

*F. H. Walker,*

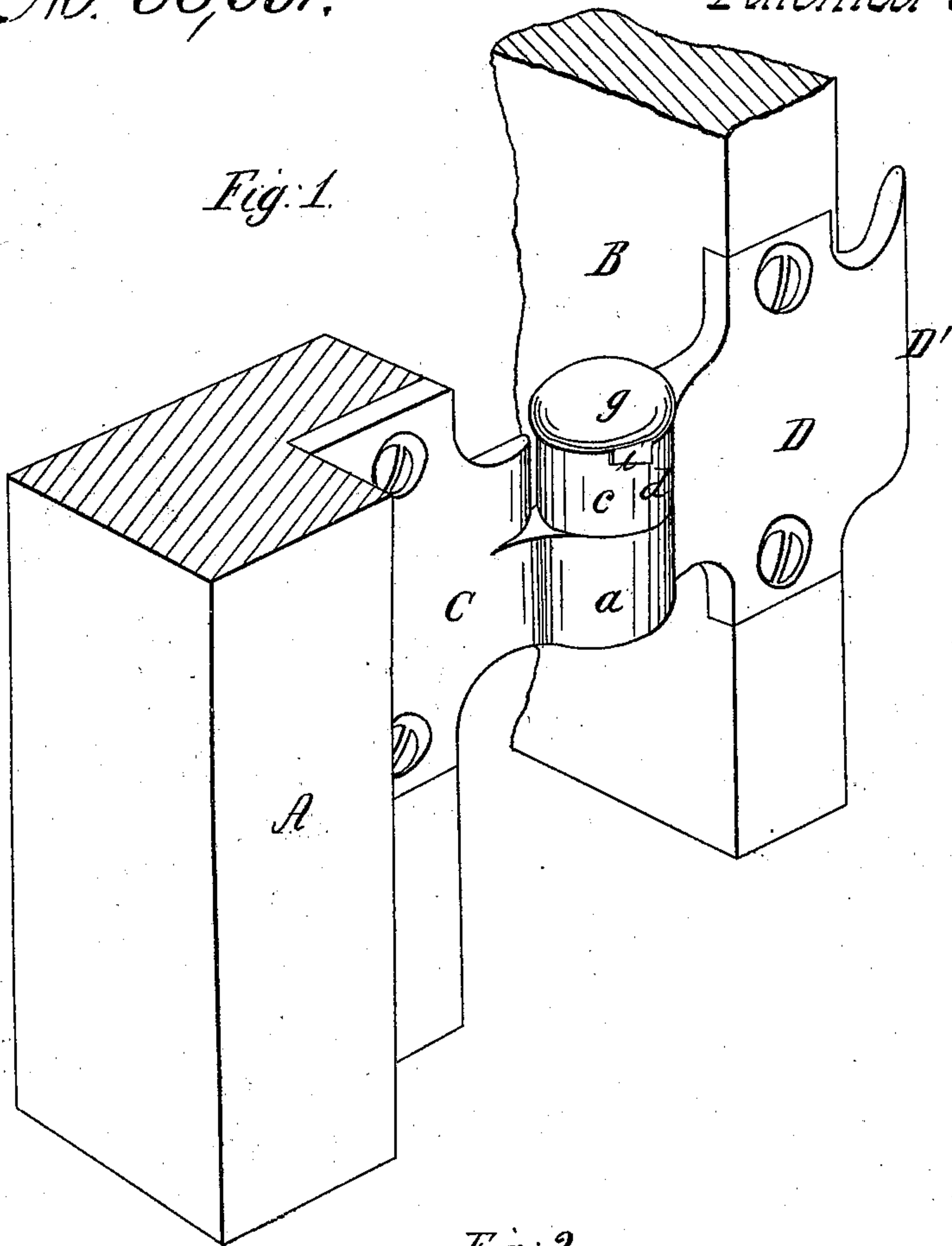
*2., Sheets, Sheet. 1.*

*Hinge.*

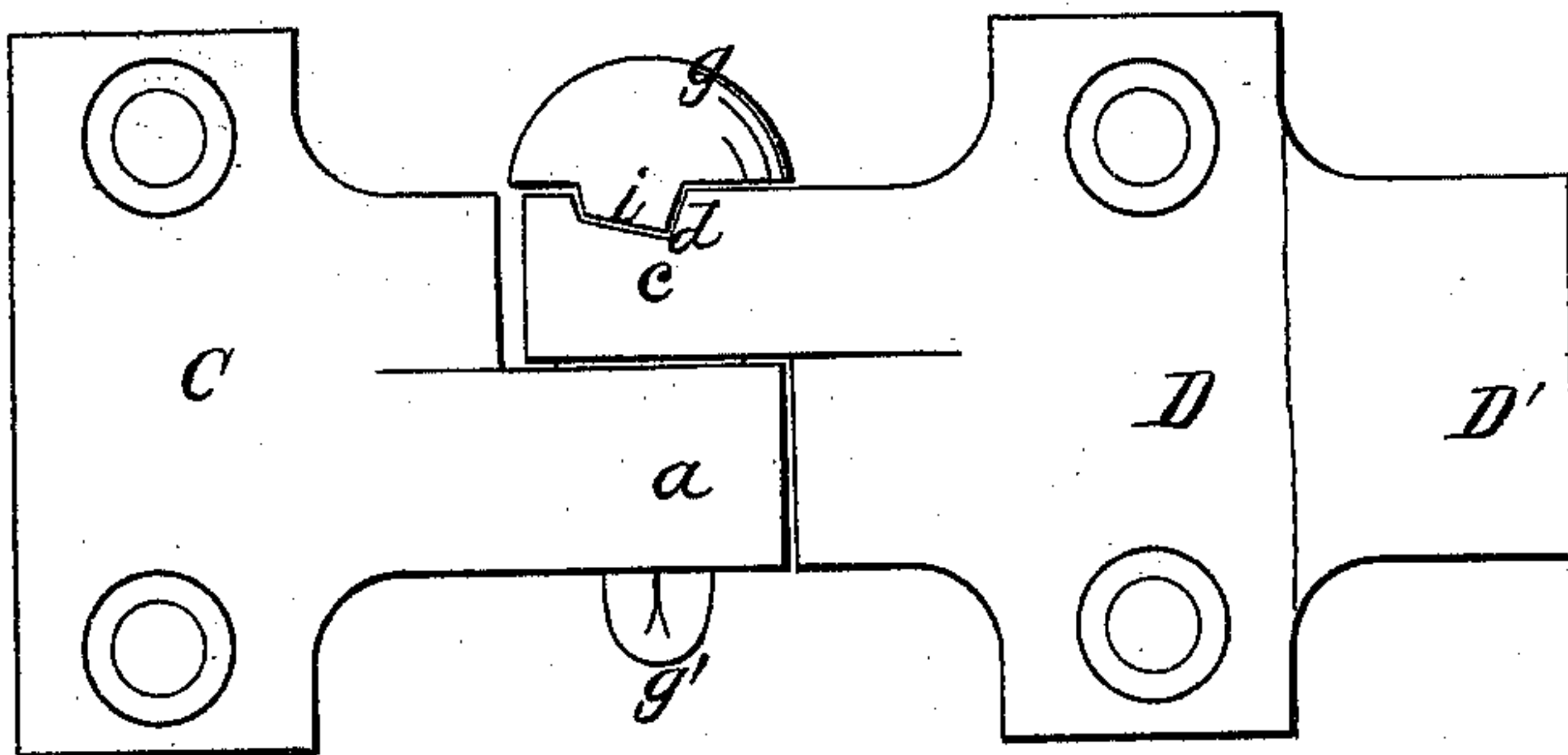
*No. 88,351.*

*Patented Mar. 30. 1869.*

*Fig. 1.*



*Fig. 2.*



*Inventor;*

*Francis H. Walker*  
*by his agents*

*Mason Fenwick Lawrence*

*Witnesses;*

*R. T. Campbell*  
*J. V. Campbell*

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2. Sheets. Sheet. 2.

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Fig. 3.

