

(No Model.)

2 Sheets—Sheet 1.

C. S. KEMPTON.
SHUTTER WORKER.

No. 361,296.

Patented Apr. 19, 1887.

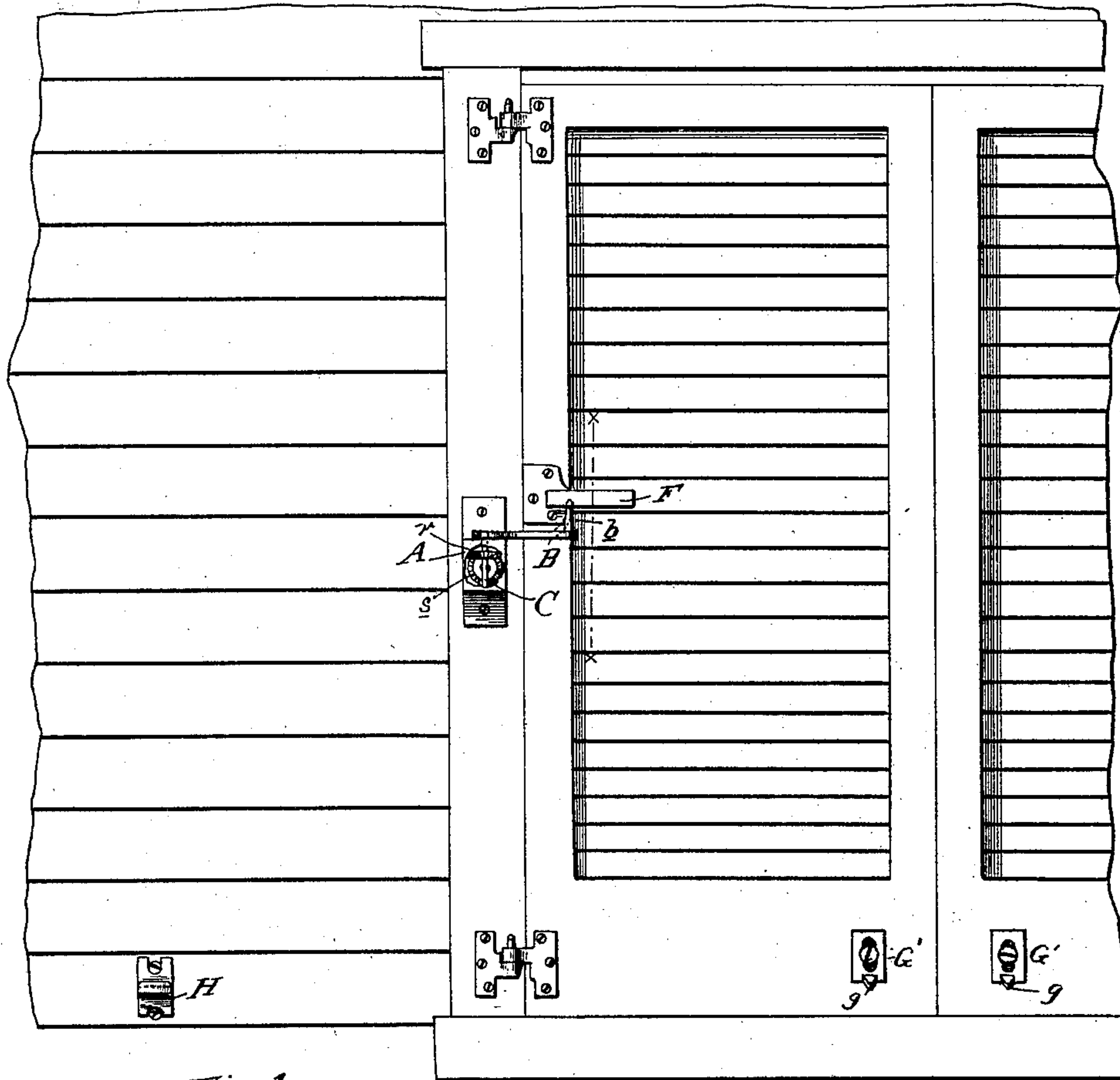


Fig. 1.

