

No. 662,660.

Patented Nov. 27, 1900.

W. VAN MANEN.
BENCH VISE.

(Application filed Dec. 18, 1899.)

(No Model.)

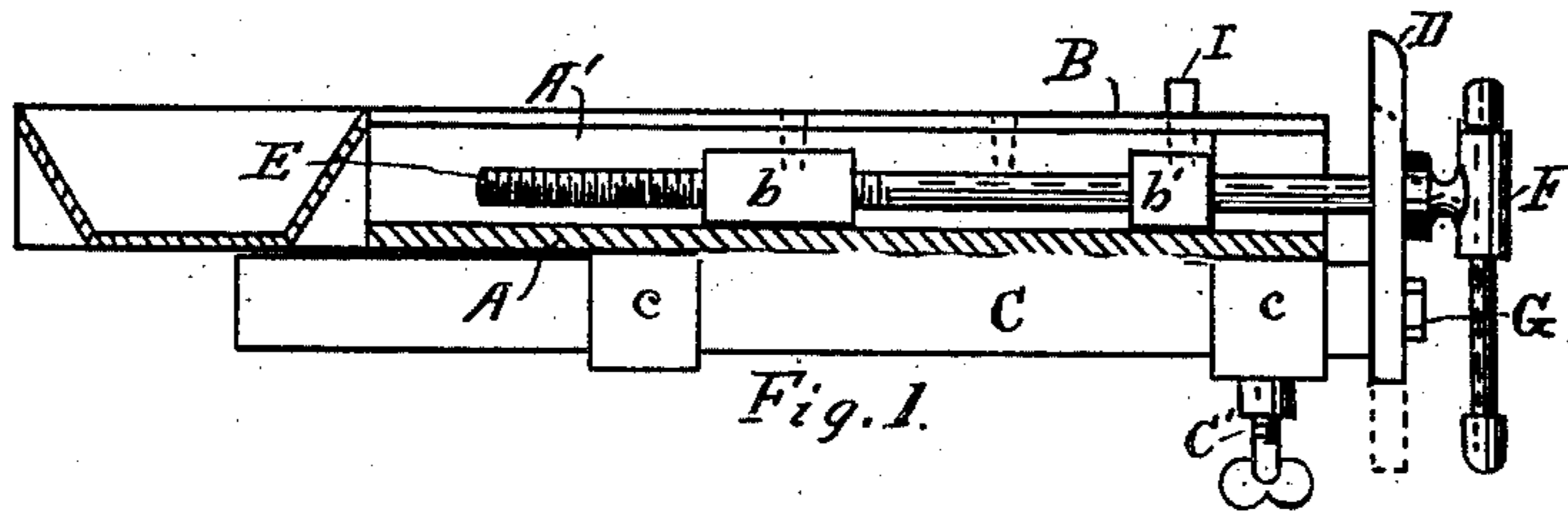


Fig. 1.

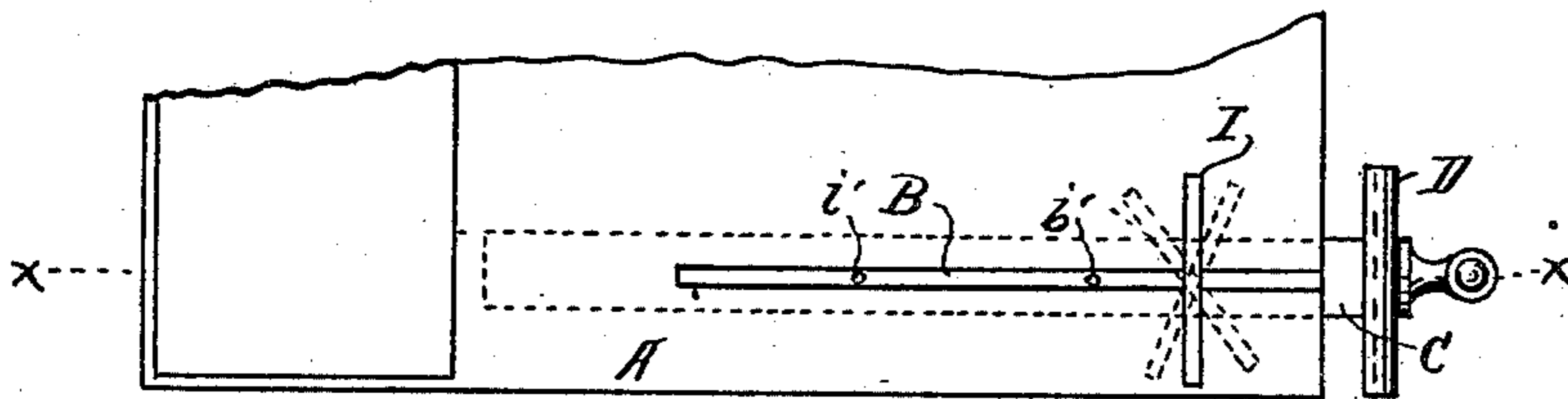


Fig. 2.

