

E. BOILEAU & C. MESNIER.

Improvement in Hinges.

No. 130,466.

Patented Aug. 13, 1872.

Fig. 1.

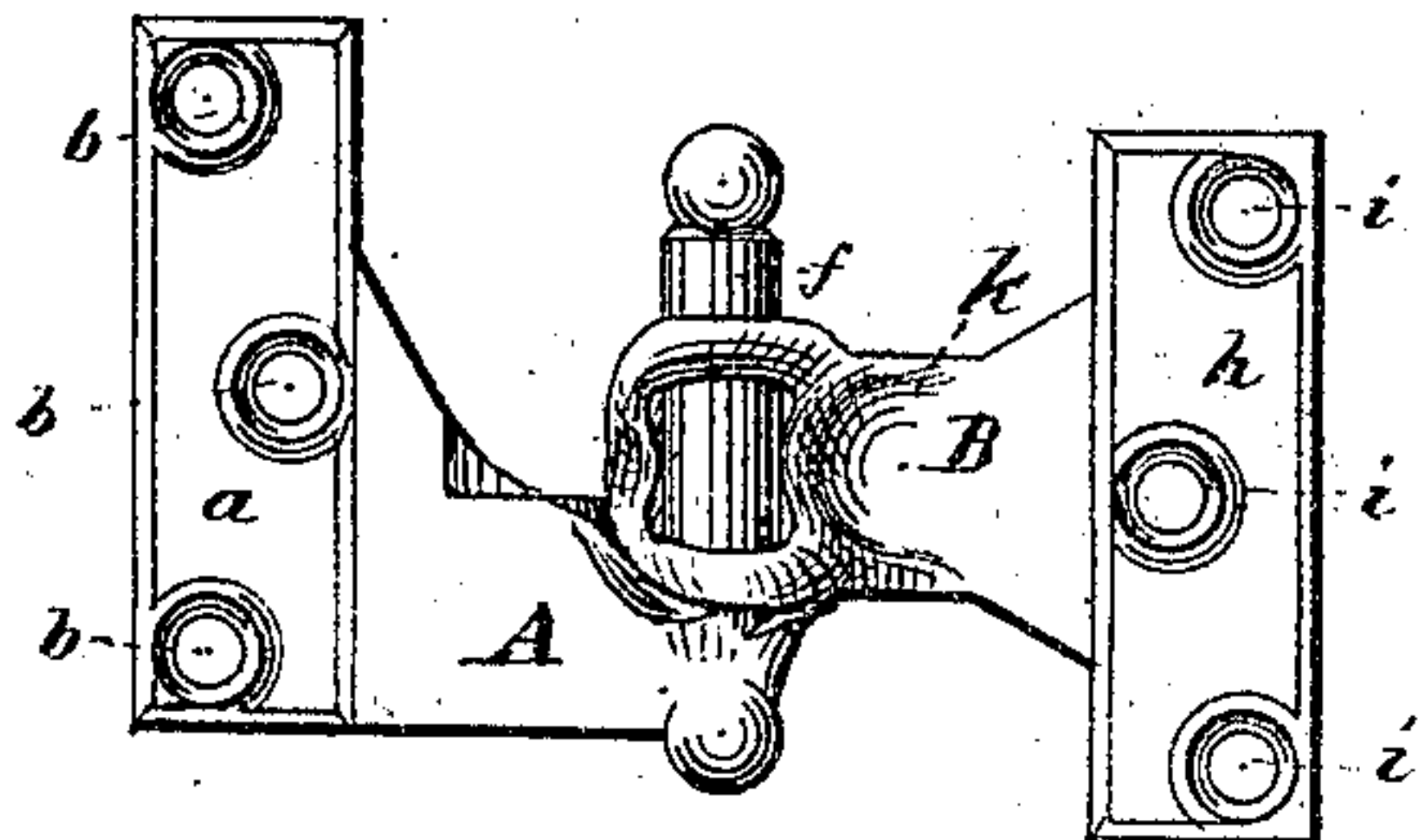


Fig. 2.

