

The Totoket Historical Society, Inc

**A CHRONOLOGICAL HISTORY OF INDUSTRIAL SITE # 15  
THE MILL POND TAVERN SITE**

By  
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1997

(Revised)

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Introduction

I believe that most of this research paper was written sometime in the 1990s when Gordon Miller was very active in the archeology of local industrial sites. The paper was not recorded in the archives of The Totoket Historical Society until June 18, 2003 (after his death) when it apparently was donated by his wife, Judy Newman Miller. The document has been digitized exactly as written.

Theodore Groom Ph. D.  
Chairman, Technology  
The Totoket Historical Society, Inc.

July 29, 2012

**INDUSTRIAL SITE #15  
MILL POND TAVERNE**

- 1739/40      March 12  
                 Joseph Bartholomew sold to Abraham Bartholomew (a member of the Northford Congregational Church in 1750) 3 acres of land at ye old Saw Mill - - - & lyes on ye East Side of ye highway going to Paug (3. V6-P258)  
                 NOTE: Location to be confirmed
- 1777            January 10  
                 Peter and Hannah Tyler sell to Elnathan Tyler 1/2 of a certain saw mill - - - in the parish of Northford - - - on Stoney River - - - commonly called Tylers Mill, together with one half part of three acres of land adjoining said mill  
                 Bnd: N & E on Ozias Tyler  
                 S on Solomon Talmage  
                 W on highway & Ozias Tyler (3.V10-P84)
- 1779            Nov 22  
                 Ozias Tyler sold to Elnathan Tyler one saw mill on Stoney River in Northford - - - called "Tyler's Mill" (3.V10-P441)
- October 11
- 1786            Elnathan Tyler sold to Benjamin Maltby Jr 1/2 part of a saw mill on Stoney River a little southward of sd Maltby's Grist Mill (3. V11-P87)
- 1805            September 16  
                 Benjamin Maltby leases to Calvin Mansfield for one dollar a year " - - - the free use and improvement of all my share or right to a certain mill place where there was some years ago a saw mill called Tyler's Mill - - - about one hundred rods (1,950 ft.) south of my Grist Mill for the purpose of a fulling mill and dyeing cloth seven months a year beginning the first of October annually" (3.V15-P414)
- 1806            January 1  
                 Elnathan Tyler leases to Calvin Mansfield "The free - - - use and improvement of a certain mill place where I have for a number of years past improved for a saw mill which for a length of time past been demolished and no use there of made for a saw mill - - - Calvin Mansfield - - - shall have free and full leave and liberty of my right in sd mill place for the purpose of building a fulling mill and dye house" (3.V15-P378)

- 1822            March 30  
                  Augustus Tyler sells to Phoebe Tyler a certain fulling mill, mill dam, dye house described in lease given by Elnathan Tyler to Calvin Mansfield - - - and since in my possession by Joseph Fowler Jr. (3.v19-P356)
- 1823            April 24  
                  John B. Tyler sells Julius Maltby one piece of land with building - - - aforesaid being one hundred fifty feet long by fifty feet wide together with the mill seat - - - the above is the same I brought of Wyllys Todd by deed of June 1823 (See 3.V19-P288 of June 6, 1823 for boundries and description) (3.V20-P53) Recorded May 17,1824
- 1823            June 6  
                  Wyllys Todd sells to John B. Tyler one piece of land running Northerly and Southerly and running twenty five feet north of the mill dam and Southerly - - - as far as to make one hundred fifty feet and adjoins west on the Turnpike road and running east of said Turnpike Road fifty feet - - - and also the privilege of keeping up the mill dam - - - also to lower the bottom of the river below sd dam - - - what will be necessary to drain water from the water wheel (3.V9-P288)
- 1828            January 15  
                  "Wyllys Todd & Calvin Mansfield agree that Todd rents yearly on a lease of 999 years to Calvin Mansfield - - - a certain mill seat - - - in Northford about one fourth mile Northeasterly of the meeting house - "  
    Bound: N on Wyllys Todd  
    E on heirs of Elnathan Todd  
    S on Solomon Tadmage  
    W on turnpike  
                  "with the privelege and right of repairing rebuilding and continuing the dam on the spot where it now stands - - - and also of erecting buildings on the premises below said dam" (3.V21-P484)
- 1837            "He (Thaddeus Fowler) made a very satisfactory pin machine which was used about five years in the old Maltby building by the United States Pin Co. , when (1842) the interest was transferred to Seymour." (12.P78)
- 'License was used in mentioning this name as it was not official until 1860) "By 1840 Fowler Brothers at Northford were manufacturing

1837  
(Cont'd)

pins - - - Then Slocum and Jillison of Poughkeepsie, New York and Dr. Howe combined on a machine that mechanically stuck pins in paper. In 1842 Brown & Elton the big brass rollers, purchased the Fowler's patents and business - and moved it to Waterbury. Northford just missed being the pin capital of the world" (9.P125)

1844

(See also 1860)

1850)  
1876)  
1878)

"Chapman Maltby owned the brick shop and made axe handles. He made the first desicated cocoanut, the meat was taken out, grated and sweetened, kiln dried and put up in packages as It is today. At first they did not save the shells, but later they polished them and put on a wooden handle and made a useful dipper."

Ref. (6.P4)

Mr. and Mrs. Robert Bennitt own wooden and metal boxes in which the desicated cocoanut was packed. The Totoket Historical Society has recovered the following items from the site: 32" unused axe handle, semi-finished gun stock, part of a wooden flail, two apparently wooden covers, several wooden dippers are owned by town residents. Buttons and spoons are also attributed to having been made by E. Chapman Maltby. His dippers were sold in New Haven at:

"Britannia Rimmed @ \$3.75/doz.

Plain Dippers @ \$3.50/doz. "]\*

"Chapman Maltby proved he had a good idea when he sawed the top of a cocoanut shell, polished it, added a fancy metal rim, attached a neat wooden handle and sold it at a small but fair profit to almost everyone who had a well or needed a dipper.

His brick shop for making axe handles, other tools and buttons was expanded into a brick factory." (9.P125)

"George Scranton, Sr. who served Chapman Maltby as carpenter, wheelwright and handyman, suggested that instead of allowing the putrifying cocoanut to rot and despoil the air, it be dried, cut up and sold as food. The Maltby kitchen became a 19th Century research department, laboratory and conference room. Successful results brought the attention of New York interpreneurs, one of whom began selling under a label very similar to Chapman's. Father, Julius Maltby, forbade his son to engage in legal proceedures. Twenty six years after Chapman Maltby had launched his shredded cocoanut on the national market, it won a first prize at Philadelphia's 1876 Centennial. . . . But Northford

1850/76/78  
(Cont'd)

might have been today the 'shredded cocoanut capital of the world if Grandfather Julius and son Chapman Maltby had not been content to net a mere \$100 a day by manufacturing shredded cocoanut in a conservative small town way." (9.P127)

(The two entries below, dated June 26, 1850, are probably associated with I. S. #15. Thaddeus Fowler's name is connected to this site between 1837 and 1842 by J. L. Rockey. Plumley, also, places Thaddeus at this location while making horse shoe nails in the Paug Manufacturing Company about 1862.)

1850 June 26

Lewis J. Atwood indebted to Thaddeus Fowler for about \$250 - - - for services rendered by Thaddeus Fowler about six weeks prior to this date said contract was for work by Fowler in making machinery for the manufacture of Buttons - - ""Now to secure the \$250 - - I, Lewis J. Atwood, sells for \$1 to Thaddeus Fowler "-- three certain power presses now being in the shop owned by Samuel Maltby to clear the debt - - ""

[3.V9-P614]

1850 June 26

Lewis J. Atwood owes \$900 to George W. Atwood for the manufacture of buttons. Contract of Feb 5. 1850 to continue till \$1,000 owed. Lewis for \$1 assigns to George Atwood articles of personal property, situate now in the shop - - - owned by Samuel Maltby, to wit, all the buttons finished and unfinished in said shop - - - amounting to about seventy five hundred dollars, all my tools and implements for the manufacture of buttons - - - except for three power presses - - conveyed to me by Thaddeus Fowler, all the varnish paper. Boxes and other material - - - and all the timber for button making - - - now lying in the road near the premeses of Eliakim Linsley

[3.V9-P617]

1854 Sept. 14

"Articles of Association of the Paug Manufacturing Company Be it known that we the subscribers do herby associate ourselves with a body politic and corporate pursuant to the provisions of Chapter 14th Title 3rd of the Revised Statutes of the State of Connecticut entitled "of Joint Stock Corporation" and the several Acts in addition thereto and amendatory thereof, and the following are the Articles of our Agreement and Association

Article 1st

The name of said corporation shall be the Paug Manufacturing Company.

Article 2nd

The capital stock of said corporation shall be ten thousand dollars which shall be divided into four hundred shares of twenty five dollars each.

Article 3rd

The purpose for which said corporation is established is the following (to wit.) To manufacture, sell and deal in all kinds of agricultural implements or all other articles composed either of wood or iron or both conjoined, to manufacture sell and deal in machines for making the aforesaid work, to purchase and sell patent rights and to deal in all kinds of goods wares and merchandise, and purchase & sell all articles necessary or convenient for the prosecution of said business and generally to do all acts connected with and incidental to said business or necessary to the management of same.

Article 4th

The statutes aforesaid entitled of "Joint Stock Corporations" and the several acts in addition thereto and amendatory thereof are hereby particularly referred to and made part of these articles and the corporation hereby established and organized under and pursuant to the said statutes shall have the power I proceed in accordance with the regulations specified therein.

Article 5th

The said corporation is established and located in Northford, Town of North Branford, State of Connecticut.

Article 6th

Each subscriber to these articles agrees to take the number of shares annexed to his name of the capital stock of the corporation Each share to be twenty five dollars as aforesaid and to be paid for by installments as the directors of the corporation shall call in the same.

Subscribers Name	No. of Shares
George Walker L	Ten
E. Harrison	Sixteen
E. C. Maltby	Eight
Henry Maltby Jr.	Ten

1854 (Cont'd)

Subscriber's Name Ellison	No. of Shares, Twelve
Smith Carlos Smith Lydia	Four
T. Hull	Eight
O. E. Maltby	Forty
Samuel Maltby	One Hundred Twenty
Julius Maltby	Twenty
William Maltby	Ten
De Grasse Maltby	Twenty
Edward Smith	Twenty
Oscar A. Fowler	Eight
Reuben Harrison	Four
Henry Maltby	Eight
Reuben N. Angur	Twelve
Francis C. Bartholomew	Four
T. A. Smith	Twenty
Philander Cooke	Eight
Charter Foote	Four
Henry Cooks	Eight
Jared Linsley	Twenty
Langdon Harrison	Six

We do hereby certify that the above is a correct statement of the purpose for which the above corporation is formed also the amount of the capital stock with the stockholders names and the number of shares of each respectively owned and we do also certify that the amount of capital actually paid in to be eight hundred dollars

T. A. Smith, President  
Edward Smith)  
Oscar A. Fowler) Directors  
Saml Maltby)

State of Connecticut  
New Haven County S. S. North Branford  
Sept. 14th 1854  
Personally appeared the above named President and  
Directors and made  
Oath to the above Certificate by them Subscribed before me F.  
C. Bartholomew, Justice of the Peace Received for Record Sept  
16th 1854 and Recorded by

"Benj<sup>m</sup> Page Town Clerk"  
[8. V4-P570/572]

1854

September 20

Charles De Witt Maltby sells for \$1,500 to Samuel Maltby his father (1790-1881) - - - , - a certain mill site with the buildings thereon - - - with the right - - - of building and rebuilding - - - and continuing the Mill Dam - - - to such a height only as shall not interfere with the water privileges of the Button Factory situate on the same stream about 80 (1240 ft) rods above and now owned by Samuel Maltby - - - to carry on any operation of said factory and to erect a dam at the factory - - -"

Bnd: N & E on Charles De Witt Maltby  
S on Jared Hawks  
W on Turnpike  
(S.V4-P364)

1854

September 22

Samuel Maltby for \$2500 sells to Paug Manufacturing Company (of which he is the major stock holder) "- - - a certain mill site with the factory buildings blacksmith shop and the other buildings situate on the Turnpike Road about half a mile Easterly of the Stone Church - - -"

Bnd: N on Samuel Maltby  
E & S on Charles De Witt Maltby  
W on Turnpike

"- - of continuing the mill dam and race? where they now are or of relinquishing the present dam and instead thereof of building another dam at the factory at any future time and thereby plowing other and more lands of said Samuel Maltby on paying said Samuel Maltby an additional sum of three hundred dollars"

(8.V4-P28)

1855

Jan. 30

Patent No. 12312 was issued to George Fowler for a "Double Acting Force Pump" (cc attached)

1855

"A power press constructed with a slide box contentric ring is considered the most valuable and useful invention produced by De Grasse Fowler with the cooperation of his brother George. The press was manufactured in Northford for several years later being sold to Styles and Parker Company in Middletown" (10. Ch. 3-P8)



# UNITED STATES PATENT OFFICE.

GEORGE FOWLER, OF NORTHFORD, CONNECTICUT.

