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HISTORIC FURNISHINGS STUDY

Building 3

Pattern Shop

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ATTENTION:

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are illegible due to the poor quality
of the source document.**

A- DEFINITION OF INTERPRETIVE OBJECTIVES

To help illustrate the diversity of skill required of a research laboratory, the pattern shop located in the rear half of Building 3, should be restored to its appearance during the last years of Edison's life. At that time, the pattern shop fashioned wooden models of machinery and their parts for the blacksmith or machine shop to duplicate in steel, and performed other wood-working functions for the laboratory.

B- OPERATING PLAN

The Pattern Shop will be shown as part of the regularly conducted tour. A waist high barrier should be installed inside the doorway to enable visitors to enter the shop for a clear view. Because of the specialized nature of the operation and the dangers inherent in using old machinery, full scale demonstrations are not recommended. However, examples of patterns which the shop produced should be displayed as a "completed" pile. Occassional authorized use of the machinery by trained maintenance personnel for restoration work should be encouraged. This would add a "lived in" look and help maintain the equipment. The machinery must not be moved or altered in any form, except where absolutely necessary for safety sake, and no additional modern equipment should be allowed.

C- ANALYSIS OF HISTORIC OCCUPANCY

Part of the process of "inventing" at Edison's Laboratory was to have a carpenter make a wooden pattern of a machine or its parts. If the wooden model worked, the blacksmith and the machine shop made a metal prototype. According to an article in the Scientific American for Sept. 17, 1887, half of Building 3 was set aside as " ... a carpenter's shop, cabinet making and pattern shop ... ",¹ as such until Edison's death in 1931 and is still occasionally used for restoration work by the maintenance division.

Some examples of the activity that went on in the pattern shop during Edison's day can be shown through the men who worked there. Nick Foselli was a cabinetmaker who made many of the cases and cabinets for phonographs, movie equipment, and other items now in the park collection. The Tibbett brothers, pictured in Appendix 2 and 3, worked for the Ediphone division in later years but often came back to the shop to prepare patterns for Ediphone castings.³²

According to a laboratory payroll dated 1888, there were originally two patternmakers, A. Ludicke and J. G. East, earning 17¢ an hour. In 1920, there were eight men working in the shop. Richard Midd, foreman, earned \$55.00 a week. L. Lomas, J. Baldwin, P. B. Cook, H. W. Tipett, and B. Tipett, patternmakers earned an average of \$42.50 per week. J. Christensen, the carpenter, earned \$34.80 and C. Clark, the cabinetmaker earned \$38.90.³

¹ "Edison's New Laboratory", Scientific American.
Vol. 57, No. 12 (Sept. 17, 1887). 184.

² Historic Structures Report, Chemical Stock Room and Pattern Shop.
Bldg. No. 3, Historical Data. Page 5.

³ "Summary of Decreases in Laboratory Payrolls Between Nov. 20, 1920
and Jan. 10, 1921." Pattern Shop.

D- EVIDENCE OF ORIGINAL FURNISHINGS

The equipment in the Pattern Shop has changed remarkably little since it first opened.

The earliest photograph of the interior, taken in 1893, shows the south end of the shop with an Edison standard dynamo near the far window on the right wall (Appendix 1). In a 1939 photograph, another motor is shown on a platform opposite to where the original motor stood (Appendix 5). This later motor is still preserved on the laboratory grounds but was replaced by a similar one in June, 1961 because it arced badly and constituted a fire hazard.

While this end of the shop seems quite changed when compared with the 1939 photograph, the opposite end has remained almost intact. A 1917 photograph shows all of the machinery and benches as they are today, only the surface tables, cabinets and small equipment have been moved (Appendix 3).

Following Edison's death in 1931, no new machinery was added, although some modern safety guards were put on the old machines. With continued use, the lumber stock has changed and superficial changes in small equipment, tools and debris have also occurred. Essentially, however, it would only take a housecleaning and the introduction of the pattern molds now stored in Building 5 to

return the shop to its appearance at the time of Mr. Edison's death.

It is not recommended that the shop be restored to an earlier appearance because we lack sufficient information, it would be inconsistent with the appearance of the other buildings, and would add little to the interpretation.

A trap door in the floor of the shop leads to a basement with the drive shaft for the machinery above. Because of the small and hazardous opening, this area should not be accessible to the public and not restored.

E- DESCRIPTION OF RECOMMENDED FURNISHING

The following is an inventory list of the Pattern Shop after one that was done in September, 1957 (Appendix 9). The objects on the list should be arranged according to the 1939 photographs in Appendices 4 to 8 and the floor plan done from those photographs. All other objects should be removed. Missing objects should be replaced.

