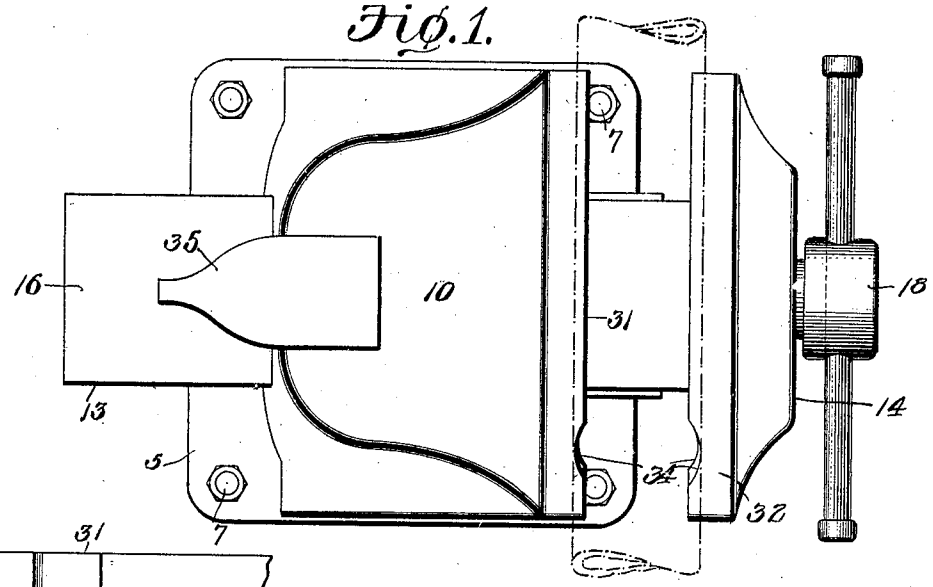
No. 829,976. PATENTED SEPT. 4, 1906.

C. J. LINDGREN.

VISE.

APPLICATION FILED JAN. 22, 1906.

Fig. 1.



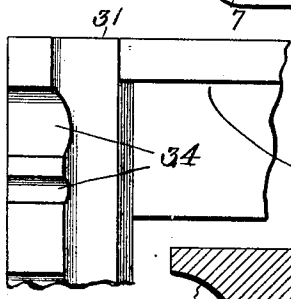
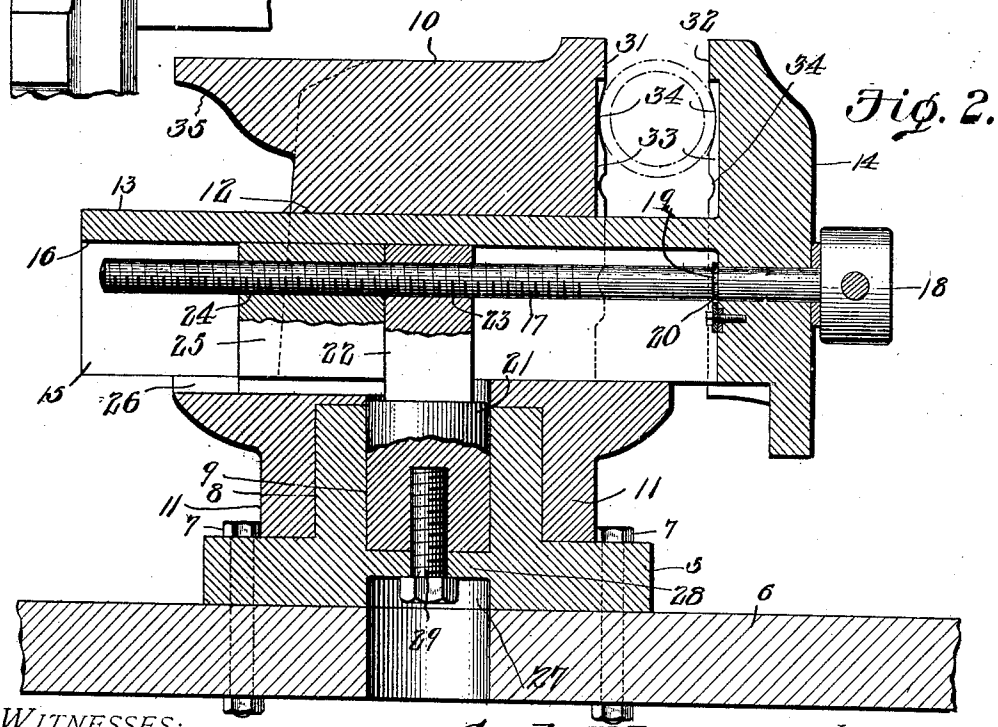


Fig. 3.

Fig. 2.



WITNESSES:

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CARL J. LINDGREN, OF WARREN, PENNSYLVANIA.

VISE.

No. 829,976. Specification of Letters Patent. Patented Sept. 4, 1906.

Application filed January 22, 1906. Serial No. 297,333.

To all whom it may concern:

Be it known that I, CARL J. LINDGREN, a citizen of the United States, residing at Warren, in the county of Warren and State of Pennsylvania, have invented a new and useful Vise, of which the following is a specification.

This invention relates to vises, and has for its object to provide a strong, durable, and efficient device of this character having a plurality of work-receiving recesses or pockets formed in the clamping-jaws thereof, whereby pipes, rods, and other work may be supported in horizontal or vertical position while being operated upon.

