

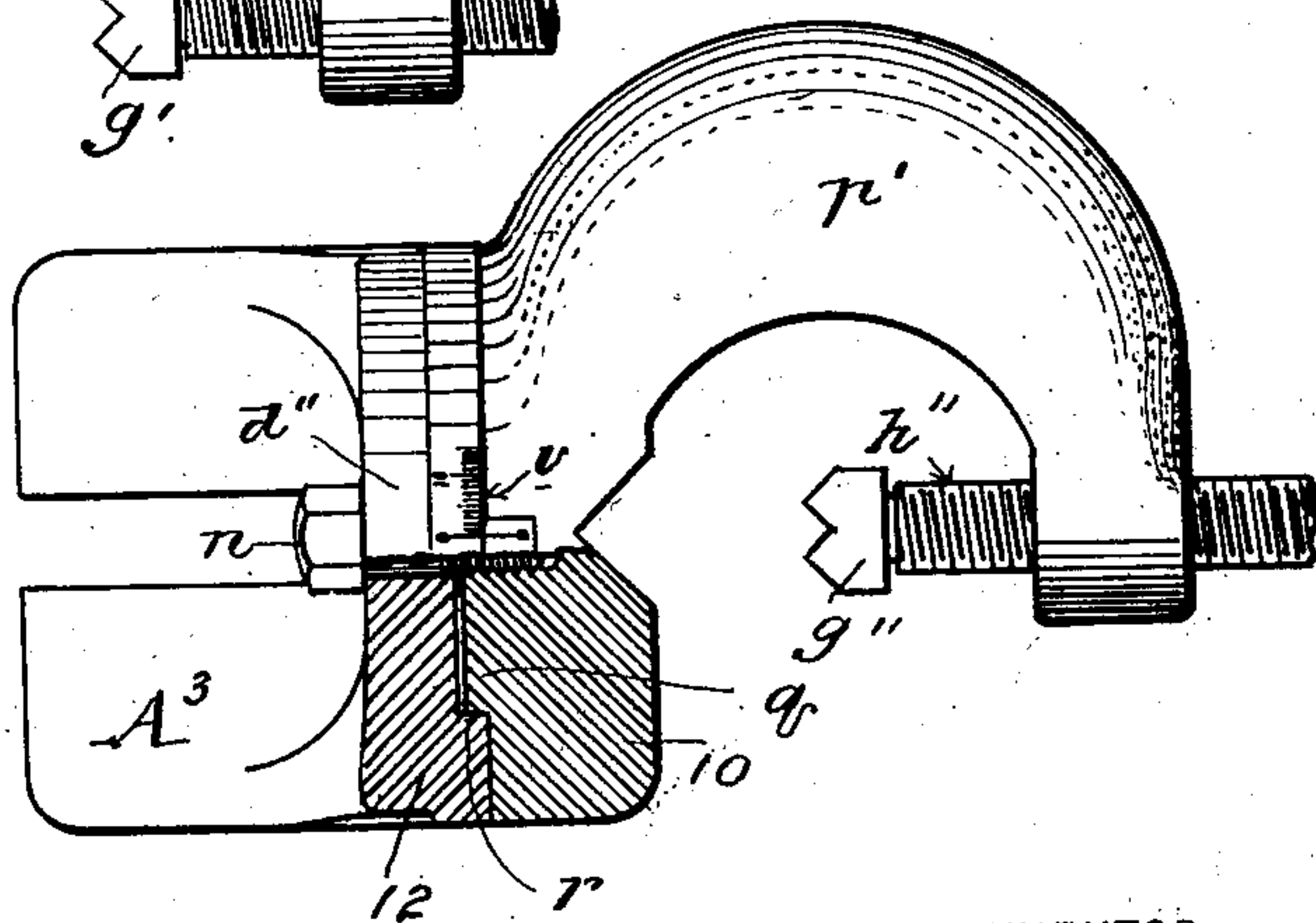
