Dec. 2, 1952 R. M. STARBUCK ET AL 2,619,858

PORTABLE PIPE VISE

Filed Nov. 29, 1949

FIG. 1

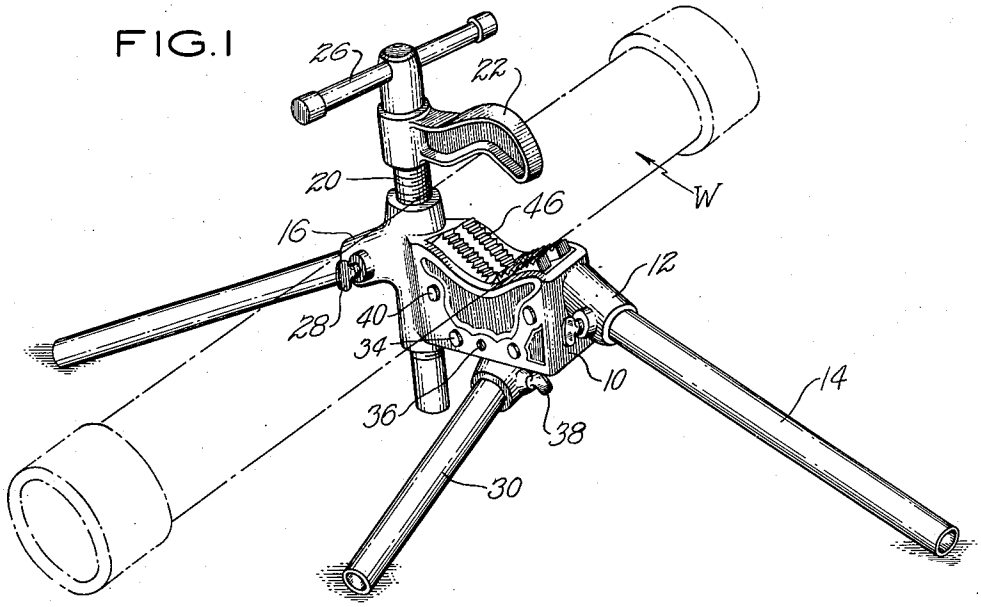


FIG. 2

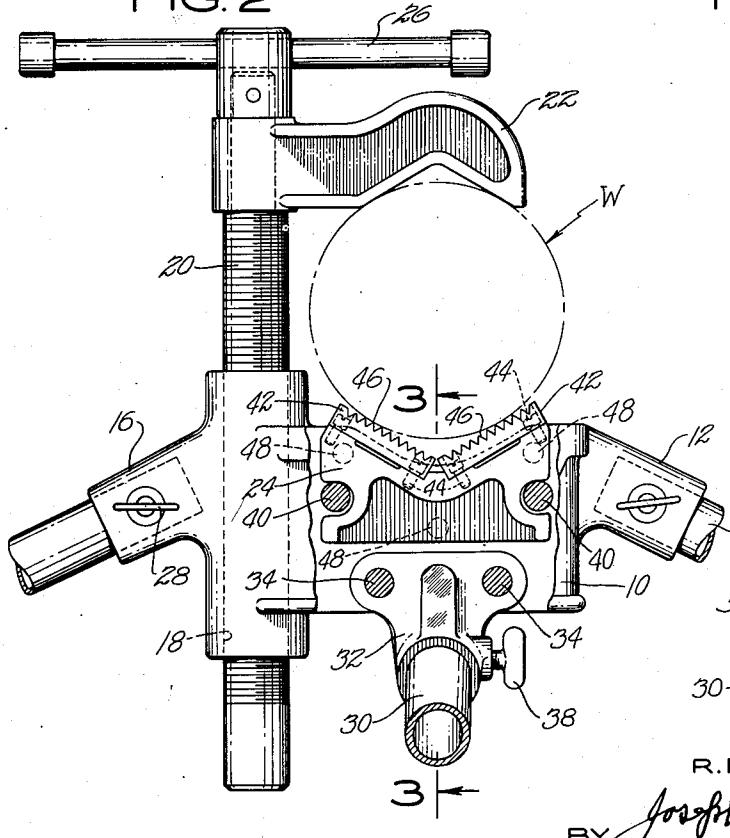
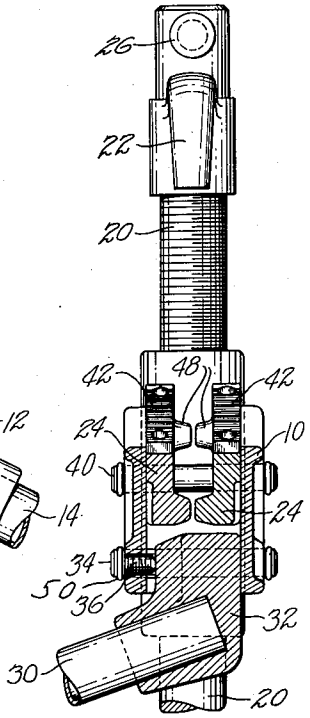


FIG. 3



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PORTABLE PIPE VISE

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3 Claims. (Cl. 81—19)

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This invention relates to work-holding vises and more particularly to a vise adapted for pipes and which may conveniently be disassembled for transportation.

A primary object of the present invention is to provide a convenient pipe clamping vise having floating or self-adjusting jaws adapted to firmly grip circumferential surfaces of pipes of varying diameters.

