

Holbrook, Dodge & Marshall, Shutter Worker.

N^o 71,009.

Patented Nov. 19, 1867.

Fig 1.

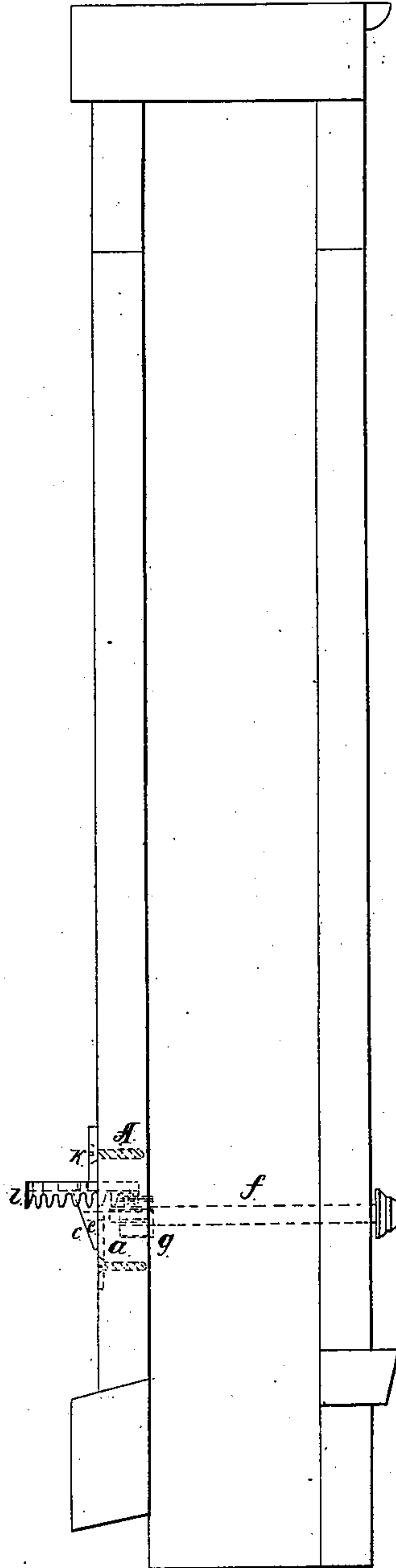


Fig 2.

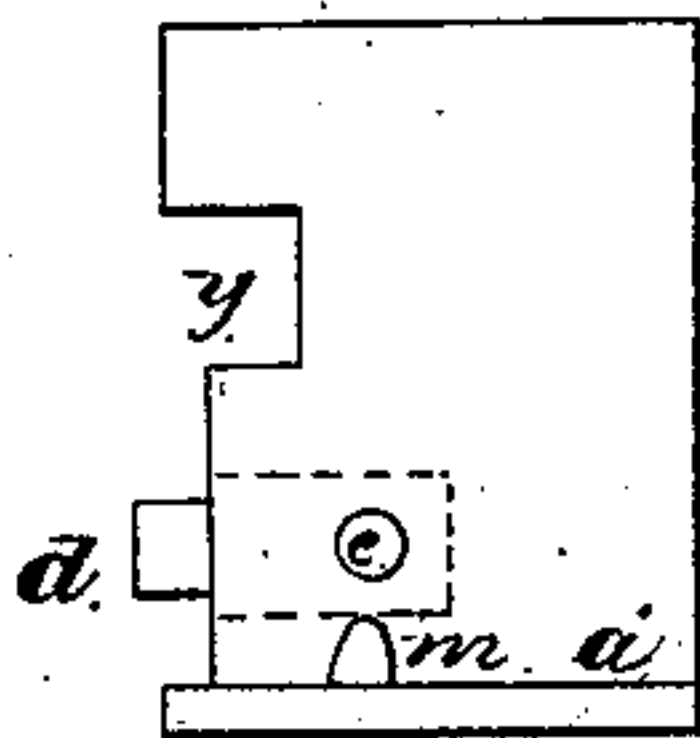


Fig 3.

