

F. W. NICHOLS.

Lock-Hinges.

No. 146,776.

Patented Jan. 27, 1874.

Fig. 1.

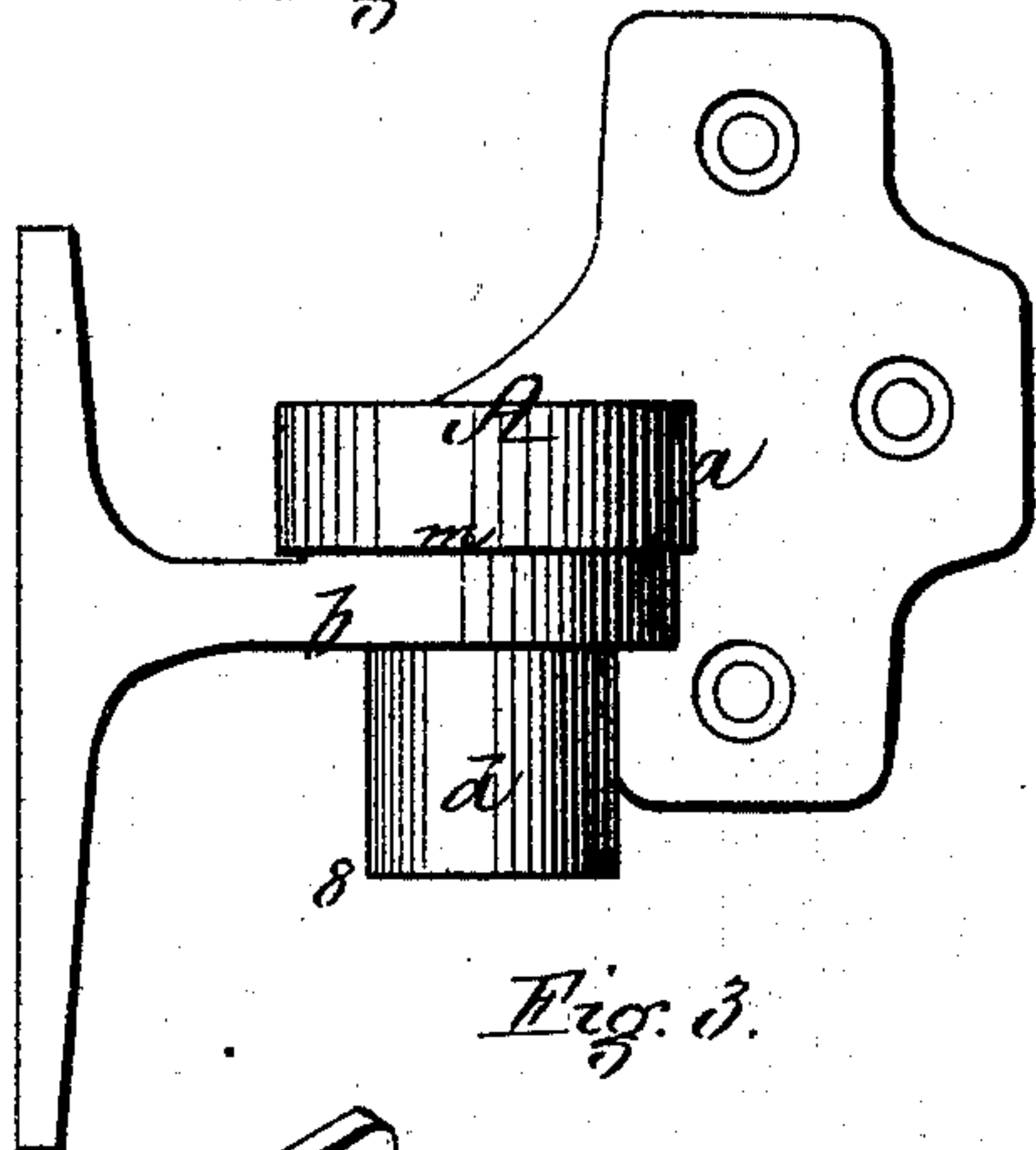


Fig. 2.