INVENTORY - PATTERN SHOP

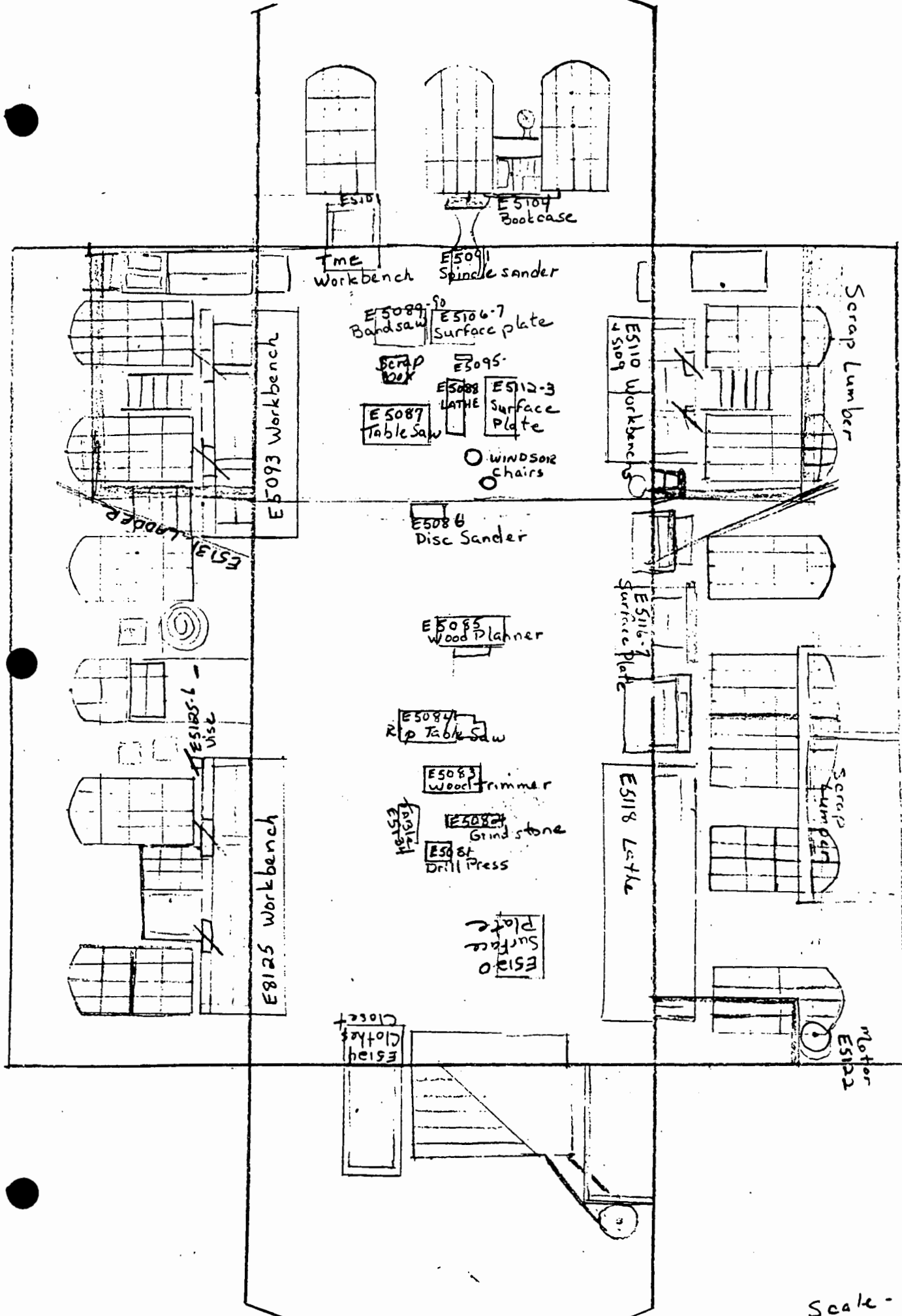
No.	Object	Location
E-5118 (Cat. #277)	J. A. Fay ironwood Turning lathe	Sec. 5 in place
E-5081 (Cat. #316)	Davis Spindle drill	Sec. 5 in place
E-5082	Hopper's emery grindstone	Sec. 5 in place
E-5083 (Cat. #317)	Foxwood trimmer and miter cutler	Sec. 5 in place
E-4938	Double end grinder	Sec. 7
	Three small wood tables	Sec. 5 in place
E-5120	Iron bench plate	Sec. 7
E-5129	Rocking chair from Gleanmont	Sec. 5 in place
	Wooden ladder	Sec. 5 in place
	Three wooden stools	Sec. 7
	Wall shelf rack	Sec. 5 in place
E-5084 (Cat. #319)	Crescent circular variety saw	Sec. 6 in place
	Cabinet makers work bench	Sec. 6 in place
E-1920	Parker bench vise	Sec. 6 in place
	Bench top cabinet	Sec. 6 in place
E-5124	Clothes cabinet	Sec. 6 in place
E-5134 (Cat. #2007)	Mahogany table	Missing (5-70)
	Stool	Sec. 6 in place
E-5088 (Cat. #320)	Wood turning lathe	Sec. 7 in place
E-5091 (Cat. #321)	Syracuse vertical drum sander	Sec. 7 in place
E-5090	Band saw setting machine	Missing
E-5092	Oliver molding trimmer & miter cutter	Sec. 7 in place
E-1116	Iron bench plate	Sec. 5
E-5110	Cabinet-makers workbench	Sec. 7 in place
E-5109	Cabinet-makers workbench	Missing
E-5106	Iron bench plate	Sec. 6
E-5112	Iron bench plate	Sec. 7 in place
E-5111	Corner cabinet	Sec. 7 in place
E-5104	Cabinet rack	Sec. 7 in place
	Wall and window ledge racks	Sec. 7 in place
E-5105	Two drawer cabinet	Sec. 7 in place
	Floor cabinet	Sec. 7 in place
	Electric gluepot	Sec. 7 under bench
	Stool	
	Step stand	Sec. 8
	W. H. electric fan	Sec. 6
	Wall clock	Sec. 7 in place

No.	Object	Location
E-5085 (Cat. #332)	Fay hand planer or jointer	Sec. 8 in place
E-5086 (Cat. #323)	Syracuse disc sander	Sec. 8 in place
E-5087 (Cat. #324)	Beach & Brown table saw	Sec. 8 in place
E-5089 (Cat. #325)	Clement Bard saw	Sec. 8 in place
E-5093 (Cat. #326)	Cabinet-makers workbench	Sec. 8 in place
E-5101	Wall workbench	Sec. 8 in place
E-5100	Iron bench place	Sec. 8 in place
E-5094	Cabinet	Sec. 8 in place
E-5099	Cabinet	Sec. 8 in place
	2 small drawer cabinets	Sec. 6 Top of closet
	Wall racks	Sec. 8 in place
	First Aid Cabinet	Sec. 8 in place
	Electric fan	Sec. 8 on shelf
	Electric bench lamp	Missing
	Kerosene lantern	Missing (Sec 2)
	Electric gluepot	Sec. 7 under bench
E-3903	Swivel armchair	Missing
E-3922	Oak armchair	Missing
	Armchair	Missing
	Fire extinguisher	Sec. 8 in place
	Photo of Edison	Sec. 8 in place
	Plaster cast Indian head	Sec. 8 in place
	Hand bellows	Missing
	Scrap box and work rest	Sec. 8 in place
	Wood clamps	Sec. 5,6,7 & 8
	Small tools	Sec. 5,6,7 & 8
	Lumber	Sec. 5,6,7 & 8
	Misc. supplies	Sec. 5,6,7 & 8

