No. 814,802. PATENTED MAR. 13, 1906.

W. POTTER.

COMBINATION DRAFT EXCLUDER AND LOCK.

APPLICATION FILED MAY 16, 1905.

2 SHEETS—SHEET 1.

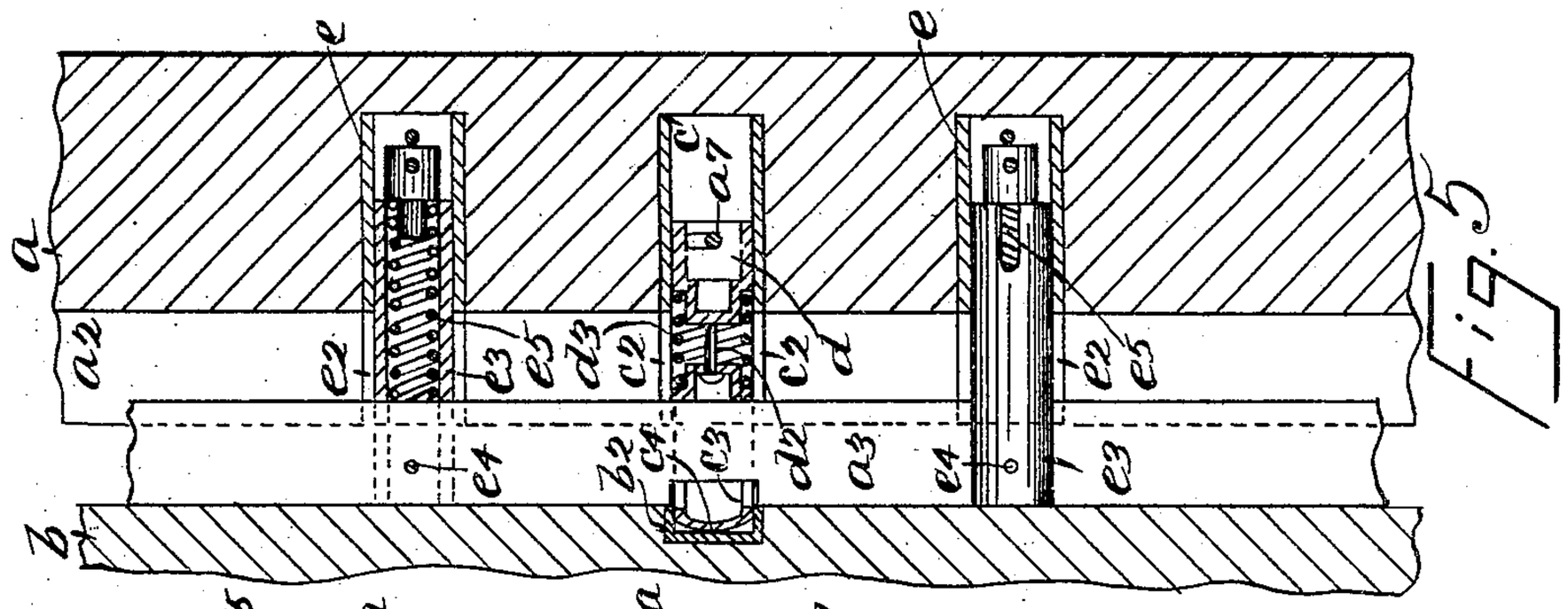

Fig. 5.

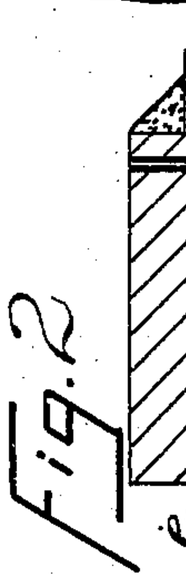

Fig. 2.