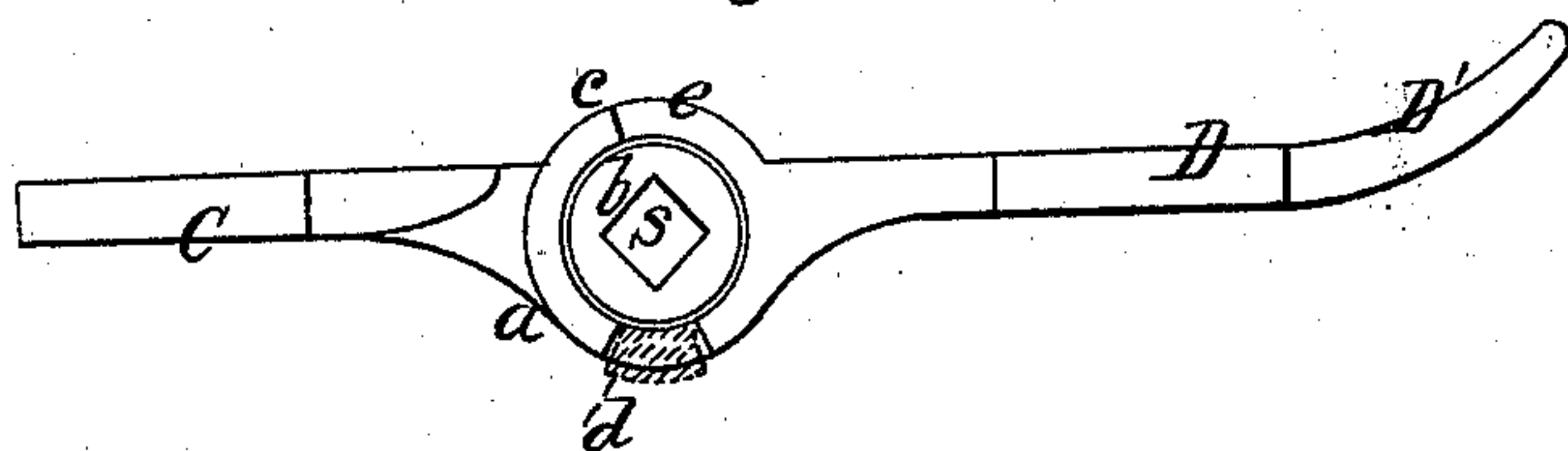


Fig. 4.

