

J. H. NELSON.

2 Sheets—Sheet 1.

Improvement in Machines for Wiring Blinds.

No. 120,454.

Fig. 1.

Patented Oct. 31, 1871.

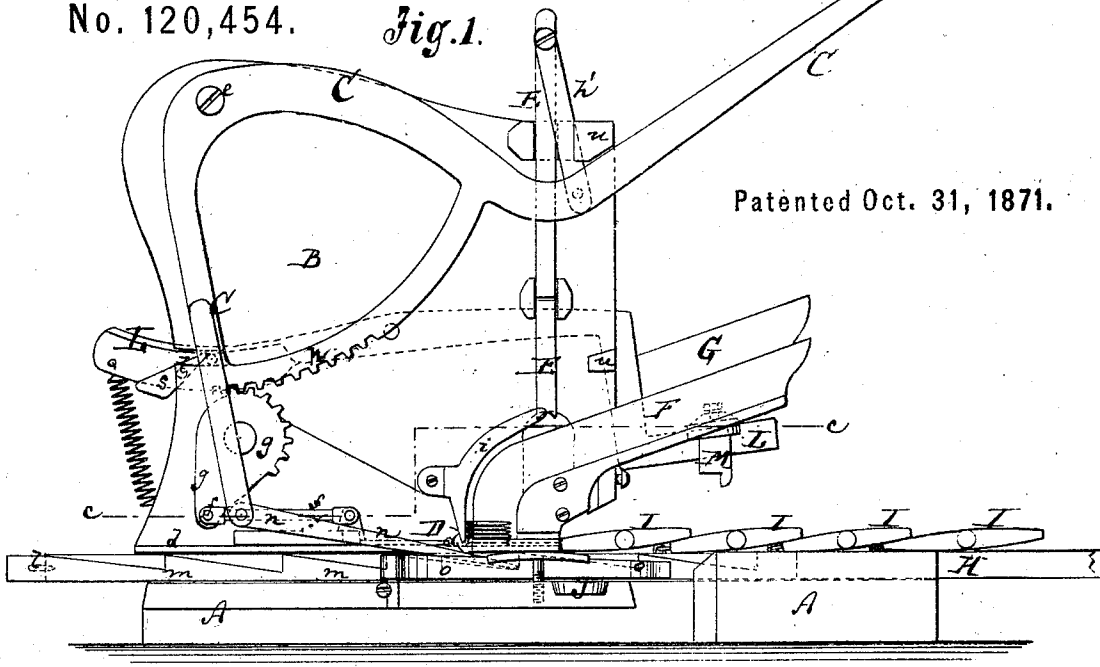
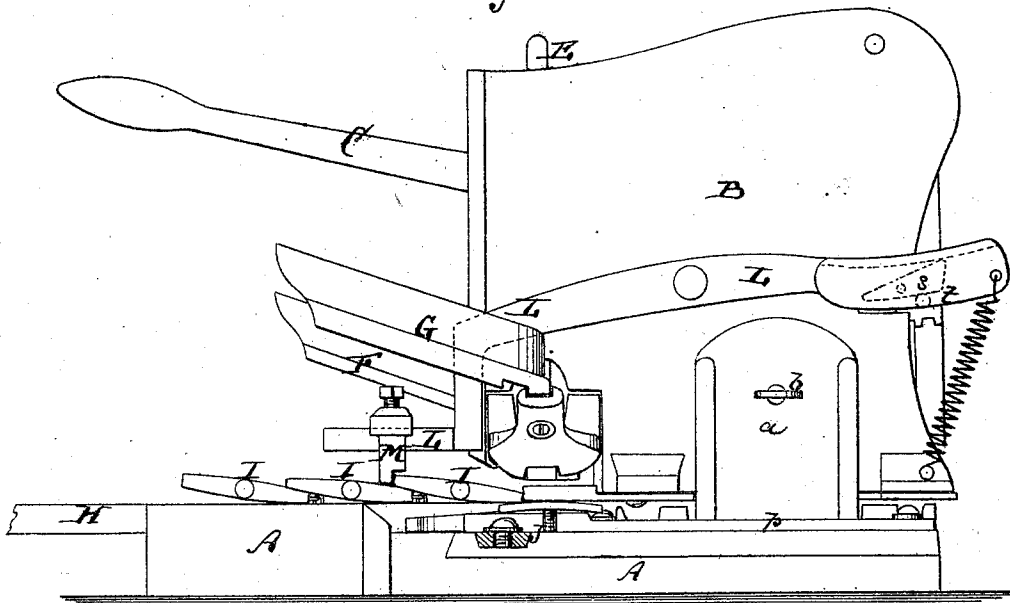


Fig. 2.



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2 Sheets--Sheet 2.

Improvement in
No. 120,454. *Fig. 3.*

Machines for Wiring Blinds.

Patented Oct. 31, 1871.

