

No. 898,076.

PATENTED SEPT. 8, 1908.

N. H. SUREN.  
SIGNAL BOX.

APPLICATION FILED JAN. 5, 1907.

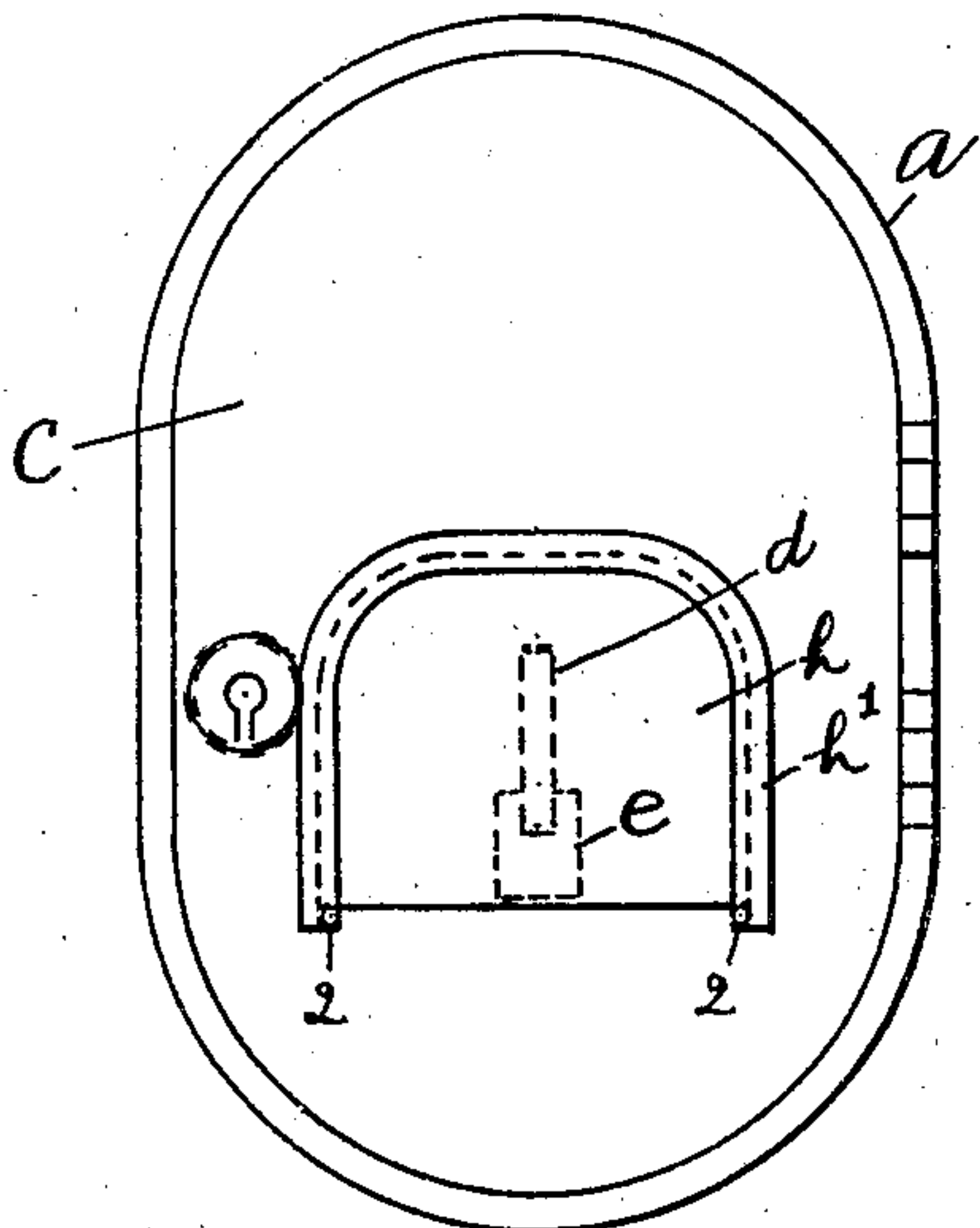


Fig. 1.