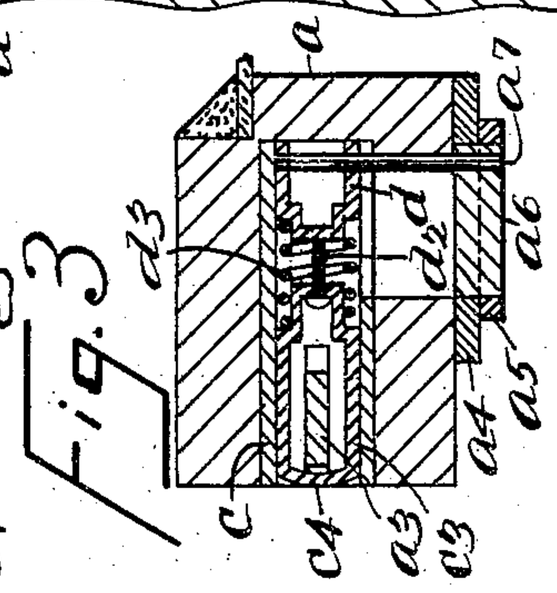

Fig. 3.

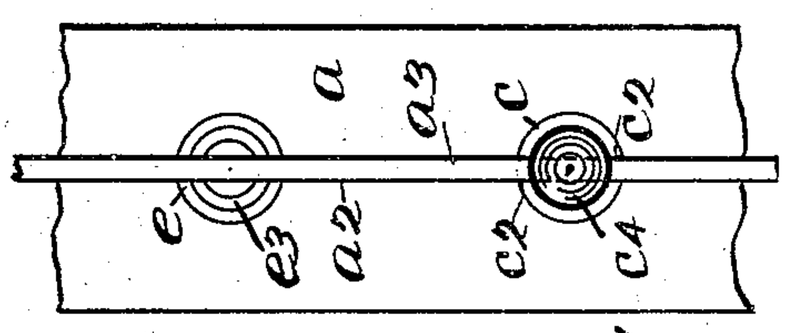

Fig. 4.