## DOUBLE-ACTING FORCE-PUMP.

Specification of Letters Patent No. 12,312, dated January 30, 1855.

*To all whom it may concern:*

Be it known that I, GEORGE FOWLER, of Northford, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Lifting-Pumps; and I do hereby declare that the following is a full, clear, and exact description of the construction, character, and operation of the same, reference being had to the accompanying drawings, which make a part of this specification, in which—

Figure 1 is a perspective view of a double acting lifting pump, showing all its external parts, as ready for use. Fig. 2, is a vertical section of the same, cut through its center, showing all the internal structures in their proper positions. Fig. 3, is a perspective view of the end, or mouth piece of the water pipe E, Fig. 1.

My improvement consists in so constructing the pump, (either single, or double, acting) that the water will be let into the pump stock, or cylinder, above the piston, so that the piston will not need any valve, it being worked, to lift the water, by a rod, or shaft, outside of the pump stock, leaving the whole space in the cylinder to be filled with water, thereby raising a greater quantity of water in proportion to the size of the cylinder and the piston being solid will be much less liable to get out of order, while the only valve, which is used, is in the upper reservoir, where it can be readily examined by simply unscrewing the lid.

I make the pump stock, A, B, Fig. 1, of a hollow cylinder, of any suitable material, open at both ends, as shown, in section at A, B, Fig. 2, and secure the upper end, *a, b*, in the bottom of a suitable reservoir, C (which serves both as water vessel, and air vessel,) the upper end of the cylinder passing completely through the bottom, as seen at *a, b*, Fig. 2. And the lower part perforated with holes, as seen at *h, i*, Fig. 1. In the bottom of the reservoir, C, I fit a suitable valve, as seen at *c, d*, Fig. 2, to close the upper end of the cylinder, the valve opening upward to admit the water into the reservoir, and closing by its own gravity, or the pressure of the water in the reservoir.

I make the reservoir of cast iron, or any other suitable material, and render it air tight by screwing down the lid, D, Fig. 2, with suitable packing. And, to the side of

this reservoir, C, I fit a suitable pipe, as E, 55 Fig. 1, to which may be attached any desired length of pipe, or hose, to convey the water to the desired locality. Or, this pipe may be attached to the lid, and be extended down to near the bottom of the reservoir, (leaving sufficient space for air,) as indicated 60 by dots, at D, Fig. 2.

I make the piston, *e, f*, of solid cast iron, or any other suitable material, (without boxes or valves,) to accurately fit the inside 65 of the cylinder, as seen at *e, f*, Fig. 2, so that no packing will, ordinarily, be necessary, (but they may be packed in any of the ordinary ways, if thought necessary). The rod and piston, together, should be about the 70 length of the cylinder, as shown at *f*, Fig. 2.

I connect the lower end of the piston, (by means of a cross bar *j*,) with the side rod, or shaft, F, G. This side rod, F, G, is caused to work parallel with the piston rod, *h, i*, 75 by means of the guide, H, I, attached to the reservoir C. I connect the upper end of the parallel side rod, F, G, with the lever, or brake, K, by means of the connecting rod, or bar, L, M. 80

Having constructed the parts as above described, I connect the lower ends of the piston, and side, rods, insert the piston into the lower end of the cylinder, and the side rod through the guide, and connect its upper 85 end with the lever, or brake, when the pump is ready for use. The lower end of the cylinder, &c., is put into the water to a depth greater than to the holes, *h, i*, so that when the piston is forced down to the position seen at *e*, Fig. 2, the water will rush into 90 the holes, at *h*, and when the piston is forced up, it will lift the water upon its upper end, force open the valve, as at *d*, Fig. 2, and force the whole column of water into the 95 reservoir, C, when the pressure of the air (in the reservoir,) upon the water will force it out through the pipe, E, and convey it to any desired place, by means of additional pipe, or hose, to the extreme end of which, 100 should be attached the pipe, or mouth piece, Fig. 3, or some other suitable termination.

This pump can, very advantageously, be made double acting, as shown in Figs. 1 and 2. And, when set very deep in the water, 105 there may be valves opening inward, near the top of the water, to prevent the resistance of the vacuum while the piston is de-

scending. This pump will be equally suitable for fire-engines, or, in any situation where lifting or forcing pumps are required.

What I claim as my invention, and desire  
5 to secure by Letters Patent, is—

The combination of the solid piston with the cylinder, and reservoir, when the piston is inserted from the lower end of the cylinder, and worked by a parallel side, rod, or  
10 shaft, outside of the cylinder, (whether for

single, or double, acting pumps,) so as to constitute it an efficient lifting pump, (without suction valves,) and the whole is constructed, combined, and arranged, substantially, as herein set forth.

GEORGE FOWLER.

Witnesses:

SAMUEL THOMPSON,  
R. FITZGERALD.

1855

Paug Manufacturing Company. [The following shares of Capital Stock, valued at \$25 are recorded in a stock certificate book owned by heirs of Mrs. William D. Carter.]

- Cert. #1 for One Hundred & Twenty Shares on \_\_ ? \_\_ to Samuel Maltby.
- Cert. #2 for Forty Shares on November 22, 1855 to O. E. Maltby.
- Cert. #3 for Twenty Shares on Dec. 22, 1855 to Julius Maltby.
- Cert. #4 for Twenty Shares on Nov. 22, 1855 to DeGrasse Maltby.
- Cert. #5 for Eight Shares on \_\_ ? \_\_ to E. C. Maltby.
- Cert. #6 for Ten Shares on Nov. 19. 1855 to William Maltby.
- Cert. #7 for Ten Shares on Nov. 19, 1855 to Henry Maltby, Jr.
- Cert. #8 for Twelve Shares on May 3, 1855 to Reuben Augur.
- Cert. #9 for Eight Shares on \_\_ ? \_\_ to Henry Maltby.
- Cert. #10 for Twenty Shares on \_\_ ? \_\_\_\_\_  
to Thomas A. Smith.  
[Cert. #10 signed by T. A. Smith, President and Oscar A. Fowler, Secretary, has not been removed from the book.]
- Cert. #11 for Four Shares on Nov. 23, 1855 to F. C. Bartholomew.
- Cert. #12 for Four Shares on Nov. 10, 1855 to Carlos Smith.  
[Not removed from the book]'
- Cert. #13 for Eight Shares on Sept. 10. 1855 to Mrs. Lydia C. Hull.
- Cert. #14 [Stub is missing].-
- Cert. #15 for Ten Shares on Dec. 1855. to George Walker.
- Cert. #16 for Six Shares on Jan. 14. 1856 to Langdon Harrison
- Cert. #17 for Sixteen Shares on \_\_ ? \_\_ to Lorenzo E. Harrison.  
[Signed by T. A. Smith, President and not removed from the book]\*

1855 (Cont'd)

Cert. #18 [Stub is missing]\*  
Cert. #19 for Eight Shares on Dec. 15, 1855 to  
Philander Cook.  
Cert. #20 for Twelve Shares on Jan. 15, 1856 to  
Ellison Smith.  
Certs. #21, 22, 23, 24. [Stubs are missing]\*

[Stock Transfers recorded in the same book are:]\*

#1 Ruben N. Augur, twelve shares to  
E. Chapman Maltby, Feb. 29, 1856.  
#(?) Henry A. Cook, four shares to  
Rueban N. Augur, Esq., March 10, 1856.  
#(?) Henry A. Cook, four shares to  
Oscar A. Fowler, March 10, 1856.

[Note: Company certification still in book and not signed].

#(?) Henry Maltby. eight shares to  
Henry Maltby, Jr., December 12, 1856.  
#(?) E. C. Maltby. twelve shares to  
Julius Maltby, January 1, 1857.  
#(?) Edward Smith, four shares to  
Sidney Cowles, November 15, 1858.

[Note: Company certification still in  
book and not signed] :

#(?) R. N. Augur, four shares to Carlos Smith, March 29, 1859.

1856

August 26

Thaddeus Fowler by deed from Lewis J. Atwood become the owner of  
three certain power presses being in the shop of Samuel Maltby - - -  
with full power to dispose of them - - and whereas George W. Atwood  
wishes to hire said presses and remove them  
to the shop of Thelus Tod - - .

I, Thaddeus Fowler leases to George W. Atwood the three  
power presses with liberty to remove them without injury to said  
Thelus Tood for sixty days

[8.V4-P618]

1855-59

The Paug Manufacturing Company stock certificates book (owned by the  
heirs of Mrs. William D. Carter) shows an entry on January 1, 1857 which  
reads as follows:

1855-59 (Cont'd)

"10,000 paid in	
real estate value not less than	\$3400
personal estate not less than	\$6000
account receivable not less than	\$3800
bills payable not over	\$3500."

1858

" - - about 1858 - - - The Fowler Manufacturing Company (began) to manufacture in Wallingford heavy metal presses, evaporating pans. etc. out of solid sheet iron by machinery invented by De Grosse Fowler of Northford. The industry was discontinued about 1860" (11. Vol. 1. Ch. 3- P356)  
"Chapman Maltby kept four peddlers' carts on the road vending his bone, ivory and homemade wood buttons" (9-P120)

Often times a large seed was found inside the cocoanut. These Maltby manufactured into fancy buttons which were known a vegetable ivory buttons and were in demand for trimming suits and dresses - - - These were ivory in color with a tiny brown center" (10. Ch. 3-P8 & 9)

Plumley adds that "The E. C. Maltby firm later became known as the Smith & Cowles Company. Under this name they continued to make cocoanut dippers and added Britannia dippers. They also made agricultural implements including a wheel horse rake and made light iron castings to order." (10. Ch. 3-P9)

1859

May 27

The Paug Manufacturing Company is sold to E. C. Maltby, Edward Smith, Sydney Cowles and Carlos Smith - - - a certain mill site with the factory buildings, Blacksmith Shop, Foundry & other buildings. "

Bnd. N, E9 Son Samuel & Charles De Witt Maltby  
W on turnpike

[8.V4-P662]

NOTE 1) Edward Smith's daughter, Clara, provided the initial funds for the construction of the Edward Smith Library. She had lived for many years in the splendid Gothic house on Maltby Lane. Clara had earned a PHd Doctorate and headed the Department of Mathematics at Welesley College. Her many wonderful charcoal (?) portraits are maintained by the T H S.

1860

Jan 17

Patent No. 26874 was issued to De Grasse and Thaddeus Fowler for "Making Coated Iron Pins". (cc attached)

# D. G. & T. Fowler,

## Papering Pins,

N<sup>o</sup> 26871.

Patented Jan. 17, 1860.

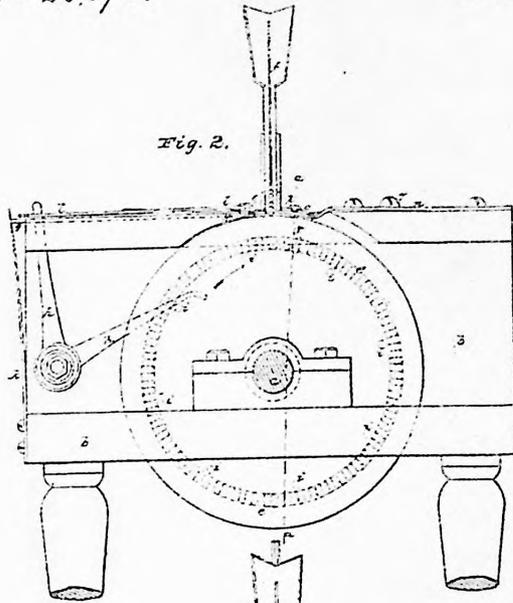


Fig. 2.

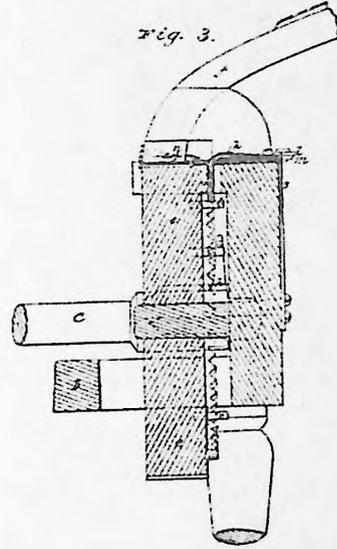


Fig. 3.

