

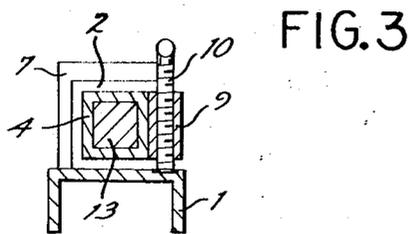
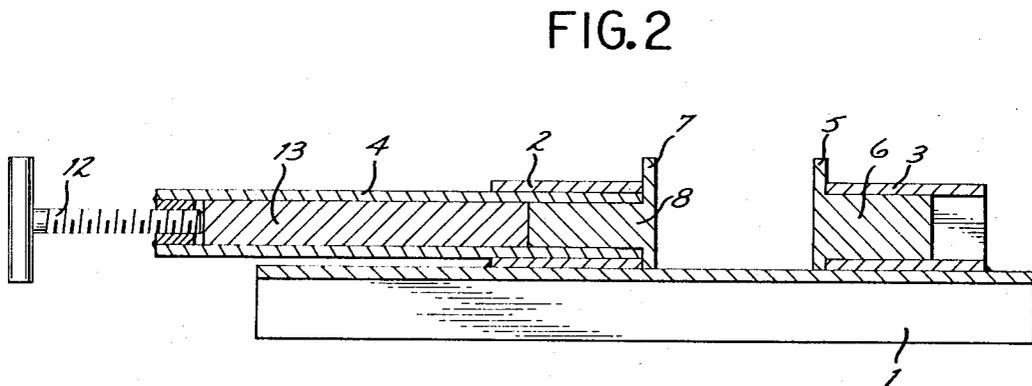
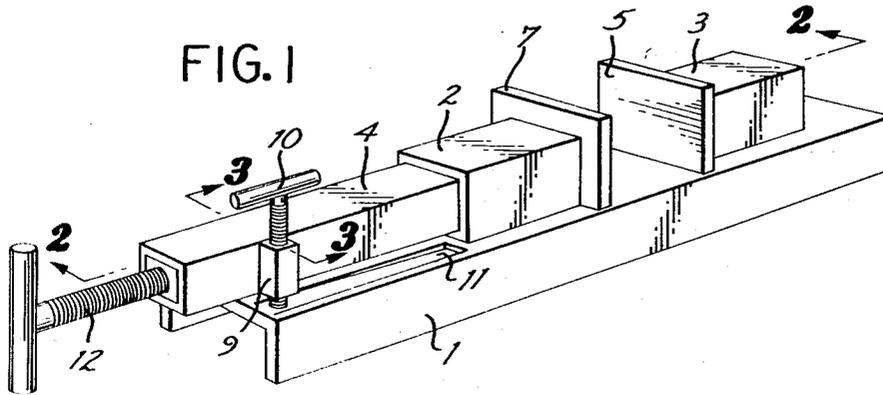
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BENCH VISE

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BENCH VISE

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This invention relates to a quick adjustable bench vise whereby the jaws of the vise can be quickly adjusted to their approximate final position and, subsequently, the jaws are accurately adjusted to engage the article in the vise.

An object of my invention is to provide a novel bench vise which is inexpensive to manufacture and which is effective in operation.

Another object of my invention is to provide a novel bench vise in which the jaws are quickly removable and replaceable to accommodate different shapes and sizes of the work.

Still another object of my invention is to provide a novel bench vise which is adaptable to different sizes and uses, and which will function both as a bench vise or a portable vise, as might be required.

Other objects, advantages and features of invention may appear from the accompanying drawing, the subjoined detailed description and the appended claims.

In the drawing:

FIGURE 1 is a perspective view of my quick adjustable bench vise.

FIGURE 2 is a sectional view taken on line 2—2 of FIGURE 1.

FIGURE 3 is a sectional view taken on line 3—3 of FIGURE 1.

Referring more particularly to the drawing, the numeral 1 indicates a base which is preferably formed of a structural shape, such as a channel. The base may be bolted, screwed, clamped, or otherwise attached to a bench, if desired, or the vise may be portable and transported from place to place. A pair of spaced sleeves 2-3 are fixedly attached to the upper surface of the base 1, such as by welding, brazing, or the like. The sleeves 2-3 are preferably formed of square tubing, that is, the tubing is square or substantially so in cross section. A guide bar 4 is also formed of tubing, which is square in cross section, and the bar 4 fits accurately and with a close tolerance within the sleeve 2, and is slidable lengthwise in the sleeve.

A jaw 5, of the required size and shape, is formed with a hub 6 which fits in the sleeve 3 with a close tolerance, but can be readily removed when required, that is, the hub 6 fits in the sleeve 3 with a sliding fit. A second jaw 7 is formed with a hub 8 which is also square in cross section. The hub 8 fits in the inner end of the bar 4 and this jaw and hub may also be readily removed by hand, since the hub has a sliding fit in the end of the bar 4.

A lug 9 is positioned on one side of the bar 4, and this lug is threaded to receive the set screw 10. The set screw engages the upper surface of the base 1 and preferably fits in a tapered groove 11 so that the jaw 7 will not readily retract under pressure. By loosening the set screw 10 the entire jaw assembly, consisting of the jaw 7 and

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the bar 4, can be moved horizontally on the base 1 to provide the rough adjustment relative to the work which is placed in the vise. The fine adjustment of the jaw 7 relative to the jaw 5 is accomplished by the adjusting screw 12 which is threaded into the outer end of the bar 4. A spacer 13 is also preferably square in cross section and fits with a sliding fit within the hollow bar 4. The adjusting screw 12 engages the outer end of the spacer 13, and the inner end of the spacer engages the hub 8, thus moving the jaw 7 relative to the jaw 5 to clamp the work in the vise.

Having described my invention, I claim:

1. A vise comprising a base, a pair of spaced sleeves fixedly attached to the base and in alignment with each other, a first jaw mounted in one of said sleeves, a bar slidably mounted in the other sleeve, means on said bar engageable with the base to adjustably fix the bar on the base, a second jaw slidably mounted in said bar opposite the first jaw, and means including an adjusting screw threaded into the bar for moving the second jaw.

2. A vise as recited in claim 1 and wherein the spaced sleeves are rectangular in cross section, and the first jaw having a rectangular hub to fit in one sleeve, and the second jaw having a rectangular hub to fit into the bar.

3. A vise as recited in claim 1 and wherein the means on the bar engageable with the base comprises a set screw threadedly mounted on the bar and engageable with the base.

4. A vise as recited in claim 1 and wherein the spaced sleeves are rectangular in cross section, and the first jaw having a rectangular hub to fit in one sleeve, and the second jaw having a rectangular hub to fit into the bar, the means on the bar engageable with the base comprises a set screw threadedly mounted on the bar and engageable with the base.

5. A vise as set forth in claim 1 and wherein the base is formed of a structural shaped member, and said sleeves being rectangular in cross section and welded to the top of the base, and the first jaw including a rectangular hub fitting into one sleeve, and the second jaw including a rectangular hub fitting in the bar, and the bar being rectangular in cross section to fit in the other sleeve.

6. A vise as set forth in claim 1 and wherein the base is formed of a structural shaped member, and said sleeves being rectangular in cross section and welded to the top of the base, and the first jaw including a rectangular hub fitting into one sleeve, and the second jaw including a rectangular hub fitting in the bar, and the bar being rectangular in cross section to fit in the other sleeve, and the means on the bar engageable with the base comprising a set screw threadedly mounted on the bar and engaging the base.

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