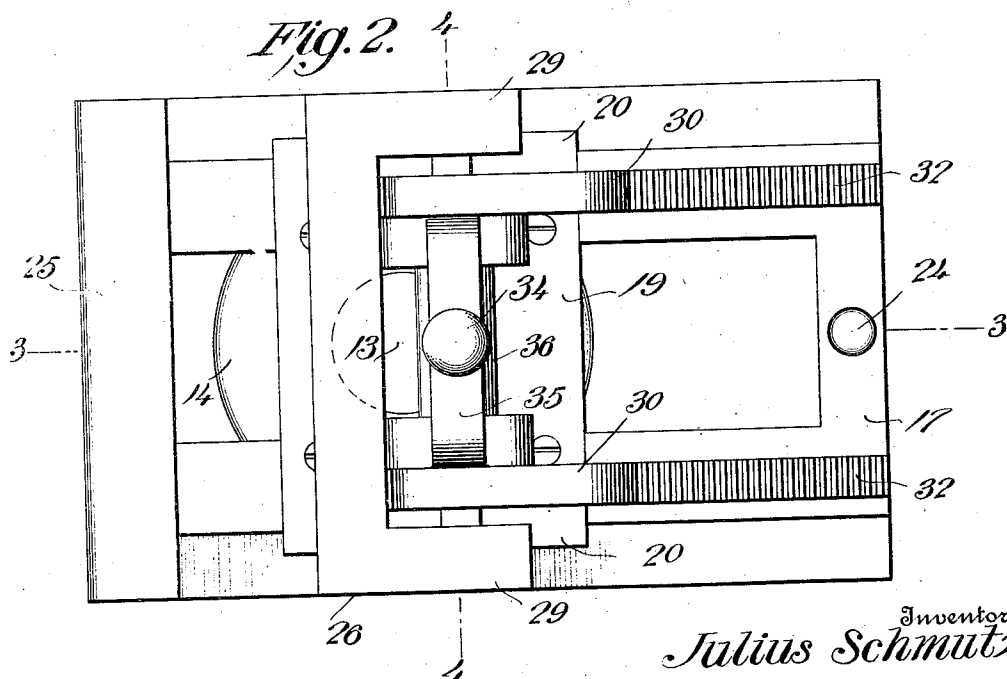
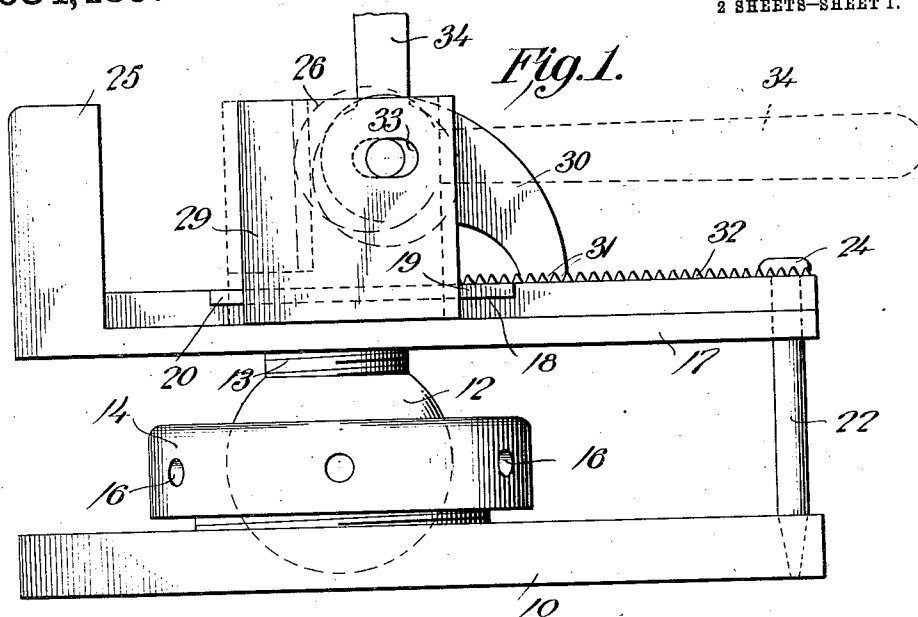


VISE.

