

Forge Creek Dam
Cades Cove
Great Smoky Mountains National Park
Blount County
Tennessee

HABS No. TN-118

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1-

REDUCED COPIES OF MEASURED DRAWINGS

Historic American Buildings Survey

Forge Creek Dam-John Cable Mill
(Forge Creek Dam)
Cades Cove
Great Smoky Mountains National Park
Blount County
Tennessee

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Addendum to:

Forge Creek Dam
Cades Cove
Great Smoky Mountains National Park
Blount County
Tennessee
(drawings first transmitted)

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Department of the Interior
Washington, D.C.

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HISTORIC AMERICAN BUILDINGS SURVEY

FORGE CREEK DAM - JOHN CABLE MILL
(Forge Creek Dam)

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Cades Cove
Great Smoky Mountains
National Park
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(drawings first transmitted)

Location: Cades Cove, Great Smoky Mountains National Park, Blount County, Tennessee.

Present Owner: National Park Service.

Present Use: Public demonstration.

General Information: The John Cable Mill, powered by an overshot water wheel, is an example of one of the six methods of making meal to be found in the Great Smoky Mountains National Park. The other methods are the Indian pestle and mortar, Indian querns, the pounding mill, the tub mill, and the steel turbine mill.

In the larger valleys or coves, mills using overshot water wheels with all wooden gearing, or a combination of wood and iron gears, used to be fairly common. At one time eight mills of this type were in operation in Cades Cove alone. Today the John Cable Mill is the only mill of this type existing in the park.

The present mill is the third to be built on this site. The first mill was powered by a large wooden turbine called a "tub" by the natives, thus giving the name "tub mill" to this type of mill. The second mill used an overshot wheel, as in the present mill.

John Cable built the present mill in the 1870s. Originally the mill had two sets of stones, one for grinding wheat which was removed some years ago, and the one which is still in use, for grinding corn. The mill was restored in 1935-36.

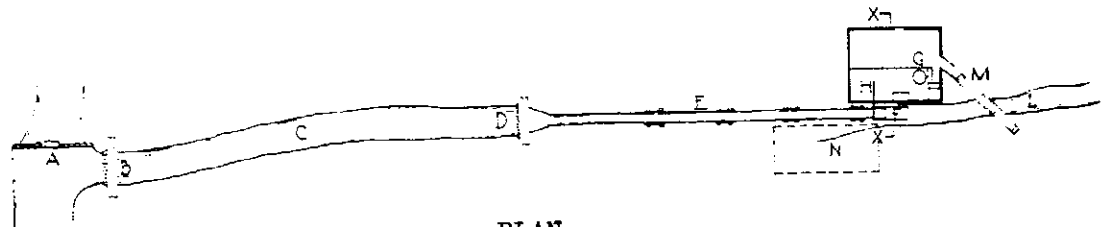
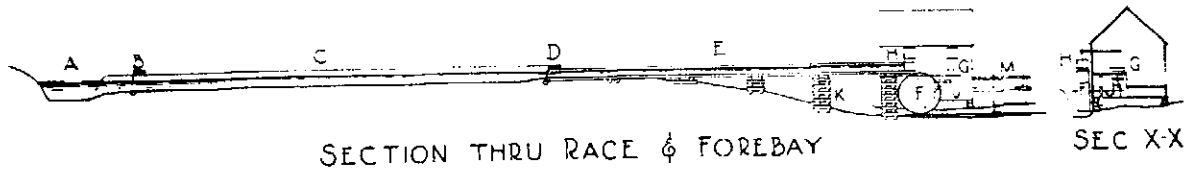
In connection with the grist mill, and right by it, John Cable also operated a saw mill. This mill was of a type known as a sash saw. It derives its name from the frame or sash in which the saw blade is hung when cutting a log.

FORGE CREEK DAM - JOHN CABLE MILL
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In addition to the two mills mentioned above, an iron forge operated about one-quarter mile up the Forge Creek from the mill. The creek's name is derived from this forge. Heaps of slag and pieces of iron ore mark the site. Part of the forge hammer used in this forge is now in the collection of the Great Smoky Mountains National Park.