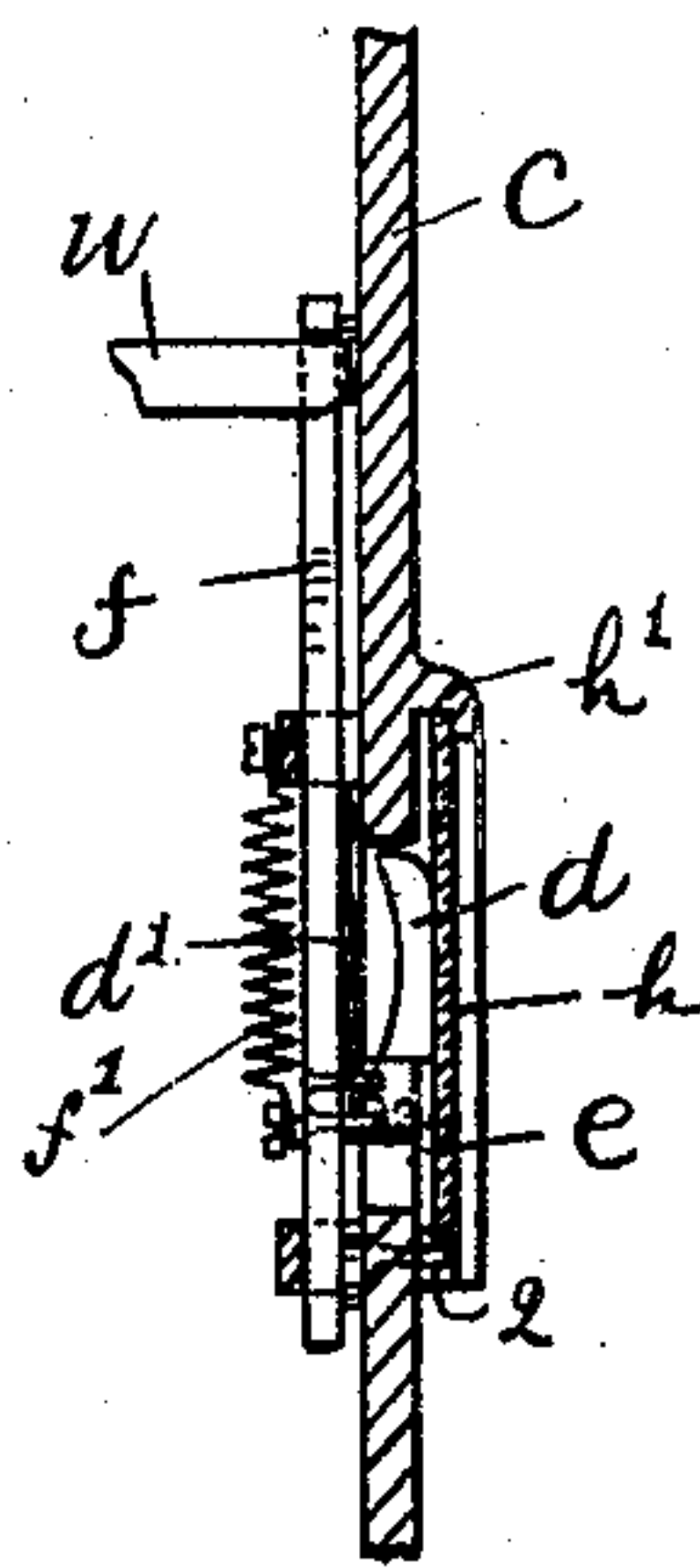


Fig. 3.

