

E. E. BECK,
POST PIPE VISE.
APPLICATION FILED JULY 16, 1915.

1,168,049.

Patented Jan. 11, 1916.

Fig. 1.

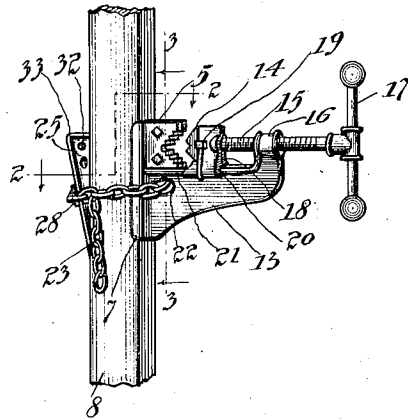


Fig. 2.

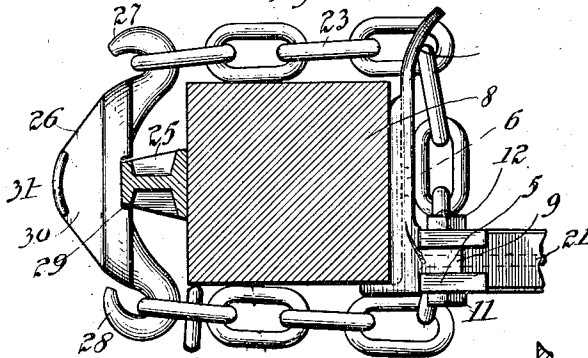


Fig. 5.

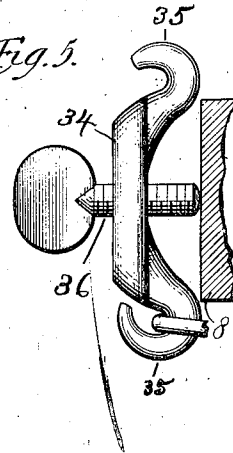


Fig. 3.

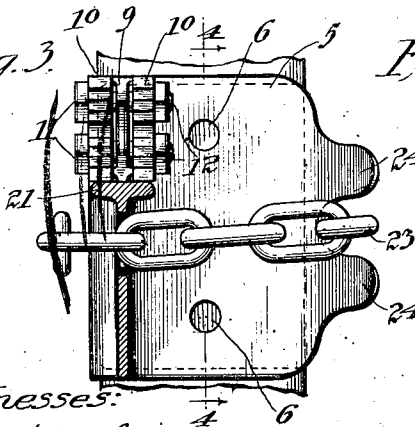
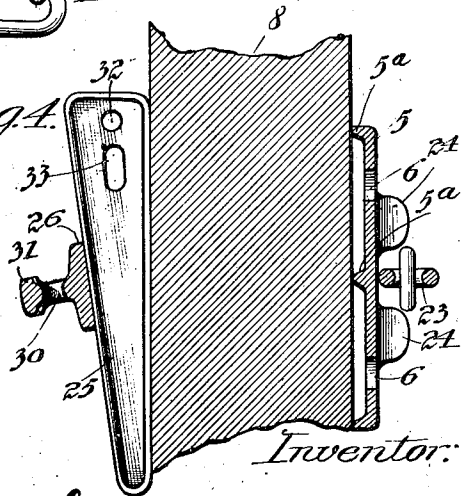


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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POST PIPE-VISE.

1,168,049.

Specification of Letters Patent.

Patented Jan. 11, 1916.

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To all whom it may concern:

Be it known that I, EDWARD E. BECK, a citizen of the United States, and resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Post Pipe-Vises, of which the following is a full, clear, and exact specification.

This invention relates to improvements in means for securing pipe vises to posts, by the use of a chain passed around the vise and post, for sustaining the vise against the post and in its operative position.

The prime object of this invention is to provide a means by which a chain may be successfully utilized for rigidly securing the vise to posts differing in cross section, composed of wood or metal, and in such a manner that the vise may be quickly secured to the post and sustained in its operative position without obstructing the introduction of the pipe to, or its removal from the vise and particularly to the instruments employed by the operator upon the pipe.

A further object of my invention is to provide a means for tightening a vise to a post by means of a wedge sustained against lateral movement when forcing it to and while in its operative position against the post.

