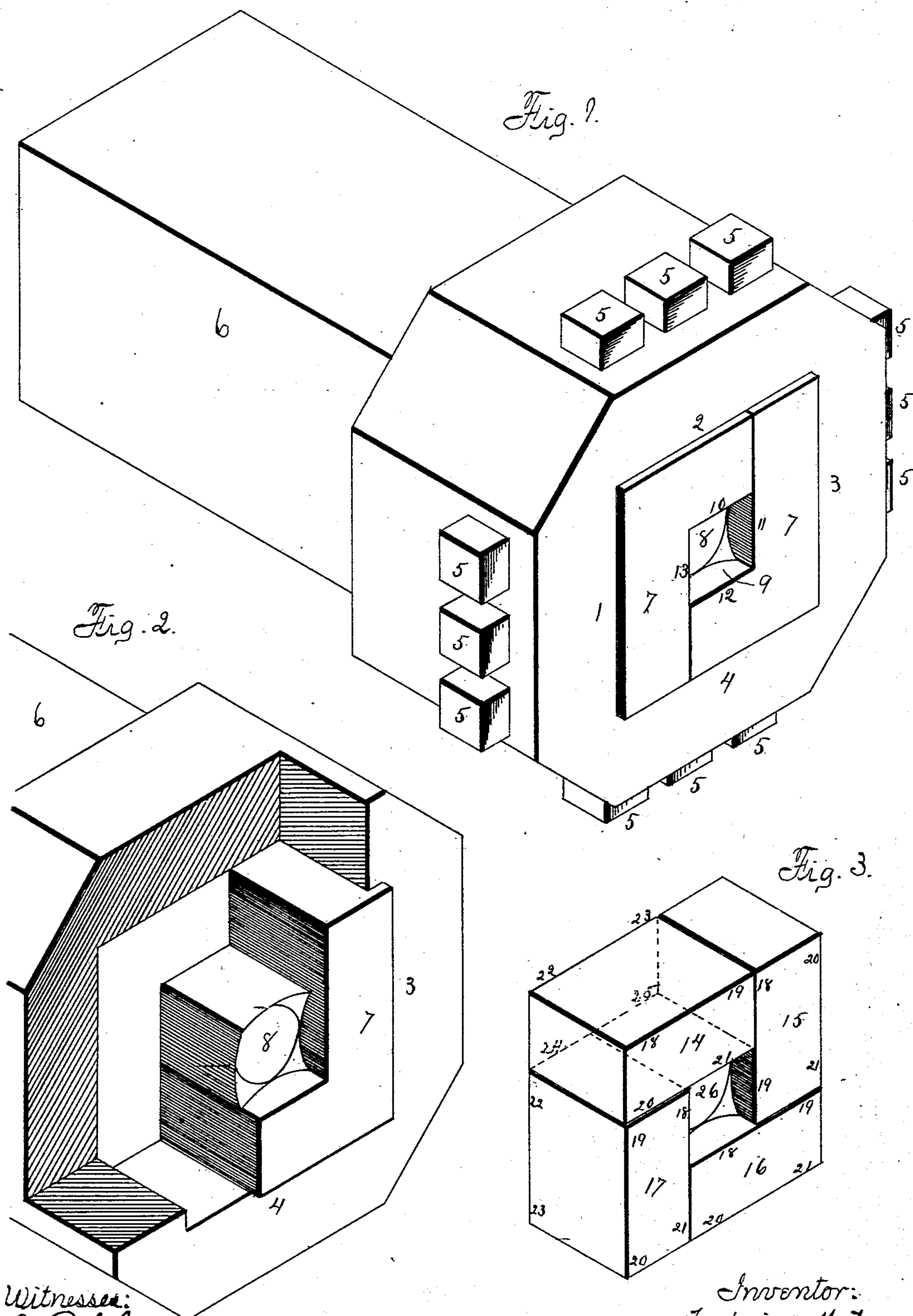


(No Model.)

F. MUTIMER.  
BOLT HEADING TOOL.

No. 398,342.

