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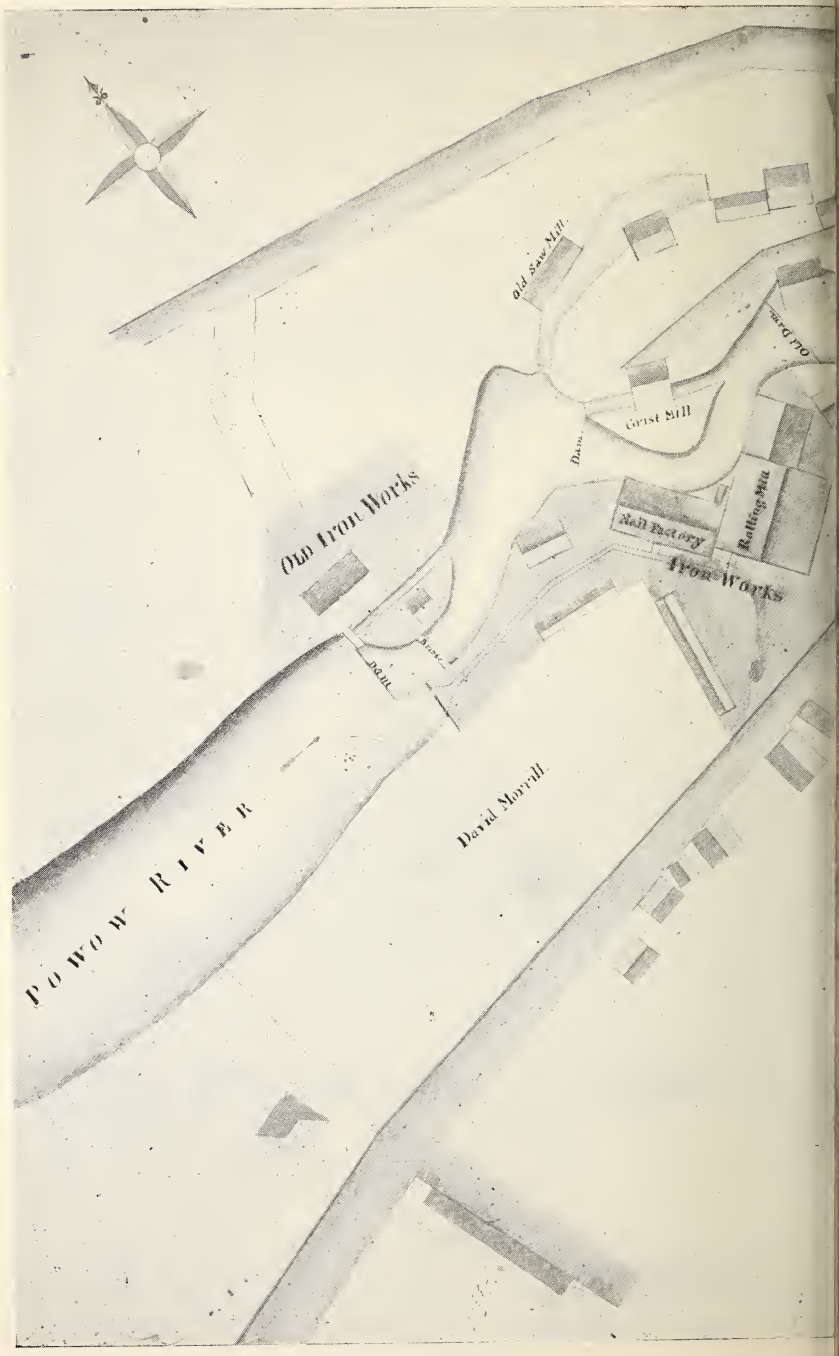

PLAN SHOWI

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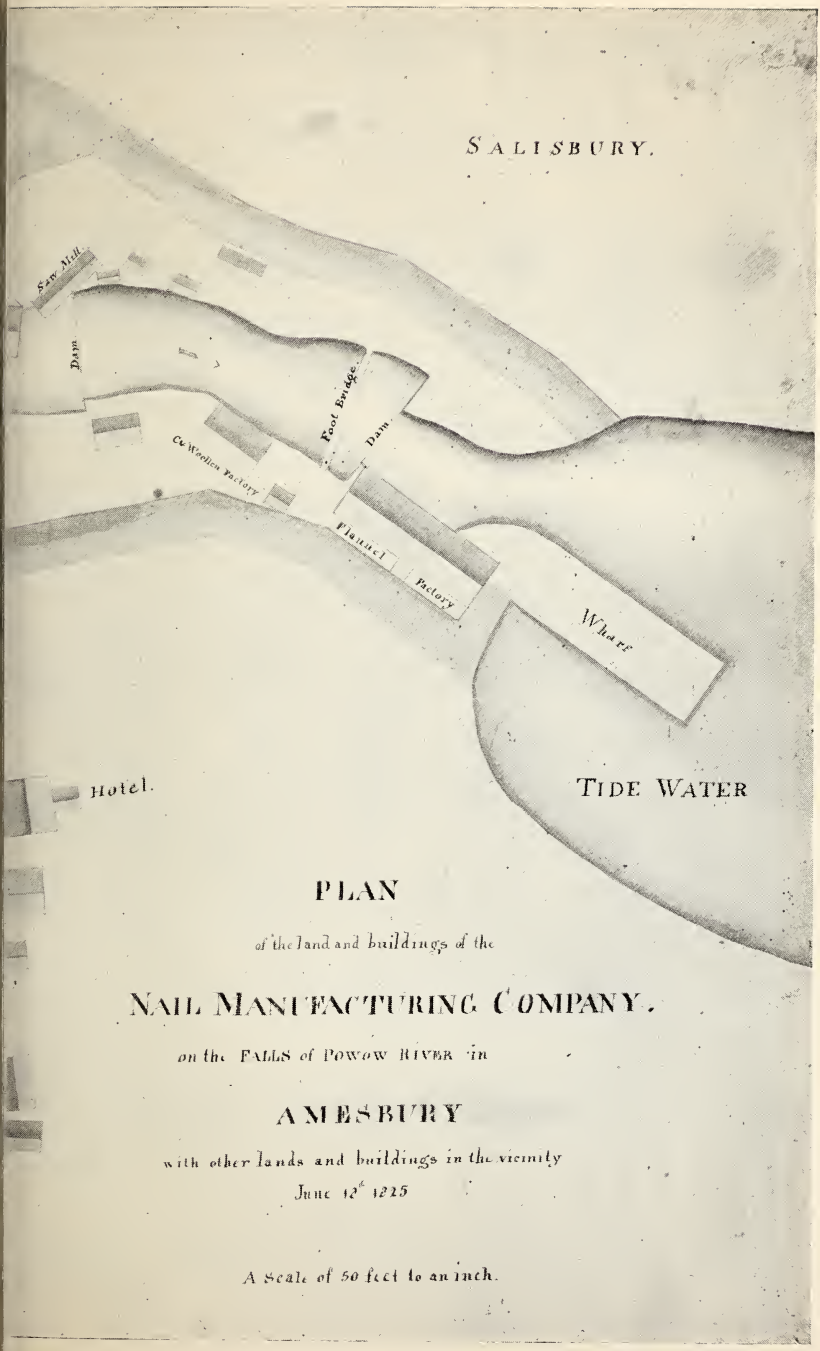

PLAN

of the land and buildings of the

NAIL MANUFACTURING COMPANY,

on the FALLS of POWOW RIVER in

AMESBURY

with other lands and buildings in the vicinity

June 12th 1825

A Scale of 50 feet to an inch.

