

W. M. THOROUGHGOOD.
Devices for Heading Bolts.

No. 138,958.

Patented May 13, 1873.

Fig:1

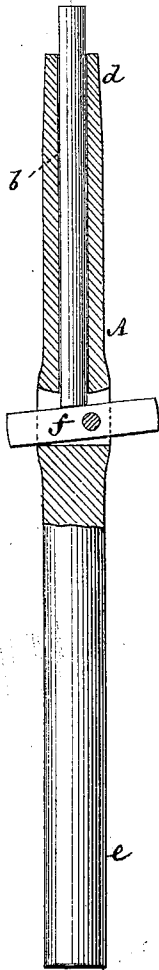


Fig:2

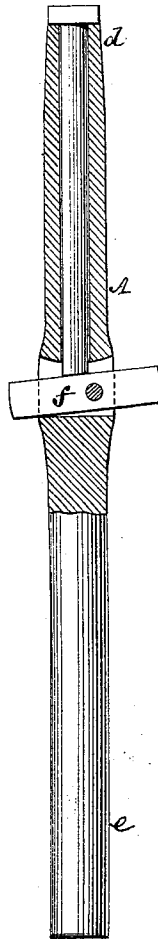


Fig:4

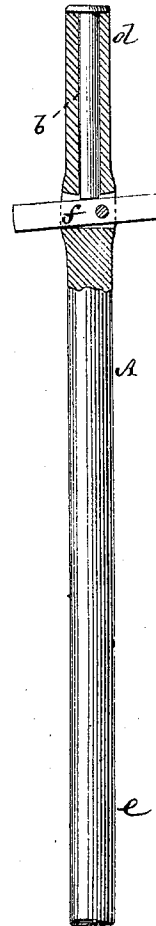


Fig:3



Fig:5



Witnesses:
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WILLIAM M. THOROUGHGOOD, OF SALISBURY, MARYLAND.

IMPROVEMENT IN DEVICES FOR HEADING BOLTS.

Specification forming part of Letters Patent No. **138,958**, dated May 13, 1873; application filed March 15, 1873.

To all whom it may concern:

Be it known that I, WILLIAM M. THOROUGHGOOD, of Salisbury, in the county of Wicomico and State of Maryland, have invented a new and useful Hand-Tool for Heading Bolts, Spikes, and Nails, of which the following is a specification:

My invention consists in a bolt, spike, or nail header of a rod or bar like construction, of a suitable length to hold or handle with facility, and made hollow at its one end to form a die corresponding with the required shape and size of the body or shank of the bolt or nail, and the extremity of said end on its exterior sides being made to correspond with the required shape of the head of the bolt or nail; also, said bar preferably being provided with an ejector to facilitate discharge of the bolt or nail when made. By a hand-tool or implement thus constructed, bolts, nails, and other articles of like description can be forged with great rapidity, and of uniform length and with heads of the same size, and stronger in many instances; also the whole bolt or nail more perfect, generally, than heretofore by the ordinary means in use.

In the accompanying drawing, which forms part of this specification, Figure 1 represents a partly-sectional longitudinal view of a bolt-header constructed in accordance with my invention, with a bolt-blank therein ready to be headed. Fig. 2 is a similar view of the same with the bolt therein when headed, and Fig. 3 an end view of the head-forming portion of the tool. Fig. 4 is a partly-sectional longitudinal view of a like tool constructed to produce flat-headed nails, and showing a nail as made therein. Fig. 5 is an end view of the head-forming part of such tool.

Similar letters of reference indicate corresponding parts.

When using the tool, the rod to be worked up into bolts or nails is first cut up into proper lengths by any suitable means and each of such pieces or lengths in succession inserted into the hole *b* in the one end *d* of the tool *A*. Such end *d* of the tool, containing the bolt or nail-blank to be headed, is next placed in the fire and heated as required according to its size. The opposite end *e* of the rod,

bar, or tool serves as a handle by which to manipulate it. The blank to be headed projects beyond the end *d* of the tool a sufficient distance to form the head, as shown in Fig. 1, its projection being determined by its inner end resting against an injector, *f*. After the projecting end of the blank is heated sufficiently, the tool containing the latter is removed from the fire and the projecting end of the blank is struck forcibly against the face of the anvil. This upsets the blank and forms the head, which is finished to the required shape and size by the hammer, the extremity of the head-forming end of the tool corresponding at its sides to the requisite shape of the head, which may be square or round, as represented in Figs. 3 and 5, or of any other desired form. A slight blow on the ejector *f* then throws the headed bolt or nail from the tool.

Different tools will be required for different diameters or sizes and shapes of bolts, spikes, or nails, but such tools may be readily made by any blacksmith of ordinary intelligence. Both large and small bolts and nails may be made with the head complete at a single heat. In finishing the head, the tool is or may be held in a horizontal position.

Small bolts of soft metal may be headed cold by the hereinbefore described tool.

What is here claimed, and desired to be secured by Letters Patent, is—

1. A hand-tool for heading bolts, spikes, and nails, formed of a rod or bar recessed or bored at its end to receive the body or shank of the article to be made, and of an external shape and size at the extremity of said end on its sides to correspond with the size and shape of the head to be formed, substantially as specified.

2. The combination of an ejector with the rod or bar of the hand-tool constructed to receive within its end the shank or body of the article to be made and shaped externally on the sides of said end at its extremity to correspond with the head to be formed, essentially as described.

WILLIAM M. THOROUGHGOOD.

Witnesses:

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