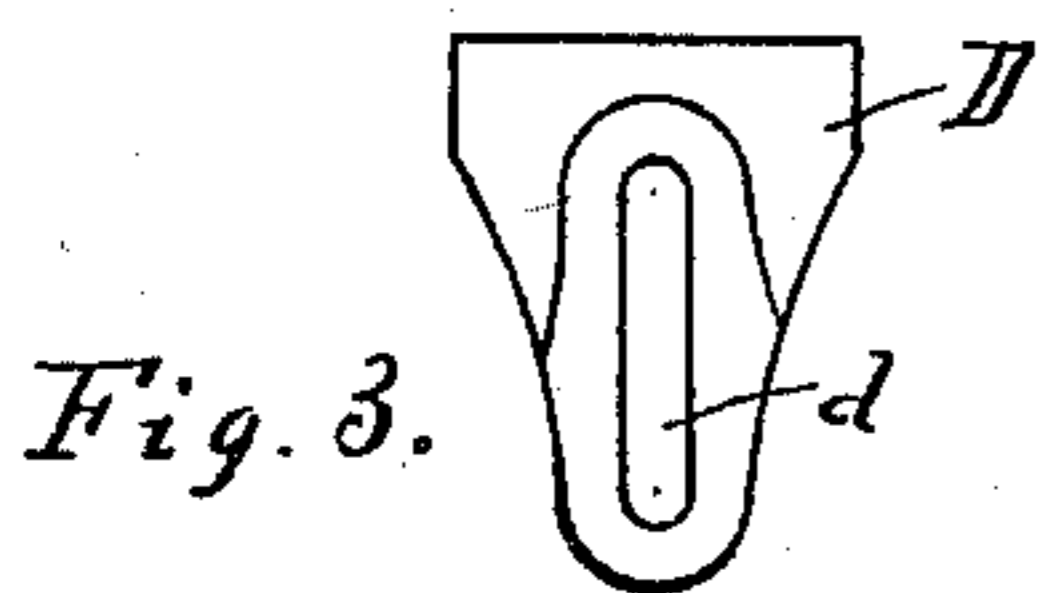


Fig. 3.

