

No. 790,139.

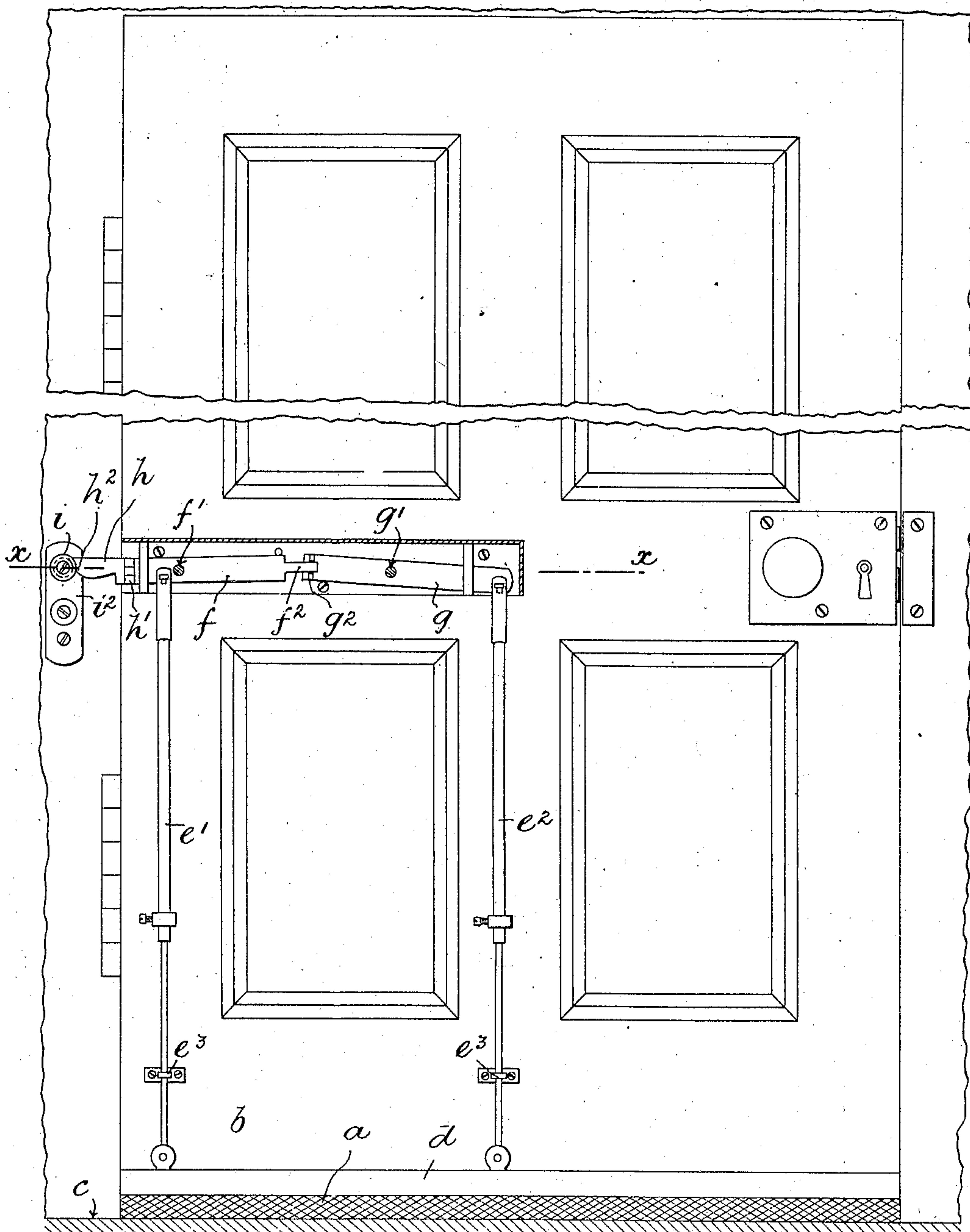
PATENTED MAY 16, 1905.