F- SPECIAL RECOMMENDATIONS

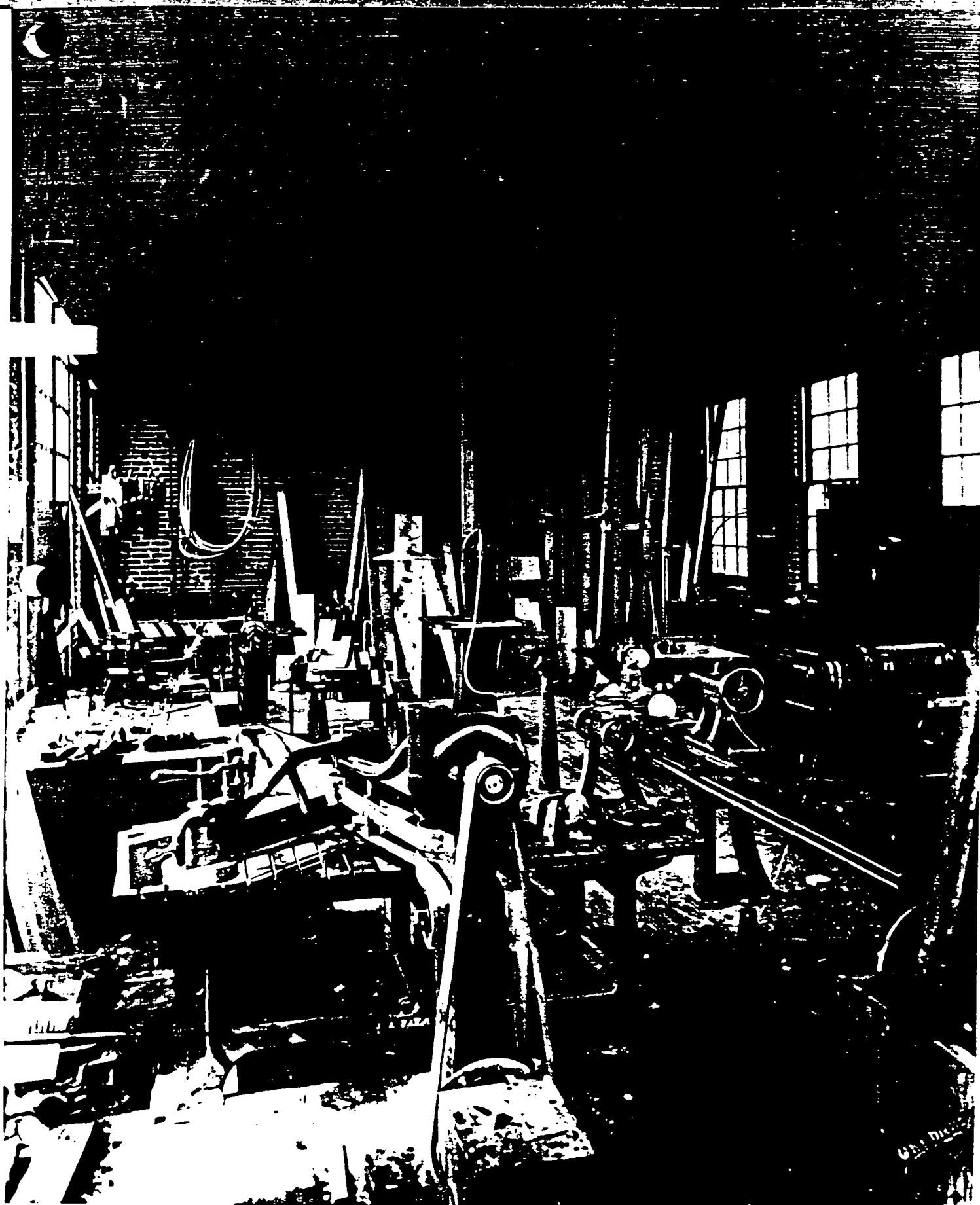
The carpenter shop is too large to be viewed well by the doorway. A waist high barrier should be placed to allow visitors to walk inside a few feet.

A busy shop would have a cluttered, slightly dirty look so maintenance should be minimal. Occasional use of the shop will help this look as well as keep the machines in good condition. If the shop is so used, the machinery should be regularly inspected for safe operation.



APPENDIX 1

Interior of the Pattern Shop in the back half of Building No. 3, as it was about 1893. The two poles of the old-fashioned Edison Standard motor are visible near the far window on the right side of the room. Belt from motor to drive shaft in cellar may be seen, sloping toward hole in floor just below and to the left of the saw table. Taken by W. K. L. Dickson about 1893. Negative No. 0-1064.



