

United States Department of the Interior
National Park Service

For NPS use only

National Register of Historic Places
Inventory—Nomination Form

received JAN 24 1935
date entered FEB 21

See instructions in *How to Complete National Register Forms*
Type all entries—complete applicable sections

1. Name

historic Doane's Sawmill/Deep River Manufacturing Company

and or common Messerschmidt Hardware Mill

2. Location

street & number corner Horse Hill and Winthrop Roads N/A not for publication

city, town Westbrook and Deep River N/A vicinity of

state Connecticut code 09 county Middlesex code 007

3. Classification

Category	Ownership	Status	Present Use
<input type="checkbox"/> district	<input checked="" type="checkbox"/> public	<input type="checkbox"/> occupied	<input type="checkbox"/> agriculture
<input checked="" type="checkbox"/> building(s)	<input type="checkbox"/> private	<input checked="" type="checkbox"/> unoccupied	<input type="checkbox"/> commercial
<input checked="" type="checkbox"/> structure	<input type="checkbox"/> both	<input type="checkbox"/> work in progress	<input type="checkbox"/> educational
<input type="checkbox"/> site	Public Acquisition	Accessible	<input type="checkbox"/> entertainment
<input checked="" type="checkbox"/> objects	<input type="checkbox"/> in process	<input checked="" type="checkbox"/> yes: restricted	<input type="checkbox"/> government
	<input type="checkbox"/> being considered	<input type="checkbox"/> yes: unrestricted	<input type="checkbox"/> industrial
	N/A	<input type="checkbox"/> no	<input type="checkbox"/> military
			<input checked="" type="checkbox"/> other: vacant

4. Owner of Property

name State of Connecticut, Department of Environmental Protection,
Conservation and Preservation Division, Planning and Development Unit

street & number 165 Capitol Avenue

city, town Hartford N/A vicinity of state CT 06106

5. Location of Legal Description

courthouse, registry of deeds, etc. Westbrook Hall of Records

street & number Boston Post Road

city, town Westbrook state CT 06498

6. Representation in Existing Surveys

title State Register of Historic Places has this property been determined eligible? yes no

date 1984 federal state county local

depository for survey records Connecticut Historical Commission, 59 South Prospect Street

city, town Hartford state CT

7. Description

Condition		Check one	Check one
<input type="checkbox"/> excellent	<input type="checkbox"/> deteriorated	<input type="checkbox"/> unaltered	<input checked="" type="checkbox"/> original site
<input type="checkbox"/> good	<input type="checkbox"/> ruins	<input checked="" type="checkbox"/> altered	<input type="checkbox"/> moved date _____
<input checked="" type="checkbox"/> fair	<input type="checkbox"/> unexposed		

Describe the present and original (if known) physical appearance

The Messerschmidt Hardware Mill is a 2-and-1/2-story, timber-framed structure with a gable roof (Photograph 1). Erected in c.1875 as a sawmill, its original vertical-board walls have been covered with asphalt shingles, and shed-roofed additions appear at the north, south and west elevations (Photograph 2). The mill is built into an earth-and-rubble dam which impounds the Falls River into a pond of approximately 100 acres area. Inside the mill remains all the equipment from the manufacture of steel nutcrackers, nut picks and lobster forks, which was installed in the mid-1930s. The site also includes a small, gable-roofed frame shed, erected c.1935, which stands across Horse Hill Road from the mill; this shed held the equipment for nickel-plating the mill's products. No other buildings are visible from the site, which is surrounded by woodland.

The dam consists of an earth embankment with a rubble core and has a maximum height of 22 feet. The stone spillway, located immediately south of the mill, is stepped at the top and has a curved apron; recently applied concrete now covers the spillway. The headrace opening (Photograph 2) conducts water to the turbine located beneath the west wall of the mill; the water continues under the building in a stone-lined tailrace, to rejoin the Falls River at the bottom of the spillway.