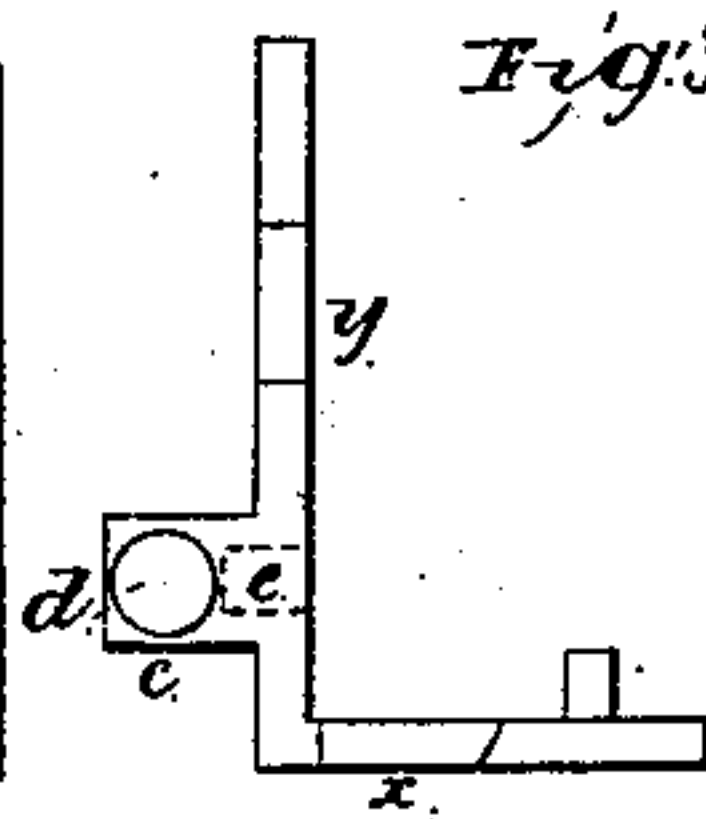


Fig 4.

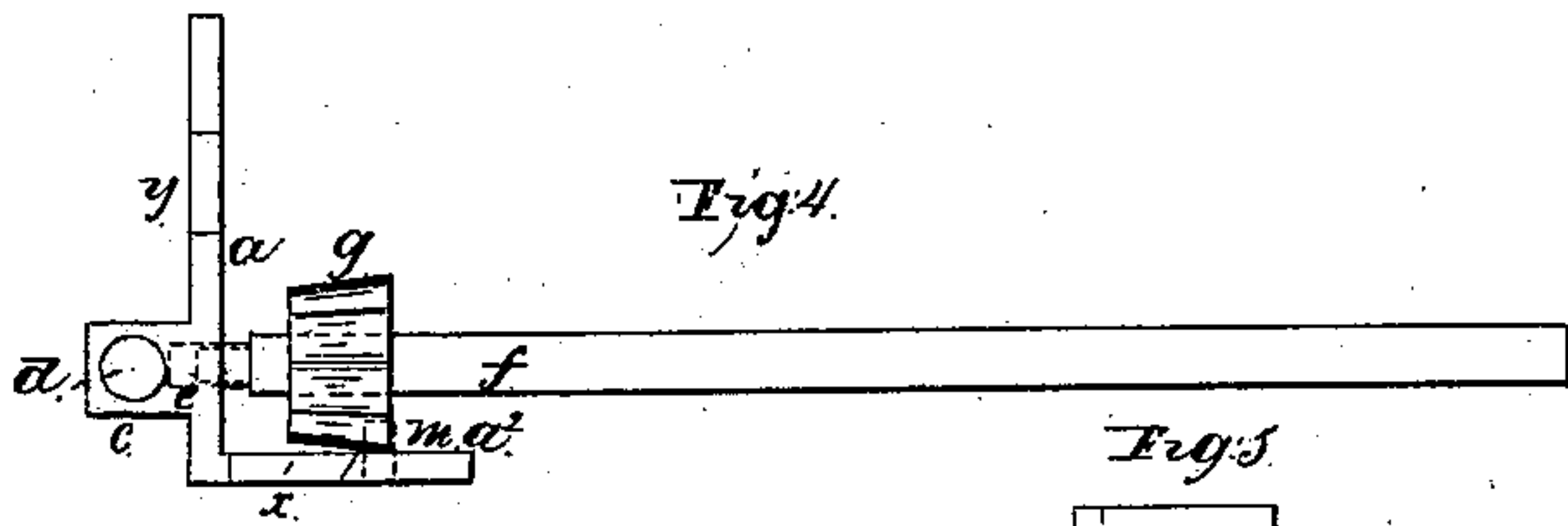


Fig 5.