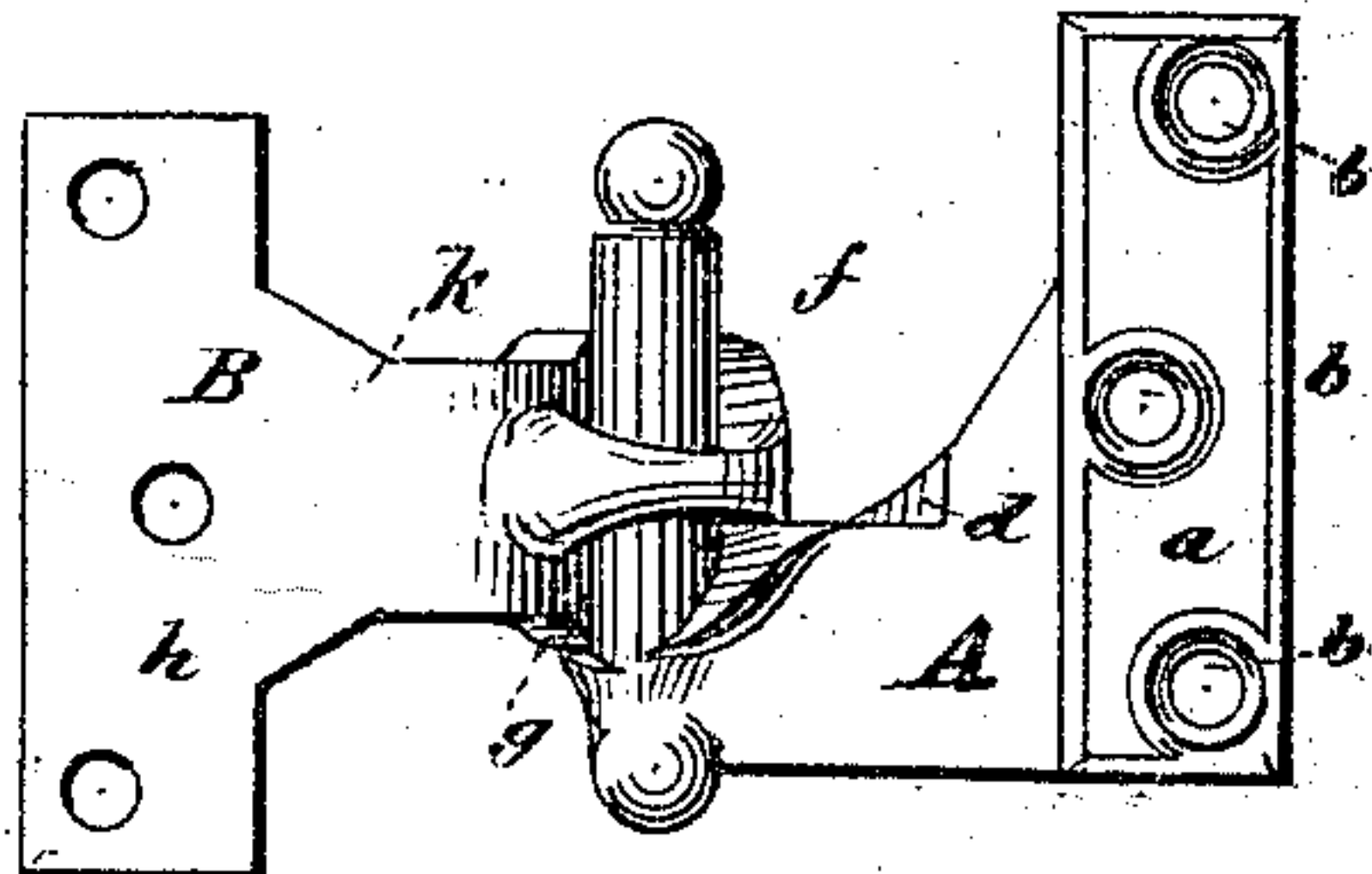


Fig. 3.