At the south and west elevations of the mill the dam forms its foundation, while elsewhere the mill rests on mortared rubble. The building's walls and roof are covered with asphalt shingles, but in places the shingles have fallen away to reveal the original vertical-board siding. In the original portion of the mill, openings are symmetrically placed: three per floor with a single attic light at the end, and four per floor at the sides. The surrounds are of plain boards and the sash, where extant, is wooden and six-over-six; much of the sash is missing and what is left is hidden by plywood that now fills the openings. Inside, the original mill's framing consists of chestnut timbers joined by treenails; at several locations steel bolts have augmented or replaced the treenails (Photograph 3). Walls and ceilings are unfinished. Plank flooring appears in the toolroom (west addition), while elsewhere are dirt floors or concrete pads to support machines.

Machinery from every distinctive aspect of the operation is in place; the only missing elements are the footpresses that were used to rivet together the nutcrackers. The S. Morgan Smith turbine (not visible) drove a direct-current generator (Photograph 4), which in turn powered a motor to turn the line-shafting. The main shaft, extending from the west wall to the east (Photograph 3), drove the entire shop except the toolroom in the northeast corner; a jackshaft belted to the main shaft brought power to the toolroom machinery. There are sixteen metalworking machines, all in their operating positions and many with their belts still in place. Except for the toolroom machines, all were extensively modified during the historic-use period in order to adapt them to the specialized operations of making nutcrackers, nut

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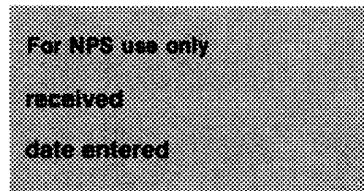
**National Register of Historic Places
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Messerschmidt Hardware Mill

Continuation sheet Westbrock, CT

Item number 6

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Representation in Existing Surveys (continued):

Connecticut: An Inventory of Historic Engineering and Industrial Sites

1981, Federal/State

Records deposited at Connecticut Historical Commission
59 South Prospect Street
Hartford, CT 06106

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Description (continued):

picks and lobster forks. (Photograph 5 shows the products manufactured at this site.) Following is the inventory of equipment, including the maker (if known) and maker's location, date, the machine's place in the manufacturing process, and modifications.

Production Equipment:

Power press, Waterbury-Farrel Co., Waterbury, CT., c.1910; stamped the teeth into the legs of nutcrackers; modified for automatic feed of stock and ejection of stamped parts (Photograph 6).

Power press, P.W. Bliss Co., Brooklyn, N.Y., c.1910; stamped out from sheet steel the tops of nutcrackers, where the legs pivot; fitted with puch-and-die set made on site.

Power press, maker not known, c.1900; cut off small wire keepers that were placed around the legs of nutcrackers to keep them closed during shipment.

Knurling machine, made on site, c.1946; cut the decorative, wavy surface patterns on nutcracker legs and nut pick bodies; built entirely by shop proprietor using purchased lever cams to hold stock and chain drives to power the knurling tools (Photograph 7).

Multiple-spindle screw machines (2), Gridley Co., New Britain, CT., c.1916; cut the decorative ball designs on the legs of nutcrackers and ends of picks; modified for individual motor drive (instead of belt-drive from shaft), fitted with form tools made on site.

Swaging machines (7), Torrington Co., Torrington, CT., c.1885-1905; three of the swages were used in sequence to draw out the tapered bodies of nut picks, three for a similar operation on lobster forks, and one to form the ends of the picks; all are fitted with automatic mechanical feed and ejection apparatus and dies made on site. The machine to form the ends of the picks has an electromagnetic table to hold the picks during the forming operation. (Photograph 8).

Toolroom Equipment (Photograph 9):

Milling machine, Pratt & Whitney Co., Hartford, CT., c.1900; used to make dies, form tools and components of modified drives and feeds for production equipment.

Drill press, Blaisdell Co., Worcester, MA., c.1885; use similar to milling machine.

Lathe, Whitcomb-Blaisdell Co., Worcester, MA., c.1910; use similar to

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milling machine.