POWOW RIVER INDUSTRIES

By Charles I. Pettingell, A.B., L L. B.

One of the oldest things hereabouts, is the Powow River. It is a subject with many possibilities. If we were geologists, we might enter into a discussion of the geological formation which has caused the river, or if we were anthropologists, we might write about the early inhabitants who lived here before the settlers came; but instead we shall consider the river during days of the early white settlers and since, particularly the early use made of the river for industrial purposes.

The subject is not industries alone, however, but will have to do with men, men of ability, of resource, of eminence and achievement, men in whose lives will be found romance as well as accomplishment, men who should be better known, more talked about and much more appreciated.

We shall not write in any detail about the upper river, the several ponds in New Hampshire from which it comes, its courses from Kingston through South Hampton, Tuxbury's Pond, Lake Attitash and the lowlands above Lake Gardner. This part of the river was once used industrially and was also a favorite canoeing place, all of which has apparently ended. Nor are we going into detail about the river below tidewater and the shipbuilding along the river and the commerce carried on it.

But we shall discuss the river from Lake Gardner to tide-water, the part of the river which contains the falls, and in which were built dams necessary for the industries. As far as possible we shall reconstruct the geography of that area and picture it as it was before any dams were built or any water was held back and controlled.

There is unfortunately no final and authoritative explanation of the name Powow. In all modern accounts of the name it is stated that the river was named for the hill and that the hill was so called because the Indians held "powows" on it.

After forty years of study and search, I am unconvinced having found no account of a "powow" ever having been

held on the hill, or, as far as that goes, no account of a "powow" held in this part of New England. We have never heard of any Indian traces being found on the hill. We have in Amesbury a locality which the first settlers called the "Indian Ground,"[1] because of the traces of Indians found there, showing a considerable settlement of Indians at one time in that vicinity. If any such traces have been found on Powow Hill, they have not come to my attention. In our local preoccupation not many of us know that not more than five miles away, in East Kingston, there is another Powow Hill, and if the theory of the name of the Amesbury Hill is correct, the Indians held "powows" on the East Kingston hill, also. We do know in this respect that when the first settlers came here there were very few Indians in this vicinity. Edward Johnson, who wrote one of the first books on New England, "The Wonder Working Providence," and was much about the country, says that there were only a few hundred in all in this part of New England.

"Powow" is an Indian word of the Algonquin dialect. Its first meaning in the early days was the name or description of a man, a medicine man, a socerer or sachem. A secondary meaning was a ceremony or gathering presided over by a "powow." In the early English records the word was frequently spelled "pauwais." There is evidence that the early settlers knew and used the word in its primary meaning. I have found no use of it in its secondary meaning.

One case in which it was used is illustrative. During King Philip's War the bad Indian in this neighborhood was one Symon who attacked white settlers in the Merrimac Valley and in Rockingham County, New Hampshire. He made at least one raid on Amesbury in which he attacked a Quimby family. Although no record says so, the probability is that Mr. Quimby was killed. There is trustworthy evidence that Mrs. Quimby had a personal encounter with Symon, whom she knew because he had at one time lived with her mother. In the course of the conversation Symon struck her and knocked her down. Mrs. Quimby being a woman of spunk, got up and threw a rock

1 *Old Norfolk County Deeds*, book 2, leaf 201.

at him. Although Symon knocked her down again, she was not killed and lived to identify definitely the Indians who had made the attack.

At one time and another we have searched for data regarding Symon. We have traced some of his activities elsewhere and found by chance a statement by Increase Mather regarding his death. Increase Mather was the father of Cotton Mather the author of the Magnalia, the great colonial book, and, if possible, Increase Mather wrote more books than his learned son.

Increase Mather says[2] that Symon got into a fracas in which he received a broken arm whereupon "he withdrew to a Pauwais, but nevertheless died." That one sentence tells us not only that there were Indian medicine men of whom the early settlers knew, but that Increase Mather had information that Symon had resorted unsuccessfully to one for treatment.

My own theory is that at some time, either before the settlers came, or in the early years of their arrival, there was such an Indian pauwais living on the river and that the Indians and the settlers called the river the Pauwais River or the Powow's River. It might be more eloquently described as the River of the Powow.

The earliest mention of the river in Merrill's History of Amesbury is on page 12, where in speaking of the names which had been given to localities by 1640, he uses in quotation marks "ye Pawawes" river. On page 24 he quotes an order made in 1642, in which the river is described as "ye Powowas River." These may not be attempts to describe "the Powow's river" but they look very much like it. I have seen also an old deed in which it is called the "Powawas" River.

Let us leave the name and get back to the river itself. What did the part we are interested in look like in the early days? The first thing we have to do to see it as it was is to eliminate the dam at Lake Gardner. That did not come until 1872. Before that dam was erected the river came down in one stream to a point just below the

2 See Increase Mather: "Remarkable Providences," Library of Old Authors Edition, London, 1856, pp. 253-254. Also "Symon Indian." A letter written at Amesbury, Mass., 9:5:1679 by Lieut. Philip Challis: Mass. Archives, vol. 69, p. 142.

present Pond Street, where it encountered a ledge which created a fall or series of falls. Conditions are such now that it is impossible to reconstruct the actual scene. The ledge is under water and there has been so much building and tearing down, and filling, that the original situation is beyond reconstruction, at least while the water is up.

There are, however, two plans made about 1825, which tell us much about the early conditions. At the top of the falls the river divided into two main channels. I say, "main channels," advisedly, for there were at least two, probably more. These main channels were separated by a considerable island and at the head or westerly end of the main island were two much smaller islands. An early writer refers to this group of islands as an archipelago. The channels between the smaller islands and the main island are undoubtedly lost today; but although the river now has only one channel, the southerly one, the northerly channel can be easily traced and a part of it exists in its original condition.

