

(No Model.)

2 Sheets—Sheet 1.

A. McKENZIE.
CURTAIN CABINET OR SAFE.

No. 538,431.

Patented Apr. 30, 1895.

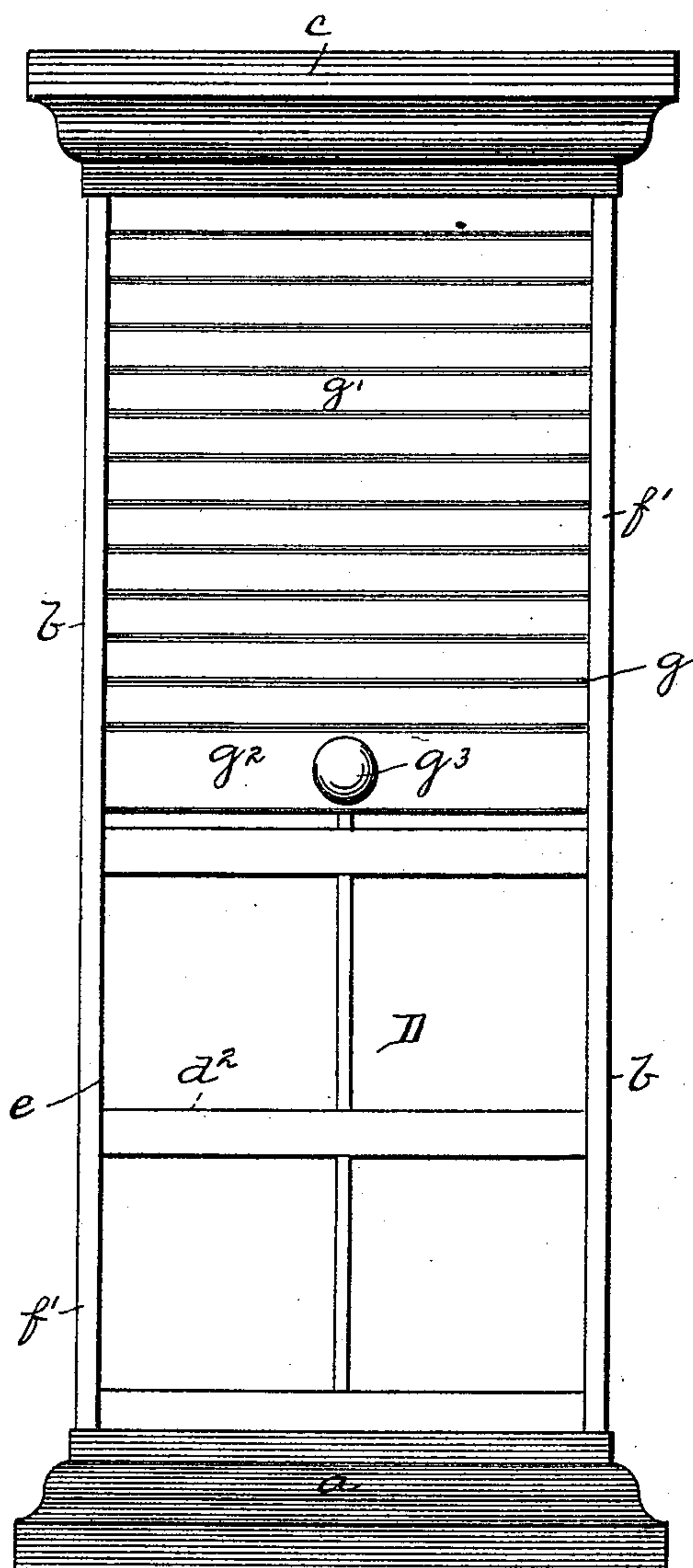


Fig. 1.

