A PHYSICAL HISTORY OF THE PLANT OF THE U. S. ARMORY AT HARPERS FERRY, VIRGINIA 1794-1885. ITS EVOLUTION, DEVELOPMENT, DESTRUCTION, AND DISPOSAL, HARPERS FERRY NATIONAL HISTORICAL PARK, WEST VIRGINIA.

VOLUME III

RECONSTRUCTION, DESTRUCTION, AND DESPOSAL ~~OF THE ARMORY, 1852-1885.~~

COMPILED BY
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A PHYSICAL HISTORY OF THE PLANT OF THE UNITED STATES ARMORY AT HARPER'S FERRY, VIRGINIA, 1794 to 1885, Its Evolution, Development, Destruction, and Disposal. Harpers Ferry National Historical Park, West Virginia

VOLUME III

Reconstruction, Destruction, and Disposal of the Armory, 1852 - 1885

by

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CHAPTER IV- Col. Huger and Major Bell, 1852- 1854:

General:

Brevet Colonel Benjamin Huger, appointed on July 9,1851 to replace Major John Symington as the superintendent of the U.S. Armory at Harper's Ferry, reported for duty at the Armory in September 1851,[1] and served as the commanding officer of the Armory until March 1854.[2] He was replaced in March 1854 by Major William H. Bell, the last of the line of military superintendent, who served until December 1854,[3] when civilians were once again made superintendents of the National Armories.[4]

During the period January 1,1852 to June 30,1854, Col. Huger and Major Bell were largely engaged in carrying to completion the plans that had been conceived and proposed by Major John Symington. This included the completion of the Annealing Shop and Brass Foundry.Bldg. 14 at the Musket Factory; the construction of the Machine Shop, Bldg. No.6,1852-53, at the Rifle Factory ; the construction of the Rolling Mill, Bldg. No. 18, at the Musket Factory in 1852-55; and the public sale of U.S. lots and Dwelling Houses in September 1852. Superintendents Huger and Bell spent a total of $ 134,360.29 on repairs and improvements during the period January 1,1852 to June 30,1854(see Chart on following page).

Because of the destruction by the National Archives staff during the 1940's of all vouchers issued by the Armory Paymasters during the years January 1, 1852 to April 18,1861, it is no longer possible to trace in detail the costs of construction and repairs, amounts of materials used, and who did the construction of armory buildings during the years 1852 to 1861.

1. General Order No. 9 of Adjutant Generalm July 9,1851, Reel 24, V.6,p.517. Huger to Craig, Chief of Ordnance, October 1,1851, Reel 24, V. 3, p.278.
2. Huger to Craig, March 11,1854, Reel 25, V.3, p.254.
3. Craig to Bell, January 27,1854, Reel,19, V. 6, p. 604; Craig to Bell, September 24,1854, Reel 19, V. 7,-p.673.
4. Secretary of War Jefferson Davis to Henry W. Clowe, January 9,1855, Reel 25, Vol. 8, p.782.

Chart No. 1

Expenditures for Repairs and Improvements at the U.S. Armory at Harper's Ferry, Virginia, during the administrations of Col. Benjamin Huger and Major William H. Bell, January 1,1852 to June 30,1854:

Fiscal Year	Expenditures	Appropriations	Date
Jan.1,1852 to June 30,1852	$ 26,358.06 (1)	0	-
July 1,1852 - June 30,1853	47,979.19 (2)	$ 28,950.00	8/31/52
July 1, 1853- June 30,1854	60,023.04 (3)	$ 63,500.00	3/3/53
Total:	$ 134,360.29	$ 92,450.00	-

See Chart No. 4 on page 4, for a breakdown of the appropriations among the projects that Huger and Bell intended to use the money voted for repair and improvements at the Armory.

1. 3rd Series, Files 12680 and 13017, National Archives Record Group 217, 2nd Auditor's Accounts. The sum of $ 34,621.19 that was spent during the 3rd and 4th quarters of 1851 have been subtracted from the total of $ 60,979.25 that was reported as expended for repairs and improvements during the fiscal year July 1,1851 to June 30,1852, as published in Serial No. 677, Document No.26.
2. Serial No. 717, Document No.19.
3. Serial No. 783, Document No.33. On August 5,1854,after Bell had left Harpers Ferry, Congress appropriated $ 35,100.00 for repairs and improvements at the Armory. U.S. Statues at Large, Vol. 10,p. 578. This increased the amount asked for and received by Huger and Bell from 1852 to 1854 to $ 127,550.00.

Chart No.2- Expenditures for Repairs and Improvements, Harpers Ferry Armory

YEARS	For Land, including Mill sites and the Houses on the land when purchased.	Buildings, milldams, canal or races, and other permanent improvements, including machinery.	Repairs of Buildings, dams, canals, &c.	Total for lands, buildings, improvements & repairs
1796 to June 30, 1851	$ 87,914.63*	$ 1,175,219.06	$ 105,067.23	$ 1,368,200.92
June 30 1852		60,979.25		$ 60,979.25
June 30 1853		47,979.19		47,979.19
June 30 1854	$ 7,000.00	60,023.04		60,023.04
Subtotal	$ 94,914.63	$ 1,337,200.54	$ 105,067.23	$ 1,537,182.40
June 30 1855		37,292.67		37,292.67
June 30 1856	8,700.00	31,158.00		39.858.00
June 30 1857	1,465.66	43,616.25		45,081.91
June 30 1858		25,044.68		25,044.68
June 30 1859		32,663.07		32,663.07
June 30 1860		71,079.03		71,079.03
April 18 1861	0	?		?
GRAND TOTAL	$ 105,180.29*	$ 1,576,643.49	$ 105,067.23	$ 1,786,891.01

* Total included $ 2,000.00 spent to purchase buildings of Dr.Nicholas Marmion that were located on Armory land.

Summary Sheet-Appropriations for Repairs and Improvements at the Harper's Ferry Armory, 1852- 1854:

Year:	Musket Factory	Rifle Factory	New Arsenal	Canals & Dams	Magazine & Lumber Shed	Repairs & Preservation General	New Machinery-General	Grand Total
8/31 1852	$ 3,100	450	16,450	1,650	-	2,300	5,000	$ 28,950
3/3/ 1853	10,500	2,600	13,700	9,000	-	20,000 (1)	7,700	63,500
8/5/ 1854	23,400	-	-	0	7,000	1,700	3,000	35,100
Total	$ 37,000	$ 3,050	$ 30,150	10,650	$ 7,000	$ 24,000	$ 15,700	$ 127,550
TOTAL								

(1) Includes $ 20,000 provided to clean up and repair damage caused by April 1852 flood.

Chart No. 4

4

A. Effects of the April 19-20,1852 flood on Armory Operations:

In his inspection report of Harper's Ferry Armory, dated July 20,1852, Lieutenant Colonel R. L. Baker, Inspector for Ordnance Department, reported to Col. Henry K. Craig, Chief of Ordance:

A reduction in the number of muskets manufactured monthly, which prior to the great flood, was about 1,667, is a consequence of that disaster, by which more than 20,000 arms were injuried. Labor has been diverted from the manufacturing to the repair; and the work of reparation is proceeding at the rate of about 250 per day. This change in employment has enabled the commanding officer to add to the number of workmen on rifles, so as to increase the manufacture of that arm to about 250 per month.....

There are at the present time 354 men employed at this armory as follows:

1 master- armorer	9 borers	103 laborers.
4 clerks	34 turners and drillers.	
1 assistant clerk	3 grinders	
16 foremen	12 lock-filers	
32 machinists	29 mounting-filers	
5 barrel-forgers	7 polishers	
5 lock-forgers	19 stockers	
3 bayonet-forgers	23 barrel finishers	
8 mounting forgers	1 arm assember	
4 trip=hammer men	7 blacksmiths, for jobbing.	
12 assistant forgers	1 job filer	
4 annealers	9 carpenters	

"many of the laborers are temporarily employed in cleaning the wet arms, &c., and will be discharged when that work shall be finished. The amount of the pay-roll for May is as follows, viz:

Manufactures of Arms.....	$ 5,810.23	Muskets.
.....	2,301.36	Rifles
Manufacture of Rifles		
Special Work		
Repairing damage by flood....	1,957.56	
Fabricating cones and polishing	298.72	
Buildings and improvements	538.58	
New machinery..	720.28	
	$ 11,626.73. (1)	

1. Serial No.,659, Document No.1, p.248-249.

B. Musket Factory:, 1852- 1854:

1. The Flood of April 20, 1852:

Of the great flood that struck Harper's Ferry in April 1852, Superintendent Huger report in regards to the Musket Factory on the Potomac:

"The Armory yard and shops were overflowed by the flood of April 20. The water was about 10 feet deep over the yard and six feet over the shop floors, leaving a large deposite of mud. All cleaned out, and the walks and roads laid off and remade; near 400 feet of stone flagging, 5 9/12 feet wide, laid in front of the workshops."[1]

As a result of the great flood of April 19 and 20,1852, the Ordnance department asked for and Congress appropriated, on March 3,1853, the sum of $ 20,000 to pay for repairing and cleaning up the damage caused by the flood.[2]

During the years 1852-1854, repairs, additions, and alterations were made to six of the following large musket factory workshops:

Old Bell Shop, Bldg. No.3; Boring Mill, Bldg. No. 5; Machine and Stocking Shops, Bldg. No. 6; Tilt Hammer Shop for Barrel Welding, Bldg. No. 9; the Smiths or Forging Shop, Bldg. No. 13; and the Annealing Shop and Brass Foundry, Bldg. No. 14.

Four new buildings, two major- the Stock and Store House(New Arsenal), Bldg. No. 11; and the Rolling Mill, Bldg. No. 18; and two minor- the Lime House, Bldg. No. 19, and the Ice House, Bldg. No. 20, were constructed by Colonel Benjamin Huger.

2. Repair and Improvements to the Six Shops:

1. Annual report for the year ending June 30,1852, Serial No. 659, Document No.1, p. 254.

2. U.S. Statues at Large, X, p.217.

APPROPRIATIONS FOR REPAIRS AND IMPROVEMENTS AT THE MUSKET FACTORY, 1852-54

Year:	Bldgs. 3 and 5 Bell Shop & Boring Mill	Bldg. 7 Stock House	Bldg. 11 New stock House -grounds	Bldg. 13 Smiths Shop	Bldg. 18 Rolling Mill (1)	Entrance Gate & wall	cistern	Paved walks
8/31/1852				$ 3,100				
3/3/1853		$ 1,000		2,500	7,000			
8/5/1854	$ 1,800		8,800		4,100	1,000	1,000	700
Total	$ 1,800	$ 1,000	$ 8,800	$ 5,600	$ 11,100	$ 1,000	$ 1,000	$ 700
TOTAL								

(1) An additional $ 16,500 had been appropriated to erect a rolling mill on August 14,1848. This money had apparently been expended to purchase building materials for the structure and to make necessary machinery for the mill. In 1855 an additional $ 1,432 was provided in order to complete the structure.

Appropriations for Repairs and Improvements at the Musket Factory, 1852-54

(20

Year:	Purchase of Land for gate & wall	Grand Total For Bldgs.	For Potomac Canal	For Potomac Dam	Enclosing South Wall &WestWall	Grand Total, Bldgs., Dams & Canals	
8/31/1852		$ 3,100	1,650	0		$ 4,759	
3/3/1853	(2,500)	$ 10,500	4,000	0		14,500	
8/5/1854	(4,500)	$ 23,400	0	0	6,000	23,400	
Total	($ 7,000)	$ 37,000	5,650	0	6,000	$ 42,650	
TOTAL							

(2) This is the sum actually spent to purchase Lot No. 11 in order to complete the formal entrance wall at the Musket Factory. In was paid from the balance of $ 9,829.67 that had been left from the original appropriation of $ 50,261.00, voted by Congress on August 8, 1846.

8

a. Repairs and Improvements, Old Bell Shop, Bldg. No. 3, and Boring Mill, Bldg. No. 5, Musket Factory, 1852-1854

The destruction of the Armory paymaster's vouchers for the years 1852 to 1861 by the National Archive staff during the 1940's makes it impossible to trace in detail repairs and improvements made to the shops during this period.

The superintendent's annual reports reveal that the following work was done to the building and its machinery from 1852 to 1854.

In the annual report for the year ending June 30,1852, Brevet Col. Benjamin Huger reported: "A new brick wash house between the Bell Shop (Bldg. No. 3) and Boring Mill (Bldg. No. 5 on 1859 base map), has been erected, with a tin roof."[16]

The great flood of April 20,1852 apparently damaged the Bell Shop and Boring Mill. In his annual report for the fiscal year ending June 30,1853, Col. Huger wrote: "New floors have been laid in the boring mill and in the bell shop; the excavation under the floors deepened some three feet, and the bottom graded and arranged to carry off the water washing from machines,&c, into the race-way."[17]

The estimates for the 1854-55 fiscal year contained a request for $ 1,800.00 "for repairs to the bell shop and boring mill". It was explained that" the lower stories of these buildings require re-flooring", thus suggesting that this money was to be used to pay for work that had already been done in 1853.[18]

Returning to June 30,1853, Superintendent Huger further reported: "Stone forebay at bell shop repaired, 1,134 cubic feet of earth excavated, and paved, and grouted with cement. Culvert under bell-shop flagged over with 56 square yards of flagging, and cross walls under floors to support joists,&c."[19]

In the report for the year ending June 30,1854, the new superintendent, Major William H. Bell, noted: "Extensive improvements have been made to the main and counter lines of driving machinery in the first and second floors of the Bell Shop and Boring Mill."[20]

16. Serial No. 659, Document No.1, p. 253, item 2.
17. Serial No. 692, Document No.1, p. 277.
18. Serial No. 714, Document No 2, p. 188,189, item 10. The money appropriated on August 5,1854.
19. Serial No. 692, Document No. p. 277.
20. Serial No. 747, Document No.1, p.361.

b. Alterations and Repairs to the Machine and Stocking Shops, Bldg. No. 6, Musket Factory, 1852 - 1854:

The destruction of the Paymaster vouchers for the years 1852 to 1861, done by the National Archives staff in the 1940's, makes it impossible to trace in detail the repairs and alterations that were made to the stocking and machine shop after 1852. The superintendent's annual reports, however, reveal that the following work was done:

June 30,1852, the new superintendent Bvt. Col. Benjamin Huger reported: "A new brick building on stone foundations, adjoining the new machine shop.(Bldg. No. 6D), and of the same style of architecture, has been erected as an office for the foreman of that shop."[48]

June 30,1854, Major W. H . Bell reported: "...some new and additional main and counter line put up in the new machine shop and stocking shop. Many machines transferred and put in position in stocking shop, to facilitate the operations."[49]

c. Alterations to Stock-House, Bldg. No. 7, Musket Factory,1852-54:

In his inspection report of the Harper's Ferry ,dated July 20,1852, Inspector of Arsenals and Armories, Lieutenant Colonel R.L. Baker, reported:

"The present stock house in the armory yard(Bldg. No. 7) was overflowed,and that building convenient and required for a work-shop, another stock-store should be put up on the ground above all floods(This was to be Bldg. No. 11)." 49A

The estimates for the 1853-54 fiscal year thus included a request for $ 1,000 "for converting the present stock-house into a work-shop,"It was explained that"The cellar and first floor of the present stock-house were completely overflowed in April(1852). The removal of old dwellings will afford a good site for building a safe storehouse for gunstocks(Bldg. No.11), while the old one can be usefully converted into a work-shop." 49 B.
The requested money was appropriated by Congress on March 3,1853,[49C] but was apparently not spent prior to 1855.

48. Serial No.659,Document No.1, p.253, item.3.
49. Serial No. 747, Document No., p. 361.
49.A., Serial No. 659, Document No.1, p. 250.
49B. Serial No.675, Document No. 2, p. 257,258, Item No. 3.
49C. U.S. Statues at Large, X, p.217.

d, Repairs and Alterations to the Tilt Hammer Shop for Barrel Welding, Bldg. No. 9, Musket Factory, 1852- 1854:

Due to the destruction of the armory paymaster's vouchers for the years 1852 to 1861 by the staff of the National Archives in the 1940's, it is no longer possible to trace in detail the repairs and alterations that may have been made to the tilt hammer shop during this final period.

The superintendent's annual reports, however, do reveal that the following repairs and alterations were made during the years 1852 to 1861:

In the report for the year ending June 30,1852, Breve t Colonel Benjamin Huger noted: "The wood frames for belt tilt hammers have been found to stand much better than iron ones. They answer perfectly well. Solid platforms of stone masonry have been placed under these hammer frames and the two punching presses."[29]

In the annual report for the year ending June 30,1853, Superintendent, Huger reported: "In tilt-hammer shop, for foundations and fixtures for tilt hammers, there has been laid 29 perches of stone masonry, 245 by 2 feet, facing "stone dressed, and 167 yards of flagging."[30] Some of this work may have been done to repair damage caused by the great flood of April 1852.

In the estimates for the 1854-55 fiscal year the sum of $ 700.00 was requested to construct a pavement of stone flagging " in front of the boring mill (Bldg. No. 5 on 1859 map) and tilt shop." It was explained that 'this pavement is required for dry communication with these shops in wet weather.:"[31] Money for this estimate was appropriated on August 5,1854.[32]

29. Serial No. 659, Document No.1, p. 253.
30. Serial No. 692, Doc. 1,p.277.
31. Serial No. 714, Document No. 2, p.188,189, item No.12.
32. U.S. Statues at Large, X, p. 578.

e. Repairs and Improvements to the Smiths or Forging Shop, Bldg. No 13, Musket Factory, 1852-1860:

In the estimates for the 1852-53 fiscal year, the sum of $ 3,100 was requested and received "for cast-iron forges for new smiths shop,and for filling in and flagging the floor"..."for the proper and permanent completion of the shop for smiths' work."[43] The estimate for the 1853-54 fiscal year also requested the sum of $ 2,500 "for paving smith's shop; sheet-iron stacks for 18 forges; repairing roof, and new ventilator". It was explained that "To make the smiths' shop complete, requires this additional work."[44]

In his annual report for the fiscal year ending June 30,1853, Armory superintendent Brevet Colonel Benjamin Huger reported of this work:

New smith's shop and forging shop has been extensively repaired(The building was partly submerged in the great flood of April 20,1852). The floor has been removed, and the interior filled up with earth, and paved with brick and flagging; new cast-iron forges, with sheet iron stacks, put in; wind and water pipes laid complete, and new anvil blocks, placed on cast-iron chairs, set in stone foundations. A ventilator has been put on the whole length of the building, 216 feet; the roof altered and repaired; the foreman's office removed from centre of building, and a new one made in the end. 45. Total cost was probably about $ 5,600.00.

The destruction by the National Archives in the 1940's of the Armory Paymaster's vouchers for the years January 1,1852 to 1861 make it impossible to provide any additional details as to workmen, costs, and what minor repairs were made to smiths shop during the years 1852 to 1861. No major repairs or alterations, however, appear to have been made to the forging shop after June 30,1853.

43. Serial No. 633, Document No.1, p. 212. Appropriation made August 31, 1852, U.S. Statues at Large, X,p.207.
44. Serial No.675, Document No. 2, p.257-258. Money appropriated March 3, 1853-US Statutes at Large X, 217
45. Serial No. 692, Document No. 1, p. 276. The armory also made"30 cast-iron forges, complete."

March 3, 1853

f. Improvements to the Annealing Shop and Brass Foundry, Bldg. No. 14, Musket Factory, 1852- 1860:

In his annual report for the year ending June 30,1853, Superintendent Huger wrote: "Two furnaces built, and six cast-iron forges and stacks put up in the tempering shop, with wind and water pipes laid complete. Floor paved with brick, and 20 square yards of flagging covering the wind and water-pipes between this building (Bldg. No. 14) and the forging shop. (Bldg. No. 13 on the 1859 map)."[12]

The superintendents' annual reports for the period 1854 to 1860 indicate that no further major alterations or repairs were made to the Annealing house and Brass Foundry during those years.

12. Serial No.692, Document No.1, p. 277.

3. Construction of Four New Buildings, Musket Factory, 1852-55

Brevet Colonel Benjamin Huger designed and erected the two following minor structures at the Musket Factory in 1852-53:

a. Lime House, 1852. Bldg. No. 19:

In his annual report for the fiscal year ending June 30,1852, Huger announced that "a new lime house, of wood", probably one-story, had been erected at the musket factory.[1] This storehouse probably replaced the frame lime house that Major Henry K. Craig had built in 1844. The appearance and location of the lime house in the musket factory yard are not known.

b. Ice House, 1853. Bldg. No. 20:

In his annual report for the fiscal year ending June 30,1853, Col. Huger noted, "An ice house has been built, 20 feet square by 13 feet high" at the Musket Factory.[2] The appearance and location of the ice house in the musket factory yard is also unknown.

c. More Coal Bins under the B.&. O. Railroad Tracks;

Huger continued the practice begun by Major John Symington of constructing coal bins in the space between the Musket Factory and Baltimore and Ohio Railroad Company river walls, and under the railroad trestle that stood astride the two walls. In his annual report for the fiscal year ending June 30,1853, Col. Huger reported: "To fill up the open spaces under the Baltimore and Ohio railroad, 51 feet of dry stone wall built - 19 feet high and 4 feet thick - 6,500 cubic yards of filling in making coal bins and spaces under the trestle-work of the road."[3]

In the report for the year ending June 30,1854, Major William H. Bell wrote: "Thirty coal-bins, each about 15 by 17 by 29 feet deep, under treatle work of Baltimore and Ohio railroad, have been filled in with earth and made suitable for the reception of coal and other stores."[4] These 30 bins formed a line 510 feet long.

1. Serial No. 659, Document No.1, p.253.
2. Serial No. 692, Document No.1, p. 277.
3. Serial No. 692, Document No.1, p. 277.
4. Serial No. 747, Document No.1 p. 361-362.

d. The new Rolling Mill, Musket Factory Bldg. No. 18, 1852-1854 :

The vouchers of the Armory Paymaster relating to the construction of the rolling mill and for the period 1852 to 1861 were destroyed by a committee of the National Archives during the 1940's. This makes it impossible to trace the details of the cost of construction, amounts of materials used, as well as to identify the workmen who constructed in this large shop.

Major John Symington's estimates for for the 1848-49 had contained a request for $ 16,500 "for erecting a rolling mill at the musket factory." This building was needed, it was explained "To work up scrap iron into bars of suitable sizes for use in the shops. For want of a rolling mill the large amount of scrap iron annually made at the armory has to be sold for whatever it will bring. This iron is of the best quality, and the working of it into bars, fit for use, would make an annual saving of $ 1,500 or more. The estimate includes the necessary furnaces and stack, with water-wheel and stone forebay, to drive and machinery, two pairs of rolls."[1] Congress appropriated the requested $ 16,500 on August 14, 1848,[2] but for reasons that are not known, the proposed rolling mill edifice was not constructed during the period 1848-1852. The money may, however, have been used to purchase or make machinery for the mill.

Col. Huger's estimates for 1853-54, included a request for $ 7,000 :"For building a roll mill". He explained: this was needed "To work up scrap iron suitable for manufacturing. All the machinery and part of the material for this this object have been procured, and this amount is required for its completion. "[3] The desired sum was appropriated by Congress on March 3,1853.[4]

The estimates for the 1854-55 fiscal year included a request for an additional $ 4,100 to purchase the following machinery for the rolling mill:

" $ 1,300 "for one heavy tilt-hammer". "This...is to be placed in the rolling mill, and will be required for drawing barrel plates and other heavy work."[5]

1. Serial No. 514, Document No. 2, pp. 110-111, Item No. 6.
2. U.S. Statues at Large, IX, p. 306.
3. Serial No. 675, Document No. 2, p.257,258, Item No. 2.
4. U.S. Statues at Large, X, p.217.
5. Serial No. 714, Document No. 2, pp.188-189, Item No. 1.

"$ 2,800" for a driving-wheel and a small wheel for blast," which were "Required for the rolling mill."[6]

The requested $ 4,100 was appropriated on August 5,1854.[7]

Finally, in the estimates for 1855-56 fiscal year, it was necessary to ask for $ 1,432 "for completing the exterior of the rolling mill." This money was needed "For completing walls for supporting embankment, filling in the same, and otherwise completing the exteriorof the rolling mill."[8] This sum was voted by Congress on March 3,1855.[9] The cost of constructing the rolling mill, 1853-1855 was thus approximately **$ 12,532** but if the money from the 1848 appropriation is included, as it probably should be, the final total cost of the new rolling milling, including the machinery and structure, was probably about $ 29,032.

Preparation, which included clearing the site, for the new rolling mill was underway in the spring of 1853. In his annual report for the fiscal year ending June 30, 1853, Superintendent Benjamin Huger reported:

"The old tilt-hammer shop (at the Musket Factory, Bldg. No. 11 on the 1848 map, built in 1834-39 at a cost of $ 21,776) has been pulled down, and the (water) wheels, &c., removed; the wheel-pits penstocks and forebays filled up; and all made ready for building the new rolling-mill on its foundations."[10]

The following year, Major William B. Bell announced the completion of and described the new workshop was follows:

"New Rolling Mill; 146 feet by 45 feet, one story of 16½ feet, built of brick, on stone foundation, covered with slate; paved with stone, and having two reverberatory furnaces, with stacks 45 and 40 feet high; two tilt-hammers, one forge, one large lathe for rollers, two trains of rollers, 13 and 8 inches; large shears, fan-blower, water-wheel, 15 feet cube, master wheel and gearing, pullies and other

6. Serial No. 714, Document No. 2, p. 188,189, Item No. 13.
7. U.S. Statues at Large, X, p. 578.
8. Serial No. 781, Document No. 3, p. 238, Item No. 1.
9. U.S. Statues at Large, X, p.637.
10. Serial No. 692, Document No.1, p. 277.

"machinery, one large cast-iron flume from canal to forebay, is now completed, except the two tilt-hammers, part of the pavement, lathe and shears, forebay , part of machinery for driving fan-blower, which is not in position. It is expected that this mill will be ready for operations on or before the first of October next(1854)."[11]

Like the other new buildings at the Musket Factory, the rolling mill had cut stone water table, sills, and copings and the gutters and down spouts were of copper. Either Major John Symington or Brevet Colonel Benjamin Huger could have prepared the plan used in constructing the rolling mill, but photographsHarpers Ferry NHP Negative HF- 9 and 10, taken during the Civil War, reveal that new mill was designed in the same architectural style that Symington had been applying to the new shops going up at both the musket and rifle factories since 1846.

e. New Stock and STore House(New Arsenal), Musket Factory, Bldg. No. 11, 1854-55.

The New Stock and Store House, Bldg. No. 11 on the 1859 historical base map is considered a part of the Musket Factory establishment even though the structure was not located in the factory yard, but on the south side of the armory canal, on the side of the hill between the canal and High or Washington Street.

In 1849, Col. Henry K. Craig had recommended that a new arsenal building to store muskets and rifles should be erected to replace the two original arsenals structure which dated from 1799 and 1806.[1]

As a result of the great and destructive flood of April 1852, it was decided to erect the new arsenal well above flood level, on the side of the hill overlooking the Musket Factory. The estimate for the 1852-53 fiscal year contained a request for $ 16,450 " for the erection of an arsenal, or storehouse for small arms." It was explain that the new building was needed because:

> The old arsenal is in a dilapidated condition, and is insufficient and unfit for the storge of small arms; the lower floor being subject to be flooded at high water. Its location is also bad; being in the business part of town (on Block A, Shenandoah Street), with private buildings in its immediate vicinity, and the Winchester railroad passing within 30 feet of its walls. The proposed building is to store finished armd, and will conveniently hold 80,000 stand. The proposed location for it is convenient to the other armory buildings, and remote from private property." [2]

Congress appropriated the money for this project on August 31,1852.[3] In the estimates for the 1853-54 fiscal year, Col, Benjamin Huger asked for an additional appropriated of $ 13,700" for completion of new arsenal and enclosing wall," explaining: "The old arsenal is dilapated, and so low as always to be liable to inundation. It is on one of the lots (Block A,Shenandoah) not required for armory purposes, and will be sold. The plan of the arsenal building heretofore proposed will have to be enlarged to receive the property it was intended to store

1. Captain William Maynadier of Ordnance Office to Supt. John Symington, May 8, 1849, Harpers Ferry NHP Microfilm reel No. 19, Vol. 4, p.383.
2. Serial No. 633, Document No. 2, p. 212, Item No. 1.
3. U.S.Statues at Large, X, p.107.

"in the old arsenal, and also muskets in the upper part, out of the reach of floods."[4] Congress also voted this money, on March 3,1853,[5] thus making a grand total of $ 31,150 available for this project.

Work on the site was underway in the spring of 1853 and on June 30,1853, Brevet Colonel Benjamin Huger described the progress in his annual report as follows: "To carry off water from foundations of new arsenal, the road above (High or Washington Street) has been graded and drains constructed; 419 feet of stone wall built, averaging 7 feet high by 4 thick."[6]

The new superintendent, Major William H. Bell, in his annual report of the year ending June 30, 1854, reported:

"New Arsenal: Foundation for this building nearly excavated. The lumber, cast-iron pillars, window and door frames, and roof irons purchased and delivered."[7]

In July,1854, however, Major Bell decided that the hillside would not be a suitable place to erect the new arsenal and recommended that it should be constructed on Old Arsenal Square, Block A, Shenandoah. In his inspection report, dated July 19,1854, Lieutenant Colonel R. S. Baker, Inspector for the Ordnance Department, concurred in and supported both of Huger's proposals regarding the proper site for the new arsenal.[8] Chief of Ordnance Col. Henry K.Craig approved the change in plans.

The estimate for the 1854-55 fiscal year thus contained a request for $ 8,000 "for building a new stock-house," explaining that "The cellar and first floor of the present stock-house (Bldg. No. 7) was covered with water during the last flood, in 1852. A large number of stocks have been collected

4. Serial No. 675, Document No. pp., 257-258, item No. 1.
5. U.S. Statues at Large, X, p.217.
6. Serial No. 692, Document No.1, p.277.
7. Serial No. 747, p. 361.
8. Inspection Report of Lt.Col. Baker, July 19,1854, Harpers Ferry NHP Photostaic Collection, Vol. 3, pp. 54-55.

"for seasoning, and a suitable building is required to keep them secure. The plan of the building will be furnished before the meeting of Congress."[9]

Also requested in this same estimate was $ 400 " for a post-and-rail fence to enclose arsenal grounds." "This was necessary." it was explained," to preseve the drains and slopes, which are liable to be injured by cattle."[10]

An additional $ 400 was desired "for drains and culverts", "To conduct water from the slopes and hill-sides, above the (Musket Factory) canal, to prevent wash, and to pass the water from the foundations of the arsenal and proposed stock-house."[11]

Congress appropriated the rquested total of $ 8,800 for these three related projects on August 5, 1854.[12]

Thus in August,1854, the plans to erect the proposed new arsenal on the hillside south of the new Tilt Hammer and barrel welding shop, Bldg. No. 9, were abandoned and Major William H. Bell prepared the plan for the actual structure, Bldg. No. 11, the Stock and Store House, which was to be constructed on the proposed arsenal site, in 1854-55.[13]

Master Armorer Samuel Byington, serving as acting superintendent, supervised the construction of the new stock house. On December 30,1854, Byington reported that the foundations walls and brick walls of the first story had been completed.[14]

He also informed Col. Craig that: "instead of putting a wooden fence on the [illegible] government line on Washington Street, I have constructed a permanent Stone- wall, ... from stone saved from the foundations of the buildings torn down by the U.S. on that line. This wall is a most useful improvement,as it widens the street about double its original width and secures the face of the hill below from the work of the hill."[14a]

9. Serial No. 714, Document No. 2, pp.188-189, item No. 2.
10. Ibid., item No. 7.
11. Ibid., Item No. 9.
12. U.S. Statues at Large, X, p.578.
13. Also see Smith, Philip R , Jr."Research Report- History of the Large and Small Arsenals, 1796-1869, Block A., Lots 2, 3,4, 5, 6, and 7, Shenandoah Street, Harpers Ferry National Monument, West Virginia,"(NPS typescript, Harpers Ferry NM, W.Va., April 29, 1959),pp.21-25.
14. Col. H.K. Craig to Master Armorer in Charge Samuel Byington, August 24,1854, Reel 19, V. 7, p.655; Byington to Craig, December 30,1854, Reel 25, Vol. 11, p.4, 7.
14a, Ibid.

In his first annual report, for the fiscal year ending June 30, 1855, the new superintendent, Henry W. Clowe wrote:

" New stock house. Commenced and nearly completed; of brick, 100 by 35 feet, two stories, covered with slate, on stone foundations, cut-stone water-table; the doors and window frames are of cast iron. This building only needs the painting "of the (brick) walls outside to complete it. The foundation is that which was reported last year as nearly excavated for the new arsenal."[15]

In his report for the year ending June 30,1856, Clowe recorded: "The new stock-house, reported as nearly completed last year, has been finished, and is now occupied."[16]

The cost of the new stock and store house was probably about $ 8,800.00.

The gutters and downspouts probably were of copper.

15. Serial No.841, p.556.
16. Serial No. 876, p. 389.

4. Grading and Street Lights in the Musket Factory yard, 1852-54:

Following the April 1852 flood, the musket factory yard was cleaned up and many improvements made. In his annual report for the fiscal year ending June 30, 1853, Superintendent Benjamin Huger reported of this work: "The roads in armory yard graded and macadamized; grass plats filled up, graded, and sown with grass-seed; six cast-iron lamp-posts put up and furnished with lamps complete."[1]

5. Fire-Fighting Water System Installed, 1852-54:

On June 30, 1853, in his annual report, Brevet Col. Huger noted that "About 1,300 feet of 8-inch cast-iron pipe, with 9 hydrants attached, have been laid between the shops for conducting water (to extinguish fires) from the large force-pump to be attached to one of the water-wheels. This improvement will be completed the present summer."[2]

In the annual report for the fiscal year ending June 30, 1854, Superintendent William H. Bell wrote: "One large force pump for throwing water in case of fire, completed with all its machinery connected with the water wheel, with cast iron gearing."[3]

6. Cistern for Drinking Water, 1853:

In the annual report dated June 30, 1853, Col. Huger wrote: "A cistern has been built at the musket factory, capable of containing 25,000 gallons of water, for use of the shops, &c."[4]

This perhaps cost $ 1,000 to build, for in the estimates for the 1854-55 fiscal year, $1,000 was requested "for building a cistern." The justification stated: "To supply the workshops with drinking water, which now has to be brought from a distance." (5) The Congress appropriated this sum on August 5, 1854 and the

1. Serial No. 692, Document No. 1, p. 277-278.
2. Serial No. 692, Document No. 1, p. 277.
3. Serial No. 747, p. 361.
4. Serial No. 692, Document No. 1, p. 277.
5. Serial No. 714, Document No. 2, pp. 188, 189, item No. 8.

money may have been used to pay for the cistern already built.[6]

7. Painting the Work Shops, 1853:

In the report for the yearing ending June 30,1853, Superintendent Huger mentioned that "Many of the buildings, machines,&C.," at the musket factory had been painted.[7]

8. The Musket Factory Entrance Gate/Wall, Project, 1852-54.

Major John Symington's plan of constructing a formal entrance to the musket factory yard from the Wager Ferry Lot had been half executed in 1846-1849 at a cost of approximately $ 11,100. Wager Lot No. 12 had been purchased at a cost of $ 9,999.35, the large brick stores on the property demolished, and an architecturally impressive gate erected and an entrance wall built on Lot 12. Symington was unable to complete the balancing entrance wall because he could not presuaded the owners of Wager Lot No. 11 to sell. The following military superintendents did not forget Symington's plan. Brevet Col. Benjamin Huger was able to induce the owners of the property to sell it to the United States. On November 14,1853, Noah H. Swayne, the owner of the land, sold the lot, subject to the unexpired term of a 99 year lease held by the merchant Richard D. Doran, to the United States, for $ 2,500.00.[8]

On January 13,1854, the exectuor of the late Richard D. Doran's estate, Dr. Nicholas Marmion, sold Doran's 99 year leasehold and the title to the large brick building on Lot No.11 to the U.S. for $ 4,500.[9]

The large 2½ story brick building on Lot 11 had been erected by George Rust, Jr. and Robert Keyes in 1831-32. The edifice had two store rooms on the 1st floor and duplex houses or quarters on the upper floors."[10]

6. U.S. Statues at Large, X,p.578.
7. Serial No. 692, Document No. 1, p. 277.
8. Deed of Bargin and Sale, November 14,1853, Deed Book 33,p389, Jefferson County Courthouse, Charles Town, W.Va.
9. Assignmane of Lease, January 13,1854, Deed Book 34, p.1, Jefferson County Court House.
10. Snell, Charles W.; "An Historical Study of Wager Lot No. 11, 1831-1854, Ferry Lot Studies, Harpers Ferry National Monument, West Virginia,"(NPS typescript, Harpers Ferry NM,W.Va., September 23,1958)pp.5-6.

Major John Symington, on December 12,1844, had described the Lot 11 building as follows: "Double Brick building, 40 by 40 feet, 2 stories high, with finished garrett and shingled roof; cellar underneath; and open gallery in front; back buildings of brick, 2 stories; lower story occupied as store, upper story and garret as dwelling." He had estimated that the land could be purchased for $2,286 and the building $ 4,000, making the total estimated price $ 6,286.[11]

The total final price paid in 1853-54 was,as has been noted, $ 7,000.00.[12]

The demolition of the Lot 11 building and construction of the remaining portion of the entranc wall took place in 1855-56 and will be considered in the following chapter.

11. Serial No. 464, Document No. 43, p. 9, Schedule A, item No.1.

12. This $ 7,000.00 came from the balance of $ 9,829.67 out of the August 8,1846 appropriation of $ 51,261 that had been provided to purchase land in the Wager Six Acre Reservation and Ferry Lot Reservation, Byrnes Island, and Dr. Nicholas Marmion's claim to houses located on Armory land.

C. Old Arsenal Square, Block A, Shenandoah Street, 1852-54.

1. Effects of April 1852 Flood.

In May 1849, Col. Henry K. Craig of the Ordnance Office in Washington, had recommended that a new arsenal be constructed at Harpers Ferry and also suggested that it be located in the center of the old Arsenal Yard on Block A. Shenandoah Street.[1] No action was taken on this suggestion.

In April 1852 a great flood swept through Harpers Ferry and did much damage. On April 23,1852 Superintendent Benjamin Huger reported that over 20,000 stand of arms had been damaged by the flood waters and had to be cleaned.[2]

In his annual report for the year ending June 30, 1852, Col. Huger reported: "The flood of 20th April overflowed the old arsenal, which is built on low ground and damaged over 20,000 stand of arms. These have to be stripped and cleaned, and no muskets were manufactures during the two remaining months of the fiscal year (that is, May and June 1852). All the force that could be so employed were set to repairing these damaged arms, among which there were 9,000 new percussion muskets, all of which were stripped and the parts thrown into boxes. When they had been cleaned and repolished, they were put together again without any difficulty, all the parts fitting and interchanging perfectly, thus showing the great accuracy of the work."[3]

2. Proposals for a New Arsenal:

Col. Huger, supported by Lt. Col. R.L. Baker, Inspector of Armories and Arsenals for the Ordnance Department, proposed in July 1852 erecting a large new arsenal on the hillside over looking the musket factory. In his inspection report of the Harper's Ferry Armory, dated July 20,1852, Col. Baker wrote to Col. Craig, Chief of Ordnance: "The reserved (from sale) site, on which is

1. Capt. Wm. Maynadier, Ordnance Office, to Major John Symington, May 8,1849, Reel 19, Vol. 4, p. 383.
2. Col. Huger to Col. Craig, Chief of Ordnance, April 23,1852, Reel 26,V. 3, p. 271.
3. Serial No. 659, Document No. 1, p. 254-255.

it is proposed to build the arsenal, is large enough to contain other buildings which are required and which I recommend should be constructed. 1st. A stock-house for a large supply of stocks stored for seasoning (This was to be built as Bldg. No. 11 of the Musket Factory]. The present stock house in the armory yard (Bldg. No. 7] was overflowed, and that building being convenient and required for a work-shop, another stock-house should be put up on the ground above the floods. The site of the (new)arsenal is such; but it is very rough. and will require much labor and expense to put it in order. By suitable grading and draining, the wash down the ravine passing through these grounds will be prevented, and the annual labor and expense of cleaning out the canal, at this point, saved."[4]

As has been noted, on August 31,1852 and on March 3,1853, Congress appropriated a grand total of $ 31,150 to grade and drain a site on the side of the hillside overlooking the musket factory and to construct a large new arsenal building capable of holding 80,000 arms on that land.[5]

By June 30,1854, Major William H. Bell reported that the foundation for the new arsenal had been"nearly excavated" and much of material needed to built the structure had been acquired.[6]

3. Description of Arsenal Square in 1852:

While this was transpiring, plans were made to subdivide old Arsenal Square, Block A into seven building lots. After the new arsenal had been completed, the two old arsenal structures would be demolished and the seven lots offiered for sale at public auction. Surveyer S. Howell Brown's 1852 map, being prepared for the sale of public lots and armory dwelling houses that was to be held in September 1852, thus provides us with the following data on Arsenal square.

4. Serial No. 659, Document No. 1, p.250.
5. U.S. Statues at Large, X,107, 217.
6. Serial No.747, p.361.

BLOCK A, ON SHENANDOAH(STREET)

No. of Lots:

1. N.East end of Arsenal Lot, having on it the old Superintendent's Office (1832); front 33 10/12 feet on Shenandoah St., with Steven's(Wager Lot no 5) line East 184 feet to the River Shenandoah; extending across the Winchester & Potomac Railroad, binding 73 feet thereon, running with the N.E. line of Lot No. 2, to the front 179 feet.

2. Old Arsenal(1799), intersected by these 5 lots-each 30 feet front on Shen-
3. andoah St., same width to Shenandoah River, intersected by an Alley near
4. Railroad embankment - 179 feet deep for No. 2, 145 feet deep for No. 6-
5. other intermediate depth to the rest, and extend same
6 width across Railroad to River.

7. 24 feet front on Shenandoah St., extending same width through to the River Shenandoah, paralel to the previous numbered lots - having on it, and Washington Street prolonged, the Old Small Arsenal(1806), part on the lot and part on the street." 6

The Old Arsenal Yard also contained to the west, Washington Street prolonged, SHENANDOAH STREET. **plus Lots No. 1 and 2 in Block B, These Block B lots were described** in 1852 as follows:

Lot No. 1 On South(or west) side of Washington Street, ... continued; 30 feet front on Shenandoah Street, 147 feet deep to Alley near Winchester & Potomac Railroad, 30 feet on said Alley, and 143 feet back to Shenandoah St. Vacant.

Lot No. 2- Parallel to No.1- 30 feet front on Shenandoah Street, 143 and 141 feet deep to Alley. Old Paymaster's Office.

Lot No. 3-Parallel to Lot No.2- 30 feet front on Shenandoah St., 141 and 140 feet deep to Alley -vacant.

Lot. No.4- 97 feet front on Shenandoah St. 140 feet deep to Alley-124 feet on Alley, and from Alley 122 feet on Market Street to Shenandoah Street. Dwelling No. 2-Master Armorer's House." 7

This data indicates that Old Arsenal Square fronted 297 feet on the south side of Shenandoah Street and 141 feet on the east side of Market Street. The south side of the are extended 337 feet along the north side of the Winchester and Potomac Railroad track and the east side of the square ran from the northeast corner 184 feet to the bank of the Shenandoah River.

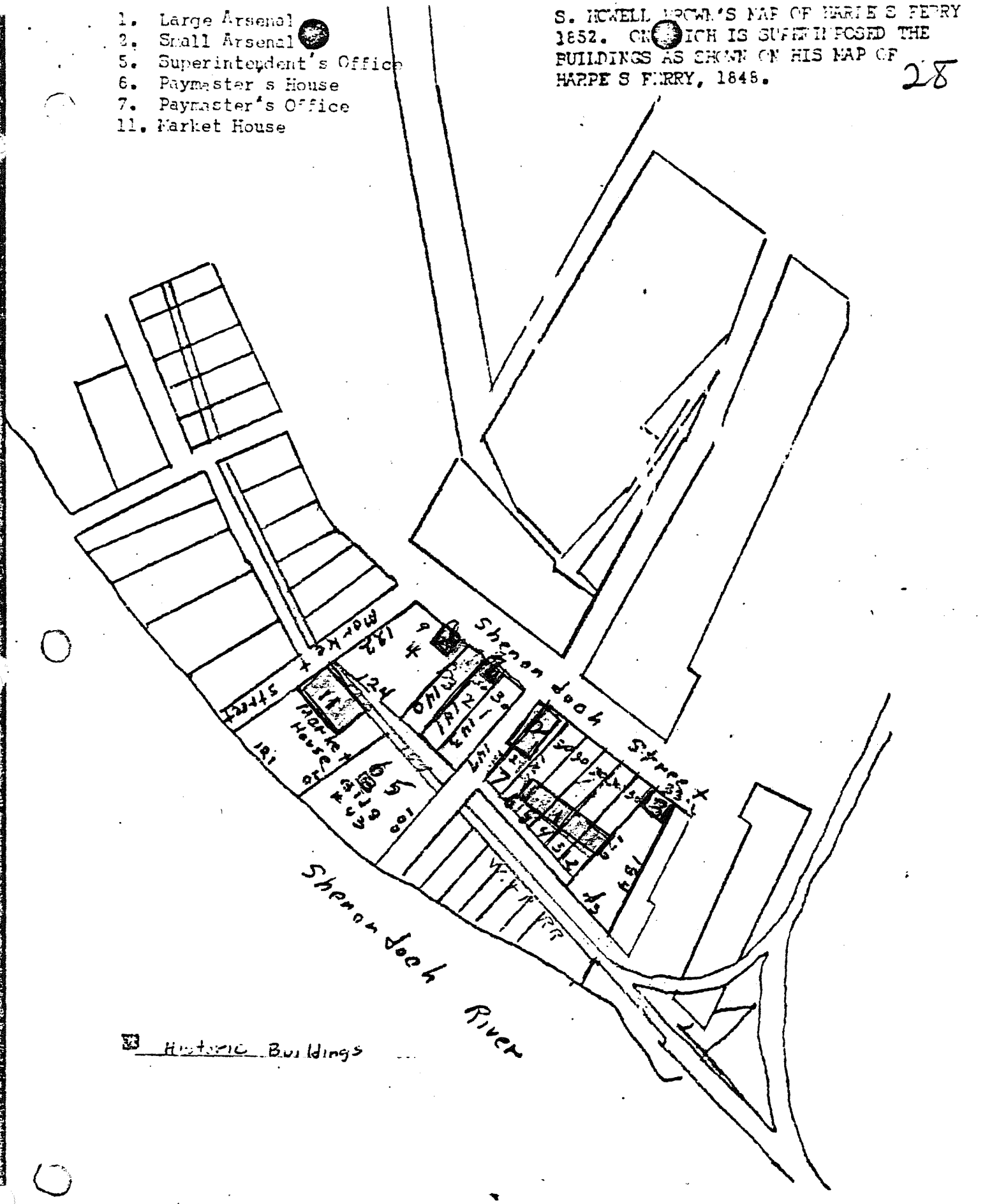
6."Legend Exhibiting the Corresponding Numbers of the Houses, Inventory of the 30th June,1852, with the Lots of Land as per Brown's Map of the same, Where Correspondwnce Exists, and in Other Cases, an Approximation. National Archives R.G. LR. H. 330-1852, August 28,1852. Box 133 OCO DOC File 1797-1844.

7. Ibid.,

1. Large Arsenal
2. Small Arsenal
5. Superintendent's Office
6. Paymaster's House
7. Paymaster's Office
11. Market House

S. HOWELL BROWN'S MAP OF HARPER'S FERRY 1852. ON WHICH IS SUPERIMPOSED THE BUILDINGS AS SHOWN ON HIS MAP OF HARPER'S FERRY, 1848.

28


Shenandoah Street
Shenandoah River
Potomac
Virginia
Maryland
Arsenal
Paymaster's House
Paymaster's Office
Engine House
Market House
Armory
Armory Yard
Guard House
Superintendent's Office

In July,1854, Superintendent Major Wiliam Hl Bell decided that the side of the hill overlooking the musket factory would not be a suitable site for the proposed new arsenal and recommended that the edifice should be constructed on Block A, Shenandoah Street, the Old Arsenal Square. In his inspection report of July 19,1854, Lieutenant Colonel R. S. Baker, Inspector of Arsenal and Armories for the Ordance Department, concurred in this plan and further noted:

"The old Arsenal yard is from 1½ to 4 feet lower than the road(Shenandoah Street) on its front. By filling the lot to the road level, and raising the floor of the basement room three or four feet above the yard, it is probable that no flood would ever wash it, the high water marks on the old Arsenal floor being under six feet."

He further suggested: "Should this change be adopted, I would recommend sending the arms contained in the two old stores(Arsenal buildings) to the

Arsenal (at Washington, D.C.), taking both of these stores down, and using their Materials, which appear very good, in the construction of the new buildings; indeed, they would furnish a good part of the bricks required..."[7]

4. Use of Buildings on Arsenal Square, 1852-54:

Thus no changes were actually made to Old Arsenal Square during the period 1852-54, by the Armory. In 1847, however, the Winchester and Potomac Railroad sold the land on Virginius Island on which its first depot had been built and it erected its new depot on its fifty-foot wide right of way on Block A, Old Arsenal Square. The structure was located on the south side of the railroad track, between the tracks and the Shenandoah River, and it stood directly south or behind the Large Arsenal.[8]

The Large and Small Arsenals continued to be used for the storage of small arms. The Superintendent's Old Office Building, Located on Lot No.1, Block A, Shenandoah Street, was used from 1848 to May 1854 as a school house for the Harpers Ferry Female Institute. In May 1854 the Armory granted the Corporation of the Town of Harpers Ferry a lease to the old brick house for use as a temporary school house until a new brick school house could be constructed on Lot. No. 2, Block E. Shenandoah.[9] This latter school was built in 1856. The Paymaster's Old Office and Vault, located on Lot No. 2, Block B. Shenandoah Street, which had been leased to the Corporation of the Town of Harper's Ferry in June 1851, continued to serve as the town hall and jail from 1851 to 1858.[10]

7. Inspection Report, July 19,1854, Harpers Ferry NHP Photostatic Collection, Vol. 3, pp. 54-55. Also see Smith, Philip R., Jr."Research Report- History of the Large and Smith Arsenals, Blocks A, Lots 2,3,4,5,6, and 7, Shenandoah Street,",pp.21-25.
8. Smith, Philip R., Jr., "His ory of Large and Small Arsenals,"p. 20.
9 Smith, Philip R.,Jr., "Research Report-History of Superintendent"s Old Office, Arsenal Square, Block A., Lot No. 1, Shenandoah Street,p. 4.
10. Smith, Philip R.,Jr."Research Report: History of the Old Pay Office, Block B, Lot No. 2, Shenandoah Street," p.4.

D. Repairs and Improvements at the U.S. Rifle Factory, 1852-54:

During the period 1852-54 one major and one minor new buildings were erected at the Rifle Factory, namely, the new Machine Shop, Bldg. No. 6 on the 1859 map, and the new Coal House, Bldg. No. 7 on the same map.

Two minor extant structures were also repaired and converted to other uses. These were the Stock House, Bldg. No. 8 on the 1859 Historical Base Map, a Store House(probably Bldg. No. 14 on the 1848 map), which is Bldg. No.10 and should be added to the 1859 historical base map.

1. Effects of the April 1852 Flood:

In his annual report for the fiscal year ending June 30,1852, Brevet Col. Benjamin Huger described the effects of the 1852 flood on the U.S. Rifle works as follows: "The principal workshops at the rifle works were not injured by the flood of April 20. The lower buildings and grounds were covered. These works were suspended a day only. The grounds have been cleaned up and partially graded."[1]

1. Serial No. 659, Document No. 1, p.254.

2. Construction of new Machine Shop, Bldg. No. 6, Rifle Factory, 1852-53:

Because of the destruction of the Armory Paymaster's vouchers for the years 1852 to 1861 by the staff of the National Archives during the 1940s, it is no longer possible to determine the details of construction in regards to cost, quantities of materials utilized, or the names of the men who did the construction. The annual reports of the armory superintendent, however, do provide the following data on the construction.

Although designed by Major Symington in 1849 or 1850, the actual construction of Bldg. No.6, the new machine shop, was supervised by his replacement as superintendent, Brevet Colonel Benjamin Huger, in 1852.-53.

In his annual report for the fiscal year ending June 30,1852, Col. Huger reported: "A two-story machine shop has been commenced, basement of stone, 87 9/12 feet long by 35 feet wide, with a projection in in the centre of it of 14 by 36 feet, for an office. The foundations are ready for the brick masonry."[6] In the report for the year ending June 30,1853, Huger announced that "The new machine shop, reported last year as 'stone foundation completed, ready for the brick-work,' has been finished." Also, "One turbine wheel placed in wheel-pit, of cut stone; a new stone and cast-iron forebay put in; culvert made to conduct water from this wheel,and other culverts repaired." A large force pump, intended for use in fighting fires, was also to be attached "to the water-wheel of the machine shop."[7]

Machinery for the new shop was fabricated and installed in 1853-54; in the report for the year ending June 30,1854, the superintendent Major William H. Bell noted:

"Governor to water-wheel at barrel drilling shop put up; the main line shafting in machine shop improved.

"One large force pump, for throwing water in case of fire, has been put in position, with the required gearing, connected with the water-wheel at the machine shop.

"Counter machinery fabricated and put in position in the basement of new machine shop, for lathe for first turning stocks and driving circular saw for cutting stocks to length."[8]

Finally, in his annual report for the fiscal year ending June 30,1856, Superintendent Henry W. Clowe commented that"Five feet of counter shafting have been fabricated and put in operation in machine shop at the rifle factory, and the

6. Serial No.659, Document No.1, p. 254, item No. 10.
7. Serial No. 692, Document 1, p. 278.
8. Serial No. 747, Document No.1, p. 362

"fixtures for drawing head-gates in this shop have been fabricated and attached."[9]

For views of the Machine Shop,Bldg. No. 6, and other new Rifle Factory Shops, see Volume II, p. 232- a sketch made in 1853, and p. 233, a lithograph that was published in 1857.

9.Serial No. 876, pp.390-391.

3. Repair of Store House, Bldg. 10, Rifle Factory, 1853:

This structure is probably Bldg. No. 14 on Brown's 1848 map,"Store House and Office". Bldg. No. 14 was apparently erected for use as Captain John H. Hall's Office about 1827. Judging by the 1834 maps of the island, the building was approximately 30 by 35 feet in size.[1]

In the estimates for the 1853-54, Brevet Colonel Benjamin Huger requested $450 "for repairing storehouse at rifle factory," commenting:"This is an old building, but may be made to answer the purpose of a storehouse by repairs."[2] The Congress appropriated the desired sum on March 3, 1853.[3]

In his annual report for the fiscal year ending June 30,1853, Superintendent Huger noted: "storehouse repaired; outside stairs removed and new stairs put up inside."[4]

This evidence indicates that the store house was a two-story structure.

The repaired store house, probably built of stone, will be Building No. 10 at the Rifle Factory when it is added to the 1859 historical base map.

(1) See Bldg. No. 15 on Maps No. 9 and 10(1834), in Volume I of this study.
(2). Serial No. 675, Document No. 2, p. 257,258, item No. 6.
(3) U.S. Statues at Large,X, 217.
(4) Serial No. 692, Document No.1, p. 278.

4. The New Coal House, Bldg. No. 7, U.S. Rifle Factory, 1853-54.

The estimates for the 1852-53 fiscal year contained a request for $ 450 for "Coal houses at the Rifle factory." It was explained that this was needed to shelter the charcoal and anthracite and bituminous coal used in making arms, &c., at the Rifle factory."[1] The desired money was appropriated by Congress on August 31, 1852.[2]

In the estimates for the 1853-54 fiscal year Col. Benjamin Huger asked for an addition $ 650 "For building coal-houses and bins at the rifle factory" It was explained that "The coal-houses and bins at the rifle were only temporary structures, and were washed away by the flood of April (1852). Since then, supplies of coal have had to be carried from the musket factory, from time to time, which is troublesome and expensive."[3] Congress voted the requested sum on March 3, 1853.[4]

A total of $ 1,100 was thus provided for constructing coal houses and coal bins at the rifle factory in 1852-53.

In the annual report for the fiscal year ending June 30, 1854, Major William H. Bell reported: "New coal house, built of brick, covered with sheet-iron, 21 by 25 feet, one story of 15 feet."[5]

For a view of the new Coal House, see the 1857 lithograph in Volume II, p.233.

1. Serial No. 633, Document No. 1, p. 212, item No. 5.
2. U.S. Statues at Large, Vol. X, p.107.
3. Serial No. 675, Document No. 2, Item No. 7, p. 257, 258.
4. U.S. Statues at Large, X, p.217.
5. Serial No. 747, p.362.

5. Remodelled Stock House, Rifle Factory, Bldg. No. 8, 1853-54:

In the annual report for the fiscal year ending June 30, 1854, Major William H. Bell reported that at the Rifle Factory the "Old Forging shop repaired for a stock house, and laid with two new floors."[1]

On Brown's 1848 map there are shown two "forging shops", Bldgs. No. 22 and 19, which both erected for the use of Captain John H. Hall.

John H. Hall's first smiths shop, a stone-two story structure with wood shingled gable roof, was erected in 1819. The building measured 30 by 30 feet and was valued at $ 1,000 in 1821. The roof of the shop was slated about 1829.[2]

Captain Hall's 2nd smiths' shop was a one-story stone building with a slate-covered gable roof, that had been erected in 1827 at an approximate cost of $ 1,404 by the mason Lewis Wernwag. The structure was 35 by 35 feet, its wall held about 481 perches of stone masonry, and there were four forges, each served by its own chimney, in the shop.[3]

From the evidence given in the June 30, 1854 report, indicating that it was a two-story building, it appears that that the 1819 smiths shop was remodelled into a stock house.

What is probably the remodelled stock house, two-story high, and three bays deep, can be seen in the 1857 lithograph (Harpers Ferry NHP Negative No. 490), located at the extreme eastern (lower) tip of the Hall Island and situated on the south bank of the Shenandoah Canal.[4] This evidence suggests that Bldg. No. 22 on Brown's 1848 map was the smiths shop that was erected for John H. Hall in 1819.

1. Serial No. 747, p. 362.
2. See Volume I, p. 529.
3. See Volume I, p. 531.
4. **For 1857 lithograph, see Vol. II, p. 233.**

6. Grading, Fencing, [illegible] Rifle Factory, 1852-54

In the estimates for the 1853-54 fiscal year $ 1,500 was asked "for removing old buildings, grading grounds, and fences, at the rifle factory;" it was explained that "As the new buildings at the rifle factory are completed, the grounds should be put in order and enclosed. They are now in bad order, and the shops and property are exposed for want of proper enclosure."[1] Congress appropriated the request amount on March 3,1853. (2)

In the annual report for the year ending June 30,1853, Superintendent Benjamin Huger reported the following improvements had been made to the grounds at the rifle factory:

7. **Fire-Fighting Water System, 1853:**

"About 300 feet of 6-inch cast-iron pipe, with 3 hydrants attached, have been laid in front (to the **north**) of the the shops for conveying water (in case of fire) from the large force-pump designed to be attached to water-wheel of machine-shop (Bldg. No. 6, which was then under construction). This improvement will be completed during the present (building) season."[3]

The armory had purchased this force pump from J. T. Ames of Boston, Mass., on January 27,1852 for $ 1,865.64.[4] Included in this shipment from Ames were 62,188 lbs. of cast iron pipe, which cost $ 583.14.[5]

In the annual report for the fiscal year ending June 30,1854, Major William H. Bell reported: "One large force pump, for throwing water in case of fire, has been put in position, with the required gearing, connected with the water-wheel at the machine shop."[6]

1. Serial No. 675, Document No. 2, p.257,258, item No. 9.
2. U.S. Statues at Large, X, p.217.
3. Serial No. 692, Document No. 1, p.278
4. National Archives Record Group 217, Records of 2nd Auditor, 3rd Series, File 13017, Voucher 76, dated Jan.27,1852, for total of $ 2,448.78.
5. Ibid..
6. Serial No. 747, p.362.

8.Street Lights, 1853:

On June 30,1853, Col. Huger also noted" Two cast-iron lamp-posts put up, and furnished with lanterns complete."[7]

7. Serial No. 602, Document No.1, p. 278.

E. New Armory Lumber Yard, Upper Hall Island, 1854-55:

in the annual estimates for the 1854-55 fiscal year, Major William H. Bell asked for $ 6,000 "for a lumber shed and yard," explaining:

The removal of the shanties heretofore used as dwellings on the upper end of Hall's island will give a good location for a lumber yard, and the only one that is accessible and not liable to be overflowed. The flood of April 1852 swept away the former lumber yard (located at Z on 1848 map or Block G, 1859 Map, Shenandoah Street), and a great deal was lost. The plan of the lumber shed will be furnished before the meeting of Congress."[1]

The requested money was appropriated by Congress on August 5,1854.[2] From August 18 to December 30,1854, Master Armorer Samuel Byington, the acting superintendent of the armory spent a total of $ 417.63 getting the project underway.[3]

In April 1854, there were still 11 old Armory Dwelling houses standing on the Upper Hall Island. In a letter dated April 3, Major William H. Bell informed Chief of Ordnance, Col. Henry K. Craig:

"There are three buildings for Dwelling Houses on the Rifle Factory grounds, numbered 156, 168, and 158 on Brown's Map of 1848, which occupy land reserved from sale (in 1852) and come within the instructions of the Sec. of War, for removal therefrom.

The first three are desirable as residences for the Master foreman of the Rifle department, and for such hands at that factory as might be useful to have occupy them for the better protection in case of fire.

They are not in the way of any proposed improvement and therefore I request authority to retain them for the purposes named."[4]

This request was granted: Buildings, Nos. 157, 159, 160, 161, 163, 165, 166, and 169, were apparently demolished in 1854 to clear the site for the new Lumber Yard.[5]

1. Serial No.714, Document No. 2, p.188,189, item No. 14.
2. U.S. Statues at Large, Aug.5,1854.
3. "The Special Armory accounts, show the following condition of the objects of expenditure, provided for in the Appropriatiins for Repair, Improvements, New Machinery for the fiscal year ending June 30th 1855, December 31,1854, Reel 25, V. 4, p.325.
4. Bell to Craig, April 3,1854 Reel 25 V.1 p.25.
5. **Annual report, June 30,1854: "Seven of old buildings occupying reserved ground have been removed, and sold to be removed. Serial No.747, p.362.**

APPROPRIATIONS FOR REPAIRS AND IMPROVEMENTS

Year:	New Powder Magazine	new lumber shed & yard	Armory dwellings					Total
8/31 1852	0	0	0					0
3/3/ 1853	0	0	0					0
8/5/ 1854	$ 1,000	$ 6,000	0					$ 7,000
Total	$ 1,000	$ 6,000	$ 0					$ 7,000
TOTAL								

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The retained Dwellings, on Upper Hall Island, were:

Old No. 1854	New No. 1860	Class.	1852 Value	Description
156	6	6	$ 800	Brick, 2 story
158	7	5	$ 900	Brick, 2 story.
168	8	6	$ 800	Stone, 2 story. (or 1½ story)
3 houses:			$ 2,500	

These three houses stood and were used as armory dwelling from 1854 to 1861.

The Annual reports of Superintendent Henry W. Clowe for the fiscal years ending June 30, 1855, 1856, and 1857, makes no mention of the lumber shed ever being erected.[6] In his annual report for the year ending June 30,1856, however , Clowe did report: "A new post,rail, and picket fence has been made to enclose that portion of island above and attached to the rifle factory grounds. There is of this fence about 100 panels."[7]

6. Serial No. 841,p.557. Serial No.876,p.389. Serial No.920,p.553.
7. Serial No. 876, p. 389.

F. A New Powder Magazine for the Armory, Camp Hill, 1854-55.

In his estimates for the 1854-55 fiscal year Major William H. Bell asked for an appropriation of $ 1,000 "For a magazine and a road to it". He explained: "The magazine now in use (located at X on the 1848 and 1852 maps) has to be removed, as the ground adjacent has been sold for building lots (These would be Blocks A and B, Camp Hill). The new one is to be placed on ground adjacent to the new arsenal (Bldg. No. 11, built as new Stock House); and to place it in a secure position requires heavy work to make a road on the side of the cliff. The plan will be furnished before the meeting of Congress."[1]

Congress voted the desired money on August 5,1854.[2]

On December 30,1854, Master Armorer Samuel Byington, who was serving as acting superintendent of the armory, informed Chief of Ordnance, Col. Henry K. Craig.: "I have built a Magazine. The building is as near the plan approved as I had data for with the addition of an outer wall of brick, enclosing it, which I thought necessary for its better protection from without, the sum appropriated being sufficient for the purpose. This building is situated on the brow of the hill, immediately west of the Rolling Mill (Bldg. No. 18 on the 1859 historical base map), and in full view of the watchman of the Musket Factory, presenting a very pretty front viewed from the Supt's. office (at Armory Bldg. No. 2) and Rail Road Station (on Wager Lot No. 1). The road to the Magazine is made and so laid out to be very accesible."[3]

In his first annual report, dated June 30,1855, the new superintendent Henry W. Clowe, described the new magazine, writing:

"New magazine for powder.- This building is of brick, 12 by 16 feet, one story, covered with slate, enclosed by a brick wall coped with cut-stone; upon a portion of this walling iron fencing is placed, and a lightning rod put in position. The building is located on the bluff, immediately above the canal basin opposite the rolling mill. This building was commenced and completed within the year."[4]

Of the new road, he wrote: "A road of about two hundred yards in length

1. Serial No. 714, Document No.2, pp. 188,189, item No. 6.
2. U.S. Statues at Large, X, p.578.
3. Byington to Craig, Dec.30,1854, Reel 25, V.1, p.4.
4. Serial No. 841,p. 556.

"has been cut and graded, leading from Washington Street to the new magazine by an easy ascent, and a number of forest trees planted on the grounds surrounding the magazine and adjacent to the armory."[5]

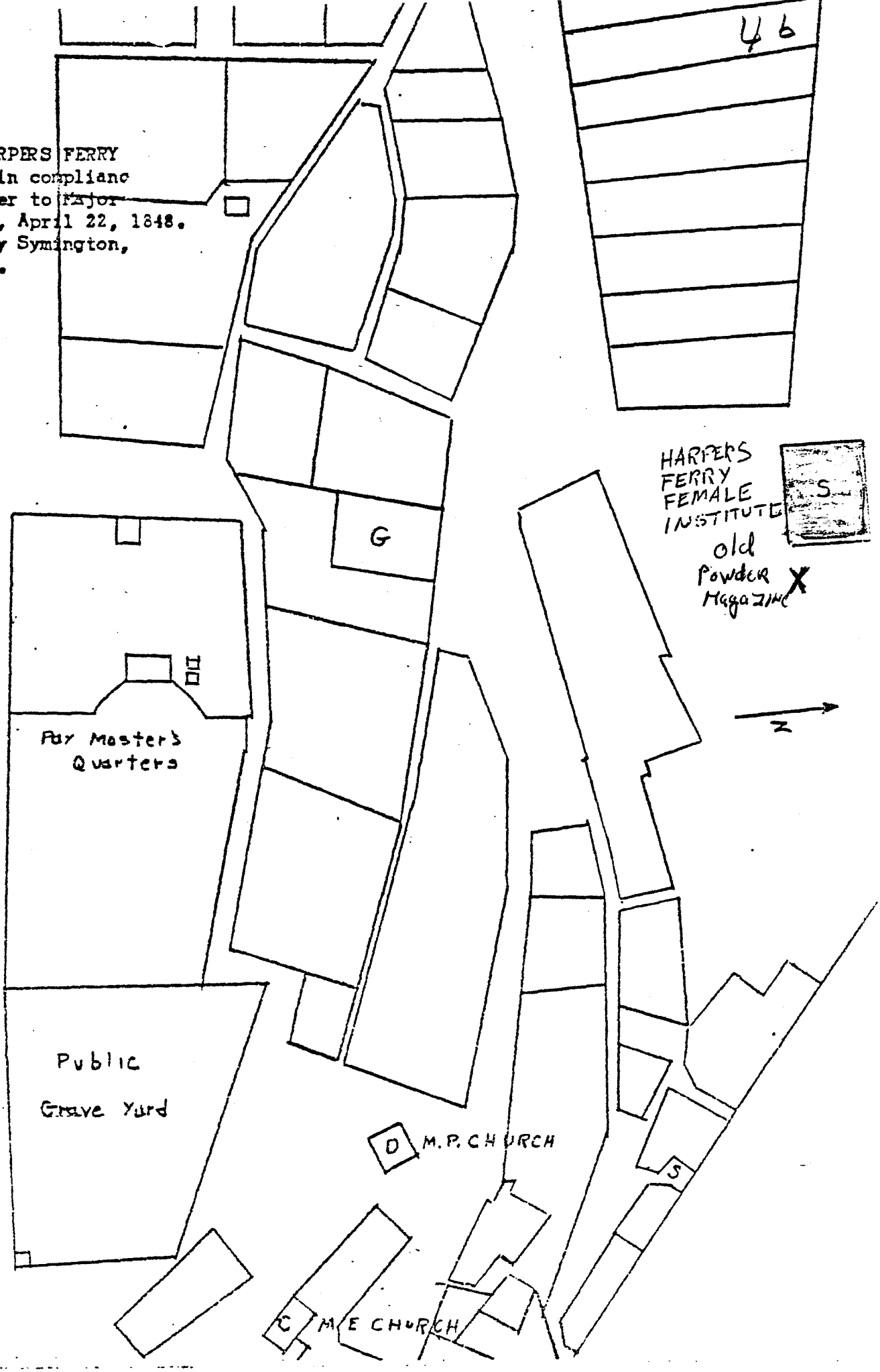
The 1854 powder magazine served its function from 1854 to 1861 and survived the Civil War in good shape. In his inspection report dated July 27, 1865, Brigadier General Edward D. Ramsay informed the Chief of Ordnance, Brigadier General A. B. Dyer,: "Powder Magazine- Brick - 1 story, 12 x 15, No.1 on Camp Hill, In good condition- not occupied."[6]

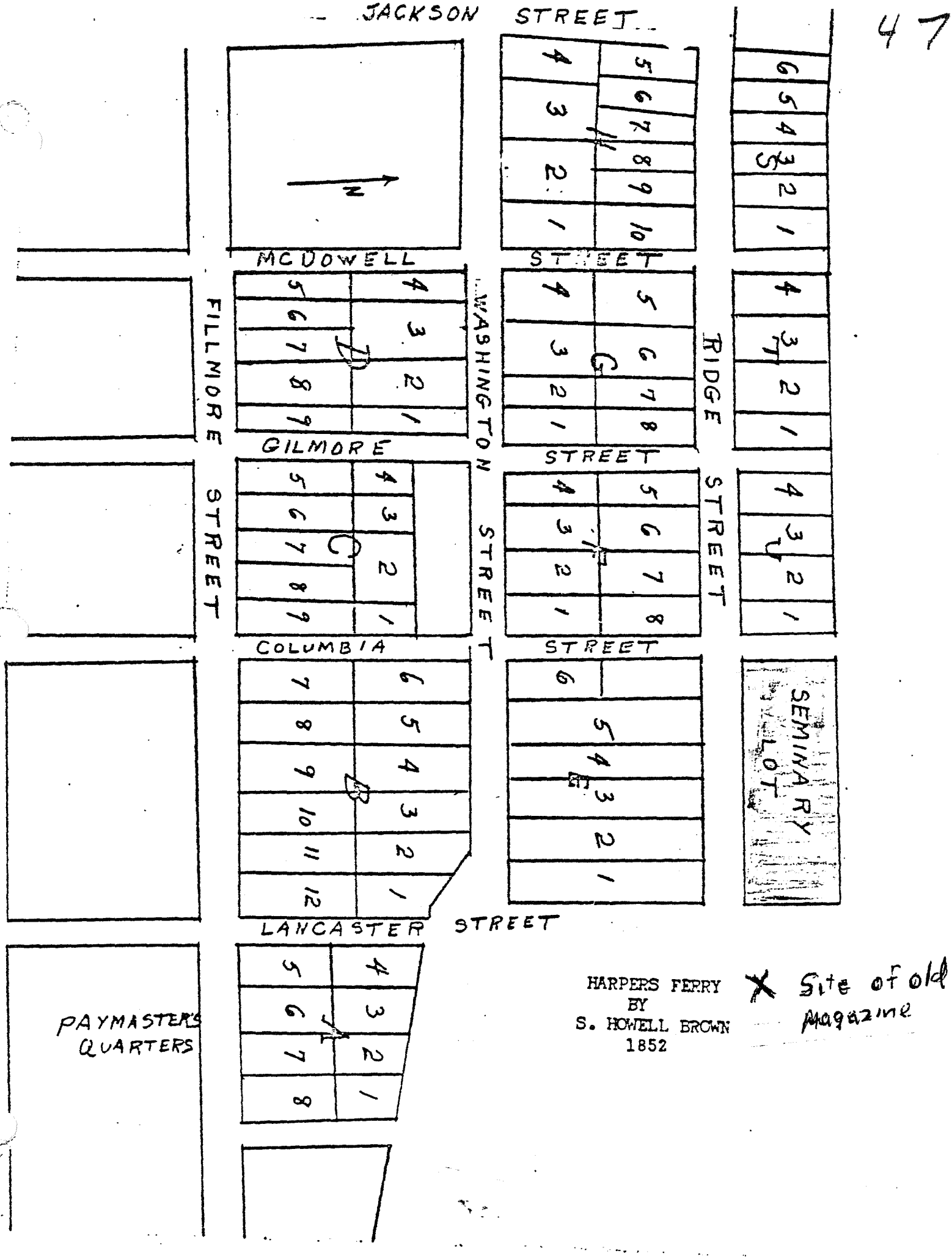
The side of the hill on which the magazine was located, but not the structure itself, can be seen in Harpers Ferry Negative No. HF- 83, a photo which was probably taken about 1875.

5.Serial No. 841, p.557.

6. Inspection report, July 27,1865, National Archives Record Group No.156, Harpers Ferry NHP Photostatic Collection, Map Case, Drawer No. 10. Also see, Smith,Philip R., Jr."Research Report- History of the Public School, the Harpers Ferry Femele Seminary, and Armory Magazine, Camp Hill,1796-1869, Harpers Ferry National Monument, West Virginia,"(N.P.S. typescript, Harpers Ferry NM, W.Va., April 2, 1959), Section III,p.14.

MAP OF HARPERS FERRY
Prepared in compliance
with letter to Major
Symington, April 22, 1848.
Revised by Symington,
Jan, 1851.





HARPERS FERRY
BY
S. HOWELL BROWN
1852

X Site of old Magazine

G. U.S. Canals, 1852- 1854:

1. The U.S. Musket Factory Canal on the Potomac River:

The estimates for the 1852-53 fiscal year requested $ 1,650 " for rebuilding a part of the armory canal wall and interior revetement, and removing obstructions." This work was necessary it was explained because:"This wall has been thrown down in consequence of the narrowness of the old road along the canal, which was only 15 feet wide, and afforded but a single tract(sic-track?). The road been widened so as to prevent a recurrence of the damage, and it is necessar to rebuild the wall that has fallen, and to remove obstruction caused thereby to a full supply of water for the wheels."[1] Congress appropriated the desired amount on August 31,1852.[2]

In his annual report of operations for the fiscal year ending June 30, 1853, Brevet Col. Benjamin Huger reported of construction o the musket factory canal:

"A grouted stone wall built on the northeast side of canal, near new rolling-mill(Bldg. No. 18), 248 feet long, 6 feet high by 4 feet thick; and on the opposite side of the canal a dry wall 255 feet long, 6 feet high, and 2½ feet thick, to sustain that bank of the canal. These walls are complete, except the coping.

"The sluice-way of the canal(near old tilt shop)(Bldg. No. 18) has been repaired. 48 perches grouted stone-masonry, 50 perches dry wall, and 68 square yards of paving, 2 feet deep in this repair, together with a new sluice- gate, with cast-iron gearing complete, made and put in place. Extensive repairs and improvements have been made to the canal by cleaning out sand-bars and obstructions which have heretofore impeded the passage of water at low stages."[3]

1. Serial No. 633, Document No. 2, p.212, item No. 2.
2. U.S. Statues at Large, X, p. 107.
3. Serial No. 692, Document No.1, p. 277.

The estimates for the 1853-54 fiscal year contained a request for $ 4,000 "for repair of buildings, drains, and culverts, making roads and walks, and grading grounds." This was needed it was explained "From the very rough nature of the ground around the works, and the abrupt declivities, the rains do continued injury. It will be cheaper to grade these declivities, and to conduct the waters off, by a proper system of drainage, than to make continued repairs, with a constant recurrence of the injury will render necessary."[4] As this appears to be a program to keep the earth and rocks from being carried into the canal, the request is considered under this heading.[5] The desired amount was voted by Congress on March 3,1853. The money may have been used to grade the hillside on the south side of the armory canal, where the proposed new arsenal and the new stock house(Bldg. No.11), were scheduled to be erected.

In his report for the year ending June 30,1854, Major William H. Bell reported the the"Armory canal at the head,repaired; a wall of 200 feet, 4½ feet high, 3 feet thick, built to prevent wash, and large sand bars removed from the head of the canal. Lock gates and head gates at the stone forebay improved."[6]

Many of the improvements made to the Musket Factory canal and the grading of the hillside can be seen in the 1857 lithograph, Harpers FERRY NHP Negative No. HF -51 or HF-256. **(See Photo No. 1, Volume II, p. 193).**

4. Serial No. 675, Document No.2,,p.257,258,item No. 5.
5. U.S. Statues at Large, X, p.217.
6. Serial No. 747, p.361

2. The U.S. Canal at the Rifle Factory on the Shenandoah, 1852-54 .

In the annual estimates for the 1853-54 fiscal year, Brevet Colonel Benjamin Huger requested $ 5,000 "for repairs of canal at the rifle works, and constructing a revetment wall along that portion(about one-half) where there is no such wall; and for opening a new waste-way and closing the old, and repairing the canal bridge."; it was explained; "The canal requires repairs in that part without revetment wall, which the construction of such a wall will, in a great measure, prevent hereafter. The waste-way is now at the upper end of the canal, and leaves no current in the lower part. By moving the waste-way to the lower end of the canal, and building the revetment wall, the deposite will be lessened, and the necessity of stopping the works to clear out the canal will be avoided."[1] The amounted requested was appropriated by Congress on March 3,1853.[2]

In his report for the fiscal year ending June 30,1853, Superintendent Huger announced that at the rifle factory:

"A dry stone wall has been built all along the basin on the opposite (north) side of the canal, to the works, two sections on each side of the bridge, to raise the edge of the canal, and so grade the road as to draw off the water from the road(Shenandoah Street) and hill-side, which has heretofore washed large deposites of earth into the basin: for this purpose 409 feet of dry wall, nearly 6 feet high by 3 wide, have been built; 700 cubic yards filling put in.

"A dry wall, 224 feet long, 6½ feet high, and 3 feet thick, has been built along the southeast(workshop) side of the canal, adjoining the finishing shop (Bldg. No. 3)(Bldg. No. 1 on 1848 map) and across the opening of old sluice-way, which has been filled up. This completes the walling-in of the whole basin. The accumulated deposites from this basin were excavated and removed, amounting

1. Serial No. 675, Document No.2, p. 257,258, item No. 8.
2. U.S. Statues at Large, X, p.217.

" to near 2,000 cubic yards."[3]

No further further construction was reported on the Shenandoah Canal in the report for the fiscal year ending June 30,1854.[4]

The stone walls and improvements made to the canal at the Rifle Factory in 1853-54 can be seen in the 1857 lithograph, Harpers Ferry NHP Negative No. 490. **(See Illustration No. 3, Volume II,p. 233.)**

APPROPRIATIONS FOR
U.S. ARMORY CANALS, 1852-54

Year:	Musket Factory Canal	Rifle Fcatory Canal	Total-Canals
8/31 1852	$ 1,650	0	$ 1,650
3/3/ 1853	4,000	5,000	9,000
8/5/ 1854	6,000(1)	0	6,000
Total	$ 11,650 (1)	$ 5,000	$ 16,650

(1) Figure includes $ 6,000 for erecting a wall and fence along the south side of the Armory Canal and also along the west or upper end of the Musket Factory Yard.

3. Serial No. 692, Document No.1, p. 278.
4. Serial No. 747,p. 362.

H. U.S. Armory Dams, 1852-1854:

1. The U.S. Musket Factory Dam on the Potomac:

In the annual report for the year ending June 30,1853, Brevet Colonel Benjamin Huger reprted that "The dam over the Potomac, which was much injured by the flood of [April] 1852, has been repaired, 1,083 perches of stone wall laid, and 916 cubic yards of filling."[1] No further work was mentioned in the annual report for the year ending June 30,1854.[2]

2. The U.S. Rifle Factory Dam on the Shenandoah, 1852-54.

The annual reports of operations of the superintendent for the fiscal years ending June 30, 1853 and 1854, make no mention of any repairs or construction being made to the Rifle Factory dam.[3]

Appropriations for Repairs and Improvements to U.S. Armory Dams, 1852 to 1854:

Years	Musket Factory Dam	Rife Factory Dam	Total Dams
8/31 1852	0	0	0
3/3/ 1853	0	0	0
8/5/ 1854	0	0	0
Total	0	0	0

1. Serial No. 692. Document No. 1, p.277.
2. Serial No. 747, pp.361-362.
3. Serial No. 692, Document No. 1, p.278; Serial No. 747, p.362.

I. Armory Dwelling Houses, 1852-1854:

1. Repairs and Improvements to Armory Dwelling Houses:

In his annual report for the fiscal year ending June 30, 1854, Major William H. Bell reported: "Master armorer's quarters (Dwelling No. 2- Park Bldg. No. 34-35), also the five buildings occupied by the clerks (on High Street, Houses No. 177, 179, 180, 182), have been generally repaired, painted and plastered. New kitchen built to the master machinist's quarters. principally of old materials; and other repairs."[1]

The repairs and other routine repairs made to armory workshops and storehouses were paid for from $ 4,000 appropriated in a general fund earmarked for the repair and preservation of public buildings.[2]

2. Rents Collected, 1852-54:

Due to the destruction of the Armory Paymaster's vouchers and rent rolls for the years 1852-1861, by the staff of the National Archives during the 1940's, this information is no longer available.

3. Demolition of Old Dwelling Houses.

Superintendents Benjamin Huger and William H. Bell continued the program and policy that had been instituted by Major John Symington in 1845 of demolishing the oldest and most delapidated of the Armory dwelling houses.

Approximately 18 houses valued at $ 4,550 went down between 1852-54 as follows:

Year	No. of Houses	Appraised value of houses:
1852	7	$ 850
1853	2	750
1854	9	2,950

1/ Serial No. 747, p.361.

2. $ 2,300 was provided on August 31, 1852, See Serial No. 633, Document No. 2, p. 212, item No. 4, and U.S. Statues at Large, X, p. 107; $ 1,700 was voted August 5, 1854, see Serial No. 714, Document No. 2, p. 188,189, item No. 11, also U.S. Statues at Large, X, 578.

Armory Dwelling Houses demolished (3)

House No.	Class	1852 Value	Location	Description	Year
33	13	$ 200	NW side Shenandoah St.	Stone, 2 story	1852 [1]
45	14	150	Between Shenandoah St. & Shenandoah River	wood, 1 story	1852
96	16	50	Washington Street	old school room. wood, 1 story	1852
113	15	100	Camp Hill- Lot 3, Block H,	Wood, 1 story	1852
115	16	50	Camp Hill- Lot 1, Block I	Wood, 1 story	1852
133	16	50	Camp Hill- on Public Square	Wood, 1 story	1852
152	12	250	In line between C.O.'s Quarters & Magazine	Wood, 1 story	1852
170	Site cleared	-	Shenandoah Street, river	site of slaughter house	1852
171	Site cleared	-	Shenandoah Street, on River bank	site of slaughter house	1852
Total	7 houses	$ 850			1852
36	12	250	North side of Shenandoah Street	Wood, 1 story	1853 [2]
41	8	500	North side of Shenandoah Street	Wood, 2 story	1853
Total	2 houses	$ 750			1853

In his annual report for the fiscal year year June 30,1854, Major William H. Bell noted briefly "Seven of the old buildings occupying reserved [to U.S.] ground have been removed, and sold to be removed."[4]

3. Snell, Charles W., "A Comprehensive History of the Congtruction, Maintenance and Numbers of Armory Dwelling Houses, 1796-1869", pp.109-115.

4. Serial No. 747, p.362.

Government Dwelling Houses demolished in 1854 (4) 1854

House No.	Class	1852 Value	Location	Description
157	9	$ 450	Upper Hall Island	Wood, 2 story
159	13	200	" " "	Stone, 2 story.
160	12	250	" " "	Stone, 1 story.
161	13	200	" " "	Stone, 1 story
163	11	300	" " "	Wood, 1 story
165	11	300	" " "	Stone, 1 story
166	11	300	" " "	Stone, 1 story
169	9	450	" " "	Wood, 1 story
141	8	500	Lot 8, Block A, Camp Hill	Wood, 1 story. (5)
Total	9 house	$ 2,950		1854

1852-54: 18 houses $ 4,550

Types of Armory Dwelling Houses demolished 1851-54

Material Build of	One-Story Houses	Two-Story Houses	Total Removed	Appraised Value
Wood	10	2	12	
Stone	4	2	6	
Brick	0	0	0	
1851-54: Total:	14	4	18	$ 4,550

4. Smith, Philip R.Jr., "Historic Building Site Survey Report: History of the Upper Hall Island, Harpers Ferry, 1796-1885, Harpers Ferry National Monument, West Virginia,"(NPS typescript, Harpers Ferry NM, W.Va., February 19,1959), pp.5-11.

5. Snell, Comprehensive Hostory ...of Armory Dwelling Houses,",p.114.

5. The 1852 Sale of U.S. Lots and Dwelling Houses

a. 1852 Map for Sale of Lots:

The Deputy Surveyor of Jefferson County, Va., S. Howell Brown, was engaged to prepare the final plat of the U.S. land at Harper's Ferry, which was to serve as the basis and map of record for the proposed sale of lots in 1852.[1] He completed his work and the map in April 1852. On July 1,1852, Brown was paid $ 340.00 "For 42½ days surveying & Dividing the United States land at Harper's Ferry into Lots & constructing 3 maps of same, including the services of chain carriers, Paper for Maps, and stakes for corners of lots @ $ 8.00 per day."[2]

Although the map was completed in April, the Secretary and Ordnance Department were slow in making the final decisions. A great flood struck Harpers Ferry on April 18 and did much damage to the Armory dwelling houses located along Shenandoah Street. Superintendent Huger thus finally wrote to Chief of Ordnance Henry K. Craig,

> You are aware the late flood either destroyed or injured many buildings; and all fences and out-buildings on the low grounds are washed away. Who is to repair them? The occupants will not do so, if they are to be sold, and I cannot, under the circumstances put the U. States to the expenses of their Repair. So no repairs are made, and many families are exposed to much annoyance and great incovenience, and as the season advances, to liability to sickness, for want of a final decision of the subject.[3]
> May I urge on you the necessity for getting such a decision."

Perhaps spurred on by his request, Secretary of War Conrad made the necessary decisions and gave his final approval on June 10, 1852, to the Board of Officers Report of September 24,1851 and also to S. Howell Brown's 1852 Map of Harpers Ferry.[4]

1. His signature and this date is on his map, "Map of Harpers Ferry by S, Howell Brown, April 1852," seeMap NF- HF- 9005.
2. U.S. to S. Howell Brown, July 1,1852, Reel 18, V. 12, p.1212.
3. Reel 26, Vol. 3, p. 284.
4. Reel 24, Vol. 8, p. 804-806.

b. Terms of the 1852 Sale of Lots:

The Secretary of War wrote:

> The Superintendent of the Armory is hereby directed to cause to be sold at public auction to the highest bidder, such of the lots as the Board of Officers.... did by their report of 24th September last, recommend to be sold. These lots as designated and described on a plat lately prepared by order of said Board, by S. Howell Brown Deputy Surveyor of Jefferson County, Virginia, to which I have this day affixed my signature, by Streets and Squares.
> (For Map, see page 64).
> From this Sale will be excepted such lots or portions of ground as are recommended in said report of 24th September, to be reserved. Also such other lots or portions of ground as are designated on the plat above described as the sites of Churches, parsonages, or public institutions of any kind, leaving to the persons or Corporations interested in said reservations to apply to Congress for a title to the Same, which I have no power to grant.
>
> The above sale shall take place after due advertisement at Harpers Ferry, on the 1st day of September next. If all the lots should not be sold on that day, no other sale shall take place, until a new order shall be issued for that purpose. The Superintendent will report his action under this Order. 5

Under the terms of the sale, as established by the Secretary of War, one-fourth of the cash was to be payable on the day of the sale and the remainder in two equal installments of one and two years after the date of the sale.

"If the whole amount of each instalment shall be punctually paid when the same shall fall due, no interest shall be charged thereon, otherwise interest at the rate of Six per cent per annum shall be charged on such instalment from the date of Sale until the final payment thereof.

"Workmen employed at the United States Armory will be allowed to purchase not exceeding two lots on the following terms, viz.

"One fourth cash, and the remainder at one, two, three, and four years without interest, provided the purchasers agree that an amount equal to the 1/12 part of each annual instalment shall be deducted from their monthly wages. If any workmen should cease to be in the employment of the Government he shall thence forward as regards instalment remaining due on property purchased by him, be subject to the same conditions as other purchasers."

5. Reel 24. Vol. 8, pp.804-805.

Finally, Secretary of War Conrad directed that "No deed of conveyance for any of the lots will be made until the price thereof shall have been paid in full."[6]

The Secretary of War further liberalized the sale of U.S. lots to Armory workmen and on July 23, Col. Craig notified Col. Huger of this decision, writing:

"The Secretary of War has this day given his sanction to the following rule:

It being for the interest of the Armory, that the workmen should not be unnecessarily distrubed in their residences in consequence of the sale of lots at Harpers Ferry on the 1st of September, the Commanding Officer of the Armory is authorized to appraise such of the lots to be sold, with the buildings and improvements thereon, as are occupied by Armory workmen, whose services it is desirable to retain, and to dispose of them, at private sale, to such occupants, at the appraised value. No workman will be permitted to purchase at private sale, more than one lot on which he resides, together with the improvements thereon; and any lot offered as above, and declined to be purchased at the appraised value, will be disposed of at public sale."[7]

On August 6, Col. Huger informed Col. Craig that "Mr. John Moler, a farmer of the neighborhood, and a landed proprietor, & Mr. J[eremiah] Fuss, a carpenter & practical builder, have been invited & consented to act as Appraisers."[8] These men were each to receive $ 4.00 per day.[9] The two men apparently completed the appraisal of the 57 dwelling houses that were to be offered for sale in seven days, for they submitted their individual report on each building on August 20, 1852 and received a total of $ 56.00 for their work.[10]

On July 26,1852, Superintendent Huger also requested permission "to employ an Agent instead of an auctioneer to superintend all the business of the sale at Public Auction on the 1st of September next, and that he should be paid a commission not exceeding 2½ per cent of the amount of sale made.

6.Reel 24, Vol. 8, pp.805-806.
7.Reel 19, V.6.p. 510.
8. Huger to Craig, August 6,1852, Reel 24, V.6, p.751. Huger's orders and instruction to appraisers Fuss and Moler, August 7,1852 are in Reel 24, Vol. 7, p.613.
9.Huger to Craig, July 26,1852, Reel 26,V.4, p.335-336. Approved by Craig, July 28, 1852. Reel 19, V. 6, p. 512-513.
10. Reports of John Moler and Fuss, A proved by Col. Huger, August 20,1852, Reel 24, Vol. 7, pp. 618-670.; paid, Huger to Craig, October 4,1852, Reel 24, V.6, p.604.

"I propose employing for this business M. S. Howell Brown the surveyor who laid off the lots, I consider him a responsible & suitable person, and if another is employed I will have to engage him also to resurvey & mark out each lot. I would prefer he should do it all for one price."[11] On July 28, Chief of Ordnance Henry K. Craig granted Col. Huger the requested authority to employ Brown to supervise the public auction.[12]

c. Results of the 1852 sale of Lots and Houses:

Brown, on his April 1852 map of Harpers Ferry, had laid out a grand total of 312 U.S. lots that were to be offered at the private sale held on August 31, and the pubic auctions of September 1 and 2,1852. Included in these sales were a total of 57 armory dwelling houses.

At the private sale August 31,1852, 50 Armory workmen purchased 53 armory dwelling houses and 51 lots (there were several double houses on single lots and one house straddled two lots!) for their appraised value, which totaled $ 31,525.00. The mechanics paid $ 8,153.00 in cash and bonds in the amount of $ 23,372 were issued for the balance, which were payable in full by August 31,1856.[13]

The four remaining Armory Dwelling Houses(which included a double house on one lot) and a total of 261 lots(258 of which were vacant) were offered at the public auction that took place on September 1 and 2 , 1852. One hundred and twenty six people placed bids on 211 lots and the four houses(No. 3-4, 46 and 52 on Shenandoah Street) and no bids were received on 50 vacant lots, probably because the latter were located in ravines or on steep hill sides. Under the terms of the sale, one-fourth of the total

13."Account Sales at Harpers Ferry Armory,made by Benjamin Huger, Bvt. Col. of Ordnance, Commidg., of Lots and Dwelling Houses there occupied by workmen in the Armory, and sold to them by order of the Secretary of War, at a value, ascertained by the Appraisement, hereto annexed of John Mohler, and Jeremiah Fuss,in August 1852, Harpers Ferry Armory, August 31, 1852, Reel 24, Vol. 7, p.614-617; Also Huger to Craig, Oct.4,1852,Reel 24,V.6,p. 604.

11.Huger to Craig, July 26,1852, Ree 26, Vol. 4, p.335-336.

12. Craig to Huger, July 28,1852, Reel 19, V.6, p.512-513.

price had to be paid in cash and three of the 126 bidder, who had placed bids on four lots, refused to do so . The remaining 123 bidders, however, who had bid a total of $ 27,034.83, made the required down payment of $ 7,818.95½ for their 207 lots and four houses in September 1852 and signed bonds for the balance that was due.[14] The results of the 1852 sale were as follows:

Date	No.of Buyers	Cash Paid	Bonds Issued	Total Bid	Lots	Houses
Aug.31	50 workmen	$ 8,153.00	$ 23,372.00	$ 31,525.00	51	53
Sept.1-2:	123 bidders	7,818.95½	$ 19,215.87 3/4	$ 27,034.83	207	4
Total:	173	$ 15,971.95½	$ 42,587.87 3/4	$ 58,559.83	258	57

The total number of different individuals purchasing U.S. lots and houses in 1852 was 159 and about 216½ acres of Armory land was sold in 1852.

Schedule of Payments was as follows, 1852-1860:

Year	No. of Bidders Deedsissued To:	No. of Lots deeds issed for	Amount collectd
1852	10	13	$ 18,623.58
1853	0	0	10,272.23
1854	10	27	9,349.33
1855	8	13	6,898.40
1856	64	78	5,615.64
1857	20	28	1,000.62
1858	4	8	823.73
1859	12	21	1,618.90
1860	5	8	197.43
Total:	133	196	$ 54,399.86

[15]

14. The reports of the Harpers Ferry Armory Paymaster for the 1852 sale, covering payments from 1852 to December 31,1860, are in National Archives Record Group No. 153- Military Reservation Division, Harpers Ferry, W.Va., Box 45,Washington, D.C.

15.Snell, Charles W.,"The Acquisition and Disposal of Public Lands of the U.S. Armory at Harper's Ferry, West Virginia,1796-1885,(Volume I, a Narrative History(NPS typescript, National Capital Team, Denver Service Center,December 1979),pp.26- 31

In the total of $ 54,399.86 received by the Government from the 1852 sale to December 31,1860, was $ 1,758.08 that had been paid by 23 bidders on 34 lots and one house, on which they failed to complete the balance of payments. The Government kept this money and title to the 34 lots remained in the United States. After the Civil War in the period 1866-69, 18 purchasers completed their payments, which totalled $ 1,827.41, and received deeds to 28 additional lots. Final resultsof the 1852 sale were that 134 different buyers purchased title to 56 houses and 224 lots for $ 56,227.43, The U.S. government still retained title in 1869, to 88 vacant lots of the total of 312 lots that had been offered for sale in 1852.[16]

In addition to the 224 lots sold and paid for, the U.S. Government also leased 11 lots to the following churches and town government of Harpers Ferry.in 1852:

Block	Lot No.	Location	Organization
B	4	Shenandoah Street	Market House, Town of Harpers Ferry.
D	2	Shenandoah Street	Catholic Church Parsonage Lot
D	3	Shenandoah Street	Presbyterian Church Parsonage Lot.
E	2	Shenandoah Street	School House Lot, Town of Harpers Ferry
A	1	Camp Hill	Protestant Epsicopal Church
A	8	Camp Hill	Parsonage Lot.
D	2	Camp Hill	Methodist Protectant Church Parsongage Lot.
H	3	Camp Hill	Methodist Epsicopal Church Parsonage Lot.
I	9	Camp Hill	School House Lot, Harpers Ferry Town
J	2	Camp Hill	Lutheran Church site and lot for
J	3	Camp Hill	Parsonage

Total 11 lots. (17)

16.Snell, C.W.,"Acquisition and Disposal of Public Lands," 28-31.
17, Ibid.p.31.