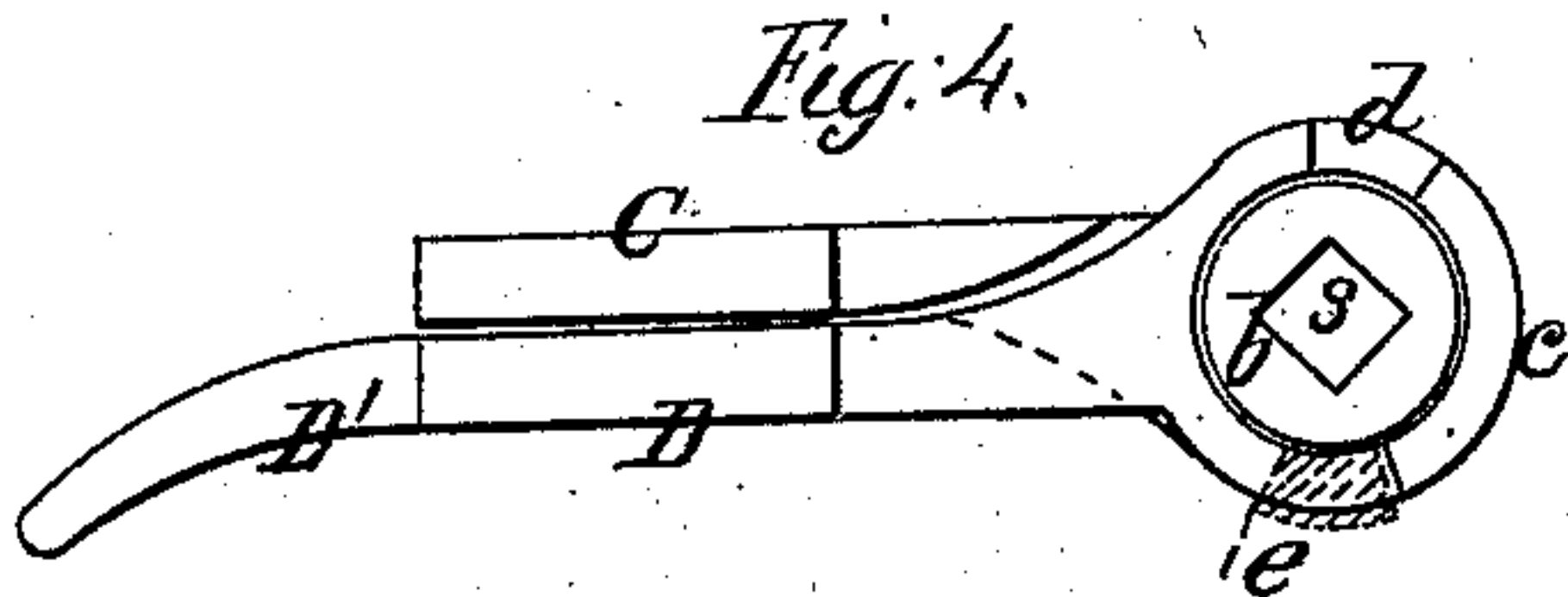


Fig. 5.

