May 19, 1953 B. E. BIGELOW 2,638,805

LAP VISE AND BENCH

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Fig. 1

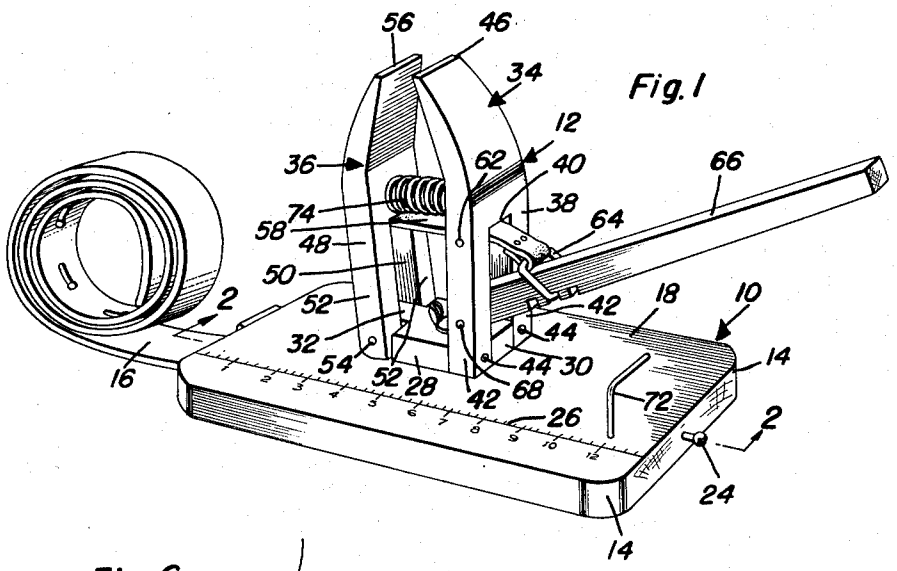



Fig. 6

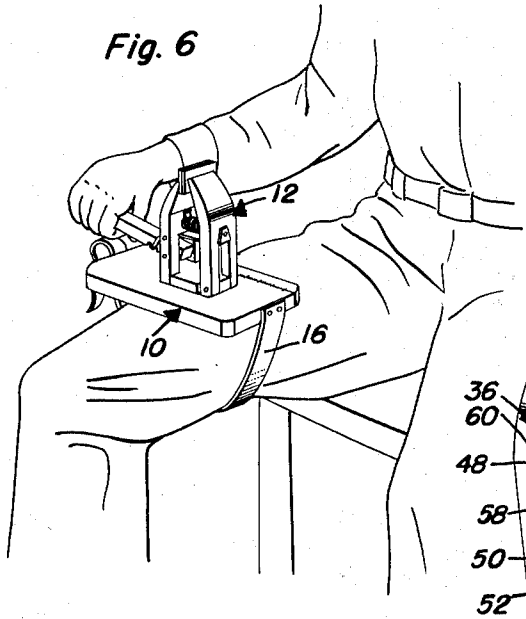



Fig. 7

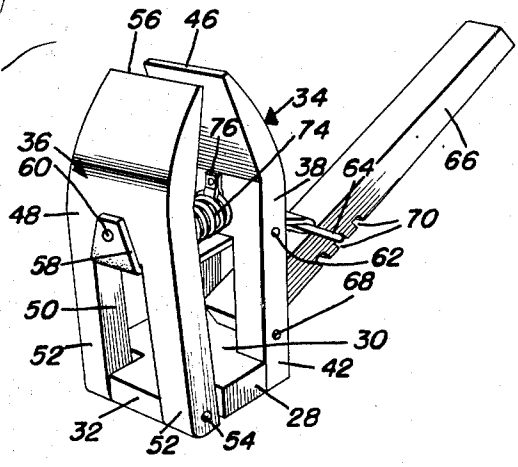
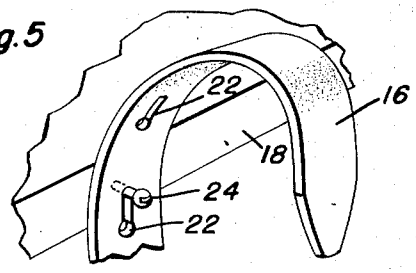