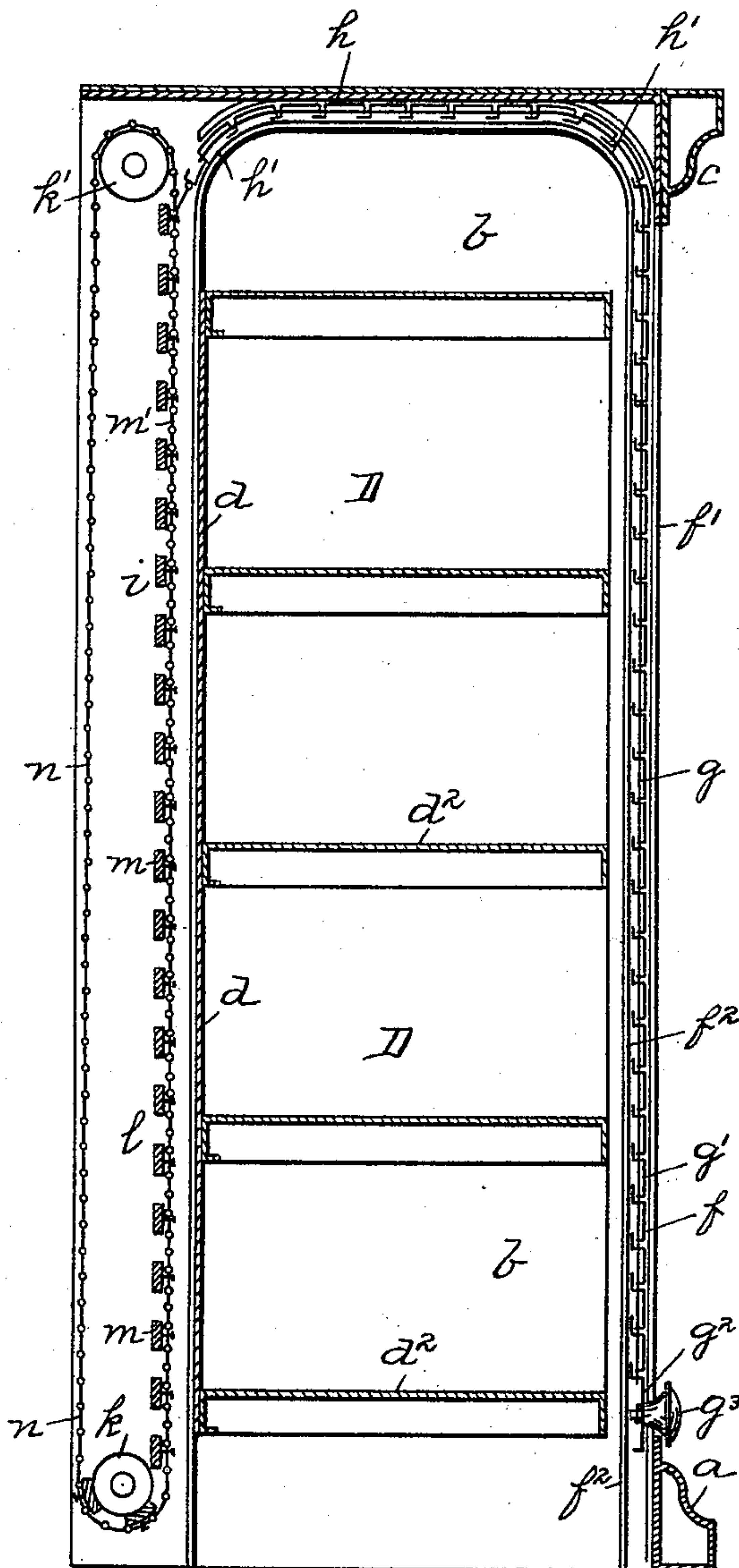


Fig. 2.

Witnesses:

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By Kay, Totten & Cooke,
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Fig. 3.

