here,

81

FORM B - BUILDING SURVEY

MASSACHUSETTS HISTORICAL COMMISSION
Office of the Secretary, State House, Boston

1. Is this building historically significant to:
Town Commonwealth Nation

Building has historical connection with the following themes: (see also reverse side)

Scholar	Commerce/industry
Agriculture	Science/invention
Art/Sculpture	Travel/communication
Education	Military Affairs
Government	Religion/philosophy
Literature	Indians
Music	Other

Development of town/city

Architectural reason for inventorying:

2. Town Chelmsford

Street address 3 Mission Road

Name Hoole/Chamberlain House

Use: original & present Residential

Present owner James Spillane

Open to public no

Date 1803-1812 Style

Source of date Deed books

Architect

OR part of Area #

3. CONDITION Excellent Good Fair Deteriorated Moved Altered Added two family; dormer added on ell

4. DESCRIPTION

FOUNDATION/BASEMENT: High Regular Low Material granite fieldstone, brick on top faced with granite slabs.

WALL COVER: Wood clapboard Brick Stone Other

ROOF: Ridge Gambrel Flat Hip Mansard
Tower Cupola Dormer windows Balustrade Grillwork

CHIMNEYS: 1 2 3 4 Center End Interior Irregular Cluster Elaborate

STORIES: 1 2 3 4 ATTACHMENTS: Wings Ell Shed has chimney; shed dormer added about 20 years ago.

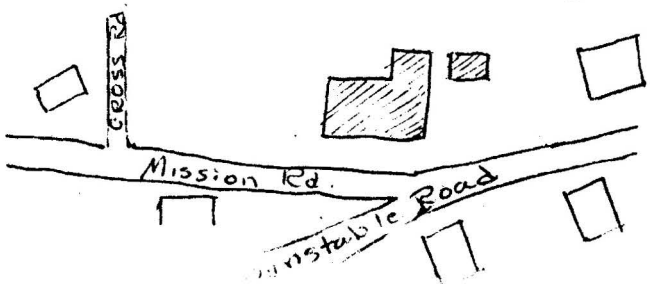
PORCHES: 1 2 3 4 PORTICO Balcony

FACADE: Gable end: Front/side

Entrance: Side

Corners: Plain Pilasters Quoins Cornerboards

5. Indicate location of building in relation to nearest cross streets and other buildings



6. Footage of structure from street 50 ft.
Property has 485 feet frontage on street

Recorder Norma Jane Thompson

For Chelmsford Historical Commission

Photo # 8-9A Date January, 1974

SEE REVERSE SIDE

RELATION OF SURROUNDING TO STRUCTURE

1. Outbuildings Garage, formerly small barn attached to house

2. Landscape Features: Agriculture Open Wooded Garden: Formal/Informal
Predominant features
Landscape architect

3. Neighboring Structures
Style: Colonial Federal Greek Revival Gothic Revival Italian Villa Lombard Rom.
Venetian Gothic Mansard Richardsonian Modern

Use: Residential Commercial Religious Conditions: Excellent Good Fair Deteriorated

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GIVE A BRIEF DESCRIPTION OF HISTORIC IMPORTANCE OF SITE (Refer and elaborate on theme circled on front of form)

This property, once containing at least 200 acres in Chelmsford, Westford and Tyngsboro, is referred to as the homestead farm of Isaac Chamberlain (Chamberlin(. Isaac Chamberlain (1755-1827) was a blacksmith who, in 1796 was paid by the town for "fixing waits on the meetinghouse bell...and for making a fraim to set the crisning bason in..." He is listed on the Muster Roll of those men who marched with Capt. John Nutting (Wm. Prescott's Regt.) from Pepperill April 19, 1775, and is on the Muster Roll for the same company dated Aug. 1, 1775, enlisted April 25, 1775, service, 3 mos., 8 days.

