

(No Model.)

2 Sheets—Sheet 1.

W. J. WANLESS.
VISE.

No. 536,496.

Patented Mar. 26, 1895.

Fig. 1.

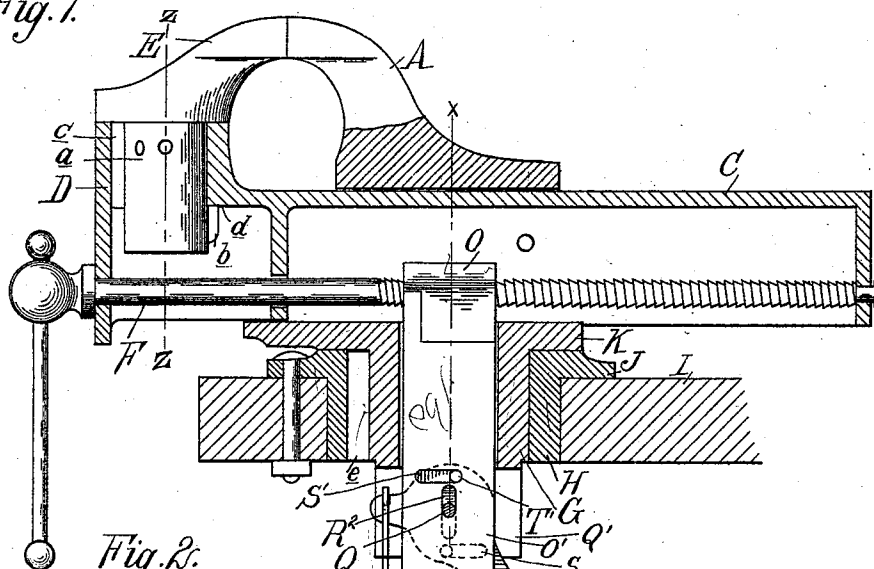


Fig. 2.

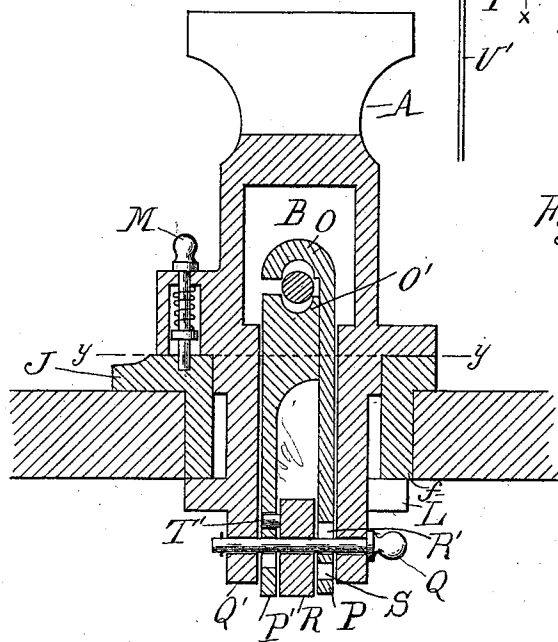
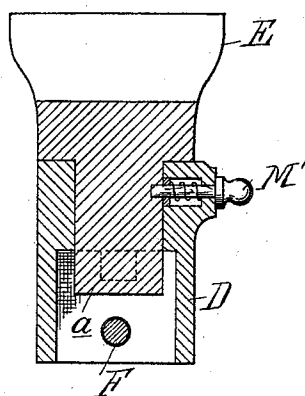


Fig. 3.



