

(No Model.)

R. O. WOOD.
DOOR SPRING.

No. 422,678.

Patented Mar. 4, 1890.

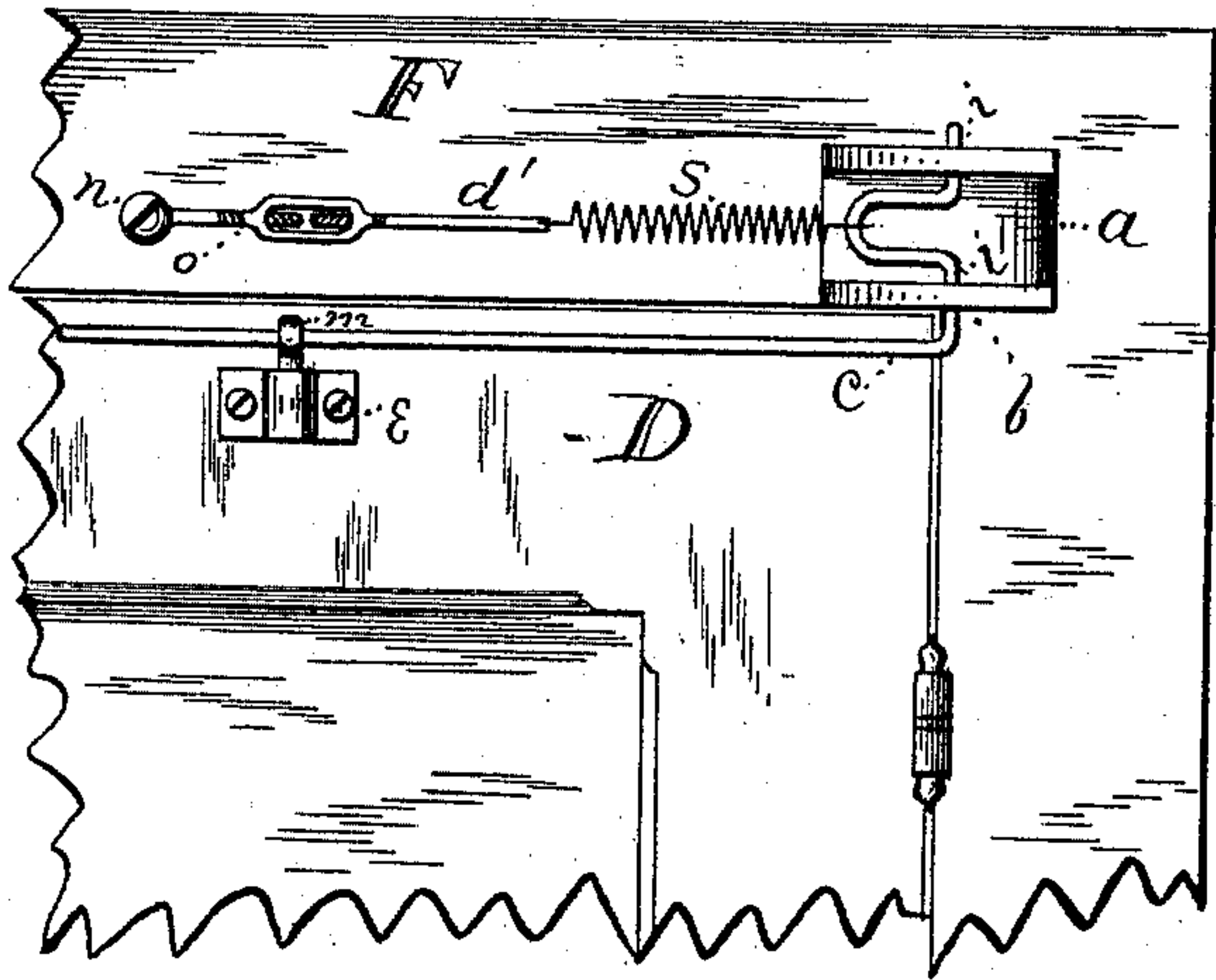


Fig. 1.