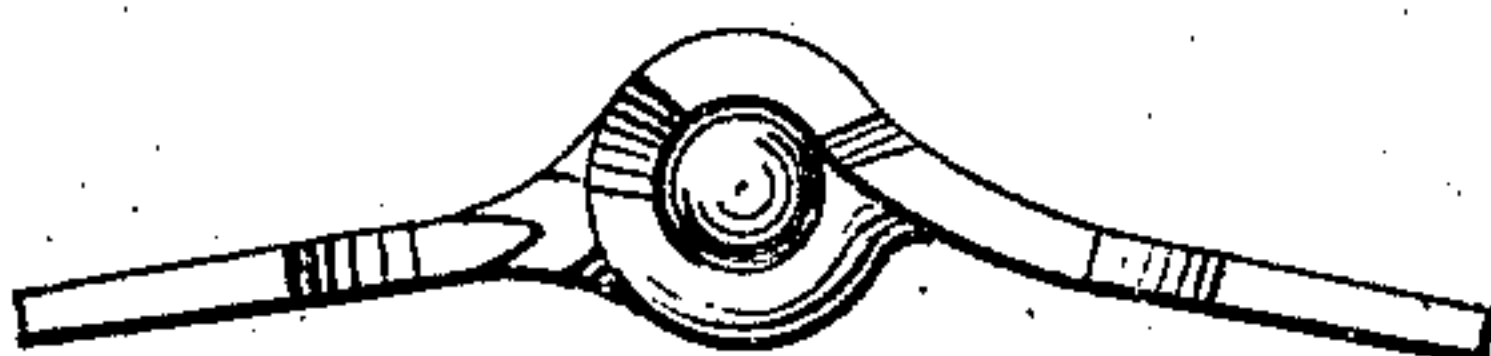


Fig. 5.

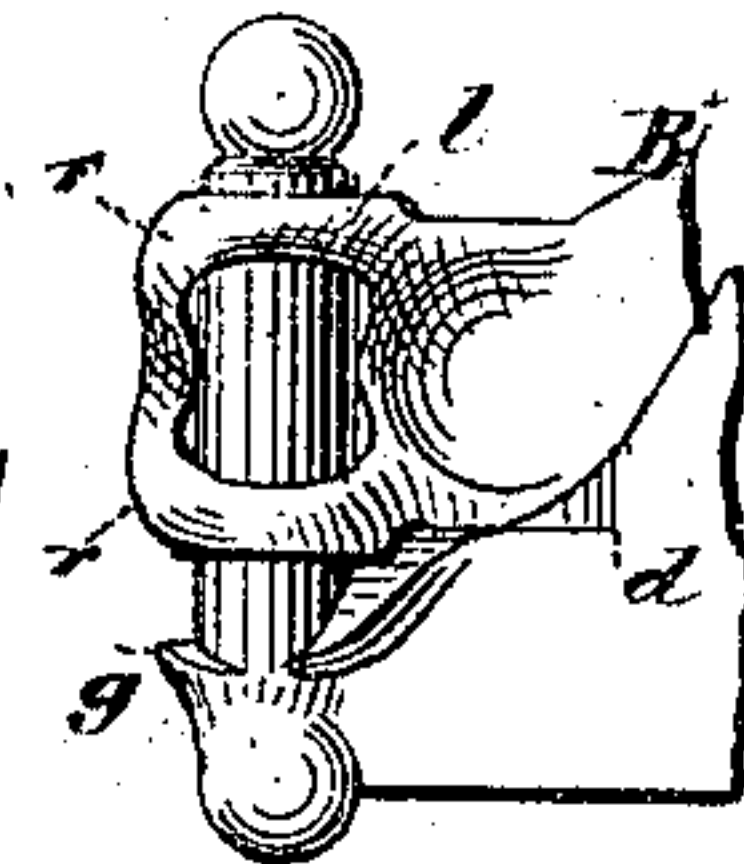


Fig. 4.