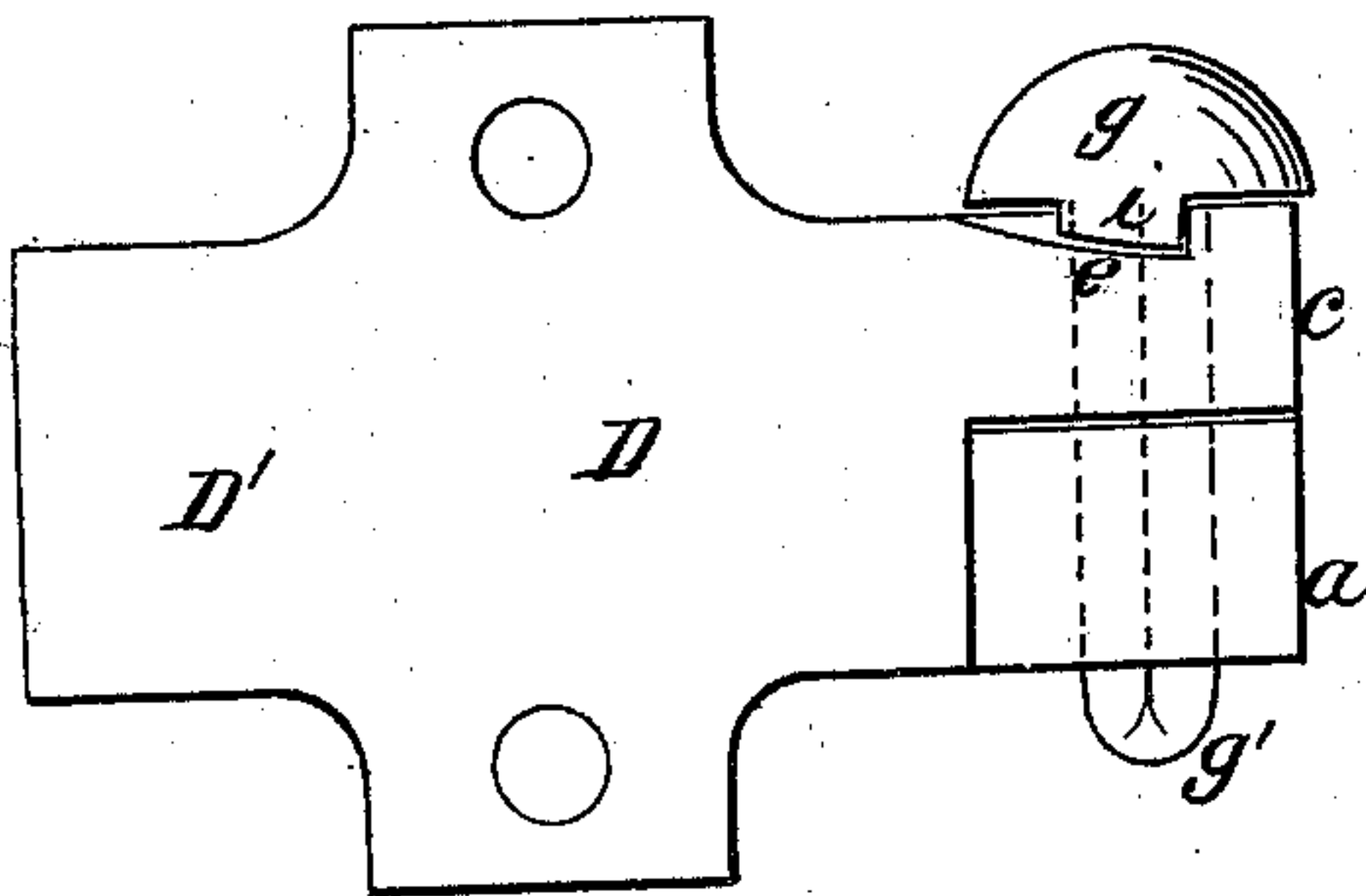


Fig. 6.

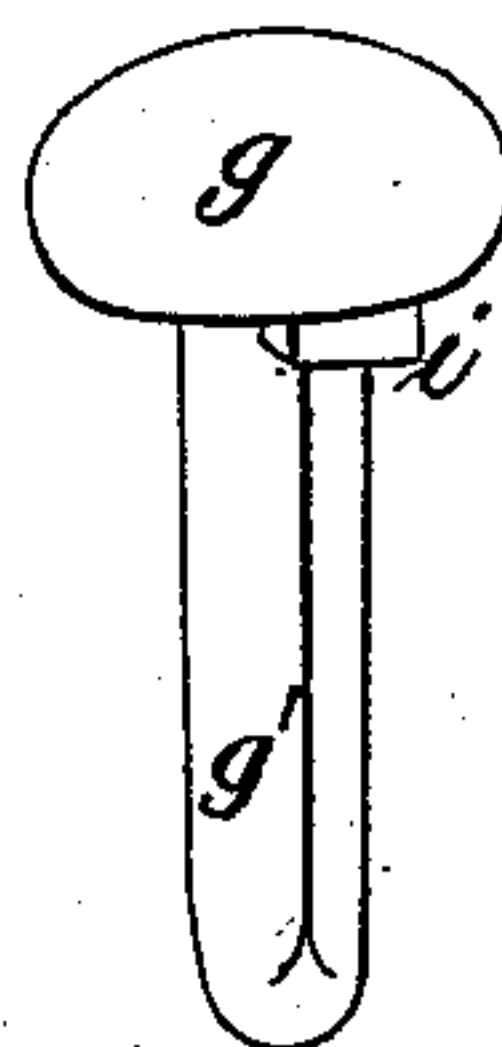


Fig. 8.