Fig. 5




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LAP VISE AND BENCH

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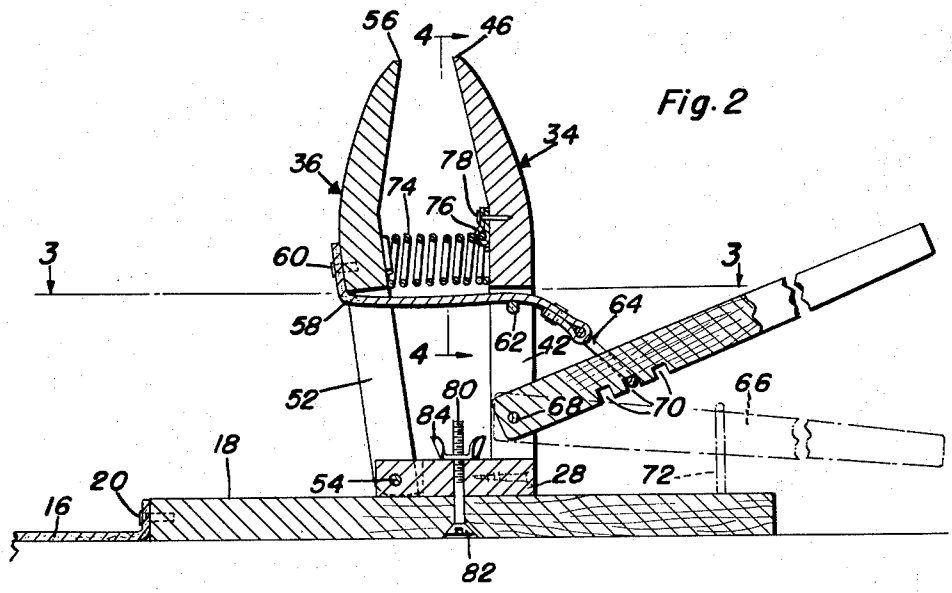
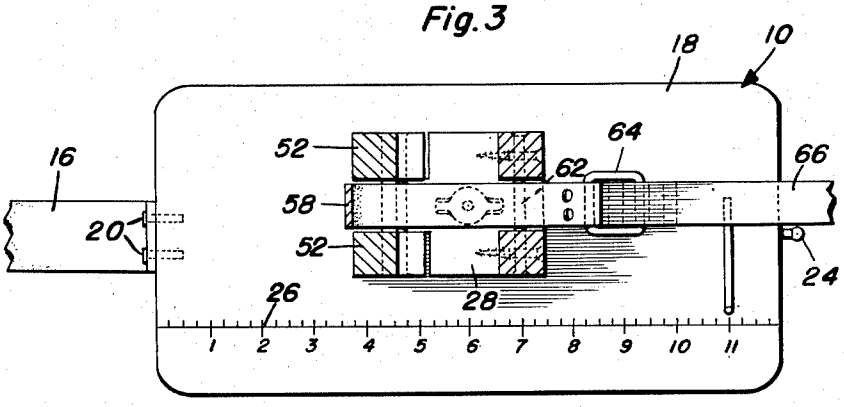



Fig. 2

Fig. 3



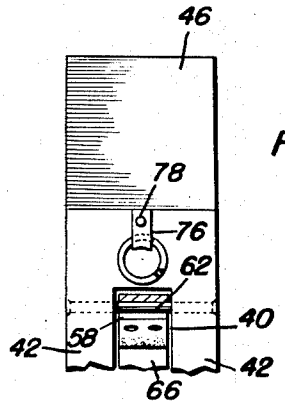




Fig. 4

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## LAP VISE AND BENCH

Benjamin E. Bigelow, Warren, Pa.

