

The BRICK-MAKERS of FRANKLIN COUNTY, Massachusetts

Ed Gregory

The BRICK-MAKERS of FRANKLIN COUNTY, Massachusetts

Compiled
By
Ed Gregory
2012

Contains

Pg.

i	Contents
ii	The Brick Makers of Franklin County (to the reader)
iii	Prologue . . . Good day reader (e.g.)
iv	Early Brick-Making References in the State of Massachusetts
v	Order regulating size of bricks
vi	Comment (e.g.)
1	The Brick Makers of Franklin County . . . early references
2	Franklin County Towns Researched
3	Towns (alpha listing)
5	Brick Fabrication
6	Marty Wells' Paper
8	The Towns Affiliation With the Industry
9	Charlemont
9	Colrain
10	Conway
10	Deerfield
14	Greenfield
23	Pray's Brickyard
25	Hawley
25	Montague Center
28	Memories of Herbert Bitzer
29	Montague City
52	Montague Bricks Aging With Grace
56	Northfield
56	Orange
57	Rowe
58	Shelburne
59	Sunderland
59	Warwick
61	Whately
62	Sundry References
63	Professor Edward Hitchcock's Report on the Geology of Massachusetts
65	1906 - Montague City Business Directory (ads)
65	F.Y.I.
71	Brick Making
69	The Ephemera Archive for American Studies
70	An Interesting Take on Ancient and Remote Home-Site
71	Appleton's Cyclopedia of Applied Mechanics; Modern Mechanism
82	Other Populated Places
83	Citations
84	Pictorial

The BRICK-MAKERS of FRANKLIN COUNTY, Massachusetts

To the reader . . . Information in this composition has been gathered to provide anyone so interested in the Brick-Making Industry in Franklin County, Massachusetts with the essentials associated with the subject. This paper is not intended to be a critical exposition nor is it proposed to be an in-depth thesis on the topic.

I trust that those utilizing this information will find it an aid to your research, knowledge base, or whatever purpose you saw fit for accessing this record.

e.g.

Bricks—Bricks everywhere,

. . . all the buildings tall.

Bricks—Bricks everywhere,

. . . none are yet to fall.*

e.g.

Good day reader.

Bricks? Why bricks? The next time you're out and about, take the time to be aware of the structures that are in the areas that you visit. Consider . . . the ubiquitous brick.

Prime example: Turners Falls.

From the downtown level to the middle-hill terrace, to "the capitol of Turners Falls", (the Patch), this area has 149 brick houses, garages, mills, storage buildings and a great deal of various frameworks utilizing brick foundations. The only brick structure that I didn't find during my survey[†] is a brick shithouse. Albeit, I'll venture a bet that the town had a brick "*library*" or two back in the "good 'ol days."

With a plethora of brick structures in Turners, you would think that the brick-making industry was located here, or, at least nearby. Well . . . you'd be correct in your thought process.

Of the five villages in the Town of Montague (Lake Pleasant, Millers Falls, Montague Center, Montague City and Turners Falls) three of them had interests in the brick-making trade. Three miles west of Turners Falls is Greenfield. Two major brick-makers plied their skills in that town along with a plethora of lesser endeavors.

Reaching out to the margins of Franklin County, various towns had a modest interest in the making of the brick.

This brief introduction is an ideal segue to learning more about the **Brick-Makers** of Franklin County.

* Buildings have been razed due to fire, weather damage, or total neglect. None have met their demise due to shoddy construction efforts or inferior brick production.

[†] I drove around Turners Falls on Friday, December 10, 2010 with a prepared chart and penned the statistics at predetermined stops. If you would like to verify the results, be aware that numerous brick buildings on Avenue 'A' appear to be a single structure. Many have been added to an existing wall of a prior construction. I counted these as two or more individual buildings. *e.g.*

Early Brick-Making References in the State of Massachusetts

The State of Massachusetts began governing the brick-making businesses within its borders as far back as the Colonial period. State records show that in 1629, in the Town of Salem . . . bricks were being made.

“**In** 1792, Noah Webster wrote to his friend, Timothy Pickering, to ask for a recipe for making bricks, having in mind at the time the building of a State House at Hartford, and stating that Connecticut was sadly ignorant on the subject.”

“**P**ickering answered saying that Philadelphia has followed closely an old Massachusetts law regarding brick making. He then gave directions that the molds should be shod with iron, that each mold should be for a single brick, and that they should be thrown into a tub of fine sifted dust, not water, to prevent bricks from sticking to the sides.”

“**In** Massachusetts they were making brick, at Salem, in 1629, and Boston is said to have had a brick house in 1638. A very humble brick was made of native clay, formed in a rude wooden box and left to dry and bake in the sun. These are the ‘sun-baked’ brick which often show their sides as filling or ‘plugging’ in the walls of a frame house. ‘Brick nogging’* was one name for them.

* Masonry between studs; small stones, bricks, or bits of masonry used to fill the spaces between studs in a wall or partition.

Order regulating size of bricks on penalty . . .

IT is Ordered by this Court and the Authority thereof, that clay to make Bricks shall be digged before the first of November, and turned over in the Moneth of February and March ensuing a moneth before it be wrought, and that no Person temper their Bricks with salt or brackish water; and that the size of Bricks be nine inches long, two and a quarter inches thick, and four and an half inches broad; and that all moulds used for making of Bricks be made according to these sizes, and well shod with iron: And what person or persons so ever, shall make Bricks in any respect contrary to this Order, in the several particulars of it, shall forfeit the one half of such Bricks to the use of the Treasury of the Town where they are made.

Addition to the law for making bricks . . .

AS an Addition to and Explanation of the Law: Regulating the size of Bricks, made at the General Court, May 28, 1679. It is Ordered by this Court and the Authority thereof; That henceforth all Bricks shall hold out, and be of the full size and dimention expressed in the aforesaid Law, even after they be sufficiently Nealed or Burnt; And to that end all Moulds for Bricks shall henceforth be made of such, a convenient size or scantling, that the said Bricks may and shall hold out and be of the full Dimention prescribed when they are sufficiently Nealed or Burnt, as aforesaid; which shall be so judged and accounted Merchantable. When as at least three quarters of every parcel of Bricks be hard and through Nealed Ware, and - not Samnell Bricks: and for the due observation hereof, every Town where Bricks shall be made or sold, than annually choose, and appoint two or more able men, each of which than have power to view, divide, and cull all Bricks from time to time, that shall be exposed to sale; who shall be Sworn to the faithful Discharge of their Office, and shall be allowed four pence for every thousand of good and merchantable Bricks they shall so Cull, one half thereof to be paid by the Seller, and, the other half by the Buyer; And no Bricks shall be sold or made use of before they have been viewed and culled, as aforesaid, upon the penalty of paying *twenty shillings* in Money per thousand, one half thereof to the Town where such Bricks are made or sold, and the other half to the Informer.²

Note: For the most part, the above laws are presented here in a modern syntax regarding the spelling of some the words containing the letter -s-. Seventeenth early eighteenth Century spelling concerning the letter -s- was presented as the letter -f; i.e. . . . *And to that end all Moulds for Bricks shall henceforth be made of fuch, a convenient fize or fcantling, that the said Bricks may and shall hold out and be of the full Dimention prefcribed when they are fulliciently Nealed or Burnt, as aforesaid; . . .*

Comment:

As with numerous activities during the colonial period, lawmakers and community leaders found it necessary to impose stringent regulations and laws that were enforceable by —often times—over bearing means in the event the citizenry breach any given policy.

I suppose ignorance played a large part in those days. Furthermore, if one takes a concerted view at the goings-on of today, we may see parallels to those archaic times. I shan't make inference to the broad-based lawmaking structures of our times, but . . . the control or authority resulting from the observance and enforcement of a community's system of rules certainly regulates our day-to-day interaction. Sans rule of order . . . chaos. e.g.

The Industrial Revolution afforded major changes in agriculture, manufacturing, mining, transportation; and technology had a profound effect on the socioeconomic and cultural conditions of the times. It began in the United Kingdom, then subsequently spread throughout Europe, North America, and eventually the world.

During the height of the Industrial Revolution, the folks in Franklin County are able to carry-on with their daily activities with the assurance of a burgeoning economy, community, and a plentiful job market.

With somewhat of a—peace-of-mind mentality—as a driving force, the Towns of Franklin County move forward at a steady and structured pace. Industries moving into the area were looking to expand their physical space. People were moving about the county seeking homes and building sites close, or closer to their places of employment. Densely populated areas are literally growing from the wilderness. Towns will include the arrival of workers and support elements to supply the muscle, ingenuity and sustenance for the local industrial revolution.

With that consideration in mind, foresters are challenged in their efforts to provide adequate amounts of lumber to be used as building materials. An alternative type of construction substance, suitable for sturdy, long-lasting structures is to be utilized . . . the subject for this paper . . . the brick.

The major players in the industry during the mid-to-late 19th and early 20th Centuries in Franklin County, were located at Montague City and Greenfield. The brickyards there were to provide their wares for numerous areas throughout New England, New York, and beyond, as well as the local requirements.

e.g.

The Brick Makers of Franklin County . . . early references.

Franklin County towns researched. Those known to have brick yards as businesses or brick-makers as manufacturers or ancillary endeavors, have been **tinted**.

Ashfield, Bernardston, Buckland.

Charlemont: is mentioned. - Charlemont Massachusetts 1765-1965 Bicentennial History
Allan Healy - Published by the town, 1965

Colrain: (Coleraine) is mentioned. - The Story of Western Massachusetts - Wright - Vol. II
Lewis Historical Pub. Co. 1949
A History of Colrain, Massachusetts - L.M. Patrie
Louise McClellan Patrie 1974

Conway: is mentioned - The Story of Western Massachusetts - Wright - Vol. II
Lewis Historical Pub. Co. 1949

Deerfield

Justin Hitchcock 1782
Seth Nims 1797-1830

Erving, Gill.

Greenfield

Jared George and Roswell Wells 1793
Manley J. McClure Leyden Road, Greenfield 1871-1887
Wesley J. McClure Leyden Road, Greenfield 1889-1891
Smith & Mitchell - Leyden Road, Greenfield 1891-1895
C. C. Dyer - Deerfield Road (Street) - also residence here 1892-1923
R. E. Pray - Colrain Street (Wedgewood Gardens) 1897-1955

Hawley

At the pond of Dr. Cox on Clesson's River. C.1844

Heath, Leverett, Leyden, Monroe.

Montague Lake Pleasant, Millers Falls, Turners Falls.

Montague Center

W. H. Ward and Medric Lanois 1889-1895
Montague Brick Manufacturing Company 1895
Patrick F. Welch 1901-1913
John N. Cahill 1913

Montague City

Rector L. Goss - David W. Goss - Montague City, 1855-1871
Amos Adams and Son (George) - 1871-1883
Daniel J. Thomas; James A. Thomas (Brothers) - 1884 to
Joseph Moreau?
Turners Falls Brick Co. (Dr. O'Brien) Jan. 2, 1889 to
Patrick F. Welch; July 10, 1889
F. G. and Allen C. Burnham purchase A. Adams brick yard. Dec., 1889

New Salem

H. Crowl, New Salem (Millington) 1871

Northfield: is mentioned - The Story of Western Massachusetts - Wright - Vol. II
Lewis Historical Pub. Co. 1949

Orange: is mentioned - 1792-1892 Centennial Gazette 1892 Greenfield, Mass.

Rowe: is mentioned - The History of Rowe Massachusetts - Brown/Williams
Rowe Historical Society - 2006

Shelburne: Shelburne is mentioned - History and Tradition of Shelburne,
Massachusetts-Town of Shelburne 1958

Shutesbury

Sunderland: is mentioned - The Story of Western Massachusetts - Wright - Vol. II
Lewis Historical Pub. Co. 1949

Warwick

Ebenezer Bancroft c.1790-1825

Josiah Proctor c.1790-1825

Wendell

Whately

John Locke 1778

Morton & L. Stiles 1782-1795

Morton & H. Stiles 1799 then Morton till 1827

T. Crafts & J. White 1827

J. Crafts & C. & L. Wells [1810]

L. Bush Jr. 1832

Note: Most towns had brick-makers per sé. Typically an individual home builder may make their own bricks (or the like) if their plan called for their use. The plans may have been foundations for the house or out-house, utility structure foundations, use for fortification on specific areas of the house, barn or whatever may be thought of as appropriate for individual defense or structural purposes e.g.

The actual fabrication of bricks is not well-documented in the numerous town histories that I've visited. Earlier in this paper, the colonials provided a process that is detailed as it could be at that time;

(ref.: Order regulating size of bricks on penalty . . .pg. v)

In his book;

"INTRODUCTION TO EARLY AMERICAN MASONRY, STONE, BRICK, MORTAR, AND PLASTER"

National Trust /Columbia University Series on the Technology of Early American Building

1973 - 92 pgs. - soft cover - 8vo

Harley James McKee provides a well written description of the brick-making process.

The process of making bricks in the Valley (Connecticut) began with the excavation of a clay deposit. The clay was then spread out and dried. Once dry the clay was pulverized. This powder was then mixed with thirty percent sand and sufficient water that a workman could pack it into a brick mold. Sand was used in the molds as a release agent. After packing the clay the molds were scraped level and the wet brick was removed and placed in a drying rack for thirty days.

This initial open air drying prevented the bricks from exploding during the "burning" process in the kiln. Brick molds were about fourteen percent oversized.

Eight percent would take place during this air drying and the remaining shrinkage took place during firing. "Green" bricks were then stacked, forming temporary kilns, known as "clamps" or "scove" kilns. This was the least expensive type of kiln and was often done at a building site. Bricks were stacked forming a clamp, leaving arched passageways at the base where a wood fire would be built. The rest of the clamp was stacked so as to allow heated air to circulate throughout the stark. A fire was built and stoked until the temperature within the kiln reached approximately 1800 degrees Fahrenheit. The kilns were fired for approximately seven days, and cooling took several more days. Experience was necessary to limit shrinkage to six percent during firing, as bricks had to meet standard sizes.

The local reliance on wood firing of clamp kilns resulted in bricks of varying quality. The outermost layers of bricks, called common bricks did not fully harden, and not being weather proof, were used in unexposed portions of walls. Bricks nearest the heat partially melted and were deformed and irregular. These were known as "clinkers." Stock bricks were the regular, evenly fired hard bricks (later to be known as face bricks) which were used on exposed portions of buildings (41-44).

In 1988 Marty Wells wrote—as a portion of his learning experience at Greenfield Community College—a class project under the tutelage of Geology Professor Richard Little. His paper is directed to the brick-making industry in the Pioneer Valley.

This relation is from Marty Wells' paper . . .

From accounts and photographs it appears that little changed in the methods of production used at local brickyards during the four hundred years they were in operation.

Brick making remained a seasonal activity employing traditional hand methods of production. Although by the mid-nineteenth century railroads served the Valley making coal available I found no evidence of its being used for firing. It seems that local brick makers continued using wood to fire their kilns. Although many brickyards operated for as many as fifty years and constructed huge barns to work within I found no records of permanent kilns in the Valley. However, other regions beginning in the nineteenth century used gas and coal fired permanent kilns, and utilized patented brick making machines capable of forming bricks from clay dry enough to be placed directly in kilns eliminating the air drying step which enabled year round operation.

The earliest brick molds were wooden. In the nineteenth century cast iron molds were introduced which made it possible for brickyards to mark every brick with their name or logo. Bricks with logos can be found throughout the Valley.

Local historical societies and a few individuals have collections displaying these logos. One of the most well known logos from Greenfield is that of the “PRAY” Brickyard.

This was the last brickyard operating in this town. The brickyard began in 1893 on Elm Street just below where the county jail now stands. Many brick structures can still be seen, along Elm Street today. Another brickyard whose logo is well known is the Amherst Brick Company's “ABC”, and was the last to be operating in its town.

Prior to the revolution the demand for bricks in the valley was limited primarily to chimney building although we find several notable exceptions beginning with the Pyncheon mansion, begun in 1659. Receipts from the estate of John Pyncheon of Springfield indicate that he ordered forty thousand bricks from Francis Hacklington's brickyard in Northampton to be delivered in Northampton over a period of several months in 1659. Following the delivery of this order, Pyncheon ordered an additional ten thousand bricks. Pyncheon used these bricks to build a new home in Springfield.

Pyncheon's house is the first documented brick house in the Connecticut Valley region. The house was torn down in 1831. Much of the historical investigation into its past took place in the 1870's at which time a drawing of the house was done. This drawing though possibly not accurate, depicts a very stylish house which featured many large windows, gable end chimneys which distinctively exhibited three separate flues, and a porch.

The Pyncheon house set a pattern that would be repeated many times, of architectural innovations appearing in brick homes before they were featured in homes of more traditional construction. This house also played a significant role during the Indian raids of 1675 providing protection to many townspeople who crowded in to the house. After this time the house became known as the “Old Fort”.

From this time until the American Revolution very few buildings in the region were built entirely of brick, with a notable exception being the John Robbins¹ home in Rocky Hill, Connecticut, 1767. This stylish house appears to set the stage for the post-Revolutionary trend of wealthy people in the Connecticut River Valley building homes of brick.

The Robbins' home exhibits the first use of a Palladian window, round gable window and embellished cornice in the region.

The earliest recorded brick house in Franklin County, the Asa Stebbins house in Deerfield, was built in two stages, the first in 1799, and the latter portion built in the years 1808 and 1809. The rear ell of the house is the earlier portion. This portion is of much simpler design and investigations reveal that the roof has been altered significantly a few times. Several factors influenced Stebbins' choice of brick in the simple design of the earlier part of the house.

His previous wooden house had burned and a relative in Deerfield had produced the bricks for the recently completed building at Deerfield Academy. The availability of a builder capable of building with bricks and a ready supply of bricks and the fire resistance of the material were likely influences in Stebbins' decision. The later portion of the house differs significantly. Stebbins obviously gave much more thought and consideration as well as time to the addition of his home that was substantially larger than the original portion of his house.

Details include a Palladian style doorway, stone window sills, gauged brick arches over windows, and a more intricate brick pattern known as a Flemish Bond.

The first quarter of the nineteenth century saw many developments take place in the Valley. Prosperity in the Valley was beginning to change the way people lived. It was possible to expend significant time and resources on what had previously been only necessities or rare luxuries. This prosperity led many people to build new homes that were statements attesting to their new found wealth. At the same time a new style of commercial architecture was emerging. These buildings were for the first time being built primarily as a place of business and the material of choice was brick. A majority of nineteenth century commercial and industrial buildings were of brick. Cities around the country had begun to institute building codes that prevented wooden structures in urban centers. This was in response to devastating fires which destroyed entire commercial districts. Little of this emerging commercial development is left as the prosperity that came with the industrialization of the region that bloomed in the last half of the nineteenth century led to the destruction of smaller evenly spaced buildings. Downtowns no longer resembled residential areas, as huge brick buildings called blocks went up side by side eliminating open space because of a new sense of confidence about fire safety that came with masonry construction.

The Towns:

Their affiliation with the industry.

Charlemont

Charlemont is mentioned. - Charlemont Massachusetts 1765-1965 Bicentennial History
Allan Healy - Published by the town, 1965

Pg. 97 ¶2

. . . The records also show that the town established a brickyard in 1767 and sold brick for about twelve shillings threepence per 1000. They supplied the laborers there with rum procured in Deerfield. Later apple brandy was made in town by Hart Rice, who had a most productive cider mill.

Colrain

A History of Colrain, Massachusetts - L.M. Patric; Louise McClellan Patric 1974

Pg. 258 ¶1

BUSINESS HISTORY OF THE LAST CENTURY

At the close of the Civil War the Griswoldville Manufacturing Company was the most important industry in Colrain, as it is today. At that time Joseph Griswold was still active in his many enterprises, but as he had grown older and they reached maturity, he had taken his three sons, Joseph III, Ethan and Lorenzo, into partnership. The company was now wholly owned by the Griswold family. At about this time Joseph bought the property at Willis Place and erected several buildings, including the mill known as Number Two, and a large brick tenement block nearby.

According to his usual custom, he had the bricks made on the spot, while a sawmill installed there provided the lumber for the buildings. It was customary at this time for mill owners to furnish living quarters for their employees, and the Griswold tenement building was an outstanding example. It was one of the largest in Franklin County, the central portion consisting of single rooms, with a long wing on each side containing small apartments. Altogether it contained 21 apartments and 111 rooms. Each apartment was made up of six rooms, two to a floor, with three stories, an attic and a cellar. Some of these apartments were subdivided into two or three rooms each. The work on these buildings was supervised by Joseph Griswold in person. The tenement block was occupied until 1954, although some families began to move out as early as ten years before that. In 1955 the whole block was razed by the Kendall Company, which gradually disposed of its other residential property, but continued to operate the mill.

GRISWOLD MANUFACTURING Gazette, November 13, 1865 Pg. 18 ¶3

This settled, building began. In May 1866, progress was noted, and completion estimated for the coming autumn. Says our omnipresent "Gazette": "...Operations were first commenced by purchasing several wood lots, and the erection of a saw mill with all the modern improvements.

A brick pressing machine was then purchased, of the latest improvement; a brickyard established close by the wall of the contemplated new factory and operations commenced. We paid the place a visit on Wednesday and were kindly shown about the premises by Mr. Griswold, who is superintending the work personally.

At present time a set of hands may be seen in the mill sawing out timber, boards, planks and shingles; another set making and laying up a brick kiln and another set, laying the foundation of the factory . . . 12,000 bricks made a day . . . Between forty and fifty hands are employed." And so the work went on. There was at least one lost time accident while the job was in progress. "George Gary was quite seriously injured...by the falling of a temporary post . . . was struck on the head and remained unconscious for some hours . . . is now doing well."

Conway

Conway is mentioned - The Story of Western Massachusetts - Wright - Vol. II
Lewis Historical Pub. Co. 1949

History of Conway 1767-1917: by the People of Conway-1917; edited by Rev. Chas. Stanley Pease

Pg. 112 ¶ 3

There were several brickyards operated at different periods,— one of the earliest near Leukhardt's Falls, one near Boice's mill, another in the South Part, and still another near Bardwell's Ferry. There were a number of tanneries; the principal one and last one remaining was near the site of Boice's mill. It was owned by William T. Clapp and was burned in 1871.

Conway 1767-1967; edited by Dean Lee - by the Town of Conway, Massachusetts; 1967

Pg. 70 ¶ 2

Before 1837 the only manufacturing in Conway, except for sawmills and gristmills, was on a very small scale. Many of the early firms lasted only a few years. In 1780 there was a fulling mill; in 1797, an oil mill; in 1810, a broadcloth factory; and, later, a cotton cloth factory, near the bridge in the village. There were also tanneries, including one west of the bridge in the village. There were brickyards in Broomshire, South Part, and the village. Rakes were made in Broomshire; hats, on Baptist Hill; combs, on the place now owned by the Sportsman's Club; and buttons, near the Johnny Bean brook.

Deerfield

Justin Hitchcock 1782

*History and Proceedings P.V.M.A.*¹ Vol.VII

Pg. 479 ¶ 2

In 1782 he (Jonathan Hoyt) records dressing flax, 131 pounds, 35 oz. in 11 days. At this time Justin Hitchcock was making brick, and for one pound he sold Hitchcock five loads of wood with which to burn brick. He carted brick all one day for 6 shillings, and also received the same amount for Boarding Hitchcock for nine days, which would seem to indicate that Jonathan himself might have owned the brick kiln and rented it as occasion offered.

¹ Pocumtuck Valley Memorial Association, Deerfield, Massachusetts

Pg. 21-22 ¶

In 1703, the town of Deerfield was destroyed by the French and Indians, under De Rouville. Great numbers were killed or carried away captive, among whom we find the names of Hinsdel, Hastings, Nims, Smead, Brooks, Corse, Denio, Wells. This was in the reign of Anne, Queen of England, with whom the French were at war, and the French settlers in Canada, took the liberty of instigating the Indians to join them, and bring trouble upon these border settlers, who had never troubled them. The Indians would have never thought of stirring in this matter, but, for these Frenchmen, The total population of the state was then estimated at 70,000, and that of Connecticut at 30,000, and the French population of Canada proper at only about 8500—Militia 1000.