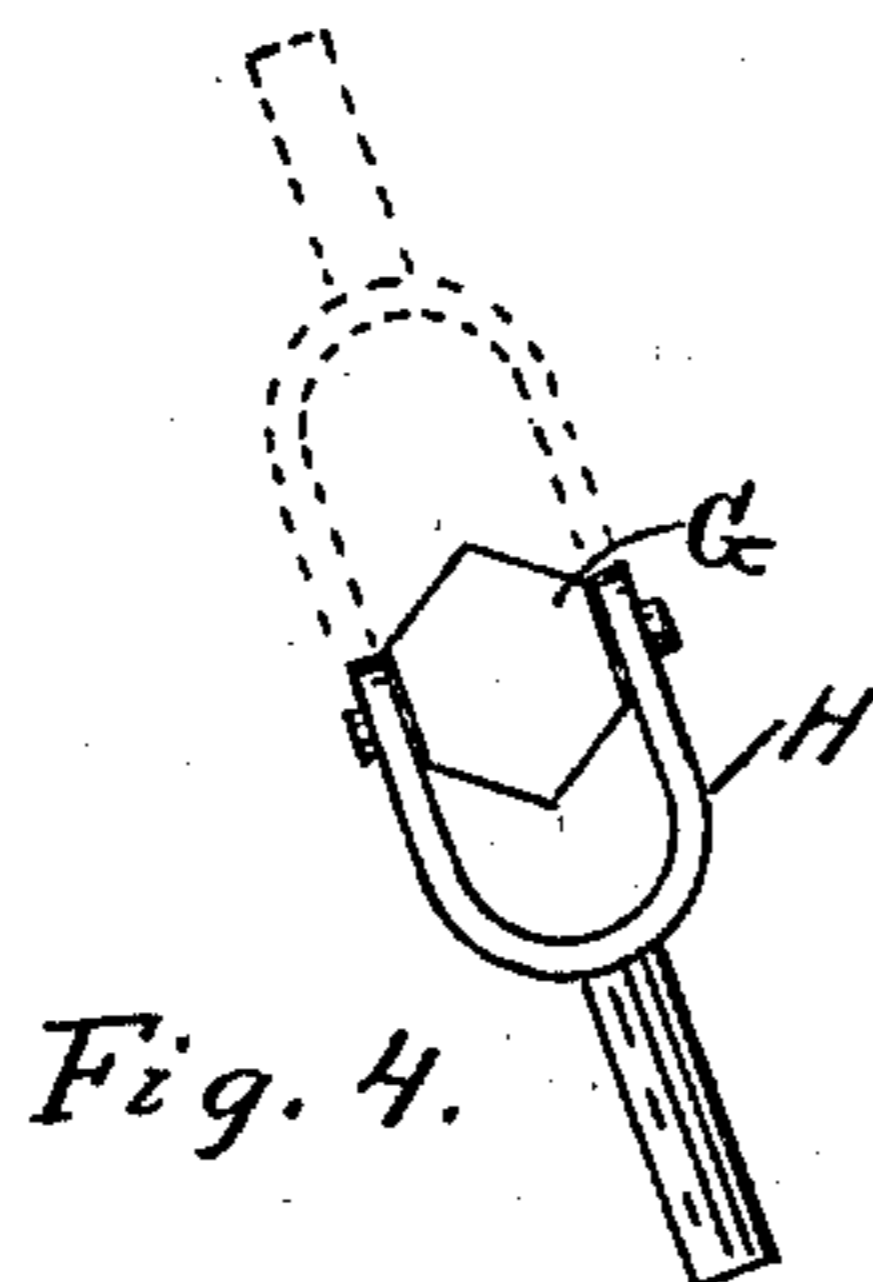


Fig. 4.