Number and Type of Armory Dwelling Houses sold, September 1852
(in Private Ownershop, January 1,1855)

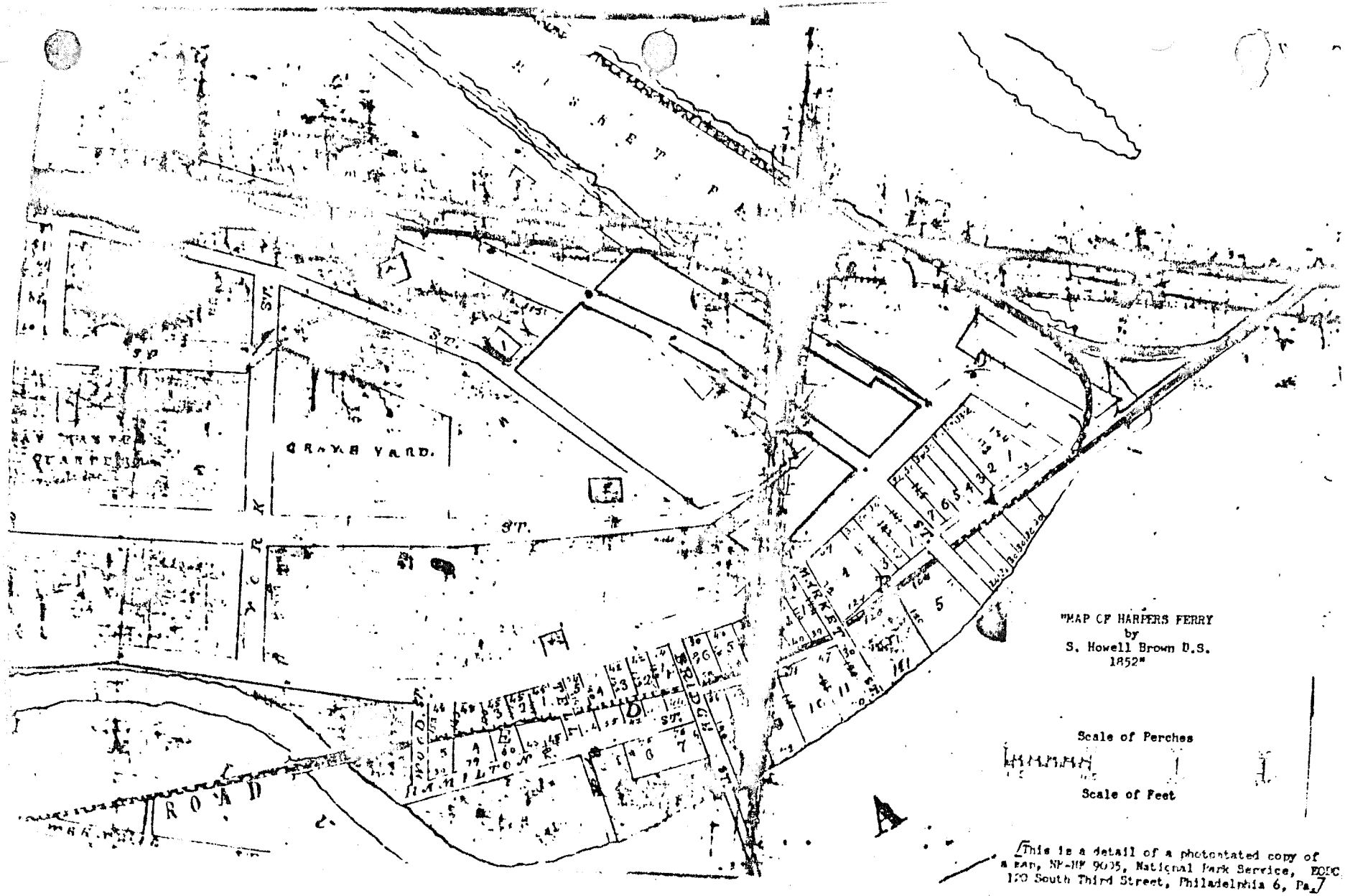
Material Built of	One-stony Houses	Two-story Houses	Total No. Of Houses	Sale Value
Wood	15	3	18	
Stone?	1	8	9	
Brick	8	22	30	
Total:	24	33	57	$ 35,757

S. Howell Brown, who conducted the 1852 sale at the public auction, received his commission of $ 678.04, at 2½ percent for the houses and lots sold, on October 4, 1852.[18]

A second effort to dispose of the remaining[54] unsold vacant lots was made at a public auction held on February 17,1853, but the sale was halted by Superintendent Benjamin Huger when the highest bid received for any lot was only five dollars.[19] No further U.S. land at Harper's Ferry was to offered again for sale until 1869.

Major John Symington's plans for selling U.S. Armory Dwellings and vacant lots to the Armory workmen, approved in 1851, and put into effect in September 1852, was thus generally succesful in achieving its desired effects and also produced a grand total of $ 56,227.43 in the proceeds of the sale.

18. U.S. to Brown, October 4,1852, Reel 18, V.12, p.1214.
19. Snell,C.W."A Comprehensive History," 101-102.



"MAP OF HARPERS FERRY
by
S. Howell Brown U.S.
1852"

Scale of Perches

Scale of Feet

This is a detail of a photostated copy of a map, NP-HF 9035, National Park Service, EODC 150 South Third Street, Philadelphia 6, Pa.

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d. Lots Sold at the Sale of U.S. Land held at Harper's Ferry, Virginia, August 31, September 1 and 2, 1852

CHART NO. 6

Block	Area	Numbers of Lots sold.	No. sold
A	Shenandoah Street	(None offered for sale) U.S. Land	0
B	" "	Lot No. 5. (Lot 4 leased)	1
C	" "	1,2,3,4,5,6,7,8,9,10.	10
D	" "	1, 4, 5, 6, 7. (2 and 3 leased)	5
E	" "	1, 3, 4,5. (lot 2 leased)	4
A	Camp Hill	2,3,4,5,6,7. (1 and 8 leased)	6
B	" "	1,2,3,4,5,6,7,8,9,10,11,12.	12
C	" "	1,2,3,4,5,6,7,8,9.	9
D	" "	1, 3,4,5,6,7, 8,9. (2 leased)	8
House	High Street	House No. 55 with lot.	1
E	Camp Hill	1,2,3,4,5,6.	6
F	" "	1,2,3,4,5,6,7,8.	8
G	" "	1,2,3,4,5,6,7.	7
H	" "	1,2, 5,6,8,9,10 (3 leased)	7
I	" "	1,2,3,7,8,11,12,13,14,15,16. (9 leased)	11
J	" "	1, 4,8,9,14,15,16. (2,3,church lot leased)	7
K	" "	1,2,3,4,5,6,7,8,9,10,12,13,14,	13
L	" "	1,2,3,4,7,8,9.	7
M	" "	1,2,3,4,5.	5
N	" "	1, ,5,6,7.	5
O	" "	1,2,3,4,5,6,7,8½,9,10,11,12,15,16.	14
P	" "	1,2,3,5,7,9,11,12,13,15,16,17,20.	13
Q	" "	7,9,10,11,12,13,14,	7
R	" "		0
S	" "		0
T	" "		0
U	" "		0
V	" "	7,8,9.	3
W	" "	1,2,3,4,5,6,7,8,9,12,13,14,15,16,17,18,19.	17
X	" "	1,2,3,4,5,6,7,8,9,10,11,13,14,15,16, 8½, 9½.	17
Z	" "	1,2,5,6,7,8.	6
1	" "	1,2,3,4	4
2	" "		0
3	" "	1,2,3,4,5.	5
Y	" "	1,2,3,4,5,6,7.	7
	TOTAL:	312 lot and 57 houses offered: Sold, 56 houses &	224

National Archives Record Group 121, Public Buildings Service, Entry No. 76-"Deeds from United States, Harpers Ferry, Ordnance Department," (2 vols.), Vol. I, pp. 1-201; 395-491. Sold to 134 buyers.

e. How to dispose of the Proceeds of the 1852 sale?

On October 15,1852, Brevet Col. Benjamin Huger raised the question of how to expend or dispose of the some $ 58,559.83 that was apparently raised by the September sale of Armory dwellings and house lots. Writing to Chief of Ordnance, Col. Henry K. Craig, Superintendent Huger suggested:

I now recommend that the amount received from the sale of part of the public property here, may be taken up, under the appropriation of repairs and improvements, and applied to improving the part retained by the U.S..

I would propose to apply these funds- 1st to build quarters on the blocks (on Camp Hill) reserved for the purpose, for the Officers of the Armory, (Master Armorer & Clerks.).

The buildings now occupied by these are on lots to be sold. As they are entitled to quarters, these cannot be sold until others are built.

New quarters should be erected & the sale of the lots and houses now occupied by these Officers would replace the amount so used.

2nd. To grade and drain the grounds -great injury has been done, & more expense incurred from year to year in repairing damages done by wash into the canals than would be required so to grade & drain the grounds as to prevent the wash.

Although many improvements have been made by my predecessors, these were necessilary confined to building workshops &c.. They were unable to do any thing towards getting the grounds in order.

3rd. To open good & convenient roads between the different public establishment..."[20]

On October 19,1852, Col. Craig submitted Huger's suggestions to the Secretary of War and recommended that they be approved.[21] Secretary of War Conrad, on November 12,1852, declined to approve the plan, explaining: "I do not think it would be regular for this Department to determine what use should be made of the money arising from the sale of the lots - The money had never been appropriated by Congress, and they alone have the right to dispose of it. It must therefore be deposited in the Treasury, but not to the credit of any existing appropriation- leaving to Congress to appropriate whatever sums may be required for repairs & improvements at the Armory."[22] There the matter rested until 1856. In the meantime the fund increased in size as the purchasers made their payments on their houses and lots.

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20. Huger to Craig, October 15,1852, Reel 24, Vol. 8, pp.777-778.
21. Craig To Sec. of War Conrad, Oct.19,1852, Reel 20, V. 2, 110.
22. Decision of Secretary of War Conrad, dated Nov.12,1852, and transmitted by Col. Craig to Huger, Nov.13,1852, Reel 19, Vol. 6, pp.545-546. Also see Snell, Charles W.,"Comprehensive History of....Armory Dwelling Houses,"100-103.

J. U.S. Timber Rights and Wood Rangers, Loudoun Heights, 1852-61:

From January 1,1852 until at least March 26,1857, William McSherry was employed by Superintendents Benjamin Huger, William H. Dell, and Henry W. Clowe as "supervisor of the public woodland" at a salary of $ 100 per year.[3] A "Wood Ranger " was also employed from 1857 to 1861 to protect the Government timber and to also provide wood. The inspection report of the Harpers Ferry Armory dated April 14,1859, described the situation as follows: "The mountain tract has since 1854 been in charge of a wood ranger who received for this service $ 100 per annum. During this period he has had the privilege of supplying the Armory with such fuel, charcoal, rails, logs, and posts as were requiredm all being cut and made on this tract.

"For the wood he receives $ 3.65 per load, But as the highest price in

3. Petition of William McSherry to the Secretary of Warn March 26,1857, Reel 26, Vol. 6, pp.554-556.

William McSherry,in 1852, was living in Armory Dwelling House No. 176, a two-story brick house located on High Street,on Wager Lot No. 18-Rent Rolls.

" the market for a better quality and measure than he is said to give, is is $ 3.50 per load, it would appear that the Government has been paying for some years at least 15¢ per load for the privilege of burning its own wood, besides giving the ranger $ 100 per annum to attend it. The Superintendent (Alfred M. Barbour) reports that both wood and coal can be purchased in the open market or by contract at much cheaper rates,,," 4

By 1854 the problem of squatters taking up residence on the Loudoun Heights woodland required action. On May 16,1854, Col. Henry K. Craig, Chief of Ordnance informed the Secretary of War that he District Attorney of the United States was being asked to "institute the necesary legal proceedings to prevent a continuance of the Tresspass," and that the lawyer Andrew Hunter of Charles Town was being engaged to help the District Attorney in this matter. 5

Major William H. Bell, Superintendent of the Armory, had on May 12,1854, provided the Chief of Ordnance with a list of name of 19 persons who occupied ground with houses in which they resided without permission from the armory, and a list of three people who lived off the U.S. woodland, but who also used U.S. wood and timber without permission. 6

These cases were fought through the courts for two years. The Armory won its first case but only after having spent some $ 1,700 to prosecute. It was therefore decided that it was too costly to prosecute remaining cases and further legal action was halted, in December 1857. 7 On the advice of their attorney, Andrew Hunter, the government henceforth negotiated with those still living on the land to obtain from them "a distinct recognition and title of the U.S. ,and that they occupy under, and by permission of the Government, with the

4. Inspection Report of Harpers Ferry Armory, April 14,1859, Photostats, Vol. 4, p.3; Also Smith, Philip R. Jr., "Research Report- History of Loudoun Heights, 1813-1880, Harpers Ferry National Monument, West Virginia," (NPS typescript, Harpers Ferry NHP, W.Va., June 9, 1959), 9-10.
5. Craig to Sec. of Warm May 16m 1854m Reel 26, Vol. 4, p.338.
6. Bell to Craig, May 12,1854, Reel 26, V.4, pp.341-344.
7. Craig to Secretary of War Floyd, December 9,1857, R el 26m V.6, p.340.

"understanding that they be permitted to remain, until notified after a certain period to leave, or that they may be compensated for their improvements, which I understand would be of very little value in the aggregate,..."[8]

In April 1860 there were still five persons living on the Loudoun Heights forestlands and the total appraised value of their property was $ 660.[9] On April 11,1860, Chief of Ordnance Craig informed Superintendent Alfred M. Barbour: That the squatters against whom the ejectment suits had been brought should be allowed to remain tenants at will upon acknowledging in legal form that they so held, or should be compensated for their improvements if they quit...:[10]

8.Hunter to Col. Craig Nov.28,1857, Rrel 26, p.544-556.
9. Appraisal of property of squatters on Fairfax Mountain,April 3,1860. Appointed by Supt. Am.Barbourm and Andrew Hunter, the three [illegible] appraisers were Edward Tearney, E.H. Chambers, and Thomas Thrasher,Reel 27,V.7,p.690.
10. Craig to Barbour, April 11,1860, Reel 19, V.11, p.1100-also Smith,P.R.Jr., "History of Loudoun Heights," 11-12.

Expenditures on Repairs and Improvements by the Military Superintendents of the U.S. ARMORY AT HARPER'S FERRY, VIRGINIA, 1842-June 30,1854

Superintendent:	Dates	Expenditures	Appropriated
Major Henry K. Craig	Jan.1, 1842- 30 June 1845:	$ 141.487.53	$ 108,500.00
Major John Symington	July 1,1845 to Dec, 31,1851.	384,153.24	335,702.00
Brevet Col. Benjamin Huger and Major William H. Bell	January 1,1852 June 30,1854	134,360.29	92,450.00
Total:	Jan.1,1842 to June 30,1854:	$ 660,001.06	$ 536,652.00

Construction Program at Harpers Ferry Armory, 1842-1854

Superintendents:	New Buildings Major	Minor	Total	Remodeled Bldgs.	Acquired Bldgs.	Bldgs. Demolished	Houses Sold
Henry K. Craig 1841-1844	4	2	6	0	0	4	0
John Symington 1845 - 1851	17	3	20	2	8	64	0
Huger & Bell 1852 - 1854	3	5	8	2	0	19	57
TOTAL:	24	10	34	4	8	87	57

New Buildings erected at, 1842- 1854:

By Superintendent	Musket Factory	Rifle Factory	Other	Total
Craig,1841-44	5	1	0	6
Symington,1845-51	12	4	4	20
Huger & Bell,1852-54	5	2	1	8
Total:	22	7	5	34

Symington remodeled two old buildings at the Musket Factory and Huger remodelled two old buildings at the Rifle Factory.

PART II- THE CIVILIAN SUPERINTENDENTS, 1855-61

CHAPTER V - HENRY W. CLOWE AND ALFRED M. BARBOUR

A. General

For political reasons, President Franklin Pierce signed into law on August 5,1854 a measure that restored civilian superintendents to command of the National Armories at Harper's Ferry and Springfield, Mass., as had been the case from 1794 to 1841.[1] The last military superintendent, Major William H. Bell, departed from Harpers Ferry, apparently in August 1854, and Major Armorer Samuel Byington acted as the acting superintendent from August to December 31,1854, when the new civilian superintendent, Henry W. Clowe, was appointed to the office. Clowe had been employed at the Harper's Ferry Armory since at least 1841. During the years 1841 to 1849 he resided in Armory Dwelling House No. 105, a one-story stone house, valued at $ 600 and located on Camp Hill. His rent was $ 9.25 a quarter. By December 31, 1850, he become an master machinist of the armory and was living rent free in Armory Dwelling House No. 103, a two-story brick house valued at $ 900, which was located on Block F, Lot No. 1, Camp Hill. He was still living in House 103 in 1852. His earlier House, No. 105, was siutated on Lot. No. 4, Block F.,Camp Hill.[2]

In December 1858, Secretary of War John B. Floyd was forced to removed Clowe as superintendent of the Armory because of Clowe's general mis-management of the Armory,[3] even through both Floyd and Clowe were fellow Democracts. Clowe then returned to his former position as master machinist.

On December 24,1858, Secretary of War Floyd announced the appointment of Alfred M. Barbour as the new civilian superintendent of the Harper's Ferry Armory.[3] A political choice, Barbour was a lawyer from nearby Charles Town, Va. Barbour was to be the last superintendent of the Harper's Ferry Armory, serving

1. U.S. Statues at Large, Vol. X, p.578. See Smith, Merritt Roe, Harpers Ferry Armory and the New Technology, p.301-304 for more detailed discussion.
2. Data from rent rolls, Records of 2nd Auditor, Treasury Department, National Archives Record Group 217, 2nd and 3rd series.
3. Smith, Harpers Ferry Armory, p. 302.
3. Ibid., p. 303.

in that office from December 24,1858 to April 19, 1861, when Confederate troops seized the Armory by force of arms. On March 22,1861 he submitted a letter of resignation which not accepted until April 1861. During this latter period he was actively engaged in Richmond,Virginia, in preparing and facilitating Confederate plans to capture the Harpers Ferry Armory.[4]

During the period July 1,1854 to June 30,1860, a total of $ 251,019.36 was spent for repairs and improvements and the purchase of land at the Harper's Ferry Armory.

B. Expenditures for Repairs and Improvements, Harpers Ferry Armory, 1854-1860

Calender Year:	Appropriated	Spent during year	Balance carried over June 30 Treasury	From Sale of land in 1852	Date Appropriated
1854-1855	0 (5)	$ 37,292.67	0		8/5/54
1855-1856	52,673.00	39,858.00	$ 37,850.00		3/3/55
1856-1857	38,892.00	45,081.91	53,625.03	36,606.70	4/23/56 8/30/56
1857-1858	34,970.00	25,044.68	18,000.00		3/3/57
1859-1859	101,907.00	32,663.07	38,900.00		6/12/58
1859-1860	55,000.00	71,079.03	88,608.40		3/3/59
1860 1861	65.500.00	?	?	-	6/12/60
Sub-TOTAL	348,942.00 + 36,606.70	$ 251.019.36	-	36,606.70	4/19/61 Armory captured.
1861-L862	64,500.00	0			3/2/61
Total	413.442.00 36,606.70				
Total	$ 450,048.70				

4. Smith, Merritt Roe, Harpers Ferry Armory, p.315.

5. The $ 35,100 appropriated has been included in the totals in the proceeding chapter, as money requested by the military superintendents.

The census of 1860 provides the following data on the two civilian Armory superintendents of the 1855-1861 period:

Henry W. Clowe, born in Virginia, was 48 years old in 1860. His real estate was valued at $ 2,000 and his personal estate at $ 500. His wife Sarah, 38 years old, and Clowe had two daughters and three sons living with them, ranging in age from 8 to 18. Clowe's occupation in 1860 was listed as "armorer."[A.]

Alfred M. Barbour, "Superintendant of U.S. Armory," in 1860 was 28 years old and had been born in Virginia. The value of his real estate was estimated to be $ 5,000 and the value of his personal estate, $ 10,000. He was married to Kate D. Barbour, aged 20, and the couple had no children.[B]

A. National Archives Record Group No. 29, Reel No. 1355.
B. Ibid.

C. Final Dispostion of the Proceeds of the 1852 sale of U.S. Lots.

The chart on the preceeding page reveals that from March 3,1855 to June 12, 1860 the U.S. Congress appropriated a grand total of # $ 348,942.00 in projects designated as repair and improvement at the Harper's Ferry. In addition, on April 23, 1856, they also voted that $ 36,606.70 that had been collected from the 1852 sale of lots and houses and deposited in an special account in the U.S. Treasury, could be used to make repairs and improvements on the Armory land at Harper's Ferry. The total amount of money available for repair and improvement projects at the Armory from March 3,1855 to June 12,1860 was thus $ 385,548.70.

Under the joint resolution of Congress, passed April 23,1856, it was resolved. "That the Secretary of War be and he is hereby authorized to apply so much of the proceeds of the recent sale of land and lots at Harper's Ferry, as he may deem advisable, to the purchase of such other lots at that place, as he may deem necessary to the safety and convenience of the public buildings belonging to the United States, and that he may apply the residue of the proceeds of said sale to the improvement of the property retained by the United States."[6]

In the last chapter, it was noted that Col. Benjamin Huger,October 15,1852, had suggested to the Chief of Ordnance that the proceeds of the 1852 be used to make improvements at the Armory, but had been turned down by the Secretary of War. Huger following the guide lines laid down by the Board of Officers in their report of September 24,1851,which had been approved by the Secretary of War on June 10,1852, had worked out detailed estimates of the work that should be dowe to Armory grounds and streets, if the proceeds of the 1852 sale were made available. On March 18,1854, in reponse to the request of Representative Charles F. Faulkner of Virginia , Major William H. Bell,

6.U.S. Statues at Large, XI, p. 143.

Superintendent of the Harper's Ferry Armory, provided both the Congressman and the Ordnance department with copies of Huger's 1852 estimate and other documents relating to the 1852 sale.[7] He also advised Faulkner that To March 31,1854, a total of $ 27,692.31 collected from the sale had been deposited in the special account in the U.S., Treasury, that the Armory Paymaster had on hand $ 2,100.00 that had not yet been deposited,making a total of $ 29,792.31 collected and the unpaid balance outstanding was $ 28,854.52.[8]

This information served as the basis for Congressman Faulkner's actions which led to the passage of the joint resolution of Congress on April 23,1856. By this date the total amount collected had risen to $ 33,725.27 and by June 1856 the total stood at $ 36,606.70. Huger's and Baker's September 1852 estimates thus appearsto have served as the chief basis of the improvement program totalling $ 36,606.70 that Secretary of War Jefferson Davis acting under approved, the joint resolution of Congress, on June 28,1856:[9]

This $ 36,606. 70, added to the $ 38,892.00 appropriated in repair and improvement appropriation, made a grand total of $71,576.70 available for construction during the 1856-1857 fiscal year.

The records of the Treasury Department of disbursals of funds to the Harper's Ferry Armory Paymaster indicates that an additional $ 6,218.74 from the proceeds of the 1852 sale, money paid in during the period 1856-60, was made available by the Secretary of War for making improvements at Harpers Ferry. The grand total expended from this fund from 1856 to 1861 was thus $ 42,825.44.(See Chart No. 2, page 366.).

The improvement program approved by Secretaryof War Jefferson Davis on June 28, 1856 was comprised of the following 10 projects:

7. Bell to Faulkner, March 18,1854, Reel 25, Vol. 1,pp.80-88.
8. Ibid., p.80.
9. Chief of Ordnance Henry K. Criag to Superintendent Henry W. Clowe, Reel 19,Vol.9, p.871. Also Secretary of War to Secretary of Treasury, Mar 7,1856, Reel 26,V.5,p.466. Sec.of Treasury to Sec. of War, May 10,1856,Reel 26, V.5, p.464; Craig to Sec.of War, May 3,1856, Reel 20, V. 3, p.231-232; Criag to Clowe, May 10,1856, Reel 19, V. 9,pp.862-863. Receipts,Expenditure, and Deposits for 1852 lots at Harpers Ferry, are on Reel 18, V. 12, pp.1205-1207.

Proceeds of 1852 Sale of Public Lots and Houses, made available June 28, 1852, for making the following improvements at the U.S. Armory at Harper's Ferry during the 1856-57 fiscal year:

1. Purchase of (Wager) Lot 17 (to be made into a street)	$ 1,466.00
2. Erection of three quarters (Master Armorer's new house, Park Bldg. No. 36; Paymaster's Clerk's Quarters, Park Bldg. No. 58; Superintendent's Clerks's Quarters, Park Bldg. No. 57)	18,000.00
3. Grading and Opening Street	5,613.20
4. Repairs of Finishing Shop (Bldg. No. 3) Rifle Factory	2,860.00
5. Enclosing grounds of new magazine and new stock house (Bldg. No. 11 of Musket Factory)	1,000.00
6. Cleaning well on Fillmore Street (Camp Hill) and Pump	200.00
7. Completing protection and improvement Rifle Factory	3,993.00
8. Filling, grading, and paving East end at North Cliff (making Wager Lot 13 into a street)	357.50
9. Extending Arsenal Square (Blocks A and B, Shenandoah Street)	2,917.00
10. Removing building from (Wager) Lot 17	200.00
	$ 36,606.70 (10)

The additional $ 6,218.74 spent from the proceeds of the 1852 sale were apparently expended to meet the cost overruns in the construction of three new quarters for the Master Armorer, the Superintendent's Clerk, and the Paymaster's Clerk, and the addition of a second story to the Paymaster's Quarters. The final total cost of this work was thus $ 24, 218.74 and not $ 18,000 as had been estimated.

The money approrpiated by Congress for repair and improvement, plus the $ 42,825.44 made available from the proceeds of the 1852 sale of public houses and lots, was to be used as follows during the period 1855 to 1861:

10. Col. Craig to Supt. Henry W. Clowe, June 28,1856, Reel 19, V.9, p.871.

SUMARY SHEET:

APPROPRIATIONS FOR REPAIRS AND IMPROVEMENTS AT THE HARPER'S FERRY ARMORY
1855 - 1861

Calender Year:	Musket Factory	Rifle Factory	Arsenal Square	Canals	Dams	Officers' Quarters	Wells	Streets
3/3/ 1855	$ 1,971	8,180		5,839				9,650
8/30/ 1856	10,689	2,050	5,761	2,670	7,000			422
3/7/ 1857	1,766	6,853	2,917			18,000	200	7,636.70
6/12/ 1858	11,103	0	27,325	8,479	40,000			
3/3/ 1859	1,600	15,820		10,730	26,000			
6/21/ 1860	28,650							
3/27/ 1861		12,128 *		23,092 *		2,000 *		
TOTAL	$ 55,779	$ 45,031	$ 36,003	34,476	$ 73,000	$ 20,000	$ 200	$ 17,708.70
TOTAL SPENT	$ 55,779	$ 32,903	$ 36,003	$ 33,741	$ 73,000	$ 18,000	$ 200	$ 17,708.70

* Money never spent.

SUMMARY SHEET: APPROPRIATIONS FOR REPAIRS AND IMPROVEMENTS AT THE HARPERS FERRY ARMORY, 1855-61

Year:	Machinery	Total
3/3/ 1855	7,033	$ 32,673.00
8/30/ 1856	10,000	38,892.00
3/7/ 1857	34,204	71,576.70
6/19/ 1858	15,000	101,907.00
3/3/ 1859	850	55,000.00
6/21/ 1860	36,850	65,500.00
3/2/ 1861	27,280 *	* 64,500.00
TOTAL	$ 131,217	$430,048.70
TOTAL SPENT	$ 103,937	$ 365,548.70

* Money never spent.

D. U.S. Musket Factory, 1855 - 1861:

During the period 1855 to 1861 a total of $ 50,056 was appropriated and probably spent making repairs and improvements to the buildings and grounds of the U.S. Musket Factory: Major improvements included the following:

1. Conversion of the 1846-47 Storehouse for Stocks to a Millwright Workshop in 1859-60. Cost, $ 11,103.00. Musket Factory Bldg. No. 7.

2. Construction of Connecting Workshop,Bldg. No. 21, linking Musket Factory Buildings No. 7 and 8, 1860-61. Cost about $ 5,951. Large two-story brick shop.

3. Addition of 2nd brick story to Bldg. 8A, Grinding Mill, east wing of Bldg. 8, in 1860-61. Cost about $ 800.00.

4. Construction of Bell Tower Workshop,Bldg. No. 22, connecting Bldgs. No. 6 and 7, in 1860-61. Cost about $ 8,073.50.

5. Construction of the formal entrance wall on Wager Lot No. 11 in 1854-55. Cost, about $ 1,000.00.

6. Additional coal bins were constructed under the trestle of the B. &. O. Railroad tracks.

7.The 1851 frame horse and carriage shed, located near the main gate, was removed from the Musket Factory yard in 1856.

8. A smaller frame horse shed was built under the B.&.O. treatle in 1856.

9. 1855-57 about $ 10,723 was expended constructing a stone wall that was topped by an iron paling fence along the south bank of the Armory canal, between the canal and North Cliff(or Potomac) Street. This wall was about 1,365 feet long.

10.1854-55, about $ 1,000 spent constructing a brick pier and iron paling fence enclosing the the western or upper end of the Musket Factory Yard.[1.]

Details of this construction follow:

1.The costs and details of the enclosing walls along the canal are considered under the section on the U.S. Potomac Canal,1855-61.

APPROPRIATIONS FOR REPAIRS AND IMPROVEMENTS AT THE U.S. MUSKET FACTORY, 1855-1861

Year:	Bldg.2 Offices	Bldg. 3 Bell Shop	Bldg. 6 Machine Shop	Bldg.7 (Old Stock) Millwright Shop	Bldg.8 Grinding Mill	Bldg. 11 New Stock House & Grounds	Bldg. 21 Connecting Shop	Bldg. 18 Rolling Mill
3/3/ 1855				363				1,432
8/30/ 1856		1,000				3,183		
3/7/ 1857	766					1,000		
6/12/ 1858				11,103				
3/3/ 1859					800	800		
6/21/ 1860			600				7,025	15,000
3/2/ 1861								
TOTAL	$ 766	$ 1,000	$ 600	$ 11,466	$ 800	$ 4,983	$ 7,025	$ 16,432

APPROPRIATIONS FOR REPAIRS AND IMPROVEMENT AT THE U.S. MUSKET FACTORY, 1855-1861

Year	Coal Bins	Paving Walks	Bell Tower & Shop	Bldg. 22 Total Bldgs. Grounds	U.S. Canal	U.S. Potomac Dam	Total Bldg. Dams, Canals	Enclosing SouthhWall	
3/3/ 1855	176			$ 1,971	2,334	0	4,305		
8/30/ 1856	223	560		10,689	2,670	7,000	20,659	5,723	
3/7/ 1857				1,766	0	0	1,766		
6/121/ 1858				11,103	6,479	40,000	57,582		
3/3/ 1859				1,600	10,730	26,000	38,330		
6/21/ 1860			6,025	28,650	0	0	28,650		
3/2/ 1861				0	11,693*	0	11,693		
TOTAL	$ 399	$ 560	$ 6,025	$ 55,779	34,476	$ 73,000	$ 163,255	5,723	
TOTAL SPENT	$ 399	$ 560		55,779	$28,236	$ 73,000	$ 151,292		

* Money never spent.

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1. Improvements for Armory Office ,Building No. 2,Musket Factory, 1857-1860

The paymaster's vouchers for the period 1852 to 1861 were destroyed by the National Archives in order to save space during the 1940's, hence it is impossible to trace any minor alterations or repairs that may have been made during the years 1852-61.

The estimates for the year 1857-58, however, requested the sum of $ 766.00 to erect an "iron fence and gates in front of armory offices". It was explained that "the building in the armory yard devoted to offices, and in which all the offices of the armory with their clerks, including the vault of the military storekeeper and paymaster, is without any enclosure. It is proposed to construct a iron fence in front, so as in a great degree to separate it from the business of the yard,and as a better and further protection to the records and papers of the establishment."[11] The requested amount was appropriated[12] on March 7,1857.

In his annual report for the year ending June 30, 1858, Superintendent Henry W. Clowe reported: " 35 cut stone bases, for fence in front of armory offices, have been purchased ready for doing the work."[13] The completion of this iron fence, however, is not mentioned in the superintendent's annual reports for June 30, 1859 and June 30,1860,[14] so that iron fence with piers of brick and cut stone was probably not erected prior to the Civil War(1861). HFNHP Negative HF-27B, an excellent photograph showing the front of the Armory Office building in 1865, apparently confirms this, as no fence is visible in front of the Office.

11. Serial No. 909, Document No.192, p.162.
12. U.S. Statues at Large, XI, p. 203.
13. Serial No. 976, Document No.1, p. 1319.
14. Serial No. 1025, Document No.1, p.1114 for 1859; Serial No. 1079, Document No.1, p.973-974.

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14. Serial No. 1025, Document No.1, p.1114 for 1859; Serial No. 1079, Document No.1, p.973-974.

In his annual report for the fiscal year ending June 30, 1860, Superintendent Alfred M. Barbour reported that the "new privy at offices" had been completed.[15] **What is probably this brick structure can be seen in Harpers Ferry Negative No. 539, a photo taken in 1886.**

15. Serial No. 1079, p. 973.

2. Repairs and Improvements to the Old Bell Shop, Bldg. No. 3, Musket Factory, 1855-1860:

In his first annual report, for the year ending June 30, 1855, the new superintendent, Henry W. Clowe reported, regarding the Bell Shop:

" Machines fabricated:

47 feet, lineal, main line shafting put up and in operation on first floor of bell shop.

32 10/12 feet, lineal, counter-line shafting, put up and in operation on first floor of bell shop.

This shafting is of the latest and most approved style, finished bright, with cast-iron pulleys, gearing, and metallic journals....

Various and extensive improvements have been made to the main and counter-line of driving machinery on the second floor of the bell shop...; to the water-wheel at bell shop, improving the head-gates of the same..." 21.

The estimates for the 1856-57 fiscal year contained a request for $ 1,000.00 "for forebay for cast-iron water-wheel at bell shop;" it was explained: "The present forebay for this wheel is of wood, having been constructed about 18 years ago, and is in a very dilapiated and decaying condition, The timbers are constantly giving way, causing not only a great waste of water, but requiring constant renewing. This estimate proposes that the entire frame-work of the forebay be of iron; the planking to be of yellow pine two inches thick, secured with iron bolts and straps." 22

The requested money was appropriated on August 30, 1856. 23

Finally, under the heading of machinery made, Superintendent Clowe, in his annual report for the year ending June 30, 1856, noted:

"31 feet of main line, and 38 of counter shafting, with pulleys of cast-iron, finished bright, of uniform size, of good quality, and the most approved construction, have been fabricated and put in operation on the first floor of the bell shop; and 38 feet of old counter shafting removed, as unfit for service.

65 feet of main line and 69 9/12 feet counter shafting, with cast-iron pulleys, hangers, and white metal journal seats, with pans for catching the oil from the journals, oil cups, cone pulleys, belt shifters, &c., all complete as above; and 98 feet of old main line, and 125 feet 4inches of the old counter shafting, removed as worn-out and unservicable from the second floor of the bell shop. 24

21. Serial No. 841, Document No.1, p. 556.
22. Serial No. 865, p. 245, 247, item No. 11.
23. U.S. Statues at Large, XI, p.150.
24. Serial No. 876, Document No.1, p. 388.

In the report for the year ending June 30,1857, Clowe reported:

Fifty feet main line shafting, and 210 feet of counter shafting, of superior quality, finished bright, with cast iron pulleys, hangers, and Babbitt metal journal bearings or seats, have been completed and in operation on the first and second floors of the bell shop and boring mills, in the stocking shop, and on the first and second floors of the machine shop."[26]

In the report for the fiscal year ending June 30,1858, Clowe noted that " 1 cast iron forebay for water wheel at bell shop, [had been] fabricated" and that "1 set of gearing, shafting,&c. for head of forebay [had also been] fabricated."[26] **The cast-iron forebay was apparently installed at the Bell Shop in 1858-59.**

25. Serial No. 920, p. 550.
26. Serial No. 976, p. 1318.

3. Alterations and Repairs to the Boring Mill, Musket Factory Bldg.No.5, 1855-1861:

In the annual report for the fiscal year ending June 30,1856, Superintendent Henry W. Clowe noted that "94 feet counter shafting and machinery on second floor of boring mill so improved as to allow the removal of 115 7/12 feet of shafting, with pulleys, fixtures,&c, and simplify the machinery, economize oil and belting and reducing the friction equal to the amount removed."[1]

In the report for the year ending June 30,1857, Clowe reported:

Fifty feet main line shafting, and 210 feet of counter shafting, of superior quality, finished bright, with cast iron pulleys, hangers, and Babbitt metal journal bearings or seats, have been completed and in operation on the first and second floors of the bell shop and boring mills, in the stocking shop, and on the first and second floors of the machine shop."[2]

1. Serial No.876, pp. 388-389.
2. Serial No. 920,p.550.

4. Alterations and Repairs to the Machine and Stocking Shops, Bldg. No.6, Musket Factory, 1855-61:

In his annual report for the fiscal year ending June 30,1855, Superintendent Henry W. Clowe reported that " 10 feet, lineal, counter-line shafting"had been made,"put up and in operations on the first floor of the machine shop. This shafting is of the latest and most approved style, finished bright, with cast-iron pulleys,gearing,and metallic journals."[1]

In the report for the year ending June 30,1856, Clowe noted: "11 feet counter shafting, fabricated and put in operation, first floor of machine shop."[2] He also noted that "Machinery and fixtures ...for drawing head gates at... the grinding mill [had been installed]. These are of cast iron, and of the most permanent and durable construction."[3]

He further recorded that"Very considerable improvements have been made on the stocking-table, and machinery attached to it, and the main line of shafting thereof, in the stocking shop."

In the report for the year ending June 30,1857, Clowe reported:

Fifty feet main line shafting, and 210 feet of counter shafting, of superior quality, finished bright, with cast iron pulleys, hangers, and Babbitt metal journal bearings or seats, have been completed and in operation on the first and second floors of the bell shop and boring mills, in the stocking shop, and on the first and second floors of the machine shop."[4]

In the estimates for the 1860-1861 fiscal year Superintendent Alfred H.Barbour asked for $ 600 "for removing partitions on first and second floors of machine shop"; It was explained;"These partitions are found, from experience to be in the way."[5] Congress appropriated the desired sum on June 21,1860.[6]

1.Serial No.841,p. 556.
2. Serial No. 876,p. 388.
3.Serial No. 876,p. 389.
4.Serial No. 920,p.550.
5. Serial No.1043, p. 229, Item No. 5.
6.U.S. Statues at Large, XII, p. 66.

5. Construction of Bldgs. No. 21 and 22, Addition of Second Story to Grinding Mill, Bldg. 8A, 1860-61.

In 1860-61 $ 13,050 was provided to make the following improvements at the musket factory:

1. To raise the one-story east wing of Bldg. 8A, the grinding mill, to two-stories in height .

2. To construct a two-story brick building, Bldg. No. 21, that would connect the Grinding Mill, Bldg. 8A with the recently converted Millwright Shop, Bldg. No. 7.

3. To construct a tall bell tower, Bldg.No.22, between Bldg. No. 7, the Millwright Shop, and Bldg. No. 6D, the Machine Shop and two-story west wing of Bldg. No. 6 .

This construction would thus unite Bldgs. No. 8, 21 , 7, 22, and 6 into single gigantic shop about 519 feet long by 36 feet wide. The purpose was to form a single building within which production and assembling line would pass along muskets and the steps of manufacturing would progressivly follow, with the finished weapon emerging at the lower end of the line.[1]

The destruction of the Armory Paymaster's vouchers for the years 1852- to 1861 by the staff of the National Archives during the 1940's makes it impossible to trace in detail the costs of constructions, amounts of building material actually used, or the names of the men who constructed Bldgs. No. 21 and 22, and added the second story to Bldg. 8A.

1. Inspection Report,July 20,1859, Photostats, Vol. 4,p.7; George Mauzy to J.H. Burton, August 18,1859,; Photograph HF-30; Superintendent A.M. Barbour to Chief of Ordnance, Col. Henry H. Craig, July 31,1860, Reel 27, V.8,p.801; Craig to Barbour, August 3,1860,Reel 19,V.12, p.1139; Barbour to Craig, August 6,1860, Reel 27, Vol. 8, p.807; Craig to Secretary of War Floyd, August 7,1860, Reel 20,V. 4, P.325; Craig to Barbour, August 26,1860, Reel 19,V.12,p. 1148; Craig to Barbour, September 7,1860, Reel 20, V. 4, p.351; Craig to Barbour, February 14,1861, Reel 20, V.4, p.388. Also estimates of work, August 30, 1860, Reel 27, V.9, p.822-823 .

6. Bldg. No. 22, Bell Tower, Between Bldgs. 7 and 6, Musket Factory 1860-61:

The estimates for the 1860-61 fiscal year contained a request for $ 6,025 for making an "Addition to machine and stocking shop (Bldg. No. 6)," it was explained that "If this addition is authorized, the building (no. 6) will be connected with the barrel finishing (or Millwright Shop, Bldg. No. 7), and under the same roof, whereby a large amount of external transportation of components and materials will be avoided."[1] Congress appropriated the desired amount on June 21, 1860.[2]

The plans and itemized cost of materials and laborer need in the construction the Bell Tower, Bldg. No. 22, were prepared by Master Armorer Armistead M. Ball, at Superintendent Alfred M. Barbour's request, on August 30, 1860, as follows:

215,000	Brick laid @ $ 16 per M.....	$ 3,440.00
412	26/27 yds Earth Excavation @ 30¢ per yd.....	123.75
412	26/27 yds Earth removed @ 25¢ pr yd.....	103.75
352	10/25 perches Cement (foundation walls) ..... at $ 4.50 pr perch.....	1,585.75
94	ft. (cut stone) water table @ 1.00 per lineal ft..	94.00
130	ft ft (cut stone) Window Sills @ 75¢ " " "	97.50
110	ft (cut stone) coping @ $ 1.00 pwe ft.....	110.00
13,000	lbs Iron Castings (door & window frames) @ 4¢ pr lbs	520.00
700	ft Glass (double) @ 15 ¢ pr ft.....	105.00
1,800	ft Slating @ 9 ¢ pr ft.....	162.00
150	ft Copper Guttering @ 87½ ¢ pd lineal ft.....	131.25
14,000	ft Sawed Timber @ $ 16 pr ft.....	244.00
4,000	ft 1 inch plank @ $ 2 pr ft.....	80.00
3,000	ft. 1 inch plank @ $ 1.50 pr ft.....	45.00
3,500	ft 2 inch plank, @ $ 2.00 " ".....	70.00
3,000	ft 1½ inch plank @ $ 2.00 " ".....	60.00
	Painting, Glazing & Materials.....	230.00
	Irons for Roof (Lightning rods?).....	45.00
	Fitting up Castings (iron), Windows & Door frames..	60.00
	Hardware & Nails.....	50.00
	Carpenter Work.....	650.00
	Transportation of Lumber.....	66.50
	Appropriated (June 21, 1860) $ 6,025	$ 8,073.50 [3]

1. Serial No. 1043, p.229, Item No. 3.
2. U.S. Statues at Large, XII, p.66.
3. Ball to Supt. Barbour, Aug. 30, 1860, Reel 27, V.9, p. 823.

Barbour and Ball apparently planned to pay for the cost overrun on Bldg. No 22, the Bell Tower, by transferring surplus funds from the Connecting Shop, Bldg. No.21, project as follows:

For Bldg. No.	Appropriated	Estimated Cost
21	$ 7,825.00	$ 5,950.67½
Bldg. 22	$ 6,025.00	8,073.50
Total	$ 13,850.00	$ 14,024.17½

Col. Henry K. Craig, Chief of Ordnance, approved the plan for Bldg. No. 22 on September 7,1860[4], and construction apparently got underway at once.

Because of the outbreak of the Civil War in April 1861, Superintendent Alfred M. Barbour never wrote his report of operations for the fiscal year ending June 30,1861. Due to this, and also to the destruction of the Armory Paymaster's vouchers for the period 1852-1861, there is no long any data extant on the progress of construction of Bldg. No. 22. Visual evidence, taken 1861-1865, however, reveals that Bldg. No. 22, the tall bell tower was erected in the period September 1860- April 1861. Historical prints and photographs made 1861 to 1865 showing the Bell Tower are as follows: HF- 223- a drawing published in Harpers Weekly in 1861 entilted: "Harpers Feery Armory as It now Appears, July 20,1861"; HF-240 and HF -492, both photographs taken in October 1862; HF- 30, also a photo made in 1862; HF-11, photo of October 1862; HF-10, 1862 photo. HF- 38, a photo taken in 1865 or 1866 reveals that Bldg. No. 7, 22, and 6 had all be demolished by that date.

4.Craig to Barbour, Sept. 7,1860, Reel 20, V. 4, p.351.

The photographs reveal that the Bell Tower, Bldg. 22 ,was three bays wide, three stories high, with a gable roof. The center bay of the square shaped north or front elevation was occupied by a slight projecting bell tower that rose three full stories from the ground. The tower was then set slightly back and rose another two stories the top was adorned by small turrets at each corner. Each elevation of the square belfry contained a tall open round arched window above which, in the 5th story, was st a small open round window.

Repairs and Remodelling of the

7

Store House For Stocks, Bldg. No. 7, **1855-1861:**

Musket Factory, **(The Millwright Shop):**

On March 3,1855,Congress appropriated $ 363.00 to install a plaster ceiling and repair the floor of the store house for stocks.[1] The estimate requesting this sum explained the need as follows: "The present stock-house is found to be injurious in some degree(to the stock stored there) from dampness, owing to the condensation of vapor from a sheet-iron roof without ceilings, and from defective drainage and decayed floor. By the addition of the ceiling, and removing the floor and renewing, and the drainage, the dampness may be easily remedied."[2]

In the estimates for the 1858-59 fiscal year, the sum of $ 11,103.00 was requested "For converting old stock house(Bldg. No. 7) into a work-shop." This was needed because""There is a necessity for more shop room for the manufacture of arms; and a new stock house(Bldg. No. 11) having been erected outside of the armory yard affords an opportunity of converting the building in the yard, heretofore used as a stock house, into a very suitable workshop. It is designed for files and putting in position the cutting and milling machines necessary for the work of machines."[3] The converted stock house was henceforth to be known as "the millwrights shop." Congress appropriated the desired amount for this project on June 12, 1858.[4]

1. U.S. Statues at Large, X,p.637.
2. Serial No. 781,Document No.3, p.238.Estimates for 1855-56 **Bldg. No. 11, the new Stock House, under construction in 1854-55, had a slate roof.**
3. Serial No. 941,p.193.
4. U.S.Statues at Large Vol. 11, p.335.

Because of the destruction of the Armory Paymaster's vouchers for the years 1852 to 1861 by the staff of the National Archives during the 1940's, it is no longer possible to trace in detail the costs of construction, amounts of material and machinery purchased and used in the conversion, and the names of the men who did the work.

Under the heading of machinery"in progress of fabrication" in the annual report for the fiscal year ending June 30,1859, Superintendent Alfred M. Barboour noted that" 1 water-wheel, flume, shafting(main and counter,) with pits, head gates, fixtures, walling, &c. for converting the old stock-house (Bldg. No. 7) into a workshop" had been made.[5] The wheel and flume were apparently constructed of cast-iron.

In his report for the year ending June 30,1860, Barbour wrote: "The old stock-house(Bldg.No. 7) at the musket factory, has been converted into a workshop, but the necessary work has not yet been completed, to enable it to be employed as such."[6]

Plans for the conversion of the stock house to a millwrights shop were prepared by Superintendent Henry W. Clowe, but the execution of the work was done by Superintendent Alfred M. Barbour in 1859-60.

5. Serial No. 1025,p.1113.
6.Serial No. 1079, p. 974.

Construction of

8. Bldg. No.21, Connecting Shop,Between Bldgs. 7 and 8, Musket Factory, 1860-61:

The estimates for the 1860-61 fiscal year contained an item asking for $ 7,025 for making an addition to barrel-finishing shop (Bldg. No.7); it was explained "This addition will connect this building (No.7) with the grinding mill (Bldg. 8A)," and "under the same roof whereby a large amount of external transportation of components and materials will be avoided."[1] Congress appropriated the requested amount on June 21,1860.[2]

The plan and itemized cost of materials needed in the construction of Bldg. No. 21, were worked out by Master Armorer Armistead M. Ball for Superintendent Alfred M. Barbour, at Barbour's request, on August 30, 1860, as follows:

"Estimate of Cost of Additional Building, connecting Grinding Mill (Bldg.8A), and Barrel Finishing Shop (Bldg. No.7), Musket Factory

90,000	bricks, layed @ $ 16 per M	$ 1,440.00
110	ft cut stone Water table @ $1 pr lineal ft	110.00
156	" " " Window sills @ $ 0.75 " "	117.00
258	yrds Earth Excavation @ 30¢ per yd	77.55
260	perches Cement walling @ $ 4.50 pr prch	1,170.00
12,000	lbs. Iron castings (window and door frames) @ 4¢ per lbs	480.00
258	yds Earth removed @ 25¢ per yd	64.62½
2,900	Ft Slate roofing, @ 9¢ per ft	261.00
18,000	ft sawed Timber at $ 16 ft	278.00
5,000	Ft 1½ inch plank, at $ 2 ft C	100.00
4,000	Ft 2 inch plank. @ $ 2 ft C	80.00
9,000	Ft 1 " " $ 2 " "	180.00
2,000	Ft 2 " " $ 3.50 "	70.00
600	Ft window glass @ 15¢ pr ft	90.00
230	ft.copper guttering @ 87½ ¢ per Lineal ft	192.50
	Hareware and Nails	80.00
	Painting, Glazing & Material	230.00
	Fitting up (iron) castings Window & Door Frames	120.00
	Irons for Roof.(A)	90.00
	Transportation of Lumber	100.00
	Labor of Out hands	20.00
	Carpenter Work	600.00
	Appropriated(June 21,1860): $ 7,025.	$ 5,950.67½

1. Serial No. 1043, p.229. Item No.4.
2. **U.S. Statues at Large, XII, p.66.**

A. Perhaps /for lightning rods.

In addition, Master Armorer Ball noted that there was also available an appropriation of $ 800.00, made March 3, 1859, for making an addition to the grinding Mill, Bldg. 8A, that had not yet be used.[3] Thus a total of $ 7,825 was apparently available for construction that was estimated to cost only $ 5,951. The surplus from Bldg. No. 21 was apparently utilized to help construct Bldg. No. 22, as the estimated cost of Bldg. No. 22 exceeded the amount of money voted for that purpose.

The Chief of Ordnance, Col. Henry K. Craig, approved the plan and estimate for constructing Connecting Building No. 21 on September 7, 1860.[4]

Because of the destruction of the Paymaster's vouchers and due also the coming of the Civil War in April 1861, causing Superintendent Barbour to never write his annual report of operations for the fiscal year ending June 30, 1861, there is now no information available on the progress of construction of Bldg. No. 21. The following Harpers Ferry NHP Negatives, however, reveal that a second brick story was added to the grinding mill, Bldg. 8A and that a two-story brick shop was erected that connected Bldgs. No. 8 and 7; HF-223, a drawing published in Harpers Weekly entitled: "Harpers Ferry Armory as It Now Appears, July 20, 1861," shows the Bell Tower, Bldg. No. 2, the Connecting Shop. Bldg. No. 21, and part of the new second story on Bldg. 8, the Grinding Mill. The new buildings were designed in the same style that Major John Symington had begun applying to the new Armory Buildings in 1846. HF-30, a photo taken in October 1862, reveals that the details shown in HF-223 are correct and also shows Bldgs. No. 8, 21, 7, 22, and 6 in detail. HF-38, a photo taken in 1865 or 1866, reveals that Bldgs. No. 8,

3. Ball to Barbour, August 30, 1860, Reel 27, V.9, p.822.823.
4. Craig to Barbour, Sept. 7, 1860, Reel 20, V. 4, p.351.

and 21 were still standing in ruined state, but that buildings No. 7, 22, and 6 had been demolished.

Judging by the visual evidence, the Connecting Shop was approximately eight bays long on its front(north) and rear(south) elevations.

9. Repairs and Alterations to the Grinding, Saw , and Planing Mills, Bldg. No. 8, Musket Factory, 1856-60:

The destruction of the Armory paymaster's vouchers for the years 1852 to 1861 by the staff of the National Archives during the 1940's make it impossible to trace in detail the completion of the saw and planing mills in 1852 or of repairs or alterations made to the structure during this period.

The annual reports of the superintendents, however, do reveal that the following work was done to the work shop during the period 1852-1861.

In his annual report for the fiscal year ending June 30,1856, Superintendent Henry W. Clowe reported that"A portion of the floor in the carpenter's shop (north wing,Bldg. 8C),which was discovered to be very much decayed, has been removed, and new joists and floor put in."[20]

The annual estimates for the 1859-60 fiscal year contained a request for $ 800.00 "for adding to the length of the grinding mill (south wing, Bldg. No.8A) at the musket factory," explaining: "The building in which all this work for both factories is now done is entirely too small for the business, and is so constructed as to cause the machine grindstones to be dangerously crowded. The addition proposed will obviate these defects."[21] The appropriations for this fiscal year were approved on March 3,1859.[22] In the fall of 1860, a brick second story,matching in design the second story of the center, was added to the east wing, Bldg.8A, the Grinding Mill.

In a letter to Superintendent Alfred M. Barbour, dated August 30,1860, Master Armorer A.M. Ball informed Barbour that appropriation of $ 800.00 for lengthening the grinding mill had not been spent.[23]

23,Cited in Snell,-Charles W.," Research Report: The Musket Factory Buildings and Grounds, Harpers Ferry Armory,1858-60,"p. 78.

20. Serial No. 876, Document No.1, p.389.
21. Serial No. 996, Document No. , p.181, item No. 3.
22. U.S. Statues at Large, Vol. XI, p.433.

10. Alterations and Repairs to the Tilt Hammer Shop for Barrel Welding, Bldg. No. 9, Musket Factory, 1855-1861:

In the annual report for the year ending June 30, 1856, Superintendent Henry W. Clowe reported that "5 and 5/12 feet of counter shafting, for driving heavy drop-hammers in the tilt-hammer shop, fabricated and put in operations, and the hammers set up and put in operation."[1]

He further noted that machinery and fixtures for drawing the head gates at the tilt hammer shop had been completed. "These are of cast iron, and of the most permanent and durable construction."[2]

1. Serial No. 876, p. 388.
2. Serial No. 876, p. 389.

Bldg.No.11,Musket Factory:

11. Fencing and Grading the New Stock House Yard, 1856- 1860:

On April 23,1856, a joint resolution was passed by Congress that authorized the Secretary of War to apply the proceeds, amounting to $ 33,725.27, that had been collected from the 1852 sale of U.S. lots and Armory dwelling houses to making improvements on the Armory land at Harpers Ferry.[17] On June 28, 1856, the Chief of Ordnance, Col. Henry K. Craig notified Superintendent H.W. Clowe that the Secretary of War had approved the expenditures of the 1852 sale proceeds on 10 improvement projects, among which was Item No. 5, $ 1,000 "for enclosing grounds of new magazine (which was located on Camp Hill) and stock house." (Bldg. No. 11)."[18]

In the estimates for the 1856-57 fiscal year Superintendent Clowe also requested an appropriation of $ 3,183.00 for the following two projects on the new Stock House yard:

1. $ 1,324 "for enclosing new-stock-house," explaining: "This building is outside of the armory enclosure, on the south side of North Cliff street, and to protect it will require a fence on the north side next the street, and the adjoining grounds. It is proposed to construct it of a foundation of stone, with brick piers, coped with cut stone,

17. U.S. Statues at Large, Vol. 11, p.143.
18. Craig to Clowe, June 28, 1856, Reel 19, V.9, p.871.

"similar to the style of the opposite fence or railing, on the south side of the [musket factory] canal; wood railing and paling in the spaces between the their piers. The length will be about 675 feet."[19]

2. $ 1,859.00" for further grading and teracing the hill-side." Clowe explained:

> The appropriation heretofore made for this purpose will be all exhausted in the current fiscal year, and this sum will be further required to continue the grading on the plan proposed for this hill and the grounds adjoining the new stock house and new magazine. The heavy rains of the present summer have serioulsy broken up the irregular surface of these grounds, and will every year increase the gullies and deep washes, unless timely care is had in grading and terracing the portion liable to these damages; that portion of the hill-side on which the expenditure of the appropriation for the current year has been devoted has withstood the unusual raims remarkably well. "[20]

Congress appropriated the requested total of $ 3,183.00 on August 30,1856 (21) With the money from the 1852 sale included, there was a total of $ 4,183 available for work on the new Stock House yard: $ 2,324 for erecting fences and $ 1,859 for grading.

Prior to the receipt of this money, Superintendent Clowe, in his June 30,1856 report, described the progress that had been made on the new Stock House area as follows:

> "The hill side of the reserved [U.S. owned] ground, lying immediately on and south of [North] Cliff street, overlooking the armory between Washington and Cliff street, has been graded and terraced as far as the ravine dividing this from magazine hill. The terraces have been planted with forest trees. This work embaces about 7,000 cubic yards of excavation and filling, 30 perches of stone masonry, and 430 lineal feet of walled culverts and drains."[22]

"Harper's Ferry Armory from Magazine Hill," a lithograph by Ed. Beyer and published in his Album of Virginia, Dresden,1857 , deplicts accurately and in detail the hill side grading, planting, and also Bldg. No. 11, the Stock House.[23]

19. Serial No. 865, p. 244, 245, item No. 3.
20. Ibid., item No. 4.
21. U.S. Statues at Large, XI, p.150.
22. Serial No.876, p.391.
23. Harpers Ferry NHP Negative No. 51 or 256. **See Volume II, p. 193.**

In his report for the fiscal year ending June 30,1857, Superintendent Henry W. Clowe reported: "A portion of the hill-side of the magazine grounds, has been terraced, graded, and drained, requiring 260 perches of masonry, 440 yards sodding with grass, and 3,342 yards of excavation and filling, with 60 panels ___ post and ___ board fence."[24]

In what proved to be his final annual report, dated June 30 1858, Clowe noted that " All the reserved grounds, including the area within the armory enclosure, the terraces below the new magazine, and in rear of the new stock house, have been carefully improved at considerable cost, and many of the streets graded and rendered easy of access and ordinary travel."[25]

In the estimates for the 1859-60 fiscal year the sum of $ 800 was requested "For new fence along Washington street and on the hill side at right angles therewith to North Cliff street." It was explained that "This fence is essential for the preservation of the grounds around the new magazine and new stock-house."[26] Congress voted the money for this project on March 3,1859.[27]

In his first annual report, dated June 30,1859, Superintendent Alfred M. Barbour noted that "The new stock-house has been fitted up for stocks."[28] No further work on the Stock House or its grounds were reported in the annual report for the fiscal year ending June 30,1860.

From August 5,1854 to 1860 the Armory spent some $ 15,833 on Bldg. 11 and its hillside site. This included $ 8,000 for building the new Stock House, $ 3,524 on fences and walls, and $ 4,359 on grading, planting, and drains.

24. Serial No.920, p.551.
25. Serial No. 976,p. 1319.
26. Serial No. 996, p. 181, 182, item No. 7.
27. U.S. Statues at Large, XI, p. 433.
28. Serial No. 1025, p.1114.

12. Repairs to the Proof House, Bldg. No. 15, Musket Factory, 1855-61:

In the annual report for the year ending June 30,1857 , Armory Superintendent Henry W. Clowe reported" "the lower floor in the proof house, which was found to be very much decayed, was renewed,and new joists and floor put in."[10]

10. Serial No. 920, Doc. I, p.551.

13. Final Touches to the Rolling Mill, 1855-1860: Bldg. 18, Musket Factory

In his first annual report, dated June 30, 1855, Superintendent Henry W. Clowe reported that" A new office has been built in the rolling mill for the foremen." He also noted that:

"All the exterior grounds about the rolling mill have been graded, walled, and filled up with stone and earth. The house for the protection of the rolling-mill water-wheel has been built, with slate roof and brick walls. The embankment all around the mill on the canal side has been supported with a good dry wall, consisting of some 300 perch, and, where it was necessary, mortar or grouted masonry has been used. This dry walling is extended from the east end of the mill on the south side and gable end, where it terminates in the Potomac River, by a tail race for the outlet of the water from the wheel-pit. These exterior grounds are now fully completed."[12]

Under the heading of "Machinery fabricated and in progress," Clowe wrote:

"1 set of tools and fixtures for rolling and scraping iron, fabricated.
1 cast-iron forge for rolling mill, fabricated.
1 cast-iron furnace for rolling mill, fabricated.
1 water-wheel for rolling mill, finished and in operation.
1 forebay for rolling mill, cast-iron frame, columns, gates, gearing, and planking, secured by iron bolts and screws.

Machinery for rolling mill, including the water-wheel and forebay, partially reported last year, has been completed and put into operation, and about ten tons of iron fabricated and rolled into suitable bars and shapes. Extensive improvemen

11. Serial No.747, p.361.
12. Serial No. 841, p.557.

made on the shingling and drawing hammers, furnaces and fixtures. Fixtures and machinery for drawing head-gates at the rolling mill nearly completed."(13)

In the report for the fiscal year ending June 30,1856, Superintendent Henry W. Clowe reported that the last part of the work on the rolling mill had been completed, writing:

"Machinery and fixtures for drawing head gate at rolling mill, have been completed, and also, for drawing head gates at the tilt-hammer shop(Bldg. No. 9) and grinding mill(Bldg. No. 8A). These are of cast iron, and of the most permanent and durable construction."[14].

In his annual report for the fiscal year ending June 30, 1858, Superintendent Clowe noted that 64 perches of dry wall had been erected and 84 cubic yards of excavation had been done "for a cesspool, at the rolling mill."[15]

The estimates for 1860-1861 fiscal year requested $ 15,000 "To defray the expense of purchase and erection of barrel-rolling machinery;" It was explained, "This sum to be applied to objects of repairs and improvements heretofore authorized, but which are now delayed in consequence of the expenditure for the purchase and erection of new barrel-rolling machinery, deemed essential to the best interests of the armory,and not to be postponed."[16] The desired sum was voted by Congress on June 21,1860.[17]

In his annual report for the fiscal year ending June 30,1860, Superintendent Alfred M. Barbour reported: "Exentive repairs and improvements ,,,,,.for furnace for barrel rollingm housings for barrel machines, main and counter line of machinery

13. Serial No. 841, pp.555-556.
14. Serial No. 876, p.389.
15. Serial No. 976, p. 1319.
16. Serial No. 1043, p.229, Item No.1,
17. U.S. Statues at Large, XII, p. 66.

" for barrel rolling and finishing shop.... and complete fixtures and machinery for rolling barrels, at a cost of over fifteen thousand dollars."[18]

18. Serial No. 1079, p.973.

Completion of the

14. Musket Factory Entrance Gate and Wall, 1855-61:

In 1853-54, as has been noted, the Armory had purchased Wager Lot 11 and the large brick building on it for $ 7,000. In the estimates for the 1854-55 fiscal year Major William H. Bell now requested $ 1,000 for "a wall and railing on north side of main, on the lot purchased of Noah H. Swayne (Lot 11)." He explain that this new wall and fence was "To correspond with the present wall and railing on the south side of the entrance on Wager Lot 12)."[1] Congress appropriated the requested amount on August 5, 1854.[2]

In his annual report for the fiscal year ending June 30, 1855, Superintendent Henry W. Clowe reported: "The enclosing wall and fence on the north side of the main entrance gate to the armory yard, consisting of stone foundation, brick piers and panels, coped with cut-stone, and wrought-iron fence, resting upon the coping, is completed. This is similarly finished to that on the south side of gateway, completed some years ago."[3]

The total cost of erecting this formal entrance, which had been designed by Major John Symington in 1846, was approximately $ 19,349. This sum included $ 16,999.35 for purchasing Wager Lots 11 and 12 and the two large brick structures standing on those lots, and $ 2,450.00 for demolishing the two stores and constructing the formal gate and flanking walls.

In his report for the year ending June 30, 1857, Clowe wrote: "The portion of armory yard lying northeast of entrance gate has been graded and laid off into a pasture, the borders sodded and tress planted therein."[4]

1. Serial No. 714, Document No. 2, p. 188, 189, item No. 5.
2. U.S. Statues at Large, X, p. 578.
3. Serial No. 841, p. 556.
4. Serial No. 920, p. 552.

Historical prints and photographs showing the main entrance to the Musket Factory yard in detail include the following Harpers Ferry NHP Negative Nos. HF- 66- A photo taken in 1859 and showing a portion of the fence and wall on Wager Lot No. 11; HF- 99, photo taken in October 1859, closeup of main entrance, wrought iron fence and gates, and wall on Lot No.12. HF-27B, closeup of Lot 12 and main entrance, taken in 1865, HF-379, HF-539, and HF-59, taken 1870-1889, all show the entrance, together with the John Brown Fort or old Armory fire and guard house, with the fences by 1889(HF-59) gradually being demolished.

15. More New Coal Bins, Musket Factory, 1855-1861:

During the period 1845 to 1851, Major John Symington had built more than 24 coal bins in the open space between the two parallel stone river walls that had been erected by the U.S. Armory and the Baltimore and Ohio Riailroad company in 1837-40 and top of which, mounted on trestles, stood the main line west of the railroad. Built at a cost of approximately $ 1,312, these bins were about 15 feet wide, 17 feet long, and about 13 feet ddep.

Brevet Colonel Benjamin Huger continued this program in 1852-54 and added at least 30 more of these bins.

The estimates for the 1855-56 fiscal year asked for $ 176.00 "for fitting up three bins for scrap-iron under railroad near the new rolling mill (Bldg. No. 18)"; it was explained that "There is no covered place for scrap-iron at the present time, and in consequence the borings and turnings suffer great deterioration from the actions of the atmosphere; it is necessary to have them covered, and in a position convenient to be worked up in the rolling-mill, for which the above expenditure is required."[1] Congress provided the desired money on March 3,1855.[2]

In the annual report for the fiscal year ending June 30,1855, Superintendent Henry W. Clowe wrote: "A very considerable amount of filling in with stone and earth has been done in the armory yard to complete coal bins under the railroad."[3]

In the estimates for the 1856-57 fiscal year, Clowe requested $ 223 "For filling ditch and completing six-coal bins, under Baltimore and Ohio railroad;" This was needed he explained because: "The open spaces under the trestle-work of the Baltimore and Ohio Railroad are fruitful sources of disease, being subject

1. Serial No. 781, Document No.3, p.238, Item No. 4.
2. U.S. Statues at Large, X,p.637.
3. Serial No. 841, p.557.

"to the inundations of the river Potomac; great quanities of vegetable and other alluvia are deposited there at every rise in the river; and slowly decompose, tainting the atmosphere with the offensive effuvia. This condition of things can be remedied by filling up these spaces with earth and rock at the same time that ample receptacles of suitable dimensions and convenience can be afforded for coal and other heavy articles out of the way, and under partial protection from the weather., by the flooring of the trestle-work."[4]

Congress appropriated the requested amount on August 30,1856.[5]

In his annual report for the fiscal year ending June 30,1856, Superintendent Clowe noted that "some of the coal bins, under the railroad, have been raised, and stone walls built to support the embankments."[6]

There is no further mention of the building of an additional coal bins in the annual reports written after June 30,1856. It thus appears that approximately nine coal bins were built at a cost of $ 399 during the period 1855 - 61.

From 1845 to 1861 a total of at least 60 of these storage bins were built under the B.&.O. railroad tracks at an approximate cost of more than $ 1,701.

4. Serial No. 865, p.245, 246, item No. 7.
5. U.S. Statues at Large, XI, p.150.
6. Serial No. 876, p.389.

16. Painting and Slating Roofs, Musket Factory, 1855-61:

In his annual report for the fiscal year ending June 30,1856, Superintendent Henry W. Clowe noted "The iron roofs on the shops at the musket factory have all been painted, and the slate roofs, copper guttering and spouting thoroughly repaired."[1]

In the report for the year ending June 30, 1858, Clowe reported that at the musket factory "All the workshops have been slightly repaired and the exterior brick walls painted."[2]

Finally, in the report for the fiscal year ending June 30,1859, Superinentendent Alfred M. Barbour wrote: "All the shops at the musket factory have been more or less improved, including the painting of all the cast-iron and wooden window frames and sash."[3]

17. Grading the Musket Factory Yard, 1855-61:

In the annual report for the fiscal year ending June 30,1855, Superintendent Henry W. Clowe reported: "the grounds in front of the shops have to some extent been filled up and graded, to bring them to a uniform level with the portions heretofore completed."[4] In his report for the year ending June 30,1856, Clowe again noted" The armory yard has been filled and graded in some places..."[5]

In the report dated June 30, 1858, Clowe wrote: "All the reserved U.S. owned grounds, including the area within the armory enclosure,... have been carefully improved, at considerable cost,..."[6]

Finally, in his annual report for the fiscal year ending June 30,1860, Superintendent Barbour wrote: "The grounds,generally, of the armory, comprising a considerable area, have all been kept in order and where improvements were necessary to preserve or add to their sightly condition,they were made."[7]

1. Serial No. 876, p. 389.
2. Serial No. 976, p.1319.
3. Serial No. 1025, p. 1114.
4. Serial No. 841, p.557.
5. Serial No. 876, p.389.
6. Serial No. 976, 1319.
7. Serial No. 1079, p. 974.

18. Pavement and Sidewalks, Musket Factory, 1855-1861:

In the estimates for the 1854-55 fiscal year Brevet Colonel Benjamin Huger asked for $ 700 "for pavement(stone-flag) in front of tilt shop[Bldg. No. 9] and boring-mill[Bldg. No.5]," he explained"This pavement is required for dry communication with these works in wet weather."[1] Congress appropriated the desired amount on August 5,1854.[2]

In the estimates for the 1856-57 fiscal year, Superintendent Henry W. Clowe requested an additional $ 560 "for continuing the flag pavement in front of workshops," he explained: "Besides improving the appearance of the armory yard, this work seems to be necessary to afford comfortable passage from shop to shop of the workmen and other employed at the armory, and to finish the same in the style in which it has been commenced."[3] Congress voted the additional money on August 30,1856.[4]

Clowe described the results of this construction in his annual report for the fiscal year ending June 30,1857, writing: "About 196 square yards of heavy **cut stone flag** pavement, and 139 lineal feet of dressed curbing have been laid and set in front of and between several of the workshops in the armory yard."[5] In the report for the year ending June 30,1858, Superintendent Clowe reported: " 125½ square yards of paving, with large flagstones have been laid in front of the carpenters' shop[Bldg. No. 8C] and stock house[bldg. No. 7]."[6]

Total cost of this flag stone sidewalk, which ran from the tilt -hammer shop [Bldg. No. 9] east to the main entrance gates, was approximately $ 1,260. Portions of the walk and crubing can be seem in Harpers Ferry NHP Negative HF-90, taken in October 1859; HF-89- a drawing by A.R.Ward, published March 11,1865; HF- 27B, a photo taken in 1859.

1. Serial No. 714, Document No. 2, p. 188,189, Item No. 12.
2. U.S. Statues at Large, X, p. 578.
3. Serial No. 865, p.245, 246, item No. 8.
4. U.S. Statues at Large, XI, p.150.
5. Serial No. 920,p. 551.
6. Serial No. 976,p.1319.

19. Old Horse Shed Removed from Musket Factory Yard, 1856 :

In his annual report for the fiscal year ending June 30,1856, Superintendent Henry W. Clowe reported that"The horse shed, occupying a position in the armory yard, near the entrance gate, has been removed to a more suitable site, on a lot outside the yard,on North Cliff street [now called Potomac street], and disconnected with the armory."[1]

This is probably the frame horse and carriage shed that Superintendent Benjamin Huger had built in December 1851 at a cost of $ 104.72.

20. New Horse Shed Built in New Location, Musket Factory Yard,1856.

In the annual report of operations for the yearing ending June 30, 1856, Clowe also noted that a new horse shed "of smaller dimensions, inside the [armory] yard, under the Baltimore and Ohio railroad [trestle], has been put up."[2]

1. Serial No. 876, p. 389.
2. Ibid.,

21. Lease of Lot for a B & O. R.R. Water Tower, Musket Factory Yard, 1855-1862:

Acting under the authority and instructions of Secretary of War Jefferson Davis, Armory Superintendent Henry H. Clowe and the President of the Baltimore and Ohio Railroad Company, V. Brooks, entered into a formal agreement on November 16, 1855 . The United States granted the company permission to erect a brick water tower about 17 feet square and about 36 feet high in the musket factory yard, with the understanding that the building would be removed if requested.[1] The tower was located adjacent to the main line on the Potomac River wall and stood at the south or east end of the Musket Factory yard, just inside the main entrance. Built in 1856, the tower was destroyed on Union troops on February 7,1862, during the Civil War.[2]

1. Agreement, November 16,1855, Reel No. 25, Vol. 9, pp.936-937.
2. See Snell, Charles W.,"Historic Building Site Survey Report for Wager Lot No. 1 & the Bridge Lot- The Baltimore & Ohio Railroad Company's Bridge and Buildings at Harpers Ferry, 1835- 1862, Harpers Ferry National Monument, West Virginia,"(NPS typescript, Harpers Ferry NM, W.Va., September 22,1958),pp.35- 37.

E. Old Arsenal Square, Block A., Shenandoah Street, 1855-61:

1. New Walls and Fences: The estimates for the 1856-57 fiscal year asked for $ 5,761 "for enclosing the arsenal square;" it was explained:" The present enclosure of the old arsenal square requires to be entirely renewed, in consequence of its dilapidated condition, having been constructed in front on Shenandoah Street, of condemned musket barrels and bayonets, many years ago."[1] The Congress appropriated the desired amount on August 30,1856.[2]

Two months prior to this, on June 28,1856, and acting under the authority granted to him by a Joint Resolution of Congress dated April 23,1856, Secretary of War Jefferson Davis made available the sum of $ 2,917.00 for "Extending Arsenal Square," from the proceeds of the 1852 sale of U.S. lots and houses.[3]

By August 30,1856, a grand total of $ 8,678.00 was available for repairs and improvements to Old Arsenal Square.

In his annual report for the fiscal year ending June 30, 1858, Superintendent Henry W. Clowe described the progress of construction as follows: "The west [or north] face of the Winchester and Potomac railroad wall, on the east [or south] line of Arsenal Square [across Blocks A and B, Shenandoah Street], has been faced, the [stone] materials of the wall having considerable projections, which rendered it unslightly and easy of descent into the yard by boys or others; the wall itself having been raised several feet, in pursuance of the plan extending the Arsenal Square."[4]

Work on rebuilding the Shenandoah Street iron fence and brick piers was still underway in 1859. In the report dated June 30 of that year, Superintendent Alfred M. Barbour reported: "A large number and quantity of materials for inclosing the arsenal grounds have been procured, consisting of stone coping for rear wall and piers for gateway, with pier caps of cut stone;

1. Serial No. 865, p.244,245.Item No. 1.
2. U.S. Statues at Large, XI, p.150.
3. Col. Henry K. Craig, Chief of Ordnance to Supt. Henry W. Clowe, June 28,1856, Reel No. 19, V. 9, p.871.
4. Serial No. 976, p.1319.

"and also a large amount of iron fence castings, which are now on hand ready for use."[5] In his annual report for the year ending June 30,1860, Barbour failed to record the completion of the new Arsenal walls and iron fence.[6]

However the photographs taken in October 1859, immediately following the John Brown Raid, reveal that brick pier and iron fence along Shenandoah Street, with the main gate, was completed and in place by that date.(See Harpers Ferry NHP Negative No. HF-66 and HF-90)

2. Filling in the Arsenal Yard and a New Arsenal Proposed:,18 58-59:

The estimates for the 1858 -59 fiscal year included a request for $ 27,325 "For building new arsenal and filling up old arsenal square for site." It was explained that "This building is required for the storage of finished arms. It is proposed to locate it on the old arsenal square (Block A. Shenandoah Street), filling up the ground to the level of (Shenandoah) Street so as to keep it above the highest rise of water."[7] As has been mentioned, Inspector of Arsenals and Armory, Lt. Col. R.S. Baker had reported on July 19,1854: "The old Arsenal yard is from 1½ to 4 feet lower than the road (Shenandoah Street) on its front.. By filling the lot to the road level, and raising the floor of the basement room three or four feet above the yard, it is probable that no flood would ever wash it, the high water marks on the old Arsenal floor being under Six feet."[8] Congress voted the desired amount on June 12,1858.[9]

Photographs HF- 66 and 90 indicate that filling of the yard to the level of the street was completed by 1859 so that the new brick pier and iron fence could be erected along the Shenandoah Street front of the square. The proposed new arsneal, however, was destined to never be built. The Ordnance Department decided to construct the large new arnsenal of iron and the cost

5. Serial No.1025, P. 1114.
6. See Serial No. 1079,pp.973-974.
7. Serial No. 941, p.193, Item No.1.
8. Inspection Report,July 19,1854, Harpers Ferry NHP Photostat Collection, Vol. 3, p.54-55
9. U.S. Statues at Large, XI, p.335.

brought this plan to a halt. On May 7,1860, Secretary of War John B. Floyd informed the Chairman of the Senate Finance Committee that $ 27,375 has been voted to erect the proposed arsenal at Harper's Ferry Armory was inadequate and that an additional $ 108,125 would be needed, making a total $ 135,000, necessary to erect that large new iron building the Ordnance Office now desired.[10] Floyd was apparently advised to forget this project, for the annual estimates for the 1859-60, 1860-61, and 1861-62 fiscal years failed to request any more money to construct a new arsenal.[11]

3. Use of the Buildings on Arsenal Square,1855-61:

The two old Arsenal Buildings, erected in 1799 and 1806 respectively, were those still standing in April 1861. The Large Arsenal, dating from 1799, had by 1859 achieved such a poor structural condition that it could no longer be used for the storgge of small arms. At the time of the John Brown Raid, in October, 1859, the first floor of the Large Arsenal was vacant and the second floor contained only miscellaneous supplies that did not weigh much. Following the Brown Raid, Federal troops were sent to guard the Arsenal and Armory, and the soldiers were quartered on the first floor of the Large Arsenal from November,1859, to April, 1860, and then again from February,1861 to April 18,1861.[12]

The Small Arsenal, a two-story brick building with cellar and slate covered gable roof, was used from 1806 to April 18,1861 for the storage of small arms. The structure measued 36 by 68 feet and the Large Arsenal[13], brick two-stories and with a cellar, 125 by 32 feet.

On June 30,1860, there were 20,057 small arms stored in the Small Arsenal. On April 18,1861, when the two arsenals were detroyed by fire, the number of muskets in the Small Arsenal had apparently been reduced to 4,287.

10. Floyd to Chairman of Senate Finance Committe, May 7,1860. Harpers FERRY NHP Photostats, Vol. 4, p. 27.
11. The annual estimates are in Serial No. 996,p. 181; Serial No. 1043,p.229; and Serial No. 1092, p. 322.
12. Smith, Philip R.Jr."Research Report-History of the Large and Small Arsenals, 1796-1869...",pp.25-26.
13. Ibid.,

The Old Superintendent's Office, fronting on Shenandoah Street on Block A, Lot 1, during the period 1854 to 1861 was leased to the town government of Harpers Ferry. From 1854 to 1856 the former office was used as school house; from 1856 to 1861 it probably served as the town hall, and in July 1865 the brick house was serving as a U.S. Post Office. The house can be seen in Harpers Ferry NHP Negative No. HF- 18, which was taken during the Civil War.[14]

The Old Pay Office, Located on Block B, Lot 2, Shenandoah Street and dating from 1822, was leased to the town of Harpers Ferry and used from June ,1851 to April 1858, as a town hall and jail. It was removed from Block B in April 1858 to clear the site for the construction of new quarters for the Master Armorer.(Park Building No.36). In the annual report for the fiscal year ending June 30,1858, Superintendent Henry W. Clowe thus recorded: "The old "paymaster's office' has been taken down, to make room for the master armorer's quarters."[15] Other evidence indicates that the Old Pay Office was either moved intact, or reassembled, in 1858 in the Musket Factpry yard.[16]

During the period 1858 to 1861 there were thus just three buildings standing in Old Arsenal square; the two brick arsenals, and the Superintendent's former Old Office, also a brick edifice, all three with slated roofs.

14. Smith, Philip R.J.,"Research Report-History of Superintendent"s Old Office, 1833-1869, Arsenal Square, Block A, Lot L...",p.4.
15. Serial No. 976, p.1319. Also Smith, Philip R., Jr.,"Research Report-History of the Old Pay Office, 1822-1858, Block B Lot 2, Shenandoah Street,",pp.3-4.
16. Brigader General Edward D. Ramsay's inspection report of July 25,1865, to Brigade General A.B. Dyer, Chief of Ordnance, Photostat Collection,Map Case, Drawer 10,Harpers Ferry NHP.

F. U.S. Rifle Factory, 1855 to 1861:

During the years 1855 to 1861, approximately $ 32,903 was spent for repairs and improvements to the buildings and grounds at the U.S Rifle Factory. About $ 4,910 went to repair and improved Bldg. No. 1, the Finishing and Machine Shop. The two six-feet water wheels in this shop were replaced by onqundershot water wheel that was 10 feet in diameter and 12 feet wide. One large new workshop, Bldg. No. 9- the Barrel Welding or Drilling and Finishing Shop, was erected at the Rifle Factory in 1859-60 at a cost of $ 15,820. Finally, about $ 12,173 was expended grading the grounds and enclosing the plant with a fine stone wall and iron paling fence.

(See Chart on following page).

APPROPRIATION FOR THE REPAIRS AND IMPROVEMENTS AT THE U.S. RIFLE FACTORY, 1855-1861

Year:	Bldg. No.1 Finishing Shop	Bldg.9 Barrel Welding Shop	Walls, Road, Grading	Proposed Annealing, stock, proofmgringing	Total	U.S. Shenandoah Canal	U.S. Shenandoah Dam	Bldg., Dams & Canals
3/3/ 1855			8,180		$ 8,180	$ 3,505	0	$ 11,685
8/30/ 1856	2,050				2,050	0	0	2,050
3/7/ 1857	2,860		3,993		6,853	0	0	6,853
6/12/ 1858					0	2,000	0	2,000
3/3/ 1859		15,820			15,820	0	0	15,820
6/21/ 1860					0	0	0	0
3/2/ 1861				12,128*	* 12,128	11,129*	0	23,257
TOTAL	$ 4,910	$ 15,820	$ 12,173	$ 12,128*	$ 45,031	$ 16,634	0	$ 61,665
TOTAL SPENT	$ 4,910	$ 15,820	$ 12,173	$ 0	$ 32,903	$ 5,505	0	$ 38,408

* Money never spent

1. Repairs and Improvements to the Finishing and Machine Shop, Bldg. No. 3., Rifle Factory, 1855- 1860:

The destruction of the Armory Paymaster's vouchers for the years 1852 to 1861 by the staff of the National Archives in the 1940's makes it impossible to trace in detail the alterations and repairs repairs that were made to the finishing shop during this final period. Estimates and the superintendents' annual reports, however, do provide the following data on this building during the years 1852 to 1861.

In his annual report for the fiscal year ending June 30,1854, Major William H. Bell, reported that extensive repairs had been made to the water wheel and forebays at the rifle factory finishing shop. On October 31,1855, Superintendent Henry W. Clowe wrote to Col. Henry K. Craig, the new Chief of Ordnance, regarding the two six-feet turbine water wheels in the finishing shop as follows:[31]

"Permit me to call your attention to the great necessity which I also explained verbally to you at yr last visit to the Armory, of substituting for the two Turbine water wheels at the Rifle Factory, a new Undershot Wheel.

I am at no time certain of the availability of those wheels for efficient service, and a full description of the trouble they give us for repairs is cited in my estimates for the ensuing Fiscal year. The present is the most favorable time and season for accomplishing this purpose, if the required funds, say about $2,000 can be supplied from other sources or abstracted from our Current Appropriations for New Machinery.

You were kind enough to say, that you would investigate the probability of obtaining such funds, without trenching on our Annual Appropriation, and I trust you will be able, so to arrange it."

The estimate for the 1856-57 fiscal year according requested the appropriation of $ 2,050.00 " for water-wheel, penstock and pit-gearing for new finishing shop at the rifle factory."[32] The reason given to explain the need for changing the two new turbines with a single undershot wheel was as follows:

31. Harpers Ferry NHP Microfilm Reel 25, Vol. 7,p.652.
32. Serial No. '865, Document ,p. 245, item No. 12.

12. The two turbine wheels now in use in this shop are placed so low in the pit, that it is difficult to make the necessary repairs when required; at some seasons of the year they cannot be made at all. Should any accident happen during the winter, or in the sickly season during the summer, the exposure of the health of the workmen incident to the repairs, would be such as to preclude to a great extent and perhaps entirely its accomplishment with reasonable cost. All this being occasioned by back-water rising from the dam across the Shenandoah river, erected by the Harpers Ferry and Shenandaoh Manufacturing Company in connexion with the deep position of the turbine wheels, which back water is liable to stop the works for necessary repairs for two or three weeks at a time. It is proposed to substitute for these a new undershot wheel with cutstone head blocks, cast iron frame, fitted, framed and erected upon the most approved plan."

33

Congress appropriated the requested $ 2,050.00 on August 30, 1856 34.

The replacing of the water wheel was accomplished before the money was provided, for in his annual report of the year ending June 30,1856, Superintendent Henry W. Clowe reported:

> Two of the old water-wheels (at the Rifle Factory) have been removed, and their places supplied by one undershot wheel, 10 feet in diameter and 12 feet wide, designed to perform the service lately performed by the two old ones. This wheel is of wood, with cast-iron shaft, flanches " L irons and pillow blocks, secured with wrought-iron bolts and nuts. It has two master-wheels of cast iron, 10-feet diameter and 8-inch face. The whole is supported by two cut-stone head blocks 12 feet long, 5½ feet wide, and 6 feet high, cemented. The penstock is cast- iron frame, 21 feet long, 3 feet wide, and 3 feet high, the planking being secured by bolts and nuts, with cast-iron gates, racks, pinions, &c., the whole resting on a solid stone bed or wall, grouted and cemented. This wheel drives the machinery in the new finishing shop, and very considerable improvements have been made in the main driving drums, shafts, pillow and head blocks of the same shop.
>
> 40 9/12 feet of counter-shafting and machinery in the east end of this shop have been so improved and altered as to dispense with 39 9/12 feet, with all appendages, &c., whereby great saving in oil, belting and power is effected. 35

In addition, on June 28,1856, $ 2,860.00 was made available by the the Secretary of War from another fund to make "repairs of Finishing Shop, Rifle Factory." On April 23,1856, a joint resolution was passed by Congress

33. Serial No. 865, p.247,Item No.12.
34. U.S. Statues at Large, XI, p. 150.
35. Serial No.876mp.390.

which authorized the Secretary of War to apply the proceeds from the 1852 sale of U.S. lots and houses at Harpers Ferry to the purchase of other land and to the improvement of public property and buildings at the Harper's Ferry Armory.[36] A total of $ 36,606.70 had been collected from this sale from September 1852 to May 1856,[37] and was available for use at Harper's Ferry.

On June 28,1856, Col. Henry K. Craig was able to inform Superintendent Clowe that the Secretary of War approved the expenditure of the $ 36,606.70 on 10 projects.[38] Among these, Item 4, was $ 2,860.00 for the repair of the rifle factory finishing shop. Superintendent Henry W. Clowe's annual report for the fiscal year ending June 30,1857 indicates that the $2,860.00 was spent as follows:

Under machinery fabricated: "Eight feet of main and counter shafting of the most superior quality, finished bright, with cast-iron pulleys, hangers, and Babbitt metal journal seats, have been completed and in operation on the first and second floors of finishing shop and machine shop."

Under the heading of "Building", Clowe further reported as erected:

" An addition to 'finishing shop' rifle factory' 35 by 25 feet, two stories, of brick upon stone foundation, all in the same style as the main building, with cast iron window frames, cut stone sills and water tables, and roofed with sheet iron, has been completed and is now in use. The whole exterior of this building has been neatly painted."[39] **Bldg. 3A on the 1859 historical base map.**

The location of this addition is not known, but it may be the "unidentified structure", located about 10 feet south of the rear one-story east wing by by Archeologist Edward McMillian Larrabee during his exploratory archeological excavations on the Lower Hall Island Rifle Factory site in August 1959.[40]

36. Secretary of War to Secretary of Treasury, May 7,1856, HF NHP Reel 26,V.5,p.466; Secretary of Treasury to Secretary of War, May 10,1856, Reel 26,V. 5.p.464. U/S. Statues at Large, XI, p.143.
37. U.S. Statues at Large, XI, p.143.
38. Harpers Ferry NHP Microfilm Reel No. 19, Vol. 9, p.871.
39. Serial No. 920, p.552-553.
40. Larrabee, Edward McMillan, "Report of Exploratory Excavations conducted on the Lower Hall Island Rifle Factory, Harpers Ferry National Monument, Harpers Ferry West Virginia, August 25 through August 29,1959," (NPS typescript, June 20,1960), pp.2-3

Archeologist Larrabee found the corner foundations of the finishing and machine shop still in place, built according to the dimensions giving by Major John Symington in his annual report for the fiscal year ending June 30,1848. Measuring the structure, the main building, in 1959, was found to be 128 feet 8 inches long and 36 feet one inch deep. The two backs wings, which once contained the six feet cast-iron turbine wheels, were each 25 feet square,[41] as had been stated by Superintendent Symington.

The superintendents' reports for the years July 1,1857 to June 30,1860 suggest that no further major repairs or alterations were made to the finishing shop during that period.

41.Larrabee, E.M.,"Report of Exploratory Excavations...Rifle Factory,1959,",p.3

2. Repair and Improvements to the Tilt Hammer and Smiths Shop, Bldg. No. 4, Rifle Factory, 1852- 1860:

Destruction of the Armory Paymaster's vouchers for the years 1852 to 1861 by the National Archives staff during the 1940's makes it impossible to trace in detail the repairs and alterations that may have been made to the structure during period just prior to the Civil War. The annual reports of the superintendents, however, do provide the following information on work done on the shop. In his annual report for the fiscal year ending June 30,1854, Major William H. Bell noted briefly "Anvil blocks in forging shop altered and improved."[37] Finally, in his annual report for the fiscal year ending June 30,1859, Superintendent Alfred M. Barbour recorded that"A watch house has been partitioned off from one end of the forging shop at the rifle factory."[38] This room would have been used by the night watchmen.

37. Serial No. 747, Document No.1, p. 362.

38. Serial No. 1025, Document No.1, p.1114.

3. Repairs and Improvements to the Annealing Furnace and Proof House, Bldg. No. 5, Rifle Factory, 1855- 1860:

In the annual report for the fiscal year ending June 30, 1855, Superintendent Henry W. Clowe noted that at the Rifle Factory;"The annealing furnaces have been enlarged and extensively repaired and improved in construction."[12]

Finally, in his annual report for the fiscal year ending June 30,1860, Superintendent Alfred M. Barbour noted: that" pipe for conveying water to the annealing house"[13] at the rifle factory had been installed and was in use.

12. Serial No.841, Document No.1, p.558.
13. Serial No. 1079, p.975.

4. Repairs and Alterations to Machine Shop, Bldg. 6, Musket Factory, 1855-61:

In the annual report for the year ending June 30, 1856, Superintendent Henry W. Clowe reported that "Five feet of counter shafting fabricated and put in operations in machine shop and the fixtures for drawing head-gates in this shop have been fabricated and attached."[1]

1. Serial No. 876, pp. 390-391.

5. Construction of the Barrel Drilling and Finishing Shop, Bldg. No. 9, Rifle Factory, 1859-60:

Due to the destruction of the Armory Paymaster's vouchers for the years 1852 to 1861 by the National Archives staff during the 1940's, it is no longer possible to trace in detail the history of the costs of construction, amounts of material used in the construction, and the names of the men who built the new Barrel Drilling and Finishing Shop at the Rifle Factory.

The estimates for the 1859-60 fiscal year requested $ 15,820 "for erecting new workshops for barrels,&c, at the rifle factory," it was explained: "More shop room is essentally necessary at this factory than we now have to facilitate the fabrication of the new rifle, and wherein the needful machinery can be put in position."[1] Congress appropriated the desired sum on March 3,1859.[2]

On June 7,1859, Superintendent Alfred M. Barbour informed Col. Henry K. Craig, Chief of Ordnance,: "By the mail today I transmit to yr address a Drawing exhibiting the ____ Forging (Bldg. No.5) and Machine (Bldg. No.6) Shops at the Rifle Factory, with the new Barrel Drilling and Finishing shop (Bldg. No. 9), proposed to be built under the appropriations available after the 30th inst. It (Bldg. 9) occupied a central position, and connects these shops (Bldgs. No. 4 and 6), in such a manner as to enable the operations on the barrels to pass forward from stage to stage, in regular order, without crossing or clashing.

"The shop will be 57½ by 49½ feet in the clear, two stories, giving ample room for all the operations on the barrels to be performed without removal to any other shop until completed and ready for assembling.

1. Serial No. 996, p.181, Item No. 1.
2. U.S. Statues at Large, XI, p. 433. Col. H.K. Craigm Chief of Ordnance, informed Supt. A.M. Barbour on April 11,1859, that the money had been appropriated to erect the new shop, Harpers FErry NHP Reel 19,Vol. 11,p. 1023.

"I am satisfied that the proposed location and plan will be highly conducive to economy in the construction of the building and to order, convenience, and symetry; I respectively recommend the plan for your approval."[3]

On June 8,1859, Col. Craig presented to plan to Secretary of War Floyd and recommended its approval, writing:

"As you will perceive from the accompanying letter of the Superintendent it is designed for the operations of Rifle Barrels and will fill up the space between two other shops (Bldg.No. 4 and 6). The arrangement is very good and when carried on to execution the three Buildings will present quite a handsome appearance."[4] Secretary Floyd approved the plan on July 12,1859.[5]

Construction was underway by mid-August, for on the 18th of that month, George Mauzy, a resident of Harpers Ferry, advised James H. Burton, a former master armory of the Harpers Ferry Armory and then chief engineer of the Enfield armory in London, that! "The government is building another large shop between the lower forging shop (Bldg. No. 4), and the middle or machine shop (Bldg. No.6) at the Rifle Factory."[6] In September 1859, Mauzy was able to report that the stone mortar masonry foundations had been completed.[7]

On April 28,1860, Superintendent Barbour wrote to Col. Craig and requested permission to put one bell plus four clocks,-one in each face of the square tower of the new shop.[8] Responding on May 1, the Chief of Ordnance anounced that the procurement of the bell and clocks for the new barrel Drilling and Finishing Shop must be postponed because it was planned to include a bell and clocks in the new iron arsenal building that was proposed to be erected on Arsenal Square, Block A. Shenandoah Street.[9]

3. Barbour to Craig, June 7,1859, Reel 27,Vol. 6,p. 518.
4. Craig to Floyd, June 8,1859, Reel 20, V.3, p.294.
5. Capt. William Maynaider of Ordnance Office, to Supt. Barbour, July 12,1859, Reel 19, Vol. 11, p.1051.
6. Mauzy to Burton, August 18,1859, Harpers Ferry NHP collections.
7. Mauzy to Burton, Recived in London,England October 6,1859.
8. Barbour to Craig, April 28,1860, Reel 27,Vol. 8,p.720.
9. Col. Henry K. Craig to Barbour, May 1,1860, Reel 19, V.12, p.1107.

On May 12,1860, Lt. Col. James W. Ripley, of the Ordnance Department and submitted his inspection report of the Harper's Ferry Armory, noted that "The addition to the Rifle Factory connecting the forging with the machine shop" was "nearly completed". He also commented: "Many improvements have taken place at these works since my last inspection, and when all the designs in contemplation for its better arrangement and further improvement have been carried out it will be a creditable and more complete establisment."[10]

In his annual report for the fiscal year ending June 30,1859, Superintendent Alfred M.Barbour reported: "The new barrel-drilling and finishing shop (at the rifle factory).. has been very nearly completed, together with a powder-house, and an annealing shop fitted up."[11]

On July 20,1860, George Mauzy wrote to James H. Burton and reported that that new barrel grinding shop was nearly finished and when done would be one of the best shops at Harpers Ferry.[12] The shop was probaby finished by the end of the summer of 1860.

With the erection of Bldg. No.9, connecting Bldgs. No. 4 and 6, a new giant shop 254 feet long by actual measurement of the extant foundations and about 35 feet deep. was formed. This same evidence dicates that Bldg. No. 9 was 57½ feet wide and 49½ feet deep.[13]

10. Inspection Report of Lt.Col. James W. Ripley,May 12,1860, Harpers Ferry NHP Photostats, Vol.4, p. 31.
11. Serial No. 1079, p. 975.
12. Mauzy to Burton, July 20,1860.
13. Larrabee, Edward McMillian,"Repart of Exploratory Archeological Excavations conducted and the Lower Hall Island Rifle Factory, Harpers Ferry National Monument,Harpers Ferry, West Virginia from August 25 through August 29,1859,"(N.P.S.typescript, Harpers Ferry ,W.Va., June 20, 1960), pp.32-33

Harpers Ferry Negative No.HF-37, a photo taken May 22, 1865 reveals that Bldg. No. 9 was a two-story brick shop with a four story high clock tower. The north(front) and south(rear) gable end elevations of the shop were divided into five bays each and the center bay of the north facade was comprised of a square tower that was approximately four stories tall. The new shop was designed in the same architectural style that had been introduced to the Harpers Ferry Armory by Major John Symington in 1846 and which had been been applied to adjoining Bldgs. No. 4 and 6.

From these circumstances it is highly probable that the new Barrel Drilling and Finishing Shop had stone mortar masonry foundation walls, brick upper walls that were trimmed with cut-stone water table, window sills, and coping; the door and window frames would have been cast-iron. The gable roof would have been covered with slate and the gutters and downspouts would have been of copper. HF- 37 shows that the first story windows of Bldg. 9 had round arches and were recessed in panels beneath round arched brick pilasters in the usual Symington manner, and that the second story opening, which had flat arches, were also recessed within rectangular panel, also in the Symington style. The north and south gable end walls had the usual brick parapet end walls that were topped with cut stone coping, crenelated, and rose above the ridge of the gable roof. The gable roof was also set at right angles to flanking Bldg. No. 4 and 6. The square bell tower rose about one-story above the roof ridge, was crenelated, having a small turret at each top corner, and the OC was a round Arch opening set in each face apparently intended to hold a clock.