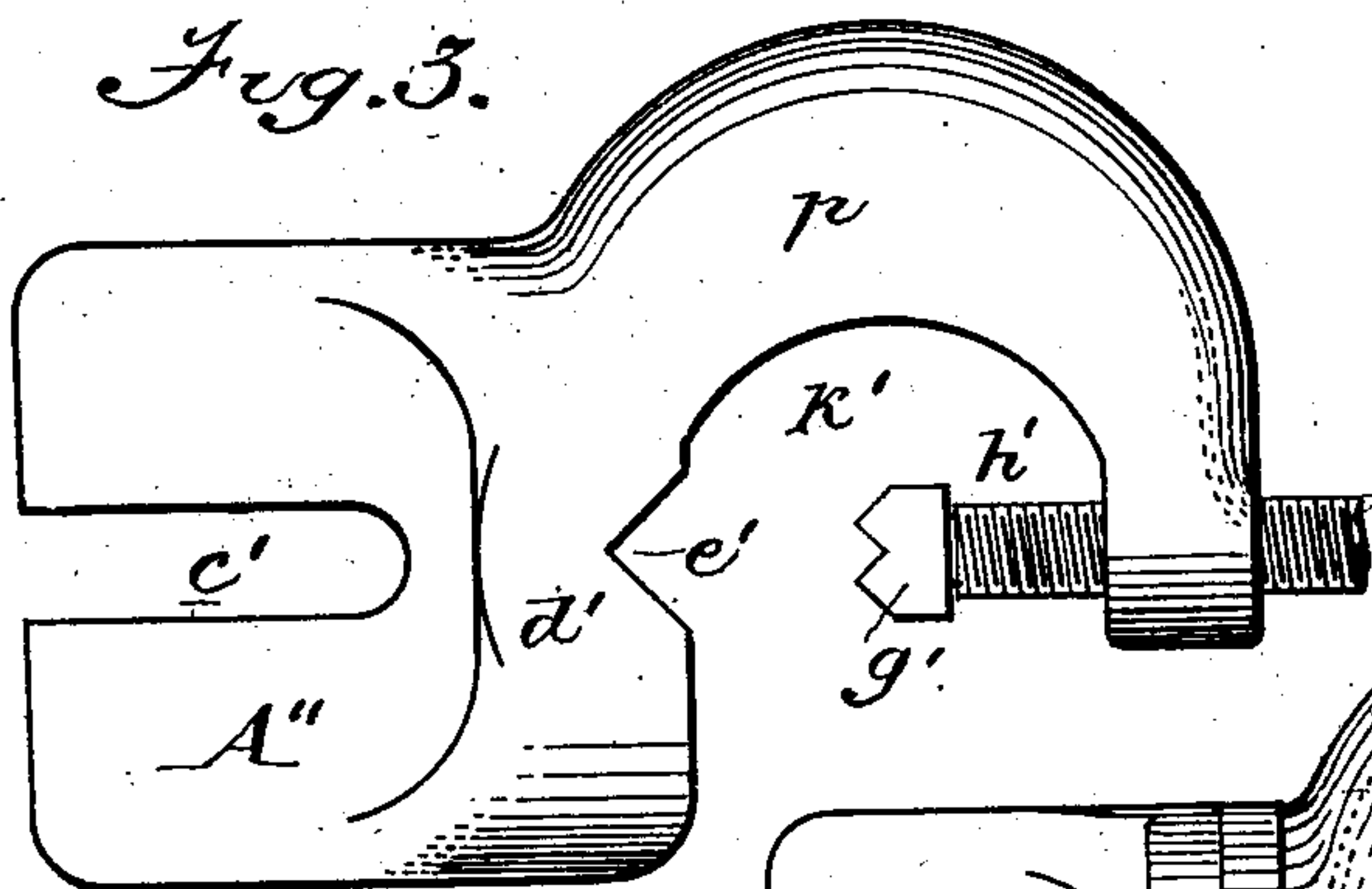
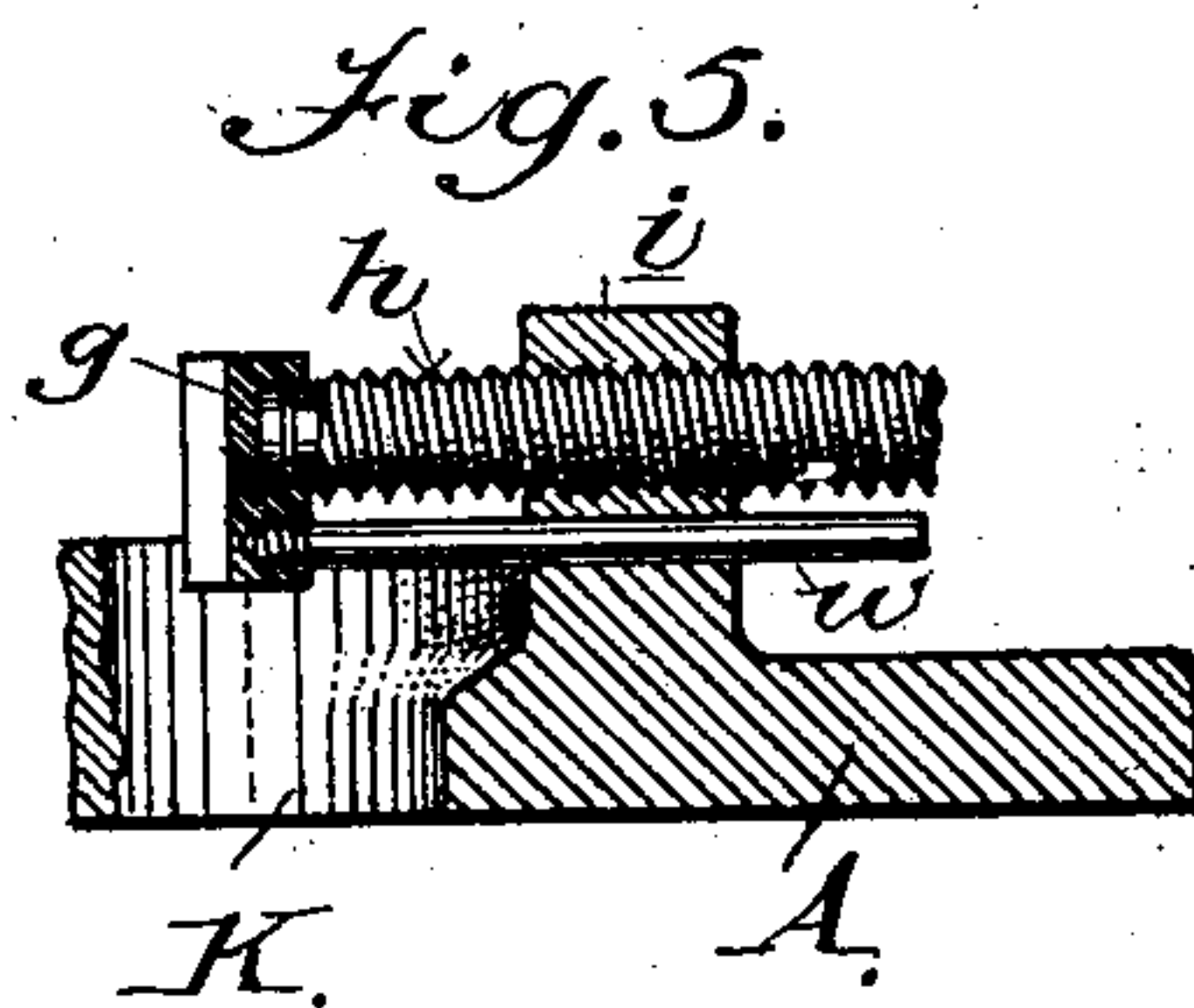