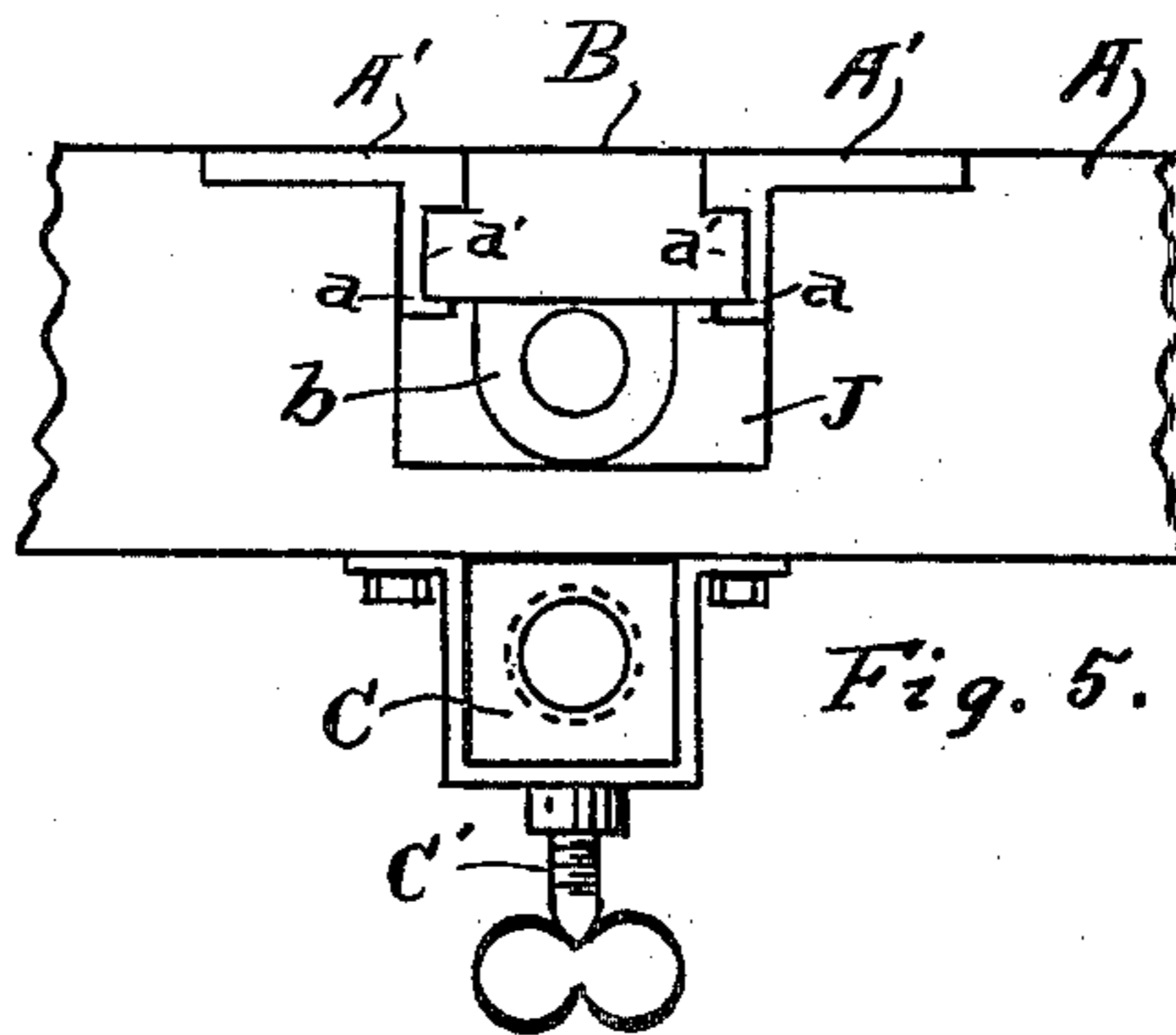


Fig. 5.

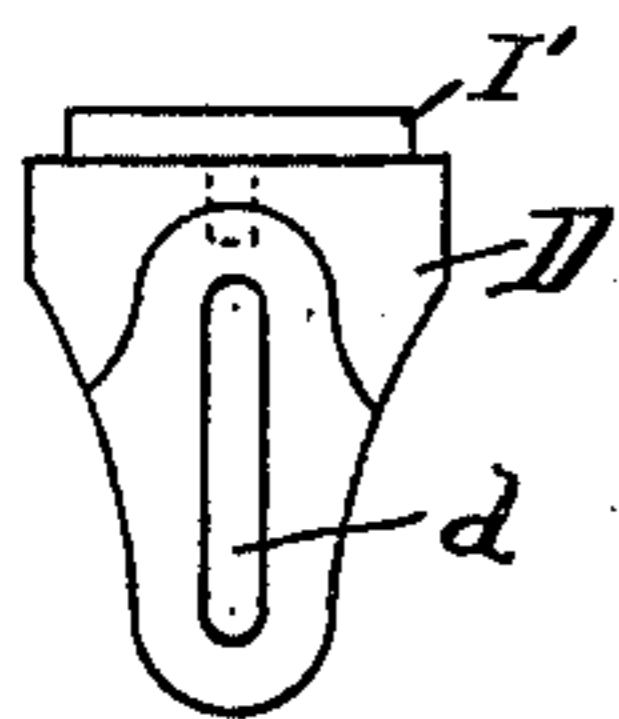


Fig. 8.

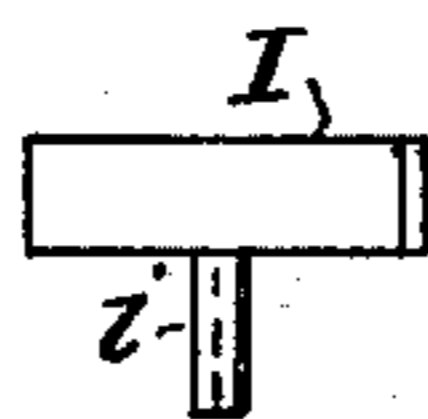


Fig. 6.



Fig. 7.

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UNITED STATES PATENT OFFICE.

WILLIAM VAN MANEN, OF GRAND RAPIDS, MICHIGAN.

BENCH-VISE.

SPECIFICATION forming part of Letters Patent No. 662,660, dated November 27, 1900.

Application filed December 18, 1899. Serial No. 740,813. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM VAN MANEN, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Bench - Vises, of which the following is a specification.