(see page 135)

6. Enclosing Walls and Grading at the Rifle Factory, 1855-61:

The annual estimate for the 1855-56 fiscal year included a request for $ 8,1840 for the "Protection and improvement of rifle works;" it was explained: The grounds occupied by the rifle works, about five acres, require to be enclosed to protect the public property at these works. This will require an enclosing wall of masonry with rough coping. It will also be necessary to make a road, sunk under the (W.&.P.] railroad, to communicate with the banks of the Shenandoah river, in order to obtain sand for building purposes."[1] Congress appropriated this sum on March 3,1855.[2]

Major William H. Bell, who prepared this estimate, provided the following additional data on the state of the island and scope of the work intended. He wrote: "The grounds.. are exceedingly irregular having wide and deep cavities to be filled in, and great irregularities of surface, requiring to be graded and levelled. Without protection from enclosures or walls, whilst they are much exposed by the meeting of canal boatmen, immediately in front of the factory,

"They are exposed on four sides, two of them by the canal, Railroad, and County Road.-They exceedingly need attentions to protect the Public property at at the works. The sunken Road is..to obtain sand from the Shenandoah for building purposes, this being the only point where it can be obtains...[3]

The cost he esimated would be about as follows:

1. Serial No. 781, Document No.3, p. 238, 239, Item No. 7.
2. U.S. Statues at Large, X, p.637.
3. Major William H. Bell, Estimates May 18,1854, Reel 25, Vol. 1, pp.85-86.

"1. Enclosing wall of mortar masonry 2,665 feet long, 8 feet high, 28 in. thick average.
Foundation of same, 2665 feet long, 3 feet high, 3 feet thick, equals 2,949 perches @ $2 per..... $ 5,898.00.

2. Rough coping of wall 2,665 feet lineal @ 50¢..... 1,332.50
Enclosing Wall: $ 7,230.50

3. Double Dry Wall for sunken road through Rifle work to Shenandoah River, under Railway, 160 feet long, 11 ft high & 28 in. thick average-164 perch @ 1.50,,,

"have been nearly completed, only four panels- about forty feet- remaining to be finished. The enclosure of brick and iron has been painted with three coats of lead and oil.

"A considerable amount of filling has been done in grading and levelling the yard around the workshops within the enclosure."[7]

Superintendent Clowe, in his report for the fiscal year ending June 30, 1858, commented: "The work necessary to complete the plan of protecting and improving the grounds immediately surrounding the workshops at this [rifle] factory has been completed, and the piers and gateway constructed, and a part of the wall on the canal erected....

"The enclosing wall around the factory, with iron pickets, gateways and piers has been thoroughly painted."[8]

7. Fire Protection and Street Lighting, 1855-1861:

In his annual report for the fiscal year ending June 30,1860, Superintendent Alfred M. Barbour reported, that at the rifle factory: "The tail- race for the new shops [Bldg. No.9], hydrants for force-pumps, pipe for conveying water to the annealing house [Bldg. No. 5]; iron lamp posts for yard lamps, and an iron gate at the west [upper end] of the inclosure, have all been completed, and in use."[9]

Historical prints and photographs showing the enclosing fence are as follows: Harpers Ferry Negative No. HF-490, a lithgraph published in 1857; HF- 37, a photograph taken May 22,1865.

HF-37 will be found on page 135 of this volume and HF-490 in Volume II, page. 233.

7. Serial No. 920, p.553.
8. Serial No. 976, p.1320-1321.
9. Serial No. 1079, p.975.

8. Painting and Slating Roofs, Rifle Factory, 1855-61:

In the annual report for the fiscal year ending June 30,1856, Superintendent Henry W. Clowe reported" The slate roofs of the shops at this (rifle) factory have all been repaired, and the iron roofs newly painted."[1]

In his annual report for the fiscal year ending June 30,1858, Clowe noted that: "The workshops at the rifle factory have been kept in the same state of repair as they were at the beginning of the year, requiring to do so, only slight repairs and painting."[2]

Finally, in his annual report for the fiscal year ending June 30,1859, Superintendent Alfred M. Barbour wrote: "All the shops at the .....rifle.factory have been more or less improved, including the painting of all the (cast-iron) window frames and sash."[3]

1.Serial No. 876, p. 390.
2.Serial No. 976,p.1320.
3.Serial No. 1025, p. 1114.

9. Proposed **Alterations** and Improvements at the Rifle Factory, 1860-61:

a. Removing Old Buildings:, 1860:

A February 10, 1860, Superintendent Alfred M. Barbour wrote to the Chief of Ordnance, Col. H.K. Craig, suggesting the removal of several old stone buildings from the Rifle Factory grounds on the lower end of the Hall Islands, stating:

"There are two old rough cast buildings [ ] possibly Bldgs. No. 8 and 10] in the lower end of that enclosure which are used only for rubbish etc. They are in an exceedingly diplipidated condition and not now needed and mar the appearance of the grounds. The material(or a portion of it) in them might be used for some other purpose. There are also a few old trees in the same enclosure, which it would be adviseable to take down. I would like authority to have the old houses and trees removed."[1]

The permission to make these changes was not granted, but the plan was studied and concurred in by Lt.Col. James W.Ripley in his inspection report of Harpers Ferry Armory of May 12, 1860. He noted that "The addition to the Rifle Factory [Bldg. No. 9] connecting the forging [Bldg. 4] with the machine shop [Bldg. No. 6],- now in process of erection and nearly completed, and as soon as it is finished, the present drilling and browning shop [Old Bldg 12 (?), on 1848 Map?)] which is entirely out of position, may be removed and the material applied to the erection of a small stock house of sufficient capacity to accommodate about 10,000 stocks, such building being very much needed at the Rifle Works..."[2]

No evidence has been found to indicate that these changes were made prior to 1861.

1. Barbour to Craig, February 10, 1860, Reel 27, V. 7, p.650.
2. Inspection Report of Harpers Ferry Armory by Lt.Col. James Ripley, May 12, 1860, Harpers Ferry NHP Photostats, Vol. 4, p.31.

b. Plans for A New Workshop, ,1861.

The estimates for the 1861-62 fiscal year requested $ 12,128 "For a brick building as an annealing shop, stock-house, proof house, and grinding mill," at the rifle factory; It was explained:

> All the grinding of the components for the rifle has now to be done at the musket factory, and all the stocks have to be first stored in the stock-house there; much of the annealing of parts of arms has to be done in like manner; which involves an extraordinary expense in time and loss of labor in the transportation of all these things to the rifle from the musket factory, a distance of nearly a mile.

The improvements at the rifle factory resolved on some years ago, likewise render it essential that a building, as estimated for should be erected at the earliest practicable period, The shops at this place being originally temporary structures for the fabrication of the Hall's rifle, and erected many years since, the place had either to be abandoned as a factory, or rebuilt for the manufacture of the new model rifle of 1855. This latter alternative was resolved on; in pursuance whereof, several buildings of a permanent kind have been constructed, especially looking to the necessity of filling up and grading the ground on which they stand to such a height as to secure them from inundations of the Shenandoah. By the erection of this building, all the objections to this place as a factory may be obviated, the old houses now in the way of filling up may be removed, and the cost of the manufacture of the rifle ultimately much diminished." (1)

Congress appropriated the desired $ 12,28 for construction proposed Shop No. 12 at the rifle works on March 2,1861.[2] The edifice was never built as Confederate troops seized control of the Harper's Ferry Armory on April 19, 1861.

1. Serial No. 1092, p.322, Item No. 1.
2. U.S. Statues at Large, XII, p.202.

U.S. Rifle Factory on the Shenandoah River,
at Harper's Ferry, Virginia, 1861-63.
Photo taken near Jefferson's Rock, May 22,1865

Harpers Ferry Negative NHP-HF- 37.

Looking west up the Shenandoah River from Harper's Ferry,

In center foreground, note the lower locks of the Shenandoah Canal, moving to the right the stone-arched bridge leading to the shops located on the lower Hall Island, and further to the right, a wooden bridge leading to the Upper Hall Island. If the date of this photograph is correct, then the small houses to be seen on the Upper Hall Island (above and to right of wooden bridge) are structures that were erected by the U.S. Military Railroad corps in 1864. Three old Armory Dwelling Houses standing on the Upper Hall Island were demolished in 1864 by those troops.

Shenandoah Street runs along the north bank of the Shenandoah Canal at lower right-hand corner of the photo.

The main line of four large Rifle Factory shops fronting on the south bank of the Shenandoah Canal, from left to right, are as follows.

First, Bldg. No. 4, a one-story, three-part shop, the Tilt Hammer and Smiths Shop, 110 feet long and 35½ feet deep, erected in 1849-51.

Second(to the right), two and one-half story plus bell tower Bldg. No. 9, Barrel Drilling and Finishing Shop, 57½ feet long and 49½ feet deep, built in 1859-60.

Third, one-story, three-part Bldg. No. 6, the Machine Shop, 87 feet 9 inches long and 35 feet deep and constructed in 1852-53.

Bldgs. No. 4, 9, and 6 formed a shop 254 feet long.

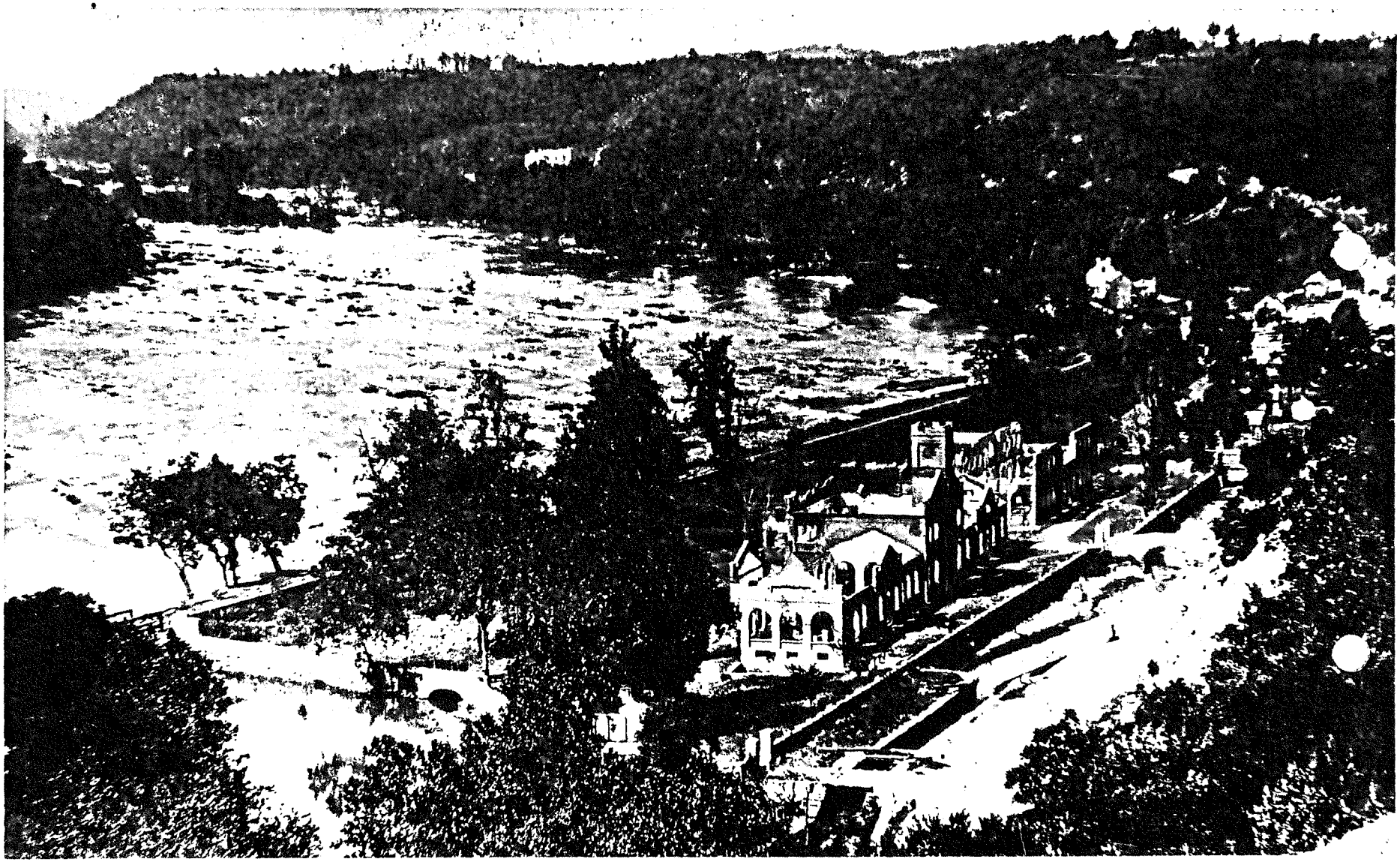
Fourth(to right of Bldg6), is the two-story, three-part Finishing and Machine Shop, Bldg. No. 3, 128 feet 8 inches long and 36 feet deep, erected in 1847-48.

To the south(left) of the rear of Bldg. No. 9 can be seen a portion of a two-story building, with a first-story of stone and the second of brick. This may be be Bldg. No. 1, the Filers Shop, 74 by 25½ feet, built in 1843-44.

A 11-foot high wall, once topped with an iron paling fence, that completely enclosed the lower Hall Island, can be seen in the photo.

At the left side an arched opening in the wall can be seen. This is probably the waste way for the new main tail race that was constructed in 1847-48 and carried the water to and from the water wheels of the new shops, along their south(rear) elevations, in an underground race.

Ruins of a gable end wall can be seen in the trees at lower center, to the left of the lower locks. This could be either the ruins of Bldg. No. 5, the Annealing Furnace and Proof House, 60 by 36 feet, 1 story, built in 1851-52, or Bldg. No. 8, remodelled Stock House, a two-story stone structure, 30 by 30 feet, erected in 1819.



G. Armory Stable, and Yard, Block F, Lot 2, Shenandoah Street, 1855-1861:

On May 18,1854, Major William H. Bell submitted estimates for the 1854-55 fiscal year in which he requested $ 3,239.50 for "improvement of Public Stable Grounds." This was to be used "For walls on the North East side of these grounds and for filling in the same, to the W. & P. Railroad. Also, for hay scales for the same, and for enlargment of the Stable on the East side. Viz:

1. Wall of mortar masonry 219 x 8 ft x 28 inch average. Foundation for Ditto 219 x 3 ft x 3 ft = 290 perch @ $ 2.....	$ 580.00.
2. Filling in 91 ft x 81 ft. x 6 ft.= 1,638 yds @ 25C.....	409.50
3. Hay Scales & Foundation for same.....	50.00
4. Enlargement on east side Stable, 15 x 35 ft(brick)....	2,200.00
	$ 3,239.50 (1)

The enlargement of the stable was disappoved and never built, leaving the probable cost of the work that was to be done about $ 1,039.50.

As Bell further explained: "This item excepting the enlargement of the stable is approved by the Secretary of War in the Report of the Board of Officers. When much work is on hand the Stable need to be a little larger. The ground requires improvement for the relief of the horses- there being no space now for that purpose."[2]

No special appropriation was made for the above purposes but the filling of the ground was apparently down from general funds. In the annual report for the fiscal year ending June 30,1855, Superintendent Henry W. Clowe reported:

"The stable ground have been filled in to a uniformed level with about 600 cubic yards of filling,[3] leaving a portion of the yard yet to be filled up."

The cost of this work, at 25 cents per yard, would have been $ 150.00.

1. Harpers Ferry NHP Microfilm Reel 25, Vol. 1, p. 86.
2. Ibid, p. 87.
3. Serial No. 841, p.557.

In the annual report for the year ending June 30,1857, Clowe wrote:"A wall has been built in the stable yard and filling to the amount of 331 yards and 120 perches of stone masonry."[4] This suggests an expenditure of $ 322.75: $ 82.75 for the filling and $ 240.00 to the mason for the wall. In his report for the fiscal year ending June 30,1858, Clowe further noted tersely: "The stable yard has been improved."[5]

From the data presented above, the following work and expenditures were made on the stable yard during the period 1855-61:

For filling, ca. 931 cubic yards @ 25¢.....	$ 232.75.
For stone masonry walls, 120 perches @ $ 2.00.....	240.00
	$ 472.75

It thus appears that the armory horses received approximately half of the "relief" proposed by Major Bell in his 1854 -55 estimates.

4. Serial 920, p.557.
5. Serial No. 976,p.1319.

H. U.S. Armory Canals, 1855-1861:

1. U.S. Musket Factory Canal on the Potomac:

The estimates for the 1854-55 fiscal year requested a total of $ 6,000 to wall and fence the armory canal. The money was to be used as follows:

1."$ 5,000 " for a stone wall and iron railing along the south side of armory canal;" this was needed, it was explained"To secure the canal bank it is necessary to build a permanent wall, which, with an iron railing, would enclose the work on that (the street) side."[1]

2. $ 1,000 "For iron railing between railroad bridge and armory canal"; this was need"To enclose the west (or upper) end of the Armory yard."[2]

The desired $ 6,000 was appropriated by Congress for these projects on August 5,1854.[3]

In his first annual report, for the fiscal year ending June 30,1855, Superintendent Henry W. Clowe reported: "Enclosing wall and fence has been put up at the west (upper) end of the armory yard, near the rolling mill (Bldg. No. 18) on the west side, consisting of stone foundation, cut-stone coping, brick piers and panels, with wrought-iron fence, filling the space between the piers, and extending from the Baltimore and railroad track to the basin, leaving the waste-weir and gates within, and thus cutting off all communication with the armory yard from that side."[4]

Continuing, he also wrote: "The wall along the south side of the armory canal has been excavated for, and the foundation of stone completed about 1,365 feet in length. A portion of this wall is sixteen feet high, while the residue is from six to nine feet in height, with an average thickness of three feet. 1,365 feet of cut-stone caps for piers have been made ready to place upon the wall when the brick

1. Serial No. 714, Document No. 2, p.188,189, item No.3.
2. Ibid., item No.4.
3. U.S. Statues at Large, X,p.578.
4. Serial No.841, p.556.

"piers are built."[5]

In his estimates for the 1856-57 fiscal year, Clowe asked for $ 5,723.00 "for completing stone wall and iron railing on south side of armory canal;" he Explained "This sum is needed to purchase and set bricks for the piers, and base wall for the cut-stone coping. The foundation wall, with the needful cut-stone coping, is already prepared and paid for from the previous appropriation. The superstructure of panel brick-work has yet to be laid, which, together with the wrought-iron railing, now being made at the rolling-mill of the armory, from scrap of inferior quality, will require the above sum."[6] Congress voted this money on August 30,1856.[7]

The fence along the south of the armory canal, for which a total of $ 10,723 had been provide, was completed by June 30,1857; in the annual report of that date Clowe wrote:

"The enclosure on the south side of the armory, consisting of stone foundation, brick piers, cut stone caps and coping, wrought-iron railing between the piers and pickets, has been completed, except painting. The wall is now about 1,309 feet long.

5. Serial No. 841, p. 557.
6. Serial No. 865, P.244,245, item No. 2
7. U.S. Statues at Large, XI,p.150.

"The stone masonry was done previous to the close of the fiscal year ending 30th June 1855;... The brick and iron work was done in the last fiscal year."[9] In this same report, Clowe also noted that"50,966 pounds of iron (hadbeen) made and rolled from blooms for fence." (8)

In the estimates for the 1855-56 fiscal year, Superintendent Clowe had also requested $ 2,334 for two other canal projects:, namely:

1. $ 234 for "repairs and filling in of sluice-ways at musket and rifle factory;" it was explained that"The bottom and sides of sluice-ways at the musket factory need filling in with sand and cementing, to prevent the water from undermining and ruining the foundations below the sluice-ways and the walls on each side."[10]

2. $ 2,100 for "Improvement of north side of hill at the musket factory". "The torrent in rainy weather down the sides of this hill are exceedingly injurious to the canal at the present time, filling it in with dirt and sediment continually, rendering it necessary too often to stop the works to clean the race-way."[11]

Congress appropriated the money for these two canal porjects on March 3,1855.[12]

The 1856-57 estimates, in addition to the $ 5,723 already mentioned to complete the wall along the south side of the Armory canal, also asked for another $ 2,970 for two more projects:

1.$ 441.00 "for new bridge and sluice over armory canal at musket factory." Clowe noted that "Nearly opposite the east-end of the rolling mill (Bldg. No. 18), on the south side of the canal, there has been dug out a deep pit to receive the debris of the ravine at this point, which formerly emptied itself into the canal, always injurious to its capacity, and often endangering the safety of the canal embankment. This pit has now served its purpose; but the constantly increased expense, which become more repeated as the reservoir inclines entirely to fill up, giving warning of the necessity of providing a better, and more durable, and

8. ;Serial No.920,p.549.
9. Serial No.920,p. 551.
10. Serial No. 781, Document No. 3, p.238,239, item No. 6.
11. Ibid., Item No. 9.
12. U.S. Statues at Large, X,p. 637.

" less costly vent to this drainage. It is therefore proposed to construct at this point a bridge over the canal, the chords of which will serve as the sides of a trunk underneath the plafform of the bridge to carry off the surplus water and drainage into the tail-race of the water-wheel of the rolling-mill (Bldg. No.18), which is sufficiently low to effect the purpose with great facility, and ,as compared with the expense of frequent removal of the gravel and dirt from the pit before spoken of, at little cost. "[13]

Congres voted this money on August 30,1856.[14]

This bridge was constructed in 1856-57 and in his annual report for the year ending June 30,1857, Superintendent Clowe described this improvement as follows: "A bridge and sluice, or trunk, has been built over the armory canal. This structure consists of a wooden bridge, thirty-six feet long and ten feet wide, to admit of the free passage of wagons and carts. Suspended to the bridge is a trunk of sufficient capacity to conduct the water from the hill across the canal during heavy rains; and thus prevent the deposit of mud and stones in the canal. Connected with this is a walled drain, leading from the bridge to the tail-race, at the rolling mill (Bldg. No.18), paved at the bottom, walled on both side, and covered with heavy flag stones.

"The foot bridge across the canal has been removed about sixty feet east from its old position, with the stone masonry on which it rested."[15]

What is probably the old foot bridge, perhaps in its original position, can be seen in the lithograph,Harpers Ferry NHP Negative HF-256, which was published in 1857. **See Volume II, page 193.**

13. Serial No.865, pp. 244,245, Item No. 6.
14. U.S. Statues at Large, XI,p. 150.
15. Serial No. 920, p. 551.

The 2nd request in the 1856-57 estimates with regards to the Potomac Canal was for $ 2,529 "For breakwater wall to protect lock-gates at head of the armory canal, and stone wall on the southwest and north sides above and below the railroad bridge, where it crosses the canal." It was explained that:

"The construction of the inlet at the head of the canal is such that every freshet causes more or less injury to the lock gates. These gates are very valuable; and by the erection of this wall the current will be broken, and drift acompanying it will be carried away over the dam instead of lodging against the gate, and thumping against the planking, with the action of the water. The stone wall above and below the bridge over the canal, on the roadside [south side], is very much needed, as the water here is very nearly even with the surface of the road for the distance of about 895 feet, and consequently liable to filling up by the wash of the road and the accumulation of stones from the common use of the road, and other causes."[16]

Congress voted the requested sum on August 30,1856.[17]

The construction was completed in 1856-57 and in his annual report for the fiscal year ending June 30,1857, Clowe remarked:

"Four thousand one hundred and ninety-two perches of heavy dry walling, in eight sections, and 589 cubic yards of earth filling, have been constructed for the breakwater, at the dam on the Potomac River, and in repairing the same. The walling is of very heavy stone, secured by heavy iron bolts in the most permanent manner to resist the ice and drift during the freshets which frequently occur in the river."[18]

During the 1857-58 fiscal year "The enclosing [brick] wall and iron picket fence, on the south side of the armory [was] painted its entire length." "1,179 yards of the inner face of the canal wall [were].. pointed with mortar.," and

16. Serial No. 865, pp. 245,246, Item No. 9.
17. U.S. Statues at Large, XI,p.150.
18. Serial No. 920, p. 551.

" A new set of beams for the lock gate, at the head of the armory canal, were put in position, and a platform across the locks constructed for the convenience of opening and closing the same."[19]

In his estimates for the 1858-59 fiscal year, Superintendent Henry W. Clowe asked for $ 6,479 "for construction of a stone wall from the lock gates at the head of canal, along the south bank of the same, east, to unite with the new iron fence opposite the rolling mill (Bldg. No. 18)," he explain the need as follows: "The canal, or race-way, which furnishes all the power to the armory, requires protection from the washing of the hill-side, (which is steep and bluffy throughouts its entire length,) more particularly now, as a county road, very much used, lies along its bank the whole distance from the armory buildings to the lock gates or head. The efforts heretofore made to secure the object of this estimate have been partial and temporary; and although they have materially aided in preventing the evil complained of, complete protection in this respect cannot be obtained except by the construction of a revetment wall like that above esimated for."[20]

Congress appropriated the desire money on June 12,1858.[21]

In his first first annual report, dated June 30,1859, the newly appointed superintendent, Alfred M. Barbour, wrote: " Two thousand five hundred and ninety-three perches of heavy stone masonry have been built on the south bank of the armory canal; 4,447 cubic yards excavation and filling earth, and 209 yards rock excavation done on the same."[22]

The estimate for the 1859-60 contained a request for a total of $ 10,730 to accomplish the three following projects on the musket factory canal:

19. Serial No. 976, p. 1319.
20. Serial No. 941, p.193, item No. 3.
21. U.S. Statues at Large, XI, p. 335.
22. Serial No. 1025, p. 1114.

1. $ 2,230 "for removing old canal embankment from present armory canal," because "The embankment to be removed obstructs very injuriously the volume of water in the armory canal and should be removed."[23]

2. $ 6,500 "for face and range stone wall on canal bank in rear of workshops", needed because "By construction of this wall a much greater volume of water can be obtained, and the damage done by the burrowing of muskrats in the embankment of the armory canal will cease."[24]

3. $ 2,000 "for cleaning out armory canal"; it was explained "This work of cleaning out the canal has become necessary from a great accumulation of debris."[25]

Congress provided the desired $ 10,730 on March 3,1859.[26]

In his annual report for the fiscal year ending June 30,1860, Barbour noted of these projects: "The banks of the canal at the musket factory next, to the shops, have been repaired by a grouted cement wall, all along its length from the barrel shop (Bldg. No. 9) to the bell shop (Bldg. No. 3), and this improvement insures the entire efficiency of the canal in rear of the range of shops. The canal having been cleared from all obstructions from its bed, the flow of water is now ample to meet any possible contingency of power."[27]

Superintendent Alfred M. Barbour, joining the Confederancy in April 1861, never submitted his annual report of operations for the fiscal year ending June 30,1861, hence the repairs and improvements that may have been made to the musket factory canal during that period are unknown.

Barbour, in his estimates for the 1861-62 fiscal year, was thinking of rebuilding much of the armory canal and requested an appropriation of $ 11,963 "for enlargement and protection of musket factory canal." He explained

23, Serial No. 966, p.181, Item No. 4.
24. Ibid., Item No. 5.
25. Ibid., Item No.6.
26. U.S. Statues at Large, XI, 433.

This item... is in continuance of the plans heretofore proposed, to make the canal sufficient as a water power for government use. By the expenditure of the sum estimated, it will, in connection with the new dam over the Potomac river, so prove; and its future usefulness and secured permanent adaption to the wants of the armory will be beyond question. It also refers to a very valuable improvement, looking to facilities in the working operations of the armory. The workshops next the canal are now so close to the bank of the canal as to preclude the use of the shop range of shops [??].

The bank of the canal is wide enough to allow the removal of a portion of it, so that the space thus reclaimed may be conveniently used by carts passing in rear [south] of this range of shops, whereby great inconvenience in the constant transportation of materials and work may be avoided. (27)

Congress, on March 2,1861, appropriated the requested $ 11,963 to implement this plan,[28] but before any construction could be undertaken, Confederate troops seized the armory on April 19, thus ending U.S. Ordnance Department operations at Harper's Ferry until 1862. Of the total of $ 40,199 approprated for canal projects, 1855-1861, approximately $ 28,236 was actually spent on repairs and improvements.(See Chart)

The U.S. Musket Factory Canal can be seen in the following drawings and photographs. : Harpers Ferry Negative No. 51 or 256, a lithograph published in 1857; HF- 30, a photo taken in October 1862; HF- 10,photo Taken October 1862, excellent view of the brick pier and iron fence erected along the south side of the armory canal, showing section from rolling mill east to Shenandoah Street; HF-9,taken October 1862,showing area of canal west of rolling mill,Bldg.No.18. HF- 38,photo taken 1865or 1866;HF 28, taken 1865- or 1865; HF- 355, excellent photo taken about 1886; HF-492- taken from Loudoun Heights about 1880; HF-539, excellent photo taken in 1886, looking west over Bldgs. 1 and 2, showing condition of wall along south side of armory canal and the of the canal.

27. Serial No. 1092, p.322,323, item No. 3.
28. U.S. Statues at Large, XII,p. 202.

2. U.S. Rifle Factory Canal on the Shenandoah, 1855-1861:

The estimates for the 1855-56 fiscal year requested $ 3,505 "For repairs of canal embankment walls on the southwest and river sides, and of the canal and dams at the rifle factory." Major William H. Bell explained that "These walls and embankments were principally injured by the great flood of April 1852, also, in some degree, by heavy rains of the last two years; and the above amount is requisite to put them in proper repair."[1] Congress appropriated the requested amount on March 3, 1855.[2]

In the annual report for the year ending June 30, 1856, Superintendent Henry W. Clowe reported that "5,823 feet of dry wall, varying from one to six feet in height and from two to four feet in thickness, and 4,895 feet of coping, have been built and set on the armory canal." He also noted that "3,000 feet of excavation and filling had been made on the north and south banks of the canal." He explained that "All of the foregoing, walling, filling, and excavation was necessary to protect the banks of the canal from injury by floods, heavy rain, and other casualties."[3]

He further noted that "The wooden bridge across the canal has been weather-boarded and the frame covered to protect it from the weather."[4]

In his estimates for the 1858-59 fiscal year Superintendent Clowe asked for $ 2,000 for a wall on the west (or north) bank of canal, rifle factory;" he explained' 'The county road (Shenandoah Street), running immediately along the margin of the canal, is constantly wearing away its banks and forming a slope from the road to the canal, facilittating the washing into the immediate channel of the canal of all kinds of rubblish and filth that accumulate on the surface of the road."[5] Congress voted the $ 2,000 for this project on June 12, 1858.[6]

1. Serial No. 781, p.238, Item No. 2.
2. U.S. Statutes at Large, X, p.637.
3. Serial No., 876, p. 390.
4. Ibid., p.389.
5. Serial No. 941, p193, 194, Item No. 5.

In His annual report for the fiscal year ending June 30, 1858, Superintendent Henry W. Clowe wrote that at the rifle factory "a part of the wall on the canal (had been) erected", and also noted "The gravel bar, arising from the wash of the ravine in the vicinity into the canal, has been removed, and the obstruction to the flow of the water temporarily obviated."[6]

Alfred M. Barbour, the newly appointed superintendent of the Armory, described the completion of this project in his annual report for the fiscal year ending June 30,1859, as follows:

"One thousand four hundred and seven perches heavy stone masonry, 1,459(or 459) feet stone coping, 405 yards earth excavation, and 507 yards filling of earth have been made in completion of a wall on the east(sic-west or north) bank of the canal at the rifle factory, protecting it on the county road side from the wash of the hill side, and depredations and incursions from that edge of the bank."[7]

George Mauzy, who resided in an Armory Dwelling House located on the upper end of the Upper Hall Island, informed his friend James H. Burton on June 12,1858, that this new wall ran from opposite the Rifle factory along the roadside of the canal west or up the river to a point opposite to his residence.[8]

In his report for the year ending June 30,1860, Barbour briefly noted that "the canal at the rifle factory and the musket factory have been repaired to such an extent as the occasion required, so as to render them both efficient."[9]

6. Serial No. 976, p.1321.
7. Serial No. 1025, p.1115.
8. Mauzy to Burton, June 12,1858 Collection of Letters, Harpers Ferry NHP.
9. Serial No. 1079, pp.973-974.

In his estimates for the 1861-62 fiscal year Superintendent Alfred M. Barbour requested $ 11,129 "for enlargement and protection of rifle factory canal;" He explained: "... Orginally this canal was made by a joint stock company [in 1802], to facilitate the navigation from the upper country bordering on the Shenandoah river, and was not designed for the purposes to which the water power derived from it is now devoted. In effecting the improvement here proposed, a stone wall will be necessary to render the water-power of the rifle factory sufficient; and also to protect from inundation the land and tenements of the government between this canal and the Shenandoah river. These [on the Hall Islands] are occupied by operatives of the armory and are very valuable [??]."[10]

Congress appropriated the desired $ 11,129 on March 2,1861,[11] but the Confederature capture of the Harpers Ferry armory on April 19,1861 ensured that none of this money was ever spent on rebuilding the Shenandoah Canal at the U.S. Rifle Factory. Of the total of $ 16,634 provided for canal projects from 1855 to 1861, approximately $ 5,505 was actually spent.(See Chart).

The results of this work on the Shenandoah Canal opposite the U.S. Rifle Factories can be seen in the following views: the lithograph published in 1857-"View of the Island of Virginius,in the Shenandoah, at Harpers Ferry, Taken near Jefferson's Rock",(Harpers Ferry NHP Negative HF- 490), HF-37, a photo taken during the Civil War. **For Hf-490, see Vol. II, p.233; for HF-37, see this volume, p. 135.**

10. Serial No.1092, pp. 322,323, Item No. 2.
11. U.S. Statues at Large, XII, p. 202.

APPROPRIATIONS FOR U.S. CANALS AND DAMS, 1855 - 1861

Year:	U.S Potomac Canal	Rifle Factory Ganal	Total Canals	U.S. Potomac Dam	U.S Shenandoah Dam	Total Dams.		Total- Canals & Dams
3/3/ 1855	2,334	3,505	$ 5,839	0	0	0		$ 5,839
8/30/ 1856	8,693 (1)	0	8,693	7,000	0	7,000		15,693
3/7/ 1857	0	0	0	0	0	0		0
6/13/ 1858	6,479	2,000	8,479	40,000	0	40,000		48,479
3/3/ 1859	10,730	0	10,730	26,000	0	26,000		36,730
6/21/ 1860	0	0	0	0	0	0		0
3/2/ 1861	11,963 *	11,129 *	23,092 *	0	0	0		23,092 *
TOTAL.	(1) $ 40,199	$ 16,634	$ 56,833	$ 73,000	0	$ 73,000.		$ 129,833
TOTAL SPENT	$ 28,236	$ 5,505	$ 33,741	$ 73,000	0	$ 73,000		$ 106,741

* Money never spent.

(1) Figure includes $ 5,723 for erecting a enclosing wall and fence along the south side of the Armory Canal.

I. U.S. Armory Dams, 1855 - 1861:

1. U.S. Musket Factory Dam on the Potomac:

In the estimates for the 1856-57 fiscal year Superintendent Henry W. Clowe asked for $ 7,000 "for repairs to the Potomac Dam." He explained: " Upon the safety and permanency of this dam the whole utility of the establishment depends; and in the event of a very serious breach being made in it, the entire working machinery of the musket factory would be compelled to stop. The superintendent of the armory reports that he has caused, and has himself made, careful surveys of the condition of the dam at present. The great flood of [April] 1852 did it very serious damage; and the repairs which have been made to it since have not be as permanent as they might have been, and the heavy rains and freshets of the late summber have continued to make gradual inroads upon it, carrying away many of its supports. It requires now heavy coping, and much filling in, to resist the powerful pressure against it through its entire length. The expenditure now of this sum may and probably will save to the government other and large sums for the same purpose at no distant day."[1]

The Congress appropriated the desired money on August 30,1856.[2]

In his annual report for the fiscal year ending June 30,1858, Clowe reported that" 1,456 perches of heavy stone masonry have been constructed, as a breastwork for the repair of the dam over the Potomac."[3]

A New Potomac Dam Proposed,1858-1861:

In the estimates for the estimates for the 1858-59 fiscal year., Superintendent Clowe requested $ 40,000 "For a new dam across the Potomac;" It was explained: "The old dam on the Potomac river, by which the entire effective value of the armory, as such, is controlled, has been in use over thirty years [since 1828-29], and as constructed at that early day is deficient, and always has been so, in all the points which render it secure and reliable. Year after year it has been necessary to repair it, and remedy the

1. Serial No. 865, p. 246,247, item No. 10.
2. U.S. Statues at Large,XI,p.150.
3. Serial No. 976,p.1319.

"defects which every freshet in the river, or the breaking up of the ice in the spring, makes apparent. The cost of the repairs which have been made to this dam since its construction would be more than sufficient to reconstruct it upon the most approved plan, which is now proposed as a measure of necessity and economy."[4]

Congress voted the $ 40,000 on June 12,1858.[5]

On February 18,1859, the United States entered into a contract with Snovell & Company to built the new dam.[6] The engineer in charge of the project was Thomas Leiper Patterson.[7] The specifications and plans for the new dam will be found in Snell, Charles W.,"Research Report-The Musket Factory Buildings and Grounds, Harpers Ferry Armory, 1859-1860, Harpers Ferry National Monument, West Virginia,"(N.P.S. Typescript, Harpers Ferry NM, W.Va., April 27, 1959), Appendix No.IV, pp.80-83. The foundation and abutments were to be comprised of heavy stone rock ashlar masonry bound with mortar. These were to be 10 feet thick. The upper part of the dam was also to be composed of heavy stone masonry, laid in two walls which formed the upper and lower faces of the dam. Each mortar wall was to be eight feet(four course] high and two feet thick. This was also to be 10 feet thick and the core was to be apparently filled with heavy stone. The stone portion of the dam was to have a timber superstructure that was to be five feet 10 inches high and 10 inches thick. This was to consist of seven courses of white oak timbers each 10 inches thick , which were to be secured to the masonry section by one and one-eighth inch iron bolts.

The contractor began laying masonry for the dam on the Maryland side of the Potomac about the first of June 1859.[8]

4.Serial No. 941, p.193,194, item No. 4.

5.U.S. Statues at Large,XI,p.335.

6.Col. Henry K. Craig, Chief of Ordnance, to Secretary of War Floyd,February 21, 1859, Reel 20, V.3, p.289; Contract dated February 18,1859, in Harpers FERRY NHP Photostatsm V. 4, pp. 10-17.

7. Col. Craig to Secretary of War Floyd, Nov.22,1858, Ree; 27,Vol. 1,p.91.

8.Engineer T.L. Patterson to Col. Craig, June 22,1859,Reel 27,Vol.6,p.528.

In his annual report for the fiscal year ending June 30,1859, Superintendent Alfred M. Barbour described the progress of construction as follows:

"Up to the close of the fiscal year, but little comparative progress has been made in the construction of the new dam over the Potomac river to supply the place of the old one, for feeding of the armory canal.

"The contractor for this work, which is controlled chiefly by a civil engineer in charge, had performed preparatory labor and procured materials, amounting in the whole to about $ 2,827.20, for which he had been paid. A large number of heavy iron bolts and nuts for securing the coping and timber of the work have been prepared at the armory from scrap-iron, made and forges in the rolling mill and workshops of the armory."[9]

The contractors made such slow progress that the United States cancelled the contract in October, 1859.[10] Of the total 1,470 feet length of the new dam, Snovell & Company had only constructed 335 feet, extending out from the Maryland shore, at a cost of $ 9,130.75.[11]

A new contract for completing the dam was awarded to Hugh L. Gallaher in March 1860.[12]

9. Serial No. 1025, p. 1114.
10. Col. Craig to Supt. Barbour, October 27,1859, Reel 19, V.11, p.1069.
11. Report on Armory Dam by Civil Engineer C. Crozet, to Col. H.K. Craig, May 21, 1860. Reel 26,Vol. 10, p.962-968; Final estimate of Work done by Snovell & Co. Upon the new dam for the U.S. Armory at Harper's Ferry, November 26,1859, Reel 26, V.11, pp.1027-1028.
12. Col. Craig, to Supt. Barbour, Mar h 2,1860, Reel 19, V.11,p.1095.Contract with H.L. Gallaher, for Completion of the Dam at Harpers Ferry, dated March 1, 1859, Harpers FERRY NHP Photostats, Vol. 4, pp.34-41.

In the annual estimates for the 1859-1860 fiscal year the Ordnance Department asked for an additional $ 26,000 "for continuing the new dam across the Potomic." They explained to Congress "The appropriation made at the last session of Congress embraced 40,000 dollars for this dam as estimated by the Superintendent of the armory. But the construction of the work having been confided to a professional engineer, and his estimate being that the work, to be permanently and properly done, will cost $ 66,000, this additional sum is now asked."[13]

Congress voted the additional $ 26,000 on March 3,1859.[14]

Of the total of $ 66,000 provided, $ 56,869.25 was available on March 1,1860 to pay Hugh L. Gallaher for completing the dam.

In his annual report for the fiscal year ending June 30,1859, Superintendent Barbour reported: "The contract for the new dam over the Potomac River, to supply the armory canal, has progressed with very variable prospects, to its completion; but it is now hoped that the present season, if favorable, will terminate the work. This,however, will very much depend on the weather and the unabated energy of the contractor."[15]

-Progress was slow and on September 6,1860, Engineer Patterson reported that the work had been much delayed by frequent freshets in 1860. He described the state of the new dam as follows:

> The masonry of the Dam is complete for about 420 feet from the Maryland abutment which is raised to the level of the C. & O. Canal embankment and within four and a half feet of its full height. More than 300 feet of the dam is timbered and sheeted.
>
> The Coffer dam extends out to about 600 feet from the Maryland abutment and will be continued so as, by the last of next week to enclose one-half of the length of the Dam (735 feet)....

13. Serial No. 996, p.181,182, item no.8.
14. U.S. Statues at Large, XI, p.433.
15. Serial No. 1079, p.974.

Engineer Thomas L. Patterson listed the costs of construction, 1858 to date as follows:

Amount of work done by first contractor, Snovell & Co.	$ 9,130.73
" " " " " second " , Hugh L. Gallher	9,702.59
Cost of timber and plank	8,797.89
Iron bolts & spikes manufactured in Armory	3,230.60
Engineering expenses	9,174.96
Advertising & printing of bids	66.67
	$ 40,103.44 [16]

Thus by September 6,1860, only $ 25,896,56 remained of the original appropriation [17] of $ 66,000, and the dam was still less than one-third complete!

On October 12,1860, Engineer Patterson suggested that the line of the dam be changed on the Virginia or armory side of the river.[18]

Henry W. Clowe, Master Machinist and former superintendent of the armory, explained the reasons for these proposed changes to the Ordnance department as follows: By the alterations, the line of the Dam next the Virginia side will be nearly perpendicular to the course of the current of the river, & have a tendency to direct the driftwood away from the head or lock gates towards the center of the stream -- more than would be the case by the former line -- and this with the peculiar & favourable construction of the proposed abutment with the flume wall, must it seems effectually prevent the drift wood knocking against the head gates, & also from the accumulation of it at this point, a result that the construction of the Old Dam & lock gates never successfully accomplished..." [19]

The Secretary of War approved this proposed change in the line of the dam on December 22,1860.[20] Secretary of War Floyd was also informed during December 1860 that an additional appropriation of $ 50,000, thus increasing the total cost to $ 121,000, would be required to complete the new Potomac dam.[21]

The construction season ended in November,1860, on the dam and in order to reduce expenses to an absolute minimum, Engineer Thomas L. Patterson and his assistants were dismissed in January,1861 and further construction of the dam was to be supervised by Superintendent Alfred M. Barbour.[22]

22. Col. Craig, Chief of Ord., to Barbour, January 21,1861, Reel 20, V. 4,p.384.

16. Patterson to Col. Craig, September 6,1860, Reel 26, V.8,pp.750-751.

18. Patterson to Superintendent Barbour, October 12,1860, Reel 27, V.8.,p.854-856.

17. Col. Craig,Chief of Ordnance, to Secretary of War Floyd, Sept. 18,1860, Reel 20, V. 4, p.329.

19. Clowe to Master Armorer A. M. Ball, October 23, 1860, Reel 27,V.8, pp.858-859.

20. Capt. Mayandier, Ordnance Dept., to Superintendent Barbour, December 22,1860, Reel 20,V. 4, p. 376.

21. Capt. Mayandier, Ord. Office, to Secretary of War Floyd, December 12,1860, Reel 20, V.4, p.343.

No further work was done an the new Potomac dam during the winter of 1860-61 and Confederate soldiers seized the Armory on April 19, 1861, before construction was resumed.

The unfinished dam, about one-third complete and erected at an approximately cost of $ 42,000 or $ 43,000, was apparently well-built, for the masonry portion of the structure has stood from 1861 to date with no further maintenance or repairs being made to the dam.

This new dam was described as "half completed" in 1880, when the U.S. Government offered the musket factory, the Potomac Canal, and dams for sale.[22] As no work had been done on the dam from 1861 to 1880, a more exact description would have read "one-third complete."

There are no known historical drawings or photographs that show either the old or new armory dams.

From 1855 to 1861 a total of $ 73,000 was appropriated to make repairs and improvements to the dams of the Potomac. Of this sum about $ 50,000 was actually spemt: $ 7,000 to make repairs to the old dam 1857-58 and $ 43,000 to construct about one third(about 420 feet) of the new dam in 1859-60.

22. Catalog of Property of the United States at Harper's Ferry, W. Va., to be Sold By the Solicitor of the Treasury on the 25th day of May, A.D. 1880, at Harper's Ferry, p.1, National Archives Record Group 121, Public Buildings Serice, Harpers Ferry, W.Va.

2. U.S. Rifle Factory Dam on the Shenandoah, 1855-61:

On March 3,1855 Congress appropriated $ 3,505.00"for repairs of canal embankment walls..., and of the canal and dams at the rifle factory.[1] It was explained to Congress that"these walls and embankments were principally injured by the great flood of April 1852,[2] also , in some degree, by heavy rains of the last two years..."

This money went chiefly to make repairs to the canal walls and canal at the rifle factory in 1855-56, and the repair made to the U.S. Rifle Factory dam were apparently so minor that the superintendent of the armory, Henry W. Clowe failed to describe them in his annual report for the fiscal year ending June 30,1856, although the work on the canal is given at some length.[3]

In like manner, the superintendents' annual reports for the period July 1,1855 to June 30,1860 fail to make any mention of repair or improvements being made to the Rifle Factory dam during thos e years. It thus appears that only minor repairs were made to the Shenandoah dam from 1855 to 1861.

1. U.S. Statues at Large, X,637.
2. Estimates for the 1855-56 fiscal year, Serial No. 781, Document 3,p. 238, Item No.2.
3. Serial No. 876, p.390.

J. IMPROVEMENTS TO ROADS AND STREETS, HARPER"S FERRY, 1855-1861:

On March 3, 1855 and August 30, 1856, Congress appropriated and the Secretary of War on June 28, 1856, made available from the proceeds of the 1852 sale of U.S. lots, a grand total of $ 16,908.70 to make improvements to the streets of Harpers Ferry. Of this total, $ 10,166.00 was used to purchase three private lots and buildings so a existing street could be widened and a new street created. The balance, $ 6,742.70 was utilized to remove the buildings situated on the acquired lots and to make improvements to the streets.

Major William H. Bell, in estimates dated May 18, 1854, submitted the data and proposals that served as the basis for most of this work and he, in turn, had drawn on the Report of the Board of Officers dated September 28, 1851,[1] for most of these proposals.

The improvements made will be studied under the heading of the various projects that were approved and funded in 1855 and 1856.

1. The North Cliff(Potomac Street) Improvement Project: 1855-56:

The estimates for the 1855-56 requested $ 8,850.00 "for removing obstructions in North Cliff street on musket factory canal viz:

(1) purchase of leasehold building on (Wager Lot No.13) which obstructs North Cliff Street at its junction with Shenandoah Street.....	$ 5,000.
(2) and of the reversion in feet of the lot (No.13) on which this building stands.....	2,000.
(3) purchase of twenty-five feet in depth of Lot No. 15 (subdivisions 2 and 4, on which Park Bldg. No. 7 stood), adjoining the foregoing, which obstructs North Cliff Street to that extant.....	1,700
For land and buildings:	$ 8,700
(4) pulling down and removing these buildings, and for sewers and grading North Cliff street.....	150
	$ 8,850 (2)

1. Major William H. Bell to Congress Charles Faulkner, March 18, 1854, together with Bell's estimates dated May 18, 1854, Reel 25, Vol. 1, pp. 80, 83, 84.
2. Serial No.781, Document No. 3, p. 238-, item 10.

It was explained to Congress that "These buildings so obstruct this street on the south side of the musket factory, that their removal is indispensable to the proper grading and cleaning of that street, which under the present circumstances, in summer, is very injurious to health, as well as inconvenient to the public works."[3] This project was thus an extension eastward to Shenandoah Street of Major John Symington's plan of widening the 15 foot alley to a 40 foot wide street. This goal had been accomplished from the western corner of the Six Reservation (Wager Lot 34) eastward to Wager Lot 15 in 1847-48, but at this point eastward to the Shenandoah Street junction, the alley still retained its orginal width of 15 feet.

Congress appropriated the requested $ 8,850.00 on March 3,1855.[4] Acting under the authority granted him by the Joint Resolution of Congress of April 23,1856, Secretary of War Jefferson Davis, on June 28,1856, further funded this project by making available $ 357.50 from the proceeds of the 1852 sale of U.S. Lots "for Filling, grading & Paving East end at N. Cliff Street."[5] **See Brown's 1852 map, page 64, for width of North Cliff Street.**

The total amount of money provided for the North Cliff Street improvement project was thus $ 9,207.50.

On December 26,1855, the United States purchased Wager Lot No. 13 from its owner, Noah H. Swayne, for $ 2,000,"Subject to the unexpired term of a lease for ten years" held by John G. Wilson.[6] On January 31,1856, the Government was next able to acquire for $ 5,000 from John G. Wilson his lease to Lot 13 "having on it a three storey brick dwelling and store."[7]

3. Serial No. 781, Document No. 3,p.239, Item No. 10.
4. U.S. Statues at Large, X,p.637.
5. Col. Henry K. Craig, Chief of Ordnance to Supt. Henry W. Clowe, June 28,1856, Reel 19, V. 9, p.871.
6. Deed of B.&. S., December 26,1855, Deed Book 35, pp.296-297, Jefferson County Court House, Charles Town, W.Va.
7. Assignment of Lease, January 31,1856, Deed Book, 35,p.295, Jefferson County Courthouse.

The building on Lot 13 had been erected by Wilson in 1837-38 for use as a hotel. It was a three, and proably 3½ story brick structure, with 17 rooms plus a finished cellar. The edifice fronted 27½ feet on Shenandoah Street and was about 40 feet deep. By 1841 Wilson had added a two-story brick annex to the rear of the main house. The building then had four rooms in the basement and 20 rooms in the upper structure.[8]

The brick structure was demolished by April 1856 and on the 28th of that month, Chief of Ordnance, Col. Henry K. Craig, informed Superintendent Henry W. Clowe that Secretary of War Davis had granted authority to sell the materials from house, such as doors and windows, and door and window frames, at public auction.[9]

On February 13,1856, the U.S. Government purchased a portion of Wager Lot 15, subdivisions No. 2 and 4, fronting 24 feet on North Cliff street and 25 feet deep, together with that portion of the two-story stone warehouse that occupied that ground, from its owner, Federick A. Roeder, for $ 1,700.00.[10] The stone warehouse, 24 by 40 feet, had been constructed by William Anderson in 1838-39 as a one-story structure with cellar and slate roof. Roeder had added the second stone story in 1848-49.[11]

The front half of Roeder's building, which had been purchased by the United States, was demolished by April 1856, and the land made a part of widened North Cliff Street.

8. Snell, Charles W." Historical Study of Wager Lot No.13, 1837-1856, Harpers Ferry National Monument, West Virginia,"(N.P.S. typescript, Harpers Ferry NM, W.Va., September 25,1958), 20-22.
9. Craig to Clowe, April 28,1856, Reel 20, Vol. 9, p. 858.
10. Deed of B.&. S.,February 13,1856, Deed Book 35, pp.299-300.
11. Snell, Charles W.,"Historic Structure Report, White Hall Tavern, Bldg. No. 7 on Subdivisions No. 2 and 4 of Wager Lot No. 15, Historical Data, Harpers Ferry National Historical Park, West Virginia,'(NPS typescript, National Capital Team, Denver Service Center, April 1980),pp.8-11.

In the annual report for the fiscal year ending June 30,1856, Superintendent Henry W. Clowe reported of this project:

"...the buildings and the fee-simple estate in the land occupied by them, which obstructed the widening of North Cliff street, have been purchased, and the buildings removed, and the street opened to the full width to its intersection with Shenandoah Street."[12]

The Common Council of the Town of Harper's Ferry also made its contribution to this project on July 18, 1856, when it purchased from Philip Coons for $ 227.08 1/3 a vacant portion of Subdivision No. 1 of Lot No. 15 which fronted on the narrow alley. The section which the town acquired, nine feet one inch wide, 25 feet deep, and containing 229 1/12 square feet, also was made a part of widened North Cliff Street in 1856.[13]

Total cost of this improvement of North Cliff Street in 1855-56, including the town money, thus appears to have been approximately $ 9,434.58.

2. Creation of a New Street, 1856 - 1857: **Wager Alley.**

Acting under the authority granted to him by the Joint Resolution of Congress dated April 23,1856 , Secretary of War Jefferson Davis, on June 28,1856, made available $ 1,666 from the proceeds of the 1852 sale of U.S. Lots for the following project:

1."Purchase of [Wager] Lot No. 17.....$ 1,466.00.

2 "Removing building from Lot No.17..... 200.00 "

Total: $ 1,666.00 [14]

The purchase of this land was planned to make possible the creation of a new street that would run up the hill from North Cliff to High or Washington Street.

12. Serial No. 876, P.391.
13. Deed of B.&.S., July 18, 1856, Deed Book 35, p.311-312, Jefferson County Courthouse.
14. Chief of Ordnance, Col. Henry K. Craig, to Supt. Henry W. Clowe, June 28,1856, Reel 19, V. 9, p.871.

On February 26,1856, Superintendent Henry W. Clowe had recommended the purchase of Wager Lot No. 17 because the large stable which occupied most of that land was "filled with Hay & Straw, under careless attendance day and night, " hence was "a mine of danger" to the safety of the musket factory workshops.[15] On August 26,1856, the United States was able to purchase the land and the stable for a total of $ 1,465.66.[16] Of this sum $ 1,165.66 went to Frederick A. Roeder, who owned the land, and $ 300.00 to John G. Wilson who held a leasehold on the lot and held title to the stable.[17] Wilson had constructed a large stone and frame stable, about 40 by 100 feet on Lot No.17 in 1837-38. The fire hazard was demolished by the Armory in 1856.[18]

In his annual report of operations for the fiscal year ending June 30, 1857, Superintendent Clowe reported:

"The stable and fixtures occupying lot 17 of Wager's reserve,of six acres, purchased of F.A. Roeder and John G. Wilson, have been removed, a wall built on each side of the lot, in the aggregate about 150 feet long, averaging five feet in height and two feet thick, covered with dressed stone coping. The walling was necessary to support the filling required to make a street of easy grade upon this lot, running from Washington to North Cliff Street."[19]

3. Other Improvements in Lower Town Streets:

a. High or Washington Street, 1855

In the annual report for the year ending June 30,1855, Superintendent Henry W. Clowe wrote" New dressed stone curbing and flagging has been placed in front

15. Clowe to Col. H.K.Craig, February 27,1856, Reel 25, V.8, p.803.
16. Roeder to U.S., B.&.S., August 26,1856, Deed Book 36, p.135-136.
17, Wilson to U.S., Assignment of Lease, August 26,1856m Deed Book 36m pp.133-134.
18.Sullivanm Arthur L., "Historic Buildings Site Survey Report for Wager Lots No. 17 to 34, 1782-1869, Harpers Ferry National Monument, West Virginia,"(N.P.S. typescript, Harpers Ferry NM, May 15,1959),pp.72-74.
19.Serial No. 920, p. 551-552.

"of the public houses on the end end of Washington street, to conform to the grade of this street prescribed by the corporation of Harper's Ferry."[20]

These public houses were Armory Dwelling Houses No. 176, 177, 178, 179, 180, 181, and 182, which were located on the north side of High Street on Wager Lots No. 18,19,20, 21, 22, 26, and 27.

b. Drains at Shenandoah and North Cliff Street Junction, 1857.

In the annual report for the fiscal year ending June 30,1857, Superintendent Clowe reported: "A surface drain has been made, running from the intersection of North Cliff street, with Shenandoah Street across the front of the armory (musket factory) yard, and entering an alley leading to the Potomac river; this drain has been permanently paved."[21]

c. Shenandoah Street, 1856-57:

The estimates for the 1856-57 fiscal year contained a request for $ 422.00 "for building stone wall and grading the grounds on Shenandoah Street;" it was explained: "This wall is proposed to be constructed of sufficient height only to break up the unsightly appearance of the reserved (U.S.owned) ground at the base of the hill along (the north side) of Shenandoah Street, whereby,also, the constant wash from the hill-side will be arrested, and finally fill up the broken ground at this point; whereas now the United States are at constant expense in removing from the street along this line the accumulated rubbish from the hill after every few rains."[22] Congress appropriated the desired sum on August 30,1856.[23]

20. Serial No. 841, Document No.1, p.557.
21. Serial No. 920, p.551.
22. Serial No.865, p.244, item No. 5.
23. U.S. Statues at Large, XI, p.150.

In the annual report for the fiscal year ending June 30,1857, Superintendent Henry W. Clowe described the new wall as follows: "A stone wall has been built on the west(or north) side of Shenandoah street, running from the Presbyterian church on that side to dwelling No. 7(present Park Building No.45), in length 274 feet, five feet high and two feet thick, including 531 yards of filling in levelling and dressing the hill-side above the wall."[24]

d. Improving the Streets on Camp Hill, 1856-57:

In his estimates dated May 18,1854, Major William H. Bell asked for $ 5,050 for making the following improvements to streets located on top of Camp Hill:

1. For cutting down and grading Fillmore Street being in front of the Six Buildings(for Master Armorer and five clerks) above proposed (to be erected) for Armory officers.....	$ 1,000.00.
2. For improvement & straightening Washington Street.....	1,400.00
3. For opening & grading McDowell, Gilmer, Columbia, and Lancaster Street, running across Washington.....	2,650.00
	$ 5,050.00

This work should be done Bell explained, because:"In consequence of the great irregularity of the ground on which these streets are located, the deep cuts required to open them, as well as the substantial walls & gutters required on account of the great power of the torrents in rainy weather, their grading needs considerable more expense than in ordinary cases. There appears besides to be a general understanding here, especially among the purchasers of the Lots & Houses sold by order of the Secty of War(in 1852), that the Government was to open these streets sufficiently at least - as to make them passable, it is certainly utterly impossible for these purchasers to open them, inconsequence of of the expense; Without this interposition of the Government their lots will be comparatively of little value,certainly far short of that they imagined would be the case."[25]

24. Serial No. 920, p. 552.

25. Bell's estimates of May 18,1854, Reel 25, Vol.1, p.84.

Acting under the authority granted to him by the Joint Resolution of Congress dated April 23,1856, Secretary of War Jefferson Davis, on June 28, 1856, upped the amount to $ 5,613.20 "for Grading and opening streets" and made this sum available from the proceeds collected from the 1852 sale of U.S. lots and houses.[26]

In the annual report for the fiscal year ending June 30,1857, Superintendent Henry W. Clowe reported: "The excavating, walling and filling necessary for the grading and opening of Washington, Fillmore, and other streets on Camp Hill, and the enclosing grounds of the new magazine, has been done to the extent of about $ 5,600 dollars, equivalent to 11,180 yards excavation [of earth], 471 rock excavation, and 500 perches stone walling and other like work."[27] This indicates that the allotment of $ 5,613.20 had been expended by June 30,1857.

e. New Wagon Road Up Loudoun Heights, 1858:

In the annual report for the fiscal year ending June 30,1858, Superintendent Henry W. Clowe recorded: "A new and improved wagon road has been constructed from the east [or south] end of the Shenandoah bridge through and up to the wood land on the top of the mountain [,1,395 acres], belonging to the United States, from which the supply of coal [charcoal] and wood [firewood] for the armory is obtained."[28]

The new road replaced the old armory road, with its heavy grade, up the the side of the mountain. Built at a cost of $ 1,000, the Armory contributed $ 500 to this total, Jefferson County $ 200, and private subscribers who owned land in that vicinity, $ 300, in March 1857.[29]

The road was built in the fall of 1857 by George Mauzy, who informed former master armorer James H. Burton on September 7:

"I am now, and have been engaged for about a month in superintending the

26. Col. Henry K. Craig, Chief of Ordnance, to Supt. Henry W. Clowe, June 28,1856, Reel 19, V.9, p.871.
27. Serial No. 920, P. 552.
28. Serial No. 976, p. 1319.
29, Supt. Henry W. Clowe to Col. H.K. Craig, Chief of Ordnance, March 17,1857, transmitting plan of new line of road and also showing old road,Reel 25,Vol.10, pp.1044-45; Craig to Clowe, March 21,1857,granting permission to contribute $ 500, Reel 19, Vol. 19,p. 920.

construction of a road from the mouth of the Shenandoah Bridge along the side of the mountain, to the top of the hill at Pipertown; a fraction less than a mile of this road when completed will be a great improvement over the old one, the grade of which in several places is 10.5 & 11 feet in 50 feet. I succeeded in getting a grade not exceeding 7 or 8 feet per 100 ft...." 30

30. Mauzy to Burton, Sept. 7, 1857. See also Smith, Philip R., Jr., "Research Report: History of Loudoun Heights, 1813-1880, Harpers Ferry National Monument, West Virginia" (MPS typescript, Harpers Ferry NM, W.Va., June 9, 1959), pp.16-18.

APPROPRIATIONS FOR IMPROVEMENTS OF STREETS AT HARPER'S FERRY, 1855-1861

North Cliff Street Project

Calender Year:	Lot 13	Lot 15	Grading Paving &c.	Subtotal N.Cliff St.	Lot 17 Street	Shenandoah Street	Camp Hill Streets	Grand Total	
1855	$ 7,150	$ 1,700	0	8,850.00	0	0	0	$ 8,850.00	
1856	0	0 (1)	357.50	357.50	1,666.00	422.00	5,613.20	8,058.70	(1)
1857									
1858									
1859									
1860									
1861									
TOTAL	$ 7,150.00	$ 1,700.00	$ 357.50	$ 9,207.50	$ 1,666.00	$ 422.00	$ 5,613.20	$ 16,908.70 (1)	

(1) in addition, July 18, 1856, Town of Harper's Ferry spent $ 227.08 1/3 of town money to purchase part of Lot 15, subdivision No. 1, a vacant section, to add it to North Cliff Street.

Total Expenditures for Land for Streets for Musket Factory Improvements, 1842 - 1861

Years	North Cliff Street Fire Hazard Project	Lot 17 Wager Alley Project	Lots 11 & 12 Entrance Gate	Total	
1847-49:	$ 28,938.00	0	9,999.35	$ 38,937.35	
1853-54:	0	0	7,000.00	7,000.00	
1855-56:	8,700.00	1,465.66	0	10,165.66	
Total:	$ 37,638.00	$ 1,465.66	$ 16,999.35	$ 56,103.01	
Byrnes Island Purchase 1847				$ 1,500.00	
Total				$ 57,603.01.	(1)

(1) An additional $ 2,000.00 was sepnt in 1847 to purchase title to Dr. Marmion's buildings which stood on U.S. land, Lot H.

K. U.S. Armory Dwelling Houses, 1855 to 1861:

1. Rents Collected:

Because of the destruction of the Armory Paymaster's vouchers and rent rolls for the years 1852 to 1861 by the staff of the National Archives during the 1940's, it is no longer possible to determine the amount of rent that was collected from 1855 to 1861. As the total number of U.S.-owned houses fell from 50 on January 1,1855 to 33 by June 30,1860, and approximately 10 of these were occupied rent-free by officers of the Armory, the annual amount collected in rent was not very great during this period.

2. Demolition of Old Armory Dwelling Houses,1855-1861:

In the estimates he submitted to the Ordnance Office on May 14,1854, Major William H. Bell asked for $ 500.00 "for pulling down and removing old buildings about 10 in number condemned by the Report of the Board of Officers of September 28,1851 remaining on reserved ground land retained for U.S. Armory use".[1]

In the 1855-56 fiscal year estimates, this item was included but the amount increased to $ 800.00. It was explained to Congress that "The rest of these old buildings have been sold and pulled down by the purchasers; those that remain unsold will have to be pulled down by the United States and removed."[2] Congress appropriated the $ 800 on March 3,1855.[3]

Because of the destruction of the Armory Paymaster's vouchers for the years 1852 to 1861 by the National Archives staff during the 1940's, it is impossible to trace the story of the sale and demolition of the condemned old Armory dwelling houses in any detail.

1. Bell to Ord.Office, May 14,1854, Reel 25,Vol.1, p.87.
2. Serial No.781, Document No.3, p. 238,239, Item No. 8.
3. U.S. Statues at Large, X,p.637.

As has been noted, the number of U.S. owned Armory Dwelling houses standing on January 1,1855, was 50; there were comprised of 23 one-story and 27 two-story residences. During the period 1855-1861 three new brick two-story houses were to be erected for use of the officers and a second-story was to be added to the Paymaster's Quarters. At the beginning of the Civil War, April 1861, the number of extant Armory-owned dwellings stood at only 33,[4] thus indicating that a total of 20 old residences had been demolished since January 1,1855.

Number and type of Armory Owned Dwelling Houses standing April 18,1861:

Materials Built of:	One-Story Houses	Two-Story Houses	Total No. of Houses	
Wood	1	1	2	
Stone	1	10	11	
Brick	0	20	20	
Total:	2	31	33	

The demolished residuces included 15 woodem, 1 stone, and 4 brick residences.

3.Repairs and Improvements to Armory Dwelling Houses, 1855-61:

Due to the destruction of the Paymaster's vouchers for the year 1852-61, as mentioned above, it is no longer possible to trace in detail the repairs that were made to the houses of Armory workmen. Extracts from Superintendent Henry W. Clowe's annual reports of operations for the fiscal year ending June 30,1855 to June 30,1858, however, indicate that the following work was done:

4.Inspection Report, Brigadier General Edward D. Ramsay to Brig. General A.B. Dyer, Chief of Ordnance, July 27,1865, Harpers Ferry NHP Photostat Collection, Map Case, Drawer 10.

June 30,1855: "The superintendent's and other free quarters as well as the dwelling-houses belonging to the Unites States, have all received slight necessary repairs during the year."[5]

June 30,1856: " Slight repairs have been made to the work-shop generally, as well as to dwellings."[6]

June 30,1857: Dwelling House No.47 [sic] has received considerable repairs, consisting of a new roof, raising and adjusting galleries, repairing windows, doors, &c. Several of the other dwellings have also been repaired to a slight extent."[7] House No. 47, a two-story stone house located on Block C, Lot No. 9, Shenandoah Street, had been sold to an armory workman for $ 600 on August 31,1852, so the number of the building as published in the annual report appears to have been a typographical error.

June 30,1858: "Dwellings No. 9[sic], 25, 27, 30, 31, 44, 126, and 129, have each been slightly repaired."[8]

Here again there appear to be typographical errors in the printed Report. Bldg. 9 had been sold in 1852, so that this No. probably refers to Dwelling No. 7 [present Park Bldg. No. 45,] a two-story stone house located on the north side of Shenandoah Street on Lot No.1; House No. 27, which was demolished in 1846, probably refers to House No. 26, a one-story brick house located on Shenandoah street. House No.25, which appears to be the correct number, was a two-story brick dwelling. House No. 30 was a two-story

5. Serial No. 841, p. 557.
6. Serial No.876, p. 389.
7. Serial No. 920, p.551.
8. Serial No. 976, p.1319.

stone house located on the north side of Shenandoah Street; House No. 31, also located on the north side of the same street, was a wooden one-story residence. Bldg. No. 44 is also a wrong number, as this structure had been demolished in 1847, but it could have been 40, 41, or ___ which were both reserved by the U.S. in 1852 and located on the north side of Shenandoah Street. Houses No. 126 and 129, both two-story brick houses, were located on Camp Hill.

Superintendent Alfred M. Barbour, in his annual reports, commented on repairs to armory dwellings as follows:

June 30,1859:"The dwelling houses of the persons employed at the armory have had repairs done to them, to preserve them in tenantable order."[9]

June 30,1860: No comment was offered on this subject.[10]

9. Serial No.1025, p. 1114.
10. Serial No. 1079,p. 974.

4. Repairs and Improvements to the Commanding Officer's Quarters, Armory Dwelling House No. 25, Camp Hill. (Park Bldg. No. 59). 1852-1861:

Destruction of the Armory paymaster's vouchers for the years 1852 to 1861 by the National Archives staff during the 1940's makes it impossible to trace repairs and improvements that may have been made to the Commanding Officer's Quarters in any detail. The annual reports of the superintendents, however, reveal that the following work was done to the structure and grounds during those years:

In his annual report for the fiscal year ending June 30, 1855, Superintendent Henry W. Clowe wrote: "The superintendent's and other free quarters...have all received slight necessary repairs during the year; the quarters of the superintendent have been thoroughly painted inside."[46]

Finally, in the annual report for the fiscal year ending June 30,1857, Superintendent Clowe reported that "About 225 panels of fence have been made around the ground attached to the quarters of the superintendent."[47]

The Commanding Officer's Quarters was the residence of Superintendent Henry W. Clowe from January 1855 to December 1858, and of Superintendent Alfred M. Barbour from January 1859 to April 18,1861.

On July 27,1865, Brigadier Edward D. Ramsay made a detailed inspection of the buildings and stores of the Harper's Fery Armory and reported in regards to the Commanding Officer's Quarters,"Armory Dwelling House No. 25 -Superintendent's Quarters- In Bad condition- occupied as quarters for Officers".He further remarked:

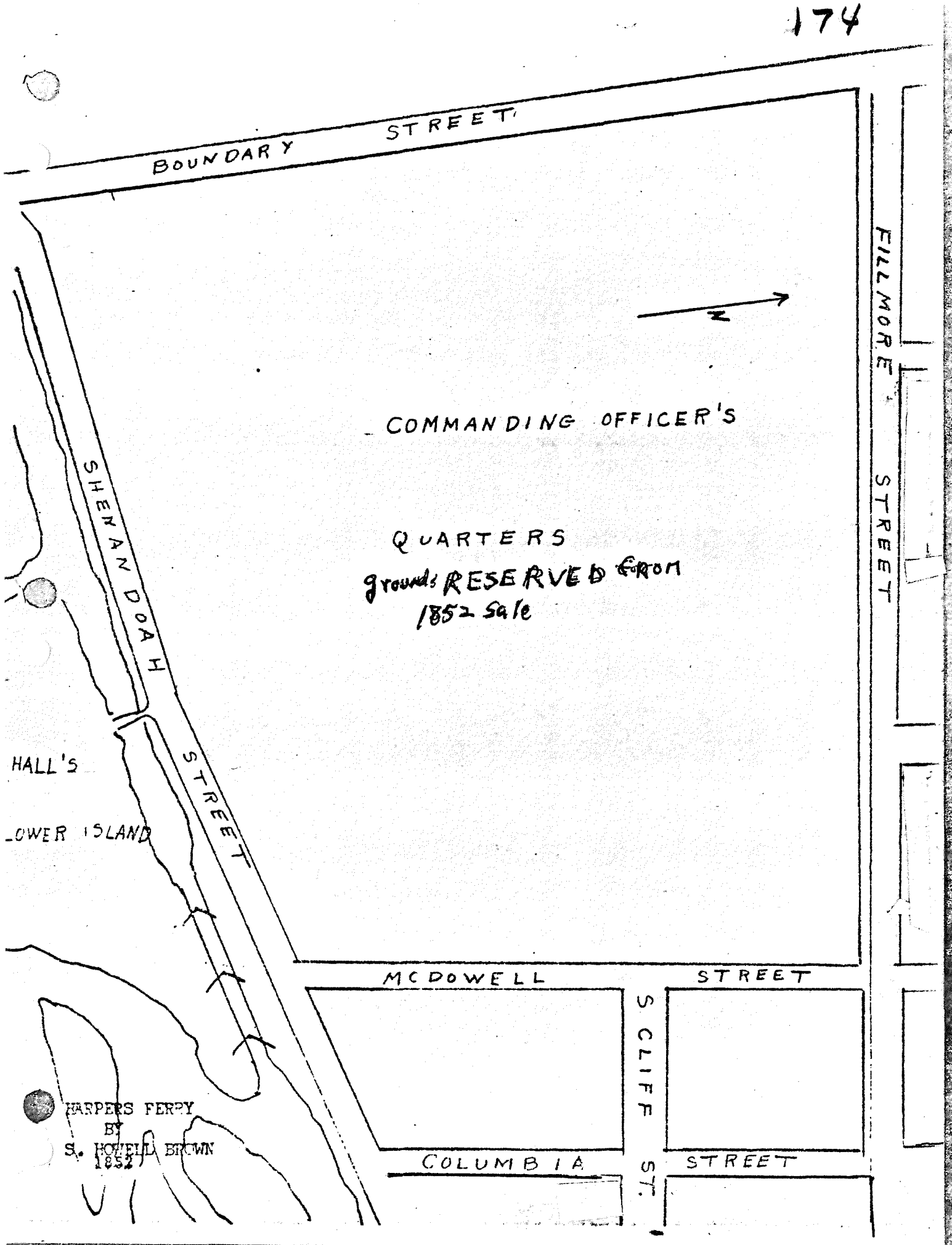
46. Serial No. 841, p.557.
47. Serial No. 930, p. 551.

The costly quarters of the Superintendent of the Armory, of the paymaster, and other conspicuous and valuable buildings belonging to the government, have been wantonly abused, and I am sorry to say,as I am credibly informed, mostly by our own troops. Marble mantle pieces have been taken away; and the stair cases torn down and used as fuel, To repair these buildings will involve an expense of at least one half of their original cost." 48

The Commanding Officer's Quarters can be seen in Harpers Ferry NHP Negatives No.HF-31 ,a photo taken in 1862; HF-20, a print made during the Civil War; and HF-338, a skietch published Nov.1,1862. 49

48. Ramsay to Brigadier General, A.B. Dyer, Chief of Ordnance, July 27,1865, Harpers Ferry NHP Photostat Collection, Map Case, Drawer No.10.

49,Smith, Philip R.,Jr.,"Research Report- History of the Commanding Officer's Quarters, Camp Hill(Anthony Hall,Storer College), Harpers Ferry,1847-1867, Harpers Ferry National Monuement, West Virginia,"(NPS typescript, Harpers Ferry NM, W. Va., March 19,1959)


BOUNDARY STREET
FILLMORE STREET
COMMANDING OFFICER'S
QUARTERS
grounds RESERVED FROM
1852 Sale
SHENANDOAH STREET
HALL'S
LOWER ISLAND
MCDOWELL STREET
S CLIFF ST.
COLUMBIA STREET
HARPERS FERRY
BY
S. HOWELL BROWN
1852

5. Repair and Improvements to the Master Armorer's Old House, Armory Dwelling No. 2 (Park Bldg. No. 34-35), Lot No. 3, Block B, Shenandoah Street, 1852-1858:

Repairs and Alterations to Master Armorer's Quarters, 1852-1858:

The destruction of the Armory paymaster's vouchers for the period 1852 to 1861 by the National Archives staff during the 1940's make it impossible to trace in detail costs, repairs, and alterations that may have been made to the Armory Dwelling No. 2 during those years.

The annual reports of the superintendent, however, do indicate that the following work was done in 1854, probably after Master Armorer James H. Burton resigned, March 16, 1854, and left Harpers Ferry, to put the structure in condition for his replacement, Master Armorer, Samuel Byington.

In the annual report for the fiscal year ending June 30, 1854, Superintendent Major William H. Bell wrote: "Master armorer's quarters...have been generally repaired, painted, and plastered."[5]

Byington lived in Armory Dwelling No. 2 until October 29, 1858.

From November 1858 to July 1859, the Old quarters were next the residence of the Paymaster's Clerk, John E. P. Daingerfield.

In July 1859 Daingerfield moved from Armory Dwelling No. 2 into the new adjacent house (Park Building No. 36) which had just been completed for the Master Armorer on Lot No. 2, Block B, Shenandoah Street- the Master Armorer having decided to live in the new Paymaster's Clerk House on Camp Hill. The Secretary of War approved this decision between the two armory officers to trade houses.[6]

5. Serial No. 747, p. 361.

6. Superintendent Henry W. Clowe to Chief of Ordnance, Henry K. Craig, November 26, 1858; Photostat Collection, V. 3, p. 87; Supt. Alfred M. Barbour to Col. Craig, July 18, 1859, Photostats, V. 3, p. 90A.

On July 16, 1859, Superintendent Alfred M. Barbour described the condition of the Master Armorer's Old House, Dwelling No. 2, Park Bldg. No. 34-35, as follows:

> The old house (Bldg. 34-35) is on the same lot (Lot No. 4 on the 1852 map), and very near to one of its (the Master Armorer's new house, Bldg. No. 36) gables, and is quite in a dilapidated condition. The outhouses attached to the old house, are wanted for the use of the new one; if the old house is retained, new outhouses will have to be built for the new house, and for these, there is not sufficient space upon the lot, without materially marring the appearance and enjoyment of the grounds. Besides the materials in the old house can be very profitably employed in the construction of outhouses for the new Quarters on the (Camp) Hill, where they are much wanted, and will soon be needed for that purpose.
>
> I therefore recommend the pulling down of this hous (Bldg. No. 34-35, which had been built in 1812), and the saving of the materials, as above named."[7]

The Ordnance Department refused to grant permission to demolish Park Bldg. 34-35 and when Barbour again requested permission on September 5, 1859 to level the structure[8], the Chief of Ordnance, Col. Henry K. Craig responded, writing:

> "upon a full examination, it appears there is no authority for pulling down or removing said house. It will therefore, have to remain, as it is, until the attention of the Secretary of War shall have been called to the subject and his decision been given...." (9)

The Secretary of War never granted permission to tear down the Master Armorer's Old House, hence the building still stands.

The house was vacant from July 1859 to November 1859, when as a result of the John Brown raid, a detachment of soldiers was sent to guard the armory. On November 8, 1859, George Mauzy wrote to James H. Burton, former master armorer at Harpers Ferry, "Your old quarters are now used as a recruiting station by Capt. Burton, there is a Co. of Soldiers, who were sent here from Govs. Island to protect Government property."[10]

7. Barbour to Col. Craig, July 16, 1859, Photostat Collection, V. 3, p. 90A.
8. Barbour to Craig, Sept. 5, 1859, Reel 27, Vol. 4, p. 331.
9. Criag to Barbour, Sept. 7, 1859, Reel 19, Vol. 11, p. 1058.
10. Mauzy to Burton, Nov. 8, 1859.

Old Armory Dwelling House No. 2(Park Bldg. No.34-35) was thus apparently used as a recruiting office and quarters for the officers from November 1859 to April 5,1860, when Captain Barton's company was withdrawn from the Harper's Ferry Armory.[11]

The old house then probably stood vacant from April 1860 to February 1861. In February regular army troops were again sent to protect the armory and it is possible that Bldg.34-35 was again used as quarters for the officers and also as a recruiting station. These soldiers, 44 men, remained at Harpers Ferry until April 18,1861, when they retreated on the approach of Confederate forces.[12]

On July 27, 1865, Brigadier General Edward D. Ramsay made a detailed inspection of the buildings and stores at the Harper's Ferry Armory and described Park Bldg. No.34-35 as follows:

"Dwelling House No.2 - two-story brick, located on Shenandoah Street. In fair condition and occupied as quarters for Officers."[13]

The Master Armorer's Old Dwelling House(Bldg. No.2) can be seen in the following Harpers Ferry NHP Negatives: HF- 141 and HF- 224, both drawings made in March 1865; HF-361, a photo made in 1865; and HF-43, a photo made in the 1870-75 perid.

The lot of the Paymaster's Old House(Armory Dwelling No. 2) was described in 1852 as follows: Lot No. 4- (Block B, Shenandoah Street on the 1852 map)- 97 feet front on Shenandoah St., 140 feet deep to Alley(on south side)- 124 feet on the Alley, and from the Alley 122 on Market Street to Shenandoah Street. Dwelling No. 2- Master Armorer."[14]

11. Barbour to Craig, April 4,1860, Reel 27, V. 7, p.691, Also Mauzy to Burton, April 5,1860; Virginia Free Press, April 19, 1860, p.2, c.1.
12. Snell, Charles W.,"Historic Building Report, Part II, Historical Data Section- Bldgs, No. 34-35, 32, 33, and 34A, the Samuel Annin House, Lot No.3, Block B. Shenandoah Streetm Harpers Ferry National Monument, West Virginia," (NPS Typescript, Harpers Ferry NM, W.Va., March4,1959),pp.24-26.
13. Ramsay to Brigaider General A. B.Dyer, Chief of Ordnance, July 27,1865, Harpers Ferry NHP Photostat Collection, Map Case, Drawer No.10.
14. "Legend Exhibiting the Corresponding Numbers of the Houses,as per the Inventory of the 30th June 1852..."

6. Construction of Three New Quarters for Officers of the Armory, 1856-1861:

Major William H. Bell, in his estimates prepared May 18,1854, had proposed "Building Quarters for Armory Officers on Fillmore Street", on Camp Hill. He suggested that $ 34,500.00 should be used for the following purposed:

"For one Master Armorer & Five Clerks- 6 buildings,$ 5000 each-$ 30,000.00
Enclosure,Sewers & Cisterns for ditto & Outhouses $ 750 each 4,500.00
$ 34,500.00

Superintendent Bell justified this plan, writing:

This item is recommended in the Report of the Board of Officers (of September 28,1851) and approved by the Secretary of War (June 10,1852), This being in consequence of the dilapiated & unhealthy conditions of the buildings now occupied by these Armory Officers and also in consequence of the lots of these houses next the Musket Factory having been cut off, and the length of the lots thereby diminished with a view to the protection of the Musket Factory Buildings (By the widening of North Cliff or Potomac Street). These shortened lots (Wager Lots No. 18,19,20, 21,etc) by the decision of the Board are to be sold, when the above quarters are provided." (1)

Bell's proposal appears to have served as the basis of the modified plan that was finally adopted in 1856. On April 23,1856, a joint resolution of Congress authorized the Secretary of War to apply the proceeds of the 1852 sale of U.S. lots and houses at Harpers Ferry to the purchase of other lots of land and to making improvements of the Armory property.[2] Acting under this authority, Secretary of War Jefferson Davis, on June 28,1856 authorized the expenditure of $ 18,000 for the"Erection of three quarters."[3]

1. Estimate of work required to be done at Harpers Ferry Armory, May 18,1854, Reel 24, Vol. 1, p.82.
2. U.S. Statues at Large, XI,p. 143.
3. Coll Henry K. Craig, Chief of Ordnance, to Supt. Henry W. Clowe, June 28,1856, Reel 19, V.9, p.871.

In July 1856, Superintendent Henry W. Clowe drafted a set of plans for the three new houses that were to be erected for the Master Armorer(Armory Dwelling House No. 1-Park Bldg. No. 36); the Superintendent's Clerk(Armory Dwelling No. 31- Park Bldg No.57),and the Paymaster's Clerk(Armory Dwelling House No. 30-Park Bldg. No. 58). In August Clowe hand-carried these plans to Washington,D.C. for review by the Chief of Ordnance, Col. Henry K. Craig, and final approval by Secretary of War Davis.

Craig, returning the plans to Clowe on September 5,1856, wrote:

The plan of Quarters for Master Armorer and Clerks, left by you at this office, is returned herewith. On examining it, there appears to be a defect in making the width of the steps at the front entrance too small, and bringing the two middle columns too close together. In putting up the building, two of which for clerks may be commenced on the hill[Camp Hill], it will be well to correct these defects. The third building of those authorized by my letter to you of the 28th June last, for the Master Armorer[Park Bldg.36], had better be located on or near the site of his present quarters[Park Bldg. No. 34-35 on Block B, Shenandoah Street]. If such location should require any modification of the plan, or should increase the cost of the building please inform me." 4.

On September 12 and 13, 1856, Col. Craig personally inspected the Armory and grounds at Harpers Ferry and settled with Superintendent Clowe the exact locations of the three quarters and other matters relating to their construction. On September 14, the Chief of Ordnance reported these actions to the Secretary of War, writing:

"Two of the dwelling houses for Clerks that were authorized to be erected and paid for out of the proceeds of sale of lots, will be soon commenced on the Hill[Camp Hill and fronting on Fillmore Street] near the Armory. The House for the Master Armory will be erected nearer the Armory, as it is thought advisable that those of the officers should at all times be near the shops and stores..." 5

4. Craig to Clowe, Sept. 5,1856, Reel 19, V. 9, p. 887.
5. Craig to Sec. of War Davis, Sept. 14,1856, Photostatic Collection,V.3,pp. 60, 62.

7. Construction of the Two Houses for the Clerks, Armory Dwellings No. 30 and 31, Camp Hill, 1857-58:

In his annual report for the fiscal year ending June 30,1857, Superintendent Henry W. Clowe reported" Two of the houses designed for quarters for clerks, located on the reserved lands on Camp Hill, are in progress, These houses are of brick, on stone foundations, two stories high, and covered with slate."[6]

On November 5,1857, the Virginia FRee Press commented on the improvement of streets and construction of the two clerks' quarters as follows:

> A number of street and alleys have been graded and other-wise improved; particularly High Street from the Ferry to the Luthern Church, near the confines of Bolivar. On Fillmore street, Camp Hill, a great change has been made, hollows have been filled in, hills have been removed, and the feet of pedestrians now tread this new made Street. Two splendid mansions are in progress of completion on this street, constructed by the Government at a cost of $ 6,000 a piece, as quarters for the clerks employed in the Armory."[7]

In his annual report for the year ending June 30,1858, Clowe wrote: "The two buildings on Camp Hill, designed for clerks' quarters, reported last year as in progress of construction, have been completed and ready for occupation.:"[8]

On April 3,1858, Superintendent Clowe had informed Col Craig that the two clerks' houses "on Camp Hill have exceeded the amount appropriated for them about $ 820 each, owing to the location, and consequent expense of the transportation of materials, &c."[9] Cost of construction thus appears to have been $ 6,820 each, or a total of $ 13,640, leaving a balance of $ 4,360 available for the construction of the Master Armorer's new quarters(Armory Dwelling No. 1).

In his June 30,1858 annual report, Superintendent Clowe also recorded that the following improvements had been made to the grounds of the clerks' new quarters, Armory Dwellings No. 30 and 31:

6. Serial No. 920, pp.550-551.
7. Virginia Free Press, November 5,1857, p.2, c.5.
8. Serial No. 976, p. 1318.
9. Clowe to Craig, April 3,1858, Photostat Collection V.3, p.83.

" 121 perches of dry wall and 132 yards of earth excavation, for a a drain, built on the dividing line, or ravine, separating the clerks' quarters on Camp Hill...

" 2,193 yards of excavation and filling has been done to improve the grounds about the clerks' quarters on Camp Hill."[10]

On November 26,1858, Superintendent Henry W. Clowe informed Col. Henry K. Craig, Chief of Ordnance, that there had been a change in plan over who would occupy the new houses. By mutual agreement, John E. P. Daingerfield, the Paymaster's Clerk, who was scheduled to move into the new Paymaster's Clerk's Quarters(House No. 30 Park Bldg. 58),had actually moved into the Master Armorer's Old Quarters(Dwelling No. 2-Park Bldg. 34-35 on Shenandoah Street), where he would reside until the Master Armorer's new quarters (Armory Dwelling No.1, Park Bldg. 36) had been completed, when he would move next door in Dwelling No. 1 on Shenandoah Street. By the other part of this agreement , Master Armorer Benjamin Mills had decided not to move into either Armory Dwelling Houses 1 or 2 on Shenandoah Street, because he did not think this location would be a healthy place for his family to live. Instead, Mills had swapped with Daingerfield and occupied the intended Paymaster's Clerk's Quarters, (House No. 30 or Park Bldg. No. 58)[11] on Camp Hill.

Master Armorer Benjamin Mills lives in Armory Dwelling No. 30 from November 1858 to November 3, 1859,[12] when he left Harpers Ferry.

The Superintendent's Clerk, or Chief Clerk of the Armory, Archibald M. Kitzmiller, moved into his intended residence, the Superintendent's Clerk's

10. Serial No. 976, p. 1319.
11. Clowe to Craig, November 26,1858, Photostat Collection, Vol. 3, p.87-88.
12. Superintendent Alfred M. Barbour to Craig, Novemeber 3,1859, Reel 27,V.5, p.411.

Quarters(Armory Dwelling No. 31-Park Bldg. No. 57) on September 21, 1858 and resided there until April 19, 1861.

Additional improvements were made to the grounds of the two clerks' quarters. In his annual report for the fiscal year ending June 30,1859, Superintendent Alfred M. Barbour reported: :"A new brick outhouse, on stone foundation, covered with slate, and a board stable, also covered with slate, have been built on the ground of the master armorer's Quarters, on Camp Hill(that is, Armory Dwelling No. 30 or Park Bldg. 58), and the building partly repainted and improved. A rain-water cistern with fixtures has been constructed for these and the quarters on Shenandoah street.

"Two hundred and twent-four feet of stone pavement have been laid at the adjoining quarters (Armory Dwelling No. 31-Park Bldg. No. 57), occupied by the chief clerk(A. M. Kitzmiller), since the 21st September, 1858."

Finally , Barbour reported: "One thusand feet of fence, with locust posts, oak string pieces, and yellow pine palings have been constructed for these quarters(Paymaster's Quarters,Armory Dwelling No. 32, and Dwellings No. 31 and 30), and enclosing reserved(U.S. owned)ground (along Fillmore Street)."[13]

In his annual report for the year ending June 30,1860, Barbour wrote: The quarters of the master armorer, paymaster, and clerks, have received many additions to them, to render them comfortable, and the grounds, which were very rough, have been graded and improved."[14]

13. Serial No.1025,p. 1114.
14. Serial No. 1079, p.974.

After Master Armorer Benjamin Mill left Harpers Ferry and the Paymaster's Clerk's House (Dwelling No. 30-Park Bldg. No. 58) in November 1859, the residence was next occupied by. Thomas Leiper Patterson, the civil engineer who was supervising the construction of the new Potomac Dam.[15]

On August 4, 1860, Secretary of War Floyd instructed Superintendent Barbour to remove Engineer Patterson from the Paymaster's Clerk's Quarters, so that that clerk, John E. P. Daingerfield, who had been living in the New Master Armorer's Quarters(Armory Dwelling No.1-Park Bldg.36) on Shenandoah Street since July 1859, could move into the Camp Hill Armory Dwelling No. 30, that had been built for his use in 1857-58.[16]

Paymaster's Clerk John E. P. Daingerfield thus apparently lived in Armory Dwelling House No. 30 on Camp Hill from about August 1860 until April 19, 1861, when Confederate troops seized the armory.

In his inspection report of the Harper's Ferry Armory dated July 27, 1865, Brigadier General Edward D. Ramsay described the two clerk's quarters as follows:

"House Dwelling No. 30 ,Two story, brick, Pay Master's Clerk's Quarters- In bad condition, occupied for army purposes."

"Dwelling House No. 31, Two story, brick, Superintendent's Clerk's Quarters. In bad condition- Occupied by Santiary Commission."[17]

17. Continued: Smith, Philip R., Jr.,"History of Superintendent's Clerk's Quarters, Camp Hill(Armory Dwelling No 31,"Brackett House," Storer College,) Harpers Ferrym 1857-1867,"(NPS typescript, Harpers Ferry National Monument, Harpers Ferry, West Virginia, March 27, 1959.

15. Barbour to Craig, August 2,1860, Reel 27, V.10, pp.981-982.
16. Col. H.C. Craig, Chief of Ordnance to Barbour, August 4,1860, Reel 19, V.12,p.1140.
17. Ramsay to Brigaider General A.B. Dyer, Chief of Ordnance, July 25, 1865, Harpers Ferry NHP Photostat Collection, Map Case, Drawer No.10.
Also see Smith, Philip R. Jr., "History of Paymaster's Clerk's Quarters, Camp Hill(Armory Dwelling No. 30,"Morrell House",Storer College), Harpers Ferry, 1857-1867,"(N.P.S. typescript, Harpers Ferry National Monument, West Virginia,March 26m 1959, and

Armory Dwelling H uses No. 30 and 31 were identical twins. The main structure of each house was a two-story brick building with slate covered roof, and measured 39 feet 8 5/8 inches by 33 feet 2½ inches. At the south side of the main house there was a two-story brick service wing measuring 23 feet 1½ inches by 18 feet 8½ inches in size. The main house had eight rooms and a center hall, and the rear wing three, including a kitchen and pantry on the first floor and a bedroom above.

There was a full basement under the rear wing and under one-half of the main house. residing in House No. 31,

Chief Clerk Archibald M. Kitzmiller, according to the census of 1860, had been born in Virginia, was 47 years and had a personal estate valued at $ 300. He and his wife Ann had 7 children living with them, ranging in ages from 4 to 21.[18] The Armory rent rolls reveal that Kitzmiller had been employed as chief clerk of the Armory from at least as early as October 1,1841 . In 1841 he was residing in Armory Dwelling House No. 165, a one-story stone house that was located on the Upper Hall Island. By 1844 he was living in Armory Dwelling House No.164, the 2-story brick house that Captain John H, Hall had built on Camp Hill in 1827 on the site were the Paymaster's Quarters,Armory Dwelling No.32, was to be erected in 1847-48. The Superintendent's Clerk lived in House No. 164 from 1844 until 1848, when the structure was demolished. In 1848-49 he resided in Armory Dwelling House No. 3, which was located on Lot 1, Block C, Shenandoah Street; and from 1850 to 1852, when the records end, was living in House 177, which was located on Wager Lot No. 19 and fronted on High Street.

18.Harpers Ferry NHP Microfilm Reel 10, V. 2, p.186.

John E. P. Daingerfield, the Paymaster's Clerk, who moved into Armory Dwelling No. 30 in September 1860, according to the census of 1860, was 42 years old, had been born in Virginia and held a personal estimate that was valued at $ 7,600. He and his wife, Matilda, had four children living with them, who ranged in ages from 1 to 12.[19]

The Armory rent rolls indicate that Daingerfield had been working as a clerk at the Armory since at least October 1,1841. In 1841 he was living in Armory Dwelling House No. 46, a two-story stone house located on Lot 10, Block C, Shenandoah Street. In 1844 Daingerfield was living in Dwelling No. 5, on its upper floors(present Park Bldg. No.45), which was located on the north side of Shenandoah Street. By 1846 he had moved across the street into House No. 3, a large brick house,2 stories, that stood on Lot 1, Block C, Shenandoah Street. From 1849 to 1852, when the records end, Daingerfield was living in House No. 179, which fronted on High Street and was located on Wager Lot No. 21.

19. Reel 10, V. 2, p.170.

8. Construction of the Master Armorer's New House(Armory Dwelling No. 1-Park Bldg.36,Shenandoah Street, 1858-59.

As has been mentioned, Superintendent Henry W. Clowe in July 1856 had drafted set of plans to erect three idenitcal residences for the use of the Master Armorer, the Superintendent's Clerk, and the Paymaster;s Clerk at a total cost of $ 18,000. The money was to come from the proeeeds of the 1852 sale of U.S. lots and houses. The Secretary of War had approved the plans and cost estimates in September and construction on the two houses for clerks, which were to be located on Camp Hill, got under way in September 1857. It had also been decided that the new quarters for the master armorer would be erected on Lot No. 4, Block B, Shenandoah Street, just to the east of the Master Armorer's Old Quarters, Armory Dwelling No.2 (Park Bldg. No. 34-35), which was also situated on Lot No.4.

On April 3,1858, Superintendent Clowe informed Col. Henry K. Craig, Chief of Ordnance, that the two clerks' houses were cost-ing about $ 6,820 each to build rather $ 6,000 a piece as had been planned, thus leaving only $ 4,360 available to construct the Master Armorer's $ 6,000 house. He also wrote: I have prepared a ground plan of house for the proposed Master Armorer's Quarters, varying from that already adopted. A House built on the place Lot 4,Block B, Shenandoah Street can be built for about seven thousand dollars.

"Be pleased to ,instruct me, whether I may vary, in the erection of this House, from the plan already adopted for those on Camp Hill. Those on Camp Hill have exceeded the amount appropriated for them about $ 820 each, owing to the location, and consequent expense of the transportation of materials.*&c.

"The original plan," Clowe remarked," can be constructed at the site on the Arsenal Square for about seven thousand dollars or less."[1]

1.Clowe to Craig, April 3, 1858, Photostatic Collection, V.3, p.83.

The Chief of Ordnance did not response and on April 22, Superintendent Clowe again wrote to Washington requesting a decision on which plan should be used, explaining" " I have now cleared the site, of obstructions at the place(Lot 4, Block B. Shenandoah Street). close to the present quarters of the M. Armorer(Armory Dwelling No. 2-Park Bldg. No.34-35), and the workmen will be kept waiting, unless I am informed without delay, if any change in the plan is to be authorized.

Excavating for the foundation wall, depends upon this knowledge."[2]

Superintendent Clowe wrote for a third time on May 4, requesting a decision.[3] The long delay was apparently due the fact that the Secretary of War had to render a decision on the matter. On May 19, 1858, Col. Henry K. Craig, Chief of Ordnance, was finally able to answer Clowe's question, writing: "I have to inform you that the Secretary of War has now approved the plan for the Master Armorer's Quarters transmitted with your letter of 3rd April last; and that the building may be commenced without further delay."[4]

On June 3, 1858, Clowe sent back to Craig "the Draft of Master Armorers Quarters, which I brought to the Armory, from your Office, a few days ago ."[5] No plans of the Harper's Ferry Armory buildings, except for one or two minor structures, have been found in the National Archives Records. Under the new plan, however, a $ 7,000 structure, instead of $ 6,000 building as originally intended, was to be erected.

2. Clowe to Craig, April 22,1858, Reel 27, V.1, p.48.
3. Clowe to Craig, May 3,1858, Reel 26, V.7,p. 687.
4. Craig to Clowe, May 19, 1858, Reel 19,V. 10,p.973.
5. Clowe to Craig, June 3,1858, Reel 26, V.8, p.703.

