

J. C. GILL.
Device for Attaching Plungers to Glass-Presses.

No. 215,516.

Patented May 20, 1879.

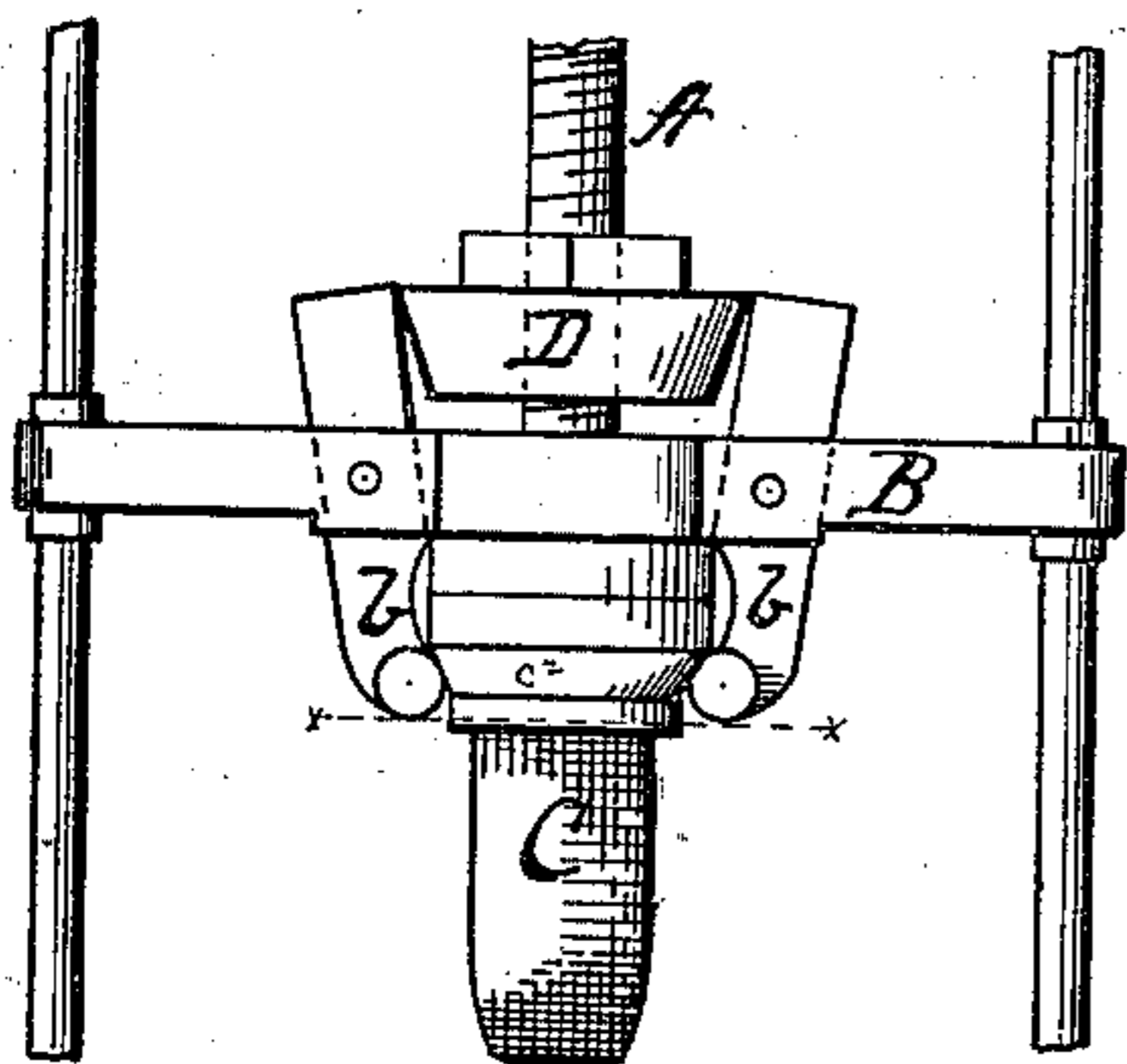


FIG. 1.

