

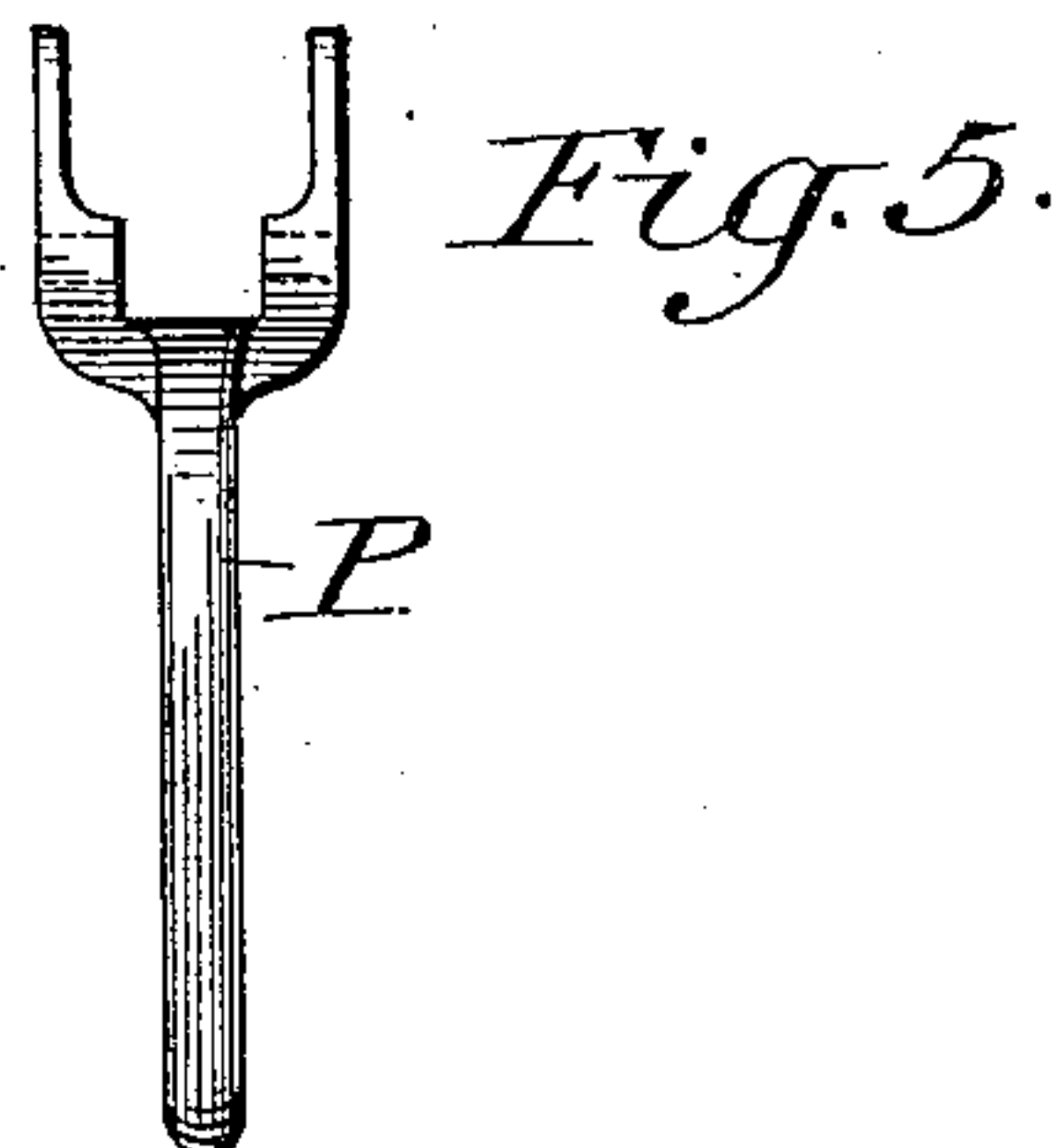