These manufacturing activities are a good example of a type of industry which existed before the era of modern transportation.

Prepared by: Charles S. Grossman
National Park Service
Late 1930s



PLAN

JOHN CABLE MILL
AND
FORGE CREEK DAM

KEY

- A: DAM
- B: WATER-GATE
- C: HEAD-RACE
- D: TRASH-RACK
- E: FOREBAY
- F: OVERSHOT WATER WHEEL
- G: MILL-STONES
- H: WATER-GATE
- J: GEARING
- K: CRIBBING FOR FOREBAY
- L: TAIL-RACE
- M: BRIDGE OVER TAIL RACE TO MILL
- N: SITE OF OLD SASH-SAW MILL

FORGE CREEK DAM

GREAT SMOKY MOUNTAINS NATIONAL PARK
CADES COVE, BLOUNT COUNTY, TENNESSEE

HISTORIC AMERICAN BUILDINGS SURVEY
U. S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
BRANCH OF PLANS AND DESIGN

MEASURED:

DRAWN: 1936

MEASUREMENTS CHECKED:

DRAWINGS APPROVED:

DRAWINGS APPROVED:

ACCEPTED FOR LIBRARY OF CONGRESS:

, DISTRICT OFFICER.

, CHIEF ARCHITECT.

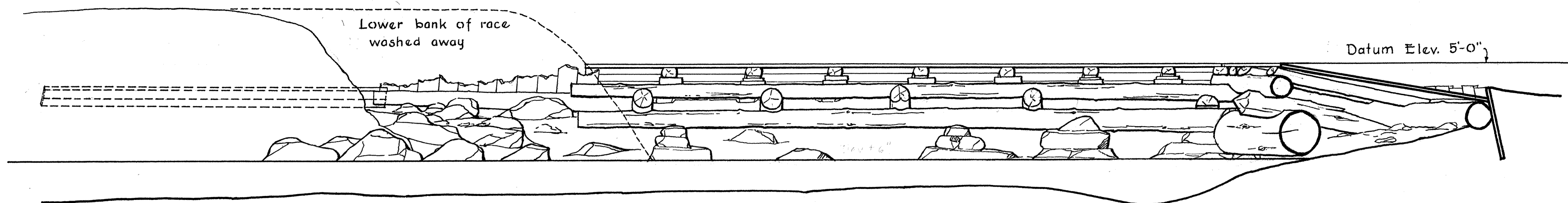
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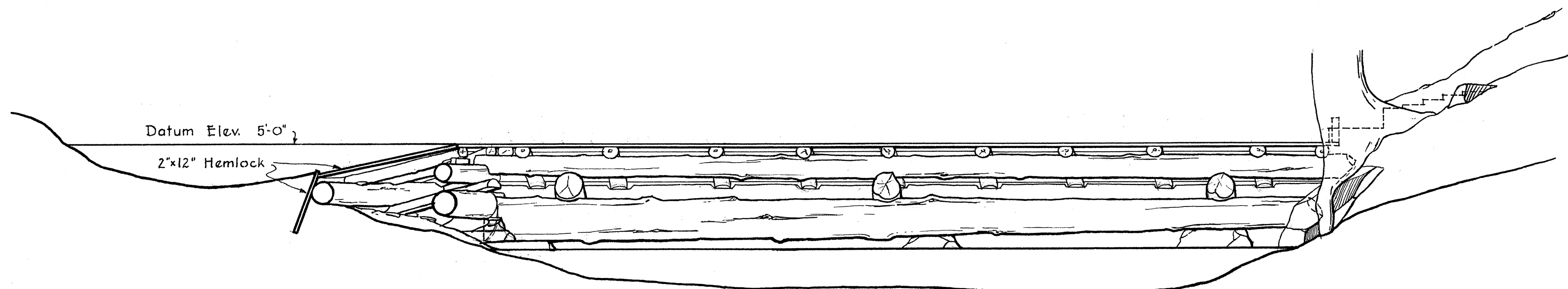
3 SHEETS

INDEX NO.