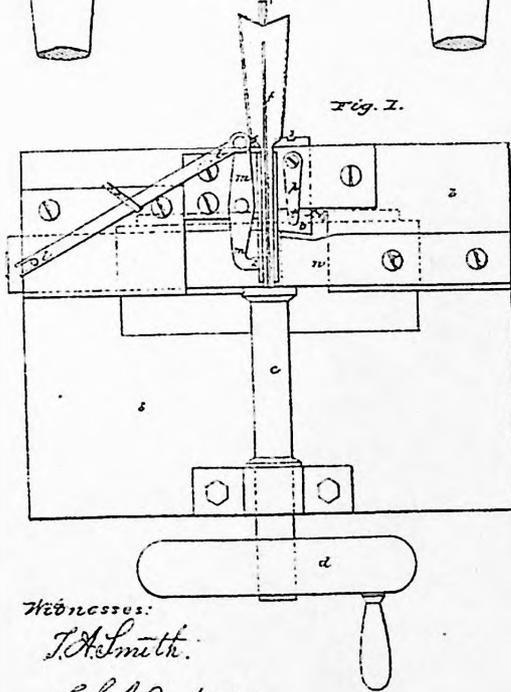
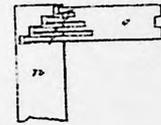


Fig. 1.

Fig. 4.



Witnesses:

J. A. Smith.

Chas. D. Matty.

Inventors.

D. G. & T. Fowler.

Therding & Co.

# UNITED STATES PATENT OFFICE.

DE GRASSE FOWLER AND THADDEUS FOWLER, OF NORTH BRANFORD, CONNECTICUT, ASSIGNORS TO THEMSELVES, SAMUEL MALBY, AND GUSTAVUS R. ELLIOTT, OF SAME PLACE.

## MAKING COATED IRON PINS.

Specification of Letters Patent No. 20,874, dated January 17, 1860.

*To all whom it may concern:*

Be it known that we, DE GRASSE FOWLER and THADDEUS FOWLER, of North Branford, in the county of New Haven and State of Connecticut, have invented and made a certain new and useful Improvement in Coated Iron Pins; and we do hereby declare that the following is a full, clear, and exact description of the nature and operation of our said improvement, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1, is a plan of our machine for finishing the pins, Fig. 2, is an elevation of the same, Fig. 3, is a vertical section at the line *a, a*, Fig. 2, and Fig. 4, is a plan of a slight variation in the burnishing device.

Similar marks of reference indicate the same parts.

Pins have heretofore been formed of iron by the ordinary cutting heading and pointing machinery, and have afterward been coated by boiling in tin similar to the brass pins, but the coating put on is so thin that the iron is liable to discolor and rust. When a thicker coating of tin is put on the pins by dipping the pins, or by any ordinary process for depositing such coating metal on the pins, they become very rough on their surface so that they will not pass into or through any fabric with ease, because such coating metal exists on the surface in minute granules: If the pins after being thus coated are subjected to any of the known polishing operations, such as the revolving or shaking box, the inequalities of surface are not removed, and considerable power is required to stick the pin in the fabric, as well as giving an unpleasant sensation to the hand.

Our invention does not relate to any particular mode of coating the iron pins, but our said invention does consist in finishing such coated iron pins by a rolling and compressing operation whereby the granules are crushed down to a perfect level and the pin rendered smooth and uniform throughout its entire length. To accomplish this operation we make use of a wheel *c*, mounted on a shaft *e*, that is sustained on a frame *b*, and rotated by the fly wheel *d* or otherwise.

*f* is the conductor onto which the pins are placed and pass down the curved end of the conductor and lie horizontally as seen in Fig. 3. From the conductor the pins are separated one at a time by the slide *g* that

is moved by the lever *h*, which is acted on by the pins *i, i*, at the back of the wheel *e*.

*k*, is a spring to keep the lever *h*, toward the pins *i*.

*l*, is a slide acting on the lever *m*, that is set on the fulcrum 1, and formed with a chisel shaped separator 2.

6 is a spring acting against the end of lever *m*. The operation of this is, that the slide *g* presses a pin along from beneath the end of the conductor to be acted on as hereafter described, at which moment the separator 2 is drawn back and the line of pins rests on the slide *g*, now as the slide *g* draws back the separator 2, passes above the lowest pin sustaining the others above, while this lowest pin falls on the wheel *c*, as slide *g*, draws from under it.

*n*, is a spring compressing plate coinciding near its end with the shape of the edge of the wheel *c*.

7 is a screw by which the spring compressing plate is kept toward *e*, with more or less power. The end of this plate *n*, is slightly beveled so that each pin is pressed in between the wheel *c*, and plate *n*. The revolution of the wheel *c*, rolls the pin around and both surfaces being very smooth bring down, by a rolling compression, all the inequalities and roughnesses consequent on the tinning operation, and produces a perfectly smooth and highly finished pin; and the finished pin passes away from beneath the plate *n*, before another is entered so that any slight inequality in size will not affect the perfect operation and uniformity of pressure on the pin. To finish up the point we make use of the vibrating polisher *o*, kept onto the point by the spring *p*, and vibrated by the joint operation of the spring 3, and a series of teeth 5, around the back of the wheel *c*, acting on a stud 4, from the slide *o*. When desired this vibrating plate *o*, may extend in the form of burnishing fingers 7, see Fig. 4, the ends of which act through openings in the compressing plate *n*, to burnish the pin as it rolls beneath said plate *n*, between that and the wheel *c*.

It will now be apparent that by the rolling and compressing operation herein set forth, an iron pin can be made in as perfect and salable form as the brass pins, because the pins heretofore made either had not sufficient coating material to be protected from rust or else were rough and uneven on their

55

112

surface; we are enabled to apply the necessary amount of coating material and then bring the surface to a perfect finish.

What we claim and desire to secure by  
5 Letters Patent is—

Finishing coated iron pins by the rolling and compressing operation substantially as specified.

In witness whereof we have hereunto set our signatures this fifteenth day of December 1859.

DE GRASSE FOWLER.  
THADDEUS FOWLER.

Witnesses:

T. A. SMITH,  
C. D. MALTBY.

1860

May 10

The Articles of Association of the United States Pin Company was established.

Article 1st

We the subscribers have associated and do hereby associate and form ourselves into a body politic and corporate under and pursuant to a certain statute law of the State of Connecticut entitled "of Joint Stock Corporation" Title III (three) Chapter 14 (fourteen) of the Statutes of Connecticut compilation of 1854 and under and pursuant of all other acts in addition to and in alteration or amendment of the same and said statute we hereby particularly referred to and made part and parcel of these articles.

Article 2nd

The name of said corporation is "United States Pin Company".

Article 3rd

The capital stock of said corporation is sixty thousand dollars and is divided into twenty four hundred shares of twenty five dollars each.

Article 4th

Said corporation is organized for the manufacture, working of fabricating, purchase, sale and exchange of metallic pins and wire of every description and of such engines, machines, tools, implements and patent rights as are or may be or may become necessary or convenient for the manufacture, working, or fabricating of such pins and wire \_ And generally to deal in any and all patent rights and any and all arts, proceses, and other things in any way incidental to, connected with, or convenient for the prosecution of the business aforesaid and to buy, sell, lease, or hire any real or personal property, necessary or convenient therefore.

Article 5th

The said corporation is located in the Town of North Branford, in the County of New Haven and State of Connecticut

Article 6th

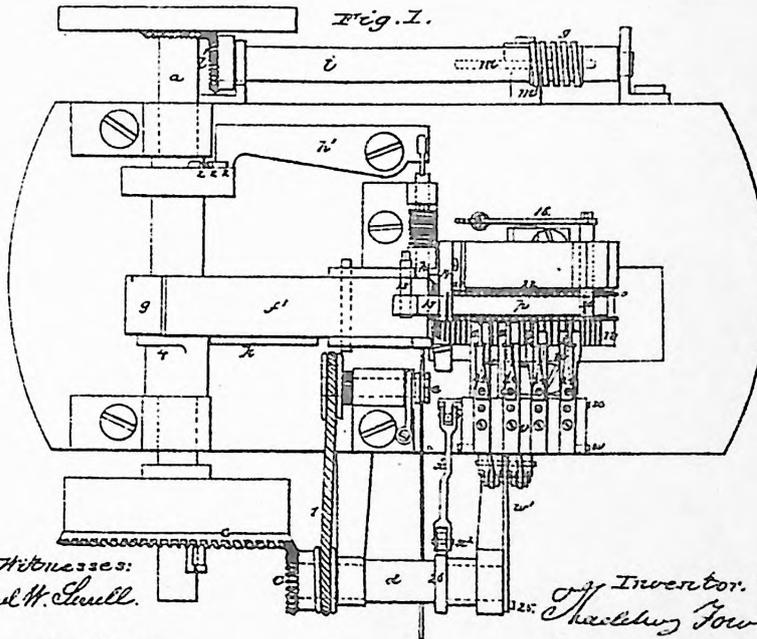
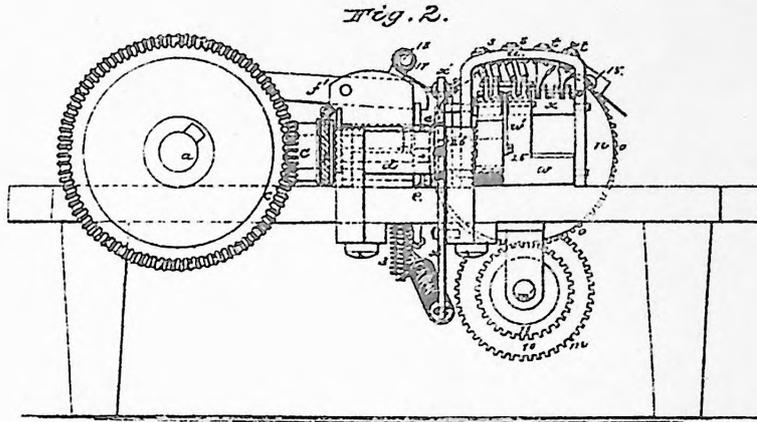
Each subscriber to these articles agrees to take the number of shares assigned to his name as hereinafter mentioned, Dated at New Haven this 10th day of April 1860.



T. & D. G. FOWLER  
PIN MACHINE.

No. 29,431.

Patented July 31, 1860.



Witnesses:  
Lemuel W. Sewell.

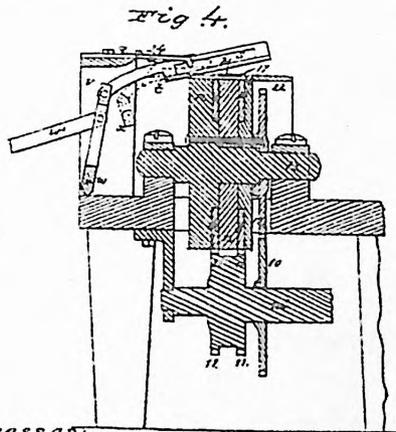
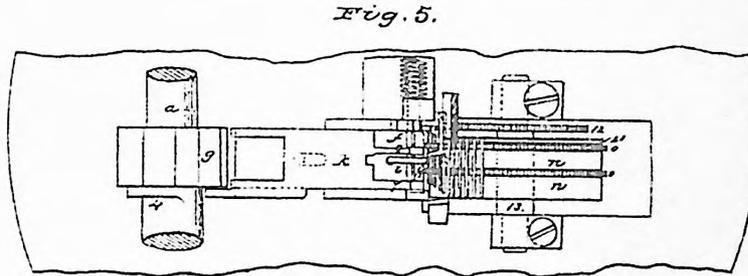
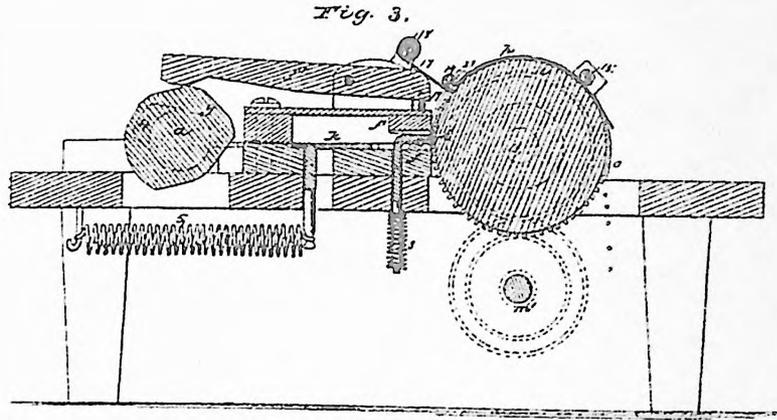
Chas. H. Smith

Inventor.  
Charles Fowler.  
D. Drake Fowler.

T. & D. G. FOWLER.  
PIN MACHINE.

No. 29,431.

Patented July 31, 1860.



