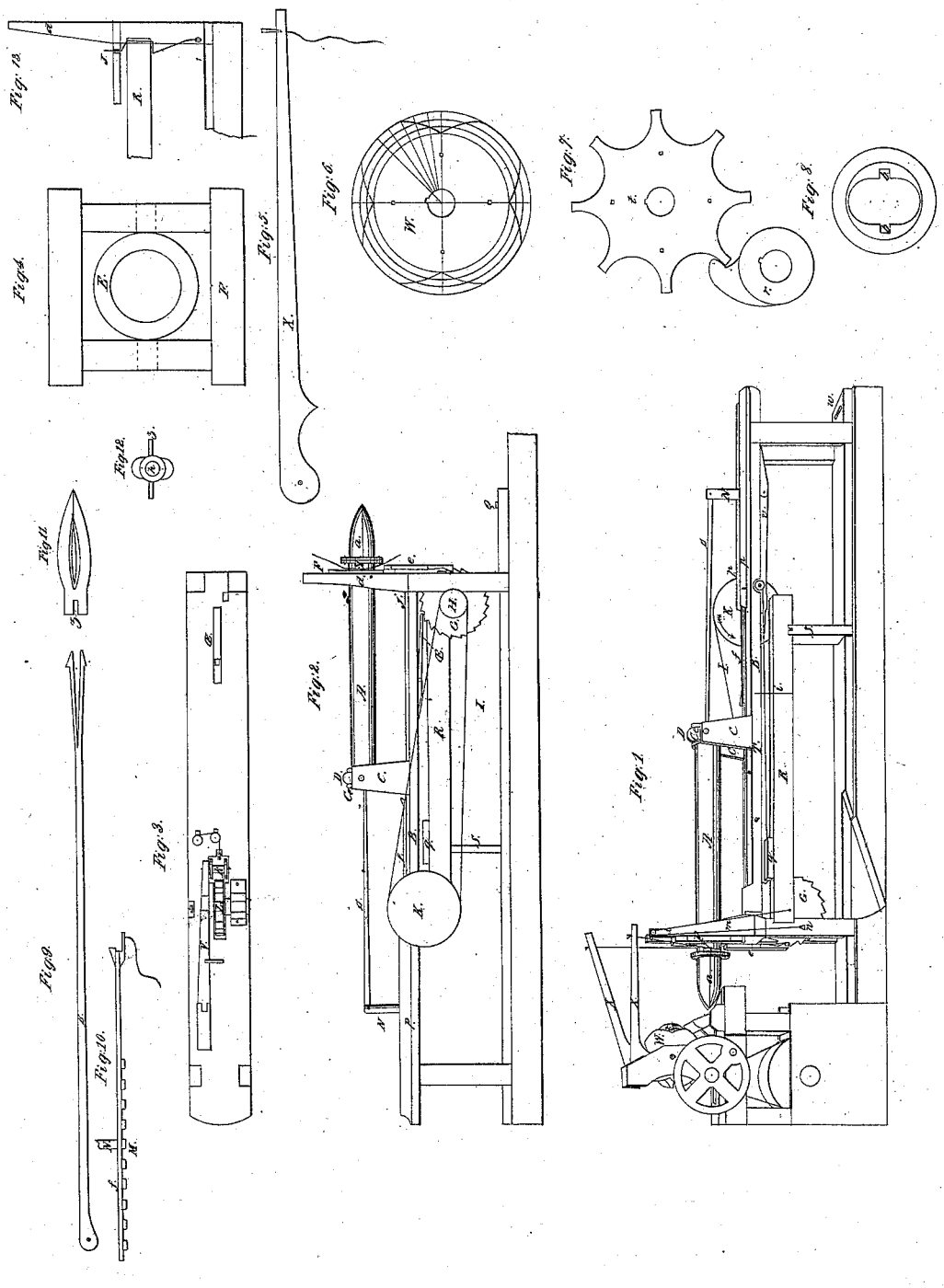
C. Ishister,

Making Cut Nails,

No. 3,868. Patented Dec. 31, 1844.



UNITED STATES PATENT OFFICE.

CALEB ISBISTER, OF ALLEGHENY, PENNSYLVANIA.

FEEDER FOR NAIL-CUTTING MACHINES.

Specification of Letters Patent No. 3,868, dated December 31, 1844.

To all whom it may concern:

Be it known that I, CALEB ISBISTER, of the city of Allegheny, county of Allegheny, State of Pennsylvania, have invented a new and useful Machine for the Purpose of Turning and Feeding Rods or Plates to the Cutters of Nail-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1, is a perspective view. Fig. 2, a longitudinal elevation of the reverse side. Fig. 3, underside of top of table. Fig. 4 sliding head, and collar. Fig. 5 lever, Fig. 6 cam with the method how to construct, Fig. 7, cog wheel between cams, and finger cog, Fig. 8 end view of tube as at D, Fig. 9 feeding rod. Fig. 10 slide showing the rack. Fig. 11 side view of nippers. Fig. 12 end view of nippers. Fig. 13 spring catch on inside of table leg, showing the end of the trough supported by it.