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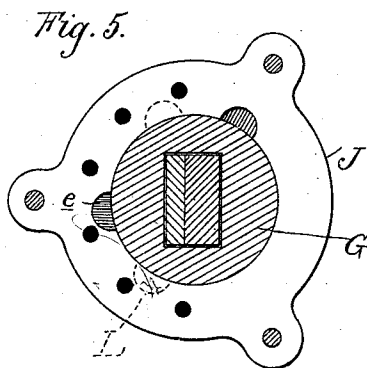
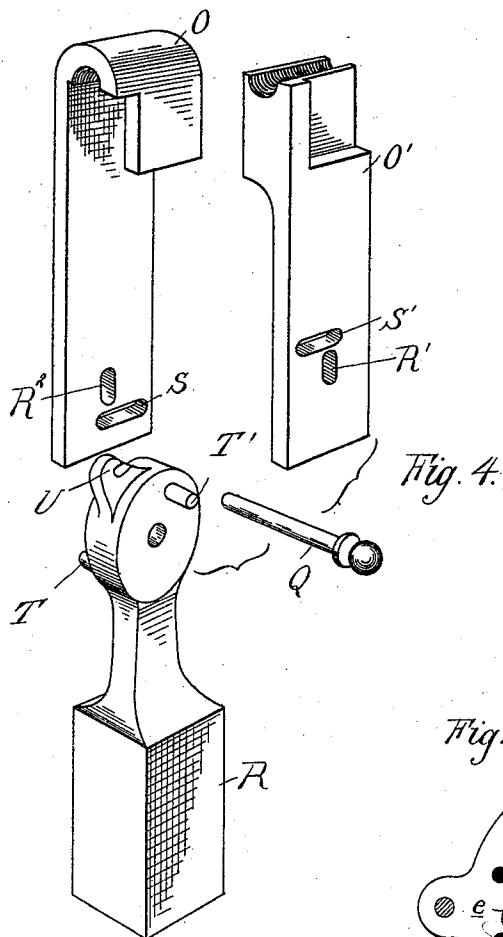
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2 Sheets—Sheet 2.

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O. F. Barthel
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Inventor:

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UNITED STATES PATENT OFFICE.

WILLIAM J. WANLESS, OF BAY CITY, MICHIGAN, ASSIGNOR TO THE DRY
DOCK IRON COMPANY, OF SAME PLACE.

WISE.

SPECIFICATION forming part of Letters Patent No. 536,496, dated March 26, 1895.

Application filed November 26, 1894. Serial No. 530,034. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. WANLESS, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Vises, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the peculiar construction, arrangement and combination of the various parts, whereby the construction is simplified, cheapened and improved all as more fully hereinafter described.

In the drawings, Figure 1 is a vertical, central section through a vise embodying my invention. Fig. 2 is a section on line *x x*, Fig. 1. Fig. 3 is a section on line *z-z*, Fig. 1, through the movable jaw, illustrating the means of securing it in position. Fig. 4 is a perspective view of the nut sections, their supporting shaft and operating lever, detached. Fig. 5 is a horizontal section on line *y y*, Fig. 2, illustrating the manner of securing the post of the stationary jaw detachably and adjustably in position.

A is the stationary jaw of a vise, provided with a transverse aperture or guideway B, in which engages the screw supporting arm C of the movable jaw. This arm has the tubular socket D at its outer end in which is detachably secured the circular standard *a* of the movable jaw E. This standard near its lower end has a lug *b* adapted to be entered through a vertical slot *c* in the inner front wall of the socket D and to be locked by a partial rotation beneath an annular shoulder *d* at the bottom of the socket.

F is the operating screw for the movable jaw, provided with the usual handle, or sliding lever at its outer end and passing longitudinally through the supporting arm C, as plainly shown in Fig. 1.

G is a tubular standard or post formed integral with the stationary jaw A and entering the metallic sleeve or socket H secured in the top I of the table or bench to which the vise is to be attached. This sleeve H has an annular flange J at its top resting upon the bench, the upper face of which forms a turntable for the flange or bearing K around the post G. The post is detachably engaged with the sleeve.

