

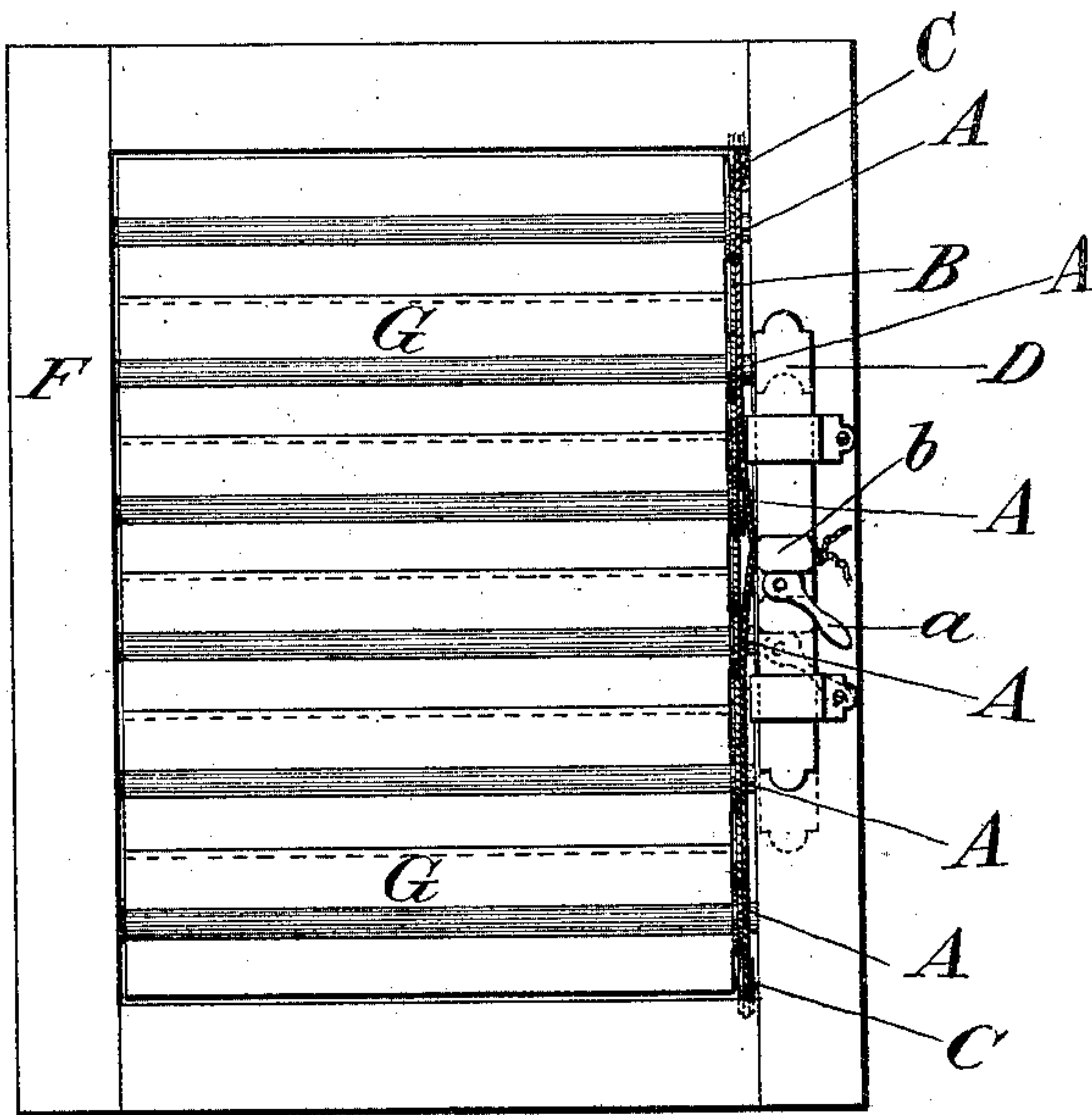
(No Model.)

