# W. Hunt,

## Making Cut Nails,

No. 3,305. Patented Oct. 12, 1843.

Fig. 1.

Plate. 1.

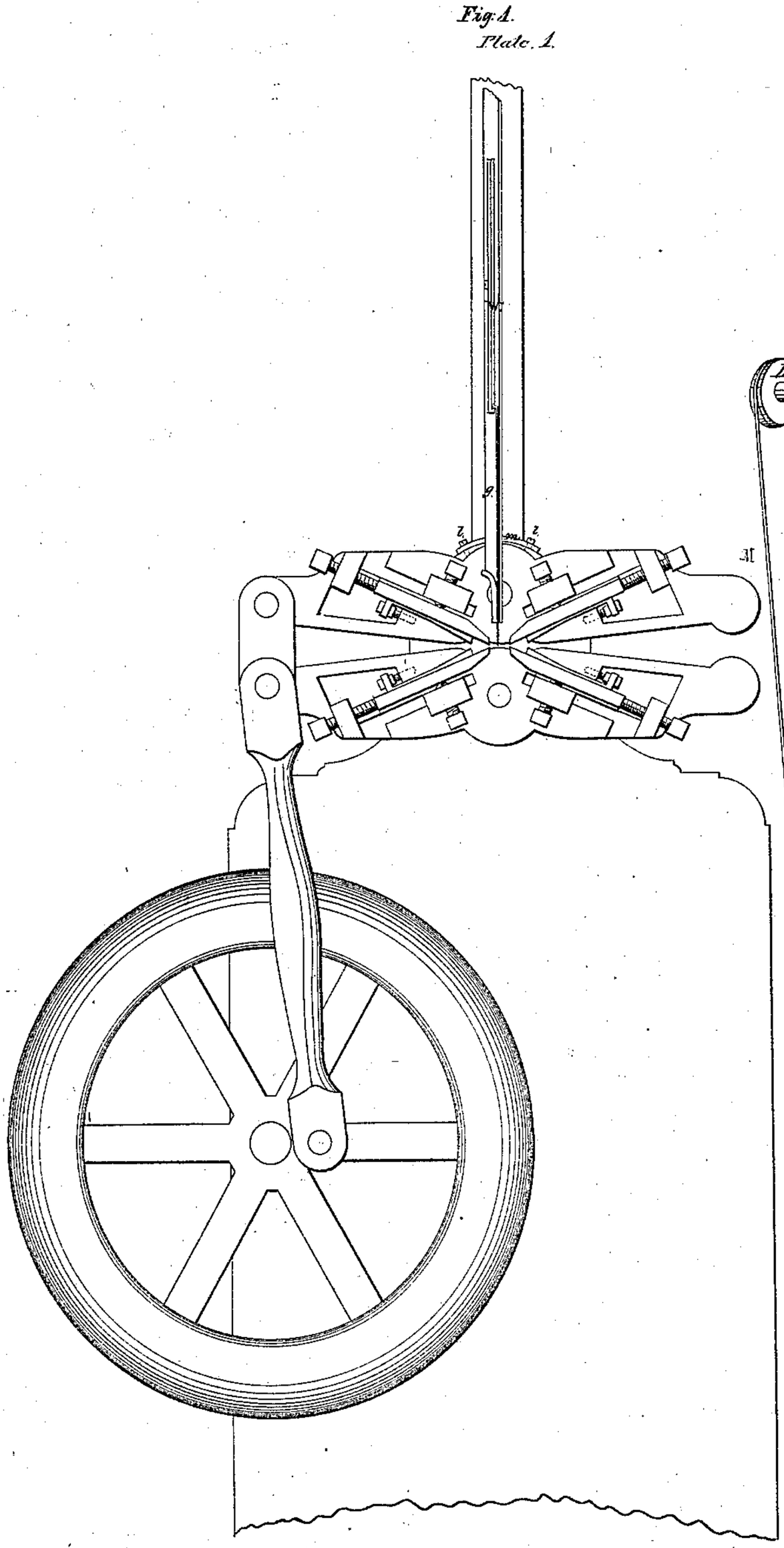

Fig. 1.

Plate. 2.