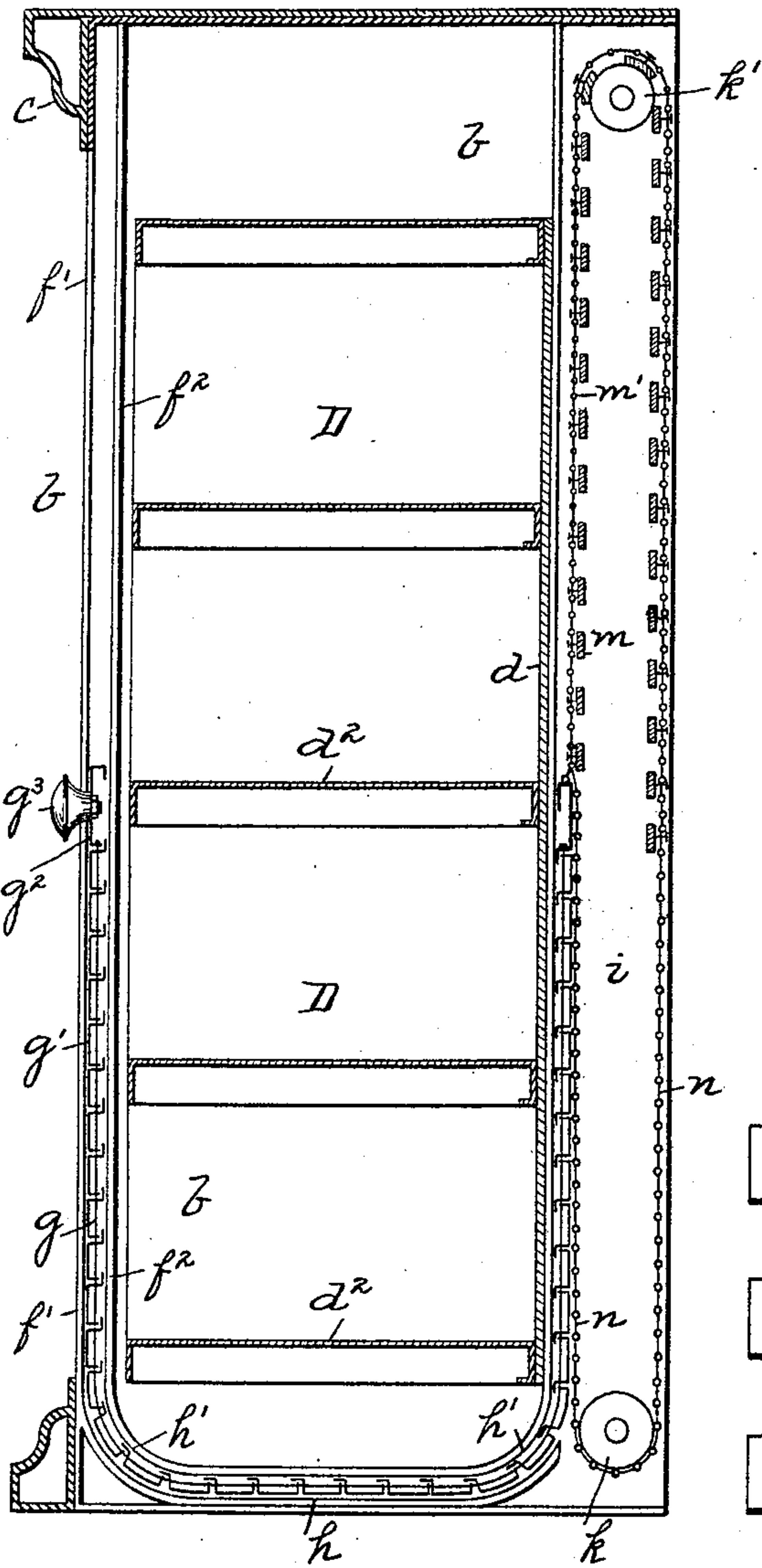


Fig. 5.