Besides these pieces of major equipment, the shop features numerous hand tools and sets of dies and knurls in different patterns (Photograph 9). Also in place are tools that were cobbled together by machine operators to facilitate the removal of jammed pieces in the automatic feeding devices attached to the machinery (Photograph 10).

The building's architectural integrity has been compromised. While the original timber framing is substantially intact, and the original form of the mill is discernible within the welter of small additions, the post-World War II asphalt shingles detract from the historical appearance. Similarly, the dam retains all of its original material, but it is hidden by concrete repairs made in the 1970s. Neither mill nor dam is in danger of collapse, as indicated by their having withstood the flood of June 1982, which destroyed numerous structures downstream on the Falls River. Since the shop closed in 1976, vandals have repeatedly gained access and, according to local informants, made off with many tools and other materials. Despite these losses, and the threat of further vandalism, the production equipment continues to reflect the manufacturing that took place in the mill between 1933 and 1976. As shown below in Item 8 (Significance), that manufacturing, including some of the equipment still in place, is a direct descendent of a late nineteenth-century hardware producer.

8. Significance

Period	Areas of Significance—Check and justify below			
<input type="checkbox"/> prehistoric	<input type="checkbox"/> archeology-prehistoric	<input type="checkbox"/> community planning	<input type="checkbox"/> landscape architecture	<input type="checkbox"/> religion
<input type="checkbox"/> 1400–1499	<input type="checkbox"/> archeology-historic	<input type="checkbox"/> conservation	<input type="checkbox"/> law	<input type="checkbox"/> science
<input type="checkbox"/> 1500–1599	<input type="checkbox"/> agriculture	<input type="checkbox"/> economics	<input type="checkbox"/> literature	<input type="checkbox"/> sculpture
<input type="checkbox"/> 1600–1699	<input type="checkbox"/> architecture	<input type="checkbox"/> education	<input type="checkbox"/> military	<input type="checkbox"/> social/
<input type="checkbox"/> 1700–1799	<input type="checkbox"/> art	<input type="checkbox"/> engineering	<input type="checkbox"/> music	<input type="checkbox"/> humanitarian
<input checked="" type="checkbox"/> 1800–1899	<input type="checkbox"/> commerce	<input type="checkbox"/> exploration/settlement	<input type="checkbox"/> philosophy	<input type="checkbox"/> theater
<input checked="" type="checkbox"/> 1900–	<input type="checkbox"/> communications	<input checked="" type="checkbox"/> industry	<input type="checkbox"/> politics/government	<input type="checkbox"/> transportation
		<input type="checkbox"/> invention		<input type="checkbox"/> other (specify)

Specific dates c1875-built; ¹⁹³³⁻converted **Builder/Architect** not known

Statement of Significance (in one paragraph)

Messerschmidt Hardware Mill is significant in the history of American industry and the history of Connecticut because it depicts the type of manufacturing that gave Connecticut its start as the national leader in the production of consumer hardware (Criterion A): the small, rural, water-powered shop that used mass-production methods based on localized (and in this case even personalized) innovations. The shop includes equipment dating from the late-nineteenth century to the mid-twentieth century, representing the complete process for making the parts for the company's formed-metal goods. The machinery spans several distinct episodes of production, from the company's original role as a maker of various hooks and knitting implements through its conversion to making implements for the table. Like their counterparts throughout the consumer-hardware sector of Connecticut, the successive owners of this shop displayed a keen eye for what would sell and the ability to re-tool production accordingly. Until after World War II, and despite the dominance of large manufacturing corporations, the small hardware shops of Connecticut managed to provide livelihoods for many clever mechanics. The shop also illustrates Connecticut's important role as a supplier of machinery to a wide range of industries; most of the extant equipment was made by in-state machine-building firms.

