United States Patent

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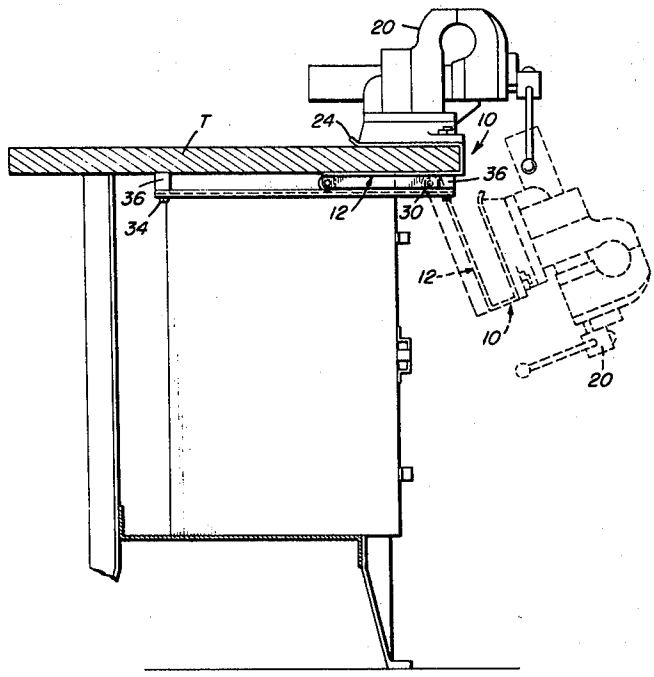
[54] TOOL STORAGE FIXTURE
7 Claims, 5 Drawing Figs.

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[51] Int. Cl. A47b 81/00
[50] Field of Search 269/55, 74; 308/3.6, 3.8; 312/21, 27, 28, 29; 112/217.1; 248/117.1, 117.2, 117.6, 117.7

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ABSTRACT: A cliplike arrangement is disclosed for removably mounting a tool on a work bench. In service, a clip grasps the edge of a bench. The lower part of the clip is captivated by an axle and roller to a trolley arrangement mounted to the underside of the bench. To remove the tool from service for storage beneath the bench, it is withdrawn with the clip from the edge of the bench and swung down to depend upon the roller. It may then be pushed back upon the track as far as desired.



