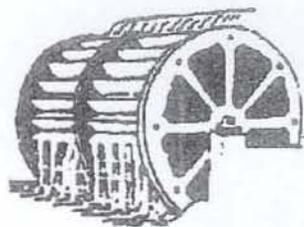


MILLWORK



Winter, 1999

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Vol. 13 - No. 1

What's News?

Hanford House Restoration - After much planning, dreaming and seeking funds, the restoration work began on the John Hanford Farmhouse. *Titan Well Drilling* put in a new well, pump and ultra-violet system. With these improvements, the restroom and sinks are now functional making things much easier on visitors and staff. *The Woodsmith* is repairing many walls in preparation for papering to be done by *Barbara Snyder*, professional paper hanger. *The Woodsmith* will be reproducing the wooden kitchen cupboards the Hanford family once had in the kitchen. *The Furniture Doctor* took 48 pieces of furniture from the house to restore for interpretive purposes. We will put this furniture in place before the museum opens in May. *Jo Bordinger* took delivery of six pieces of overstuffed furniture to reupholster. This furniture once belonged to Horace Hanford. The Museum has photos of what the furniture originally

looked like and *Jo Bordinger* will restore them as close to the original as possible. *385 Electrical* is upgrading and checking all outlets and wiring and installing some new fixtures. *David Lewis*, museum consultant, is

designing and installing an exhibit in the basement to interpret the dairy barn, farm and different vocations of John Hanford. Museum staff is building a room in the basement to enclose the furnace and water system. The Lewis exhibit will be mounted on the outside walls of this room. Visitors

will be encouraged to see the basement exhibit, coal bin, fruit cellar and gas engine. The museum curator is working with collections to have artifacts ready to install in the house once the restoration is complete.



PLASTERER



CONTRACTOR



PAINTER

Gift Shop Inventory - Once more, the gift shop is being prepared for a new season. This year we have a new gift shop manager, Sara Sikes, who has done a fabulous job of getting ready for the season. Visitors will be pleased to discover many new books on local history, nature, forestry and culinary arts. A new line of T-shirts with the museum name and logo will be available. The old tool shirts that everyone loved so well are in stock and plentiful. This year, for the first time, the gift shop will carry a line of jewelry - very Victorian and lovely. Sara discovered an old display case, had it repaired and lined it with fabric like the furniture in the Hanford House to set off the jewelry. Children are going to enjoy the new line of toys, books and games - but do not worry, you can still get butterfly nets.



1998 Collection Donations

Hanford Mills Museum would like to thank the following people for donating artifacts and documents to the Museum's historic collection in 1998:

Alice Barrett
Ruth Doolittle
Hardy & Ronald Hanson
William Hollenbeck
Roy Ickes
Jack Leadley
Jane McCone
Patricia Morris
Eric Olson
Anita Pizza
Michael & Virginia Quagliano
Louise Robinson
Dorothy Ryndes
Bob Stark
Bernice Stewart
(In memory of her husband,
J. Edward Stewart)

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The John Hanford Farmhouse - Part II: The Upstairs

by Jane McCone

Author's Note: In the last issue of Millwork, we talked about the beginnings of the John Hanford House, now we'll talk about its main rooms. If you missed the last Millwork, please contact us and we'll send you a copy of the article.

As John had his house built, he bought windows and some lumber from the mill. Much of it may have been given to him or milled out for him, too. Although John's home was a new and modern house, it proved to be less formal than its predecessor. Now entry was directly into a living room and not into a waiting hall or vestibule. Movement throughout the house was less formal and often through more private spaces. John placed the master bedroom on the first floor just off the living room and connecting to the kitchen. This is very understandable when considering John was a dairy farmer and was often in the barn late or up much earlier than the rest of the family members. The master bedroom features two built-in closets and a window seat, personalizing it yet further.

When the Erharts purchased the house in 1945, they used it for a summer home. They installed new wall coverings, special lighting and a beauty

salon sink. One other unique change the Erharts brought about in the master bedroom was to install asphalt, inlaid tiles. They planned that Mrs. Erhart would have a beauty salon when she was not singing - she was a country western singer. She never did hair, but died early. The changes and sink are still visible in the master bedroom.

The house features a porch on the south side.

Entry into the living room and kitchen are made from this porch. The Hanfords had a swing and a tiered plant stand on this porch. There are five circular columns on the porch holding the roof and adding some classical architectural features.

The living room features a large bay window, ornate woodwork, original chandelier and several pieces of Hanford furniture.

What's a Morris Chair?

A Morris Chair is the ancestor of the LaZboy recliner. It is a wooden framed chair with a reclinable back. It was first devised by the firm of the English designer, William Morris. They were first built around 1866, and remained popular into the early twentieth century.



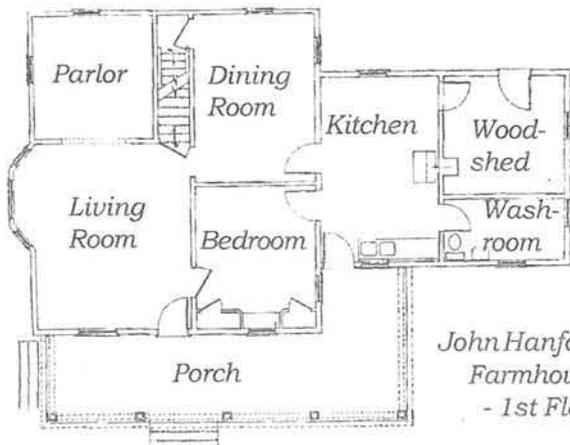
designs. The window to the south depicts a haying scene and the one on the west side of the house has a floral scrollwork design. They ordered these windows from a catalog. The parlor to the immediate north of the living room was used for the family piano and as a sitting room. John Hanford's daughter was married in this living room/sitting room. In 1938, when John died, they laid his coffin in the parlor and the funeral was at the house.