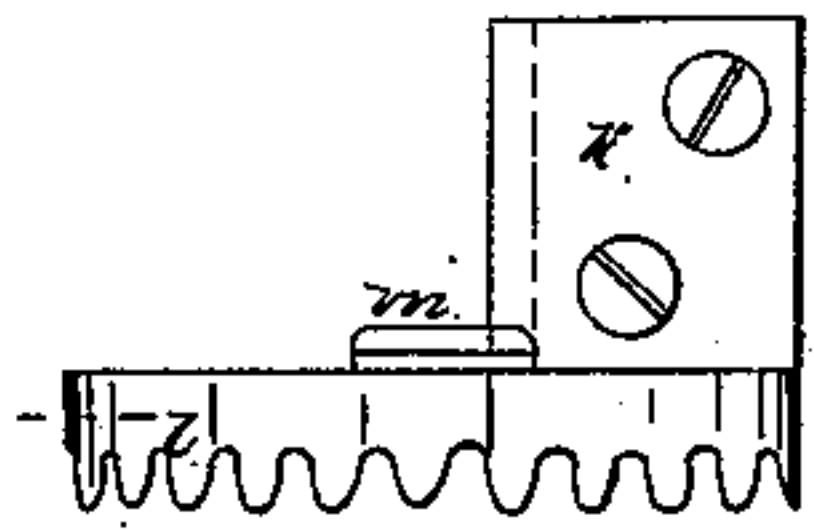


Fig 6.

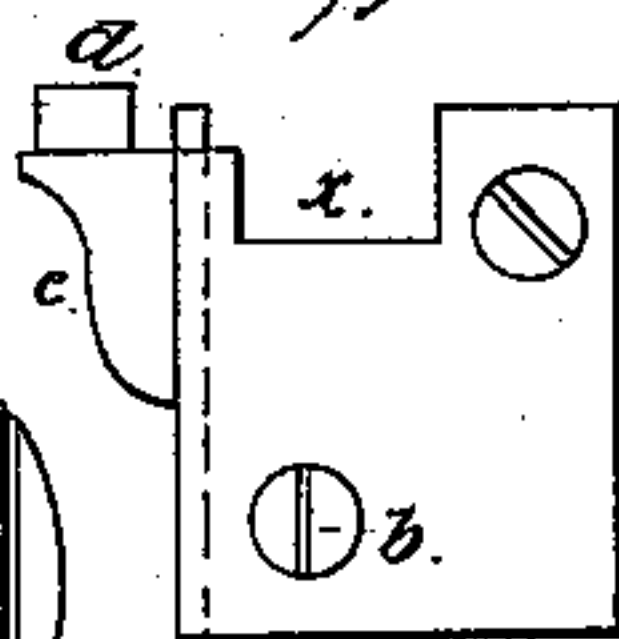


Fig 7.