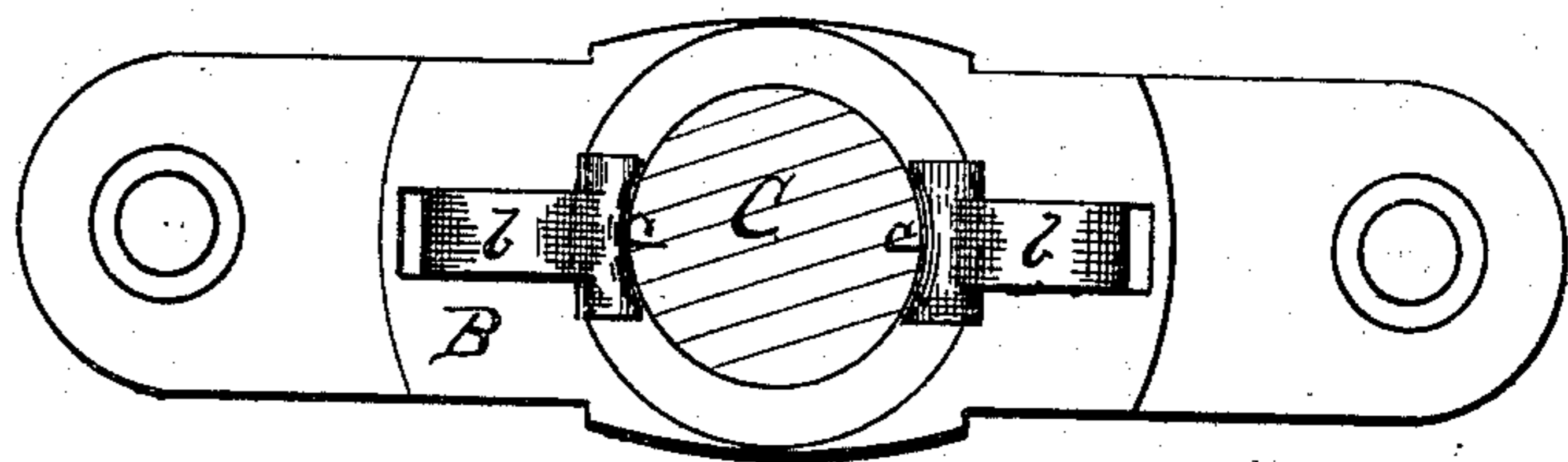


FIG. 2.