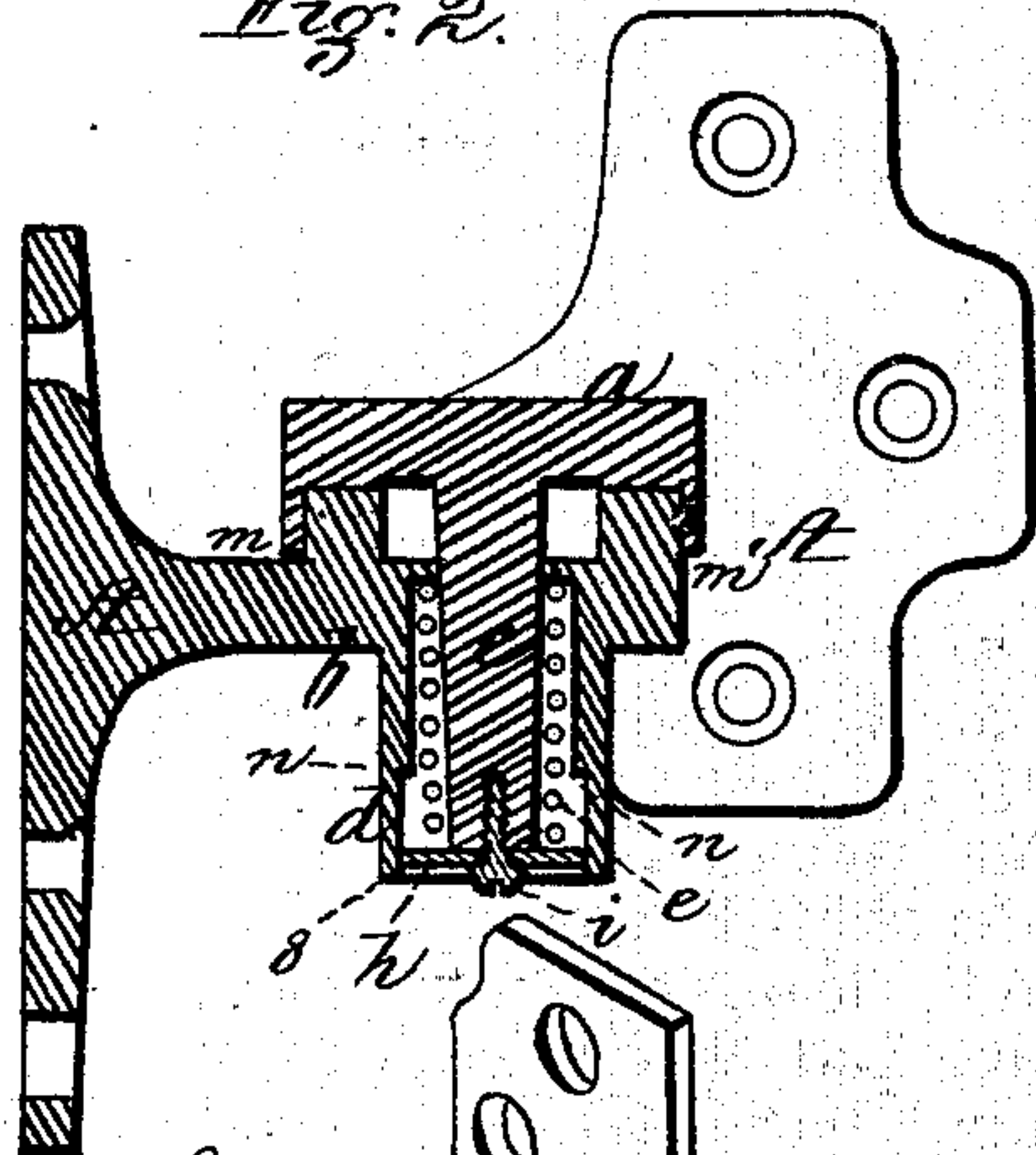


Fig. 3.