Description.—My machine consists of a hollow shaft or tube A with a flat mouthpiece *a*, Fig. 1, having within it two grooves, *b*, *b*, Fig. 8, this tube is fixed upon a table or platform B, by means of two pillar-blocks *c c*, which receive the journals of a collar C *e*, which is on one end of the tube, as at D, the other end of the tube is passed through another collar E, Fig. 4, which is made fast by its journals to a square frame or sliding head, F, which sliding head, works vertically between the two uprights *d d*, made fast upon one end of the platform B, attached to the sliding head is a spring catch *e*, which works the rack wheel G, working the small pully H, Fig. 2, which by means of a band I, works the large pulley K, this pulley works the cog wheel L, Fig. 3, which works into the rack M, Fig. 10, on the under side of the slide *f*, fixed on the slide is an upright N, which receives the joint end of the rod O, the other end of the rod having a spring catch *g*, to receive the nippers, Fig. 11, which are made with a circular recess *h*, to receive the spring catch of the rod, and also have projections on each side *z*, *z*, Fig. 12 to enter the grooves of the tube, the slide *f* works under, and also between, the two spring guides *p p*, made fast to the forward end of the slide, is a cord, or chain, which passes through to the underside of the table, and over some pulleys Fig. 3, and is made fast to the weight *q*, which moves on rollers in the trough R, one end of which is fastened by journals to the upright S, the other is supported by the spring catch J, Fig. 13. The lever T, which is made fast upon the side of the table, passes under the sliding head F, the other end is connected by the chain *i*, to the trough R, made fast to the inside of one of the legs of the table is a spring catch, which passes through the top, as at *j*, Fig. 3, Fig. 13, below the top and in front of the cog wheel is a friction roller *k*, Fig. 3, made fast upon a jointed lever V, passed over a pulley U on one of the uprights *d* is a cord or chain *m*, one end of which is made fast to the trough R, and the other end to a stirrup *n*, the fall catch E, Fig. 3, is to prevent the rack wheel G slipping back, the nail machine requires the following additions, viz., on the working shaft of the machine, I place a finger cog *r*, Fig. 7, which works into the cog wheel *t*, between the two cams W, W, on the shaft 3, Fig. 1. These cams are made fast to the cog wheel. They work the two levers *x*, *x*. These levers are made fast by a cord or chain to the tube A as at Y.

The manner in which the machine operates is as follows: the working shaft of the nail machine brings around the finger cog *r*, which strikes one of the cogs of the wheels *t* between the cams *w*, *w*, turns them one eighth around which causes one of the levers *x* to raise on the circumference of one of the cams, and the other lever to drop into the notch of the other cam this causes the tube A to turn over and also to rise and fall. In the fall it takes with it, by means of the spring catch *e*, one tooth of the rack wheel G, which by means of the pulleys H and K, and the small cog wheel L, brings forward the slide *f*, which works the feeding rod O, when the slide comes quite forward it pushes back the spring catch *j*, which supports the trough R, when it falls letting the weight *q* run down, (and at the same time raising the friction roller *k*, which lifts the slide *f*, out of gear of the small cog wheel L, which brings back the feeding rod O, with the empty nippers. The fall of the trough causes the lever T to raise the sliding head F, which stops the motion of the tube, so that it can be again supplied. When supplied and the rod attached to the nippers, and the nippers put inside the tube with the projecting side

pieces in the grooves. The trough must then be raised to its place by the cord *m*, over the pulley U, where it is held by the spring catch *j*, Fig. 3. The rising of the trough R, raises the lever T, which allows the sliding head to fall again to its place, when the machine is in full operation the tube being turned by the motion of the levers *x*, *x*, and the motion of the sliding head F, working the feeding rod *o*, one end of the platform is made fast by a center pin Q Fig. 2, directly under the cutter of the nail machine, and the other end is made fast by a screw in an oblong groove *w*, so as to allow of a side motion.

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

1. The mode of feeding the nail rod or plate to the cutters, by means of a rotating hollow shaft, or tube, operating substantially in the manner described, whereby the rod or plate is turned over at each operation.

2. I claim also the combination of the parts which communicate the progressive feeding motion to the nippers, by the up and down movement of the forward end of the rotating hollow shaft, or tube, as described.

3. And I claim the combination of parts by which the nippers are brought back, and the machine stopped.

4. And finally, I claim the combination of parts by which the motion is communicated from the nail machine to the rotating hollow shaft, or tube.

CALEB ISBISTER.

Witnesses:
FLEMING MORROW,
WILLIAM WESTERMAN.