- The property was bought in 1867 by Asa M. Swain who erected a shop (not on the site of the present house and land) for manufacturing a water-wheel, invented by Mr. Swain and known as Swain's turbine-wheel. The shop, known as the Wickasauke Works, ran about 10 years at the site of an old saw mill on nearby Deep Brook.

Jonas C. Butterfield, a scythe maker and Reuban J. Butterfield, glass manufacturer, became owners in 1845.

BIBLIOGRAPHY AND/OR REFERENCE

History of Chelmsford, Mass., Rev. Wilson Waters. Courier Citizen Co., Lowell, Mass. 1917.

RESTRICTIONS

Original Owner: Isaac Chamberlin
Deed Information: Book Number 9 Page 58, Northern Middlesex County Registry of Deeds

3 Mission Road
Taken in March 2004
Before Demolition

SWAIN'S WHEEL FOR WOOD FLUME.

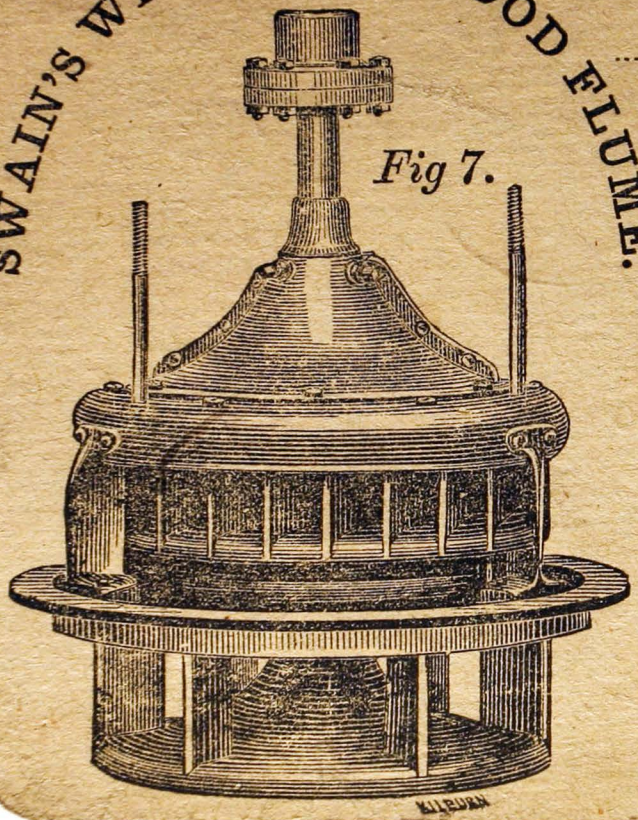

Fig 7.

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Wt. ..... lbs. .....

FROM THE SWAIN TURBINE CO.

N. Chelmsford, Mass.

MANUFACTURERS OF

SWAIN'S PATENT TURBINE WATER WHEELS,

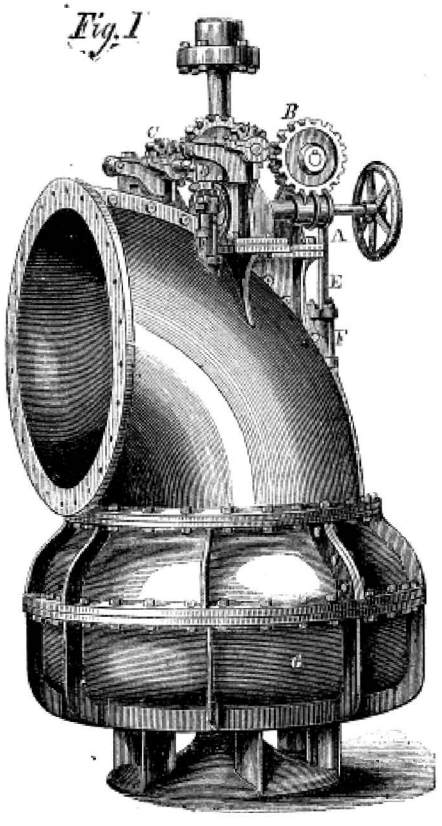
The Best Thing Out. Well Made, Durable and Economical,

When Used at 3-4, 1-2, and even 1-4 Gate.

