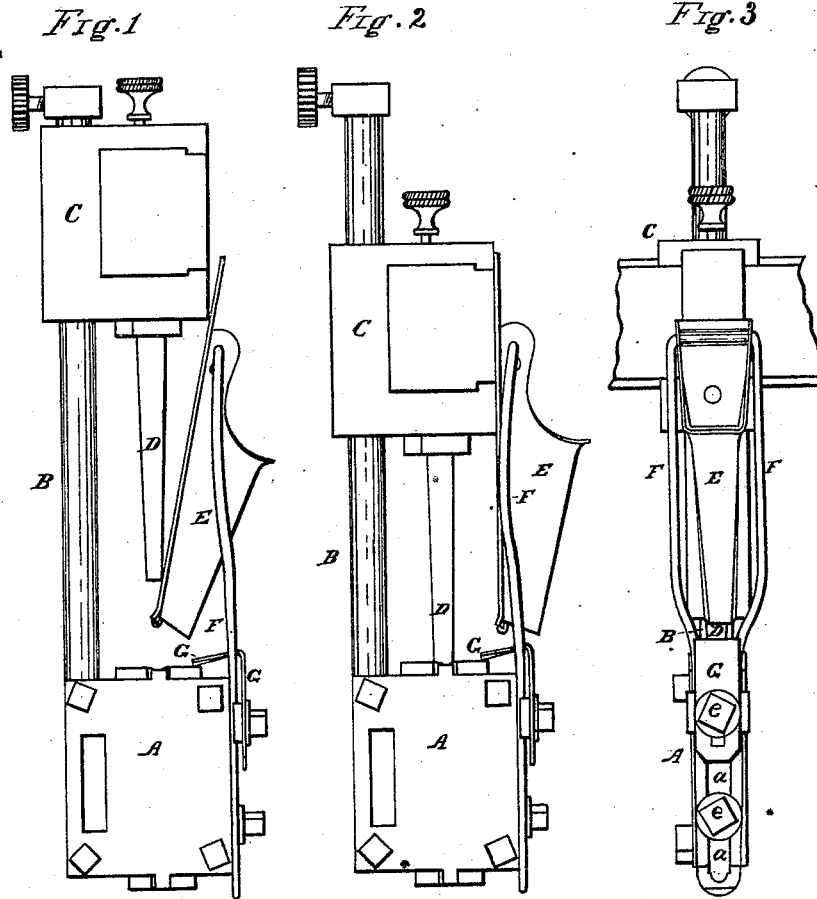


A. E. WHITE.
Box-Nailing Machine.

No. 161,650.

Patented April 6, 1875.



WITNESSES

F. J. Herring
H. P. Sorensen

INVENTOR.

Albert E. White.
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UNITED STATES PATENT OFFICE.

ALBERT E. WHITE, OF CHICAGO, ILLINOIS, ASSIGNOR TO HENRY E. MOORE,
OF SAME PLACE.

IMPROVEMENT IN BOX-NAILING MACHINES.

Specification forming part of Letters Patent No. 161,650, dated April 6, 1875; application filed
December 22, 1874.

To all whom it may concern:

Be it known that I, ALBERT E. WHITE, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Box-Nailing Machines, of which improvement the following is a full, clear, and exact description, which will enable others skilled in the art to which my invention appertains to make and use the said improvement, reference being had to the accompanying drawing forming a part hereof, and in which—

Figures 1 and 2 are side elevations of that part of the machine which embodies my invention, and Fig. 2 a rear elevation of the same.

Like letters of reference indicate like parts.

My object is to provide improved means to enable an attendant to keep the dies supplied with nails, without danger of being injured by the punches.

In the drawing, A represents one of the dies; B, a guide or spindle attached thereto; C, a clip through which the spindle passes freely, and D a punch attached to the clip. E is a hopper having an open bottom, and supported by an arm carried by the die. The upper part of the hopper is pivoted or hinged to this arm, and is constructed and arranged for contact with the clip during the movement of the die. The bottom of the hopper is arranged near the opening in the top of the die. The arm F is yielding, and preferably vertically adjustable on the die. In order to make this arm adjustable it may be slotted, as shown at *a*, and attached to the die by means of set-screws *e e*, passing through this slot into the die. G is a support, preferably vertically adjustable, but otherwise fixed, for the purpose of forming a support at the proper time, for the nails in the hopper; but this support is only essential in order to prevent the points of the nails from such contact with projecting parts on the die as would obstruct the passage of the nails into the die.

During the operation of the machine the dies are pushed upward by the parts of the box arranged below them. As the punches enter the dies the hoppers are pushed backward out of the way. The attendant then drops a nail into each hopper. When the punches leave the dies the hoppers move forward until the nails therein are carried to the opening in the dies. The nails drop into these openings, and are suspended therein in a position to be driven into the parts of the box to be nailed together during the next entrance of the punches into the dies. The lower part of the hopper, by striking the punch, is prevented from being carried too far forward.

It will be perceived from the foregoing description that the attendant who feeds the nails runs no risk of being injured by the punches, as he would if he should attempt to drop the nails directly into the dies. It will also be perceived that it is immaterial to my invention whether the punches are fixed and the dies movable, or whether the former are movable and the latter fixed. The hopper may be attached to any part, whether fixed or movable, provided the arrangement of the parts described is such as to make the hopper self-acting, for the purpose set forth, during the operation of the machine. The hopper may also be employed in connection with a self-feeding attachment which will deliver the nails into it, one by one, at the proper times.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the hopper E, mounted freely on the yielding arm F, the die, and the punch-holder or clip, substantially as and for the purposes specified.

ALBERT E. WHITE.

Witnesses:

F. A. HERRING,
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