

No. 751,379.

PATENTED FEB. 2, 1904.

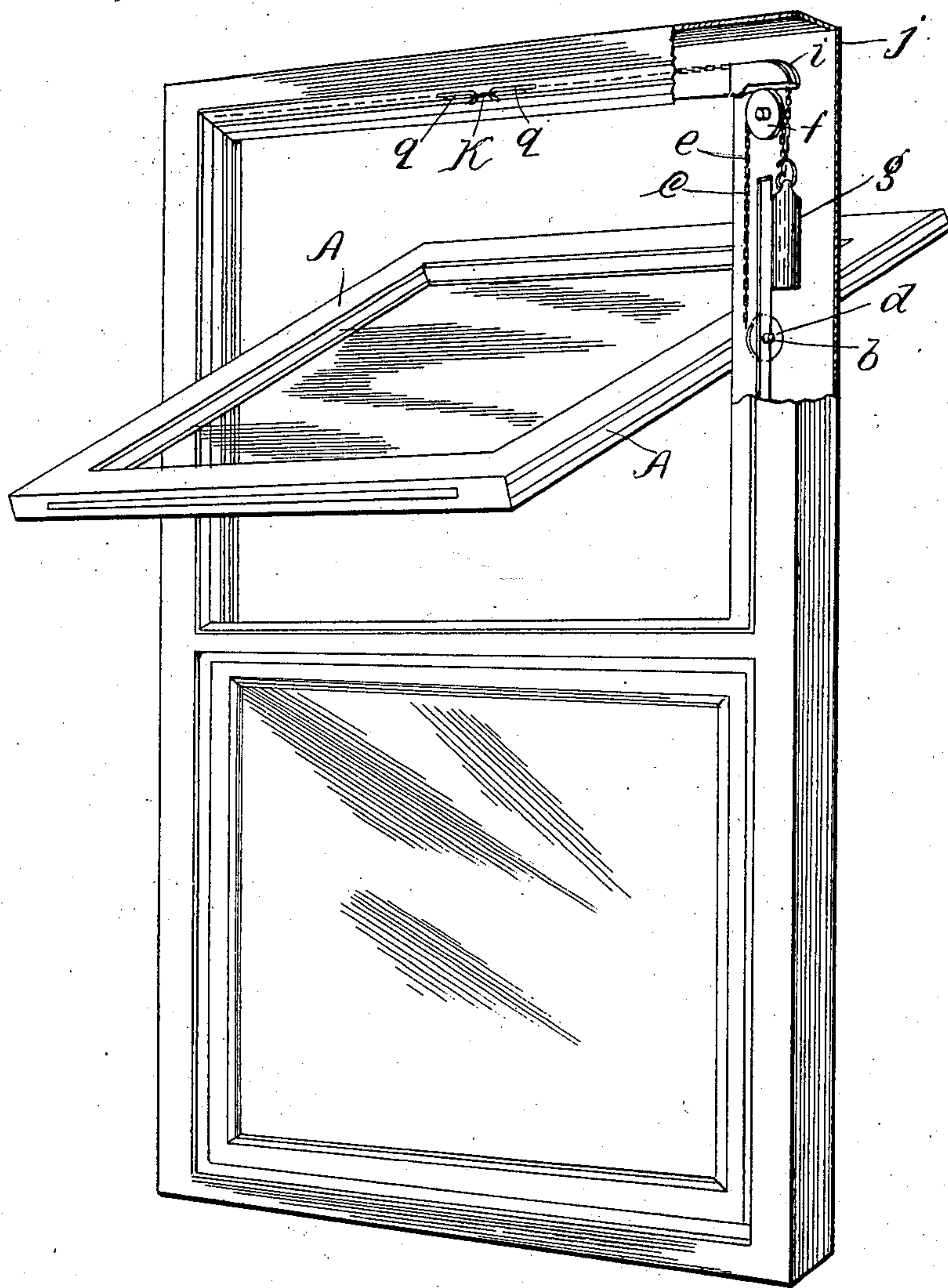
L. CHRISTENSON.
REVOLVING METALLIC WINDOW.

