June 10, 1930. G. AGOBIAN 1,763,634

VISE

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Fig. 1.

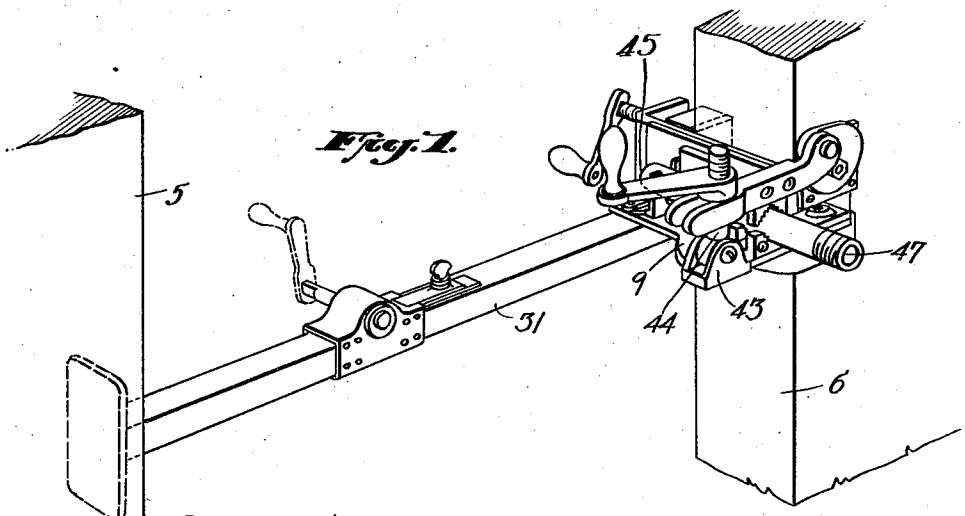


Fig. 2.

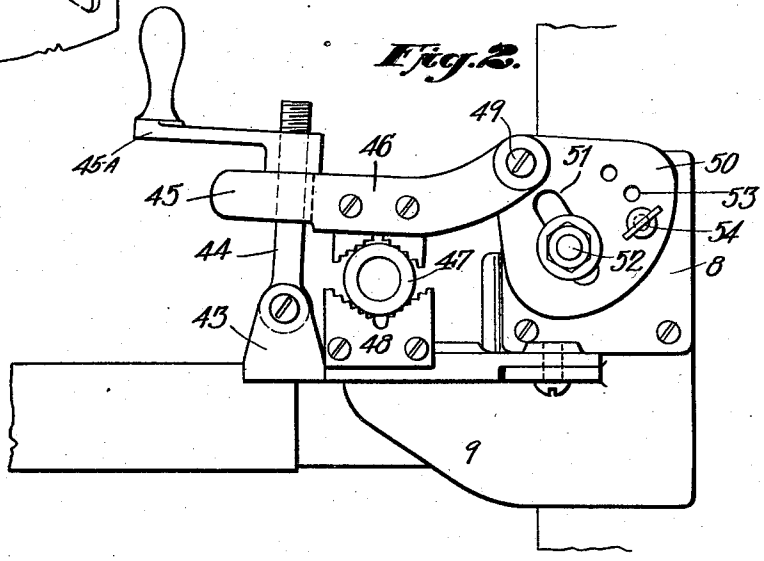
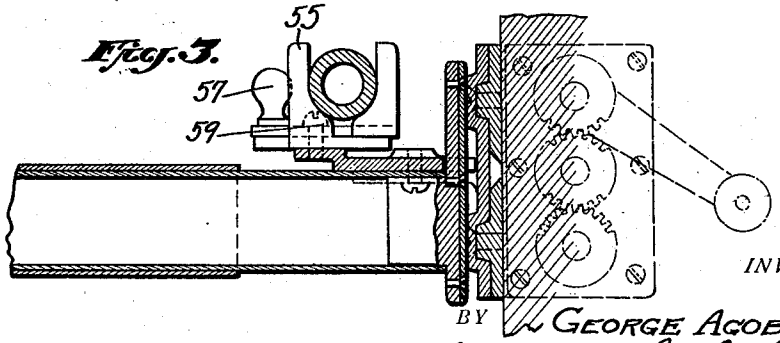


Fig. 3.