When the brick mill building, known as No. 2, or Horton's Mill, now occupied by the Bailey Company, was built in 1825 on the northerly or High Street side of the area, the mill was so placed that the north channel of the river ran under the building and lengthwise of it. A granite wall was built across the channel cutting off completely the flow of water and constituting a permanent barrier. A penstock or conduit received water from above this barrier and conveyed it to a water-wheel set in the river channel under the building which served as a tailrace for the escape of the water; another discharge from this penstock conducted water to a second wheel set farther along in the river bed. These wheels were in existence up to within a few years ago and I have talked with the man who had charge of removing them.

When they were taken out, the old river channel remained as it was when it was dammed in 1825. There in the basement of the mill is the northerly channel unchanged except for the supports built in it for the wheels. It is perhaps 25 feet wide at the top of the bank, and possibly 20 feet deep, a water scoured passage through the ledge, V shaped. There is no water in it now except for leakage

but its course through the building can be definitely followed. Its direction thus indicated points to the rear of Boyle's Drug Store, and there in plain sight is to be found the remains of the old outlet where the north channel joined the south channel just before the river crosses Main Street.

Thus in the earliest days, in the center of the town, there was a river coming down over a ledge in two channels. The height of the river at Lake Attitash is about 90 feet above tidewater. The drop from Pond Street to tidewater is about 75 feet. Below Main Street there were other falls before the river reached tidewater. The value of the falls is shown by the fact that in 1825 there were six dams between Pond Street and tidewater, the water of the river doing duty six times.

Our first interest, however, is undoubtedly the Island between the two channels which has figured largely in local story and tradition, for not only was it a place of industry but for many years there was a schoolhouse there. The island was in Salisbury and the Salisbury Mills School District purchased the building in 1801. There is an account of the school house in the Amesbury Villager for August 21, 1890, containing a copy of the warrant for the district meeting at which it was voted to purchase the building. The writer of the article says that undoubtedly the building was used for school purposes before its purchase by the school district.

It not only served as a school house but it was one of the two places in this vicinity in which an early Sunday School was held. The brick schoolhouse at the Ferry, torn down in 1851, was such a place, and the schoolhouse on the Island was another. The earliest Sunday School in this vicinity is said to have been in Beverly in 1810. The School house is said also to have been used for other religious meetings to be mentioned.

The demands of industry in time forced the removal of the schoolhouse from the island and it was moved to Pond Street where it may still be in existence. The rights of the School District on the island were sold to the Salisbury Manufacturing Company in 1826. Thus it appears

that the school on the island was in existence slightly more than twenty-five years.

The course of time, the developments of industry and science have materially changed the relation of the falls of the Powow to the industries they operate. A hundred years ago it was necessary to crowd on the river's banks the industries which were to use the power of the river. Today one modern, small-sized power house generates more power than did all the mill wheels of the past and wires convey that power to users miles away.

The real estate along the river long since has lost its value as a manufacturing location. We have seen building after building torn down or cut down in size because it is no longer able to earn enough to pay its own expense. The present buildings are not youthful and are not growing any younger. It is inevitable that the time will come when, one by one, they, too, will disappear. What will succeed them?

The center of the town must have been a beauty spot in the early days with its falls, the foaming water coming down and joining the tidewater below. Whittier speaks of it in his poem on Abraham Morrison in these words,

> When the Grist and Rolling Mill
> Ground and rumbled by Po Hill,
> And the old red school house stood
> Midway in the Powow's flood.

My dream is that some day a philanthropic son or daughter of Amesbury, lover of the old town, will restore the area to its natural condition. It means the acquisition of real estate, a grand landscaping program and great expense, but it will result in the establishment of a park in the center of the town, a park that will have not only great natural beauty but also a historic value as the scene of the town's earliest important development.

People will shake their heads and say no, but before anyone makes his mind up finally, he should go to Exeter and see the Swasey Memorial Parkway, made by cleaning up Exeter's water front, the gift of a generous son of Exeter whose philanthropy may be emulated in Ames-

bury. Some such child of the town may have the vision and the money but I make first claim to the dream.

Now let us turn to the early settlement of this region. There is on record in the Massachusetts Archives a letter written in May 1629, to the Massachusetts Bay Colony here in which is contained an instruction "to give furtherance to Francis Wells in setting up his saw mill." I have found no further mention of Francis Wells or his sawmill, but the letter shows that in 1629, people in England were considering the erection in Massachusetts of sawmills. It may well be that when the settlers came in 1638 and 1639, they came here because the advantages of the water power of the Powow were known, and understood and with an intention of making use of that power. Two or three years later, a sawmill was an actuality in the locality we are considering.

The settlement of Massachusetts which directly concerns us was that of the Massachusetts Bay company which began with the settlement of Salem as a Puritan colony in 1628. Ipswich was settled in 1633 and Newbury in 1635. A settlement at Salisbury, then called Merrimack, was authorized in 1638 and actually began in 1639. In that year there is the record of three meetings of the proprietors of the new town largely concerned with the granting of land to themselves as individuals. In 1640 and again in 1641, the meetings had to do with regulations affecting living conditions, among these being the prices of labor and food. In these latter items there were three which had to do with the products of trees. The top price for "anie sawn board" was "five shillings p^{r} hundred," for "split work no more y^{an} 4s. 6d. p^{r} hundred," while for "claboards of five feet in length," the ceiling price was three shillings per hundred; for the labor of cleaving, the workman was to get not more than six pence per hundred.[3]

This price list tells us definitely what could be made from a log in 1640. It could be cut in five foot lengths and then cleft by the use of wedges, and in this manner the early settlers made "claboards," not the clapboard of modern use, which in the beginning may have been made

3 Merrill: *History of Amesbury*, pp. 4, 5, 9, 11, 14, 19.

in the same way, but rough boards which could be worked into something else by a carpenter with a hand saw and a plane. The greatest length for this kind of board seems to have been five feet. So too were made staves which were a common product of the colony, especially in the winter time when in the absence of other employment staves were made for export. Pipestave hill is so named for the quantities of staves for pipes made there, a pipe being a container used for holding liquids, particularly wine, and being in amount two hogsheads. Such staves were much in demand.

