

Feb. 14, 1933.

F. A. TROWBRIDGE

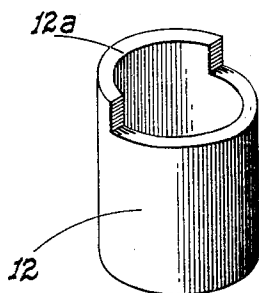
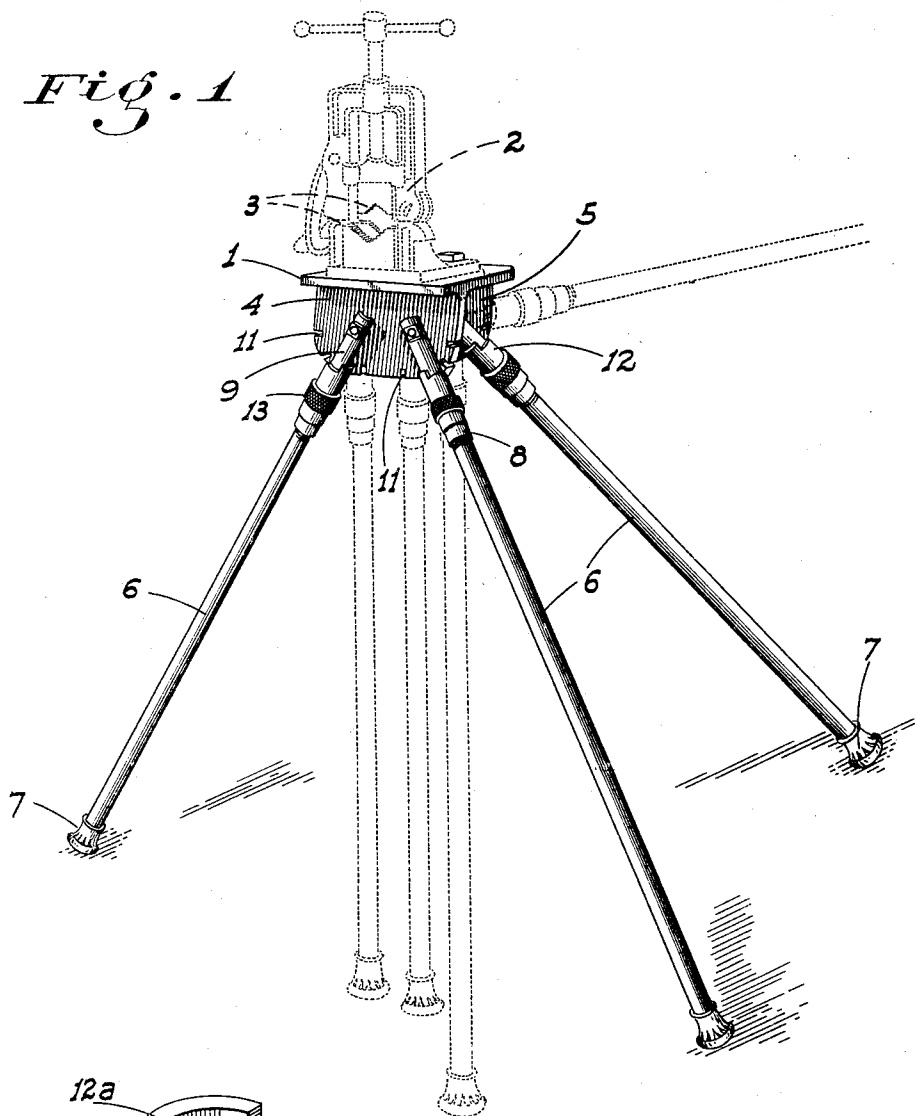
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PORTABLE AND ADJUSTABLE VISE STAND