APPLICATION FILED MAR. 18, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
J. M. Howard
C. Sedgwick

Lars Christenson Inventor
By his Attorney
A. O. Thayer.

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2 SHEETS—SHEET 2.

Fig. 3.

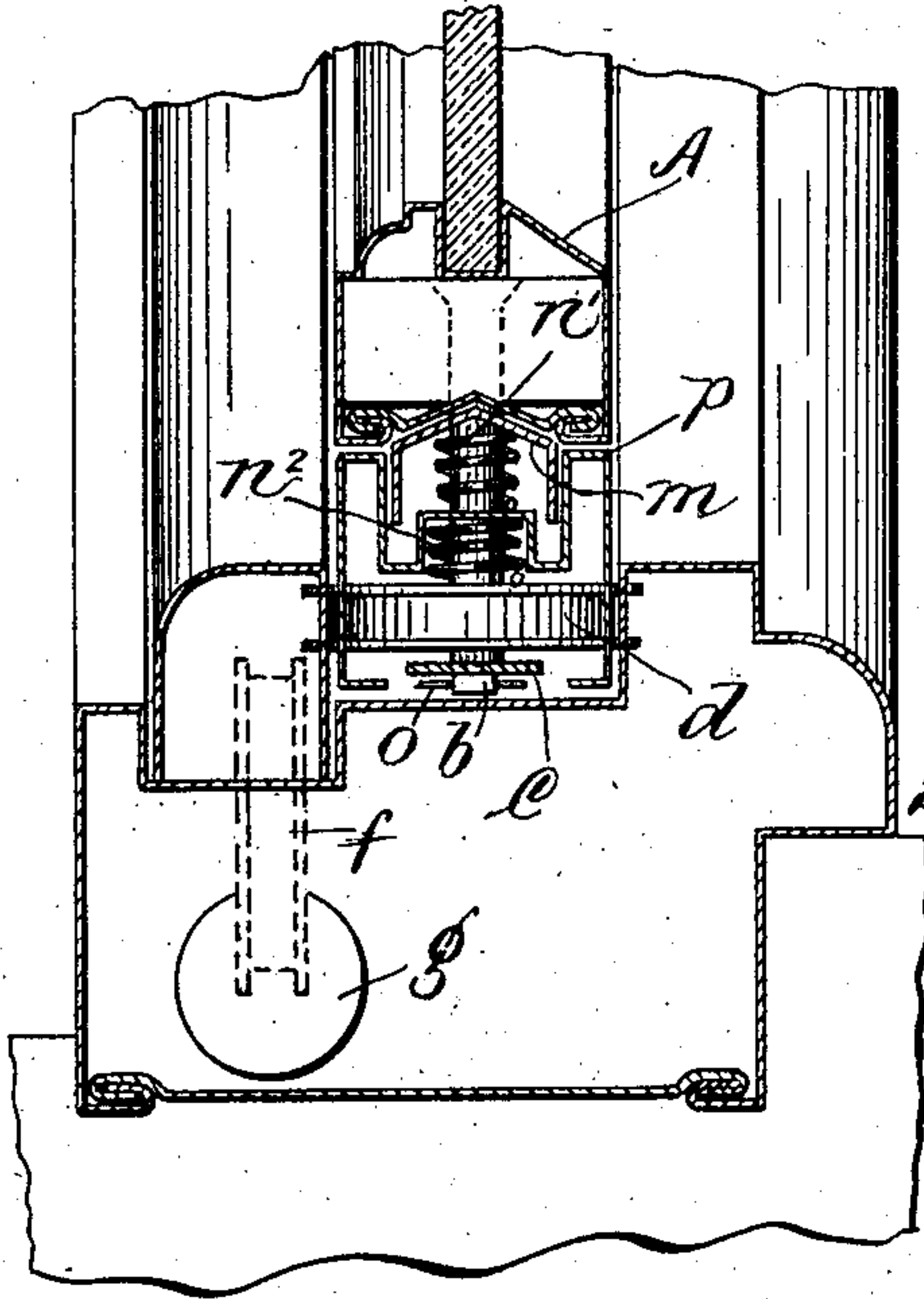


Fig. 2.

