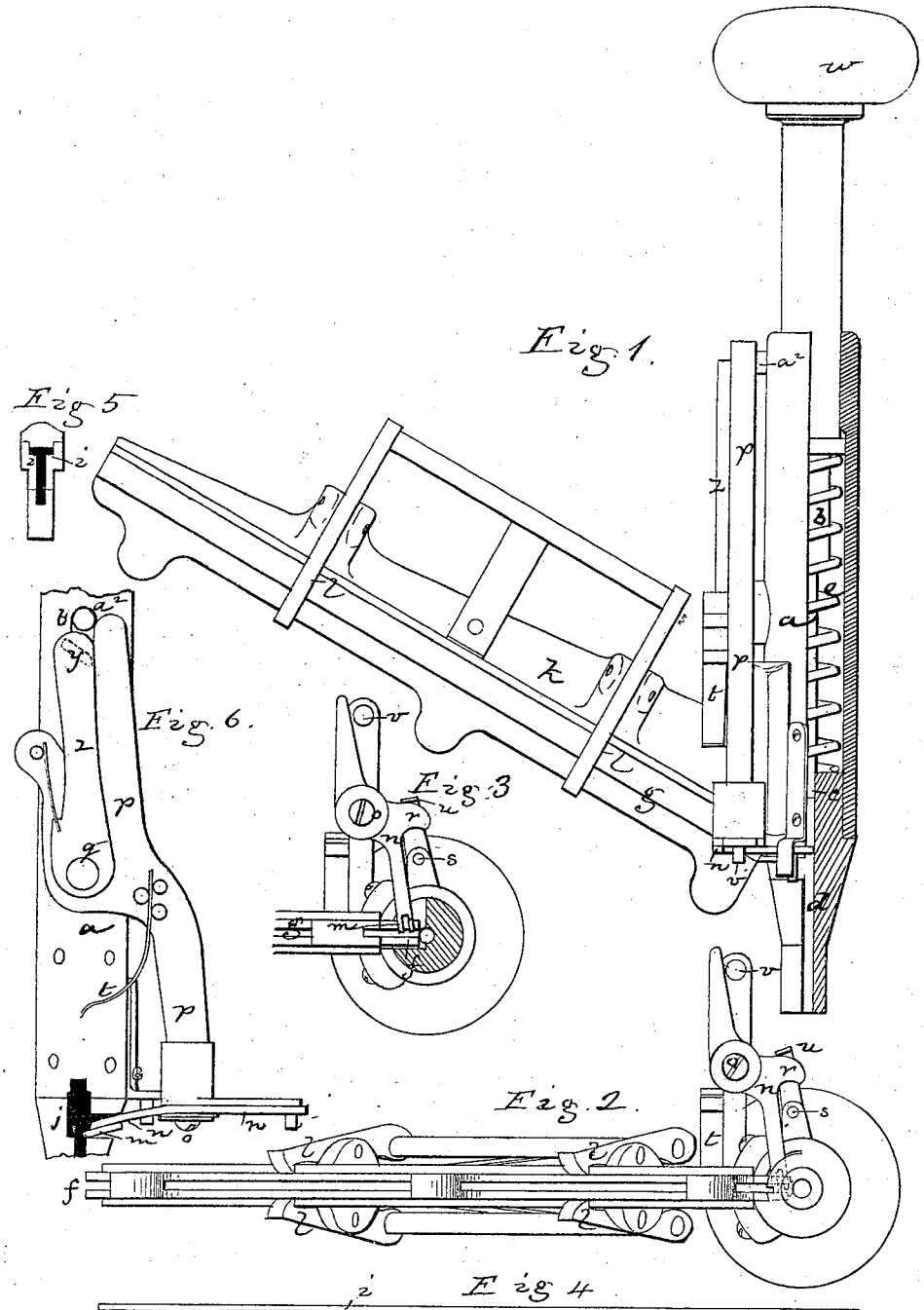
C. W. GLIDDEN.

Lasting-Tools.

No. 136,318. Patented Feb. 25, 1873.



Witnesses.
M. W. Frothingham.
L. H. Latimer.

Charles W. Glidden,
By his attorney
Edward F. Gould

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

CHARLES W. GLIDDEN, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN LASTING-TOOLS.

Specification forming part of Letters Patent No. **136,318**, dated February 25, 1873.