A detailed and interesting account of the destruction of Deerfield at this period, may be found in Hoyt's *Antiq. Researches*, Chapt. XI. The force consisted of 300 French and 140 Indians. As at, probably, a later period, several forts were maintained in this village—the following description from that work may not be unacceptable to some readers who do not possess it:— “The mode of fortifying in the frontier towns at this time was rude and imperfect, calculated merely for defence [sic] against slight attacks.

In many cases single houses were surrounded with palisades of cleft or hewn timber planted perpendicular in the ground without ditches, and the larger works enclosing villages, were much of the same nature. In some cases single houses were constructed of square timber laid horizontally, and locked at the angles, and loop holes were pierced on every side for firing [sic] upon an enemy. The walls of framed houses were commonly lined with brick², the upper story projected, and loop holes prepared to fire down upon the enemy in case of a close approach, &c, A work called a mount, was often erected at exposed points.— These wore a kind of elevated block house affording a view of the neighboring country, and where they were wanting, sentry boxes were generally placed on the roofs of houses.”

1797 -1830 [1840] *Nims lot at Deerfield*.

From George Sheldon's *History of Deerfield* Vol. II;

Pg. 843-844 ¶ 2

The first meeting of the trustees was held April 18th, 1797, at the tavern of Erastus Barnard, the present “Frery House.” Rev. Roger Newton of Greenfield, was chosen president; Rev. John Taylor, vice-president; Deacon Jona. Arms, treasurer; and Dr. Wm. S. Williams, secretary; a committee was chosen to buy an acre of land of Seth Nims, on the south part of his home lot. This is the land on which Memorial Hall now stands; it cost \$333.34. A committee was also chosen to report a plan of a building.

June 18th, this committee reported in favor of a brick structure 60 x 26 feet, two stories, with a piazza at one end, and a cupola on the roof; this report was accepted, and Esq. John Williams, Joseph Barnard and Maj. David Dickinson chosen a building committee. At a later meeting the piazza, was cut off, and the width made 28 feet. In this form it was built the same year; the bricks were made on the Nims lot, a few rods to the east, where a brick

² It appears that the bricks were made in small batches, for specific use—as a lining—as mentioned.

yard was continued some thirty or forty years. In 1797 the fund of the Academy was increased by a grant from the Massachusetts Legislature of one-half of a township of land in Maine. No account of the disposition of this land has been found.

1836 - The old brickyard . . .

Willard's History of Greenfield 1838

Pg. 145 ¶ 2

NOTE. The upper story of Moore's Mill was in the time of the late war occupied by S. Hunt & Co. for a cotton factory, and afterwards by Joel Parker. A small cellar under the mill was used in Col. Moore's day, as tradition says, by Mr. Goffe, the miller, and one Jenks, a one armed man, for counterfeiting silver coin. They were taken, and Goffe turned state's evidence. Goffe erected a dam³ some distance below the cutlery works and a little above the old brick yard, without right, and abutted it on Moore's land; he and his workmen cut away one end of it, and the next flood swept away the balance. The Oil Mill on the east side, formerly improved by A. Ames and S. Pierce, was taken down a few years ago.—The other buildings, improved by Mr. Martindale as a satinet factory, and the sawmill, &c. were swept away in a flood, Dec. 1836.

History and Proceedings P.V.M.A. Vol.III

(This, the first (1930-1938) of the five paper-bound 'annuals' that would lead to the completion of the "Proceedings". It met its terminus in 1942.) e.g.

Pg. 77 ¶ 3

What is now Memorial Lane, but was then only a road to the mountain, was also a busy place. Here we find a malt house, cabinet maker, shoe shop, cooper, and on beyond, where the road turns, a brick yard. In giving this list I have omitted to mention the rope walk on lot 24, the fulling mill on the east end of lot 22, the maker of fanning mills on the terrace west of the south end, the cider mill and distillery where Christopher Arms not only made strong waters but extracts of peppermint, spearmint and wintergreen for the housewives and salt petre [sic] for the War of 1812. The blacksmiths not only plied their regular trade but also made hinges and andirons and in their spare moments cut out nails and headed them up by hand. As late as 1808 Geo. P. Field, who tended tollgate at Cheapside, made nails by this primitive method.

A Historic and Present Day Guide to Old Deerfield

Emma Lewis Coleman - 1907

³ [The dam mentioned would have been approximately where the foot bridge crosses the Green River to access Meridian Street from Deerfield St.]

Pg. 96 ¶ 1

IN earliest days, every farmer and farmer's wife were more or less skilled in domestic arts, but as the town grew, the town's needs grew, and we soon find almost every branch of such handicraft as was needed, existing in the old town Street. There were shoemakers, tailors, and hatters (but not then dressmakers and milliners!). There was the "Maker of wiggs [sic] and foretops," which must have been a lucrative calling, for one item in an old account book is "To a wig for your Lady, £9" (Old tenor, to be sure.) There were weavers, when the weaving of a yard of linsey-woolsey cost one shilling and two pence, and "Stript cloth" [sic] two pence more. There were wagon and chaise makers, and a colonel of militia made ploughs and cultivators of his own design. Bricks were made. Graves was the coffin-maker, and when he moved, Death, the wheelwright, occupied his house. On one place there was at the same time a rope walk and the industry of making pewter buttons; and on a homestead across the street was not only a tavern and store, but a tailor's shop, and the shop-keeper's son was following his trade of watch-making. Next came a saddler, who made also the pretty embroidered crewel and silk pocket-books, with patterns like the old Florentine, and he was followed by a book-binder and a jeweler . . .

Greenfield

1793-1800 - Jared George and Roswell Wells; Eber Nash; John W. Thompson; Jesse Coombs; John Hamilton; John Marvin; Joel Merriam.
Manley J. McClure Leyden Road, Greenfield 1871-1887
Wesley J. McClure Leyden Road, Greenfield 1889-1891
Smith & Mitchell - Leyden Road, Greenfield 1891-1899
Smith alone till 1912
C. C. Dyer - Deerfield Road (Street)(Green River Park and along railroad tracks above Sirum's garage.) - also residence here (Park Street) 1892 till 1923
R. E. Pray - Colrain Street (Wedgewood Gardens) 1897-1955

In 1988 Marty Wells wrote—as a portion of his learning experience at Greenfield Community College—a class project under the tutelage of Geology Professor Richard Little. His paper is directed to the brick-making industry in the Pioneer Valley.

“A Brief History of Bricks and Their Role in Our Valley” Portions of Wells’ paper pertaining to Franklin County are brought into view. (ref. pg. 6)

Arthur L. Smith and Edward N. & J. Mitchell had extensive brickyards at the west end of Main Street. The first listing for their company, Smith & Mitchell Brickyard, appears in 1893. Mr. Mitchell partnered until 1899 and then went into the plumbing business. A. L. Smith continued with brickmaking until 1912. The Mitchells resided at 53 Main Street and Smith lived at 26 Orchard Street.

Their yard today is occupied by the Kalinowski Landscape business.

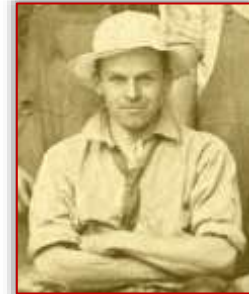
Charles C. Dyer ran his brickyard just off 309 Deerfield Street in Greenfield. This area is the Green River Park. Charles lived at 10 Park Street in Greenfield. His brother George B. Dyer assisted Charles in the business. George resided at 14 Park St. The business is listed as early as 1893 and was closed in 1923.

Charles Curtis Dyer
1916. Courtesy George B.
Dyer & Nola Gerits

Robert E. Pray & Company were contractors, builders and brick manufacturers. He and his brother Frank —the yard manager—had their offices at 143 Wells St. The yard was on Elm Street. In 1948 the Pray office was moved to 55 Riddell Street. The business began in 1897, and was closed in 1955. Presently, the Greenfield Gardens housing complex occupies that space. Robert and his wife Gertrude lived at 100 Elm Street in Greenfield.

Note: Regarding Wells’ entire paper.

To a large extent, a great deal of information is overlooked by Mr. Wells. This may have been by design as the college project was perhaps limited to a certain amount of pertinent information. Relatedly, it may be due to shoddy research. Second-guessing the reasoning behind the project is irrelevant . . . but worth a mention. Whatever the case, Mr. Wells has added his paper to the annals of history in the Pioneer Valley; thanks and recognition are germane to his endeavor. e.g.



George B. Dyer

Dyer brickmakers, c.1905. George B. Dyer is shown as the central figure in white fedora.

Courtesy George B. Dyer & Nola Gerits

aA



Robert E. Pray



Pray brickmakers, c. 1900. Robert E. Pray (white shirt) poses with two men.

Peter S. Miller collection

Western New England Magazine July, 1912

Picturesque Greenfield: Greenfield's Achievements In Varied Industries

Pg. 185 ¶ 1

. . . The B. B. Noyes Company, located on Hope Street, conduct an iron foundry and make blacksmiths' tools, a line of work in which they have been engaged for nearly forty years. The Toiletine Company, a recent comer to the town, makes the household remedy after which the company is named, and a line of remedies and flavoring extracts of high quality. Chauncey Wing conducts a plant on Pierce Street where the Horton Mailing Machine is made; this is an invention which is used in newspaper and other offices where large quantities of mailing is done. Philip H. Class, on the same street, conducts a paper box manufacturing plant where he employs a number of hands. The Charles R. Field Manufacturing Company manufacture baby carriages of a high grade, the establishment being one in which that line of goods has been produced for a long period of years.

Charles C. Dyer and Robert E. Pray run brick yards, providing convenient means for the making of the building materials used in the town and shipping quantities of brick to other places. . . .



Ed Gregory collection via George Dyer

The Mansion House Corner, Greenfield, Massachusetts, 1928.

Elizabeth L. Adams

Pg. 17 ¶1

. . . The railroad facilities in Greenfield are an important factor in the town's prosperity today.

Greenfield is becoming a center for automobiles, their routes crossing each other here as did the old stage coach routes a century ago.

Some of the bricks used in the construction of this addition[†] to the Mansion House were Meriam bricks, made in the brick-yard on the Meriam place near the top of the hill on the road leading from Factory Village to Greenfield, now one of the farms belonging to the Peleg Adams estate.

During the construction of these additions the masons on the staging above could be heard calling, "Meriam brick," "Meriam brick." A passerby on the street inquired the meaning of this and was told that the Meriam bricks, being harder and superior to other bricks, but the supply being limited, were used about the windows and where good strong bricks were most needed. The unusual superior quality of the sand—sharp with quartz—from the nearby sand bank was one reason why the bricks manufactured by the Meriams were so superior.

I am told that these Meriam bricks were used in some parts of Allen block and some other structures in town.

With the coming of the railroads brick making was discontinued by Joel Meriam and his sons for they could not compete with other brickyards on the lines of railroads . . .

[†]This addition was the extension of the main brick building from the then Greenfield Savings Bank—which was located in the Mansion House block—back to Browning's Clothing Store, being the central portion of the Mansion House.

Hearth Stone Tales

Lucy Cutler Kellogg 1936

Pg. 110 ¶ 1

THE BRICK YARDS

The brick made in Greenfield has always been considered of an unusually good quality, due in some measure to the soil composition. In the Thompson History on pages 579 and 580, is, given an account of the earlier yards here.

In October, 1902 George N. Rich of North Adams sold the yard on Colrain Street to the Shepard, Farmer Company of Boston. It was managed by the late Arthur L. Smith of Greenfield as was also a yard at Montague City. At this time the yard on Elm Street, formerly owned by Manley McClure was run by Dr. M. L. Miner, and the Cheapside yard of Charles C. Dyer was in operation. A short time before the death of Mr. Dyer, his business was given up and at present the yard is idle.

The old Smith yard on Elm Street is now owned and operated by Robert Pray and Son and is the only one doing business in town at the present time. In the old McClure yard near the west side, now discontinued, there have been many glacier markings uncovered.

HISTORY of GREENFIELD - Brick references

Francis M. Thompson - Vol. I

Pg.561 ¶ 1

1763-1802

The PLAIN ROAD

561

. . . March 17, 1802, was composed of Greenfield men. Their charter authorized them to maintain a road beginning at Munn's tavern, thence westerly through Greenfield street to the "west end of Colonel Samuel Wells barn" which stood where the large brick house on the north side of the street now stands, thence southwesterly to Green river ("where there must be a bridge"), then in a direct line to the south side of Solomon Smead's house (where Madison Woodard now lives), then by the most convenient route to the house of Colonel David Wells, in Shelburne, and so through to the west line of the county.

The south Shelburne road connected with this at Solomon Smead's place, and ran much nearer this brook than now, from a point just south of the slaughter houses. The road was laid by the Court of Sessions, and was a county affair. The road leading to Wisdom (from Reverend Dr. Robbins's place) was laid by the town in 1808. The cross road from the Woodard place leading north toward the Smead bridge, was laid in 1789, and at the same time a road was laid from the east end of the Smead bridge, up the hill and across the land now used for the brick yards, to Samuel Wells's sawmill (Miller place).

In 1773 the town laid a road twenty feet wide, commencing on the Colrain road just north of a house occupied by Solomon Dewey and extending across "the great brook" through the plain to the house of Lemuel Smead, now F. H. Ballou's home. This was the "Plain Road which was rebuilt as a county road a few years since. That road known as the "Barton Road" (formerly "proprietor's road") across the northerly part of the town, leading from the house of Abner Arms (the S. B. Slate place) to the old county road, just north of Halfway hill, was laid by the town in 1782. The hill on this road leading up to Log Plain has been greatly improved since early days.

March 7, T 1763. Voted "to Lay out a road from the West end of the Street to the Head of the Country Farm and to do ten days work on s^d road."

36

BRICKYARDS

Pg.579 ¶ 4 - 580

MANUFACTURE OF BRICK 1793-1800

In 1793 Jared George and Roswell Wells were making brick a few rods west of Nash's mills, and Eber Nash was working the same yard as late as 1846.

The brick built into the walls of the Martindale house were manufactured on the farm, on the hill just north of the Nash's mill pond.

John W. Thompson manufactured brick about 1854 on the farm now owned by Clarence Cobb.

Jesse Coombs for a short time had a yard on the south side of the street leading from the village to the Newton bridge.

Large quantities of bricks were made on the north end of west meadow (a part of the sequestered land) by John Hamilton and others.

John Marvin made brick for many years at the west end of Main street between the Colrain and Leyden roads, and for the last fifty years this yard has been in active operation. In the excavation of the clay, the work has exposed a most wonderful exhibition of the work of glaciers upon the red sandstone or conglomerate bed rock which underlies the whole field.

The new yard just off Elm street, now owned by the American Brick Co., has produced large quantities of excellent brick.

Joel Merriam made brick for many years at a yard near the farmhouse of J. P. Morgan, on the road to Gill.

The large concern owned by C. C. Dyer, near the railroad tracks at Cheapside, has unexcelled facilities for the manufacture of brick, as both clay and sand are found directly upon the premises, and the railroad extends into the yard,

It is estimated that 13,000,000 of brick were manufactured in town in 1800.

CHAPTER XLIV

Pg.622 ¶ 1

FIRES IN GREENFIELD

SUCH fires as were reported as occurring in Greenfield previous to 18 54 have been noticed in the general events happening in the town.

About 1850 a regular fire department was organized under the control of officers selected by the firemen, a fire district was incorporated, and a chapter is devoted to the record of fires occurring since 1854. January 18, 1854. H. G. Woodward's house on the Col-rain road near the brickyard was badly damaged by fire.

March 22. A fire broke out in Colonel Phelps building (Sanborn's block). The row was occupied by Colonel Phelps (bookstore); A. P. Haskins (shoe shop); Josiah Day (jeweler). The building west owned by Willard heirs, by K. A. Clark (tailor), and the building east owned by H. W. Clapp by W. H. Sanborn (dry goods). All these stores were stripped of their goods and the fire subdued after a three hours' fight. Mr. Clapp presented the firemen \$100 for their gallant work. Insurance covered nearly all losses.

June 9, 1857. P. T. Sprague's building (Fellows's shoe-store) destroyed by fire. Losses, W. D. Judd (shoes), \$1,200; P. T. Sprague (building), \$1,600; John Pooley, \$400; J. McFarland (restaurant in basement), \$500; William Elliott (insurance office), \$200.

W. H. Sanborn's store adjoining was saved, and he presented the firemen \$100.

January 5, 1858. House just below the depot belonging to A. E. Reed badly damaged by fire.

GRAVES---CHANDLER---NEWTON

. . . Lemuel Martindale settled In Greenfield in 1762. His son Uriah succeeded to the place, and his son Theodore succeeded him. Several of the sons of Uriah Martindale were interested in wool and woolen mills. They owned the mills on the east side of Green river, just below the Wiley & Russell Company dam, which were swept away in the flood of 1836. Uriah Martindale manufactured brick quite extensively, on the land sold by him to Samuel "Wilder, advertising 150,000 for sale in 1830. Pliny D. Martindale, a soldier of the War of the Rebellion, inherited the farm' from his father, Theodore, but since his death it has come into the hands of John W. Bragg, who runs it as a dairy farm. The old house stood just south of the present brick one which was built by Uriah and Theodore Martindale.

The five acre place, on the west side of the road, just north of the Martindale house came from off the Jonathan Smead farm, and the first house was built on it by David Lanfair, in 1843. His brother Elmer lived there several years.

John Graves, son of Daniel, born in 1739, only escaped capture or death by his good running powers, when his father was killed by Indians at Country Farms in 1756. He probably built the Seth S. Newton house recently demolished, and here were born his sons, EH and Luther, to whom in 1809 he conveyed that farm and the one lying north of it, now-owned by Charles B. Wells. The ell part of the old house which stood on the north farm was formerly a distillery. In 1817 Eli and Luther made a division of their interests, Eli taking the south and Luther the north farm. Luther went to Duxbury, Vermont, about 1834. Eli was the father of Deacon John J. Graves, who will be remembered by the older people of the town. Eli sold his farm in 1833 to Reverend Amariah Chandler, who transferred an interest in it to his son, H. Satterlee Chandler, and in 1842 they sold it to John and Curtis Newton who kept it two years and sold it to their brother, Obed Newton, who had been living in Colrain.

WELLS---BILLINGS---FLETCHER

It came from the Adamases to the father (Joe] Merriam) in 1736 and was sold to Andrew Adams by Pierce Chase in 1813. Mr. Merriam made brick several years, and ran the sawmill upon the little stream by the schoolhouse, formerly called Fall brook.

One John Boyington in 1790 obtained title to about ninety acres of land on Fall hill from John C. Stephens and Moses Ballard and by an execution against Captain Mack he took an interest in the mills at Fall river. He lived where what is known as the Millard place now stands. The estate went into the Adams family. Boyington was a Revolutionary pensioner.

In 1799 Joseph Mott sold to John E. Hall, a merchant of Greenfield, several tracts of land adjoining the Adams and Phillips lands, and he or some former owner built a sawmill on Fall river about a half mile above the present Gill road. The mill went to decay many years ago.

There were several small lots of land with old houses on them in the vicinity of old Fort Stocking. The northerly one was - owned by Stephen Gates in 1802, and was formerly owned by Abner Wells who owned the fort and died there. Daniel Crosby, the long-time sexton of the town, married a daughter of Stephen Gates and at one time lived at the old fort. Heirs of Edward Billings, son of the first minister of the town, sold to Mr. Gates, he to Franklin Ripley, Mr. Ripley to Mr. Crosby, and he to Henry W. Clapp. In 1838 Albert Jones, jeweller, [sic] sold seventeen acres to Franklin Ripley on which were three houses and two barns, Daniel Crosby sold the old fort itself to Ansel Phelps in 1842. Mr. Phelps's executors conveyed it to Hugh C. F. Smith in 1875, he to Daniel G. Shaw in 1877 and Shaws's estate to Walter A. Lee in 1887. Mr. Clapps's heirs sold about twenty-four acres of this land in 1881 to Henry H. Fletcher. The old buildings have all disappeared and modern homes now occupy their places.

Pg.1083 ¶ 1

MAJOR ALVORD'S ADDRESS

What did the young folks of Greenfield do for amusement and recreation in those days when not occupied in school ? The boys skated on " The Bend," and coasted on " Clay Hill" and " The Academy Lot," and went swimming under the willows along Green river, or down at the " Red Rocks" in Deerfield meadows, and nutting in Maxwell woods, when that could be safely done without the knowledge of the Deacon, * who set great store by his mast. Occasionally there would be a lonely but well rewarded day working up " Cherry Rum Brook:"

"How in summer have I traced that stream
There thro' mead and woodland sweetly gliding,
Luring the simple trout with many a scheme,
From the nooks where I have found them hiding: All a dream!
How in summer have I traced that stream."

Then there were what would now be called "coeducational" walks and talks, to Poets' Seat and Bears Den and the pretty cascade beyond the brickyard, at the west end of the village. There were also drives up the Green river road and the Gorge road, boating parties at Stillwater and picnics at Leyden Glen. That was before the days of aqueducts and bridges and railed paths at the Glen: the boys always expected to get wet at least to the waist, wading the several crossings, and the girls had to be carried over,—but not always dry. After the lapse of more than forty years the statute of limitations probably makes it safe to confess to certain conspiracies. Two fellows who formed a "basket chair" would decide which girls to carry, and to which carrier the required "toll" should be paid by each girl; and sometimes an exceptionally pretty or popular girl would be gently lowered in mid-stream and given a suggestion of "water cure," until toll to both carriers had been exacted or a promise extorted by this method of torture. What patient victims they were. It . . .

* Sylvester Maxwell.

HISTORY of GREENFIELD - Brick references

Charles Sidney Severance - Vol. IV, 1930-1953

Pg.1997 ¶ 1

Falling into the mouth of a "pug" mill⁴ brought instant horrible death to Leroy E. Aiken, 67, of 21 Arch street while working in the Pray brickyard off Elm street Sept. 4. He was believed to have fainted, or suffered a heart attack while atop the one-story high machine and to have fallen into the brick mix being churned by the machine below. He was alone at the time.

Pg.2184 ¶ 1

Oldest such concern was also the town's only extractive industry, the R. E. Pray & Company, 100 Elm street (see page 1,727). The business of collecting Green River clay, shaping it into bricks and firing them in kilns overlooking the river was from 1930 under direction of Robert E. Pray who inherited the business on the death of his father, Frank G. Pray. In this yard, bricks up to 1,500,000 were produced annually in batches of 105 by a summer staff of about 20 men. The period saw a vast decline in the use of this building material which was relatively costly to install.



A modern Pug Mill "mouth"

⁴ A **pugmill** or **pug mill** is a machine in which materials are simultaneously ground and mixed with a liquid. Industrial applications are found in pottery, bricks, cement and some parts of the concrete and asphalt mixing processes. A pugmill is a fast continuous mixer. A continuous pugmill can achieve a thoroughly mixed, homogeneous mixture in a few seconds. Mixing materials at optimum moisture content requires the forced mixing action of the pugmill paddles, while soupy materials might be mixed in a drum mixer. A typical pugmill consists of a horizontal boxlike chamber with a top inlet and a bottom discharge at the other end, 2 shafts with opposing paddles, and a drive assembly. Some of the factors affecting mixing and residence time are the number and the size of the paddles, paddle swing arc, overlap of left and right swing arc, size of mixing chamber, length of pugmill floor, and material being mixed.

This article appeared in The Greenfield Recorder Gazette, Tuesday, June 9, 1953 H3

Pray's Brickyard Survives Changes In Building Field

A dozen or more brickyards have come and gone in Franklin County since 1900 but only one has survived the decline in the demand for bricks used in various phases of construction in the last half century. That firm is Robert E. Pray and Company of 100 Elm Street.

The brickyard was established about 1900 by A. L. Smith and in 1906 Robert E. Pray purchased the business from the New England Brick Company, which had acquired many brick yards in the northeast, and for two years Pray operated the yard with Smith.