The house has a formal dining room which still

has several original Hanford pieces. John and his wife owned the table, a buffet and several chairs. Museum staff rebuilt the light fixture in the dining room from parts found in the basement of the house. The fanciest chandelier was still in its original location in the living room. There are still several lighting device pieces in the basement of the house.

Access to the kitchen is either through the master bedroom or the dining room. The kitchen is in what was once D.J. Hanford's creamery. Pictures of early creameries show them to be very neat and orderly. The walls in the kitchen, woodshed and washroom are all beaded board. There are very few features left in these spaces to remind one that once it was a creamery. The washroom and woodshed are divided by a wall, and a bathroom was added to

John Hanford kept a brass spittoon near his Morris chair. Also, near the chair was a large radio. Two windows in the living room feature in the transom sections either transferred or etched glass



John Hanford Farmhouse
- 1st Floor

Con't. on page 12

John and Lizzie Hanford

by Margaret Parris Schmitt

Editor's Note: Margaret Schmitt sent this letter when she read Jane McCone's Part I - The John Hanford Farmhouse. We didn't realize that someone who lived so close by still had memories of John Hanford, his family and home. Margaret Schmitt, who is 87 years old, spent much of her life in and around the East Meredith area. She lives in Oneonta, New York today.

After reading about the John Hanford House, it has prompted me to write a little of what I remember about the Hanfords. I was very fond of both and lived across the street from them over fifty years ago. Lizzie was in her seventies. She had a bachelor brother living farther up the street and used to go to help him often, always carrying a basket of goodies for him.

At milking time, I would see her going to the barn to help with that. Always with a white cotton kerchief tied on her head. Towns people all met in the barn with their pails to buy fresh milk from the cows. After each cow was milked, Lizzie would strain the milk and measure out fresh warm milk from the can. I bought mine daily as I did not have any refrigeration. They had mostly all Jersey and

Guernsey cows and the milk was very rich.

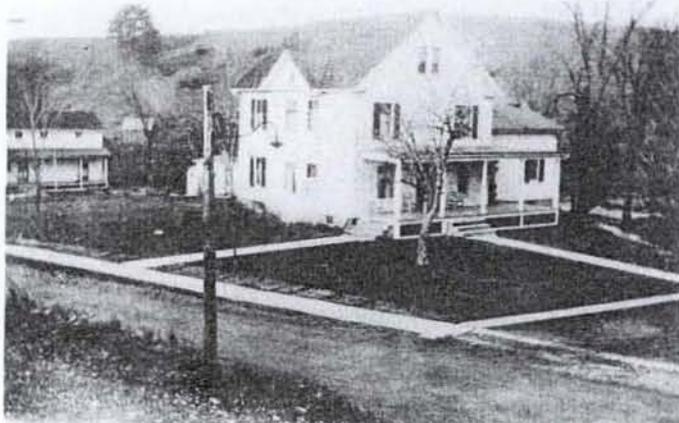
One year, I helped do the spring house cleaning in their twelve room house. There were four bedrooms, a bathroom and a store room upstairs.

All the quilts and blankets were aired on clothes lines on the porch and in the yard. Windows and paint were washed as well as the curtains.

I almost forgot to tell about John's help in house cleaning time. He would carry the rugs and carpet out, put them on the lawn and beat them with a carpet beater. Then he would hang them on the line to air for the rest of the day. House cleaning took two or three days.

Although there was a table in the kitchen, they always ate their meals in the dining room. Their supper was before milking and John went to bed quite early, after chores. But in the middle of the night, he always got up and had a lunch of bread and milk.

Their bedroom was on the first floor with a closet for each with a window seat in between (a chest-type for blankets). There was a door both to the kitchen and one to the living room in this master bedroom. The backroom was used to keep firewood for the kitchen range which was used for cooking and also to heat the hot water tank. Another room off the kitchen was a second bathroom, large enough for the washing ma-



This photograph shows John Hanford's Farmhouse as Margaret Schmitt would have seen it in the 1930s.

chine, rinse tubs and benches, ironing board, etc.

The large living room had a bay window with etched glass in the center one. Off this room was smaller room, I shall call it the music room, where the piano stood. The double doorway had wooden ornamental portieres.

After Mrs. Hanford's sister, Jennie Hetherington's husband passed away, Mrs. Hanford had her come and live with her and made the music room her bedroom. By this time, John had also passed away. Jennie was blind. I always remember the two ladies telling me about how their religious parents would not let them read the weekly newspaper on Sunday. When they were doing the barn chores, the two girls peeked at it, being very careful to fold it exactly the way it was found.

Jennie used to go into the backroom and get a piece of wood. Even though Jennie was blind she could bring the wood into the kitchen and put it in the stove. She would also fill the teakettle and put that on the stove. She enjoyed sitting by the wood fire. With her good legs and Lizzie's good eyes, they did real well.



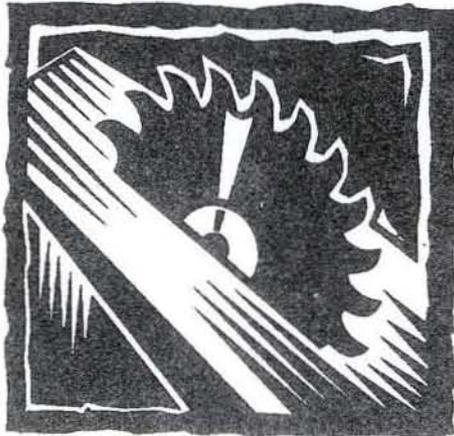
Spring House Cleaning

Elderhostel and New Calendar of Events

by Vesna Herbowy

During the week of October 11th-16th, Hanford Mills conducted its second Elderhostel in conjunction with The State University College at Oneonta (SUCO). This year's sixteen Elderhostelers came from different parts of the country, some as far as Alabama, to join us for the week of events. The group was made comfortable at SUCO's Morris Conference Center where they were provided with their lodging and meals. Throughout the week the group participated in the following college-level courses conducted on-site at Hanford Mills Museum: *Historic Milling*, *Edible and Medicinal Plants*, and *Family Heirlooms*.

