G. H. WEBB.
Bolt-Heading Machine.

No. 219,545. Patented Sept. 9, 1879.

Fig. 1.

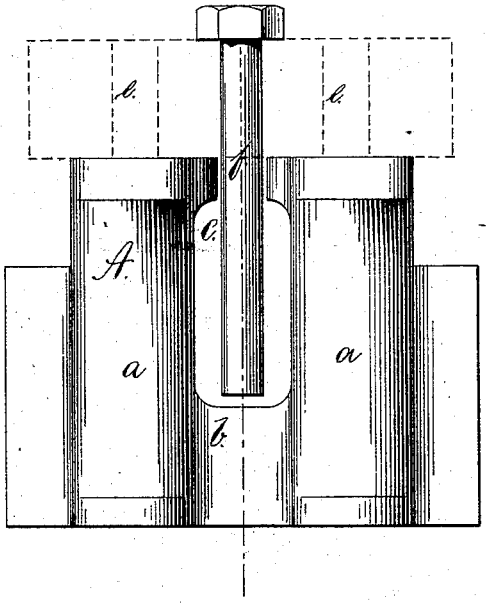



Fig. 2.

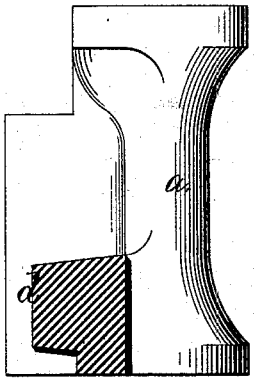
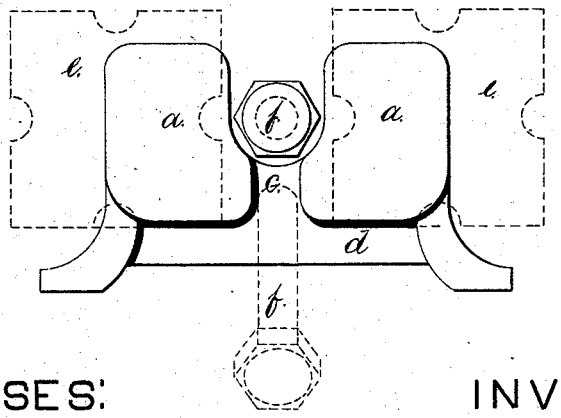



Fig. 3.

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN BOLT-HEADING MACHINES.

Specification forming part of Letters Patent No. **219,545**, dated September 9, 1879; application filed May 17, 1879.

*To all whom it may concern:*

Be it known that I, GEORGE H. WEBB, of Pawtucket, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Bolt-Heading Machines; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in the block or anvil against the face of which the die by which the bolt is held rests.

It consists in the peculiar construction of this block or anvil, more fully set forth hereinafter.

Figure 1 is a top view of the anvil-block, showing the bolt in its proper position and the dies holding the bolt in broken lines. The central portion of the anvil-block is shown removed, so that the bolt, when released from the dies, can fall through the central slit. Fig. 2 is a sectional view of the anvil-block through the center of the slit, showing the strengthening-rib cast on the anvil, by which the anvil is strengthened, so as to restore to the same the necessary rigidity which was diminished by removing the central portion. Fig. 3 is an end view of the anvil-block, showing the bolt in the position when held by the dies, and the open dies, as also the falling bolt, in broken lines.

The object of this invention is to save the time of the forger and reduce his labor and attention to the supplying of the heated blanks.

In the drawings, A is the anvil-block, with the two raised ribs *a a*. These two raised ribs were formerly connected by the web *b* their whole length, and as the form of the space between the ribs *a a* is such that when the bolt-blank is inserted the tongs holding the blank will pass between the two ribs, it became necessary for the forger either to leave the tongs in the space between the ribs, or to be so prompt in his action as to take hold of the bolt before the dies separate and release the bolt-blank, for when it once dropped into the bottom of the channel it was difficult to grasp the bolt-blank with the tongs. If the bolt is not quickly removed, the dies close against it with their square faces, and if the machine should not be promptly stopped, the blow on the dies seriously injures them.

To remove all such difficulties and release the forger from this care, as also to increase the capacity of the machine I remove the central portion of the web *b* at *c*, as is clearly shown in Fig. 1. When now the dies open and release the bolt, the bolt drops down by its own gravity, and the forger or attendant has only to hold a new bolt-blank to the dies, which will firmly hold the same until it is headed, and then allow it to fall through the central slit, *c*. The dies will now always meet fairly together, as the bolt-blank cannot rest between their square faces, and as the attendant has only one operation to perform—viz., supplying the blanks—the machine can be operated at a higher speed and more blanks headed in a given time.

As the anvil-block is weakened by the removal of a portion of the web *b*, it becomes necessary to restore its strength by the insertion of the rib *d*, which is cast with the anvil, and rigidly secures the two ribs *a a* together.

*e* represents the dies, and *f* the bolt-blanks.

By this arrangement the attendant allows the machine to forge the head while he secures a new blank, and thus the machine can strike more blows on each head and still produce the same amount of work.

My improvement is adapted for use with what is known as the "Burdict Bolt-Machine," and also for other machines in which the bolt-blank is placed in a horizontal position while being headed.

Having now described my invention, I claim as new and desire to secure by Letters Patent—

An anvil-block for a bolt-heading machine, consisting of two raised ribs, *a a*, arranged to form a support for the dies, separated at the forward ends, so as to allow the bolt-blank to pass between the same, and united at the rear end, substantially as and for the purpose set forth.

GEORGE H. WEBB.

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