H. GOFF.  
Shutter.

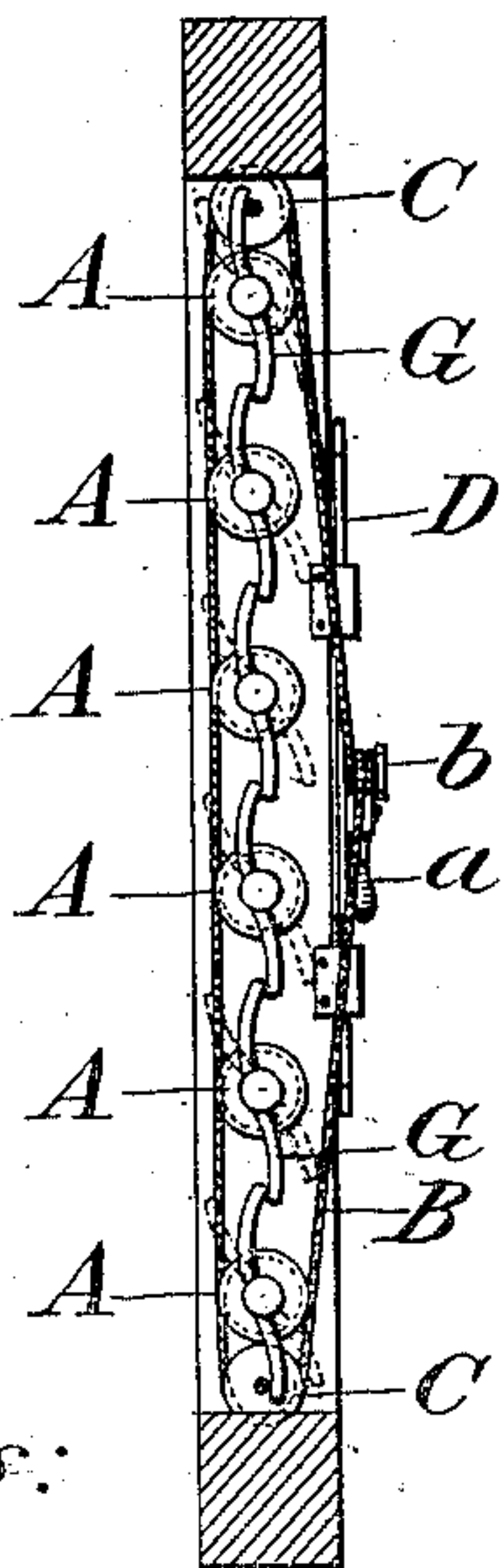
No. 232,813.

Patented Oct. 5, 1880.

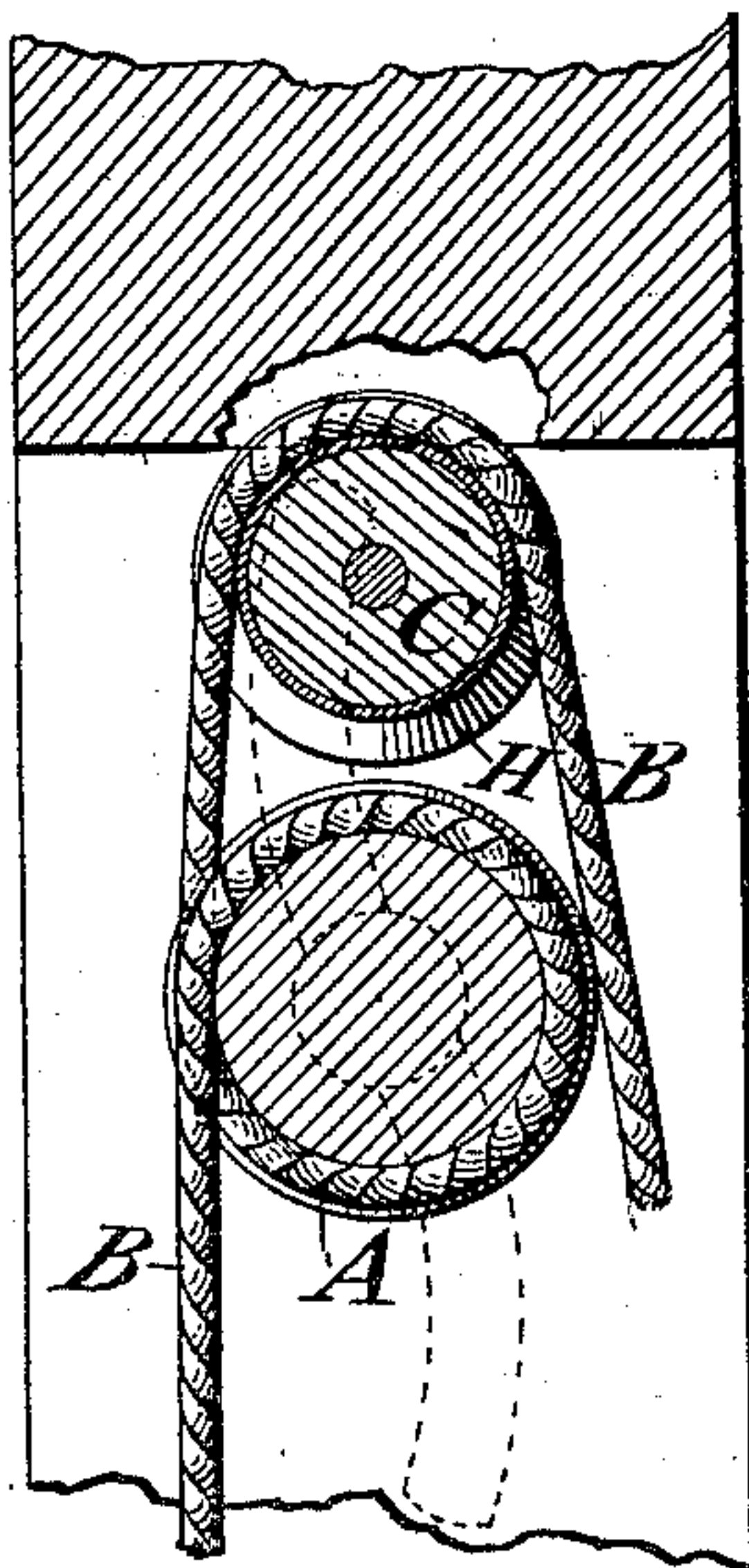
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