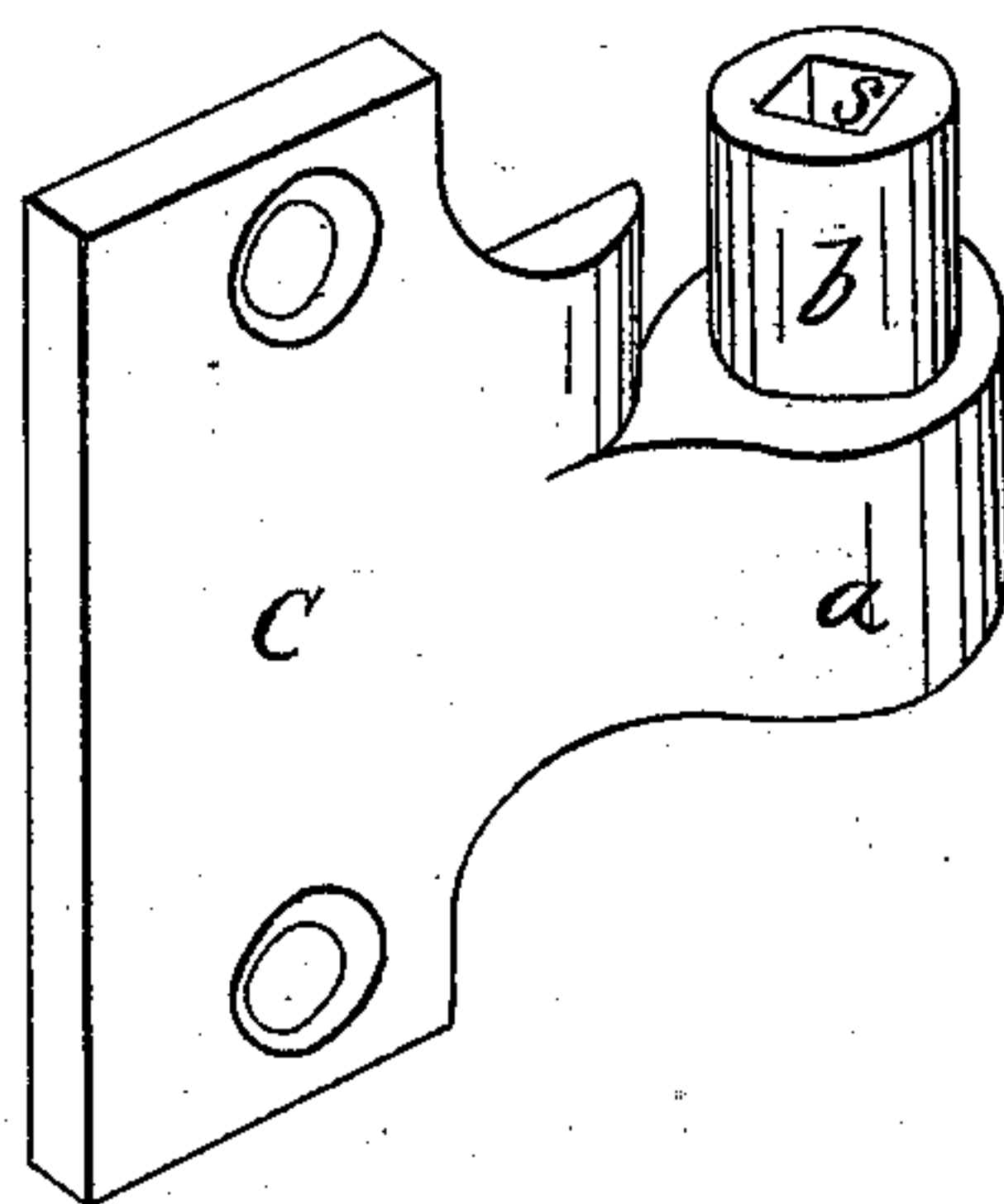
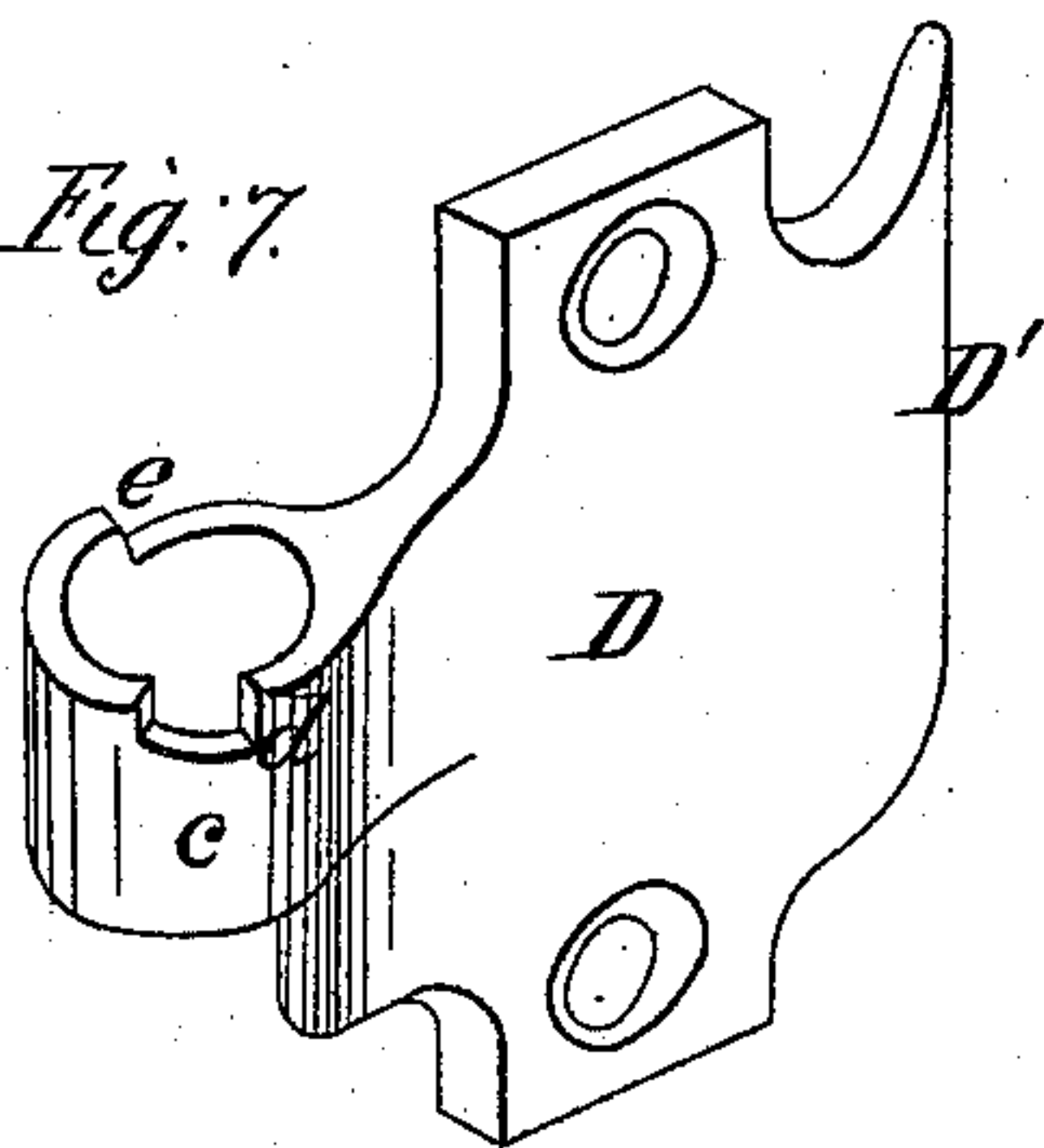


