(No Model.)

E. SHAW.

HAND SCREW OR VISE JAW ATTACHMENT.

No. 331,164. Patented Nov. 24, 1885.

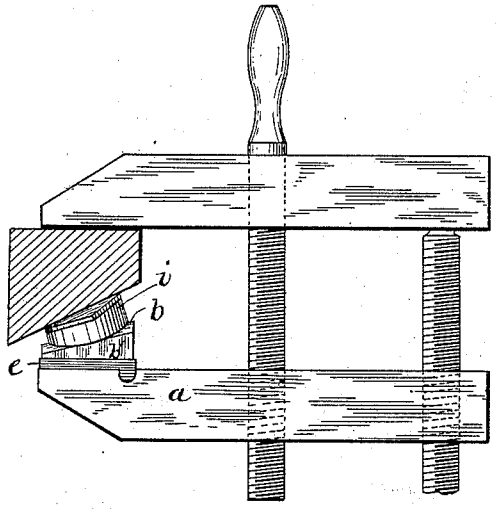

Fig. 1.

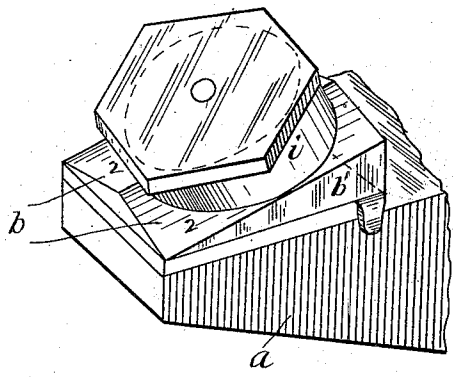

Fig. 2.

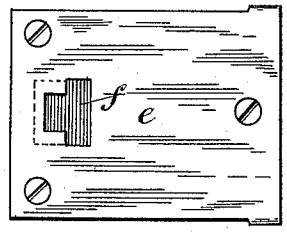

Fig. 7.

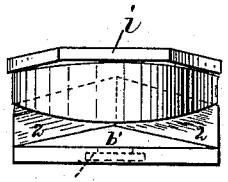

Fig. 3.

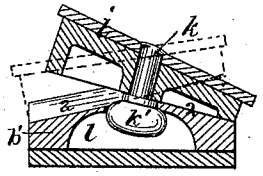

Fig. 4.

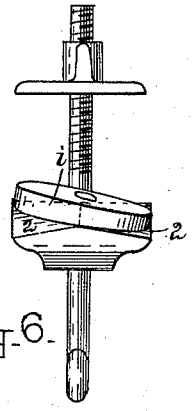

Fig. 6.

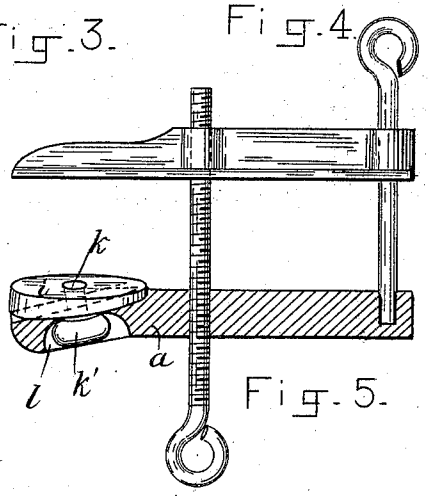

Fig. 5.

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UNITED STATES PATENT OFFICE.

EDGAR SHAW, OF LYNN, MASSACHUSETTS.

HAND-SCREW OR VISE-JAW ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 331,164, dated November 24, 1885.

Application filed February 2, 1885. Serial No. 154,691. (No model.)

To all whom it may concern:

Be it known that I, EDGAR SHAW, of Lynn, in the county of Essex and State of Massachusetts, have invented certain Improvements in Hand-Screw or Vise-Jaw Attachments, of which the following is a specification.

This invention has for its object to provide an attachment or supplemental jaw for a hand-screw or vises capable of being readily inclined at any desired angle, so that the clamping-surfaces may be readily adapted to the surfaces of variously-formed bodies to be held.

