

No. 667,151.

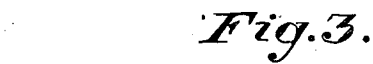
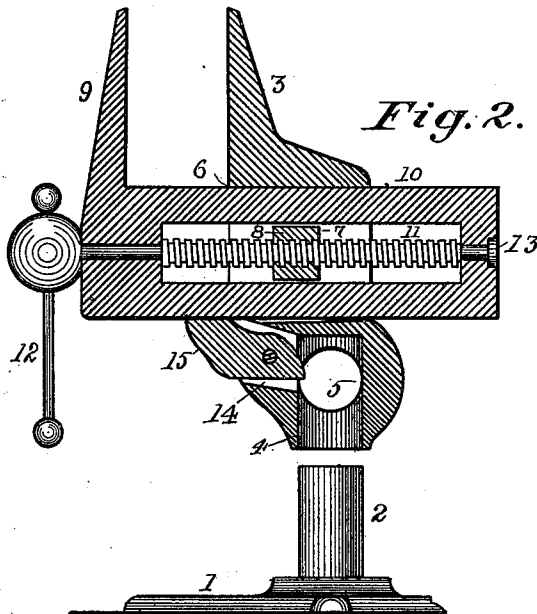
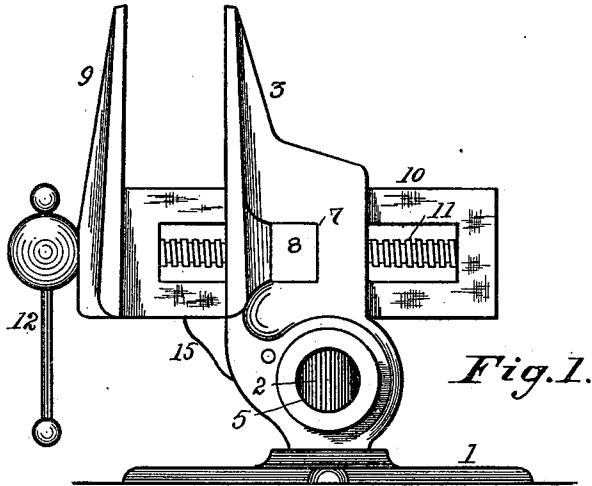
Patented Jan. 29, 1901.

J. R. LONG.

WISE.

(Application filed May 15, 1900.)

(No Model.)



Witnesses:

Ad Alexander
Bessie Crook.

Inventor:

John R. Long,
By Humphrey & Humphrey,
Attys.

UNITED STATES PATENT OFFICE.

JOHN R. LONG, OF SPRINGFIELD, OHIO, ASSIGNOR OF ONE-HALF TO JOHN CRAY, OF SAME PLACE.

WISE.

SPECIFICATION forming part of Letters Patent No. 667,151, dated January 29, 1901.

Application filed May 15, 1900. Serial No: 16,803. (No model.)

To all whom it may concern:

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

My invention has relation to improvements in vises for general use among carpenters, wagon-makers, blacksmiths, and other artisans; and it has for its object the construction of a vise having jaws that can be adapted to move in a vertical or horizontal plane to adapt them to the requirements of the operator, that can be rocked about the center of either plane to any desired angle, and in which the tightening of the vise shall lock it against movement in either plane.

To the aforesaid object 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, forming 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 arranged to have the jaws move in a vertical plane; Fig. 2, a vertical section through the vise detached from its supporting-post to illustrate the internal mechanism; Fig. 3, a side elevation of the supporting-post in its base.

Referring to the figures, 1 is the base, from which rises a cylindrical post 2.

3 is the fixed jaw of the vise, which has a circular opening 4 in the bottom, arranged to fit the post 2, and a similar opening 5 transverse to the first opening. Above the first opening is a right-angled opening 6, perpendicular to the jaw-face, adapted to receive the guide-bar of the movable jaw. The bottom of the opening 6 is slightly inclined toward the plane of the jaw-face for a purpose to be stated.

Transversely through the fixed jaw and intersecting the opening 6 is a rectangular opening 7, adapted to receive a nut 8.

The movable jaw 9 has a guide-bar 10, fitted to slide in the opening 6 and longitudinally

slotted to receive and slide on the nut 8, and a screw 11, provided with a handle or lever 12 and secured at the back by a revoluble washer 13 in a suitable recess.

In the lower front of the fixed jaw 3, below the line of the opening 6, is a slot 14, extending from the opening 4, slightly sloping upward to the left and encountering the opening 6 with its upper face, and in the slot is pivotally mounted a dog 15, having one of its ends adapted to enter the opening 4 and its other end the opening 6, the object and purpose of which is as follows: The guide-bar 10 has a slight vertical movement in the opening 6, swinging on the nut 8 as a pivot, and as the jaws 3 and 9 are compressed on any object between them the force tends to force the upper free outward end to a limited extent downward by reason of the pivot-nut 8, and as the guide-bar 10 is forced down the upper end of the dog 15 is encountered and in turn pressed down and its opposite end raised upward, thereby encountering the post 2 and locking the entire vise against revolution.

In operation when the jaws are free they may be readily revolved on the post 2; but as soon as any article is clamped between them the pressure rocks the jaw 9 slightly outward at the top, thus tilting the lower end of the guide-bar 10 down, which presses down the upper end of the dog 15 and forces its lower end against the post 2 and locks the vise against rotation thereon. When desired to use the vise in the horizontal plane, it is lifted from the post, turned on one side, and replaced with the post in the opening 5, in which position the operation of the dog 15 will be the same.

I claim as my invention—

1. An improved vise consisting of a fixed, pivotally-supported jaw, capable of revolution, a movable jaw connected therewith, means for permitting its approach and recession, a screw for pressing said jaws together, and a device arranged to be actuated by the movement of said screw to lock said fixed jaw against rotation, substantially as shown and described.

2. An improved vise consisting of a fixed jaw adapted to be pivotally supported to revolve in a vertical or a horizontal plane; a

movable jaw connected therewith, means for permitting its approach and recession, a screw for pressing said jaws together, and a device arranged to be actuated by the movement of
5 said screw to lock said fixed jaw against rotation in either position, substantially as shown and described.

3. An improved vise consisting of a fixed jaw having an opening transverse to its face
10 to receive the guide-bar of the opposite jaw: an opening across said first opening to receive a nut: a cylindrical opening in the base parallel with the jaw-face: a base having a post fitted to enter the cylindrical opening, a slot
15 below said guide-bar opening, and a dog piv-

otally mounted therein and arranged to engage said post, a movable jaw having a slotted guide-bar to slide in the opening in the fixed jaw, and a screw to run in said nut and arranged to engage and actuate said dog by
20 clamping the 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.