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SHEET 1 OF 2

Fig. 1

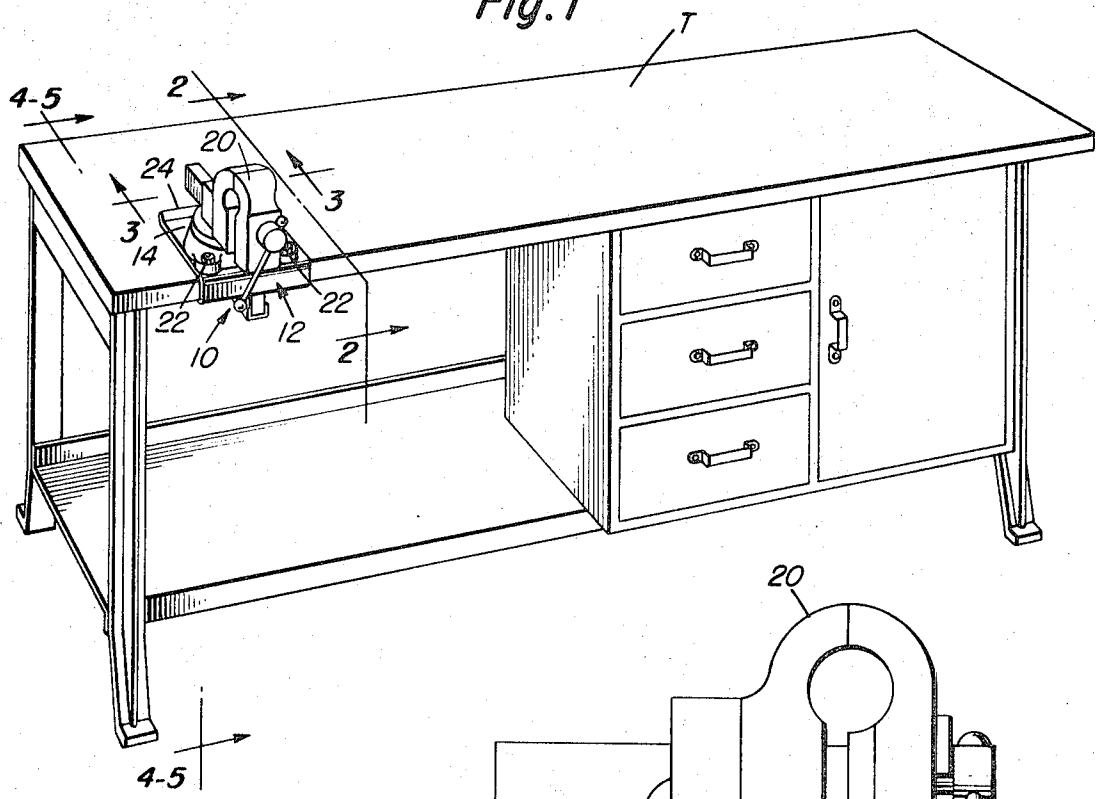


Fig. 2

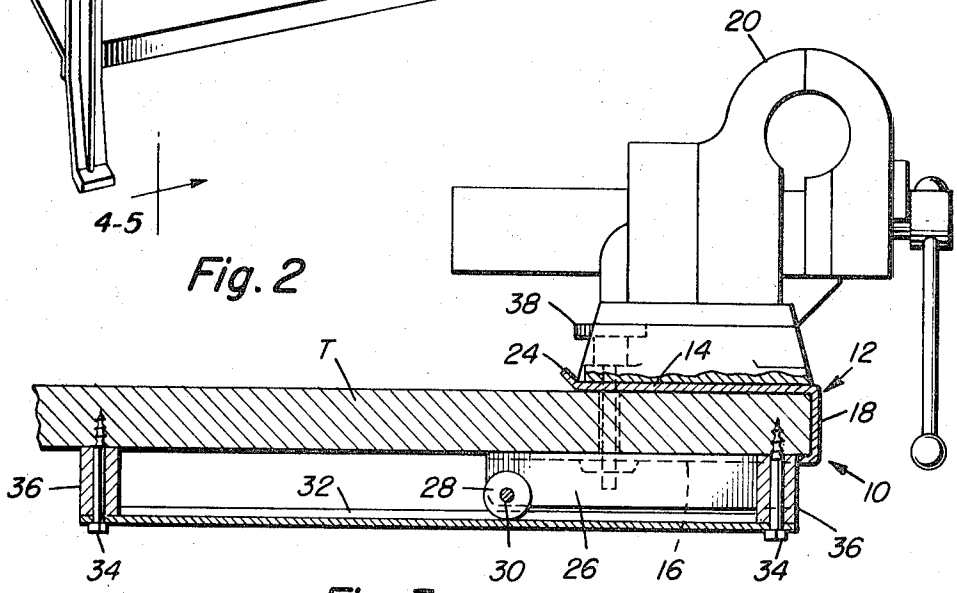
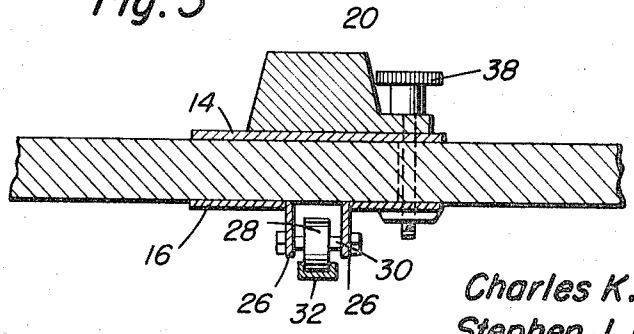