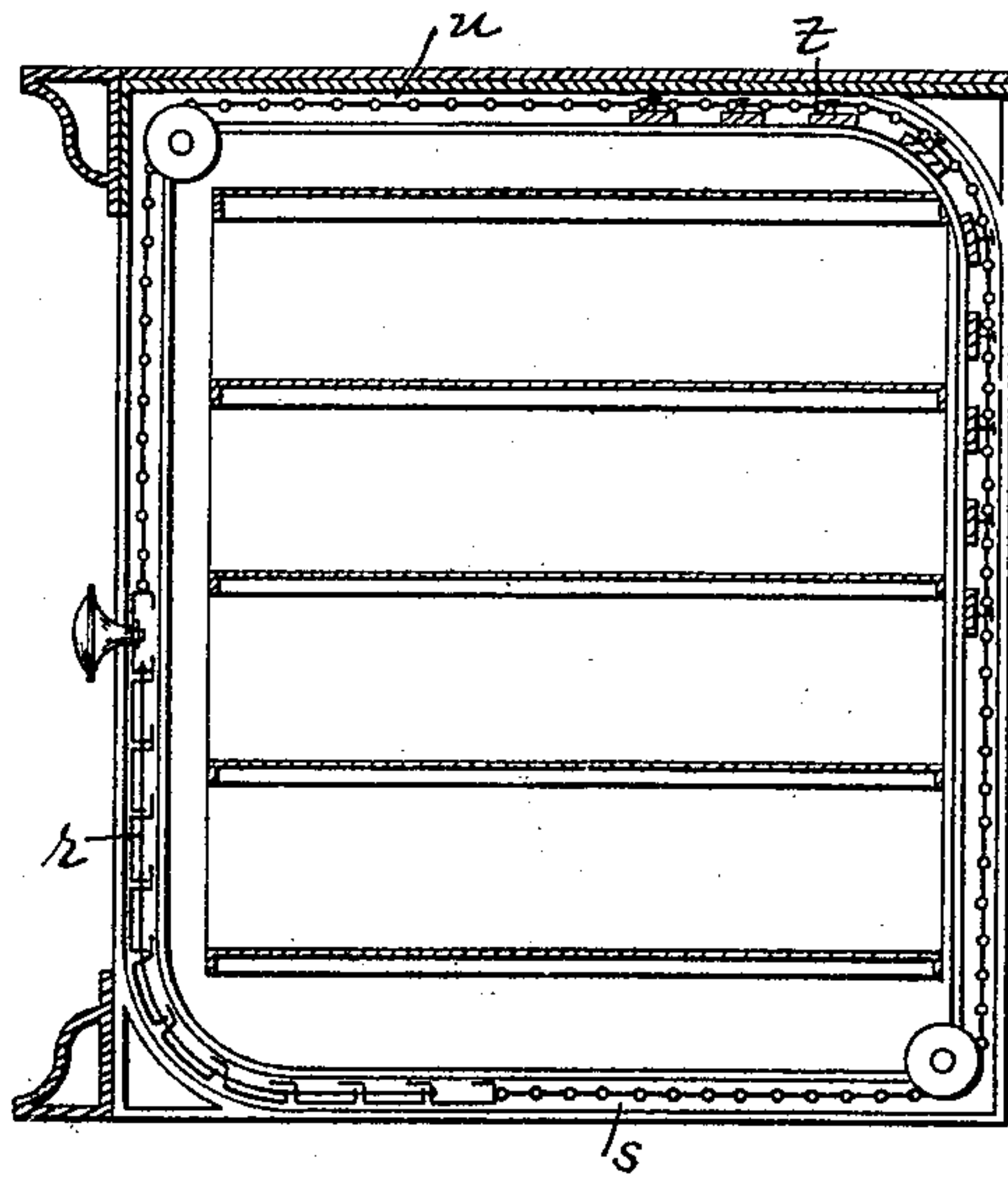
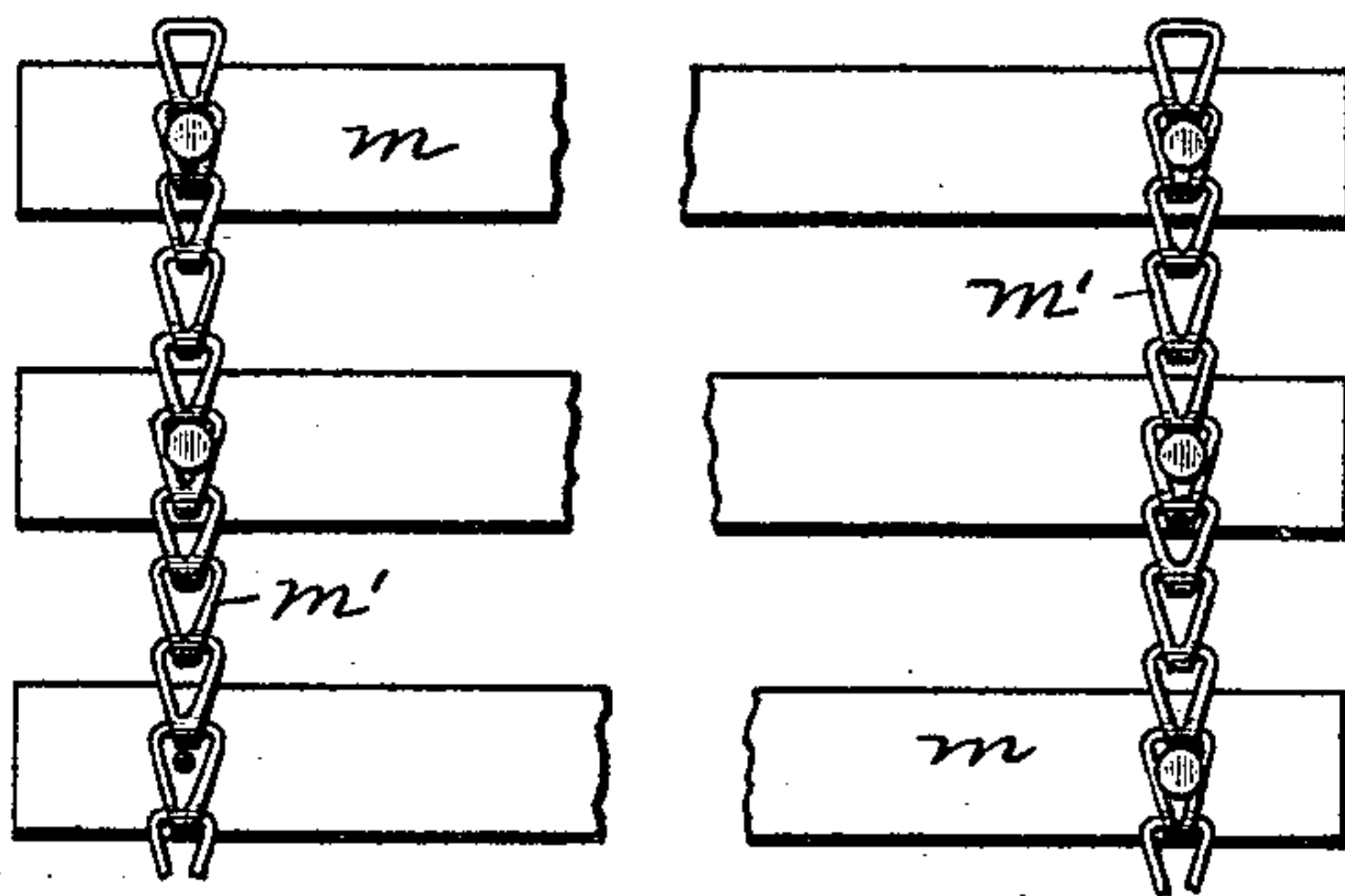