Witnesses:  
*Lemuel W. Serrell.*  
*Chas. H. Smith.*

Inventor:  
*Thaddeus Fowler*  
*Debraffe Fowler.*

# UNITED STATES PATENT OFFICE.

THADDEUS FOWLER AND DE GRASSE FOWLER, OF NORTHFORD, CONNECTICUT, ASSIGNORS  
TO UNITED STATES PIN COMPANY, OF SEYMOUR, CONNECTICUT.

## MACHINE FOR THE MANUFACTURE OF PINS.

Specification of Letters Patent No. 29,431, dated July 31, 1860.

*To all whom it may concern:*

Be it known that we, THADDEUS FOWLER and DE GRASSE FOWLER, of Northford, in the county of New Haven and State of Connecticut, have invented, made, and applied to use certain new and useful Improvements in Pin Machinery; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1, is a plan of our said machine. Fig. 2 is a side elevation. Fig. 3 is a vertical longitudinal section. Fig. 4 is a cross section through the rolling bed and cutters, and Fig. 5 is a plan of the heading and cutting die and the rolling bed.

Similar marks of reference indicate the same parts.

Our invention relates to the means for conveying the pin from the heading die to the pointing cutters and performing the operation of pointing. In all machines heretofore constructed with which we are acquainted more or less difficulty arises in revolving the pins while being pointed, and in consequence the points are apt to be imperfect and flat on one side, this arises principally from the device employed to roll the pins around, acting on the same side of the body of the pins as the files or cutters, in other words, as a general thing the pins have been rolled over a stationary surface by a belt or other device acting on the upper side of said pins and the cutters also acted on the upper side at the end to point the pins, therefore the action of the cutters was to detain the pins against the progressive and rolling motion from the belt. In our invention we apply the files or cutters on the same side as the stationary belt or resisting surface and apply the rolling bed on other side of the pins, thereby the files or cutters assist in insuring the revolution of the pins. We also make our stationary belt or resisting surface in the arc of a circle corresponding to the rolling bed which is itself of cylindrical form, by which means we are enabled to obtain a resisting surface on which the pins roll that will give the pressure on the pin necessary for revolving the same and even straightening it if slightly crooked and at the same time give opportunity for a long sweep or vibration of the file or cut-

ter over the pin, which prevents the cutters clogging and gives a better shape to the pin point.

In the drawing *a*, is a shaft revolved by competent power and sustained on the bed *b*, of the machine; *c, c*, are bevel gears driving the second shaft *d*, from which a belt *e*, passes to the rollers; *e, e*, that feed in the wire these rollers are pressed together onto the wire by suitable springs and continue to project the wire into the machine whenever opportunity is given for so doing by the heading jaws opening; when these jaws are closed the rollers either slip on the wire or the belt slips on the pulleys.

The heading jaw *f, f'*, is operated by the cam *g* on the main shaft *a*, and *h*, is the heading die actuated by the lever *h'*, and cams 2, 2, 2. The wire passes into grooves between the jaws *f, f'*, and is by them clamped at each blow of the header *h*, the jaws releasing the wire slightly between each blow in consequence of the flat places in the cam *g*, so that the feed rollers can move the wire slightly endwise as the head is formed by the successive blows as now practiced. It has been usual however heretofore to open the jaws and cut off the pin and force it out, the act however of so doing often causes the pin to jump out suddenly and hence it does not pass properly into the next part of the machine; we therefore provide the finger *i*, kept down by a slight spring 3, and occupying a cavity formed for that purpose in the upper jaw *f'*, and said finger has a notch with a flaring mouth so that the pin wire can pass along in the groove of the jaw *f* beneath said finger, and when the pin is cut off and passed out of the jaws this finger presses lightly on said pin and insures its proper delivery by the cutter *k*. This cutter *k* is actuated by the cam 4, drawn back by the spring 5, and has the cutting blade or end 7, acting to separate the wire and with the projecting toe 8 carry the headed blank out of the jaws *f, f'*, and deliver it into the apparatus next set forth where the pointing is performed.

*l*, is a third shaft geared to *a*, by miter wheels *l'*, and 9 is a worm thereon driving the wheel *m*, on the cross shaft *m'*. This shaft *m'*, has on it gears 10, and 11, 11, the former connects to and drives the wheel 12, and rolling bed *n*, on the shaft 13. This rolling bed is composed of rings keyed or

secured onto the shaft and receiving between them the notched pin wheels *o, o*, see section Fig. 4, and these notched pin wheels are driven by the gears 11, 11, and the size of the wheels 10, 11, and 12, is such that the surface of the rolling bed *n*, travels twice as fast as the notches in the wheels *o, o*, so that each pin placed in the notches of *o, o*, by being delivered from the jaws as aforesaid, is rolled around constantly by the joint operation of the rolling bed *n*, notched pin wheels *o, o*, and a resisting stationary surface *p*. This resisting surface *p*, is formed by a strip of metal between two projecting arms 14, 15, the latter of which is fitted to turn and provided with a lever 16, and weight or spring whereby the metallic strip is kept toward the rolling bed with the power and tension necessary to cause the pins to roll.

17 is a thin leather belt between the strip *p* and the pins to make a better bearing surface for said pins to roll against, and this belt is wound on a stud 18, by the turning of which the belt can be drawn through under the strip *p* to bring a new piece of the belt to the proper place in case of one part thereof wearing out.

The pins as delivered from the cutting and heading jaws into the notched wheels *o, o*, are by them carried up, and a shield 19, see Fig. 5, prevents their falling out while an incline 20 slides them endways until the heads of said pins take the groove 21, in *n*, and shield 22, behind the heads prevents the pins being moved endways as pointed. A small grooved compression plate 23 extended from 22, presses on the pin heads as they roll beneath it and by joint action with the groove 21, compresses and rolls down any slight bur or inequality in the heads. The pins after being pointed as next described fall out into any suitable conductor or receptacle or are removed from the notched wheels *o, o*, by a small stationary tongue of metal and fall into a box or other receiver.

The device for pointing consists of several files or cutters, we have shown four, two of them have a long sweep or movement for taking off the metal and shaping the point, the other two have a less movement and are finer cutters to burnish and finish the points. Each of these cutters *s, s, t, t*, is formed with a slide on the upper part thereof working through an arm *u*, extending from the arch *v*, and 24, 24, are springs pressing the cutters down. The arms *u, u*, may be adjusted by set screws so as to prevent the cutters touching the edge of the rolling bed *n*, or removing too much of the pin point. The cutters *s, s*, are reciprocated by the rock shaft *w*, and connecting rod *w'*, to the crank pin 25, on the end of the shaft *d*, and the cutters *t, t*, are reciprocated by the rock shaft *x*, connecting rod *x'* and lever *x''* operated on by the cam 26, on the shaft *d*. This

cam having three or more points gives a short quick movement to the finishing cutters *t, t*, while the roughing cutters *s, s*, receive a longer and slower movement.

The stationary resisting surface *p*, being curved to the rolling bed enables us to use only a thin plate under tension, and thereby but little space is occupied above the pin, we are therefore able to use cutters of any desired length and vibrate them freely over the points. This is of considerable importance, particularly in pointing iron pins because we can use cutters with a large extent of surface and a comparatively slow motion, so that neither the cutters or pins become heated; and the cutters will remain sharper longer than those now in use, and act to remove the metal in detail. The movement given to the cutters from the rock shaft *w*, dresses the points in a convex curved form that is the best shape for penetrating easily.

The advantages resulting from our machine as a whole will be apparent, and as before indicated it will be seen that the pins roll under the cutters, and that these cutters acting on the same side as the stationary resisting surface do not interfere in the least with the pin rolling freely and revolving as it rolls.

What we claim and desire to secure by Letters Patent is—

1. The spring finger *i*, within the clamping jaws for the purposes and as specified.
2. The combination of the cutter *t*, and toe *8*, with the finger *i*, for carrying the headed pin out of the clamping jaws and delivering the same into the notched pin wheels *o, o*, as set forth.
3. A rolling bed in combination with a stationary resisting surface and cutter or cutters, when said cutter or cutters act on the same side of the shaft of the pin as the stationary surface against which the pin rolls in being pointed, for the purposes and as set forth.
4. The notched pin wheels *o, o*, and revolving and rolling bed *n*, constructed and operating substantially as set forth.
5. The metallic strip *p*, kept at a proper tension by the lever 16, or its equivalent and pressing the belt 17, onto the pins in combination with the rolling bed and notched plates as and for the purposes specified.
6. The arrangement of the reciprocating cutters *s, s*, and *t, t*, combined with the rolling bed as described and shown.

In witness whereof we have hereunto set our signatures this twenty seventh day of June 1860.

TIIADDEUS FOWLER.  
DE GRASSE FOWLER.

Witnesses:

LEMUEL W. SERRILL,  
CHAS. H. SMITH.

1861 (Cont'd)

NOTE: "The E. C. Maltby firm later (?) became known as the Smith Cowles Company. Under this name they continued to make cocoanut dippers and added Briitannia dippers. They also made implements including a wheel horse rake and made light iron castings to order" (10. Ch. 3-P9)

1861

September 10

Patent No. 2263-33267 issued to Edward Smith and Sidney Cowles for "Improved Horse Rake" (cc attached)

NOTE: The way this patent number is typed in the Patent Office book of 1861 leads me to believe No. 2263 may have been a patent issued some 20 years earlier (GSM.)

1862

August 18

E. C. Maltby sells to Baldwin Hart for \$1,000 a 1/4 part of mill site & factory buildings belonging to said firm of Smith Maltby & Co.

Bnd: N, E & S on Samuel & Charles De Witt Maltby  
W on turnpike

"-- with all rights vested in me by a deed from Paug Manufacturing Company recorded in North Branford Land Records, V4-P662/663. also 1/4 part of "- - stock on hand, manufacturing in process, machinery & tools belonging to said firm of Smith Maltby & Co. except all that which pertains to the horse rake business"

[8. V5-P 139]

1 862

October 7

Edward Smith sells to E. C. Maltby and Baldwin Hart a certain manufacturing establishment known by the name of Hart & Co.

Bnd: The New Haven and Middletown Turnpike Road & on lands of Samuel and Charles De Witt Maltby.  
[8.V5-P140]

1862

-, - - but about this time, 1862, I think Thaddeus Fowler invented the Fowler horse nail made by machinery and the same nail is made today under the name of the Capewell horse shoe nail." (6) See Patents 1867.

"These (horse shoe nails) were manufactured in the Paug Manufacturing Company on Northford Pond." (10. Ch. 3-P7) See Patents 1867.

1862/1936 "The Fowler Nail Company was established in June, 1865. Manufacturing was started that year in Seymour, Connecticut.

# Smith & Cowles.

## Horse Rake.

N<sup>o</sup> 2263

" 33267

Patented Sep. 10, 1861.

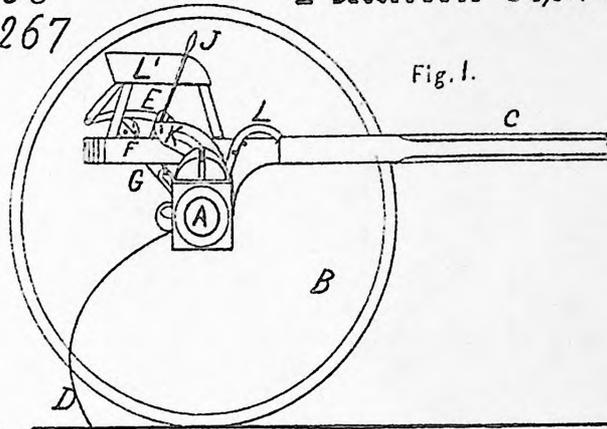


Fig. 1.

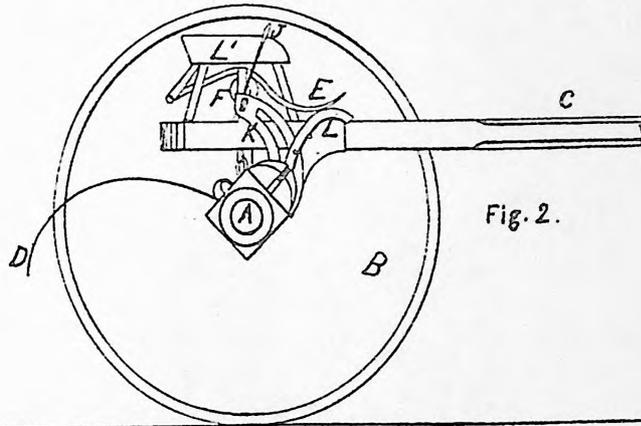


Fig. 2.