Fig. 3



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Fig. 5

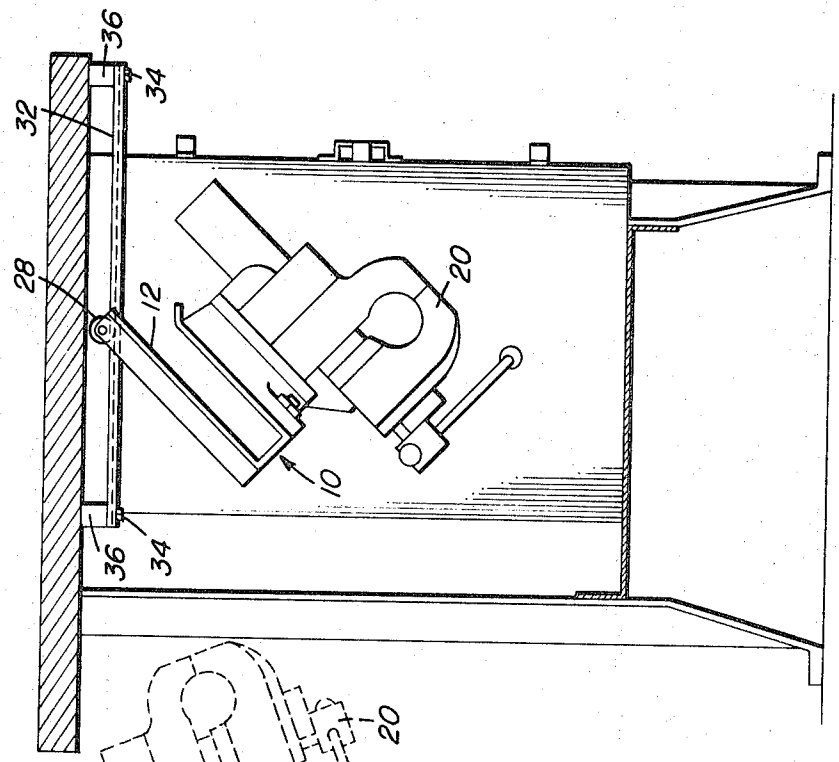
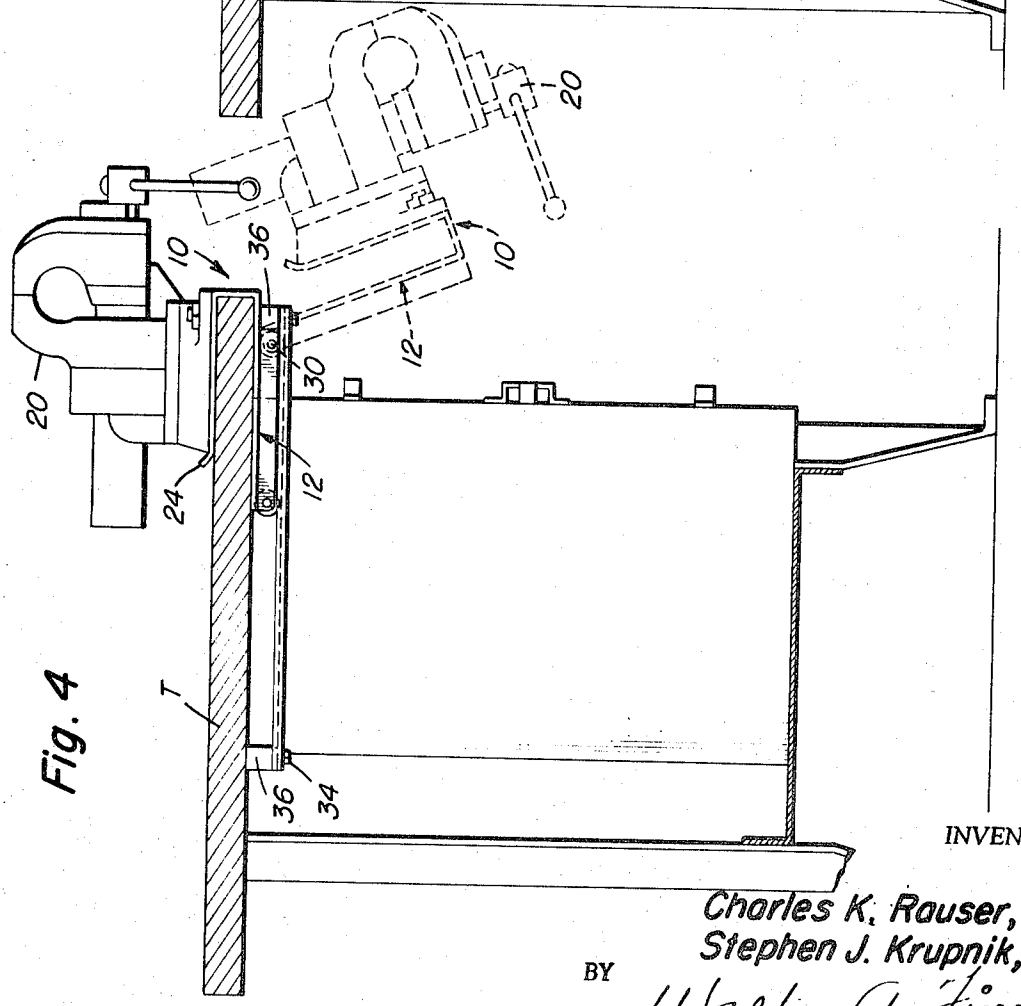


Fig. 4



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TOOL STORAGE FIXTURE

This invention relates generally to tools, and more particularly it pertains to a trolley arrangement by which a bench machine may be stored under the bench or put in service on top with a minimum of handling.

Where bench space is at a premium, as in a home workshop, it is often desired to provide only a temporary mount for a vise or other occasionally used machine. The usual clamp screw arrangement serves adequately for small vises but for a heavy item, such as a large vise, grinder, drill stand and the like, such arrangement is impractical and the danger of dropping the machine is great.

