

(No Model.)

H. BUNKER.
DOOR CLOSER.

No. 483,989.

Patented Oct. 11, 1892.

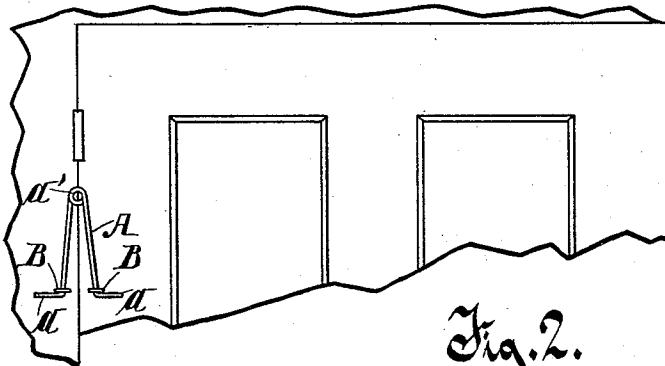


Fig. 1

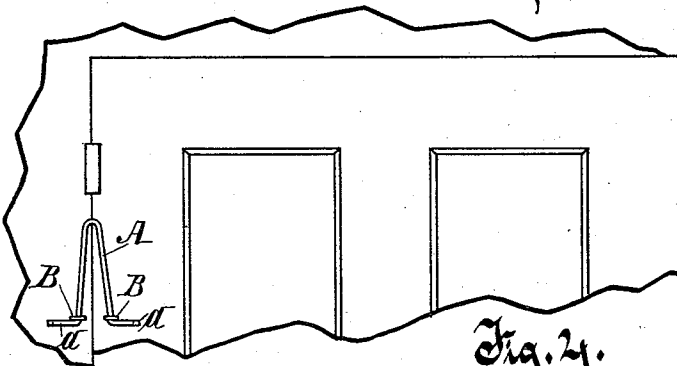


Fig. 2.

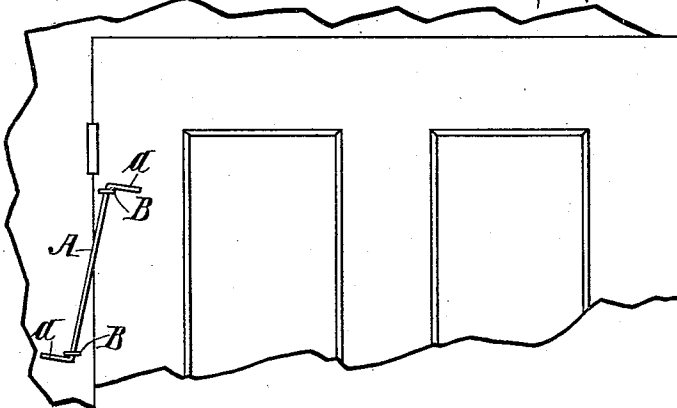


Fig. 3.

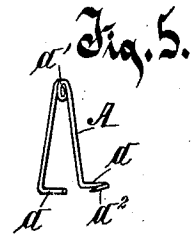


Fig. 4.

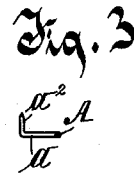


Fig. 5.

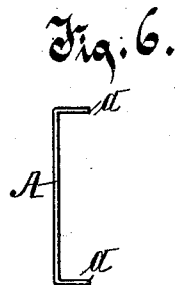


Fig. 6.

Witnesses:

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UNITED STATES PATENT OFFICE.

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DOOR-CLOSER.

SPECIFICATION forming part of Letters Patent No. 483,989, dated October 11, 1892.

Application filed February 9, 1892. Serial No. 420,839. (No model.)

To all whom it may concern:

Be it known that I, HARMAN BUNKER, a subject of the Queen of Great Britain, residing at Barrie, in the county of Simcoe and Province of Ontario, Canada, have invented a new and useful Improvement in Door-Closers, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in door-closers.

The object had in view is to provide a more certain and effectual device of this class, and one which is not only simple in construction, but comparatively inexpensive of production.