Staves and clapboards were rough products which had to be finished by another worker. The only way a sawn board could be porduced was in a saw-pit, a hole in the ground over which was placed a platform. On the platform was a frame on which was set a log. Two men equipped with a long saw, one man on the platform, the other in the hole, one pushing, the other pulling, sawed the log into boards. It was a slow, laborious task and it made boards relatively expensive. A man cleaving logs could get six pence per hundred for five foot clapboards, but a sawer of boards got three shillings per hundred. A clapboard sold for three shillings per hundred but a board sawn in this way sold for five shillings. Saw pits remained in use long after these early days because they were not entirely displaced by sawmills. The corner of Main Street and Rocky Hill Road, where the Christian Church stands was originally used for ship building and I have talked with a man still living who has told me that as a boy he helped fill an old saw-pit in that yard.

All this is introductory to the fact that in 1641, two years after the actual settlement of the town of Salisbury, William Osgood[4] was given a substantial grant of land "on condition y^{at} he build a mill y^{at} may be sufficient for y^{e} use of y^{e} towne before y^{e} 10th of y^{e} seventh month next ensuing." This grant was dated April 21, 1641. The seventh month was September so that William Osgood had practically six months in which to build his mill and get it at work. He was to get three shillings six pence

4 Town Records quoted in Merrill's *History of Amesbury*, p. 19.

per hundred for sawing. As boards sawn in a pit sold for five shillings, a considerable cut in the price of boards was anticipated, to say nothing about the increased quantity of sawn boards that was to be available.

To us who view this undertaking of William Osgood from the point of view of three centuries distance in time it does not seem to be anything enormous. Let us, however, view it as William Osgood saw it. He was dealing with a new and almost unkown thing. Grist mills run by water power were in use both in England and here but there were no sawmills in England. There was one sawmill in New England at that time, erected by Captain John Mason's men at Newichawannock, now South Berwick, Maine. The usual date given for that mill is 1631, but in 1926 I heard Everett Stackpole, an eminent New Hampshire historian, give an address at South Berwick in which he contended that the correct date for that mill was 1634. There is no definitely established date for any other water-driven sawmill in North America earlier than William Osgood's mill in 1641.

Osgood had available the long saws used in sawpits. Beyond these he had to contrive and construct himself everything he needed. There was no place where he could purchase anything; as saw mills were unknown in England he could not import any parts. There is authority for the statement that for the early sawmills all the parts were made by hand of wood, the axles of white oak, and the gears of hickory. The carriage of the mill on which the log rode to the saw was drawn forward by a weight attached to the carriage by a rope running over a pulley. As the carriage went to the saw by this power, it pulled down a stout sapling firmly affixed to the building. This sapling was to act as a spring. When the saw had made its cut in the log, and the tension of the sapling was released, it sprang back, drawing the carriage with it, ready for another approach to the saw. In some of the early mills the water power pulled the saw down through the log and another elastic pole pulled it up. In course of time the water power was harnessed to do all these tasks.

In principle the saw worked as did the saw in the saw-

pit, up and down. Even as late as within the memory of living men, "up and down" sawmills were in existence. The only difference in character between the sawpit and th "up and down" mill was that in the latter the power was furnished by water.

In the early mills it became a normal thing to use "gang" saws, several which cut at the same time. At Newichawannock it is said that the mill worked nineteen saws at once so that the place became known as "great works" and the local name of the Asbendick River, which furnished the water, was the Great Works River.

The first patent granted by Massachusetts was in 1646 to one Joseph Jenks, an outstanding genius of that time, and was for some essential part of a sawmill.[5] Nowhere is the patented part described, and we have no knowledge of what it was, but the grant tells us that there was demand enough in 1646 for saw mills to cause the ablest mechanical brains of the colony to produce something intended to make more easily possible their construction. As Jenks was employed at the Iron Works at Saugus, known as Hammersmith, the first iron works in the colony, what he invented was doubtless some part which could be cast from iron and could be purchased.

In 1646, when Jenks received his patent, William Osgood with his home-made mill had been sawing boards for five years. Although such mills were, in our judgment, slow, clumsy, and wasteful, they were a tremendous advance over the saw-pit Lumber was plentiful, boards became relatively cheap, better houses could be built, better ships built, and the first big boom in industry had begun. The saw-pit could have been relegated entirely to the past except for one thing, the early mills could not saw oak or other similar hard woods, their use was limited to pine and the other soft woods.

Where was William Osgood's mill located? Fortunately, from old conveyances we are able to locate it almost exactly. The large island between the two channels of the river although sometimes called "Great Island" was generally known as Osgood's Island. In 1824, one John Osgood, presumably a descendant of William, sold to the

5 *Massachusetts Bay Colony Records*, vol. 3, p. 65

Salisbury Manufacturing Company, his one-eighth of the "Saw Mill Privilege," "on the northerly side of Osgood's Island." Without doubt, this locates the original saw mill on the north channel of the river, the one that goes under No. 2 mill, built in 1825. But Osgood's deed goes further, it bounds it definitely on Pond Street, although it referred to that street by another name, the original name of Pond Street, to be spoken of later. This deed places Osgood's mill very definitely close to High Street and between No. 2 Mill and Pond Street.

If there was ever a pioneer, William Osgood, was one. His brain and hand built a saw mill, one of the first in the colony. Think of what an asset this mill was to this part of New England, particularly to the ship building that was to follow for more than two hundred years in the Merrimac Valley. Consider what it meant for housing, in the development of the back country, how it was closely connected with our foreign and coastwise commerce. William Osgood helped to open the gate which admitted prosperity to New England, a prosperity in which we all share. And yet he remains, to us, and to the world, simply a man who built a sawmill in 1641.

Contrary to the popular idea our Massachusetts settlers built very few log houses, one reason being that by the time that they were ready to build permanent houses William Osgood and others like him were sawing boards and the first houses built were frame houses, boarded. What did they live in at first? Houses made of limbs and brush and plastered or "daubed" with mud.

At some time later William Osgood had a grist mill on the north channel. The date of its beginning is unknown but the mill can be traced down through the conveyances. It was located nearer Market Square and was in the neighborhood of the present Watkins garage. In 1817 one Richard Osgood conveyed his one-eighth of it to David Nayson, describing it as "Osgood's Mill." As "Nayson's Mill" it appears on one of the two plans of this locality.

Other mills were locating on the river. Abraham Morrill and Henry Saywood had a grist mill in 1642 on the Amesbury side. It must be remembered that before 1642 all this territory was in Salisbury. It was in 1642 that

the first order for the removal of settlers across the Powow was made which was the beginning of the settlement of the new town which in time became Amesbury. From 1642 on until 1886, the Powow River was the division line between the two towns. In 1642 began the separation of the village later known as the Mills Village into Amesbury Mills Village and Salisbury Mills Village. In 1656, Amesbury authorized the erection on the Powow of a sawmill by two of the prominent men of the town. One of these was Thomas Macy, first town clerk of Amesbury, the builder of the Macy-Colby house, and later one of the first settlers of Nantucket. His leaving Amesbury for his new home is the theme of Whittier's poem, "The Exiles." The other, Richard Currier, was prominent in town affairs from the original settlement of Salisbury. There is reason to believe that this mill was between Main Street and tidewater, in the neighborhood of Mill Street.