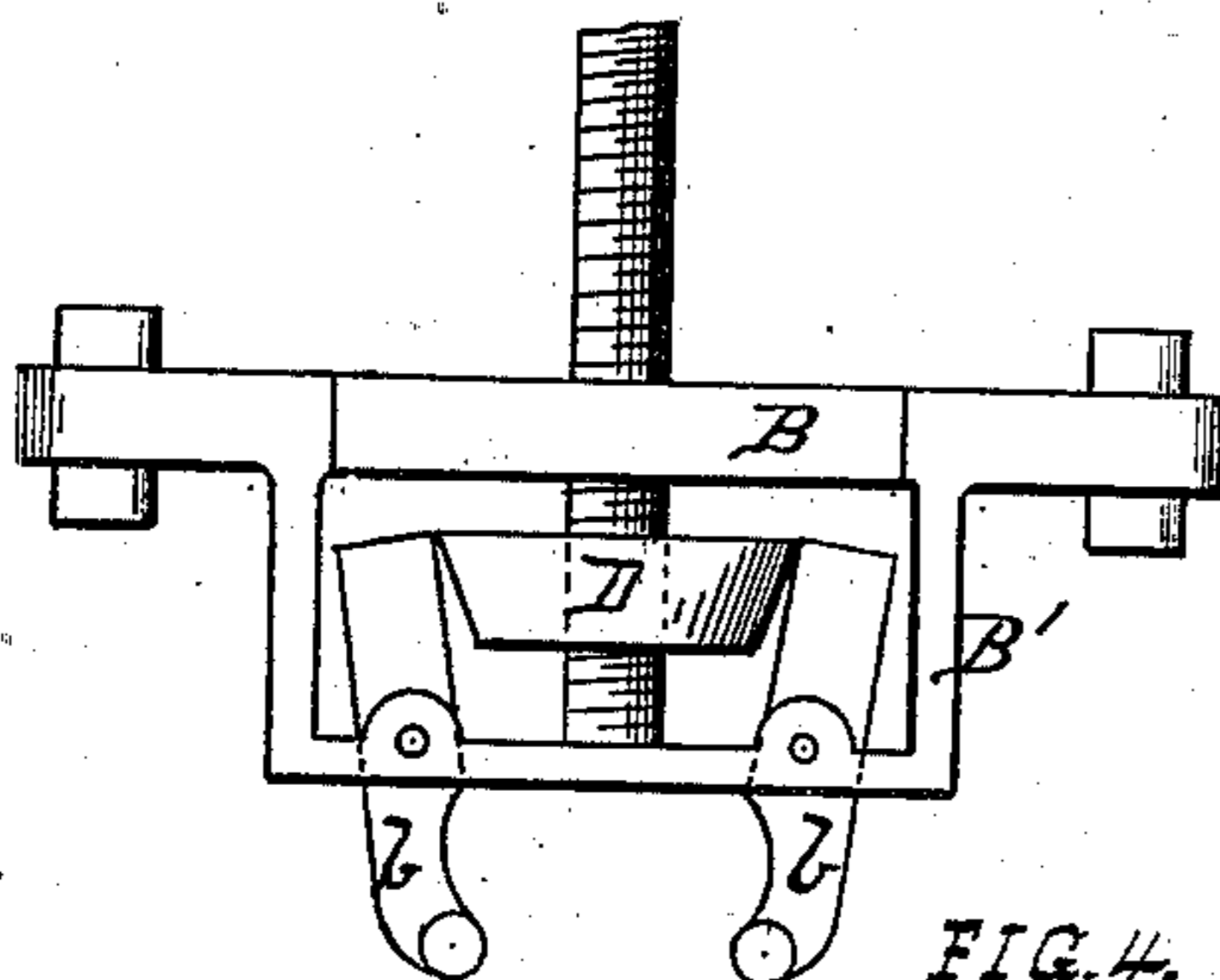


FIG. 3.