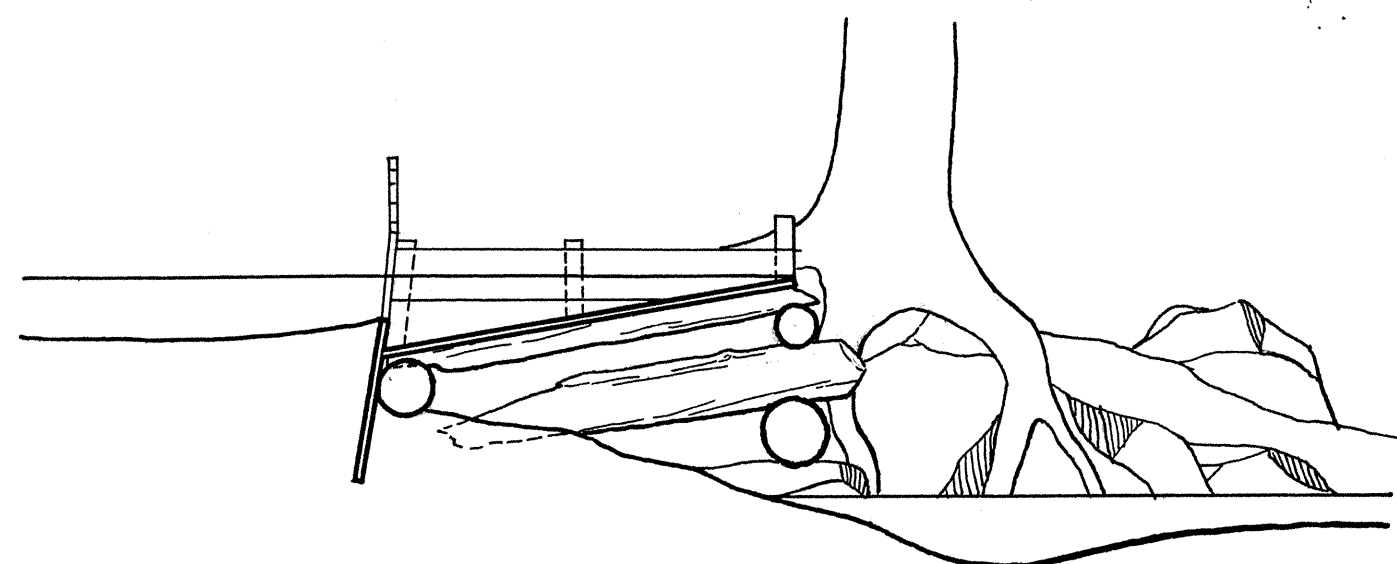
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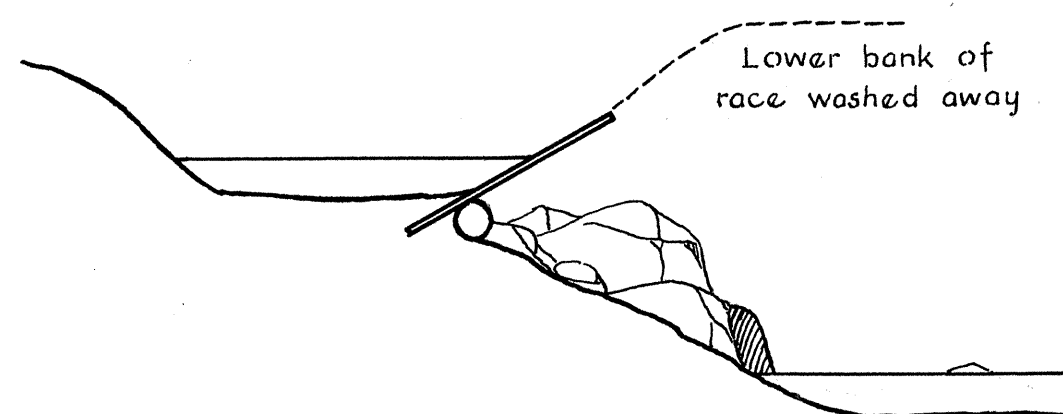
EAST ELEVATION