Robert Grassi, Hanford Mills Foreman, taught the *Historic Milling* course. The history and development of water power, saw and grist-



mills were topics of discussion throughout the week. The participants spent much of their time in the mill examining the water wheel, gears, pulleys and shafts used here. Everyone saw the grist and sawmills in action. Some Elderhostelers plan to use what they learned in their own projects and involvements in historic mill preservation. The whole group was enthusiastic about the course and many even took the time to build their own boxes and crates in the mill.

We were fortunate enough to have cooperative weather all week which allowed the group to enjoy different plant walks as

part of the *Edible and Medicinal Plant* course taught by Curator, Caroline de Marrais. She discussed the history of the use of edible and medicinal plants, identification of plants, various uses and precautions. Caroline also used slide lectures to allow everyone to see what the plants looked like during the

different seasons of the year. The Elderhostelers were even able to sample edible and medicinal creations, such as dandelion wine and St. John's Wort oil, made by Caroline.

Hanford Mills Director, Jane Mc-

Cone, taught the third course, *Family Heirlooms*. Jane used many of her own family heirlooms to illustrate the topics that were covered. She also used participants' heirlooms to demonstrate techniques and materials used in paper conservation. The care and storage of photos, metal and organic objects, as well as the cleaning, displaying and storage of textiles, such as quilts, were

other topics covered.

In addition to the classes, the participants enjoyed various evening activities such as visiting SUCO's Science and Discovery Center and attending a lecture by local scholar Al Bullard on the *History of Hops*. With the help of Mary Lou Ryan at the Morris Conference Center, everyone thoroughly enjoyed the 1998 Elderhostel.

This year's Elderhostel was such a great success that we have already begun planning next year's Elderhostel. Hanford Mills and SUCO have moved the Elderhostel week to an earlier date of September 12th-17th. This change will hopefully ensure warmer, more favorable weather for the participants.

the Elderhostel date is not the only change on the Hanford Mills Calendar of Events. The staff updated and added new events and programs to the 1999 Calendar of Events. Be sure to look for some new events and the return of

some of your favorite old ones. If you have not received your calendar yet, you should be finding it in your mail soon.



Meet Worker Fred Hager - "Skin Too Thin for Zero"

by Caroline de Marrais

Through the years, the Hanfords have employed hundreds of men. Most were local boys brought up in East Meredith, who would go on to take over family farms, work for the railroad or maybe run a general store. Most of the mill's workers spent their lives right here in East Meredith or nearby. Of course, there are exceptions to this rule. One of them was Fred Hager, who found out he had "skin too thin for zero."

Fred Hager was born about 1856 in the village of Hobart which is about fifteen miles from East Meredith (a three to five-hour horse and wagon ride). Fred's father was Leander Hager. The 1869 atlas of Delaware County records Leander as the miller at the gristmill in Hobart, dealing in flour, feed and grain. Leander's brother, Austin, was also a miller and lived with the family until the Civil War. During the war, Austin

fought in the 72nd New York Infantry and was taken prisoner at Chancellorville, Virginia on May 1, 1863. We are uncertain if he made it home.

The Hager family was small for the time. Leander and his wife, Mary, had only one other child, a daughter they named Charlotte who was two years older than Fred. Another of Leander's brothers, Asa, who ran a store on River Street in Hobart, also lived nearby. It is likely, though, that the Hager family was good friends, if not somehow related to, the Hanford family that lived in and around Hobart. Levi Hanford (D.J. Hanford's uncle, who later moved to East Meredith) lived on a farm nearby and Levi's

brother, Horace, ran a store in town.

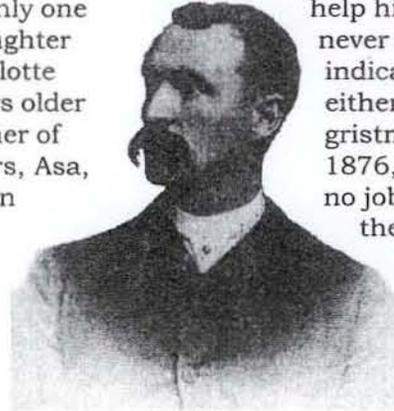
Around the time he turned 20, about 1876, Fred Hager moved to East Meredith to take a job in D.J. Hanford's mill. Why didn't he stay in Hobart to help his father? We might never know, but there are indications that Leander either never owned the gristmill or lost it. By 1876, there was probably no job for either Hager in the mill. A 1888

directory shows a Leander Hager working as a carpenter and builder rather than a miller. For whatever

reason, Fred Hager became a part of the Hanford business and the East Meredith community.