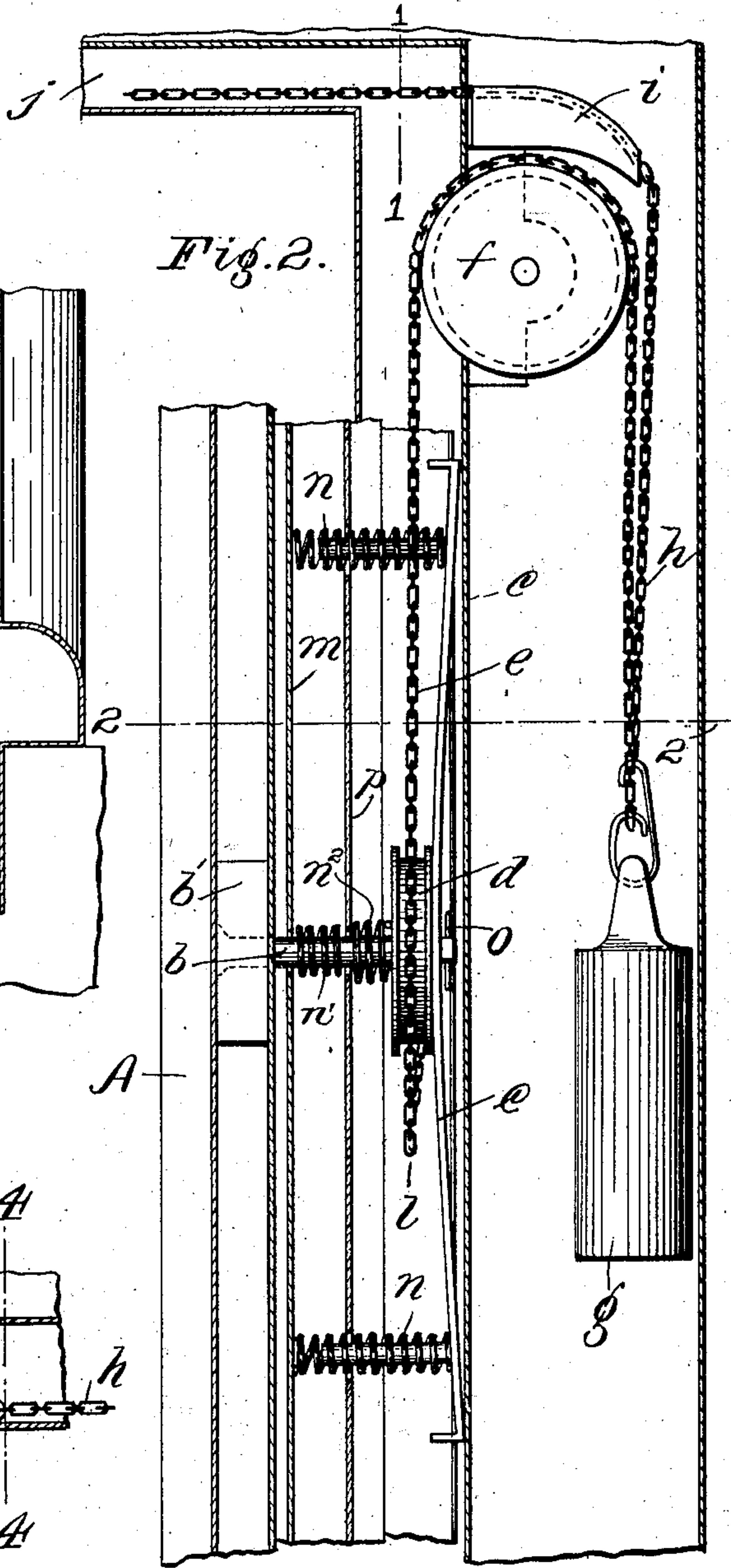


Fig. 4.