From 1656 until 1710 there is no mention of any other industry on the Powow. The Macy-Currier mill was in operation in 1682, as appears by a deposition made by Richard Currier, and conveyances show that the Osgood mills continued in operation until after 1800.

But in 1710 the two towns granted privilege to four men Col. John March, John Barnard, Joseph Brown and Jarvis Ring, to build an iron works, and with it freedom from taxation. Merrill's History says that the iron works were built in Amesbury, in which Merrill is clearly wrong, for not only do the conveyances on record show that the works were in Salisbury, but the map of the Amesbury Flannel Manufacturing Company in 1825 shows that the "old iron works" as distinct from those of the later Amesbury Nail Manufacturing Company, was in Salisbury. The "road to the Iron works" was that part of Pond Street which is between High Street and the river. There was no bridge on Pond Street until many years later.

It is hard to understand why there should have been an iron works located here. To visualize the conditions which these men faced, the conditions which prompted the move, we must go back to those days in order to get a better idea of what they did and why they did it.

Sawmills such as William Osgood's had tremendously affected New England development. Not only did they produce an enormous number of boards for building houses but as well boards for building ships. Ship building requires iron. A vessel uses a great amount of it. When the *Alliance* was built during the Revolution we know the exact amount of iron which was built into her. Not counting what went into cannon or anchors, the amout of iron used on the *Alliance* was 25 tons, 853 pounds. When one considers the hundreds of vessels built in this vicinity and realizes that each vessel required several tons of iron, one understands what a market there was for it.

There is no iron ore, as we know it, in this vicinity. There were no railroads by which such ore could be shipped to Amesbury. Iron ore did come by water from Norway, Sweden or Russia but not in amounts sufficient to meet the demand.

There was, however, a local iron supply which was available and served the Salisbury Iron Works for a century. The very early settlers knew of the presence in rivers and ponds of bog iron. This is a substance found in fresh water which runs over rocks or sand containing oxide of iron. Bog iron is a mineral mass which precipitates in the bottom of ponds and swamps and can be raked or dredged out and smelted as other iron. It was found in Saugus in 1629, and the iron works known as Hammersmith were started there in 1643. In later years it was dicovered in the ponds in the southeastern part of the state where its presence was the foundation of a great iron industry of which the stove business at Taunton is a present descendant. Two Amesbury names, Allen and Leonard, are those of men who came here from that part of the state as iron workers.

The proprietors of the iron works at Salisbury had knowledge that there was available a supply of this kind of iron and for approximately a hundred years the ponds of this vicinity, including those of Newton and Kingston furnished enough ore to keep the iron works busy. Not only were anchors and ship fittings made here but parts for

sawmills and gristmills, cart tires, cranes, fire dogs, and other plain heavy articles were produced.

Nevertheless, although the iron works were existent for so long a time, it is now a completely lost industry. No record of it exists, except in the form of recorded transfers of land at Salem. No one as far as I can find has ever written any account of it; it has wholly passed on leaving almost no trace.

Individuals, however, have a way of continuing their existence although industries with which they have been connected disappear. In the last years of the Salisbury Iron Works the principal figure in its operation was one Jonathan Morrill who is described in old deeds as an "anchor smith," a smith who made anchors. He came well by the trade for his first Morrill ancestor, Abraham Morrill, who settled in Salisbury in 1641 and was granted land in 1642 on the Powow for a "corn mill," was a blacksmith by occupation.

Jonathan Morrill was one of the leading men of the time. In 1812 the iron industry having begun to fade, Morrill enters the picture again as one of the first to introduce the manufacture of textiles in this vicinity. More about him later.

But before we leave iron for textiles we have another chapter dealing with metals. We have seen how boards were laboriously made in a sawpit before sawmills became established. The idea naturally associated with boards is that of nails. Just as William Osgood brought to the Powow River a revolution in making boards, so now the river was to participate in a revolution regarding nails.

Before the invention of Jacob Perkins of which you hear next, all nails were made by hand. Not only were they made by men engaged in that business, but the making of nails and tacks was a household industry carried on in the home during the winter or in the evenings. It was a common thing for a kitchen to have in its big fireplace a small forge and a vise in which heated iron wire of the proper length was beaten and heated into a nail or tack. By this process a man could make 2000 tacks a day. David Blaisdell, one of Amesbury's greatest mechanics, made

nails when he had nothing else to do. Even children learned to make tacks.

Jacob Perkins changed all this. He was born in Newburyport, July 9, 1766. At the age of twelve he was apprenticed to a goldsmith from whom he was supposed to learn the trade, but three years later the goldsmith died. This, as matter of law, freed Perkins from any further liability, nevertheless, he decided to stay by his master's family.

The principle articles made by a goldsmith then were gold beads and shoe buckles. The fifteen year old Perkins discovered a new method of plating these articles, by which he could produce gold beads and shoe buckles and undersell his competitors; through the increase of business he was able to support the goldsmith's widow and children. At the age of 21 he made an improvement in dies for making coin and was employed by the government in making copper coins, something which not been done successfully before in America. As a young man, he invented a machine for cutting and heading nails. After experimenting with this machine at Newburyport and at Newbury, he moved to Amesbury and started the Amesbury Nail Manufacturing Company. In this case as in the case of the "old iron works" there is a lamentable lack of knowledge about Perkins and his life in Amesbury, and about the Amesbury Nail Factory. Merrill's History is almost bare of mention of either. The most important item about Perkins or the Nail Factory in Merrill is under the date of 1805 (page 126)

A fire was discovered at 4 A. M. on December 26th on the premises of the Nail factory, which burnt that building, a grist mill, two blacksmith shops, and three hundred cords of wood. It was described as the greatest conflagration then known. The damage was estimated at $80,000, which in those times was a very large sum.

From the foregoing account of the fire in 1805, we know that the business must have been a busy and extensive one. We are not surprised, therefore, to read in the Gazeteer for Massachusetts "that 1000 tons of iron have been wrought in the year 1800 and 165 hands employed." The business, however, did not last.

In 1825 Merrill mentions the fact that "The old Nail factory was sold to the Salisbury Manufacturing Company about this time and converted into a weaving room."