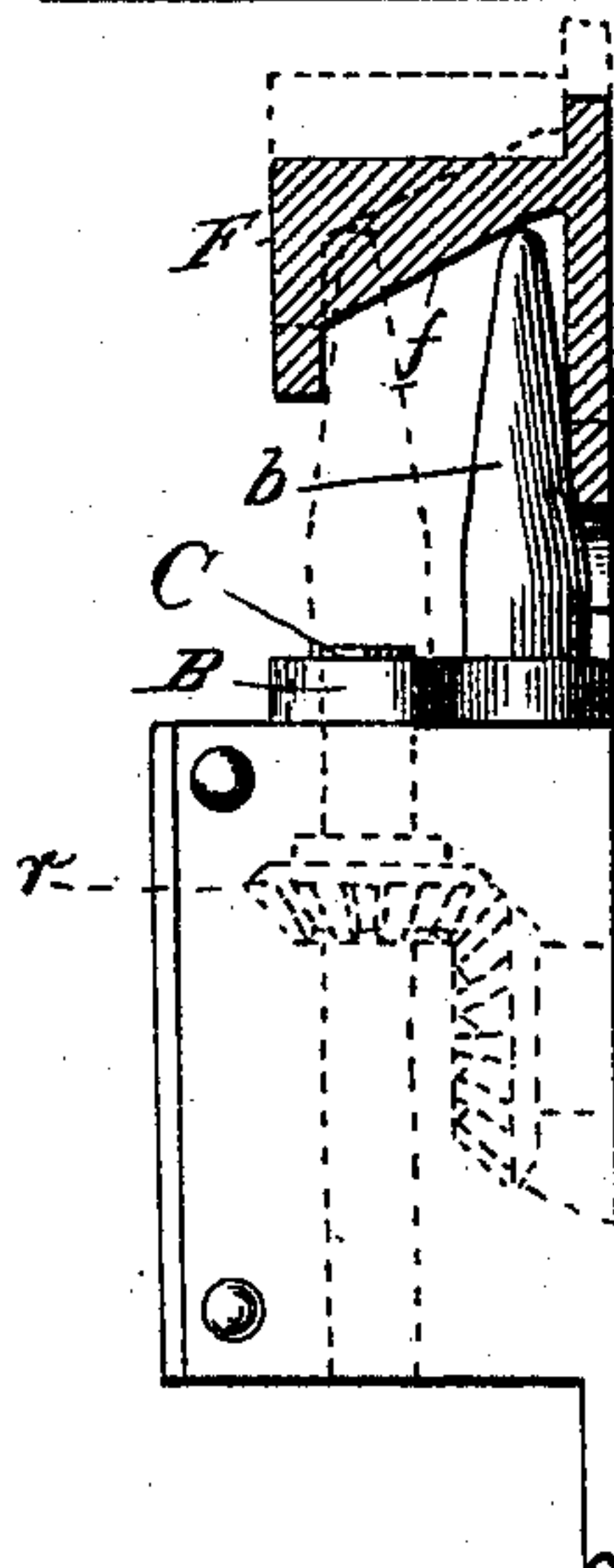


Fig. 2.

Witnesses
C. A. Raeder
H. J. Robertson

Inventor
Clifford S. Kempton
By his Attorney
J. W. Robertson

(No Model.)

2 Sheets—Sheet 2.

C. S. KEMPTON.
SHUTTER WORKER.

No. 361,296.

Patented Apr. 19, 1887.

Fig. 3.

