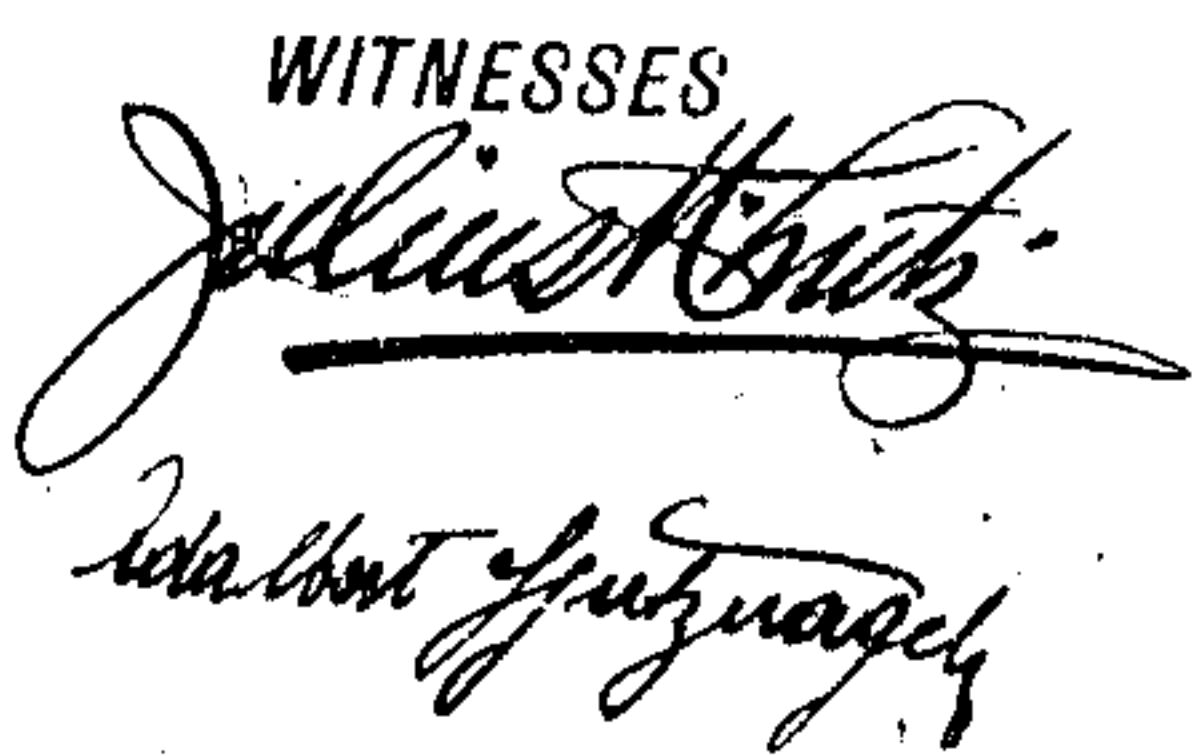


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PLUMBER'S VISE.

956,039.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FREDRICK CABLE, of Rockaway Beach, borough of Queens, city and State of New York, have invented certain new and useful Improvements in Plumbers' Vises, of which the following is a full, clear, and exact specification, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide a pipe vise of special service to plumbers and like mechanics which vise may be folded into compact form, carried conveniently in the plumber's kit and readily and securely applied to a post, joist, or any other convenient object either in a shop, building or yard.

Heretofore vises of this sort have been made incapable of being folded compactly and adapted to be secured only by means of lag screws which not only materially injure the part into which they are driven, but are also very liable to become loose so that the vise during the use thereof is frequently torn from its setting.

My invention seeks to overcome these disadvantages. I attain this end by mounting the vise proper on a base in such a way that it may be folded flat against the same when not in use and providing the base with peculiar folding devices by which it may be fastened securely to any desired object without injuring such object, and without danger of the fastenings being torn therefrom.

My invention involves various other features of importance all of which will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is had to the accompanying drawings which illustrate as an example the preferred embodiment of my invention, in which drawings,

Figure 1 is a perspective view of the device showing it in operative position; Fig. 2 is a side view showing the device folded; Fig. 3 is a detail section showing one of the tie rods of the mounting means; and Fig. 4 is a detail section on the line 4-4 of Fig. 1.

10 indicates the base of the vise which is preferably in the form of a flat plate. On this base is mounted by a hinge or hinges 11 the stationary jaw 12 of the vise. The hinges are located adjacent to one edge of the base 10 and so disposed that said jaw may be thrown down on the base in position substantially parallel therewith. The hinges

are also arranged at the inner side of the jaw so that when the jaw is thrown up to vertical position as shown in Fig. 1 it cannot swing outward beyond said position. 60 The jaw 12 is provided with side members 13 rising therefrom and to one of these side members is pivoted a yoke 14. The opposite side member 12 is bifurcated to receive the corresponding end of the yoke 14 and a removable pin 15 is provided to hold the yoke 14 rigidly in the position shown in Fig. 1. Upon removal of said pin, however, the yoke 14 may be thrown into the open position so as to allow a pipe to be readily 70 inserted by a sidewise motion into the space between the jaws of the vise. The movable jaw 16 of the vise is actuated by the usual screw 17 operating in the yoke 14 and runs on guides 13^a and 14^a formed on the inner 75 surfaces of the side members 13 and arms of the yoke 14. Said guides 13^a and 14^a have beveled edges matching with each other as shown by the broken lines in Fig. 1 so that they may readily separate when the yoke is 80 thrown open, but when the yoke is in closed position the guides closely abut each other to form a continuous guiding means for said jaw 16. When the yoke is to be thrown open the jaw should be moved upward into 85 the yoke so that it will move with the same.