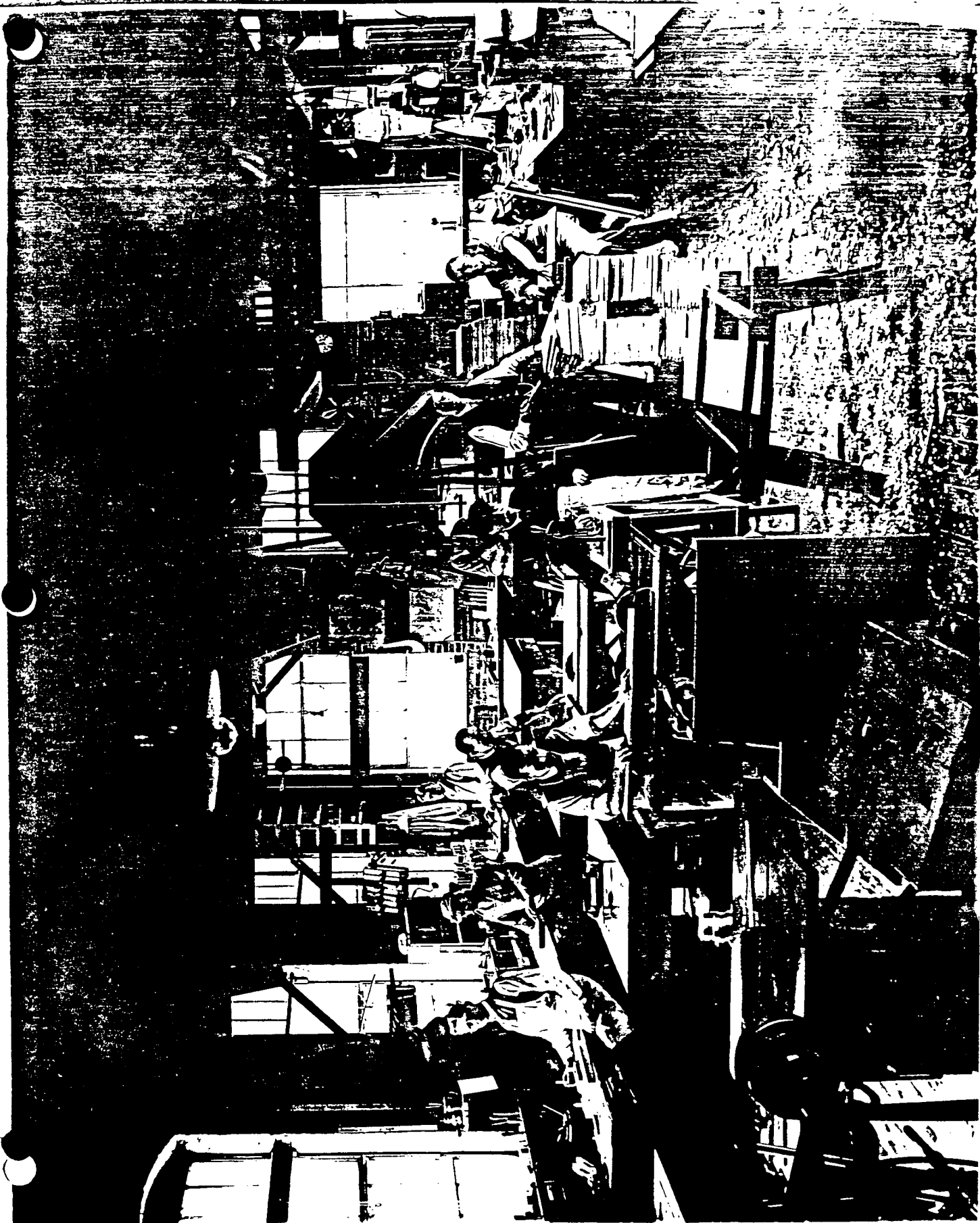
APPENDIX 2

Mr. Arthur Mudd (center of group) and his
Pattern Shop staff in front of the side door
(Pattern Shop entrance) of Building No. 3.
The two Tibbett brothers are on the extreme
left and right ends of the group. Taken
January 6, 1917. Negative No. 4636B.



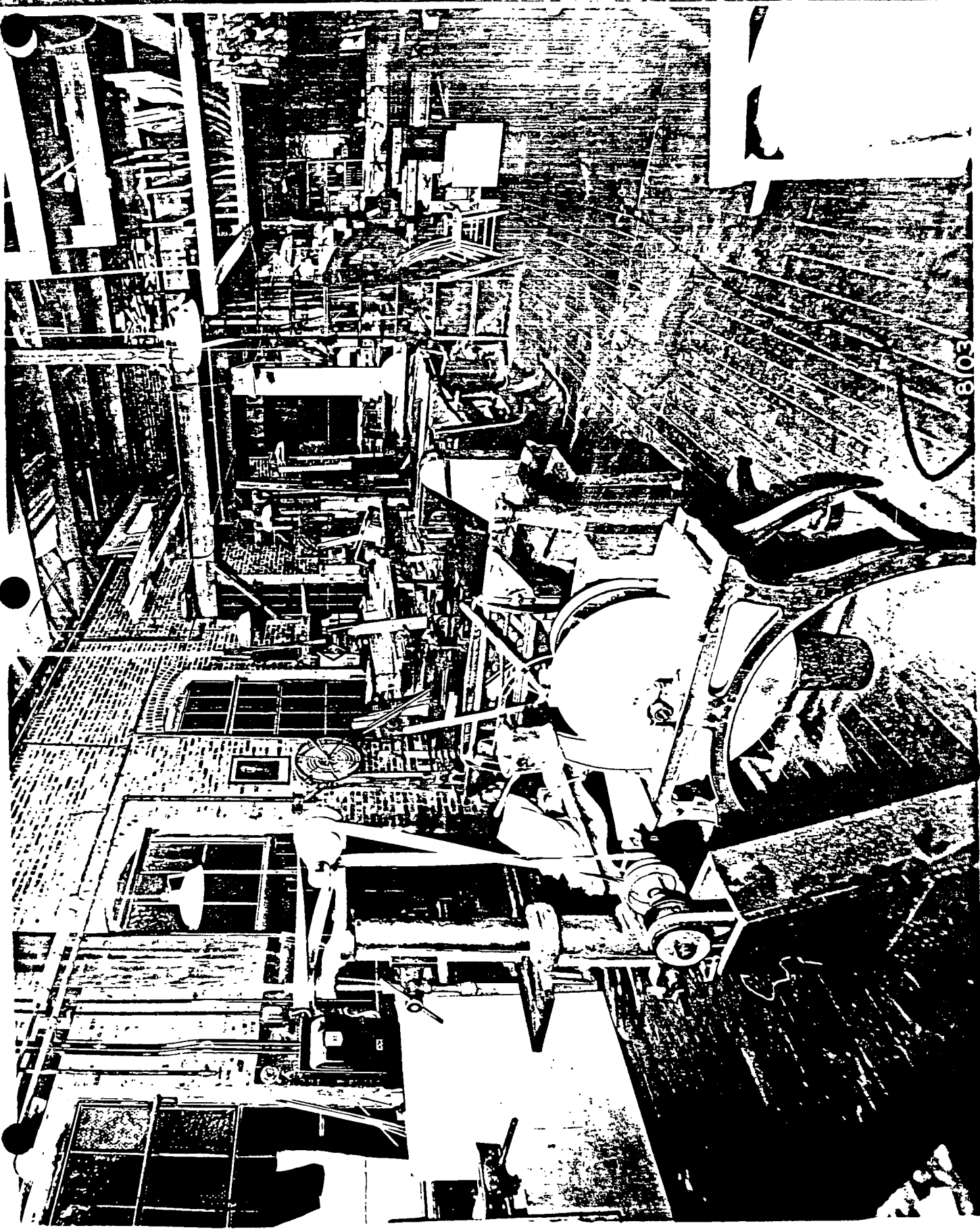
APPENDIX 3

Mr. Arthur Mudd and his staff at work in the
Pattern Shop in the back half of Building No. 3.
Taken January 6, 1917. Negative No. 4636A.