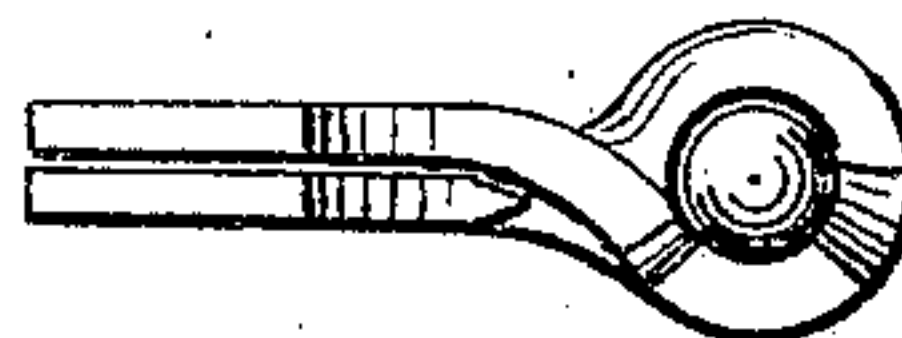


Fig. 6.

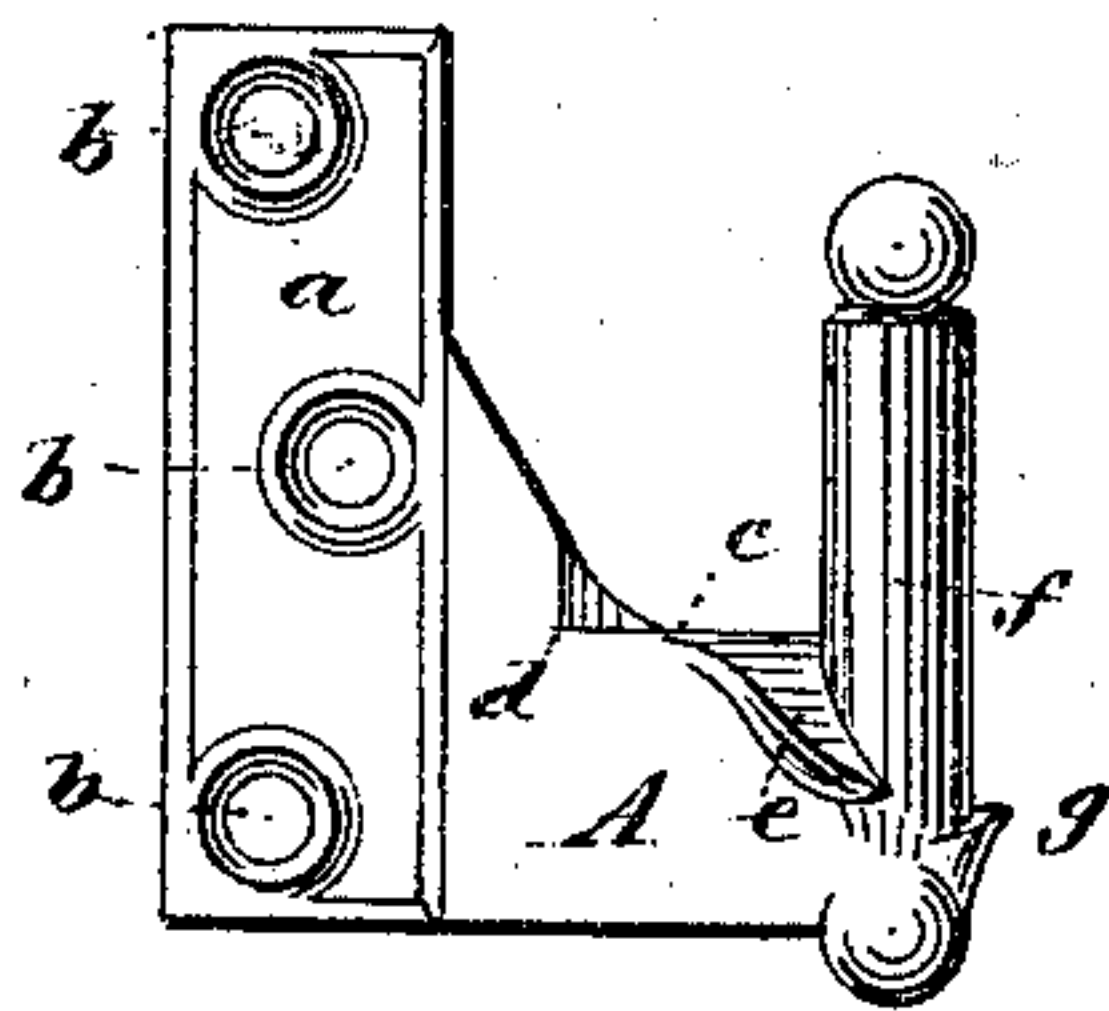


Fig. 7.



