

Sheet 1.

MARTIN BUCK.

2 Sheets

Improvement in Machines for Crimping Blind Slats.

No. 118,102.

Patented August 15, 1871.

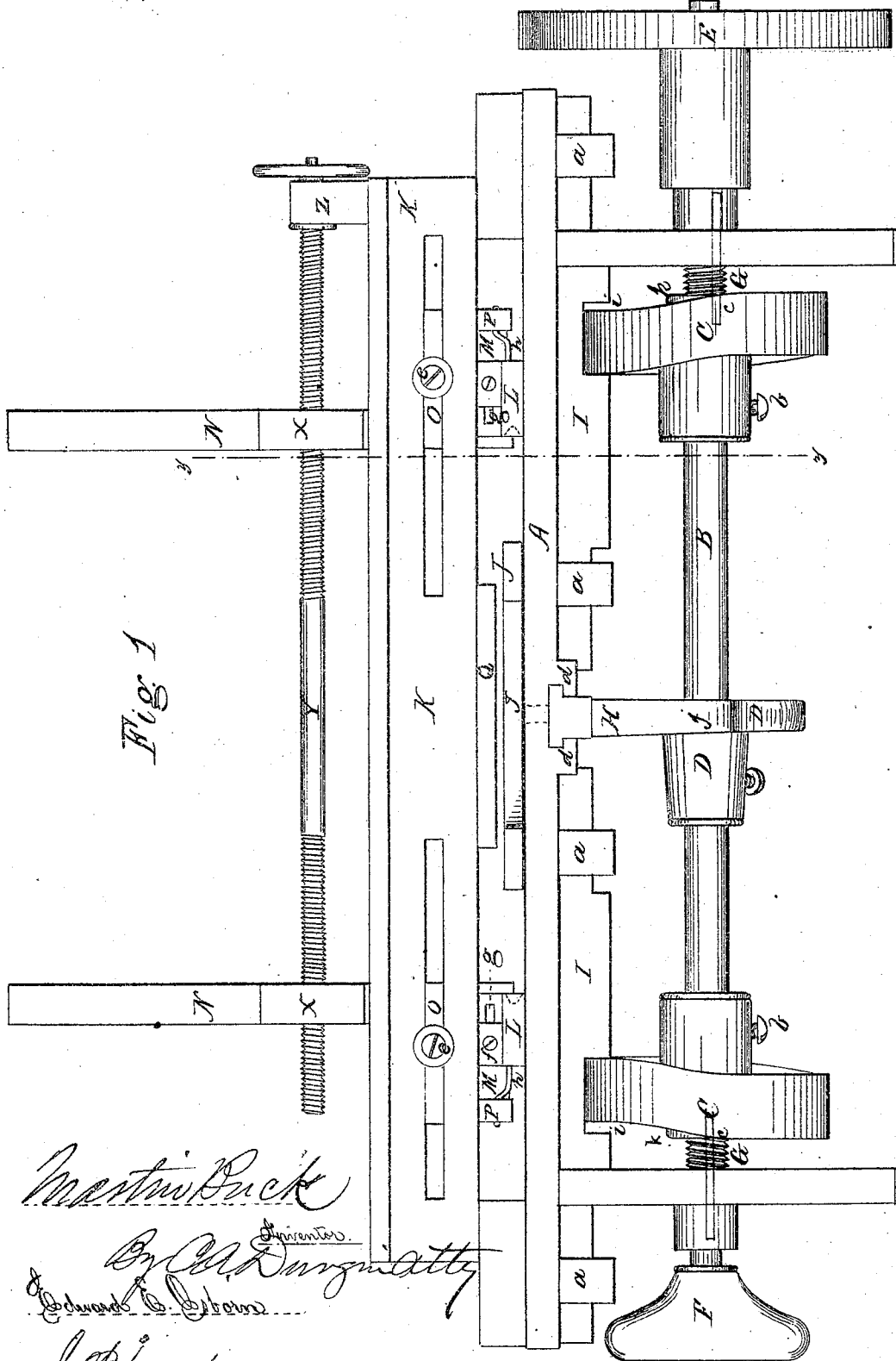


Fig. 1

Martin Buck

By C. D. Durgin, Attorney.

