

Fig. 2.

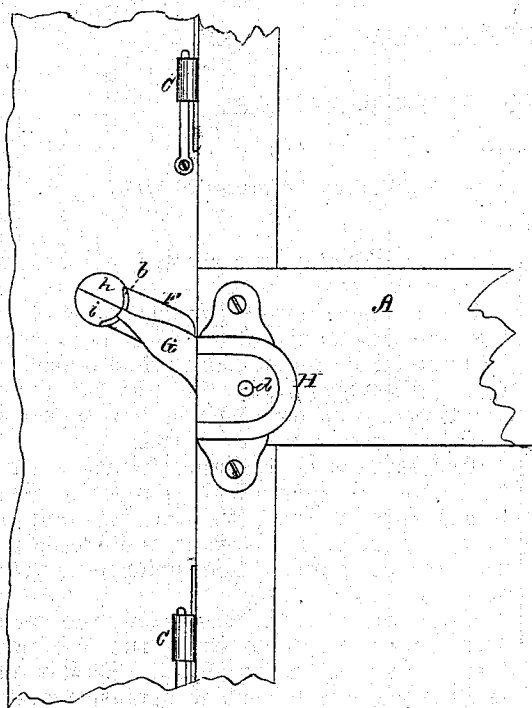
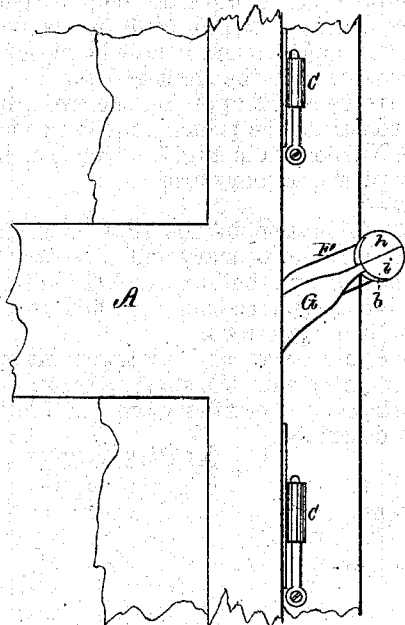


Fig. 6.



Witnesses

S. N. Piper

L. A. Moller

Fig. 1.

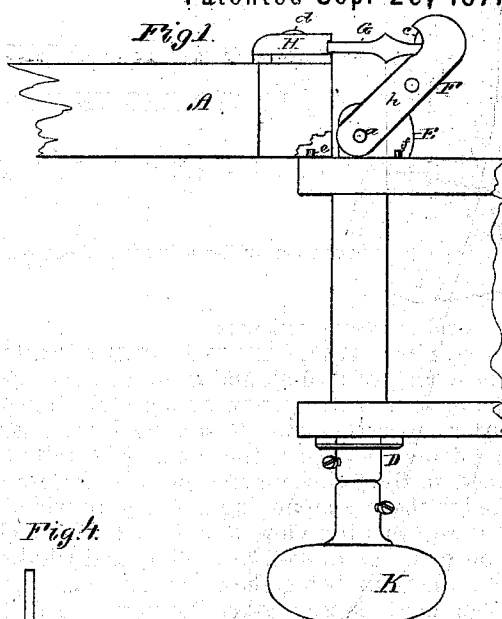


Fig. 4.



Fig. 3.

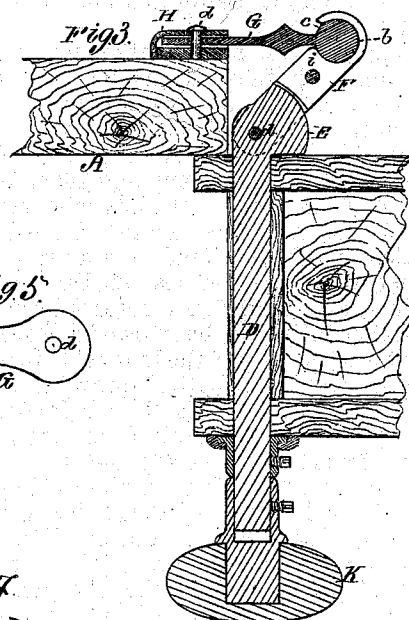
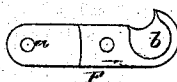


Fig. 5.



Fig. 7.



Alfred Brown

by his attorney.

R. H. Cady

UNITED STATES PATENT OFFICE.

ALFRED BROWN, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SHUTTER-WORKERS.

Specification forming part of Letters Patent No. 119,304, dated September 26, 1871.

To all whom it may concern:

Be it known that I, ALFRED BROWN, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Blind or Shutter Operating-and-Fastening Mechanism; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a top view, and Fig. 2 a front elevation of it as applied to a blind and window-frame, the blind being shown as closed. Fig. 3 is a horizontal section taken through the upper joint-bar and its sector and operative spindle or shaft.

The nature of my invention consists, firstly, in a blind or shutter-operative mechanism as composed of a shaft, a sector, a box, and two arms connected by a ball-and-socket joint; and, secondly, in a blind or shutter operative-and-fastening mechanism as composed of two stops and the shaft, the sector, the box, and two arms, as mentioned, all being arranged and applied together, and to the blind or shutter and window-frame, as hereinafter described and represented.

In such drawing; A denotes the blind or a portion thereof, and B that part of the window-frame to which it is hinged, the hinges being represented at C C. A rotary shaft, D, provided with a knob, K, is inserted through the window-frame at or near the middle of the blind, and is to be applied to the frame so as to be capable of being revolved therein. There is fixed to the outer end of the shaft a plate or sector, E, it being arranged and formed as represented. An arm, F, forked at one end to receive the sector, is jointed to it in the axis of the shaft produced, the joint-pin being seen at *a*. The said arm F, at its outer end, is provided with a socket, *b*, to receive a ball, *c*, projecting from an auxiliary arm, G. In other words, the arms are connected by what is termed a ball-and-socket joint. The arm G is flat, and enters a box, H, fastened to the blind, and turns vertic-

ally in said box upon a pivot, *d*, going through the box and arm.

Fig. 4 is an edge view of the box, and Fig. 5 is a side view of the arm G as it appears when separated from the box and primary arm. Fig. 6 is a front view of the blind and its operative-and-fastening mechanism as they appear when the blind is open or turned back.

Two studs, *e f*, projecting from the window-frame and arranged a little above the shaft D, in manner as shown in the drawing, limit the rotary movements of the shaft and the sector by the latter being brought up against either of such studs.

When the blind is closed and the sector is turned up against the stud *e* the blind will be fastened in position; so when the blind is opened and the sector is turned up against the stud F the blind will be fastened in position. By turning the shaft so as to move the sector from the stud *e* to the stud *f* the blind will be revolved on its hinges or opened; and it may be closed by a return movement of the shaft and sector.

For convenience of applying the two arms together I construct the primary one in two halves or parts *h i*, as shown in Fig. 7, which is an inner-side view of the primary arm.

I claim—

1. The combination of the shaft D, sector E, the box H, and the primary and auxiliary arms F G, connected by a ball-and-socket joint, as set forth, all being arranged and applied together, substantially as described.

2. The combination and arrangement of the studs or stops *e f* with the shaft D, sector E, box H, and primary and auxiliary arms F G, all connected as described.

ALFRED BROWN.

Witnesses:

R. H. EDDY,
J. R. SNOW.

(45)