INVENTOR

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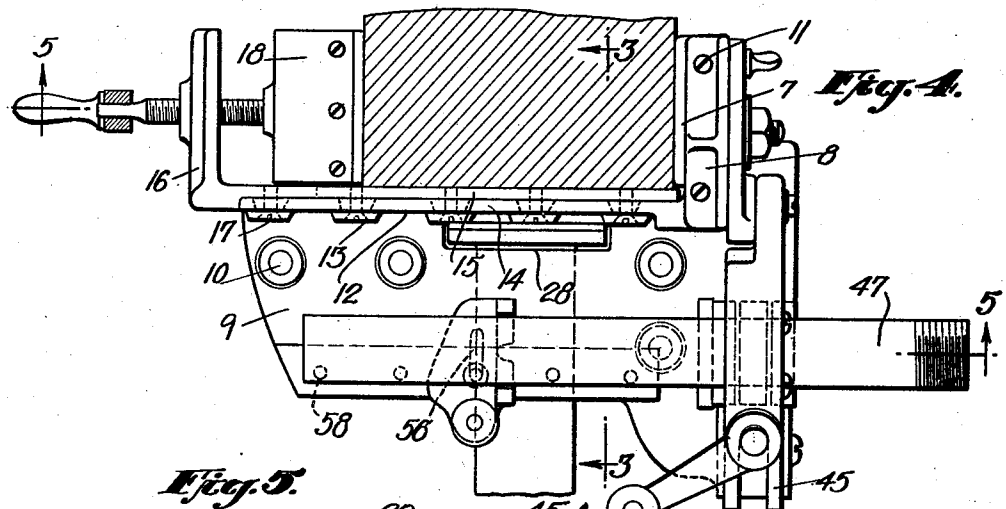


Fig. 4.

Fig. 5.

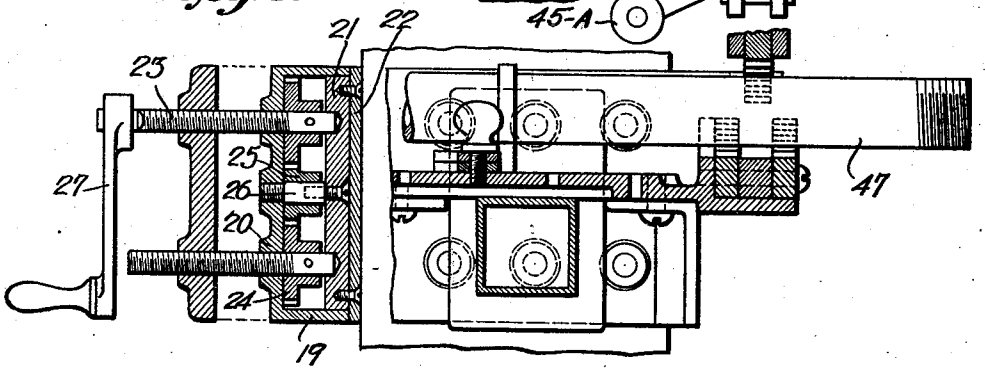
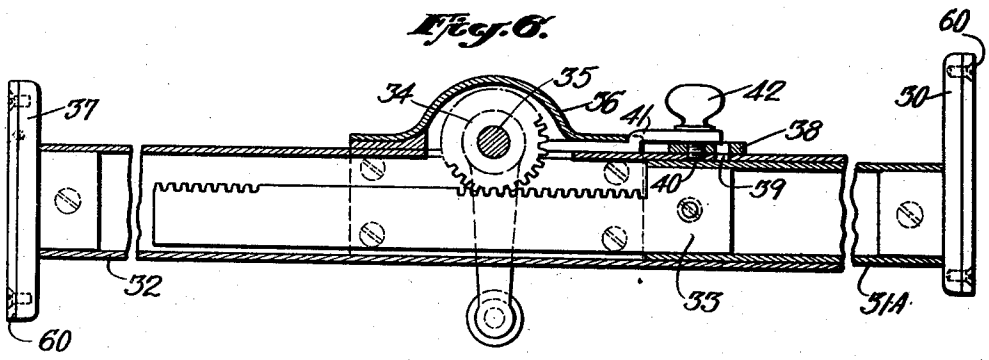


Fig. 6.