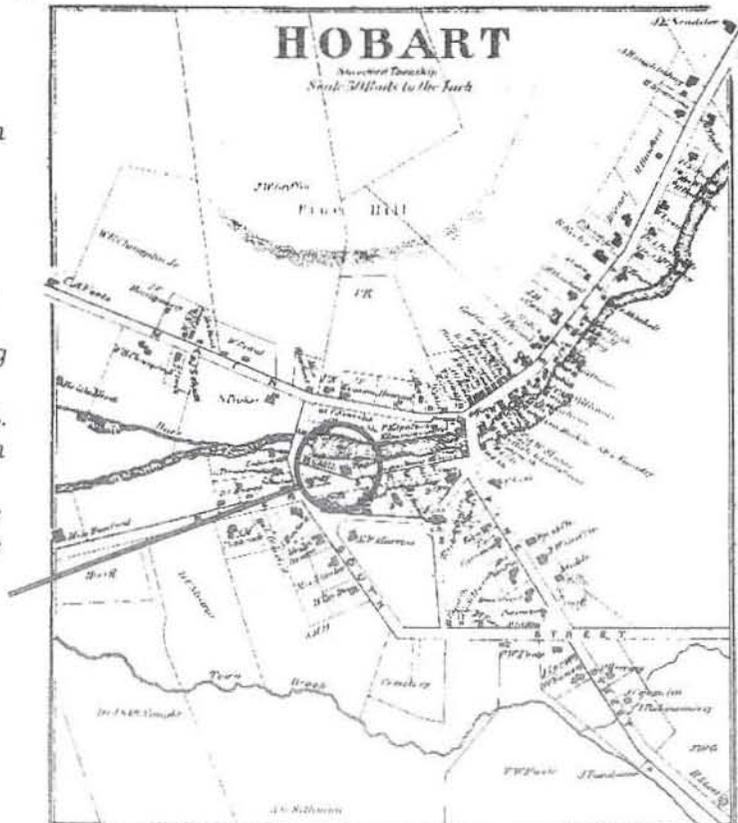
Fred moved in with D.J. Hanford's family and, according to the 1880 national census, he worked in the gristmill. While the Hanfords left little information on who was doing which jobs at the mill, Fred's experience with his father in the Hobart gristmill suggests he was one of the Hanford's millers. We also know, though, that milling wasn't his only job. His initials appear in a cutout made for the new circular sawmill in 1880 suggesting that he had a hand in setting the new sawmill up. We also find his initials throughout the building (for example, high up on an outside wall of the tub cover room - did he help to build that, too?) and in the business books (did he help keep the mill records?).

Fred also became an important part of the East Meredith community and especially close to both the D.J. and Levi Han-



Fred Hager

This map comes from the 1869 atlas of Delaware County, New York. With a magnifying glass, the name of "L. Hager" can just be read to the right of the village gristmill.



Con't. on page 6

Hager - con't. from page 5
ford families. Fred Hager spent time with D.J.'s son, Will (or Willie as they knew him then at the age of 17). He also escorted D.J.'s daughter, Elizabeth, occasionally, and spared some of his time for a 10-year-old Horace. He was also a close friend of Levi's son, Charlie, who was only five years his senior:

Charlie & Fred went to Oneonta to Firemans Parade

**Elizabeth Hanford Diary,
August 29, 1882**

Fred was always visiting with the Levi Hanford family, and even gave Elizabeth, Levi's wife, her 1883 diary.

Fred was not just a "fair weather friend" to the Hanfords. He went out of his way to help them when they needed a favor or when a family member was sick as Elizabeth Hanford recorded in her diaries:

Uncle [William Brownell] not so well. William [his son] & Fred sets up tonight

August 9, 1880

We left Ithica for home at 9 o'clock. At Oneonta at five o'clock. Fred Hager met us there. Home at eight.

November 27, 1880

Fred Hagar staid with us most all day. A lonely day to me [her mother's funeral was the day before].

January 8, 1882

Fred Hager could also be the life of a party, especially when that party included music.

Howard & Sophia Mitchell & Fred Hagar, Will Hanford here in evening, lots of Music.

**Elizabeth Hanford Diary,
March 7, 1882**

Music appears to have been one of Fred's passions. Together, he and Charlie Hanford bought a piano, which they kept at Charlie's house:

Fred Hagar went to Oneonta after a Pianna Bought by himself & Charlie

**Elizabeth Hanford Diary,
November 14, 1881**

Fred Hagar, Howard Mitchell, G.G. Hanford here in evening to Play on Piano & Sing

**Elizabeth Hanford Diary,
November 18, 1881**

Fred then learned to play an-

other instrument:

Fred here with his violin - in evening.

**Elizabeth Hanford Diary,
March 10, 1883**

Fred Hager also made time for his own family. His sister, Charlotte, was sick a couple times in 1883 and early 1884. He visited her often, though it is unclear whether she was still living in Hobart or if she had moved west to Addison in Steuben County, New York. This may have been the reason Fred decided to move to Addison, leaving on February 1, 1884. The Hanfords missed him. Elizabeth Hanford noted in her April 27, 1884 diary:

We sent a Cake of Sugar to Fred Hagar

Every year Fred Hager had been in East Meredith, he hadn't missed a maple sugar party at Levi Hanford's home. Fred *did* come back for an unexpected visit to Elizabeth Hanford and her family on August 28, 1885. He made visits to Hobart and left for Addison again on September 4, 1885.

We don't know what Fred was doing in Addison, but whatever it was, it didn't work well for him. He was back in East Meredith in 1888 working for D.J. Hanford again. They recorded him as working 313 days that year - every day except Sundays! Perhaps Fred Hager was working hard to earn money for his next move, for some time in 1889 he relocated to North Temescal (possibly Berkeley), California.

We would know little of his life there except two of his letters, sent to "Friend Horace," have been saved. Fred most likely wrote to many East Meredith residents, but Horace Hanford was a "pack rat." From these letters we find that Fred found work at a California gristmill:

One of Our men had the La Grippe & I had to Ride on the Delivery Wagon for Two Weeks and it rained nearly Every day. We never stop for rain here. It

is Very disagreeable besides getting cold from being Wet so much. We use the Oiled Coats & Pants but they don't always Keep one Dry.

