(No Model.)

A. D. GOODWIN.

DOOR CLOSER.

No. 346,742. Patented Aug. 3, 1886.

Fig. 1.

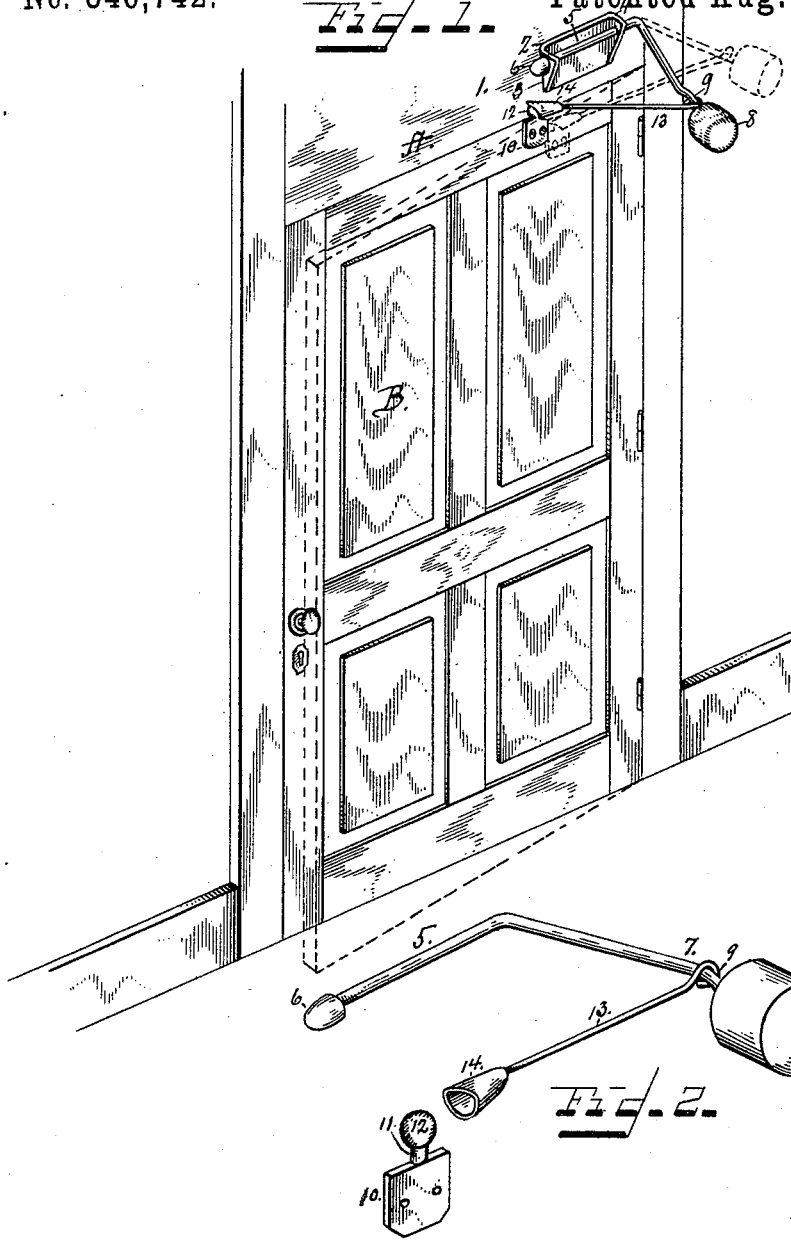

Fig. 2.

Witnesses
J. Thomas Cross.
E. S. Pritchard.

Inventor
A. D. Goodwin.
By his Attorney A. G. Dyrenforth.

UNITED STATES PATENT OFFICE.

ADOLPH D. GOODWIN, OF LEXINGTON, VIRGINIA, ASSIGNOR TO DAVID G. BOWYER, OF SAME PLACE.

DOOR-CLOSER.