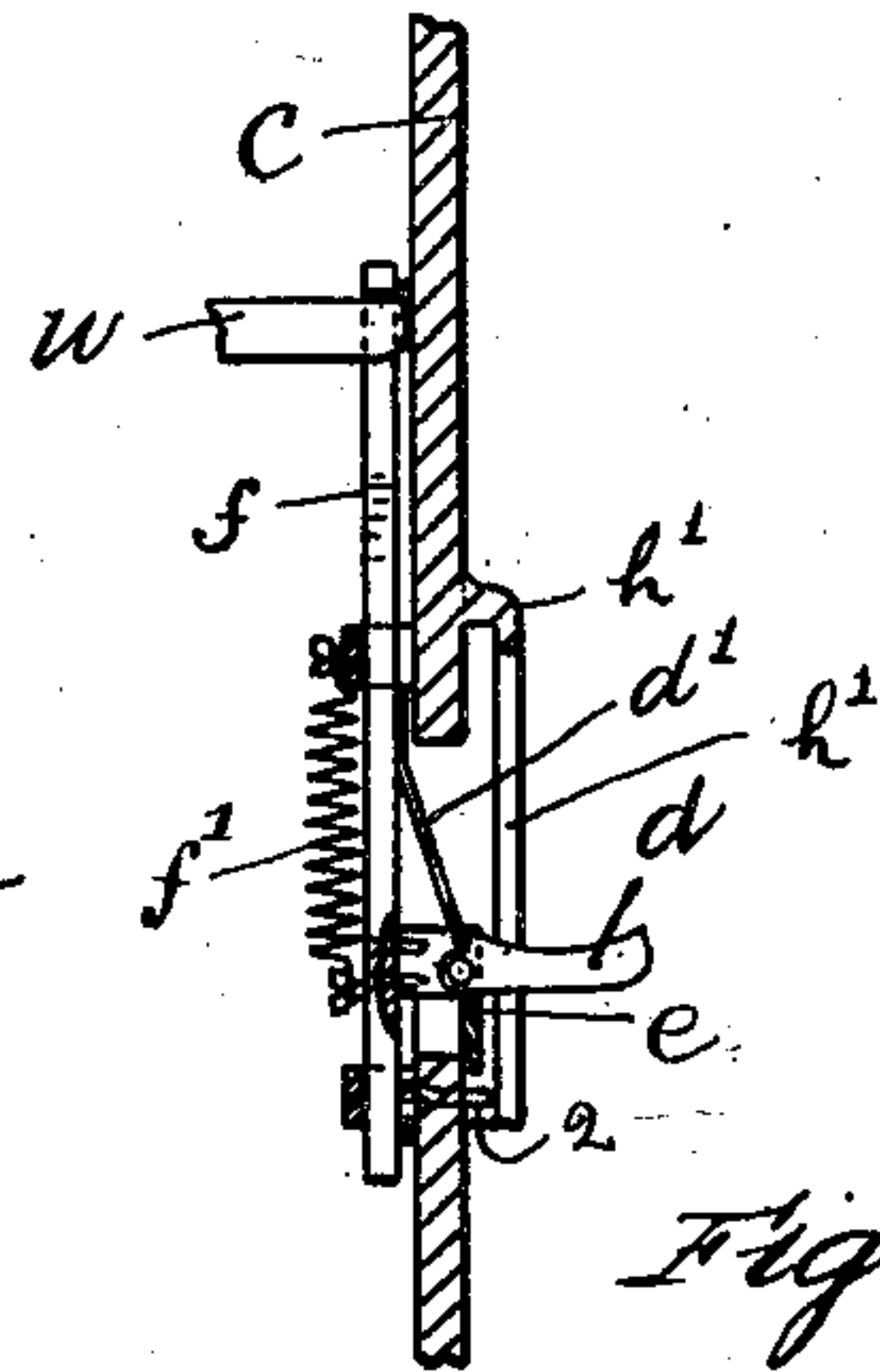


Fig. 4.