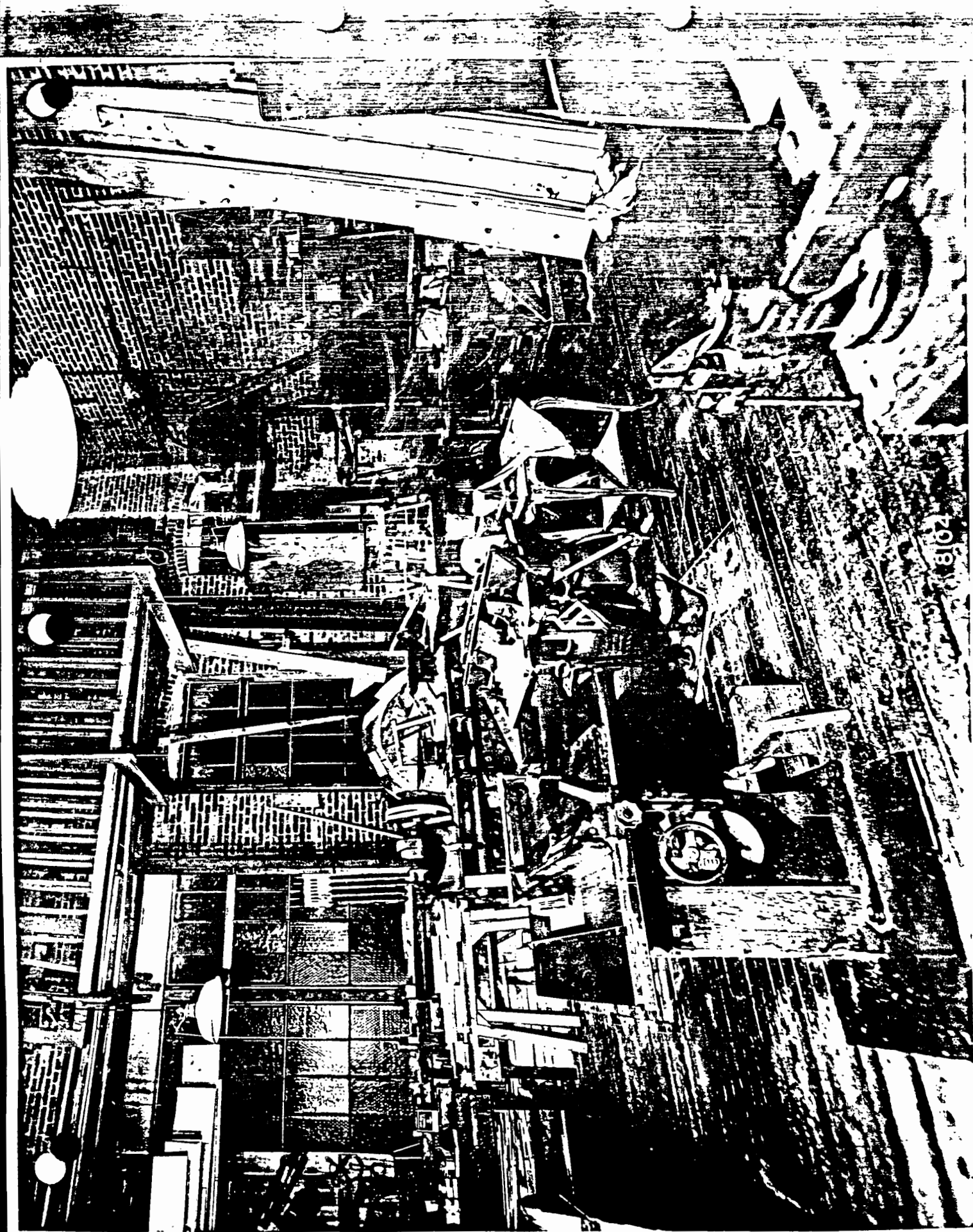
APPENDIX 4

Pattern Shop, Building No. 3, as it was in 1939,
showing sections No's. 6, 7, and 8. Taken in
September, 1939. Negative No. 8103.