SPECIFICATION forming part of Letters Patent No. 346,742, dated August 3, 1886.

Application filed February 26, 1886. Serial No. 193,297. (No model.)

To all whom it may concern:

Be it known that I, ADOLPHUS D. GOODWIN, a citizen of the United States of America, residing at Lexington, in the county of Rockbridge, in the State of Virginia, have invented a new and useful Door-Closer, of which the following is a specification.

My invention has relation to improvements in automatic door-closers of that class known as "gravitating," whereby the door is closed from any point within the limits of a movement not exceeding a right angle, or turned back when opened beyond the limits of such angle, and the objects are to construct a door-closer of the kind named which can be cheaply made and readily applied in operative position, and which is certain, positive, and efficient in action; and, second, to provide a device for the purpose named which may be readily disconnected and as readily connected in operative combination.

My invention, therefore, consists in the novel construction and combination of parts, as will be hereinafter fully described, and especially as will be pointed out in the claim made hereto.

I have clearly and fully illustrated my improved device in the accompanying drawings, wherein—

Figure 1 is a perspective view thereof, showing it in operative position on a door; and Fig. 2 is a detail view of the ball-bracket and push-bar on a larger scale than shown in Fig. 1.

Reference being had to the drawings forming a part hereof, the letter A designates the door-frame, and B the door. These may be of any size or pattern, the door being hung on its hinges to turn open in the direction of the side on which the closer is applied.

To the face of the upper piece, 1, of the frame A is secured a bracket, 2, formed or provided with lugs 3 4, having bearings formed in them. This bearing device consists, preferably, of a bracket, as described; but the bearings may be made separate and fixed to the door by any suitable means. A shaft or bar, 5, is passed through the bearings in the bracket, and has the free end provided with a nut or bar, 6, to keep it from slipping from its bearings. That part of the shaft or bar resting in the bearings is made somewhat longer than the distance between the lugs, in order that it may have longitudinal play in both directions to relieve the strain that would otherwise result from being seated without this movement. The outer end of this shaft or bar 5 is bent outward, forming the lever-arm 7, on the outer end of which is secured a weight, 8. Close to the point of connection, between the lever-arm 7 and the weight 8, the lever-arm has a short bend or step, 9, to keep the loosely swung push-bar from slipping up on the bar of the lever-arm.

On the upper piece of the door is secured a bracket, 10, which consists of a screw-plate having projecting therefrom a vertically-arranged lug, 11, terminating in a knob or ball, 12. This lug stands outward from the door and frame, in order that the knob shall not strike against the frame. Swung on the lever-arm is the push-bar 13, having secured to its free end a socket-piece, 14, the socket of which is formed to set on and over the knob of the bracket on the door. The rim of this socket is inclined with the extended line arranged to set over the top of the ball on the bracket, substantially as shown in the drawings. The shaft or bar is arranged in its bearings, so that the weighted lever-arm projects about on a line with the hinges of the door, and inclined downward somewhat, to give a better angle to the push-bar, and the push-bar inclines from the seat in the lever-arm to its seat on the knob, thus giving a proper push on the door at all times.

The weight on the lever-arm may be varied to suit any and all sizes, weights, and kinds of doors swung or hinged.

If it is desired to disconnect the parts, the socket can be lifted from the ball and left to hang from the lever-arm.

What I claim as my invention, and desire to secure by Letters Patent, is—

The door-closer herein described, comprised of a bracket having bearings, a bar mounted and secured in said bearings, a weighted lever-arm arranged at an angle to said journaled bar, a push-bar having one end swung in a step or seat in the lever-arm and its free end formed with a socket, and a bracket having a ball or knob projected therefrom, all adapted to be used and combined substantially as and for the purpose specified.

In witness whereof I have hereunto set my hand in the presence of two attesting witnesses.

ADOLPHUS D. GOODWIN.

Attest:
E. M. PENDLETON,
S. RAMSEY.