In his annual report for the fiscal year ending June 30,1858, Superintendent Henry W. Clowe remarked of the new house:

"The building on the south (or west) end of the Arsenal square, designed as quarters for the master armorer, is advanced, ready for roofing. This building is of the same (architectural) style of structure as those on the (Camp) Hill, (that is the Quarters for the Superintendent's Clerk and the Paymaster's Clerk), built of brick on stone foundations; the main building being 42 by 38 feet, with wing 25½ by 20 feet, two stories high, and roofed with slate." [6]

This evidence indicates that Clowe had made the Master Armorer's house larger than the two clerks' houses, which had dimensions of 39 feet 8 inches by 33 feet 2 inches for the main housesand 23 feet 1 inch by 18 feet 8 inches for the wings.

On October 4, 1858, Clowe informed Col. Craig that only $ 2,634.50 of the $ 7,000 provided remained available to complete the house. [7]

On November 18, the Virginia Free Press, which was hostile to the administration, commented on the new quarters:

"Amongst the many improvements being made at Harpers-Ferry, we observe a large and handsome dwelling intended for the Master Armorer, on Shenandoah Street. It will no doubt be very conomfortable and convenient. What the cost will be, must be left to conjecture. Under the Military system (of Armory superintendents), proposals for all public works were issued and competition elicited, but (under civilian system of Armory superintendents) as 'Kissing goes by favor,' no published proposals are made, and we take it, that the contractor, whoever he may be, is is not losing by the job..." (8)

6. Serial No. 976, p.1318.
7. Clowe to Craig, October 4,1858, National Archives R.G. 156, OCO Document File 179701894, No.416-Box 161.
8. Charles Town Virginia Free Press, November 18, 1858, p. 2, c.2.

6. Continued:Clowe also reported June 30,1860-"The old paymaster'd office (located on Lot 2, Block B, Shenandoah Street) has been taken down, to make room for the master armorer's quarters." P.1319.

In his annual report for the fiscal year ending June 30,1859, Superintendent Alfred M. Barbour, who had replaced Clowe as Superintendent on December 24,1858, wrote: "The building on the south(or west) end of arsenal square, designed as quarters for the master armorer, advanced to the roof, as by last report, has been completed during the year,and is now occupied." He further noted "A rain-water cistern with fixtures has been constructed for... the quarters on Shenandoah street."[9]

The Master Armorer's new Quarters, Armory Dwelling House No.1(Park Bldg. No. 36) was thus constructed May, 1858 to June,1859 at an approximate cost of $ 7,000. The additional funds, [redacted], about $ 2,640, which were required to complete the house, were apparently made available by the Secretary of War from the proceeds of the 1852 sale, into which workers made payments of $ 6,616.26 in 1856 and 1857., as Congress did not appropriate any money to erect quarters during the 1855-61 period.

Finally, in his report for the year ending June 30,1860, Superintendent Barbour reported" The quarters of the master armorer, paymaster, and clerks, have received many additions to them, to render them comfortable, and the grounds, which were very rough, have been graded and improved."[10]

Master Armorer Bejmain Mills and Paymaster's Clerk John E.P. Daingerfield agreed to swap their new houses. Mills ,who was scheduled to reside in the new quarters,Dwelling No. 1 on Shenandoah Street, thus actually moved into Armory Dwelling House No. 30 on Camp Hill, the Paymaster's Clerk's desingated house, when it was completed, in November 1858. Clerk Daingerfield, in November 1858, took up residence in the Master Armorer's Old House(Dwelling No.2-Park Bldg. No. 34-35) on Shenandoah Street, where he lived until the Master Armorer's new Quarters(Armory Dwelling No.1-Park Bldg.36) was

9. Serial No. 1025, p. 1114. Also Barbour to Craig, July 5,1859, Reel 27, V.3,p. 289-"The work is done at the Master, Armorer's new Quarters on Shenandoah Street."
10. Serial No.1079,p. 974.

Probable Costs of Construction and Improvements to Officers' Quarters, 1855 - 1861.

	Cost
Chief Clerk's Quarters,(Amory Dwelling No. 31) -	$ 6,8200
Paymaster's Clerk's Quarters,Am. Dwelling 30	6,820
Master Armorer's Quarters(Armory Dwelling No.1	7,000
Subtotal: Three new houses, 1857-59:	20,640
Paymaster's Quarters, second story added,A.D.32	4,000
Total	$ 24,640

$ 18,000 allotted from proceeds of 1852 sale of lots and houses to erect Armory Dwelling Houses No. 1, 30 and 31. The cost overrun of $ 6,640 was apparently provided from the grand total of $ 54,399.86 collected from the 1852 sale from 1852 to December 31,1860.

9. Repairs and Improvements to the Paymaster's Quarters,Armory Dwelling No.32, Camp Hill(Park Building No. 56), 1852- 1861:

Repairs and Alterations, 1852-1858:

The destruction of the Armory Paymaster's vouchers for the period 1852 to 1861 by the National Archives staff during the 1940's makes it impossible to trace in detail repairs and alterations that may have been made to the Paymaster's Quarters during those years. The superintendent's annual reports, 1852-1860, however, indicate that no major work was done on the residence until 1858-59, when a second brick story was added to the original structure.[23]

The building served as the residence of Paymaster Edward Lucas,Jr. from 1848 until his death in 1858. Lucas as been superintendent of the Armory from 1837 to 1841.

No drawings or photographs have been found that show the Paymaster's Quarters as it appeared during the years 1848-58, namely as a one-story brick structure over an elevated stone basement.

Adding a Second Story,1859-59 :

On June 3,1858, Superintendent Henry W. Clowe submmited plans and an estimate he had prepared for adding a second story the Armory Paymaster's Quarters, Armory Dwelling No. 32(Park Bldg.No.56) on Camp Hill to Col. Henry K. Craig for review and approval. This document,"Estimated Cost of Addition to Paymaster's Quarters at Harpers Ferry Armory..For raising the Building One Story, and other Alterations" amounted to $ 3,464.02.[24] The materials and costs were estimated as follows:

3,600 brick @ 12¢.....	$ 540.00
6,000 feet Lumber.....@ 3¢ pr,sq.fr....	180.00
4,168 feet Joists, @ 1½¢ pr ft.....	62.52
500 feet Lintels, @ 1½¢ " ".....	7.50

23. Serial No. 1025, p.1114. Also Smith, Philip R., Jr.,"Research Report: "History of Paymaster's Quarters("Lockwood"House, Bldg. Bldg. No.56), Storer College), Harpers Ferry,1848-1867,Harpers Ferry National Monument, West Virginia,"(NPS typescript, Harpers Ferry NM, W. Va., March 23,1959) 29 pp.

24. Reel 27,Vol. 1, 63.

1,000 feet Studding @ 1½¢ per ft.....	$ 15.00
2,700 feet Slating @ 9 $ pdg.....	243.00
860 Yards Plastering @ 25¢ yd.....	215.00
10 Window Sills (Cut-stone?) @ 3$ ea.....	30.00
Painting, Glazine & materials.....	225.00
Hardware & Nails.....	40.00
Material for Pantry.....	18.00
Material for Gallery.....	70.00
Material for Portico.....	40.00
2,500 feet flooring @ 3¢ (sice?).....	45.00
1,200 feet Stud partition @ 1¢.....	12.00
10 Double Bay Windows @ 10$ ea.....	110.00
Framing joints.....	40.00
4 Wardrobes @ 10$ ea.....	40.00
Washboards.....	20.00
Stairs.....	180.00
Doors and Jambs.....	40.00
Four mantels.....	24.00
Roofing (Labor ?).....	80.00
Front Portico.....	100.00
Back Gallery.....	150.00
Pantry.....	25.00
Clothes Press	18.00
Damages likely to occurr to first story.& for repairs of same.....	120.00
New metal Roof to Gallery.....	67.00
Repairs of Basement Story.....	100.00
Excavation around 2 sides of Basement.....	400.00
Hauling and incidental expenses.....	150.00
Total	$ 3,464.02 (25)

On June 4,1858, Col. Craig sent the plan and estimate to Secretary of War J. B. Floyd for his necessary final approval. Craig recommended that the plan be approved and explained: "The Funds on hand at the Armory applicable to such a purpose (are) to be used. At present the House consists of a Basement partly under ground and one (brick) story above for family use. The Kitchen and Servants Rooms being in the (stone) Basement which are damp and unhealthy; it is therefore proposed to constructed an upper story to the building and excavate an area around the Basement to make that portion of it more habitable."[26]

The Secretary of War took his time reviewing and rendering a final decision on the merits of this addition. Not until July 22,1858, was Col. Craig able to

25. Reel 27, Vol.1, p. 63.
26. Craig to Floyd, June 4,1858, Reel 20, V.7, p.675.

to imform Superintendent Clowe that the Secretary of War had approved the project and that Clowe could now proceed to make the proposed alterations to the Paymaster's Quarters.[27]

On September 27, 1858, Clowe advised the Chief of Ordnance that "The work on the paymaster's quarters is rapidly progressing to completion... and the paymaster is desirious of occupying his (house) this autumn.[28] With this letter Superintendent Clowe also submitted an estimate proposing $ 1,500 in additional improvements. Of this sum, $ 200 was to be used to construct a rain water cistern, $ 75 for whitewashing fences, and the balance, $ 1,225, for building three stables, and two smoke and fuel houses for the quarters of the paymaster, Armory Dwelling No.32, master armorer, Dwelling No. 15, and the two clerks(Armory Dwelling Houses No. 30 and 31).

Col. Henry K. Craig disapproved the estimate for $ 1,500 in additional improvements on October 8,1858, explaining that there were no available funds that could be legally used for these purposes.[29]

In his annual report for the fiscal year ending June 30,1859, Alfred M. Barbour, who had recently replaced Henry W. Clowe as superintenendent of the Armory, reported: "The paymaster's quarters have been very materially enlarged and improved by an addition of one story to the height, and galleries and porticos on the east and west sides, and the interior arrangement entirely altered, finished, and thoroughly, and occupied by the paymaster.

"One thousand feet of fence, with locust posts, oak string pieces, and yellow pine paling, have been constructed for these quarters(Armory

27,Craig to Clowe, July 22, 1858m Reel 19, V.10,p.980. Clowe had also written to Craig on June 23,1858,urging speed in make the decision, as the construction season was fast passing, Photostat Collection, Vol. 3,p.84.
28. Clowe to Craigm September 27,1858, Photostat Collection,Vol. 3,p.75.
29. Craig to Clowe, October 8,m Reel 19, V.10,p.993.

Dwelling Houses No. 32, 30 and 31 on Camp Hill, and enclosing reserved U.S.-owned ground."[30]

In the annual report for the year ending June 30,1860 , Superintendent Barbour further noted" The quarters of the master armorer (Dwelling No.1), paymaster (Dwelling No.32), and clerks (Dwelling No.30 and 31), have received many additions to them, to render them comfortable, and the grounds, which were very rough, have been graded and improved."[31]

As completed in 1859, the Paymaster's Quarters was 56 feet 4 inches by 39 feet 9 inches, two storys of brick, upon a high one story basement of stone . The hipped roof was covered with slate. The water table and window sills were of cut-stone and the gutters and down spouts of copper. There was a one-story wooden portico on the east elevation and a wide two-story wooden gallery or porch on the west facade. Also on the lot was a one-story brick outbuilding with wood shingle roof and measuring 18 by 20 feet in size; this had been erected in 1847-48 and a rain water cistern, also built in 1847-48, capable of holding 12,000 gallons of water.

Also standing on the Paymaster's lot was a stone or "rough-cast" stable that had been built by Captain John H. Hall in 1827 or 1828.[32] This one-story building was probably about 25 feet square.(32A)

On August 6,1860, Barbour proposed demolishing this old stable and erecting a new one, writing to the Chief of Ordnance:

You will remember that there is an old rough cast stable upon the back (?) grounds of the Paymaster's Quarters. I understand that it was intended that this old and almost useless building should be taken down and a new stable built upon the lot. I know of no special appropriations for it but presume you intend to have it done out of the funds for reapirs and improvements... It is much needed both for use and appearance. You will please express your wish upon the subject and indicate what sort of a stable shall be put up, what cost &c. I will then have plans made & sent you."[33]

30. Serial No. 1025, p.1114.
31. Serial No. 1079, p.974.
32. Vol. One of this study, p. 173.
33. Barbour to Craig, August 6,1860, Reel 27, Vo.8,p.810.
32A. Captain John H. Hall to Col. George Bomford, Chief of Ordnance, June 25,1827, Reel 22,V.2,p.112, describing buildings he hoped to build.

Responding on August 14,1860, Chief of Ordnance Craig ordered Barbour not to tear the old stable down until the new one could be constructed, suggested that the new stable not exceed $ 600 in cost, and advised Barbour to include a request for these funds in the estimates for the 1861-62 fiscal year.[34]

This Barbour did, increasing the request to $ 2,000 to cover the cost of erecting outbuildings for Armory Dwellings No. 1, 30, and 31, as well as the stable for House No.32.[35] Congress appropriated the desired $ 2,000 on March 2,1861,[36] but Confederate troops seized the Harpers Ferry Armory on April 19, 1861, before any of this money could be expended.

The Paymaster's Quarters, Armory Dwelling House No.32(Park Buldg. No. 56) served as the residence of the Armory Paymasters from its completion in 1848 to April 19, 1861.

The house was the home of Paymaster Edward Lucas, Jr. from September 1848 until his death in March 1858.[37] Lucas had also served as the superintendent of the armory from 1837 to 1841.

Dennis Murphy was appointed as the next paymaster in May 1858.[38] As the second story was being added to the Paymaster's Quarters during the summer and fall of 1858, Murphy did not move into the structure until this work was completed, either in late autumn 1858, or the spring of 1859. He resided in the dwelling until April 19, 1861. The Census of 1860 indicates that Paymaster Dennis Muprhy had been born in Maryland, was 49 years old, and owned real estate valued at $ 3,000 and personal estate valued at $ 6,000. Murphy and his wife, Margaret, had five of their children ranging in ages from 5 to 18 years living with them. (39)

34. Craig to Barbour, August 14,1860, Reel 19, p. 1146.
35. Serial No. 1092, p. 322-323, item 4, estimates for 1861-62 fiscal year.
36. U.S. Statues at Large, XIII, p.202.
37. Chief of Ordnance George Talcott to Superintendent John Symington,May 13,1847, Reel 19, V.3, p.297,regarding appointment of Lucas as paymaster; Supt. Clowe to Col. Craig, Chief of Ordnance, March 5,1858, regarding death of Edward Lucas,Jr, Reel 26, Vol.7, p.645.
38, Maynadier,Ordnance Department, to Murphy, May 17,1858,Reel 19, V.10,p.971.
39.Census of 1860, Reel 10, V. 2, 186.

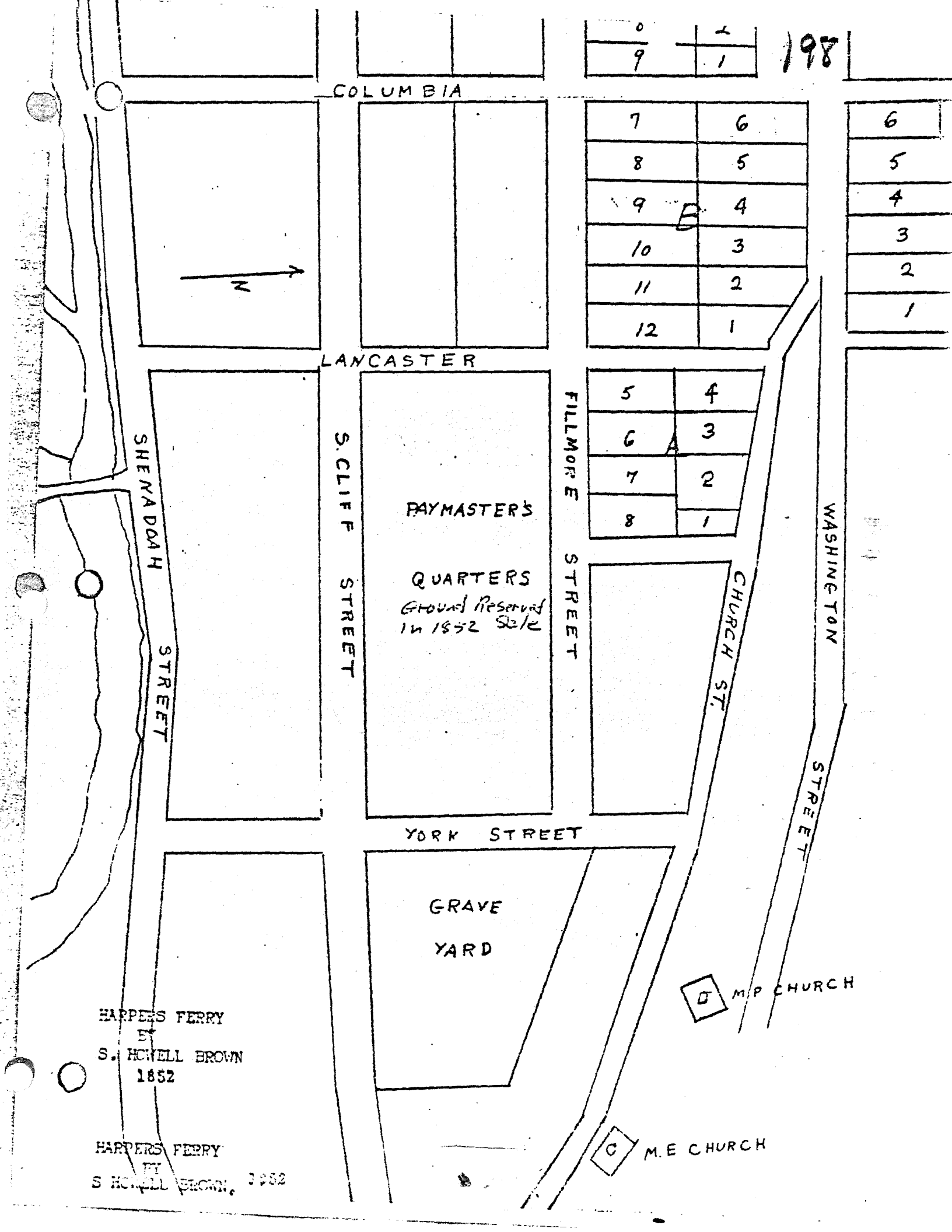
On July 27, 1865, Brigadier General Edward D. Ramsay made a detailed inspection of the Harpers Ferry Armory and reported of the Paymaster's Quarters:

"Dwelling House No. 32, Brick, two-story- Pay Master's Quarters- In bad condition, occupied by the Medical Purveyer [of the U.S. Army] as quarters." 40

He also remarked:

"The costly quarters of the Superintendent of the Armory [Armory Dwelling House No. 25], of the paymaster [Dwelling No. 32], and other conspicious and valuable buildings belonging to the government, have been wantonly abused, and I am sorry to say, as I am credibly informed, mostly by our own troops. Marble [illegible] mantle pieces have been taken away; and the stair cases torn down and used as fuel. To repair these buildings will involve an expense of at least one-half of their original cost." (41)

40. Ramsay to Brig. Gen. A.B. Dyer, Chief of Ordnance, July 27, 1865, Photostat Collection, Map Case, Drawer No. 10.
41. Ibid.,


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COLUMBIA
LANCASTER
SHENADOAH STREET
S. CLIFF STREET
FILLMORE STREET
CHURCH ST.
WASHINGTON STREET
YORK STREET
PAYMASTER'S QUARTERS
Ground Reserved In 1852 Sale
GRAVE YARD
M.P CHURCH
M.E CHURCH
N
HARPERS FERRY
BY
S. HOWELL BROWN
1852
HARPERS FERRY
BY
S HOWELL BROWN, 1852

10. Proposal to Erect Outbuildings for the new Officers' Quarters, 1861:

In the estimates for the 1861-62 fiscal year, Superintendent Alfred M. Barbour asked for $ 2,000 "For out-houses for officers quarters"; in justifying this request, it was explained:

> The funds for the construction of these quarters (Master Armorer's, Superintendent's Clerk's, Paymaster's Ckerk:s Quarters, together with the second story added to the Paymaster's house, 1857-59), derived altogether from the (1852) sale of lots at the armory, having been exhausted in the erection of the buildings themselves, no outside conveniences, such as a stable, meat-house, or other necessary buildings, could be erected. This item of the estimate includes the building of a stable for the paymaster (at Armory Dwelling House No. 32), and the removal from the present site of the old stable on his premises, erected thirty years ago, and for like purposes at the other quarters (Dwelling No. 1, 30, and 31). The erection of these outhouses is rendered the more essential through the fact that these quarters are far removed, except that of the master armorer (Dwelling No. 1), from the business part of town, and the tenants suffer great inconveniences from the want of needful supplies, which cannot be secured in advance in consequence of having no suitable places in which to store them." (1)

Congress appropriated the request sum on March 2,1861,[2] but the money was never psent as Confederate troops seized the Harpers Ferry Armory on April 19, 1861.

1. Serial No. 1092, pp. 322, 323, Item No. 4.
2. U.S. Statues at Large, XII, p.202.

11. Wells, Camp Hill, 1855-61:

Under the authority granted him by the joint resolution of Congress on April 23,1856, Secretary of War Jefferson Davis, on June 28,1856, made available $ 200.00 from the proceeds of the 1852 sale of public lots for"Cleaning well on Fillmore Street and Pump.[1]

In the annual report for the fiscal year ending June 30,1857,Superintendent Henry W. Clowe described how this money had been utilized, writing: "A considerable amount of rock excavation has been made in the well on Fillmore street, and also in the effort to regain the stream of spring water lost in grading Washington street."[2]

1. Col. Henry K. Craig, Chief of Ordnance to Superintendent Henry W. Clowe, June 28,1856, Reel 19, Vol. 9, p.871.
2. Serial No. 920,p. 552.

APPROPRIATIONS FOR REPAIRS AND IMPROVEMENTS TO DWELLING HOUSES, 1855-1861

Calender Year:	3 new Quarters	New Out-Buildings	Demolishing Old Houses			Total			
3/3/ 1855			800.00			$ 800.00			
8/30/ 1856									
3/7/ 1857	18,000					$ 18,000			
1858									
1859									
1860									
1861		2,000 *				$ 2,000*			
TOTAL	$ 18,000	2,000*	$ 800.00			$ 20,800			

* Money never spent.

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Construction and Repair at the U.S. Armory at Harper's Ferry, Va., 1842 to June 30,1860 , work accomplished under the various Superintendents .

Years	Superintendents	Amount expended	Amount Appropriated for C &R	No. of bldgs built
1842 to June 30,1845	Major Henry C. Craig:	$ 141,487.53	$ 90,500(1)	6
July 1,1845 to June 30, 1851	Major John Symington	384,153.24	335,702.00	20
July 1,1851 to June 30, 1854	Col. Benjmain Huger & Major William Bell	134,360.29	92,450.00	8
Subtotal 1842-54	Military Superintendents	$ 660,001.06	$ 536,652.00	34
July 1,1854 to July 1,1858	Henry W. Clowe	147,277.26	263,542.00(2)	3
July 1,1858 to June 30,1860	Alfred M. Barbour	103,742.10	185,000.00	3
Subtotal, 1854-60:	Civilian Supts.	$ 251,019.36	$ 448,542.00	6
Grand Total 1842-60		$ 911,020.42	$ 985,194.00	(2) 40
Proceeds of 1852 land sale for use in 1856:		-	36,606.70	
1842-60,June 30. GRAND TOTAL		$ 911,020.42	$ 1, 021,800.70	40

(1). Total includes $ 18,000 in funds carried over into 1842 from the 1841 appropriations of $ 38,000.00.

(2). Total does not include $ 36,606.70 obtained from the sale of U.S. Houses and lots in 1852 and authorized by Congress in 1856 for use to make repairs and improvements at the armory.

POPULATION OF HARPER'FERRY AND VIRGINIUS Island , VIRGINIA, 1810- 1900

	1810	1820	1830	1840	1850	1860	1870	1880	1900
White Males	386	681	656	879	806	619	651		
White Females	275	574	598	696	745	593	590		
Total Whites	661	1,255	1,254	1,575	1,551	1,212	1,241		
Free Black Males	0	13	21	40	50	20	115		
Free Black Females	0	11	43	50	37	19	97		
Total Free Blacks	0	24	64	90	87	39	212		
Slave Black Males		47	61	68	37	33	0	0	0
Slave-Black Females		51	95	68	72	55	0	0	0
Total-Slaves	90	98	155	136	109	88	0	0	0
Total=Blacks	90	122	220	226	196	117	212		
GRAND TOTAL POPULATION	751	1,377	1,474	1,801	1,747	1,339	1,453	1,255	896
No. Armory Houses	20	89	108	169	142	33	291	232	190
No. of Families	100	196	224	277	279	217	292	240	190
BOLIVAR: Whites	0	0	233	459	948	1,029	1,189		
BOLIVAR Free Blacks	0	0	16	51	60	74	225		
Black Slaves	0	0	20	5	46	27	0	0	0
Total, Bolivar Blacks	0	0	36	56	106	101	225		
GRAND TOTAL BOLIVAR	0	0	269	515	1,054	1,130	1,414	1,518	781
GRAND TOTAL HARPERS-FERRY-BOLIVAR	751	1,377	1,743	2,316	2,801	2,469	2,867	2,773	1,677

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CHART

U. S. CENSUS RECORDS OF BOLIVAR

Year	1810	1820	1830	1840	1850	1860	1870
Total Population	0	0	269	515	1,054	1,130	1,414
Total Whites	0	0	233	459	948	1,029	1,189
No of Families	0	0	53	103	210	217	242
No of Houses	0	0	-	-	197	204	273
White Males	-	-	118	219	479	497	582
White Females	-	-	115	240	469	532	607
Free Black Males	-	-	5	21	29	33	109
Free Black Females	-	-	11	30	31	41	116
Total of Free Blacks	-	-	16	51	60	74	225
Male Slaves	-	-	8	2	17	14	0
Female Slaves	-	-	12	3	29	13	0
Total of Slaves	-	-	20	5	46	27	0
Total of Blacks	0	0	36	56	106	101	225

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CHAPTER VI

DESTRUCTION OF THE HARPER'S FERRY ARMORY, 1861

Lieutenant Roger Jones, commanding the company of 44 soldiers guarding the U.S. Armory at Harper's Ferry, was warned of the approach of Confederate forces on April 18,1861. He removed a large quantity of powder from the armory magazine located on Magazine Hill and laid powder trains through the two brick arsenal buildings on Old Arsenal Square on Shenandoah Street and also in the two rows of some 20 brick Musket Factory shops lying between North Cliff(or Potomac) Street and the Potomac River.

At nine o'clock on the night of April 18, Jones wired the Assistant Adjutant-General in Washington,D.C. , of the impending crisis and the action he had taken to meet it. He telegraphed" ...The steps I have taken to destroy the arsenal, which contains nearly 15,000 stand of arms, are so complete that I can conceive of nothing that will prevent their entire destruction...'[1]

Jones was assisted in this task by Captain Kingsbury, who had arrived to take charge as superintendent of the Armory on April 18, following Alfred M. Barbour's resignation. George Mauzy, an eye witness of these events, a civil engineer, and resident of the island of Virginia , described what followed, writing on April 9: "At about ten o'clock at night they (Capt. Kingsbury and Lt. Jones) set fire to the carpenter shop(Bldg. 8C) and grinding mill(Bldg.8A), stocking shop(Bldg. 6A-all at the Musket Factory),and the 2 arsenals, which were both burned down together with some 15,000 guns of various kinds...

1. Lieutenant Roger Joines to Assistant Adjacent-General,Washington, D.C. April 18, 1861- 9 p.m., CR,S.I., Vol. II,pp.3-4.

"The first named shops are also a perfect heap of ruins, fortunately the stock shop was saved with but little damage. Well after these buildings were set on fire Lieut Jones and his men walked across the Potomac bridge and it is said went up to the Canal, in the direction of Hagerstown, it is presumed they are making their way across to Penn."[2]

As the arsenal buildings and musket factory shops burned on the night of April 18, however, the lower town section of Harpers Ferry was alive with men, women, and children, hurrying to an fro, loaded with plunder from the workshops and soldiers' barracks. Evently some of the Armory workmen dragged the fire engines out of Musket Factory Bldg. No.1, the Engine and Guard House, and succeeded in extinguishing the flames at the Musket Factory. Citizens of Harpers Ferry who had helped Jones in his work of destruction now fled northward for their lives, as Confederate troops entered the about 1 a.m. on April 19.[3]

Harpers Ferry NHP Negatives HF- 349, HF- 533, and HF-334 are fairly accurate drawing made and published in 1861, showing the destruction of the Armory Bldgs, on April 18,1861.

Lt. Jones and his 44 men made a forced march of 30 miles to Hagerstown, Md., where they boarded ominibuses for Chambersburg, Pa., where they were fed by the people of the town. They arrived at Carlisle, Pa. and safety about 2:30 p.m. o April 19. Secretary of War Cameron promoted Jones to captain for his fine work on April 22,1861.[4]

On April 25,1861, Lt. Col. James W. Ripley, of the Ordnance Office, informed Harpers Ferry Armory Paymaster Dennis Murphy:

> The armory at Harpers Ferry having been foreably taken possession of on the night of 18th April, by the Militia of Virginia, the United States will not be responsible for the services of the operatives after that date." 5

Thus the production of arms that began in 1803, ceased on April 18,1861 at Harpers Ferry.

2. George Mauzy to James H. Burton, former Master Armorer at Harper's Ferry, April 19,1861.
3. Sullivan, Arthur L.,"Harpers Ferry, April 18-December 31,1861- A Casualty of War, Harpers Ferry National Historical Monument,West Virginia,"(NPS typescript, Harpers Ferry NM, W.Va., Fenruary 17, 1960) Chapter I.
4. Sullivan, Ibid.,p. 28.
5. Ripley to Murphry,April 25,1861, Reel 20, V.4, p.405

Confederate troops held Harpers Ferry from 1 a.m. April 19th to June 15,1861.

During this period all U.S. Armory property at Harpers Ferry, including 78 U.S. workshops and storehouses and the arms manufacturing machinery therein, was seized by the Confederate Government. Armory employees were forced to vacate their government quarters so that they could be used as barracks. Harpers Ferry churches were also occupied and utilized as barracks. Townspeople who were suspected of being Union sympathizers were thrown in jail without hearings or trial, their property stolen and their houses occupied as barracks. Between April 19 and June 14 more than 432 valuable machines for manufacturing arms, 57,000 assorted tools, and thousands of feet of belting and shafting for the machinery were stripped from the Musket and Rifle Factory workshops, loaded on wagons, and transported south to be used in the armories established at Richmond,Virginia, and Fayettevilee, North Carolina, to manufacture arms for the Confederacy.[6]

On June 14,1861, the Confederate army, under the command of Brigadier General Joseph E. Johnston, began evacuating Harpers Ferry. About 6;30 a.m. on June 14, the army burned the Baltimore and Ohio Railroad Company's wooden bridge across the Potomac and the iron bridge span next to the Wager House Hotal, which was located on Wager Lots No. 6,7 and 8, was blown up. (Harpers Ferry NHP Negative No. HF-102, a drawing published July 1,1861,shows the destruction of the bridge). Also about 6:30 a.m. on June 14, the Confederate troops also set fire to the 22 workshops, storehouses, and offices located in the Musket Factory yard. The wooden interiors, floors, and roofs of all these structure were destroyed, with the exception of the large, incombustable

6. Sullivan, A.L,"Haprper's Ferry...",p. 53-55.

Smiths or Forging Shop, Bldg. No. 13, and a smaller store house, a warehouse, Bldg. No. 12. The solid brick walls of most of the other buildings, however, remained standing. The iron railroad trestle, with its wooden platorms, along the top of the great Potomac River wall, in the Musket Factory yard, from the lower or eastern end of the yard west to the railroad road bridge over the U.S. Armory canal, was also burnt.

On the morning of June 15, Johnston's army of more than 10,000 men began their march south towards Winchester.

The Armory Superintendent's House, Armory Dwelling No. 25(Park Bldg. No.59), which had been occupied as General Johnston's Headquarters, had been heavily damaged and stood open, with locks broken, furniture removed and the floors and grounds covered with papers, topograpgical plans, letters, paymaster's rolls, etc."[7]

On June 20th, or 28th, a Confederate regiment returned to Harpers Ferry during the early morning hours, and set fire to and destroyed the 10 U.S. workshops and storehouses at the Rifle Factory on the Shenandoah, which Johnston had forgot to burn on the14th; they also burned the wooden toll bridge across the Shenandoah river, and ran Baltimore and Ohio Railroad Locotmotive No.165 and some cars into the Potomac River.[8]

Union troops occupied Harpers Ferry July 18 and held the town until August 17,1861.[9] (See Harpers Ferry Negatives HF- 223, and 229, for drawings showing the Musket Factory, published in July 1861). From August 18,1861 to February 25,1862, the town was a no-man's land.[10]

7.Sullivan, Op.t Cit.,pp.48-49, p.51. The description of the state of Armory Dwelling is from the diary of David Hunter Strother, p.25, who was present in Harpers Ferry during this period.

8.Sullivan,Ibid., p.58. Some accounts state the raid took place on June 20th,others on June 28,1861.

9.Ibid, p. 69. Captain Newton of the Engineers and a Massachusetts regiment apparently occupied Harpers Ferry on July 18,1861. Ibid.,p. 78.

10.Sullivan, Chapter IV,p. 79-100.

On November 16, 1861, Lt.Col. William Maynadier, of the Ordnance Department, submitted a report to Secretary of War Simon Cameron regarding the losses incurred at the U.S. Armory at Harper's Ferry on April 18-19, 1861.

With regards to the value of the plant, he reported:

HARPERS FERRY PROPERTY, NOVEMBER 16,1861

The amount expended on the same for land purchases at different times.....(This figure is the amount that was spent to January 1,1847 -an additional $ 57,598.88 had been spent 1847-1856-actual total cost of land was thus about $ 103,076 in 1861).....	$ 45,477
For improvements thereon, for water power, canals, enbankments, walls, and water privileges and for hydraulic machinery and buildings of all kinds.....	$ 1,787,430
Total. exclusive of the amount expended in the manufacture and repair of arms [1796-1861].....	$ 1,832,907.

The last annual inventory of the property belonging to the United States at that Armory is dated June 30, 1860, in which the value of all the property on hand at that date is apprised as follows:

1,669½ acres of land [original acreage, by 1818, 1,890 acres; about 216½ acres sold off as house lots in 1852 and 4 acres put in Harper's Cemetery.....		$ 37,457.00
Mills, Dams, canals, water power, and hydraulic machinery		233,279.00
Forges, rolling mills, machine shops, dwellings and other buildings.....		341,221
Amount of Real Estate.....		$ 611,957.00
Machinery used in workshops.....		270,235.00
Tools used in workshops.....		109,560.00
Machinery and tools.....		379,795.00
Unwrought materials on hands.....	$ 100,043.00	193,616.00
Parts of arms in progress.....	93,573.00	
20,507 arms of different models in storage.....		$ 285,145.00
TOTAL APPRAISED VALUE, June 30,1860		$ 1,407,513.00 (11)

11. A Collection of Annual Reports and Other Important Papers Relating to the Ordnance Department Taken from the Records of the Office of the Chief of Ordnance, from Public Documents, and from other Sources Prepared under the direction of Brig. General Stephen V. Benet (4 vols., Washington, D.C., 1880), Vol.IV, p. 1043-1044.

Of the 20,507 arms reported in storge on June 30,1860, Lt. Col. Maynadier informed the Secretary of War on November 16,1861, that this number by April 18,1861, when the Armory was destroyed, had been reduced to 4,287, the value of which he placed at approximately $ 64,000. Maynadier thus estimated the value of the Harper's Ferry Armory to be $ 1,470,513 on June 30,1860 and only $ 1,207,660 on April 18,1861.[12]

Harpers Ferry, however, was too important strategically to be left unoccupied. The Baltimore and Ohio Railroad, the Chesapeake and Ohio Canal, and the road between Federick,Md., and the Shenandoah Valley in Virginia all funneled through Harpers Ferry and its river gaps. Who ever controlled Harpers Ferry had command of the important coummincation lines from Washington, D.C. to the West. For this reason, the Union Army reoccupied Harpers Ferry on February 25,1862. By the night of the 26th, 8,500 infantry, 18 cannon, and 2 squadrons of cavalry held the town and Loudoun and Bolivar Heights.[13] also, Union forces held Harpers Ferry From February 1862 to September 1862.

During the first year of the war, the Commanding Officer's or Superintendent's Quarters, Armory Dwelling House No. 25(Park Bldg No. 59) was used as follows: Headquarters of Col. Thomas J. Jackson, CAS, about May 8 to May 23,1861; Headquarters of Brigadier General Joseph E. Johnston,C.S.A, May 23-June 15,1861; Headquarters of Major General Robert Patterson, U.S.A, July 21-25,1861. Headquarters of Major General Nathaniel P. Banks,U.S.A., July 25 to ca.July 31,1861.

Escaping destruction by Confederate and Union Forces in 1861-62 were Musket Factory Buildings No. 1-Engine and Guard House(Bldg. Bldg. No. 63) Bldg.No. 2- the Armory Office Building; No.12-the Warehouse,and No. -13-

12. Ibid., IV, pp. 1043-1044.
13. Sullivan, Arthur L.,"Harpers Ferry in the Civil War-1862,Harpers Ferry National Monument, West Virginia," (NPS typescript, Harpers Ferry NM, W.Va., June 26, 186k),pp.18- 22.

the Smiths or Forging Shop.

During the Federal occupation of Harper's Ferry, February-September 1862, many of the burned out brick Musket Factory buildings and the first floor of the Large Arsenal, the latter located on Old Arsenal Square, were re-roofed and utilized as Quartermaster and Commissary depots for both the troops stationed at Harpers Ferry and the large Federal forces in the Shenandoah Valley, By March 24,1862, the Winchester and Potomac Railroad had been repaired for its entire length from Harpers Ferry to Winchester, for the purpose of forwarding supplies to the Union troops in the Shenandoah Valley. The arsenal operated by the Ordnance Department at Harpers Ferry during this period was located at the U.S. Rifle Factory on the Lower Hall Island.

Colonel Dixon S. Miles, who commanded Federal forces at Harpers Ferry from March 29 to September 15,1862, had his headquarters in a house located on Shenandoah Street, probably the Master Armorer's new Quarters, Armory Dwelling House No. 1(Park Bldg. No. 36). Brigadier General Rufus Saxton, U.S.A., also had his headquarters in the same building during the period, May 25-29,1862.[14]

Siege of Harpers Ferry, September 1862

September 1862 brought the first Confederate invasion of the North following victory in the battle of Second Manassas. Reaching Frederick on his way through Maryland toward Pennsylvania, General Lee decided to remove the threat to his rear and line of communications represented by the strong Union garrison at Harpers Ferry. In order to do this he decided to divide his army, sending part of it against Harpers Ferry while the main body pressed on toward Hagerstown. It was a daring plan, its success depending upon the Confederates ability to capture Harpers Ferry and quickly reunite in time to face Major General George B. McClellan's Union army which was following them.

14. Snell, Charles W., "The Forifications at Harpers Ferry, Va., in 1861, and Jackson's Attack, May, 1862,Harpers Ferry National Monument, West Virginia," (NPS typescript, Harpers Ferry NM, W.Va., February 9, 1960,p.96-97.

Lee sent three columns with a total of some 32,000 men against Harpers Ferry; Major General Thomas J. Jackson approached from the south; Major General Lafayette McLaws invested Maryland Heights from the north; and Brigadier General John G. Walker approached from the east. Jackson reached the vicinity of Harpers Ferry on the south on September 12; on the 14th McLaws seized possession of Maryland Heights and emplaced his cannon there; Walker arrived at Loudoun Heights a day later. Thus, on September 14, Colonel Dixon S. Miles, in command of the Harpers Ferry garrison of 14,238 officers and men, largely new recruits, found himself surrounded with Confederates on the heights overlooking his positions at Camp Hill and Bolivar Heights.

Miles and his men withstood the Confederate artillery fire from across the Potomac and Shenandoah Rivers on Maryland and Loudoun Heights for two days, almost but not quite upsetting Lee's schedule for re-concentrating his army. Although the Union casualties were not heavy, his artillery ran out of ammunition and Miles surrendered his garrison on the 15th, not knowing that if he held out a little longer a rescue force would arrive. A cannon shot from the Loudoun Heights batteries mortally wounded Miles at the very end of the action. 12,693 officers and men of the Harpers Ferry garrison were taken prisoners and paroled; 44 were killed and 173 wounded. Colonel B. F. Davis led his Union cavalry command, 1,510 men, over a pontoon bridge across the Potomac and escaped. Except for prisoners, Confederate casualties in the action were greater than the Union losses, incomplete returns indicating that there were about 283 killed and wounded. Also taken were 47 pieces of artillery and some 13,000 small arms.

Immediately after the capitulation of the Union garrison, Jackson hurried off toward Sharpsburg to reinforce Lee in the battle of Antietam, leaving Major General A. P. Hill to arrange the parole of the Union prisoners. Having hurriedly done that, Hill, in turn rushed off to Sharpsburg with his men and reached there at a critical moment in time to save Lee's army from threatened disaster in the battle of Antietam.

During the siege of Harper's Ferry, September 12-15,1862, Colonel Dixon S. Miles," Headquarters continued to he located in a house on "main street" in the lower town and near the Potomac River pontoon bridge and the B.& O. Railroad bridge. This house was probably Armory Dwelling No. 1,(Park Bldg.No.36), the Master Armorer's new Quarters. After Miles's surrender, Major-General A.P. Hill, C.S.A. used Miles's office as his own headquarters. Federal ammunition was also stored in"the arsenal" in the lower town, either in a reroofed structure in the Musket Factory yard, or on the re-roofed floor of the Large Arsenal on Arsenal Square.[15]

15.Snell, Charles W., "A Report on the Federal Fortifications at Harpers Ferry, Va., and of the Conferate and Union Troop Movements during the Siege of Harpers Ferry, September 12-15,1862,Harpers Ferry National Monument, West Virginia,"(NPS typescript, Harpers Ferry NM, W. Va., December 1,1959),p.6.

Harpers Ferry, 1862-63::

On September 20, 1862, the Union Army re-occupied Maryland Heights and on the 22nd also took position on Camp Hill and Bolivar Heights. During October 1862 three army corps with more than 60,000 men present and fit for duty camped at Harpers Ferry and its surrounding heights. During that month and November the soldiers constructed three large stone redoubts on the summit of Loudoun Heights and cleared the crest of timber. A series of strong fortified works, including the "Stone Fort" and Fort Duncan, batteries and rifle pits, were erected on Maryland Heights. Much of this mountain was also cleared of heavy forest.

When Lee invaded the north a second time--in the 1863 campaign that led to Gettysburg--a Union garrison evacuated Harpers Ferry on June 29. On July 1, they also abandoned the strong fortifications on Maryland Heights. On July 7 the Union Army reoccupied Maryland Heights and on the 14th they again moved into Harpers Ferry and Bolivar Heights.

During the period 1863-64, the headquarters of the Union generals commanding at Harpers Ferry were located in the lower town and probably in Armory Dwelling House No.1 (Park Bldg. No. 36), the Master Armorer's new Quarters. These officers included: Brigadier General Benjamin F. Kelley; Brigadier General John R. Kenly, Brigadier General Henry H. Lockwood(July 19 to October 12,1863),and Brigadier General James C. Sullivan(October 13 to December 31,1863).

The Guard House, in September 1863, was located in Musket Factory Yard in the relocated Paymaster's Old(1822) Office, which was described has having a front room 18 by 18 feet, two back rooms, one 18 by 14 feet and the other 14 by 10 feet in size. The"dungeon", 10 by 7 feet , was the old Paymaster's Vault and was "burglar, air, and light proof."

"A Government Bakery" to bake bread for the troops and also a Government "slaughter house", to butcher cattle for the soldiers, were located in re-roofed Armory structures that were situated either in the Musket Factory yard or an Old Arsenal Square.[16]

16.Snell, Charles W., "Harpers Ferry Becomes a Fortress, September 21,1862 - October 6,1863, Harpers Ferry National Monument, West Virginia,"(NPS typescript, Harpers Ferry NM, W.Va., December 16,1959,p. 59-60.

Harpers Ferry, 1864-65:

The last year of the Civil War saw three related developments take place at Harpers Ferry: First, the completion of all fortifications; second, the successful defense of the position at Maryland Heights against a major attack, July 4-8., 1864; and third, the conversion of Harpers Ferry into a major base of operations for Sheridan's army, August 1864 to February 1865, which led directly to the destruction of Confederate power in the Shenandoah Valley.

The Confederates held Harpers Ferry briefly for the last time in the course of Lt. General Jubal A. Early's raid against Washington in the summer of 1864. On July 3 Early approached Harpers Ferry with approximately 20,000 men. The Union soldiers evacuated the town of Harpers Ferry on the night of July 4 and the commander, Brigadier General Max Weber, concentrated his troops on Maryland Heights. There he was joined by soldiers under the command of Major General Franz Siegel bringing the total number of Union troops to 6,500. Early arrived in Harpers Ferry on July 5, but found it impossible to cross the Potomac there as the Union army had burned the railroad and pontoon bridges and also still stood guard on Maryland Heights. On July 6 2,800 men and three batteries, re-enforcements from Washington also reached Maryland Heights. Meanwhile, Early was forced to detour his army around Harpers Ferry, crossing the Potomace near Sharpsburg. His men put Harpers Ferry to the torch as they left it on the night of the 6th. On the night of the 7th the last Confederate brigade also left Bolivar Heights. On July 6 and 7th there was heavy skirminishing on Maryland Heights along the Barnard Lines and there was also heavy cannonading from the Federal guns. Meeting with determined resistance, Early pulled back his soldiers and continued his march on Washington on the 8th. On July 8 the Union troops crossed the Potomac and re-occupied Harpers Ferry for the last time. Early devoted and lost four days in his unsuccessful attempt to cross at Harpers Fery and take Maryland Heights. As a result of this delay, Early did not reach Washington until July 10, 1864. From August 1864 to February 1865 Harpers Ferry served as the main base of operations and supplies for Major General Philip S. Sheridan's army, which successfully destroyed Early's army as a fighting force and conquered the Shenandoah Valley in Virginia.

During this period the brick and stone walls of the burned out Musket Factory, arsenal, and Rifle Factory buildings were reroofed to serve as giant warehouses for the storage of the munitions and supplies that were necessary to support Sheridan's advance. His great wagon trains numbering up to 1,000 wagons per train were parked for safety within the defensive lines on Bolivar Heights in August 1864, before they began their march south. In November 1864 the U.S. Military Railroad Corps also rebuilt the destroyed Winchester and Potomac Railroad from Harpers Ferry south 28 miles to Stephenson's Depot, a point about five miles west of Winchester, Virginia. Six hundred soldiers were employed to operate the 13 locomotives and 75 cars on this line. During the period December 1864 to June 1865 this railroad dispatched 2,236 trains that carried nearly 200,000 persons and thousands of tons of supplies to support Sheridan and also to transfer forces to Grant.

Harpers Ferry NHP Negatives HF-89; HF-27B, HF- 28, and HF- 38. photographs or drawings made in 1864-66, reveal that the following Musket Factory buildings were reroofed and used for storehouses:

1. Bldg. No.1- Engine and Guard House(Park Bldg. No.63).

In his July 27, 1865 inspection report, Brigadier General Edward D. Ramsay described this structure as: "Engine House ,brick, 1 story, 25 x 35 feet, No.2-Bldg.Located in Armory enclosure-In good condition-used for storing Ammunition."[1] He further remarked."The small engine house, celebrated as the citadel of John Brown, is used as a magazine. I consider this very dangerous, and the ammunition should be removed to a place of greater security."[2] The structure was serving as Ordnance Department Warehouse No. 2 in 1865.

2. Pay Office. Described by General Ramsay as, "Brick, 1 story, 18 by 28 feet, Ordnance Bldg. No. 3, located in Armory enclosure, in good condition, used as Repair Shop."[3] This is apparently the Old Pay Office, erected in 1822 on Block B, Lot 2, Arsenal Square,on Shenandoah Street, and supposedly "demolished " in April 1858 to clear the site for the construction of the Master Armorer's new Quarters,Armory Dwelling No.1(Park Bldg.No.36). The Old Pay Office was apparently simply removed(not demolished) to the site in the Musket Factory Yard in 1858, where it was still standing in 1865.

3. Armory Office Building. Photographs show this structure in good condition and in use by the Union Armory. (Bldg. No.2).

General Ramsay reported:"The Q(uarter)M(aster) and Commissary have been and are occupying some of the (Armory) buildings, but have put upon them very inferior repairs," which apparently consisted of new roofs and floors.[4]

1. Brig.Gen. E.D. Ramsay to Brigadier General A.B. Dyer, Chief of Ordnance,July 27, 1865, Harpers Ferry NHP Photostats, Vol.4, p.50-56; Photostat Collection,Map Case, Drawer No.10-for list of buildings.
2. Ibid.,
3. Ibid.
4. Ramsay to Dyer, July 29,1865.

Photographs HF- 27A and HF-38) show that the Q.M. and Commissary were using the following Mukket Factory structures in 1865:

4. Bldg. No. 3- the Old Bell or Finishing Shop.
5. Bldg. No. 5-The Boring Mill.
6. Bldg. No.12- The Warehouse
7. Bldg. No. 13, The Smiths or Forging Shop.
8. Bldg. No. 14, The Annealing Shop and Brass Foundry.

Still standing, with ruined walls and no roofs were:

9. Bldg. No. No. 8, Carpenter Shop, Saw Mill, and Grinding Mill,
10. Blg.BNo. 21- Connecting Building, erected in 1860-61
11. Bldg. No. 9- Tilt Hammer Shop for Barrel Welding.
12. Bldg. No.18-Rolling Mill(see HF-83).

Also still standing on Potomac Street, just across the street from the Musket Factory was the "brick Old Stock House", Musket Factory Bldg. No.11, which General Ramsay listed as being in fair condition-Ordnance Department Ware House No.1,.[5]

Other items that items that Brigadier General Ramsay found laying in the musket factory yard included the followinG:

8 Anvil Blocks(cast iron) in good condition
1 large turning lathe, in Machine shop, damaged.
8 grind stone frames in good condition.
34 cast iron columns, new.
1 iron forbay or flume, new.
1 Rolling Mill with machinery, furnace and Forge,in Armory Bldg.,damaged
Arch window frames, new.
Square window frames, new.
Tons cast iron, scrap.
Tons wrought iron, scrap.
1 lot dressed stone, good.
Water wheels, in Armory Bldgs., damaged.[6]
1 lot iron fence around armory buildings, good condition.

5.Ramsay to Dyer,July 27,1865 list.
6.Ibid.

B. Old Arsenal Square: 1865:

1. The first story ruined brick walls of the Large Arsenal, reroofed, was used in 1864-65 as a bakery for Sherdian's army (See Harpers Ferry NHP Negative HF- 25, 40, and 362).

2. Superintendent's Old Office, fronting on Shenandoah Street. This structure was described by General Ramsay in 1865 as "brick, 1 story, 21 by 28 feet, in good condition, used as Post Office."[7] It was located on Lot 1, Block A, Shenandoah Street.

The following three one-story frame buildings, erected by the U.S. Military Railroad, were still located on Old Arsenal Square in February 1866:

3. One Mess House, 62 x 21 feet, with wing, 26 x 13 feet, located opposite the Superintendent's Office.

4. One Building(near Supts Office), 16 x 16 feet.

5. One Building(near Supts. Office), 18 by 16 feet.

The U.S. Military Railroad Corps transferred their three frame buildings to the Quarter Master General on February 24,1866. On March 1,1866 the Secretary of War approved the demolition of the wooden structures and the sale of their materials at public auction.[8]

Armory Stable, Block F., Lot 2, Shenandoah Street. General Ramsay described this structure as "Brick, 1½ stories, 36 by 36 feet, located on Shenandoah Street, in good condition and being used for army purposes."[9]

Powder Magazine, Camp Hill. Ramsay reported this to be "Brick, 1 story, 12 x 15 feet, located on Camp Hill, in Good condition and not occupied."[10]

10. Ramsay to Dyer.

7. Ibid.

8. National Archives Record Group 92, Office of the Quartermaster General, Consolidated Correspondence Fille, Harpers Ferry, W.Va.,- "State ment of Govt buildings & lumber at Harpers Ferry,va., transferred by the U.S. Mil. R.Rds to BVT Major G. A. FLAG,AQM, Feb.24,1866, inNoffsinger, James P.,"Harpers Ferry,West Virginia, Contributing Towards a Physical History,"(NPS typescript, Eastern Office of Design and Construction, Philadelphia,Pa., November 1959), pp.119,p.121.

9. Ramsay to Dyer, July 27,1865.

C. U.S. Rifle Factory Plant, Lower Hall Island.

The following six frame structure had been erected by the U.S. Military Railroads on the Lower Hall island, adjacent to the U.S. Rifle Works in 1864-65:

1. One locomotive Engine House, 164 by 26 feet.
2. One Machine and Blacksmith shop, 82 by 26 feet.
3. One railroad loading platform, 197 by 27 feet.
4. One railroad loading Platform, 232 by 22 feet.
5. One railroad loading platform, 112 by 16 feet.
6. One railroad loading platform, 446 by 25 feet.

On the Upper Hall Island were located two more frame U.S. Military Railroad buildings.

7. One tool house, 37 by 22 feet.
8. One Agent's Office, 31 by 13 feet.

On March 1,1866, the Secretary of War directed the Quartermaster General to demolish these eight structures and to sell their materials at public auction.[11]

In his inspection report dated July 27,1865, Brigadier General Edward D. Ramsay reported that Armory Dwelling Houses No. 6. 7, and 8, "located at Rifle Factory on Hall's Island" had been "Torn down [in 1864] to make room for the Military Rail Road." He listed the three demolished houses as follows:

Dwelling House No. 6, two-story brick. [Old Armory Dwelling 156]

Dwelling House No. 7, one & half story, stone. [Old A.D. 168]

Dwelling House No. 8, two story, brick. [Old A.D. 158].[12]

11. Noffsinger, pp.119,121.
12. Ramsay to Dyer, July 27,1865 list.; also see Snell, Charles W.,"Harpers Ferry Repels an Attack and Becomes the Major Base of Operations for Sheridan's Army, July 4,1864 To July 27,1865,Harpers Ferry National Monument, Harpers Ferry, W. Va.,"(NPS type script ,Harpers Ferry NM,W.Va., January 21,1860),71-83.

With Regards to the other 30 Armory Dwelling Houses that had been standing in 1861, Brigadier General Edward D. Ramsay reported on July 27,1865:

Armory Dwelling No. 1, Lot 2, Block B, Shenandoah Street (Master Armorer's new Quarters-Park Bldg. No. 36). Two story,brick, in fair condition and occupied as Head Quarters by Genl. Egan." The house had been used from August 15,1864 to April ,1865, as the headquarters of Brigadier General John D. Stevenson.

Armory Dwelling No. 2, Lot 3, Block B, Shenandoah Street(Master Armorer's Old Quarters, Old Armory Dwelling No. 2-Park Bldg. No. 34-35)-two-story brick, in fair condition and occupied as quarters for officers.

Armory Dwelling House No. 3,U.S. Lot No.1, North of Shenandoah Street(Old Armory Dwelling No.7- Park Bldg. No.45)," two-story stone, in need of repairs, occupied for Armory purposes." Part of the building was being used as an ordnance deport warehouse- House No.3.

Armory Dwelling No. 4, Block F, Lot 1, Shenandoah Street. (Old Armory Dwelling No. 25)," two-story brick, in bad condition and vacant."

Armory Dwelling House No. 5, U.S. Lot No.2, north of Shenandoah Street (Old Armory Dwelling House No. 30 or 32, Park Bldg. No. 48)," two-story stone, In fair condition and vacant."

Armory DwellingsNo. 6,7, and 8, on Rifle Factory Island,demolished in 1864.

Armory Dwelling No. 9, south Bank of Shenandoah River adjacent to Shenandoah toll bridge.(Old Dwelling House No. 153)." Two-story stone, house, in fair condition." This house had been leased to the Harpers Ferry and Hillsboroughs Turnpike Company from 1851 to 1861 for use as a toll house.

Armory Dwelling No. 10, on south Bank of the Shenandoah River .(Old Armory Dwelling No. 154,)" One-story,stone, in good condition , occupied free of rent by Mrs Stipes by order of Col. Henry K. Craig (" former Chief of Ord.)."

Armory Dwelling No.11, Potomac Street (Old Armory Dwelling No. 148)

"two-story stone, in good condition and vacant."

Located on Lot No. 10, Block AA, on 1869 Map.

Armory Dwelling No. 12, Potomac Street (Old Armory dwelling House No. 67) two story brick, in bad condition, having been used for Armory purposes, vacant. Lot No. 2, Block AA , 1869 Map.

Armory Dwelling No. 13, Potomac Street (Old Armory Dwelling No., 54) two-story stone, in good condition, occupied free of rent by Mr. Henry Russell, by order of Col. H.K. Craig. Lot 1, Block AA,1869 Map.

Armory Dwelling House No.14,High Street (Old Armory Dwelling House No.176 , Wager Lot No. 18) two and a half stories, brick, in good condition, vacant.

Armory Dwelling House No.15, High Street (Old Armory Dwelling No.177 ; Wager Lot No. 19) two and a half story,brick. In good condition and vacant.

Armory Dwelling House No.16, High Street (Old Armory Dwelling House No. 179, Wager Lot No. 20), three story brick, in fair condition and occupied as Porvost Marshal's office.

Armory Dwelling House No.17,High Street, (Old Armory Dwelling No. 178 Wager Lot No.21), three story,stone in good condition and occupied as Ordnance Office.

Armory Dwelling House No.18, High Street (Old Armory Dwelling No. 180, Wager Lot No.22), three story stone, in fair conditions, occupied as Quartermasters Office.

Armory Dwelling House No.19, High Street (Old Armory Dwelling House No. 181 Wager Lot No. 26). three story stone, in good condition. Vacant.

Armory Dwelling No. 20,High Street (Old Armory Dwelling No. 182 Lot No. 27) three story stone, in bad condition, occupied as quarters for Ordnance Detachment.

Armory Dwelling No. 21, located near Jefferson"s Rock (Old Armory Dwelling No. 65) Two- Story brick house. In bad condition and vacant. Situated just southof Park Bldg. 48A.

Armory Dwelling House No. 22, Camp Hill. (Block BB,Lot 6Old Armory Dwelling No. 69), one and one-half story frame, in good condition and occupied by Mrs. M. Stipes, by order of Col. H.K. Craig.

Armory Dwelling House No. 23, Camp Hill(Block II, Lot 2, Old Armory Dwelling No. 116)," two-story brick, in bad condition and being used for army purposes."

Armory Dwelling House No. 24: Washington Street(Block II, Lot 1 ,Old Armory Dwelling House No. 118), "two story, brick, in good condition, occupied by Ordnance Agent Daniel J. Young as private quarters."

Armory Dwelling No. 25,Superintendent's Quarters (Park Bldg. No. 59),Camp Hill

This building had served as the headquarters of Brigadier General Max Weber in 1864. In July 1865, Brigadier General Ramsay desribed Bldg. No. 25,"two story, brick, In bad condition, occupied as Quarters for Officers. He also commented" The costly quarters of the Superintendent of the Armory, of the Paymaster(Armory Dwelling House No. 32), and other conspicuous and valuable buildings(probably refering to Armory Dwellings No. 30 and 31 on Camp Hill) belonging to the government, have been wantonly abused, and I am sorry to say, as I am credibly informed, mostly by our own troops. Marble mantlepieces have been taken awaym and the staircases torn down and used as fuel. To repair these buildings will involve an expense of at least half of their original cost..."

Armory Dwelling Houses Nos. 26, 27, 28, and 29, Fillmore Street,Camp Hill.

These four old residence, Brigadier General Ramsay reported in July 1865, had been "Torn down by order of Brig. Genl J.D. Stevenson to have the material for building. The four houses were described as follows: winter quarters for the troops."

Armory Dwelling House No. 26(Old Dwelling No.125)," one and half story,brick." Block GG,Lots 3 and 4 on 1869 map.

Armory Dwelling House No. 27 (Old Dwelling No.126)" one and half story,brick." Block GG,Lots 1 and 2 on 1869 map).

Armory Dwelling House No. 28(Old Dwelling No.129)" one and half story,brick." Block FF, Lots 3 and 4 on 1869 map).

Armory Dwelling House No.29 (Old Dwelling No.130)" one and half story, brick." (Blocks FF, Lots 1 and 2 on 1869 map).

These four residences had probably been built in 1831-32.

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12qSee Volume I, pp.315-319.

Armory Dwelling House No. 30, Fillmore Street, Camp Hill; Paymaster's Clerk's Quarters (Morrell House-Park Bldg. No. 58). Two story, brick, in bad condition and "occupied for Army purposes" in July 1865.

Armory Dwelling House No. 31, Fillmore Street, Camp Hill. Two story, brick, Superintendent's Clerks Quarters (Brackett House, Park Bldg. No. 57), In bad condition and occupied by the Sanitary Commission in July 1865.

Armory Dwelling House No. 32, Fillmore Street, Camp Hill. Two-story, brick. Paymaster's Quarters (Lockwood House, Park Bldg. No. 56). In bad condition, occupied by Medical Purveyors as Quarters in July 1865.

Armory Dwelling No. 33, on the Bluff, near the Grave Yard, Camp Hill. (Old Dwelling No. 62) One-story, frame. Brigadier General Ramsay reported in July 1865 that this house had been "Torn down by soldiers."

The wood was probably used as firewood. Located in southeast corner of Harper's Graveyard, abutting on Block EE, Lot 1, Camp Hill, on 1869 map.

On July 27, 1865, then, a total of 33 Armory buildings, out of the grand total of 73 standing on April 17, 1861, were still extant. These included three in the Musket factory yard: Engine and Guard House, Bldg. No. 1; Office Building, Bldg. No. 2, and the transplanted Old Pay Office, a fourth Musket Factory Bldg, No. 11; the Stock House also still stood on the south side of Potomac Street; The Superintendent's Old Office stood on Lot 1, Block A, Shenandoah Street, also standing were the town Market House on Block B, Shenandoah Street, the Armory Stable, on Block F, Lot 2, Shenandoah Street, the 1854 Powder Magazine on Camp Hill, and 25 Armory dwelling houses. Eight dwellings and 32 workshops and storehouse, located at the U.S. Musket and Rifle Factories, had been destroyed during the war and the latter only the stone foundations and brick walls of some of these structures still stood. All 10 buildings at the Rifle Factory, two on Arsenal Square, and 20 at the Musket Factory were gone.

"Harpers Ferry Property (1) Ca.1865-69)

I On Potomac side. [U.S. Musket Factory] [Bldg.No.1]

Fire Engine House, about 30 ft. by 25 ft. one story brick slate roof, two iron doors, Cupola. (1)

Long Building, about 100 ft. by 25 feet, one story brick, one half demolished, but boarded up; with board roof. The brick half has slate roof. Wooden part has brick gable. Foundation, with dressed stone coping 100 feet by 25 ft. 2 feet above ground. (2) [Office Bldg.]

Foundation & Stone Coping, 2 feet above ground 100 feet by 25 feet. [Bldg. 3 ?]

Blacksmith Shop & Blast Furnace, about 250 feet by 30 feet Chimney stack about 115 feet high & 10 feet at base all of brick. Partly under rough roof, one story high, 21 iron window frames remaining, 2 iron door frames. Granite foundadion dressed coping, about 2 feet above ground. [Bldg. 13]

Front Wall of Government Yard, 12 panels of iron railing on granite base & brick with brick piers brown stone coping on piers. Double iron gates two in number. Heavy dressed gate posts of granite five in number.

West Enclosure Wall and part of South Enclosure 46 pannels [sic] --iron pickets between brick piers

[2]

stone coping base of masonry about six feet high.

South Enclosure in part, about 500 feet in length rock base and solid brick above about eight feet high.

Cast Iron Overshot Wheel about 15 feet in diameter set in pit of masonry faced and coped with heavy dressed granite. Forebay of iron frame and wood over the wheel about 15 feet square. 4 cog wheels 5 ft. diam. each on heavy shaft of iron. 2 small cog wheels 3 ft. Two lines of wrought iron shafting about 10 feet long each by 8 inches.

1. National Archives Record Group 121, Washington ,D.C., Public Buildings Service, Harpers Ferry File No. 154, n.p., n.d., prepared ca.18865-1869. Cited from James P. Noffsinger,"Harpers Ferry,West Virginia...".pp.124-127. Building numbers added by C.W.Snell. Dimensions of the buildings as given in report are not very accurate. Nearly all structures listed were at least 35 feet wide and not 25 feet as is generally stated.

Line of blast pipe 150 feet long by 10 inches underground to blacksmith shop. Drum wheel in ground about 4 ft. diameter & part of shaft about 3 ft. long. Wooden buckets all destroyed.

(Bldg. No. 21 Connecting Shop ? 1860-61)

Foundation of Machine Shop built in 1857. Laid about 4 feet deep. Coping of dressed granite--length about 100 ft. width about 25 feet. 2 iron cogs about 4 ft. in diameter & shaft about 12 ft. by 8 in.

Two Granite-faced Waste-ways. Walls about 12 feet high.

Overshot Wheel. Iron shaft wooden frame braced &

[3]

bolted with iron, journals broken & metal carried off. 6 large cogs 4 ft. diameter, 2 small do. 3 ft. Bed of masonry about 40 feet by 15 ft. 1 large cog about 6 feet, 2 small do. about 3 ft. Drum wheel 4 feet wrought shafts 12 feet by 8 in.

Foundation of Carpenter Shop 100 feet long about 30 feet wide. Part of dressed granite coping. (Bldg.No. 8)

Foundation of Proof Shop 100 feet by 30. Granite-dressed coping above ground about 10 inches. (Bldg.No.15)

Undershot Wheel. Iron shaft wooden frame wood nearly destroyed. 4 large cogs 6 ft. diam. 4 small cogs 3 ft. 2 drum wheels 5 ft. Shafts 2 10 ft. by 8 in. All set in bed of dressed granite blocks. 2 lateral shafts 8 ft. by 8 in. 2 Drum wheels & shafts 10 ft. by 8 in.

Foundation of Millwright Shop. 100 ft. by 25 ft. Masonry with dressed stone coping. (Bldg. No. 7)

Turbine Wheel in bed under ground & perpendicular shaft, 1 cog 3 ft. 1 cog 2 ft. Cast iron frame & fly wheel heavy 4 ft. drain 8 in. wide, and operating shaft. Masonry bed about 10 ft. square.

Long line of Masonry wall enclosure South

[4]

Foundation of building about 25 ft. square. No coping. (Bldg. 16? Charcoal House ?)

Foundation of Grinding Mill, 80 ft. by 25 ft. Heavy & long dressed stone coping, 14 in. above ground. (Bldg.6A- Stocking Shop ?)

Iron Flume 4 ft. diameter well bolted about 35 feet long with perpendicular shaft of Turbine Wheel. Turbine Wheel probably burried /sic./ under ground.

Old Machine Shop Foundation 80 ft. by 25. Masonry. (Bldg. No. 6D?)

Two Cisterns

Flag Stone Walk along fronts of buildings about 1/4 mile in length.

Rolling Mill and Till Hammer Shop. Brick one story, on dressed stone coping to foundation. 17 iron window frames. Length of building 200 feet by 40 ft. 2 door frames iron. Large quantity dressed stone inside over surface of shop. No roof. (Bldg.No.18 (Rolling Mill)

Turbine Wheel & Flume. The latter about 30 feet length & 4 in. diameter. Iron frames & supports. Wheel & machinery burried /sic./ in ground similar to the one before described.

Walls of Arched Warehouse. All of masonry 1 story 70 ft. by 50 ft. (Bldg. 10) (Lumber House and Coal Bins)

[5]

Old Rolling Mill Shop Foundation. Stone coping dressed 200 ft. by 30 ft. Flag flooring many iron bolts. (Bldg.No. 9 Tilt Hammer and Barrel Welding Shop)

Overshot Wheel Wood frame. 15 ft. diameter. Large revolving shafts. Forebay 15 ft. square. Large masonry waste-way about 60 ft. by 15 ft. 20 ft. deep. Dressed stone facing and coping. Boiler iron supply pipe 25 ft. by 4 ft. Iron water gate.

Iron Flume about 4 ft. diameter 20 ft. long. Iron water gate.

Coping of Canal Wall blocks of dressed stones about 6, 8, 10 ft. long 8 in. thick. Stones well squared about 500 feet in length.

Locks of Canal at Dam on Potomac & headway one open gate. One lifting gate & chains.

II Shenandoah Side (U.S. Rifle Factory):

Foundation of Rifle Factory had order of 2 or 3 buildings
200 ft. by 60 - 80 ft. by 60 ft. -
100 ft. by 60.
Lot of dressed coping.

Foundation of Stable about 50 ft. square. Dressed stone coping.

Immense open quarries of stone face the property.

The property in machinery described & in the great quantities of dressed stone and building material laying [sic] around upon the land must be of very great value."

(Bldgs.No. 6, 9, and 4 were 254 feet long)

(Bldg. No. 1 was 128 feet 8 inches long).

(Bldg. No. 5 was 60 feet long. All these structures, except for their projecting center sections, were from 35½ to 36 feet wide).

The Shenandoah Bridge Company and the U.S.Shenandoah Ferry,1865-1869:

On January 3,1868, the Ordnance Department informed the Secretary of War:

In July 1865, the Shenandoah Bridge Company [S. V. Yantis, President], at the request of its president, obtained from the Secretary of War " a temporary license to establish a ferry, subject to revocal at the will of the Secretary if War while the bridge was in process of erection, but is in no respect to waive the obligations of the company to a bridge in conformity will the act of Congress[of 1842]." This liscene was accepted (by the President of the Company on the 12th of August 1865, Since this date it had enjoyed the ferry privileges across the Shenandoah at Harper's Ferry, and without having ever commenced to rebuilt the bridge.

On November 2,1867, the company requested an indefinite extension of the ferry lease or licenee. (1) The Shenandoah Bridge Company appears to have operated the Rope Ferry across the Shenandoah River from August 12, 1865 to December 1 and 2,1869, when the United States sold the Shenandoah ferry rights at public auction.

(1) A Collection of Annual Reports and Other Important Papers Relating to the Ordnance Department Taken from the Records of the Office of the Chief of Ordnance, from Public Documents, and from other Sources Prepared under the direction of Brig. General Stephen V. Benet (4 vols., Washington, D.C. 1880), Vol. IV, p.1047.

CHAPTER VII

Disposal of the U.S. Harpers Ferry Armory Property, 1866 - 1885

The Decision to Close Down the Harpers Ferry Armory Forever:

On May 14,1866, Brevet Major General A.B. Dyer, Chief of Ordnance, reported to Secretary of War E. M. Stanton on the status and future plans of the U.S. Armory at Harpers Ferry, West Virginia. Dyer wrote:

"...The Government owns at that place about 75 acres of improved land (about 274 acres in Harpers Ferry) and has the right of cutting wood on a large tract of unimproved land (1,395 acres) on the south side of the Shenandoah River. On the improved land there are 25 dwelling houses, a powder magazine, a public stable, a repair shop (for arms), nine storerooms, and ruins of the former shops. Eighteen of the dwelling houses are in fair condition; the residue, as well as the main shops of the old armory, have been much injured during the warm and are in bad order. The powder magazine, stable, repair shops, and storerooms are all in good condition.

"The (Ordnance) Department is now using for purposes of an ordnance depot, for the storage and preservation of munitions of war, the powder magazine, five storerooms, the repair shop (the Old Pay Office), and a dwelling house (No.24) for quarters for the military storekeeper. This ordnance depot is only required for a temporary purpose, and will be broken up as soon as the supplies now stored there can be transferred to the arsenals.

" Harper's Ferry can not, in my opinion, be ever again used to advantage for the manufacture of arms, the retention of the property of the United States at that place is not necessary or advantageous to the public interest, beyond the temporary use of so much as may be required for the ordnance depot,

"and I receommend that as soon as that depot can be broken up, all the public land, buildings, and other property there be sold and the proceeds of the sale be applied to the construction of the armory in the west, as now authorized and directed by laws to be established."[1]

The Repair Shop, in the Old Pay Office, at Harper's Ferry had been ordered to close on March 9,1866.[2]

Planning for the Sale of U.S. Land, 1868-69:

On December 15,1868, the U.S. Congress passed an act that authorized and directed the Secretary of War to sell at public auction the U.S. lands, buildings, machinery, and water power privileges at Harpers Ferry. The land owned by the Harpers Ferry Armory totalled 1,669½ acres. The law, as events were to prove, was carelessly written. Easy credit was to be granted to the purchasers and the law specified that the property was to be "sold on credit of one and two years, taking bond on security from the purchaser, or purchasers, for the payment of the purchase-money." Thus unlike the 1852 sale, where buyers were required to pay at least one-fourth in cash on the day of the sale, purchasers in the 1869 sale did not have to put any cash down in order to obtain control and use of the property they bid on-instead simply signed bonds promising to pay in installments at future specified dates. Fortunately of the U.S., the 1868 law also specified that the purchaser was not to receive a deed until all payments had been completed in full.

(1) A Collection of Annual Reports and Other Important Papers Relating to the Ordnance Department Taken from the Records of the Office of the Chief of Ordnance, from Public Documents, and from other Sources Prepared under the direction of Brig. General Stephen V. Benet (4 vols., Washington, D.C. 1880), Vol. IV, pp. 1049-1050.

2. Ibid., IV, p. 1048.

Congress further directed that the proceeds from the sale should be expended as follows: (1) To defray the expenses of the sale; (2) to refund "to the United States the principal sum of purchase money paid for said lands, tenement, and water privileges by the United States, and for the erection of buildings thereon."; and (3). If any surplus should remain, the Secretary of War was instructed "to deliver this sum to such agent as the legislature of West Virginia should appoint, to be set apart, invested, used and applied as a part of the school fund of that State..."[3] Because of the disasters that followed the 1869 sale, there was never any "surplus funds" available to deliever to the State of West Virginia.

The 1868 law also authorized and directed the Secretary of War to convey by deed to Storer College at Harpers Ferry "the buildings with the lots on which they stand numbered (Armory Dwelling No.) 30, 31, 32 and also Building No. 25 with enough of the lot on which it stands to give a breath of 10 rods (165 feet) on High Street, otherwise known as Washington Street... and also to convey by deed to the proper persons such other lands and buildings, portions of the aforesaid property, as have heretofore been set apart by the proper (Armory) authorities for religious, charitable, and town purposes."[4]

The same surveyer, S. Howell Brown, who had laid out the lots and prepared the map or plat for the 1852 sale, was once more employed by the Ordnance Department to lay out additional house lots on the ground and to draft a new map for the 1869 sale. His map, entitled "Map of Harper's Ferry - Plat of Haroer's Ferry Armory Property laid off into lots for Sale in Pursant to the Act of December 15,1868," was completed by S. Howell Brown on November 1,1869, with a scale of 165 feet

3. U.S. Statues at Large, XV, p.265-266.
4. Ibid.

to the inch. Secretary of War William W. Belknap approved Brown's plat on November 16,1869. On his 1852 map, Brown had laid out 312 house lots; on his 1869 map the surveyer subdivided the U.S. land that had not been offered for sale in 1852 into 188 additional house lots, so that the grand total of lots shown on the 1869 map was 500 lots. Two hundred and twenty-four of these lots and 57 Armory Dwelling houses had been sold at the 1852 sale. In 1869, the United States donated 31 lots and six buildings for religious, educational and town use. The balance of 245 lots, which included 243 lots and 22 buildings, were to be offered for sale at public auction[5] in December 1869.

Donation of 31 lots, 1869-70:

The Secretary of War donated a total of 31 lots and 7 armory dwelling houses under the terms of the Act of December 15, 1868 as follows:

On December 15,1869, the United States gave seven lots and four Armory Dwelling Houses, No. 25-the Commanding Officer's or Superintendent's Quarters; No. 30- The Paymaster's Clerk's Quarters, No. 31, the Superintendent's Clerk's Quarkers, and No. 32, the Paymaster's Quarters (Park Bldg. No. 56,57, 58, and 59) to Storer College. These four large dwelling had been erected 1846-1859 at a cost of approximately $ 39,348,[6] but had been severely damaged during the war.

The remaining 24 lots and two buildings that were donated, totalled 112,147 square feet,[7] or a little more than 2½ acres.

The United States donated the 24 lots on January 1,1870 as follows: To the Boards of eduction, three vacant lots for use as school sites; five

5. Snell, Charles W.,"The Acquisition and Disposal of Public Lands of the U.S. Armory at Harper's Ferry, West Vorginia, 1796-1885," Volume I, A Narrative History,"(NPS typescript, National Capital Team, Denver Service Center, December 1979)pp.32-33.
6. The deeds issued by the U.S. are in National Archives Record Group No.121, Washington, D.C. Entry No.76,"Deeds from the United Statesm Ordnance Department," 2 vols, Vol. II, pp.221-229, p.251.
7. Gen. A.B. Dyer,Chief of Ordnance to Sec. of War, January 17,1867, in Benet, Collection of Annual Reports...,IV, p.1050.

lots and one building, the Market House, to the Harpers Ferry town Government for use as a market house ____, two town squares, a park, and a cemetery. The Independent Order of Odd Fellows, Virginia Lodge No.1, ____ received one lot, Lot No 2, Block II, Camp Hill, which probably had Armory Dwelling No. 23, a two-story brick house on it. The house was probably given to replace their lodge structure, which had been destroyed by Union soldiers during the Civil War.[8] The United States also gave 15 vacant lots to the six churches of Harpers Ferry. Five of these were granted for use as sites for church buildings, nine lots as parsonage site lots, and one lot as the site for a Catholic School.[9]

The 1869 Sale:

On November 30, and December 1-2, 1869, the Ordnance Department offered the following ____ items for sale:

1. The U.S. Musket Factory Grounds , 72 acres of land, with the ruins of the workshops and storehouses, remains of machinery, and the water power rights on the Potomac River.

2. U.S. Rifle Factory Grounds, including the Upper and Lower Hall Islands, about 13 acres of land, with the ruins of 10 workshops and storehouses, and the water power of the Shenandoah River.

3. The Ferry Rights on the Shenandoah River, includinga ferry lot in Harpers Ferry on Shenandoah Street, also a ferry lot of 68 acres on the south bank of the Shenandoah River, together with two stone houses, Armory Dwelling Houses No. 9 and 10, both located on the south bank.

The lodge rooms of the Independent

8. The Order of the Odd Fellows Hall had formed the upper story of the Harpers Ferry Methodist Protestant Church, a stone structure about 30 by 50 feet in size. Union troops occupied the church and hall from 1862 to 1863 and severely damaged the building. The interior wood work had been gutted and was probably used as firewood. The Lodge requested $ 1,500 to repair the damage. Capt. A.S. Kimball, to Q.M. General, Major Genl. M.C. Meigs, December 10,1866 , cited in Noffsinger, James F.,"Harpers Ferry..." pp.122-123.

9. National Archives R.G. 121, Entry 76, Vol. II, pp. 221-229.

4. The perpetural rights to cut timber on 1,395 5/8th acres of mountain land on Loudoun Heights, located on the south side of the Shenandoah River, opposite to Harpers Ferry.

5. The right to dig iron ore on 1,600 acres of land in the Friends' Ore Bank, which was located on the south shore of the Potomac River at a point about two miles northwest of Harpers Ferry.(The U.S. Government had purchased this property for $ 51,000-after other items had been deducted- in 1800 for possible use for the Harpers Ferry Armory. The property had never been used by the Armory and the War Department now decided to get rid of the useless acquisition).

6. In the town of Harpers Ferry: 243 lots, with 13 Armory dwellings and one Armory stable were also offered for sale. This included Old Arsenal Square.[10]

Rumors that a group of wealthy industrialists were about to purchase the water power rights of both the Potomac and Shenandoah for the purpose of erecting new factories at Harpers Ferry, led to intense bidding in 1869 and lots and buildings located in the lower town that had commerical potentials, in particular, were sold at high prices. One-hundred and twenty-one bidders smapped up the 248 items(243 house lots and 5 other items) and agreed to pay a grand total of $ 297,793.50 for this property. The six major catogories went for the following prices:

1. Water power of the Potomac and Musket Factory grounds.....	$ 176,000.00
2. Water power of the Shenandoah and Rifle Factory grounds.....	30,000.00
3. Shenandoah River Ferry rights, 68 acres, two houses.....	1,790.00
4. Timber rights on 1,395 5/8th acres.....	3,600.00
5.Digging rights on 1,600 acres, Friends' Ore Bank.....	13,100.00
6. For 243 lots, 13 dwelling houses, and one stable in Harpers Ferry, by 116 bidders.....	73,303.50
Total of 248 items, December 1869:	$ 297,793.50 (11)

10.Catalogue of the Harper's Ferry Armory Property to be Sold by the United States on the 30th November, 1869, at the Town of Harpers Ferry, Va.,"Approved October 7,1869, D.J. Young, Captain and Ordnance Storekeeper, U.S.A. 20 pp. HFB-119(HFNHP Collections-original stolen by visitors!)

11. Report of S.V. Benet,Major of Ordnance to the Secretary of War, December 30,1872, in Stephen B. Benet,ed., A Collection of Annual Reports...IV, p.1053.

Of the 121 bidders, however, only 18 people paid in cash and in full for 20 lots at the time of the sale and the United States thus collected only $ 836.00 in December 1869-January 1870.[12] One hundred and four bidders executed notes and bonds that were due for payment in one and two years. These totalled $ 297,296,957.50 and included 185 house lots and 14 buildings. Thirteen persons who had bid on 29 lots, $ 11,539 also refused in December 1869 to pay cash or sign notes on property on which they had been the high bidders.[13] These 29 lots remained under the Ordnance Department, but control of all the other items passed to the apparent purchasers as soon as they executed their bonds in December 1869.

The last notes and bonds were to be paid in full by December 6,1872; On December 20,1872, Stephen V. Benet, Major of Ordnance, reported to the Secretary of War, that of the grand total of $ 297,793.50 bid in December 1869, only "The sum of $ 4,048.50 has been received in payment for dwellings and lots sold."[14]

Natural and Man-Made disasters,1870-1880

The December 1869 sale, in which the Ordnance Department appeared to have successfully disposed of 219 items(all but 29) at very high prices turned out to be a complete illusion. Due to natural and man-made causes, the 1869 sale proved to be an unmitigated disaster and plumged both the U.S. Government and the people of Harper's Ferry into a legal and economic morrass that was to take 16 years of action by Congress and the courts to solve.

a.The Flood of 1870:

On Friday, September 30, and Saturday, October 1,1870, the greatest flood in the

12. National Archives R.G. 121, Entry 76, Vol. II, pp. 1-17. The U.S. issued the deed for the 20 lots that were paid for in full on January 13,1870.
13. Not signed for was the timber cutting rights valued at $ 3,600, and 28 house lots, valued at $ 7,939.00
14. Benet,ed., A Collection of Annual Report...,Vol.IV,p. 1053.

history of the town struck Harpers Ferry, when the Shenandoah River went an a rampage. "Every house on the south side of the (Shenandoah) Street from the market house(Block B,Shenandoah Street, upstream or west) to the Island of Virginius was either entirely destroyed or badly injured.." Some 42 lives, including 20 at Shenandoah City, were lost in this flood.[15]

Many people who had "purchased" U.S. lots along Shenandoah Street were heavy losers. The Armory stable, located on Block F, Lot 2, Shenandoah Street, on which John G. Wilson had bid and signed notes for $ 1,800, was entirely destroyed. Wilson was to solve his problem by refusing to pay any money for the property. Armory Dwelling House No. 4, a two-story brick house located on Lot 1, Block F, Shenandoah Street, was badly damaged. Daniel Ames had bid $ 1,650 on this property. James C. Magraw, who had bid $ 5,100 on Armory Dwelling House No.2, the Master Armorer's old Quarters(Park Bldg. No.34-35) complained that the flood water had cracked the brick walls and raised the floors.[16]

On November 1,1870, 25 of the purchasers of U.S. lots in the lower town of Harpera Ferry wrote to the Secretary of War as requested a suspension of the first payment on their notes, which was due on December 1,1870, until Congress could take action on this matter. Archibald M. Kitzmiller,former Chief Clerk of the Armory, acted as counsel for these parties and sent their petition to Brigadier General A. B. Dyer,Chief of Ordnance,on November 4,18870. Dyer, in turn, sent the petition to Secretary of War William W. Belknp on November 7, requesting what action should be taken.[17] The Secretary of

15. Barry, Joseph, The Strange Story of Harper's Ferry..."(1903-7th Reprint, Shephardstown, W.Va., 1974),p. 164.
16. These and many other sad tales are to be found in National Archives Record Group 121, Public Buildings Service, Entry 78, Records Concerning the Harpers Ferry Abatement Cases,1868-1880, 2 trays. Ames clained he had put House No. 4 in perfect repair and the floor had don $ 2,500 damage to the house.
17. Serial No. 1580, Document No.6, pp.12,13.

War did not respond for seven months and on June 1,1871, in a second letter on this subject to the Secretary, Dyer wrote:

"As no instruction were communicated to me in pursuance of my request of 7th November,1870 I have taken no action toward enforcing the payment of the one-year noted due last December, and all of them remain unpaid,

"It is believed that no serious damage will result to Government by letting these notes lie over until the two-year notes become due next December; and I respectfully recommend that relief to this extent be granted to these memorialists."[18]

After consulting with the Judge Advocate General, Secretary of War Belknap approved on June 3,1871, the policy of suspending the collection, provided that the sureties formally assented in writing to such an agreement."[19]

Thus through burcratic inaction and, finally, by Government policy, the flood damaged purchasesof the lots, as well as the purchesers of all other lots at Harper's Ferry , received relief from the schedule of payments. The Ordnance Department made no effort to collect the notes that came due In December 1870. By December 31,1872, three years after the 1869 sale, only 25 purchases had paid in full under the terms of the sale , a total that amounted to $ 5,686.00 and received deeds to their 33 lots and three former Armory dwelling houses from the United States. Approximately 98 other purchasers with bonds on 178 lot still owed the U.S. Government $ 272,107.50.[20] It was clear that the War Department had a major problem on its hands in finding some means to legally dispose the land at Harpers Fery Armory.

18. Serial No.1580, Document No.6,p.16.
19. Ibid., pp.16,17.
20. Snell,C.W. "Acquisition and Disposal...",p. 44, 46.

Man-Made Disasters, 1870- 1880

The Struggle in the Courts: A band of speculators Washington, D.C. comprised of Captain Francis C. Adams, Clinton Lloyd, the chief clerk of the House of Representatives, William B. Webb, a D.C. lawyer, and Francis A. McCartney, a former disbursing clerk of the Post Office Department, who had been dismissed for defaulting, had made a paper bid of $ 206,000 and obtained control of the land, buildings, and water power of the U.S. Musket Factory and Rifle Factory at Harpers Ferry.[1] Under the easy credit terms of the 1868 act, this band of men, posing as "industrialists", by simply signing bonds and not being required to put down a single dollar, obtained complete control of the industrial resources of Harpers Ferry in December 1869. They had neither the money nor the desire to erect new factories for manufacturing at Harpers Ferry. Their true intent was to highjack the Baltimore and Ohio Railroad Company, whose main line to the west ran across the U.S. Musket Factory yard under a right of way that had been granted by the Secretary of War in 1838. The "new owners" now alledged that they owned this right of way and demanded that the railroad company pay a high price for that grant, or relocate its main line somewhere else. Because of the topography at Harpers Ferry, there was not place where the line could be relocated.

On July 20, 1872, Secretary of War Belknap requested that the U.S. Attorney General institute a suit immediately against Francis C. Adams for the sum of $ 209,705 that Adams owed on three bonds he and his partners had signed. Suits in equity were filed by Nathan Goff, Jr., the U.S. District

1. Results of investigation of George P, Fisher, U.S. District Attorney for District of Columbia, to U.S. Attorney, June 14, 1873, Serial No. 1581, Document 48m, p. 7.

Attorney for West Virginia, against Adams and his sureties in the U.S. District for that State in July 1873 for the purpose of enforcing the vendor's lien. The court handed down a decree in favor of the United States in September or October 1873, directing that the property was to be sold. The sale was to be conducted by N. Goff, Jr., acting as trustee, at a time to be fixed by the future order of the court.

Prior to this, in February 1873, the Baltimore and Ohio Railroad company had brought suit in a State Court of West Virginia to quiet its title to the right of way across the Musket Factory yard at Harpers Ferry, which had been sold by the United States to Adams. The railroad alleged that as its main line, built under the terms of the 1838 agreement w ith the Secretary of War, was constructed on "fill" land, placed forward of the original river bank into the Potomac River, and because the State of Maryland claimed jurisdiction over the whole of the Potomac River to the medium high water mark on the original West Virginia shore, that their main line was actually located in Maryland, and not in West Virginia. This being the case, the company argued that that the right of way through the Armory yard was not owned by Adams, or by implication, the United States. They further stated that their 1841 purchase of a small part of the lower end of Byrnes's Island in the Potomac, under Maryland deed, had also given them title to their main line west at Harper's Ferry. By December 1874, the State Court had handed down a decision in favor of the railroad company, which meant,however, not only did Francis C. Adams and partners not own the railroad right of way, but alsp, that the water power of the Potomac at Harpers Ferry did not belong the the U.S. States! Improvements that the railroad company had made to its main line west in the form of fill, culverts, &c, were seriously interferring with the free flow of water through the Armory canal and if this court decision stood, the railroad company would not have to correct this situation.

In January,1874, the U.S. District Attorney for West Virginia instituted a suit in equity in the U.S. District Court at Wheeling,W.Va., in the name of the United States and Francis C. Adams and his surties, against the Baltimore and Ohio Railroad Company to remove the cloud cast over the title to the property by the decision of the West Virginia State Court in upholding the validity of the Byrnes deed.[2]

Judge Jackson of the U.S. District Court of West Virginia handed down his decision on November 17,1875. First, he found that the railroad company held title to its main-line right of way across Musket Factory property by virture of the 1838 agreement between the Secretary of War and the railroad company, and not by virture of the 1841 deed to Byrnes' island. Second, the judge decided that the U.S. Government intended this grant of a right of way to be a permament one, as long as it was utilized as a railroad, thus freeing the railroad company from any claims of ownership by Adams and his partners. Third and finally, Judge Jackson found that the United States held complete title to the water power rights on the Potomac and to the Musket Factory tract, thus eliminating all claims of ownership advanced by the Baltimore and Ohio Railroad Company.[3] Thus six years after the 1869 sale,the United Statews once again held clear and full title to the water power of the Potomac and Shenandoah and to the land and buildings of the U.S. Musket and Rifle Factories tract.

In September 1876, acting as trustee for the U.S. District Court of West Virginia, N. Goff Jr. sold off at public auction the land and rights

2. Legal history,1870-1874, summarized in a report dated January 2-4,1874, in Serial No. 1632, Document No, 566,pp.2-4.
3. Snell, C.W.,"Acquisition and Disposal..." p.49-for spurces,etc.

that had been held by Adams and ____ partners under three notes. Lots No. 2 and 5, Block A, Shenandoah Street, vacant lots located in Old Arsenal Square, and for which Adams had bid a total of $ 3,705, were now sold to two purchasers for a ____ total of $ 1,090, and the United States ____ repurchased its title to the water power of the Potomac and Shenandoah Rivers for $ 70,000. The Government received its deeds for these three properties from the U.S. District Court on April 17,1877.[4] On June 15,1878, the United States sold its portion of Byrnes Island, which contained about 72 acres, for $ 500.00 to the Baltimore and Ohio Railroad Company."[5]

Thus by June 1880, approximately 10½ years after the 1869 sale, the United States had succeeded in legally disposing of only 35 items, including three armory dwellings. These had been sold to 27 purchases for $ 5,777.93.

Still outstanding, uncollected and with clouded titles were bonds in the amount of approximately $ 62,402.50, which were owed by about 97 Harpers Ferry citizens on 184 items.

The Struggle in Congress:1870-1878:

In their letter to the Secretary of War, dated November 1,1870, the 25 petitioners of Harpers Ferry had reported that they intended to petition Congress at its next session in December 1870 "for such relief in the premises as it may deem constitutional and just to grant us under the circumstances"[6]

This they did repeatly, but without success, from 1870 to 1878, when Congress finally enacted a law that was approved on June 14,1878.

The Act of June 14,1878 authorized the Solicitor of the Treasury, by and with the consent of the Secretary of War, to cancel contracts and bonds

4. Serial No. 2179, Report No. 770,p.1.
5. National Archives Record Group 121,Public Building Services, Entry 58-Warrenty Deeds to Land Conveyed by the Ordnance Department,1830-1927(4 vols), Vol.III,p.555.
6. Serial No. 1580,Document No. 6,p. 13.

and release all purchasers of lots at the 1869 sale from their purchases, whenever these buyers quit-claimed and released their lots to the U.S. Government by deed. It also specified that all such quit claims and releases had to be executed and tendered to the Secretary of War within four months following the passage of the act, that is, by October 14,1878.

The Act of June 14,1878 also authorized the Solicitor to offer for sale all such lots as had had their titles properly cleared under step 1. The Solicitor was granted further autority to lease any part of the Harpers Ferry property for any term of years, if he deemed it expedient. Finally, the Solicitor was given the authority to "abate" or reduce part of the 1869 purchase money due from purchasers "who have made improvements upon lots of land purchased... Provided in his judgement such purchasers are legally or equitably entitled to such abatment. And provided further, that such purchasers shall apply to the Solicitor for abatement within two months of the passage of this act (that is, by August 14,1878), "and in "case of an abatement is made, shall pay the balance of the purchase money due after deducting the amount abated within sixty days, thereafter; otherwise, the debt to remain as if no abatement had been made."[7]

Between 1878 and 1880, the Solicitor of the Treasury, Kenneth Rayner, abated the prices for 29 purchasers on 37 lots from the 1869 price of $ 39,755.00 to the final price paid of $ 9,668.35. Included in this group was the 1,600 acres of the Friends'Ore Bank, its 1869 bid of $ 13,100 was reduced to $ 3,500. Deeds to the abated lots were issued by the United States during the period October 31,1879 to November 16,1880.[8]

7. U.S. Statues at Large, Vol. XX, pp.130-131.
8, National Archives Record Group 121, Entry No.76,"Deed from the United States, Harpers Ferry, Ordnance Department," II, pp. 27-59.

In 1885, the Secretary of War bargined with six more 1869 bidders who had been using seven lots and one former armory dwelling house since that sale. They reached an agreement and the Secretary of War, in effect, abated the total of their 1869 bid of $ 2,735.00 to $ 905.00. The deeds for these seven additional lots were issued in the period January 28,1885 to June 26,1885.[9]

Final results of the abatement program, from 1878 to 1885, were as follows:

Date	1869 bid	No.of buyers	No. of lots	Abated prices paid
1879-80	$ 39,755.50	29	37	$ 9,668.35
1885	2,735.00	6	7	905.00
Total	$ 42,490.50	35	44	$ 10,573.35

Of this total, $ 7,037.35 was for 43 lots located in Harpers Ferry and $ 3,500 was from the 1,600 acre Friends' Ore Bank, which was located near the town

Between July 1 and October 14,1878, Solicitor Kenneth Rayner also received quit claim deeds and cancelled bonds of from 54 to 56 purchasers for 124 house lots that they had purchased in 1869. The total amount of their cancelled bonds came to $ 19,435.00.[10] Thus by the end of 1878 and including the 13 purchasers who had refused to sign notes on 28 lots in1869, the United States, had cleared title to 150 lots on which $ 30,864.00 had been bid in 1869. The action in the U.S. District Court in 1876-78

9. National Archives R.G. 121, Entry 76, These 1885 agreements have been loosely inserted in Vol. II, following p.60.
10. National Archives Record Group No.121, Public Buildings Service, Entry 77. Cancelled Bonds of the 1869 sale of Public Lots, one tray.

had also cleared the U.S. title to four more items on which a total of $ 209,705.00 had been bid in 1869.

Matters thus stood as follows in 1880

Lots Sold, 1869-1880 and paid in full for:

Date	Buyers	Lots	Amount Paid	Bid in 1869
Paid in Full under 1869 terms	27	35	$ 5,777.93	$ 5,752.50
Sold for U.S Court, 1876	2	2	1,090.00	$ 3,705.00
Abatement Cases 1878-885	35	44	10,573,35	42,490.00
Byrnes Island, 1878	1	1	500.00	0
Total	65	82	$ 17,941.28	$ 51,947.50
Lots Cleared Title for resale:				
a Dates	Buyers	Lots		Bid in 1869
1869	13	29	Refused to sign	$ 11,539.00
Court Action 1876	1	2		206,000.00
Cancelled Bonds, 1878	54	124		19,435.00
Total	68	155		$ 236,974.00
Lots Not Cleared		Lots		Bid in 1869
1880		12		8,809.00
Total:		248		$ 297,793.50

The May 25,1880 Sale:

After about one and a half years of effort, Solicitor of the Kenneth Rayner Treasury had been able to clear the title a total of 155 lots and items that had been "sold" in the 1869 sale. On May 25.1880, at 1 p.m., he offered 126 of these items at public sale at Harpers Ferry. Under the terms of the sale, all purchases under $ 50 had to be paid for in cash and purchases exceeding that amount had to be paid for in cash, one-third at the time,and the balance in one and two years with 6% interest.

The 74 house lots,with four former Armory dwellings, were sold for a total of $ 3,978.00 In addition, the 1,395 5/8 acre timber rights property on Loudoun Heights was subdivided. One tract of 512 acres and the other of 883 acres were sold to two parties for a total of $ 560.00. Total proceeds of the May 25, 1880 sale were thus 75 items sold to 27 purchasers for a total of $ 4,538.00 [1]. At this time,or shortly thereafter, Solicitor Rayner sold five more house lots to four purchasers for a total of $ 120.00.[2] Disposed of in 1880-1881 were 80 items sold to 31 purchasers for $ 4,658.00.

Solicitor Kenneth Rayner had also offered the water power rights to the Potomac and Shenandoah River for sale in 1880, but with-drew them when he received only a bid of $ 10,000 for the rights on the Potomac and zero for the Shenandoah rights. In a letter to the Secretary of the Treasury dated January 23,1882, Solicitor Rayner wrote of the water power rights at Harper's Ferry:

> The water-power of the Shenandoah as constructed and used in early times, is now of little value, because of the changes in the river-bed, made from time to time by devasting floods (in 1870 and 1877), so memorable in the region, and of the almost certain prospect of frequent overflow...