C. F. T. KRAUTH.
DRAFT EXCLUDER.

APPLICATION FILED NOV. 14, 1904.

3 SHEETS—SHEET 1.

Fig 1.



WITNESSES

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3 SHEETS—SHEET 2.

Fig 2.

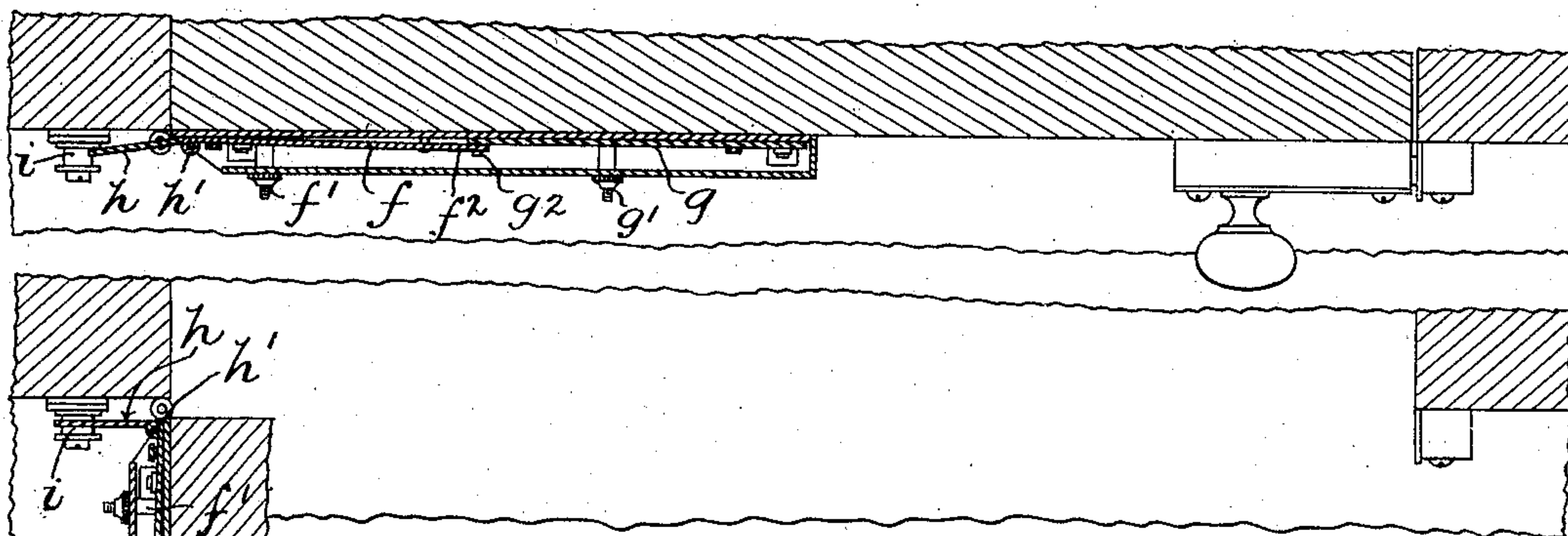


Fig 4

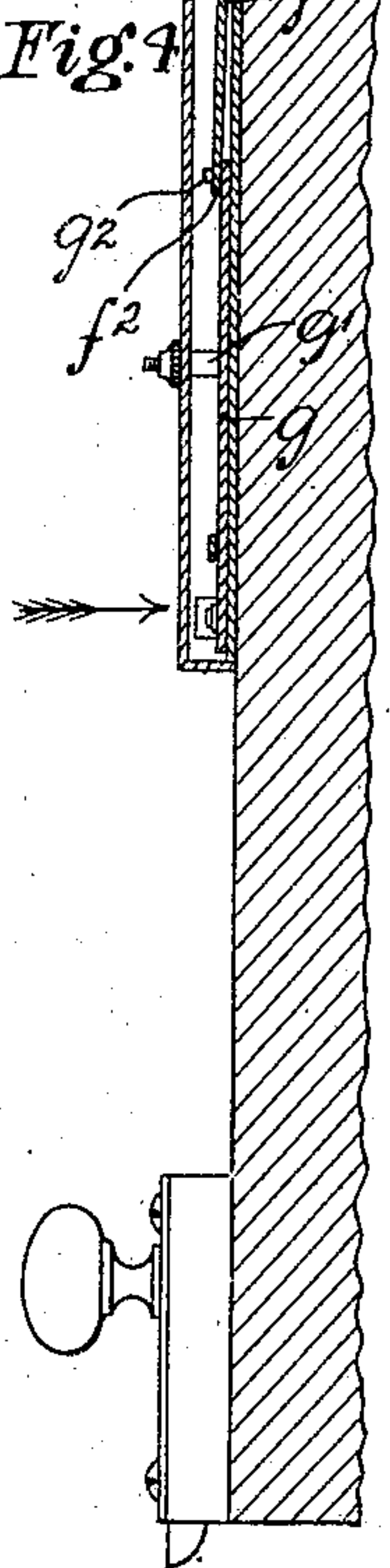


Fig 5.