To this end the invention consists in the improvements which I will now proceed to describe.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side view of a hand screw or clamp, one of the jaws of which is provided with my improvement. Fig. 2 represents a perspective view of my attachment and a portion of the jaw to which it is applied. Figs. 3 and 4 represent, respectively, an end view and a transverse section of the attachment as shown in Fig. 2. Fig. 5 represents a side elevation and partial section of a metal hand-screw having my improvement. Fig. 6 represents an end view of the construction shown in Fig. 5. Fig. 7 represents a top view of the plate as shown in Figs. 1, 2, 3, and 4, on which the attachment is supported.

The same letters of reference indicate the same parts in all the figures.

In carrying out my invention I provide a hand-screw or vise-jaw, *a*, with a fixed surface, *b*, which is composed of two faces, 2 2, which are inclined downwardly from the center of the surface *b* to the opposite edges transversely of the jaw *a*, as shown in Figs. 2, 3, 4, and 6, and are also inclined lengthwise of the jaw, as shown in Figs. 1, 2, and 5. The surface *b* may be formed directly on the jaw, as shown in Figs. 5 and 6, or on a block, *b'*, which is separable from said jaw, as shown in Figs. 1, 2, 3, and 4. In the latter case I prefer to provide the jaw with a metal plate, *e*, having a T-shaped slot, *f*, to receive a correspondingly-shaped shank, *g*, on the block having the surface *b*, said shank being shown by dotted lines in Fig. 3. The block is thus enabled to be readily applied to and removed from the jaw.

On the surface *b*, I place a plate, *i*, which is connected either to the jaw *a* or to the block *b'* by a pivot-pin, *k*, having a rounded head, *k'*, which is placed in a socket, *l*, in the jaw *a* or the block *b'*, and is capable of rocking or turning in any direction. The plate *i* is journaled on said pin, and is enabled thereby to rock on the apex or angle formed by the faces 2 2 and bear on either face, as shown in full and dotted lines in Fig. 4, thus enabling the outer face of the plate to be inclined in different directions. The plate is made with a varying thickness or wedge-shaped, as clearly shown in Fig. 4, and is capable of rotating on or with the pin *k*, so as to give other variations to the inclination of its outer face than those afforded by the faces 2 2. It will be seen, therefore, that the outer face of the plate *i*, which constitutes one of the clamping-surfaces, is capable of assuming many different inclinations with relation to the other jaw or clamping-surface, and can therefore be made to conform to variously-formed bodies to be held. The plate has an extended bearing on one of the faces 2 in any position in which it may be placed, and is therefore firmly supported, so that it cannot tip or wabble loosely, and is capable of sustaining a considerable degree of pressure without injury.

This improvement may be applied to both jaws, if desired, instead of to one only, as shown. It is capable of application to vise-jaws and other clamping devices, as well as to hand-screws. It is obvious that the pivoted plate having the varying thickness, as shown, may be placed upon the flat surface of a clamping-jaw instead of on the surface *b*. If desired, the surface *b* may be made without a longitudinal inclination.

I am aware that it is not new to provide a clamping-jaw with a pivoted wedge-shaped plate adapted to be rotated, and thereby vary the inclination of its outer face, said plate having projections on its rear side, which bear against the jaw and permit the pivoted plate to be inclined so as to assume either of two inclinations in any position to which it may be turned on its pivot. I am also aware that a ring having two oppositely-inclined supporting-faces on its outer side has been pivoted to a vise-jaw so as to partly rotate and support a face-plate adapted to rock on the apex of said faces with the same result. My improvement

differs from those above referred to in that the oppositely-inclined faces 2 2 are fixed relatively to the jaw so that each partial rotation of the plate on its pivot changes its relation to the fixed incline on which it bears. This result, I believe, has not before been accomplished.

I claim—

1. A clamping-jaw having a wedge-shaped pivoted plate and a support for said plate, composed of two faces fixed relatively to the jaw and oppositely inclined transversely of the jaw, as set forth.

2. A clamping-jaw having a pivoted wedge-shaped plate and a supporting-surface for said plate, composed of two faces oppositely inclined transversely of the jaw and inclined lengthwise of the jaw, as set forth.

3. The improved clamping-jaw attachment composed of the detachable block *b'*, having the two-faced surface *b*, and the wedge-shaped plate *i*, connected to said block by a rocking pivot, *k*, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 30th day of January, 1885.

EDGAR SHAW.

Witnesses:
C. F. BROWN,
H. BROWN.