1. National Archive Record Group 121, Public Buuldings Service,Entry 58-,Vol.III, pp.559-590.
2. Serial No. 2387, Document 20, pp.290-291. Solicitor; s final reportmOctober 29, 1885.

Continuing, Rayner remarked:

For two decades [since 1861] this whole [Armory] property, on both rivers, has been going to destruction by the filling up of the canals or race-ways, through floods in the river principally; but by the continuous disintegration of the dams; by the loss of material through the depredation of trespassers; and by the rust and decay consequent upon the exposure to the weather. There would accordingly seem to be no reason on the part of the government to hold the property for better prices, but every reason to part with for any reasonable sum that may be offered....(3)

Convinced that because of the vast changes that had occurred in the development of industrial techonology since 1861 and also due to the 20 years of neglect that had occurred, the Secretary of the Treasury, the Secretary of War, and the Solicitor of the Treasury concurred in the opinion that water power rights at Harpers Ferry could no longer be sold at high prices. They recommended that Congress should pass a law which would authorize the sale of these water power rights at lower but more realistic prices.[4]

The Sale of October 22,1884:

After studying the matter since 1882, Congress took action and passed a law that was approved on July 4,1884, that "authorized and directed"the Solicitor of the Treasury" to make sale of all the real estate and riparian rights now owned by the Government of the United States at Harper's Ferry,... such sale to be at public auction, without reservation,... to the highest bidder....Provided, that the property shall not be sold for less sum then twenty thousand dollars. The act also directed that at least one-third of the purchase made had to be paid in cash, and that the credit portion was to bear interest at the rate of six percent per annum. Purchases under one hundred dollars had to be made in cash, over that sum, one third in cash, one third in one year, and the balance in two years.[5]

3. Rayner to Charles J. Folger, Secretary of the Treasury, January 23,1882, in Serial No. 2027, Document No.66,pp.3-5.
4. Ibid., pp.1-5.
5. U.S. Statues at Large, Vol. 23,p. 69.

Accordingly, on October 22,1884, at 1 p.m., what proved to be the last large sale of U.S. land was held at Harper's Ferry. Seventy six items, including the water power rights on the Potomac and Shenandoah Rivers, and 74 house lots, with two armory dwellings, were offered at public auction.

Seventy-five items, including the water-power of the two rivers and 73 house lots with the two dwellings,were sold for a grand total of $ 32,325.76 to 28 purchasers .[6] From this total, $ 25,910.00 was for water power rights and $ 6,415.00 for 73 lots and 2 houses. All purchasers paid in accordance with the terms of the law and the United States issued the 75 deeds between 1884 and 1887, with the last deed,[7] that for the water power on the Potomac, being dated April 12, 1887:

Final results of the sale of Harpers Ferry Armory lands,1869 to 1885 was as follows:

Dates	Buyers	Lots Sold	Amount Paid	Remarks
1869	27	35	$ 5,777.93	Under terms of 1869.
Sept.1876	2	2	1,090.00	U.S.District Court.
June 15,1878	1	1	500.00	Byrnes Island
1878-1885	35	44	10,573.35	Abatement cases.(8)
1880-81	33	81	4,658.00	Auction,May 25,1880.
Oct.22,1884	28	75	32,325.76	Auction
TOTAL:	126	248	$ 54,925.04	(8)

6. National Archives Record Group No.121,Public Building Service, Entry No. 79, "Records of Federal Land sold at auction on October 22,1884-Sales of Harper's Ferry Lots," one volume.
7.National Archives Record Group 121, Entry 58, Vol.III,p. 624.
8. Total includes $ 3,500 received for Friends'Iron Ore Bank.

As of January 1,1886, there were still 15 vacant house lots in Harpers Ferry and the U.S. Ferry Rights on the Shenandoah River, including 68 acres of land and two former armory dwelling houses, unsold. The U.S. Government was still active in Harpers Ferry in the real estate division in the 1890's. In 1893 the Federal Government took possession of Wager Lot No. 23 on High Street because Alexander Kelly, who had agreed to purchase the lot for $ 900 in 1848, had failed to pay the balance of $ 450.68 that was due to the United States. On December 11,1902, the Secretary of War also issued a deed for Lot 6, Block KK, Camp Hill, at the "abated" sum of $ 46.00, reduced from the sum the owner had bide for $ 250.00 on the lot in 1869.[9]

9.Snell, C.W.,"Acquisition and Disposal,"pp.78-79.

BALANCE SHEET: THE ACQUISITION AND DISPOSAL OF PUBLIC LANDS
OF THE U.S. ARMORY AT HARPER'S FERRY, WEST VIRGINIA, 1796 to 1885

Items	Costs of Acquisition	Proceeds from Disposal of Land
92 acres in Musket Factory track. 13 acres in Rifle Factory tract. 1 acre Arsenal Square 338 acres of residental land subdivided into 503 house lots, also 7 dwelling house sold. 424 acres	$ 77,719.67	$ 56,227.43 from 1852 sale. $ 25,015.04 from1869-1885 sales. $ 81,242.47 Subtotal
Perpetual rights to cut timber on 1,395 5/8th acres of land on Loudoun Heights, south side of Shenandoah River, opposite to Harpers Ferry	$ 20,860.62	$ 560.00 from 1880 sale.
Byrnes Island in Potomac River, 72 acres, opposite to Musket Factory yard.	$ 1,500.00	$ 500.00 from 1878 sale
Ferry rights on Shenandoah River, 68 acres ferry lot and two stone houses on south side of that river.	$ 5,000.00	$ (not sold)
1,949 acres and 77 houses Armory at Harper's Ferry	$ 105,080.29	$ 82,302.47
Right to dig iron ore on 1600 acres, Friends' Ore Bank on Potomac River	$ 51,000.00	$ 3,500.00 from 1869 sale, and abated 1879.
Total, 3,549 acres, 77 houses	$ 156,080.29	$ 85,802.47

Record of Disposal of Key Armory Buildings and Lots, 1869-1884 :

1. U.S. Musket Factory yard, Buildings No.1, Engine and Guard House, Bldg. No. 2, Armory Offices, 72 acres of land, ruins of old workshops, U.S. Armory canal and dam on the Potomac: Sold October 22,1884 to Thomas H. Savery, for $ 25,100; U.S. deed to property issued to Savery on April 12,1887.[1] Water rights on the Potomac River.

2. U.S. Rifle Factory yard, 13 acres, water power rights on the Shenandoah River, ruins of 10 buildings, U.S.Shenandoah Canal and dam. Sold October 22,1884 to Thomas H. Savery for $ 810.00. U.S. issued deed for property to Savery on March 2,1885.[2]

3. Loudoun Heights Timber Rights: 1,395 5/8 acres with perpetual rights to cut timber, located on south side of Shenandoah River, opposite to Harpers Ferry. Tract subdivided into two sections:

a. Tract of 512 acres sold at May 25,1880 sale to Edward Tearney, Thomas A. Kirwin, and Patrick Higgins, for $ 250.00. The United States issued the deed to these men on June 1,1880.[3] Edward Tearney, in partnership with Peter Litle to 1849, was the stone mason who had erected the masonry foundation walls at the U.S. Musket and Rifle Factories from 1842 to 1851 and probably from 1852 to 1861.

b. Tract of 883 acres sold on May 25,1880 to George W. Greene for $ 310.00. The United States issued the deed to Green on June 1,1880.[4]

1. National Archives Record Group 121, Entry 58,Warrenty Deeds,Vol.III,p.624.
2. Ibid., Vol. III, p.616.
3. Ibid Vol. III, p. 570.
4. Ibid., Vol. III,p.571.

4. Friends'Ore Bank, Right to dig iron ore on 1,600 acres of land located on the south bank of the River River about two miles northwest of Harper's Ferry. Sold for $ 13,500 to John A. Daniel Ahl on December 1,1869, price abated to $ 3,500. The United States issued the deed for the land to the Ahlson October 31,1879.[5]

5. Armory Powder Magazine, Camp Hill, Building apparently demolished 1866-1869, as the structure is not mentioned in the Catalog for the 1869 Sale of Lots. The magazine was located on Block AA at about Lots No. 7,8,or 9.

6. Armory Stable, Block F., Lot 2, Shenandoah Street. John G. Wilson bid $ 1,800 on this building and lot in December 1869. The stable was destroyed by the great flood of October 1,1870. Wilson cancelled his bond with the U.S. on this property on July 29,1878. The vacant lot was sold to John M. Marquette for $ 60.00 on May 25,1880. The United States issued the deed to Marquette on June 1,1880.[6]

7. Superintendent's Old Office, Lot 1, Block A, Shenandoah Street. This one story brick house, located on the northeast corner of Old Arsenal Square was sold to Thomas J. Burley(or Borely) on December 1869 for $ 2,025.00. The price was then abated to $ 450.00 . The United States issued the deed to Burley on Novembe 6,1879.(6A)

8. Armory Dwelling House No. 1(Park Bldg.No. 36),Lot 2, Block B,Shenandoah Street. Two-story brick house,Master Armorer's new Quarters, built in 1858-59. From 1866 to 1872 the Armory rented this building to various persons, Zadok Butts the Ordnance Agent at Harper's Ferry had his office in this building during that period, as did the lawyer Archibald M. Kitzmiller, the former chief clerk of the Armory, and John Koonce. On August

5.National Archives R.G.121, Entry 76, "Deed from the United States, Harpers Ferry, Ordnance Department," Vol. II,p. 27.
6.NARG 121, Entry 58, Vol. III,p 560.
6A. Nat. Archives RG. 121, Entry 76, Vol. II, p.30.

17,1872, the United States and the town government of Harpers Ferry signed a lease which granted the town free use of most of the building for town offices, a school-house, and jail, provided that the town KEPT the structure in good repair and would turn the dwelling over to the Ordnance Department when requested.[7] In December 1880, the U.S. Post office was also located in front northwest corner. The Town of Harpers Ferry occupied Armory Dwelling House No. 1 from 1872 to 1884, when it was reclaimed by the United States and sold at the public sale of October 22,1884. The lot and structure were purchased by J. Garland Hurst for $ 3,600.00. The United States issued the deed for the property to Hurst on October 22,1886.[8]

9. Armory Dwelling House No. 2(Park Bldg. No. 34-35),Lot 3, Block B. Shenandoah Street. Two and one-half story brick house, Master Armorer's old Quarters, erected in 1812. Sold December 6,1869 to James C. McGraw , Mary T. McGraw and Kathie A. NcGraw for $ 5,100. Price abated to $ 1,200.00 and the United States issued the deed for the house and lot to the McGraws on February 5,1880.[9]

10. Armory Dwelling House No. 3 (Park Bldg. No. 45), Lot No.1, North of Shenandoah Street. Two and one-half-story stone house constructed in 1825-26. Dwelling on upper floors, stores and warehouse on first floor. Sold to Joseph D. Holmes for $ 3,125 on December 6,1869. Used by Holmes until October 9,1878, when the United States cancelled his bond for the purchase of this property. House and lot sold at public auction on May 25,1880 to Joshua Cavalier for $ 850.00. The United States issued the deed for the property to Cavalier on June 1,1880.[10] This was Old Armory Dwelling House No. 7 to 1860. The house was 66 feet long and 35½ feet deep. **10A.**

7.Snell, Charles W.,"Historic Building Report, Part II: Historical Data Section for Bldg. No. 36 and 36A, The John E. P. Daingerfield House, Lot No. 2, Block B, Shenandoah Street, Harpers Ferry National Monument,West Virginia,"(NPS typescript, Harpers Ferry NM, W. Va., March 10,1959),pp. 27-31.

8. Nat.Archives R.G. 121, entry 58,Vol. III, p. 618.

9.Nat. Archives R.G. 121, Entry 76,Vol. II,p.54.

10. Nat. Archives R.G.121,58, Vol. III,p. 580.

10A. Snell,Charles W.,"J Historic Structure Report,Part II, Historical Data Section for Bldgs. No. 45 and 45A, the John G. Wilson Building, Lot No. 1 north of Shenandoah Street, Harpers Ferry National Monument, West Virginia,"(NPS typescript, Harpers Ferry NM, W. Va., February 27,1959).

11. Armory Dwelling House No.- 4, , Lot No. 1, Block F, Shenandoah Street .

Old Armory Dwelling House No. 25, a two-story brick house erected ca.1811-34, about 38 feet wide and 21 feet deep. Sold December 6,1869 to Damiel Ames for $ 1,650.00. The house was badly damaged by the flood of October 1,1870. The United States cancelled Ames bonds for the property on July 31,1878. The house and lot were sold on May 25,1880 for $ 250.00 to Alexander Murphy. [11] The United States issued the deed for this property to Murphy on June 1,1880.

12. Armory Dwelling House No. 5 , Lot No. 2, North of Shenandoah Street.

Old Armory Dwelling House No. 30 or 32, erected ca.1822-31, two-story plus garrett stone house. Sold in December 1869 to Isabella Leisenring, the wife of a Harpers Ferry dry good merchant, for $ 1,475.00 . The Leisenring family resided in Armory Dwelling House No. 5 from 1869 to July 1878. The United States [12] cancelled Mrs. Leisenring's bonds for the property on July 31,1878. The house and lot were sold at public auction on May 25,1880 for $ 405.00 to Gabriel L. Myers, a Harpers Ferry merchant who ran a clothing store. [13] The United States issued the deed for the property to Myers on January 1,1881. The main house was 19 feet wide and 33 feet deep, a two-story smaller stone wing adjoined the main house on the east side.

13. Armory Dwelling House No.9, south bank of the Shenandoah River, on the 68-acre ferry lot.(Old Armory Dwelling House No. 153), Two-story stone house. Property not sold. **Built as a ferry house in 1828.**

14. Armory Dwelling House No.10, on south bank of the Shenandoah River, located on 68-acre ferry lot.(Old Armory Dwelling House No.154).One-story stone house. Property not sold.

11. Nat.Archives R.G. 121, Entry 58, Vol.III,p. 576.
12. Snell, Charles W., "Historic Structure Report-Historical Data Section for An Armorer's Dwelling House, Bldg. No. 48, on U.S. Lot No. 2 North of Shenandoah Street, Harpers Ferry National Historical Park, West Virginia,"(NPS Typescript, National Capital Team, Denver Service Center, May 1980)
13. Nat Archives R.G. 121, Entry 58,Vol. III,p .576.

15. Armory Dwelling House No. 11, Lot No.10, Block AA, Camp Hill

Old Armory Dwelling No. 148, two-story stone house located on Potomac or North Cliff street, described as the "Soap Factory", in the catalog for the 1869 sale. Sold to Thomas T. Earnshaw on December [illegible], 1869 for $ 600.00, Earnshaw then refused to sign his bond on December 6, 1869 and title reverted to the United States. The property was finally sold at the public auction held on October 22, 1884 and was purchased by Edward Tearney and James Conway for $ 100.00. The United States issued the deed to the buyers on October 22, 1886.[14]

16. Armory Dwelling House No.12, Lot No. 2, Block AA, Camp Hill:

Old Armory Dwelling House No. 67, a two-story brick house, located on North Cliff or Potomac Street end of lot. Sold December 1869 to Polly McArthur for $ 1,750.00. The price was abated to $ 500.00 and the United States issued the deed to Polly McArthur on January 31, 1880.[15]

17. Armory Dwelling House No. 13, Lot No. 1, Block AA, Camp Hill. Old Dwelling House No. 54, a two-story stone house, apparently located on North Cliff or Potomac Street end of lot. Sold to Daniel Ames in December 1869 for $ 1,225.00, on behalf of Storer College. The price was abated to $ 362.40 and the deed for the property was issued by the United States to Storer College on December 18, 1879.[16]

18. Armory Dwelling House No. 14, Wager Lot No. 18, High Street:

Old Armory Dwelling House No. 176, two and one-half story brick house, erected ca.1841, 30 by 22 feet, cellar or basement, located on High Street

14. National Archives R.G. 121, Entry 58, Vol. III, p. 619.
15. Nat. Archives R.G. 121, Entry No.76, Vol. II, p. 44.
16. Ntat. Archives R.G. 121, Entry No.76, Vol. II, p.36. **Dr. Nicholas Marmion's stone house, erected in 1829, stood on the High or Washington Street end of Lot No. 1, Block AA, until 1848, when the Armory, which had purchased it for $ 2,000.00 in 1847, apparently demolished it. It was apparently Armory Dwelling House No. 175 from 1847 to 1848.**

end of lot. The property was sold to Bridget Boerly for $ 2,600 at the December 1869 sale. Mrs. Boerly, however, refused to sign her bond and title reverted to the United States. On October 22,1884 the property was purchased by John and George Dittmeyer for $ 1,055.00. The United States issued the the deed for the lot and house to the Dittmeyers on June 22,1886.[17]

19. Armory Dwelling House No. 15, Wager Lot No. 19, High Street:

Old Armory Dwelling House No. 177, a two and one-half story over basement brick house, built in 1841, 30 by 22 feet in size. Sold December 1869 to Patrick Daley for $ 1,425.00. Price for the property abated to $ 453.00. The United States issued the deed for the lot and house to Patrick Daley on January 31,1880.[18] House located on High Street end of lot.

20. Armory Dwelling House No.16, Wager Lot No. 20, High Street.

Old Armory Dwelling No. 179, three-story brick house, built 1839-40, 34 by 22½ feet, with slate roof.located on High Street end of lot. Sold in December 1869 to Mary D. Cochrane for $ 2,025.00. Price abated to $ 755.00 and the United States issued the deed to Mary D. Cochrane on January 28,1885.[19]

21. Armory Dwelling House No.17, Wager Lot No. 21, High Street:

Old Armory Dwelling House No. 178. Three-story stone house,built ca. 1835-36, 30 by 26 feet, with slate roof, located on High Street end of Lot. Sold December 1869 to Edith O'Donnell for $ 2,275.00 and the U.S. issued the deed to her on January 10,1872.[20]

17.National Archives R.G. 121, Entry No.58, Vol. III,p. 617.
18.Nat.Archives R.G. 121, Entry 76, Vol. II, p. 43.
19. Nat.Arch.R.G. 121, Entry 76, Vol.II, p.60.
20 Nat. Arch. R.G.121,Entry 76, Vol. II, p. 22.

22. Armory Dwelling House No. 18, Wager Lot No. 22, High Street.

Old Armory Dwelling House No. 180,, three-story stone house, built 1839, 30 by 26 feet, with slate roof, located on High Street end of lot. Sold in December 1869 to Edward Murphy for $ 2,375.00. He assigned his rights to Alexander Murphy. The price was abated to $ 604.00 and the United States issued the deed for the property to Alexander Murphy on October 31,1879.[21]

23. Armory Dwelling House No. 19, Wager Lot No. 26, High Street:

Old Armory Dwelling House No. 181, a three-story stone house, built 1839-40, 24 by 20 feet, located on High Street end of lot. Property sold December 1869 to James Magraw for $ 1,000.00. and the United States issued the deed for the house and lot to McGraw on January 10,1872.[22]

24. Armory Dwelling House No. 20, Wager Lot No. 27, High Street:

Old Armory Dwelling House No.182, a two-story stone house, 30 by 20 feet, with slate roof, also two-story stone kitchen, 29 by 16 feet, built ca. 1836, located on Potomac or North Cliff Street end of lot. Sold in December 1869 to Isaac Gilbert for $ 1,000.00.(or $ 950.00 in some accounts). Gilbert had his bonds for the property cancelled by the United States on July 16,1878. Lot No. 27 was purchased at the May 25,1880 sale by James McGraw for $ 325.00. The United States issued the deed for the property to McGraw on June 1,1880.[23]

21. National Archives Record Group 121, Entry 76, Vol. II, p.28.
22. Nat.Arch. R.G. 121, Entry 76,Vol. II,p. 21.
23. Nat.Arch. R.G.121, Entry 58, Vol. III,p. 585.

25. Armory Dwelling House No. 22, Lot No. 6, Block BB, Camp Hill.

Old Armory Dwelling No. 69, one and one-half story frame house. Sold December 1869 to Valinda Stipes for $ 5.00. Deed issued by United States to Mrs. Stipes on January 13,1870.[24]

26. Armory Dwelling House No. 24, Lot No. 1, Block II, Camp Hill.

Old Armory Dwelling No. 118, two-story brick house, erected ca. 1831, located on Washington Street end of lot. Sold December 1869 to Mary D. Young for $ 1,200.00. The United States issued the deed for the property to Mrs. Young on December 5, 1871.[25]

27. Armory Dwelling Houses Nos. 6, 7, 8, 26, 27, 28, 29, and 33. Eight residences demolished during the Civil War, in 1864-65.

28. Armory Dwelling House No. 21, located near Jefferson's Rock; Old Armory Dwelling No. 65, a two-story brick house, Report to be in very poor condition on July 27,1865, this strucutre was apparently demolished by the Armory in the period 1865-1869, as the residence is not listed in the catalog for the 1869 sale.

29. Armory Dwelling House No. 23, Lot No. 2, Block II, Camp Hill. U.S. apparently donated Old Armory dwelling No. 116, a two-story brick house reported to be in bad condition in 1865, with the lot on which it stood, to Virginia Lodge No. 1, Independent Order of Odd Fellows, on January 1,1870.

30. Armory Dwelling Houses No. 25, 30, 31, and 32,Camp Hill: The United States donated the Commanding Officer's, Paymaster's Clerk's, Superintendent's Clerks, and Paymaster's Quarters to Storer College on December 15, 1869.

Buildings Sold :	Supt's Old Office	1
	Dwellings sold	17

24. National Archives Record Group 121, Entry No.76, Vol. II, p. 4.
25. Nat. Arch. R.G. 121, Entry 76, Vol. II, p. 20.

Summary: Disposal of Buildings,1866-1885:

Type of Structures	Sold	Not Sold	Demolished	Donated	Total
Engine House and Guard Room, Musket Factory	1	0	0	0	1
Office Bldgs.,Musket Factory	1	0	0	0	1
Armory Stable	0	0	1	0	1
Supt.s'Old Office	1	0	0	0	1
Powder Magazine	0	0	1	0	1
Dwelling Houses	17	2	9	5	33
Total	20	2	11	5	38

31. Disposal of Old Arsenal Square,1869-1880:

Old Arsenal Square,in,1869, was subdivided into nine lots, eight of which were vacant. These were Block A, Lots 1 to 7, with the Superintendent's Old Office, a one-story brick building situated on Lot 1; Washington or High Street extended to the Shenandoah River, for use as a town street; and vacant Lot 1, Block B, Shenandoah Street. As this level land was highly suitable for the erection of commerical structures, assuming that the town's industries were to revive, the bidding on these eight house lots was instense in December 1869. The purchasers bid a grand total of $ 15,490.00 in 1869 in order to obtain control of this property.[1] After the resale of two lots by the U.S. District Court of West Virginia on September 15,1876, and the abatement of the original prices bid on the other six lots by the Solicitor of the Treasury,under the terms of the Act of June 14,1878, the actual amount of money collected by the United States Government from the sale of these eight lots was $ 3,040.00[2]

1. Serial No. 1580, Document No. 6. p.2-3,lists names of buyers and prices bid.
2. National Archives Record Group; No.121, Entry 76,"Deeds from the United States, Harpers Ferry, Ordnance Department, Vol. II,pp. 30,31,32,33, and 34; Deed Book P, p.4, and Deed Book G, p.501, Jefferson County Courthouse, Charles Town, W.Va.

Disposal of Old Arsenal Square, Lots 1 to 7, Block A, and Lot No. 1, Block B, Shenandoah Street.

Lot No. 1, Block A, including the Superintendent's Old Office. Sold to Thomas J. Burley, in December 1869 for $ 2,025.00 The price was abated to $ 450.00 and the United States issued the deed for the property to Burley on November 6,1879.[1] One-story brick house on lot.

Lot No. 2, Block A: Sold December 6,1869 to Capt. Francis C. Adams for $ 1,655. He fails to pay and U.S. takes case to U.S. District Court. Sold by Special Commissoner of Court, Nathan Goff, Jr. for $ 685.00 to to Thomas A. Kirwin.[2] Vacant lot. Kirwan received his deed on November 6,187[illegible]

Lot No. 3, Block A: Vacant lot. Sold December 8,1869 to J. M. Decaulne for $ 1,800.00. Price abated to $ 300.00 and Decaulne assigns lot to George W. Greene. The United States issued the deed for the property to Greene on November 11, 1880.[3]

Lot No. 4, Block A: Vacant Lot. Lot sold December 6,1869 to J.M. Decaulne for $ 2,000.00. The price is abated to $ 300.00 and Decaulne assigned his rights to the lot to George W. Greene. The United States issued the deed to Greene on November 11,1880.[4]

Lot No. 5, Block A: Vacant Lot. Sold December 6, 1869 to Captain Francis C. Adams for $ 2,050.00. He failed to pay and U.S. takes him into the U.S. District Court of W. Va. to regain title to land. U.S. District Court sells lot 5 at public auction September 15,1876 for $ 405.00 to Lawren A, Montague.[5] Montague received his deed on January 28, 1879.

1. National Archives Record Group No.121, Public Buildings Service, Entry 76, "Deeds from the United States, Harpers Ferry, Ordnance Department, Vol. II, p. 30.
2. Deed Book P, p.4, Jefferson County Court House, Charles Town, W.Va.
3. Nat. Archives R.G. 121, Entry 76, Vol. II, p. 33.
4. Ibid.
5. Deed Book G, p. 501. Jefferson Country Courthouse.

Lot No. 6, Block A, Shenandoah Street: Vacant lot.

Lot sold to John L. Walsh on December 6,1869 for $ 2,025.00. The price was abated to $ 300.00. The United States issued the deed to Walsh on November 6,1879.[6]

Lot No. 7, Block A: Vacant lot. Lot sold December 6,1869 to Mary Conway for $ 2,085.00. Price is abated to $ 300.00 and the United States issued the deed to James and Mary Conway on November 6,1879.[7]

Washington or High Street extended. Once site of part of Small Arsenal, vacant lot in 1869, donated to town of Harpers Ferry for use as street.

Lot No. 1, Block B, Shenandoah Street. Vacant lot

Sold December 6,1869 to John M. Hodges for $ 1,850.00. Price abated to $ 300.00 and Hodges assigns his rights to John E. Erwin. The United States issued the deed for the property to Erwin on November 21, 1879.[8]

In the intense bidding for commerical sites that took place in December 1869, the eight lots comprising Old Arsenal Square, all vacant but one, brought a grand total of $ 15,490.00 in high bids. After the resale of two lots in September 1876 and the abatement of prices that were made on the six remaining lots in 1878, the actual total amount of money that was collected by the United States from the sale of these eight lots was $ 3,040.00.

6. National Archives R.G. 121, Entry No.76, Vol. II, p. 32.
7. Nat.Arch.R.G. 121, Entry 76,Vol. II,p. 31.
8. Nat.Arch. R.G. 121, Entry No.76, Vol. II, p. 34.

32. The U.S Ferry Rights on the Shenandoah River, 1869-1878:

On December 6, 1869, John W. Neer and Compnay were the high bidders for the U.S. ferry rights on the Shenandoah River, which included a ferry lot on the Harpers Ferry side of the river and a 68 acre ferry lot, which containing Armory Dwelling Houses No. 9 and 10, one and two-story stone houses, was situated on the south side of the river. Neer signed bonds in the amount of his bid, $ 1,790.00, and took control of the ferry, operating a ferry from 1869 to early 1878.[1] On July 13, 1878, George Neer, who was a security for John W. Neer's bonds, wrote to the Solicitor of the Treasury Deparatment, Kenneth Rayner, and asked to have these bonds cancelled under the terms of the Act of June 14, 1878.[2] The extant records in the National Archives do not provide information on the course of action that Rayner took. Because the U.S. rights to the ferry were then being contested in court, the Solicitor may not have cancelled Neer's bonds at this time.

In the spring of 1878, James M. Mason, of Charlestown, W. Va., who claimed to own lands that adjoined the U.S. ferry across the Shenandoah River at Harpers Ferry, made application in the Circuit Court of Jefferson County, W.Va., for a liscene to establish a ferry parallel with the Neer-U.S. ferry. Mason argued that under the laws of Virginia and West Virginia, that "any disuse of a ferry franchise for two years discontinued the rights of the owners. Mason admitted that the United States had purchased these rights in 1813 and had operated a ferry under a lease arrangement from 1813 to 1844, but from 1844 to 1861, while a toll bridge was functioning across the Shenandoah, Mason held that the U.S. had failed to operate a ferry and thus their rights had expired under the terms set by state law. The County Court accepted Mason's argument and applying state law,

1. Serial No. 1580, Document No.6, pp.2-3.
2. George Neer to Solicitor, July 13, 1878, National Archives Record Group, Entry 78, Tray 2.

declared that the U.S-Neer ferry was not a legal one.

Attorney James D. Butt, of Harpers Ferry, acting as an agent for the Government, and Nathan Goff,Jr., U.S. District Attorney for West Virginia, applied to Judge Jackson of the U.S. District Court of West Virginia, at Wheeling , for an injunction to restrain Mason from operating his ferry under the County Court decree. Mason and his attorney, D. B. Lucas, of Charlestown, repeated their argument before Judge Jackson, namely that 20 years of disuse of a franchise left the United States with no legal ferry rights to sell in 1869. They further held that a Federal Court could not interefere with the judgement of the County Court from which Mason clained legal authority to operate his ferry.

In June 1878, Justice Jackson rendered a decision in favor of the U.S. Government ferry rights. He declared that the Federal Government could buy any sort of property when they needed it; that when this was purchased for a constitutional purpose, the laws of States could not affect it; and finally that non-use could not be used to destroy's the United States' rights. Judge Jackson also issued the injunction requested by the U.S. District Attorney that ordered James M. Mason to cease running his county liscened ferry at Harpers Ferry.[3]

The U.S. ferry rights, ferry lots, and two houses, were not offered for sale at the public auctions held on May 25, 1880 and October 22,1884, so that the final disposal of this property is unknown. As the Solicitor of the Treasury had the power to lease Government property at Harpers Ferry, he may have leased out the rights to the Shenandoah ferry for a number of years after 1884.

3.Article in Shephardstown Register, W.Va., June 8,1878, copy in National Archives Record Group No. 153, Box No. 44.

CHAPTER IX

CATALOG OF HARPER'S FERRY ARMORY BUILDINGS ERECTED IN THE YEARS 1842 to APRIL 18,1861:

A. DESCRIPTION OF U.S. MUSKET FACTORY BUILDINGS AS THEY APPEARED IN 1859 - 1861.

(1842 - 1861)

Bldg. Numbers are the same as those used on the 1859 Historical Base Map.

Musket Factory Bldg. No. 1:

Description of the Engine and Guard House, 1847-48: (Park Bldg. No.63):

This is Bldg. No. 19 on Map No. 5(1848) and Bldg. No. 1 on the 1859 Historical Base Map. The Engine and Guard House can be seen in the following Historical photographs and drawings: HFNHP Negative Numbers:HF -64(taken in 1861); HF-90(taken in 1859- Southeast corner only); HF- 223(drawing made 1861); HF-27B, 1865; HF-355, 1886); HF- 539-1886; HF-379,1882; HF- 55(1873-75); HF- 100 taken during the 1889 flood; HF- 190, ca.1890-92. These views all show the structure on its original(1848) site. In 1892, the Engine and Guard House, then known as the John Brown Fort, was dismantled and shipped to Chicago for the World's Fair. HF-18(1864-65); HF-55( ); HF-495(1889); HF-113; and HF-58.

The Engine and Guard House was a one-story brick building, 35½ by 24 feet with cut-stone water table and coping. The slate-covered gable roof was crowned with a square wooden cupola that held a fire bell. The gutters and down-spouts were of copper. The structure was designed and erected by Major John Symington in 1847-48 at a cost of approximately $ 1,540. Inside, one-third of the structure was partitioned off by the means of a solid brick wall to form a guard room for the use of the night watchmen. The remaining two-thirds served as the engine house and housed two fire engines.

The building fronted three bays wide on the musket factory yard and was two-bay deep. Each bay was comprised of a recessed panel that was set within a relieving round arch that was supported by capped pilasters. Round arch Windows and doors were set within the recessed panels. The gable end walls were adorned with brick parapet walls that were crenalated, topped with cut-stone coping, and rose above the ridge of the roof.

Mukket Factory Bldg. No. 2:

Description
of Armory Office, Musket Factory.
(Bldg. No. 1 on 1848 Map(No.5) and Bldg. No. 2 on 1859 Map.

The Armory Office building can be seen in the following HFNHP Photographs, Negative Nos. HF-51 or 256(1857 lithograph); HF -64 (Photo taken in 1859, showing roof); HF-27B, Photo taken in 1865; HF-355, taken about 1886; HF-492- taken from Loudoun Heights, about 1880; HF- 379, taken in 1882; HF- 539, taken in 1886 • HF- 100(1889 Flood) and HF 190(1890-92) both show that the Armory Office had been demolished by 1889.

The Armory Office building was designed and erected by Superintendent James Stubblefield in 1808-09 as a two-story brick residence, about 36 by 30 feet, with a cellar kitchen and a wood shingle covered gable roof. The structure served as the residence of the superintendents from 1808 to 1844 and then of Armory Paymaster Richard Parker, 1844-47. In 1828-29 a large brick addition, which included a kitchen, was added to the original dwelling and the roofs were slated. In 1847-48 Major John Symington remodelled the old residence into the Armory Office building at a cost of approximately $ 850.00. The offices of the superintendent, paymaster, with the paymaster's vault, and of the master armorer were all located in this structure from June 30,1848 to April 18,1861. The dimensions of the Armory Office by 1861 were approximately 100 by 30 feet. In the 1847-48 alterations, the 1828 kitchen was converted into a money vault with walls of heavy masonry from three to 3½ feet in thickness and its gable roof was also covered with large, heavy flag stones. Photographic evidence suggests that the original 36 by 30 foot portion of the house had large brick chimneys built within the walls at either gable end.(There was definitely such an end chimney at the south or east end and probably a matching chimney at the north or west end). The front elevation faced east (or north), opening out on the musket factory yard. A brick privy, with three stalls) was located up against the Musket Factory fence to the rear of the office, near the northwest corner(See HF- 539). The brick wing added in 1829 was a long one-story wing, perhaps 64 feet long and 20 feet wide. A broad chimney pierced the center of its slate covered gable roof at

middle of its length, thus probably dividing the long wing into two sections each about 32 feet long.(See 539). The wing was built on the same axis as the main house and constructed so that its east(or north) facade was flush with the front elevation of the two-story building and its depth, about 20 feet, left one bay in the south(or east) gable end wall of the main house exposed. This bay contained a window that was topped by a flat arch. Photograph HF- 355 suggests that the Old Pay Office erected in 1822 may have been added to the north(or west) end of the main house in 1858. A slightly lower two-bay wide structure appears to ajoin the north gable wall of the main building.(1) Photograph HF-379,taken in 1882, reveals that the south half of the long 1829 wing was two bays wide on the front(east) elevation and also two bays wide on the south(or east) gable end. The four windows visible are topped by flat arches. By 1882 all four of these openings appear to have been bricked up.

(1) see discussion of Bldg. No. 17 for more detail on Old Pay Office.

Musket Factory Bldg. No.3:

Description of the Old Bell or Finishing Shop, Musket Factory.

The Old Bell or **Finishing** Shop is Bldg. No. 3 on the 1859 Historical Base Map. The structure can be seen in the following Harpers Ferry NHP Negatives: HF-11 or HF-256, 1857 lithograph; HF- 66, Photo taken in 1859; HF-64, photo taken in October 1859; HF-30, photo taken in 1862; HF- 27B, photo taken in 1865; **and** HF- 355, taken in 1886, reveals that the structure had been demolished by that date. HF- 492, taken about 1880, also shows that the shop is gone. HF-45, perhaps taken about 1870, indicates that the Old Bell Shop was gone by that date.

Designed and erected by Superintendent James Stubblefield and Paymaster Samuel Annin in 1809-1810, rebuilt and remodelled in 1824, and remodelled in 1847-48, the Old Bell Shop, or Finishing Shop, in 1859, was a large two-story brick structure on stone foundations, about 131 feet long and 45 feet wide. Its slate-covered gable roof was crowned in the center with a octagonal wooden cupola or belfry. The doors and window frames of this shop were of wood and the windows and doors were topped by flat arches. The floors were of wood and ceilings of lath and plaster.

Musket Factory Bldg. No. 4:

Description of the Polishing Shop, 1849-50, Musket Factory.

The Polishing Shop is Building No. 4 on the 1859 historical base map. The structure can be seen on the following HFNHP Negatives: HF- 51 or HF-256, a lithograph made in 1857;Hf-30, photo taken in 1862. HF-355,taken about 1886, reveals that the Polishing Shop had been demolished by that date.

On the 1859 historical base map prepared in 1959, it was assumed that the polishing shop used the gable end walls of the Old Bell Shop and new Boring Mill as side walls. Under this plan the front and rear elevations of the Polishing shop would each be 22 feet wide and the shop,40 deep, would project slightly forward and backward from the 35½ feet wide gable end walls of the two larger shops. An examination of HF-51 and HF-30, however, in 1981, has suggested another possible arrangement; namely, that the polishing shop was build entirely on the west(or south)sides of the Old Bell Shop and Boring mill, partially overlapping perhaps the rear corner of each structure. Under this scheme , the polishing shop would be 22 feet wide, between the side walls of the two shops and run 40 feet along the north or east bank of the Armory canal. Based on the 1857 lithograph (HF-51), the north and south 22 feet end walls may have been only one-story in height, while the roof rose at such a pitch as to form a second story in the center of the 40 feet long elevations. The west or south gable end elevation, in the 1857 ligthograph, at the 2nd story levels , appears to be adorned with the typical "Symington" brick parapet end wall that crenelated and topped with cut stone coping.

The Polishing shop was designed and erected by Major John Symington in 1849-50 at an approximate cost of $ 1,700.00. The structure, two stories high, had brick walls and stood on a stone foundation. Forty by 22 feet in size, the shop covered a large iron overshoot water wheel that drove a portion of the machinery in the adjoining Bell or Finsishing shop and the Boring Shop. The gable roof was covered with slate and the gutters and downspouts were of copper. The polishing shop was probably located on the second floor of the structure.

Musket Factory Bldg. No.5:

Description of the Boring Mill ,1843-44:

Visual evidence in the form of drawings or photographs regarding the Boring Mill is extremely limited. Best evidence or view is probably the lithograph by Ed Beyer. Ray & Son, Dresden,1857-Harper's Ferry Armory from Magazine Hill and published in Beyer's Album of Virginia,1857, in which the Boring Mill can be seen in the distance(Harpers Ferry NHP Negative No. 256). Photographic views that show distant views of the ruined walls of the burnt out Boring Mill during the Civil War include Harpers Ferry NHP Negative No. HF- 30 ,made in 1862, and perhaps No. HF-38, taken about 1865 or 1866.

The new Boring Mill was designed and erected by Major Henry K. Craig in 1843-44 at an approximate cost of $ 10,500. The diminesions of the workshop are given as 123 by 42 feet or 122 by 42½ feet, the latter figures probably being the most accurate ones. The factory had stone foundations and brick walls that were two stories in height. Its gable roof was covered with slate and was provided with lead(or copper) gutters and copper down-spouts. The water table, cornice, window and door lintels and sills, and exterior steps were all of cut stone. Lithograph HF-256 indicates that the Boring Mill has flat arched windows and probably resembled the newly built warehouse(of which there are many photographic views) in its exterior appearance, except that the Mill did not have quadrant windows in the third story windows at the gable ends. HF- 256 suggests that the Boring Mill was at least 10 bays long by 3 bays wide.

The ceilings of the mill and perhaps the interior brick walls were plastered. The floors were wooden. There was a large end chimney centered at the east end and perhaps two smaller one at the west gable end. The heating system was comprised of 10 cylinder stoves with 820 feet of stove pipe.

A cast-iron water wheel, 15 feet in diameter and 10 feet wide, drove all the machinery in the Boring Mill.

Mukket Factory Bldg. No. 6:

Description of the Stocking and Machine Shop, Musket Factory
(Bldg. 6A, 6B, ¢ 6C, and 6D, on 1859 Historical Basemap).

The Stocking Shop(south or east wing) is Bldg. 6A; the wheel house attached to the south or east end of 6A, is Bldg. 6B; the center building, attached to the north or west end of 6A, is Bldg. 6C, the office building; Bldg. 6D, the machine shop(north or west wing) is attached to the north or west side of Bldg. 6C, the office. Bldg. No. 6 can be seen is the following drawing HFNHP Negatives: HF- 51 or 256(1857 lithgraph); HF- 223, 1861 ; HF-30, 1862 photo. Photos HF-38 and HF 26, both taken in 1864 or 1865 reveal that Bldg. No. 6 had been demolished by that date.

The Stocking and Machine Shop was designed and erected by Major John Symington in the period 1847 to 1850 at an approximate cost of $ 20,450.00, with an additional $ 5,700.00 being spent for the machinery in the two shops; Total costs thus amounted to about $ 26,150.00 for the entire project. The building was comprised of three sections: the stocking shop in the south or east wing, an office building in the center, and the machine shop in the north or west wing. The entire structure stood on stone foundation, with cut-stone water table; the walls, two stories high, were of brick, with cut-stone sills and coping. The door and window frames were of cast-iron and gable roofs were covered with sheet iron. The gutters and down-spouts were of copper. Each wing measure 89 by 35½ feet and the center building, which covered a water wheel and contained offices, was 35½ feet wide and 48 feet deep, so that the center projected about six feet 3 inches beyond the both the front and rear elevations of the two wings. The over all length was thus about 213½ feet.

In addition a wheel house (Bldg. 6B) for the water wheel driving machinery in the stocking shop(south or east) adjoined the south wing at its south end. The wheel house was one-story brick on stone foundations, with cast iron door and window frames, measuring 18 by 26 feet, and its gable roof was covered with slate. HF- 51 indicates that that wings were each seven bays long by three bays wide. The front and rear elevations of the center office building

had three bay. Like other Symington-designed shop, the first story openings were set in recessed round arch openings and the flat arched windows of the second story were located in recessed rectangular panels. Crenelated parapet brick end walls, topped with cut stone coping also adorned the four gable end walls of the two wings and center building.

Musket Factory Bldg. No. 7:

Description of Musket Factory Stock House, 1846-47
(Bldg. No. 6 on 1848 map and Blg. 7 on 1859 Map).

The Store House for Stocks in its original form can be seen in detail in HFNHP Negative HF 51 or HF-256; and in slightly altered form-with extensions at either end to connect with adjacent buildings) Photographs in Negatives HF 223, made in 1861; HF-30, made in 1862; and HF-38, taken in 1865 or 1866, reveals that the ruined walls of the structure had been demolished by that date.

The Store House for Stocks was designed and erected by Major John Symington in 1846-47 at an approximate cost of $ 6,438.00. The two-story brick building stood on a one-story basement of stone, had cut stone water table, sills, cornice, and coping. Measuring 100 by 35½ feet in size, the stock house had cast iron door and window frames and its gable roof was covered with sheet iron. A plaster ceiling was installed under the iron roof on the second floor until 1855. The visual evidence indicates that in 1857 the storehouse was three bays wide and eight bays long.

The stock house had brick parapet end walls, with turrets at the corners; these were topped with cut-stone coping, and rose about the ridge of its gable roof. The brick 1st story of the stock house was composed of a series of bays, each made up of a recessed panel set within a relieving round arch that rested on capped pilasters. Windows set within these arches were topped by round arches. Bays on the second story were comprised of a rectangular recessed panel and each panel contained a window with a flat arch.

The store house for stocks was remodelled into a work shop with water wheels in 1859-60 and renamed the Millwrights Shop.

Musket Factory Bldg. No. 8:

Descripton of grinding mill(8A-South Wing), Saw Mill(Center-Bldg,8B), and Carpenters Shop(North wing,Bldg. 8C), 1850-51, 1860:

This shop is Building No. 8 on the 1859 historical base map. The Grinding Mill, Saw and Planing or Carpenter Shop can be seen is the following Harpers Ferry NHP Negatives: HF- 51 or 256, a 1857 lithograph which shows the structure in its original form); HF- 223, 1861 printing show a corner of the revised(two story) south wing; HF-30 a photo taken in 1862 that clearly shows the changes made in 1860; HF- 38, taken in 1864 or 1865, and HF- 355, photo taken about 1886, showing that the structure had been demolished by that date.

The Grinding Mill, Saw and Planing Mill was designed and erected by Major John Symington in 1850-51 at an approximately cost of $ 9,730.00, exclusive of $ 1,900 for machinery. Its style of architecture was the same as that of the other workshops then being erected by Superintendent Symington. The shop was 110 feet long and 36 feet deep. Its length was divided into three equal sections: the center was of two stories and the north and south wings of one story. The building was of brick, on stone foundations, with cut-stone water table, coping, door and window sills. The door and window frames were of cast iron; the gable roofs were covered with slate and the gutters and spouts were of copper. The structure was equipped with lightning rods. There were apparently two cast-iron turbine water wheels, one located in the south wing, the grinding mill, and the other in the north wingm the planing mill or carpenter's shop. The gable ends of the north and south wings,one-story in 1851, were each divided into three bays and brick parapet crenelated end walls, topped with cut-stone coping, rose above the ridges of the gable roofs. The story gable ends of the two-story center building were treated in like manner. The 110 foot east and west elevations were each divided into nine bays. All first-story bays contained round arch that was supported by a capped pilaster. Round arch windows were located within the recessed panel

that was set winthin each arch. Windows on the second story of the center building were topped with flat arches and set in reccessed rectangular panels. In the 1860 remodelling, a similar three-bay second story was constructed over the original one-story south wing, the grinding mill, and a new two story shop, Bldg. No. 21, designed in the same style as the 1851 construction, connected the south wing to the millwright shop, Bldg. No. 7.

Mukket Factory Bldg. No. 9:

Description of the Tilt-Hammer and Barrel-Welding Shop, Musket Factory, 1849-1851

The Tilt-Hammer and Barrel-Welding Shop at the Musket Factory is Bldg. No.9 on the 1859 historical base map. This workshop can be seen in the following HFNHP Negatives: HF-51 or 256(1857 lithograph); HF-30, photo taken in 1862; HF-10, taken in October 1862; HF-355, taken about 1886; HF-539, taken in 1886; HF-492, taken from Loudoun Heights about 1880;

The Tilt Hammer Shop for Barrel Welding was designed and erected by Major John Symington in 1849-51 at an approximate cost of $ 17,900.00; in addition, about $ 25,470.00 was also spent to purchase and manufacture the machinery for this shop. The Tilt-Hammer Shop for Barrel Welding was a one-story brick structure on stone foundations, 53½ feet wide and from 188 to 190 feet long. The water table, sills, and coping were of cut stone; the door and window frames were of cast iron. The gable roof, covered with slate, was crowned by a ventilator that ran the full length of its ridge. The gutters and downspouts were of copper. Like the other Symington-designed shops, the brick walls of the Tilt Hammer Shop for Barrel Welding were divided into round arch bays and the gable end walls had brick crenelated parapet walls, topped with cut-stone coping, that rose about the gable roof. The gable ends were apparently three bays wide and the side walls were divided into ten bays.

The machinery in the structure was powered by two cast-iron turbine water wheels that had been manufactured by the Ames Manufacturing Company of Massachusetts. There were eight tilt hammers for welding barrels and ram rods, two double tilt hammers for drawing barrel plates and tilting iron and steel; four sets of drop hammers; a large shears; a blow machine; and large grindstone.

Musket Factory Bldg. No. 10:

Description of the Lumber House and Coal Bins, Musket Factory, 1848-49:

The lumber house and coal bins are Bldg. No.10 on both the 1848 and 1859 historical base map. There are no known views or photgraphs of this structure. Located at the extreme northern or western end of the line of workshops bordering the Armory canal, the lumber house stood in an area that was not photographed or drawn. HFNHP Photographs which do show or come close to its site(without the structure being visible) include the following: HF=10, taken in 1862, what may possibly be one ruined wall can be seen); HF-9, taken in 1862; HF 83, taken about 1875; HF -492, taken about 1880.

The Lumber House and Coal Bins were designed and erected by Major John Symington in 1848-49 at a cost of approximately $ 5,695.00. The two-story structure stood on stone foundations, the first story, which contained bins for bituminous coal, had stone walls and a flagstone floor; the second story, which contained the lumber room, was of brick and its windows were adorned with blinds. The water table and coping were of cut-stone. The gable roof was covered with slate and the gutters and douwnspouts were probably of copper. If designed in the same style as the other new buildings then being erected, the stone first story contained round arches with recessed stone panels and the bays on the second brick story had windows with flat arches.

The lumber houses was 58 feet 8 inches wide and 77 feet 4 inches to 78 feet long.

Description of Stock and Store House, Bldg. No. 11, Musket Factory, 1854-55:

The Stock and Store House is Bldg. No. 11 on the 1859 historical base map. The store house can be seen in Harpers Ferry NHP Negatives No. HF-51 or 256, a lithograph that was published in 1857; and HF- 10- a photo taken in October 1862.

The Stock House was designed by Major William H. Bell in the same architectural style that Major John Symington had applied to all the major workshops and storehouses that had been erected at the musket and rifle factories during the period 1846 to 1851.. Construction of the Stock and Store House was supervised by Master Armorer Samuel Bymington and Superintendent Henry W. Clowe, August 1854 to July 1855. The cost of construction was approximately $ 8,000; another $ 4,359 was spent on grading, planting, and draining the hill side site, and about $ 3,524 was expended on fencing and enclosing the Stock House and new Powder Magazine yards. Total cost of building on the hillside thus probably exceeded $ 15,833.

The Stock House was a two-story brick structure with a slate covered gable roof that was 100 feet long and 35 feet wide. Built on stone foundations, the edifice had cut-stone water table, sills, and coping. The door and window frames were of cast iron and the downspouts and gutters were of copper. The exterior brick walls were painted with "patent paint in oil."

The gable ends were divided into three bays and the long sides each had nine bays. These followed the typical Symington plan: Each first-story bay was comprised of a recessed panel that was sent within a relieving round arch that was supported by capped brick pilasters. Round arched windows or doors were set in each panel. On the second story, the recessed panels were set within flat arches and the windows were also topped by flat arches. Brick parapet end walls, adorned with recessed rectanuglar panels, crenelated, and

topped with cut stone coping, rose above the ridge of the gable roof at each end of the Stock House.

Inside cast iron pillars were used to help support the load of the second floor. It is not known if the Stock House had a basement, if so, then cast iron pillars would also have located in the cellar to help support the load of the first floor.

Description of the Warehouse, Musket Factory Bldg. No. 12, 1841-44:

The description of the 1841-44 warehouse that follows is based on the evidence presented above and on photographic evidence. The structure can be seen in the following historical photographs: HF- 64(1859) east and north elevations); HF-66 (1859) southslope of roof only; HF-492 (1861) east and north elevations; HF-49(1861),east and north elevations; HF- 30 (1862),west and south elevations; HF-27B (1864-65) closeup east and south elevations; HF-38 (1865-66); part of west and south elevations. HF- 355(ca.1880-86) showing warehouse had been demolished by this date.

The new warehouse was designed and erected by Major Henry K. Craig, 1841-44, at an approximate cost of $ 7,200.00. The structure measured approximately 93 feet 6 inches by 30 feet 10 inches, had stone foundations, and was two stories, brick, in height. Its gable roof was covered with slate and provided with copper gutters and down spouts. The water table, cornice, window and door lintels and sills were of cut stone. A series of stone columns in the original full basement supported the wooden floor of the first floor. When this floor decayed and fell in 1849, thecellar was filled in to about first floor level with quarry spall and then paved with large flag stones. The photographs reveal that the warehouse, at the second floor level, was three bay wide and seven bays long, thus apparently have a total of 20 windows topped by flat arches at the second story. Photographs prior to 1864-65(see HF-27B) do not provide very good views of the 1st story frenestiations, however, from what can be seen and the Voucher 8011-2nd series-V.89 to Redmond Burke, November 3, 1842, for 40 cutstone window sills and 4 door lintels; it would appear that that there were probably also 20 flat-topped openings on the first story . These were probably comprised of 16 windows and possibly four doors, with the entrances being located in the center bay of each elevation.

The east gable end had a small brick chimney and the third story levels of both gable ends were occupied three windows: one square centered window flanked by two "quadrant" or semi-elliptical windows.

The interior brick walls of the warehouse were plastered. The exterior brick walls were colored with "cement wash" after 1849 and the structure had two lightning rods after 1851.

Musket Factory Bldg. No. 13:

DESCRIPTION OF THE SMITHS OR FORGING SHOP, 1845-1848,1853:

The large Smiths or Forging Shop, Bldg. No. 17 on Map No.6(1848) and Bldg. No. 13 on the 1859 Historical Base Map, can be seen in the following HFNHP lithgraphs, drawings and photographs: HF- 51 or 256, 1857 lithgraph; HF- 240 (and blowup from, HF-492) made in June 1861; HF-49, photo taken June 1861; HF-30, taken in 1862; HF- 11,taken in October 1862; HF- 89- detailed sketch published March 11,1865; HF- 27B, photo taken in 1865; HF- 38, photo taken in 1865 or 1866; HF- 28, taken in 1865 or 1866; HF-355, taken about 1886; HF- 539, taken about 1886; HF-492,taken about 1880; a nd HF- 59, taken in 1889, reveals that all but the chimney stack had been demolished by 1889. **Also HF- 45(ca.1886): and HF-113(ca. 1884-89).**

The Forging or Smiths shop was designed and erected by Major John Symington in the period 1845 to 1848 at an approximate cost of $ 18,000. Additional alterations and repairs made in 1852-53 of about $ 5,600 increased the total cost of this workshop to $ 23,600. The forging shop was comprised of three sections: the north(or west) wing of brick, was on stone foundation, one story, 122 by 35½ feet; a center building, for inspectors' offices and model and pattern rooms, was of brick, on stone foundations, two stories **and** 46 by 37 feet . In the middle of the back(east or north) wall of the center office building was the main brick chimney stack, 90 feet high, 10 feet square at the base and 6 feet square at the top. The great chimney was built upon a massive stone arch thrown across a tail race leading from one of the water wheels and waste dam of the armory canal. The third section, the south(or east) wing was of brick , on stone foundation , one story, 121 by 35½ feet. Through the center of the north and south wings there was a line of double forges for burning anthracite coal, under which there were two horizontial flues leading to the main chimney stack in the center building.

The two wings and center section had cut stone water table, sills, cornice, and coping; the gable roofs were covered with sheet iron; the door and window frames were of cast iron. The gutters and down spouts were of copper.

Ths shop apparently had one turbine reaction water wheel, with penstock and cast iron gates, shafting and bevel gearing for driving the fan blast that serviced the smiths forges. The ceilings were plastered and sheet iron was apparently used for flooring under the forges in 1847-48.

In the 1852-53 alterations, the sheet iron floor was removed, the cellar filled in with earth, and then paved with brick and stone flagging. 18 new cast iron forges, with sheet iron stacks, were put in, as were new anvil blocks that had been placed on cast iron chairs that were set in stone foundations. Finally, a 243 foot long ventilator ran the full length of the tops of the gable roofs on the north and south wings.

Photographs reval that the north and south wings were each three bay wide and 11 bays long. The facade of the centre building, 37 feet wide, was divided into three bays and the length, 47 feet, projected a total of 11 feet 6 inches beyond the wings: probably about 2 feet in front and 9½ feet in the rear. The style of architecture matched that of the other Musket factory structures that Symington had built or was then constructing. Each first-story bay of the wings and center consisted of a recessed panel that was set within a relieving round arch that was supported by a capped pilaster. This device, repeated 25 times on the 280 foot long front elevation of the forging shop, rendered the structure impressive in appearance. The 3-bay wide second story front and rear elevations of the center structure were each comprised of a recessed panel that was set within a relieving flat arch that was supported on capped pilasters, 1st story windows had round arches and second story windows flat arches. Parapet end walls, adorned with rectangular panels, topped with cut stone coping, and turreted at the corners, rose above the gable roofs at the ends of the two wings and also of the center building.

Musket Factory Bldg. No. 14:

Description of Annealing House and Brass Foundry, Musket Factory, 1851 - 1852.

The Annealing House and Brass Foundry, Building No. 14 on the 1859 historical base map, can be seen in the following Harpers Ferry NHP Negatives: HF-51 or 256, a lithograph made in 1856; HF-492, a photo taken in June 1861; HF- 49, a photo taken in June 1861; HF-30, a photo taken in 1862; HF- 11, taken in October 1862; HF-27B, a photo taken in 1864 or 1865; HF- 38, A photo taken in 1864 or 1865; HF-28, a photo taken in 1865 or 1866; and Photo HF-355, taken in 1886, reveals that the structure had been demolished by that date.

The Annealing Shop and Brass Foundry were designed and erected by Major John Symington in 1851-52 at a cost of approximately $ 9,550.00. The one-story structure had brick walls, stone foundations, cut-stone water table, window and door sills, and coping. The door and window frames were apparently of wood(otherwise of cast-iron); the gable roof, covered with slate, had three wooden ventilators mounted on its ridge, one each for the compartments below. The gutters and downspouts of the roof were copper. Inside, two brick walls divided the building into three large rooms or compartments and the floors were paved with brick. Photographic evidence reveals that the 36 feet wide by 109½ feet long edifice was divided into three equal parts and that gable roof of the center ran at right angles to the two gable roofs covering the north and south compartments. The gable ends of the north and south compartments, and also the east and west gable ends of the center section, were all adorned with brick parapet walls that were crenelated, topped with cut-stone copping, and rose above their gable roof. This created the architectural impression of a center building 1½ stories high flanked on either side by a one-story wing. Two square chimneys, each perhaps 10 feet high, rose above the ridge line of the roof, each stack being located over one of the brick interior partition walls. Each chimney apparently served one of the two annealing furnaces that were located in

the building . The structure also held six cast-iron forges and their stacks. The north and south gable ends were each divided into three bays and the 109½ foot length of the east and west elevations each had nine bays, with three bays each in the center and north and south wing sections. Each bay contained the usual Symington round arch that rested on capped pilasters. Recessed within this arch was a panel that contained a tall round arch window, a device that was used in all 11 of the large new brick structures that were erected by Major John Symington between 1845 and 1851.

Description of the Proof House, Musket Factory Bldg. No. 15, 1843-44:

Photographic evidence that contain distant views of the Proof House are as follows: Harpers Ferry NHP Negative Nos. HF- 51 Or 256(1857 lithograph), HF- 49(1861), HF 30(1862), HF-11(1862), and HF- 38(taken ca 1865). The most important view, that which gives the most architectural information about the original appearance of the proof house is HF- 49, made in 1861 after Musket Factory buildings had been burned by the Confederates. Photograph HF-11, made in 1862, suggests that either the ruined walls had been reroofed, or that a new structure, used as a warehouse had been erected on the proof house site by the Union Army in 1862. Re-roofing the brick walls would seem to be the most likely probability. HF-38, taken in 1865 or 1866, reveals that the ruined brick walls of the Proof House had been demolished by the date this picture was taken.

The new Proof House was designed and erected by Major Henry K. Craig in 1843-44 at an approximate cost of $ 2,500.00. The Proof House was 70 feet long by 30 feet wide, with a stone foundation, two-story high brick walls, and a gable roof that was covered with sheet iron. The structure had cut stone water table, cornice, window and door lintels and sills. Photograph HF- 11 indicates the Proof House was three bays wide and five bays long and that except for its iron roof, its exterior probably architecturally matched the new warehouse and new boring mill, which Craig also designed and erected 1843-44.

The windows of the Proof House, like the other two new buildings, had flat arches and the floors were of wood. The ceilings, and perhaps also the interior brick walls, of the structure were plastered.

In 1850 10 large wooden blinds were made and added to the windows of the Proof House.

Description of the Musket Factory Charcoal House, Bldg.16,1845-46:

The Charcoal House, Bldg. No. 16 on the 1859 map, can been seen in the following historical prints and photographs: HFNHP Negative HF-51 or 256, 1857 lithograph, showing western end and south slope of roof; HF 49, photograph taken in 1861, shows distant view of east gable end; this is the best picture of the structure. HF- 38, photo taken in 1864 or 1865, view of what is probably the roof of the Charcoal House, reroofed and apparently still standing at the end of the Civil War.

The Charcoal House was designed and erected by Major John Symington in 1845-46 at an estimated cost of approximately $ 1,200.00. The one-story brick storehouse stood on stone foundations and was adorned with cut-stone water table, sills, cornice, and coping; the building measured 35½ by 35½ feet in size; the door and window frames were of cast iron and the gable roof was covered with sheet iron.

Its interior was divided into four storage compartments by means of two two-inch thick wooden partition walls. Photograph HF - 49, taken during the summer of 1861, after the Confederates had burned the Armory structures, reveals that the Charcoal House was probably three bays wide on its gable end and that each bay was comprised of a recessed panel set within a relieving round arch that rested on capped pilasters. The gable end were further adorned by brick parapet end walls that were turreted at the corners, topped with cut stone coping, and that rose above the ridge of the sheet iron gable roof. Symington's use of this style was to be applied to all the brick shops and storehouses that were to be erected at the Harper's Ferry Armory from 1845 to 1861.

Musket Factory Bldg. No. 17:(1858-61):

Paymaster's Office(Old Pay) Office), 1822-1865:

This structure was located on Lot No. 2, Block B, Shenandoah(on S. Howell Brown's 1852 and 1869 maps of Harper's Ferry). The building is the "Pay Office" on Map No. 7(1834), page 276, and Bldg. No. 4(with a brick vault added to its south or rear side) on Map No. 20(1844), page 407. **Vol. I.**

The Paymaster's Office , a one story brick structure, 24 by 18 feet in size, was **erected** in 1822 at a cost of $ 500.00 The building stood at the northwest corner of Arsenal Square and fronted on Shenandoah Street.

The original wood shingle roof of the office was replaced by a slate roof in 1833. The woodwork, doors and windows of the building were repaired and the interior was repainted in 1839. In 1840 a one-story brick "fireproof" vault, five by seven feet, with walls 2½ feet thick, was added to the rear(south) elevation of the Pay Office. One-story, the ___ vault had a slated roof, an iron door, and a "Andrews Patent combination lock". Cost of construction was approximately $ 234. Plans for the building (see Maps. No. 18 and 19, pp. 405-406) were drawn by the Washington architect Robert Mills. **Vol.I.**

The Pay Office served as the Paymaster's Office from 1822 to 1848, when he removed his office to the remodelled former Superintendent's residence(See **Bldg.**2) in the Musket Factory Yard. The new general Office Building in the Musket Factory yards also contained a new ___ vault for the Paymaster's use.

The former Pay Office was then rented to various merchants as a store.

The old (1822) Pay Office stood on its original site on Lot 2, Block B, Shenandoah Street, until April 1858, when the building and vault were removed to another location in order to clear the Lot 2 site for the construction of present Park Bldg. No. 36. (The brick foundations of Old Pay Office were found still in place in front of Park Bldg. No. 36 in March 1959 when a hole was dug to erect the Park Flag pole).

The Old Pay Office was moved in April 1858 to unknown site in the Musket Factory Yard, but perhaps located at the **west or north** end of the Armory Office Building No. 2. The structure was still standing in July 1865, in the Musket Factory yard, was in **good** condition, and being used as a repair shop.

In September 1863, the Old Pay Office was used as a guard house by the Union Army. It was then described as having three rooms in the main building: a front room 18 by 18 feet and two back rooms, one 18 by 14 feet and the other 14 by 10 feet. The Paymaster's Old Vault, 10 by 7 feet, served as the "dungeon" and was described as being "burglar, air and light **proof.**"

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(1). Superintendent George Rust,Jr., to Chief of Ordnance, Col. George Bomford, May 11, 1833, Reel 22, Vol. 14, p.1393.

Musket Factory Bldg. No. 18:

Description of the Rolling Mill, Musket Factory, 1852-54:

The Rolling Mill is Building No. 18 on the 1859 Historical Base Map.

The Rolling Mill was designed by either Major John Symington or Brevet Colonel Benjamin Huger, and in the same architectural style that Symington had been applying to all new workshop shops that had been erected since 1846. The new mill was constructed by Benjamin Huger in 1852-54 at an approximate cost, including machinery, of $ 29,032.

The Rolling Mill can be seen in the following Harpers Ferry NHP Negatives: HF- 11, distant view taken in October 1862; HF- 10, closeup, taken in October 1862; HF- 9, taken in October 1862.; HF- 83, taken about 1875; HF- 492, taken about 1880; and HF- 99, taken about 1892, showing the rolling mill rebuilt as a pulp mill.

The Rolling Mill was a one-story, 16½ feet high, brick shop on stone foundations. The building was 146 feet long and 45 feet wide and its gable roof was covered with slate. The water table, sills, and coping were of cut stone and the gutters and downspouts were of copper. The gable ends were comprised of four bays and the long sides were each divided into 14 bays. Centered on the south(canal) long side was a low one-story brick wheel house with a slate covered gable roof. This structure covered the cast iron water wheel that drove the machinery in the shop. Each bay was comprised of a round arch that was supported by capped brick pilasters. A recessed panel within each arch contained a round, arched window or door. Brick parapet end walls, topped with cut-stone coping and crenelated, rose above the roof ridge at both gable ends of the main structure and also at the south gable end of the wheel house.

Inside the floor was paved with stone. There were two reverberatory furnaces that were served by two brick chimney stacks that were 45 and 40 feet high, also one cast-iron forge, two tilt hammers, one large lathe for rollers, two trains of rollers, 13 and 8 inches in size, large shears, and a fan blower. A large cast-iron flume conducted the water from the armory canal to the forebay and the cast-iron water wheel was described as being '15 feet cube".

Musket Factory Bldgs. Nos. 19 and 20:

Lime House, 1852-61: Bldg. No. 19.

The Lime House, Bldg. No. 19 on the 1859 historical base map, was constructed by Superintendent Benjamin Huger in the Musket Factory Yard in 1852. The size and exact location of this frame storehouse in the armory yard are not known. The Lime house was probably a one-story building.

Ice House, 1853-61: Bldg. No.20.

The **Ice House** was erected in the Musket Factory yard by Superintendent Benjamin Huger in 1852, its exact location in the yard is unknown. The Ice House, Bldg. No. 20 on the 1859 historical base map, was a one-story brick structure, 20 feet square and 13 feet high.

Description of the Connecting Shop, Bldg. No.21, Musket Factory,1860-61.

Bldg. No. 21 on the 1859 Historical Base Map is located between Bldg. No. 7,the Millwright Shop(former Stock House) on the east and the Grinding Mill, Saw Mill, and Carpenters Shop, Bldg. No. 8, on the west.

The Connecting Shop was designed by Master Armorer Armistead M. Ball and constructed under the supervision of Superintendent Alfred M. Barbour in the period September 1860 to April 1861 at an approximate cost of $ 5,951. The edifice was probably not completely finished when the Civil War commenced.

Bldg. No. 21 can be seen in the following Harpers Ferry NHP Negatives: HF-223, a drawing made in July 1861; photos taken in October 1862 include HF- 10, HF-11, HF-30, HF-240, and HF-492; the structure was still standing in 1865-or 1866,see HF- 38; and HF-355,a photo taken about 1886 reveals that Bldg.No.21 had been demolished by that date.

The Connecting Shop was a two-story brick workshop 36 feet wide and apparently eight bays or perhaps 88 feet long that adjoined Bldg. No. 7 on the east gable end and Bldg. No. 8 on the west gable end. The Connecting Shop was designed in the same architectural style that Major John Symington had first introduced at the Harpers Ferry Armory in 1846 and had also been used when he designed and constructed Bldgs. No. 7 and 8.

The Connecting Shop, Bldg. No. 21, had stone masonry foundations, brick walls, cut-stone water table and window sills; and the door and window frames were of cast-iron, The gable roof, covered with slate, had copper gutters and down spouts, and also probably had lightning rods attached.

Gable ends walls of Bldgs. No. 7 and 8 also served as the gable end walls of Bldg. No. 21. The north(front) and south(rear) elevations of the Connecting Shop were each apparently divided into eight bays. The first story openings,

which had round arches, were set in recessed round archs that were supported by brick capped pilasters. The second story windows, topped with flat arches, were located in recessed rectangular recessed panels, in the identical style that Symington had applied to adjoining Bldgs. No. 7 and 8. As a part of the 1860-61 construction, a second story of brick was also added to the Grinding mill, the east wing, Bldg. 8A of Bldg. No. 8.

In the normal practice of that time, the exteior brick walls of the Connecting Shop would also have reached several coats of oil paint.

Lightning rods were also probably installed on the roof.

Description of the Bell Tower, Bldg. No. 22, Muket Factory, 1860-61:

Bldg. No. 22 on the 1859 historical base map is located between and adjoins Bldg. No. 6, the Machine and Stocking Shop on the east and Bldg. No. 7, the Millwright Shop(formerly the Stock House) on the west.

The Bell Tower building was designed by Master Armorer Armistead M. Ball and erected under the supervision of Superintendent Alfred M. Barbour in the period September 1860-April 1861 at an approximate cost of $8,074. The structure was probably not completely finished when the Civil War began.

The Bell Tower can be seen in the following Harpers Ferry NHP Negatives: HF-240, drawing made in July 1861; photos made in October 1862 include HF- 240,492, HF -10, HF- 11, and HF -30; and HF-38, taken in 1865 or 1866, reveals that Bldg. No. 22, the Armory Bell Tower, had been demolished by that date.

The Armory Bell Tower was a three-story brick shop that was adorned by a square and crenelated tower that rose to a height of five stories. The main shop was 36 feet deep and three bays, or about 33 feet wide, built so that it connected Bldgs. No. 6 and 7, using their gable end walls as the Bell Tower shop's side walls. It was designed in the same architectural style that Major John Symington had first introduced at the Harpers Ferry Armory in 1846. Like the other shops erected by Symington, the Bell Tower had stone masonry foundations, brick walls, and cut-stone water table, window sills, and coping. The door and window frames were of cast-iron . The gable roof was covered with slate; it probably had lightning rods, and the gutters and downspouts were of copper.

The gable roof of Bldg. 22 ran at right angles to Bldgs. 6 and 7, and the gable ends of the Bell Tower, which formed the front(north) and rear(south) elevations of the new shop, were treated in the usual Symington manner, that is, with brick parapet end walls, topped with cut-stone coping and crenelated, that rose above the ridge of the roof at either end.

The center bay of the three-bay wide north or front facade was comprised of a square bell tower that rose to a height of five stories. The first story of the tower building contained a center door that was flanked on either side by the usual Symington, round arch window that was set within a recessed panel beneath a round arch that was supported by capped brick pilasters. Second and third story windows had flat arched that were set in recessed panels which also had flat arches. The front and rear elevations of Bldg. No. 22 thus blended perfectly with the facades of the adjoining Bldgs. No. 6 and 7 , which had both been designed and erected by Superintendent Symington.

At the fourth story level the square belfry was slightly set back. Each elevation contained one tall and open round arch window above which, at the fifth story level, was set a small and open round window. The top of the tower was adorned with four small turrets, one each set at a corner.

Under the normal practice of that time, the exterior brick walls of the Bell Tower, Bldg. No.22, should also have received two coats of oil paint. The roof also probably had lightning rods.

Musket Factory Bldgs. erected 1842-1861:

23. Engine House, 1843-1848

Built in 1843 by Major Henry K. Craig, this frame Engine House for an Armory Fire engine is believed to have been situated in the U.S. Musket Factory yard, but its exact location and size are unknown. If located in the yard, the wooden engine house was undoubtedly demolished or removed when the brick Engine and Guard House was constructed at the Musket Factory in 1847-48.

24. Lime House, 1843- 1852.

This one-story frame lime house, size unknown, was constructed by Major H. Craig in the Musket Factory Yard in 1843. Its exact location in that yard is unknown. The wooden lime house was demolished and replaced by a new store house for lime in 1852.

Musket Factory Bldgs. erected 1842-1861:

25 Coal Shed and Scales for Coal, 1849

This wooden shed on stone foundations was erected by Major John Symington in the Musket Factory Yard in 1849 to shelter the coal scale. Cost of construction was about $ 85.00. The exact location of the caol shed and scales is unknown.

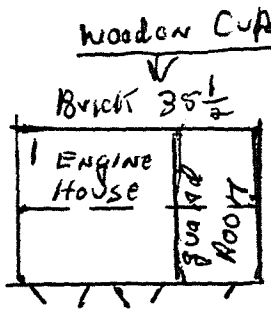
26. Horse and Carriage Shed, 1851-1856.

A frame horse and carriage shed, size unknown, was erected by Superintendent Benjamin Huger at a cost of $ 105 in December 1851. The one-story building was located in the Musket Factory, apparently somewhere near the main entrance gate and the Armory Office ;Bldg. No. 2. The structure was removed from the armory yard in 1856 and relocated to a site located on the south or west site of North Cliff(or Potomac) Street.

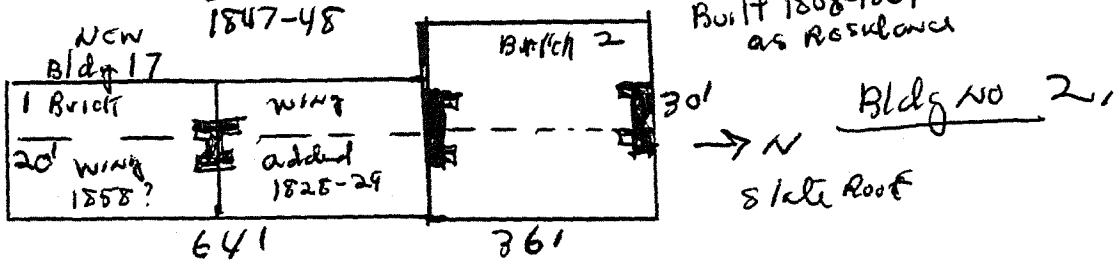
27. Horse Shed, 1856-61:

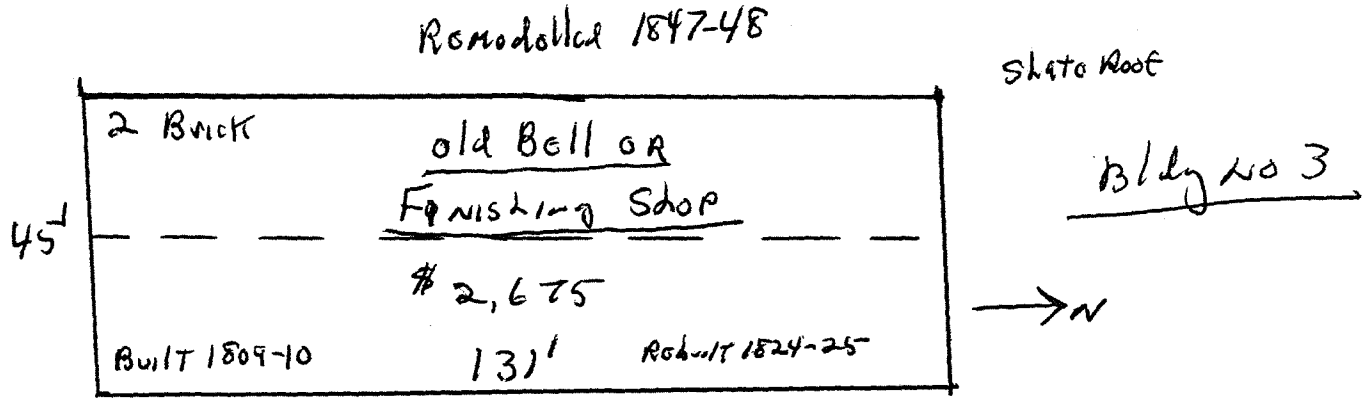
A new frame horse shed, one story, size unknown, was erected in the Musket Factory yard under the Baltimore and Ohio trestle by Superintendent Henry W. Clowe in 1856. The exact location of the shed is unknown, but it was probably situated near the main entrance gate and also the Armory Office , Bldg. No. 2.

Musket Factory 1842–1861

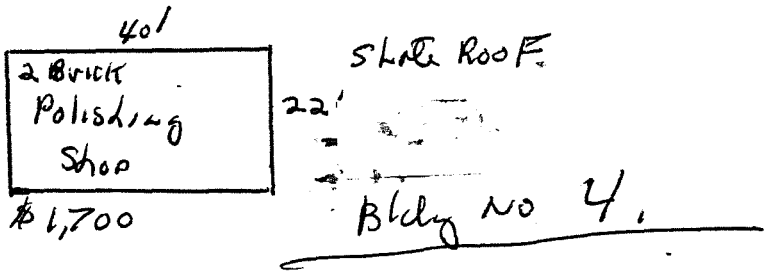


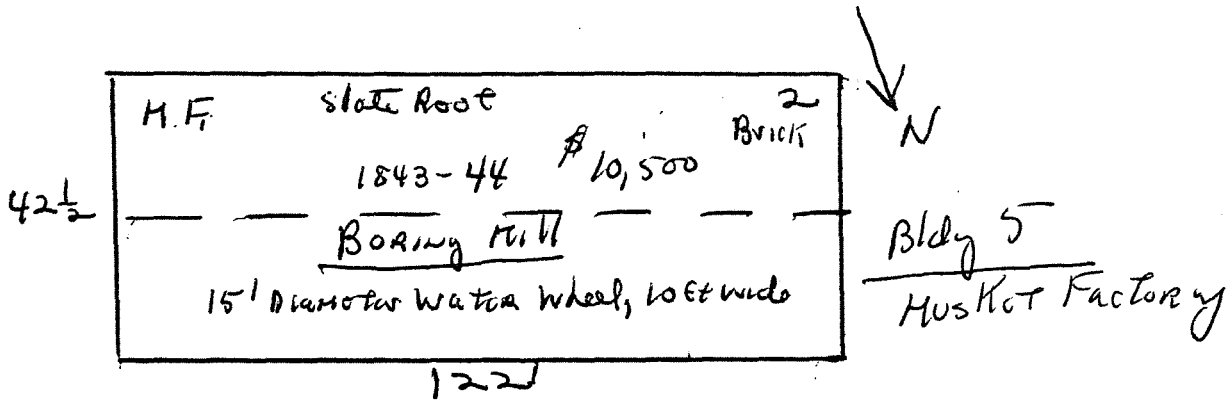
Engine and Guard House
Bldg No 1
1847–48
$ 1,540

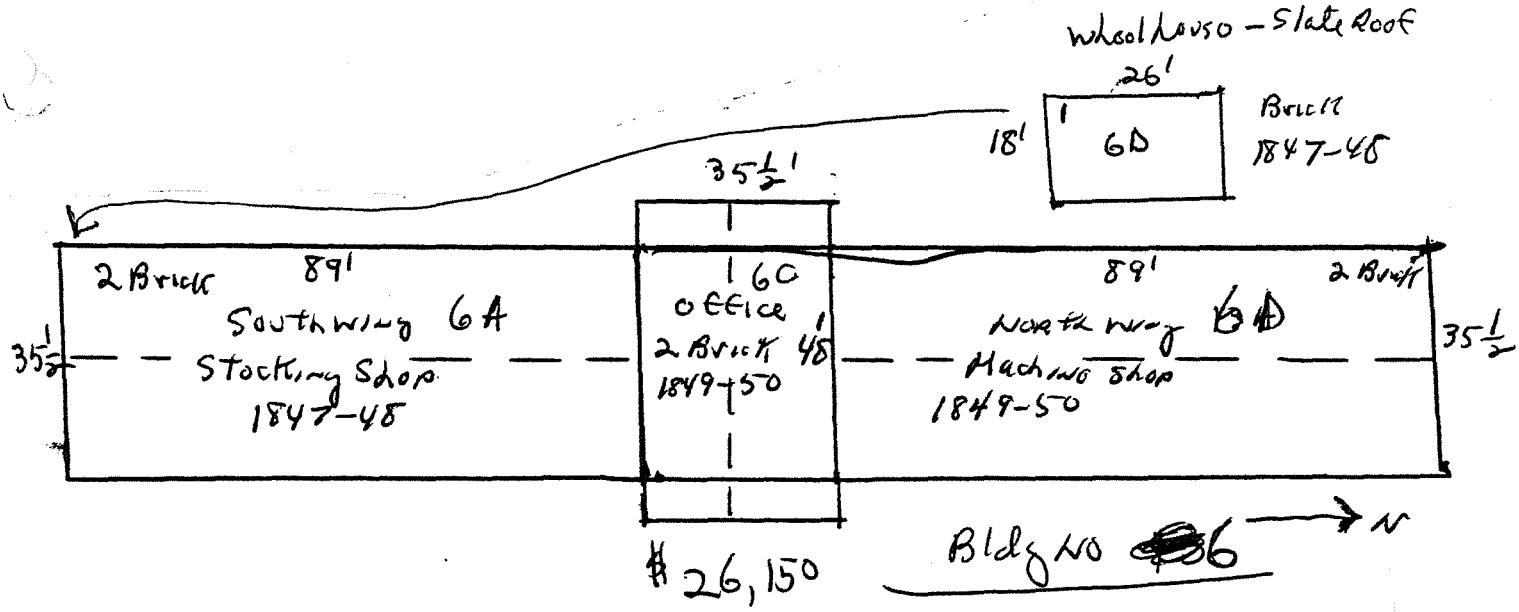




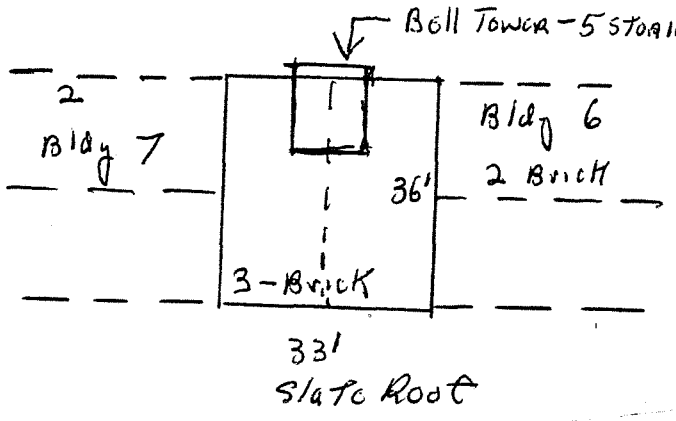
Musket Factory 1842-1861



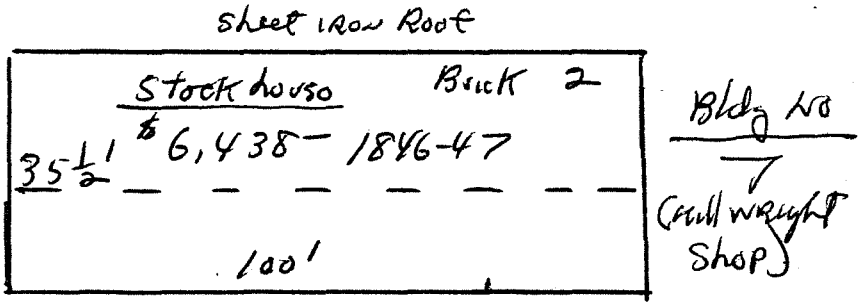




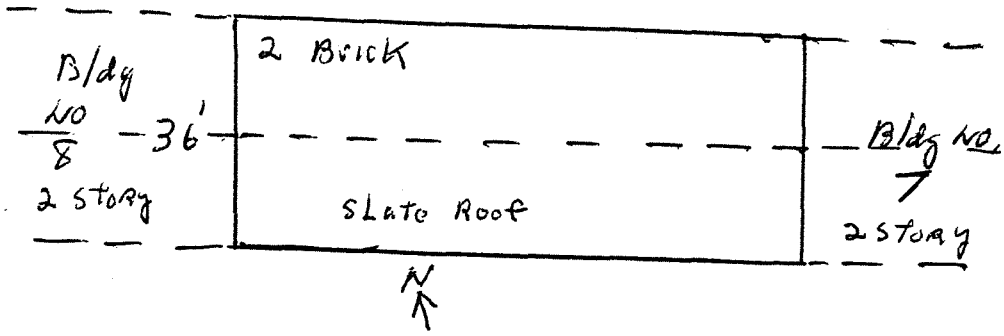
Bldg No. 22 – Bell Tower



Master Armorer
Armistead H. Bell
1860–61
Cost $ 8,074.

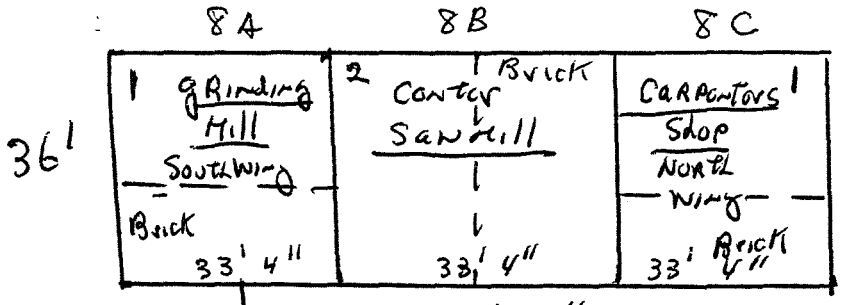


Bldg 21
Connecting Shop



Master Armorer
Armistead H. Bell
1860–61
Cost $ 5,951.

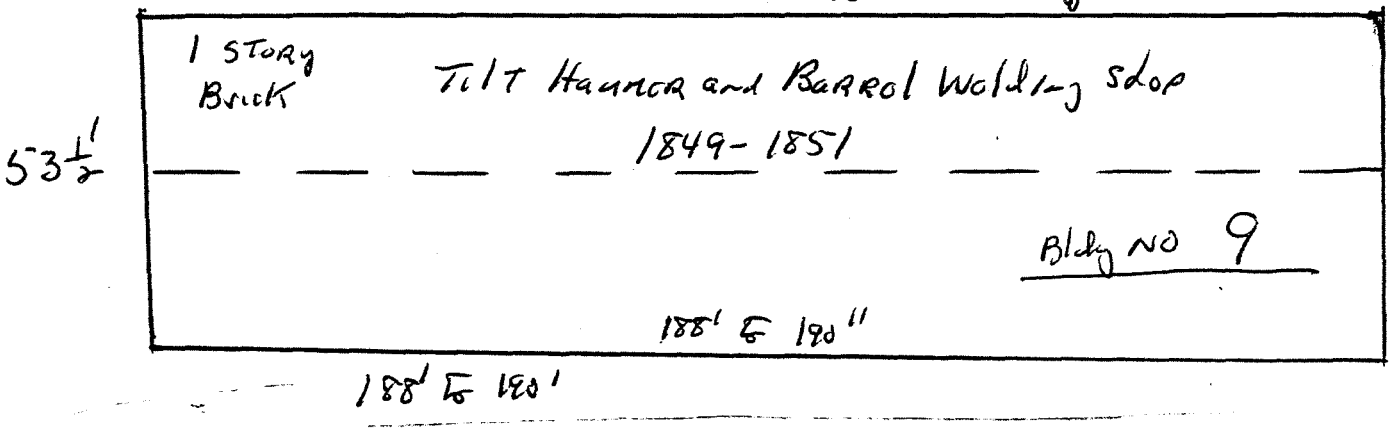
Musket Factory 1842–1861



Bldg No. 8

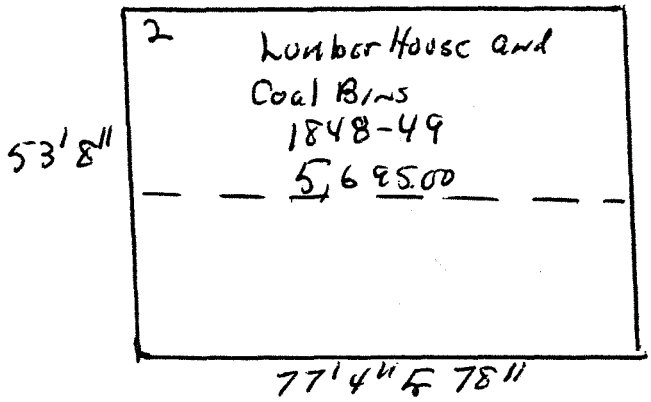
Slate Roofs

$9,730.00



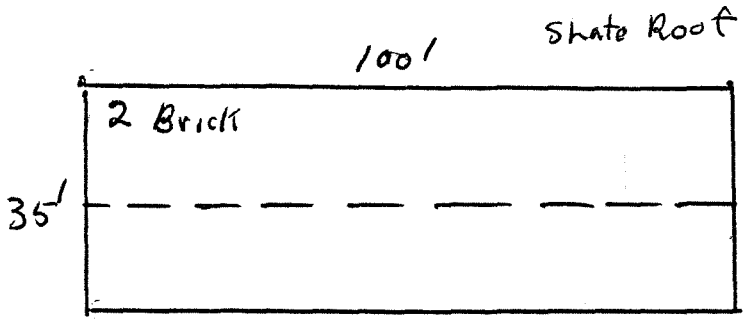
Bldg No 9

Brick & Stone Slate Roof

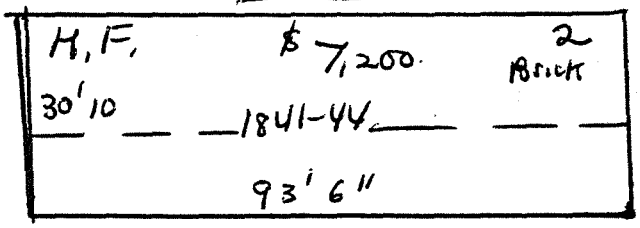


Bldg No. 10

Muskot Factory Shops 1842 - 1861



Stock and Store House
(New Arsenal)
1854-1855
$8,800



Bldg 12
Muskot Factory
Slate Roof

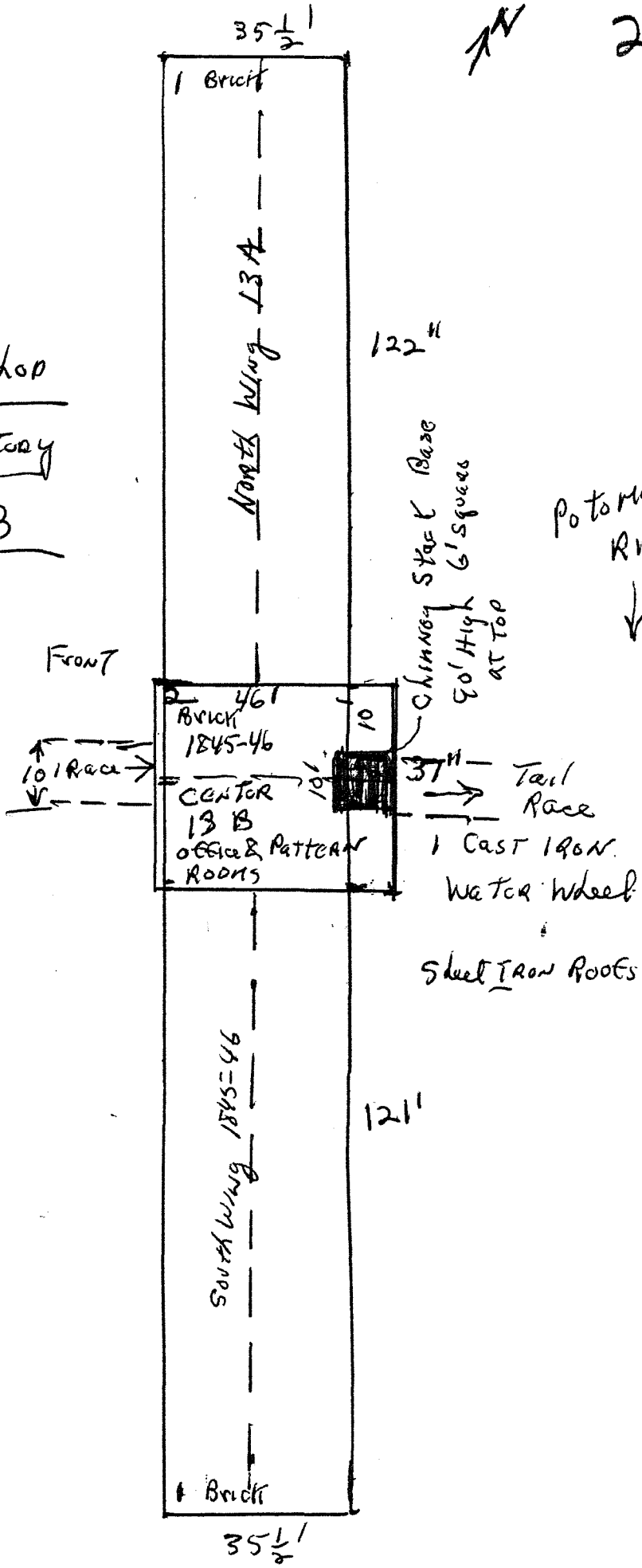
Smiths or Forging Shop

Musket Factory

Bldg No 13

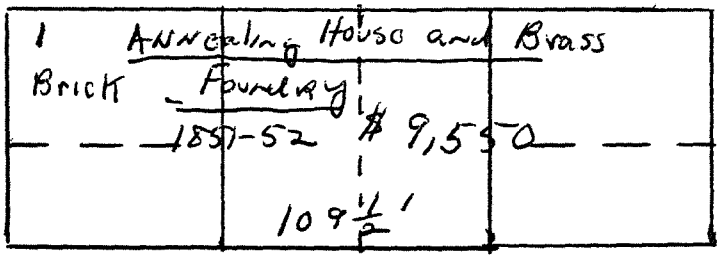
1845–1848

$23,600



Musket Factory

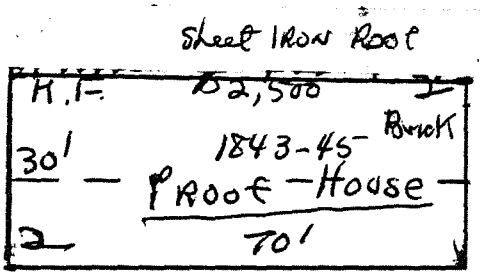
300



Bldg No. 14

Slate Roof

30' = 1"



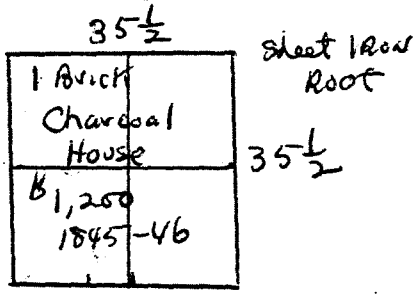
N

Bldg 15

Musket Factory

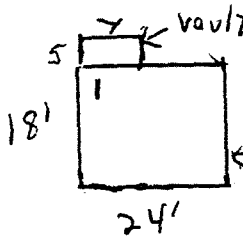
Sheet Iron Roof

Bldg No. 16



Bldg No. 17

Old Pay office, erected 1822
Relocated to Musket
Factory Yard)
April 1858

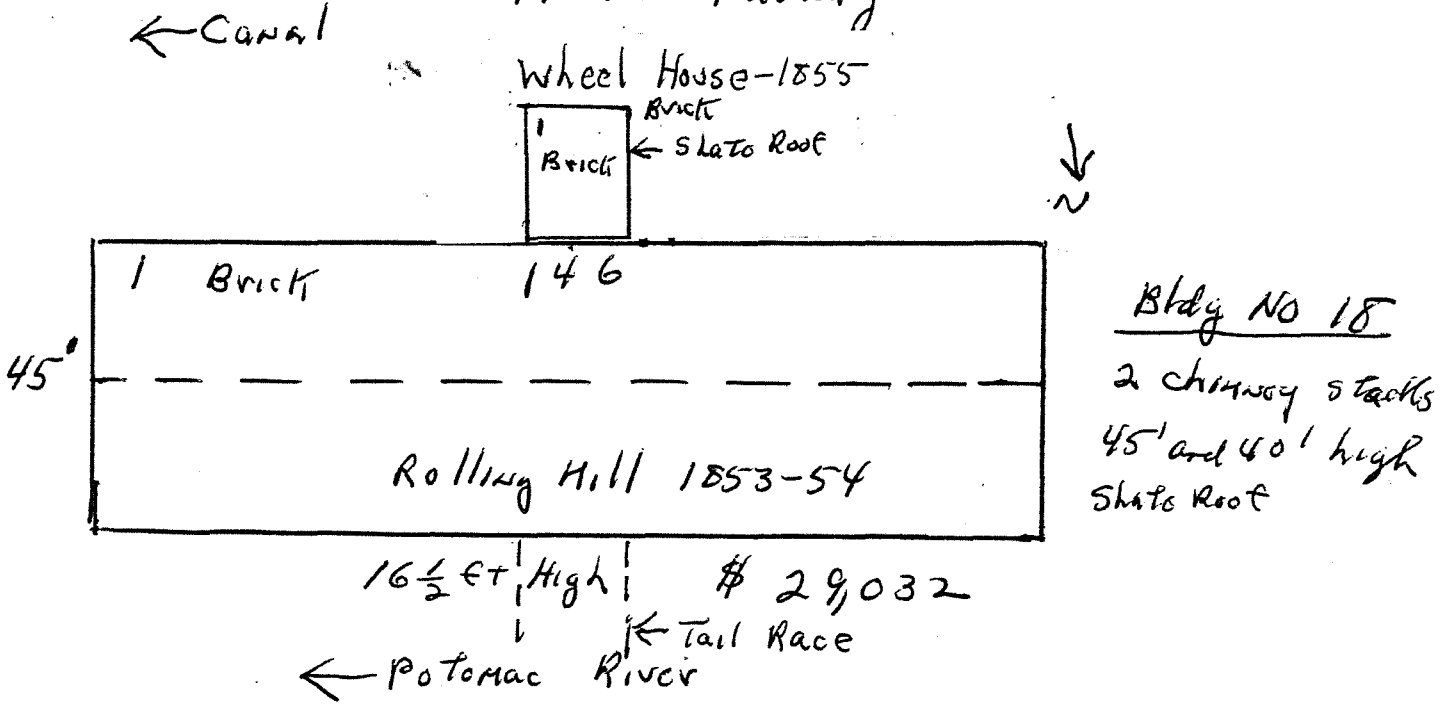


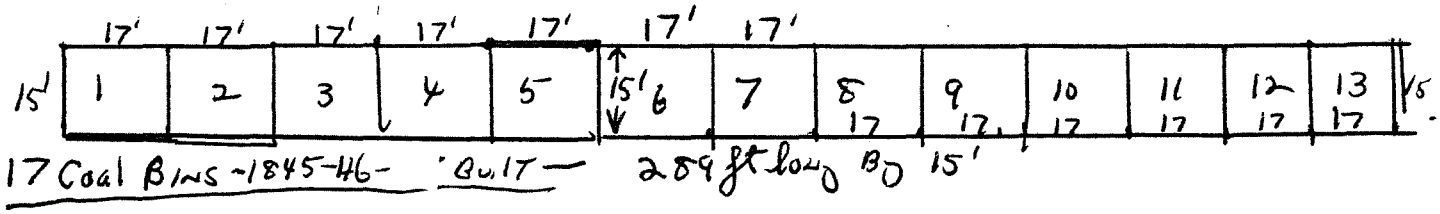
Musket Factory 1842-1861

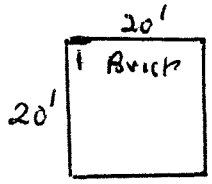
301

old
[Bldg No 17 (1859 map) probably did not Exist]

Musket Factory







Bldg 20

Ice house
1852
13 Ft high
Slate Roof (Probably)

B. BUILDINGS STANDING ON OLD ARSENAL SQUARE, BLOCK A, Lots 1 to 7, and Block B, Lots 1 and 2, Shenandoah Street, 1859-61:

1842 - 1861

Superintendent's Old Office, Arsenal Square, 1832-65:

This building was located at the northeast corner of Arsenal Square on Lot No. 1, Block A, Shenandoah Street(on S. Howell Brown's 1852 and 1869 Maps of Harper's Ferry). The structure appears as the" Supt's Office" on Map No. 7(1834), page 276, and as Bldg. No. 1 on Map No. 20(1844),p. 407. Vol. I.