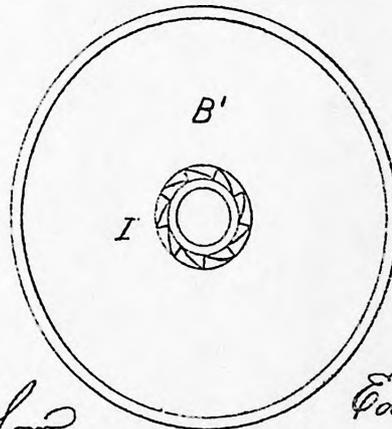


Fig. 4.

Witnesses.

*Francis S. Low*  
*M. Haskell*

Inventor.

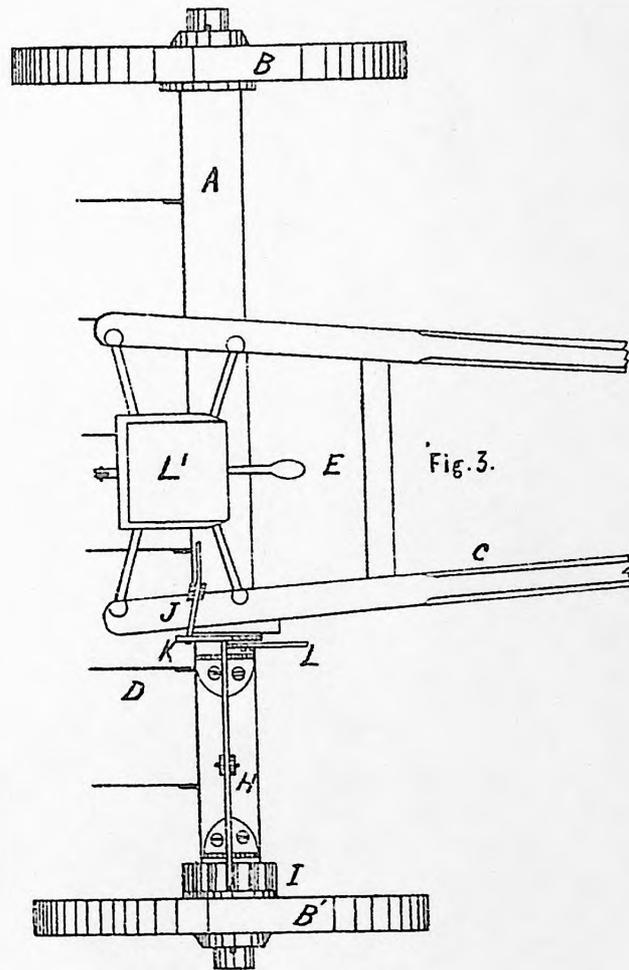
*Edward Smith*  
*Sidney Cowles*

# Smith & Cowles.

## Horse Rake.

N<sup>o</sup> 2263  
33267

Patented Sep. 10, 1861.



Witnesses.

*Francis S. Low*  
*M. Haskell*

Inventor.

*Edward Smith*  
*Sidney Cowles*

# UNITED STATES PATENT OFFICE.

EDWARD SMITH AND SIDNEY COWLES, OF NORTHFORD, CONNECTICUT.

## IMPROVEMENT IN HORSE-RAKES.

Specification forming part of Letters Patent No. 33,267, dated September 10, 1861.

*To all whom it may concern:*

Be it known that we, EDWARD SMITH and SIDNEY COWLES, both of Northford, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Horse-Rakes; and we do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is an end elevation of the machine or implement with the near wheel removed, showing the rake-teeth depressed, ready to gather its load of grass, hay, or other material. Fig. 2 is a similar view, showing the rake-teeth as elevated to drop their gathered load, or to permit the machine to be moved about without having the rake-teeth operate. Fig. 3 is a plan view of the inside of the machine; and Fig. 4 an elevation of the inside of the near wheel, showing the ratchet-wheel by which the rake-teeth are elevated.

A is the axle-tree of the machine, supported upon and by the truck-wheels B B', which revolve upon it in the usual manner.

C are the shafts, to which the animal by which the machine is drawn is attached. They are secured to the axle-tree by a pivoted joint, so that the latter can turn a portion of a revolution to raise the rake-teeth from the ground, as hereinafter described.

D are the rake-teeth, secured to the axle-tree A in the ordinary manner, and so formed that they possess sufficient elasticity to permit them to raise or spring over stones and other obstacles of a small size that may lie in their track. They are kept in contact with the surface of the ground to gather up into heaps the hay, grass, or other material to be gathered by the curved lever E working upon and over the pulley F on the arm G, attached to the axle-tree, which lever is operated by the foot of the person who directs the operation of the machine. They are elevated from the ground to deliver their gathered load or to allow the machine to be moved about without having them operate by the operator forcing the outer end of the lever H into contact with the teeth of the ratchet-wheel I on the inside of the near wheel, B', by pulling toward him the handle of the bell-crank lever J, the lower

end of which lever is connected with the curved lever K, which has a curved groove formed in it in which the inner end of the lever H is placed and worked, by which the movement of that wheel of the machine is employed to raise the rake-teeth and their gathered load, instead of having that object effected by the strength of the operator. The rake-teeth, when thus raised, are kept up by the pawl L, which is pivoted to the lower end of the curved lever K, dropping upon and over the inner end of the lever H and holding it, and through it the axle-tree A, until the pawl is released and the axle-tree allowed to turn back and the rake-teeth to drop to the ground, to be operated in raking as before. The pawl is released from contact with the inner end of the lever H by the operator pulling toward him the handle of the bell-crank lever J, the front of the pawl resting against a pin on the side of one of the shafts C, elevating thereby the curved lever K and raising the pawl against the pin named, so that its lower end moves off from the lever H, releasing that lever and allowing the rake-teeth to drop to the ground by their weight, and, by the pressure of the foot of the operator upon the lever B, acting upon the axle-tree to turn it back to its first position. L' is a seat for the person operating the machine, so placed upon the shafts C that the lever E shall be within reach of his foot and the handle of the bell-crank lever J in reach of his hand, so that they can both be readily operated at the proper time.

When the machine is to be moved about from place to place the rake-teeth are elevated and kept up from the ground, as shown in Fig. 2, and when it is to be operated the rake-teeth are depressed and brought in contact with the surface of the ground, as shown in Fig. 1, by releasing the pawl L from contact with the inner end of the lever H by the operator pulling the handle of the bell-crank lever J toward him and depressing the lever B by his foot to turn back the axle-tree, and with it the rake-teeth, as before noted. When the rake-teeth have gathered a sufficient load of material they are elevated from the position shown in Fig. 1 to the position shown in Fig. 2 by the operator pulling the handle of the lever J toward him, forcing the outer end of the lever H into contact with the teeth of the ratchet-wheel I and

causing the truck-wheel to perform the operation of turning the axle-tree and lifting the rake-teeth and their gathered load.

We do not claim the employment of a rake operated by horse or other animal power, nor elevating the rake-teeth by the movement of the truck-wheels of the machine; but

What we do claim as our invention, and desire to secure by Letters Patent, is—

1. The combination of the curved lever E, roller F, and arm G, with the axle-tree A, for the purpose of depressing and holding the

rake-teeth B in contact with the surface of the ground, as herein set forth.

2. The combination of the bell-crank lever J with the levers K and H, pawl L, and ratchet-wheel I, for the purpose of elevating the rake-teeth from the ground and for holding them when so elevated, as herein described.

EDWARD SMITH.  
SIDNEY COWLES.

Witnesses:

F. C. BARTHOLOMEW.  
E. CHAPMAN MALBY.

1862/1936  
(Cont'd)

"The Union Horse Nail Company - This company, a branch of the Fowler Nail Company, was organized in 1874 under the laws of the State of Connecticut for the purpose of manufacturing horse shoe nails in Chicago, Illinois, using the Fowler cold rolled process and continued in that city until 1920, when it moved to a new plant in Buffalo, N. Y. on consolidation with the Fowler Nail Company. In 1900 the Union Horse Nail Company bought out the Northwestern Horse Nail Manufacturing Company which was located in Brighton Park, Illinois and moved its machinery, equipment. etc. to the Union Horse Nail Plant in Chicago.

"The Northwestern Horse Nail Company - This business was established in 1862 and was located in Chicago, Illinois. In 1889 it sold out to a new organization, the Northwestern Horse Nail Manufacturing Company, which was in turn acquired by the Union Horse Nail Company in 1900.

"The Fowler & Union Horse Nail Company - In 1919 still larger facilities being required, it was decided to combine the manufacturing operations of this company (the Fowler Nail Company) with those of the Union Horse Nail Company and in that year a new and modern factory was begun in Buffalo, New York, which was completed in 1920. The combination of the Fowler Nail Company and the Union Horse Nail Company was completed in February 20, 1920 ... under the new name of the Fowler & Union Horse Nail Company."

"The Capewell Horse Nail Company was organized in 1881 under the laws of the State of Connecticut." "a consolidation was effected February 20, 1936 with the Fowler & Union Horse Nail Company under the name of the Capewell Manufacturing Company. (The Fowler & Union Horse Nail Company had gone under receivership on April 6, 1933 ... due to the long depression and progressive decrease in the use of horses."

(1 )

1863

March 26

Carlos Smith sells to Julius Maltby a certain mill site with the factory building and other buildings thereon standing- - - with all rights invested in me by a deed from the Paug Manufacturing Company per NBLR/V4-P262/263

[8. V7 -P457]

1863

October 1

"This is to certify that Maltby Fowler (son of De Grasse Fowler) - - - and Seeman Cowles and Charles S. Leete of the Town of New

1863 (Cont'd)

Haven and Francis C. Bartholomew and Isaac H. Bartholomew - - have entered into a limited partnership under the name and firm of Maltby Fowler & Co for the purpose of carrying on the business of making and selling hooks & eyes, - - - that said Maltby Fowler is the General Partner, authorized to transact the business of the partnership, and to sign the partnership name, and said Cowles & Leete and said Francis C. Bartholomew and Isaac H. Bartholomew to be special partners with the rights and duties and liability of special partners - - - The said Maltby Fowler to furnish three thousand dollars of the capital, the said Cowles & Leete to furnish also three thousand dollars - - the said Francis C. Bartholomew and Isaac A. Bartholomew to furnish also three thousand dollars - - and that said partnership to commence on first day of October, 1863 and to terminate on the first day of October 1866 - - In witness whereof of the undersigned hereto set their hands this first day of October, 1863

Maltby Fowler  
Cowles & Leete  
F. C. Bartholomew  
I. H. Bartholomew" (8.V5-P616)

\_\_\_?

"In recent years the former (Isaac H. Bartholomew) and his sons, Edward & George, engaged in the invention & manufacture of devices for electric lighting. occupying a part of the old hook & eye factory. Dynamos and other appliances are made." (12-P78 & 79)

\_\_\_?

"The Fowlers and Bartholomews, as the Northford Hook & Eye Company, made those articles for several years and later manufactured rivets but sold the machinery to parties in Chicago" (12-P78)

1867

May 21

Patent No. 64693 was issued to Thaddeus Fowler (of Seymour) for Horse Shoe Nail Machinery (cc attached)

May 21

Patent No. 64964 was issued to Thaddeus Fowler (of Seymour) for Horse Shoe Nail Machinery (cc attached)

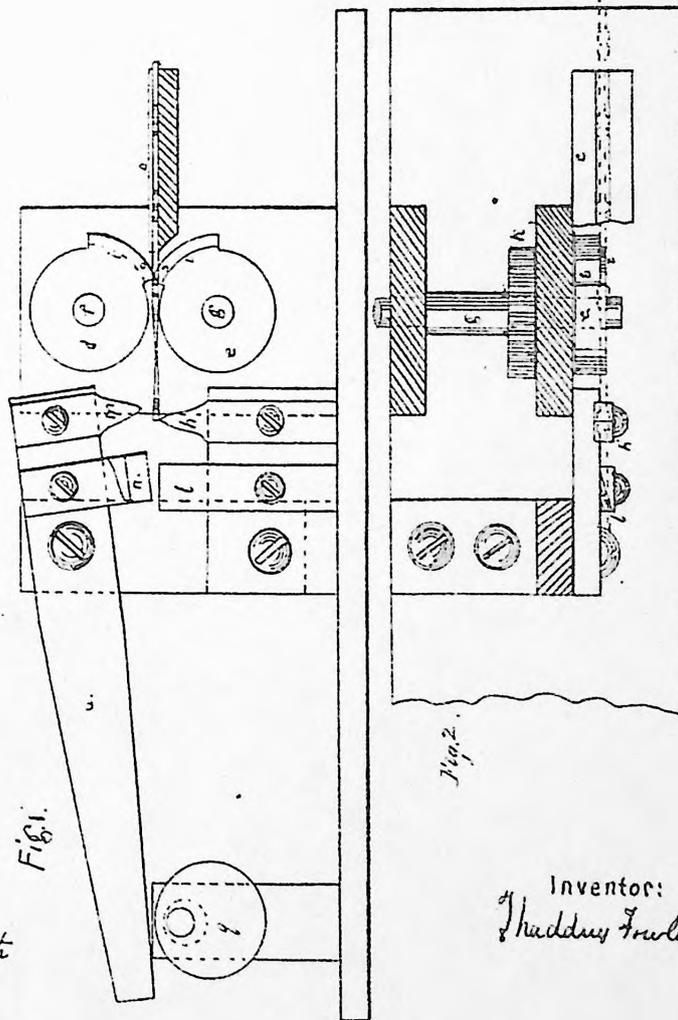
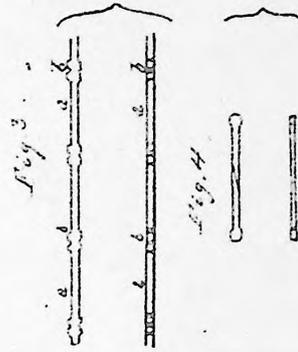
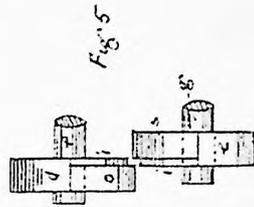
June 25

Patent No. 66158 was issued to E. C. Maltby and Edward Smith for Improved Confection (cc attached)

T. Fowler.  
Horse Shoe Nail Mach.

No 64963.