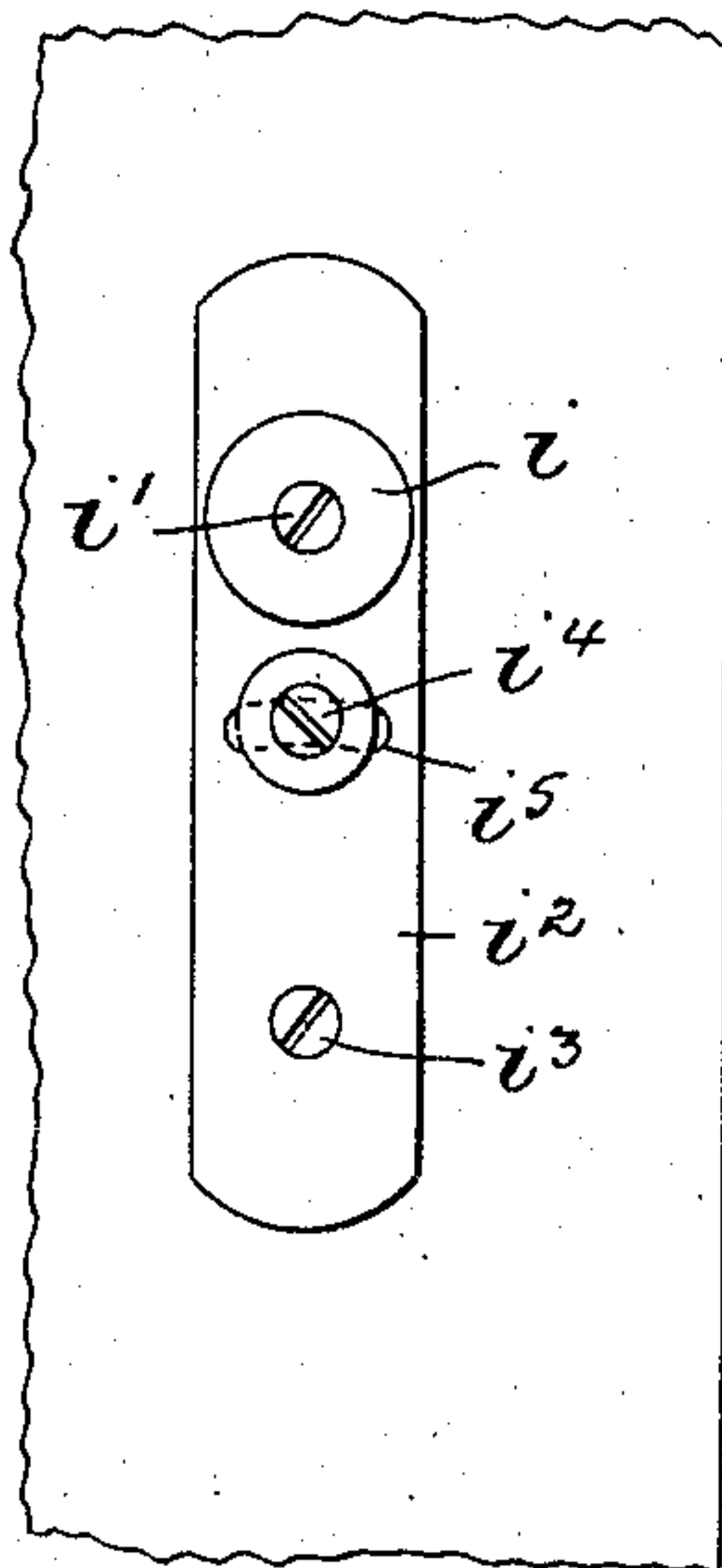