The accounts to be found in encyclopedias regarding Perkins, usually state that he invented his nail making machine at the age of 24. As he was born in 1766 this would make the date of the invention 1790. In that year it is said that he set up a nail making machine in Newburyport. There is no evidence yet available as to when he came to Amesbury, but I have found a deposition by one who testified that he worked here with Perkins in 1797, and that the date of Perkins' big invention, the machine that made and headed nails in one operation, was 1798. According to the deposition the nail factory was running before Perkins invented his single operation machine and the machines then in use, also invented by Perkins, would make 600 nails a minute if in good condition, several hundred tons of nails having been cut while the deponent worked there. There is evidence, also, that in 1799 Perkins assigned to the nail company his patent for the single operation machine.

Although the new method of making nails revolutionized the industry and should have made Perkins rich, in fact it nearly drove him into bankruptcy. The entire situation is obscure. The business started as a partnership and was later incorporated. Perkins, the inventor, assigned his patent to the corporation. Later, the corportion discharged him as an employee and he retired from the business not only penniless but heavily in debt. It is definitely stated by more than one contemporary that some of his partners were "designing adventurers" who ran off with the profits leaving Perkins to care for the debts. This may be so, but the list of the partners who later became stock holders contains the names of several respectable residents of Salem, Massachusetts, among whom was William Gray, one of the most prominent men in that city. I have found no evidence of rascality either on Perkins' part or on theirs. Perkins, it may be conceded, although a great inventor, easily the most eminent in that line who ever resided here, was not a business man in the common use of the words. His consuming interests were

inventions and making them work. The commercial exploitation of them did not interest him and all through his life the story was the same.

The bare facts are that this unusual man, moved perhaps because both iron and water power were available here, brought a nail making machine here and set up a nail factory sometime after 1790; from things that will appear later, it is certain that Perkins before coming to Amesbury tried making nails at Byfield, Massachusetts, where there was available water power; this was after 1794; that about 1798, he perfected his machine so that he had one that would make and head nails in one operation (previously there had been two); that the nail company had financial difficulties and Perkins left it, being also in financial difficulties; that his departure from Amesbury was in the early years of the 19th century. The factory had a big fire in 1805, as has been noted, and seems to have lingered along until about 1825, when it went out of business entirely. It may be that the difficulty of getting iron was a factor in its ending, as it doubtless was with that of the earlier Salisbury iron works. The available supply of bog iron must have been exhausted in its constant use since 1710. It was not a substance that easily renewed itself.

Perhaps as a result of this paper, some one will come forward with information about Thomas Boardman, who he was and where he lived, for it was with Thomas Boardman that Jacob Perkins lived while he was here, or about the iron industry which flourished for a hundred years.

His Amesbury experience was just an incident for Perkins. After leaving here he seems to have gone back to Newburyport. In the years following he invented an engraved plate for printing bank notes which was so successful in use that in 1809 the Massachusetts legislature made it the only plate from which bank notes could legally be printed for this Commonwealth. Bank notes printed on the Perkins plate were never counterfeited. In 1816, he moved to Philadelphia, possibly to be near the United States Mint, and a few years later he removed to London, England, where he resided until his death in 1849, being known in England as the "American inventor." He es-

tablished there a bank-note printing business which was remunerative, doing work for the Bank of England and for France. He made improvements in steam engines, printing presses, imprinting processes and engraving. He invented a cannon to utilize high pressure steam instead of gun powder, studied the compressibility of water, and invented the bathometer, an instrument for measuring the depth of water, and the pleometer, to measure the velocity of a vessel moving through the water. He invented many other things and processes. One of the greatest men who ever lived here, he is almost wholly unknown to the present generation.

Someone may ask about the location of the Nail Factory. The Iron Works, in Salisbury, was in the corner of Pond and High Streets. The nail factory was on the Amesbury side of the river where No. 8 mill was built in 1862; for those who do not know the mill buildings by their numbers, No. 8 is the building, at the corner of Friend and Main Streets, which several years ago was partially razed, the Main Street end being torn down. The part of No. 8 where Picard's furniture store is, in the rear of the Kilduff Block, covers the site of the nail factory. The flume built by the Nail Factory to carry water from above the dam below Pond Street, subsequently extended to and under Main Street, is the way in which the Amesbury Electric Light Company power station on Mill Street gets the flow of water which produces the eletric power it distributes.

It may be well to pause and look at the general situation as it was at the end of the eighteenth century. I have chosen the year 1793 because there is available data of conditions in that year. It is only occasionally that one is able to get a comprehensive picture of things as they were at a particular time, but in 1793 we can get an unusually fine view.

First, it must be remembered that we are dealing with two towns separated by the Powow River. At this particular place, however, there was in effect one village, the Mills Village, although in common speech it was often referred to as the two localtities it actually was, Salisbury

Mills and Amesbury Mills. The population of the village in 1793, was not more than 500.

There were two schools and no churches. The nearest established churches of the towns were, in Salisbury, at Rocky Hill on Elm Street, and in Amesbury, at Sandy Hill, on the Haverhill Road. We must think back and remember that in 1793 there was, except on paper, no one populated place of Amesbury or Salisbury. Instead there were several separate and distinct villages. In Salisbury there were settlements at old Salisbury or East Salisbury, Rocky Hill, the Point Shore, Salisbury Plains, and, before the establishment of the State line in 1742 cut it off, South Hampton, now in New Hampshire, in addition to the Salisbury Mills Village. In Amesbury there were the Ferry, Bartlett's Corner, West Amesbury, now Merrimac, South Amesbury, now Merrimacport, the settlement that is now Newton, N. H., and the Amesbury Mills Village. Besides the Rocky Hill and the Sandy Hill churches, too far away for most of the people at the Mills to attend, there was a church at Jamaico, now Merrimac, still farther away. The inhabitants of the Mills Village, however, were not entirely destitute in the matter of religious worship. The Society of Friends established a meeting in Amesbury in 1701, and the South Hampton Baptist Church, from 1787 on, held some of its meetings in Salisbury. From 1793 to 1801 it held one-half of its meetings in Salisbury in the "Shoe-String Meeting House" on Congress Street. Not until 1821 was the Salisbury Baptist Church organized, many of its members being residents of South Hampton. Of the other churches, an early Universalist Society was holding meetings here in 1820, the same year that the Christian Society at the Point Shore was organized. The Unitarian Society which preceded the Main Street Congregational Society was incorporated in 1826. St. James Episcopal Church was organized in 1827, and all the other present churches came later. But the statement attributed in the Villager to Guthrie's Geography, while correct, gives a wrong impression. It is true that in 1793 there were no churches in the Mills Village, excepting the Friends, who were more or less exclusive, and the occasional Baptist services,

but religious services nevertheless, were held in the Mills Village, in the school house on the Island, by a barber. This dates the presence of the school house back to 1793, although it was not purchased by the Salisbury Mills School District until 1801.