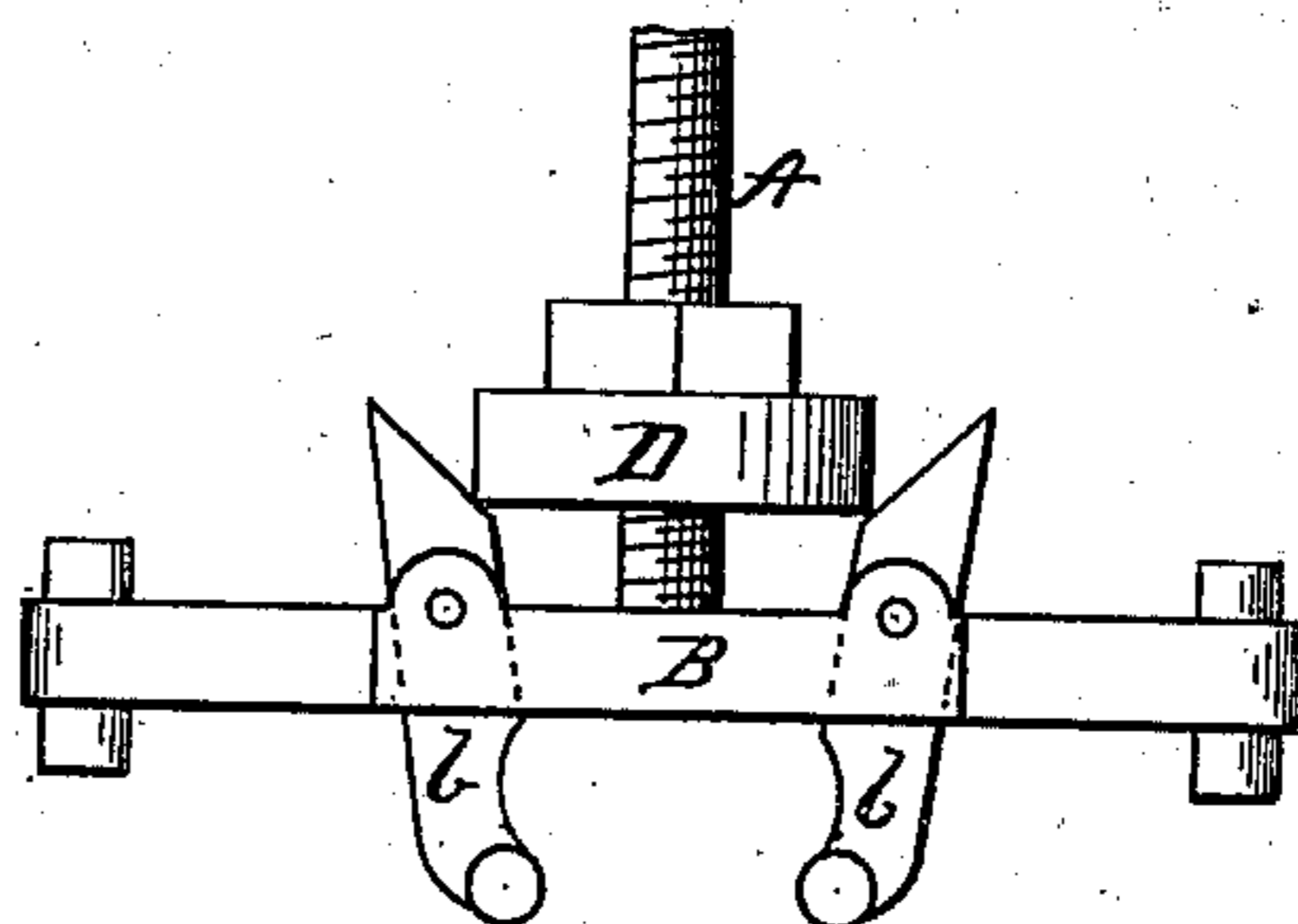


FIG. 4.

