

S. Stewart,

Door Spring.

N^o 30,005.

Patented Sep. 11, 1860.

Fig: 2.

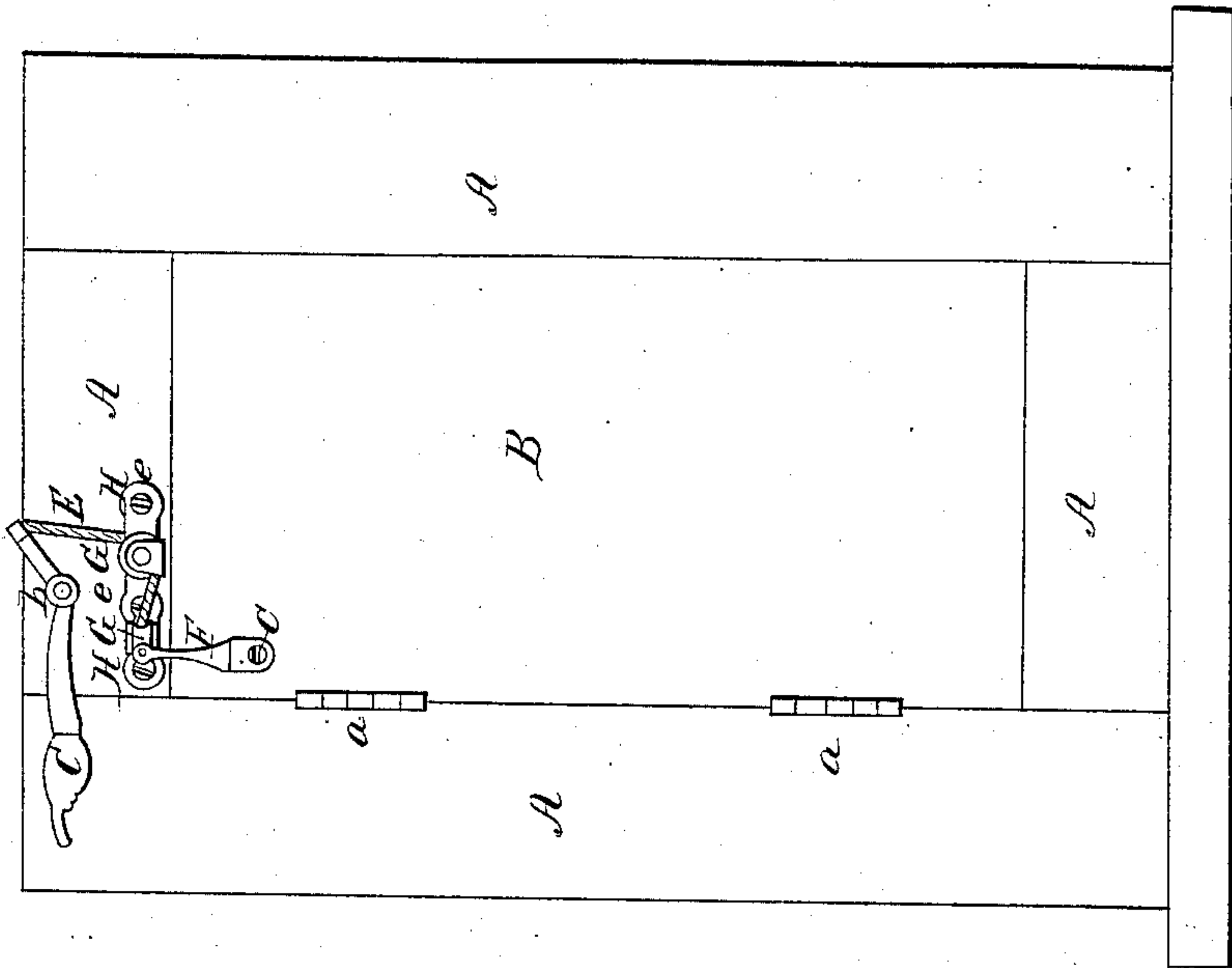
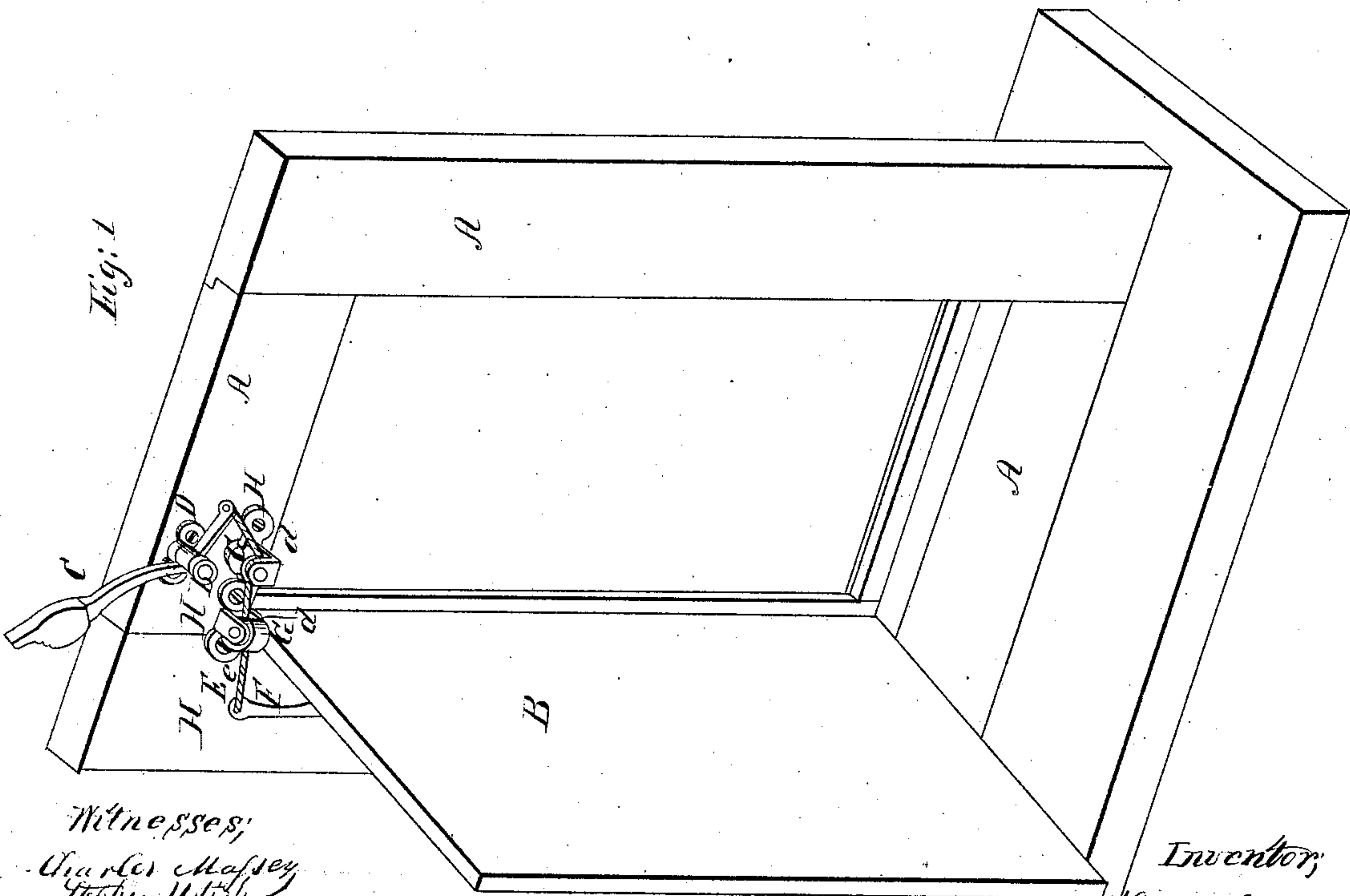