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Patented June 10, 1930 1,763,634

UNITED STATES PATENT OFFICE

GEORGE AGOBIAN, OF BROOKLYN, NEW YORK

VISE

Application filed February 27, 1928. Serial No. 257,470.

This invention relates to adjustable pipe vises and in particular to a type adapted for use on the door jambs so that the necessity of tradesmen employed in the erection of piping going to the lower floors of a building for the cutting and threading of pipes, is eliminated.

A particular object of the invention is to provide a pipe vise which is provided with clamping members which are themselves adjustable and are provided with a clamp block which is movable so that the vise can be used in connection with any width of door jamb and can also be secured thereto through the medium of the adjustable clamp block.

A still further particular object of the invention is to provide in connection with a pipe vise, a relatively adjustable clamping jaw for accommodating pipes of various diameters.

A still further object of the invention is to provide in connection with a pipe vise arranged for attachment to the jamb of a door, a brace member which is adjustable to fit between the jambs of the door to securely hold the vise in position when larger pipe stock is to be cut or threaded.

A still further object of the invention is to provide an adjustable pipe vise and brace for use in connection therewith which will be made of few parts, will be light and durable and which will eliminate the necessity of the pipe fitter providing a working bench which must be used in the cellar or on the lower floors, thus necessitating the carrying of the pipe up and down through the building for the cutting and threading operation, as needed.

To enable others skilled in the art to fully comprehend the underlying features of my invention that they may embody the same in the various modification in structure and relation contemplated, a drawing depicting a preferred form has been annexed as a part of this disclosure and in such drawing, similar reference characters denote corresponding parts throughout all the views, of which,

Figure 1 is a view in perspective illustrating the position of the pipe vise and brace in a doorway, the vise itself being secured to one jamb of the door, while the brace extends across the door opening and abuts against the opposite jamb.

Figure 2 is a view in end elevation of the pipe vise illustrated in Figure 1, the adjustable pipe holding jaw and jaw plate being illustrated.

Figure 3 is a section taken on the line 3—3 of Figure 4 and shows the arrangement of the brace in connection with the vise itself, an adjustable pipe seat being also illustrated.

Figure 4 is a top plan view of the pipe vise as illustrated in Figure 1, a portion only of the brace member being illustrated.

Figure 5 is a section taken on the line 5—5 of Figure 4 and shows the clamp block controlling means and the construction of the shelf portion of the vise, and

Figure 6 is a view in sectional elevation, the same being taken lengthwise through the brace member to illustrate how the parts thereof operate.

Referring to the drawings in detail, 5 and 6 indicate respectively, the opposite jambs of a door in which is positioned my adjustable pipe vise. The latter comprises a main jaw member 7 having secured thereto or formed integral therewith, whichever is desired, an upstanding portion 8 at one end thereof and the horizontally disposed shelf portion 9. While I have illustrated the shelf portion and the upstanding portion 8 as being connected to the clamp member 7 through the medium of the screws 10 and 11 respectively, it is to be understood that this shelf member 9 and portion 8 can be cast integral therewith. The clamp member 7 in one of its sides 12 is provided with hollow bosses 13 into which the bosses 14 of the side piece 15 of the clamping member 16 fits, the members 7 and 16 being secured together through the medium of the screws 17 and it is quite evident from inspection of Figure 4 that the members 7 and 16 can be adjusted any distance apart by simply removing the screws 17 and advancing the members 16 and 7 toward or away from each other, after which the screws can be replaced and the vise secured to a door jamb through the medium of the clamp block 18. This clamp block is positioned between the

