L. A. DODGE.

Feed-Device for Nail-Forging Machines.

No. 166,857. Patented Aug. 17, 1875.

Fig. 1.

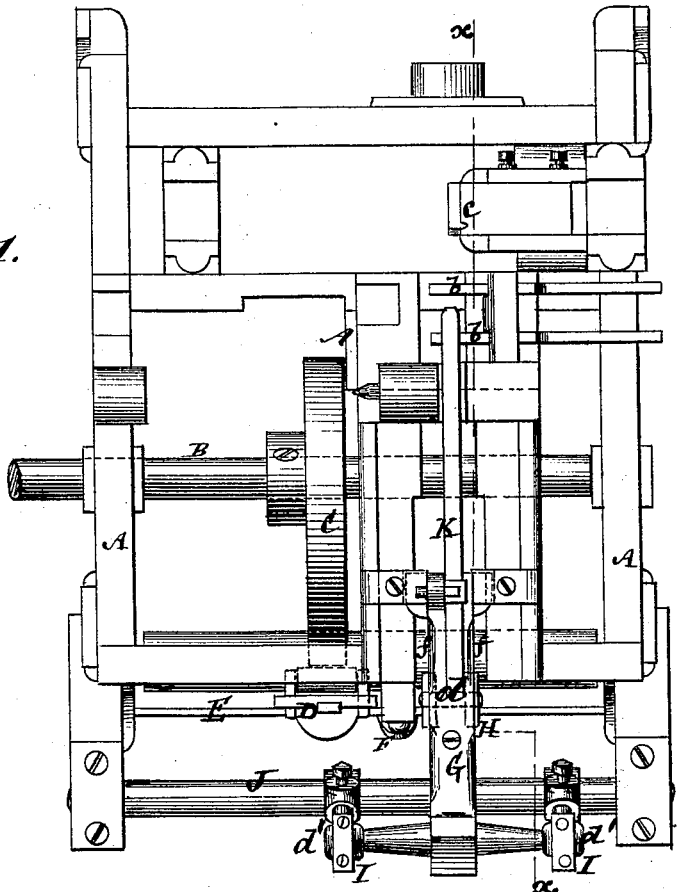
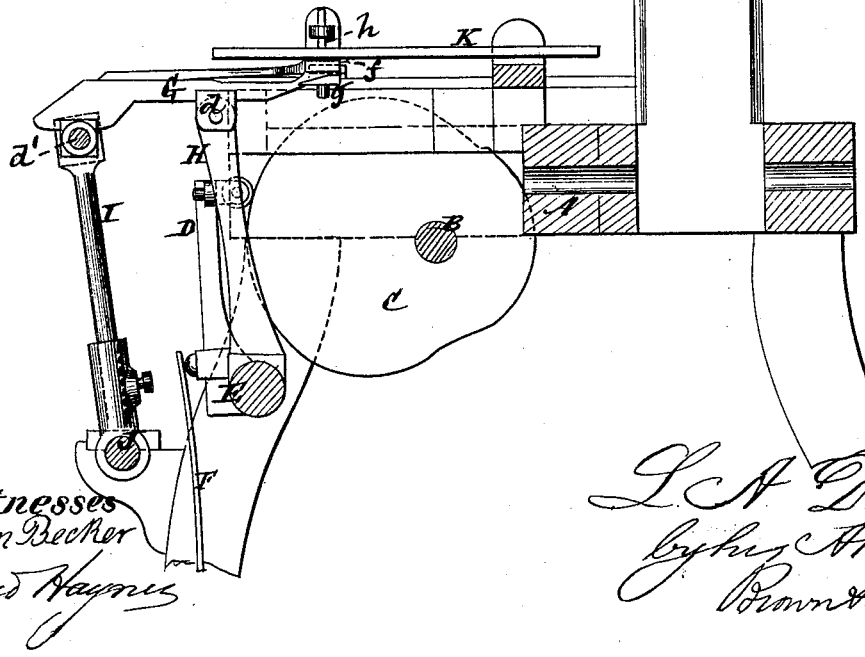


Fig. 2.