Patented May 21, 1867.



Witnesses:

Chas. H. Smith  
Geo. L. Walker

Inventor:

Thaddeus Fowler

# United States Patent Office.

THADDEUS FOWLER, OF SEYMOUR, ASSIGNOR TO THE FOWLER NAIL COMPANY, OF NEW HAVEN, CONNECTICUT.

Letters Patent No. 64,963, dated May 21, 1837.

## IMPROVEMENT IN MACHINERY FOR MAKING NAILS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, THADDEUS FOWLER, of Seymour, in the county of New Haven, and State of Connecticut, have invented and made a certain new and useful Improvement in Machinery for Making Horse-Shoe Nails; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a side view of my machine for rolling out the body of the nail and separating the nails from a bar.

Figure 2 is a sectional plan with the upper roller removed, and showing the mode in which the nails are separated at their points.

Figure 3 shows the bar in side and edge views in the condition in which it is prepared before presentation to this machine; and

Figure 4 is a side and edge view of the nail after being acted on by this machine.

Similar marks of reference denote the same parts.

Nails have heretofore been manufactured from rods by rollers acting on opposite sides to reduce the rod into the form of a nail. Difficulties have been experienced in this mode of manufacture, in consequence of the rollers not corresponding in their action, for if the nail blanks, in their first reduction, are too long or too short but a hair's breadth on each nail, the nails on the rod are spoiled by the impression of the second pair of rollers not coming upon the proper part of the nail-rod, especially towards the last end of the rod.

The nature of my said invention consists in a pair of rollers that feeds the nail-rod along by taking against the sides of the heads formed in the first reduction; thereby each nail-blank is moved along the proper distance, and then the rollers cease their hold upon the rod, hence there is a progressive feed of the nail-rod, and the difficulty before mentioned is avoided, and all the reductions of the nail-rod subsequent to the first are determined in position by the feeding movement acting against the nail-heads successively. I make the horse-shoe nail in the required pointed form by dividing the reduced nail-blank by a diagonal cut that leaves the nail with the point on the line of one side, and I straighten the nail and finish it by mechanism forming the subject of a separate application.

In the drawing, *a* represents the shank portion, and *b* the heads in the nail-rod. These are formed by running a rod through a pair of rollers that acts upon the edges of the rod, leaving the same in about the shape represented in fig. 3. The nail-rod thus prepared is laid into a trough, *c*, in which it may be steadied by hand or a spring-clamp to keep it in place as drawn along progressively by the pair of rollers *d e*. These rollers *d e* are upon the shafts *f* and *g* that are geared together by the wheels *h*, and driven by competent power. Upon the edges of the rollers *d e* are cam-shaped reducing surfaces, *i i*, of a shape to reduce and extend the blank for two nails the proper extent between the heads, and adjacent to these cam surfaces *i* are sectional flanges *o o*, the sectional flange *o* on the roller *d* being towards one edge of that roller, while the sectional flange *o* on the roller *e* is towards the other edge, so that there is between the said flanges, when they come around opposite to each other, an opening of a width corresponding to the width of the shank *a* of the nail-blank, as seen in fig. 5, where the rollers are shown detached. When the advancing ends of the sectional flanges *o o* come around, one passes on one side, and the other on the other of the shank *a*, and come up against the head *b* of the nail-blank that has been standing between the rollers *d* and *e*, unacted upon by said rollers after the cam-shaped reducing surfaces left said nail-blank upon the previous revolution of the rollers *d e*. As soon as the ends of *o o* take the head of the nail-blank, the nail-rod is drawn along and reduced between one pair of heads and the next pair of heads, so as to form the shanks of the proper thickness and length. This movement passes the previously rolled pair of nails along to and between the cutting apparatus. *k* is a standing cutter, so placed that the same is below the point where the pairs of nail-heads have to be separated at the time the nail-rod is stationary, and *l* is a diagonal cutter, so placed as to be on the line where the respective nails are to be separated to form the points, by a diagonal cut, and *m* is a cutter on a lever, *u*, to come down over the cutter *k*, and *n* is a diagonal cutter on the same lever, matching the cutter *l*. This lever *u* is actuated by the cam *q*, that is revolved in unison with the rollers *d e*, and acts upon the lever *u* to separate the nails transversely between the pairs of heads, and diagonally, to form the points, in the manner shown in plan in fig. 2. The nails are to be straightened and finished by separate or after-acting mechanism.

What I claim, and desire to secure by Letters Patent, is—

1. Moving the rod of blanks forward, and adjusting successively each blank to its proper position, before the dies bite upon it, by means of the lateral flanges *o* *s*, arranged and operating in the manner herein described.
2. I claim combining with devices for feeding the nail-blank the two pairs of cutters *k* and *m* and *l* and *n*, arranged substantially as described.
3. I claim the combination of the cutters *k* and *m*, *l* and *n*, with the rollers *d* and *e*, formed with cam-shaped surfaces *i* and flanges *o* and *s*, as and for the purposes specified.

Dated October 17, 1866.

THADDEUS FOWLER.

Witnesses:

CHAS. H. SMITH,  
GEO. D. WALKER.

T. FOWLER.  
MACHINE FOR MAKING HORSESHOE NAILS.

No. 64,964.

Patented May 21, 1867.

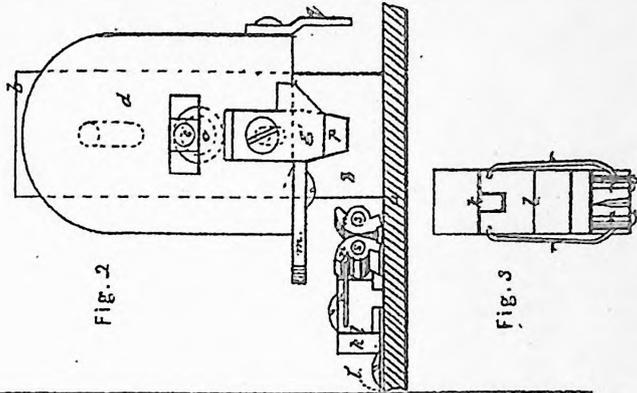


FIG. 2

FIG. 3

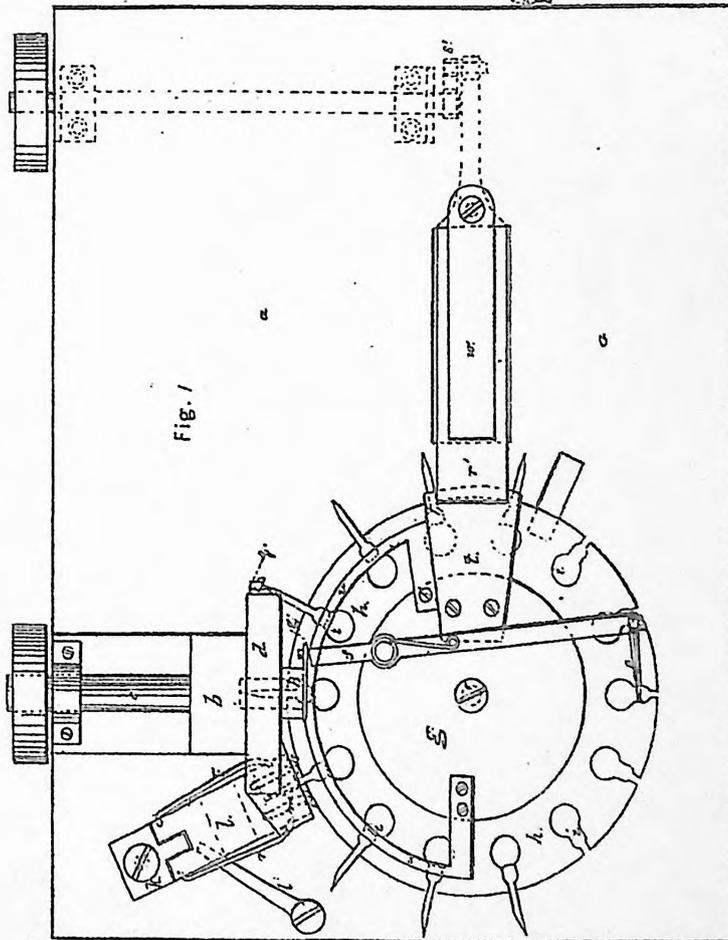


Fig. 1

Witnesses:  
*Geo. S. Walker*  
*Chas. H. Smith*

Inventor:  
*T. Fowler*

United States Patent Office.

THADDEUS FOWLER, OF SEYMOUR, ASSIGNOR TO THE FOWLER NAIL COMPANY, OF NEW HAVEN, CONNECTICUT.

Letters Patent No. 64,964, dated May 21, 1867.

IMPROVEMENT IN MACHINES FOR MAKING HORSE-SHOE NAILS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, THADDEUS FOWLER, of Seymour, in the county of New Haven, and State of Connecticut, have invented, made, and applied to use a certain new and useful Improvement in Machinery for Making Horse-Shoe Nails; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a plan of my machine.

Figure 2 is an elevation of the straightening-jaws and compressing-dies, the bed being in section; and

Figure 3 is an inverted plan of the straightening-jaws.

Similar marks of reference denote the same parts.

My invention relates to mechanism for taking the nail, after it has been rolled down to form the shank, (leaving the head of the size of the nail-rod,) and straightening said nail by lateral pressure, and then stiffening the same, as well as straightening it in the other direction, by pressure on the side of the body or shank, and at its junction with the head. I also finish the point of the nail by removing the metal on one side.

In the drawing, *a* is a bed, carrying the parts of the machine. *b* is a head-block, carrying the actuating-chaft *c* and a sliding head *d*, that is moved up and down by a crank-pin, *e*, and block running in a slot transversely of the head *d*. Any other competent mechanism might be employed for giving a small but powerful movement to the head *d*. Upon the bed *a* is a circular carrier-plate, *h*, having notches around its edges, as at *i*, of a size and shape adapted to take in the head of the nail; and *k* moves this plate around progressively and automatically by the pawl *f*, that is acted upon by the adjustable plate *g*, on the head *d*. The pawl *f* has its fulcrum upon a stationary plate, *g*, that is attached to the centre stud, around which the carrier *h* revolves; and this plate *g* may be turned upon its attaching bolt *o* so as to adjust the pawl *f* to make it move the carrier *h* to the right place each time the head *d* commences to descend. The nails are laid into the notches *i* by hand or automatically, and are carried around to the successive operations. *k* is a joint upon the bed *a*, by which the jaw-block *l* is attached. *l'* is a spring just strong enough to turn up or lift this jaw-block *l*, and the parts it carries. *s* *s* are strong studs projecting horizontally from the block *l*, and carrying the lever jaws *n* *n*, (see figs. 2 and 3;) and springs *r* are employed to turn these jaws on their studs *s*, so that the jaws will be opened by their lower ends being separated. Upon the head *d* is a plate, *m*, controlling the motion of the jaws *n* *n*. As the nail is brought around by the carrier *h* it pauses below the open jaws *n* *n*. As the head *d* descends these jaws are carried down until they rest upon the bed *a*. They are still open, because the spring *l'* yields

64964



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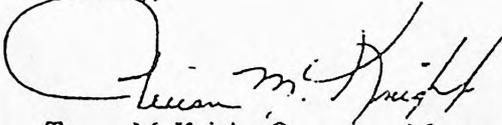
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United States Patent Office

E. C. MALTBY AND EDWARD SMITH, OF NORTHFORD, CONNECTICUT.

Letters Patent No. 66,158, dated June 25, 1867.