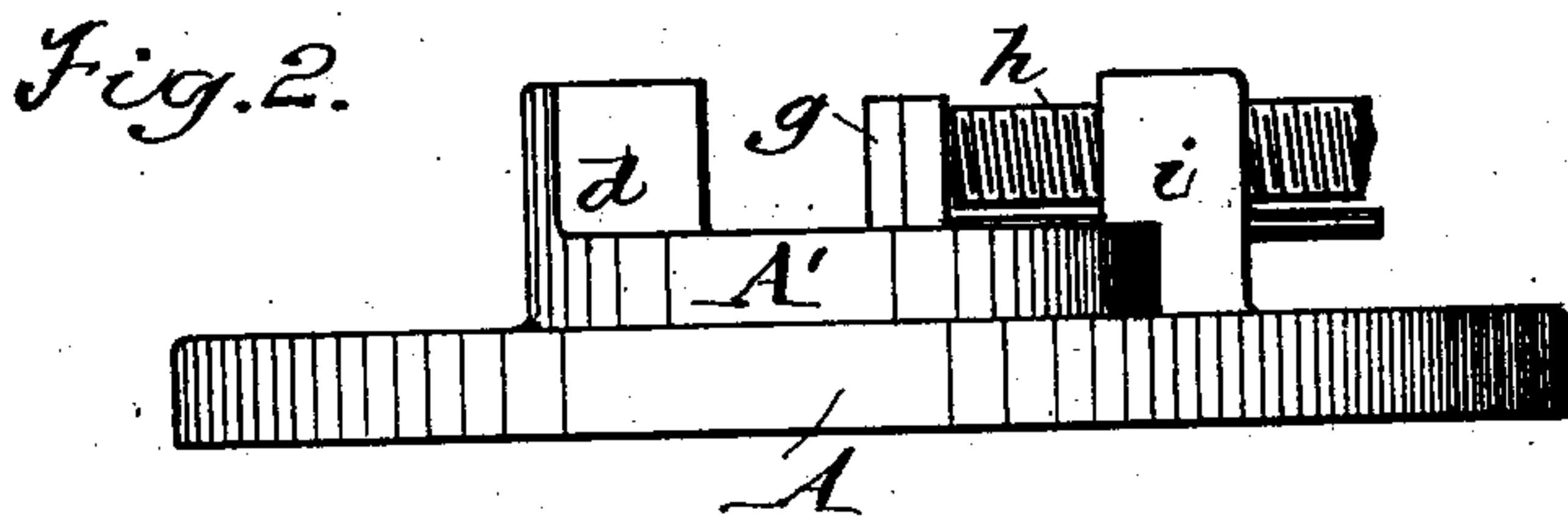
