

No. 716,805.

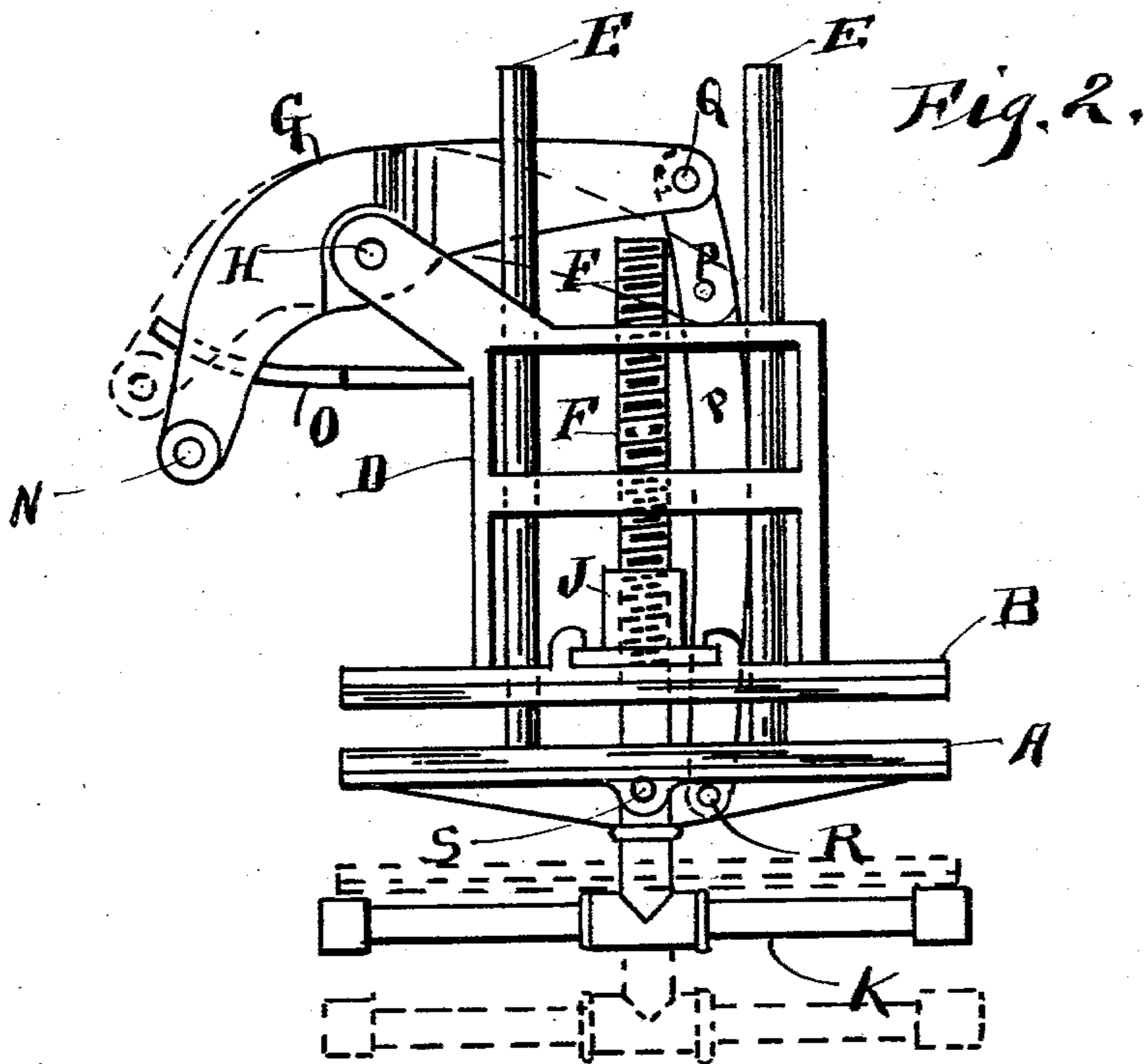