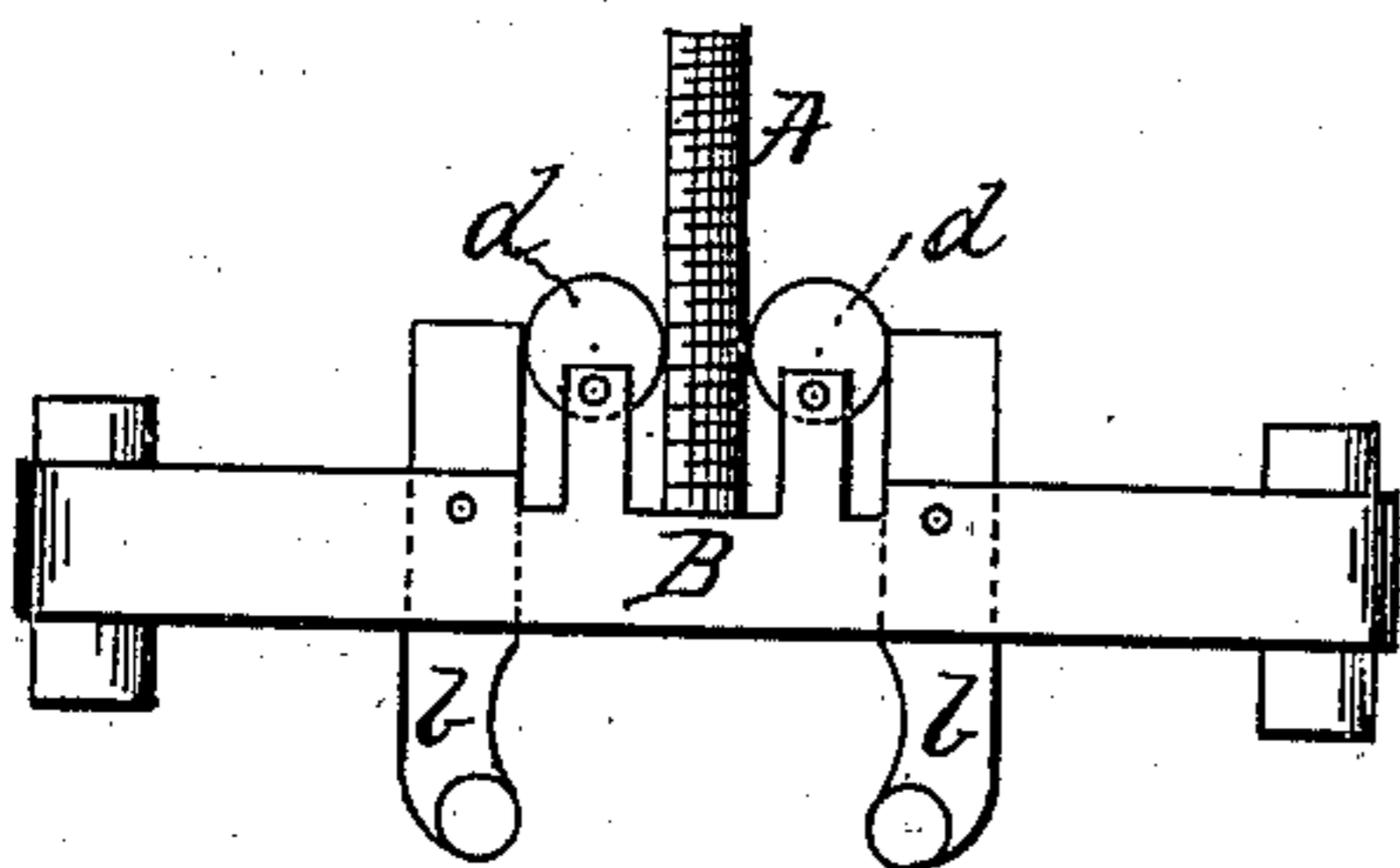


FIG. 5.