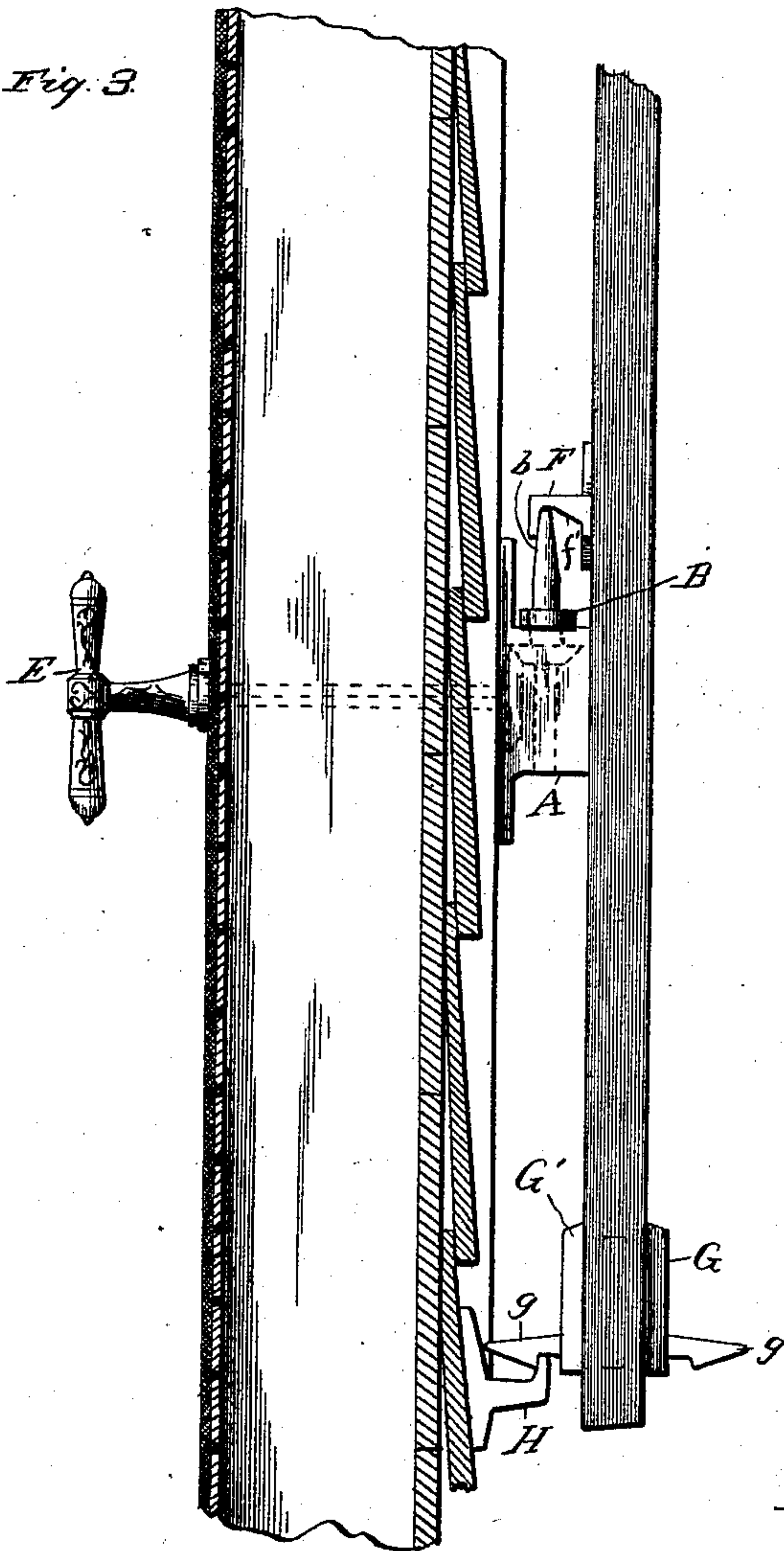


Fig. 4.

