Oct. 14, 1930. B. T. NOBLE 1,778,562

METHOD OF FORMING ANGULAR HEADED FASTENING DEVICES

Filed July 13, 1929

Fig. 1.

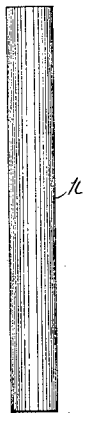


Fig. 2.



Fig. 3.

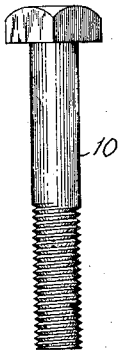
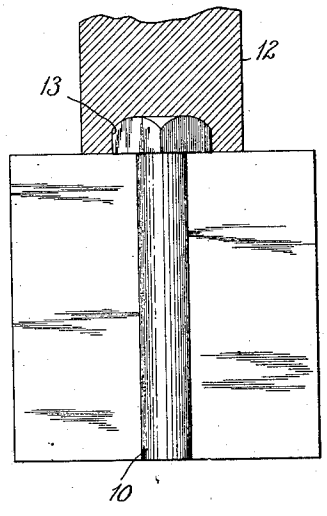


Fig. 4.



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UNITED STATES PATENT OFFICE

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METHOD OF FORMING ANGULAR-HEADED FASTENING DEVICES

Application filed July 13, 1929. Serial No. 377,929.

This invention relates to improvement in method of forming angular-headed fastening devices such as bolts, screws, spikes, etc. Heretofore, angular-headed bolts and screws have been formed by heating the blank from which the article is to be formed and then upsetting the end to form an angular head, but this method produces a flash which must be subsequently trimmed or otherwise removed. In forming angular-headed fastening devices from cold stock, the blank is first upset to form a round head and then the edges are trimmed off to form an angular head—either square or hexagonal.

The object of this invention is to form angular-headed fastening devices from cold stock, which method requires only three operations, and the invention consists in the method as hereinafter described and particularly recited in the claim.

In the accompanying drawings:

Fig. 1 is a side view of a blank from which the screw or bolt is to be formed;

Fig. 2 is a side view of the same, with one end formed with an angular section;

Fig. 3 is a side view of a completed bolt; and

Fig. 4 is a view partly in section, illustrating the heading operation.

In carrying out my invention a blank 10 of round wire is upset with an angular end 11 the flats of which are equal to or greater in diameter than the diameter of the blank. The angular end is then formed and finished by a plunger 12 having an angular recess 13 which is filled by the angular end 11, thus providing the blank with an angular head without a flash, and consequently avoiding the necessity of trimming. It will be understood that the length of the angular portion of the blank is such that the metal forming the angular section will only be sufficient to properly form and finish the head of corresponding shape. The blank is then threaded or otherwise finished in the usual manner, either with machine-threads to receive a nut, with screw-threads, forming a lag-screw or pointed to form a spike.

Attempts have been made to upset a round blank to form an angular head but the metal does not properly flow and it has not been successful, but by first upsetting the blank with an angular end corresponding to the angular head required and the flats of which are equal to or greater in diameter than the diameter of the blank, the metal will properly flow and fill the recess in the head-forming die.

I am thus enabled to form from cold stock a fastening device by three operations, that is, first upsetting a blank of round wire with an angular end, then forming and finishing an angular head, and then threading or pointing the other end of the blank.

I claim:

A method of forming angular-headed fastening devices from cold stock, consisting in first changing one end of a round blank into an angular end of larger cross sectional area than that of the round blank by an upsetting operation, then by a second single operation enlarging and finishing an angular head, and then finishing the other end of the blank.

In testimony whereof, I have signed this specification.

BOUGHTON T. NOBLE.