(No Model.)

P. A. WHITNEY.

RIVETING MACHINE.

No. 303,350. Patented Aug. 12, 1884.

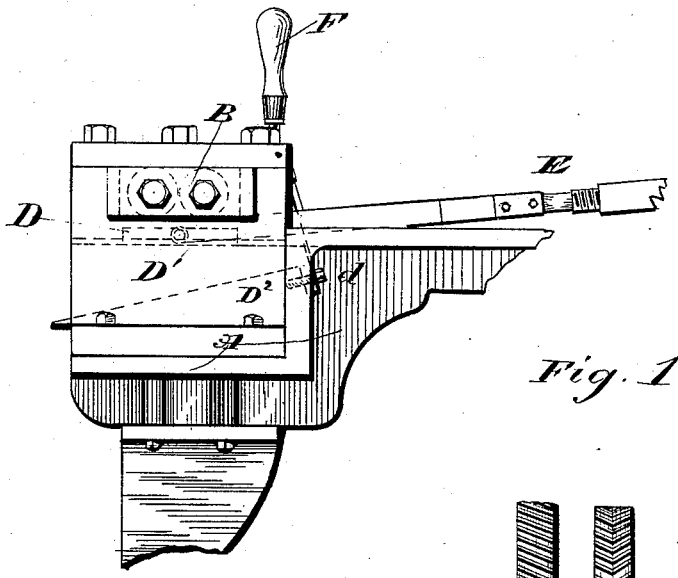

Fig. 1.

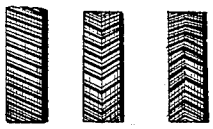

Fig. 5.

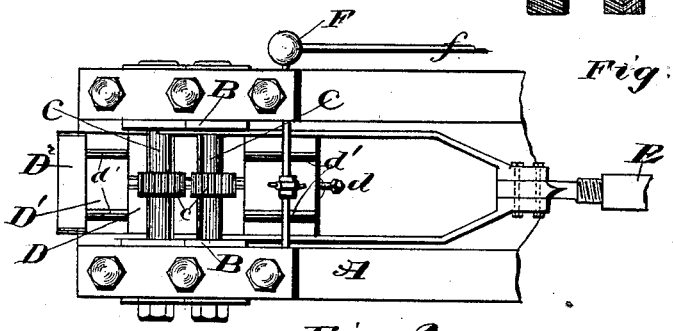

Fig. 2.

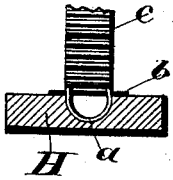

Fig. 4.

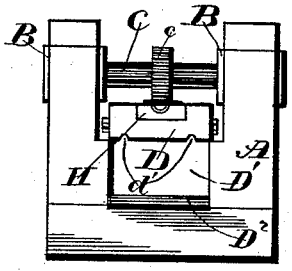

Fig. 3.

WITNESSES

Wm. M. Monroe

Geo. W. King

INVENTOR

Pardon A. Whitney

by

Leggett & Leggett. ATTORNEYS

UNITED STATES PATENT OFFICE.

PARDON A. WHITNEY, OF CLEVELAND, OHIO, ASSIGNOR TO THE PECK, STOW & WILCOX COMPANY, OF SAME PLACE.

RIVETING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 303,350, dated August 12, 1884.

Application filed February 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, PARDON A. WHITNEY, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Riveting-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in riveting-machines.

The object of my invention is to provide a machine in which, by means of a reciprocating cross-head, the articles to be riveted are carried under toothed rollers and pressed against the rollers with such force that the riveting is accomplished by a single operation.

With this object in view my invention consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation, Fig. 2 a plan view, and Fig. 3 an end elevation, of such portion of a riveting-machine as will illustrate my invention. Fig. 4 is an enlarged vertical section of a portion of the cross-head with a piece of work in position for riveting, and in elevation a portion of the toothed roller. Fig. 5 is a plan view showing different kinds of teeth on the riveting-rollers.

A represents a supporting-frame, provided with the boxes B, in which are journaled the shafts C, that support the riveting-rollers *c*.

D is the cross-head, and D′ a wedge-shaped block, provided with the ways *d′*, on which the cross-head slides, and resting on a reverse wedge, D^2, that is secured to the frame A. The wedge D′ is adjusted and held on the incline by the screw *d*, and by means of which the cross-head is raised and lowered as required. The cross-head has a recess, in which removable blocks H are secured, that are grooved, recessed, or otherwise prepared to receive the work. Any number of these blocks may be prepared to hold different kinds of work. One of these blocks is shown in Fig. 4 with the barrel *a* of a door-bolt in position to be riveted to the plate *b*.

E is a forked connecting-rod attached to a crank (not shown) and pivoted to each side of the cross-head. The throw of the crank and the length of the rod E are such as to move the cross-head some distance back of the roller, so that the finished work can be removed and other pieces placed in position for riveting.

F is a hand-lever, and *f* a rod attached to the same and leading to a clutch, (not shown,) by means of which the machine is started or stopped.

By means of the wedge D the cross-head is adjusted vertically, so that the work will receive the required pressure from the rollers. Light work will be sufficiently riveted by passing once under the rollers, and may be removed from the front side. Heavier work may be left to pass again under the rollers by the back-stroke. The teeth of these rollers may be of several forms, according to the shape of the parts to be riveted. Besides the form shown in Figs. 2, 3, and 4, other common forms of teeth in use are shown in Fig. 5.

In some kinds of work but one roller is used. In other kinds the second roller has a smooth face.

The kinds of work that may be riveted on this machine are so various that the shape of the teeth required on the riveting-rollers, and other details, must be left to the judgment and experience of the operator.

If preferred, the block that receives the work may remain stationary and the riveting-rollers be joined in and reciprocated by the cross-head, which would of course accomplish the same result, and be clearly within the purpose and spirit of my invention.

What I claim is—

1. In a riveting-machine, the combination, with one or more riveting-rollers, of a cross-head grooved or slotted to receive the work.

2. In a riveting-machine, the combination, with one or more rollers, of a reciprocating cross-head grooved or slotted to receive the work, substantially as set forth.

3. In a riveting-machine, the combination,

with one or more toothed rollers, of a reciprocating cross-head grooved or slotted to receive the work, and the devices, substantially as described, for vertically adjusting the cross-head, substantially as set forth.

4. In a riveting-machine, the combination, with the riveting-roller *c*, of a cross-head provided with the block H, and the parts D′ and D^2, adapted to adjust the cross-head vertically, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 5th day of February, 1884.

PARDON A. WHITNEY.

Witnesses:
CHAS. H. DORER,
ALBERT E. LYNCH.