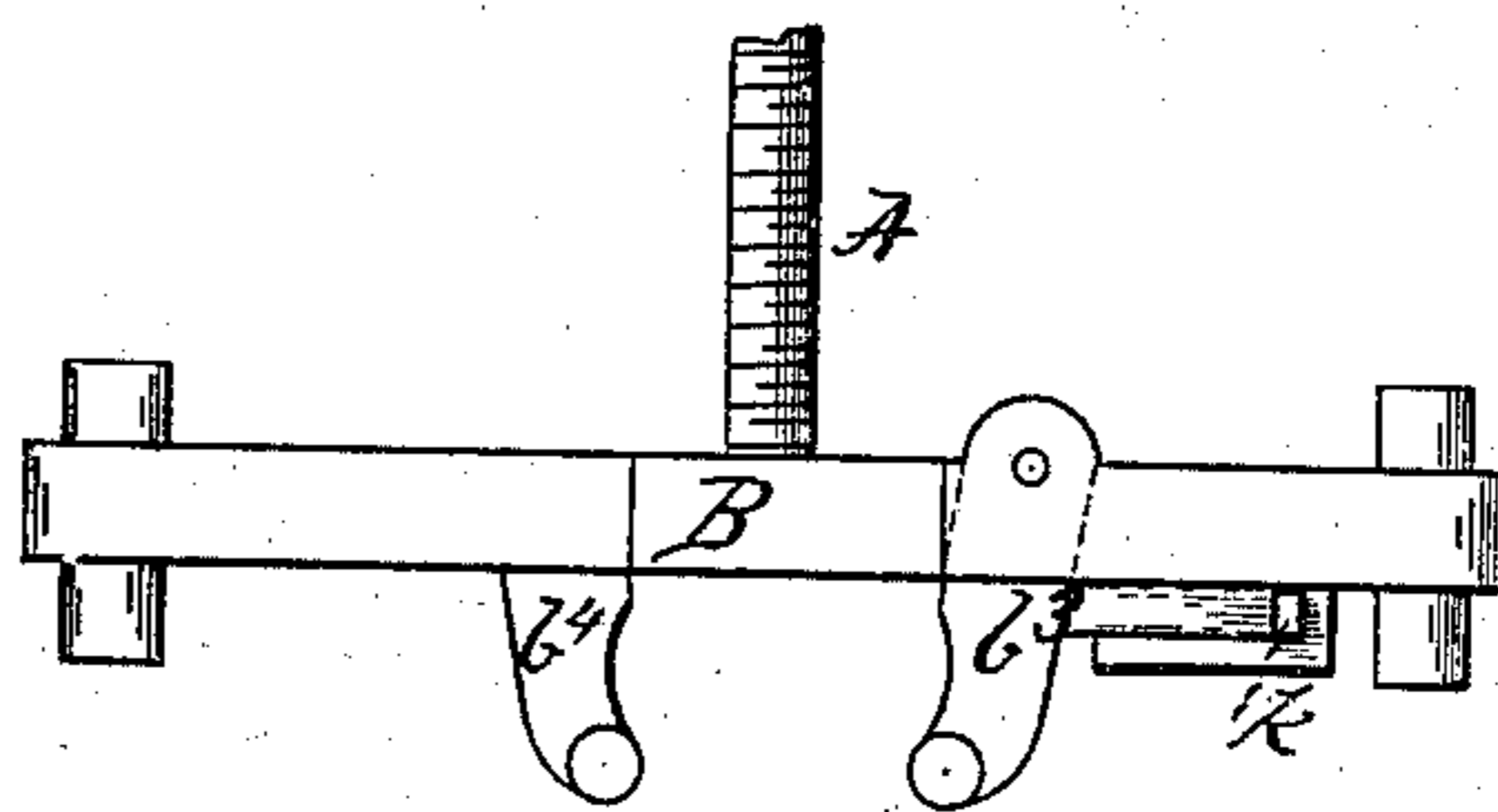


FIG. 6.

Witnesses.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN DEVICES FOR ATTACHING PLUNGERS TO GLASS-PRESSES.

Specification forming part of Letters Patent No. **215,516**, dated May 20, 1879; application filed April 21, 1879.

To all whom it may concern:

Be it known that I, JAMES C. GILL, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Devices for Attaching Plungers to Glass-Presses; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation, and Fig. 2 is a horizontal section, of devices embodying my invention in the preferred form. Figs. 3, 4, 5, and 6 show several modifications.

Like letters refer to like parts wherever they occur.

My invention relates to the method and means of attaching plungers to glass-presses; and it consists, first, in combining with the piston-head of a glass-press clamping mechanism adapted to hold the plunger, whereby the latter may be rapidly and firmly secured without loss of heat, &c.; secondly, in combining with the piston-head of a glass-press one or more pivoted clamping-jaws and a nut or followers for actuating the pivoted jaw or jaws, whereby the same are caused to clamp and hold the plunger; and, finally, in details of construction hereinafter more specifically set forth.