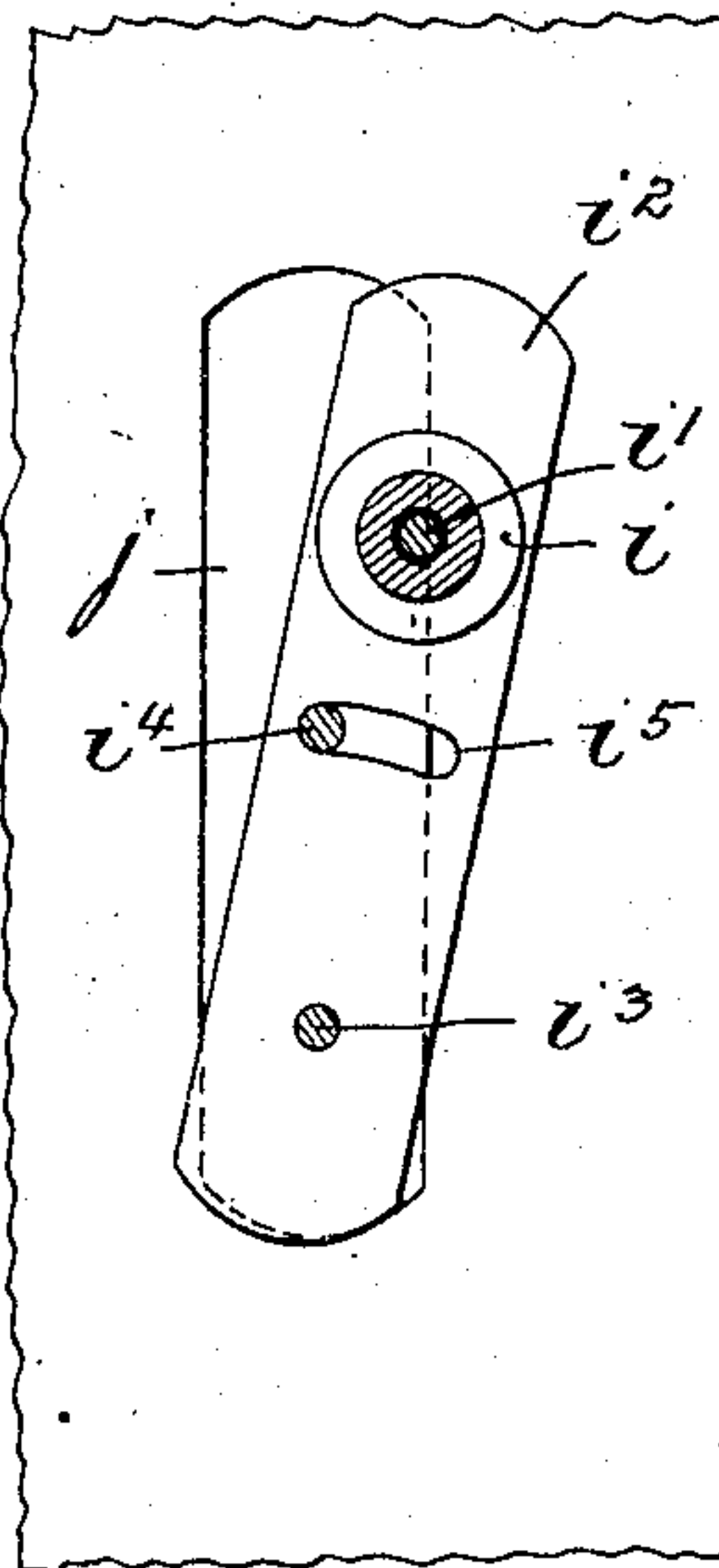