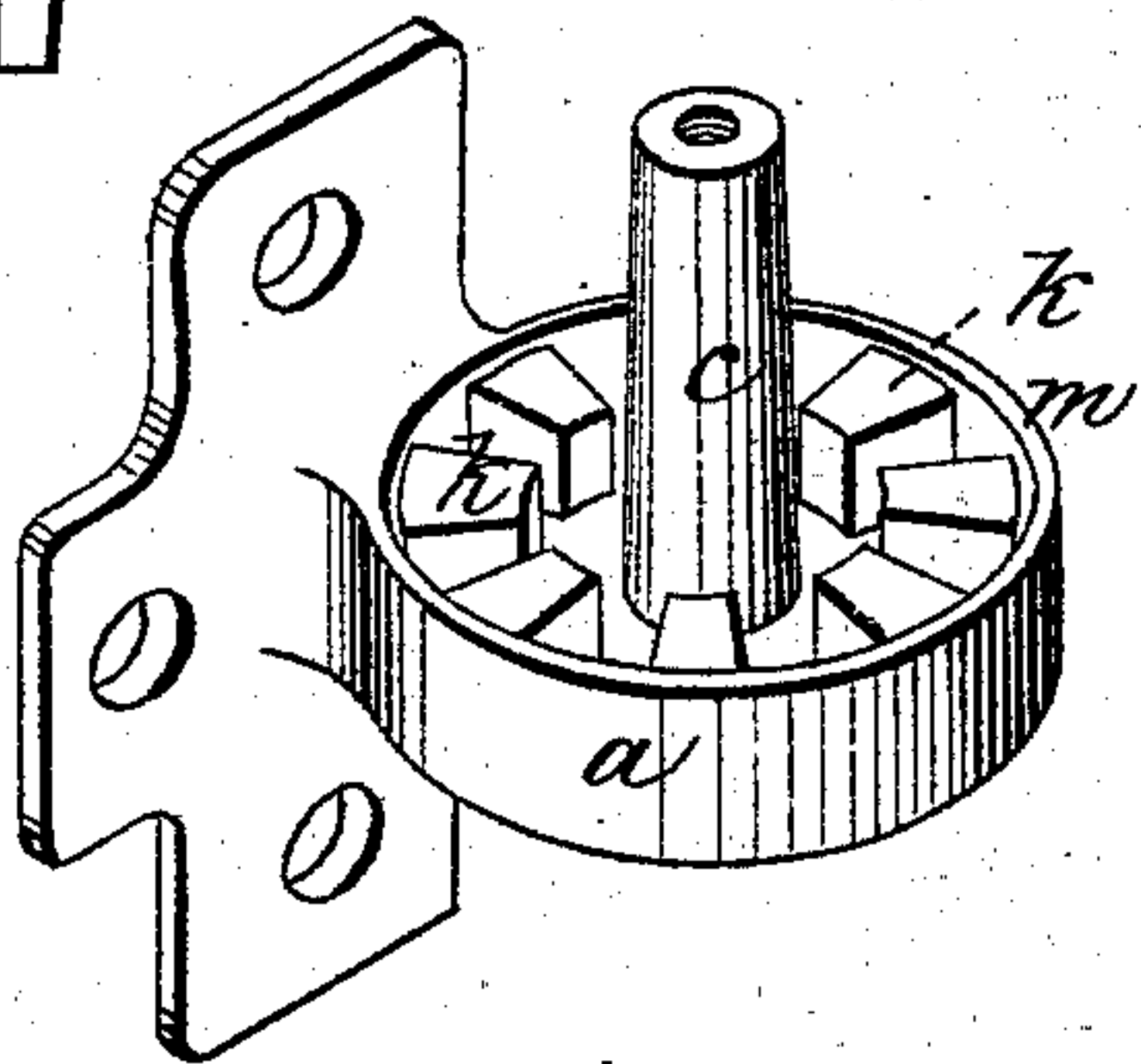


Fig. 4.