Witnesses
John Becker
Fred Haynes

L. A. Dodge
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

LUCIUS A. DODGE, OF KEESEVILLE, NEW YORK.

IMPROVEMENT IN FEED DEVICES FOR NAIL-FORGING MACHINES.

Specification forming part of Letters Patent No. **166,857**, dated August 17, 1875; application filed July 1, 1875.

To all whom it may concern:

Be it known that I, LUCIUS A. DODGE, of Keeseville, in the county of Essex and State of New York, have invented a certain new and useful Improvement in Feeding Devices of Nail and Spike Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

This invention, while applicable to nail and spike forging machines generally, is more especially designed to be applied to the machine for said purpose for which Letters Patent No. 25,183 were granted to Daniel Dodge August 23, 1859, and subsequently extended.

The improvement relates to the reciprocating griper and devices to carry and operate the same for holding the rod from which the nails or spikes are made, and for feeding said rod to the forging-dies.

The invention consists in a novel combination of independent rock-shafts and pivoted bearings for the reciprocating griper-slide carried by arms attached to said shafts, whereby a swinging parallel carrying and driving motion is obtained for said slide and guides; or ways for the latter may be dispensed with, and the wearing-surfaces connected with the griper-slide are relieved from exposure to hot scales or particles falling from the rod being worked up into nails or spikes, and, consequently, a saving in wear, friction, and oil is effected.

Figure 1 represents a plan of a nail-machine, in part, having my invention applied; and Fig. 2, a longitudinal vertical section on the irregular line *x x*.

A is the main frame of the machine, and B the revolving shaft, which, by means of a cam, C, thereon, and an arm, D, on a main rock-shaft, E, operating in conjunction with a return-spring, F, serves to reciprocate in direction of its length, to and from the cutters *b*, gage and forging-dies *c*, (shown only in part,) the griper-slide G, which is carried in part and actuated by an arm, H, fast on the rock-shaft E, and pivoted above at *d* to the slide, substantially as shown and described in Daniel Dodge's patent, hereinbefore referred to.

This invention being restricted to the griper-slide and its carrying or operating devices, no special reference or description will here be made to the forging-dies and other devices which are distinct from the present invention, and may be the same as those described in the aforesaid patent of Daniel Dodge.

Instead, however, of having the reciprocating griper-slide G, as in Daniel Dodge's patent, work in longitudinal guides and ways, it is supported or carried by a swinging parallel motion, consisting in part of the arm H on the rock-shaft E, and in part by arms I I on a front rock-shaft, J, which is parallel with E, a cross-bar or pivot, *d' d'*, connecting the upper ends of the arms I with the forward portion of the slide G. The pivots *d d'* of the several swinging arms H and I serve to support and guide the griper-slide G, which may reciprocate loosely—that is, free from any close or guiding fit—within the frame, and the arrangement of the supporting-pivots *d d'*, of which and the swinging arms H I there may be any number not less than two, secures the wearing-surfaces connected with the griper-slide G from all exposure to clog or foul with hot scales or dirt falling from the hot nail-rod K, thus saving wear, friction, and oil. Nor is this free action of the slide G interfered with by the blocks *f f*, which merely serve to keep the lower jaw *g* of the griper down, while the upper jaw *h* thereof is lifted to allow of the removal of the nail-rod, said griping-jaws being the same as in Daniel Dodge's patent, hereinbefore mentioned, or of any other suitable construction.

I claim—

The combination, with the reciprocating griper-slide G, of the supporting-pivots *d d'*, carried by swinging arms H I, attached to rock-shafts E J, and constituting a free parallel motion for the support, guidance, and operation of said slide, substantially as specified.

LUCIUS A. DODGE.

Witnesses:
DANIEL DODGE,
JNO. S. SMITH.