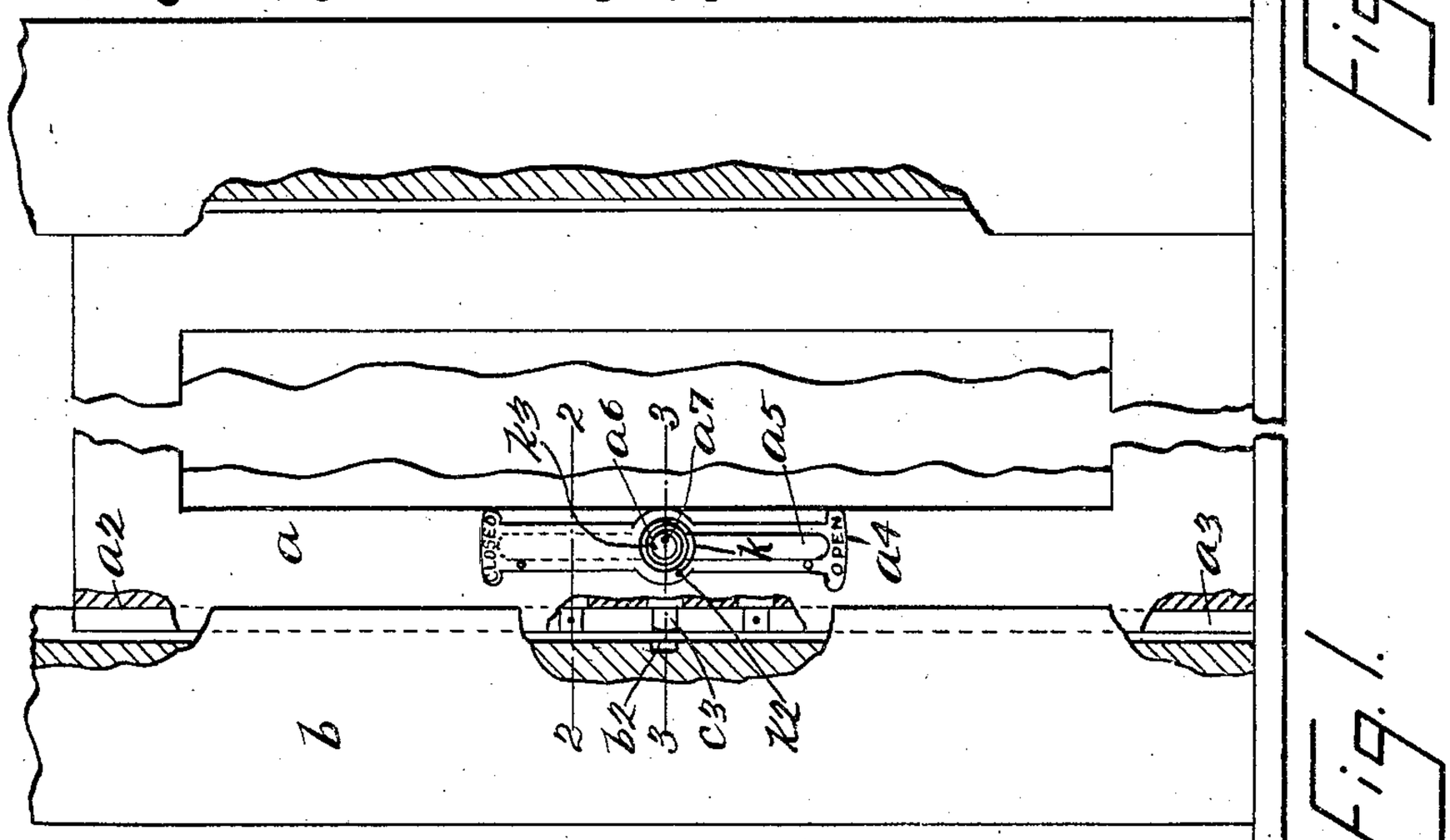

Fig. 1.

WITNESSES

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2 SHEETS—SHEET 2.