Patented Feb. 19, 1889.



Witnesses:  
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Attys.



# UNITED STATES PATENT OFFICE.

FREDERICK MUTIMER, OF ROCKFORD, ILLINOIS, ASSIGNOR OF ONE-HALF TO  
THE ROCKFORD BOLT WORKS, OF SAME PLACE.

## BOLT-HEADING TOOL.

SPECIFICATION forming part of Letters Patent No. 398,342, dated February 19, 1889.

Application filed August 8, 1888. Serial No. 282,211. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK MUTIMER, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Bolt-Heading Dies, of which the following is a specification.

The object of this invention is to make a header for use in bolt-heading machines, said header composed of sections capable of being reversed end for end, thereby exposing the surfaces of both ends for the purpose of heading bolts. To this end I have designed and constructed the header represented in the accompanying drawings, in which—

Figure 1 is an isometrical representation of a bolt-heading die embodying my invention. Fig. 2 is an isometrical representation, with parts cut away, showing the stock for holding the sections of the header in position. Fig. 3 is an isometrical representation of my invention, showing the header in five sections.

Headers as heretofore known to me have generally been made of one piece, and with which a comparatively small number of bolts can be headed before it will split or chip. Another construction has been made with the header in two half-sections opened and closed by suitable mechanism and having a central plunger moving independent of the jaws, so that when the head has been formed the jaws will open and release it; but so far as known to me I am the first to so construct a bolt-heading tool that the parts may be reversed, thereby getting at least double the use from the header.

In the drawings, the socket portion of the header is composed of the four walls 1, 2, 3, and 4, of sufficient metal to give the required strength. Each of the walls 1, 2, 3, and 4 is bored and screw-threaded for the reception of the set-screws 5. A shank portion, 6, in this instance rectangular in cross-section, projects rearwardly from the stock portion, by which the header is supported in a bolt-heading machine.

In the socket formed by the walls 1, 2, 3, and 4 are supported the bolt-heading sections composed of two like parts, 7, of the shape represented in the drawings, and a central

portion, 8. When the sections 7 are placed in the manner shown, they will form a square central opening, 9. In this opening is placed the portion 8, one end of which is concave, in a manner to give conformation to the head of the bolt. When the parts are in the position shown in the drawings, the set-screws 5 will be set against the sections 7, thereby holding them in position in the socket.

The shank portion is secured in a bolt-heading machine, to be operated in the usual manner. After feeding sufficient heated metal through the holding-dies to form the head, the header will move toward the holding-dies, forcing the heated metal into the central socket of the header, thus forming the head of the bolt. When the edges 10, 11, 12, and 13 of the sections become unfit for use, the sections may be reversed end for end, exposing new surfaces, thereby utilizing both surfaces of the sections for forming the heads on bolts.

To more fully utilize both surfaces of the header, I have shown at Fig. 3 a construction consisting of five sections. Four of the sections, 14, 15, 16, and 17, are identical in construction, being rectangular in section, having all edges at right angles and all opposite sides equal. Each of the sections has eight surfaces, 18, 19, 20, 21, 22, 23, 24, and 25, which can be employed alternately to form the central opening of the header, in which the head on a bolt is formed. The center portion, 26, is the same as the center portion, 8, above described. In this construction of header all the opposite edges of the respective sections are capable of use to form the central opening in which the bolt is formed, and by means of which the header is capable of use to produce a larger number of bolts than any header known to me, and by reason of its sectional construction splitting is prevented and the header is rendered more efficient.

I claim as my invention—

1. In a bolt-heading die, the combination, with a stock, of sections held in place in said stock and made endwise reversible, substantially as set forth.

2. In a bolt-heading die, the combination, with the stock, of rectangular sections ar-

ranged in said stock and made endwise reversible, and set-screws for holding said sections in place, substantially as set forth.

3. In a bolt-heading die, the combination,  
5 with a stock and rectangular sections removably and reversibly secured therein, of a block placed between said sections and pro-

vided with a concave face and set-screws for holding said sections in position, substantially as set forth.

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Witnesses:

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