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2 Sheets-Sheet 1

*Fig. 1*



*Fig. 4*

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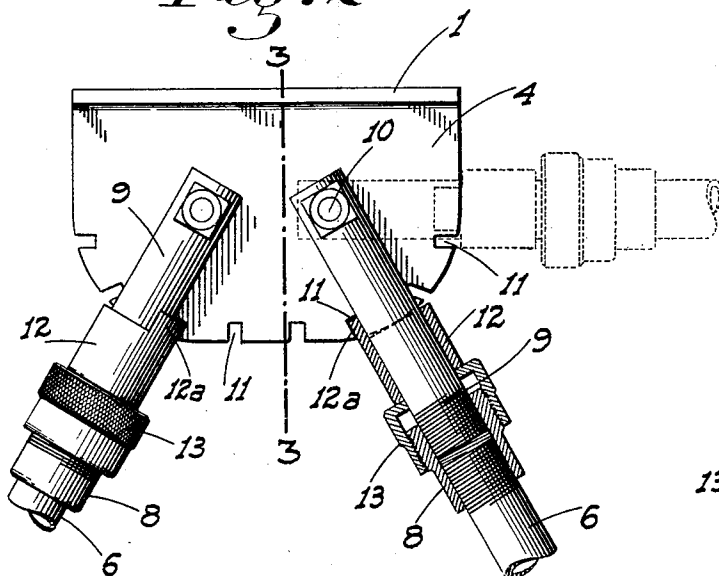
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PORTABLE AND ADJUSTABLE VISE STAND

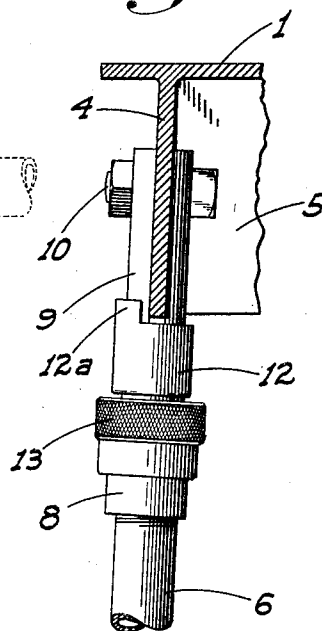
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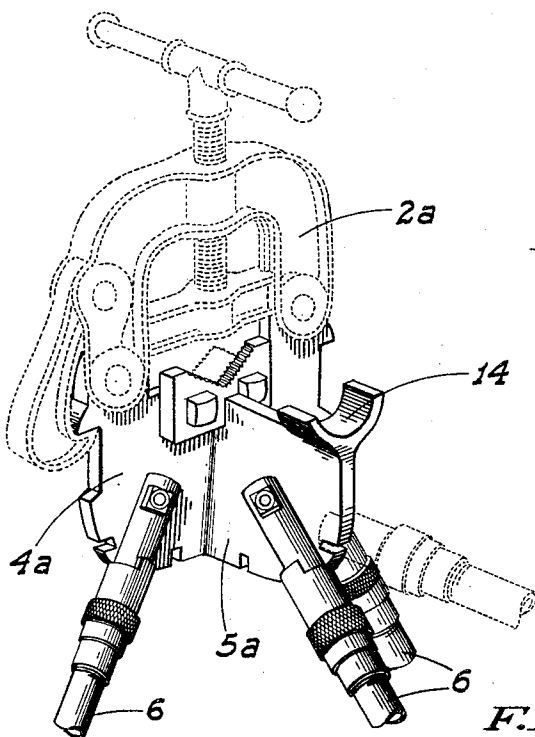
*Fig. 2*



*Fig. 3*



*Fig. 5*



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# UNITED STATES PATENT OFFICE

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## PORTABLE AND ADJUSTABLE VISE-STAND

Application filed January 8, 1932. Serial No. 585,424.

This invention relates to improvements in portable and adjustable stands for pipe vises such as are used by plumbers on the job, when a temporary support for the vise is necessary when working on pipes.