To the edge of the base 10 on which the stationary jaw 12 is mounted are pivoted slotted arms 18 rigidly connected at their outer ends by a cross member 19^a the three 90 parts forming a U-shaped member as shown. The pivoted ends of said arms 18 are provided with hooks or other equivalents 19 which when the arms are thrown down to the active position shown in Fig. 1 swing 95 upward and engage in eyes 20 secured to the side edges of the stationary jaw 12. This engagement of said hooks and eyes 19 and 20 or their equivalent means serves to hold the stationary jaw from falling back 100 upon the base 10, and insures the rigid position of the vise proper when operative, at the same time enabling this part to be easily folded down when not in use as in the manner previously described. The arms 18 form 105 part of the means for attaching the device to a support and coact with a U-shaped clamp member 21. This clamp member has screws 22 passing through it and provided with nuts 23 adapted to bear on the outer 110 sides of the clamp member 21. At their inner ends said screws are provided with

tapering heads 24 which engage the correspondingly shaped slots in the arms 18. This allows the clamp member 21 to be freely adjusted on the arms 19^a and fastened 5 securely at any desired position thereon by tightening the nuts 23.

At the edge of the base 10 opposite the edge on which the vise proper is mounted are located two tie-bolts 25 which are pivoted to the base 10 through an off-set or eccentric connection 26 shown best in Fig. 3, such connection allowing the tie bolts 25 to swing down from the base as shown in Figs. 1 and 3 and also allowing the tie bolts 15 to be moved into the folded position shown in Fig. 2 where they engage the underside of the base and lie snugly against the same. The clamp member 21 has at its transversely disposed free portion a flange or other 20 means 27 in which openings may be formed to receive the ends of the tie rods and said tie rods are fitted with nuts 28 or other means for adjustably fastening them to said flange or other means 27 on the clamp 25 member 25.

In the use of the invention when the same is to be folded for easy transport the slotted arms 18 are moved so that they lie along the side edges of the base 10, the 30 hooks 19 disengaging the eyes 20 and the nuts 23 of the clamp member 21 are loosened so that said member may also be swung with its side portions in parallelism with the arms 18 and its cross piece at its end 35 extending past the edge of the base 10 opposite the edge to which the stationary part of the vise is attached. Finally the tie rods 25 are swung under the base and if desired one of the nuts 28 tightened against the edge 40 of the base as shown in Fig. 2 to hold the tie rods from swinging freely.

To use the device any convenient object such as a beam, joist, post or the like is selected as the support and the parts 18, 21 45 and 25 moved outward from the base 10 in the manner shown in Fig. 1, the post or other support passing between the base and clamp member 21 and also between the arms 18 and tie rods 25 in the manner for example 50 as indicated by the broken lines 29 in Fig. 1. The base 10 and clamp 21 are then snugly pressed against the joist or other support and the nuts 23 and 28 then tightened so that the base is clamped rigidly to the sup- 55 port by a means completely embracing the same and therefore absolutely secure. Previous to this operation the vise proper should have been thrown out to its operative position perpendicular to the base so that 60 when the arms 18 were moved downward to the position shown in Fig. 1 the hooks 19

engage the eyes 20 thus locking the vise in active position in the manner explained. It will be seen that this mounts the vise so that it may be readily operated in the usual man- 65 ner and mounts it without the necessity of lag screws which, as explained, are not only insecure, but mark and injure the part into which they are driven. It will also be seen that the device may be lightly constructed, 70 for example of malleable iron castings and folded into most compact form so that it may be placed with the mechanic's kit in the tool bag usually employed by such opera- 75 tives. Further, the device of course is not limited to use on a horizontal support in the manner indicated in Fig. 1, but may be applied with equal facility and advantage to vertical supports or indeed to supports dis- 80 posed in any direction.

Having thus described my invention what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a vise, the combination with the jaws thereof of a base on which they are 85 mounted and toward and from which they are adapted to swing, means for fastening the base in place and devices for securing the jaws in operative position, such devices being active upon the operation of said means 90 for holding the base in place.

2. In a vise, the combination with the jaws thereof, of a base on which said jaws are hingedly mounted, clamping means to hold 95 the base in place, said clamping means including a swinging arm, a device on said arm adapted to engage said jaws when the arm is extended into operative position by which device to hold the jaw from swinging 100 movement on the base.

3. In a vise, the combination with the jaws thereof of a base on which they are hingedly mounted, means for holding the base in po- 105 sition including a swinging arm and a hook on the arm adapted when the arm is extended into operative position to engage an eye on the jaws of the vise to prevent said jaws from swinging on the base.

4. In a vise, the combination with the jaws thereof, of a base on which they are mounted, 110 arms attached to the base, a clamp member opposing the base, means for adjustably connecting the clamp member with said arms and tie rods pivoted to the base and adjustably connected with the clamp member. 115

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDRICK CARLE.

Witnesses:

ISAAC B. OWENS,
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