A further object of the invention is to provide a vise capable of being rotated in a horizontal plane to permit the clamping-jaws to be adjusted to either side of a work-bench and means for locking the vise in adjusted position.

A still further object is to generally improve this class of devices, so as to add to their utility and durability, as well as to reduce the cost of manufacture.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, and illustrated in the accompanying drawings, it being understood that various changes in form, proportion, and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a top plan view of a vise constructed in accordance with my invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a plan view of a portion of one of the clamping-jaws.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The improved device consists of a substantially rectangular base 5, secured to a work-bench or other suitable support 6, as by bolts or screws 7, and provided with a vertically-disposed flange or bearing-collar 8, defining a cylindrical socket 9, as shown.

Mounted for rotation on the base 5 is a relatively stationary clamping member 10, having a depending flange 11 for engagement with the flange 8 and provided with a longitudinally-disposed recess 12, in which is mounted for sliding movement the laterally-projecting shank 13 of the movable clamping member 14. The shank 13 is substantially rectangular in cross-section and consists of a pair of spaced parallel arms 15, united at their upper longitudinal edges by a connecting-web 16 and between which is mounted for rotation a screw 17, the latter being carried by the movable clamping member 14 and provided with an operating-handle 18 and an annular groove 19 for engagement by a pawl 20.

Mounted for rotation in the cylindrical socket 9 is a correspondingly-shaped pin 21, the upper end 22 of which is seated between the arms 15 of the shank and provided with a transversely-disposed threaded recess 23 for the reception of the screw 17, the latter also engaging a threaded opening 24 in a clamping-nut 25. The nut 25 is seated in a dovetailed recess 26, formed in the stationary clamping member 10, and is mounted for sliding movement between the arms 15, as shown, so that after the clamping members have been adjusted to engage a pipe or other object a further rotation of the screw 17 will cause the nut to clamp the squared end of the pin 21.

The base 5 is formed with a centrally-disposed opening 27, the walls of which are connected by a perforated diaphragm 28, which forms a support for the adjacent end of the pin 21, there being a bolt 29 secured to the pin and extending through the perforation in the diaphragm for engagement with a wrench or other tool whereby the vise may be locked against rotary movement.

The clamping-jaws 31 and 32 are each formed with a central depression 33, while the top and side edges of the jaws are provided with a plurality of work-receiving recesses or sockets 34, which communicate with the depression 33 and permit pipes of different diameters to be supported in both vertical and horizontal positions while being operated upon.

The stationary jaw 10 is preferably provided with a lateral extension forming an anvil 35, while the recesses or sockets 34 in both clamping-jaws gradually increase in size toward the top of the vise, as shown.

It will thus be seen that by loosening the wing-nut 30 the vise is free to rotate in a horizontal plane to either side of the work-bench, and in which position it may be locked by rotating said nut until it engages the diaphragm. It will also be seen that after the

jaws are moved into engagement with the pipe or other article to be supported a further rotation of the screw 17 will cause the nut 25 to engage the adjacent face of the pin, and thereby assist in locking the jaws in closed position and also assist in preventing rotation of the anvil on the supporting-base.

The vise is constructed with a view to simplicity, positiveness of operation, and freedom of danger of breakage or derangement in use, and by the manner in which the various elements are presented a thoroughly efficient and durable tool for the purpose described is presented.

Having thus described the invention, what is claimed is—

1. A vise comprising a base provided with a vertically-disposed flange defining a socket, a relatively stationary jaw mounted for rotation on the base and provided with a depending flange for engagement with the vertical flange, a movable jaw provided with spaced parallel depending arms adjustable transversely of the stationary jaw, a pin seated in the socket and provided with a squared head engaging said arms and having a threaded opening formed therein, a screw carried by the movable jaws and engaging the threaded opening in the head, and a nut seated between the parallel arms and adapted to engage the head for locking the jaws against rotation.

2. A vise comprising a base provided with a vertical flange defining a socket, a relatively stationary jaw mounted for rotation on the base and provided with a depending flange for engagement with the vertical flange, said stationary jaw having a dovetailed recess formed therein, a nut slidably mounted in said recess and provided with a threaded opening, a pin seated in the socket and having a threaded opening formed therein and disposed in alinement with the opening in the nut, a movable jaw provided with spaced depending arms embracing the nut and pin respectively, a screw carried by the movable jaw and engaging the openings in said pin and nut and means engaging the pin for locking the jaw against rotation.

3. A vise comprising a base provided with a vertical flange defining a socket and having an opening formed therein, the walls of which are connected by a perforated diaphragm, a relatively stationary clamping-jaw mounted for rotation on the base and provided with a depending flange for engagement with the vertical flange, a pin seated in the socket and having one end thereof bearing against the diaphragm and its opposite end provided with a threaded opening, a movable jaw provided with a laterally-projecting shank having spaced depending arms adapted to embrace the pin, a screw carried by the movable jaw and engaging the opening in the pin, a dovetailed nut mounted for sliding movement between the depending arms, and a clamping-bolt passing through the perforation in the diaphragm and engaging the pin.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CARL J. LINDGREN.

Witnesses:
ALEXANDER ERICKSEN,
ELVIN E. CARLSON.