July 28, 1953 C. NICKAS, JR 2,646,708

VISE JAW COMBINATION

Filed March 25, 1949

Fig. 1.

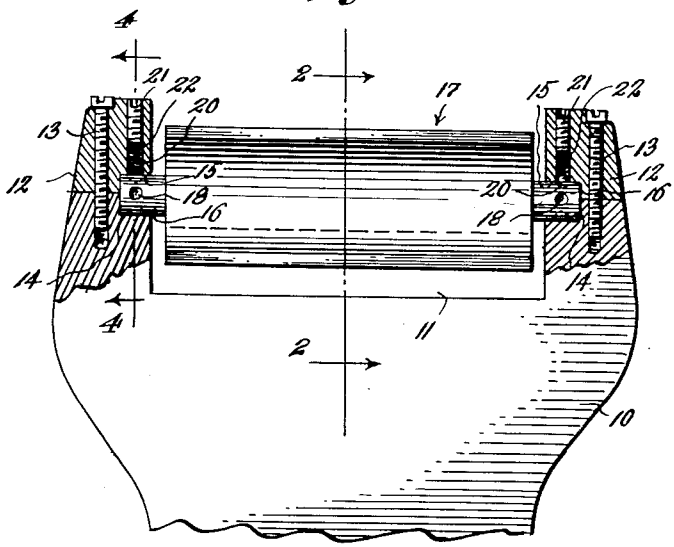


Fig. 2.

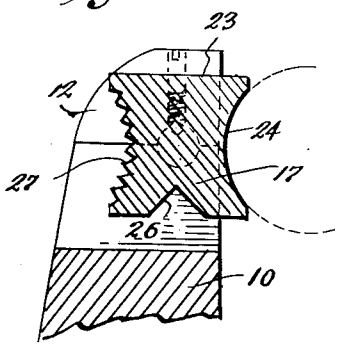
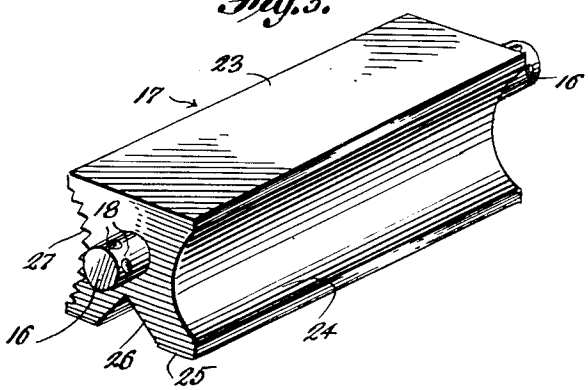


Fig. 3.



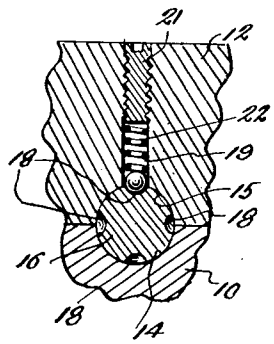


Fig. 4.

Inventor
CHRIS NICKAS, JR.

By Patrick J. Beavers

Attorney

Patented July 28, 1953

2,646,708

UNITED STATES PATENT OFFICE

2,646,708

VISE JAW COMBINATION

Chris Nickas, Jr., Farmington, W. Va.

Application March 25, 1949, Serial No. 83,453

1 Claim. (Cl. 81—39)

1

The present invention relates to a vise jaw construction and it consists in the combinations, constructions and arrangements of the parts herein described and claimed.

Generally there is provided a vise jaw construction wherein the upper end of one of the conventional jaws of a vise is removed and then equipped with a pair of upwardly extending removably mounted caps which act to hold in selected positions various faces of a rotary gripping member. Novel means is provided for holding the rotary member in the selected positions.

It is accordingly an object of the invention to provide a device of the character set forth which is simple in construction and operation and yet effective and efficient in use.

Another object of the invention is the provision of a device of the character set forth which is inexpensive and easily attached to a conventional vise jaw.

Another object of the invention is the provision of novel means whereby varied gripping surfaces may be presented upon one face of a conventional vise.