Another object of my invention is to provide a means connecting and spacing the ends of the chain, and by means of which the chain is connected and sustained in its operative position embracing the post, and which at the same time provides a bearing surface between which and the post is tightened a wedge securing the chain and a vise in its operative position thereto, and at any predetermined height thereon.

With these ends in view, my invention finds embodiment in certain features of novelty in the construction, combination and arrangement of parts by which the said objects and certain other objects are attained, all as hereinafter fully described with reference to the accompanying drawings, and more particularly pointed out in the claims.

In said drawing: Figure 1 is a perspective view of a post vise in which my invention finds embodiment secured in its operative position to a post. Fig. 2 is an enlarged transverse section taken on the line 2—2 of Fig. 1. Fig. 3 is a vertical section taken on the line 3—3 of Fig. 1, Fig. 4 is a vertical section taken on the line 4—4 of Fig. 3, and

Fig. 5 is a side elevation of a modification of the tightening means for the vise.

Similar characters of reference indicate the same parts in the several figures of the drawing.

The pipe vise shown in the drawing is of the construction commonly used by plumbers, that is to say consists of a base plate 5, provided with the usual strengthening ribs 5^a and screw holes 6—6 through which to pass bolts for securing the vise on top of a table, bench or ledge, and with a flange 7 adapted to embrace the edge of a bench or table, or as shown in the drawings, one side of a post 8, projecting from which base plate is a lug 9 upon each side of which is clamped fixed jaws 10—10 by means of bolts 11—11 and tightening nuts 12—12. From the base plate projects a bracket arm 13 forming a trackway for a movable jaw 14 actuated by means of a screw shaft 15 working in a screw-threaded hub 16 on the outer end of the bracket and provided with a handle 17, for convenience in moving the movable jaw toward and from the fixed jaw of the vise. The movable jaw 14 of the vise is clamped between two plates 18 by means of a bolt 19 passing therethrough, which plates are hung upon the screw-threaded shaft 15, and provided with hook shaped ends 20 embracing a flange 21 at the opposite sides of the bracket.

There is nothing new in the construction and operation of the vise other than that the bracket arm 13 is provided with a perforation 22 laterally therethrough for the passage of a chain 23 and that the base plate 5 is provided at its outer edge with lips 24—24, between which the chain 23, when in its operative position is sustained against lateral movement, the lips 24—24 being preferably bent slightly above the plane of the face of the base plate to better hold the chain when a post is so wide that the ends of the lips do not project outwardly beyond the same.

In order to utilize a wedge as the best means for tightening a chain for adjustably sustaining a portable pipe vise to a post, my invention includes a wedge 25 the length and taper of which is sufficient to take up the slack between two or more links of the chain employed, and as a means for adjusting the chain to posts of differing diameters I employ a yoke 26 provided at opposite ends with hooks 27 and 28, upon each

of which a link of the chain may be caught and held. The inner face of the yoke is also provided with a vertical groove 29 for receiving and guiding the wedge when forced downwardly between the yoke and the post, when tightening the chain, and thereby rigidly clamping the vise to the post, the yoke being also provided with a perforation 30 and its outer edges with a flange 31, providing a convenient means for holding the yoke between the thumb and finger in its operative position when inserting and tightening the wedge between the yoke and the post. The wedge is also provided next its broad end with a perforation 32 for the same purpose, and may be with an elongated slot 33 for the insertion of a cord or small chain, as may also the perforation 30 in the yoke, for attaching them to the vise or to the chain, as may be for preventing them from being lost or mislaid. The chain 23 should be of such a length that when connected in its operative position with the yoke it is adapted to secure a vise to the largest of posts that it may be necessary to use as a support for the vise, and as it then is for the smallest of posts utilized for that purpose.