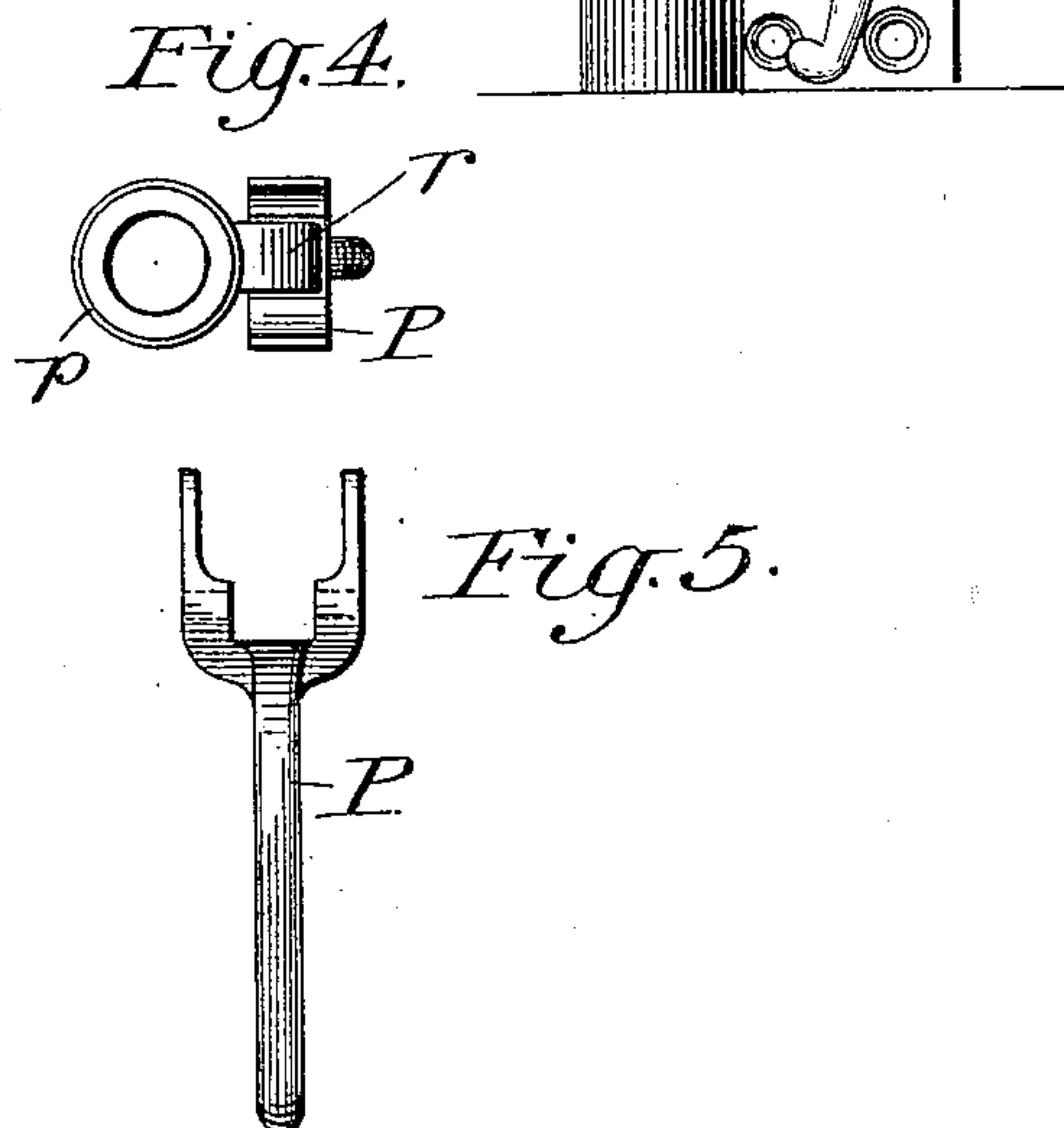
