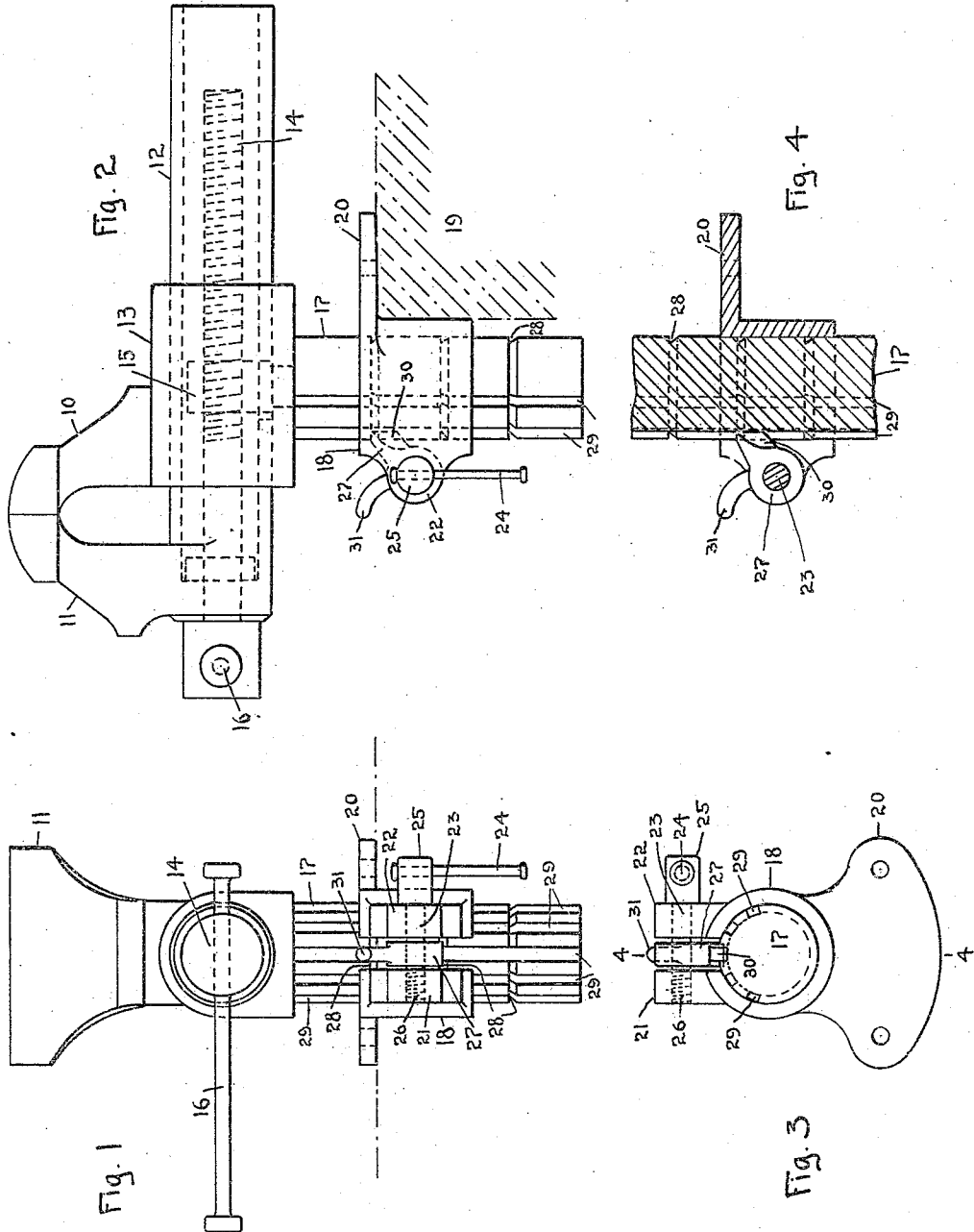


G. A. GEFVERT.
ADJUSTABLE VISE.
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Witnesses:
E. L. Jones
Paul Biefer

Inventor
Gustaf Albert Gefvert
By his Attorney
H. C. Karlsson

UNITED STATES PATENT OFFICE.

GUSTAF ALBERT GEFFVERT, OF BRIDGEPORT, CONNECTICUT.

ADJUSTABLE VISE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GUSTAF ALBERT GEFFVERT, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Adjustable Vises, of which the following is a specification.

My invention relates to means and methods of mounting vises or similar work-holders, and the object thereof is to provide an improved mount for instruments of this class whereby the same can be raised or lowered and turned as required to suit the stature of the workman or his convenience in manipulating the work.

The accompanying drawing is presented herewith as a medium of illustration, and comprises the following named views, to wit:—

Figure 1, consisting of a front elevation. Fig. 2, a side elevation; Fig. 3, a bottom plan of Fig. 1; and Fig. 4, a vertical section on the line 4—4 of Fig. 3.