A further object of the invention is the provision of novel means for rigidly holding a rotary vise jaw, forming a part of the invention, in selected positions.

Other and further objects of the invention will become apparent from a reading of the following specification taken in conjunction with the drawing, in which:

Figure 1 is a front elevational view, partly broken away, of an embodiment of the invention,

Figure 2 is a sectional view taken along line 2—2 of Figure 1,

Figure 3 is an isometric view of an element of the invention, and

Figure 4 is a fragmentary sectional view, somewhat enlarged, taken along line 4—4 of Figure 1.

Referring more particularly to the drawing, there is shown therein a conventional vise jaw 10 provided with a centrally disposed recess 11 in the upper face thereof and having at either side on its upper face a vise jaw cap 12 which is connected with the jaw 10 by means of a vertically disposed screw 13. The upper ends of the jaw 10 are provided with semi-cylindrical recesses 14 and the lower faces of the caps 12 are provided with corresponding semi-cylindrical recesses 15 and the recesses 14 and 15 coact to receive the outwardly extending axles 16 of a rotary jaw generally designated at 17.

Each of the axles 16 is provided with four spaced semi-spherical indentations 18,

2

Each of the caps 12 is provided with a vertically disposed tubular passage 19 in the lower end of which is positioned a ball 20 and in the upper end of which is threaded a set screw 21. A compression spring 22 is also positioned in the passage 19 and bears against the ball 20 and set screw 21.

The member 17 is provided with four faces which are at right angles to each other. One of the faces is flat, as indicated at 23. There is also provided a concave surface 24, a surface 25 having a V-shaped indented groove 26 and a concave ridged surface 27.

In operation, it will be apparent that the member 17 is mounted in the jaw 10 by first placing the axle 16 within the recesses 14 after which the caps 12 are fixed thereon by means of the screws 13 in such manner that the axles 16 are received in the recesses 15. The balls 20 are then dropped into the passages 19 after which the springs are placed thereon and the set screws screwed into position to force the balls 20 to engage in one of the recesses 18 in the axles 16 to thus hold the same rigidly in a selected position.

It will thus be seen that four different faces of the member 17 may be selectively placed in vertical position upon the inner side of the jaw 10. Where it is desired to work upon flat material, the face 23 is presented in a vertical position on the inner face of the jaw 10. When round work is to be clamped between the conventional jaws 10 of a vise, the face 24 is presented as particularly shown in Figure 2 of the drawing. Likewise, when it is desired to fasten a pipe within the vise, the face 27 is presented upon the inner side of the jaw 10 and, again, with certain work the face 25 with its V-shaped groove may be presented upon the inner side of the jaw. In order to make the changes it is only necessary to loosen the cap screws 13 and the set screws 21 and to thereafter turn the member 17 with the fingers until the proper face is presented upon the inner side of the jaw 10 after which the screws 13 and 21 are again tightened.

While but one form of the invention has been shown and described herein, it will be readily apparent to those skilled in the art that many minor modifications may be made without departing from the spirit of the invention or the scope of the appended claim.

What is claimed is:

A device of the character described comprising a vise jaw having a centrally disposed recess in the upper end thereof and having a semi-cylindrical recess in the top thereof adjacent each

end of the central recess, a vise jaw cap removably mounted at either side of the upper end of the vise jaw and each having a semi-cylindrical recess in the bottom thereof, a revoluble gripping member disposed in said central recess and having a pair of outwardly extending axles adapted to be positioned in the semi-cylindrical recesses in the jaw and in the jaw caps and adjustable means for locking the revoluble gripping member in selected positions with respect to the inner face of the vise jaw, said means including a plurality of spaced semi-spherical openings in the outer periphery of each of the axles, a vertical passage in each of the caps in registry with said openings, a ball in the lower end of each passage, a compression spring atop each ball and a set screw threadably mounted in the upper end of each passage, said revoluble gripping member having a plurality of different gripping faces adapted to be selectively presented at the inner side of the vise jaw.

CHRIS NICKAS, JR.

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