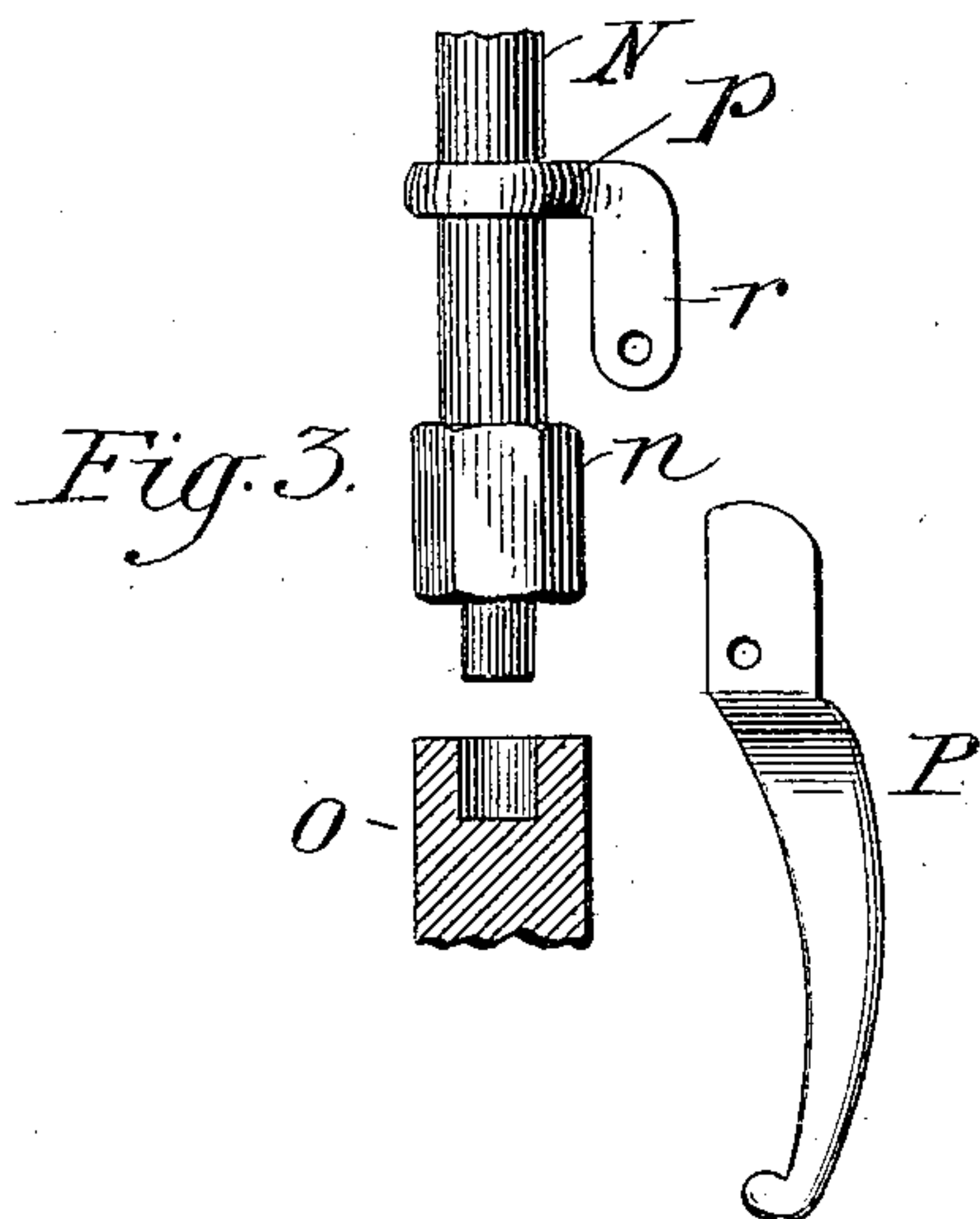