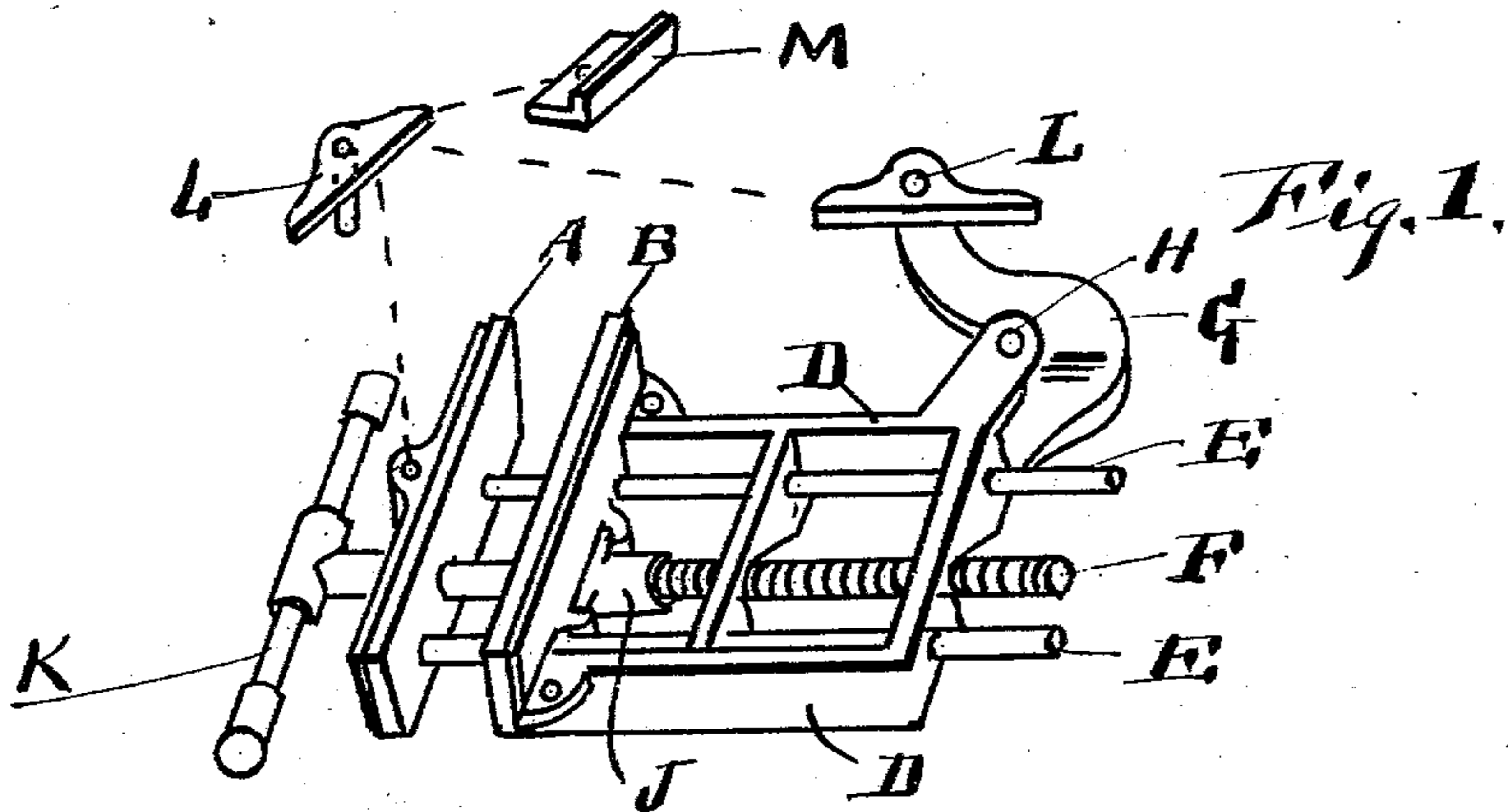
Patented Dec. 23, 1902.