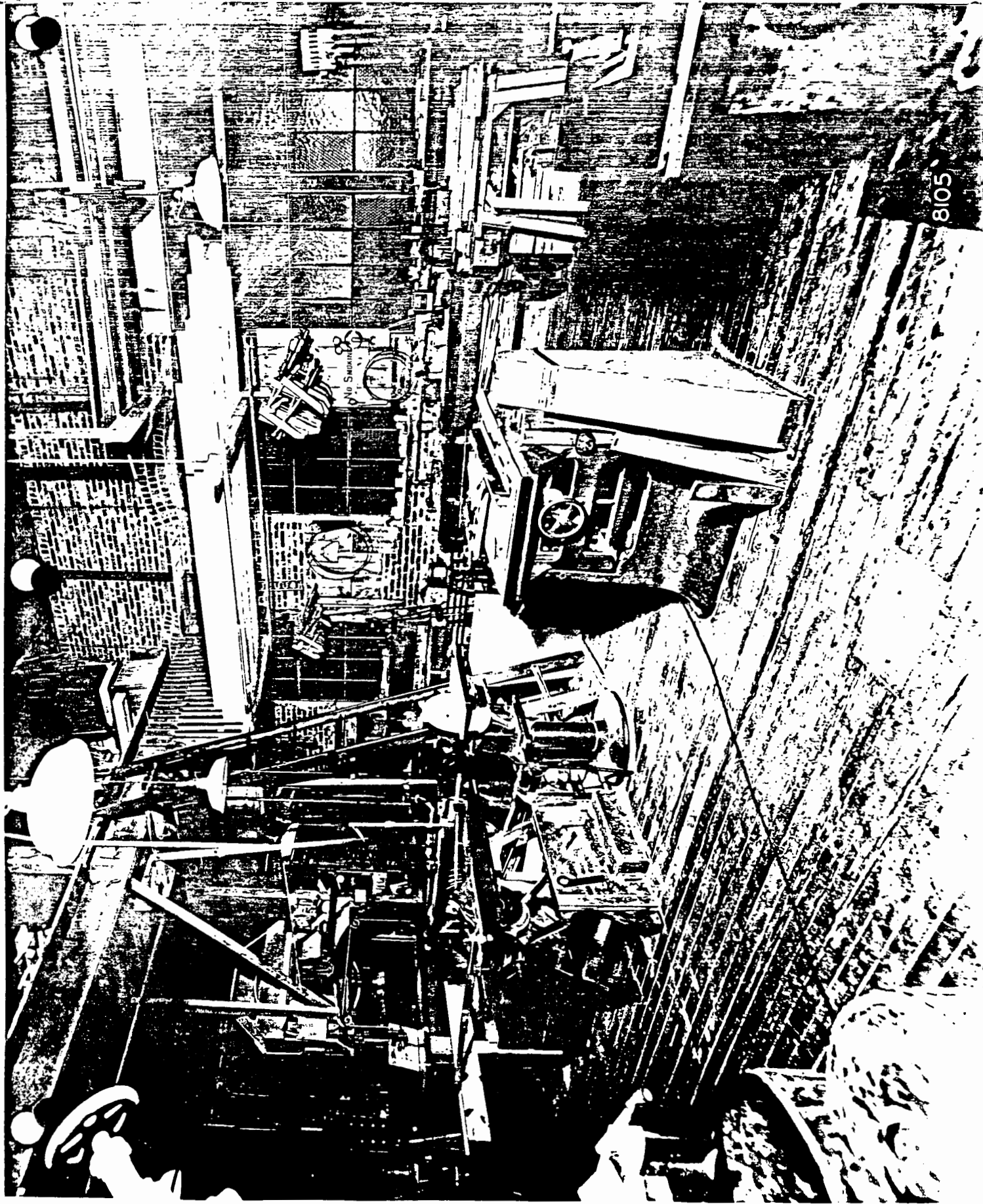
APPENDIX 5

Pattern Shop, Building No. 3, as it was in 1939,
showing sections No's. 5 and 6. Taken in September,
1939. Negative No. 8104.



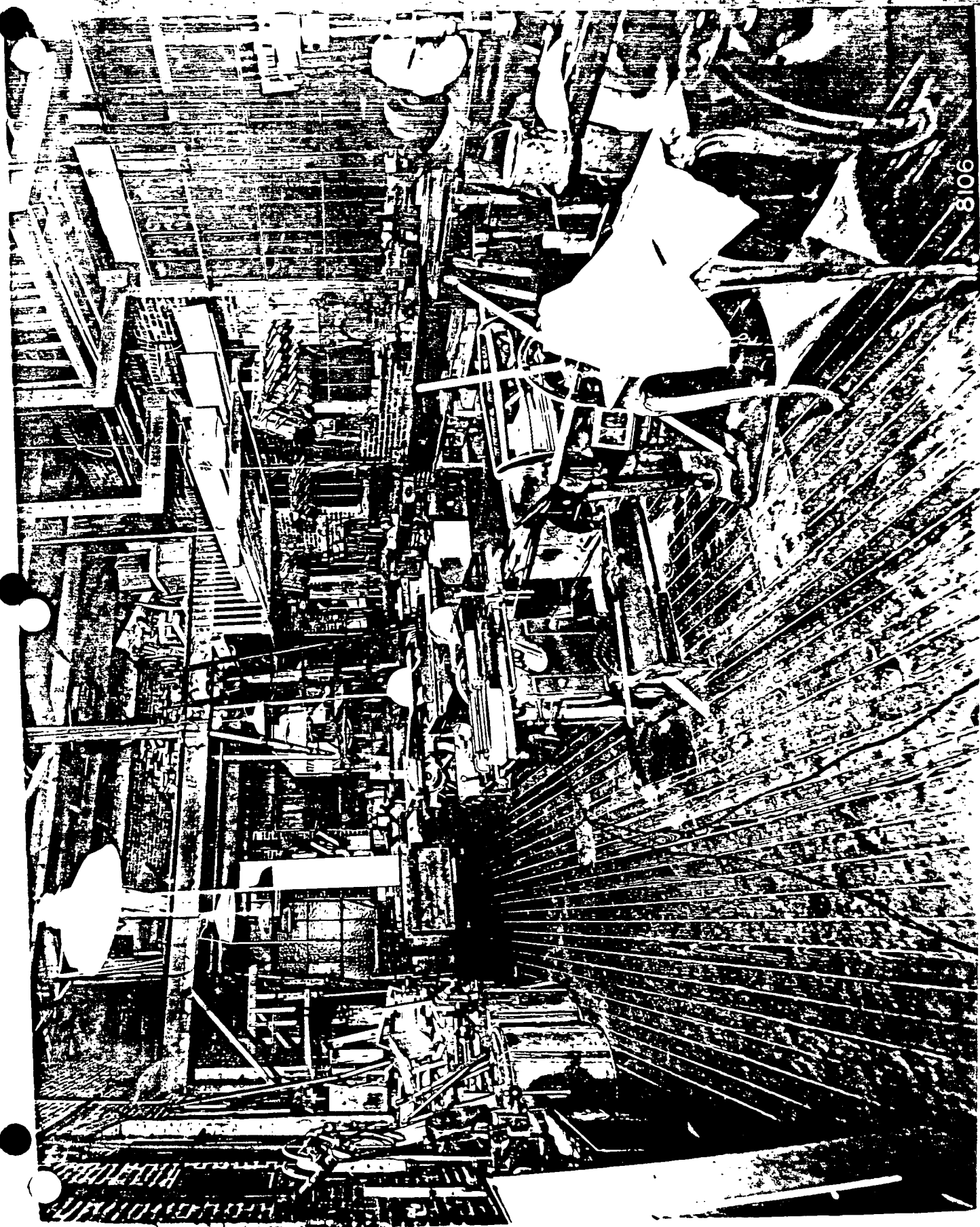
APPENDIX 6

Pattern Shop, Building No. 3, as it was in 1939,
showing sections No's. 5, 7, and 8. Taken in
September, 1939. Negative No. 8105.