Swain's Patent Turbine Water-Wheel.

MUCH interest was manifested last summer by engineers, manufacturers, and others who use water as a motive power, in the competitive test of turbine wheels then being made at Lowell, Mass. No report has been made of the comparative merits of the half-dozen or more tests made, but we have received the report of H. F. Mills, C.E., of his first series of experiments made there upon a 42-inch Swain turbine wheel, with diagrams of the entire apparatus, and

Fig. 1



description of the process, and tables of the results of ninety different experiments. There have been two other series of tests upon the same size of turbine, all of which have been more or less witnessed by the public and the highest authorities in hydraulic engineering. More than three hundred experiments have been made, comprising the most extensive and thorough series of tests upon hydraulic motors ever made public. The best result obtained in the first series was .822 per cent of useful effect out of the total power of the water applied. The total useful effect developed on a working head of 14.255 feet was 62.81 horse-power. The highest result in the second series of tests was .837 per cent of useful effect of the total power of the water applied. In the third series the results at ¼, ½, ¾, ⅞, and full gate, and the relative working speed were as follows:

	Relative speed of the Wheel.	Percentage of Useful Effect.
Full Gate	.745	.816
	.735	.819
	.706	.817
Seven-eighths Gate.	.765	.815
	.754	.816
	.722	.818
Three-quarter Gate.	.760	.808
	.760	.811
	.726	.809
Half-Gate	.736	.764
	.723	.770
One-quarter Gate.	.697	.766
	.627	.613
	.592	.616

In this series, the maximum of useful effect developed was 68.21 horse-power on a working head of 13.819 feet. We are informed that this wheel was an unusually rough specimen of its kind. We herewith present our readers with several perspective views of the style of wheel experimented upon, of which Fig. 1 shows the complete "cased" portable form; Fig. 3, the pedestal S, which supports the whole thing, and the gate J, step I, and chamber which surrounds the wheel with its wind, O Q, and socket O for the step I, and the floats R, as shown in Figs. 4 and 5. Fig. 6 shows the gate with its rods for raising and lowering by means of the hand-wheel and worm A; worm-wheel B, pinion C, rack D, and rods E, passing through the stuffing-boxes F F, in the quarter turn, and these connecting with the above-mentioned rods, as shown in Fig. 6. The guides M form a series of chutes, having a perfect contraction at all points of the opening of the gate, the water moving toward the floats of the wheel with an accelerated velocity in proportion to the opening upon the wheel. Fig. 7 shows parts in their proper position that are shown in detail in Figs. 3, 4, 5, and 6. Fig. 2 shows a style of casing adapted to situations where it is necessary to place the jack-shaft as near the bottom of the wheel-pit as possible.