Application June 2, 1952, Serial No. 291,183

1 Claim. (Cl. 81—21)

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This invention relates in general to vises, and more particularly to vises which may be conveniently mounted in the lap of a person.

The primary object of this invention is to provide an improved vise construction which includes a bench portion, said bench portion being adapted to be secured on the upper portion of a person's leg, around the chest of a person, or any other suitable portion of the person's body.

A further object of this invention is to provide an improved vise construction which includes a base of a generally cruciform configuration, said base having secured thereto a pair of upstanding clamping members similar in shape and having jaws at the upper end thereof, and novel means for urging one of the jaws toward the other.

With these objects definitely in view, this invention resides in certain novel features of construction, combination and arrangement of elements and portions as will be hereinafter described in detail in the specification, particularly pointed out in the appended claim, and illustrated in the accompanying drawings which form a material part of this application and in which:

Figure 1 is a perspective view of the vise construction, which is the subject of this invention, and shows the details of the various portions thereof;

Figure 2 is an enlarged longitudinal vertical sectional view taken substantially upon the plane indicated by the section line 2—2 of Figure 1 and shows the general construction of the vise of Figure 1, a portion of the actuating lever for urging the jaws of the vise together being broken away, a clamping position of the lever being shown in dotted lines;

Figure 3 is a transverse horizontal sectional view taken substantially upon the plane indicated by the section line 3—3 of Figure 2 and shows the general relationship of the various elements of the vise;

Figure 4 is a fragmentary transverse vertical sectional view taken substantially upon the plane indicated by the section line 4—4 of Figure 2 and shows the manner in which the spring for urging the jaws forward is secured to one of the clamping members;

Figure 5 is an enlarged fragmentary perspective view of one end of the bench portion of the vise construction and shows the manner in which a bench containing strap is adjustably connected thereto;

Figure 6 is a perspective view on a reduced scale of the vise construction of Figure 1 and

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shows the supporting bench therefor fastened to the leg of the person, the vise construction being rotated in substantially 180° from its position illustrated in Figure 1; and

Figure 7 is an enlarged perspective view of the vise portion and shows the general construction thereof.

Similar characters of reference designate similar or identical elements and portions throughout the specification and throughout the different views of the drawings.

Referring now to the drawings in detail, it will be seen that there is illustrated in Figure 1 an improved vise construction, which is the subject of this invention, the vise construction including a bench portion, which is referred to in general by the reference numeral 10, and a vise portion, which is referred to in general by the reference numeral 12. The bench portion 10 includes a flat rectangular block which has rounded corners 14 and which has secured to one end thereof one end of a flexible strap 16. The strap 16 is secured to said one end of the rectangular block, which is referred to in general by the reference numeral 18, by a plurality of fasteners 20. The flexible strap 16 is provided adjacent the other end thereof with a plurality of longitudinally spaced slots 22 which are of a generally key-hole shape. The other end of the block 18 is provided with a centrally located T-headed fastener in the form of a screw 24 which is adapted to be selectively engaged in one of the key-hole slots for clamping the bench portion 10 to a leg or chest of a person, or any other suitable support. The block 18 has inscribed on the face thereof adjacent one side edge a scale 26 for measuring articles utilized in connection with operation of the vise.

The vise portion 12 includes a base 28 which is generally cruciform in outline and includes a pair of oppositely disposed arms 30 and 32. The arms 30 and 32 have secured thereto similarly shaped upstanding clamping members 34 and 36, respectively. The clamping member 34 includes a vertical lower portion 38 which is bifurcated to include a notch 40 and a pair of downwardly extending legs 42. The lower ends of the legs 42 are disposed on opposite sides of the arm 30 and secured to the base 28 by a plurality of fasteners 44 whereby the clamping member 34 is rigidly secured to the base 28. The clamping member 34 also includes a curved upper portion which curves inwardly and terminates in a jaw 46.