A few years after Pray assumed control the business was sold to Daniel Strickland but later reverted back to Pray who retained possession from then on.

When the yard was built there were two other brickyards in Greenfield and the annual capacity of the three was about 12,000,000 to 15,000,000 bricks. When Pray took over the brickyard he was contractor and during his active years he built many well known buildings in Greenfield, including the armory, the junior high school the Sheldon Block, Davenport Block, Masonic building and Davis Street School. He also served as selectman for many years.



Robert E. Pray

Property Expanded

Pray's brickyard has always remained at the same location but several additions have been made since it was established. The sheds have been extended, a garage and barn built and three brick houses constructed by the late Robert E. Pray who conducted the business much as a sideline.

In the early days of the business, bricks were used much more commonly than now. Brick houses, once one of the residential features of rural New England areas such as Franklin County, are not as common as in years gone by and the need for heavy brick walls is not so prevalent now because of the use of steel frames for supporting heavy weight in construction. However, bricks are still used in large quantities for such projects as school construction, chimneys, manholes and industrial buildings. During World War I the brickyard closed for a year because of the shortage of manpower and the interruption of construction because of the war effort. The same problems confronted the business during the last war and for four years the plant did not operate.

Contractors Buy Most

Now the company sells about 50 per cent of its bricks to contractors, 40 per cent to building supply dealers and another 10 per cent to miscellaneous buyers. The yard is capable of producing more than 2,000,000 bricks a year but in recent years it has averaged about 1,500,000 bricks.

During the winter months the weather makes it necessary to suspend the production of bricks. Warm weather and sunshine are needed to dry these bricks, although some brickyards have special dryers which make it possible to manufacture this product year round. Pray's is one of the few yards which still burns its bricks with wood fires instead of oil, which has in most instances supplanted the old burning methods.

A number of processes are involved in the manufacture of bricks, starting first with the excavation of clay from nearby banks. This clay is hauled to a mixing machine where it is combined with a small quantity of sand and allowed to remain just hard enough to hold together suitably when pressed into the molds. Bricks turned out at Pray's brickyard are "sand struck", according to Frank G. Pray, son of the original owner.

He explained that sand is spread in the molds so the clay will not stick when removed. Some yards use the “water struck” method for preventing the clay substance from sticking to the molds. About 105 bricks are set for drying. When dry the bricks are placed inside the shed for burning in a large kiln and it is this burning process that turns the color to red. They remain in the kiln for about a week before they are hardened enough.

Frank Pray, who joined the firm as superintendent, following service in World War I, was taken in as a partner by his father in 1930 and has succeeded his father, who died in 1946, as owner. During the winter months when the company is partially inactive, Pray employs about three men. Between 20 and 25 persons work there in the summer.

The Pray Brickyard was located where Greenfield Gardens resides today.

e.g.



Ed Gregory collection

Hawley

History of the Town of Hawley - Louise Hale Johnson, 1955

Pg. 84 ¶ 2

On Clesson's River, at the upper end of the Eldridge pond, later owned by Dr. Cox, there is an old dam. Water from this pond furnished power for a turning shop where broom handles were turned out. Levi Eldridge, great-grandfather of Arthur and Dean Eldridge, operated this turning shop at one time, probably about 1844. There was also a brick yard near the pond of Dr. Cox. The kiln where the bricks were baked was north of the pond and east of the traveled road. Below this another pond supplied water for the over-shot water wheel to a mill on the Buckland road.

Montague Center

W. H. Ward and Medric Lanois 1889-1895

Montague Brick Manufacturing Company 1895-1901

Patrick F. Welch 1901-1913

John N. Cahill 1913

On Wednesday, September 15, 2010 I met with Lillian Fiske, president of the Montague Historical Society, at her home in Montague Center. The pre-arranged meeting was to secure a group of historical renderings regarding my quest for information on the subject of brick-makers in Franklin County, Massachusetts.

I arrived at 9:30 a.m. and was met at the kitchen door by Lillian. She was aware that I had intentions to produce an historical paper concerning the aforementioned subject. Lillian was prepared with a selection of documents that she had gleaned from the archive of the society. Our get-together lasted for 80-minutes or so, and, after various topics of discussion—not only regarding the brick industry here—I thanked her for consideration put forth toward my query. We will meet another time.



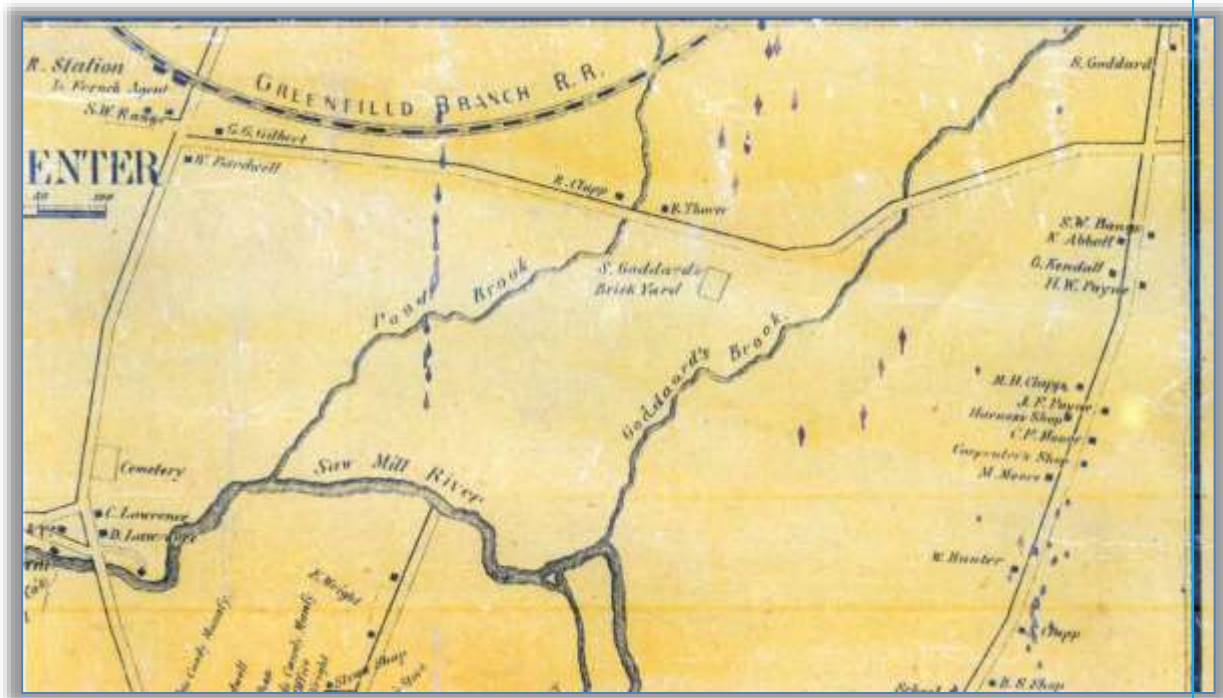
Courtesy Montague Historical Society

From the Montague Historical Society:

—Text kindly provided by the President; Lillian Fiske—

November 4, 1889

J. W. Shanks of Palmer, A. Kent of Stafford, Connecticut; J. B. Cronin and Medric Lanois of Montague have leased of H. Goddard the brickyard formerly run by Goddard's Father, consisting of 25 acres. They will have a yard running in the spring, and will also build a saw mill on the premises. The product will run at 3 million brick, with the intention of running as high as 8 million during the season.



Goddard's yard was located near the north end of the *Mile Swamp* on the old county road.

H.F Walling map of Franklin County 1858 (portion) c.g.

April 8, 1891

Business at the brickyard is brisk. W. H. Ward proprietor has just put in an engine for power that will soon be at work. He has shipped some 77 carloads this spring.

July 1, 1891

The payroll to the new employees by Ward and Lanois, brick manufacturers, amounted to \$1000 for the month of May.

November 25, 1891

Ward and Lanois are making arrangements to put in a sawmill at their brickyard, to run in the cold season, when brick manufacture has to be at a standstill.

December 16, 1891

Ward and Lanois have their sawmill building erected and boarded and ready for shingling. They have quite a force of choppers at work, cutting wood and timber on Dry Hill.

August 17, 1892

Owing to the dissolution of the partners of Ward and Lanois, the manufacturer of brick, will not be carried on any more for some time.

April 25, 1894

Medric Lanois commenced the manufacture of brick at his yard last week, a somewhat earlier date than usual. Ernest Garmond has the position of bookkeeper at the Lanois yard this season.

May 16, 1894

Lewis G. Eddy, who has been working in Leverett has returned to town and is living in Jason Mason's tenement and employed as engineer at the Lanois brickyard.

On February, 26, 1896, H. L. Putnam of Worcester, treasurer of Montague Brick Manufacturing Co., has been in town looking over the company's business interests and making preparations for the summer's work in the yard. A thousand cords of wood is being delivered and the company propose burning 4 million of brick this season. Some \$2500 is to be expended for sheds, for which lumber is already contracted. The company has bought from Mrs. Davis, on Dry Hill Road, 5-acres more of clay land, adjoining its premises, for future needs. Mr. Putnam says, "The deeper they dig, the better the clay. The brick from this yard has a good reputation and it's product for quality is to be kept up."

By April 29, 1896 work at the yard was fast-paced. The construction of a large shed is intended be put up here.

June 5, 1901. Alonzo Bruce sells his farm on Greenfield Road near Sawyer's Crossing, to P. F. Welch who will establish a brick yard there. By July, 31, 1901, Welch begins his brick making at that site as the Massachusetts Brick Company.

On June 18, 1913, The Brick yard at Montague, near the Field place, once run by P. F. Welch as the Massachusetts Brick Company, has been started up by John N. Cahill of Montague City, who is a very fine brick manufacturer and competent salesman.

Lawyer W. S. Dana had an interest in the property, and probably will continue his interest with Mr. Cahill.

The memories of Herbert Bitzer, son of John Bitzer, who established the fish hatchery in Montague (which was subsequently named for him), offers this.

*"I remember the brick yard operated by Mildred's grandfather, John Cahill. He used to take the train to New York, pay for the fares for a group of Polish immigrants, and bring them back to Montague. They would work for him until they had paid back their passage. He housed them in the [green house] *. I must ask him where the greenhouse was. He said he remembers one Polish girl would walk all the way from Millers Falls—barefoot—and push a wheelbarrow of bricks back and forth from the place they were to be fired."*

Lillian Fiske remembers . . . *"The brick yard was on the East side of Greenfield Road near the B & M Railroad. All that remained when I started school in 1929 was the chimney and oven and brick scattered everywhere. My brother saw the chimney being pulled down by men using two oxen.*

The Bruce homestead was on the other side of the RR tracks and the workers were housed there. It was called the Green House. My sister-in-law told me, her grandfather, John Cahill used to go to N.Y.C. and pay the passage way for immigrants and bring them back to Montague to work at his brickyard. My brother said some of the bricks made here were the size of cement blocks. When he cleaned out the Cahill home he threw the forms in the dump.

There was a pond nearby where we used to skate and there was so much clay in the water that until it was frozen real solid, the ice was like a spring dance floor."

. . . "My son is going to get a couple of bricks from the area." l.f.

Montague City: The most renowned brick-making vicinity in Franklin County during the periods mentioned.

Montague City, Massachusetts 1792-1900

Thomas C. Burnham - 1978

A concise synopsis of the brick-making industry in Montague City;
Burnham selectively gleaned *all* the Montague City articles from the newspapers of the day.

THE IMPARTIAL INTELLIGENCER	1792 - 1793
THE GREENFIELD GAZETTE	1793 - 1811
THE TRAVELER	1811 - 1812
FRANKLIN HERALD	1812 - 1822
FRANKLIN HERALD & PUBLIC ADVERTISER	1822 - 1827
GREENFIELD GAZETTE & FRANKLIN HERALD	1827 - 1837
THE GAZETTE & MERCURY	1837 - 1841
GAZETTE & COURIER	1841 - 1900
THE TURNERS FALLS REPORTER	1872 - 1918

R.L. & D.W. Goss 1868-

Joseph Moreau ?

Amos Adams & Son 1871-1889

P. F. Welch 1889-

Burnham Brothers 1890-1895

Thomas Brothers 1884-1928

NOVEMBER 2, 1868

R. L. and D. W. Goss can be classed among the most active and competent business men of the county. Within the past few months in addition to running steam mills in Greenfield and Montague City, and their extensive lumber and other business, they have built the depots at Charlemont and the Tunnel, and made 400,000 brick for the Turners Falls Co.



Rector L. Goss
Courtesy Carnegie Library



David W. Goss
Courtesy Carnegie Library

AUGUST 15, 1870

Charles Morris, a young man, age 19, at work at Dickinson's brickyard at Montague City, was killed on Friday, August 12. He was employed in digging clay when a heavy mass from above his head fell

upon him, breaking the bone in the lower part of the back. He survived but a few hours.

OCTOBER 3, 1870

The brick manufactured at the two brick yards at Montague City, are of superior quality, which is due both to the skill of the manufacturers and the excellence of the clay there found.

Mr. Goss has received an order for over a million brick to be shipped to Fitchburg, where they are acknowledged to be of a better quality than can elsewhere be procured. He contemplates making soon, "pressed bricks," which are used for the nicest work, fronts of city buildings, etc, and we doubt not that the brick business will soon be an important interest in the new city. The clay is found in unlimited quantity and is very easily worked.

NOVEMBER 7, 1870

Rector L. Goss has just manufactured the first pressed brick made in Franklin County. He has procured a machine for the purpose from Philadelphia and is bound to produce as good an article as can be found in any market. The samples we have seen are as smooth, perfect and handsome as any brick layer would care to see. Brick making is yet to be a great business with our neighbors on the other side of the river, and we are glad to see the lead Mr. Goss is taking in the matter. Mr. Goss lost his big, gray, team horse on Tuesday, a valuable animal.

NOVEMBER 14, 1870

George J. Brooks of Brattleboro, Vermont, has contracted with R. L. Goss to furnish and lay all the brick for the block of buildings he is about to erect on Main Street, in that town.

JUNE 19, 1871

We have been shown a photograph plan of Brooks Hotel, now building at Brattleboro, Vermont, It is to be a splendid structure, the finest hotel in the whole Connecticut Valley, and will probably cost about \$150,000 Rector L. Goss of Montague City, has the contract of furnishing the brick, (one million) and also for laying them.

SEPTEMBER 18, 1871

As workmen were engaged in digging clay at an embankment at Goss' brick yard, on Tuesday afternoon, September 12, a large mass from above them gave away, burying two men beneath. They were dug out at once. But one, Bausa, a Frenchman, was dead, and the other Alexander Lenawa, had his right leg badly fractured. A section of the bone had to be removed in re-setting the limb. The delicate operation was performed by Dr. A.C. Deane of Greenfield, assisted by Dr. Coy of Montague City, and the man is likely to recover. Bausa is described as a steady, industrious man, and had a wife and children in St. John, N. B.

JULY 10, 1872

A. Adams & Son . . . Brick Makers of Montague City, all orders promptly attended to.

SEPTEMBER 9, 1872

R. L. Goss is turning out about thirty thousand brick per day at his brick-yard. His clay is of the finest quality, and he makes a superior article, finding a market as far from home as Fitchburg, Worcester, New London, Hoosac Tunnel and Bellows Falls. Two million were sold at Turners Falls, last year. A. Adams & Son, who runs another brick-yard near Mr. Goss's using steam power and employing 25 men, turn out 25,000 brick per day, for which they find a ready market, having sold 800,000 to the Keith Paper Company, this season, for their new mill at Turners Falls.

OCTOBER 8, 1872

R. L. Goss will commence laying the brick for the walls of the new school house at Turners Falls today. Charles A. Waters is engaged to "perform the operation," or rather to stand around and see it done. Charley knows just how to do that thing.

OCTOBER 30, 1872

On Saturday last, no less than fifty-one thousand brick were shipped from Montague City. 11,000 went to New London, 10,000 to Fitchburg, 10,000 to Gardiner, from the yard of R. L. Goss, and 20,000 to Worcester from the yard of A. Adams & Son. The whole made 111 tons of freight. Not so bad for our town.

FEBRUARY 5, 1873

R. L. Goss is laying in an immense stock of wood for his brick yard purposes the next season. He intends to double his facilities. In this we think he is wise, as there will be a full demand for all he can supply.

MAY 19, 1873

R. L. Goss has his first brick of the season ready for market. He makes about 40,000 a day.

JUNE 25, 1873

R. L. Goss has the contract for building the engine house at Greenfield depot.

If you want to see some pretty brick from Adams & Sons brick yard, just examine Lawrence Power's new house.

NOVEMBER 17, 1873

David Carson, a teamster employed by R. L. Goss, had a narrow escape from death last Tuesday. He had on his wagon a load of brick, and the board coming out of the front end of the wagon, let out one tier of brick and Carson with them. He fell in front of the wheels, which passed so as to crush the scalp from his head, but fortunately did not fracture the skull. He was attended by Dr. Coy, and will probably recover. It was literally a hairs breath escape.

JANUARY 12, 1874

Rector Goss has taken the contract for furnishing the brick and doing the brick work on the new Massachusetts Insane Hospital at Worcester, and will begin work early in the spring. It is estimated that about 11,000,000 brick will be required, and three years is the limit of the contract for its erection. Mr. Goss was the builder of the immense Cutlery works at Turners Falls. And also the Brooks Hotel at Brattleboro, Vermont. The brick will be shipped from the yard at Montague City over the Vermont & Massachusetts, Boston, Barre and Gardner railroads.

JUNE 1, 1874

Rector L. Goss sent 440,000 brick to Worcester from his yard during the past month.

JANUARY 27, 1875

B. N. Farren has purchased all the brick in the yards of George Adams & Son and Rector L. Goss to be used at the Hoosac Tunnel.

MARCH 24, 1875

Mr. Rector Goss has prepared for the spring campaign by drawing to his brick yards about 1,200 cords of wood. He intends turning out about 5,000,000 brick during the coming season. Mr. Goss has taken the contract for building a new freight house, 500 feet long by 60 wide, for the Fitchburg Railroad at Charlestown, and will resume work on the new insane asylum of Worcester as soon as the weather will permit.

MARCH 31, 1875

The largest shipment of brick ever made in one day from any Franklin county yard was that of 50,000 sent from Adam's and Sons yard Friday.

MAY 26, 1875

They have just got to work making their first brick at the Montague City yards this season.

JUNE 9, 1875

Mr. B. N. Farren has a half dozen of the best Jersey cows in this part of the county.

George F. Adams, Monday, made a contract to supply Mr. Farren with 3,000,000 brick during the summer.

JULY 14, 1875

Adam & Son find a ready sale for all the brick they can manufacture.

R. L. Goss turns out 40,000 brick per day from his Montague City yard.

Adams and Son are to supply the brick for Sam R. Pierce's new block

R. L. Goss has laid 617,000 brick in the walls of the new asylum at Worcester, last month.

———— 1876-1880 was not recorded by Burnham.

MAY 11, 1881

Amos Adams & Son have already burned one kiln of brick, and are rushing business with over 50 men.

JUNE 8, 1881

A. Adams & Son have just received an order from a Rhode Island Company, for one million and a half of brick.

JULY 6, 1881

Thomas Brothers will begin on Patrick Welch's Avenue A block this week. It will be a three story structure, with store front.

Thomas Brothers have the contract to build a brick block for Charles T. Roberts on the corner of 5th and Canal Streets, opposite the old Suspension Bridge. It will be three stories high. The first story will be used for a blacksmith shop, the rest for a tenement, and the top for a carriage shop. The entrance to which will be from the hill in the rear.

SEPTEMBER 21, 1881

Thomas Brothers have begun to lay brick for the new bank building.

NOVEMBER 23, 1881

Amos Adams & Son, the Montague City brick manufacturers have just received an order for 2,500,000 brick, to be delivered early next summer to Rhode Island parties.

DECEMBER 7, 1881

Amos Adams & Son are burning their last kiln of brick for this season. It contains about 500,000 brick.

FEBRUARY 1, 1882

Thomas Brothers are building for themselves a brick barn 26 x 40 feet.

Thomas Brothers have received the contract to build a brick house, 26 x 28 feet for Dan Burke on the lower flat.

FEBRUARY 8, 1882

Amos Adams & Son have all their teams busy hauling wood for next season's brick making. They will haul in about two thousand cords.

APRIL 5, 1882

Brickmaker George F. Adams has just returned from Canada with about forty Frenchmen and some nice horses.

APRIL 12, 1882

Amos Adams & Son have bought all the tools, utensils, horses, and plant, of the brick yard of the late Joseph Moreau, and will probably run the brick yard this summer.

APRIL 19, 1882

Amos Adams & Son are busy making brick.

APRIL 26, 1882

Amos Adams & Son started fires under several Kilns of brick last night.

MAY 31, 1882

Amos Adams & Son's new railroad to their brick yard at Montague City is a great convenience, as brick can now be put on the cars right from the kiln.

JUNE 28, 1882

Yesterday Amos Adams & Son made 55,000 brick at their Montague City yard, the largest day's work the firm has ever done.

JULY 5, 1882

Thomas Brothers have the contract for the mason work of the Congregation parsonage.

JULY 19, 1882

Thomas Brothers have been awarded the contract to put up five brick school buildings on the Purple farm in Gill, at a cost of about \$30,000. They are for Mr. Moody, of course.

OCTOBER 18, 1882

Amos Adams & Son of Montague City have put on the market over three million brick the past season. Charles W. Hazelton and R. B. Campbell have sold to B. N. Farren their interest in the Goss brick yard at Montague City.

OCTOBER 25, 1882

Amos Adams and Son have about a million brick to supply their winter and early spring trade.

NOVEMBER 22, 1882

Amos Adams & Son have received an order for a million brick from Rhode Island.

APRIL 4, 1883

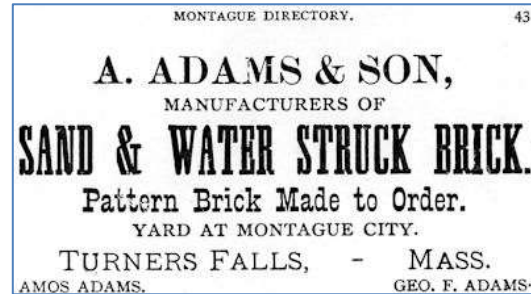
George F. Adams has just returned from Montreal, where he has engaged men for the brick-making season.

APRIL 18, 1883

Thomas Brothers, have been awarded the contract to build a Catholic church at Spencer, Mass, and will begin work in a few days. The structure will take about 1,200,000 brick, and 15,000 yards of stone. They will employ about 50 men, and it will take five or six months to complete the work. Any good mechanics desiring work out of town will be taken in preference to strangers.

MAY 2, 1883

Amos Adams & Son are getting ready for the summer work at their brick yard and will turn out 4,000,000 brick this season, a good many already being ordered for out of town.



This ad appeared in the 1883 Montague Directory. Courtesy Lillian Fiske

MAY 23, 1883

Thomas Brothers are employing several men from the village on the new Catholic Church, at Spencer, which they are building.

Amos Adams & Son are shipping several car loads of brick a week to out of town builders and have a large force working at their yard.

JUNE 6, 1883

Amos Adams & Son are making 500,000 brick for Brattleboro, Vermont builders.

JUNE 13, 1883

The drive of sixty million feet of logs is expected at the point before the month is out, if the water keeps up.

Amos Adams & Son of Montague City have an order for one-half million of brick for the New Home Sewing Machine Company of Orange, Mass.

JULY 18, 1883

Amos Adams & Son will turn out over four million brick this season, and the orders come in faster than they can be filled.