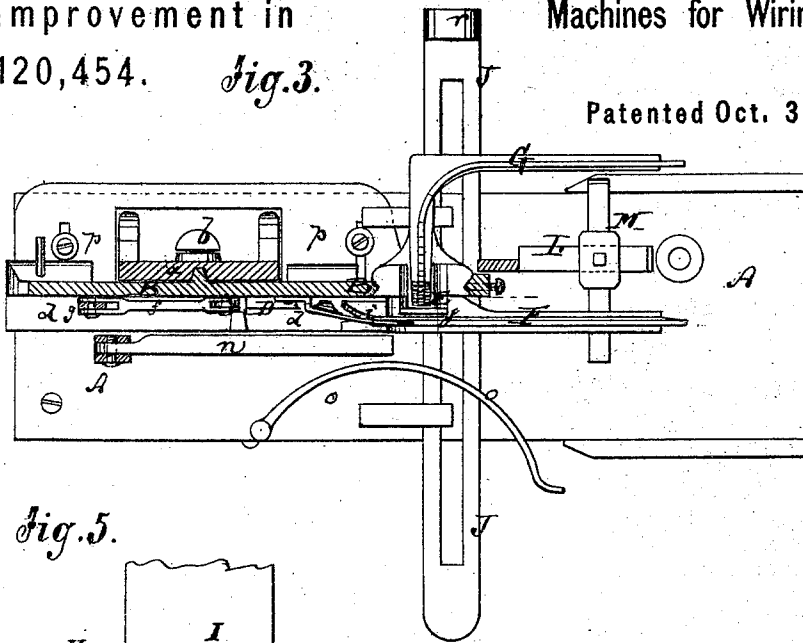


Fig. 5.

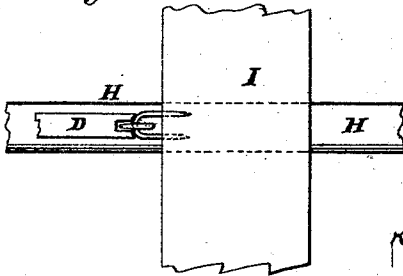


Fig. 4.

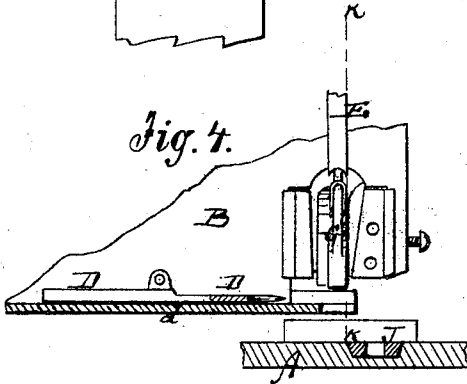
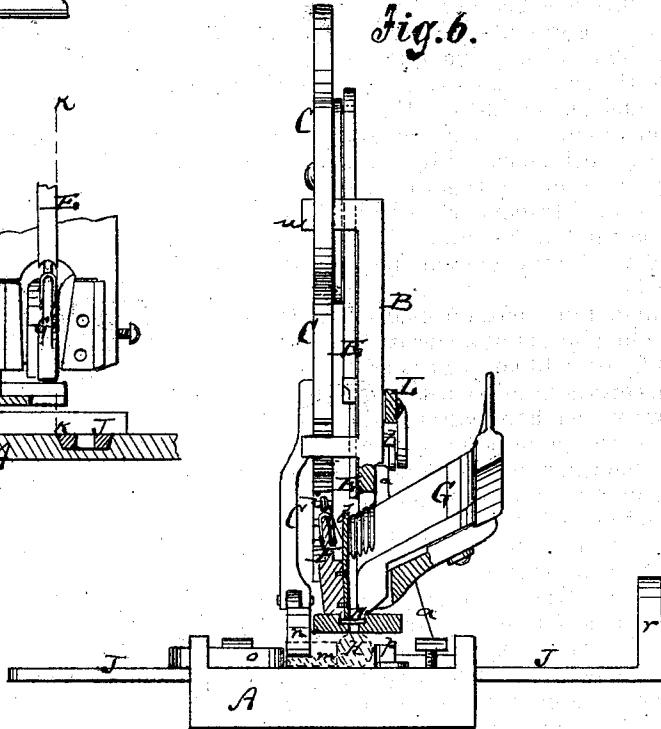


Fig. 6.



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UNITED STATES PATENT OFFICE.

JAMES H. NELSON, OF LITTLE FALLS, NEW YORK, ASSIGNOR TO HIMSELF AND
BYRON K. HOUGHTON, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR WIRING BLINDS.

Specification forming part of Letters Patent No. 120,454, dated October 31, 1871.

To all whom it may concern:

Be it known that I, JAMES H. NELSON, of Little Falls, in the county of Herkimer and State of New York, have invented a new and Improved Blind-Wiring Machine; 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 drawing forming part of this specification.