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DOUBLE ACTING VISE.

(Application filed June 3, 1902.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES.

Harry J Perkins.

Mary S. Tucker

INVENTOR.

Jacob Benedict

BY his ATTORNEY.

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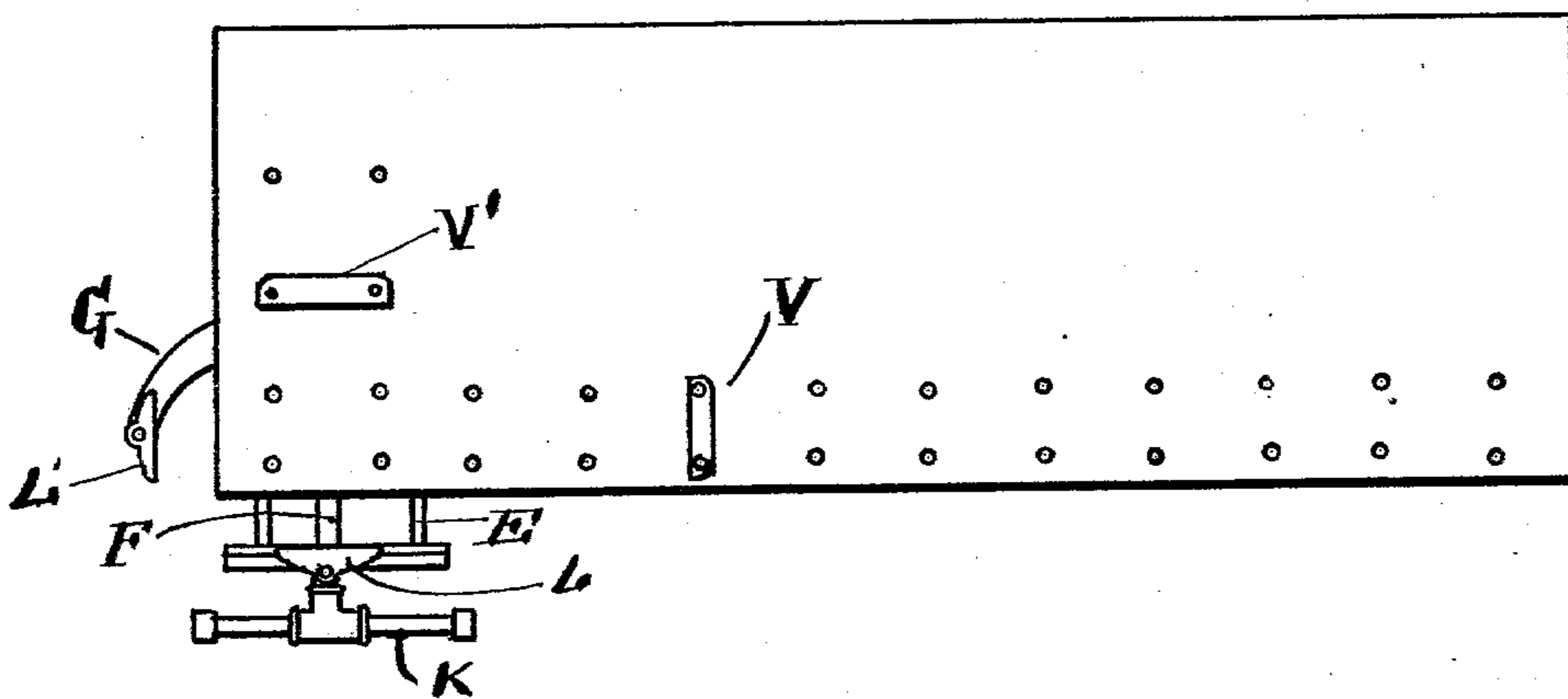
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Fig. 3.



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UNITED STATES PATENT OFFICE.

JACOB BENEDICT, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO BENEDICT FURNITURE CLAMP COMPANY, OF GRAND RAPIDS, MICHIGAN.

DOUBLE-ACTING VISE.

SPECIFICATION forming part of Letters Patent No. 716,805, dated December 23, 1902.

Application filed June 3, 1902. Serial No. 110,094. (No model.)

To all whom it may concern:

Be it known that I, JACOB BENEDICT, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented new and useful Improvements in Double-Acting Vises, of which the following is a specification.

This invention relates to vises used in connection with cabinet and other benches; and the invention consists in combining in one vise a double action, by means of which two movable jaws act simultaneously and move in any suitable direction to clamp the stock thereof, said jaws moving substantially at right angles to each other.

The objects of my invention are, first, to furnish a vise for the use of cabinet-makers and others that by a single movement of the handle of the vise the clamping-jaws will be moved so as to clamp the stock either laterally or longitudinally, as the user may desire; second, to so combine the movable jaws of the vise with suitable mechanism that said jaws can be moved simultaneously in lines substantially at right angles to each other, thus enabling the operator to use either of the clamping-jaws for retaining the stock in the required position; third, other objects hereinafter pointed out and claimed. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 shows a perspective view of the double-acting vise detached from the bench and also shows the preferred form of keepers which are used in connection with the two movable jaws. Fig. 2 shows a plan view of the vise also detached from the bench. Fig. 3 shows a plan view of a bench to which my double-acting vise is attached.

Similar letters refer to similar parts throughout the several views.

A represents the ordinary movable jaw carried on a line with the movement of the bench-screw.

B represents that part of the frame which may serve as a stationary jaw, the same being attached to and composing a part of the framework D.