Fig. 7.



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# United States Patent Office.

FRANCIS H. WALKER, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 88,351, dated March 30, 1869.

## IMPROVEMENT IN HINGES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, FRANCIS H. WALKER, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and improved Self-Fastening Hinge; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my improved hinge, complete, representing it as it appears while holding a shutter open.

Figure 2 is a face view of the hinge locked open.

Figure 3 is a top view of fig. 2, with the locking-pin removed.

Figure 4 is a top view of the hinge when closed, with its locking-pin removed.

Figure 5 is a side view of the hinge closed, with the locking-pin in place.

Figure 6 is a perspective view of the locking-pin.

Figure 7 is a perspective view of the swinging leaf of the hinge.

Figure 8 is a perspective view of the fixed leaf of the hinge.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of my invention consists—

First, in the improvement of hinges for blinds and shutters, by providing them with self-locking gravitating pins, which will securely hold the swinging leaves of the hinges at different angles, and at any desired angle, and which will not be liable to become inoperative by exposure to ice and dirt, as will be hereinafter explained.

Secondly, in providing a shutter, or blind, or the swinging leaf of one of its hinges, with a finger-piece, or handle, so applied as to render the closing of a shutter, or blind, very convenient, as will be hereinafter explained.

I am aware that it is not new to apply devices to the hinges of shutters for locking the shutters open, and therefore I do not claim, broadly, such a combination, unless it is effected substantially in the following manner:

C represents the fixed leaf of the hinge, or that leaf which is secured to the frame, A, of a window; and

D represents the swinging leaf, or that leaf of the hinge which is secured to the edge of a shutter, B.

The leaf C has, constructed upon it, an eye, *a*, from which rises a cylindrical pintle, *b*, of less diameter than the eye *a*, as shown in fig. 8.

Through the centre of the pintle *b* and eye *a*, a hole, *s*, is made, which is adapted for receiving the shank, *g*, of a locking-pin, and preventing this pin from turning while in its place.

The drawing, figs. 2, 5, and 6, shows a pin, whose shank is rectangular, in cross-section, but it is obvious that it may be of any other prismatic shape, which will prevent it from rotating in its hole, or sockets *s*.

The leaf D has, constructed upon it, an eye, *c*, having a hole centrally through it, for receiving the pintle *b*, and thus forming the joint for this leaf D.

The pintle *b* is equal in length to the eye *c* of leaf D.

