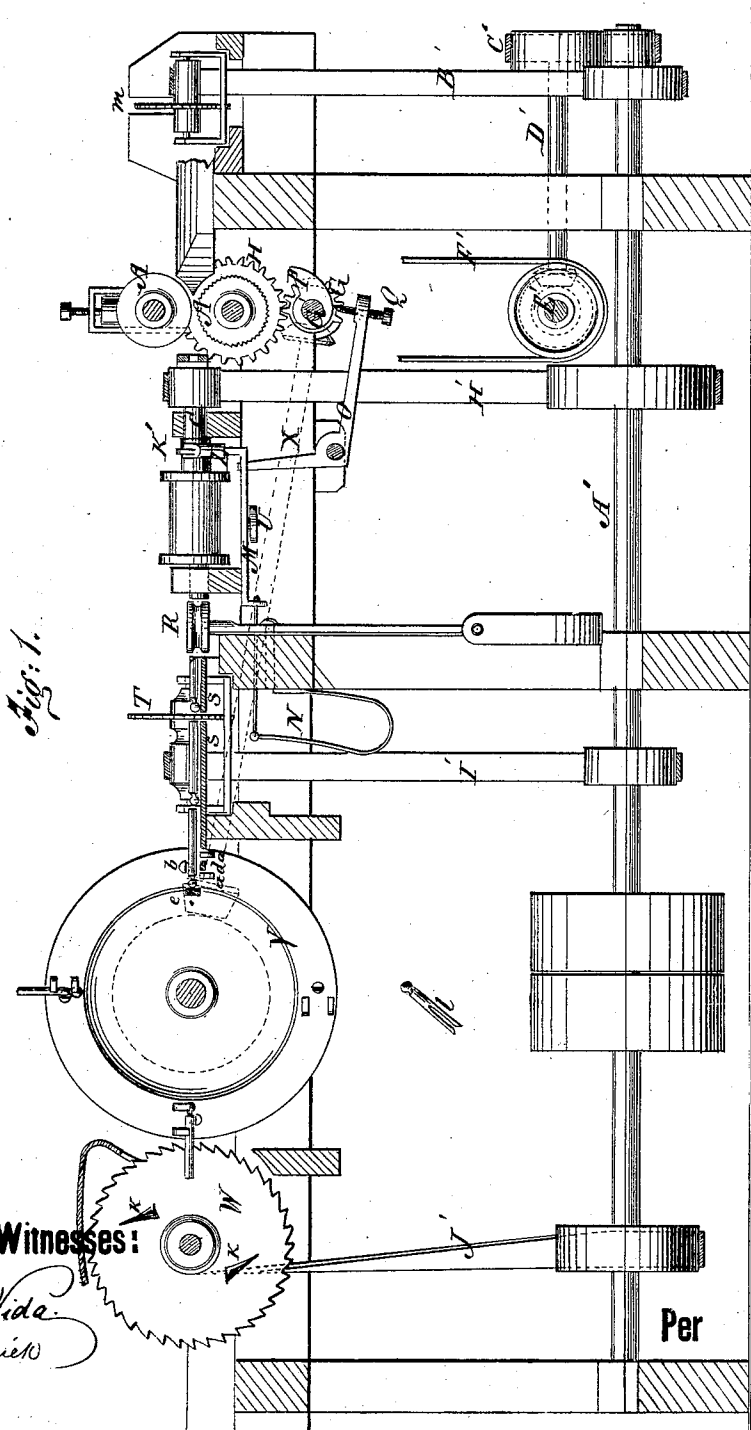


B. B. & A. J. OCKINGTON.
Machines for Making Clothes-Pins.

No. 145,587.

Patented Dec. 16, 1873.



Witnesses:

Chas. Nida
Osborne

Per

Inventor:

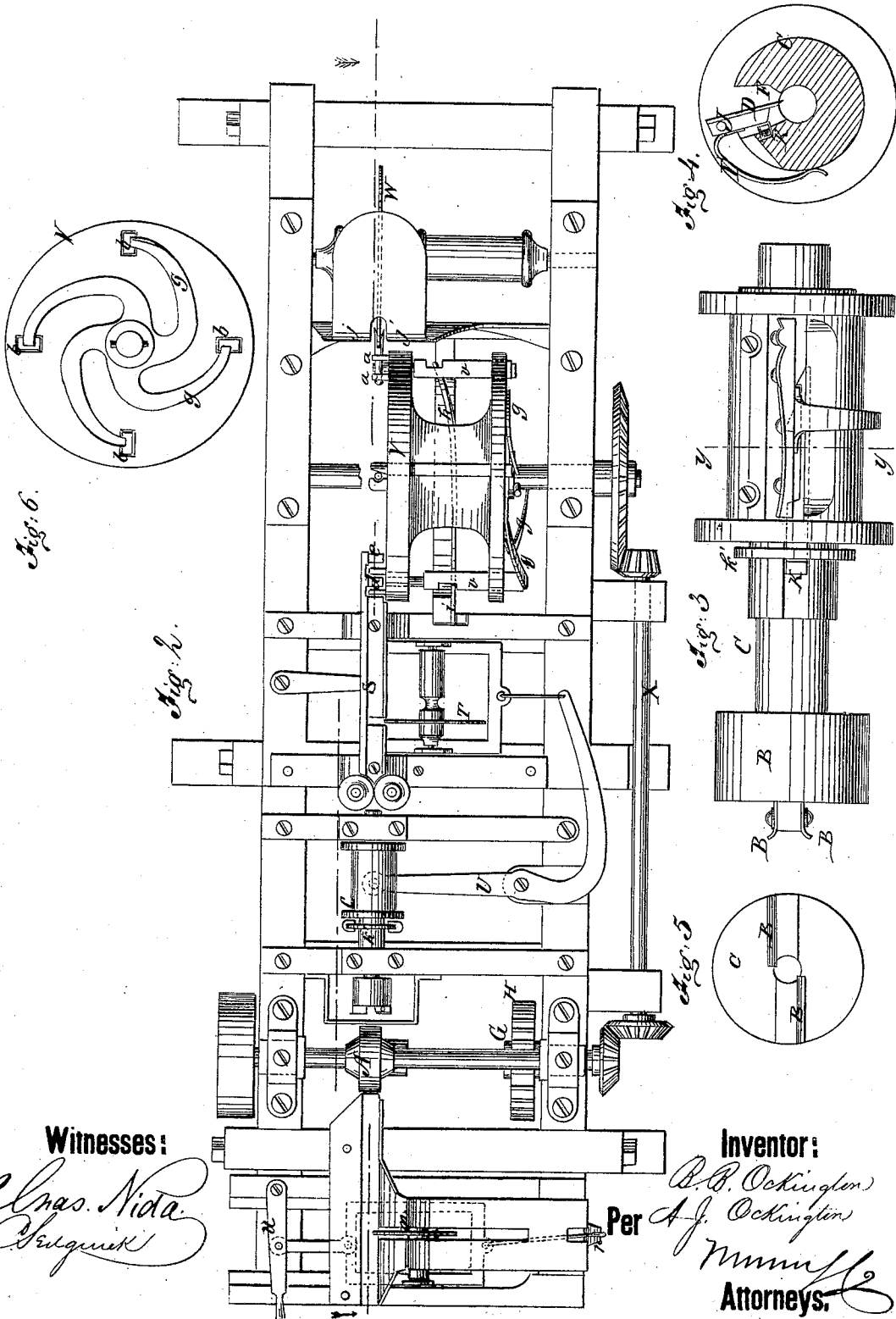
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UNITED STATES PATENT OFFICE.

BENJAMIN B. OCKINGTON AND ANDREW J. OCKINGTON, OF STRATFORD
HOLLOW, NEW HAMPSHIRE.

IMPROVEMENT IN MACHINES FOR MAKING CLOTHES-PINS.

Specification forming part of Letters Patent No. **145,587**, dated December 16, 1873; application filed
November 1, 1873.

To all whom it may concern:

Be it known that we, BENJAMIN B. OCKINGTON and ANDREW J. OCKINGTON, of Stratford Hollow, in the county of Coos and State of New Hampshire, have invented a new and Improved Machine for Making Clothes-Pins, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claims.

Figure 1 is a longitudinal sectional elevation of our improved machine, taken on the line *x x* of Fig. 2, looking in the direction of the arrows. Fig. 2 is a plan view. Fig. 3 is a plan view of the mandrel for turning the pins. Fig. 4 is a cross-section of Fig. 3 on the line *y y*. Fig. 5 is an end elevation of said mandrel, and Fig. 6 is a side elevation of the carrying-wheel which presents the pins to the slotting-saw.