This building, a one-story brick edifice with hipped roof, and measuring 28 by 21 feet in size, was erected on the corner of Arsenal Square as a dwelling house at some undetermined date after 1811 and prior to 1826. From October 1826 to 1832 the structure served as the residence of Armorer James Clark, who paid an annual rent of $ 20.00. (For a distant view of what is probably this dwelling house, see Photo No. 2, ca. 1826, page 152). Vol.I.

In August 1832 the Armory took possession of the building and remodelled it for use as the office of Superintendent George Rust, Jr. In 1833 the original wood shingle roof the the office was slated in order to lessen the danger of fire to the two brick arsenals. In 1841 the Superintendent's office was whitewashed inside and the slate roof was repaired.

The Office was used by SuperintendentsRust, Edward Lucas, Jr., Major Henry K. Craig, and Major John Symington as the administrative headquarters of the Armory from 1832 to 1848. In 1848 the Superintendent's Office was relocated in the former Superintendent's Residence(See item 2), which was situated in the Musket Factory yard. The Old Office was used as school house by the Harpers Ferry Female Institute from 1848 to May 1854. In May 1854, the structure was leased to the town government, which used the building as a school house to 1856, and from 1856 to 1861 as a town hall.

The Superintendent's Old(1832) Office was still standing on the northeast corner of Arsenal Square at the end of the Civil War, in 1865.

In July 1865, the Old Office was being utilized as a U.S. Post Office.

The Superintendent;s Old Office, together with Lot 1, Block A, Shenandoah Street, was sold to Thomas J. Burley (or Borley) in December 1869 for $ 2,025.00. The final and abated price that he actually paid was $ 450.00. The U.S. issued the deed to Burley for this property on November 6, 1879.

The Large Arsenal, 1799-1861. Arsenal Square:

The Large Arsenal stood on portions of Lots No. 2 to 6, Block A, Shenandoah Street.

The Large Arsenal is Bldg. No. 12 on Map No. 2 (1803), p.55, the "Old Arsenal" on Map No. 7(1834), p. 276; and Bldg. No. 2 on Map No. 20(1844), page 407. See Photo No. 1, ca. 1803, p.63. and Photo No. 2, ca. 1826, p. 152. Vol. I.

The Large Arsenal, designed and built by Paymaster John Mackey in 1799-1800, was a two and one-half story brick structure with stone foundations but no cellar, and with a gable roof that was covered with oak shingles.

The dimensions in 1799 were given as 120 by 27 feet "within" the walls; the 1811 inventory of buildings listed the dimensions as 125 by 31½ feet; and the 1821 building inventory reported the size to be 125 by 32 feet. Its value in 1821 was set at $ 12,000.

Archeological investigation has revealed that the stone foundations of the Large Arsenal were five feet deep and included a center stone wall that ran the entire length of the structure. The center wall was included to give additional support to the beams of the first floor.

The front(Shenandoah Street) elevation of the Large Arsenal was divided by means of a central pedimented pavilion that appears to project foreward slightly, into three sections and the two wings and center were each divided into three bays. The first story of the facade of each section contained a center door that was flanked on either side by a round arched window and the second story above held three more round arched windows. The rear or river elevation presumably held 18 round arched windows. The end elevations were two bays wide and held four round arch windows, two at the first and second floor levels at each end. Above these and centered at the pedimented gable endwall at the third story was a small round window. According to these calaculations, the Large Arsenal, in 1799, had 37 round arched windows, two round windows, and three doors. In addition there were also apparently 12 dormer windows in the roof. The round arch windows probably had exterior shutters.

The Large Arsenal was painted on the exterior for the first time in 1819. The building had no chimneys or fireplaces in order to reduce the danger from fire and to further lessen this risk, the roof was slated in 1825.

In 1829 $ 808.54 was spent repairing the arsenals. This work involved "taking out the old frame and putting in new one at the arsenal". The central pedimented pavilion and 12 dormer windows may have been removed from the roof of the Large Arsenal as part of this rebuilding. The carpenters made 38 windows frames, 1,640 lights of new sash, and 37 pairs of panelled shutters. This suggests that all of the original window frames, glass, and windows, and the exterior shutters of the Large Arsenal were replaced in 1829. The brick and stone work of the Large Arsenal was also repointed at that time.

In 1833 228 feet of down spouting and 20 feet of spouting were put up on the roofs of the two brick Arsenals on Arsenal Square.

The Large Arsenal was used from 1801 to ca. 1850 for the storage of muskets and rifles manufactured at the Harper's Ferry Armory.

Because of the decayed state of the old arsenal, it was decided that it was no longer safe to store small arms, which were quite heavy, in the Large Arsenal. The structure was thus used from ca. 1851 to 1861 only for the shortage of light supplies. During the period following the John Brown Raid, October 1859 to April 1860 and from February 1861 to April 18,1861, the company of U.S. soldiers sent to guard the Armory were quartered on the first floor of the Large Arsenal.

U.S. Soldiers set fire to the Large Arsenal on April 18,1861 in order to destroy the supplies stored in the structure to prevent these items from falling into the hands of approaching Confederate troops. This fire also destroyed the Large Arsenal.

The Small Arsenal, Arsenal Square, 1806-1861:

The Small Arsenal stood party on Lot No. 7, Block A, Shenandoah Street, and partly on on Washington or High Street extended to the W.&.P.R.R. line.

The Small Arsenal is the "New Arsenal" on Map No. 7(1834), p. 276, and Bldg. No. 3 on Map No. 20(1844), p.407. Vol.I.

The specifications for the Small Arsenal were provided by Secretary of War Henry Dearborn and Paymaster Samuel Annin constructed the edifice in 1806-07.

The 1806 specifications called for a two-story brick structure with cellar, interior dimensions of 64 by 32 feet, and a gable roof covered with wood shingles. The 1811 inventory of buildings described the Small Arsenal as brick, two stories with cellar, and dimensions(exterior) of 68 by 36 feet. The 1821 building inventory lists the structure as valued at $ 8,000 and its size as 68 by 36 feet.

As constructed in 1806 the Small Arsenal was a two-story brick structure, 68 by 36 feet, with a full cellar and gable roof that was covered with wooden, probably cypress, shingles. The brick walls were two feet thick and the edifice was constructed without chimneys and fireplaces in order to reduce the danger from fire. There were two rows of stone columns in the cellar and probably also two tiers of wooden columns on the floor above to provide greater support for the 1st and 2nd story floors on which heavy arms were to be stored.

The length of the Small Arsenal fronted towards the Potomac River and the Wager Ferry Lot. This facade was divided into three bays. The center bay of the first story contained the main entrance and each flanking bay held a held a window with nine over nine lights and topped with a flat arch. The second story was occupied by three similar windows that were located above the first story openings. The rear elevation presumably also divided into three bays on each floor, contained six more flat arched windows. One narraw end of the Small Arsenal fronted on Shenandoah Street and the other on the Shenandoah River. These gable end walls each held only one small window that was located high near the peak of the gable roof. The Small Arsenal, in the brick superstructure, thus appears to have had one large door, 11 large nine-over nine light windows and two small windows in the gable end walls. In 1852 the building held 20,000 small arms and 20,507 on June 30,1860.

Archeological investigation has revealed that the stone cellar walls probably contained a total of eight small cellar windows that were protected by iron bars and a stairway in one corner that led from the exterior down into the basement.

The exterior of the Small Arsenal was painted for the first time in 1819 and its roof was slated in 1825 in order to reduce the danger from fire.

The brick work of the Small Arsenal was repointed in 1829 and some of its windows were repaired. In 1833 downspouts and spouting were installed on its roof.

The Small Arsenal was utilized for the storage of muskets and rifles from 1807 to 1861. There were 4,287 of these small arms stored in this structure on April 18, 1861; U.S. soldiers set fire to the Small Arsenal on that date in order to prevent these weapons from felling into the hands of approaching Confederate soldiers. The fire destroyed both the arms and the Small Arsenal.

D. OTHER ARMORY STRUCTURES STANDING
1859- 1861-

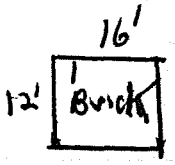
DESCRIPTION OF:

1842- 1861:

DESCRIPTION OF Armory Powder Magazine, Camp Hill, 1854.

The new Powder Magazine was located on the brow of Camp Hill immediately west of the Musket Factory Bldg. No. 18, the Rolling Mill, on the 1859 Historical Base Map.

The Powder Magazine was designed and erected by Master Armorer Samuel Byington in 1854 at a approximate cost of $ 1,000. The one-story brick building had a slate roof and measured 12 by 16 feet in size. The building was a surrounded for security reasons by a brick wall that was coped with cut stone, and had a iron fenceing mounted on a portion of the wall. The structure had a lightning rod. A road about 200 yards long lead from Washington Street to the new magazine.



Powder Magazine 1854-55
Camp Hill
Slate Roof
Cost $1,000

C. DESCRIPTION OF

U.S. RIFLE FACTORY BUILDINGS:

STANDING in 1859-61:

1842- 1861.

(Bldg. Nos. same as those used on 1859 Historical Base Map.)

Rifle Factory Bldg. No. 1:

Description of the Filing Shop, 1843-44:

Because of its location to the south(or rear) of two large two-story work shops that fronted on the south bank of the Shenandoah Canal , the 1844 Filing Shop cannot be seen in the known historical drawings of the U.S. Rifle Factory. This includes the 1857 lithograph, HFNHP Negative No. HF-490; and the sketch by Lieut. James G. Benton, drawn about June 1853 Negative No. 794; NHP Negative No. HF-37, which was taken during the Civil War, after June 1861,when the workshops had been burned and prior to the stone and brick walls being levelled, however, provides a view of what are probably two bays of the east wall at the southeast corner of the Filing Shop. The building has one-story high stone walls topped by a brick second story. The two or three windows visible in the east wall near the southeast rear corner are topped with flat arches of cut stone. Based on this limited visual and documentary evidence the new Filing Shop may be dsecribed as follows:

The new Filing Shop was designed and erected by Major Henry K. Craig in 1843-1844 at a approximate cost of $ 1,000. The two-story structure was from 73 to 74 feet long and from 24 to 25½ feet wide.

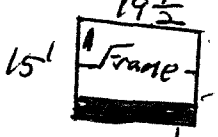
The first story or high foundation was of stone and the upper story of brick. The cornice, window and door sills and lintels were of cut stone, as were the exterior stone steps . The windows and doors had flat arches and the gable roof was covered with slate. The ceilings were lathed and plastered. Work benches equipped with vices for holding the arms extended around the interior walls of the shop . The general exterior architectural appearance of the new filing shop probably ressembled that of the new warehouse, boring mill, and proof house that Major Craig also constructed at the Musket Factory during the years 1842 to 1844.

Description of the Proof House, Bldg. No. 2, Rifle Factory, 1845:

The Proof House is Bldg. No.2 on the 1859 historical Base Map of the U.S. Rifle Factory.The structure(also bldg. No. 23 on Brown's 1848 map of the Rifle Works), was located on the eastern(lower) end of the Hall Island and immediately north of the Winchester and Potomac Railroad tracks.

The Proof House, erected by Major John Symington in 1845 at an estimated cost of $ 750, was a one-story frame building with a back wall of stone mortar masonry that was 2½ feet thick. The structure was 19½ by 15 feet in size and probably had a slate covered roof. The edifice was used for proofing rifle barrels.

A portion of what may be Proof House, a one-story structure with a two-bay wide gable end wall that is located in the correct position, can be seen on Harpers Ferry NHP Negative HF-490, a lithograph which was published in 1857.



Proof House - Bldg 2
Frame Ca $750
1843
Stone Masonry
Back Wall 2½ thick
Slate Roof (Probably)

Rifle Factory Bldg. No. 3:

Description of Finishing and Machine Shop, Rifle Factory

The Finishing and Machine Shop is Bldg. No. 1 on the 1848 Map(No.6) and Bldg. No. 3 on the 1859 Historical Base Map. The workshop can be seen in the following Harpers Ferry NHP Negatives: No.HF-490(, a lithograph that was published in 1857); HF-794,"A Sketch of the U.S. Rifle Works at Harpers Ferry" by Lieutenant James G. Benton, probably drawn about June 1853); and HF-37 a photograph taken May 22,1865.

The Finishing and Machine Shop was designed and erected by Major John Symington in 1847-48 of approximately $ 26,880.00. This total included $ 10,800.00 for the structure, $ 4,200.00 for the forebays and two six feet cast-iron turbines, and $ 11,880.00 for the machinery. An additional $ 3,320.00 was spent constructing a new main tail race behind the shop. The tail race was 10 feet wide, 6 feet high, covered over,and its side walls, comprised of large stones, were 2½ feet thick.

The finishing and machine shop, was 128 feet 8 inches long and 36 feet 1 inch wide(by actual measuring on the ground in 1959), two stories, brick on stone foundations. At the rear, on the east and west ends, were two brick wings on stone foundations, one-story each, 25 by 25 feet square(by actual 1959 measurement). The door and window frames were of cast-iron, the water table, cornice, coping, and sills were of cut stone. The gable roof were covered with sheet iron and the gutters and spouting were of copper. In 1848 each one-story wing contained a six foot cast-iron turbine water wheel that drove the machinery in the shop. The construction of a dam in connection with the operations of factories located on Virginius Island caused back water that reduced the efficiency of the turbines.

In 1856, the two turbines were replaced at a cost of $ 2,050.00 by a new wooden undershot wheel that was 10 feet in diameter and 12 feet wide. In 1856-57 an "addition to the finishing shop" was erected at a cost of $ 2,860.00.

This was 35 by 25 feet, two stories, of brick on stone foundation, built in the same style as the main shop. The addition thus also had cast-iron window and door frames, copper spouting and gutters, cut stone water table, sills, and coping, and its gable roof was covered with sheet iron. No photo or sketch of the 1857 addition had been found. The building, however, may have been located about 10 feet south of the east wing of the main finishing shop.

In 1850 518 feet of cast-iron stove pipe were installed in the main workshop to heat the building.

HF NHP Negative HF- 794 provides a detailed and apparently accurate view of the Finishing and Machine shop as it appeared about 1853. The main two-story building, 128 feet long, was divided into two wings and a center. Each wing was three bays deep and 4 bays long while the center section was three bays wide and appeared to project slightly. The rear one-story wings were two bay wide and two bays deep. Like the musket factory buildings designed and erected by Superintendent Symington, the rifle factory finishing and machine shop had a round arch for each first story bay with a round arched window recessed within the arch. Rectanuglar bays, with recessed flat arched windows, formed the second story. The gable ends of the two two-story wings and also of the two one-story rear wings were adorned with brick parapet walls that were crenelated and capped with cut stone coping. Similarly the gable ends of the front and rear elevations of center building had like parapet walls. The parapet of the north(front) parapet, however, may have contained a center window that was added in 1849.

U.S. Rifle Factory Bldg. No.4:

DESCRIPTION OF TILT HAMMER AND SMITHS(OR FORGING)SHOP, RIFLE FACTORY, 1849-51

The Tilt Hammer and Smiths Shop is Bldg. No. 4 on the 1859 Historical Base Map. A view of the work shop can been seen in the following Harpers Ferry NHP Negatives, No.HF-490, a lithograph made in 1857;HF-37, a photo graph that was taken on May 22,1865. a distant view of the island ,taken ca,1865 and prior to the great flood of October 1870 is to be found in photo HF-119.

The foundations of the Tilt Hammer and Smiths Shop, Bldg. No.4 were located by Archeologist Edward McMillan Larrabee, during the summer of 1960 in his second season of exploratory excavations at the U.S. Rifle Factory site. His finding confirm the dimensions of the workshop as given by Major John Symington in his annual report for the fiscal year ending June 30, 1850.[1] The stone masonry walls erected by Edward Tearney's crew of masons in 1849 are four feet 4 inches wide.

The Tilt Hammer and Smiths or Forging Shop was designed and erected by Major John Symington in 1849-1851 at a cost of perhaps $ 9,500.00, and with the machinery included, of approximately $ 22,130.00 .The one-story brick building had stone basement, cut-stone water table, sills and coping. The window and door frames were of cast iron and the gable roofs were covered with slate. The gutters and downspouts were of copper. The shop was 110 feet long and 35½ feet wide and was divided into three equal sections comprised of a center building that projected 14 feet to the rear(south), contained an office for the shop foreman, and that was flanked on either side by a wing. There were three exterior wooden doors: one in the center building and

1.Larrabee, Edward McMillan,"Report of the Second Season of Exploratory Archeological Excavations Conducted at the U.S, Rifle Works, Lower Hall Island, Harpers Ferry National Monument, Harpers Ferry, West Virginia, from June 23 through July 6, 1960,"(NPS typescript, Harpers Ferry NM, W. Va., January 30, 1961)pp.20-24, 34.

one in each wing. Judging from Photo HF- 37, each wing was 3 bays wide(long) The center building was three bays wide and 3 deep., and three bay deep. As in all the other Symington designed structures, each bay was comprised of round arch that was supported by capped pilaster, with a round arch window being recessed within each arch. Brick parapet walls, crenelated and topped with cut-stone coping, rose above the gable roofs at the end of each wing and also of the front and rear elevations of the center building, the latter's gable roof being set at right angles to the roofs of the flanking wings. The ridge of the roof of each section was crowned by a wooden ventilator or lantern that was 5 feet wide and 8 feet long.

The machinery in the shop was powered by a four-foot cast-iron turbine water wheel that had been manufactured by James F. Ames of Boston, Mass., The floor of the building was covered with sheet iron. The shop contained nine cast-iron forges, with sheet iron bonnets and smoke flues; also one cast-iron furnace and flue for heating iron and steel. There was 102 feet of 8 inch tin blast pipe and 80 feet of 3 inch blast pipe. One fan-blast machinery was connected by means of this tin pipe to conduct a blast to each of the forges. Anvil blocks of oak timber mounted on stone foundations were located at each of the nine forges. The shop also contained five trip hammers(belt) which were driven by the turbine water wheel.

HF- 794, a "Sketch of the U.S. Rifle Works at Harpers Ferry" ca. 1853, by Lieutenant James G. Benton,

affords a distant and rather indistinct view of the tilt hammer and smiths shop.

Rifle Factory Bldg. No. 5:

313

DESCRIPTION of the ANnealing Furnace and Proof House, Rifle Factory, 1851-52:

The Annealing Furnace and Proof House is Bldg. No. 5 on the 1859 Historical Base Map.

The structure can be seen on Harpers Ferry NHP Negatives HF-490, a lithograph published in 1857; the structure is missing(either hidden by the trees or perhaps demolished) in HF-37, a photo taken at May 22, 1865, the end of the Civil War. This suggests that the brick walls of the Annealing Furnace and Proof House may have been demolished by Union soldiers during the Civil War, either to build huts or in connections with the operations of the U.S. Military railroad on the Lower Hall Island in 1864-65.

Archeologist Edward McMillian Larrabee, during his exploration of the ruins of the U.S. Rifle Factory, 1959-61, did not find the stone foundations of the annealing furnace and proof house.[1] This suggests several possibilities: (1) that the north eastern corner of the island where the building is believed to have stood was excavated and destroyed, together with the structure's foundations, by the construction of Lake Quigley and a pulp mill in 1887. (2) that HF-37, the 1857 lithograph is in error (hence also the 1859 historical base) and the shop was actually located some where south of the line of maon workshops which fronted on the Shenandoah Canal. If this was the case, then the foundations of the annealing furnace and proof house were located in areas that were not explored by Mr. Larrabee.

If my reading of Archeologist Larrabee's 3rd report is correct, however, is appears that about 125 feet of the northeast corner was removed in 1887 for pulp mill purposes, hence the 1851/52 stone foundations may no longer be extant.[2]

1. Larrabee, Edward McMillan,"Report of the Third Season of Exploratory Archeological Excavations Conducted at the U.S. Rifle Works, Lower Hall Island, Harpers Ferry National Monument, Harpers Ferry, West Virginia, from 25 August through 10 November, 1961,(NPS typescript, Harpers Ferry NM, W.Va., April 20,1962)p.58. Not located, some be cause they were not really searched for, were Bldgs. 1, 5, 7 and 8 on the 1859 historical base map. Bldgs. No. 7 and 8 were small structures.
2. Ibid., p.57.

The Annealing Furnace and Proof House was designed and erected by Major John Symington in 1851-52 at a cost of approximately $ 5,100.00. The one-story brick building had stone foundations, cut-stone water table, sills, and coping , and its gable roofs were covered with slate; the floors were probably paved with brick. The gutters and down spouts were of copper. The shop was 60 by 36 feet in size and divided by means of two brick partition wall into three equal compartments. The floor plan followed the usual Symington's scheme: a center building flanked on either side by a wing. The gable roof of the center structure was set at right angles to the similar roofs of the wings. HF-490, the 1857 lithograph, indicates that two square brick chimneys, one located on each parition wall, rose above the roof. The east and west ends of the wings were each divided into three bays. On the front and rear elevations, each section may have been only two bay wide. Each bay was comprised of a round arch supported by brick pilasters capped with cut stone and round headed windows were recessed in each walls, crenelated and topped with cut stone coping rose about the roof levels of the gable ends of the wing and also on the front and rear elevations of the center section. Parapet brick

The roof ridges of the west and west wings were apparently each crowned with with a wooden lantern or ventilator five feet wide and 8 feet long. Inside there was a wooden ceiling, two inside doors-, two doors leading to the exterior. Five of the semi-circular windows had venetian blinds and two windows apparently had inside shutters; there was one, and probably two, annealing furnaces in the shop, one in each wing.

Rifle Factory Bldg. No. 6:

DESCRIPTION OF THE NEW MACHINE SHOP, RIFLE FACTORY,1852-53:

The new Machine Shop is Bldg. No. 6 on the 1859 Historical Base Map. The workshop can be seen in the following Harpers Ferry NHP Negatives: HF-794- "Sketch of the U.S. Rifle Works at Harpers Ferry,"ca. June 30,1853, by Lieutenant James G. Benton';Hf-490, a lithograph that was published in 1857;HF- 37, a photo taken on May 22,1865. These three views all indicate that the new machine shop was a one-story(not two-story) building.

The stone foundations of Bldg. No. 6 were located by Archeologist Edward McMillan Larrabee during the summer of 1960. It was determined that shop was 87 feet 9 inches long, and 35 feet wide, as stated by Col. Huger in 1852, with the center section being 36 feet wide and projecting 4 feet to the front(north) and 14 feet to the rear. It was further established (1) that the west end of the machine shop Bldg.6 was located 58 feet east of the east gable end of Bldg. No. 3, the finishing and machine shop ; and (2) that the east end of the Machine Shop(Bldg. No. 6) was situated 57 feet six inches west of the west gable end of Bldg. No. 4,, the Tilt-Hammer and Smiths Shop .[2]

The discription that follows is based on Col. Huger's brief remarks, the photographic and archoelogical evidence, and a detailed knowledge of the type of workshops that Major Symington designed and erected,1845- 51.

Bldg. No. 6, the new Machine Shop, was designed by Major John Symington in 1850-51 and erected under the supervision of Colonel Benjamin Huger in 1852-53 at a cost, including machinery, of approximately $ 16,980.00. The one-story brick building had stone foundations, a basement, cut-stone water table, sills, step and coping; the door and windows frames were of cast-iron; and the gable roofs were probably covered with slate(or sheet iron). The gutters and down spouts were

1. Larrabee, Edward McMillan,"Report of the Second Season of Exploratory Archeological Excavations conducted at the U.S. Rifle Works, Lower Hall Island, Harpers Ferry National Monument, Harpers Ferry, West Virginia, from June 23 through July 6,1960," (NPS typescript, Harpers Ferry NM, W.Va., January 30,1961),pp.10-19.31,32,34.

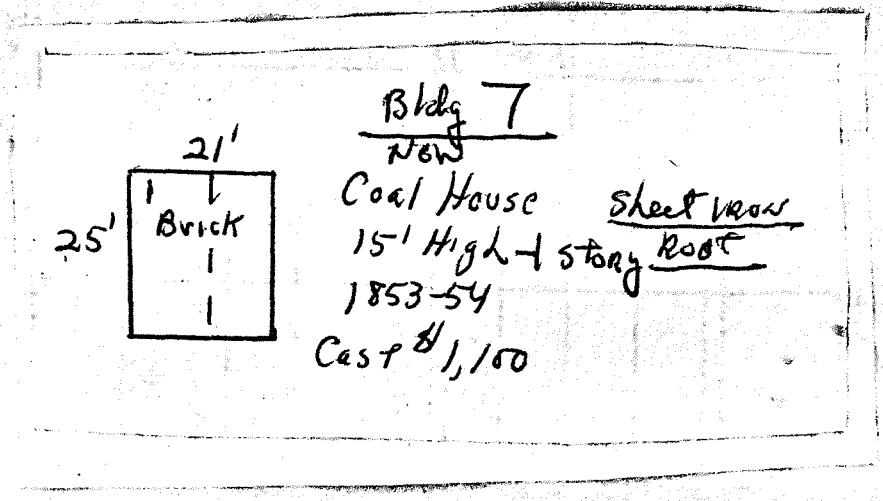
of copper. The building was 87 feet 9 inches long and 35 feet deep. In accordance with Symington's favorite floor plan, the structure was subdivided into three sections, a center building and two wings. The center section was 36 feet wide on the front and rear elevations and 53 feet deep, with the front projecting four feet to the north and the rear project 14 feet to the south. The rear portion contained an office for the foreman of the shop. Each wing was about 25 feet 10 inches long and 35 feet deep. The gable roof of the center was set at right angles to the gable roofs of the two wings; the gabled front and rear elevations of the center and also the gable ends of the two wings were adorned by the usual Symington brick parapet end walls that were crenelated and topped with cut-stone coping, which rose above the ridges of their roofs. The center of the centre structure, in the 1853 and 1857 drawings, appears to be crowned with a wooden cupola or belfry similar in design to the one found on the Engine and Guard House, Bldg. No. 1(the John Brown Fort), at the Musket Factory.

The machinery in this shop was powered by one cast iron turbine water wheel that was located in a wheel pit that was constructed of cut-stone; its forebay was built of stone and cast-iron. A large force pump, for throwing water in case of fire at the factory, was attached to the wheel of the machine shop in 1853.

The shop also probably had lightning rods on its roof and its exterior brick walls painted with two coats of paint, in oil, as was Symington's practice with the other new shops.

Description of New Coal House, Bldg. No. 7, Rifle Factory, 1854:

Designed by Brevet Col. Benjamin Huger and erected by Major William H. Bell in 1854, the coal house was a brick one-story, 15-foot-high storehouse, 21 by 25 feet in size. It roof, probably gable, was covered with sheet-iron. Cost of Construction was about $ 650.

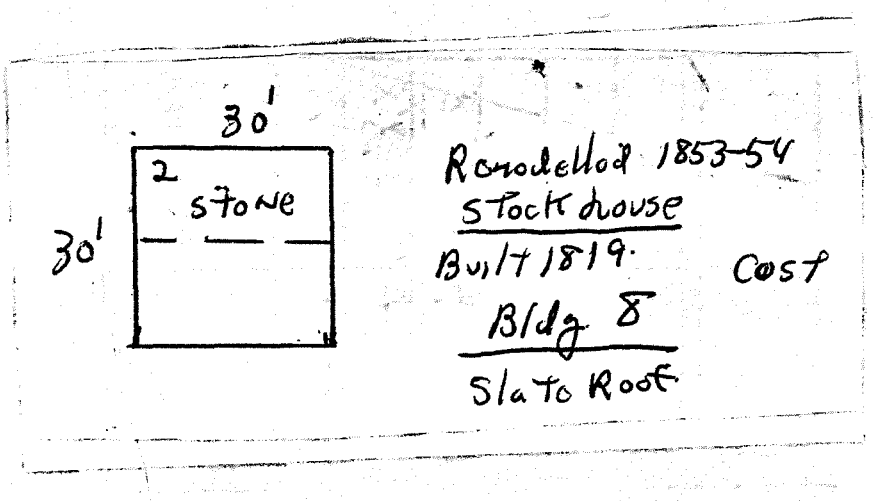


Description of the Remodelled Stock House, Bldg. No. 8, Rifle Factory; 1854:

What is probably this storehouse can be seen in Harpers Ferry NHP Negative 490, and it is also apparently Bldg. No. 22 on Brown's 1848 Map.

This two-story stone shop with gable roof and four chimneys was erected as a smiths or forging shop for the use of Captain John H. Hall in 1819 and served as one of his first two workshops. The shop was 30 feet square and each elevation was apparently divided into three bays. The roof was slated about 1829 and the windows had flat arches. The shop originally contained four forges. In 1854 the old shop was remodelled for use as store house for rifle stocks and two new wooden floors were installed.

The Stock House was remodelled by Major William H. Bell.



Description of the Barrel Drilling and Finishing Shop, Bldg. No. 9, Rifle Factory, 1859-60:

The Barrel Drilling and Finishing Shop, Bldg. No. 9 on the 1859 historical base map, was centered between and adjoined Bldgs. No. 4, the Tilt Hammer and Smiths Shop, and Bldg No. 6, the Machine Shop. Together, the three shops formed a single structure 254 feet long.

Bldg. No. 9 can been seen in Harpers Ferry NHP Negative No. HF-37, a Photo that was taken on May 22,1865.

The Barrel Drilling and Finishing Shop was designed and constructed by Superintendent Alfred M. Barbour in 1859-60 at an approximate cost, including machinery, of $ 15, 820. The workshop was designed in the same architectural style that Major John Symington had first introduced to the armory in 1846 and which had been applied to adjoining Bldgs. No. 4 and 6.

Bldg. No. 9 was a two-story brick workshop that was adorned with a four-story tall clock tower. The edifice was 57½ feet wide and 49½ feet deep. The foundations were of mortar stone masonry, the walls of brick, trimmed with cut-stone water table, window sills, and coping. Window and door frames were of cast iron and the gable roof was probably covered with slate. The gutters and downspouts were of copper and the roof probably had lightning rods attached. Under the normal practice of that day, the exterior brick walls also probably received two coats of oil paint.

The gable roof of Bldg. 9 ran at right angles to the gable roofs of adjoining buildings No. 4 and 6 . The north(front) and south(rear) gable ends of Bldg. 9 had brick parapet walls that were caped with cut-stone coping and crenelated. The north and south gable ends of Bldg. 9 were divided into five bays. The center bay of the north(front) elevation was comprised of

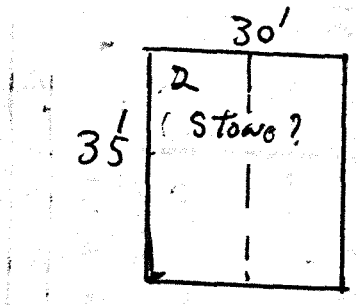
a square clock tower that rose from the grounds to a height of about four stories(or one-story above the roof ridge). The top of the tower was crenelated, having a small turret at each corner, and each recessed solid brick panel in the upper story of the tower contained a round opening that was intended to hold a clock. It is probable, however, that no clocks were ever actually installed in these four openings prior to the destruction of the shop.

The doors and windows of the first-story of the north and south elevations of the Barrel Drilling and Finishing Shop were topped by round arches and were set in recessed panels, under round arches that were supported by brick pilasters. Second floor windows on these elevations had flat arches and were set in recessed rectangular panels, all in the same identical style that Symington had applied to adjoining Bldgs. No. 4 and 6.

Description of
Remodelled Storehouse, Bldg. No. 10, Rifle Factory, 1853:

This structure is probably Bldg. No. 14 on Brown's 1848 map. The building was erected as a storehouse and office for the use of Captain John H. Hall about 1827. The edifice was approximately 30 by 35 feet in size, two stories high, and had a gable roof that was covered with slate. The structure was probably built of stone., and had exterior stairs that led to the second floor. The old building was remodelled in 1853 at a cost of about $ 450.00 for use as a storehouse. In this work, the exterior stairs were removed and new stairs constructed inside.

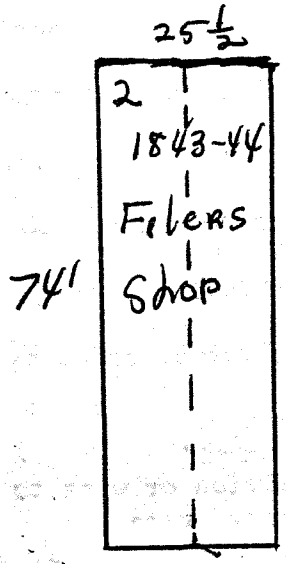
The Store House was remodelled by Brevet Colonel Benjamin Huger.



Remodelled Store House, 1853
Bldg no 10
Built Ca 1827. Cost $450
Slate Roof

U.S. Rifle Factory Bldgs 1842-61

Bldg. No. 1



Cost ~ About $1,000

1st story – Stone
2nd story – Brick

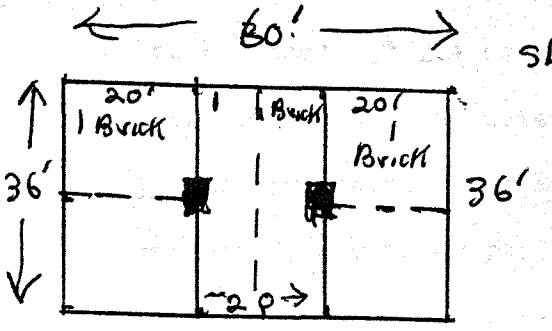
Slate Roof

Bldg No 1

Slate Roof

Bldg No 5

Shenandoah Canal



Slate Roof

Bldg No. 5

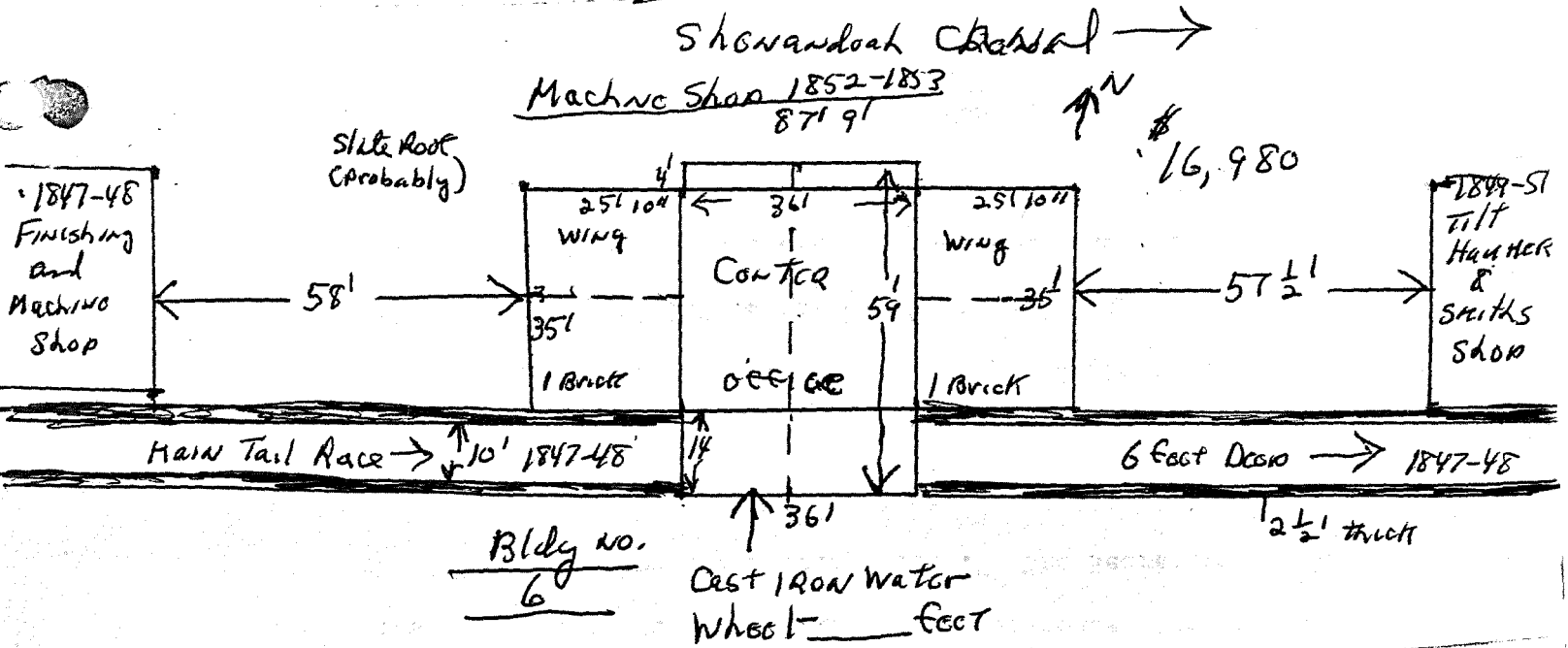
Annealing Furnace and Proofhouse

1851-52

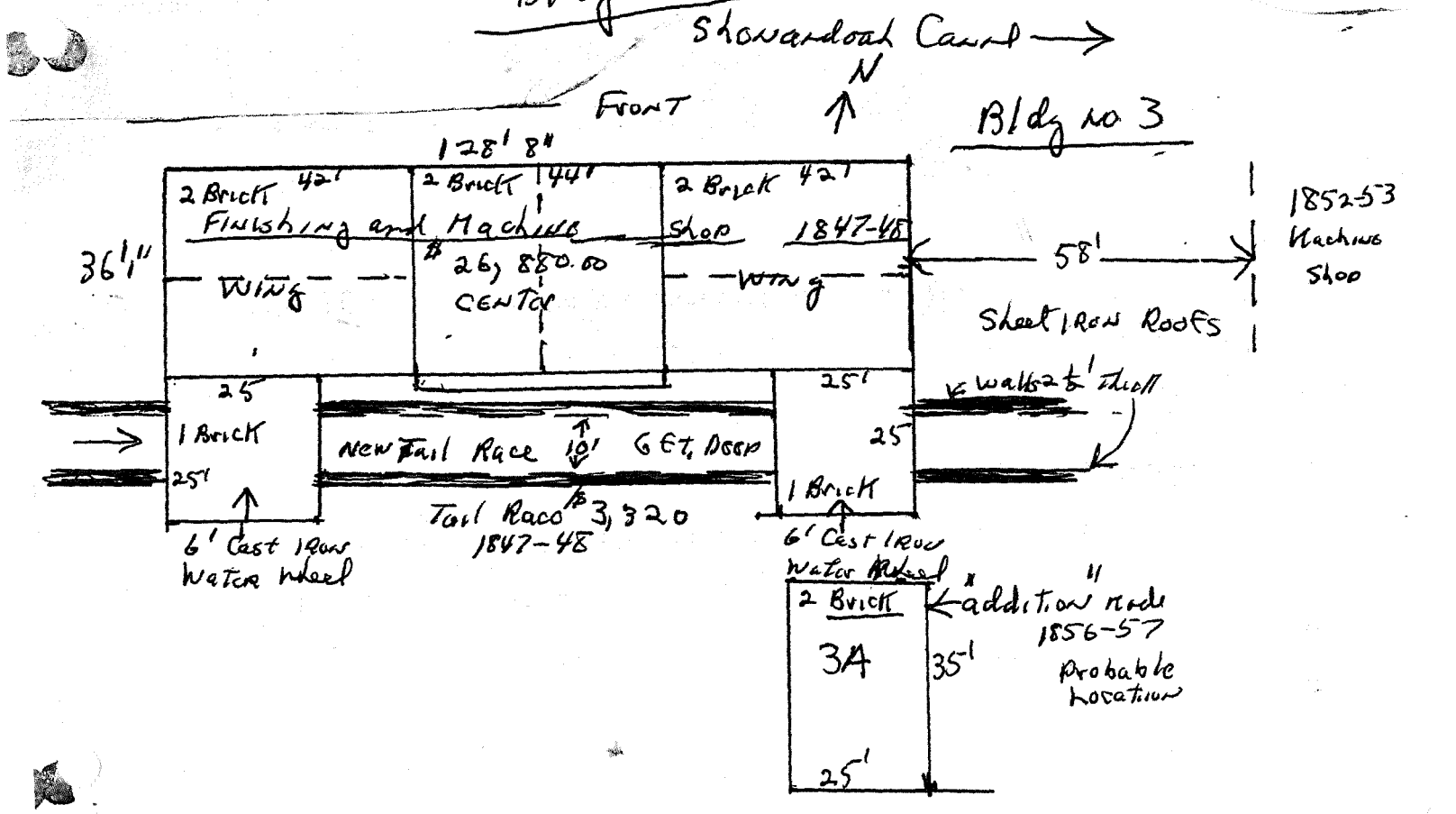
$ 5,100

Rifle Factory 1842–1861

Bldg 6



Bldg No 3



Rifle Factory 1842-1861

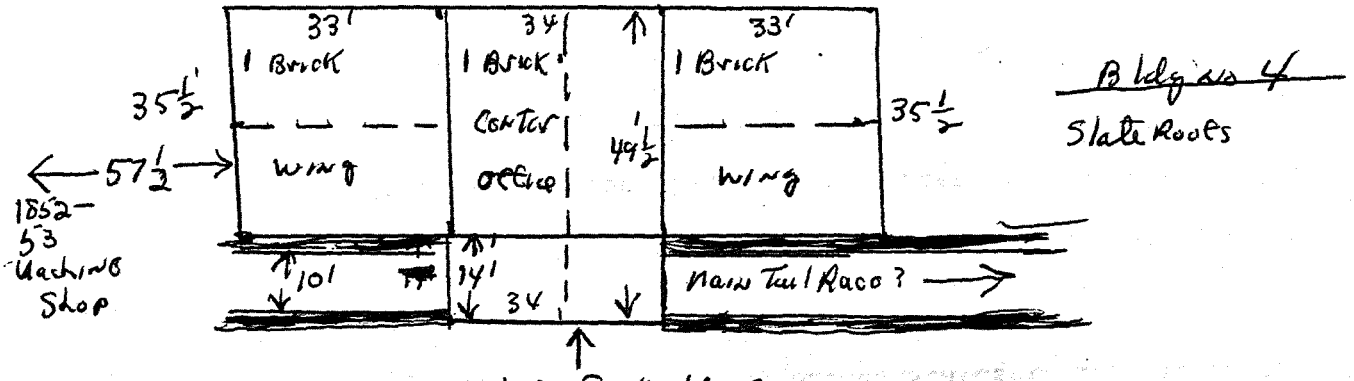
Bldg 4

1849-1851 Tilt Hammer and Smiths Shop

Shovandoal Camp →

N

1101 $ 22,130.00



Bldg no 4 Slate Roofs

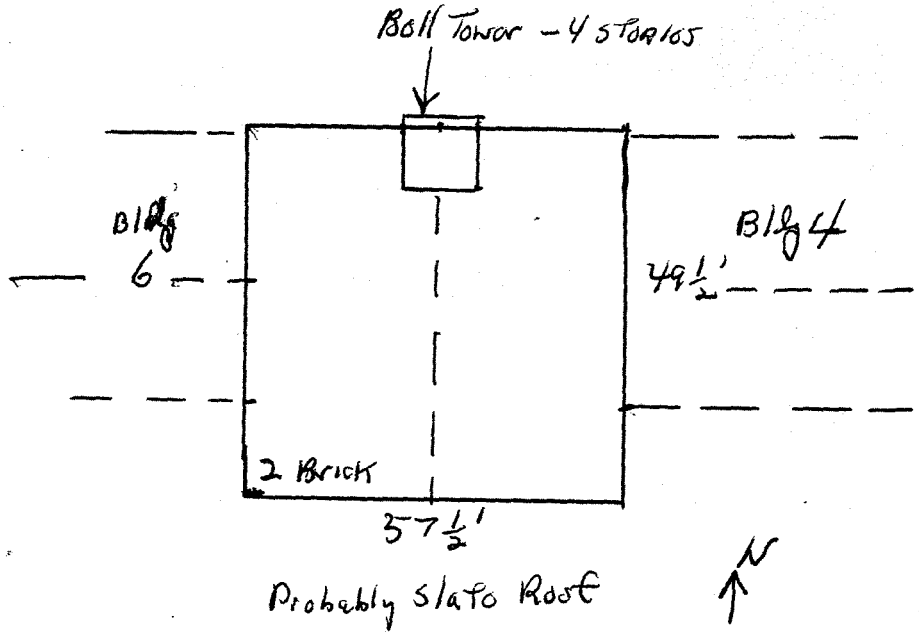
4 ft Cast Iron water wheel

Cupola on Roof

Bldg 9

Barrel Drilling and Finishing Shop

Bldg No. 9 Rifle Factory



Superintendent Alfred M. Barbour 1859-60

$15,820 Cost

Probably slate Roof

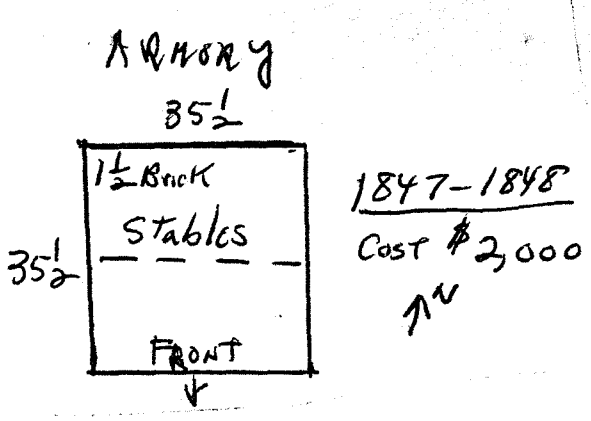
N

Description of the Armory Stable, 1847-48

The Armory Stable is located on Lot No. 2, Block F, Shenandoah Street on the 1859 Historical Base Map. Harpers Ferry NHP Negative HF-119, a photo taken about 1865 shows the east(side) and north(rear) elevations of the Armory stable.

The Armory Stable was designed and erected by Major John Symington in 1847-48 at an approximately cost of $ 2,000.00. The brick building, 35½ by 35½ feet in size, stood on stone foundations and was 1½ stories (including a high loft) tall. It was trimed with cut stone water table, coping, and cornice. The gutters and down spouts were of copper and its gable roof was covered with slate. Its architectural style was the same as that of all the Symington'designed building being erected at the musket and rifle factories udring the 1846-52 period. Each elevation of the stable was divided into three bays; each bay was comprised of round arch that was supported by brick pilasters that were capped with cut stone and the round arched windows or doors were set in the panel recessed within each arch. The gable ends, which formed the front and rear elevations of the stable, were adorned with brick parapet walls that were crenelated and topped with cut stone coping. The parapet end walls rose above the ridge of the gable roof.

Inside, the stable contained a feed room, a room for carts, and stalls for at leaset six horses.



Description of the Market House, 1846, Shenandoah Street
Block B, at Market Street

The Market House stood on the southwest corner of Block B, Shenandoah Street, between the Winchester and Potomac Railroad tracks and the Shenandoah River, and on the east side of Market Street. The market house, intended for the use of the citizens of Harpers Ferry, was designed by Major John Symington and its construction was supervised by Jeremiah Fuss, master builder and carpenter for the Armory in 1846-47. The Armory provided the money for building the first story, about $ 402.04, and the Sons of Temperance spent about $ 200.00 to add the second floor to the two-story brick structure. The first floor was to serve as a public market and the second as a lodge hall.

The Market House is "U" on S. Howell Brown's 1848 map of Harper's Ferry.

The two-story brick building, with stone foundations and slate-covered gable roof, was approximately 60 feet long and 30 feet wide. The long sides were divided into six bays and the gable ends into two bays. The first story bays were arcaded, each have a round arch supported by brick pilasters, with the round arched windows being recessed within the arch. The second story windows, containing nine over six lights, were topped by flat brick arches and were recessed in panels within the projecting brick piers located between each bay. There wefe no windows in the second story levels of the east and west gable end. A small chimney was located at the west end of the roof. By 1865, a one-story,wide frame porch with a shed roof had been built across the full width of the west(Market Street) gable end and this porch may have continued around and along the south(Shenandoah River) elevation. The building also probably had gutters and downspouts of copper or tin.

The first story was used as the town public market were meat and fresh vegatables were sold on every Wednesday and Saturday during the 19th century. The second floor served as a lodge assembly room from 1847 to 1861. This structure stood from 1846 until 1936, when it was largely destroyed by the 1936 flood.

Historical prints and photographs showing the market house are as follows:

Harpers Ferry NHP Negatives: No. HF-361, stereoptican view taken in 1865;

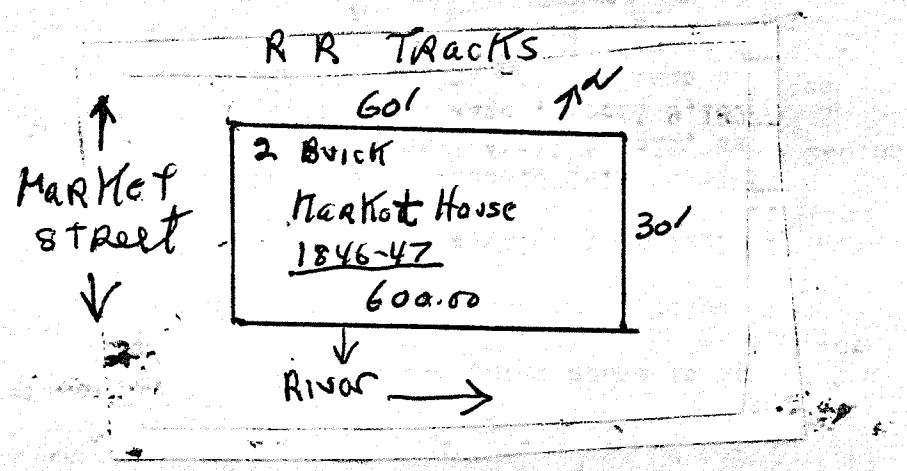
6.3rd S., F. 4837, V. 37, December 15,1846, for $ 33.60.
7. 3rd S., F. 4837, V.19, November 21,1846, for $ 44.40.
8. Smith, Philip R. Jr., "Research Report: History of the Market House, 1846-1869, Block B, Lot 4, Shenandoah Street, Harpers Ferry National Historical Monument, West Virginia,"(NPS typescript, Harpers Ferry NM, W.Va., May 1,1959), 19 pp.

HF-68, Oil painting by Ferdinand Richardts, painted ca. 1870-1883; HF-99, Photo taken from Loudoun Heights, ca. 1892-96;

HF-306, taken March 18,1836,

excellent closeup view showing flood damage. HF-291, 1932 aerial photograph.

HF- 331,taken ca.1896.



Description of the Commanding Officer's Quarters,
Park Bldg. No. 59. South Wing of Anhtony Hall)

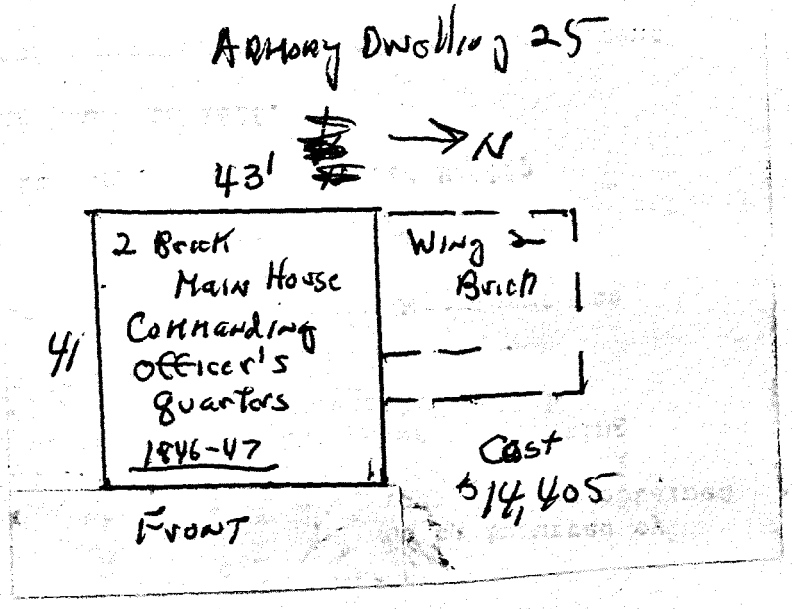
The Commanding Officer's Quarters, Armory Dwelling House No. 25 on the 1859 historical base map, now forms the south wing of present Park Bldg. No.59, Anthony Hall. The center and north wing of this structure were added in 1881. NHP Harpers Ferry Negatives showing the Commanding Officer's Quarters prior to 1866 include the following: HF-31. The Federal Camp on Camp Hill, 1862; HF- 20, Camp of 5th New York Heavy Artillery, Camp Hill, Harper's Ferry, Va.", taken during Civil War.; and HF- 338, Sketch of house, published in newspaper ,November1, 1862.

This impressive dwelling or mansion was designed and erected by Major John Symington in 1846-1847 at an approximate cost of $ 14,405.00. The large two-story brick house over elevated stone basement had a lower two-story wing on the north side that was joined to the main residence by means of a lower two-story enclosed brick passageway. The main house had four chimneys and the wing one. The hipped roofs were covered with tin, and part by slate. The ten fireplaces had marble mantels.

The facade of the east or front elevation of the main house was divided into three bays. A center door ,sheltered by a one-story portico that stood on a high porch of cut stone, occupied the center bay of the front (east) elevation. The house had cut stone water table, sills, cornice and coping. The gutters and down spouts were of copper. Windows were topped by flat arches.

A brick stable,erected in 1848, stood to the west of the residence. A brick smoke house was added to the grounds in 1849, and in 1851 a small brick storhouse, perhaps 16 by 20 feet, was built to the north of the main house.

The main dwelling measure approximately 41 by 43 feet and the stone porch may have measured about 12 by 18 feet.


Armory Dwelling 25
43'
N
2 Brick
Main House
Commanding
officer's
quarters
1846-47
41
Wing
Brick
Cost
$14,405
Front

Description of Paymaster's Quarters(Armory Dwelling House No.32, Park Bldg. No.56), Camp Hill, 1859-61:

Located on the south side of Fillmore Street on Camp Hill, the Paymaster's Quarters(then Armory Dwelling House No.32 and now Park Bldg. No.56) can be seen in the following historical prints and photographs, Harpers Ferry NHP Negative Nos. HF-47,Photo taken after June 14,1861 and prior to Feb.5,1862; HF-352- sterioptican view made in 1862; HF- 341, Detailed drawing entitled "General(Philip H.) Sheridan's Headquarters,"published in Frank Leslie's Illustrated Newspaper, September 3,1864; and HF- 78, a photo made in 1866.

The Paymaster's Quarters was erected in two stages: The large house was designed and erected by Major John Symington in 1847 -48 at an approximate cost of $ 7,303. As completed in stage one, Armory Dwelling House No.32 was a one-story brick house over a full one-story high stone basement, with cut-stone water table and window sills. The hip roof was covered with sheet tin and the gutters and downspouts were of copper. The dwelling measured 56 feet 4 inches by 39 feet 9 inches in size.

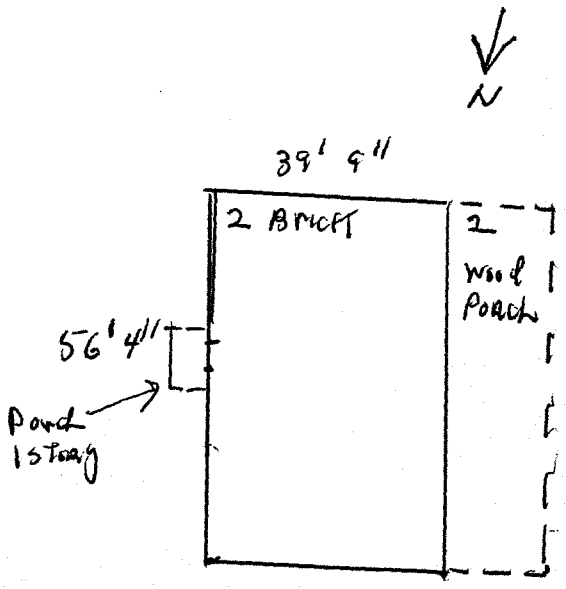
Stage Two: In 1858-59, Superintendent Henry W. Clowe designed and added a second brick story to the original house. The new hipped roof was covered with slate, wooden porches were added to the east and west elevations, and two-sides of the original stone basement were fully excavated so that the walls were fully exposed on all four sides. The cost of these alterations and improvements was somewhere between $ 3,500 and $ 4,000. Total cost of constructing the Paymaster's Quarters, 1847-1859, was thus probably about $ 11,303 .

As completed in 1859, the Paymaster's House was 56 feet 4 inches by 39 feet 9 inches, two storys of brick upon a high one-story basement of stone. Its hipped roof was covered with slate; the water table and window sills were of cut-stone; and the gutters and downspouts were of copper. There was a one-story central wooden portico on the east elevation and a wide two-story wood porch or gallery that extend completely across the west facade of the house.

In the original 1847-48 floor plan, the house had a total of eight rooms, four in the basement and four more on the brick first floor. Each of these large rooms was a corner room. The room at the southeast corner on the first floor was used by the paymaster as an office and could be reached by way of a vestibule. This vestibule also provided access to the front or east portico and to the family rooms on the first floor. A central room on the first story served as the dining room and received natural light from s skylight placed at the peak of the structure's tin-covered hip roof. The other rooms on the first floor must have served as the families parlor and bedrooms. A second first floor vestibule on the west side of the house contained the stairs to the stone basement level where the kitchen was located in the northwest corner. This vestibule also opened out onto a full length wooden porch on the west elevation of the dwelling, A small room opening off the cellar kitchen was used as a wine cellar. The use of the other rooms in the basement is unknown, but were probably service rooms and utilized by the servants(slaves).

In the 1858-59 remodelling, the original floor plan was changed as follows: An areaways at the stone basement level was constructed along the east and south sides of the building to eliminate that dampness that had previously affected the basement. On the first floor, the center was opened up to create a central hall and that also contained the stairs to the new second floor. The kitchen in the basement was relocated to the northwest corner room directly above. An enclosed new pantry at the north end of the porch on the west side opened off the relocated kitchen at the first floor level. The new brick second story had four large bedrooms and one small room. The west porch was increased in height to form a two-story gallery. (1)

(1) Data on floor plans from National Register of Historic Places Inventory-Nomination Form for the Lockwood House or Paymaster's Quarters, prepared by Architect Archie W. Franzen, ca, 1978.



Pay Master's Quarters
Armory Dwelling No 32
(Park Bldg No 56)

Stone Basement & Brick 1st Story - By Major John Symington 1847-48 - Cost $7,303.
Hip Roof - Tin Covered

2nd Brick Story added 1858-59
Supt. Henry W. Clowe - Cost $3,500 to $4,000
Hip Roof - Slate Covered

DESCRIPTION OF ARMORY DWELLING HOUSE NO. 30,(Park Bldg. No. 58), The Paymaster's Clerk's Quarters, Camp Hill.

Fronting on the south side of Fillmore Street on Camp Hill, the Paymaster's Clerk's House, then Armory Dwelling House No.30(now Park Bldg. No.58) was designed and erected by Armory Superintendent Henry W. Clowe in 1857-58 at a cost of $ 6,820. The main house was a two-story brick building with a slate-covered hipped roof and measured 39 feet 8- 5/8 inches by 33 feet 2½ inches in size. A two-story brick service wing, 23 feet 1½ inches by 18 feet 8½ inches adjoined the south side of the main house. The window sills were of cut stone; the east or front elevation of the main house and also the east side of the rear wing each had a one-story wooden porch.

In main entrance opened into a square center hall that also contained the stairs to the second floor. Two small front rooms opened off the entrance hall to the left and right and two much larger rooms were entered from the rear of the hall, opposite to the entrance door. This same four room plan was repeated on the second floor.

The rear wing contained three rooms consisting of a kitchen and pantry on the first floor, with a servant's stairway leading to the second floor, which was occupied by a small chamber. In 1858 the rear wing and one-half of the main house had a full basement. Armory Dwelling No. 30 was occupied as a residence by the following , 1858-61.

1. Master Armorer Benjamin Mills, November 1858- November 1859.
2. Civil Thomas Leiper Patterson, Engineer supervising construction of the U.S. Armory dam on the Potomac, November 1859- August 1860.
3. Paymaster's Clerk John E. P. Daingerfield, ca. August 1860 to April 18, 1861.

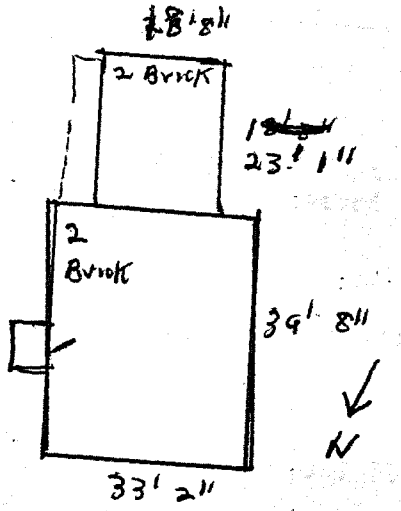
Description of Armory Dwelling House No, 31(Park Bldg. No. 57), Superintendent's Clerk's House, Camp Hill, 1857-58.

Fronting on the south side of Fillmore Street on Camp Hill, the Superintendent's Clerk's Quarters, then Armory Dwelling House No.31 (now Park Bldg. No.57) was designed and erected by Armory Superintendent Henry W. Clowe in 1857-58 at a cost of $ 6,820. The main eight-room house was a two-story brick building with cut-stone windows sills, a slated-covered hipped roof and measured 39 feet 8- 5/8 inches by 33 feet 2½ inches in size. A three-room, two-story brick service wing, 23 feet 1½ inches by 18 feet 8½ inche adjoined the rear or south side of the main house. The east side of the wing had a one-story wooden porch.

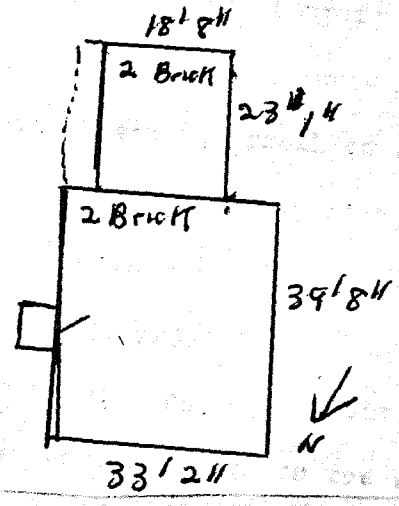
The center door of the east or front elevation of the main house was sheltered by a one-story wooden porch. This door opened into a square center entrance hall that also contained the stairs to the second floor. Two small front rooms opened to the left and right from the center hall. Two much larger rooms were entered from the rear of the entrance hall. This same four room plan was repeated on the second floor.

The first floor of the service wing contained a kitchen, pantry and service stairs leading to the second floor. The second story was occupied by a small chamber. In 1858, the rear wing and one-half of the main house had a full basement.

Armory Dwelling No. 31 was the residence of Clerk Chief Archibald M. Kitzmiller from September 21,1858 to April 18,1861.



Paymasters clerk's
Quarters (Armory Dwelling No 30 -
Park Bldg 58)
Designed By Supt Henry W. Clowe,
1857-1858
Cost $ 6,820
Hip Roof — Slate Roof.



Superintendent's clerk's quarters
(Armory Dwelling No 31 - Park Bldg 57)
Designed By Supt Henry W. Clowe)
1857-58
Cost - $ 6,820
Hip Roof - Slate Covered.

Description of the Master Armorer's New Quarters(Armory Dwelling House No.1-Park Bldg. No.36), Lot 4, Block B, Shenandoah Street,1858-59:

The Master Armorer's new quarters can be seen in Harpers Ferry NHP' Negative Nos. HF-18, photo taken ca.October ,1862; HF- 224 and 141, drawings made by A.R. Waud, March 11,1865; HF-361, a photo taken in 1865; and HF- 78, a photo taken ca.1870-76.

Designed by Armory Superintendent Henry W. Clowe as the new quarters for the Master Armorer, Armoring Dwelling House No.1 was erected in 1858-59 at an approximate cost of $ 7,000. The main house was a two-story brick building on stone masonry foundations, with cut-stone window sills, and slate-covered roof. This edifice measured 42 by 38 feet and on the rear(south or east) elevation stood a two-story brick wing 25½ by 20 feet in size.

The gable roof had a pair of end chimney which were connected by brick parapets at each gable end and the gable corners were marked by similar parapets. A brick dentiled cornice marked the eave line of the north or front elevation of the main house.

The facade was five bays wide and the sides four bays deep. Windows, adorned by exterior louvered shutters, had six over six lights, cut stone sills and flat arch brick lintels above, which were supported by cast-iron angles. The center door was framed by a wooden architrave within which there were flanking sidelights and above the door, a rectangular transom.

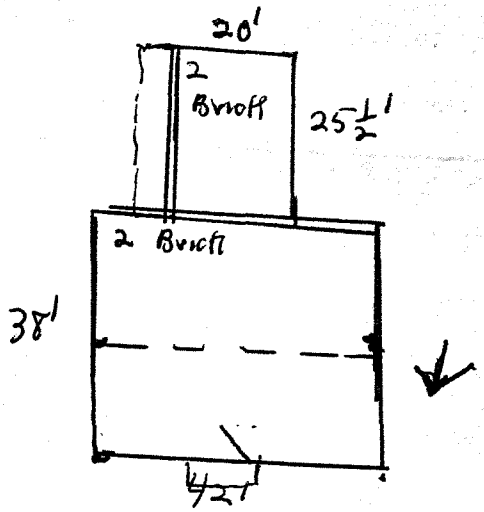
The main house had central hall plan and this hall extended completely through the house, running from front to back and opening out on a wooden porch in the rear. The stairs were set against west(right) wall. The two rooms on the the left(east) side of the hall, both parlors, were connected by a large double door; the room in front on the right(west) was either a library or parlor, and the room in its rear was the dining room. The center hall plan was repeated on the second floor where there were four bedrooms and a small room, probably a dressing room, located at the north(front) end of the hall. Each of the eight large rooms in the main house had its own fireplace.

The interior was plastered throughout, and there were ornamental plaster cornices in the first floor hall and the two east parlors. Plaster ceiling roundels were also found in the first floor hall and rooms. There was no cellar under the main house.

The two-story brick service wing in the rear had a two-story covered wooden porch that ran along the east side of the wing and also across the rear (south) elevation of the main house. The wing had a basement which contained a kitchen. A second kitchen and pantry were situated on the first floor of wing and there were two small bedrooms on the second floor.

In 1859 Lots No.1 and 2, Block B. Shenandoah Street, were enclosed by wood picket fences. (on the 1869 map lot system).

The house is located on Lot 4, Block B, Shenandoah Street on the 1852 map, and on Lot No. 2 Block B, Shenandoah Street on the 1869 map.



Master Armorer's New Quarters
Armory Dwelling No 1 (Park Bldg 36)
Designed By Supt Henry W. Clone
1858-59 - Cost $7,000
Gable Roof - Slate Roof
Shenandoah Street
Lot 2, Block B.

Description of Master Armorer's Old Quarters, Armory Dwelling No.2, (Park Bldg. No. 34-35), Lot No. 3, Block B, Shenandoah Street, in 1859.

Armory Dwelling House No. 2 was located on Lot No. 4, Block B, Shenandoah St., (on the 1852 map) or on Lot 3, Block B, Shenandoah Street on the 1869 map).

The structure can be seen in Harpers Ferry NHP Negatives Nos. HF-141 and 224, two drawings made by A. R. Waud in March 1865; in HF- 361, a photo made in 1865, and HF- 43, a photo made in the period 1870-75.

Armory Dwelling House No. 2 (Park Bldg. No. 34-35) was erected by Joseph Annin, son of Paymaster Samuel Annin, in 1812 for use as a drug store and residence. The two-story brick house had a cellar kitchen, wood shingled gable roof and measured about 36 by 30 feet in size The Armory purchased the structure for $ 2,500 in 1821, and used the house from 1818 to 1858 as the residence for the Master Armorer. In 1827, a one-story brick kitcheb wing 22 by 20 feet (Bldg. 34.), was added to the southwest(rear) corner of the house at a cost of $ 500. The dwelling was further enlarged by a brick addition in 1837, in this work, which cost $ 307, the roof was raised six dormer windows inserted, and the dwelling became a 2½ story edifice. The roof was also slated and 16 pair of window blinds installed.

In 1859, the Master Armorer's Old Quarters (Bldg. No.34-35) was a two and one-half story brick buildings with a cellar, a slate-covered gable roof, and an end chimney built within the walls at either end. There were 6 dormer windows, three in the front and three in the rear slopes of the roof.

Fronting on the south side of Shenandoah Street, the main house was about 36 feet, or four bays, wide and 30 feet deep. The entrance door to the main house , topped by a rectangular transom with four lights, was located in the second bay from the east(left)corner . Windows had six over six lights and were topped by flat brick arches. First story windows were adorned by exterior paneled shutters and those on the second floor had exterior louvered blinds. The orginal kitchen had been located in the

cellar and had been entered by means of an exterior stairwell located at the west(right end of the building. This cellar entrance had been sheltered by a small porch.

The 1827 kitchen wing addition, brick, was three bays or 22 feet wide and about 20 feet deep. The entrance to the kitchen wing, topped by a rectangular transom, was located in the center bay of its Shenandoah street facade. The one-story addition had a slate-covered gable roof and a end chimney located at the south(rear)gable end.

The original floor plan of the main house and kitchen wing are not known.

Armory Dwelling House No. 2 was used as the residence of the Master Armorers from 1818 to October 29,1858. From November 1858 to July 1859 it was the quarters of John E. P. Danigerfield, the Paymaster's Clerk.
From July 1859 to November 1859, the house was vacant.
From November 1859 to April 1860 the structure was used as an army recruiting office and alsc probably as the quarters of Captain Barten and his officers, who commanded the company of U.S. soldiers who had been posted to guard the Harper's Ferry Armory, following the John Brown Raid in October 1859.

From April 1860 to February 1861, the residence was probably again vacant.

From February 1861 to April 18,1861, it was probably once more used as officers quarters and a recruiting office, when U.S. soldiers were again sent to guard the Armory.

DATA ON INDIVIDUAL GOVERNMENT DWELLING HOUSES AND THEIR LOCATIONS, 1845 to 1869

In August 1841, Armory painter John P. Kennedy painted numbers on all of the Armory Dwelling Houses to identify each residence. These numbers were used in the Armory Rent Rolls from 1841 to about 1859 to identify each house. It is thus possible to trace the location of every dwelling from 1861 back to 1841 and of every renter from 1852 back to 1841 by using the rent rolls. The rent rolls for the years 1852 to 1861 were destroyed by ghe staff of the National Archives during the 1940's.

We present a "corrected" survey of government dwelling houses for the years 1845 to 1852, giving the number of the house, a description of the house, its appraised value, its location on S. H. Brown's Map of 1852, and the final disposition of the structure, E.G, whether sold in 1852, demolished by the Government as useless, or retained by the Government as a dwelling house for Armory employees. It is necessary to "correct" these lists from a number of sources because the Armory clerks who prepared these documents often became themselves "confused" and sometimes located buildings on the wrong lots. The sources for this final list of dwelling houses are as follows:

(1). "List of United States Dwelling Houses at Harpers Ferry 30 June 1848".[3]

(2). "List of Dwelling Houses belonging to the United States at Harpers Ferry, December 31, 1850."[4]

(3) "List of Dwelling Houses at Harpers Ferry Per Inventory June 30, 1851 Corrected to December 31, 1852."[5]

(4) "Legend Exhibiting the Corresponding Numbers of the Houses, as Per the Inventory of the 30th June 1852, with the Lots of Land as per Brown's Map of the same, Where Correspondence exists, and, in other cases, an Approximation."[6]

(5) "Appraised Value of Lots & Houses Occupied by Armory Workmen, Harpers Ferry Armory, August 21, 1852" and "Account Sales at Valuation, Lots and Dwelling Houses - Harpers Ferry Armory, 31 August 1852."[7]

No. of Building	Description	Class	Valuation	Where Situated Brown's Map	Final Disposition of
** 1	Brick 2 story, slate roof	1	$2,700	Musket Factory Yard	Converted into Armory Offices in 1848.
2	Brick 2 story, slate roof (Bldg. No. 34-35)	1	2,700	Shenandoah St., Block B. Lot 3	Master Armorer's Quarters to 1858
3	Brick 2 story, slate roof	1	2,700	Sh. St. Bk.C-Lot 1,	Sold at auction
4	Part of bldg. No.3	-	-	" " " "	Sept. 1 & 2, 1852 for $2,505.00
5	Brick, 2 story, shingle roof	11	650	Sh. St.Bk.C-Lot2	Sold for 650, 8/31/52 to Armory workmen
6	Brick 2 story shingle roof	10	600	Sh. St. Bk. C- Lot 3	Sold for $600, 8/31/52 to Armory workman
7	Stone, 2 story, shingle roof (Bldg. No. 45)	3	2,000	Sh.St. Lot 1	Reserved for U.S.Use.
8	Brick, 2 story, shingle roof	13	400	Sh.St.Bk.C-lot4	Sold for $400,8/31/52 to Armory workman.

4. National Archive R.G. 153, Judge Advocate General, Abandoned Military Reservation File No. 34. Harpers Ferry Photostatic Collection, Map Case Drawer No. 4.
5. Reel 18, v. 12, p. 1177-1183.
6. National Archives R. G. 156. War Dept Ordnance, Lr. H.-330-August 28, 1852. H. F. Photostatic Collection Map Case, Drawer 3-Map No. 82.
7. Reel 24, v.7, p. 609-611; 616-617.
8. Reel 18, Vol. 12, pp. 1184 - 1191.

** The Master Armorer's new Quarters, erected in 1858-58, became Armory Dwelling House No. 1 in 1859.(Park Bldg. No. 36). Lot 2, Block B, Snenandoah Street(1869 Map).

No. of Building	Description	Class	Valuation	Where Situated Brown's Map	Final Disposition of
9	Brick 1 story shingle roof	11	$ 600	Sh. St.Bk.C-Lot5	Sold 8/31/52, $600 to Armory workman
10	Stone, 2 story, shingle roof	10	800	Sh.St.Bk.C-Lot6	Sold 8/31/52, 800 to Armory workman
11	Brick, 1 story, shingle roof	11	375	Sh. St.Bk.D-Lotl	Sold 8/31/52, $375 to Armory workman.
12	Wooden, 1 story, shingle roof	13	100	Sh.St.Bk.D-Lot 2	Demolished 5/31/51
13	Wooden, 2 story, shingle roof	12	250	Sh.St.Bk.D-Lot 2	Demolished 5/31/51
14	Wooden 2 story shingle roof	12	250	Sh.St.Bk.D-Lot 3	Demolished 5/31/51
15	Wooden, 1 story, shingle roof	13	200	Sh.St.Bk.D-Lot 3	Demolished 5/31/51
16	Brick, 2 story, slate roof	4	1,100	Sh.St.Bk.D-Lot 4	Sold 8/31/52, $1100 to Armory workman
17	Brick, 1 story, shingle roof	10	500	Sh.St.Bk.D-Lot 5	Sold 8/31/52, $500, to Armory workman
18	Wood, 1 story, shingle roof	13		Sh.St. Bk.D-Lot 5	Sold with House 17
19	Brick, 2 story, shingle roof	8	600	Sh.St.Bk.E-Lot 1	Sold 8/31/52, $600 to Armory workman
20	Wood, 1 story, shingle roof	13	200	Sh.St.Bk.E-Lot 2	Demolished 5/31/51
21	Wood, 1 story, shingle roof	13	200	Sh.St.Bk.E-Lot 3	Demolished 5/31/51
22	Stone, 2 story, shingle roof	10	400	Sh.St.Bk.E-Lot 4	sold, 8/31/52, $400 to Armory workman
23	Wood, 2 story, shingle roof	10	550	Sh.St.Bk.E.Lot 5	Sold, 8/31/52 $550 to Armory workman
24	Wood, 1 story, shingle roof	9	-	Sh.St.Bk.E. Lot 6	sold with House 23
25	Brick 2 story, shingle roof (1)	7	600	Sh.St.	reserved for U.S.Use.
26	Brick 1 story, shingle roof	10	400	Sh.St.	reserved for U.S.Use.
27	Wood, 1 story, shingle roof			Shenandoah St.	Demolished in 1846
28	Wood, 1 story, shingle roof			Shenandoah St.	Demolished in 1846

(1) House No. 25 located on Lot No. 1, Block F, Shenandoah Street, adjacent to the Armory Stable of 1848.

No. of Buildings	Description	Class	Valuation	Where Situated Brown's Map	Final Disposition of
29	Wood, 1 story, shingle roof			Shenandoah St.	Demolished in 1845
30	Stone, 2 story (1)	8	500	N. Sh. St. side	Reserved for U.S. Use.
31	Wood, 1 story	12	250	N. Sh.St. side	Demolished in 1849
32	Stone, 2 story (1)	7	600	N.n side Sh.St.	Reserved for U.S. use
33	Stone 2 story	13	200	N. side Sh. St.	Demolished 8/14/52
34	Wood 1 story			N. side Sh.St.	Demolished 1845
35	Wood 1 story	11	300	N. Side Sh.St.	Reserved for U.S. use
36	Wood 1 story	12	250	N. side Sh. St.	Demolished 2/12/53
37	Wood 1 story	11	300	N. side Sh. st.	Reserved for U.S. use
38	Wood 1 story	11	300	N. side Sh. St.	Reserved for U.S. use
39	Stone, 1 story	8	500	N. side Sh. St.	Reserved for U. S.
40	Brick. 2 story	9	450	N. side Sh. St	Reserved for U. S.
41	Wood, 2 story	8	500	N. Side sh. St.	Reserved for U. S. us
42	Frame addition to No. 41		-	N. side Sh. St.	Demolished 1853
43	Brick 2, story	7	900	Sh.St.Bk.B-Lot 5	Sold 8/31/52, 700 to Armory workman
44	Wood, 1 story	12	250	Between Sh. St.& River	Demolished in 1847
45	Wood, 1 story	14	150	" " " "	Demolished in 1852
46	Stone, 2 story	8	500	Sh.St.Bk.C-Lot 10	Sold at auction 9/1/52 for $805.00
47	Stone 2 story	8	600	Sh.St.Bk.C-,Lot 9	Sold, $600, 8/31/52 to Armory workman
48	Brick, 2 story	12	400	Sh.St.Bk.C, Lot 8	Sold,$400 8/31/52 to Armory workman
49	Brick, 1 story	12	275	Sh.St.Bk.C.Lot 7	Sold, $275 8/31/52 to Armory workman
50	Wood, 1 story			Between Sh.St. & River	Demolished 1845
51	Wood, 1 story			" " " " "	"
52	Stone, 2 story	4	1,200	Sh.St. Bk.D, Lot 7	Sold at public auction 9/1/52 for $812.00
53	Wood, 1 story	16	50	Washington St.N.side	Reserved for Govt.Use
54	Stone, 2 story (2)	8	500	N.Side Wash, St	Reserved for Govt.Use
55	Stone, 2 story	4	1,100	S.Side High St. adjacent 6 acre Res	Sold, 8/31/52 for $1100 to Armory workman
56	Wood, 1 story			Washington St.	Demolished in 1845
57	Brick, 1 story	9	450	Washington St.	Reserved for U.S. use
58	Stone, 2 story	13	300	Washington St.	Demolished 5/31/51
59	Brick, 1 story	12	250	Washington St.	Reserved for. U.S. Use
60	Wood, 1 story			Washington St.	Broken up in 1847
61	Wood, 1 story	11	300	Washington St.	Reserved for U.S. Use
62	Wood, 1 story	13	200	Camp Hill near Grave yard	Reserved for U.S. Use
63	Wood, 1 story	16	50	" " " "	Demolished in 1847
64	Stone, 1 story	16	50	" " " "	Reserved for U.S. use
65	Brick, 2 story	7	600	Camp Hill by Bldg. No. 48-A	Reserved for U.S. use

(1) House No. 30, or House No.32, both located on U.S. Lot north of Shenandoah Street, is present Park Bldg. No. 48.

(2) House No. 54 located on Lot No.1, Block AA, Camp Hill, 1869 map.

No. of Building	Description	Class	Valuation	Where Situated on Brown's Map	Final disposition of Building
66	Wood, 1 story	16	$ 50	Between Wash. St. & musket Factory	Demolished 12/24/51
67	Brick 2 story (1)	5	900	Btn. Wash.St.& musket Factory	Reserved for U.S.Use
68	Wood, 1 story	11	300	Btn. Wash, St. & musket Factory	Reserved for U.S.Use
69	Wood, 2 story (20	9	450	Btn. Wash, St. & musket Factory	Reserved for U.S.Use
70	Wood, 1 story	10	400	" " " " "	Demolished in 1849
71	Wood, 1 story	10	400	" " " " "	Demolished in 1849
72	Wood, 1 story	10	400	" " " " "	" " "
73	Wood, 1 story	10	400	" " " " "	" " "
74	Wood, 1 story	11	300	" " " " "	" " "
75	Wood,1 story	12	250	" " " " "	" " "
76	Wood, 1 story	12	250	" " " " "	" " "
77	Stone, 1 story	11	300	" " " " "	" " "
78	Stone, 1 story	11	300	" " " " "	" " 1850
79	Brick, 1 story	13	200	" " " " "	" " 6/30/51
80	Wood, 1 story	14	150	" " " " "	" " 1850
81	Wood, 1 story	13	200	" " " " "	" " 1849
82	Wood, 1 story			" " " " "	" " 1845
83	Wood, 1 story	16	50	" " " " "	" " 5/31/51
84	Wood, 1 story	11	300	" " " " "	" " 5/31/51
85	Wood, 1 story	16	50	" " " " "	" " 5/31/51
86	Stone, 1 story	10	400	" " " " "	" " 1850
87	Stone, 1 story	12	250	" " " " "	" " 5/31/51
88	Wood, 1 story	12	250	" " " " "	" " 5/31/51
89	Stone, 1 story	11	300	" " " " "	" " 1850
90	Brick, 1 story	12	250	Washington Street	" " 5/31/51
91	Brick, 1 story	12	250	" "	" " 5/31/51
92	Brick, 1 story	12	250	" "	" " 5/31/51
93	Brick, 1 story	12	250	" "	" " 5/31/51
94	Stone, 1 story	11	300	" "	Reserved For U.S.Use
95	Wood, 1 story	11	300	" "	reserved for U.S. us
96	Wood, 1 story	16	50	" " School Room	Demolished in 1852
97	Brick, 2 story	6	900	Camp Hill, Bk.E. Lot 1	Sold 8/31/52, $900 to Armory workman
98	Brick, 2 story	6	950	Camp Hill, Bk.E.Lot 2	Sold 8/31/52, $950 to Armory workman
100	Wood, 1 story	16	800	Camp Hill, Bk.E. Lot 5	Sold to Armory workman $800, 8/31/52
99	Brick, 2 story	6	900	Camp Hill Bk. E. Lot 3	Sold 8/31/52,$900 to Armory workman
101	Wood, 1 story	16	part of 100	Camp Hill, Bk. E Lot 5	Sold to Armory workman $800, 8/31/52
102	Wood, 1 story	14	150	Camp Hill, Wash. St. School Room.	Reserved for U.S.

(1) House No. 67 located on Lot No. 2, Block AA, Camp Hill, 1869map. House fronted on North Cliff or Potomac Street.
(2) House No.69 located on Lot No.6, Block BB, Camp Hill, 1869 map.

No. of Building	Description	Class	Valuation	Where situated on Brown's Map	Final disposition of Building
103	Brick, 2 story	5	900	Camp Hill, Bk.F, Lot 1	Sold 8/31/52, $900 to Armory Workman
104	Brick, 1 story	10	475	Camp Hill, Bk. F. Lot 2	Sold to Armory workman 8/31/52, for $475
105	Stone, 1 story	9	600	Camp Hill Bk. F, Lot 4	Sold 8/31/52 for $600 to Armory workman
106	Wood, 1 story	10	175	Camp Hill Bk.F. Lot 3	Sold 8/31/52 for $175 Armory workman
107	Brick 2 story	5	1,000	Camp Hill, Bk.G, Lot 1	Sold 8/31/52 for $1,000 to Armory workman
108	Wood, 1 story	8	500	Camp Hill, Bk, G, Lot 2	Sold to Armory workman 8/31/52 for $500
109	Wood, 1 story	9	600	Camp Hill, Bk. G,Lot 3	Sold to Armory workman on 8/31/52 for $600
110	Brick, 2 story	6	1,000	Camp Hill, Bk. G,Lot 4	Sold to Armory workman on 8/31/52 for $1,000
111	Brick, 2 story	7	825	Camp Hill, Bk. H,Lot 1	Sold to Armory workman on 8/31/52 for $825
112	Brick, 2 story	5	1,110	Camp Hill, Bk.H,Lot 2	Sold 8/31/52, $1110 to Armory workman
113	Wood, 1 story	15	100	Camp Hill, Bk.H.Lot 3	Broken up in 1852
114	Wood, 1 story	10	400	Camp Hill, Bk, H,Lot 4	Sold 8/31/52 for 400 to Armory workman
115	Wood, 1 story	16	50	Camp Hill, Bk. I, Lot 1	Demolished in 1852
116	Brick, 2story (2)	5	900	Camp Hill, Bk.II, Storer College	Reserved for U.S.use
117	Wood, 1 story	9	450	Camp Hill,Bk.II, Lot 2	Reserved for U.S. use
118	Brick, 2 story (1)	5	900	Camp Hill Bk.II,Lot 1	Reserved for U.S. use
119	Brick, 2 story	6	1,000	Camp Hill, Bk. D,Lot 4	Sold to Armory workman for 1,000 on 8/31/52
120	Brick, 2 story	6	1,000	Camp Hill, Bk. D.Lot 3	Sold to Armory workman on 8/31/52 for $1,000
121	Wood, 1 story	8	600	Camp Hill, Bk.D, Lot 1	Sold to Armory workman on 8/31/52 for $600
122	Wood, 1 story	10	475	Camp Hill, Bk.C, Lot 3 & 4	Sold 8/31/52 for $475 to armory workman
123	Wood, 1 story			Camp Hill	Broken up in 1845
124	Brick, 2 story	6	650	Camp Hill, Bk. D.Lot 6	Sold on 8/31/52 for $650 to Armory workman
125	Brick, 2 story	6	800	Camp Hill, Bk.___ Lot ___Back of Wash.St. Near C.O. Qrs,	Reserved for U.S.use
126	Brick, 2 story	6	800"	" " " "	Reserved for U.S. use
127	Brick, 2 story	6	650	Camp Hill, Bk.D, Lot 8	Sold 8/31/52 for $650 to Armory workman
128	Brick, 2 story	6	675	Camp Hill, Bk.C Lot 5	Sold 8/31/52 for $675 to Armory workman

(1) House No. 118 located on Lot No.1, Block II, Camp Hill, 1869 map.

(2) House No. 116 located on Lot No. 2, Block II, Camp Hill, 1869 map.

No. of Building	Description	Class	Valuation	Where situated on Brown's Map	Final disposition of Bldg.
129	Brick, 2 story	6	$800	Camp Hill, Bk.__,Lot__ Back of Wash. St. near C.O.Qrs.	Reserved for U.S.use
130	Brick, 2 story	6	800	" " " " "	Reserved for U.S.use
131	Brick, 2 story	6	675	Camp Hill, Bk.C,Lot 7	Sold 8/31/52 for $675. to Armory workman
132	Wood, 2 story	11	425	Camp Hill, Bk.C,Lot 2	Sold 8/31/52 for $425 to Armory workman
133	Wood, 1 story	16	50	Camp Hill on Public	Sold & removed 1852
134	Wood, 1 story	13	350	Camp Hill, Bk.B,Lot 7	Sold 8/31/52 for $350 to Armory wokman
135	Brick, 2 story	5	950	Camp Hill, Bk.B,Lot 6	Sold to Armory workman for $950 on 8/31/52
136	Brick, 1 story	14	300	Camp Hill, Bk.B,Lot 8	Sold to Armory workman for $300 on 8/31/52
137	Wood,1 story	13	275	Camp Hill, Bk.B,Lot 9	Sold to Armory workman 8/31/52 for $275
138	Wood, 1 story	11	400	Camp Hill, Bk.B, Lot 4	Sold to Armory workman on 8/31/52 for $400
139	Wood, 1 story	15	275	Camp Hill, Bk.B,Lot 10	Sold to Armory workman on 8/31/52 for $275
140	Brick, 1 story	8	400	Camp Hill,Bk.B,Lot 12	Sold to Armory workman o 8/31/52 for $400
141	Wood, 1 story	8	500	Camp Hill Bk.ALot 8	Demolished in 1854
142	Wood, 1 story	16	50	Camp Hill back of Wash.St.	Demolished in 1847
143	Wood, 2 story	8	500	Camp Hill,Bk.A. Lot 1	Reserved for U.S. use
144	Wood, 1 story	12	250	Camp Hill, Bk.A,Lot 2	Sold on 8/31/52 for $250 to Armory workman
145	Stone, 2 story	9	500	Camp Hill, Bk.A, Lot 4	Sold on 8/31/52 for $500 to Armory workman
146	Wood, 2 story	7	700	Camp Hill, Bk.B, Lot1	Sold on 8/31/52 for $700 to Armory workman
147	Wood, 1 story	11	300	Up bank of Potomac	Reserved for U. S. Use
148	Stone, 2 story (1)	11	300	Up bank of Potomac	Reserved for U.S. use
149	Wodd, 1 story	11	300	In line between C.O's Qr's & Magazine	Reserved for U.S. use
150	Broken up in 1845 Wood, 1 story				
151	Wood, 1 story	16	50	In line between C.O.Q.&Mag.	Reserved for U.S.
152	Wood, 1 story	12	250	" " " " "	" Demolished in 1852
153	Stone, 2 story	7	600	Across Shenandoah	Reserved for U.S. use
154	Stone, 1 story	11	300	Across Shenandoah	Reserved for U.S. use
155	Wood, 1 story	13	200	Above rifle factory	Broken up in 1847
156	Brick, 2 story	6	800	Island above R. Factory	Reserved for U.S. use
157	Wood, 2 story	9	450	" " " "	Reserved for U.S. use
158	Brick, 2 story	5	900	" " " "	" " " "
159	Stone, 2 story	13	200	" " " "	" " " "
160	Stone, 1 story	12	250	" " " "	" " " "

(1) House No. 148 located on Lot No. 10, Block AA, Camp Hill, 1869 map. House fronted on North Cliff or Potomac Street.

No. of Building	Description	Class	Valuation	Where situated on Brown's Map	Final disposition of Building
161	Stone, 1 story	13	$100	Island above R. Factory	Reserved for U.S. use
162	Wood, 1 story	8	500	" " "	Removed in 1850
163	Wood 1 story	11	300	" " "	Reserved for U.S. use
164	Brick, 2 story (1)	2	2,500	" " "	Broken up in 1848
165	Stone, 1 story	11	300	" " "	Reserved for U.S. use
166	Stone, 1 story	11	300	" " "	Reserved for U.S. use
167	Stone, 1 story	9	450	" " "	Demolished in 1850
168	Stone, 2 story	6	800	" " "	Reserved for U.S. use
169	Wood, 1 story	9	450	" " "	Reserved for U.S. use
170	Site for Wm. McGraw's Slaughter			Shenandoah St.	Demolished by 1851
171	Site for Philip Coons' Slaughter-House			Shenandoah St.	Demolished by 1851
172	Site for stable of John C. Unseld,			Sh. St.	Demolished by 1851
173	There was no No. 173				
174	Stone	5	900	Washington St.	Demolished in1848
175	(2)	5	900	Washington St.	Demolished in 1848
176	Brick 2 story	3	2,000	Wager Lot No. 18	Reserved for U.S. use
177	Brick, 2 story	3	2,000	Wager Lot No. 19	Reservedfor U.S. use
178	Stone, 2 story	7	600	Wager Lot No. 21	Reserved for U.S. use
179	Brick, 2 story slate roof	3	2,000	Wager Lot No. 20	Reserved for U.S. use
180	Stone, 2 story slate roof	3	2,000	Wager Lot No. 22	Reserved for U.S. use
181	Stone, 2 story	3	2,000	Wager Lot No. 26	Reserved for U.S. use
182	Stone, 2 story slate	3	2,000	Wager Lot no. 27	Reserved for U.S. use

181 BUILDINGS &
182, Old Pay office, arsenal yard — Relocated in 185[illegible]

The list of United States Dwelling houses at Harpers Ferry, 30 June 1848,[8] contains the following notes which appear to relate to Brown's Map of Harpers Ferry prepared in compliance to a letter to Major Symington Dated April 22, 1848:[1]

"No. of Building	Where situated per map.
A	Presbyterian Church
B	Cathelic Church
C	Methodist Episcopal Church
D	Methodist Protestant Church
E	Engine House
P	Pumps
S	Springs
T	Public Stable
U	Market House
Z	Old stables, Wood Yard, &c.
X	Old Office"

(1) House No. 164, the 1827 residence of Captain John H. Hall, located on Camp Hill, demolished to clear site for construction of Paymaster's new Quarters.
(2) House No. 175 probably the house of Dr. Nicholas Marmion, stone edifice purchased for $ 2,000 in 1847.

BIBLOGRAPHY FOR VOLUMES II AND III?

Manuscript Material:

National Archives Records, Washington, D.C.

The Confederate Army on April 19, 1861 captured the U.S. Armory at Harper's Ferry and held the place until June 15,1861. On their withdrawal on the latter date, they set fire to the U.S. Musket Factory buildings and thereby destroyed all of the original records at the Armory, which were on file in Musket Factory Bldg. No. 2, the Armory Offices. For this reason there is no collection of Harper's Ferry Armory records as such on file in the National Archives at Washington, D.C.

The originals of letters written by Harpers Ferry Armory Officers from 1798 to 1861 to the Secretary of War and Chief of Ordnance are still largely intact in the National Archives, but they are filed as they were received, when written, in the general filing systems of the Washington offical.

In 1957, Park Historians Herbert L. Kissling and Charles W. Snell, during a six week period, searched most of the central files in the National Archives for material relating to the history of the Harper's Ferry Armory from 1794 to 1869. Collected were 14,504 pages of documents on 14 reels of microfilm and 225 pages of photostated documents. Map, plans, prints and photographs in the National Archives collections relating to Harpers Ferry were also copied. Historians Kissling and Snell, in effect, thus recreated much the central Armory files that were destroyed in 1861.

The microfilm material was reproduced in the form of ex rox pages and these were placed in loose leaf notebooks. These volumes and their pages were numbered and completely cataloged and indexed according to subject and these notes placed in a master card index system.

All persons interested in performing research on the Harpers Ferry Armory history from 1794 to 1869 would therefore do well to first examine this extensive centralized collection in Harpers Ferry National Park library to collect their data, and only then, if there are still some missing links, to attempt to located these items in the general files of the National Archives, Washington, D.C.

The following National Archives Record Groups were searched and data relating to Harpers Ferry collected in 1957:

1.Records of the Bureau of the Census: Population Schedules of the Census of the United States for the Years 1810 to 1870, for the towns of Harper's Ferry, Bolivar, and Virginius Island. National Archives Record Group 29 (274 pp. on one reel of microfilm in Park Library).

2. Records of the Office of the Chief of Engineers, National Archives Record Group No. 77 (Maps and reports relating to right of way for the Winchester and Potomac Railroad, 1834).

3. Records of the National Park Service, National Archives Record Group No. 79(Maps and reports of C. &. O. and Shenandoah Canal Companies for constructing canal and locks on Shenandoah in 1803-1807.)

4. Records of the Office of the Quartermaster General, National Archives Record Group No. 92 (Civil War activities, 1861-66).

5. Records odf the Adjutant General's Office, National Archives Record Group No. 94. (Civil War).

6. Records of the Office of the Secretary of War, National Archives No.107 (1794-1869).

7. Records of the Public Buildings Service, National Archives Record Group No. 121(1796-1887 records of the purchase of land for U.S. Armory use, and also of the sale of U.S. lots and houses, 1852, and 1869-1887.).

8, Records of the Office of the Judge Advocate General, National Archives Record Group No. 153.(Records and copies of deeds for the purchase of Armory lands and the sale of the same, 1796 - 1887).

9. Records of the Chief of Ordnance, National Archives Record Group No. 156. This Office or Department was responsible, under the supervision of the Secretary of War, for the operations of the Harper's Ferry Armory,1815 to 1887).

10. Records of the Office of the Inspector General, National Archives Record Group No.159. Has many inspection reports written after inspections had been made of the Harper's Ferry Armory.

Records of the U.S. Treasury Department and the U.S, General Accounting Office, The records of the Second Auditor of the Treasury, National Archives Record Group No. 217, Series Two and Three, 1817 to 1851:

This data ia comprised of thousand of pages of documents that were prepared and submitted by the Harpers Ferry Paymasters for paying wages, for purchase of materials for manufacturing arms and for construction of buildings, dams, and canals. It includes armory pay rolls and rent rolls.