Fig. 4.



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UNITED STATES PATENT OFFICE.

ANGUS MCKENZIE, OF JAMESTOWN, NEW YORK, ASSIGNOR TO THE FENTON METALLIC MANUFACTURING COMPANY, OF SAME PLACE.

CURTAIN CABINET OR SAFE.

SPECIFICATION forming part of Letters Patent No. 538,431, dated April 30, 1895.

Application filed March 29, 1894. Serial No. 505,566. (No model.)

To all whom it may concern:

Be it known that I, ANGUS MCKENZIE, a resident of Jamestown, in the county of Chautauqua and State of New York, have invented a new and useful Improvement in Curtain Cabinets or Safes; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to flexible curtains for cabinets, safes, and like cases for holding papers, files, books, or other valuables which it is desired to protect either from theft or injury.

My invention has for its object the improvement in the method of mounting the curtains in such cases or cabinets so as to counterbalance the curtain in whatever position it may be placed and render the movement of the same easy, so providing for the working of the same either upwardly or downwardly and the holding of the curtain in any desired position.

It consists, generally stated, in the combination with a case or cabinet having guideways on the front, at one end, and at the back thereof, and curved guideways connecting the same, of a flexible curtain mounted to slide in said guideways, and a counterbalancing device connected only to the rear end of the curtain in the rear guideway, and operating to counterbalance its movement in the cabinet.

