

H. ABBOTT.
BOLT HEADING MACHINE.

No. 27,943.

Patented Apr. 17, 1860.

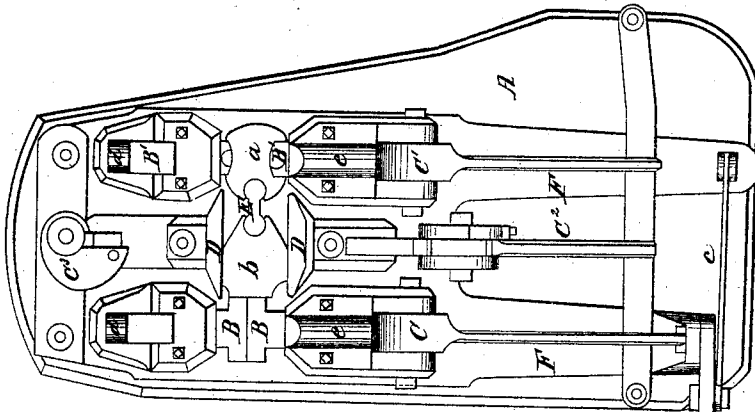


Fig. 1.

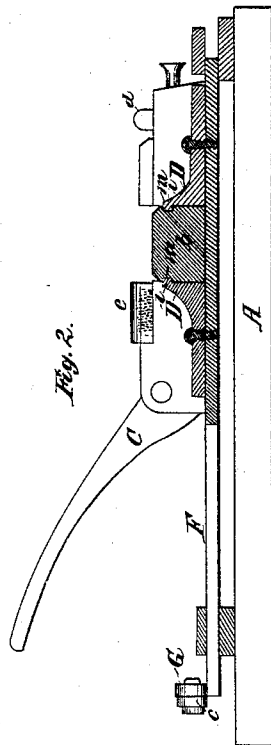


Fig. 2.



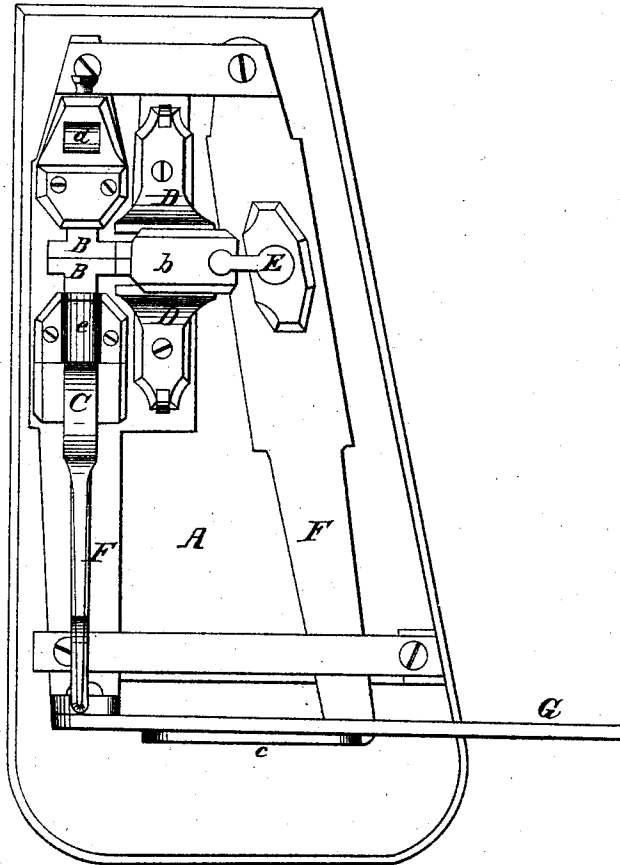
Witnesses.
Samuel Selden
Jos. Clayton

Inventor.
Hiram Abbott
per S. G. Clayton Attorney

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Attorney

UNITED STATES PATENT OFFICE.

HIRAM ABBOTT, OF WAKEMAN, OHIO, ASSIGNOR TO HIMSELF AND L. A LYON, OF
SAME PLACE.

HEADING BOLT.

Specification of Letters Patent No. 27,943, dated April 17, 1860.

To all whom it may concern:

Be it known that I, HIRAM ABBOTT, of Wakeman, Huron county, in the State of Ohio, have invented certain new and useful
5 Improvements in Bolt-Heading Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked
10 thereon.

Figure 1 is a plan view of a machine as used for the double purpose of making both bolts and rivets, and for upsetting bars, tires, &c. Fig. 2 is a vertical section through
15 $x-x$ of Fig. 3, and represents the machine when used only for boltheading. Fig. 3 is a plan view of the same.

In order that those skilled in the art may make and use my invention, I will describe
20 its construction and operation.

The nature of my invention consists in the use of the T shaped die-jaws B for clamping the rod to be headed, and also in the construction and operation of the follower
25 $a-b$ for forming the head on the rod.

It will be seen that the general construction and operation of this invention is quite similar to that patented by me, in 1855, for improved machine for upsetting tires, &c.
30 In the drawings similar characters refer to like parts.

A is the bed plate upon which the machinery is arranged. B, the T-shaped die-jaws for clamping the bolt or rod to be
35 headed. C the eccentric lever for operating said die-jaws. D, in Figs. 1 and 3, the guides to the follower or header. E, the toggle, connecting that portion b of the follower which forms the head, to that portion
40 a of the follower which is clamped by the jaws B'. F, the levers for operating the header. G, the hand lever, c the connecting rod attaching the lever G to the lever F. C', the eccentric lever for operating the jaws B,
45 this lever operating these jaws in connection with tapered pin d . C², the vertical eccentric lever, and C³ the horizontal eccentric lever, together operating the guides D.

It will be seen that Figs. 2 and 3 represent a machine for the purpose only of
50 making bolts &c., and dispensing with the apparatus for upsetting, represented in Fig. 1. It is also evident, that in Figs. 2 and 3 the construction and arrangement for operating the T shaped die-jaws B, which clamp
55 the rod to be headed, are the same as shown in Fig. 1, with the single exception, that instead of using the tapered pin d , I use a screw (set) d' ; but the construction and arrangement used for heading the clamped rod
60 is much simpler. The caps e contain each a spiral spring for throwing back the jaws B.

In operating my invention: The rod to be headed, after being heated to a suitable temperature, is passed into the groove of the T
65 shaped die-jaws until it comes in contact with the header. The eccentric lever C is then quickly, and forcibly brought down, preventing the rod from being forced back by the action of the header. The hand lever
70 G, then being raised, through the connecting rod c operates lever F, forcing the follower b , which is connected by a toggle joint to projection a of lever F, up against the end of the clamped rod thus forming the head. 75
It will be further seen, that the guides D have projections i on their inner edges, fitting as tongues into grooves m in the header b , for the purpose of guiding it vertically and laterally, and causing it to move in
80 straight lines.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is:

The adjustable jaws B, the header and
85 follower $a-b$, and the guides D, operating as described and for the purposes set forth.

In testimony whereof I have hereunto set my hand and affixed my seal.

HIRAM ABBOTT. [L. s.]

Witnesses:

H. P. TYLER,
JOHN N. BARNUM.