The means of securing these parts together I have shown as comprising the lugs or projections L on the outer face of the post G adapted to be entered through vertical slots *e* in the inner face of the sleeve H and to be locked therein by engaging beneath the bottom *f* of that sleeve, as plainly shown in Fig. 2. Upon the upper face of the flange J are a series of apertures, in any one of which a spring pin M on the stationary jaw A is adapted to engage, so as to adjust this jaw in any desired relation to the table. In the same manner I may adjust the movable jaw E in its socket D, by means of a spring pin M' engaging in any one of a series of apertures in the post *a* of that jaw.

O is the upper nut section and O' the lower nut section. These nut sections are provided with the depending legs P P', separated, as shown in Fig. 2 and extending through the central aperture in the post G of the stationary jaw.

Q is a stationary shaft detachably secured in the bifurcated extensions Q' of the post G.

R is a weighted lever having its head fitting snugly between the legs of the nut sections and pivoted upon the shaft Q. This shaft passes through vertical slots R' R² of the legs of the nut sections, these slots extending respectively above and below the shaft, as plainly shown in Fig. 2.

S is a horizontal slot extending from a point slightly to the left hand of the shaft, below the same in the leg of the upper nut section to near the opposite side thereof. S' is a similar horizontal slot in the leg of the lower nut section, extending from above the shaft to near the opposite side of that leg. In other words, these slots are located above and below the shaft in the legs of the nut sections and extend in opposite directions from that shaft toward opposite edges of the legs, as plainly shown in Fig. 4.

T and T' are pins on the head of the weighted lever adapted to engage in the horizontal slots S S'.

U is a lug or bearing on the weighted lever with which a cord U' is adapted to engage, which cord may be connected to a foot lever for turning the lever R about its pivoted shaft.

The parts being thus constructed their operation is as follows: The parts being in the po-

sition shown in Fig. 1, the weight of the lever will hold the pins T T' in the ends of the horizontal slots and substantially in line with the shaft Q, or slightly on opposite sides of its vertical center, thereby locking the nut sections against vertical movement, except by rocking the weighted lever. This is done by drawing down upon the cord U' which rocks the lever upon the shaft Q, and the pins T T' moving through the horizontal slots S S' will raise the upper section and lower the lower section from the screw, as shown in Fig. 2. The movable jaw can then be adjusted horizontally without turning the screw. When it is desired to operate the screw, the operator releases the lever R, when the weight will again cause the nut sections to engage with the screw. The movable jaw E may be turned at any desired angle to the stationary jaw and locked in its adjusted position by means of the spring pin M'. The whole vise may be turned at any desired angle to the bench by releasing the spring pin M from engagement with the notches in the collar J and turn the vise upon the post G to the desired angle where it may be again locked in position by the pin M. This construction of parts simplifies and cheapens the vise, besides adapting it to all the requirements.

30 What I claim as my invention is—

1. In a vise, the combination of the stationary jaw, the movable jaw adjustably supported therein, a depending cylindrical post

on the under face of the stationary jaw, an apertured sleeve to which said post is adapted to rotatably engage, having vertical grooves in its inner face, lugs on the post adapted to enter the vertical grooves in the inner face of the sleeve, and to be locked by engaging beneath the sleeve, by the partial rotation, the collar J at the top of the sleeve, the bearing K around the post resting on the collar J, and means for locking the stationary jaw in any adjusted position, comprising a spring-actuated pin arranged to enter the apertures in the sleeve substantially as described.

2. In a vise, the combination with the jaws and the screw shaft, of the post G having a bifurcated extension, a shaft extending across the same, a weighted lever journaled on the shaft, upper and lower nut sections engaging the screw shaft, the legs P P' of the nut section extending down into the post on opposite sides of the lever, having horizontal slots S S' therein, extending in opposite directions from at or near the middle, and central elongated vertical slots through which the shaft passes and pins on opposite sides of the lever engaging in said horizontal slots, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM J. WANLESS.

Witnesses:

THOMAS E. WEBSTER,
R. L. JOLY.