The locking-pin consists of a prismatic shank, *g*, which may be somewhat longer than the pintle *b*, and its eye *a* so as to extend beneath the lower end of the latter when in place, as shown in figs. 2 and 5. Also, a head, *g*, which may be rounded, as shown, and which should be flat on its bottom, and of such diameter as to completely cover the upper end of the eye *c*. And also, a catch, *i*, which is formed on the flat bottom of the head *g*, and adapted for arresting the leaf D, by dropping into a notch, *d*, made in the upper edge of the eye *c*, as shown in the drawings.

The notch *d* is made of such depth as will allow the head *g* of the locking-pin to rest snugly upon the upper end of eye *c*, when the leaf D is locked open, as shown in figs. 1 and 2.

Opposite the notch *d*, the upper end of the eye *c* is bevelled, as shown at *e*, in figs. 3, 4, 5, and 7, the object of which is to allow the head of the locking-pin to rest snugly upon, and closely cover the eye *c*, when the leaf D is shut, as shown in figs. 4 and 5.

In the act of swinging the leaf D open from a closed position, the bevelled edge *e* will raise the locking-pin, and when the notch *d* is brought beneath the catch *i*, this catch will drop therein, and lock the leaf open.

By thus constructing the parts, it is obvious that neither ice nor dust can find a lodgment about the joint of the hinge, so as to obstruct it, as the head *g*, of the locking-pin, will afford a cover to such joint.

In practice, I prefer to have the hole for receiving the shank of the locking-pin made entirely through the eye *a*, and to make such shank long enough to extend beneath this eye, as shown in figs. 2 and 5, as, by pressing upward against the lower exposed end of said pin, the catch *i* can be detached from its notch in the eye *c*, and the leaf D thus unlocked, and allowed to swing freely. But if desirable, the shank of the locking-pin may be made shorter, and the hole, or socket in the pintle *b* and eye *a* need not be made entirely through. When this is the case, the pin will be lifted by its head, when it is desired to detach its catch *i* from the eye *c*.

Instead of constructing the catch *i* upon the head *g* of the locking-pin, the catch may be made upon the upper edge of the eye *c*, and a notch made in the head *g*, for receiving it; but I prefer the plan above described, as the most simple and easily manipulated.

In the accompanying drawings, I have represented the leaf D, which will be secured to the shutter, or blind, as shown in fig. 1, with a curved extension, or finger-piece, D', formed upon it.

This piece D' is preferably made a part of leaf D, but this is not essential, as it may be made separate, and secured to the edge of the shutter, or blind, either above or below the leaf of the hinge.



The object of this piece *D'* is to afford a handle by which to conveniently take hold of the shutter, or blind, near its hinged edge, when it is desired to close the same.

The use of this handle *D'* will obviate the unpleasantness of extending the arm out of the window far enough to grasp the outer-swinging edge of a shutter, for the purpose of closing it, and also relieve the hinges of the shutter, in case of high wind, from undue strain caused by closing it in this manner.

As the locking-pin is removable, it can be readily lifted out of its place, and adjusted so that the catch *i* will drop into the notch *d*, in eye *c*, when the shutter is only half open, and, by making the shank *g'* of said pin hexagonal, octagonal, or polygonal, with a corresponding hole, or socket to receive it, the shutter could be locked at any desired angle.

With the four-sided shank *g'*, the shutter can be locked when half open, and also when fully open, by adjusting the said shank accordingly.

It will be seen, by reference to figs. 1 and 2, which represent the leaf *D* fully open, that the catch and notch will not only prevent a shutter from closing cas-

ually, but they will also prevent the shutter from opening further than is required. The shutter is thus held positively, and prevented from vibrating and rattling against the side of a building.

Having described my invention,

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

1. The construction of the leaf *C* of the hinge, with a bearing, *a*, and perforated pintle, *b*, adapted for receiving the eye *c* of leaf *D*, and also the shank *g'* of a locking-pin, as shown and described.

2. The self-locking gravitating pin *g g' i*, constructed and adapted for use in combination with a notched eye, *c*, of leaf *D*, and the perforated pintle *b*, on the eye, or bearing of leaf *C*, substantially as described.

3. A handle, or finger-piece, *D'*, formed on the leaf *D*, and adapted for use upon a shutter, or blind, substantially as described.

FRANCIS H. WALKER.

Witnesses:

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