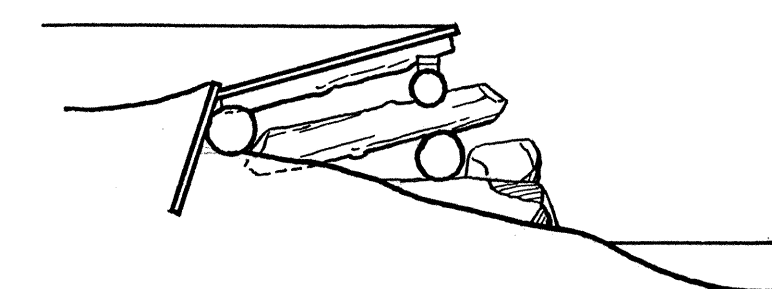
SOUTH ELEVATION



SECTION A-A

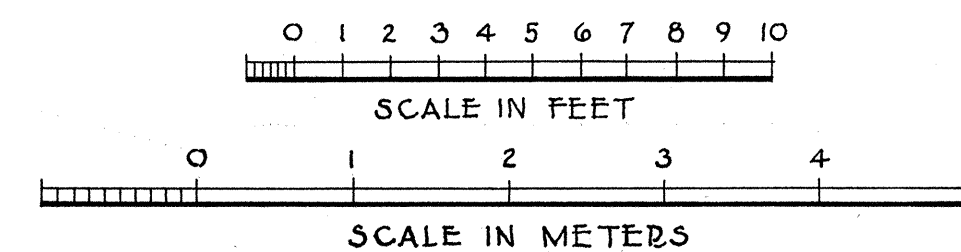


SECTION C-C



SECTION B-B

CHARLES S GROSSMAN DEL. 1936



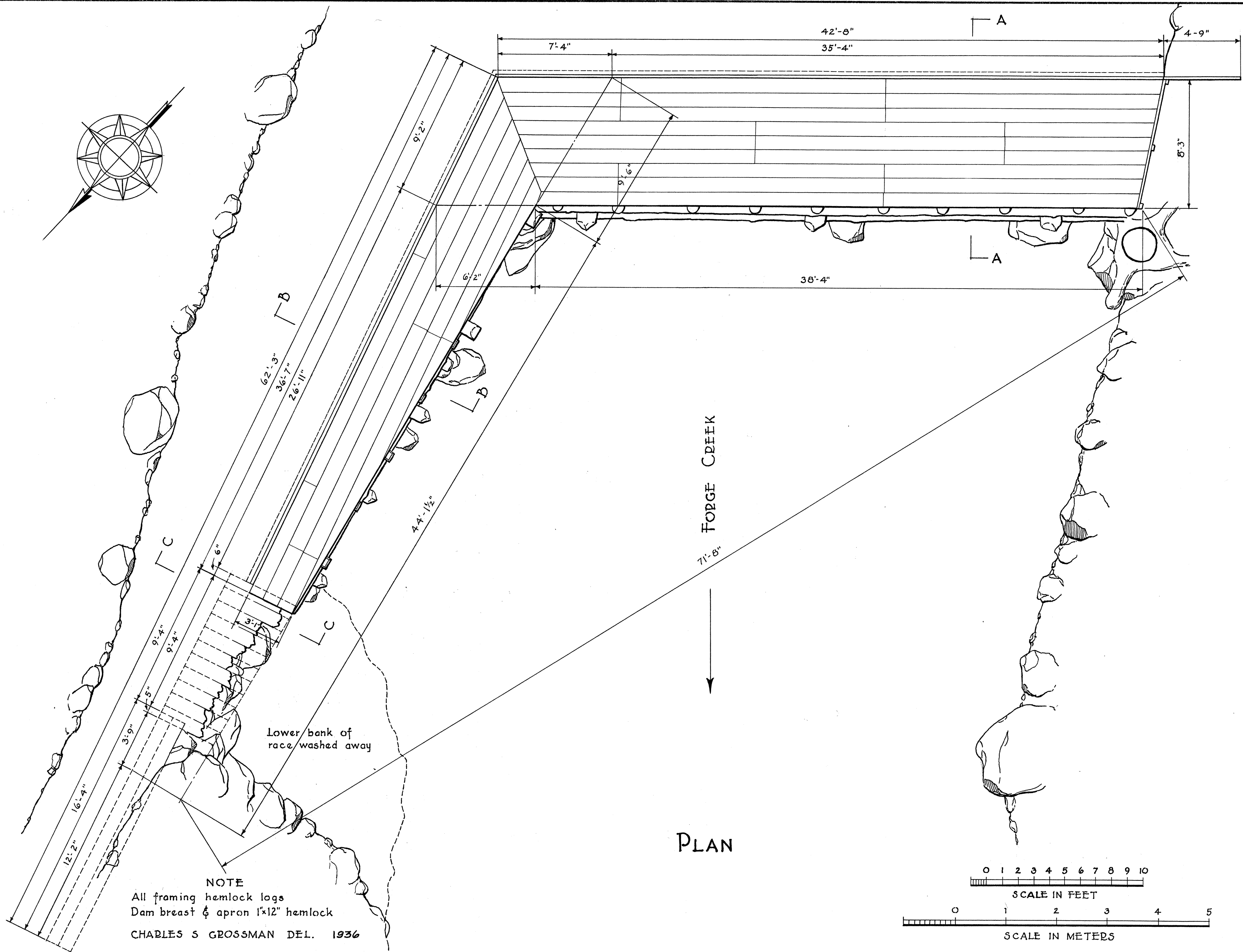
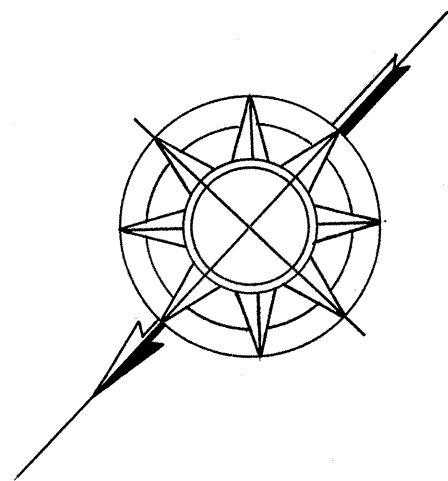
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NOTE
All framing hemlock logs
Dam breast & apron 1"x12" hemlock
CHARLES S GROSSMAN DEL. 1936