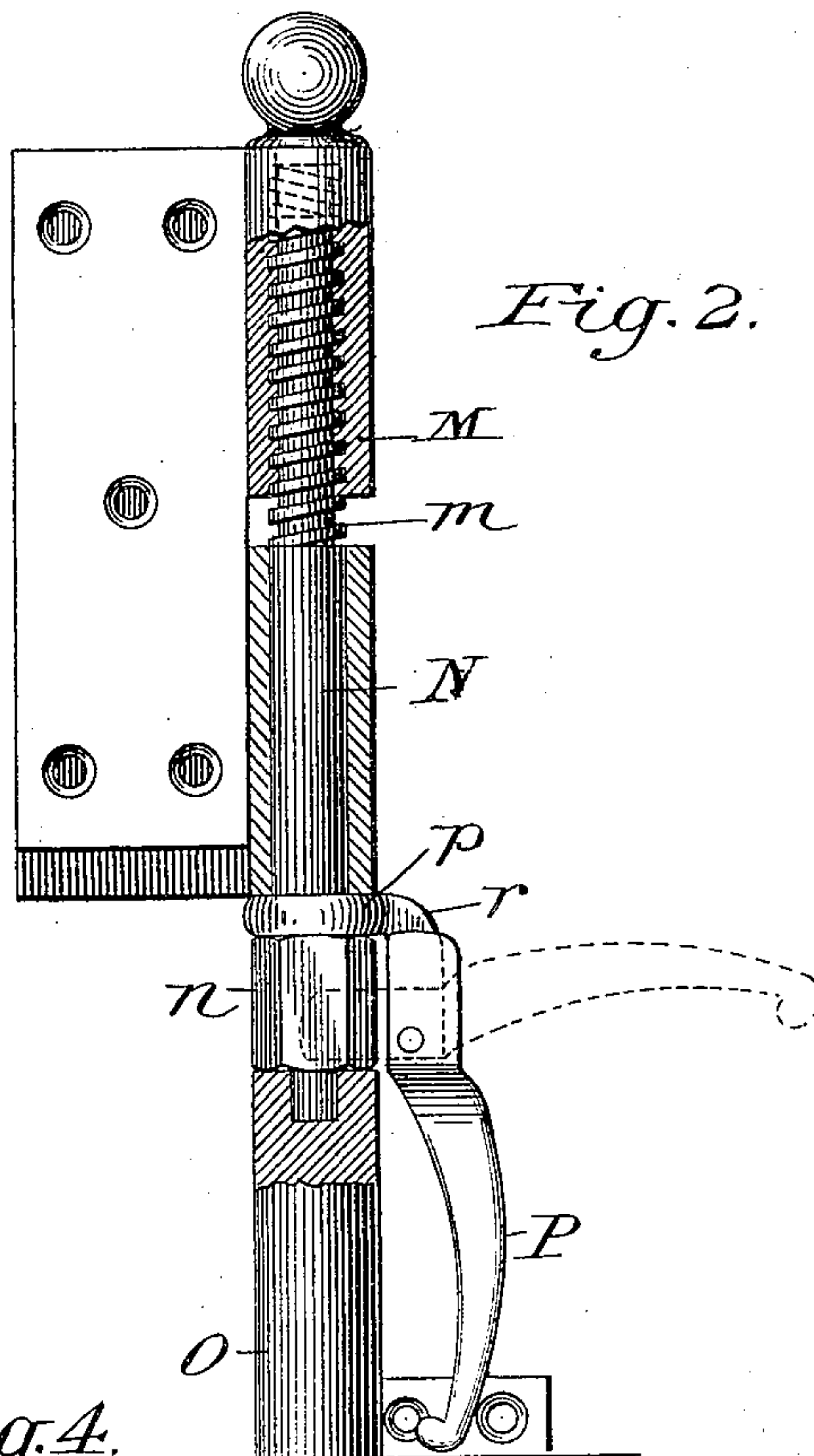