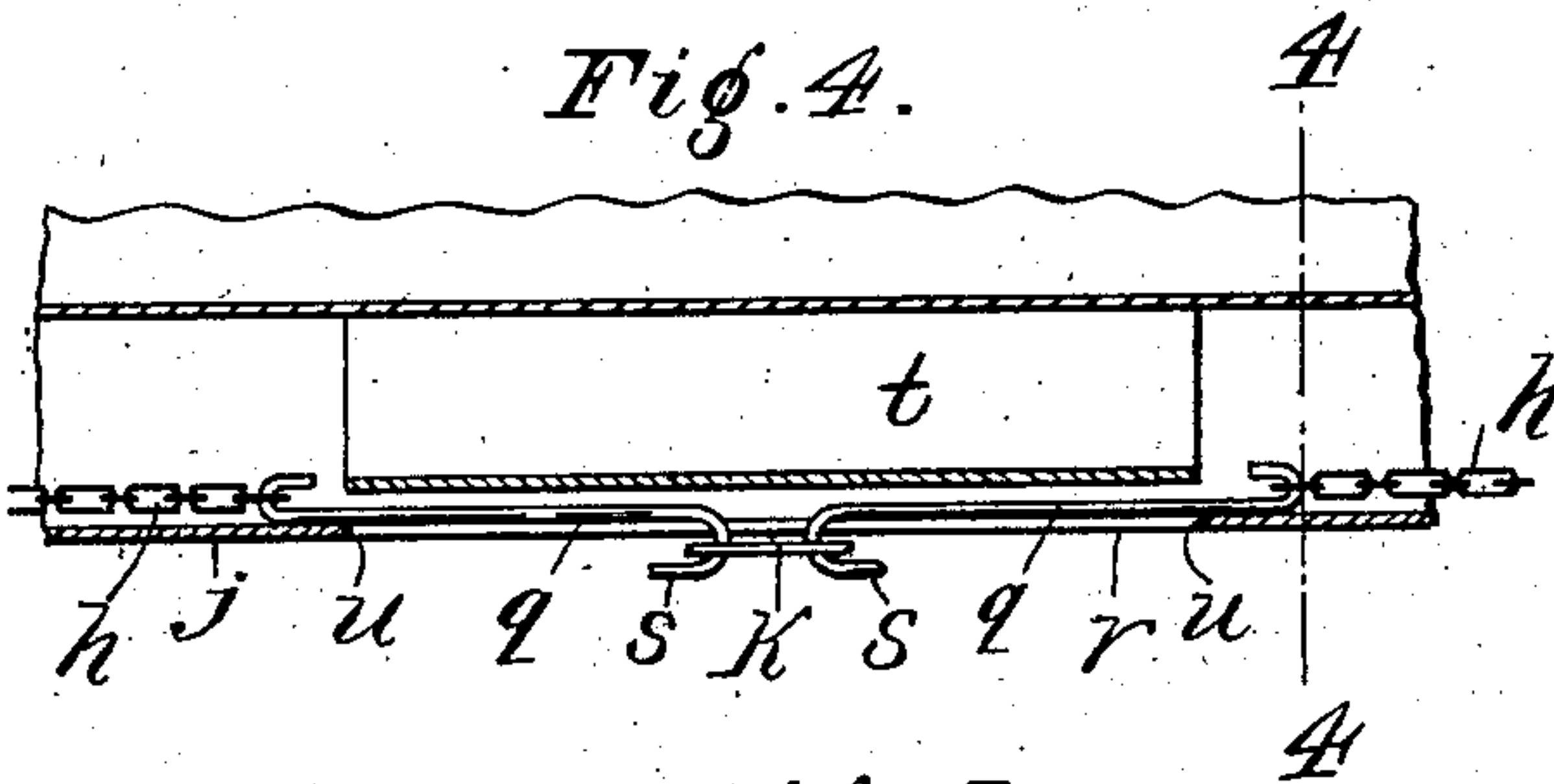


Fig. 5.