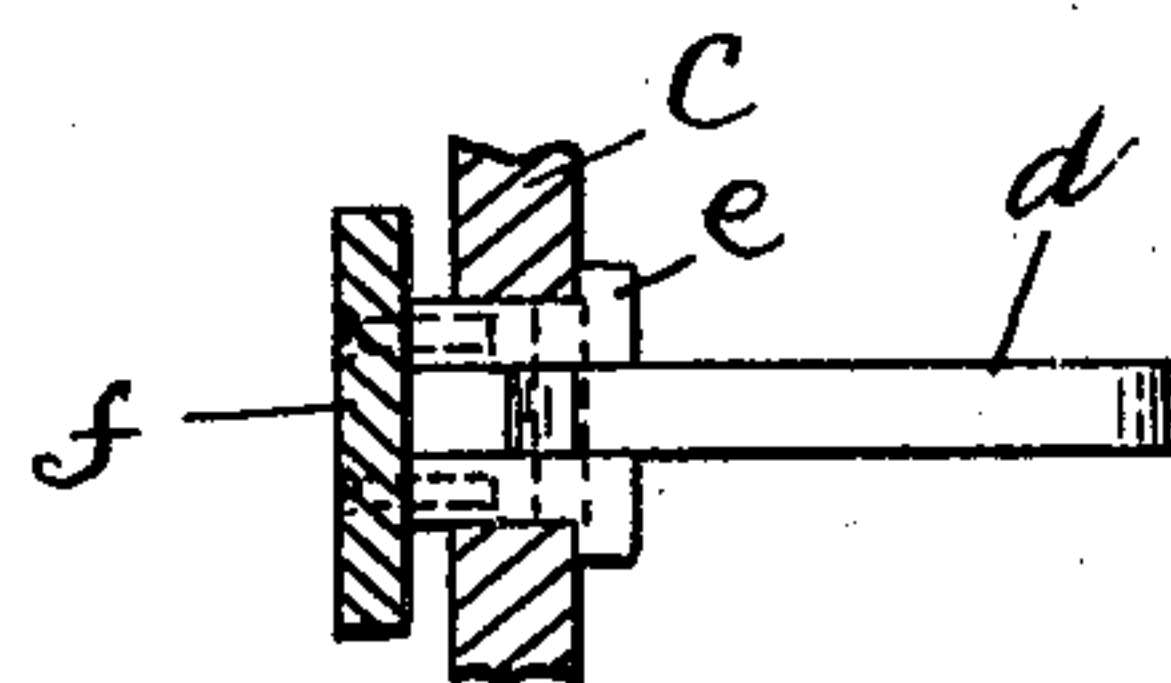


Fig. 5.

