Feb. 18, 1958 A. C. POTHIER 2,823,567

VISE ROD MOUNTING A FIXED JAW AND AN ADJUSTABLY FULCRUMED PIVOTABLE JAW

Filed May 17, 1955

Fig. 1.

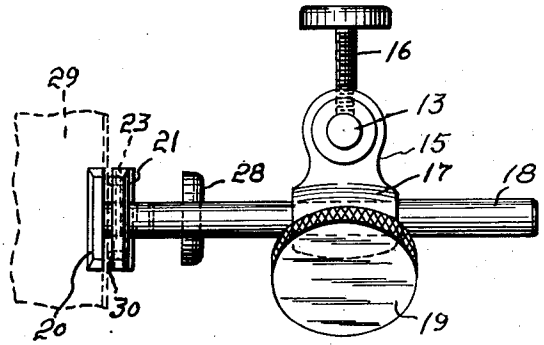


Fig. 4.

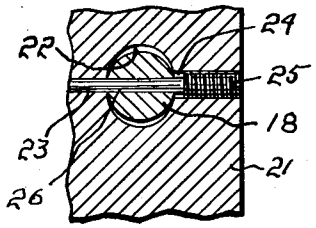


Fig. 3.

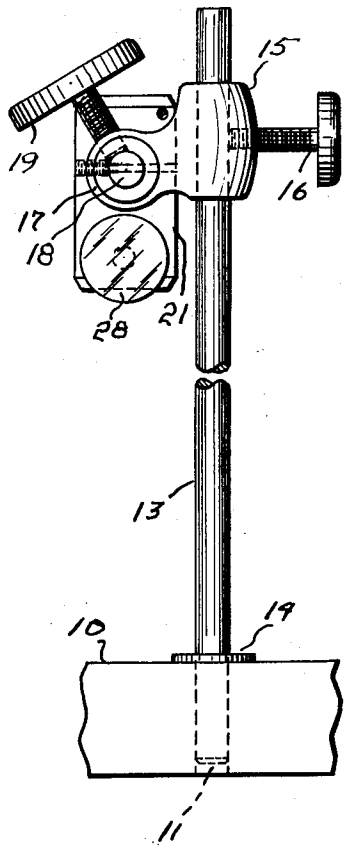


Fig. 2.

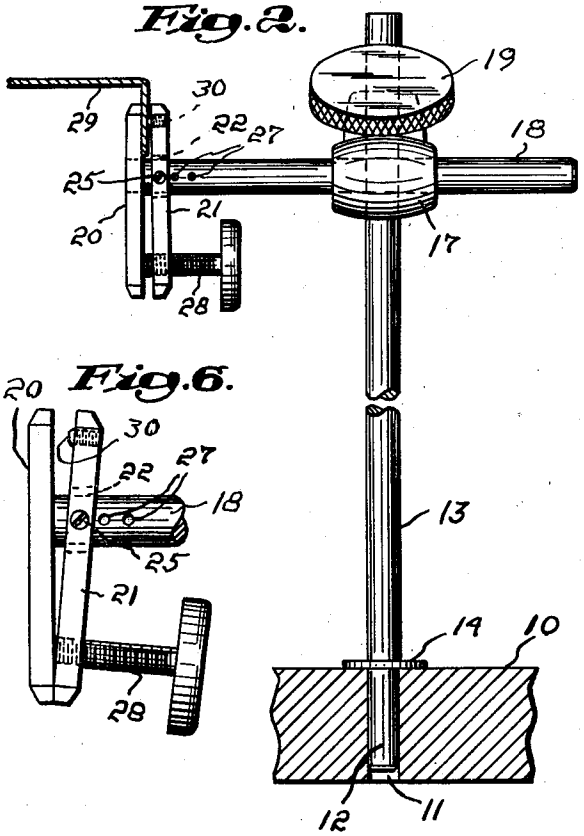
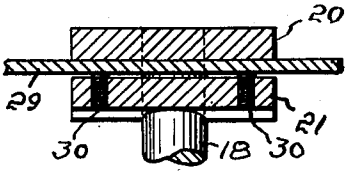


Fig. 6.

Fig. 5.



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VISE ROD MOUNTING A FIXED JAW AND AN ADJUSTABLY FULCRUMED PIVOTABLE JAW

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Application May 17, 1955, Serial No. 508,901

1 Claim. (Cl. 81—23)

This invention relates to vises and particularly to vises whose jaws are adapted to grip work that cannot be securely held by jaws whose work-engaging portions are parallel.

While vises in accordance with the invention are adapted for general use, they are particularly well suited for supporting a television or radio chassis or that of a record player where it is essential to provide an adequate grip without objectionably marring or otherwise damaging the gripped structure.