**Fred Hager,
March 17, 1891**

I have all I can attend to here in the Office. I like the Office Work first class it is a big Improvement on Shoveling coal ...We do a Very good Business in Grain But Most of Ours is sold in Small lots from 1 sk [sack] up to 1/4 ton and nearly every order has to have a bill to go with it. I have had to stop and Weigh a Load of hay, have to Keep a Record of it in a Book & make out a card for Each Load all for 10 c

**Fred Hager,
May 19, 1892**

Fred also kept up with his music though not as often as he did in East Meredith, writing:

I was Out & Spent the Eve last Thursday & took my Violin. It was the first playing I have done since I came here. I had a boss time. I met a lot of young people from Oakland. They belong to a Quartette Club & I tell you We made Rome Howl for about three Hours. The Old Violin is better now than it was when I left N.Y. I am thinking of taking lessons this Summer. There is a lot of Very nice players & singers here & they want me to join their club and I think I will.

**Fred Hager,
March 17, 1891**

In the end, it appears Fred Hager enjoyed his life in California, but still missed his East Meredith friends:

I would like to drop in on you & take a hand, but I guess I will wait now until it gets to be a little warmer. My Skin is to thin for Zero now. I must close for now & retire. Give my Regards to all the boys and Write when you can. Good Night from Old Hager.

March 17, 1891

That is all we know of Fred Hager, a Hanford Mills worker who saw more of the world than just New York State.

*Your Old Friend
Hager*

Exploring the Industrial Age with the Hanfords

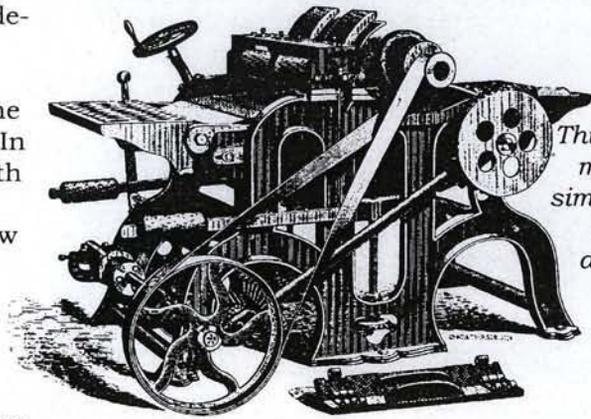
by Caroline de Marrais

D. J. Hanford lived in an interesting time in American industrial history. Even though the Industrial Revolution had been slowly gathering steam for over a hundred years, the world D.J. grew up in was still poised between the "Age of Homespun" and the "Industrial Age." D.J. was brought up a farmer using simple hand and horse-powered tools to plow, plant and harvest. He was apprenticed, while young, to a carpenter. Apprenticeships were more a thing of the past than of the Industrial Revolution, yet it is likely that D.J.'s teacher, Andrew Brown, made use of water-powered machinery in his work. This was likely D.J.'s first experience working with the results of the Industrial Revolution, though, no doubt, he saw it when he visited local mills. D.J. was fascinated by the inventions of the Industrial Age. We see this in D.J. Hanford's subscription to the *Scientific American* magazine starting in the 1860s. *Scientific American* was the best advertisement for what the Industrial Revolution could offer as it showcased new, practical industrial inventions in each issue.

How did the Industrial Revolution effect the mill? It started before D.J. Hanford ever bought the business. Hanford Mills started with one of the earliest woodworking inventions of the Industrial Revolution - a simple up-and-down sawmill. The English had resisted the use of the sawmill in the 1600s. Hand-sawyers (who used pit saws in

their work) destroyed any sawmill erected in the late 1600s. In contrast, with North America's low population and huge amounts of natural resources, sawmills were in demand. Oliver Evans, well known author of a book for millers, claimed that "One mill attended by one man, if in good order, will saw more than 20 men with whip-saws [also known as pit saws], and much more exactly." No wonder English sawyers tore down sawmills. Still, up-and-down saws were slow and took a lot of the log in sawdust (waste). It was not long before the circular saw was invented, not by a Shaker woman (as the legend goes), but by an Englishman in 1777. It was not perfected and used in the United States until about 1814. Obviously, the up-and-down saw was still popular even in the 1840s, or the builder of Hanford Mills would not have used it. The Hanfords did not "modernize" with a circular saw until 1880.

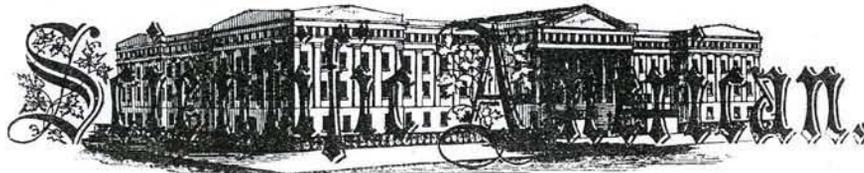
The first owners of the mill in East Meredith did not really have much interest in taking part in the Industrial Revolution. It took new owner, D.J. Hanford, reader of *Scientific American*, to see the potential in his new



This planing machine is similar to the type used at Hanford Mills.

purchase. D.J. knew there were other improvements on hand tools that could be used in a mill.

Perhaps the second most important woodworking invention of the Industrial Revolution was the planer. Planers use knives to smooth wood to a flat surface. Before the invention of the planing machine, woodworkers used wooden hand planes to finish or smooth wood by hand. It was a long, boring process that required a good eye and lots of practice to make a smooth, even board. The first machine planer was invented by Samuel Bentham in England in 1791. This machine had a fixed cutter that dressed wood on a reciprocating bed. It wasn't until 1828, however, that the first practical planing machine (basically the same design used today) was invented by a New Yorker, William Woodworth. This planer is infamous in patent history. Woodworth received his patent on December 4, 1828, and then he sold a half interest to James Strortg. Then, on April 25, 1829, Uri Emmons also received a patent for a similar planer. Mr. Emmons sold his patent rights to three other New York state residents. Rather than compete against each other, these five



Industrial - con't. from page 7
 men joined together in the end of 1829. They divided the country into sections, and licensed the leasing of their combined planer patents, collected royalties and controlled the price of finished lumber. The group also sued any manufacturer of similar machines, effectively limiting woodworkers to one planer design. This patent protection was extended seven years in 1836 and again (most likely illegally) the patent was extended until the end of 1856. A third extension was blocked by a well-organized group of wood-working machinery interests.