The principal object of my invention is to provide a stand of this character of the three-legged or tripod type in which the legs are so mounted that while they may be easily and quickly adjusted to a number of different positions, they will be positively held from slipping from any such position; thus providing a rigid support for the vise which will withstand the various strains to which such stands are subjected when being used.

The adjustability of the legs to different positions enables the height of the stand itself to be altered to various levels as will be evident, which gives the device a wide range of usefulness under different conditions which may be encountered on the job.

The legs are also arranged so that they may be readily folded so as to lie parallel to each other in very compact relationship; and despite its substantial and rigid character the device is relatively light and may be easily carried by one man.

A further object of the invention is to arrange the stand or vise supporting bracket relative to the legs so that the vise itself may be mounted in such a position that cutting, threading or tapping operations may be conveniently performed very close to the vise, without the handles of the tap or die interfering with the supporting legs. Short nipples, couplings etc. can thus be directly engaged with the vise and worked on without the necessity of using a chuck as must ordinarily be done.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views:

Fig. 1 is a perspective view of my improved stand as set up and ready for use.

Fig. 2 is an enlarged front view of the bracket of the stand with the adjacent portions of the legs.

Fig. 3 is a cross section on the line 3—3 of Fig. 2 showing the leg holding sleeve released and a leg in its vertical position.

Fig. 4 is a perspective view of a leg locking and locating sleeve detached.

Fig. 5 is a fragmentary perspective view of a modified form of stand.

Referring now more particularly to the characters of reference on the drawings and particularly at present to Figs. 1 to 4, the stand comprises a supporting bracket for the vise which consists of a top plate 1 on which the vise 2 is mounted so that its jaws 3 are as close to the front as possible, a front transversely extending plate 4 depending from the top plate at a slight forward angle from a point some distance back from the front edge of the said top plate, and a longitudinal plate 5 also depending from the top plate back of and centrally disposed relative to the front plate. This bracket is an integral casing or otherwise has all the parts rigidly connected together; and it will thus be seen that the form and arrangement of said parts gives great rigidity and strength with a minimum of weight.

The front plate 4 supports a pair of transversely extending legs while the back plate 5 supports the third rearwardly and longitudinal extending leg as shown in Fig. 1. Each leg consists of a length of pipe 6 or similar tubular member, having a cushion and non-slip foot or pad 7 on its lower end. Said leg member is connected at its upper end by a sleeve coupling 8 to a short split length of piping 9 which straddles the corresponding supporting plate and is swivelly connected thereto by a bolt 10 or the like.

The bottom and side edges of the plates 4 and 5 are curved concentric with the pivot bolts of the legs and are provided with a form of rectangular notches or slots 11; the sets of notches for the different legs being symmetrically disposed relative to each other. Slidable and turnable on each leg mem-

ber 9 between the coupling and its supporting plate is a sleeve 12 formed about its upper end with an upwardly projecting extension 12a. This extension is less than one-half the circumference of the sleeve in extent while its height is slightly less than the depth of the notches. When the sleeve is turned so that the extension is on one side or the other of the supporting plate, as in Fig. 3, said leg may be freely turned to any position, as will be evident. Upon aligning the leg so that any desired slot is positioned in the plane of the sleeve extension, and then turning said sleeve a quarter turn, said extension will enter such slot as shown in Fig. 2 and thus positively locate the leg at the desired angle and prevent the same from moving from its position, no matter how much pressure or strain may be placed on the stand.

In order to enable the sleeve to be clamped tightly against the lower edge of the plate, if desired, I may adjustably screw a collar 13 on the upper portion of the coupling 8, so as to engage the lower edge of the sleeve. By thus clamping the upper edge of the sleeve proper against the outer edge of the supporting plate, the legs may be held very rigid and any possible movement thereof, no matter how slight, is prevented. Under ordinary conditions, as when the stand is set up for a short time only, it would probably be unnecessary to thus clamp the sleeve and the collars may be retracted so that the sleeve may turn freely about the legs but without any appreciable amount of longitudinal movement thereon, which is not necessary in any event.