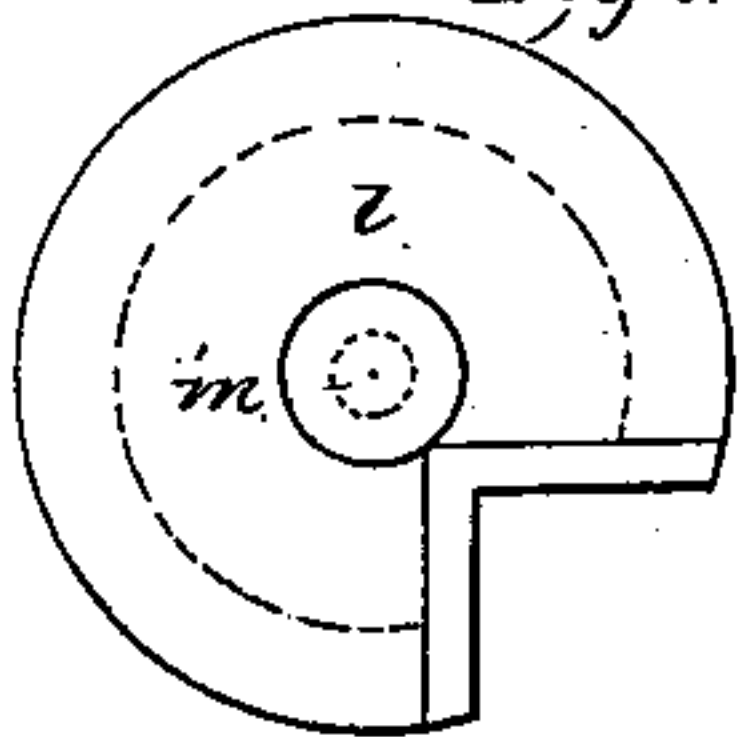
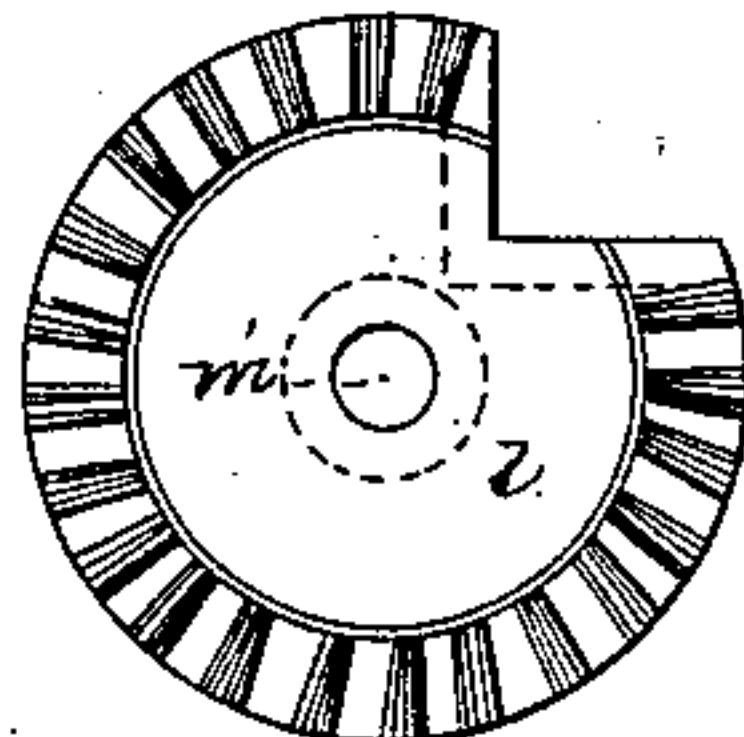


Fig 8.



Witnesses:
W. S. Bailey
Chas. G. Page

Inventor:
E. A. Holbrook,
John E. Dodge,
G. H. Marshall.
A. B.

United States Patent Office.

EDWARD A. HOLBROOK, JOHN E. DODGE, AND G. H. MARSHALL, OF
WATERTOWN, NEW YORK.

Letters Patent No. 71,009, dated November 19, 1867.

IMPROVED WINDOW-BLIND FASTENER.

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

TO WHOM IT MAY CONCERN:

Be it known that we, E. A. HOLBROOK, JOHN E. DODGE, and G. H. MARSHALL, of Watertown, in the county of Jefferson, and State of New York, have invented certain new and useful Improvements in Window-Fasteners and Openers; and we hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a transverse vertical section of a window and frame to which our improvements are applied, and Figures 2, 3, 4, 5, 6, 7, and 8, are views of detached parts to be hereafter explained.

Our invention relates to mechanism by means of which windows, blinds, &c., may be readily opened and closed, fastened and unfastened, or secured in any desired position; and it consists essentially in the combination with a toothed wheel or circular rack, attached to the window or other part to be opened or closed, of a pinion and shaft, or spindle, for actuating the same, mounted in the window-frame under such an arrangement that by slightly drawing out the said spindle from the frame, the pinion, while remaining in gear with the circular rack, will be locked, and thus prevented from rotating the said rack. By this means the blind or window may be fully or partially opened, or closed, and then held in such position by simply pulling on the spindle-handle until the pinion is caught by the locking-pin or stud, which fits between its cogs, and prevents it from moving in any degree, although it still remains in gear with the circular rack.