OCTOBER 10, 1883

Leander L. Bartlett, formerly of Turners Falls, who has been in company with his brother manufacturing fishing rods at Amherst, for a year or two, has sold out his interest there, and begins the erection of a factory at Montague City, where he will use modern machinery and employ about twenty men in the manufacture of a fine class of rods. He has bought two acres of land alongside of the Canal Railroad, near the school house, from Volney Varner, (who showed commendable liberality, by the way,) and is putting up a two-store brick building, 50 by 30 feet. A new 20 horse power engine will furnish power. Mr. Bartlett is an enterprising young man, straight as a string, well liked where ever known, and he should be given every encouragement in his new venture, which will benefit every land owner at the City and the town in general.

APRIL 2, 1884

Amos Adams & Son have just sold a million brick.

APRIL 16, 1884

Thomas Brothers have leased the old poor farm, and will establish a brick yard there.

MAY 7, 1884

D. F. Coghlan, the famous Holyoke boiler manufacturer, has just made a forty-horse power boiler for D. J. Thomas, brickyard.

MAY 28, 1884

Amos Adams & Son have already burned two kilns of brick this spring, and have another nearly ready to burn. They contemplate doing a large business this summer.

Daniel Thomas' house and H. O. Smith's house at Montague City have each been added to the list of telephone subscribers. Phillip Shanahan is to put one in his store, and Daniel Thomas at his brick yard.

JUNE 18, 1884

Amos Adams & Son have already burned 800,000 brick.

AUGUST 13, 1884

Thomas Brothers have been making their first shipments of brick, Builders say that a fine article is made in this village and so the brick makers are kept busy.

OCTOBER 29, 1884

Amos Adams & Son have sold to the French Catholics, 350,000 brick for their new church.

Amos Adams & Son have sold brick for a new town house at Princeton, Mass.

JUNE 24, 1885

Amos Adams & Son have sold a million brick to Fitchburg parties.

JULY 22, 1885

Thomas Brothers have finished the brick block for Philip Shanahan and have done a very satisfactory piece of work. Mr. Shanahan moves into his larger store next week.

DECEMBER 16, 1885

Thomas Brothers have sold 500,000 brick to the Montague Paper Company, for their new mill.

AUGUST 11, 1886

Grocer James A Gunn has let the contract to build his three store brick block on the corner of Avenue-A and Fourth Street to Thomas Brothers, who agree to have it finished in December. There will be two stores on the ground floor and the two upper stories will contain two first class tenements each.

OCTOBER 13, 1886

Thomas Brothers have begun to lay the brick wall of grocer James A. Gunn's brick block, and in a few weeks the building will begin to have a sightly [sic] appearance on the Avenue.

The Thomas Brother's are getting along quite rapidly with the reservoir on Wills Hill. About fifty men are employed under the foremanship of Mr. White of Northfield, and everything favors the construction of one of the best reservoirs ever devised by an engineer.

FEBRUARY 9, 1887

The Thomas Brothers have the contract to build a brick block for James A. Gunn on the corner of Avenue A and Fourth Street. The cellar was excavated from the solid rock and was quite a difficult piece of work. The building is of brick, three stories high, 45 by 60 feet with an L 45 by 20 feet.

FEBRUARY 23, 1887

Thomas Brothers have about 1,500,000 brick in their yards. Many of them are already sold for the spring trade.

MAY 4, 1887

Thomas Bros have contracts in view that will use all the brick they can manufacture. They are as busy as nailers getting a kiln ready to burn.

A. Adams & Son will make about four million brick this year. They are about two weeks late this season. A kiln of 300,000 will be burned about the 20th.

MAY 11, 1887

Mr. D. J. Thomas has recently sold to Boston parties 600,000 brick from his Montague City yard. The excellent duality of the brick from the local yards sells them in remote places, even with freight rates against them.

July 6, 1887

A fearful landslide occurred at Adams' brick-yard at Montague City yesterday, and had not the hands been away, to the circus, great fatality must have ensued. It was a providential escape.

JANUARY 4, 1888

Brickmaker Daniel Thomas is crowded with business since the snow came. Wood lots here, there and every where, are being cut off by his army of workmen, getting ties for the railroads, wood for his brickyard, and timber for his extensive building operations.

JANUARY 11, 1888

A son of Mrs. Joseph Moreau, aged about 7 years, broke his leg while coasting down brick-yard hill at Montague City, the other day. Dr. Coy set the fracture.

MARCH 7, 1888

Thomas Bros have been awarded the contract to build the big brick block for the Hibernians on the Avenue at Turners Falls, and they will begin on the work at once.

APRIL 18, 1888

Thomas Bros have begun to lay the brick walls of the Hibernian block.

APRIL 25, 1888

Daniel J. Thomas has spent \$3000 at his brickyard in improved machinery and has already made many bricks this season.

JULY 6, 1888

A Prosperous Manufacturing Business.

Brick making has long been one of the prominent industries of the town of Montague, but of late years its success has been wonderful. Mr. Daniel J. Thomas, of the enterprising firm of contractors of Thomas Brothers, of this village, gave his attention to the matter of brick manufacturing, and his firm having large building contracts always on hand, he found he could enter into the business with a profit not possible to parties not themselves large consumers. He looked over the tract of land in this village east of the highway between Fourteenth and Eighteenth Streets, known as the old town farm, and an abundance of clay being apparent he made a proposition to the Turners Falls Company to secure the territory, which he accomplished to their mutual satisfaction.

Mr. Thomas began in a small way until he got on top of the business, which was then new to him, increased his plant as his good judgment saw fit, found his market for his brick, with an eye to permanence, and success crowned his effort. But a man of broad mental capacity, endowed by nature with the accompanying shrewdness of great success, he was not satisfied with any limited measure of prosperity, and mapped out a course that was certain to place him in the front rank in competition.

Brick making is one of the few arts that is carried on very largely by primitive methods, and the most successful have not departed from the ways of their grandfathers, although much money might be saved by the adoption of modern machinery Mr. Thomas this season concluded to abandon old methods at whatever cost, and adopt the new, that he might be able to make more and better brick at less money, and have a longer season. The old way of obtaining dry sand has been to spread it out in the sun to dry, to be attended by a couple of men.

Mr. Thomas has a huge box containing coils of steam pipe into which the sand is dumped, to come out of the bottom as dry as snuff in a compact mass under cover. A patent automatic sanding machine takes the place of highly paid men in dusting the moulds previous to entering the brick machine, doing the work infinitely better, quicker and neater in every way. The principal brick machine is entirely automatic and requires only the services of boys to put in the moulds and cart away the brick. The clay is dumped on a platform back of the brick machine, and fed to a "pug mill," which mixes the clay and sand ten times as much as by any other method and then delivers to the brick machine. The great art in making good brick is in thoroughly mixing the tempered clay, and by this machine the quality of the brick turned out is enhanced very materially.



Burning a kiln at the Thomas' yard, 1912.

Ed Gregory archive

But the great improvement in Mr. Thomas' method is the introduction of the rack and pallet system of drying the brick before entering the kiln.

The old method, as all will remember, is to cart the molded bricks in their green state to a level yard where they are piled in rows to be dried by the sun or destroyed by the rain, which ever way nature is disposed to favor. The rack and pallet system consists of long rows of racks, on which boards holding six brick are deposited to a height of five or six feet, exposed to the drying effect of a current of air, as well as the direct rays of the sun, and still protected from the rain so that loss is out of the question. Aside from the great efficiency of these drying racks, they enable a yard full of brick to be handled with much greater ease, and at triple the speed, while giving a handsomer square brick.

Mr. Thomas runs an old-fashioned brick machine with his other machinery, and a machine for making water-struck brick, which have the appearance of a pressed brick, and in all he will turn out about five million this year, which he will market at good prices, principally in Boston. His kilns are within a few feet of a side track of the railroad long enough to hold a dozen cars while being loaded, and everything is arranged in the most convenient manner to carry on a large business profitably.

The territory, comprising some twenty-four acres, not being wholly needed for a brick-yard, the fertile parts have been highly cultivated and made to raise great quantities of grass and vegetables, and the barns have been fixed up to house the many horses used about the yard. Water from a splendid spring is brought from the mountainside to the brick machines, the barn and Mr. Thomas' residence.

The old brick building has been entirely remodeled, a large brick wing added, piazzas built around it, and the interiors finished and furnished in a modern manner, making a home under grand old shade trees which Mr. Thomas and his family highly appreciate. The total cost of all the improvements this year, on machinery and Mr. Thomas's residence is upward of \$12,000 and we are pleased to record every one industry in the place which is designed to expand and bring prosperity to the neighborhood as well as to its capable promoter.

AUGUST 8, 1888

George F. Adams has this season made more brick than was ever before turned out of his yard, and the season's output will exceed four million brick. George is one of the best salesmen of brick in the country.

JANUARY 2, 1889

A company has been formed called the Turners Falls Brick Company, and has leased the old Goss brick yard at Montague City, for a term of years, and will begin the manufacture of brick in the spring. A side track from the New Haven Railroad will be laid to the yard, an elevated track to the clay bank built, and work will be carried on in the most modern way.

JANUARY 9, 1889

The Montague City Rod Company, one of our most flourishing corporations, erected a large brick wing to their already large factory, and expended a good bit of money in improving their plant.

D. J. Thomas has spent many thousand dollars in improving his excellent brick yard.

We have been asked many questions as to the reliability of our news of the starting of the old Goss brickyard, and many doubting its authenticity. We have the assurance that the thing is a go beyond question, and that unlimited capital is behind them.

JANUARY 23, 1889

D. J. Thomas is a happy man today with no end of teams at his various wood lots hauling over two thousand cords of wood to his brickyard. The recent snow storm was a blessing to the lumbermen.

March 13, 1889

The Turners Falls Brick Company have began operations at the old Goss brick-yard at Montague City, and things will soon be booming there.

MARCH 27, 1889

Merchant G. L. Rist of Turners Falls has let to Thomas Bros the contract to build the finest private residence in the town of Turners Falls, to be located on the "Goddard Annex" The building will be of brick, with granite trimmings, and will cost considerable over \$10,000 Work will commence at once.

APRIL 3, 1889

D. J. Thomas last week burned a kiln of brick which was carried over from last year. A very fine article was turned out. Yesterday the brick making machines were started and 10,000 brick made, and today the yard will employ a full force. Mr. Thomas has engaged for superintendent William Eggleston, a very fine brick made of long experience.

Amos Adams, who died at Montague City, on Thursday, last, was born in New Salem, this county, October 24, 1803, consequently he was in the eighty-sixth year of his life. He was one of a family of eight children of Amos Adams a well to do farmer of New Salem, and is the last to pass away.

He was educated in the district school supplemented by several terms at the New Salem Academy, then in a flourishing condition. After serving his minority on his father's farm he was for a time in the employ of an uncle at Cambridge who was engaged in market gardening. Then he went to Providence, R. I. and was successfully engaged in farming, owning and running a milk route in the city as well as largely carrying on the business of a market gardener.

Subsequently he came to Orange, Mass., and was for a time engaged in trade there. He was married Sept. 14, 1828, to Sarah W. Whitney of Orange, who still survives him, with two of their four children, George F. who resides at Montague City, and Delia, wife of Col. Josiah Allen now living in California. In 1838 Mr. Adams came to Montague City, purchased the homestead and rebuilt the home in which he has since lived. He was engaged in trade under the firm name of Adams, Thayer & Co. in a building on the bank of the canal near his residence which was burned some years since. During the continuance of the boating days the firm did a very large and profitable business. In common with all country stores in those days one of the staple articles of supply and demand was Medford rum, which found a ready sale, especially with the boat and river men, and from the sale of which the firm made a handsome profit even at twenty-five cents a gallon. When Mr. Adams become conscious that an appetite for strong drink was gaining a hold upon him he had the decision of character and will power which too few possess to say to the insidious foe, "Get thee behind me Satan" and from that day was a total abstainer from the use of intoxicating liquors.

Since 1871 Mr. Adams with his son Amos Adams has been extensively engaged in the manufacture of brick.

Mr. Adam in his day was an expert measurer of lumber and considered as the best authority all over the county. In cases where lumber was cut and carried away wrongfully he was sometimes engaged to measure the remaining stumps and compute the lumber taken thereupon, which, from his long experience in measuring trees he was able to do to the satisfaction of all parties. He was a good judge and a great lover of the horse and was never seen behind a poor one.

After engaging in the manufacture of brick and having some low priced horses about the yard he never allowed one to be rated for taxes less than one hundred dollars, saying he would not have it go on record that he ever owned a horse worth less than that sum.

Mr. Adams was often called by reason of his good judgment of values to appraise property and as arbiter of differences between parties. He was for three years one of the Selectmen, Assessors and Overseers of Poor of Montague. In 1857 he was chosen agent for the town to buy a farm for the almshouse and purchased the farm subsequently sold to R. N. Oakman. He was again chosen to buy another farm and purchased the one occupied in part by D. J. Thomas. When this was sold to the Turners Falls Company he was again chosen to buy a third farm and purchased for the town the one present occupied for the support of the poor. For a good many years Mr. Adams, with his family, was a regular attendant at the Congregational church at Montague Center, making a Sabbath day's journey, to and from, of nine or ten miles, which few of the present generation would think they could do. Until prevented by infirmities of age he was a regular and interested attendant at the Sunday school at Montague City. Mr. Adams was a Kind neighbor, an upright man, a good example of the Christian gentleman. Peace to his ashes.

APRIL 10, 1889

Thomas Bros have started their brickyards and will soon be turning out over 40,000 of the best pallet bricks daily. They expect to manufacture 5,000,000 during the season, having already sold about 4,000,000 to be shipped to Boston and Worcester. William Eggleston, who for 14 years was superintendent for the Holyoke Brick Company, has charge and has moved ten families from Holyoke to assist in the work.

MAY 1, 1889

George Adams has got an early start in his brick yard and will make more brick than ever this year.

MAY 15, 1889

George F. Adams feels quite happy this spring in getting his brickyard started a month earlier than usual, with sales for all the brick he can possibly manufacture.

Martin and Matthias Duda of Turners Falls have bought a lot on top of the ledge on the south side of Third Street, at the cut, and will build a four tenement house. It will be of brick, 34 x 44 feet, three stories high, and will be finished as soon as possible. Thomas Bros have the contract.

JUNE 12, 1889

Workmen are laying a side track from the Canal railroad to the new brickyard at Montague City.

JULY 3, 1889

It is now possible that P. F. Welch will take the new brickyard at Montague City. Satisfactory offers having been made to have him take it.

JULY 10, 1889

P. F. Welch has bought the interest of Dr. O'Brien in the Turners Falls Brick Company and put the business on a strong financial footing. J. N. Cahill will continue to be manager.

Thomas Bros have the contract to build the house for Jeremiah Reen on Fourth Street Turners Falls. It is to be 26 x 43 feet, with an 'L' 17 x 18 feet, all three stories high. It will be a substantial brick building, with granite trimmings.

JULY 24, 1889

The county commissioners have investigated the question of granting the right asked by P. F. Welch and J. N. Cahill to allow the crossing of a spur of the Canal Railroad over the highway into their brick yard, and will give an order favorable to the petition at their August meeting. Then the subject must go to the railroad commissioners, so it may be late in the fall before the crossing is laid. The owners agree to provide a flagman whenever the road is in use.

JULY 31, 1889

John P. Thomas, of the well known firm of contractors and builders, Thomas Brothers, of this village, died yesterday morning, after an illness of a year of consumption at the age of 40 years. Mr. Thomas was born in Ireland and came with his parents to the Hoosac Tunnel when a year old. Getting a common school education he served an apprenticeship as a stone-mason in the employ of B. N. Farren, who was then a contractor at the west end of the Hoosac Tunnel. When Turners Falls was started, the deceased came here with Mr. Farren, and continued in his employ as a stone-mason for years. In 1871, his brother Daniel J. came to town and also entered the employment of Mr. Farren, and both were more or less under engagement with him until 1879, when the Thomas Brothers partnership was formed.

This firm soon began to prosecute successfully many large contracts in different parts of the state, notably the great Catholic church at Spencer, the Parochial school at North Adams, five school buildings for Evangelist Moody at Northfield, the bank and Hibernian blocks and the Catholic church at Turners Falls, and many others of importance, and the system of sewerage at Turners Falls was a highly creditable piece of work, taken at a price which competent engineers said meant ruin, but completed in a most thorough manner at a handsome profit. Mr. Thomas was once quite interested in politics, and held the office of overseer of the poor, and was from the first a prominent member of the fire department, but having so many business cares he, in late years, thought it best to keep aloof from the vexations of party strife. He was a first class workman, a thorough business man, and always bore an untarnished name, from boyhood to manhood, and had hosts of friends in every walk who sincerely regret his early demise.

The industry, economy and foresight of his firm, brought success to his lot in life, and he leaves a handsome property to his wife and four children. There are but two brothers left out of a family of ten boys, Daniel J. and James, although all in early life gave promise of superior constitutions and unlimited vitality.

The funeral will be held tomorrow morning from the Catholic Church, of which he was a devoted member. The body will leave the house at half past eight, and at nine o'clock a high mass will be sung at the church, after which the interment will take place in St. Mary's cemetery. The Hibernian society, of which he was always a prominent member, will have charge of the funeral.

AUGUST 7, 1889

Daniel J. Thomas, the brick manufacturer sold during the month of July, 1,100,000 brick. The largest months sales he ever made.

Frank Spencer and Frank Douglass have given D. J. Thomas the contract to build a house for them in Goddardville, Turners Falls, to be completed as soon as possible. It will be of brick, two and a half stories high, 43 x 25 feet, with an 'L' 6 x 17 feet.

AUGUST 14, 1889

D. J. Thomas is demonstrating the value of the rack system of drying in his brickyard this rainy season. The method prevents a loss only appreciated by a brick manufacturer.

SEPTEMBER 11, 1889

Childs & Maxwell of South Deerfield have shipped about 800 cords of soft wood to the Montague City brick yards thus far this season.

George Howard has let the contract for a brick house on his Maple Street lot at Turners Falls, to Thomas Bros, and the work is progressing rapidly on it. The building is to be of brick, much like the one going up for Douglass & Spencer in the same neighborhood.

SEPTEMBER 25, 1889

The bricks to be used in the new school house at Turners Falls are from the new brick yard at Montague City.

Volney T. Varner has sold his wood lot near Charles W. Hazelton's place at Montague City to P. F. Welch of Turners Falls for the brick yard.

OCTOBER 30, 1889

George Adams is furnishing brick for the Rogers & Oakman factory at Greenfield. Amos Adams is drawing them with the new pair of horses that Mr. Adams recently bought at Holyoke.

NOVEMBER 13, 1889

The administrators of the estate of the late Amos Adams offer the brick yard and considerable other property for sale at auction on December 5th.

George F. Adams has decided to offer his homestead, in connection with the brickyard, thinking it would sell better, thus benefiting the creditors.

DECEMBER 4, 1889

The Adams brickyard will be sold tomorrow.

DECEMBER 11, 1889

Daniel J. Thomas after closing the brick season, finds he has a lot of horses he would like to have work for, and would do a big job of teaming to satisfaction, or he would sell the lot rather than winter them.

P. F. Welsh has bought from Volney Varner a large tract of land at Montague City, containing over 100 acres, which he will turn into a brick yard some time. There are several fine banks of clay on the premises, and considerable wood suitable for brickmaking.

The administrators of the estate of Amos Adams sold at auction last week the brick yard for \$9,500 to F. G. and A. C. Burnham, the former in business in Holyoke and the latter for many years employed by Mr. Adams in the brick yard. The only other property sold was one third interest in the aqueduct, which brought \$400, and was bid in by the two other owners.

JANUARY 8, 1890

The administrators of the estate of Amos Adams sold the balance of the property last Thursday. Mrs. Amos Adams bought the homestead for \$2500. Mrs. Josephine Adams, the pasture on the Montague road, five acres for \$410. E. F. Gunn, the plain and Country Hill lots, 112 acres in all for \$142, the Millers Falls lot of 42 acres couldn't get a bid above \$75. C. P. Wise bought the George F. Adams place, some 12 acres and a valuable clay bank, the house and barn for \$3050.

JANUARY 29, 1890

Thomas Brother's took a host of their workmen to Lynn today to begin work on their big contract there.

Thomas Burnham has earned the gratitude of all Montague City by laying a cinder walk from the post office in that village to the big bridge. Whoever lifts his neighbor out of the mire, in any sense, does a Christian act.

FEBRUARY 12, 1890

Thomas Brother's have three contracts under way in Lynn, with the prospect of several more before long. They took seventeen of their best men from this village.

MARCH 19, 1890

P. F. Welch has begun to build a two-story double tenement house for the use of his help at his brick yard at Montague City. Each house will have eight rooms.

The Burnham Brothers are thoroughly overhauling the Adams brick yard, putting it in first class condition. All the machinery and shafting have been taken out and will be entirely rebuilt. Nothing will be spared to make the yard modern in its equipment.

D. J. Thomas began making brick at his yard early last week, and will soon have some kilns burning.

Thomas Brothers have secured other big contracts at Lynn, and it will take the full capacity of Mr. Thomas's brick yard for months to supply brick to his own building firm.

APRIL 9, 1890

George F. Adams has secured for the Burnham Brothers, the contract to furnish one million brick for the new Normal School at Westfield. Mr. Adams will secure orders for the brick firm this summer, and will find no trouble in placing their product.

APRIL 16, 1890

The brick yards are starting up, and a great number of Canadian Frenchmen have come to work in them.



The 1890 business card.

Courtesy, The Ephemera Archive for American Studies

April 23, 1890

Daniel J. Thomas got a very early start in making brick this spring, and has three kilns made already. His good judgment in arranging his yard on the modern plan was the means of his making a lot of money last year through the raining season, when brick yards were invariably run at a loss on the old plan.

APRIL 30, 1890

BURNHAM Brothers, already have contracts for 2,566,000 brick.

JULY 2, 1890

Thomas Brothers the contractors, have more building under way at Lynn, and they stand extremely high in the estimation of the people they do business for down in the city of shoes. Mr. Daniel J. Thomas's brick yard is kept a going at its full capacity to furnish brick for these new Lynn buildings.

AUGUST 13, 1890

Richard E. Oakman, administrator of the estate of Amos Adams, is paying the creditors a trifle over ninety cents on the dollar of their claims as allowed by the commissioners. This is more than expected, just about 90 per cent more Mr. Oakman firmly believes, than they would have received if he had not a hand in the finances of the brick yard for the past three or four years.

AUGUST 27, 1890

P. F. Welch has built a barn at Montague City. It is of brick, and will contain seven stalls.

NOVEMBER 12, 1890

P. F. Welch has a number of men at work preparing his new brickyard at Montague City. The engine, boiler and machinery have been removed from the old yard on B. N. Farren's land, and set up on the land bought of the late V. T. Varner, by Mr. Welch some time ago. Mr. Welch has added a saw carriage to his machinery and will saw his own logs in the future.

FEBRUARY 4, 1891

P. F. Welch of the Turners Falls Brick Company, has bought of the Volney Varner estate about 100 acres, and will vacate the "Goss Yard", where the company has made brick the last season, and In the early spring will begin the manufacture of brick in his new yard.

APRIL 22, 1891

Thomas Brothers has yet two contracts to finish in Lynn.

D. J. Thomas brick yard is being run to its fullest capacity, with orders for all the "brick they can make.

MAY 13, 1891

Brick making has begun in Welch's new brick yard at Montague City.

JUNE 10, 1891

Our ever alive and pushing firm of contractors, Messrs. Thomas Bros, than whom none more enterprising can be found in the state, have been bidding for some large contracts against some of the heaviest contractors and have been successful wherever they desired to be. They have a contract from the Right Rev. Monseigneur O'Griffin, to build a parochial school at Worcester, at a cost of \$50,000 and at Lynn they have taken two contracts which will require over half a million brick to be laid before completion. Mr. Daniel J. Thomas has also signed a contract to deliver about a million and a quarter brick to a Boston customer, the first shipment to go at once. The contracts of the Messrs. Thomas and the orders of the Messrs Thomas will keep the brick yard running to its fullest capacity all summer.

JUNE 17, 1891

Contractor Charles Parks is renovating and repairing Mr. Farren's brick yard house at Montague City for tenants.