IMPROVED CONFECTION.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, E. C. MALTBY and EDWARD SMITH, of Northford, in the county of New Haven, and State of Connecticut, have invented a new and improved Confection; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same.

This invention consists in preparing the meat of cocoa-nut so that the same may be preserved and kept an indefinite period and used at any time for pies, puddings, &c., &c.

At present, in order to prepare pies and puddings from cocoa-nut meat, the latter is grated while in a green state, and it is necessary to use it immediately, as it soon becomes acid and worthless. By our invention the cocoa-nuts may be purchased in large quantities, when there is an ample supply in the market, and consequently at a moderate cost, and the meat prepared so that it may be sold in quantities at a reasonable price and fair profit, and be fit for use at any time.

We prepare the cocoa-nut meat as follows: The meat is taken out of the shell, the rind or exterior surface removed, and then grated by means of a rotary or other grater. The grated meat has sugar added to it, about twenty pounds of sugar to sixty pounds of meat, and it is then spread out in pans about one inch thick, and the pans placed in a kiln or suitable oven, in order to evaporate the moisture contained in the meat. The pans in which the meat is dried should be of copper or galvanized iron; the latter material would be the cheapest, and probably will be used for the purpose.

Having thus described our invention, we claim as new, and desire to secure by Letters Patent—

A new and useful confection composed of the meat of the cocoa-nut, prepared in the manner substantially as herein set forth.

The above specification of our invention signed by us this 13th day of May, 1867.

E. C. MALTBY,  
EDWARD SMITH.

Witnesses:

GEO. E. TREADWELL,  
GEO. H. WATROUS.

1867 Oct 29  
(Cont'd) Patent No. 70190 was issued to Maltby Fowler for Card for Hooks & Eyes (cc attached)

1868 Maltby Fowler & Co. Manufacturing Co. (2)

1870 "Maltby Fowler & Co. Hooks & Eyes Mfg. \$10,000 capital invested. water power. 10 H. P. hook & eye machines. 8 machines. 3 males over 16 years. 5 females over 16 years. \$4,000 wages. active 12 mos. iron wire 18 tons \$4,000 value. brass wire 2 tons \$800 value. hooks & eyes 600 cases, \$20,000 value." (5) (attached cc)

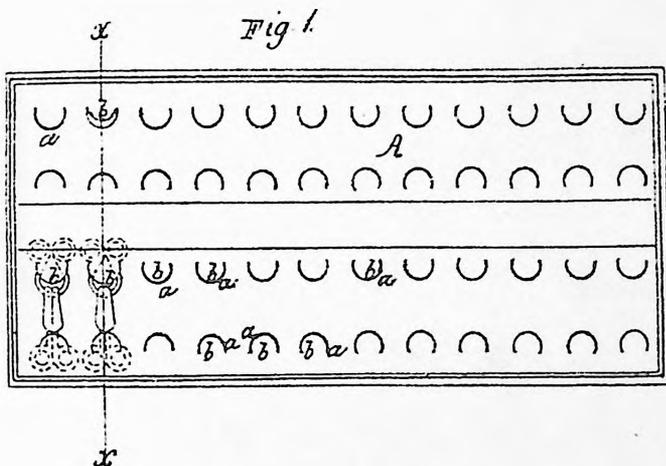
"In recent years the former (Isaac H. Bartholomew ) and his sons, Edward and George Bartholomew, engaged in the invention and manufacture of devices for electrical lighting, occupying a part of the old hook & eye factory. Dynamos and other appliances were made" (Rockey, P 78 & 79)

M. Fowler

Card for Hooks & Eyes

N<sup>o</sup> 70190.

Patented Oct. 29. 1867



Witnesses  
Theo. Fische  
Wm. Frewin

Inventor  
M. Fowler  
Per *[Signature]*  
Attorneys

United States Patent Office.

MALBY FOWLER, OF NORTHFORD, CONNECTICUT.

Letters Patent No. 70,190, dated October 29, 1867.

IMPROVEMENT IN CARDS FOR HOOKS AND EYES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, MALBY FOWLER, of Northford, in the county of New Haven, and State of Connecticut, have invented a new and improved Card for Hooks and Eyes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention relates to a card more especially intended for hooks and eyes, although it can be used for other and various articles; and the invention consists in so puncturing such cards for receiving the hooks and eyes that a tongue-piece will be left in such punctures, whereby the hooks and eyes, when passed through the said punctures, will be firmly, securely, and tightly held, as will be obvious from the following detail description of the card, reference being had to the accompanying plate of drawings, in which—

Figure 1 is a plan or top view of the card, and

Figure 2 a transverse section, taken in the plane of the line *x x*, fig. 1.

Similar letters of reference indicate like parts.

A, in the drawings, represents a card, which is of the size and shape of an ordinary card for hooks and eyes, and is adapted to receive two rows of hooks and eyes each. In this card is a series of punctures, *a*, which are such as to leave a centre tongue-piece, *b*, to each one, by means of which, when the hooks or eyes (as the case may be) are forced or passed through the punctures, such tongue-pieces will so set over and interlock with them, as shown in fig. 1, as to firmly and securely hold them in place and position, as is obvious without any further explanation.

I claim as new, and desire to secure by Letters Patent—

The card A, provided with two or more series of punctures, *a*, the convex sides of each series facing each other, and provided with the tongue-pieces *b* fitting over the hooks and eyes, as herein set forth for the purpose specified.

Witnesses:

WM. F. McNAMARA,  
ALEX. F. ROBERTS.

MALBY FOWLER.

(Industrial Site #15)

CT State Library  
Ref #317.46  
fc 76c  
9th U. S. Census, U. S.  
Industry. P447,  
Y/E 6-1-1870

1. Maltby - Fowler & Co.
2. Hooks & Eyes Mfgr.
3. \$10,000 Capital Invested
4. Water Power
5. 10H. P.
6. Hook & Eye Machines
7. 8 Machines
8. 3 Males over 16 Yrs
9. 5 Females over 16 Yrs
10. Blank
11. \$4,000 Wages
12. Active 12 Mos
13. Iron Wire 14.18 Tons 15. \$4,000 Value
- Brass Wire      2 Tons      \$800 Value
- All Other      Blank      \$2,000 Value
16. Hooks & Eyes 17. \$600 Cash
- Hooks & Eyes      48 + 50
- Hooks & Eyes      ?
18. \$20,000 Value

1870 "Maltby. E. C. Coconut Dipper Machinery. \$10,000 capital invested. water power, 10 H. P. coconut dipper machines. wheels 1. 8 coconut dipper machines. 5 males over 16 years. \$3,000 wages. Active 12 mos. coconuts 300. barrels 15. \$3 ,000 value. 18 \$10,000 value." (5) (attached cc).

1875 March 27  
" - - - belonging to E. Chapman Maltby a certain manufactory formerly known as Paug Manufacturing Company with all the shafting, water wheels and water privileges connected therewith"  
[8.V4-P88]

1876 "Twenty six years after Chapman Maltby had launched his shredded coconut on the national market, it won a first prize at Philadelphia's Centennial" [6] (9-P127)

(Industrial Site #15)

CT State  
Library Ref.  
#317.46  
fc 76c  
P447,  
Y/E 6-1-1870

1. Maltby, E. C.
2. Coconut Dipper Machy
3. \$10,000 Capital Invested
4. Water Power
5. 10H.P.
6. Coconut Dipper Machines
7. 8 (?) Dipper Machines
8. 5 Males over 16 Yrs
9. Blank
10. Blank
11. \$3,000 Wages (?)
12. Active 20 Mos
13. Cocoanuts 14. 300 Barrells 15. \$3,000 Value 16. Cocoanut 17. 21,000 Doz.
18. \$10,000 Value

- 1876 Manufactory. E. Chapman Maltby (7)
- 1876 March 27  
Mary M. Maltby sells to E. Chapman Maltby - - - the factory formerly known as the Paug Manufacturing Company with all the shafting water wheels - - - about a half mile East of the Congregational Church" [8.V7-P5061]
- 1879 Jan. 7  
"E. C. Maltby commenced to fill his ice house (located ca. 25 ft north of dam, next to road) today" (T.H.S. File, Ind. Site #3, Diary of Frank Wight)
- 1 879 E. Chapman Maltby 2 manufactories \$2,225 (7)
- 1880 David S. Stevens Jr. 1 manufactory \$2,225 (7)
- 1880 March 30  
E. C. Maltby of Huntington in Fairfield County sells to David Stevens Jr. a certain mill with factory buildings - - - situate on the turnpike road about one half mile Easterly of the stone church in the Society of Northford  
Bnd N on Samuel Maltby  
E on E. C. Maltby  
S on Charles De Witt Maltby  
W on Turnpike Road  
[8.V8-P41]
- 1880 November 22  
David Stevens sells to Henry Stevens (Brother) [8.V8-P119]
- 1880 David Stearns Stevens Jr. "- - - worked in his fathers shops, attending meantime the common schools of Northford, but completing his preliminary education at General Russell's institute in New Haven. In 1875 - - - he began the card printing business in his father's spoon shop, with an outfit costing \$36 which his father advanced to him. - - - In 1880 the present - - rooms in the old Maltby Works were secured. In those new quarters the business developed until it became one of the leading interests of the kind in this country. As many as fifty hands have been employed in carrying on the operations, which embrace the manufacture and printing of an endless variety of plain and fancy cards and scrap- book pictures, which are sold in every part of the Union. In 1880 his

1880  
(Cont'd)

brother Henry M. Stevens became associated with him since that time being Stevens Brothers. Since 1890 the latter has been in charge of the Wallingford branch - - - which was established that year." (12-P106)

1900

Manufactory. D. S. Stevens assessed at \$1500 [21]

"Tradition has it that in 1871 Lyman of Middlefield, then a representative in the General Assembly, was more influential than Maltby of Northford and the course of the railroad was changed to run through Middlefield bringing it some three miles away from the Northford manufacturing district. "

"Transportation to and from the railroad station (Clintonville) was difficult due to poor road beds almost impossible in winter and spring. This made it very hard to import raw materials and to export the finished product. One by one the factories closed and the owners sold their patterns and machinery to firms in other communities." (10. Ch. 3-P10 & 11 )

1929

New Haven Brush Co. (4)

Gordon S. Miller  
July, 1997

## BIBLIOGRAPHY

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2. Beer's Atlas, 1868.
3. Branford Land Records.
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5. Connecticut State Library, Ref. #317.46 fc 76c, P447, YIE C-1-1870.
6. Cooke, George W., My Recollections of Northford, September 1935.  
Totoket Historical Society Files.
7. North Branford Assessor's List. CT State Archival Files.
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9. May, Earl C., Century of Silver, Robert M. McBride Company, New York, 1947.
10. Plumley, Laretta A., History of North Branford, Totoket Historical Society Files.
11. Rockey, J. L., History of New Haven County, Connecticut, Volume 1, New York, W. W. Preston & Co., 1892.
12. Rockey, J. L., History of New Haven County, Connecticut, Volume 2, New York, W. W. Preston & Co., 1892.

# UNITED STATES PATENT OFFICE.

DE GRASSE FOWLER, OF NORTH BRANFORD, CONNECTICUT.

MACHINE FOR ARRANGING AND STICKING PINS IN PAPERS.

Specification of Letters Patent No. 3,751, dated September 20, 1844.

To all whom it may concern:

Be it known that I, DE GRASSE FOWLER, of the town of North Branford, county of New Haven, and State of Connecticut, have  
5 invented a new and Improved Machine for Sticking Pins into Papers; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings,  
16 which form a part of this specification, in which—

Figure 1 is a perspective view of the complete machine; Fig. 2, a section showing the curved part of the conductor with a portion  
15 of the series of grooves; Fig. 3, a section showing the apparatus for working the crimper; Fig. 4, a section, showing the manner in which the piece *c*. Fig. 3, passes over the pin *n* and is drawn back again under it,  
20 and Fig. 5 is a section showing the manner of drawing down the crimping bars into the grooves.

The parts of the different figures are as follows:

25 Fig. 1, A, A, wooden platform; B, B, a wooden frame to which the hopper is suspended; C, the hopper; D, a broad tapering trough; E, E, conductor; F, F, two troughs, or gutters; G, a small platform supported  
30 by pieces Q, Q; H, inclined plane with a perpendicular side; I, a metal plate; J, a metal plate on which the plate K, slides; K, a metal plate with a series of grooves marked *g*; L, a lever with two arms *n o* at right  
35 angles; M M M crimper, the bars of which are marked *t, t*; N, N, two springs to throw the crimper up; O, O, a rod to move the slide W; P, a rod with a handle to move the slide  
40 K; R, a lever with two arms, working upon a joint rivet in the center; S, an upright piece to support the fulcrum of the lever L; T, a drum for a band from the motive  
45 power; U W U, dotted lines, showing the position of the paper; V, a piece of metal, kept down at the broad end by springs *h, h*, to hold the paper; W, a slide for moving the paper during the process of sticking; Z, a spring to give a jolting motion to the hopper. The minor parts will be hereafter  
50 described.