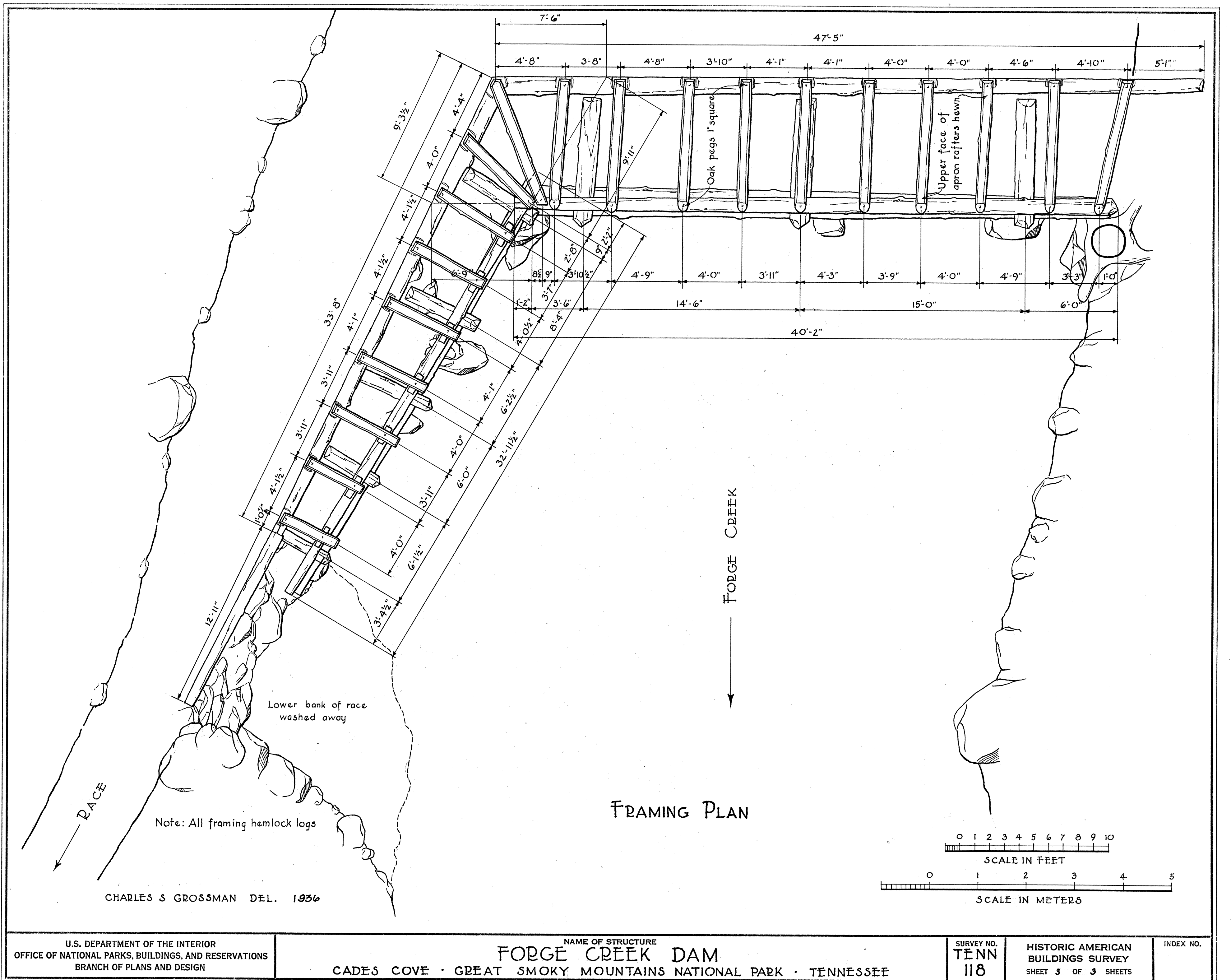
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Photocopies of ca. 1938 photographs by Edouard E. Exline

- TN-118-1 THE MILL, BEFORE RESTORATION
- TN-118-2 THE MILL, AFTER RESTORATION. THE FRONT FACES SOUTH
- TN-118-3 DETAIL OF WATER-WHEEL, WATER-GATE AND FOREBAY, BEFORE RESTORATION
- TN-118-4 DETAIL OF WATER-WHEEL, WATER-GATE AND FOREBAY, AFTER RESTORATION
- TN-118-5 CONSTRUCTION OF MAIN GEAR WHEEL. WATER-WHEEL IN BACKGROUND
(Note how rims of gear wheel are constructed of segments called shrouds)
- TN-118-6 TOM AND JERRY HEARON HEWING THE WATER-WHEEL SHAFT DURING RESTORATION OF THE MILL
- TN-118-7 DETAIL OF GEARING, AFTER RESTORATION
- TN-118-8 DETAIL OF HOPPER, SHOE AND MILL-STONE HOOP

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FORGE CREEK DAM-JOHN CABLE MILL
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Photographs by Jack E. Boucher, April 1962