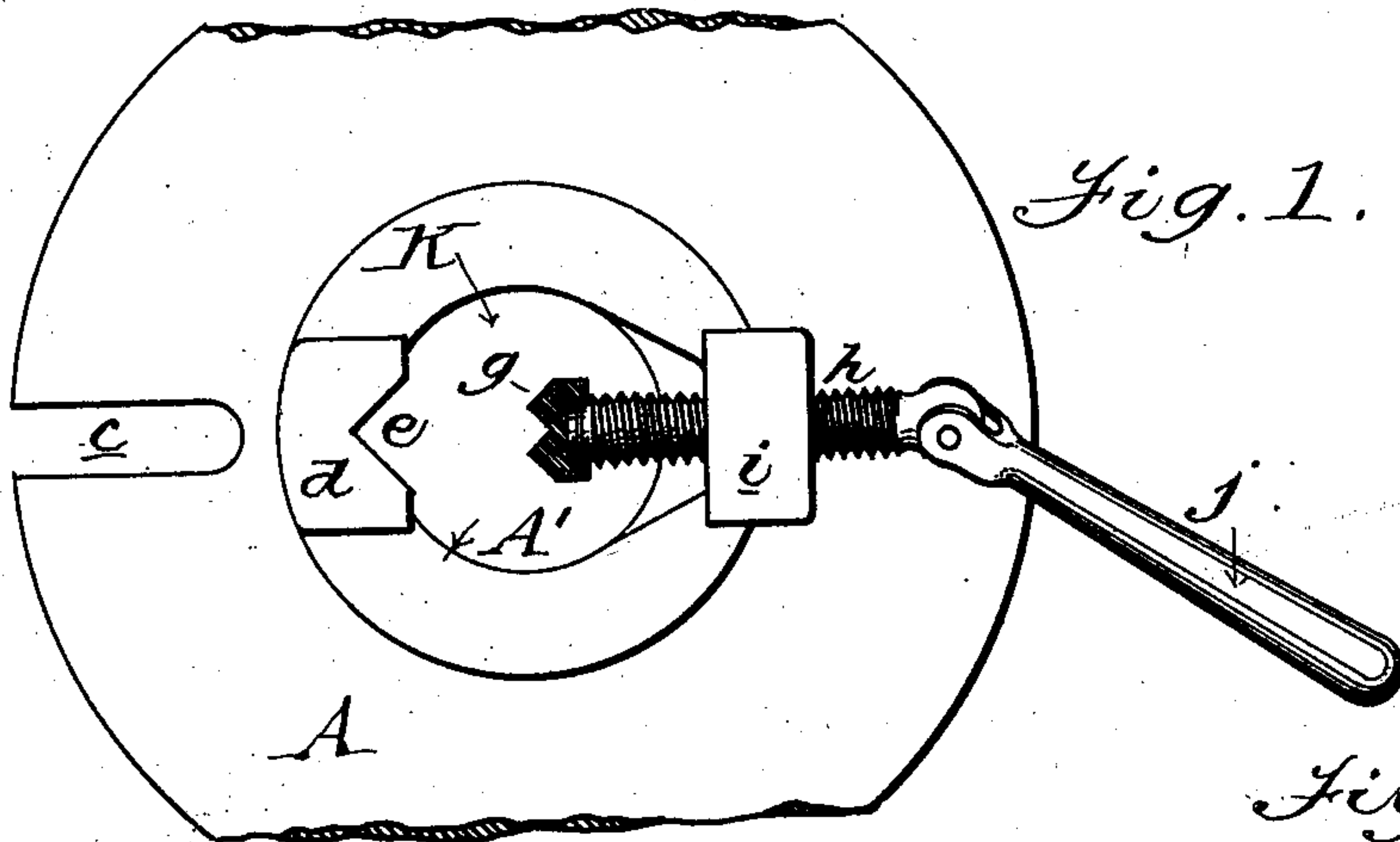
No. 747,433.