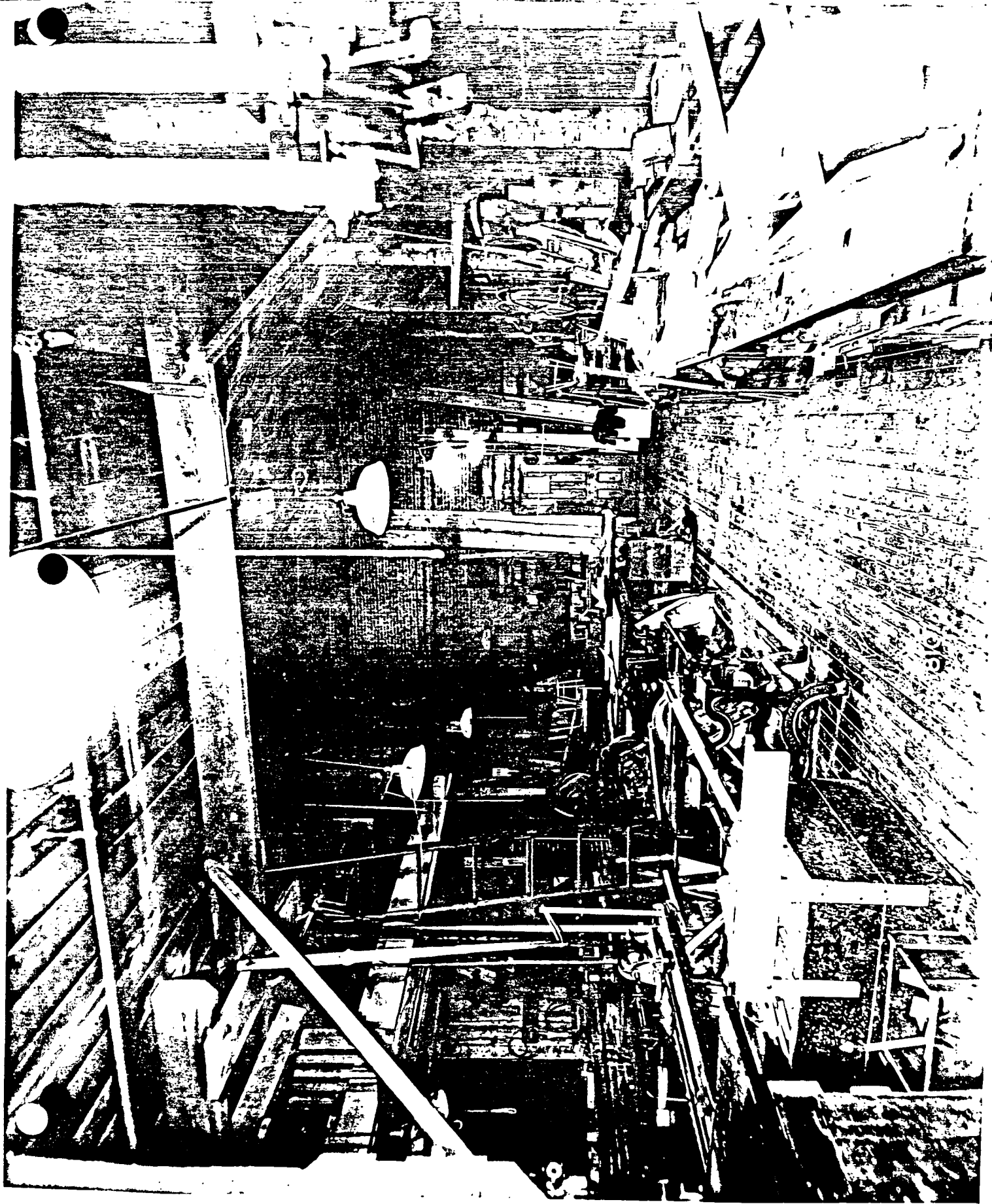
APPENDIX 7

Pattern Shop, Building No. 3, as it was in 1939,
showing sections No's. 5, 7, and 8. Taken in
September, 1939. Negative No. 8106.



APPENDIX 8

Pattern Shop, Building No. 3, as it was in 1939,
showing sections No's. 5, 6, and 8. Taken in
September, 1939. Negative No. 8107.



APPENDIX 9

Part of Inventory Appraisal Report of McGraw-
Edison Co., West Orange, New Jersey, September
30, 1957, done by the American Appraisal Co.,
Milwaukee, Wisconsin.