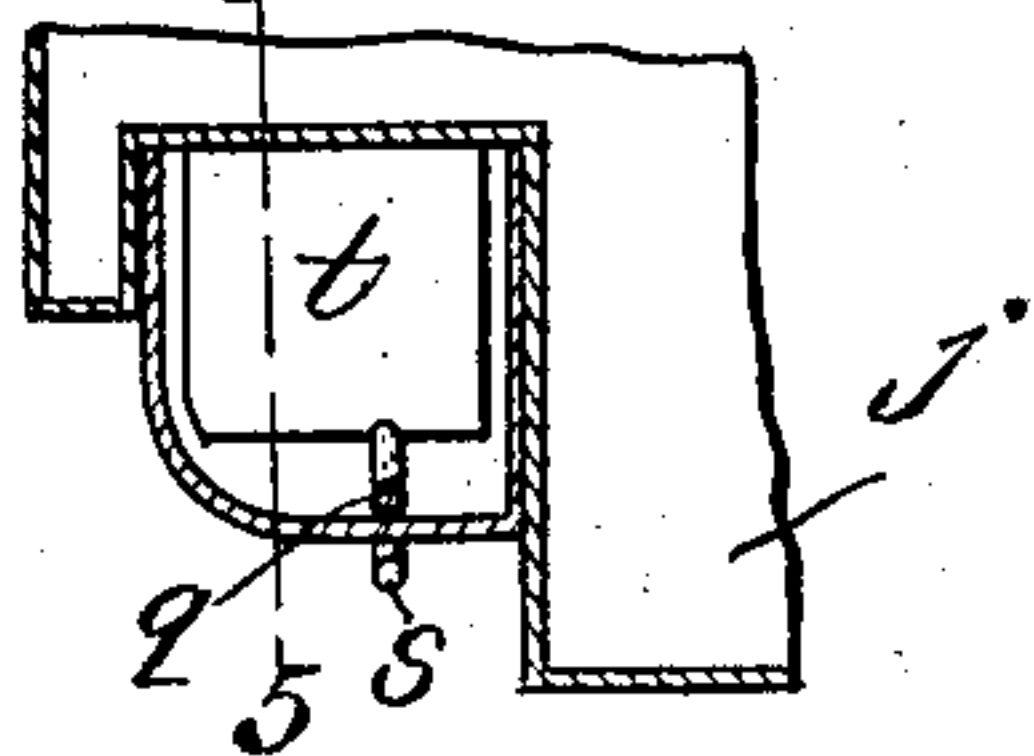


Fig. 6.



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UNITED STATES PATENT OFFICE.

LARS CHRISTENSON, OF NEW YORK, N. Y.

REVOLVING METALLIC WINDOW.

SPECIFICATION forming part of Letters Patent No. 751,379, dated February 2, 1904.

Application filed March 18, 1903. Serial No. 148,330. (No model.)

To all whom it may concern:

Be it known that I, LARS CHRISTENSON, a citizen of the United States of America, and a resident of the borough of Bronx, New York city, and State of New York, have invented certain new and useful Improvements in Revolving Metallic Windows, of which the following is a specification.

This invention relates to means for automatically closing the upper sash mounted on rotating pivots for opening and closing when weights suspended by a chain having a fusible link are let fall through the parting of the chain by the heat in case of fire, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is an elevation in perspective view, with a part in vertical section, of a window provided with my improved automatic closing apparatus. Fig. 2 is a detail in vertical section enlarged for greater clearness. Fig. 3 is a horizontal section on line 2 2 of Fig. 2 with pulley *f* indicated in dotted lines, its position being above said line. Fig. 4 is a detail in vertical section on line 5 5 of Fig. 5. Fig. 5 is a detail in vertical section on line 4 4 of Fig. 4. Fig. 6 is a detail showing the preferable construction of the fusible link.