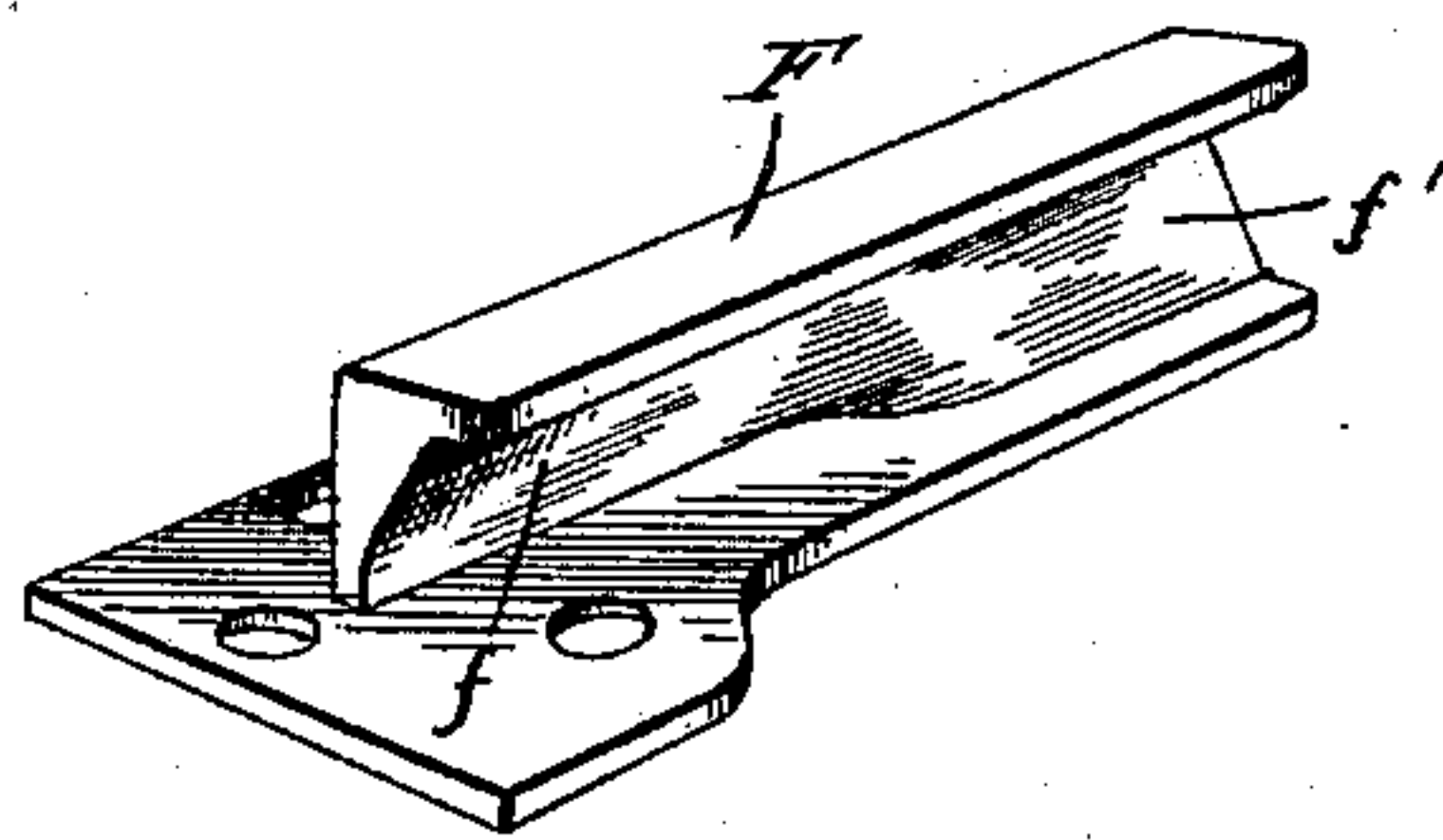