My invention relates to improvements in cabinet bench-vises; and its objects are, first, to provide a bench-vise with which various widths and forms of wood may be clamped with a short-threaded bench-screw; second, to provide a bench-vise with which either the vise-jaw of the bench-pin may be made to move or remain stationary at the will of the operator, and, third, to provide a bench-vise with which the jaw may be adjusted vertically to be used in conjunction with the bench or with a pin projecting above the surface of the bench. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a sectional end view of a bench on the line *xx* of Fig. 2, showing the application of my vise. Fig. 2 is a plan of the end of a bench, showing the application of my vise. Fig. 3 is an elevation of the vise-jaw. Fig. 4 shows the head of the bolt that secures the jaw to the sliding bar or support and the manner of applying a pivoted lever for manipulating the same. Fig. 5 is an end view of the supporting-slide and the bench-pin slide as applied to a bench. Fig. 6 is a perspective of the bench-pin. Fig. 7 is a plan of a modified form of the same; and Fig. 8 is an elevation of the jaw, showing an adjustable auxiliary jaw attached above.

Similar letters refer to similar parts throughout the several views.

A represents a portion of the top of the bench, across which I form a slot J, in which is placed suitable guides, as A', for the support and free longitudinal adjustment of the bench-pin support or slide B. The slide B is formed with projecting bearings, as a', that are designed to engage the guideways a in the guides A', and with downwardly-projecting bearings b b', the former of which is provided with a screw-thread arranged to engage the screw E to actuate the jaw D or the slide B, as the operator may elect.

The jaw D is secured to the supporting-slide C by means of the bolt G or other suitable device and is provided with a slot d, through which this bolt and also the bench-screw E passes and which is of sufficient length to allow of placing the top of the jaw level with the top of the bench or of raising it up so that it will act with the adjustable bench-pin I to clamp an object lying on the top of the bench. The supporting-slide C is sustained by means of the hangers c c parallel with the slide B and the screw E, so that all will act in unison and without danger of cramping any portion of the vise or its attachments, and it may be set to place so that it will not be actuated by the turning of the screw E by means of the set-screw C'. This is done when the operator desires to hold the jaw D stationary and draw the slide B and the bench-pin I toward it, as in clamping an object that rests on top of the bench. When it is desired to actuate the jaw and not the bench-pin and slide, this set-screw is loosened from the slide, so that it may move freely in its supports. To facilitate this action, the slide B should be held to place in its bearings by friction or otherwise, so that the natural action of the screw when actuating the jaw will not move the slide, or, in other words, that the jaw may be moved without danger of moving the slide.

The bench-pin I is formed with a pin i, arranged to enter the holes i' in the slide in such a manner that they may be adjusted in any direction, as indicated by the dotted lines in Fig. 2, and it may be made of any desired form, as indicated by I' in Fig. 7. I sometimes apply this adjustable pin to the top of the vise-jaw, as indicated at I'' in Fig. 8, which enables me to adapt my vise to many classes of work that could not be done with it otherwise.

The bolt G may be manipulated by the use of an ordinary wrench, or a lever, as H, may be pivoted to it with which to manipulate it. I find the latter far preferable to the former, as with it the means for manipulating the bolt is always at hand.

I provide for operating my vise to clamp articles of various widths or lengths by making a series of holes i' in the slide B close

enough together so that the length of the thread E will carry the slide a trifle farther than the distance between them.

5 F represents an ordinary bench-vise pin or handle with which to turn the screw to manipulate the vise in the usual manner of manipulating or actuating bench-vises.

Having thus fully described my invention, what I claim as new, and desire to secure by
10 Letters Patent of the United States, is—

1. In a bench-vise, a supporting-slide slid-
ingly secured to the bottom of the bench-top,
a vertically-adjustable jaw secured to the end
of said slide, a slide secured in a slot in the
15 bench-top, and an actuating-screw for ma-
nipulating said slide and the vise-jaw, sub-
stantially as and for the purpose set forth.

2. In a bench-vise, a supporting-slide slid-
ingly attached to the lower surface of the
20 bench-top, a parallel slide secured to lie flush
with the upper surface of the bench-top, a

vertically-adjustable jaw secured to the end
of the supporting-slide, an actuating-screw
connecting the bench-jaw with the upper slide
to actuate the one or the other, and adjust- 25
able bench-pins connected with the upper
slide or with the jaw, substantially as and for
the purpose set forth.

3. In a bench-vise, a supporting-slide, a jaw
secured to said slide, a slide in the upper sur- 30
face of the bench-top and parallel with the
supporting-slide, an actuating-screw connect-
ing the jaw and the upper slide, and a set-
screw for setting the supporting-slide, sub-
stantially as and for the purpose set forth. 35

Signed at Grand Rapids, Michigan, Decem-
ber 5, 1899.

WILLIAM VAN MANEN.

In presence of—

STEPHEN VAN MANEN,
I. J. CILLEY.