*Frank B. Brown,*  
*14 13 Williams*

Inventor:

*Henry Goff*

# UNITED STATES PATENT OFFICE.

HENRY GOFF, OF CORNING, NEW YORK.

## SHUTTER.

SPECIFICATION forming part of Letters Patent No. 232,813, dated October 5, 1880.

Application filed July 2, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY GOFF, a citizen of the United States, residing at Corning, in the county of Steuben and State of New York, have invented a new and useful Improvement in Window-Blinds, of which the following is a specification.

The invention relates to improvements in the manner of rolling the slats of window-blinds, and is particularly adapted to the working of inside blinds constructed with glass slats.

The object of the improvement is to dispense with the cumbersome outside connections ordinarily used and the accompanying wire staples, which weaken and render liable to fracture the slats, when made of glass, through the expansion and contraction caused by changes of temperature, and render more convenient the operation of rolling the slats.

The invention consists in forming the slats of window-blinds with a fixed wheel or pulley on one end, suitable in form for the reception of a band or cord, and in passing a band or cord around each, and preferably over sheaves at the top and bottom of the frame, bringing the ends together and attaching them to a sliding bar or other suitable device, so that by a movement of the band the slats will all be simultaneously rolled, and, being equally balanced, will remain in any position in which they may be placed.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a front elevation; Fig. 2, an edge view with one of the stiles, F, of the frame removed, exposing the ends of the slats G; and Fig. 3

is an enlarged detail view of one of the grooved pulleys, showing the cord B and india-rubber band H in section.

The cord B is passed around each of the pulleys A and over the carrier-pulleys C, the ends uniting at the sliding bar D, which slides under bands attached to the frame. To the sliding bar D are affixed an eccentric, *a*, and a stud, *b*, between which the ends of the cord B are passed, and are made fast by turning the eccentric *a* so as to press them firmly against the stud *b*. Hence when the slide D is moved upward or downward its motion is transmitted through the cord B and pulleys A to the slats G. Though not indispensable, I make use of the carrier-pulleys C above and below the slats, to provide against the possible slipping of the cord on the pulleys of the upper and lower slats by passing the cord around their entire circumference, the same as the others. As a further safeguard against the slipping of the cord, (though I do not deem this indispensable,) I make use of an elastic band of india-rubber, H, at the bottom of the groove of the pulleys.

What I claim is—

In a window-blind, the cord B, in combination with the pulleys A, india-rubber band H, carrier-pulleys C, sliding bar D, eccentric *a*, and stud *b*, all constructed, arranged, and operating substantially as set forth.

HENRY GOFF.

Witnesses:

E. R. ROGERS,  
J. A. PARSONS.