JUNE 24, 1891

Burnham Bros, the Montague City brick makers, are building substantial sheds over their brick kilns, to keep off the weather. The sheds are quite common in other brick making centers, but not for a long time has one been seen in a Turners Falls brickyard.

JULY 22, 1891.

A. C. Burnham & Company, the brick makers of Montague City have sued Henry W. Warner. They sold Warner part of the bricks used in building the new hotel near the depot and there is now a dispute between them as to the price. The difference between them is about \$1200.

AUGUST 5, 1891

Thomas Crimmins, aged 19, was killed by the caving of a bank in D. J. Thomas's brick yard on Saturday. Medical Examiner Dr. E. C. Coy viewed the body, but deemed an inquest unnecessary.

SEPTEMBER 9, 1891

Thomas Bros, have just received the contract to build a \$90,000 church In Waltham.

OCTOBER 21, 1891

Daniel J. Thomas has made more brick than ever before, and yet has been unable to supply his own needs in finishing his big contracts. He has bought from other yards.

DECEMBER 2, 1891

About ten weeks ago Thomas Bros. signed a contract with the First Methodist Society of Waltham, for the erection of their new building at the corner of Main and Moody streets, at Waltham. The plans provided for a brick building to cover an area of 1600 square feet, four stories in height, with a frontage of 114 feet on Moody Street, and 122 feet on Main Street. The first floor to contain four stores facing Moody Street, each with a frontage of 20½ feet, and a depth of 68 feet, The new post office to be located upon the corner with a frontage of 20 feet on Moody and 83 feet on Main Street. The floor area of the post office to be 2500 feet. Next the post office entrance is the entrance to the church portion of the building, while in the extreme end is another store 20 x 52 feet.

On the second floor the church proper occupies a space 56 x 98 feet with a seating capacity of 925. The balance of the second floor and the third and fourth floors to be devoted, entirely to offices, reception rooms etc. The building to be heated by steam. It requiring two large boilers for this purpose. The whole structure will cost the society \$125,000. This week will see the outer walls up and the roof on. Truly, this is what can be called "hustling." Turners Falls is proud of their towns' people, Daniel J. and James H. Thomas.

DECEMBER 23, 1891

P. F. Welch is doubling the size of the boarding house at his brickyard at Montague City.

JANUARY 13, 1892

P. F. Welch, the merchant and brick manufacturer, has been at death's door with pneumonia, but this morning the doctors gave hope for his recovery, much to the gratification of a very large circle of friends.

MARCH 2, 1892

P. F. Welch is putting in a side-track from the Canal railroad to his brick yard at Montague City. It will begin near the dry bridge and run up to the kiln by a pretty stiff grade. The brick yards of Daniel J. Thomas, Burnham Bros. and P. E. Welch have all begun operation, later than usual however. The

grading of the new branch track to connect P. F. Welch's brickyard with the N.Y. M. H. & H. railroad, has just been commenced.

APRIL 13, 1892

P. F. Welch is putting in a side-track from the Canal railroad to his brick yard at Montague City. It will begin near the dry bridge and run up to the kiln by a pretty stiff grade.

The brick yards of Daniel J. Thomas, Burnham Bros and P. F. Welch have all begun operation, later than usual however.

The grading of the new branch track to connect P. F. Welch's brickyard with the N.Y. M. H. & H. railroad, has just been commenced.

APRIL 27, 1892

Mr. Toomey an Athol brick maker has contracted with Burnham Bros, to manufacture brick in their yard this summer.

The switch and rails of the old brick yard tracks have been taken up and used on the roadbed of the Welch's new side track, which is now very nearly completed.

MAY 4, 1892

In the recent, fire on the plain's P. F. Welch lost about 500 cords of cut wood. A number of others have suffered heavy damages on their wood and woodlots. Daniel Benjamin having about 300 cords burnt.

AUGUST 31, 1892

James Thomas, Jr. member of the firm of Thomas Bros. is in town for a few days. He has personal supervision of all their contracts.

SEPTEMBER 14, 1892

Thomas Bros, have been awarded the contract to build the Keith mill extension.

WANTED . . . 50 men to go to work at once on the foundations of the Keith Mill Extension. Apply to Thomas Bros. Contractors.

SEPTEMBER 21, 1892

Thomas Bros, broke ground, Thursday morning, for the new Keith mill, and intend having the foundations in before the fall freshets trouble them. Thomas Bros. advertised for 50 men for two weeks and got less than a dozen local men, so the firm was obliged to send away for a lot of Italians, and fifty able bodied men came this morning. Some local laborers began to scold at importing men, but there were no other recourse. If we are to have mills we must have men to build them and when Thomas Bros. sent for men, you can bet your bottom dollar the reason is that none others are to be had. This firm is out of the infant class and, make no mistake.

SEPTEMBER 28, 1892

Brick manufacturer P. F. Welch began this morning the erection of a fine brick residence adjoining that of Charles W. Hazelton at Montague City. The building will be 28 x 50 feet, 2½ stories high, and finished in a most desirable manner. It will be located in the grove north of his brick yard. Michael Sullivan & Son have the contract.

MARCH 1, 1893

Mrs. Mary S. Varner has sold her farm of twenty acres, with large square house and barns, at Montague City, to the Burnham Bros, the brick manufacturers. The price is supposed to be in the vicinity of \$6,000.

APRIL 19, 1893

P. F. Welch is roofing his brick kilns at Montague City.

MAY 19, 1893

Burnham Bros, have the contract to furnish the brick for the new Keith Mill at Turners Falls. It will take about 3,000,000 brick.



Burnham Brothers crew pose in front of a wall of finished bricks, 1893.

Courtesy, The Ephemera Archive for American Studies

JULY 26, 1893

The community was startled this noon by the announcement of the death of Daniel J. Thomas, the well known brick manufacturer and contractor, of heart failure. Mr. Thomas has been a resident of this village since boyhood, and always was held in the highest respect for his honesty and high business Qualities, making fame and money such as only come to honorable business men. He with his brother James was engaged in many large contracts in and about Boston and the firm stood at the highest mark. Being out of health for some time, he has stayed in the village all summer, and it has been evident for some time that he was suffering from nervous exhaustion. He had several attacks of heart failure, but his physician, Dr. Bests managed to pull him through, until this noon, when he had a final attack, and he passed peacefully away. Mr. Thomas was 39 years old, and leaves a wife and three small children to mourn his early death.

AUGUST 16, 1893

John Cahill of the Turners Falls Brick Company has begun work on his house on Depot Street, Montague City, on a lot recently purchased from Charles Park.

SEPTEMBER 20, 1893

John N. Cahill, the superintendent of the Turners Falls Brick Company, has built a house on Depot Street, Montague City.

NOVEMBER 1, 1893

Allen C. Burnham, of the firm of Burnham Bros, brick manufacturers has been seriously sick for a week with a low fever. He is now gaining somewhat and his brother Cyrus, who came from Holyoke to care for him has returned home.

AUGUST 29, 1894

The strike at the Thomas brickyard has been settled, the help being paid in full and all but 13 men discharged. Work was resumed.

JANUARY 2, 1895

Mrs. Rector Goss died Monday December 24 at Melrose, where she has resided for some years with her brother. Her body was brought to Montague City Wednesday for burial. She was 61 years, 7 months, 3 days old. She was a lovely woman, refined and cultivated to a high degree and was remembered with affection by a large circle of friends. She was early left an orphan and made her home with her uncle in Montague, the elder Mr. Goddard, and was raised with Edward L. and George H. as a family of brothers and sisters. Marrying Rector L. Goss, she made her new home in the fine house built for her occupancy, and now owned by Richard N. Oakman (old nurse's home by the F. M. Hospital.)

Mr. Goss, as many of the older residents will remember, was the leading spirit in the town before Turners Falls took tangible form and shape. He operated the big brick yard at the City, a piano case factory and other enterprises; owned the general stores at both villages, ran milk wagons, conducted the two post-offices, and in fact was the leading citizen of the town in enterprise and business operations. He was some what visionary in business methods, which allowed him to leave many loose ends, so that when cut down in the prime of life, was unable to pay more than 25 cents on the dollar, although the contract left unfinished, the Worcester Lunatic Hospitals was one of the marvelously profitable enterprises of the decade.

MAY 8, 1895

All the brick-yards at Montague City are running full blast.

P. F. Welch has put a new brick machine in his Montague City yard, and expects to make more bricks than ever. He will look after the yard himself this year.

JUNE 26, 1895

John Donovan, engineer at the Burnham Brother's brickyard, had a finger broken last week be being caught in the machinery.

SEPTEMBER 11, 1895

Allen C. Burnham of Montague City has a contract to supply 2,000,000 bricks for a new corset factory in Worcester.

NOVEMBER 13, 1895

P. F. Welch has turned out about three and a half million bricks this season. This is nearly double the amount of any other season since he has been in the business.

NOVEMBER 25, 1896

George F. Adams, for many years a resident of Montague City, is to move with his family to Orange. Mrs. Adams is a native of Orange, she being the daughter of the late H. H. Whitney, who was killed by a vicious horse last summer.

DECEMBER 25, 1895

A shed at P. F. Welch's brickyard at Montague City and a freight car were burned Saturday morning. There will be a considerable loss.

FEBRUARY 5, 1896

It is rumored that a Philadelphia gentleman has purchased the old piano case factory lot at Montague City and all the land south of School Street to the Montague Road, (Greenfield Road) and to the two tenement houses and the clay pasture next to P. F. Welch's brick yard, from Mr. Farren. It is the belief a factory will be built for the manufacture of brick machinery, and a brickyard will turn out the finest quality of pressed brick.

MARCH 4, 1896

Thomas Bros will greatly increase the capacity of their brick making plant this spring. Two new machines will be added and 8,000,000 bricks will be manufactured this season.

MARCH 18, 1896

Charles Park of Montague City has the contract to erect a kiln shed for P. F. Welch soon. It will be over 200 feet long and similar in construction to Burnham Bros, kiln shed.

APRIL 22, 1896

P. F. Welch, the brick manufacturer, was quite ill last week, but is recovering.

MAY 13, 1896

The New York & New Haven Railway Company have re-planked the dry bridge at the brick yard crossing at Montague City.

JUNE 10, 1896

A handsome monument has been erected in the village cemetery at Montague City in memory of the late Thomas W. Burnham.

SEPTEMBER 23, 1896

The Greenfield and Turners Falls electric road have erected a new addition to the car house at Montague City which will be used by the company for repairing and store room purposes. The building is 62 by 26 feet and is built of brick.

NOVEMBER 25, 1896

The water department will lay a four inch pipe to Mrs. Thomas' house at the brick yard.



Ed Gregory image

DECEMBER 30, 1896

Thomas Brothers, the brick manufacturers, have put a new roof on their big barn, and repaired their out buildings about their brick yards. They have a gang of men in the woods getting wood for their kilns, and will buy much delivered.

JANUARY 13, 1897

P. F. Welch, the brick manufacturer, has the contract to build the new hotel on Fourth Street, Turners Falls, for Jeremiah Collins, and has a gang of men at work blasting out the ledge.

The people of Montague City have declined Mr. Farren's generous gift of a lot for a church, and bought one near the Post Office, of A. C. Burnham, and work is in progress on the building. The lot is on Depot Street, east of Main Street alongside the old canal. The building will be 22 by 32 feet, the basement of brick and the superstructure of wood.

Thomas Brothers will do the brick and stone work, and the wood work will be done by the day, in charge of George Andrews. It will be a very neat little church and will seat about 200.

JANUARY 21, 1897

B. N. Farren, has given \$100 for the new church at Montague City, Thomas Brothers and P. F. Welch, the brick manufacturers, contributed quantities of brick.

APRIL 7, 1897

The Montague City Rod Company have put on the market a new thing in the shape of a bicycle grip. It has a wooden core covered with a sheet of fine cork, making the strongest, lightest and best bicycle grip ever put on a wheel. Made by one of the foremost manufacturing concerns in the country, quality of the grips is on par with the work on their fine fishing rod grips.

JUNE 30, 1897

John, the three year old son of James Thomas, the brick manufacturer, fell from a baby carriage, Monday afternoon, and broke his right shoulder. Less than a year ago he fell and broke his collar bone on the left side.

MARCH 30, 1898

Brick manufacturer P. F. Welch has just put in a new boiler of 65 horse power, at his Montague City yard taking the place of a smaller one. He is also building a 50 foot smoke stack to take the place of the iron one. Last year Mr. Welch made over four million brick, and this season hopes to make many more than that. He has already sold a half million ahead of manufacture.

MAY 18, 1898

Thomas Brothers, the brick manufacturers, are shipping many car loads of brick these days.

OCTOBER 19, 1898

Thomas Brothers, the brick manufacturers, have put up a new building over their boiler and engine, at their brick yard, at Montague City, and have made provision for the storing of stove length hard wood by a building about 100 feet long. They get much hard wood in cutting off wood lots, and having power to spare and men and teams to do the work at odd times. They decided to put in a saw and cut up stove wood for the market.

APRIL 19, 1899

B. N. Farren, Esq. for forty years one of the leading citizens of the county, a man of exquisite culture and fine tastes, well traveled, with the broad mind that comes of wide observation of all countries and all people, has decided to create and endow for the benefit of mankind locally a hospital that shall be the home and shelter of the invalid poor without fee or without price, or the refuge of the well-to-do sick who may desire the best that is vouchsafed mankind in treatment and care at a commensurate compensation. It will be unlike anything of the kind usually set up ostensibly for the good of our fellow man in that it will be devised, maintained and controlled in the wisest manner without bickerings, fretful jealousies or unwieldy management and will be the poor man's haven of rest in the time of his direst need - sickness - without thought or bother of its cost.

Mr. Farren asks no favors in disclosing his plans. He simply asked the town to mend the road above what used to be the Volney Warner place to his own residence, a wretched piece of highway, and restore the county road to its true location near the electric railroad tracks, so that travel might be farther diverted from a building that must be kept quiet, and surrounded with beautiful lawns.

The interested gentleman will buy, if he can, the small building now owned by the Burnham heir's and move it away from the premises, as will the Rugg store be got out of the way. He has plans already drawn for the buildings he intends to erect and for such changes in the Oakman mansion as may be necessary.

He will come to Montague City very soon and will begin work at once, if nothing unforeseen interferes with his plans.

JUNE 17, 1899

B. N. Farren, is quietly perfecting his plans for the hospital he will build at Montague City, and expects to begin work on the structure in a few weeks. Yesterday he started a gang of men getting out stone on the fine ledge in his meadow below the Montague City railroad station under the leadership of the very expert stonemen. Patrick Cunningham and Michael Sullivan.

Mr. Farren's architect, Wilson Eyre, Jr. of Philadelphia has just come to consult with his principal as to details of construction. The Burnham house, adjoining the Oakman mansion, has been purchased and will be moved off as soon as possible so that work can be commenced without delay.

JUNE 28, 1899

Charles Parks will have charge of the woodwork of Mr. Farren's hospital at Montague City. John Short will have charge of the bricklayers.

AUGUST 16, 1899

Michael Bain, aged about 61, employed at Thomas Bros. brick yard at Montague City, dropped dead, while loading wood onto a cart, shortly before six, Friday afternoon.

OCTOBER 18, 1899

James A. Thomas has the contract to put in the brick work for the basement of the International Paper Company's wood room.

OCTOBER 19, 1898

Thomas Brothers, the brick manufacturers, have put up a new building over their boiler and engine, at their brick yard, at Montague City, and have made provision for the storing of stove length hard wood by a building about 100 feet long. They get much hard wood in cutting off wood lots, and having power to spare and men and teams to do the work at odd times. They decided to put in a saw and cut up stove wood for the market.

DECEMBER 20, 1899

P. F. Welch has done a remarkably good year's business at his yard at Montague City. He has made about four million brick and those he has on hand after the summer's work are being asked for quite greedily by the city builders.



Ed Gregory collection

Montague Bricks Aging With Grace

Brickyards Flourished in Montague City

By Joel Brown; Recorder Staff

What do downtown Turners Falls, Worcester State Hospital and the Hoosac Tunnel have in common? They were all built with bricks made in Montague City.

As many as five brickyards flourished in "The City" in the late 19th and early 20th centuries. Contractors like the Thomas Brothers and Bernard N. Farren ordered Montague City bricks for their projects throughout New England and beyond. The Thomases even established their own brickyard in town, one of the largest in the region. "Over around Walnut Street and South High Street Extension, you don't have to dig very deep before you hit brick," says local historian Thomas Burnham.

According to the Encyclopaedia Britannica, Egyptians first produced sun-dried bricks 6,000 years ago. Now about 6.5 billion bricks are produced annually in the United States alone.

Formed from clay and kilned for hardness, strength and heat resistance, the average brick is an unassuming little guy, measuring about 2 1/4 by 3 3/4 by 8 inches.

There's little sign of the Montague City claybanks now. They're covered with suburban, ranch-style homes and the fairways of the Thomas Memorial Country Club. But you can see where the clay went, just up the road in downtown Turners Falls.

The first buildings in Turners and The City were made of brick, although it was "immigrant brick." Bricks used as ballast on ships crossing from England were used in 1818 for the building of the Taft home at the foot of Ferry Road (the first permanent residence in Turners Falls) and for the home where Dr. Warren D. Thomas lives now off Montague City Road in the midst of the golf course that was built over the Thomas Brickyard.

But when the use of the Turners canal was to be converted from transportation to power, brick became a prime concern. The Turners Falls Co. planned a small industrial city on the land adjacent to the canal, and brick was intended to be the material for building it.

This year, when David and Gale O. Jensen bought a small brick building at 166 Avenue A for their Avenue A Laundromat, they investigated the deed history of the property. It was originally sold by the Turners Falls Co. to Josiah Gates of Lowell for \$825, a deed executed on June 8, 1869.



The Rector L. Goss Brickyard in Montague City supplied the bricks for the immense factories of the John Russell Cutlery, now demolished, and the Cutlery Block housing, which still stands and provides modern apartments today.

The Strathmore and Esleeck paper mills, the American House, the former Turners Falls Inn (above) and the present-day town hall were all built with Thomas Bros. engineering or Thomas Bros. bricks, or both.

The quality of the brick has made the buildings stand the test of time and figured strongly in the declaration of downtown Turners Falls as a national historic district.

The deed contains an interesting clause: "No buildings shall be erected on this lot the exterior walls of which shall be of any other material than stone, brick, or iron."

There aren't many stone buildings in Turners Falls. And it would be a long time before architects were designing skyscrapers made of metal. So guess what kind of businesses sprung up left and right in the neighborhood?

"It'd be hard to name one building there (Turners) that my father and his brothers didn't have a hand in building," says Dr. Thomas proudly.

Today's Strathmore and Esleeck paper mills, the American House and Turners Falls Inn, and the present-day town hall were all constructed with Thomas engineering or Thomas brick, or both.



The Cutlery or Third Street Block.

There were other yards and other destinations for Montague brick. Rector L. Goss owned a brickyard right where Greenfield Road meets Sherman Drive now. From 1868 to 1870, Goss supplied brick for the building of the "immense" factories of the John Russell Cutlery, now demolished, and the Cutlery Block housing, still standing on Third Street. Goss also supplied much of the brick for the asylum at Worcester.

The brickyard of George and Amos Adams, later owned by P.F. Welch, and the New England Brick Co. were located behind the Montague City Rod & Reel Co. plant. In 1882, it turned out 3 million bricks. The later Burnham brickyard was on what is now Walnut Street.

The Goss and Adams yards also furnished the brick for Farren's work on the Hoosac Tunnel railroad project.

In January 1875, Farren bought most of the year's output of the two yards for the tunnel. By October 1876, Goss was shipping 70,000 to 80,000 bricks a day for the tunnel, according to Greenfield Recorder-Gazette.

Dr. Thomas' uncles Daniel and John Thomas were already involved with Farren's various projects as engineers and builders in 1882, long before they established their brickyard. The doctor says John Thomas was Farren's "first lieutenant."

Early that year the Recorder-Gazette reported Daniel and John won contracts to "put up the five buildings on the Purple Farm, Gill, for the boys' school which Mr. Moody has established." That became Mount Hermon School.

The Thomases also built a convent school at North Adams. The paper said the structure would "take about a million bricks," which were carried over the Mohawk Trail by horse-drawn wagons.

In 1884, the brothers leased the old poor farm in Montague City and established a brickyard there.

John Thomas was a big man, the doctor says. Legend has it that he once fought John L. Sullivan in an exhibition match in Turners Falls, probably between brick walls at the Hibernian House or the Opera House. Work on the Hoosac Tunnel had begun when he was born. He lived long enough to work on the tunnel himself. He was killed in an accident while working in the first New York City (brick) subway project.

Dr. Thomas' father, James H. Thomas, came to Montague City with his bride in 1895, after all nine of his brothers died through disease and accidents. He built the brickyard up to be the busiest in town, with its own rail spur. While Goss was the first in town with a steam-driven brick press, the Thomas yard was the first in town with electricity.

When Dr. Warren D. Thomas — named for Warren Dustin, longtime treasurer of the Russell Cutlery — was born Feb. 6, 1911, the busy Thomas Brothers Brickyard was his playground.

"I've gone right out the door of this house and walked up on top of boxcars full of brick. I could walk on top of the train from here all the way down to South Street Bridge," Dr. Thomas said, "and then up through 'The Gap' to school."

Many of the dozens of Thomas employees were Polish immigrants. "They left Poland knowing they were going to work for 'Jim Thomas,' one word," Dr. Thomas said. They were kept busy in the winter, when the kilns weren't running, with labor in Thomas woodlots, cutting and hauling next year's supply of firewood for the kilns.



Thomas Bros. brickyard workers pose in front of a kiln of brick.

In the spring began the laborious job of digging in the nearby claybanks and then forming the bricks. Then they were piled in the arches of kilns 15 to 25 feet high and more than 100 feet long, which were then plastered over. When a kiln was ready for the big event — burning — the burner was called in.

"He was the top man, everyone looked up to him," Thomas said. "I think burners probably died of premature aging from stress. He was the one who said when to stop burning. It was up

to him whether the brick turned out right, or as yellow clay, or as a solid rock. A lot of money and time was tied up in each kiln and there was no insurance.

"It was a tradition that we started burning at 6 p.m., and that day my father would buy a barrel — a full barrel, not a keg — of beer that would last all during the burning, four to six days," he said. "It was hot, thirsty work pushing fire into the kiln. The men had to stay up all night for days pushing wood into the fire, and when we were kids, 10 or 12 years old, our big treat was to stay up all night once a year with them. We had to go up to the spring — it still flows where the fifth fairway is now — and get pails of ice cold water for the men," he said.

"The men always arranged a scare for us. We'd get to the spring and there'd be a dummy, or a real skeleton, hanging from a tree," he added with a chuckle.

Ten days to two weeks elapsed before the kiln had cooled enough for the burner to take some sample bricks. "I can only remember one time they didn't come out right," Dr. Thomas said. "I don't know how my father retained his composure."

Being a burner was one of the few jobs in the yard that the young Thomas didn't take on before the yard stopped making bricks in 1928. But for many years before that, all the Montague City yards turned out a good "crop" of brick, even when the workers got a day off to see P T. Barnum's Circus when it came to town.

Perhaps the local newspaper writers were the only ones not happy to see "another brick yard . . . added to the beauty of our village."

Only a few of the bricks of Montague City are buried under the fairways of the Thomas Memorial Country Club. The rest of them are still at work in innumerable places across New England. But the bricks are most valuable up the road in Turners Falls, where historic designation is the key to a long-term downtown revitalization plan.

In announcing the establishment of the Turners Falls Historic District this spring, Massachusetts Secretary of State Michael J. Connolly said it "distinguishes the people of Montague who recognize that their older buildings are not merely ornaments of the past, but reusable structures which make their contribution to each generation."

"You can't just say 'Hey, I want a window here,' and knock out a hole in the wall," says builder Larry Shurtz of California, who recently converted a three-story brick building at 105 Second St. to six condominiums. "You got a brick building, it's there."