John Crawford

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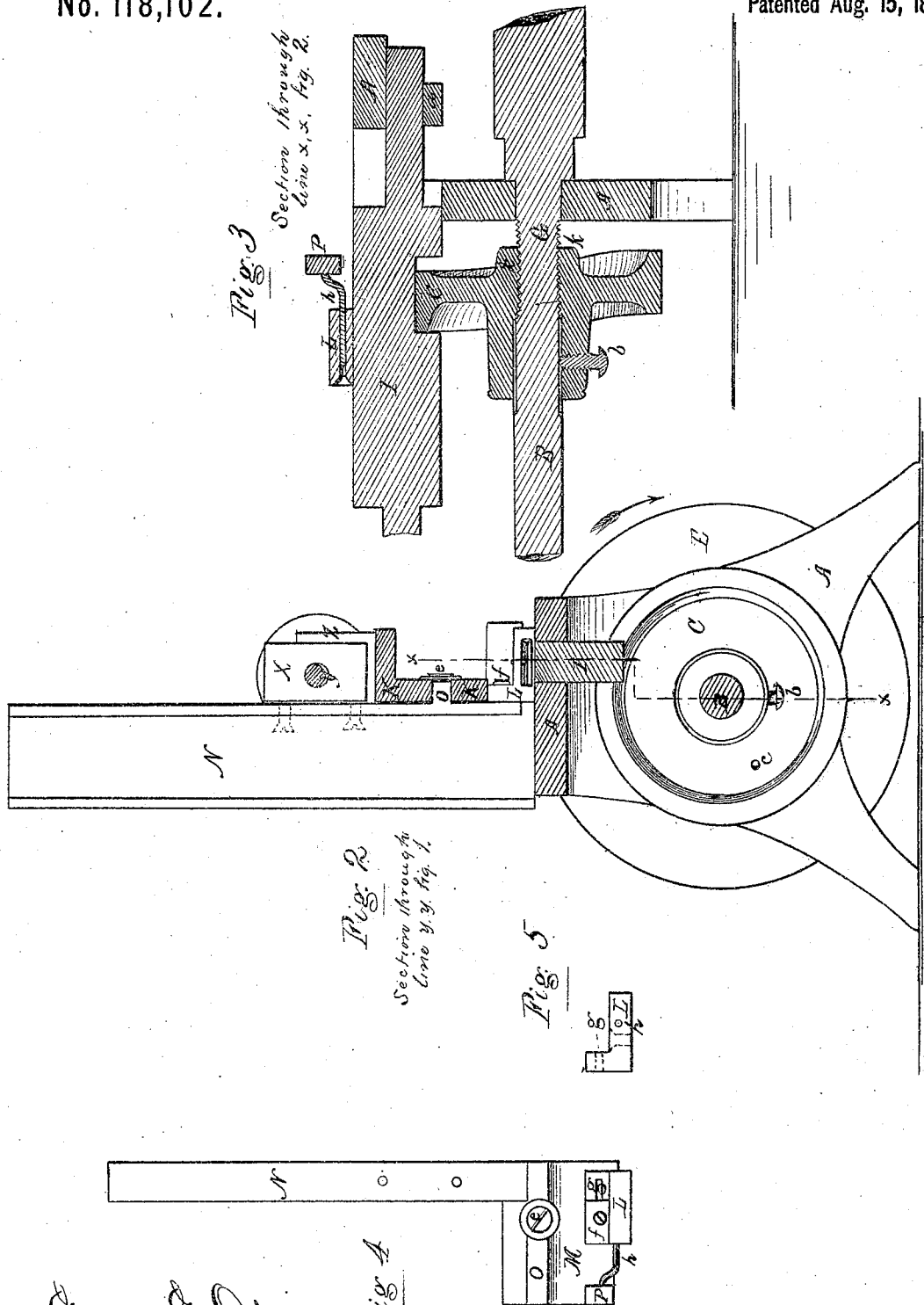
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Sheet 2.

Improvement in Machines for Crimping Blind Slats.

No. 118,102.

Patented Aug. 15, 1871



Edwards & Osborn
J. P. Sanford
Witness

Martin Buck,
By Geo. D. Rogers
the Atty. General

UNITED STATES PATENT OFFICE.

MARTIN BUCK, OF LEBANON, NEW HAMPSHIRE.

IMPROVEMENT IN MACHINES FOR CRIMPING BLIND-SLATS.

Specification forming part of Letters Patent No. 118,102, dated August 15, 1871.

To all whom it may concern:

Be it known that I, MARTIN BUCK, of Lebanon, in the county of Grafton and State of New Hampshire, have made and invented certain new and useful Improvements in Machines for Crimping or Compressing the Ends of Blind-Slats, of which the following is a specification:

My invention is an improvement upon the Letters Patent granted Luther T. Smart, May 19, 1857, No. 17,341; and it consists in certain novel combinations and arrangements of parts, which have for their object to greatly facilitate the adjustment and operation of the machine.

Figure 1 is a front elevation of my improved machine. Fig. 2 is a transverse vertical section through the line *yy*, Fig. 1. Fig. 3 is a vertical section through the line *xx*, Fig. 2. Fig. 4 is a front view of one of the racks and dies detached from the frame. Fig. 5 is a view of one of the dies taken from the left-hand side of Fig. 4.