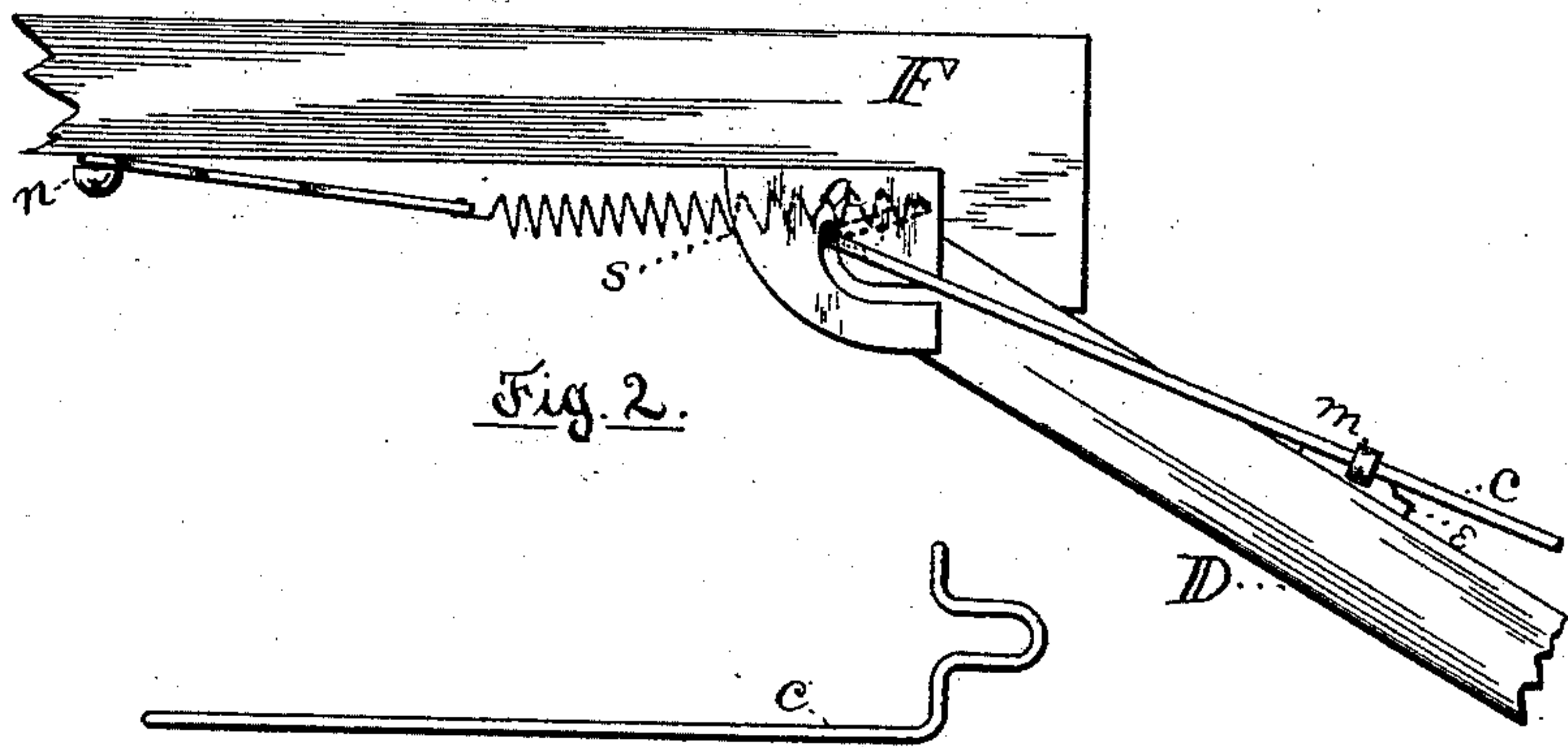


Fig. 2.



Fig. 3.

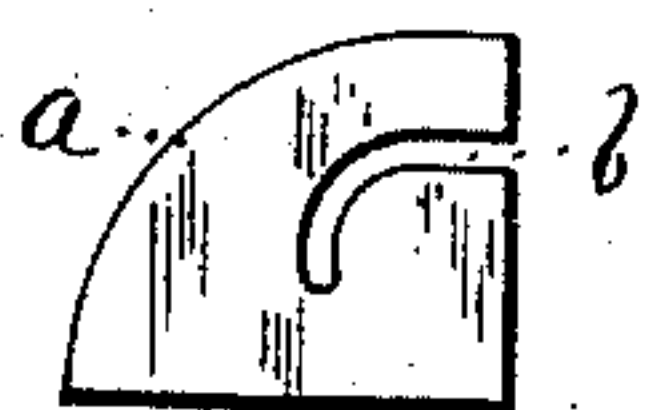


Fig. 4.