Corresponding parts are designated by the same numerals of reference throughout.

As in ordinary constructions, the vise proper includes a stationary jaw 10, a movable jaw, 11, co-acting therewith, a slide 12 of the movable jaw passing through a guide 13 of the stationary jaw, an actuating-screw 14 engaging a nut 15 in said guide, and a slidable bar or lever 16 for turning the actuating screw. There the similarity to usual structures ends, the remaining parts of the invention as hereinafter described, being considered novel and peculiarly adapted for attaining the object above noted.

To support the aforesaid vise in position, I provide it at the bottom with a cylindrical shank 17, and fit the same in a clamp-socket 18, which is secured to the work-table or bench, indicated at 19, in Fig. 2. The shank 17 is preferably made integral with the aforesaid guide 13, projecting downwardly therefrom and entering its socket 18 from above, as shown. The latter has a rearwardly extending flange 20, through which it can be screwed or otherwise fastened to the edge or upper surface of the work-table or bench. The socket 18 is open laterally and works on the principle of a clamp-collar. It is made of sufficient width to afford it a firm hold on the shank 17, which it surrounds on the sides and rear and forwardly it is formed with a pair of parallel, out-

wardly extending lugs 21 and 22, adapted to be forced together or let apart, and maintained in their respective positions when set, by means of a bolt 23, the latter being turned with the aid of a slidable bar or lever 24. The bolt 23 has a head 25 bearing against the outer face of the lug 22. Thence the bolt runs loosely through a suitable opening in the lug 22, through a small gap intervening between the two lugs, and finally into the lug 21, which it engages by a screw-thread, as at 26. Now, the collar portion of the socket 18 is such that it will spring back and release the shank 17, whenever the bolt 23 is partly unscrewed, for instance by turning the bar or lever 24 contra-clockwise and thereby letting apart the two said lugs 21 and 22. But, by turning the bar or lever clockwise, which causes the bolt to draw the two lugs toward each other, the said collar portion is closed around the shank and firmly grasps the same.

Provision is made to lock the vise positively against longitudinal and lateral displacement, by grooving the shank 17 both crosswise and lengthwise, and causing the grooves therein to become engaged with a pawl 27, on the socket 18. The grooves are circumferential, of which two sets 28 and 29 are provided. The transverse grooves 28 occur at suitable intervals apart along the shank 17, and they are shaped as shown, with their upper sides level and their lower sides slanting so that upon meeting the point of the pawl, the desired groove may be made to engage therewith and operate to lock the vise positively at the corresponding elevation. The longitudinal grooves 29 also are suitably spaced one from another, and disposed in a semi-circle (or if desired a full circle) around the cylindrical shank. The said longitudinal grooves are designed to be engaged by a fin 30, formed on the pawl 27, next to its working face. The fin, it will be seen is of less width than the working face of the pawl, and by being made to enter any one of the longitudinal grooves, it will positively lock the shank 17, and consequently the vise in the corresponding lateral position. Thus, the point of the pawl operates in a vertical plane to prevent downward movement of the vise, whereas the fin is operative in a horizontal plane, precluding displacement sideways, though allowing the vise to face in any desired direction. The pawl 27 is loosely mounted upon the

central portion of the bolt 23, between the lugs 21 and 22, and it is furnished with a trigger 31, wherewith it can be easily pressed in and out of engagement with the grooves 28 and 29.

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

1. An adjustable vise, comprising a shank with a set of transverse grooves around its periphery, a laterally open socket for said shank, means for closing said socket and clamping said shank therein, and means carried by said socket closing means for locking said shank at the desired elevation by engaging one of said transverse grooves.

2. An adjustable vise, comprising a shank grooved both transversely and longitudinally, a socket for said shank, and means carried by said socket designed to engage simultaneously one transverse and one longitudinal groove, thereby operating to lock the vise positively after its adjustment vertically and laterally.

3. An adjustable vise, comprising a shank having a set of transverse grooves at suitable intervals apart around its periphery, a clamp socket for said shank with a flange

for securing it to the work-table, means for tightening said socket on the shank, and a pawl on said tightening means adapted for engagement with said transverse grooves.

4. An adjustable vise, comprising a shank with longitudinal peripheral grooves, a clamp socket therefor adapted to grasp said shank, and a pawl with a fin designed to engage any one of said grooves, said pawl and fin being connected with said socket.

5. An adjustable vise, comprising a grooved shank, a clamp socket therefor, said socket having parallel outwardly extending lugs, a bolt operating to draw said lugs toward each other so as to close the socket upon the shank, and a pawl mounted on said bolt, adapted to engage any one of the grooves of said shank, said pawl having a trigger wherewith to press it in and out of engagement.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut this 7th day of June A. D. 1909.

GUSTAF ALBERT GEFVERT.

Witnesses:

FRED OBERG,
JACOB P. SUNDIN.