The sides of the brick building are painted over, but Shurtz only repainted instead of uncovering the brick. Historic district regulations prevent sandblasting, and anyhow, Shurtz says, "Sandblasting is death."

Most speculate that Turners Falls would have much less of its historic buildings around to impress state historic preservation commissioners if the buildings were made of wood or other material rather than brick. "Brick is historically a lot harder to raze," Shurtz says.

Newton architect M. Russell Feldman is a consultant to the town on facade renovation of downtown buildings. "They're nice, bold, simple, and sturdy," he said of the brick buildings along the avenue. He says the elaborate detailing atop the buildings — "corbelled brick cornices" — is a "very nice example" of a regional style.

"They bespeak a certain elegance and commercial success in town at the time," he said. "The brick looks like very high quality. It's standing the test of time very well. I hope they can revitalize along the Avenue. The brick buildings are worth it."



The Thomas brickyard is shown in operation at the turn of the century. In the foreground, a boiler used to produce steam for the brick press. Looking westward downhill toward Montague City Road.

Lillian Fiske of Montague Center graciously provided this article.

Northfield: is mentioned - The Story of Western Massachusetts - Wright - Vol. II
Lewis Historical Pub. Co. 1949

Herbert C. Parsons' *A Puritan Outpost* chapter XIII; Seeking Township

Pg. 109 ¶2

In every household were the big and little spinning wheels, one for wool, the other for flax, and the looms from which were turned out the stout fabric of the men's and the women's wear and the linen that came to be stocked in plenty for current needs and in anticipation for each bridal outfit. Saw-mills were supplying the boards for the houses and barns and the household furnishing. Grist mills were turning the corn into meal and the wheat into coarse flour. The clay bank near the old oak tree at the south end of the street had been dug into and a brick-kiln was burning the brick, with which some of the newer houses were interlined. A malster was supplementing the regular household production of beer. Some apple trees, set out during the second settlement were now bearing, and the cider press was set up at the mill on Mill Brook. Independence in town affairs had its complement in self-reliance in all the features of village living. To complete its resemblance to the more populous towns, Ensign Field had a slave boy, "Caesar."

Orange: is mentioned - 1792-1892 Centennial Gazette 1892 Greenfield, Mass.

Pgs. 146 ¶6 - 147 ¶4 Minerals

During the sixty years from 1780- to 1840, Orange was a farming town. Saw mills, fulling mills, tanneries, blacksmith shops, grist mills, a Brick Yard, a pottery, wagon shops all were found within the limits of the town, but were small, and all were run subsidiary to the farmers.

Minerals: Iron is found, but not in quantities sufficient to pay for working. The prevailing rock is granite, usually too coarse in texture to break well. A fine quality of soapstone is found on Tully Mountain, and has been worked to some extent. A clay bed of unusually fine quality extends for miles up the valley of West Brook. The clay has been used for both bricks and pottery, resulting in the production of goods of superior quality.

Pg. 99 ¶2

Here is a description of the early road extending east to west through the heart of Rowe as it was voted by the town in 1786:

. . . to establish the main road through this Town east and west begins on the east line of the old Myrifiel plot (200 rods west of present town line) at Capt. Benjn Browns southeast corner and David Weer's southeast corner thence running westward between said lots sixty-nine rods thence nearly southwest eleven rods in David Weer's and fifty-four rods in Lieut. Gideon Chapin's land to a large rock and stones on it thence west 45 rods to the summit of a rise of ground on the west side of a small Brook to a pile of stones thence westerly 24 rods to the bridge over a large Brook [Potter] near Gideon Chapin's house and as it is now traveled to the sd house thence in a strait line to the south west corner of Aaron Gleason Junr farm and from thence proceeding as the road is now traveled to the meetinghouse passing between Lieut. John Wells house and Barn runs by the south side of Daniel Coons house and to the bridge North of the claypit thence on the north line of Dr. I W. Claries [Clary's] farm to the pint of a ledge of rocks leaving said ledge on the north side of said road and passing between Nathan Foster Jr. and Jude Fosters Lots to the meetinghouse aforesaid from the meetinghouse southerly on a strait line to the south east corner of Willm Hartwell lot thence Westerly between sd Hartwells and Nathan Wheelers lots to the bridge near the southwest corner of said Hartwells lot thence running west about 10 D north as it is now traveled passing between Phinehas Woods and Michael Wilsons farm and on the north line of Nathaniel Morrills farm from thence between Benjn Shumways and Jonathan Whites farm on the south line of Daniel McAllesters farm and in the same direction to the west line of Lieut. Abner Chapins farme and closes. The above road established four rods in width from end to end.

Many pieces of brick in an area below this road on Pelham Brook indicate the site of the clay pit and brick works.

The road from the Old Centre past the center schoolhouse through the four corners at the junction of Shippee Road and Newell Cross Road was described in 1786 as running *"on the center line of the old Myrifiel plot excepting at a Ledge of rocks."*

Pg. 114 ¶4

At the bottom of Doubleday Brook on the Soapstone Quarry property at Hoosac Tunnel remain large stone foundations, evidence of a mill of some sort. It must have operated around the time that Jesse King owned the property there in the 1790's but no information has been found to date.

On Potter Brook at the foot of *"Tuttle's Flats,"* near the Park Trail, the remains of an old stone dam can be found. On Pelham Brook below Ford Hill Road, the remains of a brick making operation are evident, but again no definite information has emerged on either enterprise.

Sylvester Nash operated a tannery and potash works on the farm at the top of Middletown Hill (#106) on the east side of the house.

Pg. 375 ¶1

December 24, 1821, the Town of Rowe voted to allow the land west of the river to be set off, and February 21, 1822 the Town of Monroe was incorporated, taking the name of President James Monroe. After the Newton Brothers built a narrow gage railroad on the Rowe side from Hoosac Tunnel to Readsboro, James Ramage of Holyoke in 1886 erected a

dam at Monroe Bridge and built a plant for the manufacture of pulp and manila paper, used chiefly for boxes. Operations were begun December 9, 1887. A substantial brick plant later used as a warehouse was built on the Rowe side.

Shelburne: "*History and Tradition of Shelburne, Massachusetts*"
by Citizen Committee - 1958

Pg. 169 ¶1

SUCCESSORS TO OLD FRAME HOUSES IN RURAL SHELBURNE

Chester A. Chapman's House (Mohawk Trail)

Ebenezer Nims, son of Joel and grandson of Reuben, left town at the age of ten, and thirty-four years later, in 1866, returned to Shelburne and purchased from Joshua N. Sweet the present Chester Chapman place about one mile from the Falls.

It is known that Mr. Sweet owned the present house in 1858, which brings its age close to the century mark, and from its construction it appears to have been built about that time.

Ownership changed several times. In succession the families of Charles Sweet, Cyrus Bardwell, Harvey Fiske and George Townsend followed.

Near the river bank there were, a few years ago, signs of a brickyard, which may indicate the trade of the original settler.

The highway ran closer to the river in the early days. Because it is believed the Chapman house is the second one built on higher ground near the new-road, it is mentioned in this history.

Pg. 182, col. 2 ¶3

In the spring of 1833 when Franklin Academy opened its doors, the "whole number of dwellings at the Falls did not exceed twelve." This school was housed in the brick building at 71 Main Street, owned by Mr. Ernest Tudor, and even now known as the Franklin. When built, it was the wonder of the countryside, as it was the tallest building in the county. One guest at the tavern, who got up to see it before breakfast, reported that he became dizzy just from looking at it.



The "Franklin" The first 3-story brick building in Franklin County.

The first principal, Rev. John Alden, Jr., was also pastor of the Baptist Church, and the Baptists, who founded the Academy, used the top floor as a meeting-place until their first church was built in 1836. It was later owned by the Lamsons, then became the site of Shelburne Falls Academy. In 1909 it was bought by Juan C. Wood, who turned it into tenements.

The brick for these early buildings could have been furnished by any of several brickyards. One was on the Buckland Road near Roswell Miller's, one below Gardner Falls, and one on the West Oxbow in East Charlemont run by a Mr. Giles, who sold brick at \$4.00 per thousand.

Note: No other brick yards are mentioned in the book. It will be concluded that the word *several* is all-inclusive for the aforementioned yards. e.g.

Sunderland: is mentioned - *The Story of Western Massachusetts* - Wright
Vol. II Lewis Historical Pub. Co. 1949

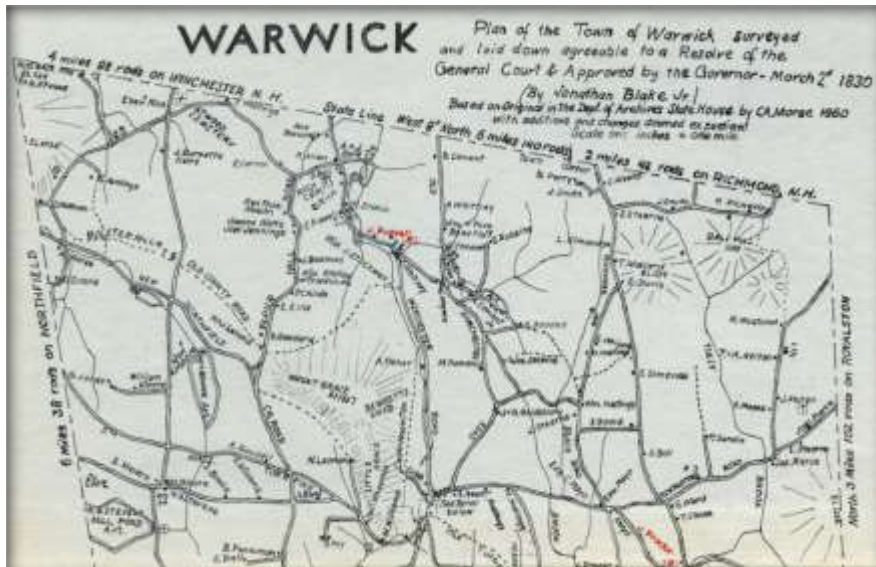
I have examined the *"History of the Town of Sunderland, Massachusetts 1673-1899" by John Montague Smith - 1899; I found no reference to brick-making in the entire book (684 pages).

e.g.

Warwick

Warwick, Massachusetts - Biography of a Town 1763-1963 - Charles A. Morse
Pg. 134 ¶2

Several references are found to show that bricks were made at two places from about 1790 to 1825. One was the brick yard and kiln belonging to Ebenezer Bancroft, who lived on the old Winchester road just north of Kidder brook. It is mentioned in the old District 8 school records as lying north of the old brick schoolhouse.



This truncated map shows the two brickyards that were in Warwick's northern tier prior to 1830. Justus Russell (Ebenezer Bancroft) and Josiah Proctor.

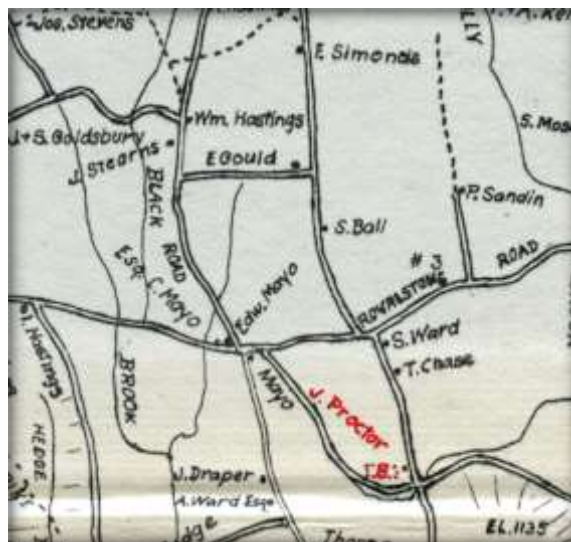
Josiah Proctor, son of old Captain Peter, also had a brick yard a few rods west of where Chase Road meets the Athol road. The Athol road was laid out in 1827 from Mayo's Corners to pass the brick yard and then to follow the brook down the hill, passing Sheomet Pond and continuing on to Athol.

Doubtless these brickyards supplied most of the bricks used in Warwick houses, and when the demand diminished they ceased to be profitable and were abandoned.

Justus Russell (Ebenezer Bancroft) Brickyard.



Josiah Proctor brickyard.



Whately

HISTORY OF THE TOWN OF WHATLEY MASS. 1661-1899 as revised and enlarged by JAMES M. CRAFTS
and . . . * HISTORY OF THE TOWN OF WHATLEY MASS. 1660-1871 by J.H. TEMPLE

PG. 256 ¶2

BRICK MAKING. In 1778, the town voted, "That John Locke have liberty to make brick in the road near the house of Capt. Henry Stiles." Daniel Morton and Lewis Stiles carried on the business from 1782 to about 1795. and then Daniel Morton and Capt. Henry Stiles were in company in 1799. After this Daniel Morton continued the business until 1827. The clay was crushed and mixed by treading with cattle or a horse in a circular pit.

Thomas Crafts and John White made brick together and built two schoolhouses of brick in 1810, one for each of the center districts. Justus Crafts and Chester Wells were probably in company with Capt. Luke Wells, on Capt. Wells' land, near Mill swamp. Oliver Dickinson made brick on the West side of Chestnut Plain road, below the Whites, for several years. About 1832, Levi Bush, Jr., made brick on the south side of the crossroad, I think, about two years, each year a kiln of about 200,000. His foreman was Jehiel Barber. Since then a smaller quantity has been made at the Drain Tile works on James M. Crafts' place, east of the Connecticut River road.

The returns for 1855 show the manufacture to amount to 25,000 bricks, at a value of \$2,500.



John N. White

Sundry references to the subject matter follow.

FINAL REPORT
ON THE
GEOLOGY of MASSACHUSETTS

Volume I

Containing

- I. Economical Geology
- II. Scenographical Geology

By EDWARD HITCHCOCK, LL. D.

PROFESSOR OF CHEMISTRY AND NATURAL HISTORY IN AMHERST COLLEGE:
GEOLOGIST TO THE STATE OF MASSACHUSETTS, ETC.

Amherst: J. S. C. Adams.
Northampton: J. H. Butler
1841

Economical Geology.

13. *Clay for Bricks.*

The clay that has been already described as serviceable in agriculture, is employed almost every where for making bricks. There are but very few towns in the state, and those very mountainous, where this clay does not occur in a state more or less pure. I regard all of it as belonging to the diluvial formation; and it seems to have been deposited in every basin, where the retiring diluvial waters were kept quiet by the surrounding hills. Consequently we find it at very different levels; and having been derived from the rocks in the vicinity of its deposits, its color and composition will somewhat vary. In most instances its color is bluish, passing sometimes to greenish- But in the eastern parts of the state, as at Lowell, Kingston, Sandwich, &c. its color is nearly white; though I am not without strong suspicion that most of the clay in Plymouth and Barnstable counties belongs to an older deposit, whose type exists on Martha's Vineyard, and which I do not include in the diluvial clays that are described above.

Nearly all the clays in Massachusetts, except the white clay of Duke's County, contain a large per cent, of iron in the state of protoxide. When exposed to strong heat, this passes to the state of peroxide, or the red oxide; and this is the reason why all the bricks made in Massachusetts are red. In some parts of the world bricks are made of clay destitute of iron, and these when burnt, are white, or nearly so. These are denominated fire bricks, because they will endure so powerful a heat without vitrification. The same clay is employed for pipes and white earthen ware; and the most delicate variety is used for the manufacture of porcelain. Very little clay in Massachusetts, except the white variety on Martha's Vineyard, will answer even for fire bricks; because it nearly all contains iron. The non-ferruginous clay of Martha's Vineyard, however, is quite abundant- I give below its analysis, as well as that of a specimen from an excavation in granite, made a few years ago, a mile northwest of the meeting house in Norwich; where is a vein of blende. The feldspar of the granite is more or less decomposed; and if the quantity is large enough, it will doubtless answer well for the purposes above named; even for porcelain; as its composition corresponds essentially with that of European porcelain clays. In neither of the specimens could I detect a trace of iron: but I selected those, which were apparently most pure.

	(No. 145.) Norwich Clay.	(No. 144.) Gay Head Clay.
Water,	8.00	9.00
Silica,	53.40	62.26
Alumina,	36.26	29.31
Lime,	0.24	0.18
Magnesia,	0.68	0.45
Manganese,	0.20	0.15
Loss,	<u>1.22</u>	<u>Excess—1.35</u>
	100.	100.

Since it is not every white clay that is destitute of iron, as an examination of Nos. 142, 143, will show; it may be well to mention an easy method of determining whether a clay contains iron in the state of protoxide. If it does, it will become yellow, or red, when exposed to a strong heat; but if it does not, its white color will remain.

1906 - Montague City Business Directory

MONTAGUE CITY

BRICK MFRS.

Burnham, A. C. & F. G., Montague City rd
New England Brick Co., Main
Thomas Bros., Montague City rd



BUILDERS and CONTRACTORS

Thomas, James H., Montague City rd

COAL and WOOD

Fitzgerald, Thomas F.

FISHING ROD MFR.

Montague City Rod Co.

FURNITURE and UNDERTAKERS

Burnham, W. E. & W. A.

HOSPITAL

Farren Memorial Hospital

JUSTICE Of The PEACE

Schuler, C. W.



F.Y.I.

TFHS Superintendent of Schools from 1915-16 . . . Francis S. Brick

Brick Making

Source: http://oldworldbricks.com/history_local_brick_making.php

At the turn of the century, there were five steps to making bricks. This process created the timeless coloring in our brick and made them strong as steel - impervious to weather.

The first step is **MINING** the clay.

The steam shovel was not invented until 1879 so early brick makers dug for the clay on site with hand shovels. This was done in the fall. The early brick maker chose his clay by its color and texture and based on his experience. He sought clay that was located just under the topsoil to minimize the hard work of digging it with hand spades. The clay was exposed to the weather so that the freeze-thaw cycle of the winter could break the clay down and allow it to be worked by hand. The winter made the clay soft and removed unwanted oxides.



The second step is **PREPARATION** of the clay.

In the spring, the clay was then able to be worked by hand. It was necessary to either grind the clay into a powder and screen it to remove stones or the clay was placed into a soaking pit where it was mixed with water to obtain the right consistency for moulding. It was kneaded with the hands and feet to mix all the elements of the clay together. This step was called tempering or pugging and was the hardest work of all. In the mid-1800's horse driven pug mills were invented.

The clay was removed from the soaking pit or pug mill by a temperer who delivered it to the moulding table.

The third step is **MOULDING**.

The assistant brick moulder was called the "clot" moulder and he would prepare a lump of clay and give it to the brick moulder. The brick moulder was the key to the operation and he was the head of the team. He would stand at the moulding table for twelve to fourteen hours a day and with the help of his assistants could make 3500 to 5000 bricks in a day. He would take the clot of clay, roll it in sand and "dash" it into the sanded mould. The clay was pressed into the mould with the hands and the excess clay removed from the top of the mould with a strike, which was a flat stick that had been soaking in water. This excess clay was returned to the clot moulder to be reformed. Sand was used to prevent the clay from sticking to the mould.

Single, double, four or six brick moulds were used. The single brick mould had an advantage in that a child could carry it to the drying area. Beechwood was the preferred material for the mould for it was claimed that the clay would not stick to it.

The top of the mould was laminated with iron to prevent wear. The brick slid easily out of the mould because it was sanded and these bricks are referred to as “sand struck bricks”. The process was also referred to as slop moulding.

The next person on the team was called an off-bearer. He would walk up to the moulding table, remove the filled mould and take it to a drying area on a pallet or barrow where it would be placed on a level bed of sand. He would then return the mould to the table and wet and sand it to receive the next brick.

The fourth step is **DRYING**

The moulded bricks were stacked in a herring bone pattern to dry in the air and the sun. The moulded bricks were first left to dry for two days at which time they were turned over to facilitate uniform drying and prevent warping. During this time tools called dressers or clappers were used by “edgers” to straighten the bricks and obtain a smooth surface. After four days of dry hot weather the bricks were sufficiently hard to allow them to be stacked in a herringbone pattern with a finger’s width between them to allow further drying. This area was called a hack or a hackstead and the bricks were covered under roof or with straw to protect them from the rain or harsh sun. After two weeks the bricks were ready to be burned.

The fifth step is **BURNING**

If fired bricks were on hand, they were used to construct the outer walls of the kiln and the surface was daubed with mud to contain the heat. If no fired bricks were available, the kiln was constructed entirely of green or raw bricks which were stacked in such a way as to act as their own kiln. These kilns were called clamps or scove kilns. Wood and coal were used for fuel.

Even after drying in air the green bricks contained 9-15% water. For this reason the fires were kept low for 24-48 hours to finish the drying process and during this time steam could be seen coming from the top of the kiln. This was called “water smoke”. Once the gases cleared this was the sign to increase the intensity of the fires. If it was done too soon the steam created in the bricks would cause them to explode. Intense fires were maintained in the fire holes around the clock for a week until temperatures of 1800 degrees F were reached. The knowledge and experience of the brickmaker dictated when the fireholes would be bricked over and the heat was allowed to slowly dissipate over another week.



When the kiln was disassembled the sorting process began. If only raw bricks were used, the bricks from the outermost walls were kept to be burned again in the next kiln. Some bricks which were closest to the fire received a natural wood ash glaze from the sand that fell into the fires and became vaporized and deposited on the bricks. These bricks were used in the interior courses of the walls. Bricks that became severely over-burned and cracked or warped were called clinkers and were occasionally used for garden walls or garden paths.

The best bricks were chosen for use on the exterior walls of the building. Those that were only slightly underfired had a salmon color and early bricklayers knew that the porosity of these bricks would help to insulate the structure and they were placed on the innermost courses of the wall.



Thursday, August 19, 2010.

A prearranged trip to Brattleboro, Vermont is underway by myself and Peter S. Miller, to pay a visit to Kit Berry, who conceived, and is archivist for;

— THE EPHEMERA ARCHIVE FOR AMERICAN STUDIES —

which is located on the second deck of the southern side at the old Cotton Mill on Cotton Mill Hill Road in that town. Kit has assembled a vast archive of ephemeral items relating to the title of his endeavor.

Our initial purpose for the visit is to access, scan, and digitize any and all information located in his annals pertaining to the brick-making industry in Franklin County, Massachusetts.

Kit's an amiable man and he graciously allowed us to attain our goal. Under his aegis, we were able to acquire several cabinet cards, stereopticon images and some business card type ephemera.

We spent two hours there digitizing his offerings and upon completion, conversed on a plethora of historical related topics.

Selected images from Kit's archive appear in my work on

— The BRICK-MAKERS of FRANKLIN COUNTY, Massachusetts —

Ed Gregory

AN INTERESTING TAKE ON ANCIENT AND REMOTE HOME-SITES AND FARM STRUCTURES THAT USED BRICK IN THEIR CONSTRUCTION.

During the early months of 2012 I've had the opportunity to participate in an archaeological dig on out-of-the-way private property in Whately, Massachusetts. The instruments utilized for the search of artifacts are metal detectors, pitch forks, shovels, a rocker box and good old *down-on-ye-knees* hand-shoveling. Thus far the site has produced a variety of pottery shards, hand-cut nails, an artesian well, a Dung Beetle Ball and bricks.

This site is touted to be an 18th century homesite, albeit we've unearthed only mundane artifacts . . . the search continues.

Additionally, I'm engaged in photographing the remains of a number of late 18th, and early 19th century home and farm structures on Catamount Mountain in Colrain, Massachusetts, for the Colrain Historical Society and the Griswold Library.

On Wednesday, April 11, 2012, I was guided around the Catamount forest by Muriel Russell of Colrain. Muriel is affiliated with the aforementioned organizations and is a wealth of knowledge pertaining to the hilltown area of Franklin County, with concerted knowledge of the Town of Colrain.

Our 5-mile trek across the mountain was on a largely nature-recovered 18th century main road from Charlemont to Colrain. The road now serves as a channel for hikers and mountain bikers. Numerous crossroads and ancillary trails are present throughout the mountain forest.

Muriel pointed-out nine stone foundation sites of early settlers' homes, barns, storage areas and one site where a clever man used the sizeable outcrop of the common rock, gneiss, to serve as the western wall of his crude dwelling.