Connecticut's leadership in the mass production of consumer products had its origins in the decline of agricultural opportunity in the late 18th century. With the good farmland all spoken for, people with economic ambition either migrated to less densely settled areas or stayed in Connecticut and turned to manufactures and trade. The acquisitive Yankees relied on peddlers' reports of what type and quality of goods would sell, and geared their production according to this crude market research rather than to pursuit of a specific craft or fulfillment of a traditional need. In the first third of the nineteenth century, as experience built up the concentrations of skill and marketing connections in certain towns, the pattern of local specialization emerged. Bell production became centered in East Hampton, clocks in Plymouth and Bristol, tinware in Berlin, buttons in Waterbury, and sewing implements in lower Middlesex County. The sewing implements trade was tied initially to a reliable supply of ivory, from which thimbles, knitting needles and like goods were made. Ships based in Saybrook and Essex, and participating in the triangular trade with Africa and the West Indies, assured the shops' access to ivory.

(continued)

9. Major Bibliographical References

See continuation sheet.

10. Geographical Data

Acreeage of nominated property less than 1

Quadrangle name Essex

Quadrangle scale 1:24000

UTM References

A	<u>1</u> <u>1</u> <u>8</u>	<u>7</u> <u>1</u> <u>1</u> <u>0</u> <u>5</u> <u>1</u> <u>4</u> <u>1</u> <u>0</u>	<u>4</u> <u>5</u> <u>7</u> <u>1</u> <u>9</u> <u>1</u> <u>4</u> <u>1</u> <u>0</u>
	Zone	Easting	Northing
C			
E			
G			

B			
	Zone	Easting	Northing
D			
F			
H			

Verbal boundary description and justification

See continuation sheet.

List all states and counties for properties overlapping state or county boundaries

N/A

state	code	county	code

11. Form Prepared By

name/title Matthew Roth and Bruce Clouette, edited by John Herzan, National Register Coordinator

organization Historic Resource Consultants

date 9-20-84

street & number 55 Van Dyke Avenue

telephone 203-547-0268

city or town Hartford

state CT


12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

national state local

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

State Historic Preservation Officer signature

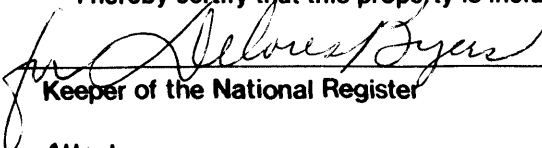


title Director, Connecticut Historical Commission

date 1/8/85

For NPS use only

I hereby certify that this property is included in the National Register



Keeper of the National Register

Entered in the National Register

date 2-21-85

Attest:

date

Chief of Registration

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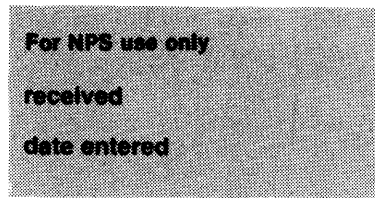
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Significance (continued):

In a pattern repeated in all the hardware towns, the antebellum years saw dozens of small competing producers making essentially similar goods, while after the Civil War the ascendance of one or two dominant firms crowded out the smaller shops. Often the big producers simply absorbed the smaller shops and assigned the former proprietors to supervisory positions. By the 1880s, Comstock, Cheney and Co. and Pratt, Read and Co. had attained control of the ivory-products trade. In Deep River (formerly a part of Saybrook), however, small producers were not entirely locked out of the market because they turned to making sewing implements from metal and thereby offered a different product than the major firms, which used ivory. They were abetted in this tactic by the vast proliferation of machine-building firms in central Connecticut, which grew out of the arms and precision-mechanisms industries. The small makers could obtain sophisticated metalworking production equipment, adapt it to their own specific needs, and make consumer hardware at a cost low enough to be competitive. In adapting the equipment the small shops used general-purpose machine tools, such as milling machines, to make the special parts they needed; the machine-builders of Connecticut, such as Pratt & Whitney, also supplied these machine tools. In this way the phenomenon of small-scale entrepreneurs using localized production innovation lived on in the region of lower Middlesex County.