Figure 1 represents a front elevation of my improved blind-wiring machine. Fig. 2 is a back view of the same. Fig. 3 is a horizontal section of the same on the line *c c*, Fig. 1. Fig. 4 is a detail front view, partly in section, of the staple-inserting mechanism. Fig. 5 is a diagram illustrating the *modus operandi* of the machine. Fig. 6 is a vertical transverse section of the machine taken on the line *k k*, Fig. 4.

Similar letters of reference indicate corresponding parts.

My invention consists in driving two staples across one another and successively into the slat and strip of a blind; also, in holding the slat; also, in certain improvements upon the operative mechanism, as hereinafter fully described and subsequently pointed out in the claims.

A in the drawing represents the bed-plate of the machine. From it projects a vertical post or plate, *d*, to which the main frame B, carrying the working-levers and devices, is fastened by a screw, *b*, or other means. This frame is preferably made in form of a vertical plate with a horizontal flange, *d*, a short distance from the bed A, as shown. To the face of the plate B is pivoted, at *e*, a lever, C, which serves to operate the punches or staple-inserting devices D and E. The horizontal punch D rests on the flange *d*, and can be moved back and forth on the same by its connection with the lever C. This connection is shown to consist of a rod, *f*, and wheel or segment *g*, the latter meshing into a toothed arc, *h*, carried by the lever. Any other equivalent connection may, however, be used. The vertical punch E works in a groove of the plate B, and is, by a rod, *h'*, connected with the lever C. The said punches are thus connected in such manner with the lever C that they will move toward each other when the lever is swung down, the punch D, however, completing its movement sooner than the punch E, which continues to descend after D has

completed its forward (and even commenced its return) motion. F is a staple-holder or rail secured against the front of the plate B, and bent so as to deposit the staples successively upon the flange *d* whenever the punch D is moved back from under such staples. When the punch D is moved ahead it pushes the lowermost staple that rests upon the flange forward into a slat, and supports at the same time the staples above, preventing them from falling until the return stroke is completed, when one more staple will rest on the flange ready to be applied. *i* is a guard placed on the plate B opposite the curved edge of the rail F to guide the staples properly downward and prevent their falling off the side of the rail. G is the staple-holder or rail for the vertical punch E. It is affixed to the back of the frame or plate B, and extends with its end through an aperture of the same, to convey the staples close against the back of the punch E. A face-plate, *j*, is affixed to the frame in front of the punch E. When the latter is elevated to clear the staples on the rail G they will, by their own weight—the rail being inclined—crowd one staple against the face-plate, so that the descending punch may force it down into the blind-rod. The rod H to be wired is placed under the flange *d* and connected, by a hook, *l*, with the notched feed-bar *m*, to which intermittent rectilinear motion is imparted by a pawl, *n*, of the lever C. A spring, *o*, crowds the rod H against a laterally-adjustable guide-plate, *p*, which is fastened to the bed A. The slat I to be wired is placed against the end of the plate B and upon the rod H. The end of the slat is made to abut against a lug, *r*, projecting from a slotted laterally-adjustable bar or plate, J, held to the bed A. To the back of the plate B is pivoted a lever, L, which carries an adjustable cross-piece, M, at one end, and a pivoted click, *s*, at the other. A pin, *t*, projecting from the lever C, will, when said lever C is swung down, catch under the click *s*, and thereby swing the lever L so as to bring the angular cross-piece M upon and against the edge of the slat, holding it in place while the staple is being applied thereto by the punch D.

The punch D first pushes its staple into the edge of the seat. The punch E then drives a staple down into the rod so as to straddle the first staple of D, as is clearly indicated in the diagram, Fig. 5. The end of the punch D is forked, to ad-

mit one prong of the upright staple over the end of the horizontal staple, while the punch D might still be in contact with the latter. The rail F is or may be made vertically-adjustable on the frame B, so that it may be set further down in case its lower end is worn by friction of the staples, and to suit staples of varying thicknesses.

u u are stops on the face of the plate B to arrest the respective movements of the lever C.

I am aware of the patent, granted to Kindberger and Arnold, of September 27, 1869, and that, in some respects, it bears a similarity to the devices used by me. I therefore desire to disclaim said machine and all that is embraced in it as any part of my invention.

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

1. The vertical punch E, combined as described with a bifurcated punch, D, working on supporting flange *d* so that one staple will be forced horizontally into the edge of the slat and a second

(immediately thereafter) forced vertically down into said slat so as to straddle the first.

2. The common actuating-lever C, having strap *h* and circular rack-bar L on the power-arm, the segment *g*, and the rod *f*, combined with the two punches, as and for the purpose specified.

3. The lever L pivoted to the frame of a blind-wiring machine, as set forth, and provided with an angular bar, M, at one end to hold the slat, as described.

4. The click *s* pivoted to the end of lever L, combined with pin *t* of lever C, as and for the purpose specified.

5. The combination, in a blind-wiring machine, of the vertical punch E, horizontal punch D, flange *d*, rails F G, and slat-holder M, operating together in the manner specified.

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Witnesses:

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