Patented Jan. 13, 1914.

2 SHEETS—SHEET 1.

1,084,489.



Witnesses

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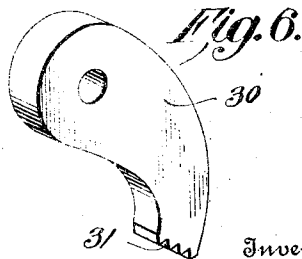
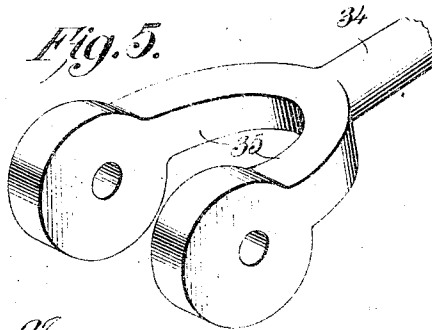
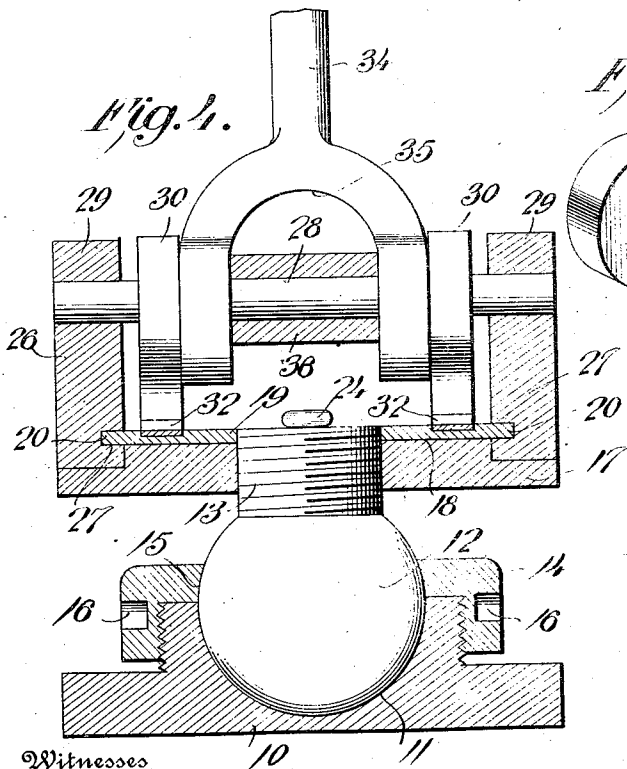
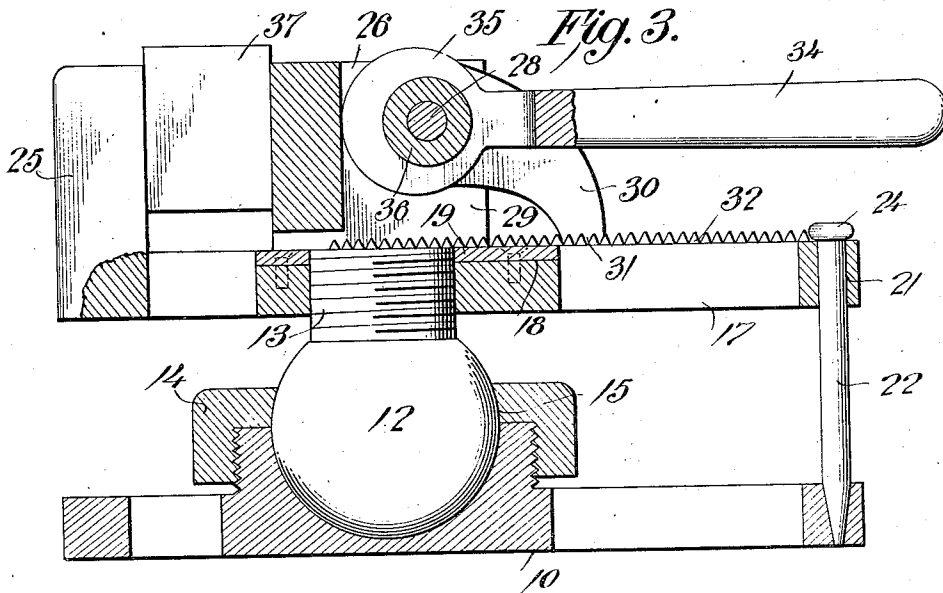
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APPLICATION FILED MAY 28, 1912.