MUSEUM EQUIPMENT

BUILDING 3

Basement

E1123 C11427	1 line shaft, 1 15/16" x 48', with collars, couplings, 7 post hangers, 8 iron machine pulleys, drive pulley and belting, 2 machine countershafts in Basement, wood supports, millwright work and guard	450 00
C11425	1 J. A. Fay & Co. (Cincinnati, Ohio) C. I. floor pedestal jig saw, #11425, 39" x 32 1/2" iron table, tight and loose pulley drive and belting	75 00
	1 4'6" dia. x 4' sheet metal tank, with cover	1 00
	Lumber, wood staves and wood cuttings	60 00
	Total Basement	586 00

Floor 1

Section 5

L/5115 C11427	1 J. A. Fay & Co. 24" x 12' bed all iron wood turning lathe, with tool rest, 4-step cone headstock, tight and loose pulley countershaft, belting and millwright work incl. C. I. floor stand, tool rest and wood face plates	950 00
L/5001 C11426	1 Davis Mach. Co. (Rochester, N. Y.) 12" floor type vertical single spindle slide head sensitive drill, round and square tables, lever feed, attached tight and loose pulley countershaft, belting and wood guard	170 00
L/5002	1 Hoppers #3 - 18" x 4" emery grindstone, iron frame, with water pot, pulley drive, belting and wood guard	30 00
L/5003 C11427	1 Fox Mach. Co. (Grand Rapids, Mich.) #6F floor pedestal type Universal wood trimmer and miter cutter	125 00
L/4938	1 bench type double end grinder, 6 1/2" between wheels, single pulley belt and 1/8 H/P D/C motor, switch and wiring, on wood stand	15 00

MUSEUM EQUIPMENT

Building 3

Floor 1

Section 5

E/5120	1	Drives Shaft in Basement	
		General Elec. Co. 10 H/P D/C shunt-wound motor, #159528, type RC, form A32, 230 V 250 H/P/A, adj. base	#159528 ✓
		Industrial Controller Co. #7110 magnetic starter in steel box, push button station	
		200-amp. 250-volt D/P/S/T knife switch, fused	
		incl. wiring and wood support platform	320 00
3		small wood tables	10 00
		Overhead wood rack and contents, lumber and wood railings	30 00
		Wood wall shelf rack and contents, hardware supplies and varnish	10 00
E/5120	1	48" x 24" iron bench plate	25 00
E/5120	1	rush seat and back wood rocking chair	5 00
	1	wood ladder	4 00
	3	wood stools	3 00
		Wood furniture clamps	20 00
		Minor supplies, drum of dry shellac, rolled sandpaper and ready roofing glue	60 00
		Small tools, wood cuttings and parts	15 00
			1,762 00

Section 6

E/5004	1	Crescent Mach. Div. (Leetonia, Ohio) 31 1/2" x 43 1/2" top all iron pedestal base circular variety saw, with tight and loose pulley countershaft on rear frame, belting, saw and drive guards	250 00
	1	15'6" wood wall type cabinetmakers workbench, 3 drawers and 2 vises	40 00
E/1920	1	Parker 3 1/2" bench vise	15 00

HOUSEHOLD EQUIPMENT

Building 3

Floor 1

Section 7

E/#5109	1	6' wood cabinetmakers workbench and vise	30 00
E/#5110	1	48" x 18" iron bench plate and wood stand	30 00
E/#5106	1	48" x 24" iron bench plate and wood stand	35 00
E/#5111	1	wood corner cabinet and contents	7 00
E/#5104	1	wood cabinet rack, glazed door and contents, incl. small tools and supplies and 11 pattern record books	60 00
		Wood wall and window ledge racks and contents, small tools, templates and supplies	20 00
E/#5105	1	2-drawer wood cabinet and contents, incl. sandpaper	4 00
	1	24" x 15" x 28" wood floor cabinet and contents, incl. supplies	8 00
		Furniture clamps on racks	20 00
	1	electric gluepot and stand	10 00
	1	hardwood stool	1 00
	1	wood step stand	1 00
E/#5000	1	wood clamp	5 00
	1	W. E. 16" electric fan	5 00
	1	wall clock	5 00
		Wood cuttings, frames, parts, small tools and supplies	25 00
			596 00

Section 8

E/#5085	1	J. A. Fay & Co. 24" hand planer or jointer, round knife head, Surty head guard, pulley drive, belting and wood guard	225 00
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MUSEUM EQUIPMENT

Building 3

Floor 1

Section 8

#5086 (45323)	1 Syracuse Sander Mfg. Co. type D horizontal disc sander, Ser. #839, 15" disc, 21" x 9" table, iron floor pedestal, direct 1/2 H/P D/C motor drive, built-in switch and wiring	✓ 120 00
#5087 (45324)	1 Beach Brown & Co. (Montrose, Pa.) 31" x 41" top all iron circular variety saw table, open leg frame, with tight and loose pulley countershaft on frame, belting, saw and drive guards	✓ 225 00
#5089 (45325)	1 Frank H. Clement Co. (Rochester, N. Y.) American #B-36 band saw, Shop 101336, 32" x 32" iron table, tight and loose pulley drive, belting and wood guards	✓ 200 00
#5093 (45326)	1 14' ³ / ₈ " ^{Pettibone machine} wood cabinetmakers' workbench ^{with 2 vises} [and] vises	✓ 50 00
#5100	1 5'8" wood wall workbench, 1 drawer	✓ 10 00
#5100	1 48" x 24" iron bench plate	25 00
#5094	1 33" x 19" x 52" wood cabinet and contents, incl. hardware supplies	25 00
#5099	1 35" x 12" x 34" wood cabinet, glazed door and contents, incl. leather fillets, pegs and band saws	35 00
	2 small wood drawer cabinets	10 00
	Wood wall racks	5 00
	1 First Aid cabinet	5 00
	1 12" electric fan	4 00
	1 electric bench lamp	1 00
	1 kerosene lantern	2 00
	1 electric gluepot	10 00
#3903	1 oak swivel armchair	5 00

MUSEUM EQUIPMENT

Building 3

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Floor 1

Section 8

#3922	1 oak armchair	5 00
	1 hardwood armchair	2 00
	Furniture clamps on racks	15 00
	1 2 1/2-gal. soda acid fire extinguisher	15 00 ^p
	1 framed photo - T. A. Edison -	5 00
	1 plaster cast - Indian Head -	5 00
	1 hand bellows	2 00
	1 wood cuttings scrap box and work rest	4 00
	Saws, dado cutters and shovels	15 00
	Lumber, plywood and compo board cuttings and parts	35 00
	Minor supplies and glue	<u>5 00</u>
		1,065 00

Balcony Rack

Lumber, compo board, dowels, panels and parts	<u>150 00</u>
Total Floor 1	<u>4,069 00</u>
T o t a l	<u>4,655 00</u>