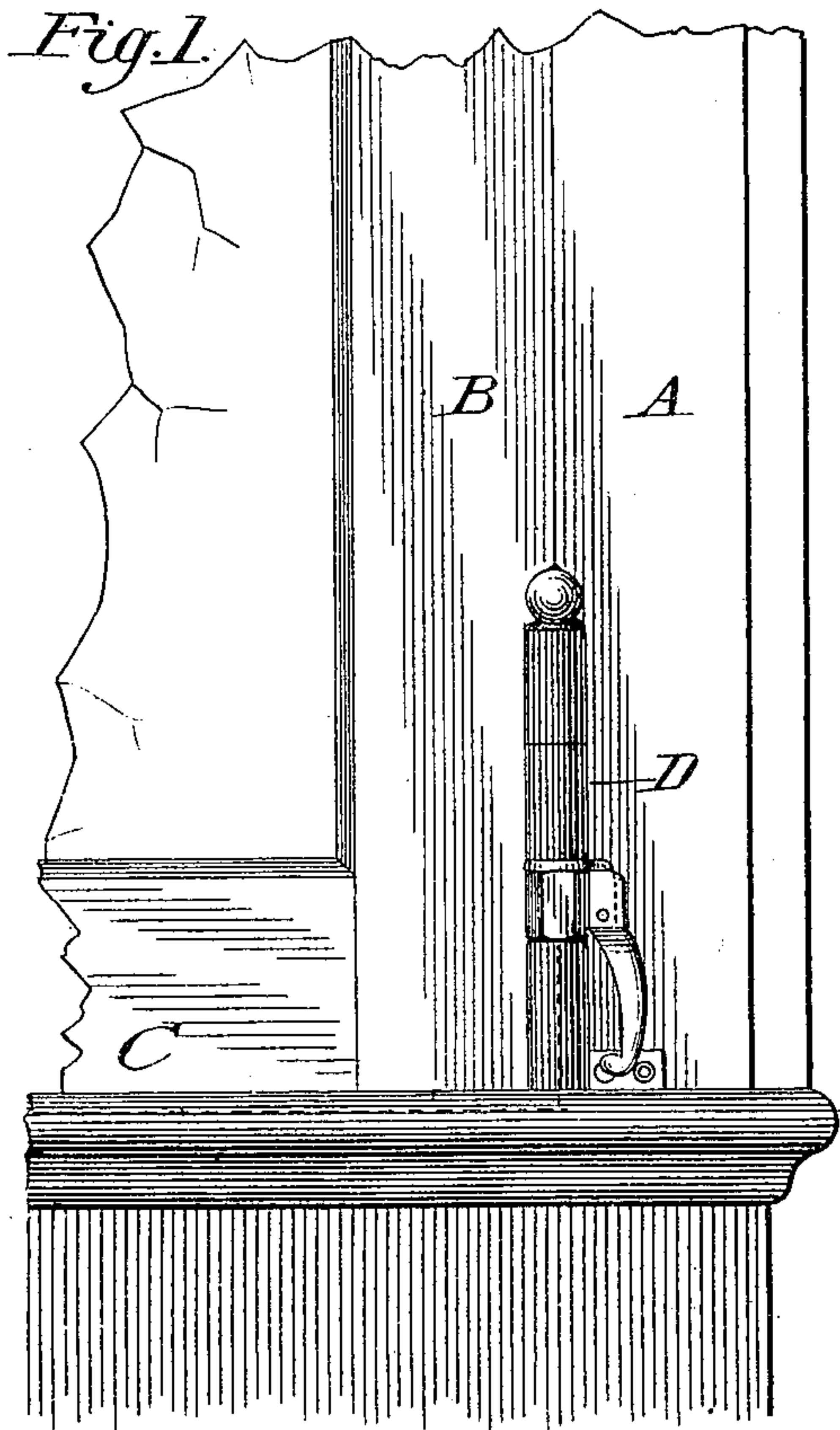
No. 648,016.