In operation with the chain passing through the perforation 22 in the post and between the lips 24—24 and with the link of one end of the chain caught in its operative position in the hook 27, the operator while pressing the vise against the post with the hook at the opposite side thereof first draws the chain taut with the force of his hands. The operator then secures the chain in this position by engaging the link adjacent to the yoke over the hook 28 followed by inserting the wedge in the groove and against the post and forcing the same downwardly until the vise is tightened in its adjusted position against the post, and so that it will thereafter remain rigidly fixed to the post until the wedge is loosened, and which will not occur accidentally, held as the wedge is between the face of the post, be it metal or wood, and against the yoke. With the chain passing through the perforation 22 in the bracket arm and between the lips 24—24 in a plane below the operative position of the jaws of the vise, as it then is, and held as the chain is closely against the base plate, it is apparent that it will afford no obstruction to the jaws, the insertion of a pipe between them, or to any of the implements employed by the operator when either cutting or screw-threading, or otherwise subjecting the pipe to any manipulation that may be desired. It should here be observed that my invention is not limited to the use of the lips for maintaining the chain against lateral movement for that when the chain has been passed through the hole in the bracket, the end secured to its hook, and

the chain tightened by the wedge, the vise will be held to the post against any such movement, notwithstanding that the lips furnish a convenient means for directing and sustaining the chain in a direct line across the base plate when conducting the adjacent end of the chain to and securing it to the yoke. Moreover it would not be a departure from the spirit of my invention to substitute for the wedge a screw bolt passing through the chain connecting-yoke and impinged against the post for tightening the chain to lock the vise in its operative position against a post, and in doing so to omit the projecting thumb piece as shown in Fig. 5. In this figure the bar 34 is provided at each end with hooks 35—35, and with a screw-threaded perforation for a screw bolt 36, working therein and projecting against the post 8, which screw-bolt on being moved inwardly toward the post will thereupon tighten the chain accordingly. The screw bolt 26 may be an ordinary screw bolt provided with an angular head or with a thumb piece as may be desired.

The device of my invention as a whole, owing to its construction and operation, has been found in practice to be not only very convenient, but a greater saver in time to plumbers in setting up their vise and especially when posts are in the immediate vicinity of their work, and as in modern buildings, they usually are.

In conclusion it may be here noted that being the first to secure a vise to a post by means of a chain passing therethrough in a plane below and away from the operative position of its clamping jaws, and whereby the former necessity of taking two or more turns of a chain about a vise is avoided, it would not be a substantial departure from my invention to connect the links of the chain directly together by a device or devices other than the yoke, and have the wedge in direct contact with the chain held against the post for tightening the vise against the post, nor does my invention of necessity require that the vise should have the flange 7 shown in the drawings, or the lips 24—24, the opposing edges of which maintain the chain and vise against lateral movement.

Having described my invention, what I claim and desire to secure by Letters Patent is:

1. A post vise, the jaw supporting arm of which is provided with a perforation transversely therethrough for the passage of a chain, a chain passing through said perforation for surrounding a post, means for connecting the links of the chain at the side of the post opposite the vise, and means adapted to tighten the chain against the post, and thereby rigidly securing the vise in its operative position to the post.

2. A device for the purposes described, 130

comprising in combination a vise, a chain, an opening through said vise for the passage of said chain, a yoke, provided with hooks, adapted to be projected through the links of and form a fastening device for the chain, and a tightening wedge, the bearing surfaces of which are opposed by the post and yoke.

3. A device for the purposes described, comprising in combination a vise provided with a perforation through the jaw supporting arm thereof forming a passage for a chain, a yoke, a chain secured to one end thereof, means for fastening the adjacent link of the tightened chain thereto, a groove in said hook, and a wedge adapted to be simultaneously tightened in said groove and against the opposing surface of a post, whereby the wedge is prevented from a lateral movement when in its operative position for tightening the vise against the post.

4. A post pipe vise provided with a perforation laterally through the jaw supporting arm thereof sustaining the jaws, for the passage of a chain and with a notch in the edge of the base plate thereof, forming a guide for said chain across the base plate, a chain, a bar for connecting the ends of said chain to the side of the post opposite the vise, and a wedge adapted to be interposed between the post and said bar for tightening the chain and the vise against the post, whereby a vise is adjusted and removably secured to a post in its operative position.

In witness whereof, I have hereunto set my hand and affixed my seal, this 14th day of July, A. D. 1915.

EDWARD E. BECK. [L. s.]

Witnesses:

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M. B. ELSNER.