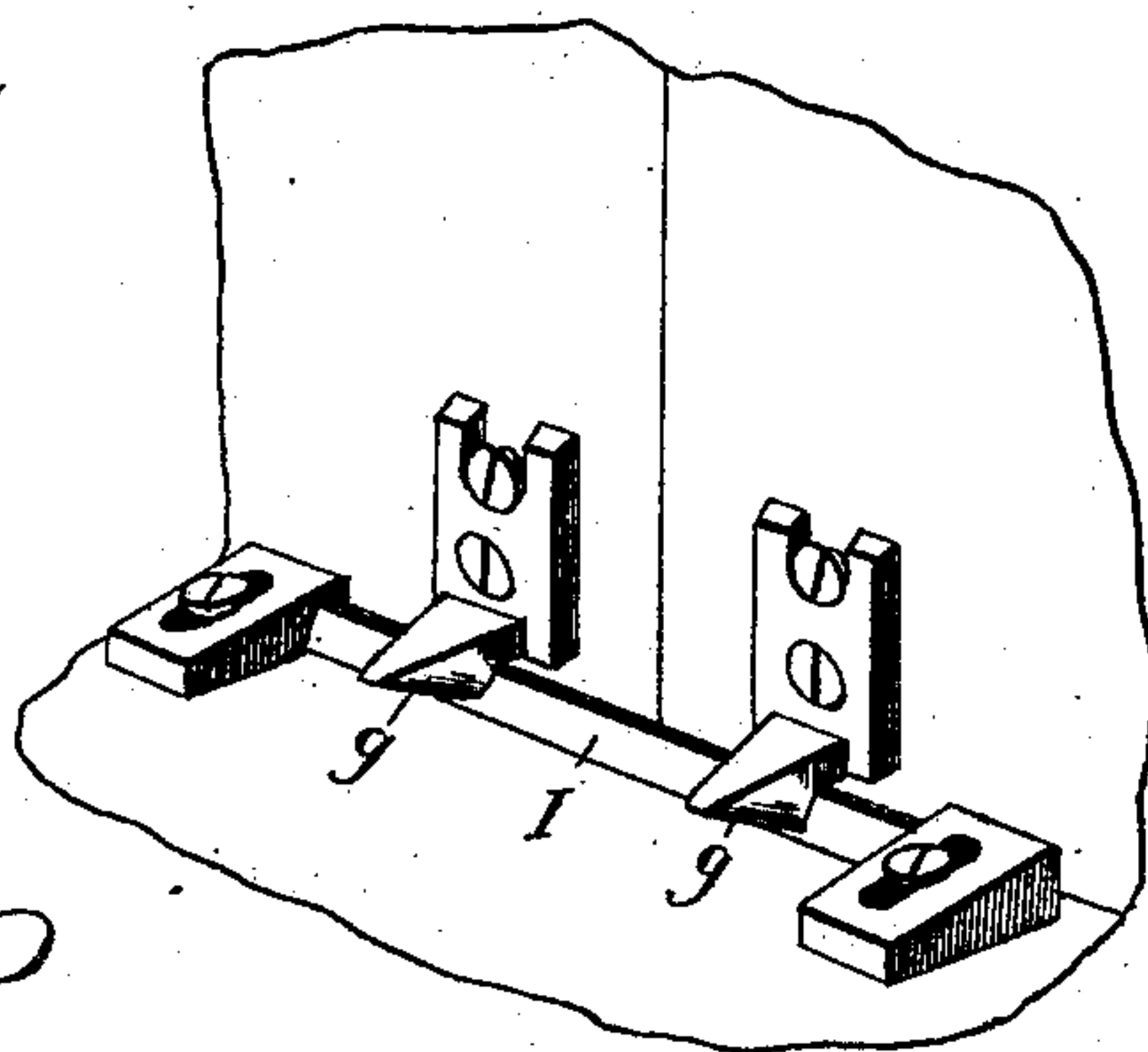