The upper sash-stiles *A* are provided with pivots *b*, one to each, midway of their length, by which they are suspended in the sash-carrying spring-plates *c* and the sliding wind-stops *m* and *p*, so as to rotate for opening and closing, as shown in Fig. 1. The pivots are fixedly secured to the sash-stiles by means of blocks *b'*, securely fastened within the hollow stiles *A*. The pivots each have a pulley *d* fixedly attached, from each of which a chain *e*, having one end fixedly attached thereto, extends upward over a pulley *f* and has a weight *g* connected to the pendent other end. These weights are normally suspended by other chains *h*, one to each, passing over runways *i*, or it may be other pulleys over pulleys *f*, and thence along the hollow space in the top *j* of the window-frame and connected together therein by fusible hooks or links *k*, so that they hold the weights in their normal position, with a little slack *l* of the chains *e*, permitting the sash to be opened by turning, as

in Fig. 1. The sash is balanced on its pivots, so as to be held open by friction caused by the springs *n*², and it will be seen that when the chains *h* part the weights *g* will fall onto the chains *e*, which will automatically close the sash.

The outer ends of the pivots *b* have bearing in the plates *c*, which are confined on them by pins *o*, and between the said plates near their ends and the wind-stops *m* are coiled springs *n* to press the stops against the edges of the sash-stiles. On the pivots *b* are like springs *n'* between stop *m* and the other wind-stop *p* and a spring *n*² between stop *m* and pulley *d* for pressing up both stops to close the joints and to produce friction to hold the sash in position when open.

The fusible link-connecting chains *h* are preferably made of two plain U-shaped pieces *h'* with the open ends intermeshed, so as to lap the respective members on each other, as shown in Fig. 6, said lapping parts being suitably soldered together. It is desirable to connect these chains *h* with open hooks, as *q*, so as to be readily connected when new links have to be put in again at times, which requires means of preventing accidental disconnection, and it is also desirable that the chains shall be prevented from falling out of reach when parted for convenience in hooking them up again. I have therefore provided a slot *r* in the lower plate of the top part *j* of the window-frame and arranged the hook ends *s* to run in said slot and engage link *k* below said lower plate, with a guard-plate *t* located over and in close proximity to the hooks, thus effectually preventing such accidental disconnection, and the hooks are thereby also prevented from being thrust up out of the slot *r* when parted, so that they will catch and be retained at the ends *u* of the slot, thus being kept in reach for connecting again.

My improved apparatus is intended alike for hollow or wood-filled sash and frame.

What I claim as my invention is—

1. The combination with a rotating window-sash, of weights one at each side of the sash respectively, a chain having a fusible connecting-link and normally suspending said weights, other chains adapted for rotating

and closing said sash and means for transferring said latter weights onto said sash-closing chains when the fusible link parts.

2. The combination with the upper sash
5 mounted on pivots and adapted for rotatory opening and closing movements, pulleys fixedly attached to said pivots, chains attached to said pulleys for winding on and off, pulleys carrying said chains above the sash-pivots, weights connected to the pendent ends of
10 said chains and other chains connected over the sash by a fusible link and normally suspending the weights respectively with slack of the chains connected to the pivot-pulleys.

3. The combination with the fusibly-connected weight-suspending chains and connecting-hooks therefor, of the slotted frame-plate adapted for the hooks to run in the slot so as to be stopped at the ends of the slot, and the guard adapted to confine the parted hooks in
15 the slot. 20

Signed at New York this 6th day of March, 1903.

LARS CHRISTENSON.

Witnesses:

C. SEDGWICK,
J. M. HOWARD.