It is an object of this invention, therefore, to provide a novel mount for removably securing machines to the edge of a bench and for captively securing them for storage on a trolley therebeneath.

Other objects and attendant advantages of this invention will become more readily apparent and understood from the following detailed specification and accompanying drawings in which:

FIG. 1 is a perspective view of a work bench equipped with the novel tool storage fixture;

FIG. 2 is an enlarged longitudinal section taken on line 2–2 of FIG. 1 and showing the tool in the service position;

FIG. 3 is a transverse section taken on line 3–3 of FIG. 1;

FIG. 4 is a cross section view taken on line 4–4 of FIG. 1 and showing in phantom lines an intermediate position in the transfer of the tool from service to storage position; and

FIG. 5 is a drawing similar to FIG. 4 but showing the tool in the final storage position.

Referring now to the details of the drawings, reference numeral 10 indicates generally the tool storage fixture of this invention. This fixture 10 consists of a bench-edge-gripping tempered steel clip 12 having upper and lower flats 14 and 16, respectively, as shown best in FIG. 2. These flats 14 and 16 are held spaced by the thickness of a typical work bench top T by a connecting web 18.

The tool 20, in this case a heavy bench vise, is secured to the upper flat 14 by flathead machine screws and nuts 22. A lip 24 is formed up at the rear edge of the top flat 14.

A pair of spaced flanges 26 extend downwardly from the lower flat 16 and run from the front to the rear thereof. These serve to strengthen it as well as to support a roller 28 on an axle 30 at the rear end.

As shown best in FIGS. 2 and 3, the roller 28 operates along a narrow channel track 32. The ends of the track 32 are supported from the underside of the bench top T by lag screws 34 and spacers 36 which also serve as stops to limit the operating range.

The operation of the fixture 10 is best described in connection with FIGS. 4 and 5. The solid lines in FIG. 4 show the fixture 10 in the service position, with the clip 12 pressed fully over the edge of the bench top T, with the lip 24 facilitating this operation.

To remove the tool 20 from the service position to a storage position underneath, the tool 20 with the clip 12 is withdrawn from the front edge of the bench top and swung downward to pivot about the axle 30 as shown in the phantom lines of FIG. 4.

Then, as shown in FIG. 5, the tool 20 thus supported on the roller 28 may then be pushed back with little effort to roll along the track 32 to a place of storage underneath leaving the upper side of the bench top T completely clear.

If it is desired to assure that the tool 20 does not move forward under some force of an operation, such as the forward and backward stroking of a saw, a pin 38, which may take the form of a threaded thumbscrew, may be inserted through the clip 12 passing through the bench top T. This pin 38, if threaded, may conveniently replace one of the tool mounting screws 22 as depicted in FIGS. 2 and 3.

A wider tool such as a small bench Miller or jeweler's lathe may be accommodated by making the clip 12 wider and securing plural pairs of flanges 26 to the lower flat. A corresponding number of tracks 32 will, of course, be required with the tool 10 then depending in the stored position from more than one roller 28. Alternatively, two or more spaced fixtures 10 operating together may be used. Other uses will suggest themselves, for example the mounting of a typewriter, pencil sharpener, or kitchen mixer.

Obviously many modifications and variations of the present invention are possible in light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims the invention may be practiced otherwise than as specifically described.

We claim:

1. A tool storage fixture, comprising, clip means for mounting a tool fixture, said clip means having parallel spaced upper and lower flat members connected together for receiving therebetween a support member, spaced flanges extending downwardly from said lower flat member and extending lengthwise thereof, roller means positioned between said spaced flanges and mounted thereto for rotation, and channel track means positioned below said roller means extending past the opposite ends of said lower flat member for guiding said roller means.

2. A tool storage fixture as recited in claim 1, and additionally stop means positioned at the opposite ends of said channel track means for limiting the movement of said roller means along the length of said channel track means.

3. A tool storage fixture as recited in claim 1, wherein said clip means is removably mounted to said support member.

4. A tool storage fixture as recited in claim 1, wherein said channel track means is secured to said support member.

5. A tool storage fixture as recited in claim 4, and additionally limit means positioned at opposite ends of said channel means for limiting the movement of said roller means along the length of said channel track means.

6. A tool storage fixture as recited in claim 5, wherein said clip means is removably mounted to said support member.

7. A storage fixture, comprising, removably mounted means for mounting an object to be stored, said removably mounted means having parallel spaced upper and lower flat members connected together for receiving therebetween a support member, roller means mounted to said lower flat member and arranged for rotation, and track means positioned below said roller means and extending past the opposite ends of said lower flat member for guiding said roller means.