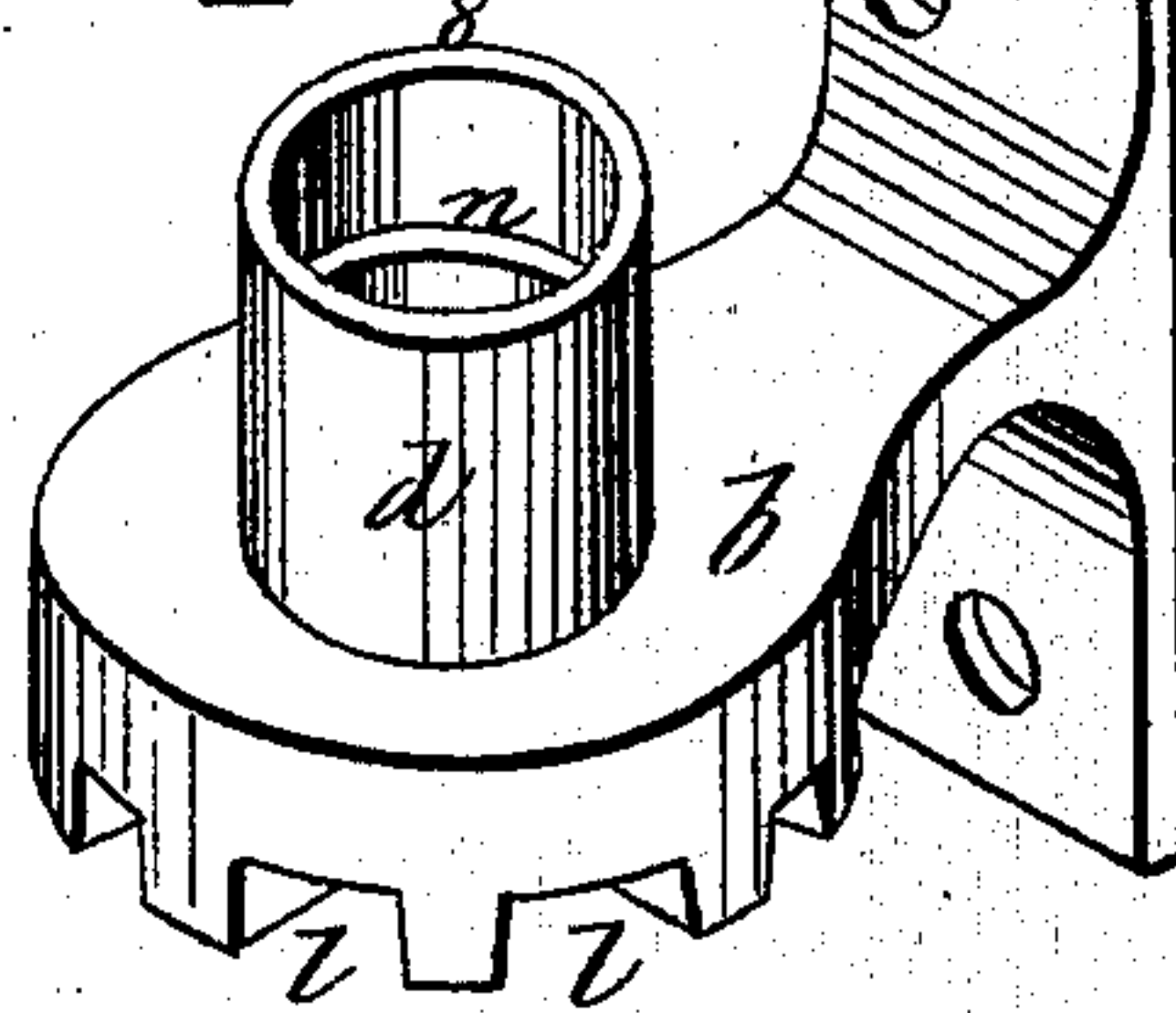


Fig. 5.

