W. F. LEWIS.

MACHINE FOR MANUFACTURING HINGES.

No. 110,983. Patented Jan. 17, 1871.

Fig. 1.

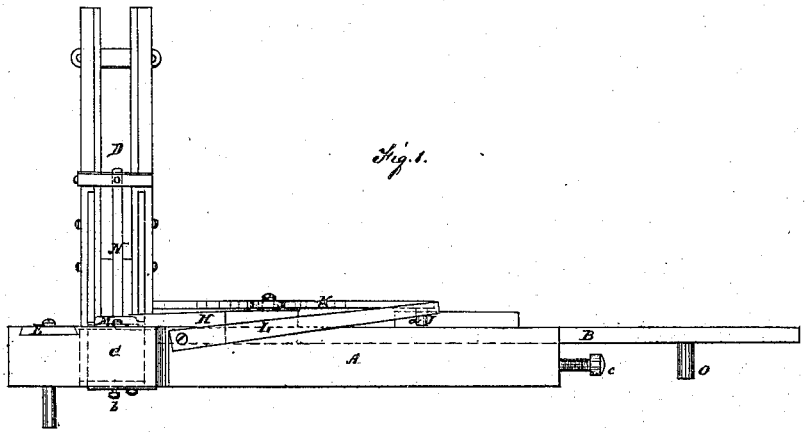


Fig. 2.

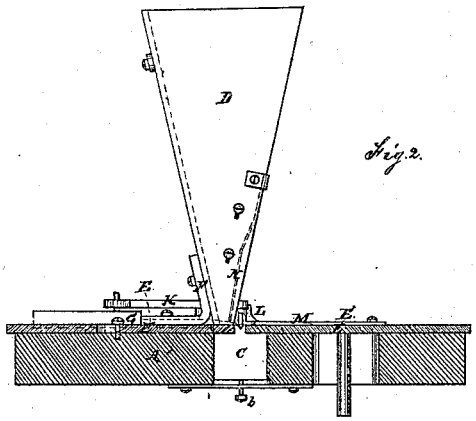
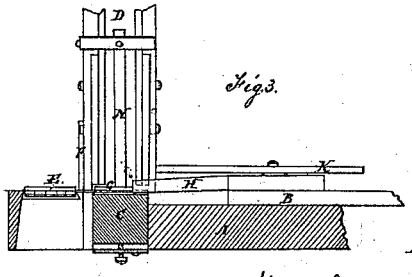


Fig. 3.



Witnesses.

Wm Kirkup

Thos. Sheridan

Inventor.

Wm F. Lewis per Atkinson Dewhurst & Co

United States Patent Office.

WILLIAM F. LEWIS, OF WATERBURY, CONNECTICUT, ASSIGNOR TO BENEDICT & BURNHAM MANUFACTURING COMPANY, OF SAME PLACE.

Letters Patent No. 110,983, dated January 17, 1871.

IMPROVEMENT IN MACHINES FOR MANUFACTURING HINGES.

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, WILLIAM F. LEWIS, (assignor to the BENEDICT & BURNHAM Manufacturing Company,) of Waterbury, New Haven county, Connecticut, have invented, made, and applied to use a new and useful Machine for Inserting the Pintles or Pins in Butt-Hinges; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing making part of this specification and to the letters of reference marked thereon, in which—

Figure 1 is a front view of my improved machine for inserting pintles in butt-hinges.

Figure 2 is a side view of the same, the plates for supporting the hinge being removed.

Figure 3 is a front view of a portion of the machine, showing the pintle being inserted in a butt-hinge.

In the drawing like parts of the invention are designated by the same letters of reference.

The nature of the present invention consists in the construction, as more fully hereinafter set forth, of an improved machine for inserting the pintles or pins in butt-hinges.

Heretofore the wire of which the pintle is composed has been fed into the machine, where it was cut off of the proper length, and then driven into the hinge; in such machines the wire is apt to be bent, and, at times, it has been found difficult to feed it into the hinge after it has been cut off in the machine.

My machine is constructed with a view to employ pintles or pins previously formed, which are supplied through a hopper, and, having been so supplied, are forced or driven into the hinges, as more fully hereinafter explained, thus overcoming the difficulties heretofore existing and accomplishing the work efficiently and rapidly.

To enable those skilled in the arts to make and use my invention, I will describe its construction and operation.

A shows the base of the machine for supporting its operative parts. This plate A has a portion of its face cut away to form a way in which the sliding plate B moves freely to and and fro, and also to receive a block, C, grooved upon its face, in which groove the pin or pintle is fed from the hopper D, as more fully hereinafter set forth.

The base A has a portion of its face cut away to form ways in which move the sliding plates E, upon which the butt-hinge rests, and is held, the butt portion of the hinge, being held between these plates E.