Luckily for D.J. Hanford, he did not have to deal with the problems of leasing a Woodworth machine. By the time D.J. Hanford was in the market for planer in 1869, the Woodworth patent had expired. With the end of the patent, the design of planer machinery could grow and improve. Not only would D.J. Hanford purchase a surface planer in 1869, but through the mill's history other planing machines were added to make mill work easier - a matcher (for planing tongue and groove joints) in 1876, a jointer (edge planer) in 1892 and at least two moulding planers, one in 1911 and one earlier (date unknown). The addition of planers to Hanford's mill allowed him to

charge more money for his product since he could offer finished lumber.

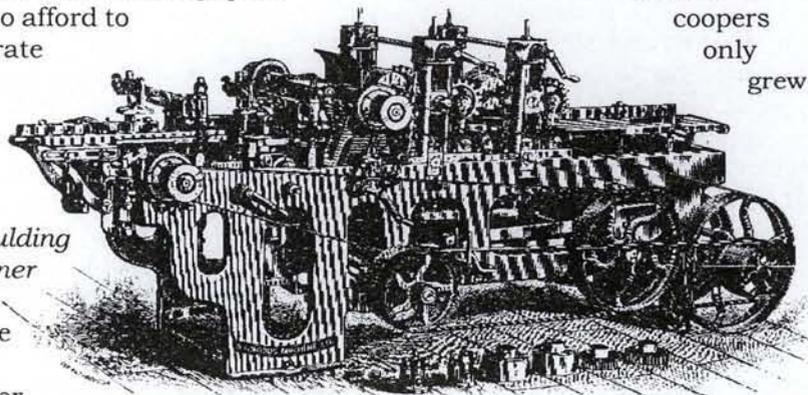
Specialty planing machines could cut decorative mouldings and flooring. Mouldings and other decorative wood ornamentation no longer had to be cut and finished by hand. The machines made it easier for a larger section of the population to afford to decorate their

Moulding Planer

house in a fancier manner. This became such a large business that smaller mills such as the Hanford's mill could not compete with the price of items made by larger factories. By the turn of the century, the Hanfords were actually ordering much of their fancy millwork from larger companies, producing only custom items in their own mill.

Other handcrafted wooden items were also affected by the Industrial Revolution. Notable in the East Meredith area was the cooper trade. Traditionally, barrel making was a very specialized craft that required years of learning and many specialized hand tools. There was great skill in crafting the properly shaped staves, fitting a tight barrel together and hand cutting covers to fit.

By the 1840s, various machines for doing different parts of the cooper's job began to come onto the market. This made a big impact on the people who practiced the cooperage trade. Between 1850 and 1890, when the population of the United States had almost tripled to sixty-three million people, the number of coopers only grew



from 44,000 to 50,000. The majority of those 50,000 were machine operators, not traditional "coopers."

The effects of the Industrial Revolution can be seen quite clearly in East Meredith, New York. In her diaries, Elizabeth Hanford, aunt of D.J. Hanford, at least three times noted that the local cooper was making use of machine made materials in his barrels and butter tubs. On January 8, 1894 she wrote

Parmer getting his Staves from the Depot

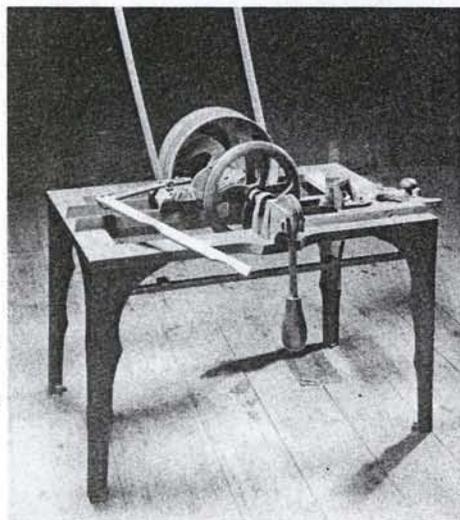
on January 22, 1895 she wrote **Parmer has teams drawing firkin hoops from Delhi** then on January 23, 1895 again she wrote

Parmer drawing Firkin Staves from Davenport Depot, with a number [of] teams.

It appears that each year, Parmer ordered a year's worth of staves and hoops which were most likely coming from a shop with barrel making machinery. Then, of course, D.J. Hanford also got on the bandwagon, as early as 1876, when he purchased a matcher and barrel heading machine. In a peak

Con't. on page 9

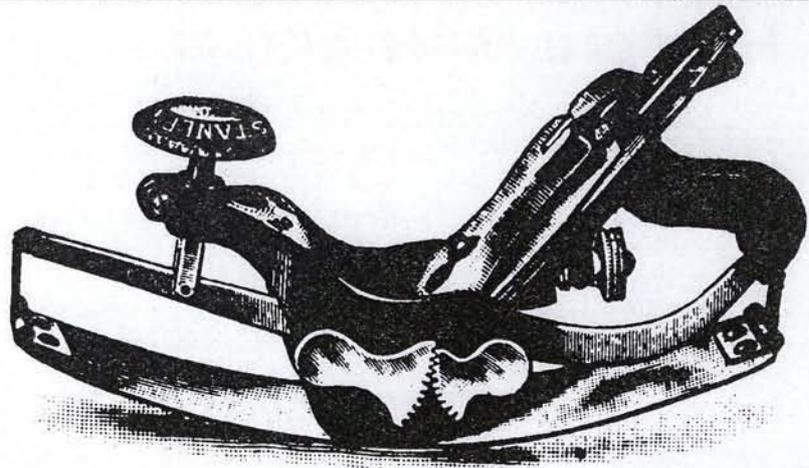
This machine for cutting barrel heads and butter tub covers was designed by William Mickel of Oneonta, New York. The Hanfords used this machine from 1876 to 1888, when they bought a more modern machine.



