

(No Model.)

C. J. JACKSON.
VISE.

No. 563,040.

Patented June 30, 1896.

Fig. 1.

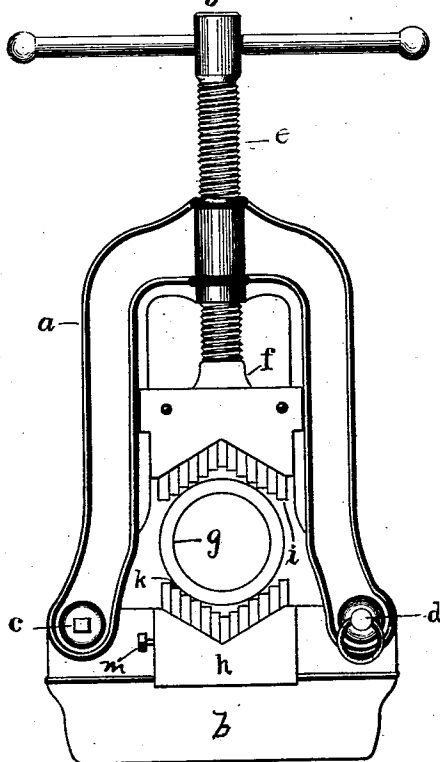


Fig. 2.

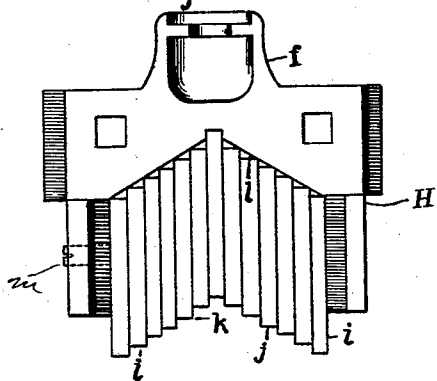
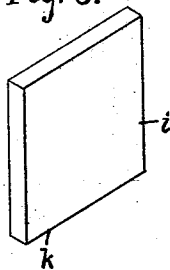


Fig. 3.



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SPECIFICATION forming part of Letters Patent No. 563,040, dated June 30, 1896.

Application filed November 2, 1895. Serial No. 567,746. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. JACKSON, a citizen of the United States, and a resident of Erie, county of Erie, and State of Pennsylvania, have invented certain new and useful Improvements in Vises, of which the following is a specification.

This invention relates to vises or similar gripping instruments.

10 The invention is particularly in the vise-jaws, the main object of the invention being to provide one or both of the jaws of a vise, or other gripping instrument, with improved gripping or wearing surfaces. The body of
15 the improved jaw is composed of one or more rows of strips of tool-steel, cut to the desired length and width, the ends of said strips being cut at right angles to the sides of the strips, and all of the strips being preferably
20 of the same length and width, whereby they are interchangeable in their holders, and each end of each strip or section has two gripping or wearing edges which can be utilized, one after the other. It is proposed in some cases
25 to make each strip or section square, thereby giving each section eight gripping edges, instead of four, which narrower or wider strips would have.

Heretofore gripping-jaws have been made
30 of strips, but one of their ends has been beveled or sharpened to form gripping-teeth. This has made it necessary to put the strips in position with a certain definite end forward, and to place the strips with a certain
35 definite side facing the center of the holder, in order to bring the wearing-teeth into proper position. In the improved jaw to be described herein the teeth will be properly arranged
40 whichever of the ends of the sections are forward when the sections are of the same length, and whichever of the sides of the sections face toward the center of the holder. When
45 one edge of a section becomes blunted, it is only necessary to turn the section so as to bring a fresh edge into gripping position, and when both edges become blunt the section
50 can be inverted and used first on one edge and then on the other, after which the section can be sharpened at both ends by being
ground off flat, slightly shortening the section, and used again.

In the accompanying drawings, Figure 1 is a side view of one form of vise or gripping device in which this improvement can be used. Fig. 2 is a side view of the upper jaw
55 with the front plate of the holder removed, and Fig. 3 is a perspective view of one of the sections of the jaw detached.

a b are the main parts of the body of a vise, pivoted together at *c*, having a fastening device *d*, and carrying a screw *e*, by means of
60 which the upper jaw *f* can be forced forward, causing the upper jaw to press against the pipe *g* or other object to be gripped, pressing it against the lower jaw *h*.
65

The holder *H*, which forms a part of each jaw, is adapted to receive and hold several sections or strips *i* of tool-steel or other suitable metal in such manner that their rear or
70 approaching ends will be adapted to partially surround and to grip the pipe or object between the jaws, and so that the ends *j* of the strips shall be stepped, and the edge *k* of each strip facing the center of the jaw shall serve
75 as a gripping tooth or edge. This may be accomplished by forming the wall *l* of the holder against which the rear ends of the strips bear V-shaped to correspond with the general
shape of the gripping-surface.

m is a screw by which the sections can be
80 pressed together and held in place in their holders. Any other suitable means may be used for this purpose.

The detached section *i* of Fig. 3 is shown as square, although it is evident that the sections
85 may be longer than they are wide, or wider than they are long.

Suppose the sections to be square and all of the same size. When the sections are to be
90 placed in a jaw-holder they are picked up at random and placed therein, either end forward, and either of the flat parallel sides facing in either direction, it being unnecessary to arrange the different sections carefully,
95 with particular ends and sides in definite directions, as in certain old vises. When the edges of the sections which are in gripping position become dull, screw *m* is loosened,
the dulled sections removed and turned so as to face in the opposite direction, that is, so as
100 to bring the other edge of the same end of each section into gripping position. This gives

practically a new jaw without the act of annealing, filing, and tempering, necessary in old forms of vises with sectional jaws. When these second edges become dulled, the sections
5 can be turned end for end and used first on one side and then on the other, and when the sections are square they can be turned to use the other four edges, as already indicated. The described construction furnish jaws
10 adapted to be easily and quickly built up, to last for a long time without sharpening, and of largely-reduced cost. The stepped gripping-jaws, formed of the strips with right-angle ends, which strips can be turned to
15 bring either of their several edges into gripping position, is an important improvement in gripping-jaws for the reasons just indicated.

I claim—

20 1. A vise or gripping instrument having one or more gripping-jaws formed of several reversible metal sections, each section having flat parallel sides, and both ends at right angles to the sides, and held to form a stepped gripping-surface.

25 2. A vise or gripping instrument having one or more gripping jaws formed of several reversible metal sections of uniform length, each section having flat parallel sides, and

both ends at right angles to the sides, and held to form a stepped gripping-surface. 30

3. A vise having, in combination, stepped gripping-jaws, and means for causing the same to grip an object placed between them, said jaws consisting of suitable holders containing several metal sections with flat parallel sides, 35 and flat right-angle ends.

4. A vise having, in combination, stepped gripping-jaws, and means for causing the same to grip an object placed between them, said jaws consisting of suitable holders containing several metal sections of equal length 40 with flat parallel sides, and flat right-angle ends.

5. The combination in a gripping-jaw of a holder having a rear wall, *l*, of approximately 45 the contour of the gripping-surface, and several sections of metal of equal length and with right-angle ends held in said holder, the rear ends bearing against said wall and the forward ends forming a stepped gripping-surface. 50

Signed this 26th day of October, 1895.

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Witnesses:

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