To all whom it may concern:

Be it known that I, CHARLES W. GLIDDEN, of Lynn, in the county of Essex, and State of Massachusetts, have invented an Improved Lasting-Tool; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

The invention has particular reference to the arrangement of mechanism by which each tack, in turn, is separated from a row of tacks behind it, and is dropped into a vertical tube, in which tube is the driver, by the blow of which the tack is driven; and the invention consists, primarily, in the combination and arrangement of mechanism for transferring each tack, in turn, from the chute containing a row of tacks to a position over or in the driver-tube and under the driver, so that by the blow of the driver such tack will be driven.

The drawing represents a tool embodying the invention.

Figure 1 shows the tool in side and sectional elevation. Fig. 2 shows a bottom view of it. Fig. 3 shows the driver-tube in section, and the chute end in reverse plan. Figs. 4 and 5 show the chute. Fig. 6 shows the lever *p*, arm *z*, &c.

a denotes the vertical piston or driver tube, in which plays a piston, *b*, at the foot of which is a driver, *c*, which normally stands over a nail-tube, *d*, the piston being held up normally by a suitable spring, *e*, and when forced down causing the driver to enter the nail-tube *d* and drive the tack which may be contained therein. At *j* the piston-tube is cut through to one side, and into the opening extend two prongs, *f*, of a tack-chute, *g*, (shown in top and end view at Figs. 4 and 5,) these prongs being a continuation of inclined ways *i*, upon and down which the tack-heads slide, and between which the tack-shanks pass, the tacks sliding down the chute by gravity, and the movement of the column being arrested by a slight spring which rests upon the head of the foremost tack at the end of the prongs. This chute is made removable, being attached to a long arm, *k*, extending from the tube *a*, and the ways and shank-groove are made long enough to receive a large number of tacks, the chute being preferably charged or loaded in a separate machine and then fastened to the arm *k*, the inclination of the chute, in connection with its construction, being such that the tacks follow down as fast as each end one is removed. The chute is shown as fastened to the arm *k* by spring-latches *l*, but may be held by any other suitable spring or other fastenings which secure it in place and enable it to be readily removed and reattached. Just below the prongs *f* a fork, *m*, at the end of a horizontal lever, *n*, extends into the driver-tube. This lever turns on a pin, *o*, at the foot of a vertical lever, *p*, fulcrumed at *q*. When the lower arm of this lever *p* is thrown in one prong of the fork *m* passes between the shanks of the two endmost tacks of the chute-prongs *f*, and as the lever *n* reaches its inmost position an arm, *r*, strikes a stop-pin, *s*, and swings the fork *m* in toward the center of the nail-tube, thereby removing the end tack from the prongs *f* to the fork *m*. As the fork moves back, by the stress of a suitable spring, *t*, the tack strikes the side of the tube, being thereby stripped from the fork, from which it falls into the tack-tube. The fork is restored to its normal position by striking another stop, *u*, a stop, *v*, limiting its movement. As the driver is forced down by a blow upon the head *w* of the piston it strikes the head of the tack and drives the tack into the surface beneath the tube. The lever *p* is operated by the plunger *b*. When the plunger descends it imparts no movement to the lever, but when it rises it actuates the lever and causes the fork to both enter the tube and separate the end tack from the rest of the tacks and drop it into the nail-tube. For this purpose the upper arm of the lever *p* has resting against it a pin, *y*, projecting from a pivoted arm, *z*, against which a spring bears to force the pin *y* against the lever-arm. The plunger *b* has extending through a vertical slot in the plunger-tube a pin, a^2, and when the plunger descends this pin presses the pin *y* back and moves the arm *z*, imparting no movement to the lever *p*, but when the

plunger rises the pin a^2 presses the pin y and arm z against the lever-arm, thereby throwing forward the fork m, the fork being thrown back when the pin a^2 passes above the pin y and arm z by the stress of the spring t.

I claim—

1. In combination with the tack and driver-tube, the inclined chute g, with its ways i and prongs f, substantially as described.

2. In combination with the tube a and chute g, the lever r, with its prongs n, the lever being operated to remove the tack from the chute and drop it into the tube d, substantially as described.

3. In combination with the tube a, a tack-chute, g, made removable, substantially as described.

CHARLES W. GLIDDEN.

Witnesses:
FRANCIS GOULD,
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