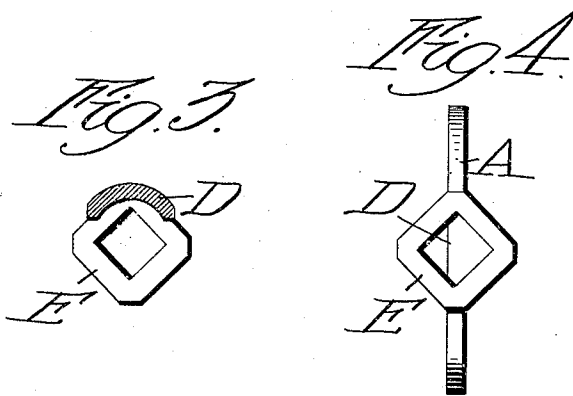
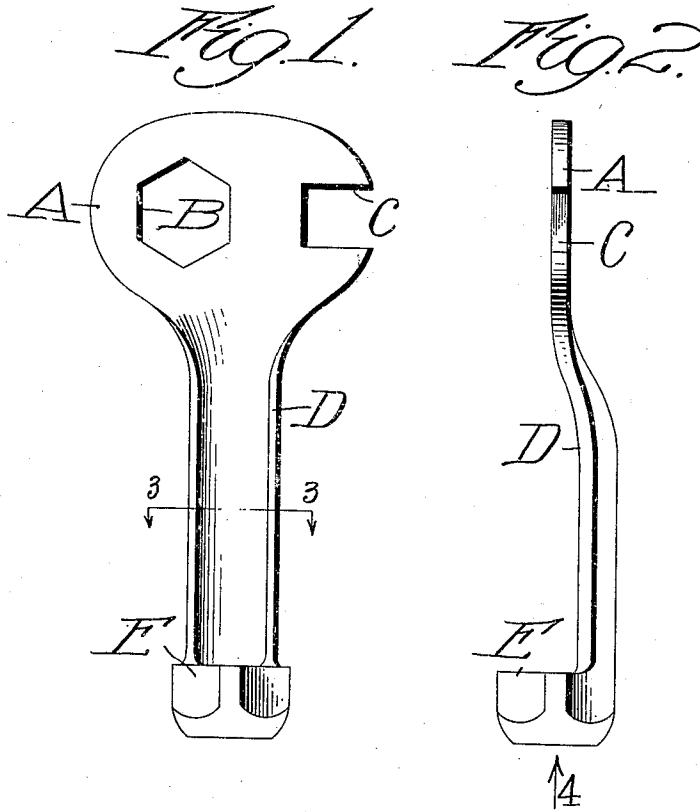


W. H. NEEDHAM.
SKATE KEY.
APPLICATION FILED AUG. 17, 1917.

1,322,331.

Patented Nov. 18, 1919.



Witness:
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UNITED STATES PATENT OFFICE.

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MAINE.

SKATE-KEY.

1,322,331.

Specification of Letters Patent.

Patented Nov. 18, 1919.

Original application filed June 20, 1917, Serial No. 175,733. Divided and this application filed August 17, 1917. Serial No. 186,783.

To all whom it may concern:

Be it known that I, WILLIAM H. NEEDHAM, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Skate-Key, of which the following is a specification.

This invention relates to a skate key formed as hereinafter specified from a single piece of sheet material.

This application is a division of my prior application Serial No. 175,733, filed June 20th, 1917. The claims of the prior application relate to a process or method of forming a skate key of the type hereinafter described.

It is the general object of my invention to provide a skate key of improved construction, particularly adapted for manufacture in large quantities at a very low cost of production.

With this general object in view, my invention relates to features of construction, and arrangements and combinations of parts which will be hereinafter described, and more particularly pointed out in the appended claim.

A preferred form of my invention is shown in the drawings in which—

Figure 1 is a front elevation of my improved skate key;

Fig. 2 is a side elevation thereof;

Fig. 3 is a sectional plan view, taken along the line 3—3 in Fig. 1, and

Fig. 4 is an end view, looking in the direction of arrow 4, in Fig. 2.

The article as shown is particularly adapted to be formed from a single piece of sheet material by the process fully set forth in my prior application.

The finished article is clearly shown in the drawings, and comprises a flat thumb piece A having wrench openings B and C formed therein, a ribbed shank portion D, and a tubular end portion E adapted to engage the

shaft by which the skate clamps are tightened.

The tubular portion E is provided with a longitudinal opening therethrough, which may be of any desired shape and corresponds to the shape of the shaft upon which the key is to be used. The square opening shown is the more common construction.

The openings B and C in the thumb piece A are designed to fit such nuts or bolts as may be found in the skate for which the key is made.

It will be noticed that the shank portion B is offset to bring the thumb piece A substantially in line with the axis of the tubular portion C and that the portion B is also ribbed, as clearly shown in section in Fig. 3, thereby much increasing the strength of the key at this point.

My improved skate key can be formed entirely by punching and pressing operations, as fully described in my prior application, and in this way a skate key of great strength and utility can be manufactured in quantities at an extremely low cost.

Having thus described my invention and the advantages secured thereby, it will be evident that changes and modifications can be made therein by those skilled in the art, without departing from the spirit and scope of my invention as set forth in the claim, and I do not wish to be otherwise limited to the details herein disclosed, but what I claim is:—

As an article of manufacture, a skate key formed of a single piece of sheet metal and comprising a thumb-piece, a tubular shaft-engaging portion substantially longer than the thickness of the stock, and an offset shank portion connecting said thumb-piece to said shaft engaging portion.

In testimony whereof I have hereunto affixed my signature.

WILLIAM H. NEEDHAM.