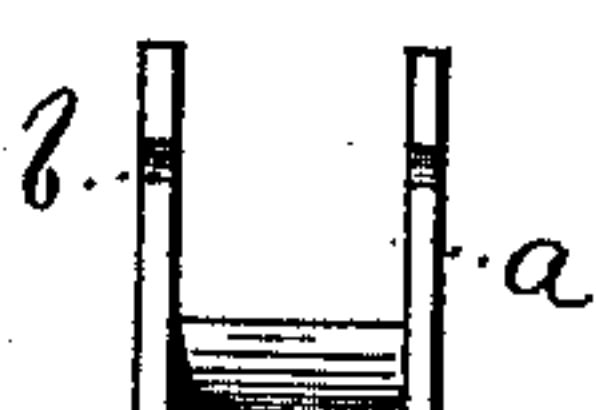


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

ROSTO O. WOOD, OF WORCESTER, MASSACHUSETTS.

DOOR-SPRING.

SPECIFICATION forming part of Letters Patent No. 422,678, dated March 4, 1890.

Application filed November 25, 1889. Serial No. 331,530. (No model.)

To all whom it may concern:

Be it known that I, ROSTO O. WOOD, of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Door Springs and Checks; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a vertical section of a door and its frame with my device thereon and showing the relative position of the parts thereof when the door is closed. Fig. 2 is a top view of the same with combination crank and lever in position when the door is wide open. Figs. 3, 4, and 5 represent the principal parts of this device and show the simplicity of their construction.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now describe more fully the various parts thereof and the manner of combining them for the successful accomplishment of the object for which it is designed.

The object of this device is to automatically close a door to which it may be attached, or to prevent it being closed when desired to be left open; and it consists of the combination of a spiral spring with an eccentric or crank, or, what is still better, a combination crank-shaft and lever, made in one piece, (see Fig. 3,) and bracket E, with loop *m* pivoted thereto or made rigid thereon and attached to a door and frame thereof, as described and set forth.

D represents a section of a door, and F the frame to which it is hinged. (See Fig. 1.)

a represents a bracket slotted at *b*, (see Fig. 4,) which is fastened to the door-frame F in close proximity to the upper edge of the door, as shown in Fig. 1.

Within the slot *b* place the combination crank and lever *c* and to the crank portion attach one end of the spring S, or an exten-

sion-piece thereof. Now attach the other end of the spring to the adjusting-screw *o*, with extension-piece *d'*, or in any other suitable manner, the pivots *i i* being kept in position by a constant tension or contraction of spring S. Next slip the loop *m* over the end of crank-lever *c* and fasten to the door, as shown in Fig. 1 at E. It is now in order to do the work for which it is designed, and it will be readily seen that when the door is opened at right angles with the frame it will close automatically, if allowed to do so, for to this point the crank will not have passed beyond the central line with the spring S; but when the door is thrown wide open the crank portion of the lever will have passed the central line, and by the contraction of the spring it must be seen that the door will be prevented from closing except other force be applied.

It is designed to have the various parts of this device of malleable iron, steel, or other suitable material for utility and durability, and it must be observed that no drilling of the parts will be required—a valuable desideratum to the cost of manufacture.

The crank motion may be effected in several other ways without departing from the spirit of my invention, none of which, however, I desire to claim, nor do I claim the principle of a crank motion and its application to a door for purposes herein described in its broadest sense.

What I do claim, and desire to secure by Letters Patent, is—

The combination of the crank-lever C, having pivots *i i*, bracket *a*, spring S, adjusting-screw *o* and extension-piece *d'*, and combination loop and bracket *m e*, substantially as and for the purposes herein described.

ROSTO O. WOOD.

Witnesses:

JULIA B. WOOD,
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