TN-118-9 VIEW OF MILL SHOWING WOODEN SILL AND SIDING

TN-118-10 MILL FRAMING DETAIL

Photocopies of ca. 1938 photographs by Edouard E. Exline

TN-118-11 DETAIL OF CRIBBING SUPPORTING THE FOREBAY, BEFORE RESTORATION

TN-118-12 DETAIL OF CRIBBING SUPPORTING THE FOREBAY, AFTER RESTORATION

TN-118-13 VIEW OF MILL-RACE: HEAD-RACE AND TRASH-RACK (IN FOREGROUND), AND FOREBAY (IN BACKGROUND), AFTER RESTORATION

TN-118-14 VIEW OF HEAD-RACE LOOKING TOWARD THE TRASH-RACK FROM THE DAM, AFTER RESTORATION

TN-118-15 MILL DAM ON THE RIGHT, WATER-GATE IN THE LEFT FOREGROUND

Photograph by Jack E. Boucher, April 1962

TN-118-16 VIEW OF MILL-RACE SHOWING RESTORED FOREBAY IN FOREGROUND, AND TRASH-RACK AND HEAD-RACE IN BACKGROUND

Photocopies of 1930s photographs. Charles S. Grossman was the photographer. The dates are indicated in each caption. Original photographs are on file at the Great Smoky Mountains National Park, Gatlinburg, Tennessee.

TN-118-17 VIEW OF MAIN AND DIVERSION DAMS FROM WATER-GATE AFTER REMOVAL OF DRIFTWOOD. DIVERSION DAM IN LEFT FOREGROUND, MAIN DAM TO THE RIGHT. Photographed July 18, 1938.

TN-118-18 DETAIL AT JUNCTION OF MAIN DAM AT LEFT AND DIVERSION DAM AT RIGHT SHOWING LOG CRIBBING. SPACES INSIDE CRIBBING WERE FILLED WITH STONE TO ANCHOR DAM; DETERIORATION OF DAM HAS ALLOWED STONE BALLAST TO WASH AWAY. Photographed July 18, 1938.

TN-118-19 VIEW FROM JUNCTION OF MAIN DAM AND DIVERSION DAM, LOOKING TOWARD WATER-GATE AND HEAD-RACE. Photographed July 18, 1938.

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- TN-118-20 VIEW FROM DOWNSTREAM SIDE OF DAM SHOWING BUTTS OF LOGS PROJECTING BETWEEN CROSS LOGS. FREQUENTLY WHOLE TREES WERE USED IN CONSTRUCTING THESE DAMS. THE BRANCHES WERE PLACED UPSTREAM AND COVERED WITH EARTH AND STONE TO ANCHOR THEM. Photographed November 6, 1935.
- TN-118-21 FORGE CREEK DAM LOOKING UPSTREAM. Photographed July 18, 1938.
- TN-118-22 MR. WILBURN IS STANDING ON DIVERSION DAM, WHICH DIVERTS WATER TO HEAD-RACE. Photographed November 6, 1935.

Photographs by Edouard E. Exline, December 15, 1938

- TN-118-23 VIEW LOOKING UPSTREAM FROM WEST BANK OF HEAD-RACE SHOWING RECONSTRUCTED MAIN AND DIVERSION DAMS; HEAD-RACE IS JUST OUT OF PICTURE AT LEFT.
- TN-118-24 VIEW FROM EAST BANK, LOOKING UPSTREAM, SHOWING RECONSTRUCTED MAIN AND DIVERSION DAMS IN BACKGROUND WITH WATER-GATE AND BEGINNING OF HEAD-RACE IN LEFT FOREGROUND.
- TN-118-25 THE HEAD-RACE, LOOKING UPSTREAM TOWARD WATER-GATE. NOTE PLANK PILING ON RIGHT BANK TO PREVENT EROSION, AFTER RESTORATION
- TN-118-26 THE TAIL-RACE, LOOKING DOWNSTREAM FROM BRIDGE (OVER TAIL-RACE TO MILL)