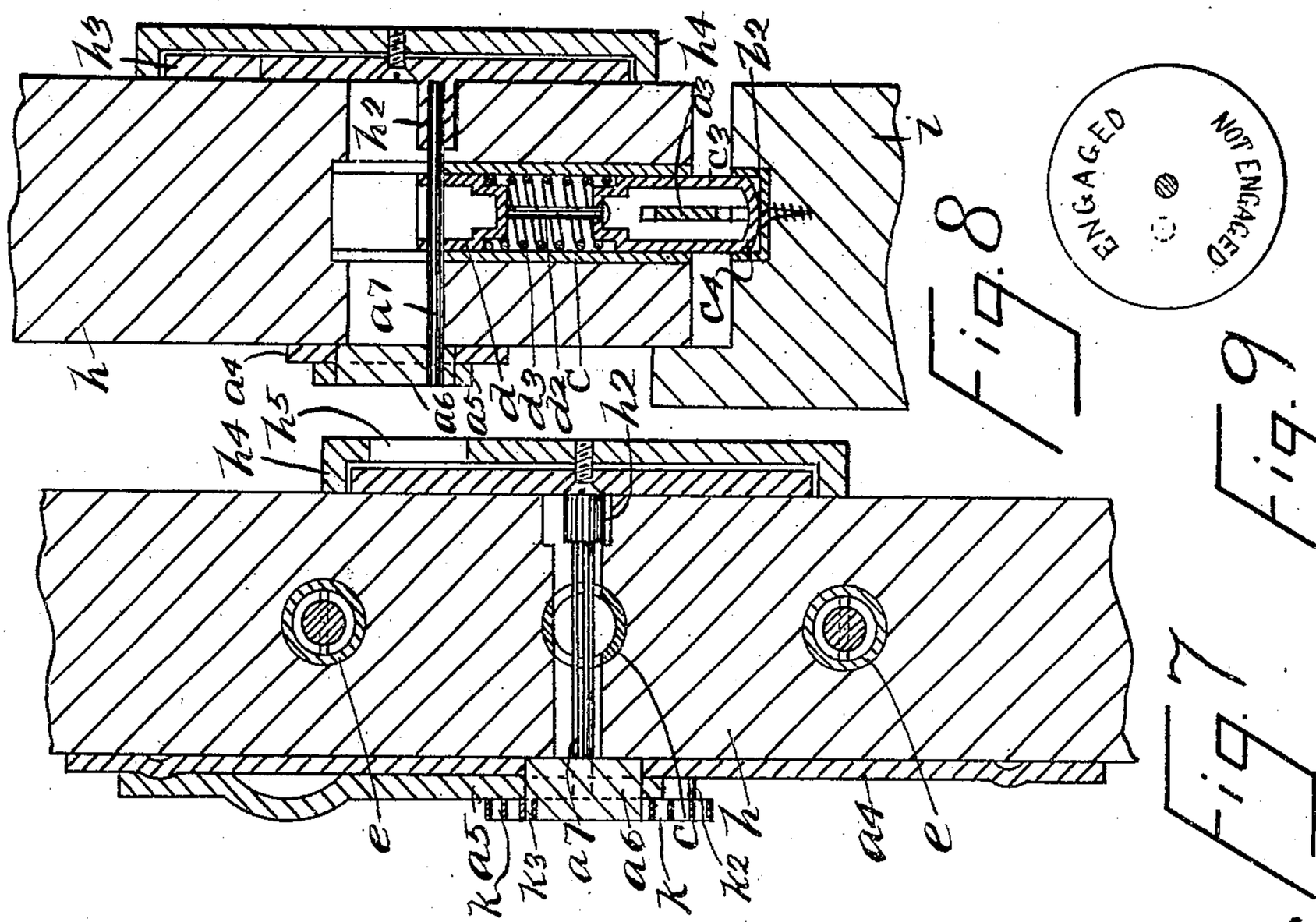

Fig. 8

Fig. 9

Fig. 7

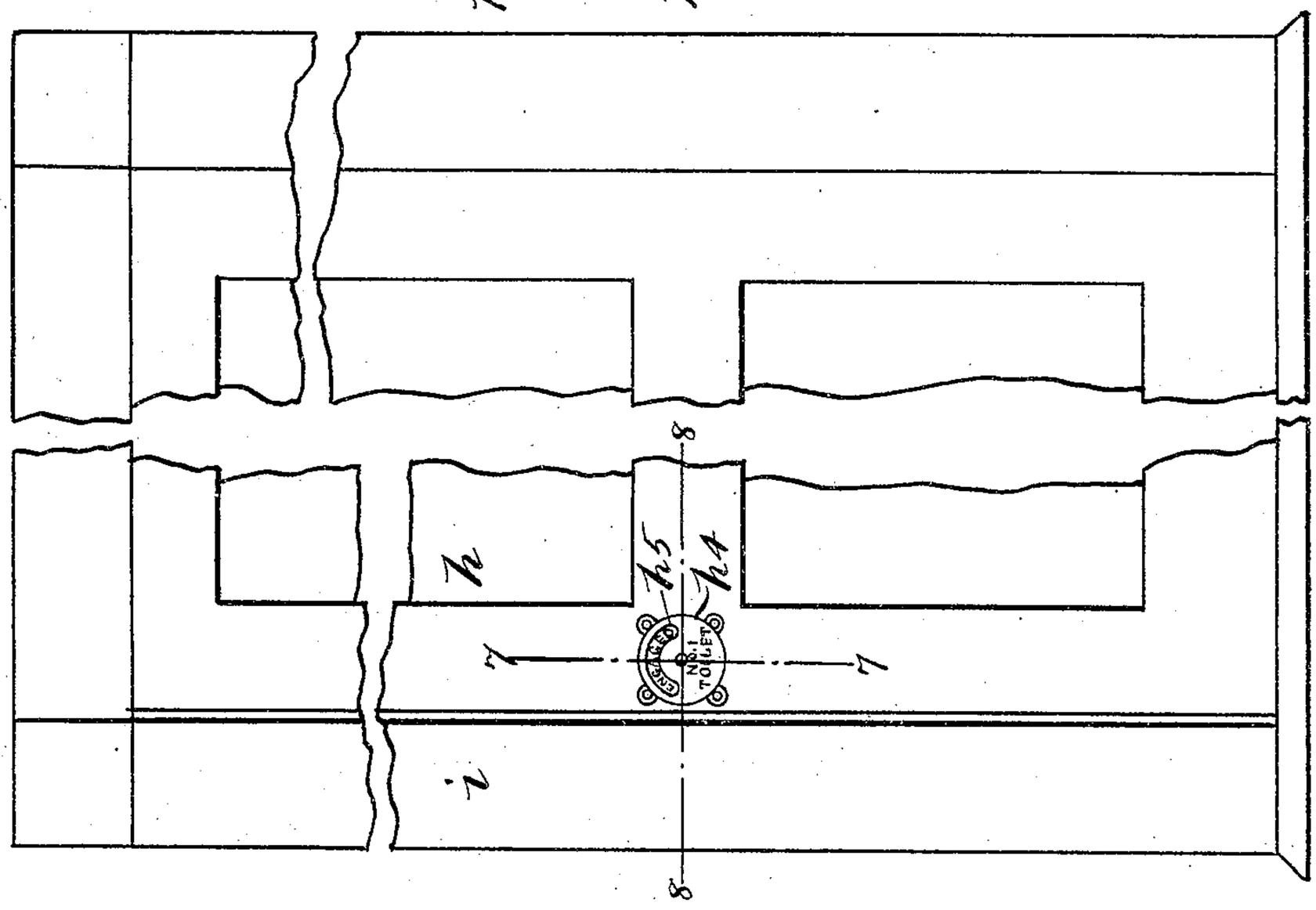

Fig. 6

WITNESSES

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COMBINATION DRAFT-EXCLUDER AND LOCK.

No. 814,802. Specification of Letters Patent. Patented March 13, 1906.

Application filed May 16, 1905. Serial No. 260,626.

To all whom it may concern:

Be it known that I, WILLIAM POTTER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Combination Draft-Excluders and Locks, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an improved draft-preventer for doors and windows which is easily operated and which effectually excludes air from a door or window provided therewith, a further object being to provide a device of this class which serves also as a lock and which is simple in construction and operation, comparatively inexpensive, and well adapted for the purpose for which it is intended.

As is well known, doors and windows, as well as the frames thereof, are frequently warped or uneven, due to carelessness of construction or to climatic influences, and in the case of the latter windows and doors are frequently rendered so tight as to be inoperative; but by means of my invention the sash-runs of window-frames may be made very loose, thereby preventing binding when swollen, as may also door-frames, and still permit of the total exclusion of draft.

My invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a partial face view of the inner side of a window-frame and showing a sash provided with my invention; Fig. 2, a section on the line 2 2 of Fig. 1; Fig. 3, a section on the line 3 3 of Fig. 1; Fig. 4, a partial edge view of the sash; Fig. 5, a vertical section taken on the line 5 5 of Fig. 2; Fig. 6, a partial outer view of a door provided with my invention; Fig. 7, a section on the line 7 7 of Fig. 6; Fig. 8, a section on the line 8 8 of Fig. 6, and Fig. 9 a detail of the construction shown in Fig. 6.

In Figs. 1 to 5, inclusive, I have shown a vertically-movable sash a, mounted in a frame b and showing a space between the same at either side of the sash, and arranged in a vertical slot a^2 in the edge of the sash a is a bar a^3, which extends the full length of the sash, and on the inner face of the sash-stile is a plate a^4, to which is pivoted a lever a^5, as shown at a^6, and the