It also consists in certain other improvements which will be hereinafter more particularly set forth and claimed.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a face view of a cabinet partly open, the cabinet being shown as closing by a downward movement of the curtain. Fig. 2 is a longitudinal section illustrating the invention and showing the cabinet closed. Fig. 3 is a like view showing the curtain open or partly open and closing by an upward movement, so illustrating the movement of the curtain. Fig. 4 is a detail of the flexible weight, and Fig. 5 is a view of another method of mounting in which this flexible weight may be employed.

Like letters of reference indicate like parts in each view.

My invention is illustrated as applied to a metallic case with metallic curtains, and I prefer to so employ it, though it may be employed with a wooden case or case of other material or with any desired form of case, cabinet, or safe having any interior arrangement or exterior finish desired.

In the drawings the case is shown with the base part *a*, sides *b*, top *c*, and rear wall *d*, having also the open front *e* to give access to the interior *D* of the case, which contains any suitable shelving, pigeon-holes, or like devices *d*² which may be arranged according to the desire of the user. The case has the front ribs or faces *f*¹ extending in from the sides *b* around the open front *e*, and has ribs *f*² back of the same, the ribs *f*¹ *f*² forming the front guideway *f* for the curtain *g*, which in Figs. 1 and 2 is shown as closing from the top downward. It has also the horizontal guideway *h* and the rear guideway *i* in which the curtain runs, which may be formed by like ribs, and the corners *h*¹ connecting the guideways are formed at suitable curves so as to provide for the easy movement of the flexible curtain around the same.

The flexible curtain does not need any special description, as it may be formed of slats, or corrugated material, metallic or otherwise, connected in any suitable way. In the drawings it is illustrated in the form of slats *g*¹ bent to shape from sheet metal and fitting the one to the other, and connected by a wire passing through the same.

At the front end of the curtain is the enlarged slat *g*² which carries the handle *g*³ by which the curtain is moved, this slat also carrying the lock by which the curtain engages with the body of the case to close it.

Back of the rear wall *d* is mounted the counterbalancing device, the preferable form of which is illustrated in Figs. 2 and 3. It is mounted on the drum or pulley *k* at one end and the drum or pulley *k*¹ at the other end, and is illustrated in the form of a flexible weight *l* composed of bars *m* connected together by links *m*¹, the flexible curtain being

of such length that the vertical parts on each side of the drum or pulley correspond to the vertical parts of the curtain in whatever position it stands. This flexible weight l is held in place by chains n connected to the ends thereof and passing around the other drum or pulley k' , and the weight or its chains are connected to the rear end of the curtain in the rear guideway i , so that as the curtain is moved it moves the flexible weight with it and causes the same to move over the pulley, either drawing up the flexible weight or counterbalancing device as the main curtain is closed, or with the rear end of the main curtain drawing upon the chain n so as to cause the movement of the flexible weight over the drum k . This is the simplest form of the device, and it will be understood that in its operation, as the flexible curtain g moves in its guideways, for example, in opening the case, it will pass from the front guideway into the horizontal guideway, and thence into the rear guideway, and the flexible weight will pass in like manner around the pulley k , the rear end of the curtain drawing up the chain n and so drawing the weight around the drum. As the portions of the flexible weight which are in vertical position so move with the main curtain, it will be seen that part of the weight passes on one or the other side of the drum gradually as part of the curtain ascends or descends in the guideways, and that as a greater or less part of the curtain is drawn into one or the other of the vertical guideways, in like manner a corresponding part of the flexible weight is carried on one or the other side of the drum k and exactly counterbalances the curtain, the weight increasing on one or the other side of the drum as the weight of the curtain which it counterbalances is moved into one or the other vertical guideways. For example, in Fig. 2 where the curtain is raised to open the case, it is counterbalanced by the portion of the flexible weight close to the rear wall d , the portion of the weight close to said rear wall corresponding in length to the portion of the curtain in the front guideway f , and as the curtain is raised this weight assists in the lifting of the same, but as the curtain is raised the weight passes around the pulley so that as a greater portion of the curtain passes into the rear guideway and moves downwardly therein, and the weight on that side of the curtain is increased, a like portion of the weight passes around the drum k , and the weight is thus reduced and counterbalanced by the part passing on the opposite side of the said drum. When the curtain is lowered to close the same a like action in the opposite direction takes place.

