

S. P. GRIFFIN & B. M. HARROD.

Improvement in Devices for Closing Doors and Gates.

No. 133,221.

Patented Nov. 19, 1872.

Fig. 1

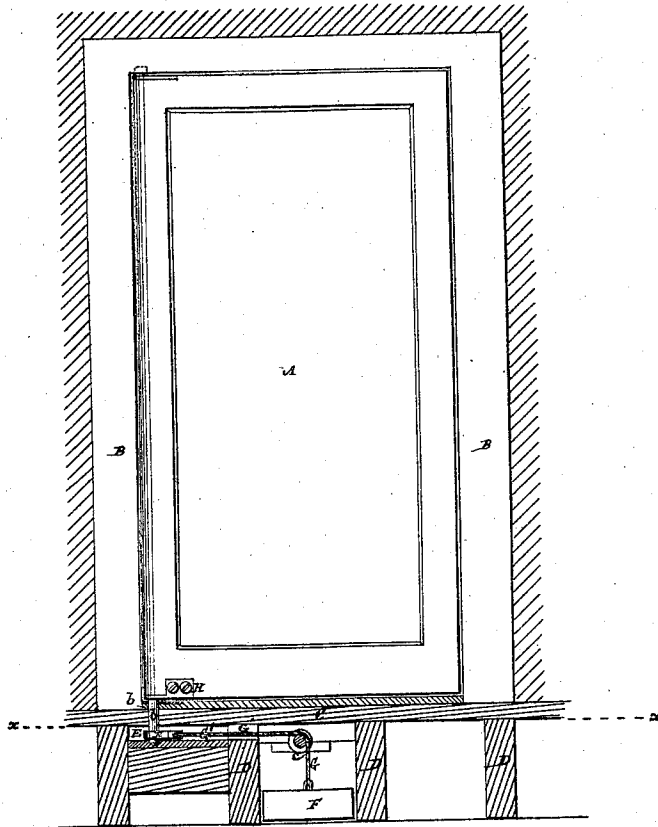
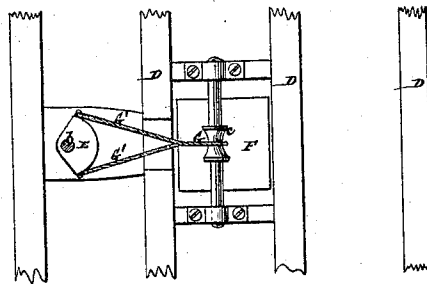


Fig. 2



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SAMUEL P. GRIFFIN AND B. MORGAN HARROD, OF NEW ORLEANS, LA.

IMPROVEMENT IN DEVICES FOR CLOSING DOORS AND GATES.

Specification forming part of Letters Patent No. 133,221, dated November 19, 1872.

To all whom it may concern:

Be it known that we, SAMUEL P. GRIFFIN and B. MORGAN HARROD, both of New Orleans, in the parish of Orleans and State of Louisiana, have invented an Improvement in Self-Closing Doors and Gates, of which the following is a specification:

This invention consists in a certain combination of devices applied to a door or gate arranged to swing or open in both directions, said combination including a curved body or sector on the lower pivot of the door, and two diverging extensions of a rope, cord, or chain having an attached weight, which acts upon the door to close it in either direction of its swing, and operates with equal effect, or thereabout, in most or all open positions of the door, by reason of the attachment of the diverging cord-extensions to the sector on opposite sides of the door-pivot and passage of either extension, according to the direction in which the door is swung, on or round the sector, thereby equalizing the leverage action of the weight upon the door.

In the accompanying drawing, which forms part of this specification, Figure 1 represents a side view of a door hung so as to be capable of swinging in both directions, subject to the control of the devices hereinbefore named for closing it, and as arranged within a door-frame mounted on the floor of a building. Fig. 2 is a horizontal section at the line *x x*, in illustration of the closing devices.

Similar letters of reference indicate corresponding parts.

A is the door, and B the door-frame. C is the floor of a room or passage to which said door belongs, and D D the joists supporting the floor. The door, which swings from pivots in the rear and is capable of opening in both directions, has its lower pivot, *b*, extended down through the floor, and upon this pivot, immediately below the floor, is fastened a sector, E, arranged so that its curved or acting portion faces that post of the frame within which the front edge of the door lies

when shut. F is the weight, which operates to close the door in both directions of its swing. This weight is arranged between two of the joists, and its extent of motion need not be in excess of the depth of the joists. Said weight is connected with the sector E on opposite sides of the door-pivot *b* by a rope, chain, or cord, G, and diverging extensions G' G' thereof, said cord G passing over a pulley, *c*. By this connection of the weight with the lower pivot *b*, the action of the weight upon the door is equal, or thereabout, in most or all opening positions, by reason of the sector E taking up on its curved portion either diverging extension G', according to the direction in which the door is being swung or opened, so that when the door is left at liberty to close, the weight F will act at a uniform leverage upon or from the pivot throughout the closing of the door, and when the door is closed the two diverging extensions G' G' will cause the weight to steadily hold the door in its closed position. The pivot *b* is connected with the door by a detachable plate, H, whereby facility is afforded for removing the door without disturbing the devices by which the door is made self-closing in either direction.

What is here claimed, and desired to be secured by Letters Patent, is—

The rope, cord, or chain G, constructed with its divided ends G' G', in combination with the sector E, lower pivot *b* of a door or gate, A, pulley *c*, and weight F, all arranged substantially as shown and described.

SAMUEL P. GRIFFIN.
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