PATENTED DEC. 22, 1903.

J. JACOBSON.  
VISE.

APPLICATION FILED MAR. 4, 1903.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JACOB JACOBSON, OF WARREN, PENNSYLVANIA.

## VICE.

SPECIFICATION forming part of Letters Patent No. 747,433, dated December 22, 1903.

Application filed March 4, 1903. Serial No. 146,052. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB JACOBSON, a citizen of Sweden, residing at Warren, in the county of Warren and State of Pennsylvania, have invented new and useful Improvements in Vises, of which the following is a specification.

This invention relates to certain new and useful improvements in that class of devices known as "vises" and designed for holding various kinds of work to be operated upon by a drill or other form of boring-tool or implement or tool of any appropriate character; and the invention consists of the parts and the constructions and combinations of parts, which I will hereinafter describe and claim.

In the accompanying drawings, forming part of this specification, and in which similar characters of reference indicate like parts, Figure 1 is a plan view of a vise embodying my invention. Fig. 2 is a side elevation of the same. Figs. 3 and 4 are plan views of vises of somewhat modified form from the one shown in Figs. 1 and 2, but illustrating the salient features of the present invention. Fig. 5 is a sectional view showing a portion of the base, the screw, the clamp, and the guide-rod.

The device shown in Figs. 1 and 2 is of the form which is commonly known as a "drill-press" vise, and it comprises a base or body portion A, of circular or any other desired or appropriate form, having its under surface, which rests upon the usual drill-press table, (not shown,) finished smooth to form a close fit, said base or body being provided with a slot c, that in practice receives a bolt or fastening which serves as the means for bolting or otherwise fastening the vise to the drill-press table. The base also has an opening made vertically through its central portion to receive the work, this opening being bounded by substantially a hub or ring A', from which on two opposite sides project two vertical posts, one, d, having its inner face provided with a finished vertical groove e, made essentially angular in horizontal section, and the other, i, having a threaded hole in which operates a screw h, the inner end of which is provided with a clamp g, whose operating-face is likewise formed with a vertical groove angular in horizontal section, said grooved

faces of the clamp and post d serving as jaws between which the work to be operated upon is appropriately held and said work being passed through the opening K, made vertically through the base, as before described.