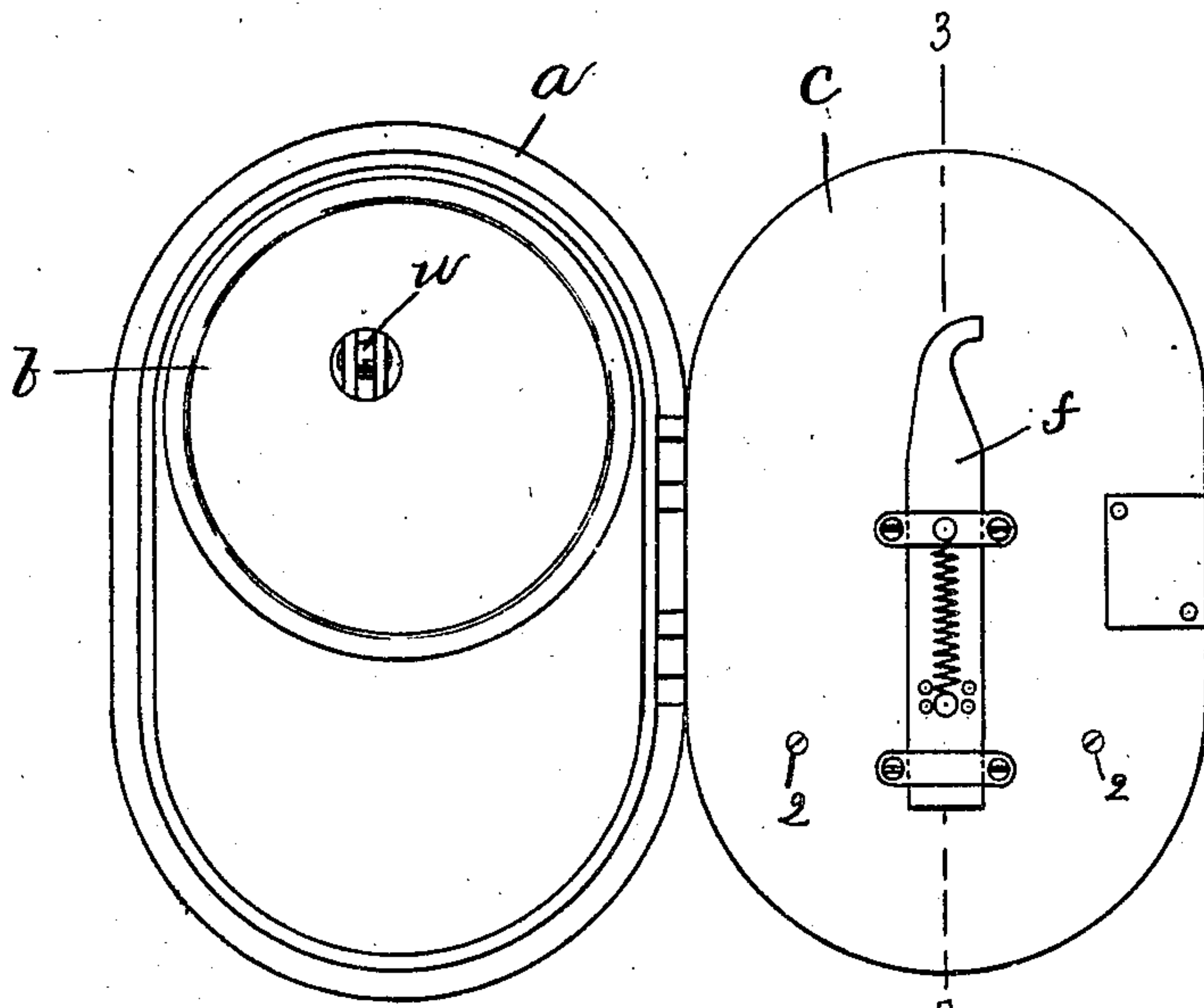


Fig. 2.

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# UNITED STATES PATENT OFFICE.

NATHAN H. SUREN, OF NEEDHAM, MASSACHUSETTS, ASSIGNOR TO THE GAMEWELL FIRE-ALARM TELEGRAPH COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## SIGNAL-BOX.

No. 898,076.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed January 5, 1907. Serial No. 351,008.

*To all whom it may concern:*

Be it known that I, NATHAN H. SUREN, of Needham, county of Norfolk, State of Massachusetts, have invented an Improvement in Signal-Boxes, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to signal boxes, and has for its object to provide the box with an actuating lever adapted to be moved into abnormal position, and to provide a frangible plate which incloses said abnormally disposed actuating lever, and when broken permits said actuating lever to resume its normal position, in order that it may be operated to transmit the signal without opening the box door, which results in saving time at the moment a little saving is of the greatest importance. Such means for inclosing the actuating lever quite effectively serves to prevent sending in false alarms, as the person sending in the alarm must first break the frangible plate and then operate the actuating lever.

While my invention is particularly designed for use on fire alarm boxes, it may be employed on signal boxes adapted for sending other than fire alarm signals.