There are also other features of our invention which need not be here enumerated, as they will be presently described.

To enable others skilled in the art to understand and use our invention, we will now proceed to describe the manner in which the same is or may be carried into effect by reference to the accompanying drawings.

The device in which our invention consists is attached to and forms part of the hinge upon which the window or blind swings. The form of the lower leaf of the hinge, which is attached to the window-frame, is shown in figs. 2, 3, 4, and 6. It consists of a piece of angle-iron, *a*, which is attached to the frame by screws *b*, or other suitable means. It has formed on one face a projection, *c*, upon which is mounted a pin or pivot, *d*, upon which the other leaf of the hinge, which is attached to the blind, swings. The leaf *a* is attached to the frame in the position shown in fig. 1, and has formed in it, at the point where the projection *c* is placed, a recess or bearing, *e*, in which the end of the pinion-shaft or spindle *f* is supported. The pinion *g* is mounted on this shaft, so as to gear with the toothed crown-wheel of the other leaf of the hinge. At the point where the pinion is located the frame is recessed, so as to admit of a slight sliding motion of the pinion-shaft and pinion, as indicated in fig. 4. This motion being produced by drawing the shaft *f* outwards from the frame, or pushing it back, the bearing *e* being of sufficient depth to admit of the movement. When the pinion is drawn out, as shown in the figure referred to, it engages with a pin or stud, *m*, which projects from the inner face *a'* of the angular leaf, and catches between two of the cogs of the pinion, thus locking it and preventing its revolution, which cannot take place until the pinion is again moved or pushed forward by means of the handle *f*, so as to be disengaged from the stud. The upper leaf *k* of the hinge is shown in fig. 5; it consists of an upright plate, or leaf proper, *k*, which carries a crown-wheel or circular rack, *l*. The leaf is attached to the blind or window, and the crown-wheel rests upon the lower leaf, the pin or pivot upon which the hinge turns being received in a socket, *m'*, formed in the centre of the wheel. The form of the wheel is shown clearly in figs. 7 and 8, which represent respectively a top and under side view of the same. When the two parts of the hinge are properly arranged together, part of the wheel *l* moves in the recess formed in the frame *A*, openings *x y* in the lower leaf being made to admit of its passage, and the cogs of this portion of it gear with the pinion *g*. It will be readily seen, without further explanation, that by turning the shaft *f*, the pinion will cause the circular rack and blind, to which it is attached, to swing or move in either direction.

When the blind is set at the desired angle, it is held firmly in such position by drawing out the shaft *f* until the stud *m* catches between any two of the cogs of the pinion, thus locking the latter and preventing its revolution. The length of the pinion, as shown in fig. 1, is such that, whether locked or unlocked, it will always remain in gear with the toothed wheel *l*. The different parts which compose each leaf of the hinge may be made of iron, and cast in one piece, so that the cost of the same will not sensibly exceed that of the ordinary

hinge. The handle of the shaft *f* projects into the interior of the apartment or room where the window is located, so that the opening and closing, fastening and unfastening of the blinds or windows can be readily controlled and effected.

Having now described our invention, and the manner in which the same is or may be carried into effect, what we claim, and desire to secure by Letters Patent, is—

The combination, with a hinge constructed as described, of the sliding shaft, and pinion, and locking-stud under the arrangement herein described, so that the said pinion may be locked, and its motion prevented, while it remains in gear with the crown-wheel or circular rack of the said hinge.

In testimony whereof we have signed our names to this specification before two subscribing witnesses.

E. A. HOLBROOK,
JOHN E. DODGE,
G. H. MARSHALL.

Witnesses:

JNO. C. McCASTEN,	}	to signature of E. A. HOLBROOK.
E. D. MOORE,		
THOS. RICHARDSON,	}	to signature of JOHN E. DODGE.
R. M. MYERS,		
J. N. BEARDSLEY,	}	to signature of G. H. MARSHALL.
G. B. SCOVILL,		