

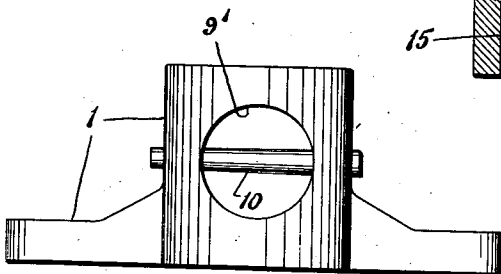
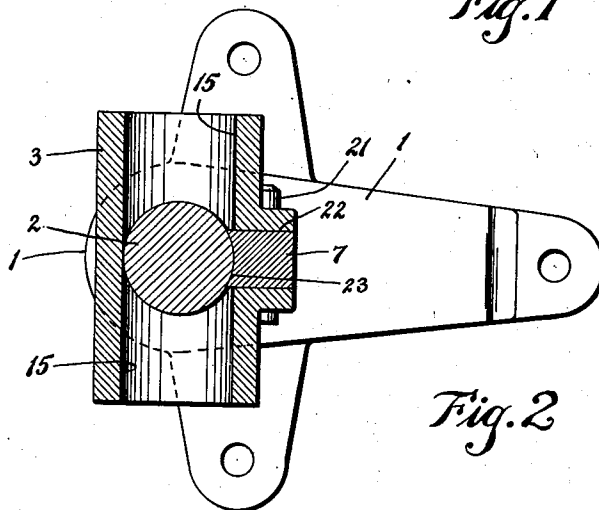
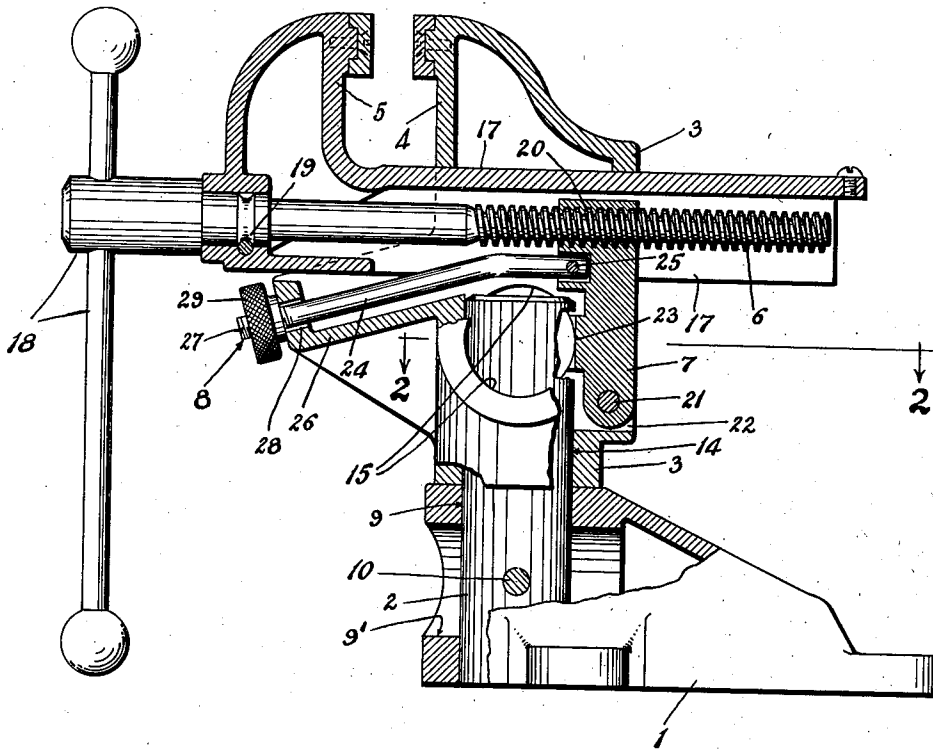
Nov. 30, 1937.

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2,100,513

WISE

Filed Aug. 11, 1936



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2,100,513

VISE

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Application August 11, 1936, Serial No. 95,342

2 Claims. (Cl. 81—33)

This invention relates to improvements in vises and has for an object thereof the provision of a vise which may be easily and quickly adjusted and set up in various positions and at different angles and effectively locked in the desired position or angle whereby to facilitate various uses thereof.

More particularly, the present invention relates to improvements in vises of the type disclosed in U. S. Letters Patent No. 1,548,201, issued August 4th, 1925, to J. R. Long, and wherein the vise body supporting the jaws is rotatably mounted on a post supported by a base; and a locking means automatically locks the body against turning on the post when the jaws are clamped on the work and releases the body when the jaws free the work. The body is provided with angularly related and intersecting post receiving bores which provide for supporting the body in different positions and for locking the body as aforesaid in any of said positions.

An important object of the present invention is to provide a vise of the character described which, in addition to the automatic locking means, is equipped with auxiliary manually operable means which may be actuated at will to releasably lock the body against turning on the post or actuated after the automatic locking action to prevent release of the locking means when the jaws release the work.

A further object is to provide a vise of the character described wherein the base is especially constructed to support the post in vertical or horizontal positions as desired, whereby the vise body and jaws may be supported in different positions to best suit the particular work, this arrangement affording a greater number of positions and angles at which the vise may be supported than is possible with a fixed post.