Similar letters of reference indicate corresponding parts.

A represents pressure feed-rollers, by which the strips of wood are fed into the machine to be turned into shape by the roughing-cutters B on the end of the hollow mandrel C, and the finishing-cutter D in the slot F in the side of the said mandrel. The roughing-cutters act while the strips are being fed along, but the finishing-cutter acts during periods of rest which the feed-rollers are caused to have by the lack of teeth on a portion of the pinion G, which drives said feed-rollers by the wheel H. The finishing-cutter is as wide as the length of a pin and acts on the pin throughout its whole length, at the same time being revolved around it, and having its edge pressed against it by the spring I as the wedge K withdraws from behind it, and allows said spring to so press it and turn it on its pivots J. The wedge is shifted forward to raise the finishing-cutter from the finished pin to allow it to be fed along, a blank portion presented for another pin, and also shifted back to allow the cutter to act by the ring K', and the ring is moved by the forked arm L of a sliding bar, M, which is moved one way by the spring N, and the other way by the elbow-lever O and cam P. This cam is on the shaft on which the pinion G is, and it is so-adjusted,

relatively to the toothless part of said pinion, that at the moment the feed-rollers stop it begins to act and move the wedge backward to allow the finishing-cutter to act, and it completes the withdrawal of the wedge, and allows the finishing-cutter to complete its work just before the pinion sets the feed-rollers in motion again, and escapes from the screw Q of the elbow-lever just in time for the spring N to throw the wedge forward and raise the finishing-cutter before the timber moves on again. The pins, still connected together, pass from the hollow mandrel between the pressure-rollers R, and along the guideway S on front of the cut-off saw T, which is moved forward each time the timber rests by elbow-lever U, connected to and operated by slide M, and cuts the pins apart. From the cut-off saw the pins are pulled along the way S to the carrier-wheels V, by which they are taken between the stationary fingers *a* and the movable finger *b* and carried around in the manner shown in Fig. 1, and presented to the slotting-saw W and finished. This carrying-wheel is geared, by the shaft X, with the shaft which drives the feed-rolls A. It makes one revolution to four of said shaft, and has four sets of carrying-fingers to take the finished pins as fast as they are presented. The stationary fingers *a* in this wheel have a little notch in the side coming against the pin, and just at the moment that they come to the pin, which is pushed along to the right place over the rest *d*, and against the step *e* just before they come to it, the movable finger *b* is thrust out at the side of the wheel by a spring, *g*, and binds the pin in the said notches of the fingers *a* by its beveled or inclined side acting on the pin. The cam *h* draws the movable fingers back to release the pins, and let them fall after they have passed the slotting-saw, and it holds said fingers back until they go forward to secure the pins when they escape from the end *i* of said cam, and are instantly thrown forward by their springs. Guards *j* are provided, in connection with the slotting-saw, to control the pins relatively to it while being slotted, to insure the making of the slots in the center. The cutters *k* on the sides of the slotting-saw

bevel the points of the pins, as at *l*. *m* is a cut-off saw in front of the feed-rollers, for cutting off the strips at the rear end, so that there will be no excess on the last pin of each strip, and the end of the next strip fed in will come right for the first pin. This saw is moved forward by the hand-lever *u*, and back by the spring *p*. The attendant who puts in the strips will move the saw. *A'* is the main driving-shaft. It drives the cut-off saw *m* by the belt *B'*, the pinion *G* by the belt *C'*, shafts *D'* and *E'*, and the belt *F'*, the mandrel *C* by the belt *H'*, the cut-off saw by the belt *I'*, and the slotting-saw by the belt *J'*.

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

1. The combination of the feeding-rollers *A*, turning-mandrel *C*, pressure-rollers *R*, cut-off

saw *T*, carrying-wheel *V*, and slotting-saw *W*, substantially as specified.

2. The cam *P* and elbow-lever *O*, combined with the wedge-moving slide *M* and the intermittingly-revolving feed-rollers, and arranged to cause the finishing-cutter to act while the feed-rollers rest, substantially as specified.

3. The arrangement of cam *P* and elbow-lever *O* relatively to the feed-rollers, to allow the spring *N* to raise the finishing-cutter off from the work previous to the starting of the feed-rollers, substantially as specified.

4. The combination of the guides *j* with the slotting-saw, substantially as specified.

BENJAMIN B. OCKINGTON.

ANDREW J. OCKINGTON.

Witnesses:

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