Fig. 5.



Witnesses
C. F. Raeder
H. J. Robertson

Inventor
Clifford S. Kempton
By his Attorney
J. W. Robertson

UNITED STATES PATENT OFFICE.

CLIFFORD S. KEMPTON, OF NEW YORK, N. Y.

SHUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 361,296, dated April 19, 1887.

Application filed December 14, 1886. Serial No. 221,569. (No model.)

To all whom it may concern:

Be it known that I, CLIFFORD S. KEMPTON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Shutter-Workers, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

10 Figure 1 represents an elevation of part of a window with my invention attached; Fig. 2, a full-sized section of my improvement on the line *xx* on Fig. 1. Fig. 3 shows a section of a wall with an edge view of the window-shut-
15 ter and its attachments. Fig. 4 is a perspective detail. Fig. 5 is a perspective detail, showing part of the inside of the shutters when closed.

This improvement relates to that class of
20 shutter-operators in which the shutter is unfastened and opened by the same handle; and the invention consists in the peculiar combinations and the construction and arrangement of parts hereinafter more particularly de-
25 scribed, and then pointed out in the claims.

Referring now to the details of the drawings, A represents a shutter-operator having an arm, B, which operator may be of any well-known form, but preferably having a vertical
30 shaft, C, carrying said arm B and turned by bevel-gears, and the shaft D operated by the handle E inside the house.

The arm B has a stud, *b*, which operates in a groove in a guide, F, which groove is of
35 peculiar form, its top being inclined in two different directions at *f* and *f'*, as shown in Fig. 4, for a purpose that will be hereinafter explained.

Attached to the inside and outside of the
40 shutters are fastenings G G', both of which are alike, each being provided with a base for attaching the same to the shutter, and projecting hook *g* to catch on the stationary part of the fastenings. These latter are in two forms,
45 one—that attached to the weather-board—being shown at H in Figs. 1 and 3, while the other is shown in perspective at I in Fig. 5, and is preferably in the form of a triangular bar, with slotted ears at the ends to receive
50 screws for fastening the same adjustably to the sill of the window-fastener.

The operation is as follows: By turning the

handle E the gears *r* and *s* and the arm B are operated in the usual manner; but as the arm B moves outward it carries the stud *b* under
55 the incline *f*, and thus raises the shutter and lifts the hook *g* of the inner fastening, G, off the bar I, and as soon as this occurs the shutter begins to open and is carried around by means of the bevel-gears *r s* in the usual manner until
60 the hook of the outer fastening, G', has dropped into the fixed catch H, when the shutter is securely fastened open. To close the shutter, the reverse action of the operating-handle causes the stud *b* to act on the incline *f'* and lift the
65 shutter off of the catch H and swing the shutter closed, when the hook *g* rises over the bar I, and as it again drops it holds the shutter securely fastened. Thus by a single movement of the handle E in one direction the shutter is
70 unfastened, opened, and fastened back, and by a reverse movement of the same handle the shutter is again unfastened, closed, and fastened shut. It will be observed that the pivot or shaft of the arm B is not in line with the pintle
75 of the hinges, so that as the shutter opens and is thrown back against the wall the stud *b* moves along the groove in the guide F, whereby, although it operates under the incline *f* in lifting the shutter before the opening of the same,
80 it operates under the incline *f'* when the shutter is wide open.

The fastening-hooks have an additional function besides that of mere fastenings, viz: In conjunction with the catch H and bar I, they
85 support the shutter at all times, whether opened or closed, and prevent it from sagging. This is an important improvement, and it is entirely prevented by the use of these catches.

Instead of using a stud, *b*, I may curve the
90 free end of the arm upward, as shown in dotted lines in Fig. 1, and should consider the two forms as the equivalents of each other; but I deem the former preferable.

Having thus described the preferable form
95 of carrying out my invention, but without limiting myself to the exact construction shown, what I claim is—

1. The combination, with a shutter and a guide-bar, I, connected therewith, of a rotary
100 vertical shaft, a rigid arm firmly attached thereto and moving horizontally, and a lifting-stud between said arm and guide-bar, substantially as described.

2. The combination, with a shutter and a swinging arm, B, of a guide, as F, having an incline, *f*, under which the arm acts to lift the shutter previous to opening the same, substantially as described.

3. The combination, with a shutter and a swinging arm, B, of a guide, as F, provided with inclines *f f'*, under which the arm B acts in lifting the shutter before opening and closing, respectively, substantially as described.

4. The combination of a shutter having rigid fastenings resting on fixed supports when open and closed, with a shutter-operator provided with the arm B, and a guide, F, having

inclines *f f'*, under which said arm works, substantially as described. 15

5. The combination, with the fastenings G G' on each shutter, of the bar I, constructed to receive and hold both fastenings, substantially as described. 20

In testimony whereof I affix my signature, in presence of two witnesses, this 11th day of December, 1886.

CLIFFORD S. KEMPTON.

Witnesses:

EMMA M. GILLET,
THOS. E. ROBERTSON.