This vast collection was searched by Historian Charles W. Snell for data relating to the repair and improvements of the Harper's Ferry Armory from 1817 to 1851. Records for the years 1852 to 1861 were destroyed by the National Archives staff during the 1940's in order to save space.

Historian Snell's long hand notes, taken during June 1980, have been typed up and are available for study in the Harpers Ferry National Historical Park Library in the following typescript reports:

Snell, Charles W., compiler, "Extracts from National Archives Record Group 217, Records of the U.S. Treasury Department, The Records of the Second Auditor, 1817-1841, Relating to the U.S. Armory at Harper's Ferry, during the Years 1817 to 1841 for Repairs and Improvements of the Physical Plant." Two Volumes. Vol. I, 1817-1829; and Vol. II, 1830-1841, 337 pages. (June 1980)

Snell, Charles W.,"Extracts from National Archives Record Group 217, Records of the Second Auditor, Second and Third Series, U.S. Treasury Department, relating to Expenditures for Repairs and Improvements at the U.S. Armory at Harper's Ferry, Virginia, during the Years 1842 to 1842."(Typescript, October, 1980), Volume III, 259 pp.

Published U.S. Documents:

1. American State Papers- Class V, Military Affairs(7 volumes, Washington, D.C., 1832-1850) Indludes some correspondence of the Secretary of War, Ordnance Office, and Armory Superintendents. Many estimates and reports, for period 1793 to 1837.

All data relating to the U.S. Armories at Harper's Ferry, Virginia, and Springfield, Massachusetts, in these seven volumes was xeroxed by Historian Charles W. Snell in January 1980 and copies of the following report provided to the libraries of both parks:

Snell, Charles W., Compiler, "Data for Operations Histories of the United States Armories at Harper's Ferry, Virginia, and Springfield, Massachusetts, 1793 to September 30,1837, complied from American State Papers(7 volumes)," (National Capital Team, Denver Service Center, January 1980), 298 pp. in two Volumes. Vol.I(1793- 1828); Volume II, 1829-1837.)

2.The Serial Number of Public Documents of the Uniteddstates published by the U.S. Congress, 1817- 1861:

This series, comprised of offical reports prepared by executive departments and submitted to Congress and also of reports and correspondence of Congress, was published annually for the U.S. Congress, beginning in 1817. About 1,100 volumes cover the years from 1817 to 1861.

Most of the data relating to the U.S. Armories at Harper's Ferry and Springfield during the years 1817-1861 was xeroxed by Historian Snell in 1979 and copies of the following report provided to the libraries of both Parks:

Snell, Charles W. Snell, compiler,"Extracts from the Public Documents of the United States relating to the Operations and History of the National Armories, 1795 -1860, at Harper's Ferry and Springfield, Published by the U.S. Congress, 1817 -1861, in its Serial Serial(National Capital Team, Denver Service Center, January 1980), 701 pages, in four Volumes. (Vol. I, 1795-1834; Vol. II, 1835-1841; Vol. III,1842-1851; and Vol. IV, 1852- 1861.

3. Serial Number of Public Document of the United States, published by the U.S. Congress, 1866- 1887 :

The Congressional Serial Number series also contains correspondence and reports, 1867-1885, relating to the sale and disposal of U.S. Armory lands at Harpers Ferry, West Virginia. This data was xeroxed by Historian Charles W. Snell and copies of the following report provided the Harpers Ferry National Historical Park Library:

Snell, Charles W., Compiler,"U.S. Documents relating to the Disposal of U.S. Armory Lands at Harper's Ferry, West Virginia, 1867-1885," Volume III, 151 pages, of the three Volume study-"The Acquisition and Disposal of Public Lands at the U.S. Armory at Harper's Ferry, Virginia, 1796 - 1885,"(National Capital Team, Denver Service Center, December 1979).

4. Benet, Stephen V. ed. and compiler, A Collection of Annual Reports and Other Important Papers, Relating to the Ordnance Department, Taken from the Records of the Chief of Ordnance, from Public Documents, and from other Sources:.(4 vols, Washington, D.C., 1878 - 1890).

   A rare book; Historian Charles W. Snell xeroxed 79 pages from this set and proved the Harpers Ferry National Historical Park Library with copies in one volume in January 1980.

5. Virginia Free Press, Charles Town, Virginia, 1824-1861: A weekly newpaper publishing Jefferson County news, 1824 to 1861. Available for use in Harpers Ferry National Historical Park Library on microfilm, nine reels.

6. The Spirit of Jefferson, Charles Town , West Virginia,1865-1955: A weekly newspaper publishing Jefferson County news,1865-1955. Available for study in Harpers Ferry National Historical Park library on 34 reels of microfilm. This set acquired in 1980.

7. U.S. Statues at Large, Volumes I to XII, contain laws, resolutions, and appropriations for the Harpers Ferry Armory, 1794 to 1861.

8. Registry of Deeds for Jefferson County, County Court House, Charles Town, West Virginia. His deeds and land records from about 1800 to date.

9. Noffsinger, James P., "Harpers Ferry, West Virginia- Contributions Towards a Physical History," NPS tyepscript, Eastern Office of Design and Construction, Philadelphia, Pennsylvania, November 1958), 278 pp.

   Has a 54 page general narrative history of Harpers Ferry,1719-1953; pp.55- 278 comprised of 36 documents transcribed from National Archives Records and copies of 12 historical maps(parts of) and and 10 19th century photographs of Harpers Ferry.

Books:

1. Barry, Joseph, The Strange Story of Harper's Ferry (1st printed in 1903; 3rd edition, Shepherstown, W.Va. 1959).

   A school teacher, Barry was born and raised at Harper's Ferry; he was a boy prior to the Civil War and his history is usuallu accurate.

2. Smith, Merritt Roe, Harpers Ferry Armory and the New Technology - The Challeneg of Change (Cornell University Press, Ithaca and London, 1977).

   A excellent history of the development and production of small arms at the Harpers Ferry Armory, 1796 - 1861. Dr. Smith made very extensive use of the thousands of pages of documents collected in the Harpers Ferry National Historical Park library as well as of material in the National Archives at Washington, D.C.

NATIONAL PARK SERVICE RESEARCH REPORTS :

A. U.S. Musket Factory on the Potomac:

Barlow, W. Lewis, IV,"Historic Structure Report-Architectural Data Section for John Brown's Fort(Park Bldg. No.63), Harpers Ferry National Historical Park, Maryland- West Virginia,"(Historic Preservation Division, Denver Service Center, National Park Service, Denver Colorado, May 1976) 87 pp. 30 photos, 18 sheets of plans.

Fairbairn, Charlotte, "John Brown's Fort - Armory Engine and Guard House, 1848- 1961," (Park Bldg. No. 63),Harpers Ferry National Historical Park, West Virginia,"(NPS typescript, Harpers Ferry NHP, W.Va., August 15, 1961). History of structure.

Kissling, Herbert H., "The U.S. Musket Factory,1796-1835, Harpers Ferry National Monument,"(N.P.S. typescript, Harpers Ferry N.M, February 28, 1961), 117 pp.

Snell, Charles W.,"A History of the Physical Plant of the U.S. Armory at Harper's Ferry, Virginia, Its Evolution and Development, 1794 to 1841, Harpers Ferry National Historical Park, West Virginia,"(N.P.S. Typescript, National Capital Team, Denver Service Center, Denver, Colorado), 566 pages 5 illustrations and 22 maps. Volume I of the three Volume history of the Armory from 1794 to 1885.

Snell, Charles W., assisted by Philip R. Smith, Jr.,"Research Report The Musket Factory Buildings and Grounds, Harpers Ferry Armory, 1859 - 1860, Harpers Ferry National Monument, West Virginia," (N.P.S. typescript, Harpers Ferry NM, W.Va., April 27,19590, 84 pp. 3 maps, 18 photographs.

Baltimore and Ohio Railroad Water Tower in Musket Factory Yard:

Snell, Charles W.,"Historic Building Site Survey Report for Wager Lot No. 1 & the Bridge Lot - The Baltimore & Ohio Railroad Company's Bridge and Buildings at Harpers Ferry, 1835 - 1862, Harpers Ferry National Monument, West Virginia,"(N.P.S. typescript, Harpers Ferry NM, W.Va., September 22, 1958).

B. U.S. Arsenal Square, Block A, Shenandoah Street:

Cotter, John L., "Preliminary Archeological Investigations at Harpers Ferry: Harpers House Garden and Building 23, Arsenal Area at Shenandoah and High Street, April 8, 1959," (Region Five Office, Philadelphia, May 21, 1959), 3 pages.

Cotter, John L., "Completion of Archeological Test at Corner of New Arsenal Building, June 7, 1960, Harpers Ferry National Monument," (Region Five Office, June 1960), 4 pages, 5 photos, 2 plans.

Gardner, William M., "Excavation-Harpers Ferry, 1973-74," (NPS Typescript, Catholic University of America, December 1974), 36 pages, 7 maps, 27 figures. Work in block bounded by Shenandoah, Potomac, High Streets, and Hog Alley. Also grounds of Paymaster's House (Building No. 56).

Larrabee, Edward McMillan, "Report of Archeological Investigation of the Arsenal Square / Block A, Shenandoah Street / at Harpers Ferry National Monument, Harpers Ferry, West Virginia, From July 20 through September 5, 1959," (for Harpers Ferry NM, December 1960), 124 pages, 18 maps, 40 plates and photos.

Smith, Philip R., "History of the Large and Small Arsenals, 1796-1869, Block A, Lots 2 to 7, Shenandoah Street," (Harpers Ferry NM, December 19, 1958, revised April 29, 1959) 49 pages, 9 maps, and 6 photos.

Smith, Philip R., "History of the Superintendent's Old Office, 1833-1869, Arsenal Square, Block A, Lot 1, Shenandoah Street," (Harpers Ferry NM, December 19, 1958, revised April 29, 1959), 14 pages, 4 maps, 2 photos.

Smith, Philip R., Jr. "History of the Armory Paymaster's Old Pay Office, Block B, Lot 2, Shenandoah Street, 1822 - 1858, Harpers Ferry National Monument, West Virginia,"(N.P.S. Typescript, Harpers Ferry NM, W. Va., May 5, 1859), 15 pp.

Shenandoah Street:

Campbell, J. Duncan, "Archeological Report on Investigations-Shenandoah Street Area, Harpers Ferry," (for Harpers Ferry NM, June 4, 1965), 32 pages, 26 photos, 4 drawings.

C. U.S. Rifle Factory on the Shenandoah, Upper and Lower Hall Islands:

Carson, Hamilton H., "Resistivity and Seismic Surveys and Excavations, U.S. Rifle Works, Harpers Ferry, West Virginia," 23 pp.typescript, illustrations and notes, March 1963.

Larrabee, Edward McMillan, "Report of Exploratory Excavations conducted on the Lower Hall Island Rifle Factory, Harpers Ferry National Monument, Harpers Ferry, West Virginia from August 25 through August 29, 1959," (Typescript, N.P.S., June 20, 1960), 8 pp., 3 photos, 1 plan..

Larrabee, Edward McMillan, "Report of the Second Season of Exploratory Archeological Excavations at the U.S. Rifle Works, Lower Hall Island, Harpers Ferry National Monument, Harpers Ferry, West Virginia, from June 23 through July 6, 1960 (N.P.S. typewscript, January 30, 1961), 37 pages, 11 plates, and 3 drawings.

Larrabee, Edward McMillan, "Report of the Third Season of Exploratory Archeological Excavations Conducted at the U.S. Rifle Works, Lower Hall Island, Harpers Ferry National Monument, Harpers Ferry, West Virginia, From 25 August through 10 November 1961," (for Harpers Ferry NM, April 20, 1962), 90 pp.,13 plates, 6 drawings.

Smith, Philip R., "Historic Building Site Survey Report-History of the Upper Hall Island, 1796-1884," (Harpers Ferry NM, February 19, 1959) 21 pp., six maps.

Smith, Philip R., "Historic Building Site Survey Report: History of the Lower Hall Island, The Rifle Factory, 1844-1884," (Harpers Ferry NM, March 2, 1959), 47 pages, 9 maps and 4 photos.

Smith, Philip R., "Historic Building Site Survey Report: History of the Lower Hall Island, 1796-1848, and Captain John H. Hall's Rifle Factory, 1819-1845," (Harpers Ferry NM, May 27, 1959, 37 pages, 6 maps.

Today, the value of the three historical reports prepared by Historian Smith on the Upper and Lower Hall Islands lies in the copies of the historical maps and photographs that they contain.

D. Other Armory Buildings:

Powder Magazine:

Smith, Philip R., Jr.,"Research Report: History of the Public School, the Harpers Ferry Female Seminary, and Armory Magazine, Camp Hill, 1796-1869, Harpers Ferry National Monument, West Virginia,"(N.P.S. typescript, Harpers Ferry, NM, W. Va., April 2,1959), 16 pp.,6 maps.

Market House, Block B, Shenandoah Street:

Smith, Philip R., Jr.,"Research Report - History of the Market House, 1846 -1869, Block B., Shenandoah Street, Harpers Ferry National Monument, West Virginia,"(N.P.S.Typescript, Harpers Ferry Nm, W.Va., May 1,1959), 19 pp., 5 maps, and 3 photos.

Armory Stables, Block F, Lot No. 2, Shenandoah Street:

Snell, Charles W., "Historic Building Site Survey Report: History of Block F, Block G, and the U.S. Ferry Lots, Shenandoah Street, 1796-1869,Harpers Ferry National Monument, West Virginia,"(N.P.S. typescript, Harpers Ferry NM, W.Va., February 9, 1959) 59 pp., 10 maps and 3 photographs. pp. 8- 11- History of Stable.

E. U.S. Ferry Rights on the Shenandoah River,1810-1869:

Snell, Charles W.,"Historic Building Site Survey. History of Block F, Block G, and the U.S. Ferry Lots., Shenandoah Street, 1796-1869, Harpers Ferry National Monumnet, West Virginia,"(N.P.S. typescript, Harpers Ferry NM, W. Va., February 9, 1959), 59 pp., 10 maps, and 3 photos. Pages 19-45 inclue a history of the U.S. Ferry, 1810-1843 and of the Shenandoah Toll Bridge, 1843-1861. Photograph HF-44, takem in 1876, show rope ferry in action and also Armory Dwelling Houses No. 9 and 10, ferry houses.

F. Armory Lumber Yard, Block G, Lots 1 to 4, Shenandoah Street(to 1852)

Snell, Charles W., "Historic Building Site Survey: History of Block F, Block G, and the U.S. Ferry Lots, Shenandoah Street,1796-1869, Harpers Ferry National Monument, West Virginia,"(N.P.S. typescript, Harpers Ferry NM, W.Va., February 9,1959), 59 pp., 10 maps, and 3 photos. pp. 14 -18 contain a history of the Armory lumber Yard.

G. Loudoun Heights, Va.: Armory Forest Lands, 1813-1869:

Smith, Philip R., "History of Loudoun Heights, Va., 1813-1880," (Harpers Ferry NM, June 9, 1959), 51 pages, 13 photos, 4 maps.

H. ARMORY DWELLING HOUSES

General

Snell, Charles W., "A Comprehensive History of the Construction, Maintenance, and Numbers of Armory Dwelling Houses, 1796-1869," (NPS, Harpers Ferry NM, October 31, 1958, revised, January 13, 1959), 140 pages, 3 plans.

Quarters of the Chief Armory Officers:

Smith, Philip R.,Jr. "History of Government Dwelling House No. 43, The Armory Paymaster's First House, Block B, Lot 5, Shenandoah Street, Harpers Ferry National Monument,"(NPS Typescript, Harpers Ferry NM, April 30,1959), 17 pp. History, 1796-1865.

Snell, Charles W., "Historic Building Report, Part II- Historical Data Section for Bldg. No. 34-35. 33 and 34A, the Samuel Annin House(The Old Master Armorer's House, Block B, Lot 3, Shenandoah Street), Harpers Ferry National Mounment,"(NPS typescript, Harpers Ferry NM, March 4, 1959,) 45 pp. History 1796-1869. **Armory Dwelling House No.2.**

Snell, Charles W., "Historic Building Report, Part II, Historical Data Section for Bldg. No. 36 and 36A, The John E. P. Daingerfield House (Master Armorer's New Quarters), Lot 2, Block B., Shenandoah Street, Harpers Ferry National Monument, West Virginia(",(N.P.S. typescript, Harpers Ferry NM, W.Va., March 10,1959), 38 pp, 5 maps and 1 photo. Armory Dwelling House No. 1 in 1859.

Smith, Philip R., "History of the Commanding Officer's Quarter's, Camp Hill (Anthony Hall, Storer College), 1847-1867," (Harpers Ferry NM, March 19, 1959), 18 pages, 4 maps, 3 photos. Park Bldg.59-Armory Dwelling 25.

Smith, Philip R. "History of the Pay Master's Clerk's Quarters, Camp Hill, (Morrell House, Storer College), 1857-1867," (Harpers Ferry NM, March 26, 1959), 12 pages, 4 maps **Park Bldg No. 58,Armory Dwelling No. 30.**

Smith, Philip R., "History of Superintendent's Clerk's Quarters, Camp Hill (Brackett House, Storer College), 1857-1867," (Harpers Ferry NM, March 27, 1959), 8 pages, 2 maps. **Park Bldg. No. 57, Armory Dwelling No. 31.**

Smith, Philip R., "History of the Paymaster's Quarters, Camp Hill (Lockwood House, Storer College), 1848-1867) (Harpers Ferry NM, March 23, 1959), 29 pages, 6 maps, 5 photos. **Park Bldg. 56,Armory Dwelling No. 32.**

Dwellings of Armory Workmen on Shenandoah Street:

Snell, Charles W." History of (U.S.) Lots 1 to 11, Block C. Shenandoah Street, 1796 to 1865," (NPS typescript, Harpers Ferry National Monument, January 23,1959), 118 pp.

Snell, Charles W.,"History of (U.S.) Lots 1 to 7, Block D, Shenandoah Street, 1795 to 1865," (NPS typescript, Harpers Ferry National Monument, January 30,1959), 69 pp.

Snell, Charles W. "History of (U.S.) Lots 1 to 5, Block E, Shenandoah Street, 1796-1865," (NPS typescript, Harpers Ferry National Monument, February 3,1959), 54 pp.

Snell, Charles W., "History of (U.S.) Block F, Block G. and the U.S. Ferry Lots, Shenandoah Street, 1796-1869,"(NPS typescript, Harpers Ferry National Monument, February 9, 1959), 59 pp.

Snell, Charles W.,"History of the Catholic School Lot, Presbyterian Church Lot, and Jefferson's Lot, Shenandoah Street, 1796 - 1868,"(NPS typescript, Harpers Ferry National Monument, February 11,1959,) 44 pp.

Snell, Charles W., "Historic Structures Report. Part II, Historical Data Section. Bldg. No. 45 and 45A, The John G. Wilson Bldg., (U.S.) Lot No. 1, North of Shenandoah Street," (NPS Typescript, Harpers Ferry National Monument, February 27,1959), 41 pp.
Armory Dwelling House No. 3 or Old No. 7.

Snell, Charles W.,"Historic Structure Report: An Armorer's Dwelling House, Bldg. No. 48, on U.S. Lot No. 2 North of Shenandoah Street, Harpers Ferry National Historical Park, West Virginia, Historical Data Section," (N.P.S. Typescript, National Capital Team, Denver Service Center, May 1980), 61 pp, 7 maps and 3 photos.

Armory Dwelling Houses , High Street, Wager Lots 18-27:

Sullivan, Arthur L.," History of Wager Lots No. 17 to 34, Six Acres Reservation, 1782 to 1869,"(NPS typescript, Harpers Ferry National Monument, Revised May 15,1959) 90 pp.

Armory Dwelling Houses on Camp Hill in 1852:

Smith,Philip R., "Survey of (U.S.) Lots and (Armory) Dwelling Houses on Camp Hill, 1852 - 1861"(NPS Typescript, Harpers Ferry National Historical Park, April 17,1959), 69 pp.

I. Harpers Ferry in the Civil War, 1861 - 1865:

Larrabee, Edward McMillan, "Archeological Exploration of the Civil War Rifle Trenches on Bolivar Heights, Harpers Ferry National Monument, West Virginia During June 1962," (Harpers Ferry, July 20, 1962), 19 pages, 3 photos and 3 maps.

Pfanz, Harry W., "Special History Report: Troop Movement Maps, 1862, Harpers Ferry National Historical Park, Maryland-W. Virginia," (NPS, Denver Service Center, Colorado, March 1976), 94 pages.

Snell, Charles W., "1865 Historical Base Map for Loudoun Heights, Va.," dated June 9, 1959).

Snell, Charles W., "1865 Historical Base Map for Bolivar Heights, W. Va.," dated February 24, 1960.

Snell, Charles W., "1865 Historical Base Map for Maryland Heights, Maryland," dated February 24, 1960.

Snell, Charles W., "Documentation of 1865 Historical Base Map of Bolivar Heights, W.Va.," (Harpers Ferry NM, November 10, 1961), 23 pages. (Same as HF-120, Sullivan, Arthur L.).

Snell, Charles W., "Documentation of 1865 Historical Base Map of Loudoun Heights, Va.," (Harpers Ferry NM, February 26, 1960), 18 pp.

Snell, Charles W., "The Fortifications at Harpers Ferry, Va., in 1861 and Jackson's Attack, May 1862. (Report on the Confederate and Federal Fortifications at Harpers Ferry, Va., April 18, 1861 to May 31, 1862) to Accompany Map No. I, dated Feb. 5, 1960) (Harpers Ferry NM, February 9, 1960), 114 pages.

Snell, Charles W., "A Report on the Federal Fortifications at Harpers Ferry, Va., and of the Confederate and Union Troop Movements during the Siege of Harpers Ferry, September 12-15, 1862, (To Accompany Map II, dated November 25, 1959) (Harpers Ferry NM, December 1, 1959), 82 pages plus Map II.

Snell, Charles W., "Harpers Ferry Becomes a Fortress, September 21, 1862 - October 6, 1863 (A Report on the Federal Fortifications at Harpers Ferry, W. Va., June 27, 1863 to Accompany Map III, dated December 11, 1959)." (Harpers Ferry NM, December 16, 1959) 83 pages.

Snell, Charles W., "Harpers Ferry Repels an Attack and Becomes the Major Base of Operations for Sheridan's Army, July 4, 1864 to July 27, 1865. (A Report on the Federal Fortifications at Harpers Ferry, W.Va., January 19, 1960)." (Harpers Ferry NM, January 21, 1960), 105 pages. (To Accompany Map IV).

Sullivan, Arthur L., "Historic Structures Report, Part I-Historic Data Section-Bolivar Heights Trenches," (Harpers Ferry NM, October 23, 1862), 20 pages, 4 maps.

Civil War (Continued):

Sullivan, Arthur L., "Harpers Ferry-April 18 - December 31, 1861, A Casualty of War," (Harpers Ferry NM, February 17, 1960), 118 pages. 14 photos.

Sullivan, Arthur L., "Harpers Ferry in the Civil War-1862," (Harpers Ferry NM, June 26, 1961), 57 pages, 23 photos.

Sullivan, Arthur L., "Documentation of Historical Base Map, Harpers Ferry Vicinity, June 1863," (Harpers Ferry NM, November 10, 1961), 23 pages. HF-120 (Completion of Snell's report,

Sullivan, Arthur L., "Documentation of Historical Base Map, Harpers Ferry Vicinity, Sheridan's Supply Base, Late 1864-65," (Harpers Ferry NM, November 30, 1961), 20 pages.

J. The Disposal of Armory Lands, 1866- 1885:

Snell, Charles W.,"The Acquisition and Disposal of Public Lands of the U.S. Armory at Harper's Ferry, West Virginia, 1796 - 1885,Harpers Ferry National Historical Park, West Virginia,"(N.P.S. typescript, National Capital Team, Denver Service Center, December 19790 in Three Volumes:388 pp.

Volume I: A Narrative History, 156 pages, including 10 property maps.

Volume II: Record of to Whom the United States Government issued deeds for lots and houses at Harpers Ferry for Armory land sold from 1852 to 1887. 81 pp, including 1 map.

Volume III. U.S. Documents relating to the Disposal of U.S. Armory Lands at Harper's Ferry, W. Va., 1867 - 1885, 151 pp.,including 3 maps.

K. The Armory and Harper's Ferry's Cemeteryes:

Smith, Philip R., Jr., "Research Report: Harper's Graveyard and the Pine Grove Cemetery, Camp Hill, 1803 - o 1865.,Harpers Ferry National Monument, West Virginia,"(NpS typescript, Harpers Ferry NM, W. Va., April 2,1959), seven pages. Both cemeteries were established by the U.S. Armory.

L. Jefferson's Rock:

Fairbairn, Charlotte J., "Jefferson's Rock," (NPS typescript, Harpers Ferry National Monument, November 1961), 57 pages, 16 photos, 1 map. Research Project No. HF-103.

M. The John Brown Raid, 1859:

Bearss, Edwin C., "Historical Base Map, Part of the Master Plan, Harpers Ferry National Historical Park, Harpers Ferry, West Virginia," June 1966 edition, 31 pages.

Bearss. Edwin C., "Historical Base Map-John Brown's Raid-Documentation-Movement Sheets, October 16-18, 1859, 6 sheets, Part of Master Plan, Harpers Ferry National Historical Park, Harpers Ferry, West Virginia," June 1966 edition, 42 pages.

John Brown's Raid, National Park Service History Series (Washington, D.C., 1973).

Oates, Stephen B., Oates, To Purge This Land with Blood: A Biography of John Brown (New York, 1970).

Quarles, Benjamin, Allies for Freedom: Black and John Brown (New York, 1974).

Villard, Oswald Garrison, John Brown, 1800-1859: A Biography Fifty Years After, (Boston and New York, 1911, 2nd edition, 1943).

CHART NO. 1

Expenditures for Land, Construction, and Repair of Buildings, Canals, Dams, and Roads at the U.S. Armory at Harper's Ferry, Virginia, January 1, 1842 to June 30, 1860

(From Ordnance Department's Annual Reports of Operations to Congress)

Year	TOTAL	Serial No.	Document No.
Jan. 1, 1842 to Sept. 30, 1842:	$ 45,260.31 (1)	421	113
Oct. 1, 1842 to June 30, 1843:	32,480.06	441	23
July 1, 1843 to June 30, 1844:	35,046.06	464	43
1844-45:	28,701.10	483	96
1845-46:	62,468.77	499	41
1846-47:	55,346.27	516	22
1847-48:	75,269.63	540	25
1848-49:	55,674.70	576	37
1849-50:	38,373.24	598	20
1850-51:	62,399.44	640	36
1851-52:	60,979.25	677	26
1852-53:	47,979.19	717	19
1853-54:	60,023.04	783	33
SUBTOTAL:	$ 660,001.06	-	-
1854-55:	37,292.67	851	21
1855-56:	39,858.00	897	25
1856-57:	45,081.91	955	55
1857-58:	25,044.68	1004	32
1858-59:	32,663.07	1048	27
1859-60	71,079.03	1097	35
SUBTOTAL 1854-60:	$ 251,019.36	-	-
GRAND TOTAL 1842-60:	$ 911,020.42	-	-
Total, 1796-1860	$ 1,786,891.01		

(1) Vouchers of Paymaster indicate that only about $ 13,037.93 went to pay for Improvements and Repairs in 1842; the remaining $ 32,222.39 was apparently spent to pay off old debts for the manufacture of arms.

CHART 2

BREAKDOWN BY PROJECTS OF ANNUAL APPROPRIATIONS FOR REPAIRS AND IMPROVEMENTS AT HARPER"S FERRY ARMORY, VIRGINIA, FROM 1842 to 1861

YEAR	Total of Appropriation	For Machinery, Water Wheel	For Repairs - Genetal	Construction at Musket Factory (1)	Construction at Rifle Factory (1)	Construction U.S. Arsenal (1)	Canals & Walls Along..	Armory Dwellings (1)	Purchase of Land
1842	$ 30,000	$ 15,000	$ 10,000	2,500	-	-	-	-	-
1843-44	$ 30,500	9,500	8,000	$ 13,000	-	-	-	-	-
1844-45	12,000	4,000	3,500	4,500	-	-	-	-	-
1845-46	18,000		-	8,000	$ 5,000	-	$ 5,000	-	-
1846-47	128.361	24,550	-	22,050	10,800	-	-	15,000	50,261
1847-48	17,770	4,700	-	10,330	-	-	2,740	-	-
1848-49	$ 53,091		1,871	20,500	23,630		3,320	170	
1849-50	62,820	27,370	2,675	30,305	440			3,645	200
1850-51	50,560	2,070	10,880	7,740	27,000		2,870		
1851-52	23,100	3,220	3,500	10,150	6,230				
52-53	28,950	5,000	2,300	19,550	450		1,650		
1853-54	+ 63,500	7,700	24,000	25,200	2,600		5,000		
854-55	35,100	11,100	1,700	9,400			6,000		
1855-56	52,673	7,033	800	13,721	8,480		3,739		
1856-57	38,892	13,050		3,966		5,761	8,693	422	
1857-58	34,970	34,204		766					
1858-59	101,907	15,000		11,103		27,325	8,479		
1859-60	55,000	13,000		1,600	15,820		10,730		
1860-61	65,500	39,700		13,650					
TOTAL	$ 902.694	$ 236,197	$ 69,226	$ 228,031	$ 100,150	$ 33,086	$ 58,221	$ 19,237	50,461
1861-62	64,500	27,280			12,128		23,092	2,000	
TOTAL	$ 967,194	$ 263,477	$ 69,226	$ 228,031	$ 112,278	$ 33,086	$ 81,313	$ 21,237	$ 50,461

(1) Includes Buildings and Grounds.

CHART 2

BREAKDOWN BY PROJECTS OF ANNUAL APPROPRIATIONS FOR REPAIRS AND IMPROVEMENTS AT HARPER'S FERRY ARMORY, VIRGINIA, 1842 to 1861.

YEAR	Dams			Armory Stables & Yard	Armory Powder Magazine	Armory Lumber Shed	Rain Water Cisterns	Sources: Serial No.	Doc. No.	Pages
1842	2,500.00	-	-	-	-			Reel 20	Vol. 7	637,639
1843-44	-	-	-	-	-			Reel 20	Vol. 7	643-645
1844-45	-	-	-	-	-			439	6	94-95
1845-46	-	-	-	-	-			Reel 20	Vol. 7	652.653
1846-47	$ 900			$ 2,800	-		2,000	481	9	111-112
1847-48	-	-	-	-	-			497	9	141-142
1848-49								514	2	110-111
1849-50							1,300	538	2	117-119
1850-51								568	4	156-157
1851-52								Reel 20	Vol. 7	694
952-53								633	2	212
1853-54								675	2	257-258
854-55					1,000	6,000	1,000	714	2	188-189
1855-56								781	3	238-239
1856-57	7,000							865	2	244-247
1857-58								909	2	162
1858-59	40,000							941	2	193-194
1859-60	26,000							996	2	181-182
1860-61								1043	2	229
TOTAL	$ 76,400			$ 2,800	$ 1,000	$ 6,000	$ 4,300			
1861-62								1092	2	322-323
TOTAL	$ 76,400			$ 2,800	$ 1,000	$ 6,000	$ 4,300			

CHART 3

CASH FLOW FROM US. TREASURY DEPARTMENT TO THE PAYMASTER AT HARPER"S FERRY ARMORY, VA., FROM FUNDS COLLECTED FROM THE SALE OF PUBLIC LOTS AT HARPER"S FERRY IN 1852,TO BE USED TO MAKE PERMANENT IMPROVEMENTS, 1855 - 1859.

Year	Repayments during fiscal Year	Total Available	Amount withdrawn by requisition of Paymaster during year.	Balance in Treasury at end fiscal year	
1855-56	$ 33,725.27	$ 33,725.27	$ 0	$ 33,725.27	(1)
1856-57	904.31	34,629.58	14,000.00	20,629.58	(2)
1857-58	0	20,629.58	16,000.00	4,629.58	(3)
1858-59	8,195.86	12,825.44	12,825.44	0	(4)
1859-60	0	0	0	0	(5)
Total	$ 42,825.44	-	$ 42,825.44	0	-

Sources:

1. Serial No. 878, Document No. 17, p. 5.
2. Serial No. 924, Document No. 29, p. 5.
3. Serial No. 1006, Document No. 64,p.4.
4. Serial No. 1047, Document No.21, p.4.
5. Serial No. 1097, Document No.34, p. 3.

Use of Funds from the Sale of Lots in 1852, as approved by the Secretary of War : For making Improvements at:

Rifle Factory:	$ 6,853.00
Grading Streets:	5,970.50
Purchase of Lot No. 17 for street	1,660.00
Arsenal Square	2,917.00
Magazine	1,000.00
Three Quarters for Master Armorer & clerks"	$ 18,200
Total:	$ 36,600.50

CHART NO 4

ARMS PRODUCED, 1842- June 30,1860
U.S. ARMORY AT HARPER"S FERRY, VIRGINIA

YEARS:	Flintlock Muskets	Hall Percussion Rifles	Hall Perc. Carbines	Total:
Jan. 1,1842 Sept.30,1842:	6,575	0	0	6,575
Oct. 1,1842 to June 30,1843:	3,105	300	1,001	4,406
1843-44:	608	2,700	-	3,308
Total :	10,288	3,000	1,001	14,289

Years:	1842 percussion musket	1842 percussion rifle	1855 rifled musket	1855 model rifles
1844-45	2,225	0	-	-
1845-46	12,203	700	-	-
1846-47	12,000	3,054	-	-
1847-48	11.000	2,802	-	-
1848-49	8,300	1,925	-	-
1849-50	9,600	2,676	-	-
1850-51	11,100	3,050	-	-
1851-52	13,400	3,227	-	-
1852-53	10,001	2,762	-	-
1853-54	9,000	2,761	-	-
1854-55	7,700	2,339	0	0
1855-56:	0	0	0	0
1856-57	-	-	1	11
1857-58	-	-	8,581	1,719
1858-59	-	-	6,489	2,450
1859-60	-	-	5,049	2,701
TOTALS, 1844-60:	106,529	25,269	20,120	6,881

	Muskets	Rifles	Total
1842-1860:	136,937	36,151	173,088

Source: Annual Reports of the Ordnance Department to Congress on Operations at the Harper's Ferry Armory.

APPENDIX I

APPROPRIATIONS, 1842-1861, FOR REPAIRS AND IMPROVEMENTS, HARPER'S FERRY ARMORY.

Objects of Appropriations	U.S. STATUTE At LARGE	DATES APPROP	AMOUNT
26. Repairs, improvements and new machinery at Harper's Ferry Armory.....	5 Stat. 509	8/23/42	$ 30,000.00
27 Repairs, improvements and new machinery at Harper's Ferry armory.....	5 Stat.605	3/1/43	30,500.00
For the fiscal year ending June 30,1845:			
28. Repairs, improvements, and new machinery at Harper's Ferry Armory.....	5 Stat.698	6/17/44	12,000.00
FOR FISCAL YEAR, June 30,1846:			
29. Repairs and improvements and new machinery at Harper's Ferry Armory.....	5 Stat. 747	3/3/45	18,000.00
For 1847 fiscal year:			
30. Repairs, Improvements, and new machinery at Harper's Ferry Armory.....	9 Stat. 69	8/8/46	128,361.00
For 1848 fiscal year:			
31. Repairs, improvements, and new machinery	9 Stat. 151	3/2/47	17,770.00
For 1849 fiscal year:			
32. Repairs, improvements, and new machinery	9 Stat. 306	8/14/48	53,091.00
For 1850 fiscal year:			
33. Repairs, improvements, and new machinery	9 Stat. 372	3/3/49	**62,680.00**
34. Purchase of a lot of ground at Harper's Ferry contiguous to the public buildings	9 Stat. 372	3/3/49	**200.00**
For 1851 fiscal year:			
35 Repairs, improvements, and new machinery	9 Stat., 507	9/28/50	50,560.00
For 1852 fiscal year:			
36. Repairs, improvements, new machinery	9 Stat., 620	3/3/51	23,100.00
For 1853 fiscal year:			
37. Repair, improvement, new machinery	10 Stat. 107	8/31/52	28,950.00
38. Damages at Harper's Ferry caused by flood of April 19 and 20,1852	10 Stat., 217	3/3/53	20,000.00
For 1854 fiscal year:			
39. Repairs, improvements, new machinery	10 Stat., 217	3/3/53	43,500.00
			63,500.00
		Subtotal:	**$ 518,652**

APPROPRIATIONS FOR REPAIRS AND IMPROVEMENTS, 1842 to 1861, Harper's Ferry Armory:

Purpose of Appropriations	U.S. STATUE at Large	Date of Approp	AMOUNT
For 1855 fiscal year: 40: Repairs, Improvements, new Machinery at Harper's Ferry Armory.....	10 Stat.578	8/5/54	$ 35,100.00
For 1856 fiscal year: 41: Repair, Improvements, new machinery	10 Stat 637	3/3/55	32,673.00
42. New Machinery	10 Stat 637	3/3/55	20,000.00
			$ 52,673.00
43. Purchase of lots and Improvements at Harper's Ferry Armory *(1) **For 1857 fiscal year: From proceeds of 1852 sale.**	11 Stat. 143	4/23/56	33,725.27*
44. Repairs, improvements, new machinery **For 1857 fiscal year.**	11 Stat.149	8/30/56	38,892.00
For 1858 fiscal year: 45. Repair, improvements, new machinery	11 Stat. 203	3/3/57	34,970.00
For 1859 fiscal year: 46. Repair.improvements, new machinery	11 Stat. 335	6/12/58	101,907.00
For 1860 fiscal year: 47. Repairs, improvments, new machinery	11 Stat. 433	3/3/59	55,000.00
For 1861 fiscal year: 48.Repairs and improvements	12 Stat 66	6/12/60	65,500.00
For 1862 fiscal year: ** 49. Repairs, improvments, new machinery at Harper's Ferry Armory	12 Stat. 202	3/2/61	$ 64,500.00

** Confederate troops seized the Harpers Ferry Armory on April 18,1861.

(1)* Item 43 was not an appropriation, but authorized the Armory to use $ 33,725.27 collected from the 1852 sale of public lots and houses at Harper's Ferry to make Programed repairs and improvements in the town.

Total Appropriated,1842-61:	$ 967,194.00
Moneyc from land sales,1856	33,725.27
Total available:	$ 1,000,919.27

Actual amount of money from the proceeds of the 1852 sale made available for improvements by the Secretary of War on June 28,1856, was $ 36,606.70, so the total amount of money available for Repairs and Improvements,1842-1861 was $ 1,003,800.70 .

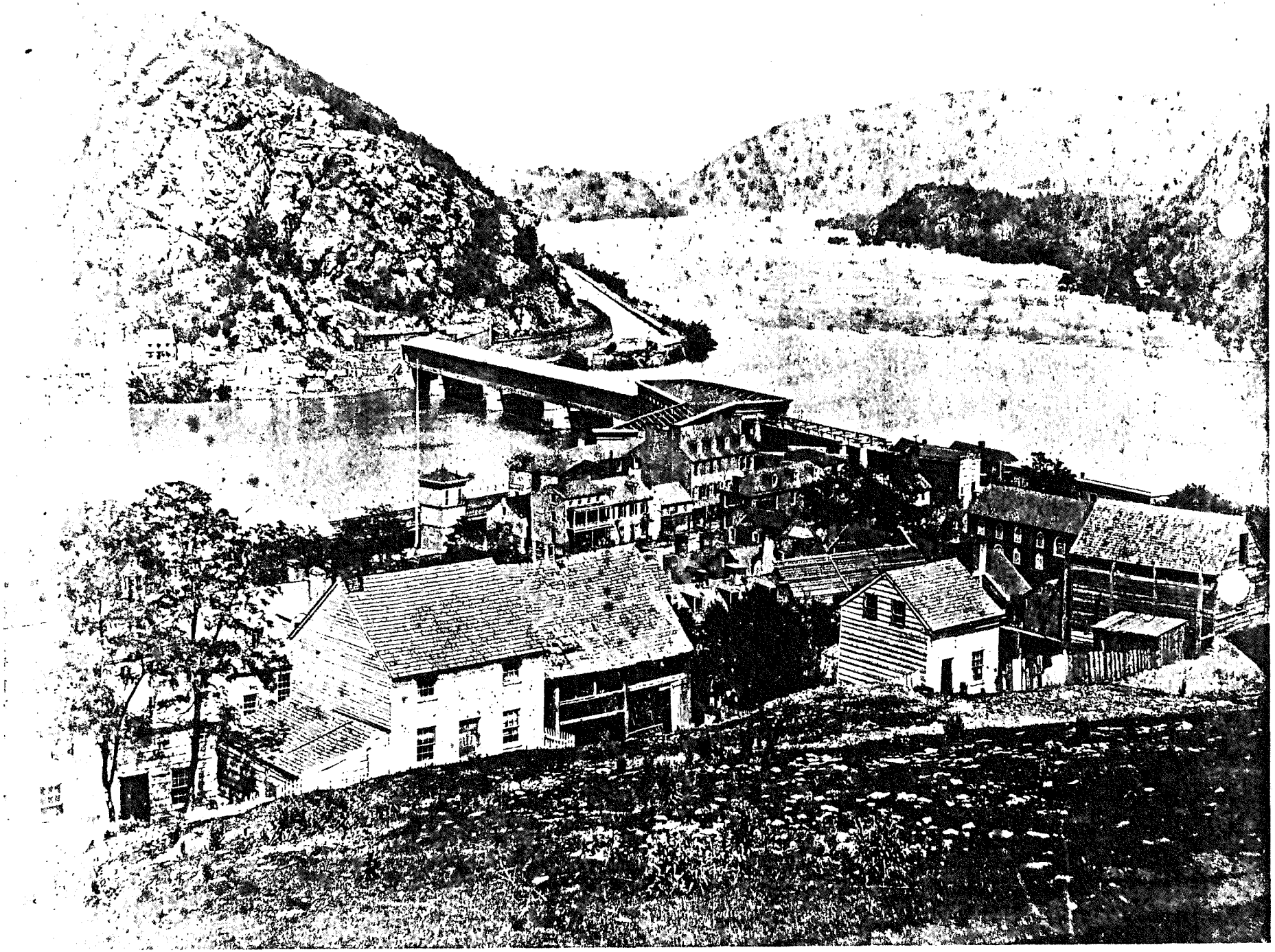
Historical Photographs(1859 - 1896) of of the U.S. Armory Buildings at Harpers Ferry, Virginia

No. 2

HARPERS FERRY FROM CAMP HILL, 1859

Harpers Ferry Negative No. HF-66.

At the left of the photograph and at the foot of the hill may be seen the roof of Bldg. No. 3, the Bell or Finishing Shop which has a cupola on its roof. Moving to the right and crossing the musket factory street, is visible the roof of Bldg. No. 12, the Armory Warehouse. Moving to the right, is to be seen the iron trestle of the B&O Railroad, then the tall Armory Flag Pole, and finally, the B&O brick water tower which was located just inside the limits of the Armory yard. A portion of the Armory entrance fence and gate, as well as trees, are visible by the water tower. The large two story brick building with arched windows to the right of the photograph, is the large Arsenal which was situated in the old Arsenal Square.

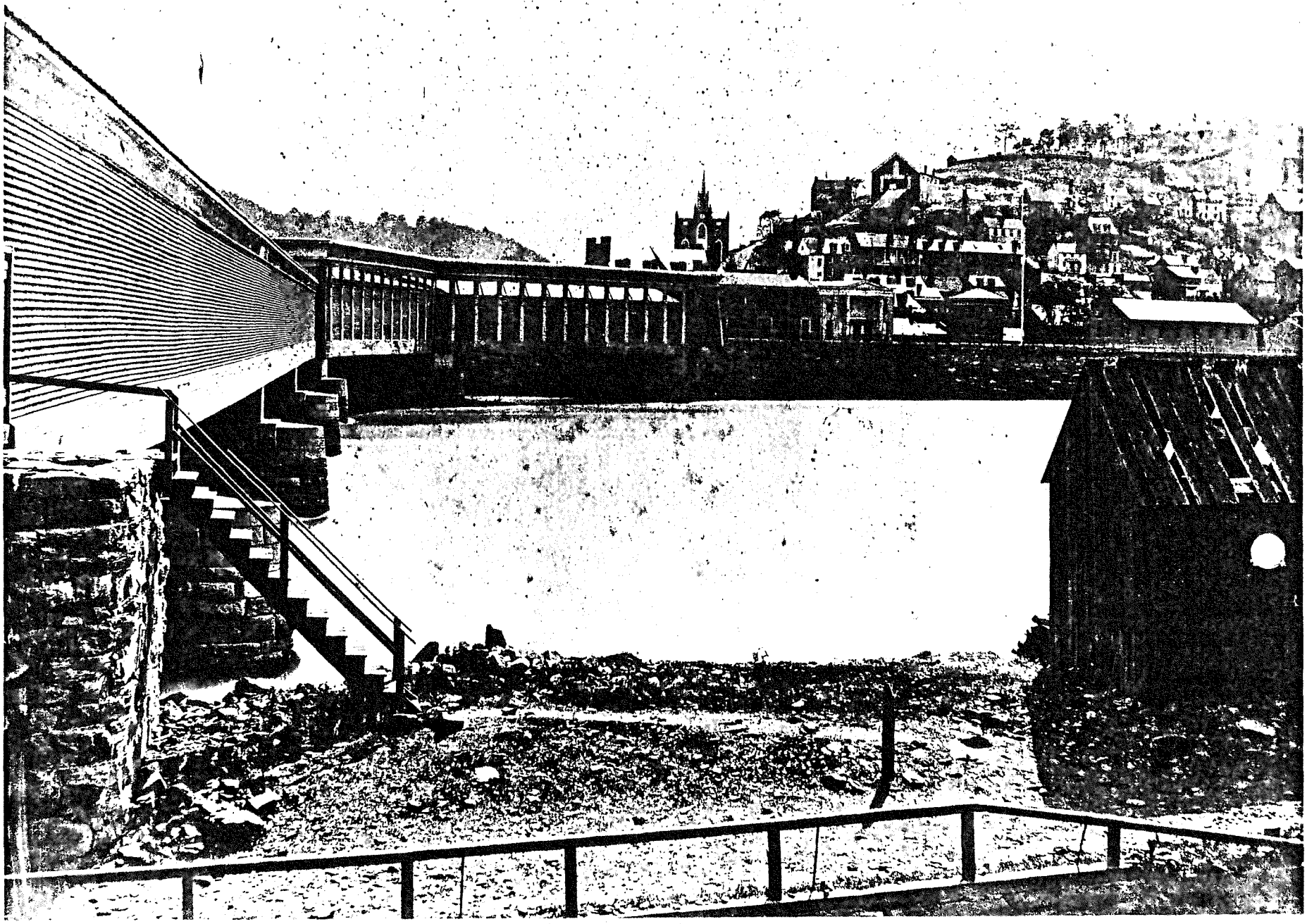


No. 3

HARPERS FERRY FROM THE MARYLAND SHORE, 1859

Harpers Ferry Negative No. HF-64.

To the left is the wooden B&O RR across the Potomac; to the right of the bridge is to be seen a portion of the Wager House Hotel; next the Potomac Rests urant (with pillars); then the roof of a stone house located on Wager Lot No. 10; the roof of Armory Bldg. No. 1, the Engine and Guard House; then the B&O brick water tower, and Armory flag pole. To the left of the flag pole and in the distance, is to be seen the roof of Armory Bldg. No. 2, the Offices. To the right of that structure stands Bldg. No. 3, the Bell or Finishing Shop. To the right of this, near the River Wall, stands large Bldg. No. 12, the Armory Ware House; and to the right of this is visible a small portion of Bldg. No. 13, the Smith Shop. Note the trees growing in the Armory yard by Bldg. No. 12.

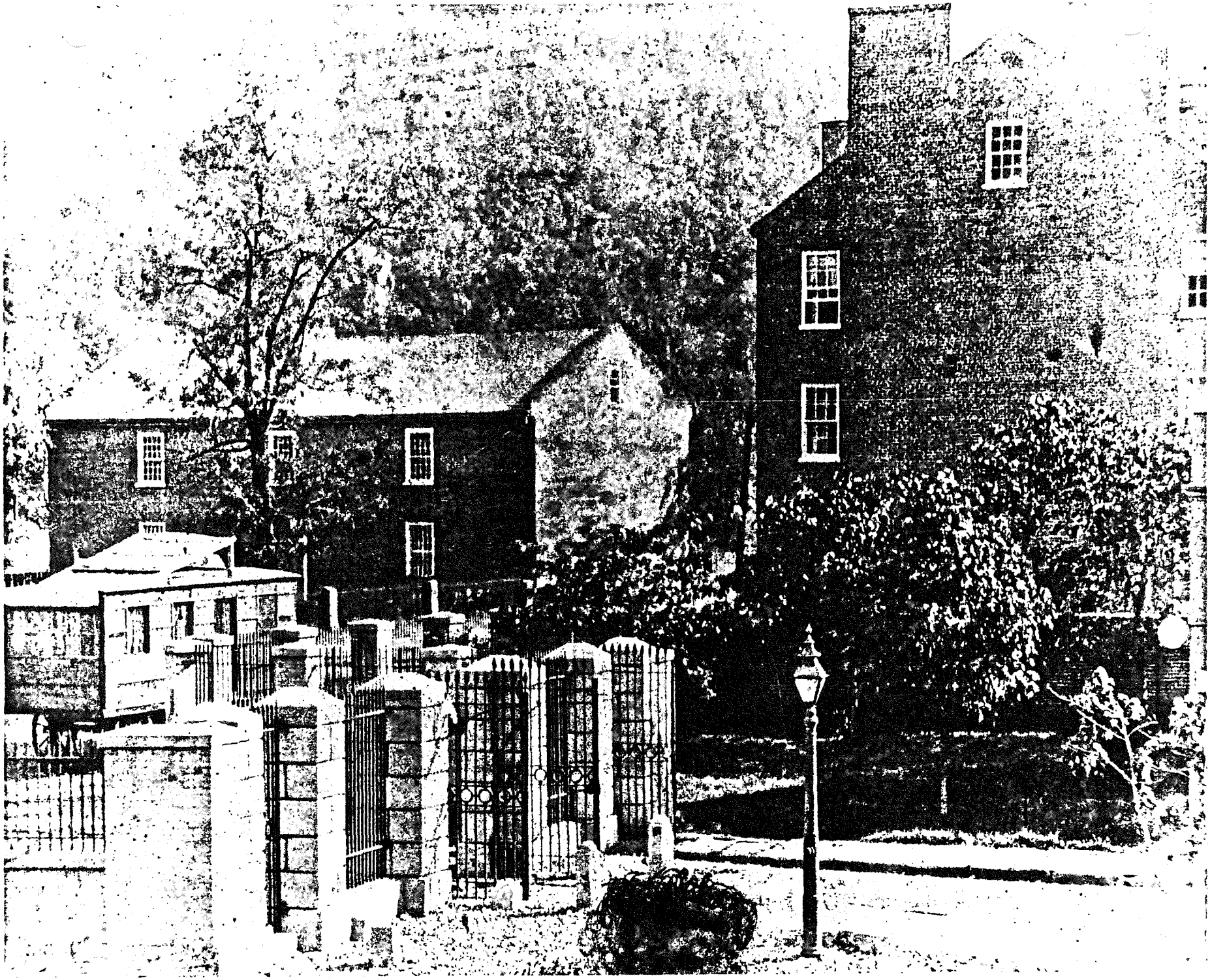


FORMAL ENTRANCE TO MUSKET FACTORY YARD, 1859

Harpers Ferry Negative No. HF-90.

In the left foreground is the formal entrance to the Armory yard, including iron gates, piers, brick walls and iron panels. Note grass and trees planted in yard, also the flag stone side walk, McAdamized street, and iron street light. The large brick building across the street to the right, is Monument Bldg. No. 9. To the left, and across Shenandoah Street, stands the small Arsenal, located in the old Arsenal Square. Note the brick and iron fence surrounding the arsenal yard.

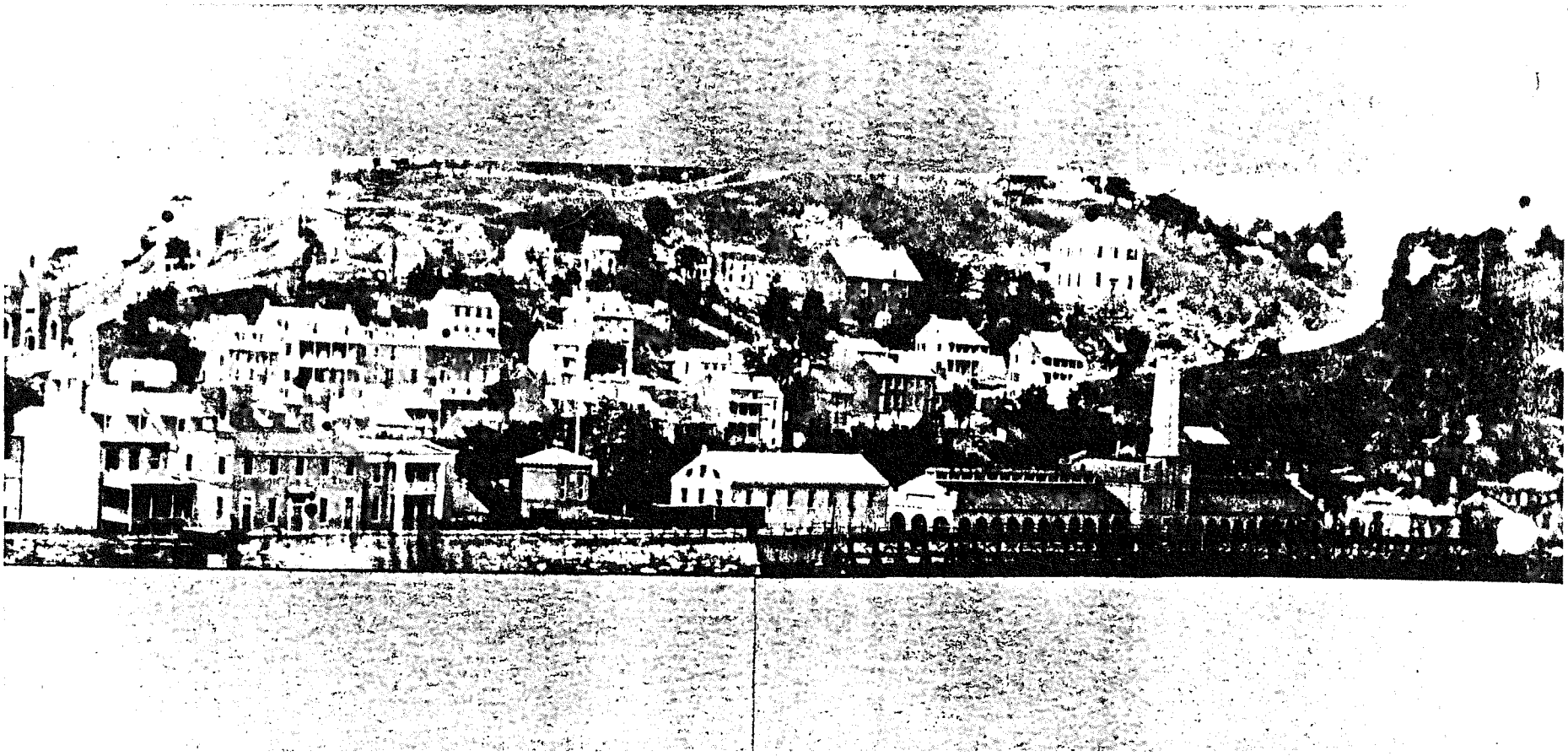
The head of a boy has been inked out at the bottom of the photo, just the left of the street light. For an uncensored version of this same photograph, see Negative HF- 625, which was added to the Park Collections in 1961.



HARPERS FERRY IN JUNE, 1861, FROM THE MARYLAND SHORE

Harpers Ferry Negative No. HF-492.

This photograph is a blow-up made from Negative HF-240. Left to right on river wall: Wager House Hotel; Potomac Restaurant B&O Water Tower; Bldg. 12-Armory Warehouse; Bldg. 13-Smith Shop; Ruins of Bldg. 14-Annealing Shop and Brass Foundry. In rear of 14 may be seen great bell tower erected between Bldgs. No. 6 and 7 in 1859-60. Note iron trestle of B&O situated on top of river wall.

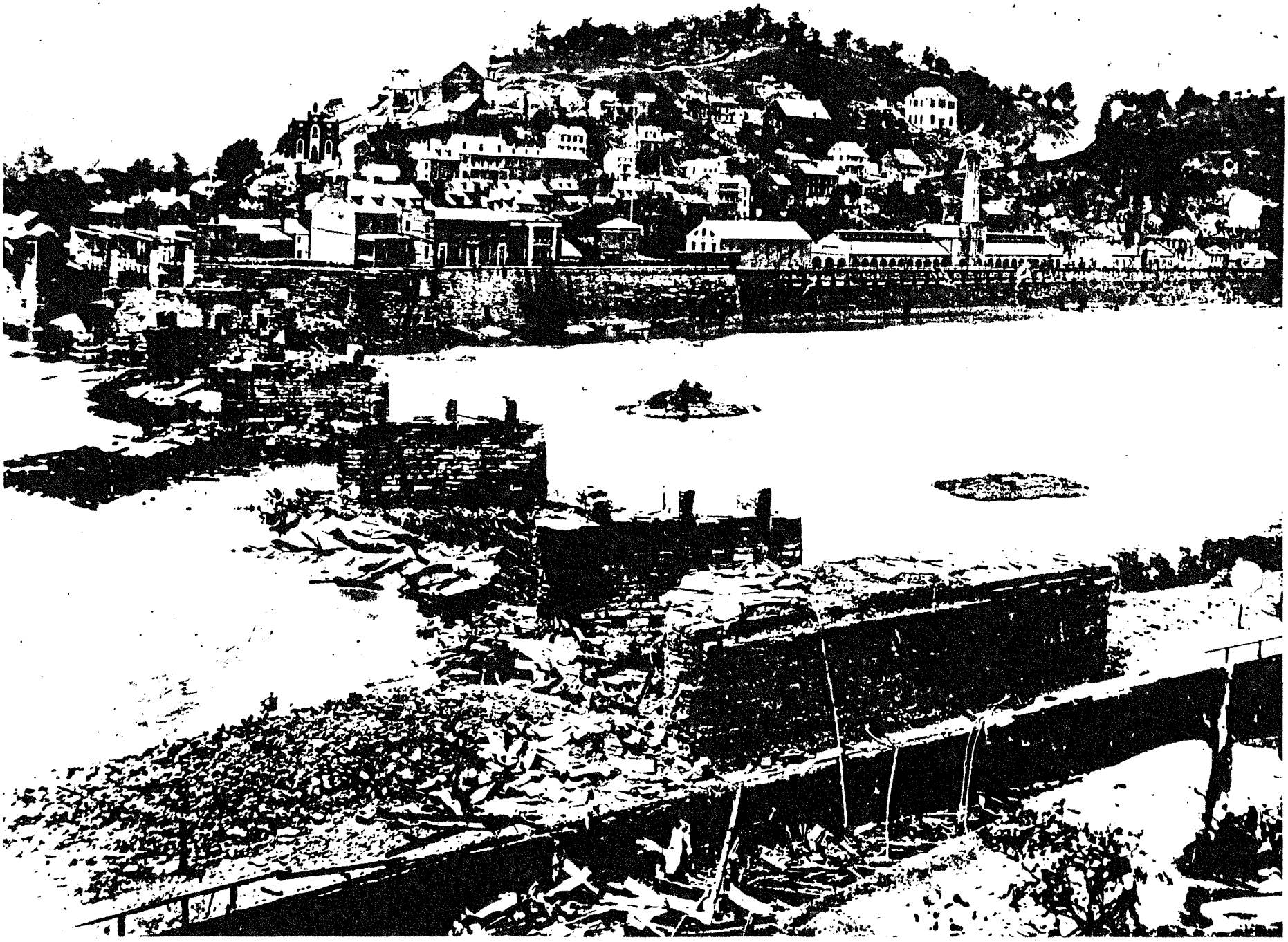


No. 6

HARPERS FERRY IN JUNE, 1861, FROM THE MARYLAND SHORE

Harpers Ferry Negative No. HF-49.

Reading from left to right along Potomac River wall: 1st, Iron Winchester Span of B&O Bridge, next B&O RR Depot, then Wager House Hotel, B&O Potomac Rest/ arant; then B&O Water Tower, Armory Flagpole, iron trestle of B&O; Old Boat Landing (below two railroad cars). Note also culverts in the River Wall for the tail races from the Armory shops; just to right of box cars are Bldg. 12, the Warehouse; then Bldg. 13-the great Smith Shop; next Bldg. 14-the Annealing Shop and Brass foundry. In the rear of 14 and towering over it, may be seen the tall bell tower erected in 1859-60, which was situated between Bldgs. 6D and 7; to the right of the tower is also the upper story of Bldg. 8. Returning to Bldg. 14 on the river edge, next in line is Bldg. No. 15-the Proof House, and then Bldg. No. 16, the Charcoal House. The Confederate forces have just evacuated Harpers Ferry and have burned Musket Factory Shops No. 6, 7, , 9, 11, 14, 15, 16, 17 and 18.



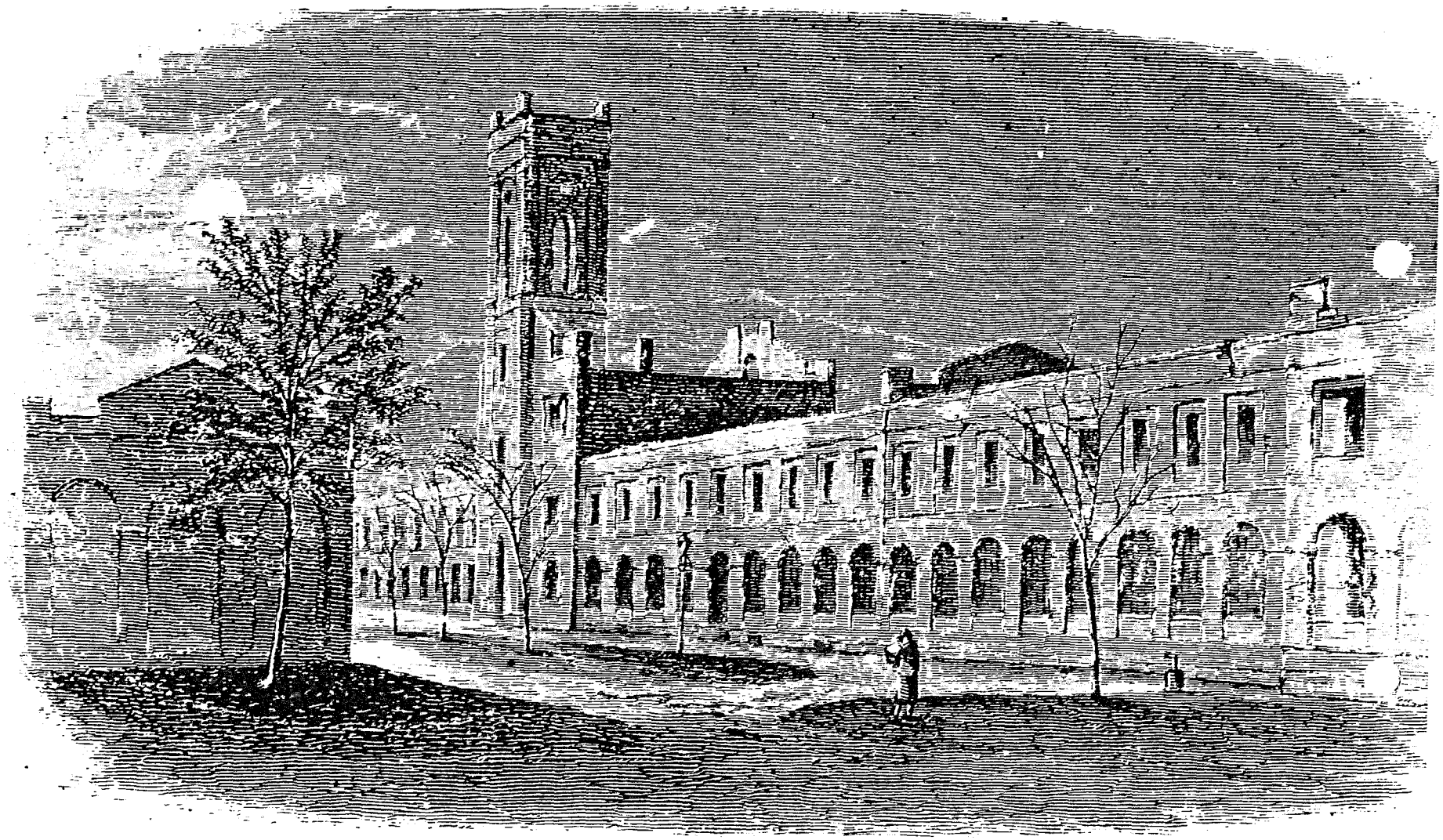
No. 7

HARPERS FERRY ARMORY AS IT NOW APPEARS, JULY 20, 1861

From Harpers Weekly, Vol. 5, 1861, page 455.

Sketch shows Musket Factory Bell tower erected in 1859-60., Bldg. No.22. To the left of the tower and connected with it, is Bldg. No. 6D, the Machine Shop. To the right of the tower is Bldg. No. 7, the Millwright Shop; then a two story section that was erected in 1859-60 to connect -The Connecting Shop, Bldg. No. 21. Bldgs. No. 7 and 8. At the right edge of the sketch may be seen a small portion of Bldg. No. 8, the Grinding Mill. A second story was added to the grinding mill in 1859-60. Note the flag stone walk, the iron street light, and trees planted along the street. To the left of the photograph is to be seen the end wall of what is probably Bldg. No. 16, the Charcoal House.

HF - 223.



HARPER'S FERRY ARMORY AS IT NOW APPEARS.

No. 8

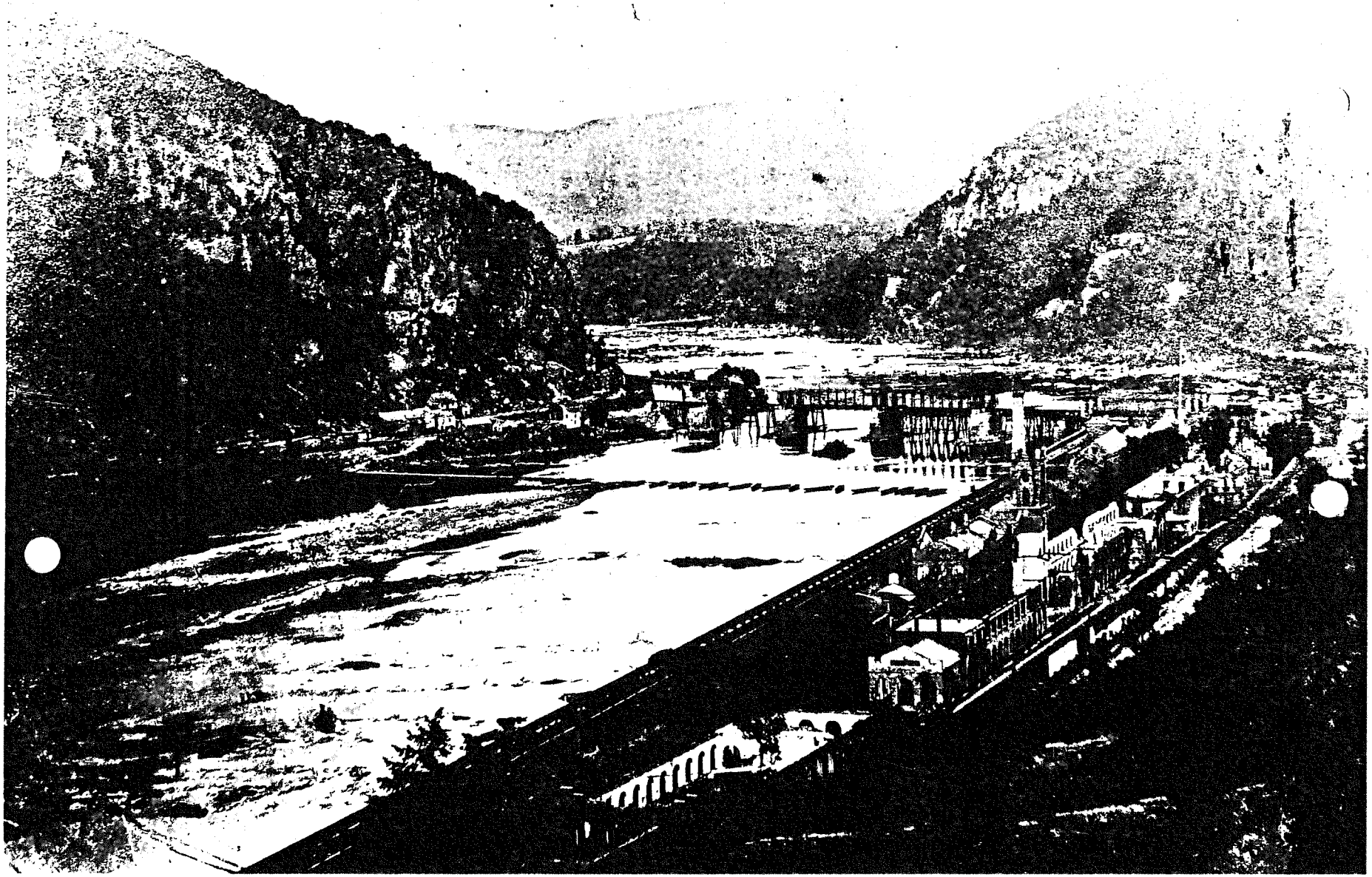
HARPERS FERRY ARMORY IN 1862, FROM MAGAZINE HILL

Harpers Ferry Negative No. HF-30.

Beginning at the bottom left center of photograph; ruined wall of Bldg. No. 10, Armory Lumber House and Coal Bin; next Bldg. No. 9, Tilt Hammer and Barrel Welding Shop. Note Armory Canal, brick wall and iron fence along Potomac Street, also note trees growing in Musket Factory yard. Next to 9, is Bldg. No. 8C-one story Carpenter shop; then 8B, two story Saw Mill; then Bldg. 8A, the Grinding Mill, with the second story that was added in 1859-60; then two story section added in 1859-60 connecting 8 to Bldg. No. 7, the Millwright Shop; then two story section, with bell tower, added in 1859-60, connecting Bldgs. No. 7 and 6D, the Machine Shop; then 6C, the Office, projecting towards the Canal; next 6A, the Stocking Shop; the projection at end of this is the one story wheel house, 6B; then Bldg. No. 5, the Boring Mill; Bldg.4, the Polishing Shop; and Bldg. No. 3, the Bell Shop; all two story structures.

Crossing the street, and moving from right to left: Armory Flag Pole-moved to new location; then B&O Water Tower near Potomac; Bldg. No. 12, Armory Warehouse; Bldg. No. 13, Smith Shop; Bldg. No. 14, Annealing Shop and Brass Foundry, one story with two chimneys, then Bldg. 15, the Proof House; and ruined walls of Bldg. No. 16, the Charcoal House.

Note two tracks of B&O on iron trestle. Pontoon bridge, on Harpers Ferry side, lands at the Old Boat Landing in Musket Factory wall.

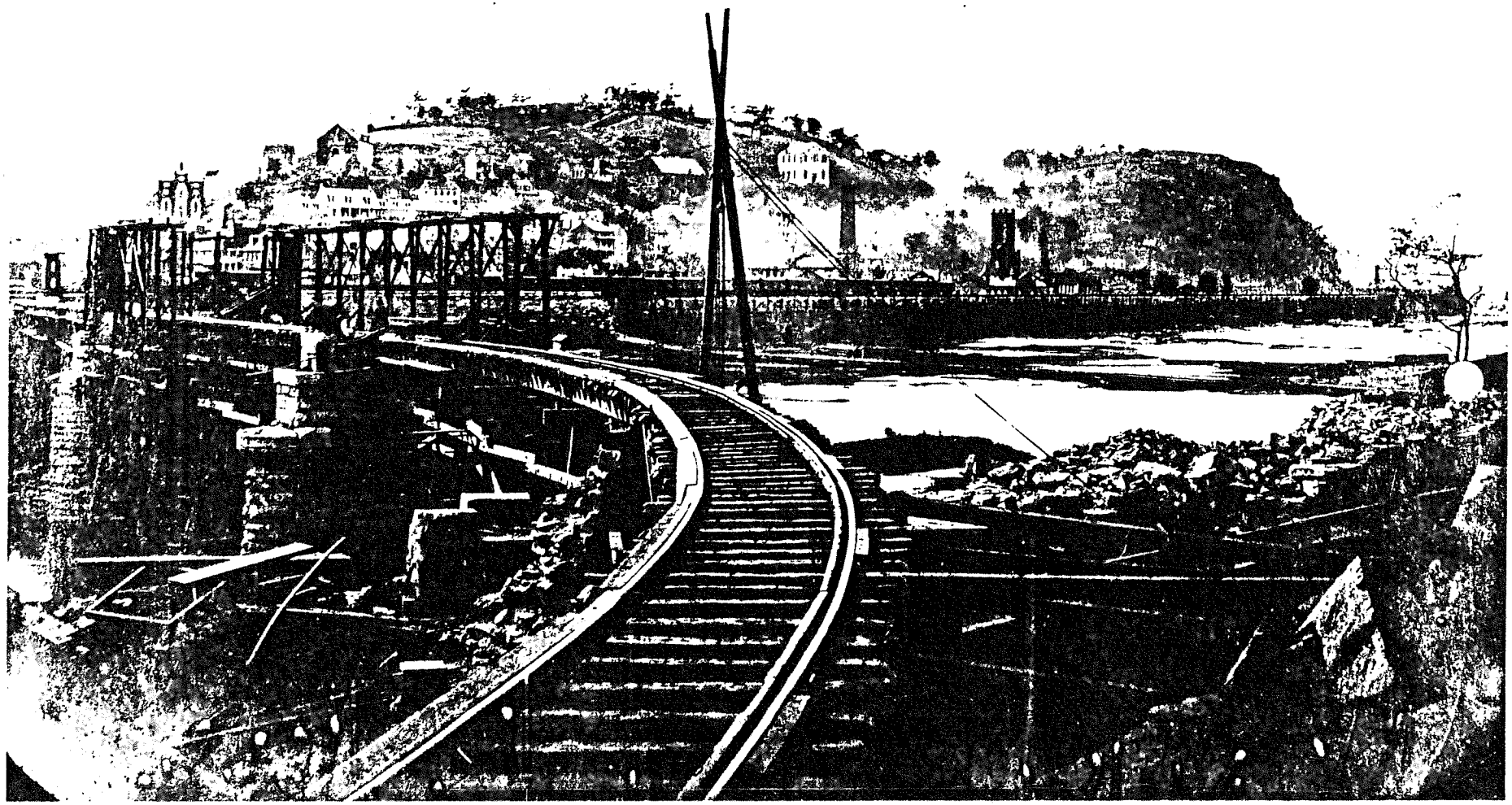


No. 9

HARPERS FERRY, OCTOBER, 1862, FROM MARYLAND SHORE

Harpers Ferry Negative No. HF-11.

Bldg. 1, the wooden cupola of the Engine and Guard House, may be seen through the bridge; by river wall, roof of Bldg. No. 12, the Armory Warehouse, has been burned off; next Bldg. 13, Smith Shop, roofs on the one story wings of this structure have also been burned. Then Bldg. No. 14, Annealing Shop and Brass Foundry; Bldg. No. 15, Proof House; Bldg. No. 16, Charcoal House; moving to right of trees, ruins of Bldg. No. 10, Lumber House and Coal Bin; then to far right of photograph, ruins and 45 foot stack of Bldg. No. 18, the Rolling Mill.



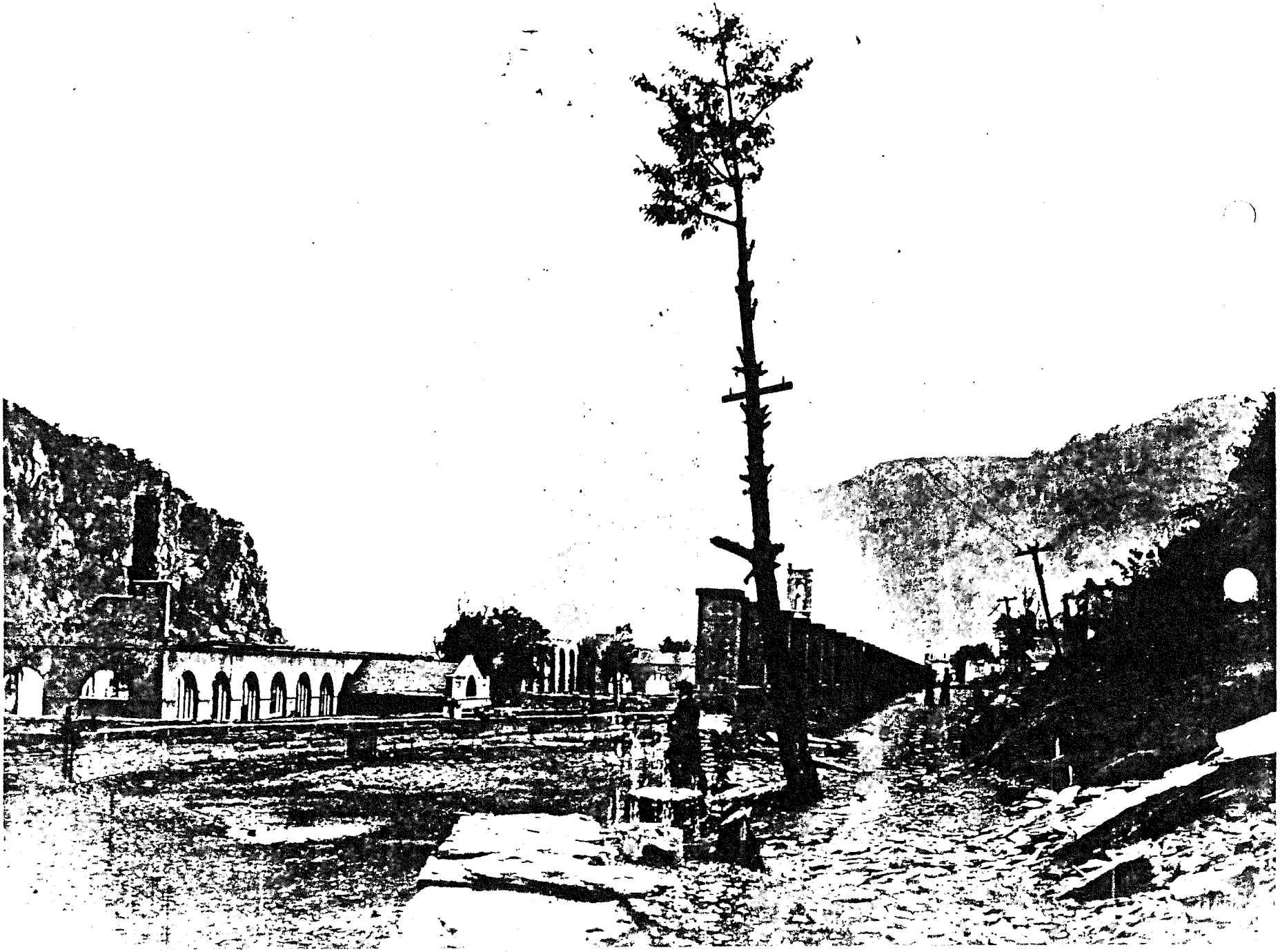
No. 10

379

Harpers Ferry Armory, October 1862

Harpers Ferry NHP Negative No. HF - 10.

To the left of the Photograph are the stone retaining walls of the Armory Canal, and beyond these are the ruins of the one-story brick wall of Bldg. No. 18 (with chimney stack), the Rolling Mill. To the right of this are the story-story high ruined wall of the Lumber House and Coal Bin, Bldg. No. 10; to the right of this can be seen the one-story brick gable end wall of Bldg. No. 9, the Tilt Hammer Shop and Barrel Welding Shop. Above the fence rises the tall tower of the Bell Tower Shop, Bldg. No. 22, erected in 1860-61. The tall brick wall with panels of iron paling fence was erected along the south side of the Armory Canal(or along the north side of North Cliff Street) at a cost of $ 10,723 in 1855-57. At the far end of North Cliff Street can be seen the rear elevation of Park Bldgs. No. 8 and 9. To the right of the right and just beyond the telegraph pole, can be seen the ruins of Bldg. No. 11, the new Stock and Store House, built in 1854-55.

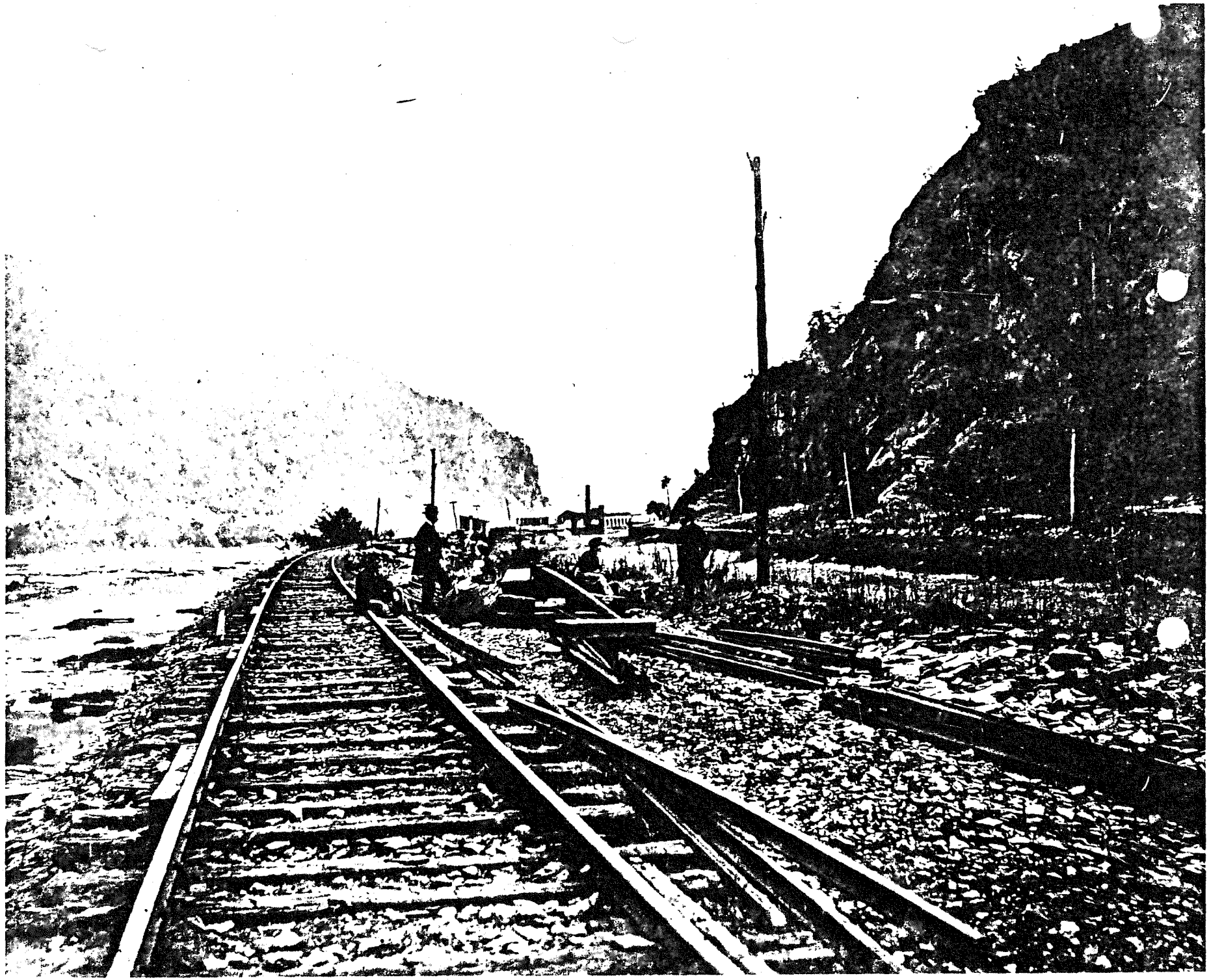


No. 11

HARPERS FERRY ARMORY, OCTOBER, 1862

Harpers Ferry Negative No. HF-8.

To the left of the railroad track is the Potomac River. In the center, at a distance, are the ruins and one stack of Bldg. No. 18, the Rolling Mill. To the right is the Armory Potomac Canal. A county road also runs along the base of the high cliffs at the right.



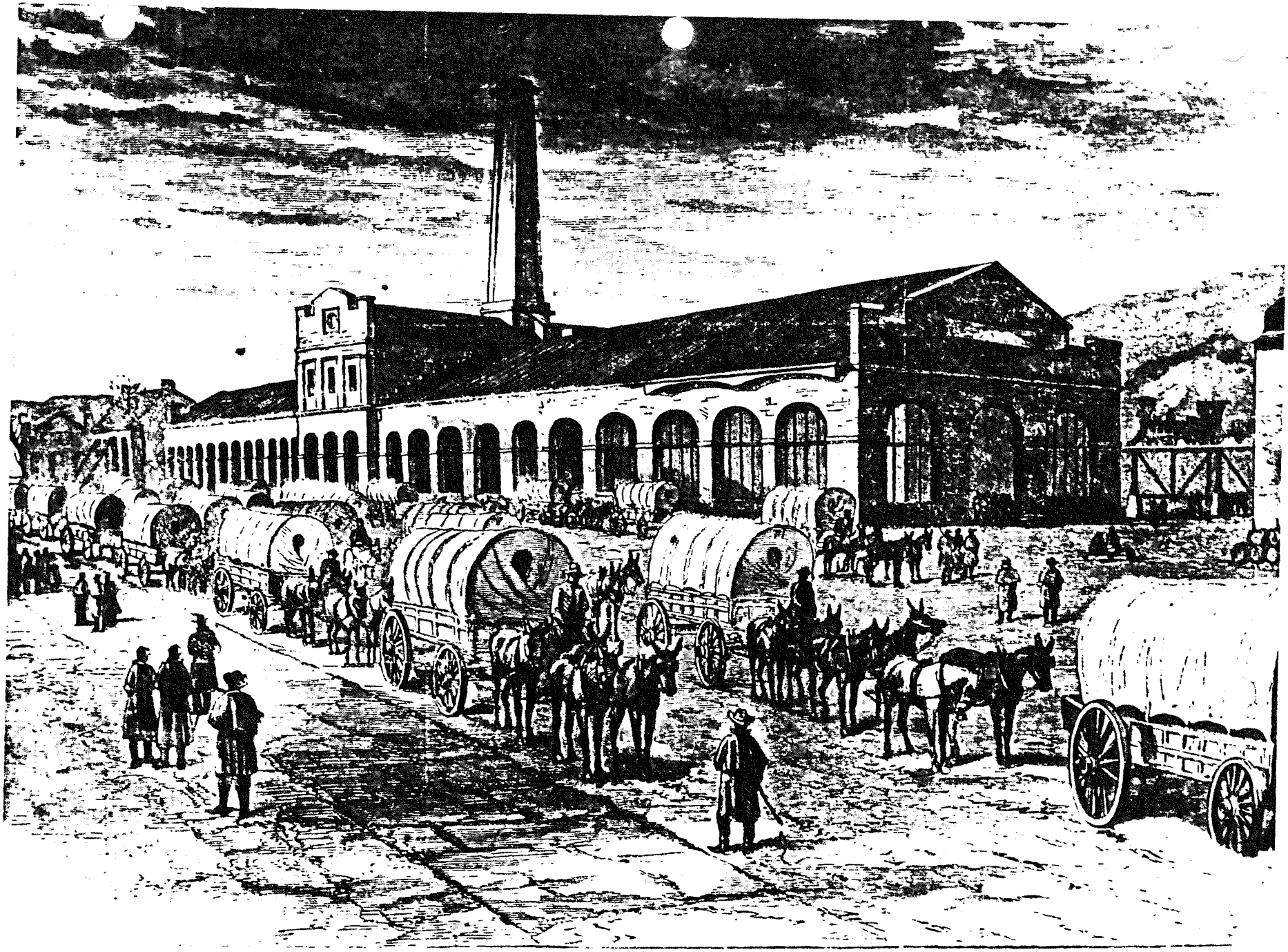
No. 12

381

UNITED STATES ARSENAL (ARMORY) AT HARPERS FERRY, NOW USED FOR QUARTER MASTER'S STORES FOR SHERIDAN'S ARMY. Sketch by A. R. Waud. Published March 11, 1865.

From Harpers Weekly, March 11, 1865, page 152.
Harpers Ferry Negative No. 89.

The great building in the center, with a temporary roof, is Bldg. No. 13, the Smith Shop. To the left of 13, stands Bldg. No. 14, the Annealing Shop and Brass Foundry, also re-roofed. To the right of 13 may be seen a corner of Bldg. No. 12, the Warehouse. Note the flagstone walk in the left foreground of the sketch.



UNITED STATES ARSENAL AT HARPERS FERRY, NOW USED FOR QUARTER-MASTER'S STORES FOR SHERIDAN'S ARMY.—[Sketched by A. R. Waud.]

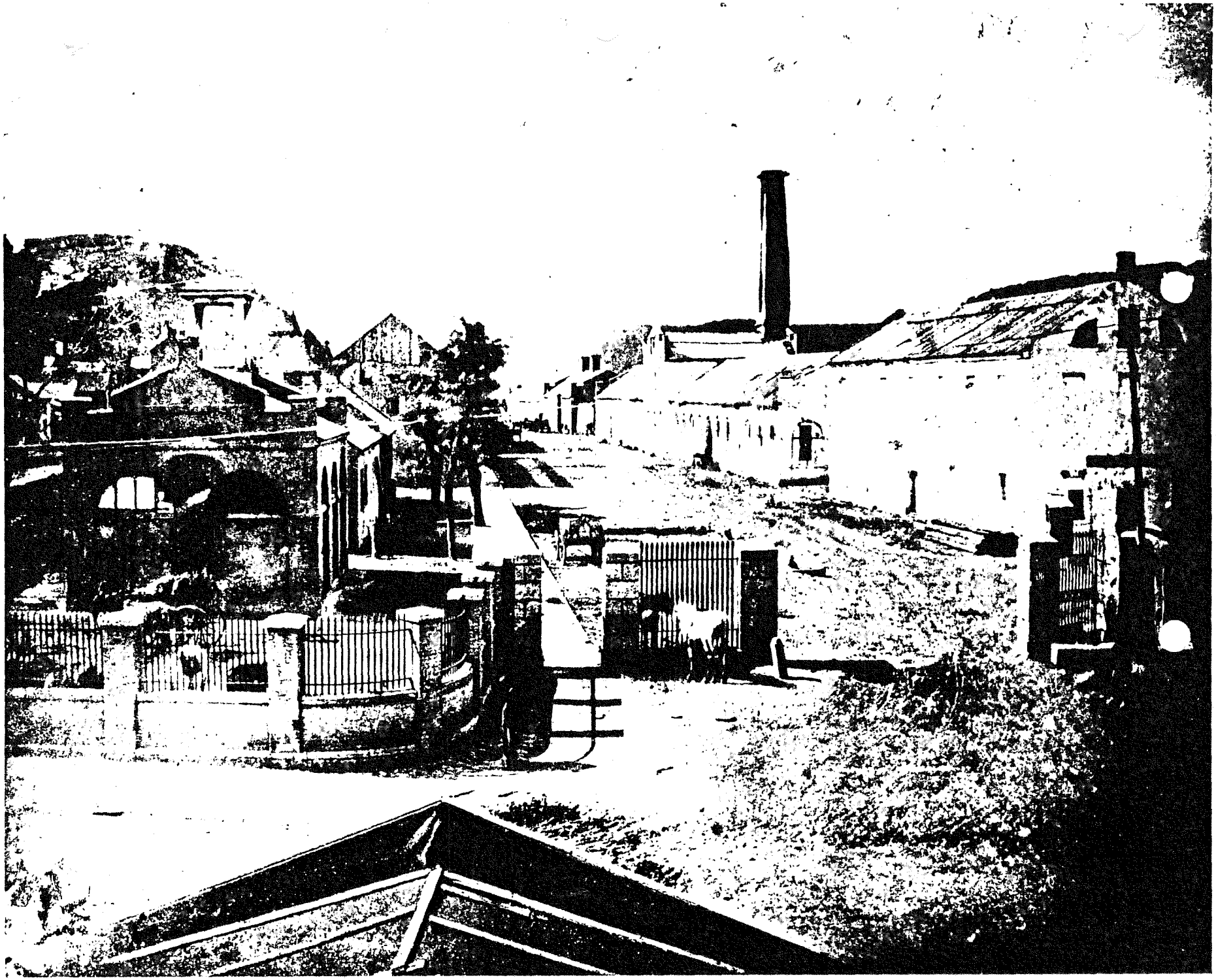
No. 13

352

HARPERS FERRY ARMORY, 1865

Harpers Ferry Negative No. HF-27B.

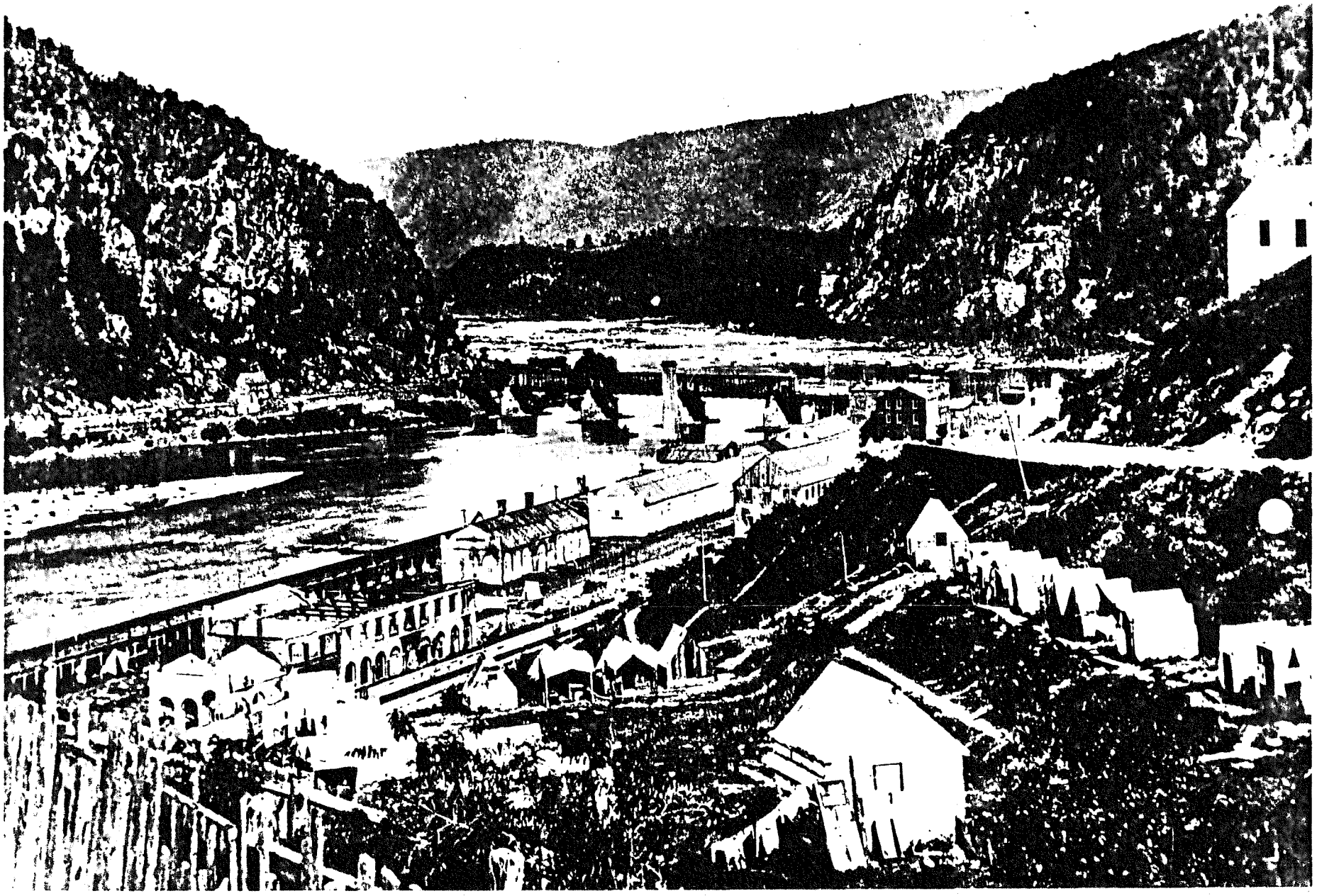
In the foreground is the main entrance to the Musket Factory, with iron gates, brick walls and iron fences. To the left of the photograph is: first, Bldg. No. 1, Engine and Guard House; next the one story brick Bldg. No. 2, Armory Office; beyond this is the two story Bldg. No. 3, the Bell or Finishing Shop. Note the flagstone sidewalk and the trees growing by Bldg. No. 2. Crossing the Musket Factory street, to the right of the photograph: first in line is Bldg. No. 12, the Armory Warehouse; next Bldg. No. 13, the Smith Shop; then in the distance, with two small chimnies, Bldg. No. 14, the Annealing Shop and Brass Foundry. In far distance, Bldg. No. 15, Proof House. The shops have had temporary roofs placed on them to serve as a Quarter Masters Depot.



HARPERS FERRY ARMORY FROM MAGAZINE HILL, 1865 OR 1866

Harpers Ferry Negative No. HF- 38.