At nearly all the sites, a common construction component is present . . . the brick.

I wondered to myself if the bricks were imported from a common brickyard in Colrain or possibly Greenfield, or, is each settler making their own bricks as needed.

Muriel surmises that a traveling brick "hawker" may have been the source for the bricks utilized by the settlers. She relates this assumption.

"I think settlers would contact this brick-maker and have him visit their site to make the bricks. The "hawker" would ask the settler if he had an ample clay supply within a reasonable distance of their site. If so, the man would travel there with his ox-driven cart laden with the necessary tools of his trade. For whatever time it took to make the necessary amount of bricks, this man would live with the settlers. For that time, room and board would be considered as a portion of the payment made to the brick-maker as he plied his trade."

Maybe so . . . maybe no. However the bricks arrived at the different site locations will remain a matter of contention.

Gleaned from:

APPLETON'S CYCLOPEDIA of APPLIED MECHANICS; MODERN MECHANISM
New York; D. Appleton and Company 1892

Pgs. 90-100

BRICK-MACHINES.

Three classes of machines for the manufacture of bricks, tiles, etc., may be distinguished:

1. Soft-clay or sand-molding machines.

The clay is taken from the bank, mixed with water, and thoroughly tempered in the machine, and pressed into molds, which are then taken from the machine, and the brick spread on the yard to dry, or put on pallets and dried in racks or artificial driers.

2. Die-working machines, making brick from tempered clay stiff enough to allow hacking direct from the machine. The clay is ground and tempered by the machine, and is pressed out through a die in the form of a bar. It is then cut into brick of the desired size by means of strong steel wires. Die-working machines may be divided into two sub-classes: (a) Auger machines, in which the clay is continuously moved out by means of a rotating auger; and (b) plunging machines, in which the clay is pressed out by the reciprocating motion of a plunger.

3. Dry-clay machines, which make brick from finely pulverized dry clay. This last type of machine is adapted to a comparatively small proportion of clays, and is best suited for the manufacture of pressed brick for the fronts of buildings.

As to the relative merits of the various processes of brick-making, opinions differ widely.

The adherents of the soft-clay process claim that the so-called "soft-mud" brick are not liable to crack or warp in drying, or check in burning; that they are cut easily with the trowel; that the sand surface forms an excellent ground for mortar; that all portions of the brick are equally dense, not having an external shell that is extremely hard and liable to flake off, leaving the porous interior to waste away. It is also claimed that they are much less difficult to burn, and, when well made and burned, if of good material, have no superior for strength and durability. Against the stiff-mud or wire-cut machines, the soft-clay adherents urge that the brick produced by them needs repressing; that they are not usually square, and that the ends are more or less ragged. It is also insisted that the clay being forced through dies stiff enough to handle at once, the center of the stream or column moves faster than its surface, and arranges itself in layers or laminations, making the brick very unsuitable for cutting by the mason, and liable to flake.

As against the dry-clay process, it is claimed that it is not possible to construct a dry-clay machine that will exert the tremendous pressure necessary to be continually given, and last for any reasonable length of time, without making it both clumsy and expensive; that there is no uniformity in density in the product, and that, after baking, the products become open and weak. The advantages claimed for the tempered-clay machines are, that they mix and temper the clay with water as they use it, without any additional handling, or without previously drying, rolling, or any other preparation whatever for ordinary clays, taking them just as furnished by Nature.

The machines first, after tempering the clay, form it into a parallel-sided bar of the proper width and thickness for a brick, sand the surface, cut this bar in uniform lengths, and then deliver the bricks so molded and sanded in a condition sufficiently stiff to be immediately wheeled and hacked in the shade or on the drying-car.

The adherents of the stiff-clay machine claim that their apparatus does everything between dumping the clay into it and making the bricks ready to hack. The bricks, therefore, do not require to be sun-dried, and hence it is asserted that yards using such machines may run five or six weeks longer in a year than those using soft-clay molding-machines. It is pointed out that, if the soft machine-made or hand-made bricks be not dried enough to hack, in case of sudden rainy weather, they must necessarily be lost or damaged. The advantages and disadvantages of the different types of apparatus will be found fully set forth in the trade publications of the various brick-machine manufacturers, and need not further be discussed here.

There have been great improvements made not merely in the construction of brick-machines during the last ten years, but also in their workmanship. A leading manufacturer claims that it is "wholly a mistaken opinion that, because clay-working machinery must work in mud and grit, it should be rough and coarse," and maintains that the details of such machinery should be "as thoroughly studied, and the design as carefully worked into shape, as though it were a Waltham watch or a Corliss engine. Though it may seem useless refinement to work to templates with so much exactness on machinery that is to be covered with grease and dirt, and be exposed more or less to the weather and all kinds of rough handling, yet it is decided economy, durability, and freedom from expensive delays, to justify this care and expense."

The " New Haven " Horizontal Steam-Power Brick-Machine (Fig. 1).—This is an example of a soft-clay or "pallet-mud" machine. It is provided with a horizontal pug-mill, with a vertical pressing mechanism attached to the front, into which press-box the clay is forced by feed-wings on the tempering-shaft. The mold-ejecting carriage rolls on a mold-table (under machine), and is operated from a hinge press-gear by means of lever and connection shown on side of the machine. There are numerous features in the construction of this machine which are worthy of notice. The tempering-box has frame timbers, 8 in. X 8 in., strongly framed together, and is bound by three rods on each side, reaching from end to end. Vertical rods also bind it from top to bottom. At the front end, where the weight and strain are greatest, it is secured with strong iron braces and rodded in proportion.

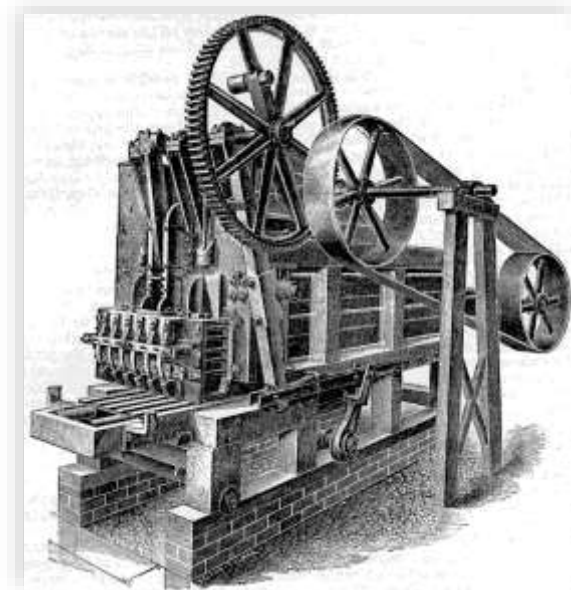


Fig.1 The New Haven Brick Machine

The bottom planks and side planks are removable. The rear end is a heavily ribbed casting, weighing 780 lbs., and is strong enough to stand any amount of back pressure that may be exerted at this point by the tempering-shaft.

The lower front casting of the tempering-box weighs 790 lbs., is heavily ribbed on the inside, and has a babbitted bearing for the front end of the tempering-shaft cast on, with suitable oil-pipe cast in, reaching to the top. Immediately above is an upper front casting, which supports the steel crank-shaft, and which is held firmly in place by two side-braces, and is securely held down against, upward pressure of the press by heavy rods on each side of the crank. The tempering-shaft is 4 in. sq., with a heavy steel collar shrunk on at the shoulder next to rear-bearing, to give a large back pressure-wearing surface. On the rear end of the shaft is a heavy bevel gear, 3 ft. 10 in. diameter, 6 in. face, which is driven by a clutch pinion on main shaft. These gears have only to drive the tempering-shaft as the press is driven by pulleys.

As many flat or pitched tempering-knives and feed-wings can be attached to this shaft as are needed to properly temper the clay and feed the press. The press-box is 33 in. X 9½ in. inside. The surfaces are planed and lined with steel plates. It will be noticed that the steel cross-head attached to the pitman, and which moves perpendicularly in the plunger standard, exerts its pressure squarely on a broad steel press-plate that fits in the pressure-adjusting notches. The effect of this arrangement is to assure a firm, square movement of the plunger downward, and prevents liability to tilt and bring extra strain and wear out the guides. The pressing surface of the cross-head is 4 in. X 4½ in. The stroke of the plunger can be regulated by inches, from 3½ in. to 10½ in., full stroke, and pressure remains on while the mold is being delivered; or, by removing the press-plate, all pressing is stopped while the machine still runs. That amount of adjustment should be enough to accommodate any degree of tempered clay. The means of relief in cases of stones or other obstructions consist in doors, shown in front of the press, which are held in place by springs, so adjusted that if an obstruction projects from any single brick that door will fly open and allow it to pass out, leaving the remaining five bricks in the mold perfect, or if the obstruction covers more than one brick it will open two or more doors and pass out. This arrangement prevents breakage and wear and tear on the molds.

On the side of the machine just above the grip connection is a dash-pot with its plunger connected with the ejector-lever, which forms an air-cushion, to prevent jar on the return stroke. The mold-table is held in position by four large steel screws that work in heavy iron cross-beams. The ejector-carriage is of iron, with wood buffer strip on the front to protect the molds from wear. Its four rollers run on an iron track on table. The carriage has a quick return motion, which allows plenty of time to insert the molds. Weight of machine, complete, is about 14,300 lbs., or a little more than 7 tons. In point of capacity, the machine is usually geared to make 13 molds per minute, which is 4,080 bricks per hour. For an output of 13 molds per minute the main driving shaft should run about 150 revolutions per minute. With stiff clay the power required for this output is about 25 horse. To produce 40,000 bricks per day requires a force of nine men and four boys.

The Chambers Brick-Machine (Fig. 2), manufactured by Messrs. Chambers Bro. & Co., of Philadelphia, Pa., is an example of an auger-class of stiff-clay machine. The clay is taken direct from the bank and dumped on the platform covering the machine at the side of a galvanized iron hopper that leads into the tempering-case of the machine, and mixed, when necessary, with loam, sand, or coal-dust; and the requisite amount of water being added to temper the clay to the proper consistency, the mass is shoveled into the hopper and falls into the machine.

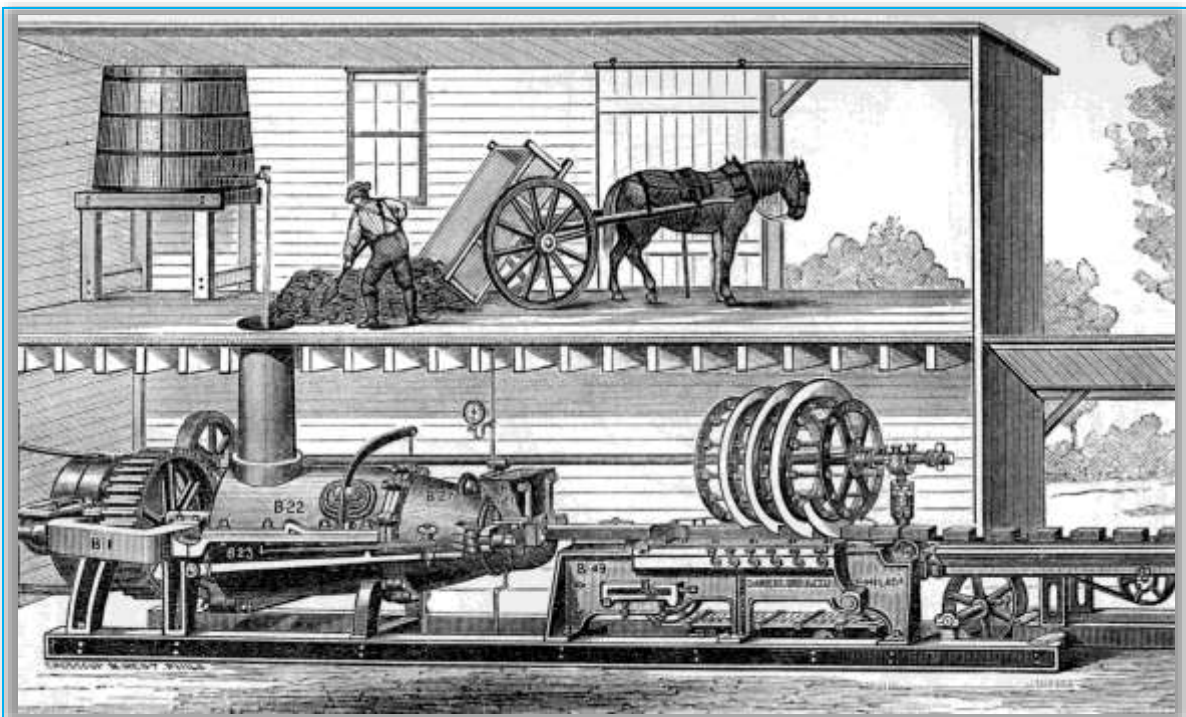


Figure 2

The Chambers Brick Machine

The hopper of the brick-machine proper is square, with circular corners, to prevent the clay from sticking in the corners, and is larger at the bottom than at the top, to prevent jamming of the mass. It enters the tempering-case at one side of its center line, so that the clay in falling meets the revolving tempering-knives as they are coining up. This keeps up an agitation of the clay in the hopper, and tends to prevent clogging and an irregular supply of clay to the tempering device. A small cast-iron roller is situated at the bottom of the hopper, and just above the line of tempering-knives and at the side toward which the knives move. Against this roller the clay is thrust by the tempering-knives as they cut through the solid mass of fine clay and lumps, and on to which the clay adheres: but as this roller turns around, say once in a minute, the impinged clay is carried within the path of the knives, and is carried off by them and tempered, thus effectually clearing the throat of the hopper.

The tempering portion of the machine consists of a cast-iron conical case, in which revolves a horizontal shaft into which are set spirally, strong tempering-knives so that, as they pass through the clay, they move it forward. The clay being stiff, and not having much water on it, is not liable to slip before the knives, but is cut through and through, and thoroughly tempered, the air escaping back through the untempered clay, so that by the time the clay reaches the small end of the tempering-case it is ready to be formed into bricks.

On the end of the tempering-shaft is secured a conical screw of hard iron, which revolves in a hard-iron conical case, the inside of which is ribbed or fluted lengthwise, so as to prevent the clay from revolving in it, and is hard, to prevent wearing. The screw being smooth and very hard, the clay slides on it, thus becoming, as it were, a nut; the screw revolving and not being allowed to move backward, the clay must go forward, sliding within the screw-case.

This operation further tempers the clay, and delivers it in a solid round column to the forming-die, which (Fig. 3) is held within the steam-heated former-case. The great difficulty experienced in machines expressing plastic materials has been to make the flowing mass move with uniform velocity through all its parts. As the channel of a river flows faster than the shallow portions, or those near the banks, so does clay move through a die, the friction of the corners holding them back, while the center moves more freely.

In the present machine this difficulty is overcome by the peculiar "former," which is so shaped as to facilitate the flow of the clay to the corners, and retard it opposite to the straight sides of the die, the projections being much larger opposite the larger diameter of the die (Fig. 3). For very wide and thin bricks the resisting projection is omitted wholly at the short diameter of the die, or at the edge of the bricks, the spreading of the clay outward to the edge, rather than into the corners only, being facilitated. By this means the angles of the bar of clay are re-enforced and made very solid and sharp, thus insuring square and well-defined corners to the bricks. The "former" is secured to the screw-case by a hinge and swinging bolt, so that it may be quickly swung open for the removal of stones.

This swinging bolt is secured to the case by a pin of just sufficient strength to hold

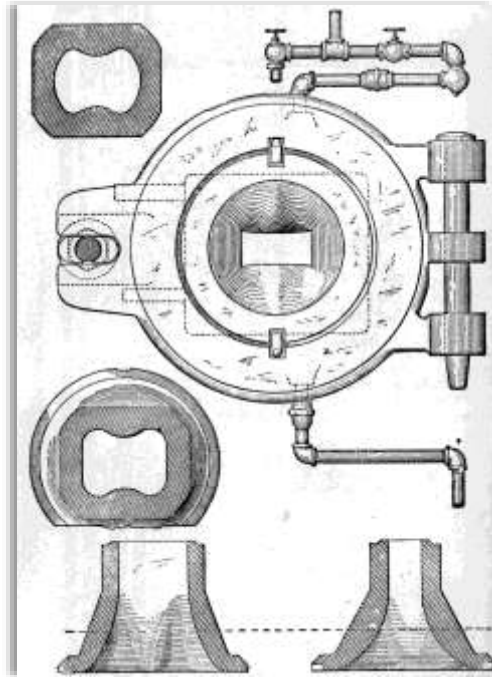


Figure 3. Chambers Brick Machine -

under normal conditions, and when undue strain comes from hard clay, etc., it yields, thus forming a safeguard against accidents arising from improper feeding.

As the bar of clay issues from the forming-die it passes through a small chamber filled with fine, dry sand, which adheres to the surface of the bricks. The surplus sand is kept back in the chamber by swinging elastic scrapers, which allow the bar to escape with its adhering sand. This sanded surface of the clay bar prevents the bricks from sticking together on the barrows or in the hacks, or on the drying-cars, and improves them in color when burnt. All clay has more or less stones in it, and as it is impracticable to pick them all out there is a necessity of making some provision for their removal. If a stone is more than 3 in. in diameter, and does not lodge in the stationary lining of clay in the case, it will lodge at the entrance to the expressing screw, preventing the clay from issuing at the die, when a safety valve is forced open, through which the stone may readily be removed.

If a stone of less diameter than the mouth of the screw passes to that point, it will go through the screw, the openings between the threads being less at the entrance than at any other point; so that a stone that once fairly enters cannot lodge until it has reached the forming-die, where it will lodge if it is larger than a brick is thick, and prevent the proper flow of clay,

causing the bar to split in two, or only part of the bar to issue; this forming-die being secured on hinges, it can be swung open and the stone knocked out, when the die is closed and the machine again started.

Should an undue pressure be brought upon the machine from a stone lodging in the die, or the clay being too sandy or too stiff, there is a safety-pin holding the eye-bolt that secures the "former," which is cut off by the strain and the former opens, thus instantly and automatically relieving the machine.

The bricks cut from the continuous bar are separated and carried by an endless belt any desired distance, sometimes 200 ft, across the yard, from which the bricks may be wheeled to any point most convenient for "hacking," or loaded directly upon the drier-cars, as may be required.

The Spiral Out-off (Fig. 4), employed in the Chamber's machine, is a thin blade of tempered steel, secured to the periphery of a drum, in the form of a spiral, the distance between the blades of which is that required for the length of a brick, and the projection of which gradually increases from nothing at its first end to the full width of the widest brick to be cut. This spiral knife runs perpendicularly in openings in the links of an endless chain, supported upon rollers, the chain being so formed as to support the bar of clay from the bottom and one edge; the clay is thus fully supported while being slowly cut off by the long drawing cut of the spiral blades in passing through the openings in the chain. The distance between the spiral blades being uniform, the lengths of the bricks are uniform. The ends of the bricks are cut smooth and square. The speed is controlled by that of the clay itself; hence, no matter how irregular the flow of clay from the die, the spiral runs in exact unison

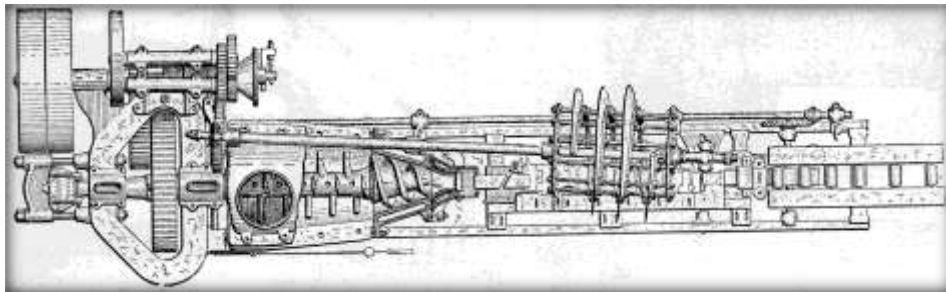


Figure 4

The Chambers Brick Machine

therewith, consequently the uniformity in the length of the bricks. This controlling of the speed of the spiral by the clay is so positive that it will run at any speed, from 3 to 100 bricks per minute, while the machine runs at its regular speed. In order that the spiral knife may not be affected by stones, the shaft to which it is secured is held in position by gravity and counterweighted, so as to adjust it with just sufficient force to compel the knife to pass through the bar of clay. When the knife comes in contact with any hard foreign substance, as stones, brickbats, or bones, it rides up on the obstruction, and, when passed, falls by gravity to its original position.

The Penfield Plunger Brick-Machine, (Fig. 5), manufactured by Messrs. J. W. Penfield & Son, Willoughby, Ohio, is an example of the plunger type of stiff-clay machine. The clay is fed into the drum or tempering-cylinder, in the center of which is a shaft filled with blades, which grind the clay and force it through a port-hole into the pressing chamber.

A plunger device then presses the clay through the die, and on to the cut-off table. It is then cut into bricks by means of a suitable cutter-frame, strung with wires and operated by hand. The mechanical device used to propel the plunger is a steel cam, placed on the main shaft between the upper and lower bed-plates. It operates the rollers at the front and rear ends of a sliding frame to which the plunger is attached, giving it alternately a forward and backward motion at each revolution of the shaft. The machines are made either single or double workers—one cam doing the work in either case. The main shaft, cam, and friction roller are of steel, and the machines are built with proportionate strength throughout. In this machine, as in that last described, the clay is tempered and molded stiff enough to allow immediate hacking of the brick. Fig. 5 represents a Penfield machine capable of turning out 40,000 bricks per 10 hours, and having the following dimensions:

Height of machine, 9 ft. 8 in.; length of sills, 6 ft.; width from out to out of sills, 3 ft. 10 in.; extreme width, 6 ft. 6 in.; capacity, 40,000 bricks per 10 hours; estimated weight, 12,000 lbs.; speed of pulley-shaft, about 145 revolutions per minute; pulleys, 4.2 in. diameter, 10 in. face; machine is back-gearred 42 to 1.

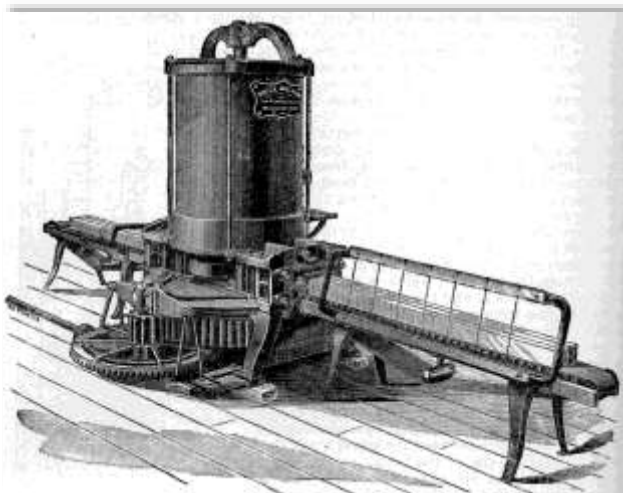


Figure 5 The Penfield Brick Machine

By a change of die in this machine, all shapes and sizes of bricks, especially those of ornamental patterns, can be made. The construction and arrangement of the die, therefore, form a novel and important feature. The back or forming die receives and forms a bar of clay with rounded corners. The clay bar then passes through the finishing die, which is slightly square-cornered, and by means of this "slicker" and the process of lubrication the bar is finished and given corners accurately shaped. The lubrication is effected by water, by steam, or by both. For water

lubrication the finishing die is set a short distance ahead of the back die, and water (or oil) is allowed to flow between the two dies and upon the clay bar.