Fig. 8.

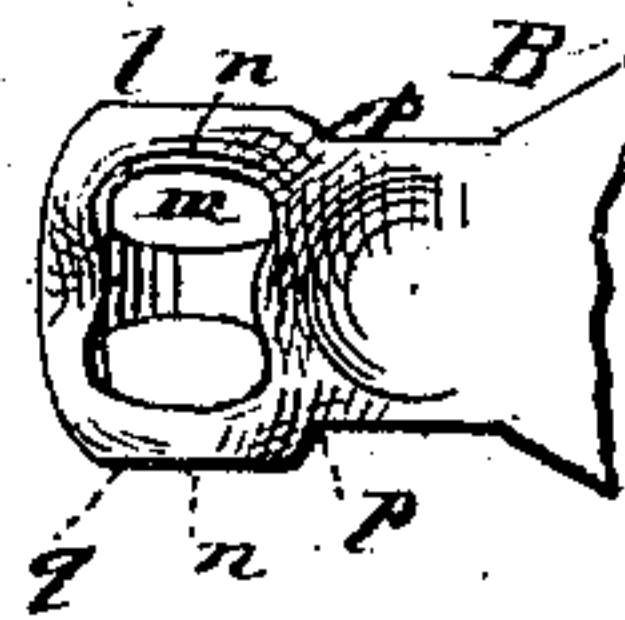


Fig. 9.

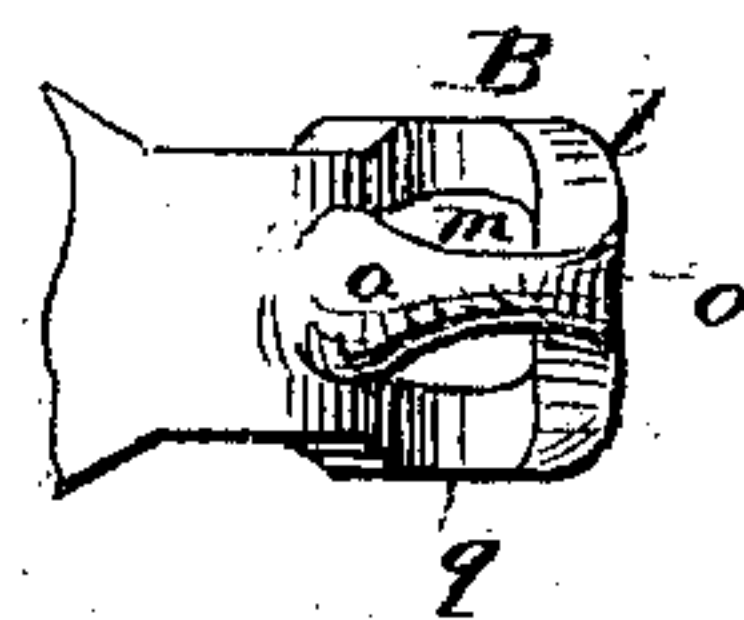


Fig. 10.



Witnesses.

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UNITED STATES PATENT OFFICE.

ETIENNE BOILEAU AND CHARLES MESNIER, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN HINGES.

Specification forming part of Letters Patent No. 130,466, dated August 13, 1872.

To all whom it may concern:

Be it known that we, ETIENNE BOILEAU and CHARLES MESNIER, of St. Louis, in the county of St. Louis and in the State of Missouri, have invented certain new and useful Improvements in Shutter-Hinges; and do hereby declare that the following, is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a view of the face of the hinge wide open and locked; Fig. 2, a similar view of the back; Fig. 3, a similar view of the edge; Fig. 4, a view of the edge when the hinge is closed; Fig. 5, a view of the heads of the hinge when closed and locked; Fig. 6, a side view of the immovable part of the hinge; Fig. 7, an end view of the same from above; Fig. 8, a side view of the head of the movable part of the hinge on the face side; Fig. 9, a similar view on the back side; and Fig. 10, an end view of the movable part of the hinge, the head in front.