If any one wishes to check up these statements and dates he will find some in the Villager for December 8, 1853, some in Merrill's History, some in the "Religious History of South Hampton," published in 1881. I have seen also the original records of the Christian Society at the Point Shore. As for the date of the Universalist Church, 1820, instead of 1843, the latter date being the one ordinarily given, I take 1820 from a Collector's Book of the Society. A few years ago, in a house on the Point Shore, I observed an old scrap book full of pasted articles. I went through it hoping to find some newspaper clippings containing news of the past. They were newspaper clippings all right but they were recipes, poetry and romances. Because of my interest in the book, I was given it. When I got it home and removed the newspaper clippings, no one of which was of any value to me, I found that I had the account book kept in 1820 by Reuben McCrillis, Collector of the Universalist Society. It not only lists those whom he paid for preaching but those who contributed to the expenses of the Society.

So much for the lack of churches and the religious services conducted by the barber. In 1793, the village contained the following industries:

The first item on the list is a bloomery. This was not something connected with the production of haberdashery or underwear. Amelia Bloomer who first introduced that article of clothing was not born until 1818, nor was Susan Pecker Morrill, the first woman in this vicinity to wear bloomers, born until 1824. "Bloomery" is the technical name of a building used in the manufacture of iron. It contains the first forge through which blooms of iron pass when it has been melted from the ore. A "bloom" is a mass of iron, usually wrought iron, deprived of its dross and shaped by hammering, pounding or rolling.

The bloomery was that of the Salisbury Iron Works, and the mention of the presence of only one bloomery is

some evidence that the nail factory which had a rolling mill was not estabilshed until after 1793.

Other industries listed were: five saw-mills; one fulling mill; seven grist mills; two linseed oil mills; and one snuff mill.

A fulling mill was a place for scouring, cleansing and beating new cloth. Cloth newly made, at that time in hand looms, was then treated by beating or stamping with pestles or stampers in troughs in which the cloths were put in hot water in which fuller's earth has been placed. In the linseed oil mills, oil for paint was secured by grinding linseed, while in the snuff mill, tobacco was ground into snuff. The use of snuff which was a fashionable habit of the eighteenth century became a common dissipation among the women operatives of the textile plants of later generations. The grist mills need no explaining.

Although the iron business and the manufacture of nails disappeared from the Powow, the water power remained; in 1812 there came a new kind of mill, one for the making of woolen and cotton textiles.

The textile industry, however, is a story by itself, commencing in 1812 and continuing until the Hamilton Woolen Company went out of business in 1912, one hundred years. In this period the town witnessed a century in which a great industry was born and developed which dominated the town's industrial and economic life. There were years of success and years of failure, a strike of the workmen which was one of the features of the early movement for shorter hours of labor, one of the strikers earning before his death the title of the "father of the eight hour day;" a strike in which John G. Whittier was an active figure. There are the stories of the great mill agents, Joshua Aubin, James Horton and Marquis De Lafayette Steere, men who wielded the power of barons, and were the influential citizens of the community.

The textile story, however, is too big for this paper, and must be reserved for another occasion. I am, however, giving the stories of two men who engaged in the textile industry after having had a part in the industries which I have been discussing.

The first of these men is Paul Moody. Joseph Merrill

describes his presence here in his History in his account of the year 1812, (page 122), as follows:

A new branch of industry was this year introduced at the Mills which has since become the principal business of the village. A company was organized for the manufacture of satinet, and a brick mill built on Mill Street. The company consisted of Ezra Worthen, Paul Moody, Thomas Boardman, Jacob Kent, Mr. Rundlett, and Mr. Wigglesworth. Ezra Worthen was the agent. The mill was two stories high at first, but raised to three and afterwards greatly enlarged. During war time a good business was done here and it was a valuable acquisition to the place.

Of these men we know something of Ezra Worthen and more of Paul Moody. Thomas Boardman was perhaps the Thomas Boardman with whom Jacob Perkins lived, but we know nothing definite about Kent, James Rundlett and Samuel Wigglesworth. The latter probably married a member of the Hackett family and lived and died on the Point Shore.

Ezra Worthen, born in Amesbury in 1781, was a pioneer in the textile business. His first activity appears to have been in the manufacture and sale of textile machinery. Later he became interested in the operation of a manufacturing plant in Amesbury, purchasing in 1810 one of the three saw mill privileges on the lower part of the Powow River. Through various transfers the business was first a partnership in which Worthen owned one third, Paul Moody one-third, Thomas Boardman one-sixth, and Samuel Wigglesworth one-sixth; then a corporation was formed in which the four men already named, together with Rundlett and Kent, became the stockholders. The corporation was known as the Amesbury Wool & Cotton Manufacturing Company. This concern under the management of Worthen became a successful enterprise. The war of 1812 was on and there was a demand for its products. It is known that the business was successful financially. A local man, who grew up in it and built up a considerable fortune for those days, was Jonathan B. Webster, who retired from the textile business to become Amesbury's leading banker. For many years he lived in the

Horton house on Main Street, later occupied by James H. Walker.

Both Paul Moody and Ezra Worthen were too big for the opportunities that Amesbury had to offer. In 1814, a group of Boston men, including Francis Lowell and Patrick T. Jackson, had formed a corporation and were building a mill in Waltham, Massachusetts. They applied to Jacob Perkins, who was still in this vicinity, asking him to take charge of it. He recommended Paul Moody. Perkins had known Moody, a younger man, from the days when Perkins had tried making nails at Byfield, before he came to Amesbury. When he came here he brought Moody with him and the latter seems to have been here until 1814. It has been said that after Perkins left the Amesbury nail factory Moody ran it. In any event, Moody married here in 1800 and must have been employed somewhere in this neighborhood between 1800 and 1810.

It is interesting that Perkins brought Moody to Amesbury, and it is interesting further that Perkins was responsible for Moody's next move, for in 1814, on Perkins' recommendation to Lowell and Jackson, Moody went to Waltham where for ten years he worked for Lowell in the development of the textile business that was being built up there, inventing and developing machinery and introducing and perfecting methods of production. In the meantime manufacturing had started at East Chelmsford, as it then was, now Lowell, where the great water-power available from the dam on the Merrimac River was making possible the building of many and larger mills. Moody's former partner, Ezra Worthen, had left Amesbury, possibly because of the limitations of the water power here, and was the first superintendent of the Merrimac Manufacturing Company, the largest plant at Lowell. When it was proposed to build a new plant there and it was felt that the size of the undertaking demanded an addition to the brain power available for the work, Ezra Worthen suggested that Moody be secured.