My invention comprehends the employment of any form of frangible device which is adapted to inclose the actuating lever and hold it in its abnormal position until broken, although in the present embodiment of my invention said device consists of a glass plate.

Figure 1 shows in front elevation a signal box embodying this invention. Fig. 2 is a similar view showing the box door open. Fig. 3 is a vertical section of a portion of the box door shown in Fig. 1 taken on the dotted line 3—3. Fig. 4 is a similar view, the frangible plate being broken, and the actuating lever having resumed its normal position. Fig. 5 is a sectional detail of the actuating lever.

*a* represents the shell or case of the box which contains any usual or suitable signal-transmitting mechanism; *b* is the inner door of the box to the back side of which the signal-transmitting mechanism is supported; and *c* is the outer door, which is herein referred to as the box door.

The actuating-mechanism for the signal-transmitting mechanism, as herein shown,

has a finger-engaging lever *d* located at the front of the box door and pivoted at its inner end to the upper end of a plate *e*, or it may be otherwise movably connected therewith, so as to be moved into a vertical position when out of use, see Fig. 3, and a horizontal position when in use, see Figs. 4 and 5. A spring *d'* is provided which engages the lever *d* and acts to move it from its abnormal or "out-of-use" position into its normal or "in-use" position when permitted to act.

On the back side of the box door a sliding plate or bar *f* is arranged which is movable in suitable guideways provided for it. The plate or bar is drawn up and held in its elevated position by means of a spring *f'* which is connected at one end to the frame and at the other end to said plate or bar. The upper end of the sliding plate or bar is formed with a hook or it may be otherwise formed, to engage the winding arm or let-off *w*, of the signal-transmitting mechanism. The box door, in front of said sliding plate or bar, is slotted and upon the outside of the door, in front of said slot, the plate *e* above referred to is located, said plate being connected with the sliding bar by a narrow portion which passes through the slot in the box door and is adapted to work up and down in said slot.

In front of the actuating lever thus described and on the front side of the box door a frangible plate *h* is supported. This plate is placed in a recessed frame *h'* which is provided for it, which is open at the bottom to provide for the insertion and ready removal of the plate or the pieces thereof. The plate is held in place by screws 2 or otherwise. The plate is located close to the box door, and as herein shown the actuating lever *d*, when in abnormal position, bears against it, so that when the plate is broken said actuating lever will be immediately thrust outward by its actuating spring *d'* and thereby caused to resume its normal position. My invention, however, is not limited to the employment of a frangible plate which both incloses the actuating lever and holds it in its abnormal or "out-of-use" position, as certain advantages are gained if said plate merely incloses the actuating lever which is otherwise held in its abnormal position. The person desiring to send in a signal first breaks the glass plate, and then pulls the actuating lever.



Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a signal box, an actuating-lever pivotally connected to the actuating-mechanism of the signal-transmitting mechanism, whereby it may be moved into and out of operating position, and a frangible plate inclosing said actuating-lever when in its abnormal position, substantially as described.

2. In a signal-box, an actuating-lever pivotally connected to the actuating-mechanism of the signal-transmitting mechanism, whereby it may be moved into and out of operating position, and a frangible plate inclosing said actuating-lever which engages and holds it in its abnormal position, substantially as described.

3. In a signal-box, an actuating-lever pivotally connected to the actuating-mechanism of the signal-transmitting mechanism, whereby it may be moved into and out of

operating position, a frangible plate inclosing said actuating-lever which engages and holds it in its abnormal position, and means for returning said actuating-lever to its normal position when said plate is broken, substantially as described.

4. In a signal box, sliding actuating-mechanism for the signal transmitting mechanism having a pivotally connected actuating lever, whereby said lever may be moved into and out of operating position, and a frangible plate inclosing said actuating-lever when in its abnormal position, substantially as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

NATHAN H. SUREN.

Witnesses:

W. W. BOWES,  
J. A. ABBOTT.