The clamping member 36 also includes a

straight lower portion 48 which is bifurcated to form a centrally located notch 50 and a pair of spaced parallel legs 52. The lower ends of the legs 52 straddle the arm 32 of the base 28 and are pivotally secured thereto by a horizontal pivot pin 54 which permits the pivoting of the clamping member 36 with respect to the base 26. The clamping member 36 also includes an upwardly and inwardly extended upper portion which terminates in a jaw 56, the jaw 56 being adapted to cooperate with the jaw 46 of the clamping member 34 to clamp an article.

In order that the jaw 56 may be moved towards the jaw 46 to clamp an article therebetween, the straight portion 48 of the clamping member 36 has secured thereto one end of a strap 58 by a fastener 60. The strap 58 extends through the notch 50 in the clamping member 36 and towards the clamping member 34 where it passes through the corresponding notch 40 therein. The strap 58 passes over a transversely extending pin 62 which extends between the legs 42 of the clamping member 34 adjacent the upper end of the notch 40 to form a guideway. The other end of the strap 58 is provided with a loop 64 which is preferably formed of metal and adapted to engage with a lever 66 for tensioning the same. The lever 66 is in the form of an elongated substantially rectangular cross sectional member having one end thereof pivotally connected to the clamping member 34 by a transversely extending pivot pin 68, the end of the lever 66 being disposed within the notch 40. The underside of the lever 66 is provided with a plurality of transversely extending grooves 70 in which the loop 64 may be selectively engaged for clamping various thicknesses of articles between the jaws 46 and 56. In order that the lever 66 may be locked in a clamped position, an L-shaped latch member 72 has one end thereof pivotally secured to the bench portion 10 and has the other arm thereof extending horizontally thereabove for overlying the other end of the lever 66. In order that the clamping members 34 and 36 and their associated jaws 46 and 56, respectively, may be biased to non-clamping positions, a coil spring 74 is disposed between the straight portions 38 and 48 of the respective clamping members. The coil spring overlies the central portion of the strap 58 and is secured to the clamping member 34 by a small loop 76. The loop 76 braces a portion of the coil spring 74 and is secured to the clamping member 34 by a fastener 78. In order that the position of the vise portion 12 with respect to the central portion 10 may be varied, the base 28 is pivotally secured to the board 18 by a centrally located fastener 80 which extends up through



the board 18 and the base 28. The fastener 80 has a countersunk head 82 which is countersunk in the bottom of the board 18 and mounts a wing nut 84 which overlies and engages the base 28.

It will be understood that due to the use of the fastener 80 to secure the base 28 to the central portion 10, the vise portion 12 may be rotated to the desired angle or if desired may be removed from the bench portion and held in one hand or mounted on some other suitable support. Also, while the vise construction has been illustrated and described as secured to the leg of a person, it will be understood that the board 18 may be secured to any desired member.

The operation of this device will be understood from the foregoing description of the details thereof, taken in connection with the above recited objects and drawings. Further description would appear to be unnecessary.

Minor modifications of the device, varying in minor details from the embodiment of the device illustrated and described here, may be restored to without departure from the spirit and scope of this invention, as defined in the appended claims.

Having described the invention, what is claimed as new is:

A vise comprising a bench, a vise structure carried by said bench, said vise structure including a base having a pair of clamping members extending upwardly therefrom, said clamping members having inwardly sloping cooperating jaws at the upper ends thereof, means urging said jaws apart, means for moving said jaws together, one of said clamping members being rigidly secured to said base, the other of said clamping members being pivotally connected to said base, said means for moving said jaws together comprising a lever pivotally connected to said rigidly secured clamping member, a flexible member connecting said lever to said pivotally connected clamping member, and said flexible member having a looped end portion selectively engageable with notches in said lever.

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