Patented Jan. 13, 1914.

2 SHEETS—SHEET 2.

1,084,489.



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UNITED STATES PATENT OFFICE.

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WISE.

1,084,489.

Specification of Letters Patent.

Patented Jan. 13, 1914.

Application filed May 28, 1912. Serial No. 700,282.

To all whom it may concern:

Be it known that I, JULIUS SCHMUTZ, a citizen of the United States, residing at Shively, in the county of Jefferson and State of Kentucky, have invented new and useful Improvements in Vises, of which the following is a specification.

An object of the invention is to provide a vise for clamping bodies in a rigid and stationary position.

The invention embodies, among other features, a device for clamping a body rigidly thereto, portions of the device being movable at various angles to the vertical so that a face of the body clamped in the vise can be arranged at any convenient angle so that the body can be easily operated upon.

The invention further embodies a vise having a stationary jaw and a movable jaw with means for quickly and efficiently operating the movable jaw to securely clamp a body between the said stationary jaw and the movable jaw.

In the further disclosure of the invention reference is to be had to the accompanying drawings constituting a part of this specification in which similar characters of reference denote corresponding parts in all the views, and in which:

Figure 1 is a side elevation showing the jaws in spaced relation, the vise being in open position; Fig. 2 is a plan view; Fig. 3 is a vertical longitudinal sectional view taken on the line 3—3 in Fig. 2, the vise being in closed position with a body clamped between the jaws thereof; Fig. 4 is a vertical transverse sectional view taken on the line 4—4 in Fig. 2; Fig. 5 is a fragmentary perspective view of the cam head; and Fig. 6 is a perspective view of one of the locking dogs.

Referring more particularly to the views, I employ a base 10 provided with a semi-spherical opening 11 in which is movably mounted a ball member 12 terminating in a threaded shank 13 extending upwardly from the ball member 12, a cap 14 being mounted on the base 10 and having threaded connection therewith, an opening 15 being provided in the cap 14, the walls of the said opening being inclined so that the said cap can be placed over the ball 12 and then moved into threaded engagement with the base 10 to retain the ball member 12 in the opening 11 of the base, it being readily seen that when the cap is screwed down on the