pivot a^6 carries an eccentric-pin a^7, arranged normally in the horizontal axis of said pivot. Arranged centrally of the bar a^3 is a tube c, which extends into the sash a and is provided with slots c^2, into which the bar a^3 passes, and within the tube c is a supplemental tube c^3, through which the bar a^3 passes and in which it is engaged, said tube c^3 having a projecting head c^4, which in its locked position extends into a cup or recess b^2 in the frame b, and said frame may be provided with a number of these cups b^2, if desired, thereby enabling said sash to be locked in a corresponding number of positions. Also slidably mounted in the tube c is a block d, provided with a headed pin d^2, which is slidably engaged by the tube c^3, and a coil-spring d^3 is arranged between the tube c^3 and the block d, said spring d^3 serving to force the said members apart, and the eccentric-pin a^7 passes into the block d and serves to operate the same inwardly and outwardly. Secured in the sash a above and below the tube c are tubes e, provided with slots e^2, into which the bar a^3 is adapted to pass, and slidably mounted in the tubes e are supplemental tubes e^3, which are secured to the bar a^3 by pins e^4, and said supplemental tubes e^3 are normally forced outwardly by means of strong spiral springs e^5, which bear against the bar a^3, and, as will be seen, when the lever a^5 is moved in one direction the bar a^3 is forced outwardly by the springs e^5 against the frame a, and said bar adapts itself to any irregularity between the sash and frame, and the sash is also forced against the opposite side of the frame a, and thereby closes the openings therebetween, and when the lever a^5 is moved in the opposite direction the bar a^3 is drawn inwardly against the springs e^5 and flush with the edge of the sash, and said sash may be readily moved, these positions of the bar a^3 being clearly shown in Figs. 1 to 5, inclusive. If the lever a^5 be moved to the locking position (indicated in dotted lines in Fig. 1) and the tube c^3 be out of line with a cup b^2, the pin d^2 enters the said tube c^3, and thereby permits the bar a^3 to engage the frame a, and if the tube c^3 be in line with a cup b^2 the play on said pin d^2 permits the said tube or the head c^4 thereof to enter the said cup, and the window is securely locked.