A feature that enables the above named object to be accomplished is that the vise has a hollow body member within which are mounted two jaws in side by side relation, the mounting of these jaws permitting individual free adjustment laterally to contact the work piece being clamped.

Another feature that is important is that the vise is provided with three demountable legs and with a top clamping jaw mounted on an adjusting or clamping screw, the jaw being rotatable for angular adjustment above and in opposed relation to the laterally adjustable jaws in the hollow body member.

With the above and other objects in view, the invention may include the features of construction and operation set forth in the following specification and illustrated in the accompanying drawing.

In the accompanying drawing annexed hereto and forming a part of this specification, I have shown the invention embodied in a demountable and transportable vise for plumbers, pipefitters, etc., but it will be understood that the invention can be otherwise embodied and that the drawing is not to be construed as defining or limiting the scope of the invention, the claims appended to this specification being relied upon for that purpose.

In the drawing:

Fig. 1 is a perspective view of a complete vise made in accordance with the present invention;

Fig. 2 is a fragmentary view in elevation, certain parts being broken away to show the vise jaws and their adjustable mounting, certain parts being shown in section and

Fig. 3 is an elevation at right angles to the view shown in Fig. 2 and partially on the plane of line 3—3 in Fig. 2.

In the above mentioned drawing, there has been shown but one embodiment of the invention which is now deemed preferable, but it is to be understood that changes and modifications may be made within the scope of the appended claims without departing from the spirit of the invention.

The embodiment of the invention illustrated in

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the drawing is a preferred form of the invention and includes a box-like body member 10 open at the top and bottom, the opening extending vertically through the member and being rectangular in outline. Integral with this body member 10 on one side 12 is a lug having an obliquely disposed cylindrical opening into which may be fitted and clamped a length of pipe or rod 14 to form a supporting leg. Directly opposite this first lug 12 is another lug 16 also provided with an obliquely disposed opening for a second supporting leg 14. In this second lug is also provided a threaded hole 18 within which operates a vertical threaded member forming a clamping screw 20. Swingable and slidable on this threaded member 20 is a clamping jaw 22 cooperating to secure a pipe or other cylindrical member W in position against lower jaws 24 presently to be more specifically described. To actuate the clamping jaw 22, a handle 26 of standard or conventional form is provided on the upper end of screw 20. To clamp the upper ends of the supporting legs 14 in position within their lug openings, wing headed screws 28 are provided as shown.

The third supporting leg 30 may be secured within an oblique opening in an inserted member 32 retained in position within the body member 10 on pins 34 extending from one wall to the other of the body member. A set screw 36 may also be provided to force the lug member 34 against one of the inner faces of the body member 10. This third leg 30 may be clamped in position within the inserted lug member by means of a wing headed screw 38.

The lower jaws 24 of the vise are housed within the body member 10 and are held loosely in place in side by side relation to each other on pins or shafts 40 extending from front to back of the body member 10. These pins 40 enter semi-circular recesses formed on opposite sides of the jaws 24 as will be seen in Fig. 2. The recesses are sufficiently larger than the diameter of the pins 40 so that the jaws 24 have a limited lateral and horizontal movement.

On upper bevelled surface of the jaws 24 are mounted gripping members 42 secured in place by screws 44 and having small teeth or serrations 46 on their upper or free surfaces. By means of these serrations 46 and the lateral movement permitted the jaws 24, a work piece W may be clamped against rotation by tightening the upper jaw 22 against the work piece. As shown, the work engaging surface of the upper clamping jaw is bevelled and free for an-

gular movement about the axis of screw **20**. By means of the individual lateral movement permitted the lower jaws **24** there will be equal engagement of the work piece W with both serrated members **42** on the bevelled surfaces of the lower jaws **24**. To retain the lower jaw members **24** spaced apart as seen in Fig. 3, projections **48** on their inner surfaces are provided and are preferably cast integrally with the jaws. Three of these projections are shown which act to maintain the jaws **24** suitably spaced apart and in substantially vertical positions.

The pins **34** may be retained in position by snap rings **50** on opposite ends so that the rings will bear against the opposite outside surfaces of the body member **10**.

I claim as my invention:

1. A work clamping vise comprising a hollow body member, a pair of serrated jaws disposed side by side and laterally adjustable within said body member, means loosely supporting said jaws in position within said body member, means to maintain said jaws in spaced apart positions, a clamping jaw disposed above said laterally adjustable jaws, and threaded means to vertically adjust the position of said clamping jaw, said threaded means including a vertically threaded opening in said hollow body member at one side of said adjustable jaw.

2. A work clamping vise comprising a hollow body member, pins extending between opposite faces thereof, laterally adjustable jaws loosely mounted on said pins for limited individual

movement, abutments on the adjacent surfaces of said jaws to retain said jaws in parallel and spaced relation, supporting legs detachably mounted on said body member, and a clamping jaw adjustably mounted on said body member for movement toward and from, and co-operating with said laterally adjustable jaws.

3. A work clamping vise comprising a hollow body member, oblique lugs outstanding from opposite sides therefrom, removable supporting legs mounted within said lugs, pins extending between opposite sides of said body member, laterally adjustable jaws loosely mounted on said pins, a lug member detachably supported within said body member and removably mounting a supporting leg for said vise, means to clamp said lug member against an internal side surface of said hollow body member, and a clamping jaw adjustable toward and from said laterally adjustable jaws.

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