The frame A supports the shaft B, upon which the cams C C D are secured, and it has a series of bearings, *a a d d*, which supports the die-blocks I I and the slide H of the feeding-plate J. The cams C C work in slots *i i* in the die-blocks I I, and give a reciprocating motion to the die-blocks when the shaft B is rotated. The upper parts of the die-blocks slide in the slots cut in the frame A, as shown in Figs. 3 and 4, and carry the dies L L, which are secured to them by screws. The plate J feeds the blanks from the rack N N to the crimping-dies. It is secured to the slide H, which works through a slot in the frame and travels in the bearings *d d*, and a reciprocating motion is given to it by the cam D, through the medium of the tappet-fingers *j* secured to the slide H. These tappet-fingers embrace the cam D on the front and in the rear; but only one of them is shown in the drawing. The shaft B is cut with a screw-thread, G, upon it at each end, one thread being a right-hand and the other a left-hand screw. The hubs *k* of the cams C are also cut to fit and turn upon these screws, as shown in the sectional view, Fig. 3, so that when the shaft is turned in one direction the cams C will move toward each other, and when turned in the reverse direction will move away from each other. The set-screws *b b* in the hubs of the cams C C bear against the shaft B when tightened up, and cause the cams to turn with the shaft. When the screws *b* are loosened the shaft may be turned independent of

the cams, which are held stationary at this time by a locking-pin inserted through the hole *c*, Fig. 2, in the cam, and into the side of the frame A. This pin allows the cams to be moved on the shaft by the action of the screws G, either toward or away from each other, but prevents any rotary motion of the cams, so that they always keep the same relative position with regard to each other, and act to move the crimping-dies L simultaneously toward and away from the ends of the blind-slat.

From the foregoing description it will be seen that the action of the right and left-hand screws G upon the cams C causes the working distance of the dies to become longer or shorter, according to the direction in which the shaft is turned, and that this construction renders the machine capable of being quickly and accurately adjusted to work upon slats of different lengths. When the distance between the dies is properly adjusted the screws *b* are tightened and the pins withdrawn from the holes *c* in the cams. The rotary motion of the shaft B will then impart a reciprocating motion to the dies, through the action of the cams C upon the die-blocks I. The racks N N constitute the hopper from which the slats are fed to the crimping-dies by the feeding-plate J. The ledges O O on the lower part M of the racks fit and slide in the slots in the plate K secured upon the upper part of the frame A. The screws and washers *e e* hold the racks in any desired place on the plate K, and when loosened allow them to be moved toward or away from each other. The dies L are connected to the racks by the screws *f f*, which pass through slots *g g* in the sides of the dies into the lower part of the racks. The dies, when in motion, slide upon the screws *f*; but, when the distance between the dies is being regulated in the manner above described, the racks may be caused to move with the dies, and their position also simultaneously adjusted, by tightening the screws *f*, to connect the dies and racks together, and loosening the screws *e* to allow the racks to move on the plate K. The blocks P P secured to the lower part M of the racks hold the clearing-wires *h h*, which pass through holes in the dies L. These wires are stationary, and the dies move back and forth upon them. They act to press the ends of the crimped slat out of the faces of the dies and prevent them sticking. As they are also connected to the lower

part of the racks, they do not require any separate adjustment, but are moved simultaneously with the dies and racks.

The slats to be crimped are placed in a pile in the hopper and fed forward to the crimping-dies by the reciprocating feed-plate J. The lowest slat in the pile is caught by the feeding-plate at each forward movement, and moved forward beneath the plate Q and between the dies L, where it is crimped; and then it is pushed, by the next slat being fed, out from between the dies and off the machine to the floor, or into a trough arranged to receive them.

Another method of moving the racks N N independent of the dies is shown in Figs. 1 and 2. The shaft Y is cut with a right and left-hand screw, and is held in the bearing Z on one end of the plate K, in which it turns. It has two nuts, X X, cut to fit and correspond with the right and left-hand threads; and when these nuts are secured to the racks N N, which may be accomplished by screws, shown in dotted lines, Fig. 2, the nuts may be caused to move by turning the shaft Y, and bring the racks either nearer to or further from each other. This arrangement

for moving the racks may be used in connection with the mechanism described for moving the dies; or it may be dispensed with and the racks adjusted simultaneously with the dies, in the manner described above.

I claim—

1. The dies L L, adjusted for the varying lengths of slats by the movable cams C C and screws G G on the shaft B, and held in proper relative position during adjustment by pins e, or equivalent device, constructed, arranged, and operating substantially as described and specified.

2. The hopper composed of the racks N N, arranged for adjustment simultaneously with and relatively to the dies L L by the ledges O O, substantially as described and specified.

3. The combination, with the racks N, of the clearers h h, and adjusting them simultaneously with and relatively to the dies L L, so as to automatically discharge the compressed slats, substantially as described and specified.

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Witnesses:

E. J. DURANT,
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