Other objects may appear as the description progresses.

I have shown a preferred form of the invention in the accompanying drawing, subject to modification within the scope of the claims appended hereto, without departing from the spirit of the invention.

In said drawing:

Fig. 1 is a vertical sectional view of a vise constructed in accordance with this invention;
Fig. 2 is a sectional view taken on the plane of line 2—2 of Fig. 1; and
Fig. 3 is a front elevation of the base member.

One embodiment of the vise of the invention comprises a base 1, a post 2, a vise body 3 rotat-

able on said post, a fixed jaw 4, an adjustable jaw 5, an operating screw 6, a locking member 7 automatically moving into and out of locking engagement with the post as the jaws clamp upon and release the work, and a manually operable means 8 which may be actuated at will to move the locking member into and out of locking engagement with said post or actuated after an automatic locking operation, to prevent release of said locking member.

As here shown, the base 1 is provided with a vertical bore 9 which is intersected by a horizontal bore 9' whereby the post 1 may be supported in horizontal or vertical position, there being a tapered pin 10 adapted to be inserted through openings in the base and pin to hold the post in place. With this arrangement the body of the vise and elements thereon may be presented and supported as shown in Fig. 1, or with the post in a horizontal position in the base the body may be supported in a lower plane and with the jaws vertically or horizontally disposed whereby to best suit the particular work.

It will be noted that the vise body 3 is provided with a vertical bore 14 intersected by a similar but horizontal bore 15 either of which may have the post 2 engaged therein so that the body will be freely rotatable on said post. This will facilitate use of the vise in various positions and at various angles to best suit the particular object or work to be held in the vise.

The adjustable jaw 5 has a shank portion 17 slidable in the body towards and away from the fixed jaw 4. The operating screw 6 has the usual handle 18 and is rotatably keyed as at 19 within the shank 17. This screw extends through a screw threaded aperture 20 in the free upper end of the locking member 7 which latter is pivoted as at 21 at its lower end within a recess 22 in the body 3. The recess 22 opens into both bores 14 and 15 and an intermediate portion of the locking member in the form of an arcuate jaw 23 is disposed to engage the post 2 when the latter is in either bore. A slight play is provided between the coacting screw threads of the screw 6 and member 7 and at the keyed portion 19 of the screw, to permit of rocking movement of the member 7 whereby the jaw 23 thereof will be moved into and out of locking engagement with the post 2.

It will now be seen that when the screw 6 is manipulated to cause the jaws 4 and 5 to clamp upon the work the member 7 is caused to rock so that the jaw 23 thereof will grip the post 2

and thereby lock the body 3 against adjustment on the post. Upon manipulating the screw 6 to cause the jaws 4 and 5 to release the work the member 7 is rocked so that the body will be free to turn on said post. Thus, it is apparent that the vise will be automatically locked against turning on the post 2 when the jaws are clamped on the work and will likewise be automatically released and free to turn when the jaws are unclamped. This arrangement will permit of an easy and quick swinging of the vise to the desired angle or position while the jaws are being clamped upon the work and will assure the holding of the jaws and work in the selected or predetermined position.

In accordance with the improvements of the invention the means 8 which permits of locking of the body on the post, at will, is comprised of a rod 24 pivoted at 25 at one end to the upper part of the member 7. This rod is longitudinally movably supported in an extension 26 of the body 3 and has a screw threaded outer end 27 protruding through an aperture 28 of said extension. On this threaded end 27 a knurled nut 29 is turnable while engaged with said extension 26. On turning the nut, the rod 24 will be moved so as to rock the member 7 and cause the jaw 23 thereof to be moved into and out of frictional locking engagement with the post 2. It will be seen that the body may be locked at will and regardless of the turning of the screw 6, or the position of the jaws 4 and 5, by merely screwing the nut 29. Furthermore, if it is desired to maintain the body locked against turning on the post 2 after it has been automatically locked by the screw 6, the operator then manipulates nut

29 so as to pull on rod 24 and thereby hold the member 7 against release, as would otherwise take place when the vise jaws are unclamped.

What I claim is:

1. In a vise, a base, a post carried by said base, a body having a bore therein receiving said post and permitting rotation of the body thereon, a fixed jaw on said body, an adjustable jaw on said body, means for adjusting said adjustable jaw including a rotary screw, a locking member pivoted at one end on said body and having a threaded aperture at its other end receiving said screw, said member having an intermediate portion disposed to lockingly engage said post, and manually operable means for moving said member into frictional locking engagement with said post.

2. In a vise, a base, a post carried by said base, a body having a bore therein receiving said post and permitting rotation of the body thereon, a fixed jaw on said body, an adjustable jaw on said body, means for adjusting said adjustable jaw including a rotary screw, a locking member pivoted at one end on said body and having a threaded aperture at its other end receiving said screw, said member having an intermediate portion disposed to lockingly engage said post, manually operable means for moving said member into frictional locking engagement with said post, and including a longitudinally movable rod pivoted at one end to said member and having a screw threaded outer end protruding from said body and a nut turnable on said end and against said body to longitudinally move said member.

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