clamping members 7 and 16 and is formed of hollow box-like construction 19 having three openings 20 in one side thereof, the opposite end being closed through the medium of a suitable block 21 which is suitably secured to the box member 19 and carries a cushion 22 on its face. The member 21 is arranged to provide a bearing for the ends of screw shafts 23 which pass through the openings 20 and carry the gears 24 within the box 19, these gears being operated through the medium of a suitable intermediate gear 25 carried on a stub shaft 26 which is threaded into one of the openings 20 in the box member 19. This intermediate gear 25 causes rotation of one of the gears 24 in the same direction as the other or upper gear 24 so that through the medium of the screw shaft 23, the clamp block 18 is advanced between the members 16 and 7 to effectively hold the vise in position on the jamb of a door. One end of one of the screw shafts 23 is provided with a handle 27 which may be removed and used on another part of the device as will be hereinafter explained. The shelf 9 is provided with an opening 28 in which is arranged one of the feet 30 of a brace 31, the brace being made of two sections of telescopic tube 31—A and 32, the former of which is provided with a rack 33, the upper face of which is arranged to be engaged by the pinion 34. This pinion is journalled on the shaft 35, the ends of which are journalled in the sides of a housing 36 carried on the tubular member 32. The end of the shaft 35 may be shaped to permit engagement of the handle 27 so that the one handle can be used to first tighten the clamp in place on the jamb of the door and can subsequently be used to expand the brace member when the foot portion 30 thereof has been placed in the opening 28 provided for that purpose in the shelf 9 of the vise, it of course being understood that the tubular member 32 is provided with a similar foot 37 which abuts the other jamb of the door to maintain the vise solidly in place.

In order that the expanded brace may be maintained in its bracing position, I have provided at one side of the housing 36 and secured in any manner to the telescopic tube 32, a latch plate 38, this latch plate being provided with a plurality of openings 39 which are adapted to receive the pin 40. This pin is threaded in position in the openings 39 to permit or prevent operation of the pinion 34. The pin 40 is carried on the outer end of a latch 41 whose end is disposed within the housing 36 and in position to jamb between the teeth of the gear, the latch 41 carrying a suitable finger piece 42 which operates the pin 40 to permit the same to be threaded in any one of the openings 39.

In order that the pipe may be effectively held in position and in order that various diameters of pipes may be accommodated in the vise, I have provided at one end of the shelf 9, the upstanding ears 43 between which is pivoted the locking bolt 44, the upper end of which is arranged to receive a locking handle 45—A, the intermediate portion of the bolt being arranged to pass through the bifurcated end 45 of an adjustable jaw member 46.

It is quite evident that when the adjustable jaw member is thrown to the position shown in Figure 2 to engage the piece of pipe 47, that the locking bolt 44 may be swung up to position between the ends 45 of the adjustable jaw 46 at which time the locking handle can be threaded down over the bolt 44 to lock the jaw against the pipe member which is supported on a fixed jaw 48 secured to the shelf 9 of the clamping member 7. The adjustable jaw is pivoted as at 49 to an adjustable jaw plate 50 which is provided with a slot 51 and bolt 52 whereby it is connected to the upstanding portion 8 of the clamping member 7, suitable adjustable openings 53 being provided in the jaw plate so that the same can be revolved to throw the pivot center 49 to position the adjustable jaw directly over pipes of various diameters. The adjustable jaw plate may be locked in any one of its adjusted positions through the medium of a suitable wing nut 54 after the plate has been adjusted by releasing the nut 52.

In order to further support the pipe and keep the same from having sidewise motion during the cutting or threading operation, I have provided on the shelf 9, a plurality of pieces 55 constituting a pipe rest or seat which is adjustable toward and away from each other through the medium of the pin and slot connection 56 that these pieces have with the shelf 9, one of the pieces being provided with a suitable handle 57 whereby it can be manipulated.