Fig: 1



Witnesses;
Charles Haffey
Stephen Wilcox

Inventor;
Stephen Stewart

UNITED STATES PATENT OFFICE.

STEPHEN STEWART, OF PHILADELPHIA, PENNSYLVANIA.

CLOSING DOORS AND GATES.

Specification of Letters Patent No. 30,005, dated September 11, 1860.

To all whom it may concern:

Be it known that I, STEPHEN STEWART, of the city of Philadelphia and State of Pennsylvania, have invented a new and Improved Mechanical Apparatus for Closing Doors and Gates; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1, is a perspective view of the door and apparatus, for closing it; with the door open. Fig. 2, is a front view of the same, with the door closed.

Like letters in both the figures, represent the same parts of the apparatus.

The nature of my invention and improvement will be understood by the following description.

To enable others skilled in the art, to make and use my invention, I will proceed to describe its construction and operation:

A, is the door frame, and B, is the door which is hung in the same, by the hinges *a, a*.

C, is a lever for closing the door; it is hung on the fulcrum *b*, in the plate D, which is attached to the door frame A. The cord E, is attached at one end to the short arm of the lever C, and at its other end to the upper end of the carrier F, which is fastened to the door B, by means of the screw *c*. The cord E, passes over the grooved pulleys G, G, which are placed at right angles with each other in the openings *d, d*, of the supporting piece H, which is made fast to the frame A, by means of the screws *e, e*.

The operation is as follows: The door being opened, so as to be at right angles, or

nearly so, with the frame A, as seen in Fig. 1, the long part of the lever C, has so far approached a perpendicular position with the fulcrum D, as to neutralize the power of the lever, and hence the door will continue in that position until it is moved for the purpose of closing it; and then a gentle force will start it; and as the long and weighted arm of the lever C, will gradually approach a horizontal position, the power of the lever thereby progressively increases until the door is closed, as seen in Fig. 2. And when the door is opened the lever gradually loses its power until the door has assumed the open position as seen in Fig. 1. Hence it will be seen that by the peculiar form and arrangement of the lever C, with the parts to which it is attached I effect the requisite power of the same at all positions of the door.

Having thus fully described the mechanical apparatus for closing doors and gates as invented or improved by me, what I claim therein as new, and desire to secure by Letters Patent, is—

The combination and arrangement of the lever C, with the cord E, pulleys G, G, and carrier F, or their equivalents, and the door B, substantially as and for the purpose above set forth.

In testimony that the above is my invention, I have hereunto set my hand and affixed my seal this eighteenth day of July 1860.

STEPHEN STEWART. [L. s.]

Witnesses:

CHARLES MASSEY,
STEPHEN USTICK.