HAES No. 7N-118-1





HABS No. TN-118-3



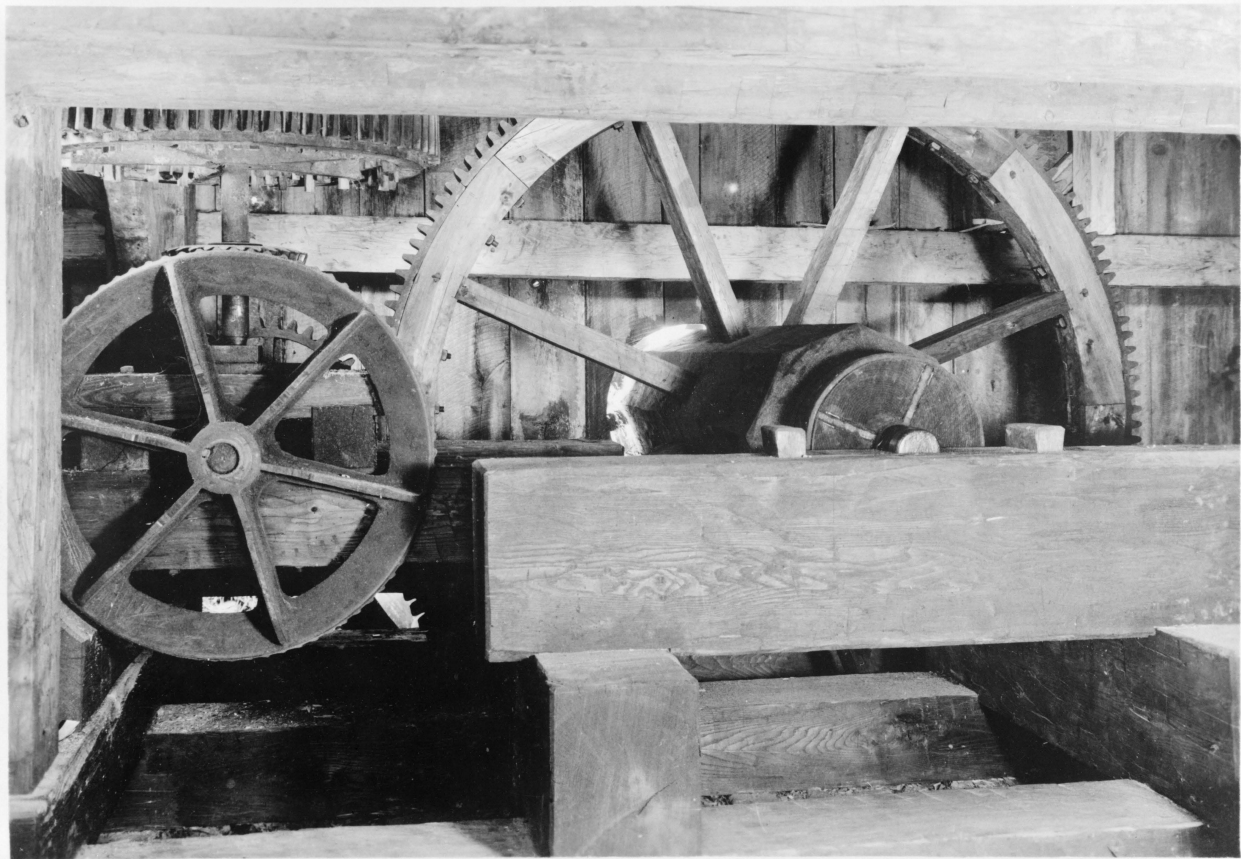
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4485 No. 7N-119-5





HABS NO. TN-118-6







HA BS No. 7N-118-10 ~~HA BS No. 7N-118-10~~



U. S. GEOLOGICAL SURVEY





HABS No. TN-118-13





26-62-11-13-16

HABJ No. 7N-118-16





HABS No. TN-118-17



81-811-N-118-18

HABS No. TN-118-19





HABS No. TN- 118-20



HABS No. TN-118-21

HABS No. TN-118-22



HAB'S No. TN-118-25





HABS No. TN-118-24

4435 No. TN-118-25





HABS No. TN-118-26