In Fig. 3, where the curtain is lowered to open the case, as the weight is required to assist in raising the same, the weight passes around the drum k and comes into action to raise the curtain in the rear guideway, the portion of the weight increasing as the greater

portion of the curtain passes into the rear guideway. When the curtain is raised to close the same, the weight in like manner passes around the drum k onto the side nearest to the rear wall d and assists in the upward movement of the curtain in the front guideway. Where the curtain is raised to close the cabinet a non-flexible weight may pass over the drum and be connected to the rear end of the curtain, the action being the same except that the entire weight is always in action.

It will be noticed that in the construction above described whether the curtain is raised or lowered to close the cabinet the weight is connected only to the rear end of the curtain, the other end being free, and by the peculiar counterbalancing means employed this can be accomplished and a simple construction be obtained.

In Fig. 5 I have illustrated another manner of mounting the curtain and flexible weight. In that construction, which can be employed with a deep cabinet but is not so applicable to shallow cabinets, the flexible weight is arranged to pass out of the rear vertical guideway and into the horizontal guideway as the curtain passes from the front vertical guideway into the horizontal guideway opposite to that in which the flexible weight moves, and the ends of the flexible weight are connected by chains to the ends of the curtain, and, as shown in the drawings, the weight is always held in the position opposite to that of the curtain, so that the flexible weight counterbalances the curtain—that is to say, that where the curtain r in Fig. 5 is lowered to open the cabinet and part thereof passes into the lower horizontal guideway a like part of the flexible weight t passes through the horizontal guideway u , the part of the flexible weight in vertical position always corresponding to the part of the curtain in vertical position; and when the curtain is raised in the front guideway, as it is drawn into that guideway it requires to be counterbalanced and assisted in the upward movement and the flexible weight gradually passes out of the top horizontal guideway, bringing a greater portion of the weight into play to assist in raising the curtain as a like part of the curtain passes into the front guideway. This figure therefore illustrates another use of the flexible weight in connection with the curtain.

By my invention I am enabled to obtain a cabinet in which the curtain is always properly counterbalanced according to its position and an exceedingly easy movement thereof obtained, while the device is simple in construction and the parts are durable, not liable to wear out or lose power, as is the case with springs.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with a case or cabinet having guideways in the front, at one end, and

at the back thereof, and curved guideways connecting the same, of a flexible curtain mounted to slide in said guideways, a counterbalancing device connected only to the rear end of the curtain in the rear guideway, and operating to counterbalance its movement in the cabinet, substantially as set forth.

2. The combination with a case or cabinet having guideways in the front, at one end, and at the back thereof, and curved guideways connecting the same, of a flexible curtain mounted to slide in the said guideways, and a flexible weight connected only to the rear end of the curtain in the rear guideway and constructed so that the parts thereof corresponding to the curtain are brought into position to counterbalance the same, substantially as set forth.

3. The combination with a case or cabinet having guideways extending around the same, of a flexible curtain mounted to slide in the guideways, and a flexible weight formed of a series of cross-bars connected by chains and mounted in the case and so connected to the curtain that the bars of the flexible weight corresponding to the portion of the curtain

to be counterbalanced are brought into vertical position, substantially as set forth.

4. The combination with a case or cabinet having guideways in the front, at one end, and at the back thereof, and curved guideways connecting the same, of a flexible curtain mounted to slide in said guideways and to pass into and out of the front and rear vertical guideways, drums or pulleys mounted at the ends of the cabinet back of said guideways, and a flexible weight formed of a series of bars connected by links and having the chains connected to the ends thereof and passing around one of the pulleys at one end of the case, said weight being so connected to the curtain that the parts in vertical position on one or the other side of the pulley shall correspond to the parts of the curtain in the two vertical guideways to counterbalance the same, substantially as set forth.

In testimony whereof I, the said ANGUS MCKENZIE, have hereunto set my hand.

ANGUS MCKENZIE.

Witnesses:

W. D. BROADHEAD,
EDWARD MORGAN.