Patented Apr. 24, 1900.

S. D. ARNOLD.  
HINGE.

(Application filed July 15, 1899.)

(No Model.)



Witnesses:  
J. J. Hangle.  
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# UNITED STATES PATENT OFFICE.

STEPHEN D. ARNOLD, OF NEW BRITAIN, CONNECTICUT.

## HINGE.

SPECIFICATION forming part of Letters Patent No. 648,016, dated April 24, 1900.

Application filed July 15, 1899. Serial No. 724,021. (No model.)

*To all whom it may concern:*

Be it known that I, STEPHEN D. ARNOLD, a citizen of the United States, and a resident of New Britain, in the county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Hinges, of which the following is a specification.

This invention relates to improvements in hinges for windows, doors, &c., which are hinged on one edge thereof to a casing and opened by swinging horizontally thereon.

The object of my invention is to provide a lifting device in connection with a hinge which will allow the use of the ordinary stool or weather-strip and the leaves of which may be separated in the direction of its axis, so that the door or window may be lifted above the stool and swung over it.

The particular object of my invention is to produce a simple and novel means of operating the hinge to obtain the desired results.

The means by which these objects are accomplished are shown in the drawings, in which—

Figure 1 is a front elevation of a part of a window frame and sash having my improvements applied thereto, the sash being in its closed position. Fig. 2 is a view of a hinge with parts broken away to show the parts of the operating mechanism. Figs. 3, 4, and 5 represent the invention in detail.

In the practice of my invention, referring particularly to the construction and the arrangement of parts as shown in the drawings, the frame or casing A is made a little longer or higher than the sash B by an amount equal to or a little greater than the thickness of the weather-strip C. The sash is attached to its frame or casing by a hinge D. The interior of the knuckle M, on that part of a hinge which is attached to the sash, is provided with a thread, preferably of a quick pitch, as shown at *m*, and the upper end of the pintle N is threaded to engage the thread on the knuckle. The pintle extends below the hinge and is squared or formed into any polygonal shape, as shown at *n*, its lower end being supported on a step O. On the pintle above the nut *n* is revolubly mounted the washer *p*, which has a lug *r*, on which is pivoted the wrench P, which normally occupies the position indicated in full lines in Fig. 2 of the drawings.

The form of wrench shown is of the ordinary spanner type.

In the operation of the device the handle is raised until the wrench engages the nut formed on the pintle, (indicated in dotted lines in Fig. 2,) when it is turned in the direction desired as far as possible, then dropped and the wrench disengaged from the nut, turned back, and the operation repeated until the sash is raised or lowered to bring it to its proper position.

It is evident that the pintle must be held against lengthwise movement to make the device operative in the form shown, although by other constructions the pintle might be movable lengthwise and not rotatable without departing from my invention. This form of the sash-lift is particularly adapted for use on heavy sashes or when extreme ease of manipulation is desired.

I claim as my invention—

1. A hinge having its pintle held against lengthwise movement and united with one of the leaves by means of interengaging screw-threads *m* and a lever rotatively mounted on the pintle and adapted to positively engage the same for operating the parts to separate the leaves in the direction of the axis of the hinge.

2. In a hinge, the combination with a thread formed in the knuckle on one of the leaves and a thread on the pintle engaging the thread on the knuckle, of a nut formed on the lower end of the pintle, and a wrench revolubly mounted with respect to the hinge and adapted to engage the nut on the pintle to operate the parts for the purposes specified, substantially as described.

3. The combination in a hinge, with a leaf and a pintle connected by means of interengaging screw-threaded parts and a nut formed near the lower end of the pintle, of a wrench pivotally supported on a rotatable member and adapted to engage the nut to separate the leaves of the hinge in the direction of its axis.

In witness whereof I have hereunto put my hand and seal in the presence of two witnesses.

STEPHEN D. ARNOLD. [L. S.]

Witnesses:

F. G. PARKER,  
I. A. SNOW.