D is the main frame of the vise, which sup-

ports the movable jaws and the working parts of the device.

E and E represent guide-rods of the jaw A, being supported loosely in ways or openings, so that the jaw A is supported in proper position as it is moved to and from the jaw B.

F represents the bench-screw, of ordinary construction and provided with a suitable handle, also a screw-thread which engages with the internal screw-thread of the collar or nut J.

G represents a lever which supports the jaw, which is adapted to move in contact with the end of the stock placed upon the bench. The lever G is pivoted to an arm or projection from the main frame D at the point H, as shown in Fig. 2.

H is a pivotal attachment which secures the lever G to the frame.

J is a threaded collar or nut securely attached to the frame D and engaging with the bench-screw F. In my preferred form of the collar J, I attach the same by means of lugs which extend so as to form grooves into which the collar J may be dropped and retained securely but loosely, so as to adjust itself and with it to allow some slight adjustment for the bench-screw. The form of this is shown in Fig. 2.

K represents the handle of the bench-screw, by means of which the double-acting vise is operated.

L represents a retainer-block, which is shown detached in Fig. 1. This retainer-block is provided with a pin which drops into the hole S in the movable jaw A and is so constructed as to project a sufficient distance above the bench to engage the stock.

L' is also a retainer-block of the same form and preferably of the same size as the retainer L. L' is adapted to engage with the hole N in the free end of the lever G, and the same projects above the bench sufficient to engage with the end of the stock placed on the bench. The position of the two retainer-blocks is fully shown in Fig. 3.

M is a block of wood or other suitable material provided with a hole through it and adapted to be placed beneath the retainer-blocks L and L' and to project in front there-

of, so as to prevent the retainer-blocks, which are usually made of metal, from injuring the stock. The block M serves as a cushion or buffer between the retainer-blocks and the stock, and the face of the same may be constructed in any form or shape adapted to be fitted to any and all kinds of stock to be used.

N is a hole in the free end of the lever G, adapted to receive the pin of the retainer-block L.

O is a support for the free end of the lever G, being a bar or projection preferably from the frame, and may be constructed in any suitable manner.

P is a connecting bar or link pivoted to the movable jaw A at R and to the lever G at Q.

V and V' are adjustable retainers on the top of the bench. It will be understood that in use these retainers are adjusted to any required position for the purpose of clamping the stock either laterally or longitudinally.

In Fig. 2 the solid lines show the position of the jaws when the stock is clamped, and the dotted lines show the position of the jaws and other parts when said jaws are open.

The operation of the device is as follows: By operating the handle in the ordinary manner when the jaws are open, as shown by the dotted lines in Fig. 2, the clamp A is moved by the bench-screw toward the stationary jaw B or toward the side of the bench, and the connecting-link E turns the lever G on its pivot H, moving the free end of said lever G, with its keeper L', to the position shown by the dotted line in Fig. 2—that is, the jaw A moves toward the side of the bench, while the keeper L', which acts as a jaw, moves toward the end of the bench.

By this construction the operator with a single vise of my construction is enabled by the handle of the vise to clamp the stock in two directions—that is, he can clamp the stock between the movable jaw A and the keeper L' or he can clamp the stock between the keeper L' and the keeper V. Thus he has a double-acting vise, which takes up but little

room and which fulfils the purposes of two separate clamping-vises.

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

1. In a double-acting vise, the combination of two stationary jaws arranged at an angle to one another, a movable jaw cooperating with one of said stationary jaws, a swinging jaw cooperating with the other of said stationary jaws, and means for operating said swinging jaw from said first-mentioned movable jaw.

2. In a double-acting vise, the combination of two stationary jaws arranged at an angle to one another, a movable jaw cooperating with one of said stationary jaws, a movable jaw consisting of an angle-lever pivoted at approximately its center, cooperating with the other of said stationary jaws, and a link connection between said first-mentioned movable jaw and said angle-lever.

3. In combination with a suitable framework a movable jaw A, a bench-screw supported in the frame, a lever G and connecting-link P, and a keeper L' serving as a jaw, said movable jaw A moving in one direction to clamp the side of the stock, and a jaw or keeper L' moving in another direction to clamp the end of the stock, all constructed as described.

4. In combination with a movable jaw A a link P pivoted to said jaw, the lever G pivotally supported to the frame and also pivoted to the end of the link B at Q, and the jaw or lever L' carried by the free end of the said lever G, substantially as and for the purpose described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JACOB BENEDICT.

Witnesses:

EDWARD TAGGART,
CHAS. M. WILSON.