The edge of the shelf 9 is provided with openings 58 so that the pipe rest may be positioned over any one of them and the adjusting screw 59 can be used to retain the pipe rest members in any one of the openings to accommodate or support the pipe at a desired distance from the clamping jaw. This adjusting screw 59 also serving to retain the pipe rest members any desired distance apart to accommodate pipes of various sizes.

It is evident that I have provided an adjustable pipe vise which can be positioned on the jamb of a door and which will make unnecessary the setting up of a pipe vise bench in the lower part of a building under construction thus eliminating the time necessary in carrying lengths of pipes up and down through the building for threading and cutting.

It is also evident that I have provided in connection with an adjustable pipe vise, a brace made of telescopic members whereby the same can be adjusted for use in connection

with doors of various widths and one which will solidly brace the vise in position and permit rapid cutting and threading of the pipe held therein.

A still further advantage of my invention is that adjustable jaws have been provided whereby the same will not only accommodate pipes of various sizes but will also fit to door jambs of various widths.

It is evident, also, that the seat portions 30 and 37 of the brace may be provided with pad members 60 so that marring of the woodwork of the door will be prevented.

It is evident that when the clamp member 16 is removed, the bosses 13 may receive lag screws through the medium of which the vise can be secured to a stud or other similar member.

While I have illustrated and described my invention with some degree of particularity, I realize that in practice various alterations therein may be made. I therefore reserve the right and privilege of changing the form of the details of construction or otherwise altering the arrangement of the correlated parts without departing from the spirit of the invention or the scope of the appended claims.

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

1. A pipe vise comprising clamping members, means for adjusting the clamping members relatively to each other, a clamp block operable between said members to secure the vise to a door jamb screws for operating the clamp block, a fixed pipe holding jaw, a movable jaw cooperating therewith, a brace arranged to be positioned against said vise to retain the same solidly in a doorway, and a foot portion on each end of said brace.

2. A pipe vise comprising adjustable clamping members, means for securing said members together in adjusted position, a clamp block operable between said members to secure the vise to a door jamb, means for operating said block including a gear train, a fixed pipe holding jaw, a movable jaw cooperating therewith, an adjustable jaw plate to which said movable jaw is pivoted and a brace arranged to be positioned against said vise to retain the same solidly in a doorway.

3. A pipe vise comprising spaced clamping members, means for adjustably securing the members together, a clamp block, gears in said block, screw shafts to which said gears are secured for advancing said block relatively to the clamping members whereby the vise can be secured to door jambs of various widths, a shelf on one of the clamping members, and an adjustable pipe rest on said shelf.

4. A pipe vise comprising spaced clamping members, a clamp block, gears in said block, screw shafts to which said gears are secured for advancing the block relatively to the clamping members whereby the vise can be secured to door jambs of various widths, an adjustable jaw plate carried on one of the clamping members, a pipe gripping jaw pivoted to the jaw plate, a shelf on one of the clamping members and an adjustable pipe rest on said shelf.

5. A pipe vise comprising clamping members, means for securing the members together in adjusted relation, a clamp block operable between said members to secure the vise to a door jamb, a fixed pipe holding jaw, a movable jaw cooperating therewith, a brace comprising telescopic tubes, a rack in one of the tubes, a gear on the other tube for engaging with the rack, means whereby said rack may be operated to adjust the tubes relatively a foot on the outer end of each of said tubes, a shelf on one of the clamping members, and an adjustable pipe rest on said shelf.

6. A pipe vise comprising adjustable clamping members, a clamp block operable between said members to secure the vise to the door jamb, a fixed pipe holding jaw, a movable jaw cooperating therewith, an adjustable jaw plate into which said movable jaw is pivoted, a brace comprising telescopic tubes, a rack in one of the tubes, a gear on the other tube for engagement with the rack, means whereby said rack may be operated to adjust said tubes relatively and a foot on the outer end of each of said tubes.

In testimony whereof I affix my signature.

GEORGE AGOBIAN. [L. S.]