The general objective of the invention is to provide a vise ensuring that such work may be properly held. This objective is attained by providing at least one of the jaws with at least one and preferably two work-engaging members adjustable relative thereto and to each other to enable work to be gripped that could not be securely held by parallel work-engaging surfaces.

One of the jaws is fixed while the other one is preferably pivoted to swing between engaged and disengaged positions relative to the other jaw. An operating member is threaded through one jaw for engagement with the other thus to furnish means for pivotally effecting their clamping relationship and the operating member is preferably carried by the pivoted jaw and so formed and disposed that its weight is effective to urge it towards its disengaged position.

In the accompanying drawings, there is shown an illustrative embodiment of the invention from which these and other of its objectives, novel features, and advantages will be readily apparent. In the drawings:

Fig. 1 is a view of a vise in accordance with the invention as seen from its upper end,

Figs. 2 and 3 are, respectively, side and end views thereof,

Fig. 4 is a fragmentary vertical cross section through the pivot portion of a pivotable jaw,

Fig. 5 is a fragmentary horizontal cross section through both jaws illustrating their relationship with a clamped workpiece, and

Fig. 6 is a fragmentary side elevation of the jaws illustrating their disengaged relationship.

At **10**, there is indicated a bench shown as having a socket **11** dimensioned to receive an extremity **12** of a support **13** provided with a bench-engaging flange **14**. Slidably supported by the support **13** is a mount **15** adapted to be locked thereto as by the setscrew **16** and having a sleeve portion **17** slidably receiving a spindle **18** but provided with a spindle-locking setscrew **19**.

A fixed jaw **20** is located at one end of the spindle **18**. A second jaw **21** has a vertically elongated aperture **22** dimensioned to freely receive the spindle **18** and to enable the jaw **21** to tilt forwardly and rearwardly to a predetermined extent. A bore **23** transversely intersects the aperture **22** and has an enlarged, threaded portion **24** to receive a threaded hub **25** of a pivot **26**. The spindle **18**

has a plurality of axially spaced transverse bores **27** each dimensioned to receive the pivot **26** thus to enable the jaw **21** to be pivotally mounted in any one of several positions relative to the jaw **20**.

Threaded through the lower part of the jaw **21** is a member **28** engageable with the proximate face of the jaw **20**. The member **28** is dimensioned and disposed so that its weight is operative to urge the jaw **21** to swing into disengaged relationship to the jaw **20**. When the member **28** is threaded to advance it relative to the jaw **20**, it is operative to swing the upper part of the jaw **21** towards the jaw **20**.

While a vise in accordance with the invention is adapted to handle any type of work, it is particularly well suited for holding the chassis of a television or radio set or that of a record player. Such a chassis is suggested at **29** and it will be readily appreciated that with work of that or like nature, it is of real advantage to have the vise jaws normally spaced apart.

Such work is also illustrative of another problem and that is the difficulty of gripping work where the gripping zones of the opposite faces of the work are not parallel thus making it difficult to securely hold the work, at least without the risk of marring it. In accordance with the invention, one of the vise jaws, preferably the jaw **21**, is provided with transversely spaced bores (usually two) extending between its front and rear faces and threaded to receive screw elements **30** which establish readily replaceable teeth that may be quickly and easily adjusted to effect an accurate and secure support of the work.

From the foregoing, it will be appreciated that a vise in accordance with the invention is well adapted to meet a wide range of work-supporting conditions.

What I therefore claim and desire to secure by Letters Patent is:

In a vise, a jaw-supporting rod of substantially uniform cross section, a pair of workpiece gripping jaws mounted on said rod, one of the jaws being rigidly fixed to the rod and the other jaw being provided with an opening substantially larger than the cross-sectional area of the rod, said other jaw being movable along the support to various positions and pivotable to said support at a selected one of a plurality of positions so as to pivot between engaged and disengaged positions relative to the fixed jaw, said jaw-supporting rod having a plurality of axially spaced bores which define said plurality of positions, said pivotable jaw having a threaded bore transversely intersecting the opening therein, and a pivot pin having an enlarged threaded portion fitting the threaded bore and a reduced portion fitting the selected one of the axially spaced bores, and a threaded jaw-actuating member extending through the pivotable jaw and engageable with the fixed jaw to move the jaws into gripping relation.

References Cited in the file of this patent

UNITED STATES PATENTS

604,526	Fowler	May 24, 1898
623,381	Theadore	Sept. 5, 1899
1,382,793	Lewis	June 28, 1921
1,604,870	Asman	Oct. 26, 1926
1,611,738	Guilford	Dec. 21, 1926
1,818,501	Odin	Aug. 11, 1931
1,832,968	De Armey	Nov. 24, 1931
1,855,143	Williams	Apr. 19, 1932
2,211,287	Neubig et al.	Aug. 13, 1940

FOREIGN PATENTS

112,295	Sweden	Oct. 31, 1944