With the above object in view the invention consists in the arrangement of a spring-wire in the manner hereinafter more fully pointed out.

In the accompanying drawings, Figure 1 illustrates a fragment of a door and its jamb, showing a spring-wire bent into one form for closing the door. Fig. 2 is a similar view showing another form applicable to doors opening both ways. Fig. 3 shows an angular extension for insertion into the woodwork, the device illustrated in Fig. 1 having the left-hand end provided with this projection and the device illustrated in Fig. 2 having both ends provided with the same. Fig. 4 is a similar view to Figs. 1 and 2, showing the wire bent into another form for accomplishing merely the closing of a door opening only one way, the same as in Fig. 1. Fig. 5 is a perspective view of the form shown in Fig. 1 before being applied to the door, and Fig. 6 is a detail of the form illustrated in Fig. 4 before its application to the door and jamb.

Referring to the drawings, the letter A indicates a single piece of wire bent to the requisite shape, and in all the figures shown as provided with angular ends a , said wire being secured to the door and door-jamb, respectively, by means of staples B, arranged at the angles formed by the angular extensions.

In Fig. 1 the wire at the central bend is given one or more coils, as indicated at a' , so as to increase the resiliency of the spring,

and the angular end on the left, or adjacent to the door-jamb, is bent inwardly at right angles, as indicated at a^2 , Fig. 3, and in the detail view, Fig. 5, and preferably pointed so as provide for its insertion into the door-jamb, thereby assisting in retaining the spring against displacement. Before the device illustrated in Fig. 1 is applied to the door the angular ends a stand in a plane at right angles to the position shown in said figure. This first position of the angular ends is clearly illustrated in Fig. 5. In adjusting the spring to its operative position, however, the angular ends are twisted around to the position shown in Fig. 1 and secured in place by means of the staples B. It will thus be seen that the door is opened against the pressure of the arm on the right, and immediately upon the release of the door by the person entering the room, the resistance being removed, said arm on the right will at once close the door by reason of the torsional power of the twisted angular ends tending to return to their normal position, (illustrated in Fig. 5,) the coils at the top facilitating this action.

In Fig. 2, which illustrates the wire bent so as to be applicable to doors opening in both directions, the wire is applied to the door exactly in the form shown without the necessity of twisting the angular extensions at right angles to their first position, as in the case of Fig. 1. In this figure, also, the coils at the top are omitted, and both the arms on the right and left are provided with the inwardly-extending pointed ends a^2 , (shown in Fig. 3,) the former entering the door and the latter the door-jamb. Whenever the door is opened in either direction, the arm on the right, after said door is subsequently released, will serve to bring the same back to its normal position flush within the door jamb or case.

In the form shown in Fig. 3, before the wire is applied to the door, the lower angular extension a extends in the same direction as the upper angular extension, as shown in Fig. 6. In adjusting the device, however, this lower extension is twisted around to the position shown in the drawings and securely held in such position by means of the staples B.

In this structure the pointed ends a^2 may, if desired, be dispensed with. Of course the constant tendency of the lower end is to return to its initial position in a line with the upper end, and consequently, after the door has been opened against the spring and then released, the increased retractive power of the spring thus produced will instantly close the door.

10 From the foregoing description it will be seen that I produce a simple and cheap device, capable of maintaining the door closed except when thrown open by the entrance of a person, and in the latter case instantly closing the same after the person entering has passed the threshold.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

20 1. In a door-closer, the combination, with a door and its jamb, of a single piece of wire having angularly-bent ends, said ends twisted

out of their true normal plane, engaging the woodwork of the door and jamb, respectively, and secured thereto by means of staples, the automatic closing of the door being effected by the torsional power of the spring exerted laterally thereagainst, substantially as set forth.

2. In a door-closer, the combination of a door and its jamb, a single piece of wire bent into approximate V shape, provided at a central bend with a coil and having its lower ends bent at right angles in opposite directions, and staples securing the angular ends to the door and jamb, respectively, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

H. BUNKER.

Witnesses:

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