The earliest antecedent of the Messerschmidt Hardware Mill was J.A. Smith and Co., which began making gatehooks, meathooks and other bent-wire goods in the 1860s. The shop was located in Deep River, overlooking the town dock on the Connecticut River. In 1885 Henry Snell, formerly the bookkeeper for Pratt, Read and Co., and Mathewson Potter bought the Smith firm and used its collection of bending, pointing (i.e, swaging) and other metalforming machines to begin making crochet hooks, knitting needles and button hooks for shoes and gloves. It is possible that one of the swaging machines described above in Item 7 dates from the Smith years or the early years of Potter & Snell. The business continued until 1927, when Potter (the surviving partner) sold out to one of his employees. By that time the firm suffered from the obsolescence of much of its product line, as high-buttoned shoes and gloves were losing popularity. It went bankrupt in a year and was purchased by Deep River Manufacturing Co., a local partnership headed by Ernest Prann. Then in 1929 this group sold the firm to a partnership of four men, including Charles Messerschmidt, Sr.

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Significance (continued):

Messerschmidt was a German who came to the United States in the early years of this century. He and his wife settled in Brooklyn, N.Y., where Charles, Jr., was born in 1907. Several years later the family moved to Westbrook, CT., and bought a farm. In 1914 Messerschmidt purchased a sawmill adjacent to his property. The sawmill was erected in the mid-1870s by Russell Doane, a local farmer who was banking on the continued clearing of land for agriculture. Doane guessed wrong on the continuing growth of farming in lower Connecticut, and the mill suffered from unsteady trade. Doane's mortgage-holder foreclosed in 1884, and the mill passed through a succession of owners until the Messerschmidt purchase. Messerschmidt depended on the farm, rather than the mill, for his principal income, so he could be content with less than full-time milling business. Moreover, the dam and turbine installed by Doane provided Messerschmidt the opportunity to generate electricity with a turbine-driven generator and then to run electrical power to his house; in this way Messerschmidt could power electrical appliances and relieve his family of the tedium and strain of pumping water and washing clothes by hand, reading by oil lamp, and heating with wood and coal. When he and his partners bought Deep River Manufacturing Co. the mill was not committed to the sawing business. The hardware business was a marginal proposition by this time, and as the Depression deepened the partners could not keep up the mortgage payments on the property in Deep River; they moved the firm to the sawmill, where the equipment still remains today.

Charles Messerschmidt, Jr., was graduated from high school in 1926 and attended Baypath Institute in Springfield, MA., for two years, earning a bookkeeping certificate. He joined the hardware business upon his father's purchase of it. The business had not improved with the move to Westbrook and Messerschmidt's partners dropped out one by one. The family kept the shop running by not drawing any salary, instead devoting all cash receipts to paying the workforce of some dozen people. A hardware wholesale firm in New York City, National Silver Co., approached the Messerschmidts with the offer to buy all the nutcrackers and nut picks they could make, at which point Charles, Jr., began the conversion of the existing equipment to make the new products. Of the extant machinery, all the swages and all the toolroom equipment date from no later than Potter & Snell's late-nineteenth-century knitting needle and crochet hook production.

The equipment today continues to reflect this conversion by a young man

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Significance (continued):

unschooled in mechanical engineering but nonetheless mechanically inclined from his boyhood on the farm and tending the sawmill. He used available materials whenever possible: the hoppers that held blanks to feed between the dies of the swaging machines were hammered out from scrap sheet metal, and the adjustments for the automatic feeds are fitted with door handles. The machine that formed the slightly hooked ends of the nut picks was fitted with a highly idiosyncratic feed system that was a hybrid of mechanical and electrical means: a hopper filled with unhooked picks fed the picks between the dies, then a cam-actuated switch turned on an electromagnet that held the piece in place while the hook was formed. This unique approach reveals the lack of formal engineering, which in the 1930s would have dictated the complete conversion to electric operation once electricity was introduced into a process. Conversely, Messerschmidt worked with the materials that were available, and was perfectly content to leave the mechanical drive of the machine and the mechanical elements of the feeding system alone, while using the electromagnet for a single aspect of the process.