Fig 6



WITNESSES

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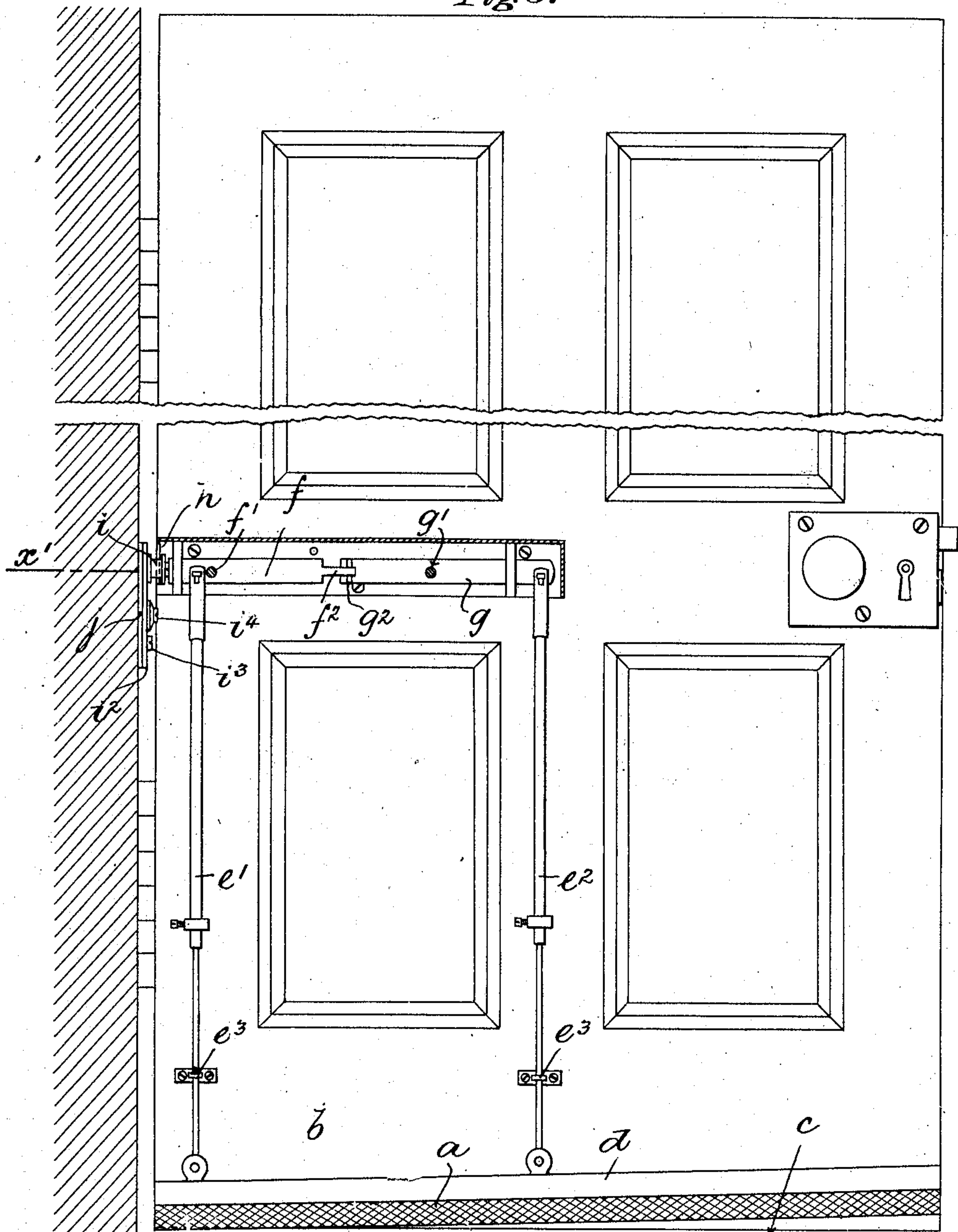
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3 SHEETS—SHEET 3.

Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHRISTIAN FREDERICK THEODORE KRAUTH, OF BIRMINGHAM, ENGLAND.

DRAFT-EXCLUDER.

SPECIFICATION forming part of Letters Patent No. 790,139, dated May 16, 1905.

Application filed November 14, 1904. Serial No. 232,697.

To all whom it may concern:

Be it known that I, CHRISTIAN FREDERICK THEODORE KRAUTH, general merchant, a subject of the King of Great Britain, residing at 124 Great Hampton street, in the city of Birmingham, England, have invented certain new and useful Improvements in Draft-Excluders, of which the following is a specification.

This invention has reference to draft-excluders for doors and for French and similar windows; and it consists in an improved and efficient attachment for the purpose of preventing drafts from entering between the door or window bottoms and the floor of a room or apartment. The attachment also serves as a means for excluding wind, rain, snow, and the like from driving into a room. The said attachment comprises a draft-excluding strip of felt or other suitable material and mechanism or means whereby the said strip is automatically raised from the floor when the door or window is opened and lowered again into its draft-excluding position when the door or window is closed.

Figure 1 of the accompanying drawings represents an elevation of a door fitted with a draft-excluding attachment and mechanism or means constructed, arranged, and applied in accordance with one form of my invention for automatically raising and lowering the said attachment as the door is opened and closed. This view shows the various parts in the positions they assume when the door is closed. Fig. 2 is a horizontal section of Fig. 1 upon the dotted line x . Fig. 3 is a similar view, but shows the attachment and the actuating mechanism in the positions they assume when the door is open; and Fig. 4 is a horizontal section of Fig. 3 upon the dotted line x' , it being understood that the elevation, Fig. 3, shows the parts as they appear when looked at from the point of view indicated by the arrow in Fig. 4. In the whole of these views, Figs. 1 to 4, the casing in which the raising and lowering mechanism is inclosed is shown in section. Figs. 5 and 6 represent, upon an enlarged scale and in two different positions, the part of the mechanism which is attached to the door-frame and whereby the

lifting arrangements are operated when the door is opened.

The same letters of reference indicate corresponding parts in the several figures of the drawings.

In the arrangement represented in the said drawings the flexible draft-excluding strip a , which normally lies in front of the space between the edge of the door b and the floor c , is attached to a carrier-bar or length of metal or other material d , which is suspended, by means of jointed rods or links, (or similar jointed connections,) from a system of lifting-levers suitably fulcrumed either to the door or to an attachment-plate on the door and provided with mechanism or devices which are operated (when the door is opened) in such a manner as to tilt the levers and raise the bar and weather-strip, so that the latter is lifted off the floor, thereby enabling the door to be freely opened and closed, whereas the closing of the door automatically restores the parts to their normal position and brings the weather-strip down again into its effective position.

The lifting mechanism represented consists of a pair of levers f and g , arranged along the bottom of a door, to which they are respectively fulcrumed at suitable points f' g' , while their inner ends are operatively coupled by an extension f^2 on the one part working between a pair of pins g^2 on the other part, or by a pin-and-slot joint or equivalent arrangement, so that when the outer end of the one lever, f , is raised the outer end of the other lever, g , will be constrained to make a corresponding movement, and as the bar which carries the weathering-strip is suspended, by means of the links, chains, or other jointed or flexible devices, from the said outer ends of the connected levers it follows that a corresponding lifting motion is also imparted to the said carrier-bar and strip.

