

No. 684,443.

Patented Oct. 15, 1901.

J. R. LONG.
VISE.

(Application filed June 13, 1901.)

(No Model.)

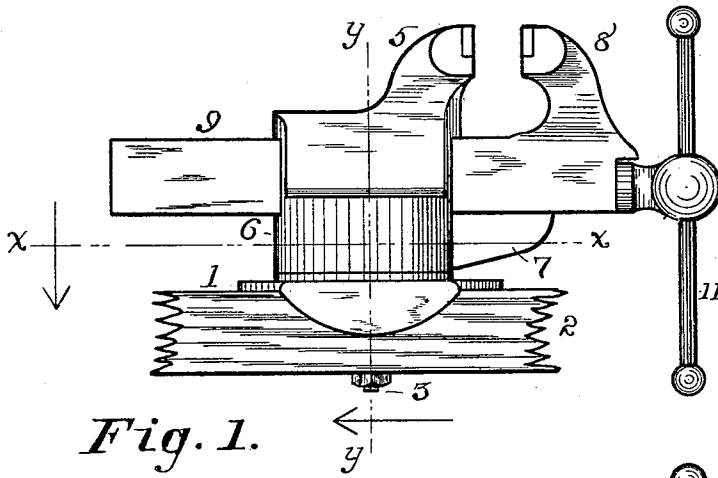


Fig. 1.

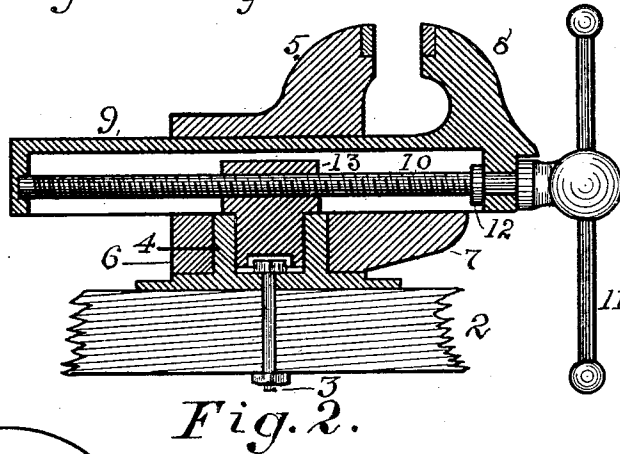


Fig. 2.

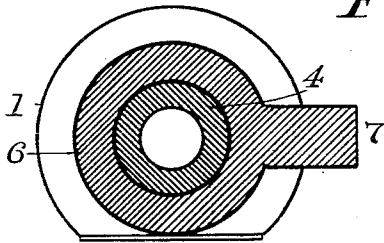
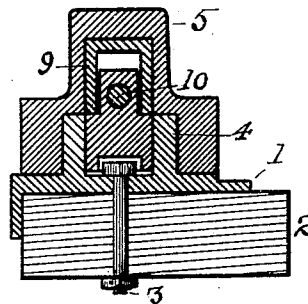


Fig. 3.

Fig. 4.



Witnesses:

Walter Bowman,
Maudie J. Miles.

Inventor:

John R. Long,
By Humphrey Humphrey
Attys.

UNITED STATES PATENT OFFICE.

JOHN R. LONG, OF AKRON, OHIO.

VICE.

SPECIFICATION forming part of Letters Patent No. 684,443, dated October 15, 1901.

Application filed June 13, 1901. Serial No. 64,363. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. LONG, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented a certain new and useful Improvement in Vises, of which the following is a specification.

My invention has relation to improvements in that class of vises used by mechanics and artisans in their work.

The object of my invention is to produce a new and improved vise adapted to the uses aforesaid revolubly mounted to turn on a pivotal post and so constructed that the tightening of the jaws by the screw will lock the vise against rotation on its pivot.

To the accomplishment of the aforesaid objects my invention consists in the peculiar and novel construction, arrangement, and combination of parts hereinafter described and then specifically pointed out in the claims, reference being had to the accompanying drawings, which form a part of this specification.

In the accompanying drawings, in which similar reference-numerals indicate like parts in the different views, Figure 1 is a side elevation of my improved vise mounted on a timber support, the ends of which are broken away; Fig. 2, a central vertical longitudinal section of the same; Fig. 3, a horizontal section of the same at the line *xx* of Fig. 1, and Fig. 4 a section at the line *yy* of Fig. 1.

Referring to the figures, 1 is a circular metallic plate and for the purpose of illustration secured on a wood beam or table 2 by means of a bolt 3. This circular plate has one side bent downward at a right angle, and in its center is a hole through which is passed the securing-bolt 3. On the plate 1 and preferably integral therewith is a cylindrical upward sleeve 4, accurately internally and externally turned. The fixed jaw 5 has a cylindrical portion 6, internally bored to fit the sleeve 4, and also has an integral arm 7 to form a support for the movable jaw and has an opening for the reception and movement of the movable jaw therein. The movable jaw 8 is integral with a sliding bar 9, which bar is in form of an inverted rectangular trough adapted to fit and slide in the opening in the fixed jaw. Lengthwise through the

sliding bar 9 of the movable jaw is the actuating-screw 10, provided with the usual sliding lever 11 and having a collar 12 to retain it. Revolubly seated in the sleeve 4 is a nut 13, the lower part of which is turned to fit in said part, and the upper portion has a transverse internally-screw-threaded opening to receive the screw 10.

In operation the fixed jaw is revolved horizontally on the sleeve 4 until the vise is in the position desired by the operator. The object to be operated upon is then placed between the jaws and the movable jaw clamped against it by revolving the screw 10 by means of the handle 11. The operation just described causes the screw to draw the nut 13 toward the actuating-handle of the screw and brings the depending part of the nut against the sleeve 4, and thus binds the vise from rotation, while the pressure of the jaws is maintained upon the object in the vise by frictional contact between the depending part of the nut 13 and the sleeve 4. This frictional contact is not wholly due to the clamping of the nut 13 against the sleeve 4, but is aided by the fact that the drawing of the upper portion of the nut by the screw 10 in one direction causes an almost imperceptible tilting of the axial line of the cylindrical portion of the nut within the sleeve, thus causing a binding effect against both sides of the sleeve 4.

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

1. The combination in a vise of the kind designated consisting of a base-plate provided with a raised sleeve, a fixed jaw adapted to inclose said sleeve and revolve thereon, a movable jaw provided with an integral bar adapted to pass through said fixed jaw, a threaded shaft mounted in said movable jaw, a nut situated in said movable jaw and meshing on said screw-threaded shaft provided with a depending cylindrical part adapted to enter and fit in the sleeve on said base-plate, substantially as shown and described.

2. The combination in a vise of the kind designated of a base-plate, means to fasten said base-plate to a permanent object, a sleeve rising from said base-plate, a fixed jaw adapted to inclose and revolve on said sleeve, a movable jaw provided with an extension to pass

through said fixed jaw, means as a screw to cause said jaws to approach and recede from one another, a nut mounted on said screw provided with a depending portion adapted to enter and fit the interior of said sleeve and to be drawn against one side thereof by the action of said screw in clamping said jaws, substantially as shown and described.

In testimony that I claim the above I hereunto set my hand in the presence of two subscribing witnesses.

JOHN R. LONG.

In presence of—

C. P. HUMPHREY,
C. E. HUMPHREY.