In Figs. 6 to 9, inclusive, I have shown my invention adapted to a bath-room or toilet-door, said door being indicated by the ref-

erence character *h* and the frame thereof by the reference character *i*, the locking devices being similar to those described in the window, with the exception that the eccentric-pin a^7 passes entirely through the door and is held in a telescopic recess h^2, eccentrically secured in a plate h^3, pivoted centrally thereof in a casing h^4, said casing h^4 being secured to the outer side of the door *h* and is provided with a segmental opening h^5, at which either of two inscriptions on the plate h^3 may be read, said plate being shown in detail in Fig. 9, and, as will be understood, the rotation of the lever a^5 to lock or open the door turns the plate h^3 correspondingly.

It will therefore be seen that by means of my invention sashes and doors out of parallel with their frames may be made weather and dust tight, for the reason that the bar a^3, being centrally mounted and spring-actuated, upon touching the frame at either of its ends immediately finds the plane of said frame, and a sash so provided also finds the plane of the frame at the side opposite the bar a^3 and rattling is prevented, and the use of weather-strips, storm-sash, and sash-locks is obviated, and if sash-weights are not employed my invention will effectually lock said sash in any desired position. Doors so provided will exclude all offensive odors and gases.

In Figs. 1 and 7 I have shown a coil-spring *k*, secured at k^2 to the plate a^4 and at k^3 to the pivot a^7 of the lever a^5 and serves as a counterbalance for the springs e^5 in the withdrawal of the bar a^3, therefore making the device easily operative by a child.

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

1. A draft-excluder for doors, sashes and the like, comprising a bar movable in a recess in said door or sash and adapted to bear against the frame thereof, a tube secured in said door or sash, a supplemental tube slidable therein and provided with slots in the opposite sides thereof through which said bar passes and said bar being provided with a recess adapted to receive the end of said supplemental tube, a block slidable in said first-named tube, a spring between said block and said supplemental tube and adapted to force said supplemental tube outwardly, devices for moving said block backwardly and forwardly in said first-named tube, coil-springs mounted in said door or sash adjacent to said tube and adapted to force said bar outwardly, substantially as shown and described.

2. A draft-excluder for doors, sashes and the like, comprising a bar movable in a recess in said door or sash and adapted to bear against the frame thereof, a tube secured in said door or sash, a supplemental tube slidable therein and provided with slots in the opposite sides thereof through which said bar passes and said bar being provided with a recess adapted to receive the end of said supplemental tube, a block slidable in said first-named tube, a spring between said block and said supplemental tube and adapted to force said supplemental tube outwardly, devices for moving said block backwardly and forwardly in said first-named tube, coil-springs mounted in said door or sash adjacent to said tube and adapted to force said bar outwardly, and said devices comprising a lever mounted on the face of said door or sash, and a pin eccentrically mounted on said lever and slidably mounted in said block, substantially as shown and described.

3. A draft-excluder and lock for doors, sashes and the like, comprising a bar movable in a recess in said door or sash and adapted to bear against the frame thereof, springs for forcing said bar outwardly, a tube arranged centrally of said springs, a supplemental tube slidable in said first-named tube and provided with slots in the opposite sides thereof through which said bar passes and in which it is engaged, said bar being provided with a recess to receive the end of said supplemental tube, devices in operative connection with said supplemental tube for moving the same inwardly and outwardly, means for moving said supplemental tube outwardly a distance greater than the movement of said bar and a recess in said frame adapted to receive said supplemental tube and thereby lock said door or sash, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 13th day of May, 1905.

WILLIAM POTTER.

Witnesses:
C. E. MULREANY,
C. J. KLEIN.