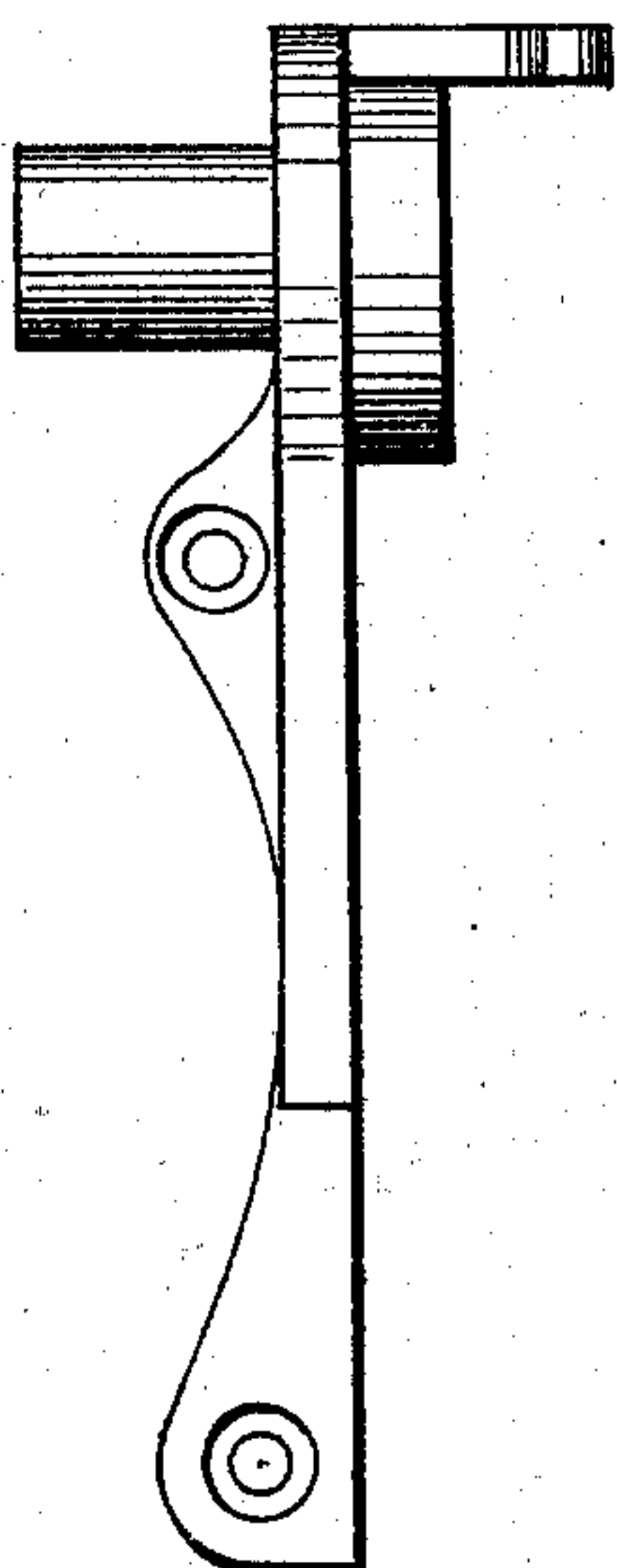
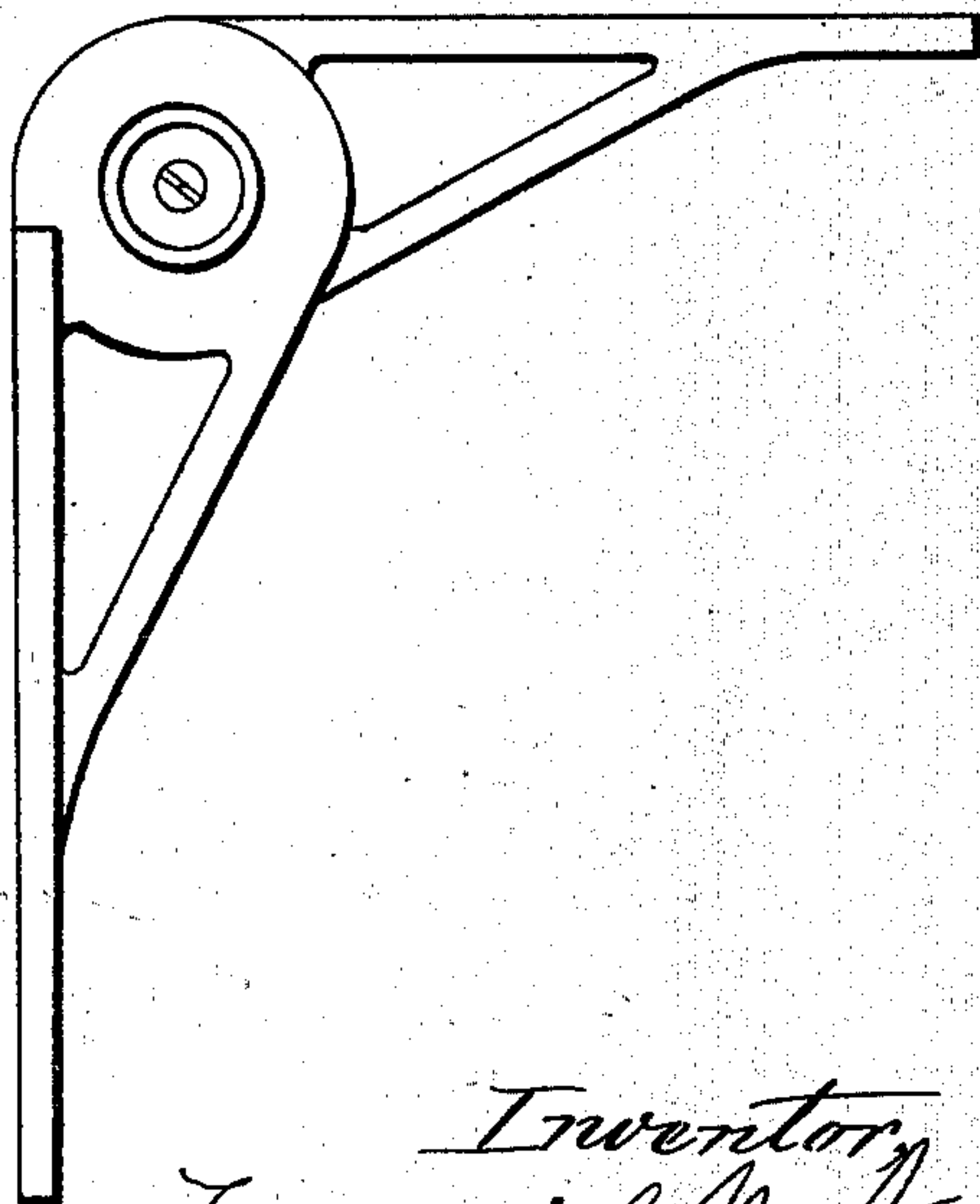