Negotiations were entered into with the Boston Manufacturing Company at Waltham, as a result of which an agreement was made by which Moody went to Lowell tak-

ing with him his patterns and patent rights, the Lowell concern paying the Waltham people $70,000.

That was in 1824; until his death in 1831 Moody remained in Lowell, not only having charge of the machine shop which built the machinery for all the mills at Lowell, but supervising the setting up of the machinery. A part of this time he was also superintendent of the mills.

He was active also in the social and community life of Lowell as he had been at Waltham. Lowell has its Moody Street as has Waltham, both named for him. Incidentally Moody Street, Amesbury, also, was named for him. It is not as important or pretentious a street as the Waltham or Lowell Moody Streets.

What kind of a man was Paul Moody? He was born in Byfield, Massachusetts, in 1779, a member of a family which has contributed numerous eminent men to the service of the country from the earliest days of the colony and province, including the late William H. Moody of Haverhill, a member of the United States Supreme Court. He was one of seven sons and the only one who did not attend Governor Dummer Academy, two of the sons graduating from Dartmouth. He decided for himself that he did not care for formal education and at the age of twelve started out on his own.

In June, 1794, when he was fifteen, a small woolen factory was started in Byfield on the Parker River by Newburyport capital. Two English weavers, brothers, by the name of Schofield, had been employed to run it. This was the first incorporated woolen factory in Massachusetts. The weaving was done on hand looms and young Moody for a long time repeatedly sought instruction in weaving, but without success. At last he found a man who would teach him. At 16 he was a practical weaver.

Then followed his experiences in Amesbury and those in Waltham and Lowell. He has to his credit a long list of inventions in textile machinery. Not the least interesting story about his ability is that of the governor, a principle now well known, but then entirely unknown in America. A traveler told of seeing in England a machine with a governor by which the speed of the machine was

kept constant. The speaker knew nothing of its construction or principle, but he remembered that there were two iron balls suspended on two rods connected at the top like a pair of tongs. Whn the speed of the machine was too great the balls, as they revolved around their center, would be driven apart by centrifugal force; as the balls spread apart their changed position produced a partial closing of the gate admitting the power; if on the other hand the motion was too slow, the balls would approach each other and the gate would be opened more widely, letting in a greater volume of water and increasing the speed. It was decided to order a governor from England. A short time later Moody was asked if the governor had been ordered; he answered that it had not been ordered and produced one that he had made which became the model for those used later in Lowell. His work in producing a governor under such conditions was a wonderful mental feat. It is impossible in this kind of a paper properly and justly to appraise the work of such a man. A record such as his requires a careful study by one technically qualified to pass upon it; a proper expression of his worth and merit, even by one so qualified, can be made only after thorough study and deliberation. Edward Everett said of him that "to the efforts of his self-taught mind the early prosperity of the great manufacturing establishments in Waltham and Lowell was in no small degree owing."

But Paul Moody had one contact with Amesbury which is both very important and extremely interesting. His wife was Susannah Morrill of Amesbury. After her husband's death she came back to Amesbury to live and resided on Main Street where the Kimball Block is now. In 1846, her youngest daughter, Hannah Morrill Moody, married Rev. Daniel Gordon Estes, rector of St. James Episcopal church from 1856 to 1872, and the builder of the church which preceded the present structure. Mrs. Estes had traveled abroad, having made the Grand Tour, as it was called, visiting the principal European countries, and knew something about continental ideas of life and taste. Her husband had similar ideas and they established in an outlying part of the town a large estate where they lived in keeping with their old world theories. It was

landscaped according to those ideas, an artificial pond created, shrubbery planted, and was one of the sights of the town. The road leading to their home in time became Estes Street. She was the owner of a large part of what later was called "The Highlands," and Moody Street, named for her father, was laid out on her land. Dr. Estes died in 1873; she lived until 1904. She had been a pupil of Margaret Fuller, had had an interview with the King of France and with the Pope, had met Thackeray, Dickens and Ole Bull, had seen the uprisings in Europe in 1848, including the revolution in Naples. In "Briarwood," her home in Amesbury, now owned by John W. Kilduff, Mrs. Estes lived a gracious and contented life consistent with her unusual culture and experience.

When she died in 1904, her obituary was apparently considered a matter beyond the ability of an ordinary reporter and was written by the late Emily Binney Smith, a prominent woman here forty years ago, who for many years was the local champion of John G. Whittier and a founder of the Whittier Home Association.

One other figure of the eighteenth century remains to be mentioned. As the century of life of the Salisbury Iron Works drew to a close one individual became prominent in the iron works who maintained his prominence in the industrial life of Amesbury in the 19th century. This was Jonathan Morrill, born in 1761, who was the last of the proprietors of the Salisbury Iron Works; he was also one of the pioneers in the textile business. He was a descendent of that Abraham Morrill who was one of the grantees by the town of Amesbury in 1642, of the right to erect a "corne mill' on the Powow. Abraham Morrill was a blacksmith and his descendant Jonathan came properly by his interest in iron work. As the supply of iron decreased Jonathan was on the lookout for a new field. He had dealings with Ezra Worthen and Paul Moody in 1812, by which he sold them his interest in a saw mill privilege where the Amesbury Wool & Cotton Company soon after located. In 1813 he built a mill for himself and sons, which became the No. 6 of later days where Jonathan Morrill and his two sons manufactured woolen goods, blankets and overcoats for the American Army.

Out of this business came the rhyme (author unknown) which was common a century ago.

"Ensign Morrill and his two sons
See the wonders they have done."

Ensign Morrill, as he was called, having been an officer in the militia, did not continue in the manufacturing business long for in 1821, he sold out to Amos and Abbott Lawrence, who from this beginning started the Amesbury Flannel Manufacturing Company.

But the iron business and the textile business were not Morrill's only activities. He built the brig *Decatur* on the Powow River below the mills. The *Decatur* was Amesbury's most noted privateer in the war of 1812. According to Samuel Hoyt, who made a study of the *Decatur* some two generations ago, she was built in 1813, the same year that Morrill built his textile mill, and was floated down the Powow River on scows, there not being depth of water enough in the river to float even an empty hull. She made a fine record at sea under Captain William Nichols, originally of West Amesbury, now Merrimac, but later of Newburyport, and was herself captured. The story of the *Decatur* belongs with that of the Amesbury ship building, or the Amesbury war activities, but it serves to illustrate the versatality of "Ensign" Morrill, who began with the iron industry, changed to textiles, and built a war vessel. His son Jonathan sailed on the *Decatur* as master at arms and was captured with her.

A continuation of this paper necessarily would deal with the development of the textile industry, and the features of that industry already mentioned, marking the years from 1812 to 1912. I hope some time to be able to present that story in order to make the tale complete.