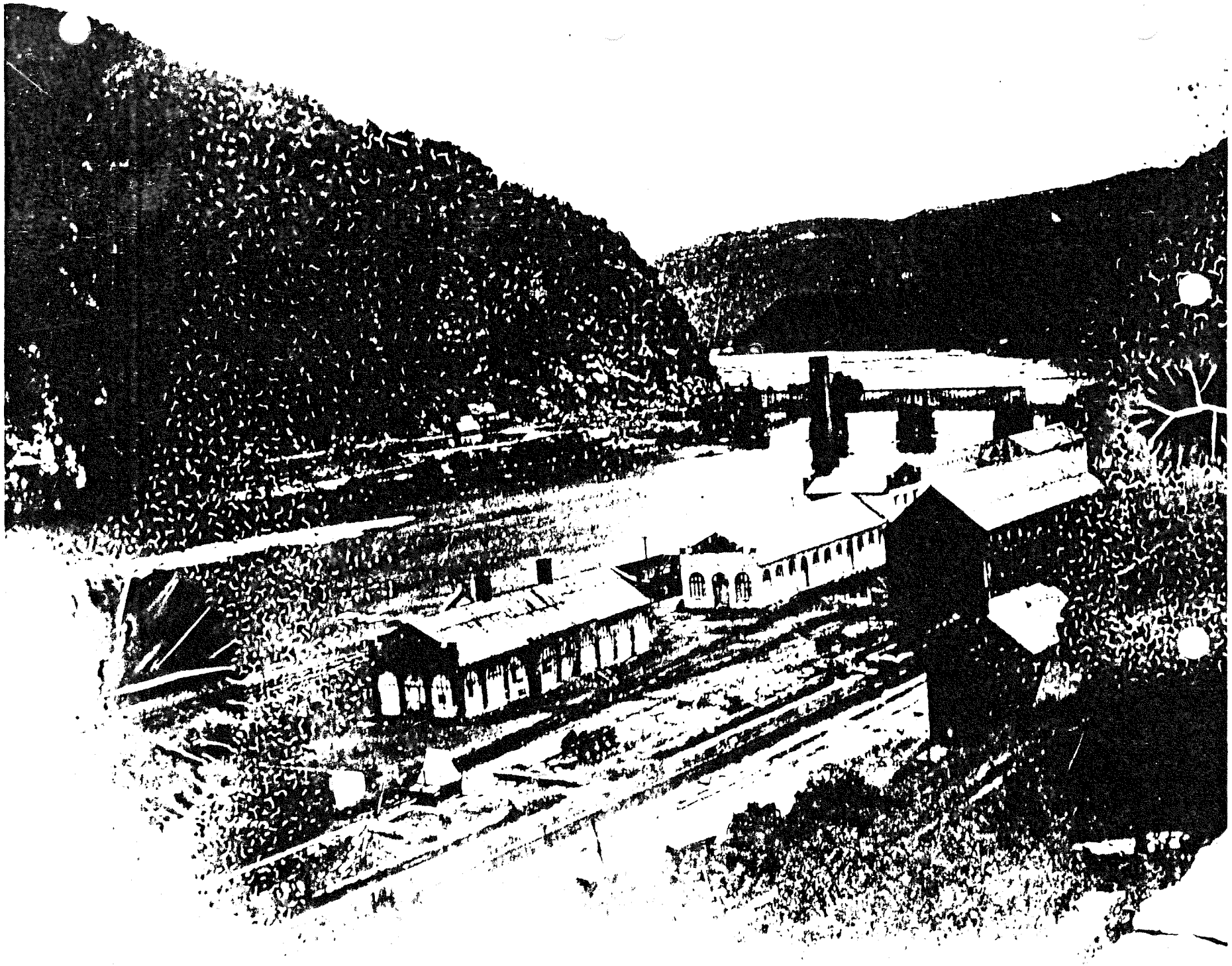
Along Potomac River wall, from left to right; first Bldg. No. 14, Annealing Shop and Brass Foundry; then Bldg. No. 13, the Smith Shop; and Bldg. No. 12, the Warehouse. The large two story building across the Musket Factory street and to the right, is probably Bldg. No. 5. the Bell or Finishing Shop. Armory Canal is to be seen in the foreground. In the lower left-hand corner, on the north side of the Armory Canal is Bldg. 8C, one-story west wing of Bldg. 8, the Carpenter Shop wing, the projecting two-story center, is Bldg. No. 8B, the Saw Mill, the next three bays to the right of the center is Bldg. 8A, the grinding mill. The Grinding Mill was erected as the one-story east wing and its second story was added in 1860-61. The remaining six bays of the two-story shop to the right of the Grinding Mill is a portion of the Connecting Shop, Bldg. No. 21, erected in 1860 to united Bldgs. No. 8 and 7. Bldg. No. 7, the Millwright Shop(converted from a stock house), the Bldg. No. 22, the Bell Tower Shop, constructed in 1860, and Bldg. No. 6, the Stocking and Machine Shop, have been demolished by this date.



HARPERS FERRY FROM MAGAZINE HILL, ABOUT 1865 or 1866

Harpers Ferry NHP Negative No. HF- 28.

Along the Potomac River Wall in center distance, reading from left to right: first Bldg. No. 14, Annealing Shop and Brass Foundry(with two chimney stacks); then Bldg. No. 13, the Smiths or Forging Shop; and the roof and gable end of Bldg. No. 12, the Warehouse. The large two-story shop across the street from Bldg. No. 13 is probably Bldg. No. 5, the Boring Shop. Bldgs. No. 6, the Machine and Stocking Shops, the Bell Tower Shop, Bldg. No. 22, and Bldg. No. 7, the Millwright Shop, which once stood along the north bank of the Armory Canal, to the left of the Boring Shop, have all been demolished. The two-story building on the south side of North Cliff or Potomac Street, near Bldg. 5, the Boring Mill, is probably Armory Dwelling House No. 20, Located on Wager Lot No. 27.



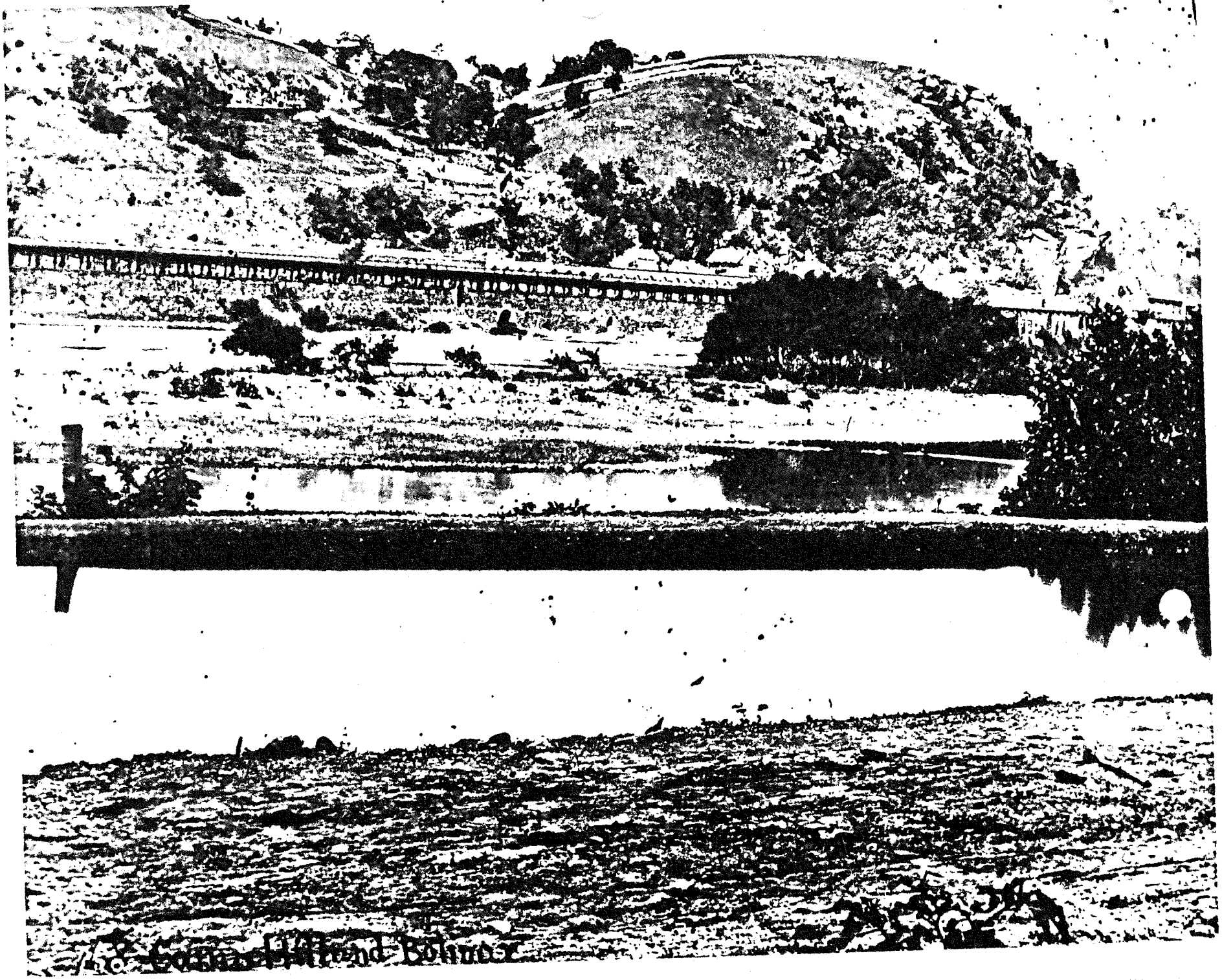
No. 16

385

CAMP HILL AND MAGAZINE HILL ABOUT 1875
FROM THE MARYLAND SHORE

Harpers Ferry Negative No. HF-83.

To the left of the photograph is Camp Hill, with Washington Street or High Street climbing the heights. Note the terracing and walling on the hillside below Washington Street. The hill to the right of the photograph is Magazine Hill. Note the Potomac River wall, with a culvert for tail race of an Armory shop in foreground. Behind the culvert and to the right of it, stands the ruins of the Bldg. No. 18, Armory Rolling Mill; to the right of this may be seen some wooden trestling of the B&O Railroad along the Armory Canal.



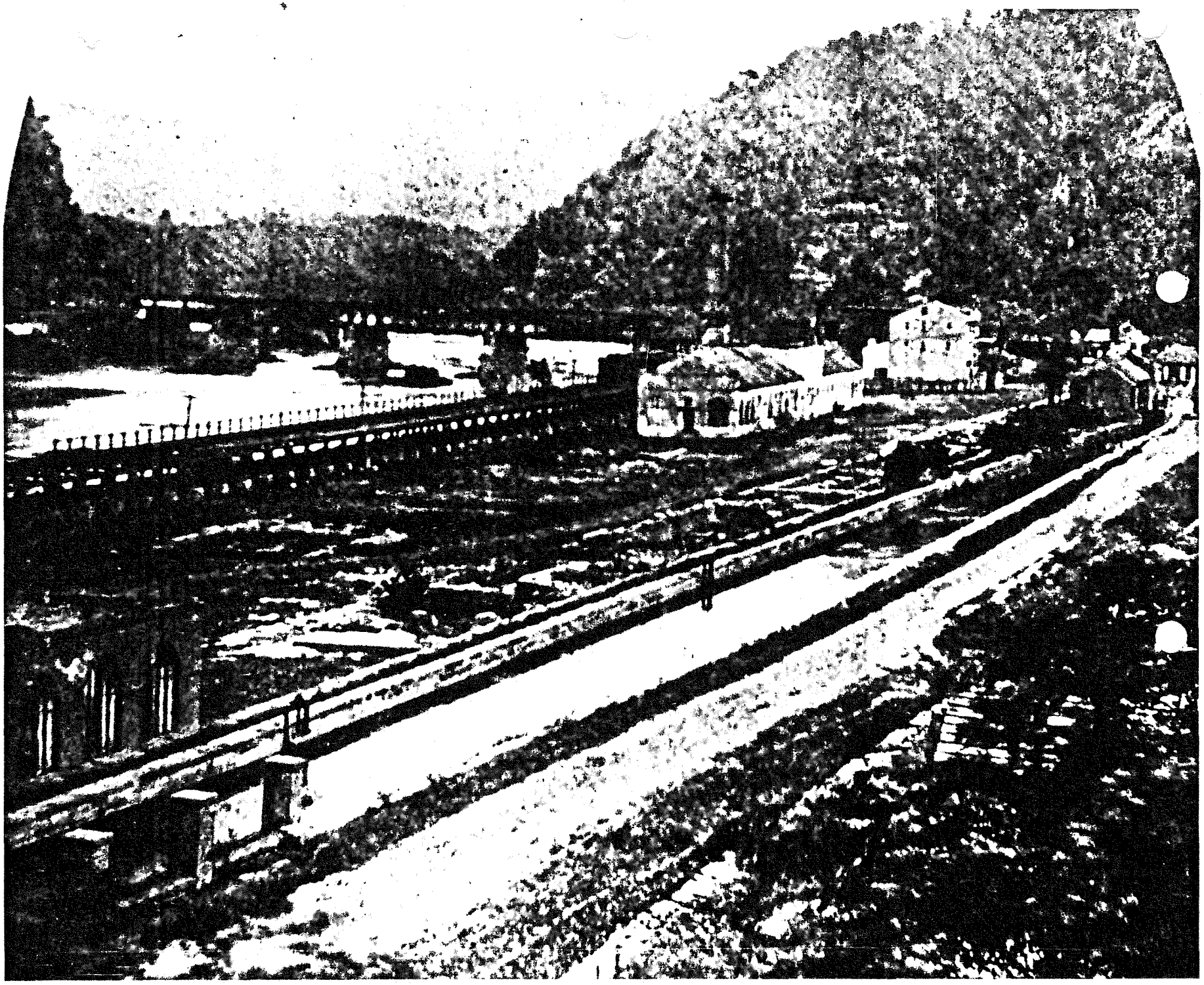
No. 17

HARPERS FERRY MUSKET FACTORY YARD ABOUT 1886

Harpers Ferry NHP Negative No. HF- 355.

In the foreground is North Cliff or Potomac Street, with the Armory canal running along its north side. The one-story brick shop in the lower left-hand corner is Musket Factory Bldg. No. 9, the Tilt Hammer and Barrel Welding Shop. Note that except for three brick piers on North Cliff Street side of the canal, the fine brick pier and iron paling fence that once guarded the south bank of the canal, has been demolished. Note the iron trestle and track of the B. & O. Railroad standing on top of the Potomac River Wall in the distance. In the right center is the great Smiths or Forging Shop, Bldg. No. 13, with its 90 foot tall chimney stack. Note that Bldg. No. 12, the Armory Warehouse, which once stood to the right of Bldg. No. 13, has been demolished. Also Bldg. No. 14, the Annealing Shop and Brass Foundry, which once stood just to the left of Bldg. No. 13, has also been torn down.

Along the north bank of the Armory Canal, Musket Factory Bldgs. No. 8, the Carpenter Shop, the Sawmill, and Grinding Mill; Bldg. No. 21, the Connecting Shop; Bldg. No. 7, the Millwright Shop, Bldg. No. 22, the Bell Tower Shop; Bldg. No. 6, the Machine and Stocking Shops; Bldg. No. 5, the Boring Mill; Bldg. No. 4, the Polishing Shop, and Bldg. No. 3, the Old Bell Shop, have all had their ruined walls levelled. At the far right, on the north bank of the Canal, can be seen what may be Bldg. No.17, the Old Pay Office, relocated from Arsenal Square in 1858, then Bldg. No. 2, the Armory Office Bldg., and finally the Engine and Guard House, with the wooden cupola on its roof, Bldg. No. 1.



The MUSKET FACTORY YARD FROM LOUDOUN HEIGHTS ABOUT 1886

Harpers Ferry NHP Negative No. HF- 492.

The Musket Factory yard stretches along the south bank of the Potomac River to the right of the photograph. All of the Musket Factory Shops and Storehouses have been demolished except the following structures: Bldg. No. 9, the Tilt Hammer and Barrel Welding Shop, standing on the north bank of the Armory Canal in the distance. In the far distance, on the south bank of the river, perhaps the ruined walls of Bldg. No. 18, the Rolling Mill; 3. The large Smiths Shop, Bldg. No. 13, with its 90 foot chimney stack. 4. Armory Office Bldg. No. 2, and 5. the John Brown Fort-Bldg. No. 1, the Engine and Guard House, with a wooden cupola on its roof. A few of the stone piers of the armory entrance gate are also still in place. The hipped roof one story house on the northeast corner of Old Arsenal Square, Lot 1, Block A, Shenandoah Street, is probably the Armory Superintendent's Old Office .

No. 19

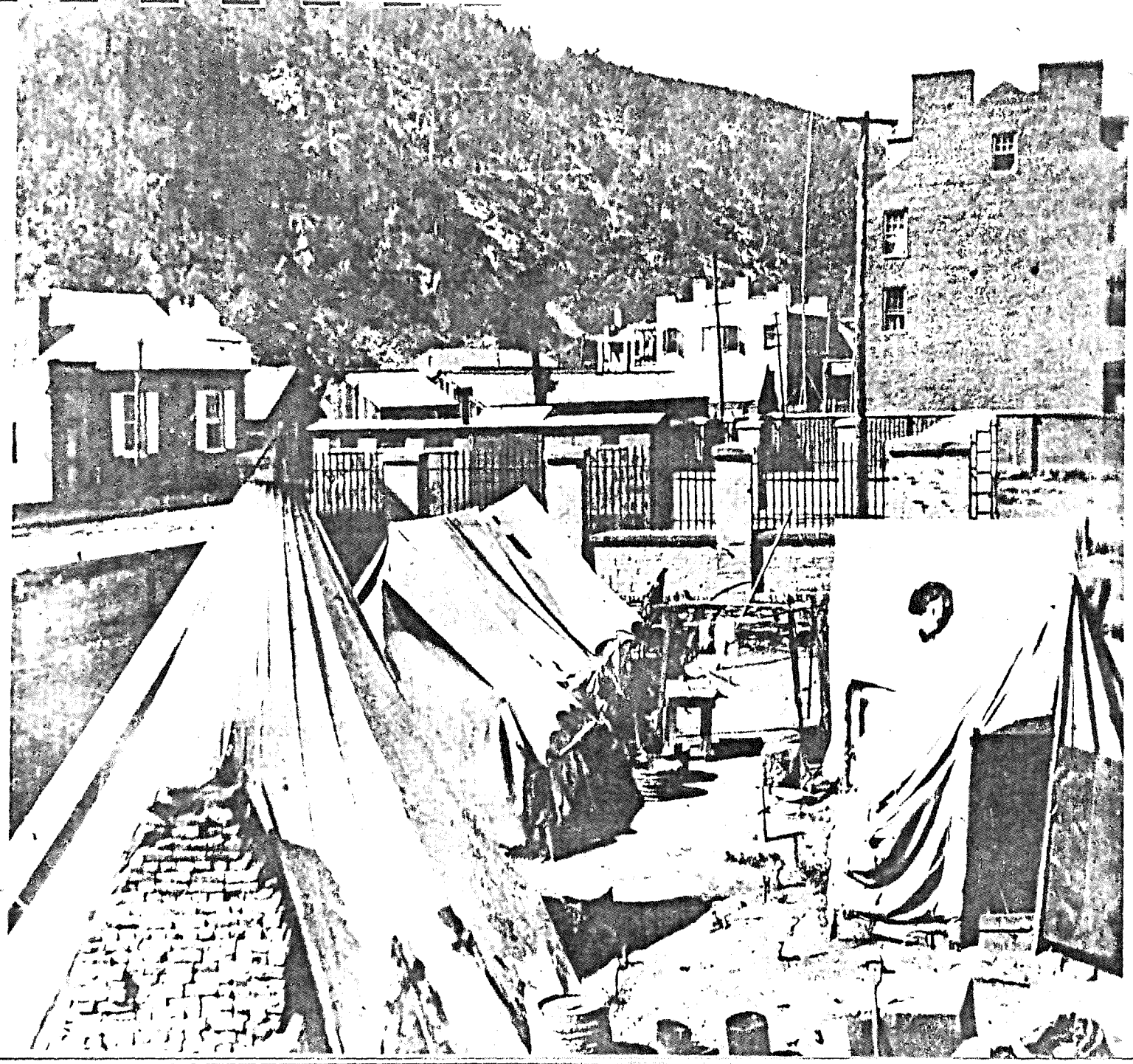
387

"CONTRABAND CAMP -HARPER'S FERRY, VIRGINIA

Harpers Ferry NHP Negative No. HF - 18
(U.S. Signal Corps Collection, National Archives
Still Picture Section- from estate of Captain
James Bown Johnston, 8th Michigan Cavalry.)

Photo probably taken in 1864 or 1865.

The tent camp of the escaped slaves is located on Wager Lot No. 11 just inside the main gate and entrance wall of the Musket Factory Yard. The hipped roof one-story brick building across Shenandoah Street to the left, is the Superintendent's Old Office, located on Lot 1, Block A., Shenandoah Street; the four or five one-story frame buildings are located to the right of the Old Office, on Lots 2 to 7, Block A, temporary structures erected by the Union Army, perhaps by the Military Railroad Corps. To the right of these, the two-story brick house is Armory Dwelling No. 1(Park Bldg. No. 36), the Master Armorer's new Quarters, which was built in 1858-59. The large three and one-half story brick building at the right, at the junction of Shenandoah and North Cliff(or Potomac) Streets, is Park Bldg. No. 9.

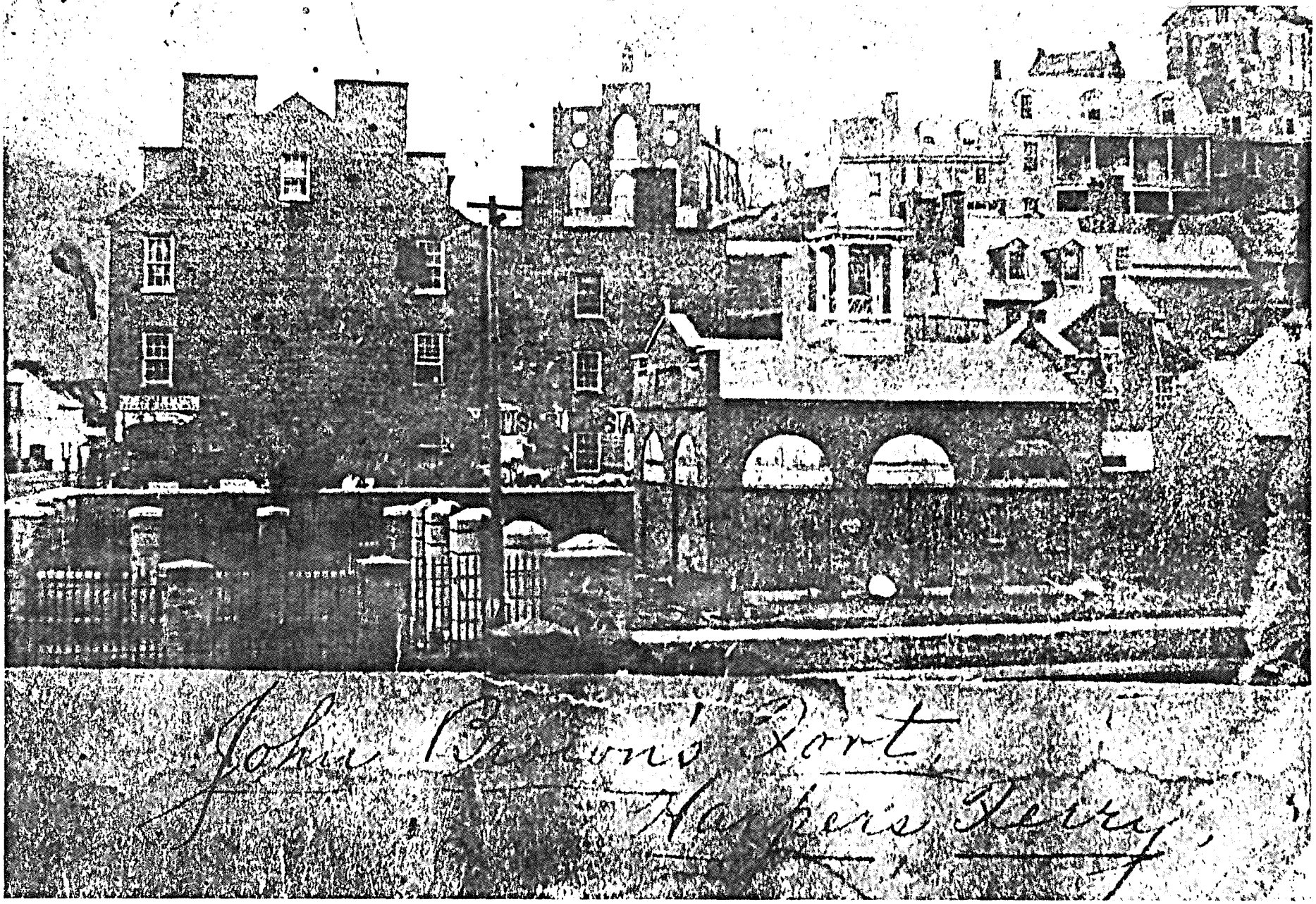


JOHN BROWN'S FORT, 1873-75.
HARPER'S FERRY, W. VA.

Harpers Ferry NHP Negative No. HF - 55

This photograph was probably taken in 1873-75. Musket Factory Bldg. No. 1, the Engine and Guard House, known as the "John Brown Fort," after the October 1859 raid, is the one-story brick building in the right center, with the wooden cupola on its roof. To the right of the "Fort" stands a part of the former kitchen wing of the Superintendent's Old Quarters, which was remodelled into an Armory Office Bldg., Bldg. No. 2, in 1847-48. Between Musket Factory Bldg.s No. 1(Park Bldg. No. 63) and No. 2, can be seen Park Bldg. No. 7, Frederick A. Roeder's White Hall Tavern. The large three and one-half story brick building to the left of the "Fort" is Park Bldg. No. 9 and the three-story rear brick service wing is Park Bldg. No. 8. Gilbert Brothers Drug Store is located in 9.

In the foreground, to the left, can be seen the main gate and entrance walls to the Musket Factory Yard, which were located on Wager Lots No. 11 and 12.


John Penn's Seat
Near Kew

No. 21

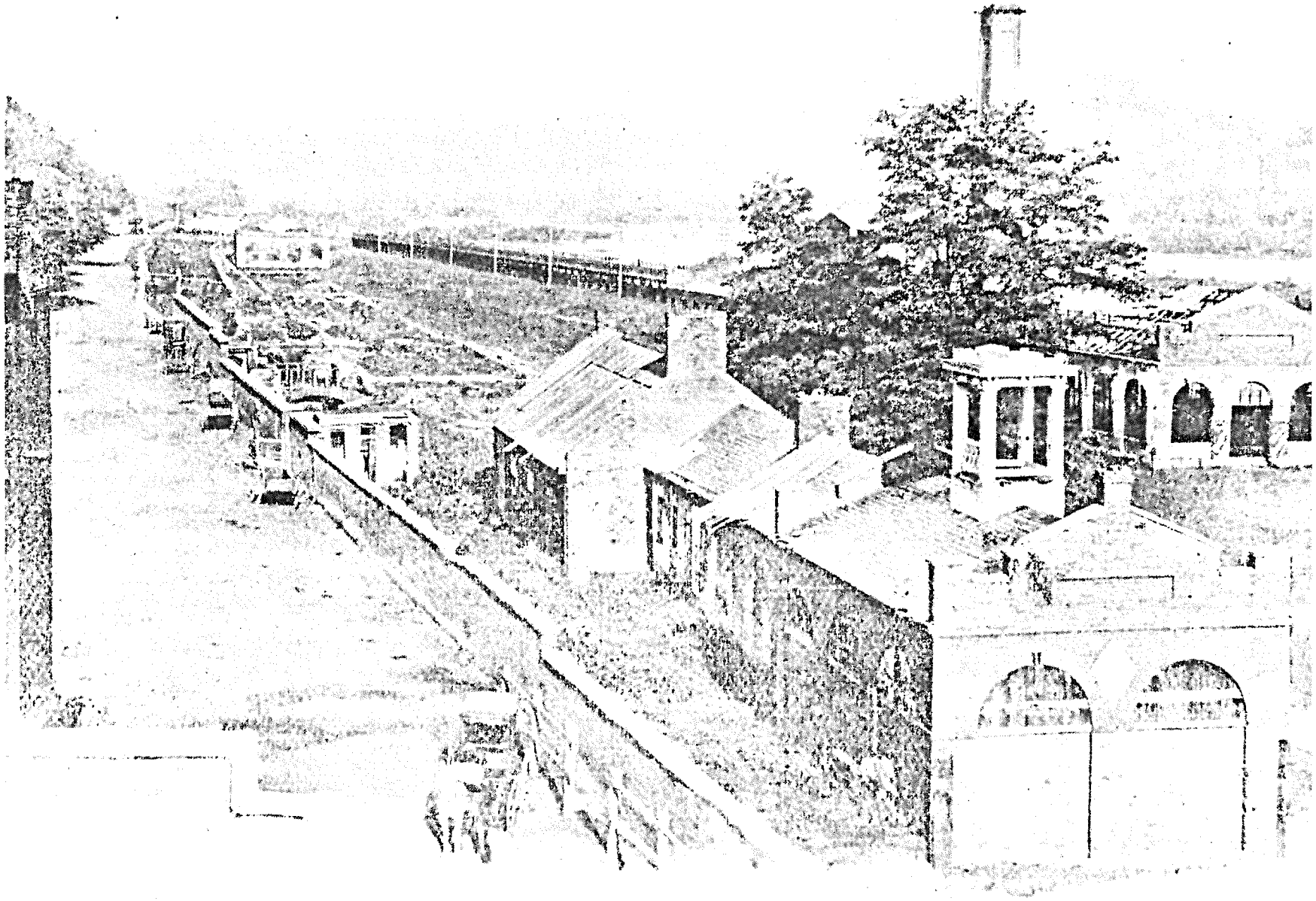
390

JOHN BROWN"S FORT AND THE OLD ARSENAL BEFORE THEY WERE REMOVED. Photo taken in 1886.

Harpers Ferry NHP Negative No. 539.

To the left is North Cliff or Potomac Street; to the right are the remains of the brick enclosing wall along the south side of the Musket Factory yard and Armory Canal. In the center distance are the one-story ruined brick walls of the Tilt Hammer and Barrel Welding Shop, Musket Factory Bldg. No.9. To the right of this is to be seen the iron trestle and main line west of the B. &. O. R.R., standing on top of the stone Potomac River wall. Behind the tree to the right, can be seen one ruined wing and the 90 foot tall chimney stack of Bldg. No. 13, the Smiths or Forging Shop.

In the right corner foreground is the east and south(rear) elevations of the John Brown Fort, Musket Factory Bldg. No. 1, the Engine and Guard House(Park Bldg. No. 63), with the wooden cuplola mounted on its roof. To the left of the "Fort" is Bldg. No. 2, the Armory Office Building, the former Superintendent's 1809 residence, which was remodelled for use as a office in 1847-48. The long one-story service wing to the main dwelling was added in 1828-29. The one-story ruined brick building, with three doors, located to the left of the main Office Building and abutting on the brick enclosing wall, is probably the "new priv y at offices " that Superintendent Alfred M. Barbour reported as being completed in his annual report for the fiscal year ending June 30, 1860.



JOHN BROWN'S FORT AND THE OLD ARSENAL BEFORE THEY WERE REMOVED.

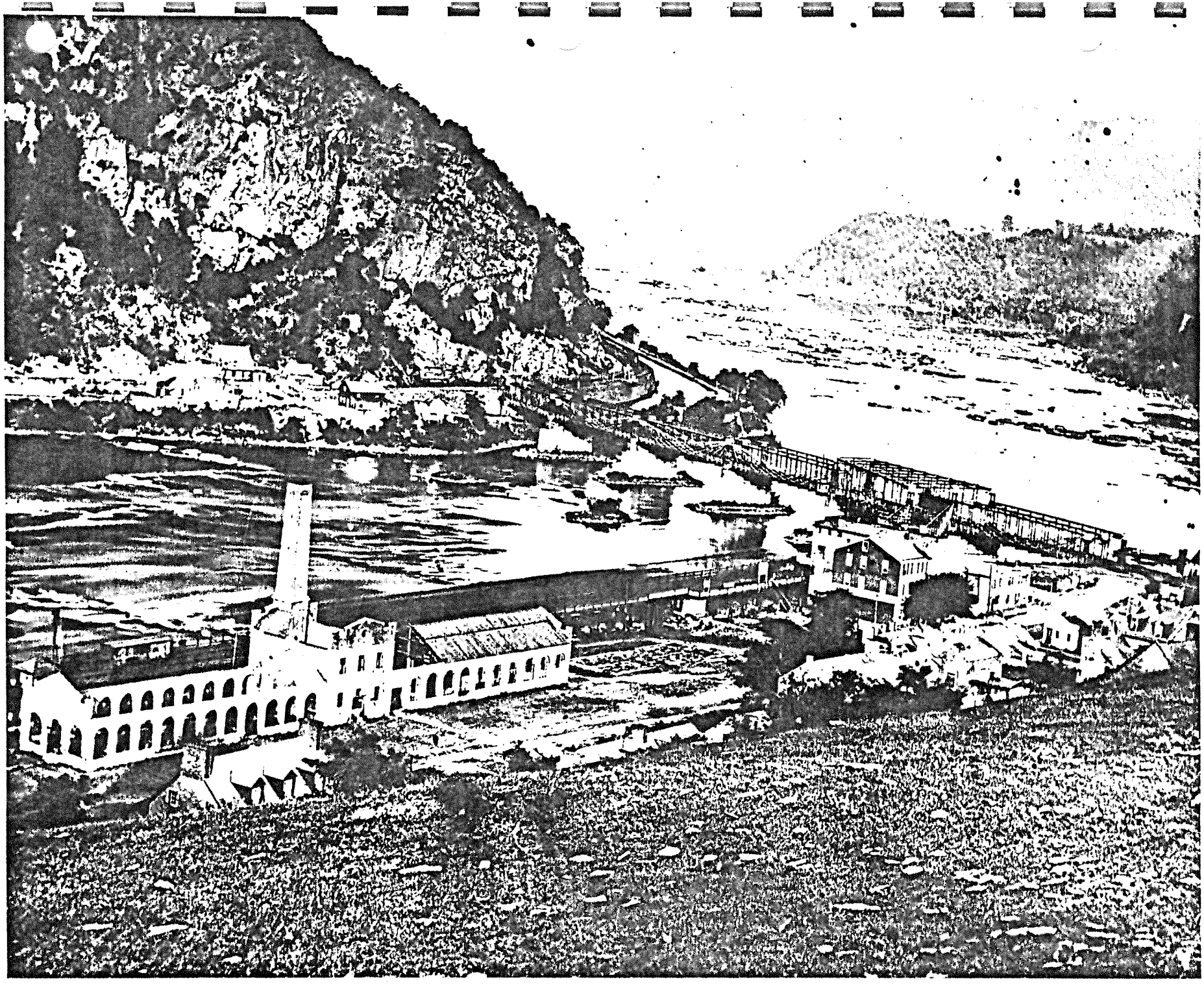
No. 22

MUSKET FACTORY YARD, 1884 -1889

Harpers Ferry NHP Negative No. HF -45

At the left, an excellent view of the huge Smiths or Forging Shop, Musket Factory Bldg. No. 13. At the foot of the hill to the right can be seen the John Brown "Fort" (Park Bldg. No. 63), with a wooden cuploa on its roof, still standing on its original site. This is Musket Factory Bldg. No. 1, the Engine and Guard House. To the left of Bldg. No. 1 can be seen the roof of the Armory Office Bldg., Bldg. No. 2. The one-story house to the right of the "Fort", on the opposite side of Shenandoah Street, is probably the Superintendent's Old Office, which was located on Lot 1, Block A, of Old Arsenal Square. Just to the right of the "Fort" on the opposite side of North Cliff or Potomac Street can be seen dormer windows that were located in the roofs of Park Bldg. No. 8 and 9.

To the right of the Smiths Shop, Bldg. 13, can be clearly seen the stone foundations of Musket Factory Bldg. No. 12, the Warehouse. (See HF- 113, following page) for a continuation of this view to the right).



No. 23

392

MUSKET FACTORY YARD, 1884 - 1889

HF- 113, Harpers Ferry NHP Negative.

This photograph was probably taken on the same day as the preceeding photo, HF- 45.

At the left can be seen the east wing of the large Smiths or Forging Shop, Musket Factory Bldg. No. 13, to its right are the the stone foundations of Musket Factory Bldg. No. 12, the Warehouse. On the opposite side of the Musket Factory Street is the "John Brown Fort,"(Park Bldg. No. 63), with the wooden cupola on its roof. This is Musket Factory Bldg. No. 1, the Engine and Guard House. To the left of Bldg. 1 is the Armory Office, Musket Factory Bldg. No. 2.



No. 24

393

JOHN BROWN'S FORT, HARPERS FERRY, 1882

Harpers Ferry NHP Negative No. HF - 379.

In center, the south(side) and north(front) elevations of Musket Factory Bldg. No. 1, the Engine and Guard House, also known as the "John Brown Fort," (Park Bldg. No. 63). To its right is the one-story rear wing of Armory Offices, Musket Factory Bldg. No. 2. Note that the Armory Gates and entrance walls, brick, with iron paling fence, at the left, is intact. This indicates that the property was still owned by the U.S. Government and this photo was taken before the U.S. sold the Musket Factory yards and its buildings on October 22, 1884.


JOHN BROWN'S FORT

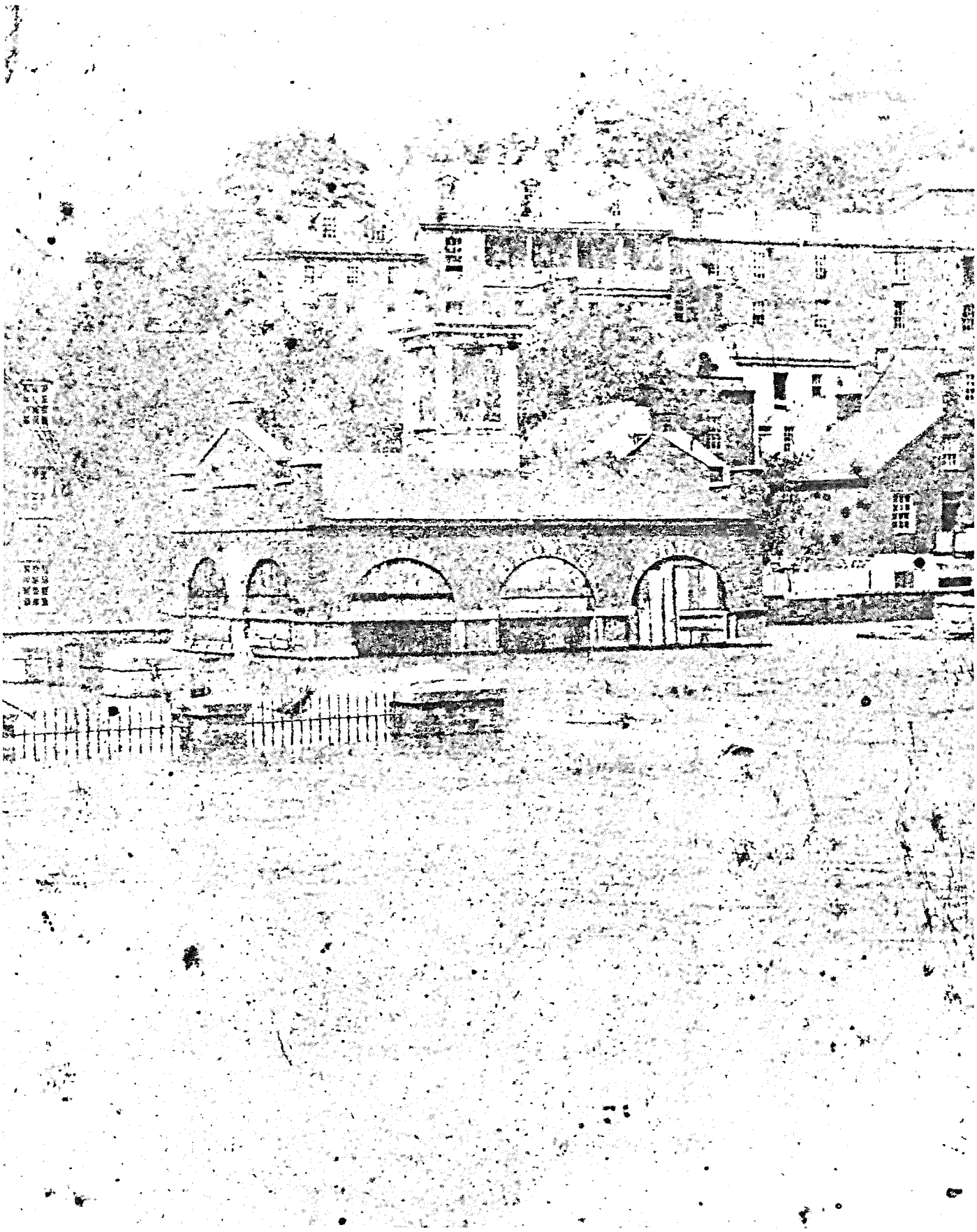
No. 25

394

The John Brown Fort in the 1889 Flood

Harpers Ferry Negative No. HF - 100.

The "John Brown Fort (Park Bldg. No. 63 and Old Musket Factory Bldg. No. 1, the Engine and Guard House), stands in the center half- submerged by waters of the 1889 flood. Note that to the right of the "Fort", the Armory Office Building. Bldg. No. 2, has been demolished, thus opening up the view to Park Bldg. No. 5, which is located on the south side of Potomac Street. Note to the left, the stone piers of the main entrance gate and the brick enclosing walls, with iron paling fence, appear to be largely intact.



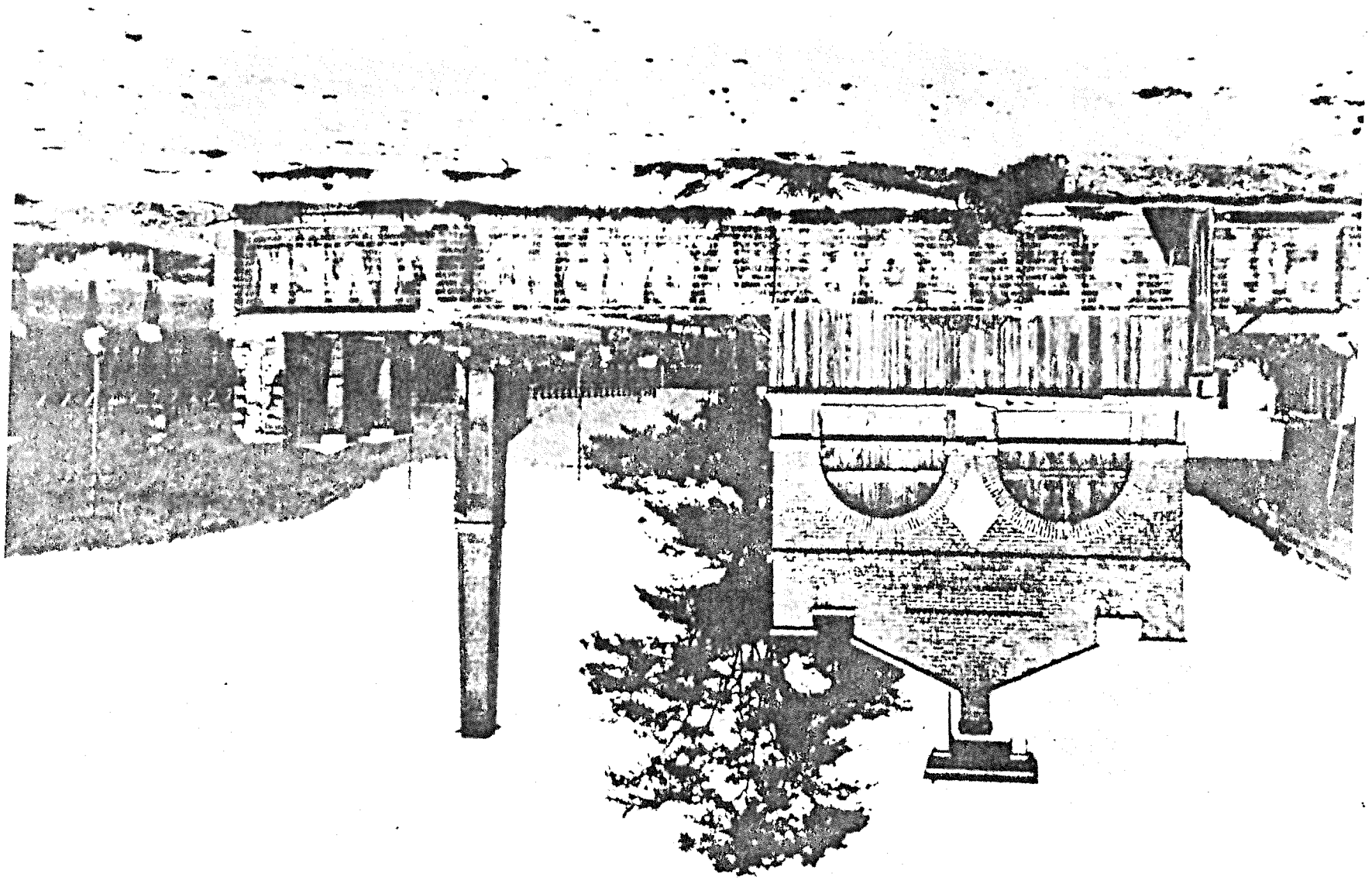
No. 26

JOHN BROWN FORT, Ca. 1890-91.

Harpers Ferry NHP Negative No. 59

At the left is the east(side) elevation of the "John Brown Fort" (Park Bldg. No. 63), old Musket Factory Bldg. No. 1, the Engine and Guard House, still standing on its original site. To the right can be seen the 90 foot tall chimney stack of Bldg. No. 13, the Smiths Shop. The two wings and center buildings of this Forging Shop have been demolished.

Note that the iron paling fence and the iron gates of the Musket Factory Main gate and entrance walls are missing. These were purchased by Alexander Murphy of Harpers Ferry to protect his coal yard. The original iron fence and stone gates still stand on the Murphy heirs' Buena Vista farm near Harpers Ferry in 1981.



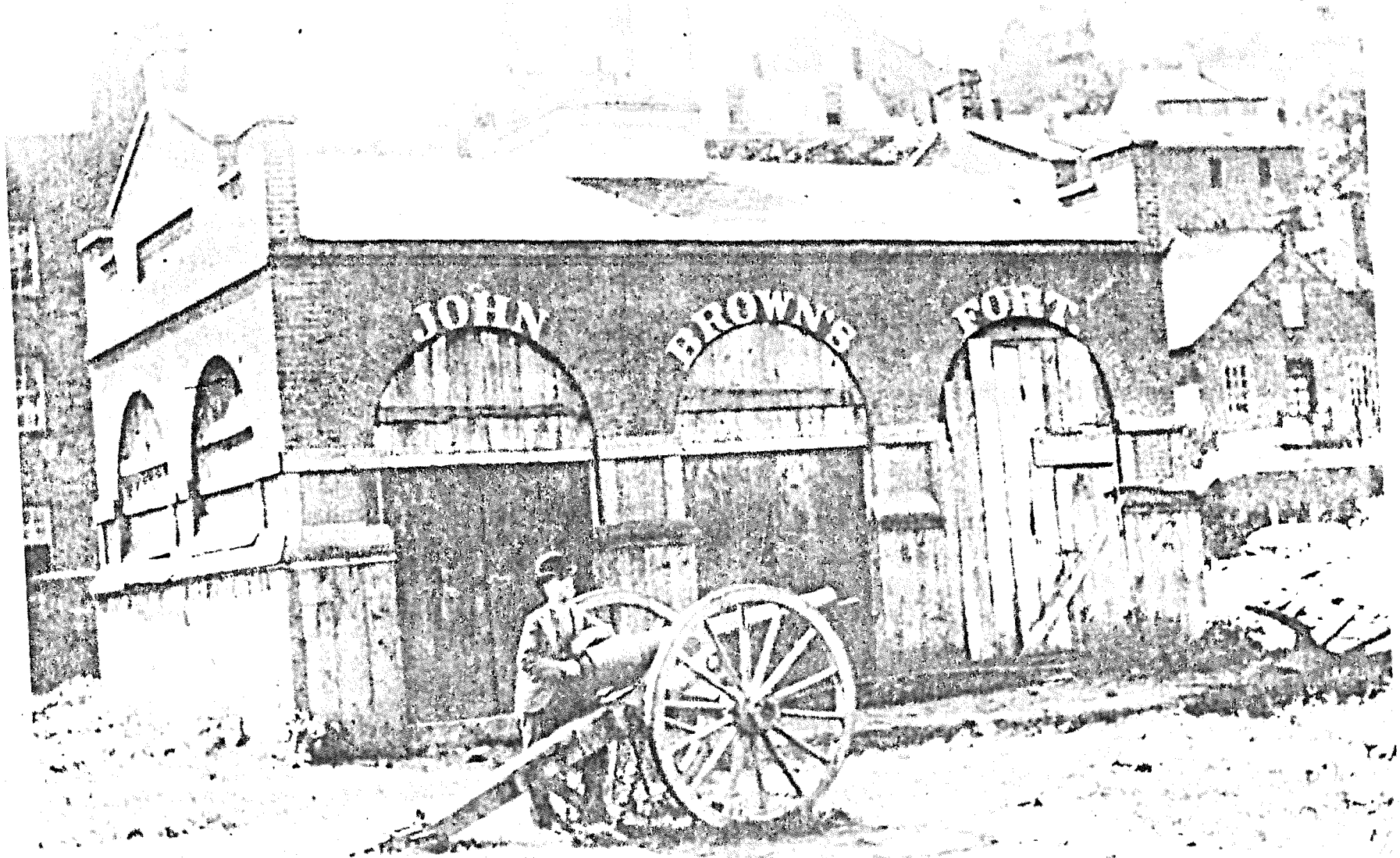
No. 27

396

The JOHN BROWN FORT, 1890-92

Harpers Ferry Negative NO. HF- 190.

East(side) and north(front) elevation of Park Bldg. No.63, the old Musket Factory Bldg. No. 1, the Engine and Guard House, better known as the "John Brown Fort". Note to the right that Armory Office Bldg., old Musket Factory Bldg. No. 2, has been demolished. The removal of the Offices opened up the excellent view of Park Bldg. No. 5. which stands to the right of the "fort" and on the south side of Potomac Street.

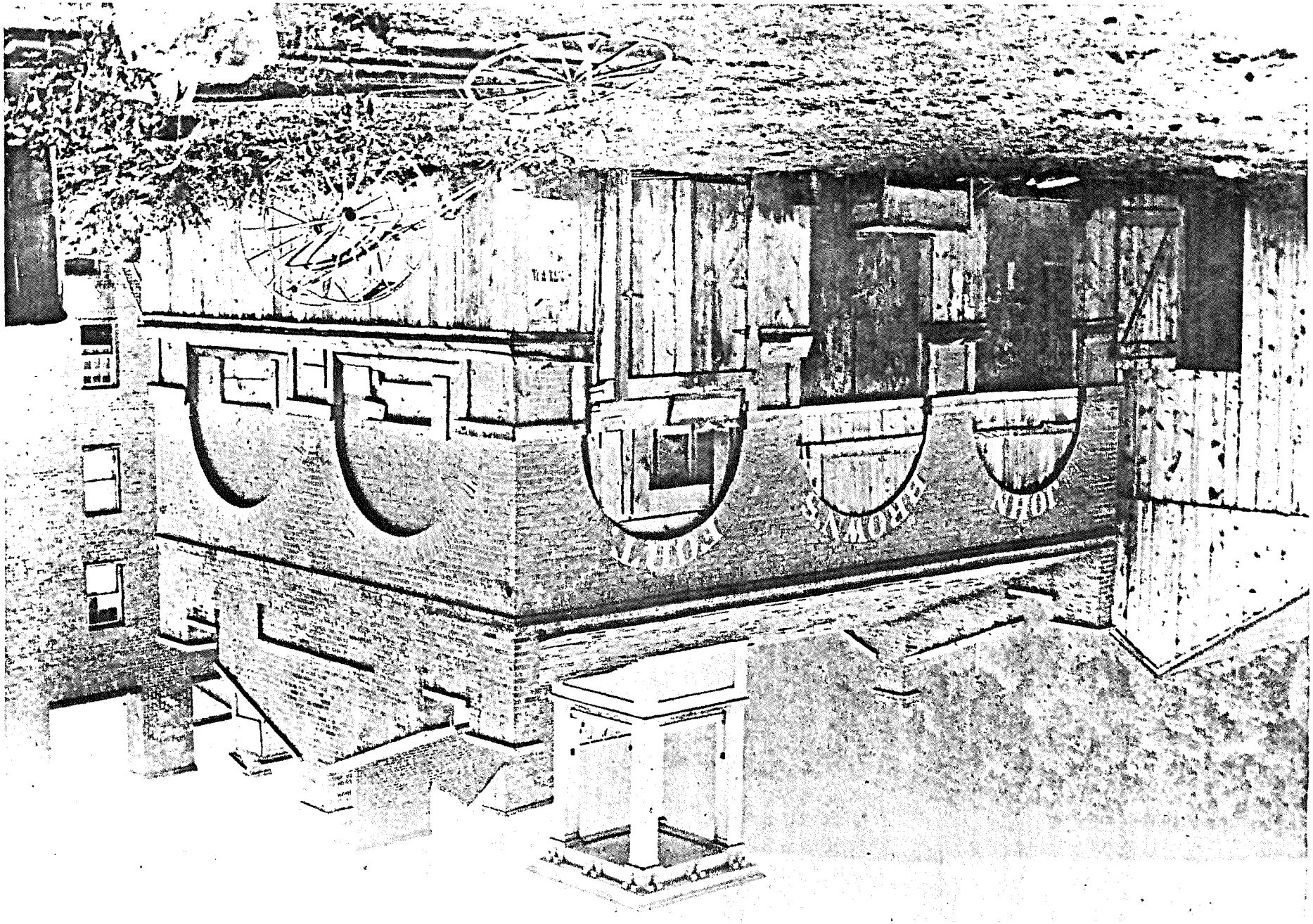

JOHN
BROWN'S
FORT

No. 28

JOHN BROWN" FORT, 1890-1892

Harpers Ferry NHP Negative No. HF- 495.

A view of the north(front) and west(side) elevations of the John Brown Fort(Park Bldg. No. 63), the old Musket Factory Bldg. No. 1, the Engine and Guard House, which had been built in 1847-48. To the right of the "Fort" can be seen Park Bldg. No. 8, the rear 3-story brick service wing to Park Bldg. No. 9.



No. 29

MUSKET FACTORY YARD FROM LOUDOUN HEIGHTS, 1892 - 1896

Harpers Ferry NHP Negative No. HF - 99.

This photograph was taken after 1892 because the B. &. O. R.R. has started to relocate its main line (see upper right) from its iron trestle on top of the Potomac River Wall, to a new location on top of the Armory Canal, which had been filled in and covered with an embankment. The photo was also taken prior to 1896, because St. Peter's Roman Catholic Church stands in the center of the picture in its original format. The remodelling of the church to its present form began in 1896.

Thomas H. Savery's pulp and paper mill,erected after 1887, can be seen in the upper right hand corner of the photo, adjacent to the iron railroad trestle. It stands on the approximate site of the Rolling Mill, Bldg. No. 18.

High Street comes down the hill at the right, the second house from that street,standing on the south side of Shenandoah Street, is Armory Dwelling House No. 1(Park Bldg. No. 36), the Master Armorer's new Quarters, built in 1858-59. To its left stands Armory Dwelling House No. 2, the Master Armorer's Old Quarters(Park Bldg. No. 34-35), built 1812. House No. 2, a two- and -one-half brick house in 1859, was greatly remodelled into a three and one-half story structure in 1870-72. Id Indemiately

Directly south(below) Armory Dwellings No. 1 and 2, on the south side of the Winchester and Potomac Railroad tracks, stands the large town Market House, designed by Major John Symington and erected in 1846 - 1847 . This is the large two-story brick building with an arched first story.



No. 30

MUSKET FACTORY YARD FROM LOUDOUN HEIGHTS,
1896 - 1901

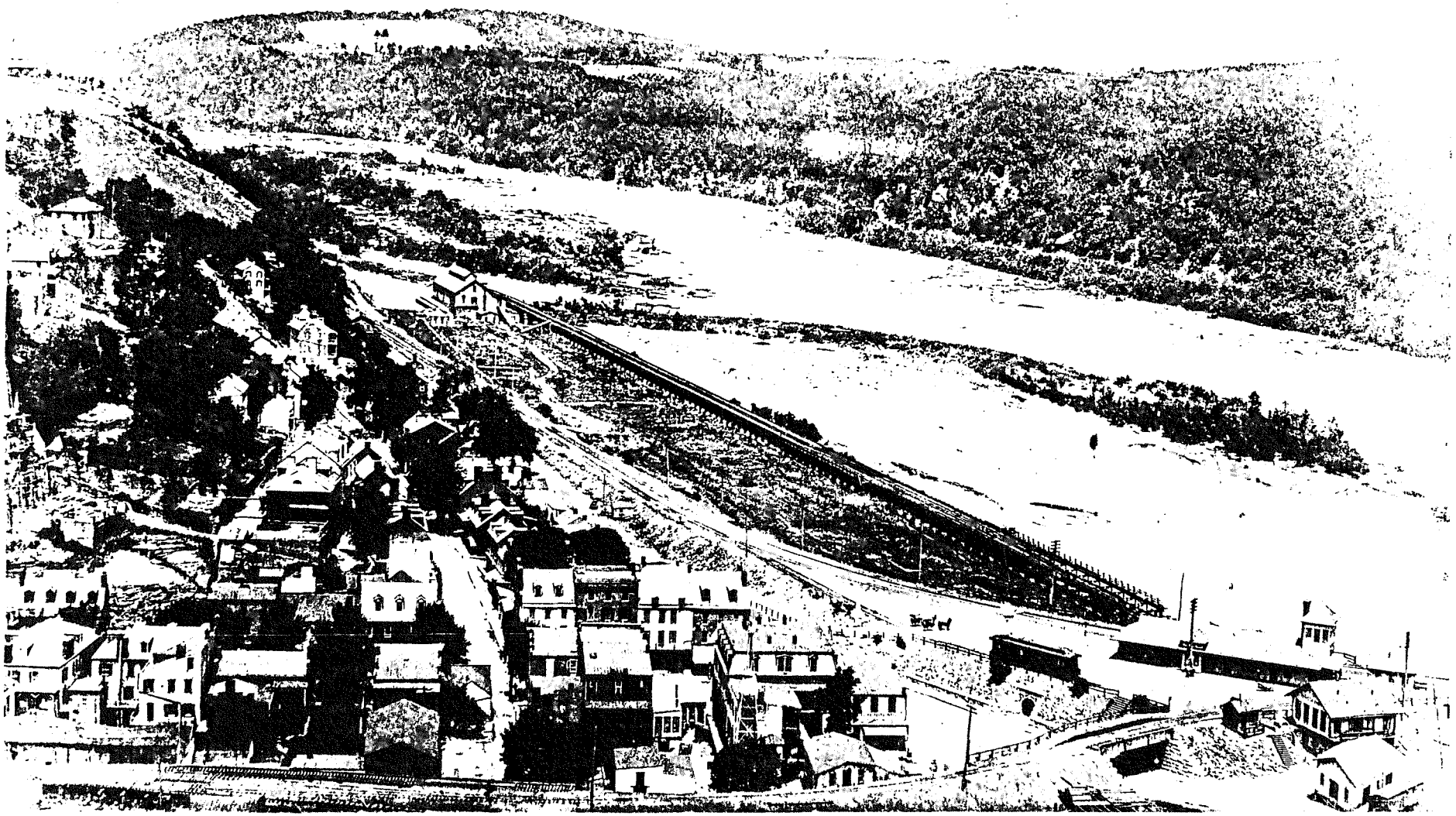
Harpers Ferry NHP Negative No. HF- 92

This photograph was taken after 1896, because the remodelling work is in progress on St. Peter's Roman Catholic Church at the right side of the photograph. The picture was taken prior to 1901, because Park Bldg. No. 3, fronting on High Street in the center of the photo has not yet been rebuilt into its present format.

The Baltimore and Ohio Railroad main tracks west have been shifted from their 1838 position on the iron trestles atop the stone Potomac River wall to a new location on top of the old Armory Canal along the south side of the Musket Factory Yard. The canal has been filled in and an embankment rises over it on which the tracks stand. The small white stone monument near the approach to the new railroad station(with several horses and carriages adjacent) marks the original site of the "John Brown Fort'(Park Bldg. No. 63- the Old Musket Factory Bldg. No. 1- Engine and Guard House).

At the far or upper end of the Musket Factory yard, adjacent to the iron trestles, can be seen Thomas H. Savery' pulp and paper mill, which is built on the approximate site of Muskat Factory Bldg. No. 18, the Rolling Mill.

High Street comes down the hill in the center. All the structures situated to the right of that street and on the south(lower) side of Shenandoah Street are located on Old Arsenal Square, Lots No. 1 to 7, and were constructed after 1870. All of these commerical structures were demolished by the National Park Service in 1958 in order to restore Old Arsenal Square.



No. 31

MUSKET FACTORY YARD FROM MARYLAND HEIGHTS,
1896 - 1901

Harpers Ferry National HP Negative No. HF- 96.

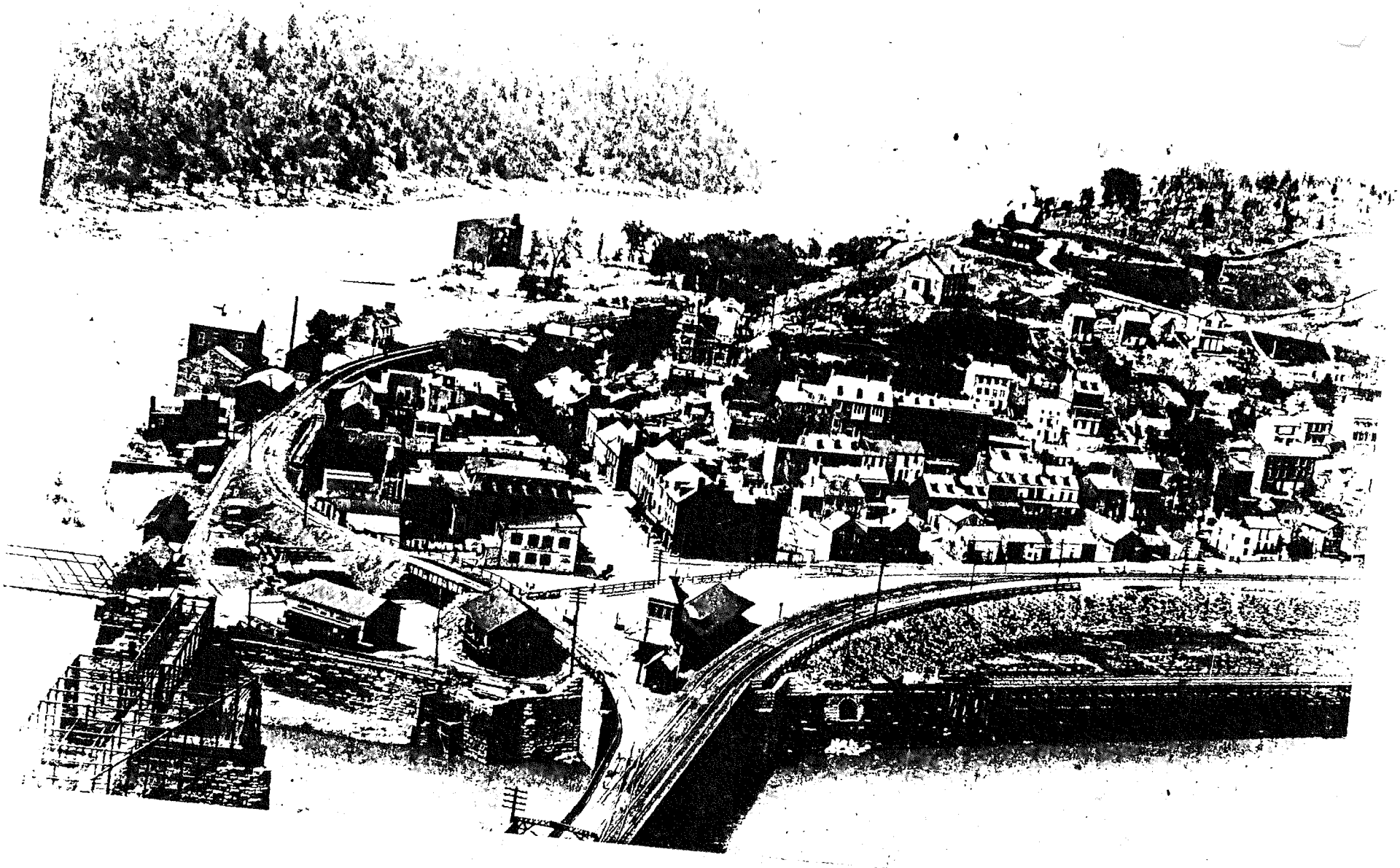
This photograph was taken after 1896, because remodelling work which started on St. Peter's Roman Catholic Church that year, is in progress. The picture was also taken before 1901, because Park Bldg. No. 3, fronting on High Street, has not yet been rebuilt in its present format. This work took place in 1901-02. In the left foreground can be seen the lower end of the Musket Factory yard, the stone river wall erected 1837-40, and the iron trestles of the B. & O. Railroad. In the center is the new railroad station and the new railroad bridge across the Potomac. The older Potomac bridge is in the lower left hand corner, as is the Shenandoah Toll bridge.

The small white stone marker near the approach to the station(between Park Bldgs. 9-8 and No.7) marks the original site of the "John Brown Fort" (Park Bldg. No. 63- the Musket Factory Bldg. No. 1- Engine and Guard House), from its construction in 1847-48 to its removal in 1892.

The mass of commerical structures on the south(left)side of Shenandoah Street and above(or west) of the Winchester and Potomac Railroad line, are located on Old Arsenal Square, Lots No. 1 to 7, Shenandoah Street. All of these buildings were constructed between 1870 and 1880.

On the shore off the Shenandoah River can be seen old Armory Dwelling House No. 43, the greatly remodelled First(1803) quarters of the Paymaster, and just above and to the right of it, the large two-story brick Market House, which was built by Major John Symington in 1846-47 for the use of the town.

Returning to the Musket Factory Yard, the stone foundations of Bldg. No. 12, the Warehouse, and of Bldg. No. 13, the large Smiths Shop, can be seen running parallel with the river wall.



MAP NO. 6

"MAP of the Relative Position of the Reserved (Wager-owned Six Acre Reservation) Land & Public Works at HARPERS FERRY, VA., 1844." (Copy. prepared by Major John Symington, Superintendent of the Harper's Ferry Armory, March 22,1847).

National Archives Record Group 121, Public Buildings Service, Harpers Ferry Laminated Material(Drawer No. 5, Portfolio No. 1).

Section of Major Symington's Detailed Map.

Bldgs. in the U.S. Musket Factory, 1844

1. Paymaster's Quarters (Residence of the Superintendent 1808-09 to 1November 1844).
2. Bell Shop, erected 1809-10, water wheels and machinery. 131 by 45 feet, 2 story. brick.
3. Boring Mill, a new workshop erected in 1843-44 on the site of the 1799-1800 armory. Had water wheels and machinery. 122 by 42½ feet, 2 stor brick.
4. Store House, also Master Armorer's Office. Old Smiths' shop erected in 1799-1800 but converted to use as a storehouse by 1821. No water wheels or machinery. 80 by 30 feet, 2 story brick.
5. Stocking House, erected in 1808-09, water wheels and machinery. 111 by 30 feet, 2 story, brick.
6. "Shop", Annealing Shop and Proof Shop, 1834. 125 by 45 feet, 1834.
7. Forging Shop., erected 1808-1809, 10 forges, 80 by 30 feet, 2 story brick.
8. Forging Shop, erected 1808-09, 16 forges, 120 by 30 feet, 2 story, brick.
9. Forging Shop, erected 1808-09, 16 forges, 130 by 30 feet, 2 story brick.
10. Warehouse, new, 1843-44, 93½ feet by 30 10/12 feet, 2 story, brick,for storing iron and steel,.

MAP

OF THE

Relative Position

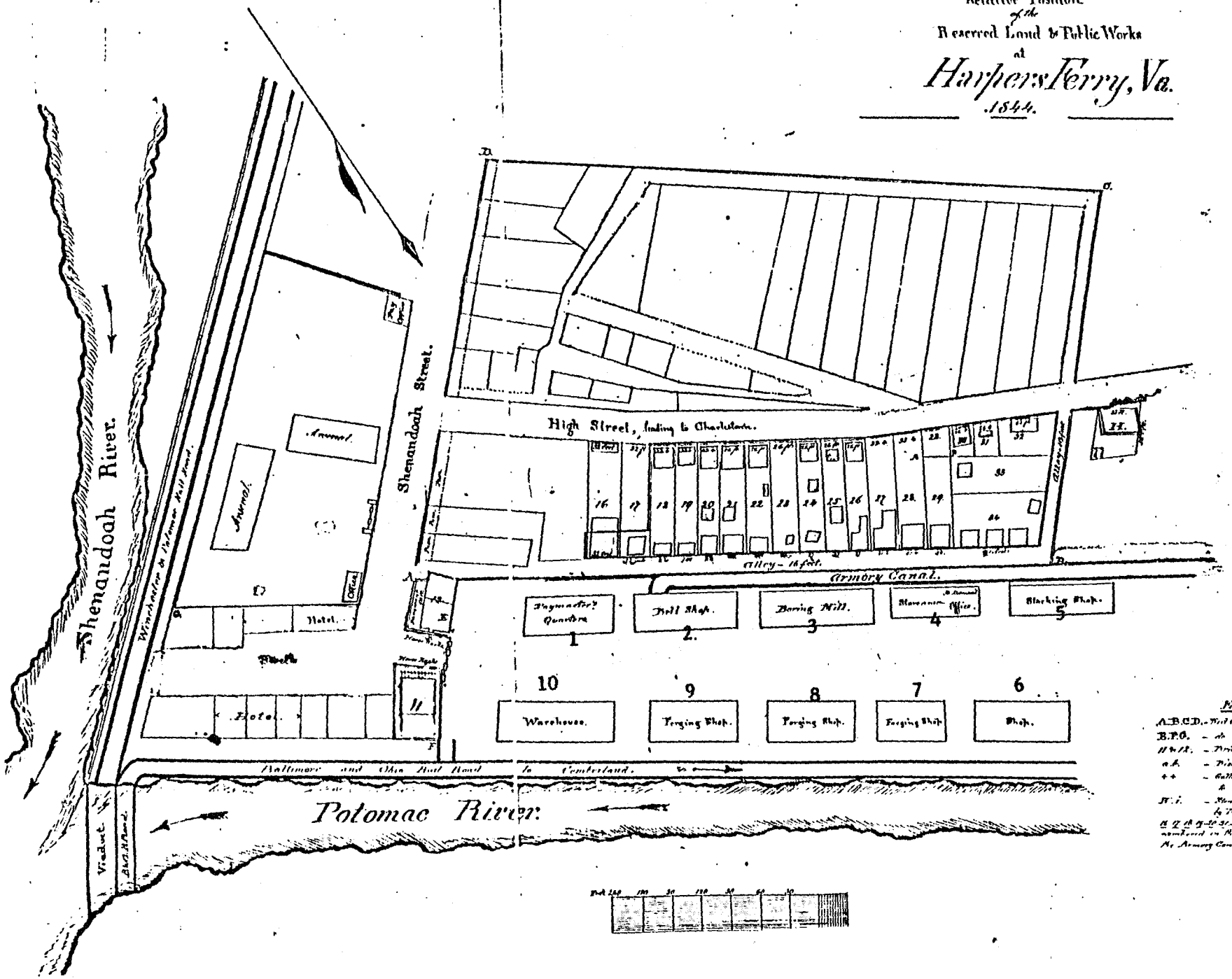
of the

Reserved Land & Public Works

at

Harpers Ferry, Va.

1844.



MAP NO. 7

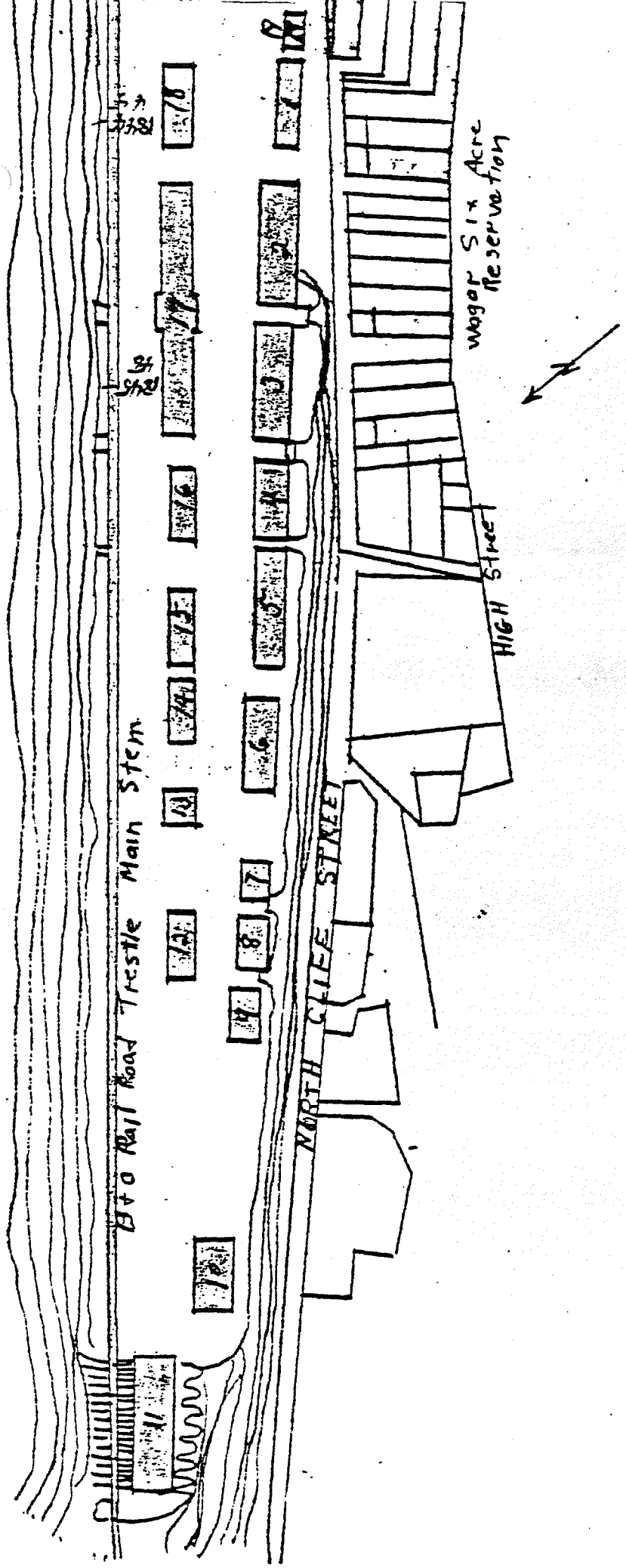
MAP OF HARPER"S FERRY, VA., prepared in Compliance with Letter to Major(John) Symington, April 22,1848," Drawn by S. Howell Brown, Surveyor, in 1848. Scale 165 feet to the inch. Original linen map, only existing copy.

Harpers Ferry National Historical Park Map Collection, Map No. 77.

On this map of great historical value, Brown shows and names the U.S. Armory buildings in the Musket Factory, the U.S. Rifle Factory, and the U.S. Arsenal. Location of springs, pumps, stables, woodyards, firehouses, schools, and churches are also indicated. In 1851 Major John Symington revised and updated the section of the 1848 map relating to the Island of Virginius. These revisions were made in red ink on the linen map in 1851.

The dates of construction given after the names of buildings have been added by the writer. The number and name of each structure, however, was placed on the map by Brown in 1848.

WORKSHOPS AND STOREHOUSES OF THE U.S. MUSKET FACTORY, 1848.



U.S. MUSKET FACTORY BUILDINGS-1848:

1. Offices (1808-09, remodelled in 1847-48).
2. Bell or Finishing Shop (1809-10).
3. Boring Mill (1843-44).
4. Stocking Shop - New (1846-47).
5. Stocking Shop - Old (1808-09).
6. Stock Store House- New (1846-47).
7. Carpenters Shop - Old (1834).
8. Machine Shop - Old (1834).
9. Grinding Mill - Old (1831).
10. Coal Bin and Lumber House (1848-49).
11. Barrel Welding and Tilt Hammer Shop (1834-38).
12. Stock Store House- Old (1832-New Workshop?)
13. Charcoal House - New (1845-46).
14. Proof House - New (1843-44).
15. Annealing Furnace - Old (1834).
16. Smiths Shop - Old (1808-09).
17. Smiths Shop - New (1845-48).
18. Warehouse -New (for iron and steel, 1843-44).
19. Engine and Guard House- New (1847-48).

MAP NO. 8

MAP OF HARPER"S FERRY, VA.,prepared in Compliance with Letter to Major(John) Symington, April 22,1848," Drawn by S. Howell Brown, Surveyor, in 1848. Scale 165 feet to the inch. Original linen map, only existing copy.

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On this map of great historical value, Brown shows and names the U.S. Armory buildings in the Musket Factory, the U.S. Rifle Factory, and the U.S. Arsenal. Location of springs, pumps, stables, woodyards firehouses, schools, and churches are also indicated. In 1851 Major John Symington revised and updated the section of the 1848 map relating to the Island of Virginius. These revisions were made in red ink on the linen map in 1851.

The dates of construction given after the names of buildings have been added by the writer. The number and name of each structure, however, was placed on the map by Brown in 1848.

WORKSHOPS AND STOREHOUSES OF U.S. RIFLE FACTORY ON THE LOWER HALL ISLAND, 1848

Location of Armory Dwelling Houses on the Upper Hall Island.

Armory Dwelling House No. 164, Captain John H. Hall's residence,1827-41, was located on Camp Hill on the present site of Park Bldg. No. 56.

U.S. RIFLE FACTORY BUILDING: 1848

1. Finishing Shop-New (1846-48).
2. Forging and Tempering Shop.(1837-38)
3. Stockers Shop.
4. Filers Shop- New (1844-45).
5. Filers Shop-Old (1837).
6. Barrel Welding Shop.(1831
7. Tilt Hammer Shop.(1837-38
8. Vitriol House.(1837)
9. Rod Tilting Shop. (1831)
10. Inspectors Office.
11. Asembling and Finishing Shop.(1837).
12. Barrel Turning and Boring Shop.
13. Bell Shop, Stockers and Machinery.(1808-09.)
14. Store House and Office.
15. House for Steaming Stocks.
16. Engine House (New-1843-44, frame).
17. Privy.
18. Drill Shop.(1836).
19. Forging Shop.(1827)
20. Annealing Shop. (1835)
21. Annealing Furnace.(1835)
22. Forging Shop. (1819)
23. Proof House (New, 1844-45) (1 story, frame).

MAP NO. 9

MAP OF HARPER'S FERRY - Plate of Harper's Ferry

Armory Property laid off into Lots for Sale in Pursant to the Act of December 15, 1868," Scale: 165 feet to inch.

by

S. Howell Brown, November 1, 1869.

Approved by Secretary of War William W. Belknap, November 16, 1869

National Archives Record Group No. 121, Public Buildings Service, Entry 76, Deeds from the United States Ordnance Department, 2 vols., Washington, D.C.

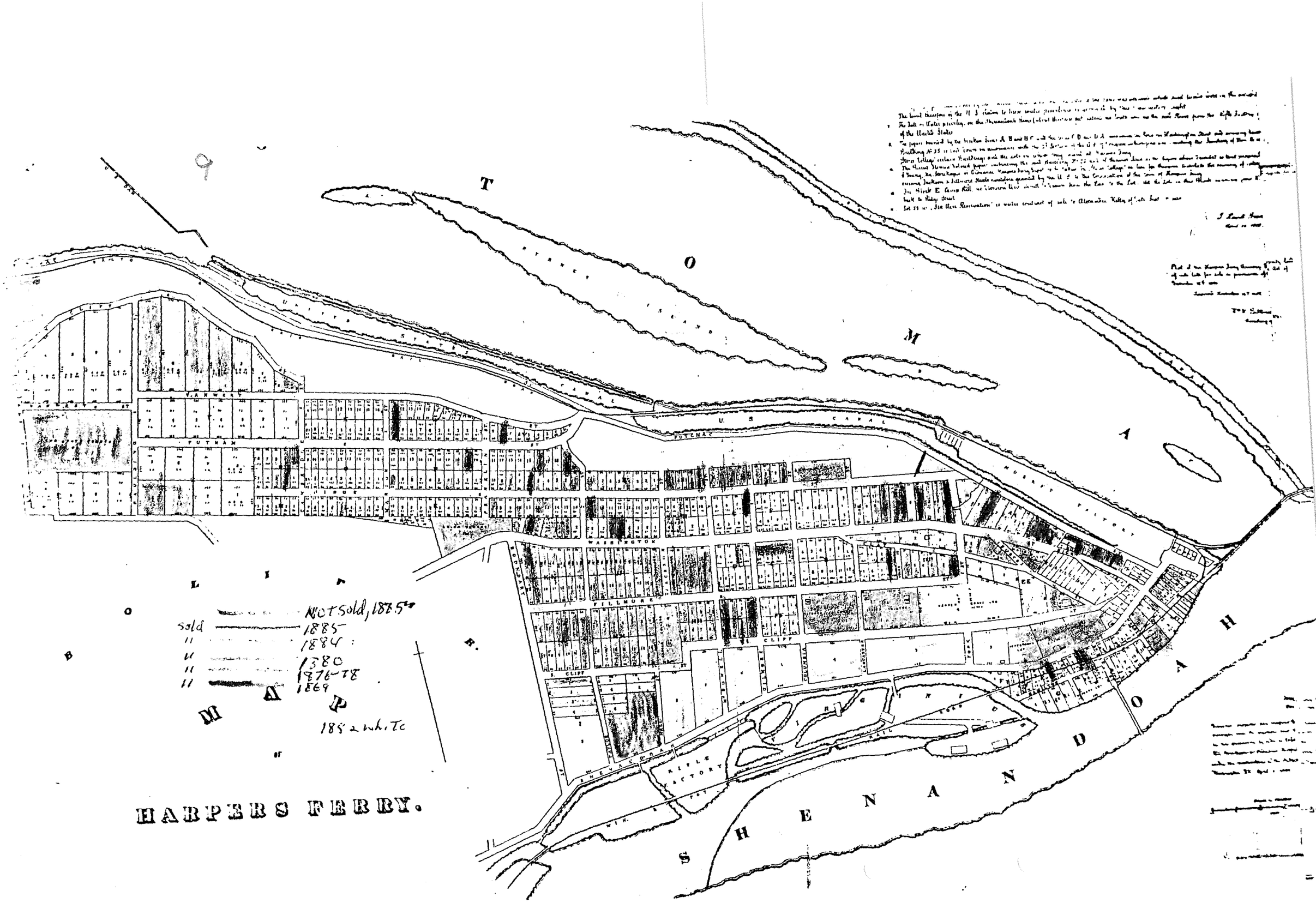
9

MAP

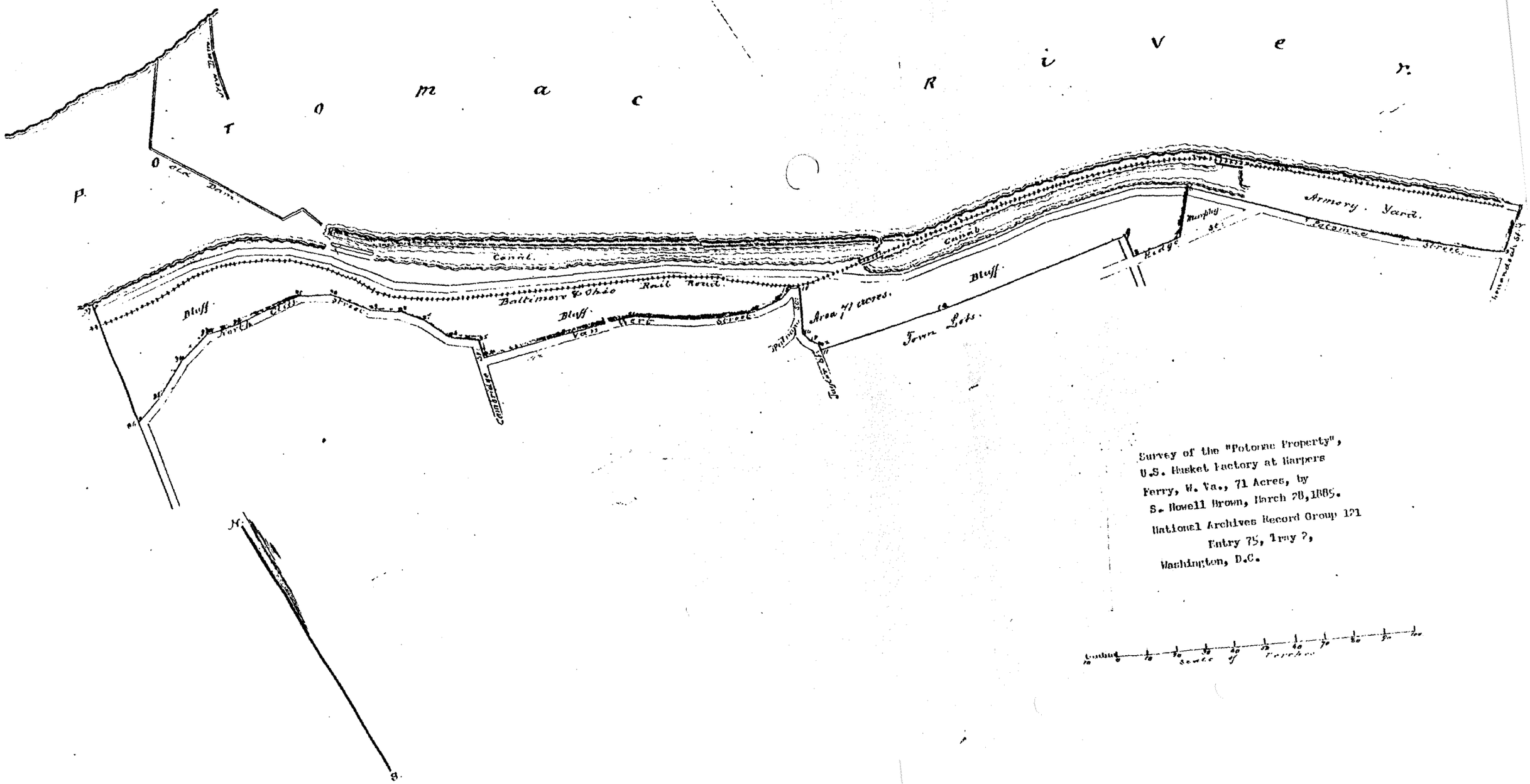
1852 white

Sold ——— 1885
" - - - 1884
" ——— 1880
" ——— 1876-78
" ——— 1869
Not sold, 1885

HARPERS FERRY.



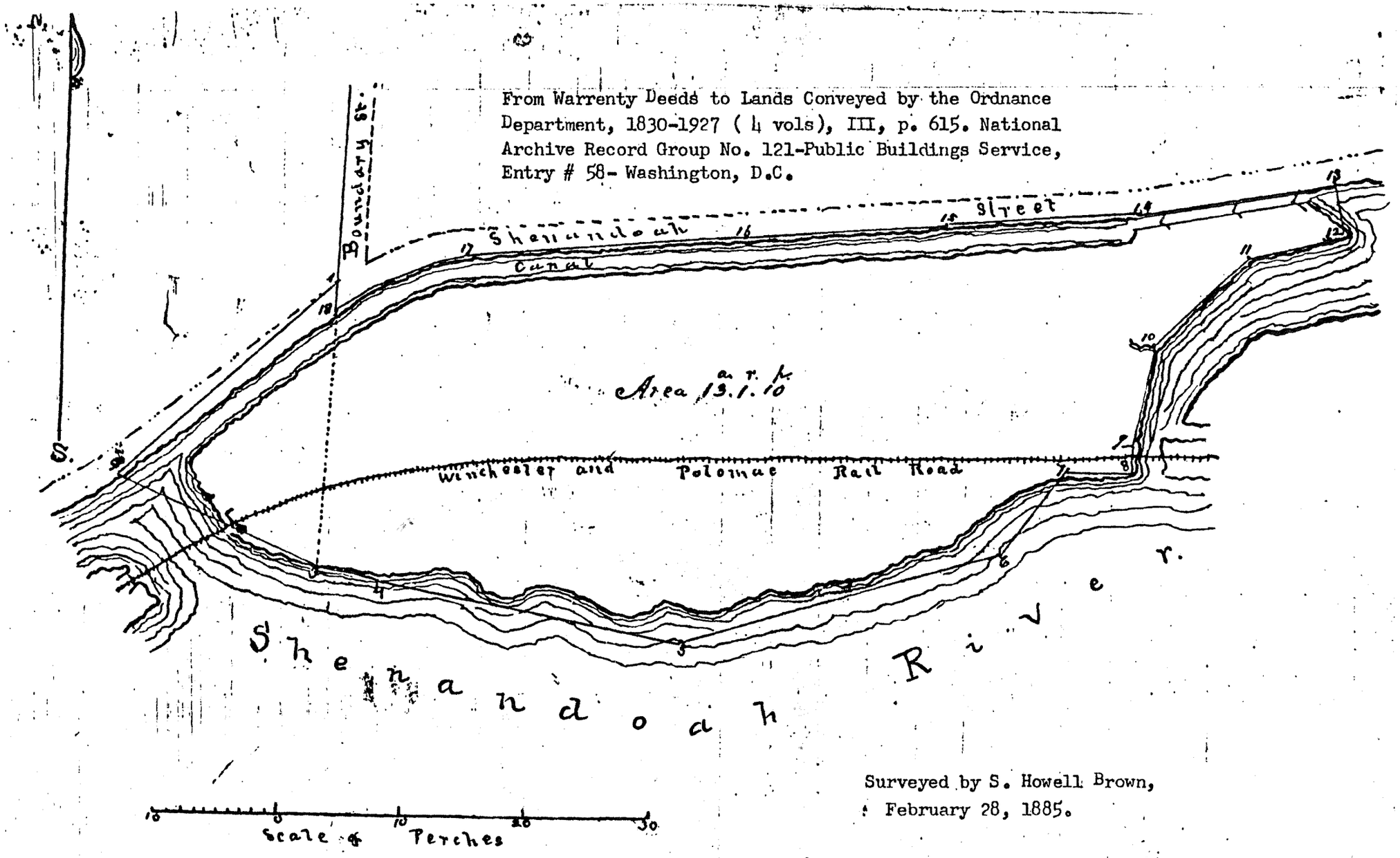
10



Survey of the "Potomac Property",
U.S. Basket Factory at Harpers
Ferry, W. Va., 71 Acres, by
S. Howell Brown, March 28,1885.
National Archives Record Group 121
Entry 75, Tray ?,
Washington, D.C.

11

From Warrenty Deeds to Lands Conveyed by the Ordnance Department, 1830-1927 (4 vols), III, p. 615. National Archive Record Group No. 121-Public Buildings Service, Entry # 58- Washington, D.C.



Surveyed by S. Howell Brown,
February 28, 1885.

MAP NO. 10

Survey of the "Potomac Property", U.S. Musket Factory at Harper's Ferry, W. Va., 71 Acres.

Prepared by S. Howell Brown, March 28, 1885.

Also shows old and new U.S. Armory Potomac Dams.

Show bounds of the property purchased by Thomas H. Savery from the U.S. on October 22,1884, for $ 25,100. Brown recalculated the acreage as containg 72 acres, not 71 acres, as written on the map.

The United States issued the deed to Savery for this property o April 12,1887.

National Archives Record Group 121, Public Buildings Service, Entry 75, Warrenty Deeds and Correspondence, 1796-1884, for for Public Lands of the U.S. Armory at Harpers Ferry,Va., Tray No. 2, of two trays. Washington, D.C.

MAP NO. 11

SURVEY OF THE U.S. RIFLE FACTORY GROUNDS,
(UPPER AND LOWER HALL ISLANDS), 13 ACRES

By

S. Howell Brown, February 28, 1885.

Copy provided to Thomas H. Savery, who purchased this property for $ 810.00 on October 22, 1884. The U.S. issued the deed for this land to Savery on March 2, 1885.

National Archives Record Group No. 121, Public Buildings Service, Entry No. 58, "Warrenty Deeds to Land Conveyed by the Ordnance Department, 1830 - 1927 (4 vols.) Vol. III, p. 615, Washington, D.C.

PAUL

April 17,1981

Memorandum

To: Superintendent Don Campbell, Harpers Ferry NHP

From: Historian Charles W. Snell, National Capital Team, DSC,
(Room 4314, 1100 L Street, NW, Washington, D.C.)

Subject: DR AFT of Research Report - " Physical History of Harper's Ferry Armory, Vol. III, 1852 - 1885.

Enclosed is the first installment of "A Physical History of the Plant of the U.S. Armory at Harper's Ferry, Virginia, 1794 to 1885.- Volume III- Reconstruction, Destruction, and Disposal of the Armory,1852-1885," Harpers Ferry National Historical Park, West Virginia."(April 1981), 406 pp., 31 photos, and 11 maps.

We transmit pages 1 - 100.

Charles W. Snell

Charles W. Snell
Historian

APR 17 8 55 AM

Enclosures.

PREFACE FOR VOLUME II

With Volumes II and III, 346 and 406 pages respectively, we complete the chronological narrative of the physical history of the plant of the U.S. Armory at Harper's Ferry, Virginia, from 1794 to 1885, which includes the establishment, construction, evolution, reconstruction, destruction and disposal of the Armory. We believe that the data presented in this study will greatly facilitate the archeological study of the major sites of the U.S. Musket Factory, the U.S. Arsenal Square , and the U.S. Rifle Factory, as well as those of lesser Armory sites, such as that of the powder magazine and stable. The information presented in this report should also greatly aid the construction of an accurate model of the Harpers Ferry Armory as it appeared in 1859-61.

On the basis of the data considered in Volumes II and III, the HARPERS FERRY HISTORICAL BASE MAP, 1859 (Drawing No. NM-HF- 3021 (10/21/1959), Sheet No. 2, should be revived as follows:

U.S. Musket Factory: Building No. 17- Old Stock Store House should be deleted, as evidence was found that it had been demolished prior to 1859.[1] Bldg. No. 17 can be applied to the Paymaster's Old Office(Old Pay Office), which was removed from Arsenal Square in April 1858 and located in the Musket Factory Yard, apparently at the west(or north) end of Bldg. No. 2, Armory Offices.

Photograph 10 (HF-10)page 379 of Volume III, indicates that Bldg. No. 10, the Lumber House and Coal Bins,should be shifted to a point on the bank of the Potomac to the east(or south) of Bldg. 18, the Rolling Mill, to the site occupied by Bldg. No. 20. The actual site of Bldg. 20, the Ice House is not known

1. Demolished in August 1849, see Vol. II, pp.129-130.

U.S. Rifle Factory: Add Bldg. No. 3A, addition to Bldg. No. 3, the Finishing and Machine Shop. (1856), to map, see Vol. III, p. 120-121 for details. This was apparently located just south of the east wing of the original shop. Also add Bldg. No. 10, remodelled Store House(1852) to map, see Volume III, p. 36 for details. Bldg. No. 10 was probably located just south of Bldg. No. 4's west wing. Bldg.No. 8, the Remodelled Stock House, should be relocated to the eastern tip of the island, abutting on the Lower Locks of the Shenandoah Canal, and Bldg. No. 5, the Annealing Furnace and Proof House should be shifted westward so that it stands closer to Bldg. No. 4.

Since writing Volume I, it has been determined that the vouchers written by Harpers Ferry Armory paymasters to pay for services, materials, and construction during the years 1798 to 1816 are no longer extant. These were mentioned in the Biblography for Volume I, page 547, under Record Group 217, as possibly being located at the Federal Record Center at Suitland, Maryland.

The writer wishes to thank Harpers Ferry National Park Librarian Hilda E. Staubs for her important assistance in providing copies of many documents from the Park's collections. He is also endebted to the assistance of three National Archivists at Washington, D.C., namely Mr. William Sherman for the fiscal documents, 1817-1851, in Record Group 217, and to Mr. Donald Helms and Mr. James Rush, for land records and maps in Record Group No. 121.

Charles W. Snell
April 16, 1981

April 17,1981

Memorandum

To: Superintendent Don Campbell, Harpers Ferry NHP

From: Historian Charles W. Snell, National Capital Team, DSC,
(Room 4314, 1100 L Street, NW, Washington, D.C.)

Subject: DR AFT of Research Report - " Physical History of Harper's Ferry Armory, Vol. III, 1852 - 1885.

Enclosed is the second installment of "A Physical History of the Plant of the U.S. Armory at Harper's Ferry, Virginia, 1794 to 1885.- Volume III- Reconstruction, Destruction, and Disposal of the Armory,1852-1885," Harpers Ferry National Historical Park, West Virginia."(April 1981), 406 pp., 31 photos, and 11 maps.

We transmit pages 101- 200.

Charles W. Snell

Charles W. Snell
Historian

Enclosures.

APR 17 8 12 AM '81

April 17,1981

Memorandum

To: Superintendent Don Campbell, Harpers Ferry NHP

From: Historian Charles W. Snell, National Capital Team, DSC,
(Room 4314, 1100 L Street, NW, Washington, D.C.)

Subject: DR AFT of Research Report - " Physical History of Harper's Ferry Armory, Vol. III, 1852 - 1885.

Enclosed is the third installment of "A Physical History of the Plant of the U.S. Armory at Harper's Ferry, Virginia, 1794 to 1885.- Volume III- Reconstruction, Destruction, and Disposal of the Armory,1852-1885," Harpers Ferry National Historical Park, West Virginia."(April 1981), 406 pp., 31 photos, and 11 maps.

We transmit pages 201 - 300.

Charles W. Snell

Charles W. Snell
Historian

APR 17 8 11 AM 1981

Enclosures.

April 17,1981

Memorandum

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(Room 4314, 1100 L Street, NW, Washington, D.C.)

Subject: DR AFT of Research Report - " Physical History of Harper's Ferry Armory, Vol. III, 1852 - 1885.

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We transmit pages 301 - 406.

Charles W. Snell

Charles W. Snell
Historian

Enclosures.