Messerschmidt purchased the Waterbury-Farrel power press, then fitted it to his needs: he cut off the legs, then installed a hopper-feed and a cam-actuated ejection rod, and set new dies to form nutcracker teeth, making all these parts on the milling machine, lathe, and drill press in his own tool-room. To integrate the feed and ejection systems with the timing of the press's ram, he put an extension on the machine's driveshaft and fitted it with pulleys to run the subsidiary operations. The press is recognizable as a standard Waterbury-Farrel model only from its nameplate.

Perhaps the height of Messerschmidt's intuitive approach to manufacturing is the knurling machine that he made himself. Knurling is commonly performed on a lathe, but Messerschmidt wanted to knurl his stock in its purchased length of sixteen feet, not cutting it up first, and he wanted to knurl four pieces at a time rather than the single piece possible on a lathe. The machine he assembled from purchased components and pieces made on-site is uniquely suited for this shop and no other. By itself it reveals a remarkable continuity between the innovative country mechanics of the early nineteenth century and the last generation of small-scale hardware production in Connecticut. In both instances the producers had an intimate connection with their markets and were able to serve those markets by developing their own individual techniques.

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Significance (continued):

Material evidence of this important phase of Connecticut history is extremely rare in 1984. As stated above, before 1900 large firms absorbed most of the small hardware shops. Of the few small shops that survived that consolidation period, most went out of business due to product obsolescence, inadequate resources for retooling because of closely held family ownership, or inability to resume normal operations after government-mandated conversion to war production in 1941-45. Less than a half-dozen shops in the state continue to produce consumer hardware on vintage equipment. Messerschmidt Hardware Mill is an important survival of a once-typical kind of Connecticut manufacturing.

Finally, this shop sharpens our view of what is misleadingly called "Yankee ingenuity." In its history we can identify the forces that shaped the extraordinary outpouring of mechanical invention in Connecticut, and refute the attribution of this inventiveness to a class of people rather than to a time and place. The country mechanics of the nineteenth century, just like Charles Messerschmidt, Jr., in the twentieth, were driven by economic ambition; directed by a well-defined sense of what goods would sell; and, equipped with little more than what they learned on the farm or at the town mill or blacksmith, were able to design and execute production processes that would make those goods cheaply enough for virtually anyone to buy.

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Commemorative Biographical Record of Middlesex County, Connecticut. Chicago: J.H. Beers and Co., 1903.

Connecticut River Valley Directory, 1881-1931.

Interview with Charles Messerschmidt, Jr., September 1984.

The [Deep River] New Era, February 15, 1951 (newspaper).

U.S. Census, Manuscript Manufacturing Schedules, 1860-1880, Connecticut State Library, Hartford.

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Geographical Data (Continued):

Verbal Boundary Description and Justification

The nominated property includes only the mill, the dam, and the small shed across Horse Hill Road from the mill (see site plan). It covers approximately one-quarter of an acre, closely approximating parcel number 3 in a 1884 foreclosure deed recorded in Westbrook Land Records, Volume 6, Page 166. The nominated property is presently part of a large parcel, more than 100 acres, conveyed to the State of Connecticut, Department of Environmental Protection, in 1983; the mill and its associated structures are the only parts of that large parcel which can claim significance in industrial history. The nominated property is shown on "Plan Made for State Of Connecticut Department of Environmental Protection, Showing Charles Messerschmidt Property," 1979, Map #1229 on file in Town Clerk's Records, Westbrook, CT. A small portion of the nominated property lies in the town of Deep River (see site plan). The site's address is given as Westbrook because the great majority of the nominated property lies in that town.

0 10 20 30 feet

MESSERSCHMIDT HARDWARE MILL
WESTBROOK, CT.



WINTHROP ROAD

DAM EMBANKMENT

POND

HEADRACE OPENING

MILL

HORSE HILL ROAD

SPILLWAY

DAM
EMBANKMENT

TOWN LINE

DEEP RIVER

WESTBROOK

PLATING SHED

FALLS RIVER

ARC 9/84