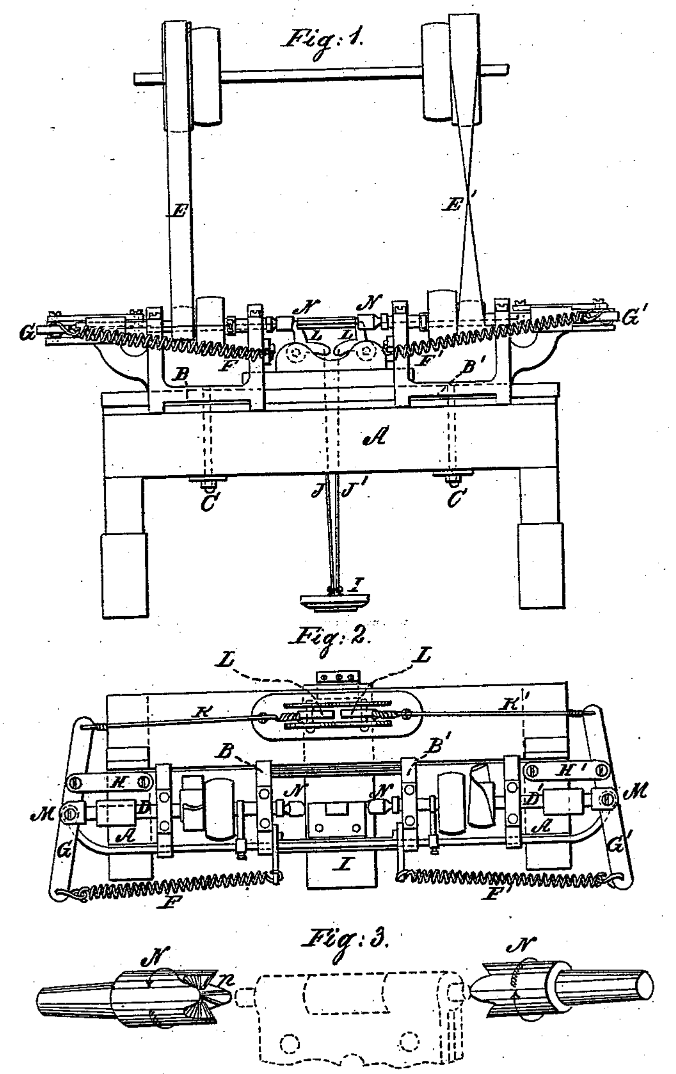
H. M. RITTER.

Riveting Hinges.

No. 84,907. Patented Dec. 15, 1868.



Witnesses:
Chas Basser
Chas Pott.

Inventor.
H M Ritter
By Knight Bro
atty

United States Patent Office.

HENRY M. RITTER, OF COVINGTON, KENTUCKY.

Letters Patent No. 84,907, *dated December* 15, 1868.

IMPROVED MACHINE FOR RIVETING HINGES.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, HENRY M. RITTER, of Covington, Kenton county, and State of Kentucky, have invented a new and useful Mode of Heading Pins and Bolts; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention relates to a mode of riveting or heading pins, bolts, &c., at one or both ends, without heating or percussion, by the action of a peculiar milling-tool, or a pair of oppositely-revolving and pressing milling-tools, and is particularly intended for riveting the pintles of but-hinges, casters, and the like.

Figure 1 is a front elevation of a machine embodying my invention.

Figure 2 is a top view thereof.

Figure 3 is a full-size representation of a pair of milling-tools, detached.

A is a lathe-bed, supporting a pair of head-stocks, B B′, which can be secured at any desired distance apart, by customary screw-bolts C C′.

The head-stocks carry a pair of slidable and rotary line-spindles, D D′, which are revolved in opposite directions by means of belts E E′, or otherwise, and are pressed toward each other, so as to bear against opposite ends of the pin or bolt to be headed, by means of spiral springs F F′, operating through levers G G′, connected to the frame by means of shackles H H′, and retracted by means of a treadle, I, connected with said levers by means of rods J K and bell-cranks L L′.

The spindles D D′, being hollow, receive rods M M′, which are pivoted to the levers G G′.

The front end of each spindle is socketed, to carry and rotate a milling-tool, N N′, whose radial corrugations, *n*, serve both to grasp and to spread the ends of the pintle, rod, or bolt being operated upon.

The operator, placing his foot upon the treadle, thereby retracts the milling-heads or tools N N′, and the hinge, with its unheaded pintle, (see dotted lines, fig. 3,) being placed in position, the tools N N′ are allowed to close upon the ends of the pintle, and form heads upon the same, when, the treadle being again depressed, the tools N N′ are thereby separated, so as to liberate the finished hinge and permit the insertion of another one.

The above is my preferred form of apparatus for heading but-hinges, but where only one end requires heading, as in case of a caster, for example, the pintle, or that to which it is attached, is grasped in a vise or clamp, and held at rest, and the heading is effected by a single milling-tool operating in the same manner as the tool N or N′, and even the pintles of the but-hinges may be thus clamped and headed, if desired.

The milling-tools may be advanced by the positive action of a treadle or otherwise, and may be retracted by springs or weights.

I claim herein as new, and of my invention—

1. A riveting-tool, composed of a rod having V-shaped grooves and intervening rounded projecting spurs on the end thereof, said grooves crossing one another at and in a direction at right angles to the longitudinal axis of said rod, substantially as described.

2. Also, a pair of riveting-tools, constructed as specified in the foregoing claim, in combination with mechanism for operating the same, arranged substantially as described.

In testimony of which invention, I hereunto set my hand.

HENRY M. RITTER.

Witnesses:

GEO. H. KNIGHT,

JAMES H. LAYMAN.