The notches or slots 11 are positioned so that the legs may be held in horizontal or vertical position as well as a number of intermediate positions. When the legs are vertically disposed they lie close to each other and are relatively folded as indicated in Fig. 1 so that the device is then in compact form and may be readily carried or stored. When the legs are set horizontally the vise is of course close to the floor or ground—a position sometimes convenient as when working on piping lifted from a trench, etc. The intermediate positions of the legs are of course the normal operating positions, the legs then diverging so as to provide a firm and non-tipping support for the bracket and vise. The front plate 4 having a forward slope, the corresponding legs also have a forward slope, which aids in holding the stand from possibly tipping forward. The top plate of the bracket overhanging the front plate and legs, the vise is set sufficiently ahead of the upper ends of the legs so that short nipples and the like may be clamped in the vise and worked on without the legs interfering with the handles of the die or other tool when rotated.

In Fig. 5 the same construction, arrangement and adjustment of the legs 6 is retained, but the top plate of the stand or bracket is omitted. Instead the front plate 4a of the bracket forms the base portion of the vise 2a, and the back plate 5a from which the rear leg depends supports a pipe engaging cradle 14 at the back. This construction is preferably used for the larger sizes of the vise and the advantages obtained with the leg mounting and adjusting arrangement are of course the same as in the first described type.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. An adjustable pipe-vise stand comprising a vise-supporting bracket which comprises a top plate on which to mount a vise, a transversely extending plate depending from the top plate adjacent the front end of the same, and a longitudinally extending back plate depending from the top plate behind the transverse plate; a pair of legs swivelly mounted on and depending from the transverse plate in transversely spaced relation to each other, a third leg swivelly mounted on and depending from the back plate; and individual means for each leg to positively hold the same against swivel movement from any one of a number of predetermined different positions; the transverse plate and the corresponding legs being disposed with a forward slope toward their lower ends.

2. An adjustable stand comprising a bracket which includes substantially vertical depending plates; legs to support the bracket, each leg including an upper forked portion straddling a plate, a pivot pin through said portion and the plate, the outer edge of the latter being curved concentric with the pin and having a plurality of notches cut in the same at circumferentially spaced points, a sleeve turnable on the leg immediately below the plate, and an extension on and projecting upwardly from the sleeve to engage any notch.

3. A structure as in claim 2, with a stop on the leg below the sleeve to prevent longitudinal movement of the same on the leg; said extension being of lesser extent circumferentially than half the circumference of the sleeve.

4. A structure as in claim 2, in which the height of the extension is less than the depth of the notches whereby the top of the sleeve

proper may bear against the edge of the plate, and means to clamp the sleeve against said edge at will.

5 5. A structure as in claim 2, in which the height of the extension is less than the depth of the notches whereby the top of the sleeve proper may bear against the edge of the plate, and a collar adjustably threaded on the leg below the sleeve and adapted at its upper  
10 end to engage the lower end of the sleeve.

6. An adjustable stand comprising a bracket which includes vertical depending plates; legs to support the bracket, each leg including an upper forked portion straddling a  
15 plate, a pivot pin through said portion and the plate, the outer edge of the latter having a plurality of radial notches cut therein, a sleeve turnable on the leg below the plate, an extension on and projecting upwardly  
20 from the sleeve to engage any notch, and a collar threaded on the leg below the sleeve to hold the same against downward movement and to releasably clamp the sleeve against the plate.

25 7. In a pipe vise, a lower vise member in the form of a transverse vertical plate and a longitudinally extending back plate, a lower jaw on said transverse plate, and legs swivel-ly mounted on said plates.

30 In testimony whereof I affix my signature.  
FREDERICK A. TROWBRIDGE.

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