In the manufacture of glassware, the molds, before being placed in the press, are heated up to such a temperature as will prevent the chilling of the glass during the molding thereof.

As at present constructed, the plunger is secured to the piston-head of the press by bolts or like devices which cannot be rapidly adjusted to secure the plunger; consequently there is a great loss of heat in the plunger before the press is ready for work. To restore the heat to the mold and plunger it is customary to fill the mold with glass several times and to force the plunger therein, which process causes the waste of about one hundred pounds of glass, more or less, besides the loss of time and the frequent injury done to the molds in removing the mass of chilled glass therefrom.

It also frequently happens that the bolts by which the plungers are secured break off in the plunger, rendering the plunger useless for

the time, and necessitating the labor and delay incident to the drilling out of the broken bolt; and the wearing out of the bolt-holes in the plunger frequently renders the same useless long before the plunger itself is worn out.

The object of the present invention is to provide means which shall not be liable to the objections specified.

I will now proceed to describe my invention, so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates the piston, and B the piston-head, of a glass-press, the rest of the press (not shown) being of the well-known or any approved form. In the piston-head B (or in an attachment thereof, B') I pivot clamping-jaws *b*, the lower extremities of which are preferably curved, as at *c*, so as to adapt them to seize and properly hold the plunger C, drawing the same firmly to its seat against the piston-head B.

The upper ends of the jaws *b* are forced apart by a screw nut or follower, D, on the ordinary threaded piston A, said nut being either tapering, as in Fig. 1, or straight, as in Fig. 3, accordingly as the upper ends of the jaws are either straight or tapering. In some instances cams or eccentrics *d*, Fig. 5, to actuate the jaws, may be used instead of the nut or follower.

In lieu of pivoting the clamping-jaws, they may be attached to slides arranged in the piston-head B—as, for instance, *b*³, Fig. 6; and the slides may be forced together by a key or wedge, *k*, to cause them to clamp the plunger C. The plunger C is usually formed with a beveled shoulder or ring, *c*², under which the clamp or clamps may take for greater security.

The operation of the devices will be as follows: The plunger C, having been properly heated, will be brought to the press and arranged in position against the piston-head B, and between the clamping-jaws *b*, which are then closed by means of either the follower, cams, or wedge, as the case may be.

As the jaws *b* are closed together they will correct the position of the plunger, and will adapt themselves thereto, so that should one jaw in course of time become more worn than the other it will not affect the efficiency of the devices.

It is obvious that one jaw or member, *b*⁴, of

the clamp may be fixed or rigid, if desired, as but a single movable jaw is essential to permit the introduction and withdrawal of the plunger, and I consider the same within the scope of my invention; but as I deem it preferable to make both jaws or members of the clamp movable, I have chosen that form for the purposes of illustration.

The advantages of my invention are the ability to attach the plunger to the press quickly, whereby loss of heat and the attendant loss of time and waste of material are avoided, and the simplicity of the devices and the absence of parts liable to wear away or break and cause delay. By the devices commonly used it requires from ten to fifteen minutes to secure the plunger to the press, while with my improved devices the plunger can be attached in less than one minute.

Having thus described the nature, operation, and advantages of my invention, what I

claim, and desire to secure by Letters Patent, is—

1. The combination, with the piston-head of a glass-press, of a clamp for securing the plunger thereto, substantially as specified.

2. The combination, with the piston-head of a glass-press, of pivoted clamping-jaws and a nut or follower for closing the jaws, substantially as specified.

3. The combination, in a glass-press, of the piston-head, the pivoted jaws, the nut or follower for closing the jaws, and the plunger having the ring or shoulder, substantially as and for the purpose specified.

In testimony whereof I, the said JAMES C. GILL, have hereunto set my hand.

JAMES C. GILL.

Witnesses:

F. W. RITTER, Jr.

JOHN E. DUFFY.