Fig. 6.



Witnesses,  
N. W. Stearns  
W. J. Cambridge

Inventor,  
Frederick W. Nichols



# UNITED STATES PATENT OFFICE.

FREDERICK W. NICHOLS, OF LYNN, MASSACHUSETTS.

## IMPROVEMENT IN LOCK-HINGES.

Specification forming part of Letters Patent No. **146,776**, dated January 27, 1874; application filed December 4, 1873.

*To all whom it may concern:*

Be it known that I, FREDERICK W. NICHOLS, of Lynn, in the county of Essex and State of Massachusetts, have invented certain Improvements in Hinges, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is an elevation of a hinge constructed in accordance with my invention. Fig. 2 is a vertical section through the center of the same. Figs. 3 and 4 are perspective views of the two portions of the hinge detached. Fig. 5 is a front elevation of a hinge particularly adapted for desks and shelves. Fig. 6 is a side elevation of the same.

My present invention has for its object to improve and cheapen the construction of self-locking hinges; and consists in providing one leaf or portion of the hinge with a central pin cast in the same piece, and surrounded by a spiral spring held in place by a screw or by a screw and washer, in combination with the other leaf or portion of the hinge, having a sleeve cast in the same piece for inclosing and protecting the spring, the two leaves of the hinge being provided with notches and projections fitting each other, whereby they may be held in any desired position.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A, Figs. 1 and 2, represents a hinge especially designed for blinds and shutters, and composed of two leaves or portions, *a b*, the leaf *a* being provided with a central pin, *c*, cast in one and the same piece therewith. This central pin projects through an opening in the leaf *b*, and passes centrally into a sleeve or casing, *d*, projecting from its outer surface, and cast in one and the same piece therewith, the portion of the pin within the sleeve being surrounded by a spiral spring, *e*, which is held in place upon the pin by a washer, *h*, secured to its outer end by a screw,

*i*; or the washer may be dispensed with and a screw having a head of a diameter greater than the spring may be employed. One leaf of the hinge is provided with projections *k* fitting into notches *l* formed in the other leaf, and a flange, *m*, projecting down from the leaf *a*, extends over and protects them from dust and the weather. Within the sleeve *d* (at a distance from the bottom *s* a trifle greater than the length of a projection, *k*,) is formed an annular shoulder, *n*, against which the washer *h* or enlarged head of the screw *i* comes in contact when the spring is compressed by laterally forcing one leaf away from the other, by which construction the compression of the spring beyond the distance sufficient to unlock the hinge and the liability of injuring and breaking the spring incident thereto are avoided.

The hinge shown in Figs. 5 and 6 is designed particularly for desks and shelves, auxiliary leaves for sewing-machine tables, &c.

By inclosing the spring within a sleeve or casing the parts are securely protected from injury by exposure to dirt or the weather, and by casting the pin *c* in one and the same piece with the leaf *a*, and the sleeve *d* in one and the same piece with the leaf *b*, I am enabled to greatly simplify and cheapen the construction of the hinge.

What I claim as my invention, and desire to secure by Letters Patent, is—

The portion *a*, with its central pin *c* cast in the same piece and surrounded by a spiral spring, *e*, held in place by a screw, *i*, or screw *i* and washer *h*, in combination with the portion *b*, with its protecting sleeve *d* cast in the same piece, all constructed and operating substantially in the manner and for the purpose set forth.

Witness my hand this 25th day of November, 1873.

FREDERICK W. NICHOLS.

In presence of—

N. W. STEARNS,  
W. J. CAMBRIDGE.