For steam lubrication the finishing and forming dies are bolted tightly together and packed. Steam is then supplied directly from the boiler to the clay bar. In cases where both water and steam lubrication are desired, two slickers or finishing dies are used, the one next to the forming die being arranged for steam connection, and the front slicker being water lubricating, each being operated respectively as already explained. Good results have also been obtained with a so-called "brass scale finishing" die in which the outer part of the slicker is an iron casting, into which is fitted a wooden lining, which in turn is lined with strips of spring brass. This slicker is provided with a large number of channels, conducting the water or steam from the outside of the slicker to the brass scales, thus lubricating the bar of clay effectively as it passes through the die. In still another form of die each corner of the bar of clay is lubricated separately, and by means of a brass plug at each corner the flow of steam can be regulated or entirely shut off from any one or more corners at any time desired.

Thus, if one corner of the die becomes clogged, so that the steam does not reach the corner of the bar of clay, causing it to ruffle or tear, the steam can be shut off from the other three corners. This will allow the full head of steam to reach the corner which is clogged, blowing out the obstruction.

Brick-Repressing Machines.—Up to within a few years, the process of making ornamental bricks, tiles, etc., was carried on entirely by hand, requiring skilled labor, and producing but a few pieces of work per day. An example of a repressing hand-press, which will produce designs of the most complicated pattern, and manufactured by Messrs. C. W. Raymond & Co., of Dayton, Ohio, is given in Fig. 6. The dies, which are supported upon the fixed standard above, are made of finished brass ; and as one die can easily be changed for another, the range of patterns possible is endless. The clay is first struck out by a machine, or molded by hand, in order to insure proper tempering and to get the requisite amount in block. After partial drying, it is put in the press, when a single stroke of the lever causes it to be molded into the desired form. As many as 2,000 blocks per hour can be made on a single press of this description.



Figure 6 Hand-brick repressing machine

The large demand made by architects for ornamental brick for embellishment of the exterior of buildings has resulted in the construction of an automatic-power brick-repressing machine, which is constructed by the same manufacturer, and which is illustrated in Fig. 7. Here the brick, after being struck out by hand or machine, and allowed properly to dry, are placed on the feeding-table by an attendant, or run indirect from the off-bearing belt.

They are then taken, by the mechanism of the press, fed into the die automatically, where they are subject to great and uniform pressure, which imparts to them sharp and well-defined corners and edges, after which they are discharged from the press automatically upon the endless vibrating-belt in a finished and perfect condition. Thence they are placed upon barrows or trucks by an off-bearer. Two men, or rather two boys, are required to operate it.

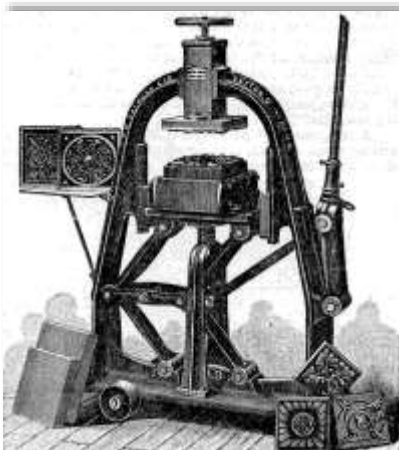


Figure 7 Power-brick repressing machine

The capacity of this machine is from 10,000 to 12,000 bricks per day. Not merely are brick-repressing machines adapted to the production of ornamental bricks, but it, is fast becoming the practice to repress all brick used for paving purposes. It is claimed that paving bricks so repressed will not flake or laminate, nor crack by the contact of horses' feet. They may be made of any shape, and so as to present a uniform and smooth surface, and as a roadway, while their greater density causes them to absorb less fluids and gases.

Messrs. Chambers Bro. & Co. give the following method of making pressed bricks, using their machine.

"To manufacture press bricks by our machine, we put on a die that will mold the bricks sufficiently narrow to drop into the mold of the press, and thick enough to make a press brick of the proper size. This can be done in five minutes. Then we use a very fine sand, largely impregnated with iron, baked dry and sieved, which is put into the sanding-machine, which coats the sides and edges of the brick all over, thus making a veneering of fine iron-ore and sand on their faces.



Figure 8 Handling bricks

These bricks are taken from the machine in the usual manner, loaded carefully on barrows designed for the purpose with their heads all even, then their heads are rubbed with sand also (Fig. 8). Now they are wheeled to the "press-shed," where they are "hacked" close; that is, so as to prevent the air from passing between them, thereby keeping them at about the same consistency as when they were made, which is just right for repressing. From this close hack the bricks are taken and repressed in the usual manner; or, if a sufficient number of presses be used, or the machine runs slow, they may be taken and pressed direct from the barrows. This repressing brings the bricks to a mathematical precision as regards their size, surfaces, and angles, the flat or largest surface of the bricks being concave, for the purpose of allowing the edges to come close, so as to show a very thin joint when laid. We do not think the "skin" on the press-bricks molded in our machines usually so good as those molded in sand by hand; but where the clay gives "color," and not the molding sand, then the best color is obtained by repressing our machine-bricks direct from the machine.

Arrangement of Brick-Yard Machinery.—Fig. 9 represents a ground-plan, showing the arrangement of pits, single-worker machine, boiler and engine, etc. This plan is made to show the arrangement of pits and machines, where crusher and elevator are used, or where it is found desirable to simply use the elevator. *A* represents the machine placed midway between the pits *B* and *C*. The pits are 12 ft. long and 20 ft. deep. The clay-crushers are placed between the two pits, and about half-way back. By this arrangement the clay is always reasonably convenient to the clay-crusher, and one pit can be tilled and soaked while the

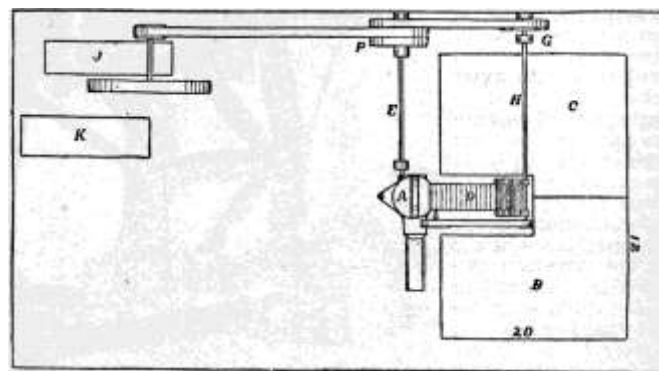


Figure 9 Brickyard plan

other pit is being run into brick. This is by far the best plan upon which to operate the machine.

The machine does not in this case require moving, and the clay can be much more thoroughly soaked, and fed into the crusher with less labor and expense than it can be thrown into the machine. One man can feed the crusher as easily as two can feed the machine.

Where a crusher is not used, an elevator, represented by *D*, is arranged to run over the partition between the pits. As the pits are 12 ft. wide and 20 ft. long, the shovelers are never at a great distance from the carrier, and the saving of one man's labor can be effected by this arrangement, which will pay for an elevator, or even a crusher, in a very short time. *E* represents the tumbling-rod which transmits the power to the machine. At *P* the pulleys are placed, which receive the belts from the engine *J*. *K* represents the boiler, and *G* the crusher pulley. *H* represents the pulley-shaft to the crushers. These pits, boiler and engine, etc., can all be covered by a shed, 30 X 50 ft. Where parties do not use the elevator, it is found desirable to make the pits, instead of 12 ft. wide and 20 ft. long, 20 ft. wide and 12 ft. long. In this case the machine is placed in the center of each pit, and moved from one to the other. This is to facilitate getting clay to the machine, as in no case will the clay be at a greater distance than 12 ft. from the machine.

Drying Bricks.—Fig. 10 represents Chambers Bro. & Co.'s artificial drier. This drier consists of six or more brick flues, about 40 ft. long, 3½ ft. wide, and 4 ft. high, built of bricks, with a railroad track through each, slightly descending from the machine, with fire-grates and doors at the lower end and a stack at the upper end. From the grates, upon which coal, coke, or wood is burned, the results of combustion are conveyed along in a flue under the bottom of the track to near the stack end, and are allowed to escape there from gradually, through perforations or slots, up, under, through, and between the bricks on the

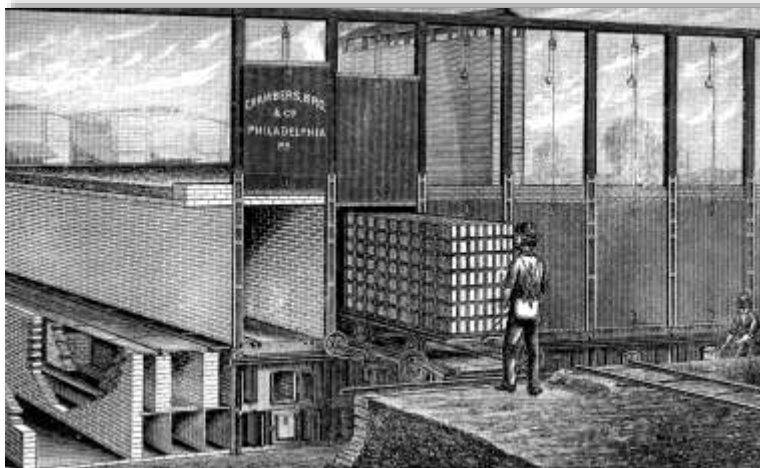


Figure 10 The Chambers brick dryer

iron cars. For each tunnel there are two chambers for the admission of air, one on either side of the grate compartment, which enter the conveying-flue just back of the grate surface. In addition to the gases from combustion, a large amount of air is admitted over and at the sides of the furnace into the flue, which becomes heated, and, when distributed through the bricks by the adjustable flue, takes up the moisture from the bricks and carries it off through the stack. The proportion of air to the results of combustion is regulated by swinging dampers, while the draft of the fire is under independent control by the ash-pit doors.

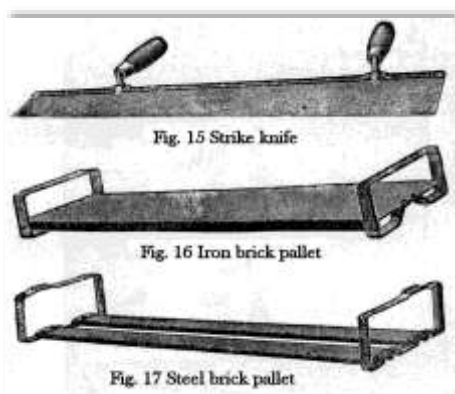
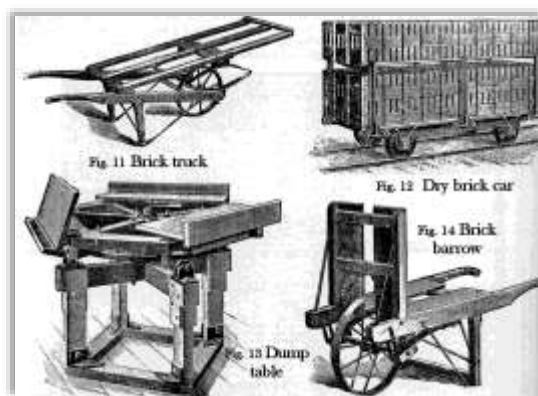
The bodies of the cars used with this drier are made of wrought channel-iron, a rigid open framework, on which the pallets are piled. A boy can transport 504 bricks on one of them.

The "pallets" consist of two strips of wrought channel-iron secured at either end to a handle whose height is greater than the width of the brick. These handles are so constructed that when the pallets are piled one on top of the other, they are securely interlocked. At each end of the flues is a transfer or switching car, which transfers the loaded cars from a single track, running from the machine, on to any one of the six running into the flues; and in like manner from any one of the six flues to the track running to the kilns.

The loaded cars are transferred into any one of the kilns by means of transfer-cars, and the empty ones returned to the machine by a return track, outside of the flues. Each car, with its load of sixty-three pallets, is brought to the side of the brick-machine. One man transfers the empty pallets from the car to the "pallet-carrier," which carries them along parallel with the off-bearing belt, and close to it, at a convenient speed, to enable the "off-bearers" to hack the bricks upon the pallets. The motion of the pallet-carrier is continuous, and when a pallet has received its quota of eight bricks it reaches a point opposite an empty drying-car. Here one or more men, as the capacity of the machine may require, lift the loaded pallets from the carrier to the car.

When the car is full it is ready to be drawn to the drier, and another that has just been emptied takes its place. The loaded car is then run on to the transfer-car, and thence into any one of the flues, where a current of heated air (an artificial summer breeze) is forced through them, the steam from the bricks near the fire condensing on the surfaces of the cold ones and preventing checking or cracking, while the bricks absorb the heat from the steam and commence drying from the inside first. When the bricks directly over the fire are dry, the car is run out to the kiln to be set, a fresh car being put in at the upper end, pushing the others down and bringing another partially dry car immediately over the fire, and so on. It is claimed that one ton of anthracite coal will thus dry 25,000 bricks; hence the expense of artificial drying is less than that of sunshine.

Figs. 11 to 17 represent a variety of improved brick-yard appliances. Fig. 11 is a platform spring-truck suitable for handling green bricks when placed upon pallets. Fig. 12 is a double-decked dry car, on which the bricks are hacked four courses high on the lower deck and three courses high on the upper deck. Fig. 13 is a revolving dump-table. Fig. 14 is a barrow designed for wheeling green or burned bricks. Fig. 15 is a brick-maker's strike-knife. Fig. 16 is a wrought-iron interlocking pallet for stiff-tempered bricks; and Fig. 17 is a steel pallet for bricks molded on flat side, or for those stiff enough to stand on edge.



Other populated places in Franklin County (*neighborhoods, subdivisions and settlements*) that may have had brickmakers. Albeit, I found *no significant* relation to the subject. Those **tinted** have been studied.

Adamsville
Ashfield
 Baconville
Baptist Corner
 Bardwell
 Beldingville
Bernardston
 Blissville
Buckland
 Buckland Four Corners
Burkville
 Camp Rowe
 Camp Warwick
Charlemont
 Cheapside
 Cold Spring
Colrain
Conway
 Cooleyville
 Dell
 Dodge Corner
Dudleyville
East Charlemont
East Deerfield
East Leverett
East Northfield
 East Northfield Station
East Shelburne
East Whately
 Elm Grove

Erving
 Farley
 Fort Lucas
 Fort Morris
 Fort Morrison
Foundry Village
Farley
 Fort Lucas
Gill
Gill Station
Griswoldville
 Grouts Corner
 Hales Crossing
 Hallockville
Hawley
Heath
 Hoosac Tunnel Station
 King Corner
Lake Pleasant
Leverett
 Leverett Station
Leyden
Locks Village
Lyonsville
 Mayo Corners
Millers Falls
 Mill River
Monroe
 Monroe Bridge
Montague Center
Montague City
 Montague Station
Moore's Corner
 Morse Village
 Mount Hermon
 Mount Hermon Station
 Munns Ferry
New Salem
North Bernardston
North Heath
North Leverett
North New Salem

North Orange
North Prescott
North Sunderland
Northfield Farms
Orange
 Packard Heights
 Pratt Corner
Prescott Center
Riverside
 Roaring Brook Camp
Rowe
 Satans Kingdom
Shattuckville
Shelburne
 Shirkshire
Shutesbury
 Sky Farm
South Ashfield
South Hawley
South Wendell
 Spruce Corner
 Stewartville
 Stoneville
Sunderland
 The Patten
 Tully
Turners Falls
Wapping
Warwick
 Watson
Wendell
Wendell Depot
West Deerfield
West Hawley
West Leyden
West Northfield
West Orange
West Whately
 Whately
 Zoar

Citations

1. CAMDEN COUNTY HISTORICAL SOCIETY CAMDEN HISTORY **EARLY BRICKMAKING IN THE COLONIES** By **N. R. EWAN** Member of the Camden County Historical Society; Reprinted from the **WEST JERSEY PRESS**; Reprinted July, 1970 By **RICHARD H. HINELINE** President Camden County Historical Society; **EARLY BRICKMAKING IN THE COLONIES A COMMON FALLACY CORRECTED** By **N. R. EWAN**
2. **CARNEGIE PUBLIC LIBRARY:** Turners Falls, Massachusetts. Susan San Soucie and her most capable staff are always anxious to provide the necessary information from their stacks.
3. **GEORGE B. DYER:** The Dyer name—for time in memoriam—will be available in Charles C. Dyer's bricks. George graciously allowed the author to access his significant family archive.
4. **KIT BARRY.** Conceiver of, and archivist for, **THE EPHEMERA ARCHIVE FOR AMERICAN STUDIES** at Brattleboro, Vermont.
5. **LILLIAN FISKE.** President of the Montague Historical Society. Lil's dedication to the task . . . whatever task she meets is head-on . . . and always a successful endeavor.
6. **PETER S. MILLER.** Greenfield's "*official*" Town Historian. Local knowledge encyclopedia . . . walking.
7. Dr. **MARY MILONAS.** Archivist for the Montague Historical Society.
8. **POCUMTUCK VALLEY MEMORIAL ASSOCIATION.** The Historical Wealth of our Valley.
9. **SEVERAL LAWS and ORDERS** Made at the First Session of the **GENERAL COURT** Held at Boston, May 28. 1679, and published by their order. Edward Rawson Secretary.

The Internet offers a plethora of information. Simply access your favorite search engine and type in "Brickmaking"

Pictorial:

Brick architecture in Turners Falls. Ed Gregory images

The architectural and construction effort involved in the erection of many of the brick buildings in Turners Falls—and the surrounding towns—is evidence that the commitment to achieve aesthetic and enduring structures was a testament to the skills of those involved.

I'm sure the people that commissioned the buildings for their businesses knew the mind-set of the architects, engineers and construction bosses, and had great confidence in their expertise. With this innate knowledge, those land-lords have passed-on a legacy that we see today as we visit the various towns with their brick facades lining the streets.

A selection of images follow that will illustrate that legacy.



Crocker Bank building at the corner of 2nd Street & Avenue 'A' in Turners Falls. East facade.

The cornice detail, known as a "Corbell Cornice" is shown below and additional representations will be viewed in subsequent images in this pictorial presentation.



The Hibernian Block at the corner of 4th Street & Avenue 'A'. East facade





Water Department building at the corner of 5th Street & Avenue 'A'.
East facade.



Turners Falls Inn; front entrance.
West facade. Corner of 5th and Avenue 'A'.



This graceful arch embellished with a floral border.



The "Hanover Club" at the South End (the patch) of Turners Falls, is at the corner of 'H' & 11th Streets. South east corner exposure.

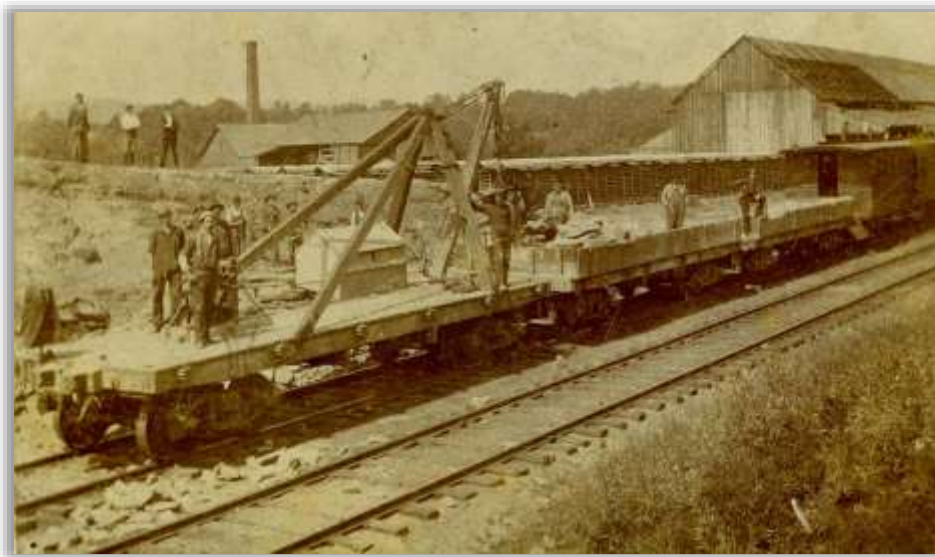
The "patch" is affectionately known to the locals as the Capitol of Turners Falls.



The Discovery Center, Turners Falls, north facade.



Drying bricks at the Thomas brickyard at Montague City. c. 1920s.



Flatcars at Thomas brickyard, Montague City. 1897



C. E. Walcott, Mott, Boston.

The Old Way.

COMPLIMENTS OF...

A. C. & F. G. BURNHAM, Brick Manufacturers,

WATER-STROCK PRIZE BRICK A SPECIALTY.

MONTAGUE CITY, MASS.

TELEPHONE 24-6.

1896	January.						1896
SUN.	* MON.	* TUE.	* WED.	* THU.	* FRI.	* SAT.	
..	..	..	1	2	3	4	
5	6	7	8	9	10	11	
12	13	14	15	16	17	18	
19	20	21	22	23	24	25	
26	27	28	29	30	31	..	

Last Quarter, 7th. New Moon, 14th. First Quarter, 22nd. Full Moon, 30th.



C. B. Watson, Mfg. Bldg.

The Old Shop.

COMPLIMENTS OF

A. C. & F. G. BURNHAM, Brick Manufacturers,

WATER-STRUCK FACE BRICK A SPECIALTY.

MONTAGUE CITY, MASS.

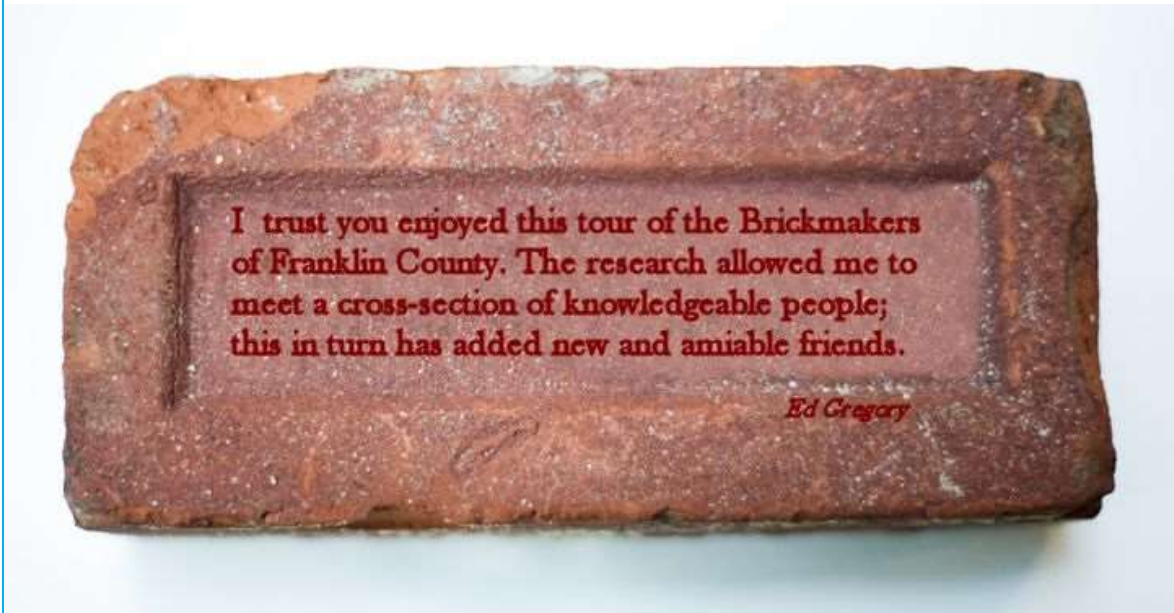
TELEPHONE 24-B.

1896 January. 1896

SUN.	* MON.	* TUE.	* WED.	* THU.	* FRI.	* SAT.
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..

Last Quarter, 7th. New Moon, 14th. First Quarter, 22nd. Full Moon, 30th.

— end —



Information provided in this book is for general informational purposes only. At the time of writing, available resources have been gleaned in a concerted effort to keep the information up-to-date and correct. There are no representations or warranties, express or implied, about the completeness, accuracy, reliability, availability with respect to the material herein. My research is not intended to be a definitive set of instructions for this project.

As, when, or if additional/reliable subject matter may become available, revisions will be offered accordingly.

I trust this record will enhance your knowledge base regarding whatever purpose you intend.

Ed Gregory

~Notes~