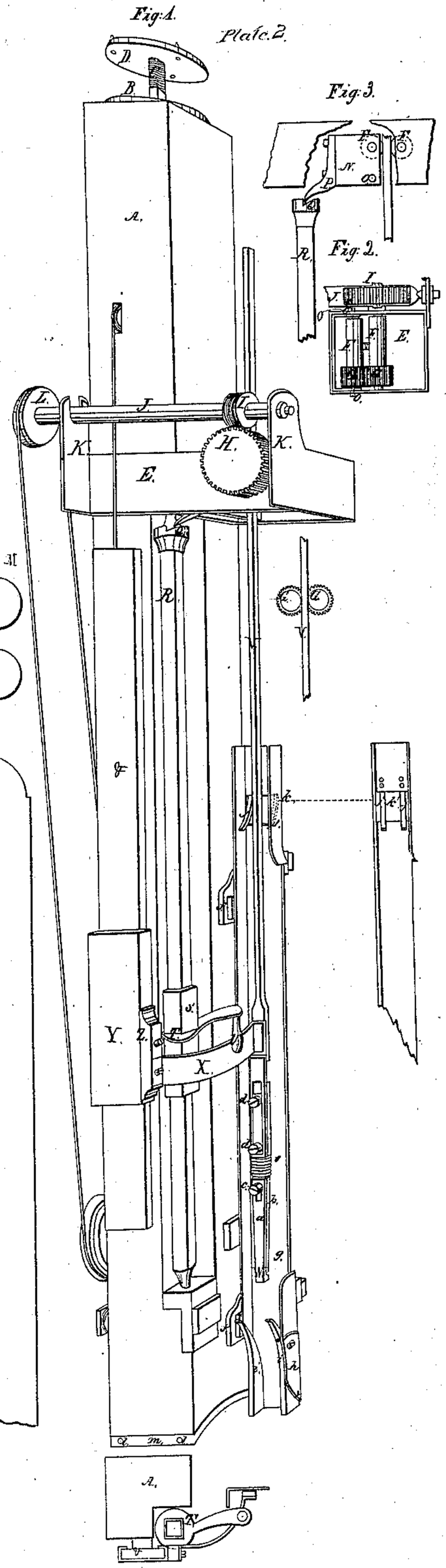

Fig. 3.



Fig. 2.

# UNITED STATES PATENT OFFICE.

WALTER HUNT, OF NEW YORK, N. Y., ASSIGNOR TO JAMES THOMPSON AND HALSEY ROGERS.

## METHOD OF FEEDING NAIL AND TACK PLATES, &c., INTO MACHINES FOR CUTTING NAILS, TACKS, &c.

Specification of Letters Patent No. 3,305, dated October 12, 1843.

*To all whom it may concern:*

Be it known that I, WALTER HUNT, of the city, county, and State of New York, have invented a new and useful Improvement in Machines for Introducing Nail-Plates, Tack-Plates, &c., into Machines for Cutting the Same into Nails, Tacks, &c., but which is more particularly designed to be connected with my improved double-acting nail-engine, for which Letters Patent were granted to George D. Strong, Jonathan Dodge and Richard W. Redfield, as assignees of my whole patent dated November 13, 1840, and that the following is an accurate and faithful description of my said above-named improvement.

The subjoined drawing, Plate 1, Fig. 1, exhibits a general view of the said entire feeding machine.

A, is a stanchion-post, to which the whole machinery is attached. To the upper end of the said post is secured a cap B, screw C, and plate D, which are arranged to secure said stanchion in a vertical position between a beam or other fixture, and the top of the nail engine to which it is to be attached. Upon the side and near the upper end of said post is attached the gear box E in which is arranged the feeding rollers F, F, Figs. 1 and 2; placed horizontally within and parallel across said box, with journals or bearings in the opposite sides of the said gear box, and which rollers are connected by the pinions G, G, fixed upon the ends of the shafts of the same.

Upon the opposite end of the shaft of one of said rollers is fixed a worm-wheel H, into which gears the endless screw, or worm I, which screw is placed upon the worm shaft J, and which shaft is supported by, and revolves upon its end journals in two flanges K, K, formed upon elevated portions of the feeder-box E, before mentioned. Upon the opposite end to the worm on said shaft is secured the driving pulley L, around which the driving band M, from the nail engine, or an intermediate pulley passes, and gives motion to the feeding rollers aforesaid. One of said feeding rollers F, is suspended in a bracket N within said gear box, which bracket is supported by two fulcrum centers O, O, which are inserted horizontally through the opposite sides of the said feeder box. See Figs. 2 and 3. Upon the back of the said bracket is secured a lever P, which projects downward in an inclined position to the corner of said stanchion post where the bottom end of said lever rests upon a screw cam Q, which is perforated centrally and secured upon the upper portion of a square metal rod R, which rod is placed vertically in a niche cut out of the corner of said stanchion post, and is supported in a step at the bottom end, and a journal in the feeding box at the upper end. Around said shaft R, is placed a sliding thimble S, with a projecting ring T secured around the center of the same, which ring forms the hub of the handle U, the whole of which is made to traverse up and down upon said shaft by the hand of the operator as the case may require. In addition to which motion said handle is moved to the right or left horizontally, by which movement (the rod, thimble and screw cam, receives the same motion, and by which motion) the incline upon the screw-cam Q, operates similar to a quick screw, in raising and depressing the end of the lever aforesaid, which lever in connection with the bracket N, operates as one general lever upon the fulcrum centers aforesaid, in closing and separating the feeding rollers F, F, one of which rollers being supported in said lever bracket as before described. Between said feeding rollers (which are fluted similar to common cotton rollers) is placed the feeding rod, or shaft of the feeding tongs V. The bottom end of said rod (near to where the tongs or pliers W, are attached) is secured to, and guided by a curved arm X, which arm is screwed upon the side of a slide box Y. Into the side of said slide box is cut a small notch Z, in which notch the horizontal circular projection or hub T from the handle as aforesaid is made to reciprocate freely, in order to allow of the horizontal motion of said handle and rod R as before described. Another and important object of the connection of said handle (by means of said hub in said notch) is for the purpose of raising and depressing the slide box Y upon the slide plate, and, which slide plate is secured laterally upon the front side of the stanchion post A, and is of corresponding length with the rod or tail of said feeding tongs before mentioned. Said feeding tongs are formed principally of two pieces and are a kind of grad-