The clamp g may be operated in any suitable manner, and an arrangement well suited for my purpose consists of a handle j, connected to the outer end of the screw by a sort of knuckle-joint. In operation, as in drilling, the work to be drilled is passed into the central opening in the body portion A and is held between the grooved faces of the post d and clamp g, said clamp being moved against the work and held solidly in place by means of the screw h, operating through the threaded opening in the post i.

In connection with the screw and clamp g I prefer to use a guide-rod w, fixed in the clamp and slidably mounted in a hole formed through the post i, as shown in Fig. 5, whereby the clamp g is maintained in such position that the groove in its face will always be in the proper position relative to the groove in the face of the opposite post.

In Figs. 3 and 4 I illustrate two forms of vises somewhat different in design from the one shown in Fig. 1 and 2, but wherein the operations to be performed are carried out substantially in the manner hereinbefore described.

The device shown in Fig. 3 is what is known as the "solid" centering-vise, and it includes an appropriate body portion A'', finished smooth on the under surface to fit the drill-press table and having a slot c' for the bolt which secures the vise to the table, as explained in connection with Figs. 1 and 2. This body A' has a thickened portion d', which answers substantially for the post d of Fig. 1, and the inner face of this thickened portion has the vertically-extending angular groove e', corresponding to the like groove e in the inner face of the post d of Fig. 1, said body A' having a vertical opening k' through it to receive the work to be drilled or operated upon, but which opening in this particular instance opens also laterally to enable the work to be introduced from one side. To facilitate this latter action, I prefer in the form of device shown in Fig. 3 to form the base with a laterally-bowed rigid neck p, which answers for



the post *i* of Fig. 1 and has a threaded opening for the operating-screw *h'*, which carries on its inner end opposite the angularly-grooved face of the thickened portion *d'* of the body a clamp *g'*, substantially corresponding to the clamp of Fig. 1, the work being held substantially as before described.

In Fig. 4 I illustrate a plan view of what is termed a "swivel" centering-vise, which is similar in its salient features to the vise of Fig. 3, in that it has a slotted body *A*<sup>3</sup>, which is fitted to the drill-press table. It also has a bowed neck *p'*, an operating-screw *h''*, and a clamp *g''* operating in conjunction with an angularly-grooved vertical face of a thickened portion *d''* of the base. In Fig. 4, however, the vise is made of two members 10 12 to produce the necessary swiveling action which is desirable in this form of vise, and to further this object I construct one of the said members 10 with a hub-like projection *q*, and I form the other member 12 with a corresponding recess *r* for said hub, whereby the member which carries the bowed neck is capable of a rotary action relative to the other member.

In order that the two members just described may be appropriately fitted together and locked firmly in any desired position, I employ a cap-screw *n* or substantially equivalent element, and a graduated scale *v* may be marked or secured on the body of the vise in such manner that the angle of inclination of the member 10 may be conveniently and quickly read from this scale. With this type of device the angular grooves which hold the work may be brought into any desired angle with the vertical line which represents the

axis of the drill, and dilling and centering may be accomplished at any desired angle. 40

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

1. In a vise, the combination of a base portion adapted to be fitted to a table, said base having two integral walls extending vertically above the plane of its top surface, one of said walls having a vertical groove in its inner face and the other wall pierced with a threaded opening; a screw engaging said last-named opening, a clamp on the inner end of the screw and having its greatest length parallel with the projection of said walls; and a guide-rod connected with the clamp and slidable through one of said vertical walls. 55

2. In a vise the combination of a base member having a rigid vertical extension provided with a recess in its vertical face, a second member having an opening to receive the work, said last-named member having a groove in a wall of its opening and having a projection to turnably fit said recess, a bolt passing centrally through said projection and also through the vertical extension of the base member, a screw disposed parallel with the bolt about which the said members turn one relative to the other, and a grooved face-clamp on the inner end of said screw. 65

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 70

JACOB JACOBSON.

Witnesses:

E. H. BESH LIN,  
NELLIE S. BESH LIN.