For the purpose of tilting the levers so as to elevate the parts from which the weather-strip is suspended on the door being opened the outer end of that lever which is nearest the door-frame has jointed to it a cam extension or inclined arm or the like, while on the

adjacent part of the door-frame itself there is arranged a fixed stud, pin, plate, or other projection against which the said cam or arm is made to strike on the opening of the door, and so operate the lifting mechanism in the manner described. On the door being closed then as soon as the cam or arm has cleared the stud or projection the weight of the bar to which the strip is attached causes the parts to automatically resume their normal positions, although, if necessary, a spring may be applied to one of the levers or other part of the mechanism for assisting the return movement.

The lifting mechanism may be applied to the lower edge of the door or the like immediately above the bar to which the weathering-strip is attached, and in this case the connection between the said mechanism and the carrier-bar is made by means of a pair of short jointed links. It is, however, more convenient to attach the said mechanism to about the middle part of the door, as represented in the drawings, and in order to provide for this the carrier-bar is connected to the opposite ends of the lifting-levers by a pair of rods e' e'' , preferably of a telescopic or other construction, to admit of their adjustment in length, and thus enable the mechanism to be fixed in any position upon the door as may be most convenient. Suitable guides, such as e^3 , may be attached to the door for the connecting-rods to work within.

Instead of a weathering-strip of felt or the like being attached to the carrier-bar the latter may be made to carry a draft-excluding curtain of any suitable length, and when the length of the curtain is equal to that of the door or window the lifting mechanism may be attached to the top edge or upper part of the said door or the like.

In the mechanism represented in the drawings the lifting-lever f carries at its outer end or at the end adjacent to the jointed side of the door an arm or extension h , connected by a vertical joint h' , arranged in the same vertical plane as the door-hinges, so as to admit of the proper action of the mechanism without interfering with the free opening and closing of the door. The jointed arm has an inclined end h^2 , which is adapted to impinge against and work over a grooved roller i , arranged within its path. This roller is mount-

ed on a fixed stud i' , secured to an angularly-adjustable plate or arm i'' , which is itself carried by an attachment-plate j , secured to the upright of the door-frame. The plate i'' swings upon the pin i^3 for the purpose of regulating the position of the roller with respect to the striker-arm and determining the amount of lifting movement which shall be imparted to the draft-excluding strip, and it is held or secured in its adjusted position by the head of a clamping-screw i^4 , whose stem takes through a curved slot i^5 in the plate i'' and into a wormed hole in the attachment-plate. By swinging the plate i'' into a position (see Fig. 6) in which the roller or other contact is taken clear of the arm h the lifting mechanism may be thrown out of action or rendered inoperative.

Having fully described my invention, what I desire to claim and secure by Letters Patent is—

1. Draft-excluding attachments for doors and certain kinds of windows, consisting of a draft-excluding medium attached to a bar or carrier which is flexibly suspended from a system of tilting levers mounted on the door or window and whose movements for raising and lowering the strip are controlled by a cam, wiper-arm or extension jointed to one of the levers and adapted to impinge against and work over a stud, roller or other contact fixed on the door or window-frame, substantially as herein described and set forth.

2. In draft-excluding attachments such as referred to in the preceding claim; the employment of a pair of lifting-levers which are jointed to the door and connected to one another at their inner ends, while the carrier-bar of the excluding-strip is flexibly suspended by links or equivalent devices from their outer ends; in combination with a jointed cam, wiper-arm or extension carried by one of the said levers and adapted to impinge against and work over a stud, roller or other contact, substantially as herein described and set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHRISTIAN FREDERICK THEODORE KRAUTH.
Witnesses:

HENRY SKERRETT,
HENRY H. SKERRETT.