J. H. BENTLEY.

VISE HANDLE.

APPLICATION FILED MAR. 10, 1919.

1,350,773. **Patented Aug. 24, 1920.**

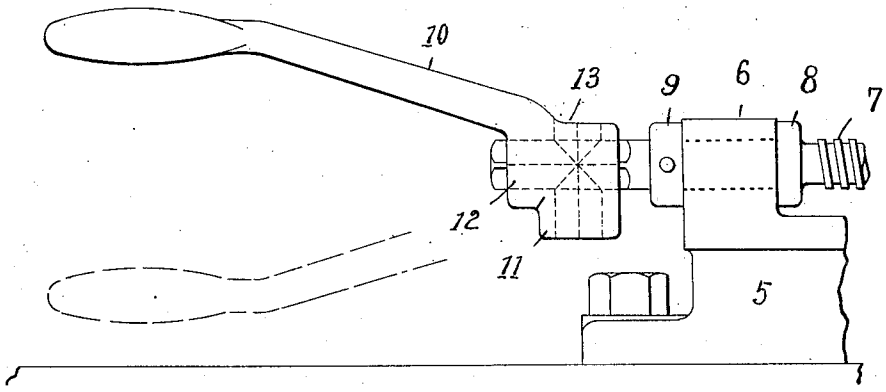


Fig. 1

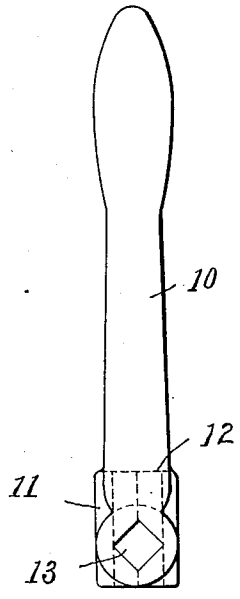


Fig. 3.

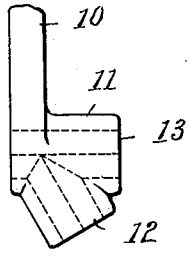


Fig. 4.

Fig. 2

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JOSEPH H. BENTLEY, OF BRIDGEPORT, CONNECTICUT.

VISE-HANDLE.

1,350,773. Specification of Letters Patent. Patented Aug. 24, 1920.

Application filed March 10, 1919. Serial No. 281,582.

To all whom it may concern:

Be it known that I, JOSEPH H. BENTLEY, a citizen of the United States, and resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Vise-Handles, of which the following is a specification.

My invention relates to new and useful improvements in detachable handles for vises, and similar mechanisms, employing a rotatable shaft adapted to be operated by a detachable handle.

The purpose of the invention is to provide a special form of detachable handle having two sockets formed therein to engage the shouldered end of the shaft and whereby different leverages may be obtained for rotating the shaft, and further to position one of the sockets within the handle so that when mounted upon the shaft it may be swung within a relatively small radius and to position the other socket so that when in engagement with the shaft a larger radius is required and a greater leverage of the handle is obtained.

I find that various forms of vises when mounted upon benches or metal working machines, are frequently operated to a great disadvantage owing to the limited amount of room available for the operation of the handle on the clamping screw, and that in order to operate the screw by the handle the latter has to be attached and removed once or more with each complete turn of the screw, and that in cases where the screw has to be given a great number of turns in order to move the jaw several inches, considerable time is lost in the operation. This same difficulty is also experienced in other forms of machines where manual operations or adjustments of a screw are made through a detachable handle and wherein my improved form of handle can be used to advantage.

With these and other objects in view the invention resides and consists in the construction and novel combination and arrangements of parts hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims may be resorted to without departure from the spirit or sacrificing any of the advantages of the invention.

Similar characters of reference denote like or corresponding parts throughout the several figures of the accompanying drawings forming a part of this specification, and upon which,

Figure 1 shows a side view of the front end portion of a vise showing my improved form of attachable handle mounted in one of its two positions, upon the clamping screw.

Fig. 2 is a similar side view with the operating handle mounted upon the adjusting screw in the other position.

Fig. 3 is a front view of the handle shown in Fig. 2, and

Fig. 4 shows the socket end portion of a slightly modified form of handle.

Referring in detail to the characters of reference marked upon the drawings, 5 represents the base portion of the vise, and 6 the bearing thereon to support the clamping screw 7 which in practice serves to operate one of the jaws of the vise, not shown. The screw is provided with suitable collars 8 and 9 that engage the opposite ends of the bearing to hold the screw against lengthwise movement. The outer end of the screw is shouldered to form a square head upon which the sockets of the hub of the handle are positioned. This end or head portion of the screw may obviously be of any preferred design to correspond with the form of the sockets and so as to insure proper engagement one with the other.

The handle 10 may be of any desired length and includes a hub portion 11 having two sockets 12 and 13 formed therein at a suitable angle to the handle portion and to each other so that when one of the sockets is in engagement with the head of the screw the handle will be disposed at but a slight angle with reference to the axis of the screw, whereas when positioned with the other socket in engagement with the head the angle will be disposed at more nearly a right angle to the shaft and whereby a greater leverage upon the shaft will be obtained, and a larger radius required in the swing of the handle.

These sockets may extend clear through the hub at right angles to each other and intersect as shown in Figs. 1 and 2 and whereby the handle when attached would be disposed in the relative positions to the

screw indicated, if preferred one of the sockets may be positioned at an acute angle to the other as seen in Fig. 4 in a way to give the same relative effect in the operation of the screw. The sockets in both forms preferably intersect but in the latter construction but one only extends directly through the hub of the handle.

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

1. As a new article of manufacture an attachable handle formed of one piece, including a handle and hub portion, the latter having two intersecting elongated sockets formed at right angles to each other and centered on the same radial plane and on a radial plane with the handle, the said handle being disposed from the hub intermediate of the two open end portions of the sockets and out of alinement with the sockets.

2. As a new article of manufacture an attachable handle formed of one piece and comprising a hub portion having an integral extended handle, the hub being provided with two elongated intersecting sockets formed at angles to each other and centered on the same plane with the handle but out of alinement therewith.

3. As a new article of manufacture an attachable handle formed of one piece, including a handle and hub portion, the latter having two intersecting elongated sockets formed at angles to each other and on the same plane and on a plane with the handle, the said handle being disposed from the hub intermediate of the two open end portions of the sockets and nearer in line with one socket than the other.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 7th day of March, A. D. 1919.

JOSEPH H. BENTLEY.

Witnesses:
C. M. NEWMAN,
LILLIAN M. ALLING.