Industrial - con't. from page 8
year, he cut nearly 40,000 butter tub covers to sell to coopers throughout central New York and as far south as New York City.

The Industrial Revolution not only made a difference in the way products were produced in D.J.'s mill, but it even effected the type of hand tools that he *did* occasionally use. In the past, hand tools could be produced by a skilled tool craftsman, the local blacksmith and/or the woodworker himself. Traditionally, hand tools were made mostly of wood with only cutting or hammering surfaces made of metal. This changed as the Industrial Revolution forced hand tools to compete with machinery. Tools were refined, new materials (notably cast metal) were used and new combination tools were designed. Especially in terms of hand planes, cast iron made it easier to align and adjust cutting edges. Metal was more wear resistant and in the case of an all-metal compass plane owned by D.J. Hanford, allowed for infinite adjustments eliminating the need for multiple tools.

Early in the history of metal planes there were numerous manufacturers, but the Industrial Revolution with its increased use of powered machinery made it difficult to support so many hand tool companies. A new skill had to be added to a company's repertoire - marketing. One company rose to the top due to good advertising, distribution and representation through hardware stores, and is still in business today - the Stanley Rule and Level Co. of New Britain, Connecticut. Stanley's first successful planes were based on a patent by Leonard Bailey around 1867. They had an all metal plane and a combination plane with a wooden base and a cast iron superstructure - both were



D. J. Hanford owned a Stanley all-metal compass plane exactly like the one pictured above.

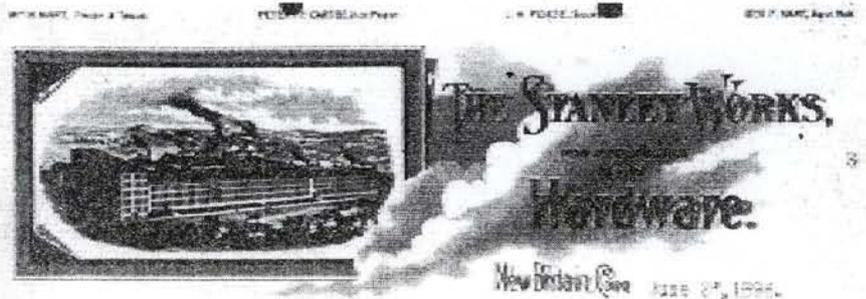
variations of Bailey's Patent Adjustable Plane. By 1890, Stanley was recognized as a world leader in the manufacture of planes and other woodworking edge tools. Even Hanford Mills dealt with the Stanley company, mainly in terms of hardware purchases.

It can easily be said that the Industrial Revolution was both good and bad for Hanford Mills. The rapid growth in the number of machine inventions made it easy for the Hanfords to acquire and make use of the technology they needed to transform their mill into a competitive business. It helped support two generations of the Hanford family, and provided the funds to help a third generation find the career they wanted to follow.

On the other hand, the Industrial Revolution, of course, brought increased competition into East Meredith. This ultimately caused the demise of the very same business it had

helped to create. First the railroad, and then trucks, brought the world to East Meredith. Machinery run with water power and flat belt pulleys became obsolete, and it was more expensive to replace them with modern machinery. As the Industrial Revolution created more technical professions, such as electrical engineer, and businesses required personnel who could keep their financial records, the Hanford children left East Meredith for jobs in the wider world.

Of course, in the end, maybe these changes were not so bad. If Hanford Mills had kept up with the modern world there would be no Museum. Instead, there would be a big, noisy factory town with Hanford-Pizza Manufacturing, Inc., a division of International Paper (or some other such corporation) at its center. Where would be the fun in that?



Hanford Mills Museum's Dam Repaired

by Robert Grassi

When we began the 1998 season at the mill it seemed that there would be no end to water. The Kortright Creek swelled with every rainfall. We had all the water we could ever need to power our waterwheel. As soon as July arrived, it was as if someone turned our water supply off and we soon ran out of water. Precipitation levels remained unusually low right through fall and continued into the winter, but one thing did change dramatically. As of the end of August, our dam on the Kortright Creek was repaired. We got our water back and could once again operate our waterwheel every day for our visitors.

For those of you unfamiliar with the Hanford Mills dam, it is a concrete structure barely twelve inches in height and about twenty-four inches in width. It spans the Kortright Creek on the mill side of County Route 12. It was built at an angle across the creek, similar to a wing dam or diversion weir used on larger creeks and rivers. Unlike these types, our dam spans the creek bank to bank and is designed to catch all the water available to keep our millpond full.

In 1979, the museum repaired the dam along with the head gates and the spillway and dredged out the millpond and its raceways. They poured concrete over what was left of the dam restoring it to its original height and length. Unfortunately, they only restored the dam to its original configuration rather than improve it. From what we can gather from early photo-

graphs before and during that restoration, the original dam never had a proper apron. An apron is essential even on a low head dam, such as ours, to guide the exiting overflow away from the dam's footings. This



This 1979 photograph shows the Kortright Creek dam before it was repaired.

prevents the dam from being undermined. Why the Hanfords never installed one remains a mystery. Also, even from the photos taken back in 1979, you can see that the creek had slightly changed course. It had carved a channel around the dam on the east side. To repair this, they did not lengthen the dam, but simply backfilled this area. These shortcomings in both the original design and in the dam's restoration in 1979 came back to haunt us twenty years later.