base the ball member 12 will be held in stationary position relatively to the base for a purpose that will be hereinafter more fully disclosed, a series of recesses 16 being preferably provided in the cap 14 for the reception of a spanner wrench or the like, whereby the cap can be conveniently rotated on the base 10 for the purpose of securing the cap on or off of the base. The threaded portion of the shank 13 has threaded connection with a bed plate 17 provided on the upper side thereof with a depression 18, forming a seat, in which is mounted a plate 19 having the sides thereof extending beyond the sides of the plate 17 to form a track 20, the plate 19 being preferably secured to the bed plate 17 by suitable screws passed through the plate 19 so that the upper faces of the screws will fit flush with the plate, the upper end of the threaded shank 13 being adapted to pass through an opening in the plate 19 and fit flush with the upper surface of the plate. An opening 21 is formed in one end of the bed plate 17 and a dowel pin 22 is adapted to extend therethrough to extend into an opening 23 formed in the base 10, thus retaining the bed plate 19 rigid relatively to the base 10, the upper end of the dowel pin 22 being formed into a suitable knob or handle 24, whereby the dowel pin can be easily removed from engagement with the base 10. A vertically extending clamping jaw 25 is formed with the bed plate 17, at one end thereof, the said jaw being hereinafter termed a stationary jaw. A substantially U-shaped clamping jaw 26 is provided with longitudinally extending recesses 27, constituting guideways to receive the track 20 formed by the projecting edges of the plate 19, thus permitting the jaw 26 to slide relatively to the bed plate 17 and the stationary jaw 25, the mentioned jaw 26 constituting the movable jaw of my device. A horizontally extending shaft 28 has the ends thereof mounted in the sides of the movable jaw 26 and rigidly mounted on the shaft are a plurality of locking dogs 30 having their under sides provided with teeth 31 adapted to operate over rack bars 32, rigidly mounted on the upper face of the plate 19. The ends of the shaft 28 are journaled in elongated openings 33 in the sides 29 of the movable jaw 26, thus permitting a slight horizontal movement of the shaft 28, a cam lever 34 being provided and terminating in a bifurcated cam head 35,

journaled on the shaft 28, between the locking dogs 30, a suitable collar 36 being mounted on the shaft 28 between the bifurcated portions of the cam head 35.

5 In the use of my device, assuming that the movable jaw 26 is in spaced relation to the stationary jaw 25, when a piece of work 37 has been moved between the jaws as shown in Fig. 3, the movable jaw 26 is slid forwardly
10 to engage the piece of work, thus wedging the same between the movable jaw and the stationary jaw, the teeth 31 on the locking dogs 30 being formed relatively to the rack bars 32 so that when the movable jaw is slid
15 forwardly the locking dogs will slide over the rack bars, the mentioned locking dogs being adapted to lock with the rack bars to prevent the clamping jaw from being slid away from the stationary jaw, it being necessary
20 to first move the locking dogs out of engagement with the rack bars before the movable jaw can be slid rearwardly. When the clamping jaw has been moved forwardly to engage the piece of work 37, a rearward
25 pull is exerted on the cam lever 34, thus moving the cam head into engagement with the rear face of the movable jaw and causing the horizontal shaft to slide in the openings 33, thus advancing the movable
30 jaw a sufficient distance toward the stationary jaw to rigidly clamp the piece of work between the said jaws, the final position of the cam head 35 being adapted to retain the movable jaw in locked position, while the
35 locking dogs 30 will also aid in retaining the movable jaw in stationary position on the plate 19.

40 By providing the ball member 12, mounted as mentioned heretofore, when the cap 14 is partially unscrewed from the base 10, the upper part of the device can be swung to lie at an angle to the vertical plane of the base,

after which the cap is rescrowed on the base 10 to secure the ball member 12 in rigid position, thus enabling the operator to operate on the work from any desired angle or position.

Having thus described my invention, I claim:

1. A device of the character described 50 comprising a base, a member disposed above and in a longitudinal plane with the base and provided with a fixed jaw, another jaw movable toward and away from said fixed jaw and provided with oppositely disposed 55 elongated openings, a shaft carried by the latter mentioned jaw and having the terminals thereof extended through said elongated openings, and means mounted on said shaft and having portions thereof engaging with 60 said movable jaw and said member whereby the former is positively held in locked position on the latter.

2. A device of the character described including a bed plate having a fixed jaw, a 65 movable jaw, said movable jaw being provided with a rear wall and oppositely disposed side walls, the latter mentioned walls being provided with elongated openings, a shaft carried by the movable jaw and having 70 its terminals extended through the elongated openings formed in the side walls thereof, and means fulcrumed on said shaft and having a portion thereof engaged with the inner face of the rear wall and another portion 75 thereof engaged with the base plate for locking the said movable jaw in relative adjusted positions on said bed plate.

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

JULIUS SCHMUTZ.

Witnesses:

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WALTER S. MENDEL.