Like letters of like kinds denote corresponding parts in each figure.

The object of our invention is the production of a reversible hinge capable of use on the right or left hand side, intended principally for window-shutters, which hinge shall be self-fastening when either closed or open, and so constructed and operated that the shutters may be made of sizes which shall fit closely the recess which they are intended to cover, which shall be cheap, durable, effective and attractive in appearance; and our invention consists in so constructing the cam-surfaces on the respective sides that in the closed position the hinge will be locked by a very slight drop or descent of the shutter, an abrupt shoulder of little vertical height being employed for this purpose; but when the shutter is opened but partially its gravity will throw it completely back against the wall and hold it wide open, a cam or incline of greater extent and vertical height being employed for this purpose.

In the drawing, A represents the immovable or lower part of the hinge, very clearly shown in Fig. 6, having a flat body, *a*, provided with suitable screw-holes *b*, which screw-holes are equally countersunk on each side. The front edge of this head slopes off to the front, as shown in the drawing, to the neck *c*, where

said edge is cut away equally on each side, leaving shoulders *d*. This neck is horizontal, a little curved on its top, and is spread out somewhat wider than the thickness of the body. From this neck, sloping at an angle of about forty-five degrees downward and forward, and curved spirally, extend the wings *e*, similar on each side, the front edges of which embrace about half the circumference of the spindle *f*, and, in continuation of the outer bottom line of said wings, a stop or bearing, *G*,² is made upon the front of said spindle. The movable or upper part B of the hinge has a flat body, *h*, with suitable screw-holes *i*, a neck, *k*, and a head, *l*. This head, as looked at side-wise, is circular in form, with a central opening, *m*, for the reception of the spindle. When viewed upon the face it has two semicircular similar ears, *n*, flaring a little outward; when seen from behind, a single arching brace, *o*, with rounding sides. The sides of the neck *k* are nearly parallel, approaching slightly toward the front, and, where they join the head, have shoulders *p* rising at a pretty sharp angle, but very short—not much exceeding an eighth of an inch in rise. The outsides of the wings *q*, for a distance of half or three-quarters of an inch, are horizontal, from which point said outsides incline inwardly a distance of about five-eighths of an inch in a spiral curve, *r*, which conforms to that of the wings *e*, on the part A before described.

In the operation of our device the lower part of my hinge may be used for either side of the window, both sides being precisely alike. The upper part will fit upon it on either side by putting it on with the proper edge uppermost, both edges being made precisely alike. When in use upon shutters, the part B revolving upon the spindle of the part A, and it is desired to close the shutters, it will be found that the necks of the parts A and B fit closely together, and that the shoulder *p* upon the part B fits closely to the slope of the wing *e* on the part A. The very slight shoulder described will keep the shutters securely locked, because the two parts of the hinge come closely together, and there is more or less friction of parts. In opening the shutters the lift of them to overcome the resistance of the shoulders *p* will not exceed an eighth of an inch, the shutters will open out upon the same level until they are

clear of the building, and they come within the operation of the spiral incline *r*, when they drop quite suddenly and lock themselves against the wall.

We do not claim, broadly, in this application, a hinge adapted to lock shut as well as open, as this is covered by our patent of January 6, 1869.

Having thus described our invention, what we claim as new therein is—

The reversible hinge herein described constructed with a short abrupt shoulder, *p*, adapted to lock the shutter when closed, with a very slight fall, and the long inclines *r e* adapted

to throw the shutter completely back when partly open and to lock it open.

In testimony that we claim the foregoing, we have hereunto set our hands this 31st day of July, 1871.

ETIENNE BOILEAU.
CHARLES MESNIER.

Witnesses:

To signature of BOILEAU:

JOHN R. YOUNG,
GEO. S. PRINDLE,

To signature of MESNIER:

CHAS. D. MOODY,
A. P. SMITH.