When I came to work in 1995, the dam was leaking badly from underneath. Without an apron, the water had undermined the dam to a point that significant leakage was occurring. This was particularly prevalent and most

obvious during periods of low water. During this summer's drought, the water in the creek fell dramatically and all of it was leaking underneath and bypassing our head race. We could not operate our waterwheel for most of the summer into early fall.

The flood of January 1996 created another problem. It reopened the old channel around the dam on the east side allowing the water to go around our dam. We had large rock and rip rap dumped in the channel as a temporary fix, but it only prevented the majority of the creek from flowing there. Water still leaked through the rocks. This leakage, along with what water was going under the dam, added up to a significant water loss. During the periods of low rainfall in both the summers of 1997 and 1998, we could not operate our waterwheel. There came a

growing concern that as the condition of the dam worsened each year we might lose it altogether during a spring freshet. That obviously would not have been good for the Museum but also for the local East Meredith Fire Department which relies on the millpond as a water source for their pumpers during a fire emergency.

In early 1998, the museum hired an engineering firm to look into our problem. They designed two options for the museum. The first was to repair the existing structure by driving interlocking steel sheet piling into the creek bed just in front of the original structure. The plan called for the space between the steel piling and the original

Continued on page 11

Dam Work - con't. from page 10
 concrete dam to be backfilled with concrete and then capped with steel plate. Also, they would extend the length of the dam ten feet into the embankment on its east end eliminating the new creek channel around the old dam. The second option was to completely replace the old structure with a new concrete

dam ten feet longer on its east end than the old dam. The museum opted for the first option, to repair and modify the original structure. All the proper permits were obtained and work began at the end of August and was completed within several weeks.

We can now harness most of the available water from the

Kortright Creek. Some water will still percolate through the underground aquifer. We will never be able to completely shut off the water supply between the dam and where the tail race returns the water to Kortright Creek. We all look forward to a full millpond in our 1999 season.



This c. 1890 photograph taken by Horace Hanford shows the dam in Kortright Creek at work. The two boys standing on the head gate are probably Fred Hanford and Merritt Barnes

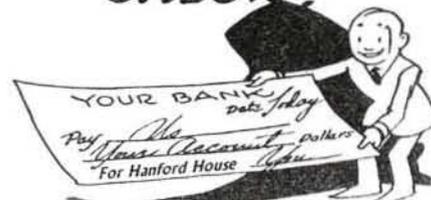
John Hanford Farmhouse Restoration Fund

The work on the Hanford House is moving along smartly and we anticipate a finish date of May 1. As anyone can well imagine, once we started opening walls, checking outlets and making repairs, more problems were discovered. We have chosen to correct all problems now rather than have them become worse later. This, of course, will increase the cost of the entire restoration project.

During Ice Harvest many visitors were able to view the

works in progress and even went on a tour with Marvin Zachow, The Woodsmith, who is doing much of the restoration work. Many kind visitors made contributions to the House project.

May we have a CHECK?



We are asking you to consider a donation to the Hanford House Restoration Fund this spring when you send you Membership or even separately, if you have already sent in your membership renewal. Be sure to note on your check or membership that the donation is for the Hanford House Restoration Project.

Be sure to mark your calendars for May 22, which is the day of our official ribbon cutting of the completed restoration project.



House - con't. from page 2
the washroom after John Hanford's death. This may have been to accommodate a relative with bad eye sight that came to live with Mrs. Hanford. The kitchen was painted and had a wood cookstove installed. That stove, a Dickson, is still in the house. For summer cooking, the Hanfords used a kerosene cookstove with a removable oven. The museum purchased a kerosene cookstove from the Amish four years ago and placed it where the Hanfords had theirs. The original kitchen sink was in the same place as the present one, but was an "iron" sink. The Erharts modernized the kitchen in the 1950s. They painted it, installed fluorescent lighting and metal cabinets.

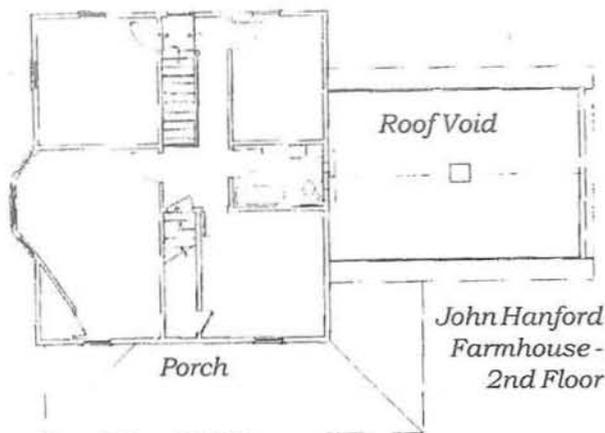
The second floor of the house features four bedrooms. The Hanfords only had two children, but often relatives stayed with them and occasionally a hired man. All the woodwork is untouched, no paint was added over the years. The wallpaper in

both the first and second floor rooms are from the 1940s and 50s. Most of the bedroom furniture in the house belonged to John Hanford and his wife.

The attic in the house was for storage. It was finished with a railing around the stairwell just like the second floor, only painted with a gray-wash and not stained and varnished. The walls were plaster and lathed with a wall-paper covering. The wallpaper is probably leftover from the main floor.

The house John Hanford built may have been too large for his needs. He had three children, one died at age ten, the other two grew up in the new house. At one time, a hired man may have stayed in one of the upstairs bedrooms, and later a

sister came to live with Mrs. Hanford. The first floor of the house seemed very accommodating to the Hanford family who enjoyed calling on friends and entertaining in their own home. The kitchen was modern when built, and the floor plan fitted the needs of the family. The uniqueness of the house made it John's, although the design and style were much like the houses being built at the same time by his siblings.



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MILLWORK



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Telephone: (607) 278-5744