D shows a hopper, formed of the V-shaped sides properly secured together, which hopper is intended to receive the pintles or pins to be supplied to the machine. The metal in the manufacture of these sides is turned over and projects sufficiently to prevent the pintles or pins from leaving the hopper D until fed therefrom.

F shows a plate of metal extending a short distance above the top surface or base of the machine, and forming a back, so to speak, for the lower portion of the hopper D. This plate F is continued in its manufacture, and the portion so continued being at right angles to the back of the hopper serves to hold in position a sliding plate, G, moving freely in a way formed upon the base A by cutting away a portion of the same, which sliding plate G slides or moves between the plates forming the hopper D, above a portion of the block C and up to the groove in the same.

Upon the forward end of the sliding plate B is secured a driver, H, by which the pintle or pin is driven into the hinge.

Upon the face of the sliding plate B is secured a cam-shaped piece, J, intended to operate a bent lever, K, by which the sliding plate G is operated. This bent lever or arm K is pivoted upon the base A, and one end is slotted and passed over a pin secured in the sliding plate G, while in its opposite under side is secured a pin, *a*, having its bearing upon the cam-shaped piece J.

L shows a flat spring, one end of which is secured upon the base A, while its opposite end is curved so that it shall have a bearing upon the end of the lever or arm K; this spring may be attached in any other form to produce a like result.

Secured upon the base A, directly in front of the hopper D, so that its face shall be slightly behind the groove in which the pintle or pin is received, is a gauge, M, intended to form a guide, so to speak, for the driver H, and also to prevent the pintle leaving the machine while being received from the hopper D or while being driven by the driver H.

Secured about centrally upon one of the clamps employed to connect together the sides of the hopper D, is a flat spring, N, extending nearly to the bottom of the hopper, and beneath which the sliding plate passes when the machine is in operation.

Between this spring N and the plate F the pintles or pins are received as they are fed down from the upper portion of the hopper D, the sides forming, when properly secured in position the hopper, may be slotted at the points intended to receive the screws, so that the sides may be adjusted to different-sized pins or pintles.

Such being the construction the operation may be thus set forth:

The hopper D is first adjusted to the sized pintles it is desired should be used, and the pintles are then supplied to the hopper, which may be filled with them, the lower or bottom ones resting between the inclined back plate F and the spring N. The block C is now adjusted in position, so as to bring the groove in the same in line with the butt upon the hinge by means of the set-screw *b*, and the regulating screw *c* inserted in one end of the base A, and against which a stud,

O, upon the under side of the plate B, impinges, is adjusted so as to govern the movement of the plate B, and thus determine the distance that the driver H upon the forward end of the same will travel. The sections of hinge to be united are now received between the sliding plates E, the butts projecting down through the same, while the balance of the hinge rests upon the plates E. The sliding plate B is now forced forward, and as the cam-shaped piece upon the same is brought to bear upon the pin *a* secured in the arm K the same is moved forward, by which movement of the arm a backward movement is given to the opposite end, which, as already stated, is slotted and passed over a pin secured in the sliding plate G, and the forward end of this sliding plate G is withdrawn from beneath the spring N just a sufficient distance to allow one pin or pintle to drop down between it and the spring. The forward movement of the plate B continuing, the hammer H advances until its forward end engages with the rear end of the pin or pintle which has been deposited in the groove in the block C, and as the hammer is further advanced the pin or pintle is forced out of the groove and into and between the butt portions of the hinge. The hammer H may now be withdrawn by moving back to its original position the sliding plate B, and as the cam-piece upon the same is withdrawn from contact with the pin in this sliding plate, the spring L, which, by the forward movement of the arm K, has been compressed, expands and causes the arm K to return to its former position. In returning to its former position a forward movement is given to the slotted end of the arm passed over a pin secured in the sliding plate G, and as a sequence this plate advances, its forward end impinging upon the pintle or pin fed down directly in front of it, and carries or forces the same forward to and into the groove in the block C, whence it is forced out and into the hinge by the next forward movement of the hammer, as already described, the hinge into which the former pintle has been driven having in the meanwhile been removed and its place supplied by a second hinge.

It will thus be seen how rapidly and certainly the pins can be fed from the hopper, carried up to the groove, and driven therefrom and into the hinges.

Having thus described my invention,

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

The combination, with the base A, of an adjustable hopper, D, sliding plate G, sliding plate B, provided with a hammer, H, grooved block C, and springs L and N, and arm K, when the same shall be constructed and operate substantially as and for the purposes set forth.

W. F. LEWIS.

Witnesses:
CHAS. BENEDICT,
CHAS. DICKINSON.