Fig. 2, C, the conductor; B, the narrow slit through the center in which the pins pass; *d d*, a plate to cause the pins to fall properly into the grooves *g*; K K, a plate  
55 with series of grooves; *i i i i*, longitudinal

grooves used in crimping the paper; *a a a a*, &c., pins. Its operation will be hereafter described.

Fig. 3, A, A, section of the platform. I, a metal plate. *n* a pin by which the plate  
60 I is moved by the arm *o* of the lever L. *a, a, a*, a metallic bar attached to the plate I. C a thick end of the bar formed like the latch of a common knob-lock. *n* a pin over which C passes to bring down the crimper.  
65 N, a spring to throw the crimper up. M, *t t* the crimper; J, the plate on which the slide K moves; P, dotted lines showing position of the paper; *m* a rod attached to the piece L, and fastened to the spring N. Its operation  
70 will be hereafter described.

Fig. 4, *a* metal bar with a large end *c*. *n* a pin over which it passes. *e* an inclined plane for the pin *n* to back over the piece C

The construction and operation of the machine is as follows, reference being had to  
75 Fig. 1 in the drawings: Upon a strong wooden platform A, A, I place the whole machine. From the cross piece at the top of the uprights B, B, I suspend a tin hopper  
80 C between which and the conductor E, E, is a broad tapering trough D, to the under side of this a stiff spring Z is attached, having one end lying upon the octangular piece *p* which is made to revolve by a band passing  
85 over the drum T and connected with a motive power. When the pin *p* revolves, a jolting motion is communicated to the hopper trough, and the pins, (which are thrown into the hopper in any quantity,) and made to  
90 slide gradually down and fall into the ravine *a a* at the upper end of the conductor E, E. Through the whole length of this conductor is a slit, represented in the drawing by a heavy black line. When the pins fall into  
95 the ravine *a a* they roll to the center, the body passes through and they are suspended by the heads as seen in the section of the conductor, Fig. 2. The conductor is sufficiently inclined to cause the pins thus suspended to slide down the slit and fall into  
100 the grooves *g*, in the slide K. The conductor being stationary, the grooves are filled by passing the slide K along under the lower end of the conductor, by means of the rod  
105 with a handle, P. As more pins might fall into the ravine of the conductor, than sufficient to fill the slit, a portion of the conductor is beveled downward from the center, as seen at *b b* and the surplus pins slide over  
110



into the gutters F, F, from thence fall upon the inclined plane H, and then into a reservoir from whence they are taken and thrown back again into the hopper. Thus the pins are prevented from being scattered about the machine and upon the floor. The triangular piece *e* is intended to ward off the pins and direct them into the gutters. A groove is cut in its lower side, large enough to allow the heads of the pins that are in the slit, to pass through. When the pins pass the curve of the conductor at C, they would be liable to fall out, or fall with the heads at irregular distances from the ends of the grooves. To prevent this, a flat upright plate shown by dotted lines and marked *f*, (or more clearly shown by the dotted lines *d*, *d*, Fig. 2,) is placed sufficiently near the conductor to have the heads of the pins strike it, and cause them to fall correctly into the grooves as they pass under the lower end of the conductor. The slide K with the grooves, having been passed along under the lower end of the conductor and the grooves filled, it is drawn back and arrested in a proper position by the pin *n*.

A thin piece of metal *r r* keeps the pins in the grooves from being thrown out by the jarring of the machine in working. This piece is rounded on its lower edge, so that the plate I is allowed to easily pass under it.

This process completed, the pins are now ready to be stuck into the paper, which is performed thus. Upon the slide W is a metal plate V, the end at *x* being as broad as the slide. The other end is bent upward, so that, (as the plate works easily upon the screws) when pressed down by the thumb, the end at *x* rises. The sheet of paper to be filled with pins is placed under this broad end, the thumb taken off of the point V and the springs *h h* pressing upon the broad end, hold the paper securely to the slide W. The paper is then passed under the crimper M' and the end thrown over back as indicated by the dotted line *u u u*; or the dotted line P, Fig. 3. The paper being thus made ready and the grooves filled with pins, the lever L is moved by the handle in the direction of the arrow. By this movement, the plate I is carried toward the pins in the grooves, and the crimper is made to perform its office as follows: When the plate I is moved forward by the lever L, the bar *a a a*, Fig. 3, which is attached to it, also moves, and its thick end *c* sliding under the plate J, J, passes over the pin *n*, which, being attached to the piece *l* causes it to be drawn down a distance equal to the curve of the piece C. To each end of *l* (as best seen in Fig. 5) is attached two perpendicular rods *m m* (which are also seen at *m* Fig. 1). The upper ends of these rods are fastened by a nut to the springs N, N, and near to the crimper M. As the piece C passes over the pin *n* Fig. 3, *l*

by means of its rods *m m* draws down the crimping bars *t t*, into the longitudinal grooves in the slide K, and thus the operation of crimping the paper is performed. Grooves or holes or notches are made through the crimping bars *t t*, in positions to correspond with the grooves in the slide K, and large enough to allow the pins to pass easily through them when closed into the longitudinal grooves. The paper, by the action of the bars and grooves, is raised into two folds, at proper distances upon the sheets, and when the pins pass through the notches of the crimping bars, they penetrate these folds. At the moment the crimper completes the operation of crimping, the plate I, moved by the lever L, strikes the heads of the pins in the grooves, and forces them through the fold in the paper. At the same time the piece C Fig. 3, passes over the pin *n* which falls behind the perpendicular part, and allows the springs N, N, to throw the crimper up. When the bar *a a a* with the plate I is drawn back by reversing the motion of the lever L, the pin *n* passes upon the inclined plane *e*, Fig. 4 and the piece C assumes its previous position as seen in Fig. 3. Thus the operation of crimping and sticking is performed, by a single motion of the lever L.

The movement of the slide W, to which the sheet of paper is attached, is performed as follows: Attached to the slide W, is a straight rack *e'* with the teeth some distance apart. Upon this rack, the rod O, O, operates thus. When the lever L is moved in the direction of the arrow, the rod O, O, is drawn forward, and the moment the plate I has performed the office of driving the pins into the paper, the flattened end *y* of the rod O, O, falls in front of one of the teeth of the ratchet *e'*. When the pins are "stuck" and the lever L is drawn back, the rod O, O, operating upon the ratchet, moves the slide W, back a given distance. This operation is repeated until the rod O, O, traverses the whole length of the ratchet, when, by a beveled piece of metal, the rod is thrown up, above the ratchet, and against the side of the slide W. The slide is then moved forward upon the rails *z z z* and another sheet of paper inserted. When the slide W reaches the desired point forward the point of the rod O, O, strikes a bevel *o'* at the end of the ratchet, and is thrown again into its place in the ratchet. It is kept against the ratchet *t'* by one end of the lever R, which is made to press against it by the action of the spiral spring *m'* attached to the other end of the lever. This lever moves upon a hinge rivet in the center. The end of the lever to which the spring is fastened, is so formed as to fall behind the teeth of the ratchet, and prevent the slide W, from being thrown back beyond a given distance each

time. The plate I is supported by four upright pieces *s s s* in which grooves are cut. In these grooves the plate I moves.

5 The form of the crimper and its mode of operation in the longitudinal grooves of the slide K, I do not claim as my invention. It is the same as one invented by John J. Howe, of Derby, Connecticut, for which Letters Patent were granted bearing date of Feb. 10 24, 1843. Also the series of grooves into which the pins fall, and the manner in which they are laid into the grooves at the lower end of the conductor, I do not claim as my invention, it being the same in form and operation, as a machine invented by Samuel 15 Slocum of Poughkeepsie, New York—for which Letters Patent were granted bearing date of September 30, 1841.

20 What I claim as my invention and desire to secure by Letters Patent is—

1. The combination of a sliding bed in

which the grooves are cut for the reception of pins, with the stationary curved conductor, combined and arranged substantially in the manner and for the purpose herein set 25 forth.

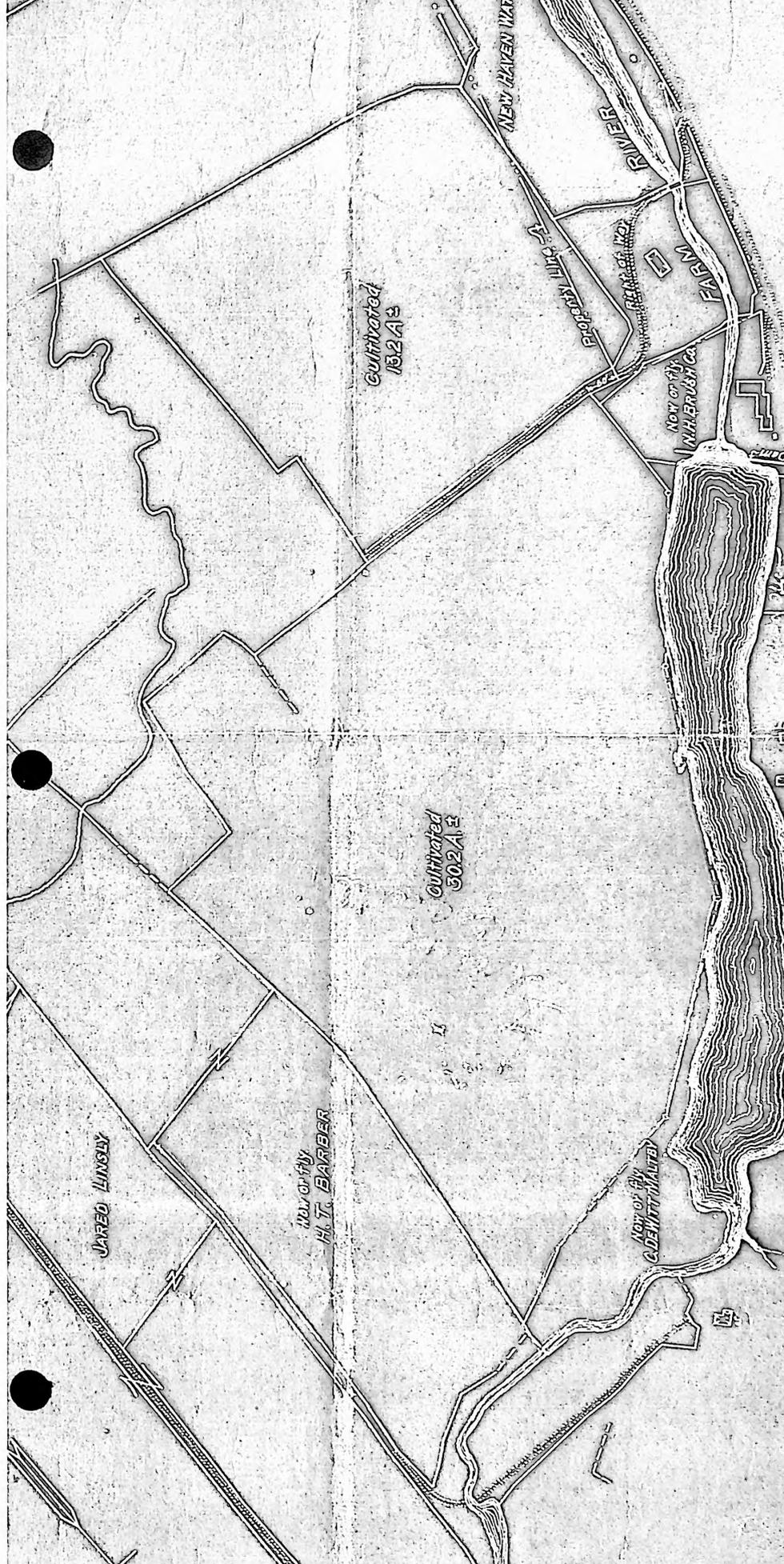
2. I claim the stationary conductors *E, E*, having two inclined bars with a downward curvature at the ends as described, and in combination therewith the gutters *F, F*, on 30 each side into which the surplus pins pass, and are carried off—the triangular piece (*e*) aiding in the operation. In the above claim I wish it to be understood that I do not claim the inclined conductors when 35 made straight but only with the curved terminations.

DE GRASSE FOWLER.

Witnesses:

JOEL HINMAN,  
PHILO BROWN.

MAP OF  
OWN  
JARED  
NORTH  
TOWN OF NORTH  
Scale 1"=200'



J. C. WOODS,  
177  
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