

J. C. GOULD.
Nail-Plate Feeders.

No. 146,820.

Patented Jan. 27, 1874.

FIG. 1.

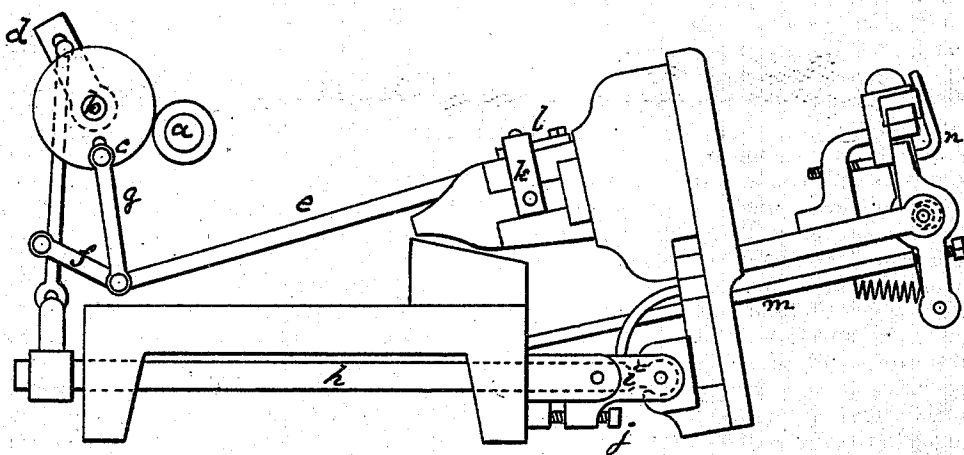


FIG. II.

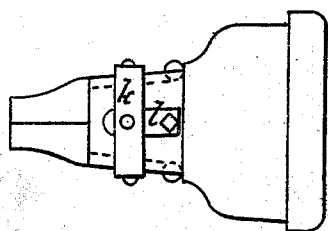
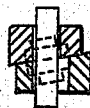


FIG. III.



WITNESSES.

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JOHN C. GOULD, OF NEW YORK, N. Y.

IMPROVEMENT IN NAIL-PLATE FEEDERS.

Specification forming part of Letters Patent No. 146,820, dated January 27, 1874; application filed October 3, 1873.

To all whom it may concern:

Be it known that I, JOHN C. GOULD, of New York, in the county and State of New York, have invented certain Improvements in Nail-Plate Feeders, of which the following is a specification:

The said improvements relate principally to the details in the construction of feeders for which patents have heretofore issued to me; and they are designed to render the machine more compact, and easier to adjust and work. The means for operating the feeder from the shaft that turns the plate, and which revolves with half the speed of the shaft of the nail-machine, consist of an arm jointed to the connecting-rod that works the feeder, so that the two work together as a toggle, and bring the nose-piece to the knives twice for each revolution of the shaft, or once for every revolution of the shaft of the nail-machine.

Figure 1 represents in elevation the working parts of a feeder. Fig. 2 is a plan or top view of the nose-piece, and Fig. 3 is a cross-section at the center of the fork-levers.

The nail-machine shaft *a* drives the shaft *b*, which works the feeder by means of the pin *c*, and also the mechanism that turns the plate by the crank *d*. The connecting-rod *e* is jointed to the vibrating lever *f*, and is worked from the joint by the rod *g* from the pin *c*. The action of the toggle worked in this manner is to bring the plate up to the knives once for every revolution of the shaft of the nail-machine, although it is operated by a shaft that revolves only half as fast. The shaft *h*, by which the motion for turning the nail-plate is conveyed, has been carried at the feeder end of the machine by a ball-and-socket joint on the adjustable bracket *i*, that supports the nose-piece and other principal parts of the feeder; and the impediment in this connection consists in supporting the shaft *h* by a ball-and-socket joint on the lever that carries the nose-piece in a line with the center-points on which it vibrates, instead of supporting it on the bracket, as heretofore described and patented by me. In adjusting the bracket up or down to suit the thickness of the bed-knife, or for any other purpose, the set-screw *j* rests against a cross-piece on the frame of the machine, instead of having a screw in a bracket projecting under

the adjustable bracket. By either of the methods the feeder may be adjusted as high as required, and left to rise still higher when necessary.

Movable or jointed jaws have been hitherto applied to the band of the nose-piece of a feeder. The improvement in the nose-piece shown in Figs. 1 and 2 is appropriate for small nails; and it consists in having the spring *k*, that clasps the jaws, carried by an arm secured by the set-screw *l*.

On slackening the screw, the arm and the spring may be set to either side, to keep the action of the spring and that of the jaws the same on both sides of the central line. The jaws come together at the center when there is nothing between them; and when a plate is inserted it is guided by the conformation of the interior to the proper position in which it is held by the edges as the projecting end is presented to the knives, the jaws being held apart by the butt of the plate for the passage of the nipper. The feed is made by a "push-up" rod, *m*, that operates a pair of fork-levers pivoted together at the bottom, and working together on the same bolt, in the middle, where one of them is loosely fitted, so that as the push-up rod works against the loose one there is lost motion before the pair move together. This lost motion causes the grasping of the nipper-rod by means of the angular surfaces of the hubs of the two levers where they come together, as shown in Fig. 3, and the gripe is secured by the wedge and roller at the top of the levers. The improvements in this respect consist in fitting the pivot or bolt at the bottom of the levers angularly in conformity with the angular surfaces of the hubs, as shown by the dotted lines of Fig. 3; and also in fitting an adjustable stop, *n*, which will strike the end of the wedge when the feeder is fully back from the knives. The purpose effected by this is to prevent the wedge moving back with the nipper-rod, and continuing to jam upon it while the rod and butt are being taken out of the machine. This stop may be made as a fork to support the nipper-rod, and to catch it by a ring at the end when the plate is nearly cut away. As the motion of the roller and wedge heretofore described and patented by me is exceedingly limited, a small portion or segment

only of the roller is required; and it may be held in position by a spur working in a recess in the wedge.

I claim as my invention—

1. The combination of the shaft *b*, crank-pin *c*, connecting-link *g*, toggle-levers *e* and *f*, and the nose-piece, substantially as described.

2. The combination of the rock-shaft *h*, the ball-and-socket joint, and the lever which supports the nose-piece, in the manner described.

3. The combination of the movable jaws of the nose-piece with the spring *k*, and the arm by which it is adjusted, and secured by the set-screw *l*.

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Witnesses:

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