uated hook, the mouth of which may be lessened or enlarged by moving the hook, *a*, which has a slot in its upper end, through which the screw *c*, enters and secures it firm to the gage *b*, the mouth being set to the thickness of the plate &c., to be cut, similar to a hand saw set. That portion of the said tongs which forms the gage &c., extends upward, and laps upon a corresponding flattened portion at the bottom of the feeding rod V, through which a slot is cut lengthwise inclosing a dovetail slide, into which (through the end of said gage) the screws *d*, *d*, are inserted, securing the two pieces (slide and hook) firmly together, the slide being shorter than the slot in which it reciprocates allows said tongs to have a partial vertical, or endwise play in said slot. In the space between the flattened bottom end of the rod V, and the upper end of the hook, *a*, a spiral spring *e'* is wound around about the middle of the gage *b*, which spring acts by extension upon said tongs, but yields to a slight pressure upon their bottom ends, which play permits of a momentary check of the downward motion of said tongs, without arresting that of the rod V, which rod is forced regularly downward, by the rotation of the feeding rollers, between which it is held as before specified. Supported upon the two flanges, or studs *f*, *f*, (which are bolted to the side of the stanchion post aforesaid) is secured by screws or otherwise the feeding trough *g*, perpendicularly in which trough, the tongs W, and rod V, are elevated or depressed at pleasure when the machine is in operation. Said trough is made of sheet metal of about two thirds of the length of said tongs and rod V. The width of the back of said trough is made to correspond with that of the nail plate to be used, and its depth, say one half less than its width. At the bottom end of said trough, is placed a small spring *h*, having a spur upon its lower end which is let through one of the sides of the trough, and which is designed to bear upon, and keep the nail plate against the opposite side of said trough as it is forced down by the tongs, and which plate is kept against the back of the said trough, by means of side stops *i*, *i*, which stops are fastened upon the side flanges of the said trough. There is an opening through the back of said trough near its upper end at *k* through which two side springs *j*, *j*, enter from the back side of the same, pointing downward, and curve partially above the inside of the said back, leaving space between said springs for the tongs W, to pass up and down, but which springs are so placed that as the tongs ascend, with a short portion or remnant of the nail plate in the hook aforesaid, the same will be caught by the said springs and forced from the tongs through the opening *k*, as before named, and thereby thrown from the machine all being produced by one and the same motion of the handle U by which it is raised to receive the next nail plate, a short flange being turned up, upon the upper end of the same, which flange is inserted in the hook of said tongs, which tongs are next brought down to enter the nail plate between the cutters below; the handle is then moved horizontally to the left, which raises the lever P, by means of the screw-cam Q and closes the rollers F, F, upon the shaft (or feeding rod of the tongs V, which rollers being kept in motion by the worm or endless screw I aforesaid: consequently the nail plate is gradually forced into the cutters of the nail-engine with perfect regularity and at any required graduation. The bottom section of said feeding machine as connected with, and attached to, my improved double acting nail engine is exhibited in plate 2 Fig. 1, by means of a circular or crescent shaped flange *m*, upon the bottom of the said stanchion post A, which flange is secured upon the top of one of the standards of said engine, through the bolt holes *l*, *l*, and is so placed that the mouth of the feeding trough *g*, stands directly over and midway between the cutters of said engine.

What I claim as new and useful in the above described machine is—

1. The pliers or feeding tongs W, constructed as above described, in connection with the spring *c* and the feeding rod V as forming a new and useful instrument for the purposes above set forth.

2. I also claim the plan of gripping, and disengaging, the feeding rod V, between the rollers F F by means of the combined arrangement of the crank or lever U, the cam shaft R, the screw cam Q, the lever P, and the bracket N, constructed and combined in the manner above set forth or similar thereto, for the above and all other purposes to which the same may be usefully applied.

New York Oct. 2d 1843.

WALTER HUNT.

Witnesses present:
W. T. Thompson,
Com. Jno. De Witt.