Fig. 2

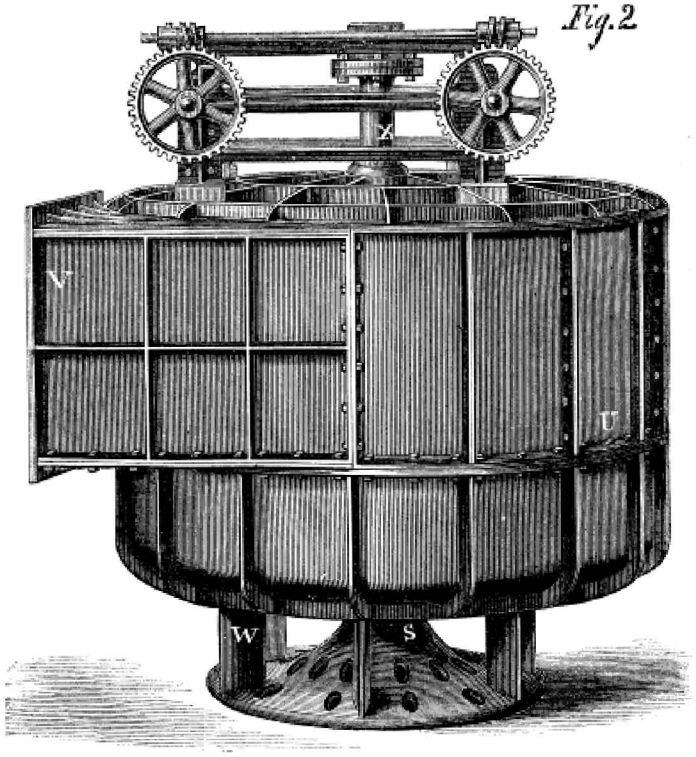


Fig. 3.

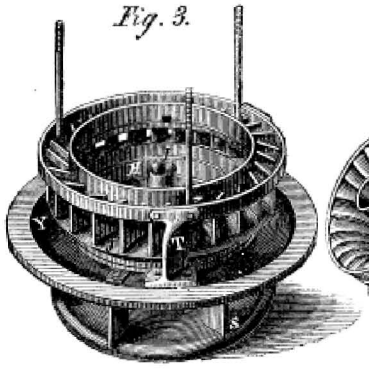
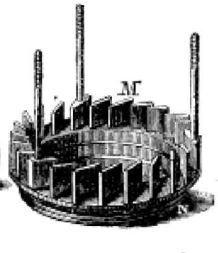


Fig. 4.

Fig. 5.

Fig. 6.

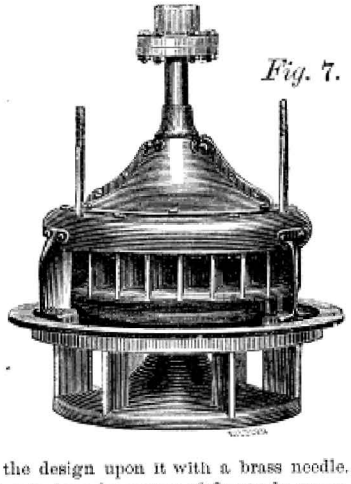


Further information can be obtained of the Swain Turbine Company, North-Chelmsford, Mass.

Seal-Engraving.

SEAL-ENGRAVING is an art akin to jewel-cutting, and merits a passing notice. The practice of using gummed envelopes has, by superseding wax, gone far to extinguish the occupation of the seal-engraver. Not many years ago, a massive seal, bearing the crest of the wearer—if he were fortunate enough to have one, or his initials, if he could not claim heraldic privileges—was invariably suspended on the watch-guards of gentlemen; and ladies carried daintily got-up seals, with which they impressed emblems of love on the gaudily-colored and perfumed wax which preserved the contents of their *billets-doux* from the glance of profane eyes. Wax and seals have had their day; but signet-rings are still in fashion, and keep the lathes of the engravers from coming to a dead stand. Engraving on gems is one of the nicest artistic occupations. It is easy for workers in metals to repair flaws or imperfections, but the seal-engraver has no facilities for doing so. If he makes a blunder, the gem is ruined and his labor is lost. He begins operations by fixing the gem on a convenient handle, and then draws the design upon it with a brass needle. The engraving is done by means of fine tools resembling drills, to which a rapid revolving motion is given in a small lathe. The tools are dipped from time to time into a composition of diamond-dust and olive-oil; and the operator holds the gem in his hand and applies it to the tools. So fine is the work generally that a powerful eye-glass has to be used; and so slow is the process of cutting that a whole day is required for the engraving of a circular ribbon and motto.

Fig. 7.



3 Mission Road Feb 1973

3 Mission Road March 2004

3 Mission Road March 2004

3 Mission Road 8/8/2004 F. Merriam

3 Mission Road

4/10/2006 F. Merriam

3 Mission Road

4/30/2006 F. Merriam

3 Mission Road

4/10/2006 F. Merriam