Oct. 7, 1952 J. J. LEA 2,612,735

GEM VISE

Filed Dec. 10, 1951

Fig. 1

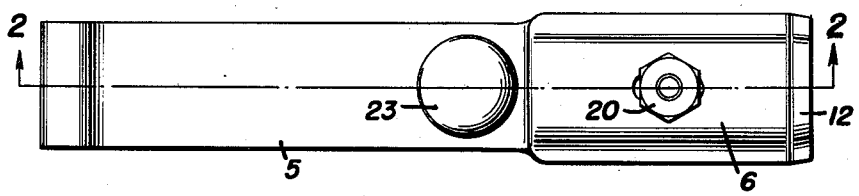


Fig. 2

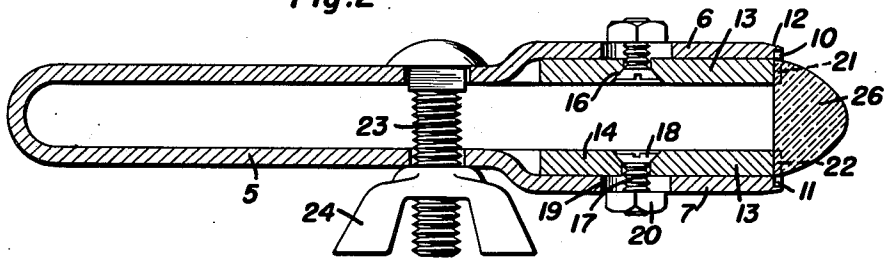


Fig. 3

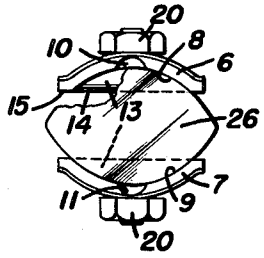


Fig. 4

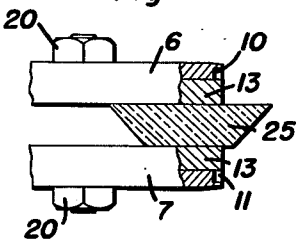
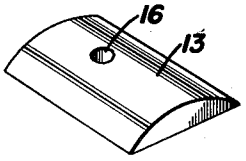


Fig. 5



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GEM VISE

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5 Claims. (Cl. 51—229)

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The present invention relates to new and useful improvements in tools for holding semi-precious stones or gems while grinding, sanding, polishing or otherwise finishing the same prior to setting thereof.

An important object of the invention is to provide a hand vise embodying a novel adjustable jaw construction for holding either flat stones or ovate stones in a desired position against a sanding or polishing wheel.

Another object is to provide a device of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, references being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view;

Figure 2 is a longitudinal sectional view taken on the line 2—2 of Figure 1 and showing an ovate stone held in the jaws;

Figure 3 is a front elevational view;

Figure 4 is a fragmentary side elevational view showing the jaws adjusted for holding a flat stone; and

Figure 5 is a perspective view of one of the jaw faces or inserts.

Referring now to the drawing in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of my invention, the numeral 5 designates a U-shaped resilient strap metal handle having its end portions enlarged to form elongated jaws 6 and 7 having trough-like opposing surfaces 8 and 9. In the opposing surfaces of the jaws at their outer ends are concaved opposing notches 10 and 11.

The outer surfaces of the jaws, at their outer ends are bevelled, as shown at 12.

A substantially semi-cylindrical jaw face or insert 13 is positioned with its rounded back in each trough-like jaw and with the flat surfaces 14 of the inserts in the plane of the side edges 15 of the jaws. Each insert is provided with an opening 16 to receive a bolt 17 with its head 18 countersunk in the flat surface 14, the bolt projecting through a longitudinal slot 19 in a companion jaw and is secured in slidably adjusted position therein by a nut 20. The inserts 13 are slightly shorter than the jaws whereby the inserts may be moved forwardly or rearwardly in the jaws to position the front ends of the inserts either flush with the front ends of the jaws as shown in Figure 4, to retract the inserts to form opposing shoulders 21 and 22 at the front ends of the jaws.

A bolt 23 passes through the handles at a point behind the jaws and a wing nut 24 is threaded on the bolt to close the jaws.

The invention thus forms a hand vise adapted for holding flat stones 25 between the opposing

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flat surfaces of the inserts or jaw faces 13 in a position for sanding or polishing an outwardly projecting edge of the stone, and by retracting the inserts 13 into a position rearwardly of the front ends of the jaws, an ovate stone 26 may be gripped by the shoulders 21 and 22, as shown in Figure 2.

The curved opposing surfaces 8 and 9 of the jaws will effectively grip the sides of ovate stones 26 even should the contour of the stone differ substantially from that of the jaws and smaller ovate stones (not shown) may be effectively held in the opposing notches 10 and 11 of the jaws.

In view of the foregoing description taken in conjunction with the accompanying drawings, it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described my invention, what is claimed as new is:

1. A hand vise comprising a resilient U-shaped metal handle, a pair of jaws at the ends of the handle having semi-ovate opposing faces adapted to grip correspondingly shaped work and jaw inserts adjustable forwardly and rearwardly in said opposing faces of the jaws to cover and uncover the semi-ovate opposing faces at the extremities of the jaws.

2. A hand vise comprising a resilient U-shaped metal handle, a pair of jaws at the ends of the handle having irregularly shaped opposing faces adapted to grip correspondingly shaped work, and jaw inserts adjustable forwardly and rearwardly in said opposing faces of the jaws to cover and uncover said faces at the extremities of the jaws.

3. The combination of claim 2 wherein said inserts are formed with rear surfaces complementary in shape to the opposing jaw faces and are formed with flat opposing surfaces.

4. A hand vise comprising a resilient U-shaped metal handle, longitudinally elongated jaws at the outer ends of the handle and having trough-like opposing faces adapted to grip correspondingly shaped work, inserts slidable forwardly and rearwardly in the opposing faces of the jaws, and means securing the inserts in adjustable position to the jaws to cover and uncover the opposing faces of the jaws at their outer extremities, said opposing faces of the jaws at their exposed extremities having opposed notches also adapted to grip correspondingly shaped work.

5. The combination of claim 4 and including means holding the jaws in closed relation with respect to the work.

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No references cited.