

No. 824,538.

PATENTED JUNE 26, 1906.

W. L. GIERSDORF.

DOOR CLOSER.

APPLICATION FILED APR. 10, 1905.

FIG. 1.

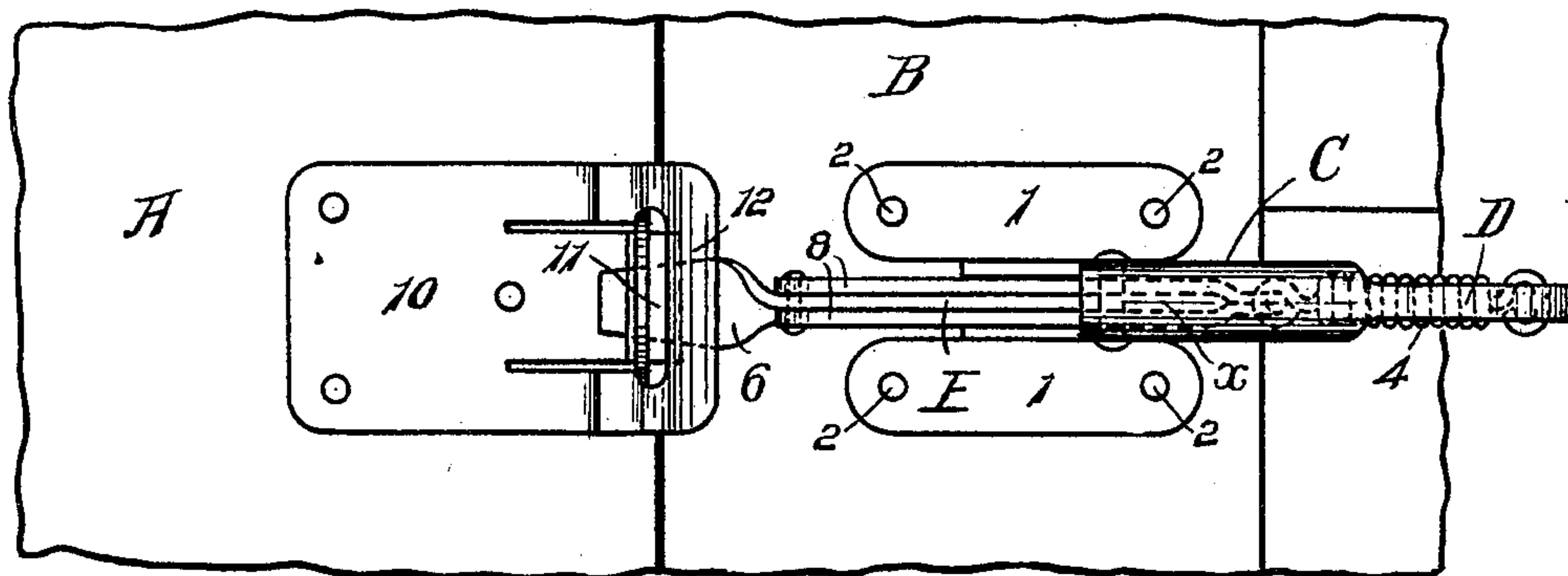
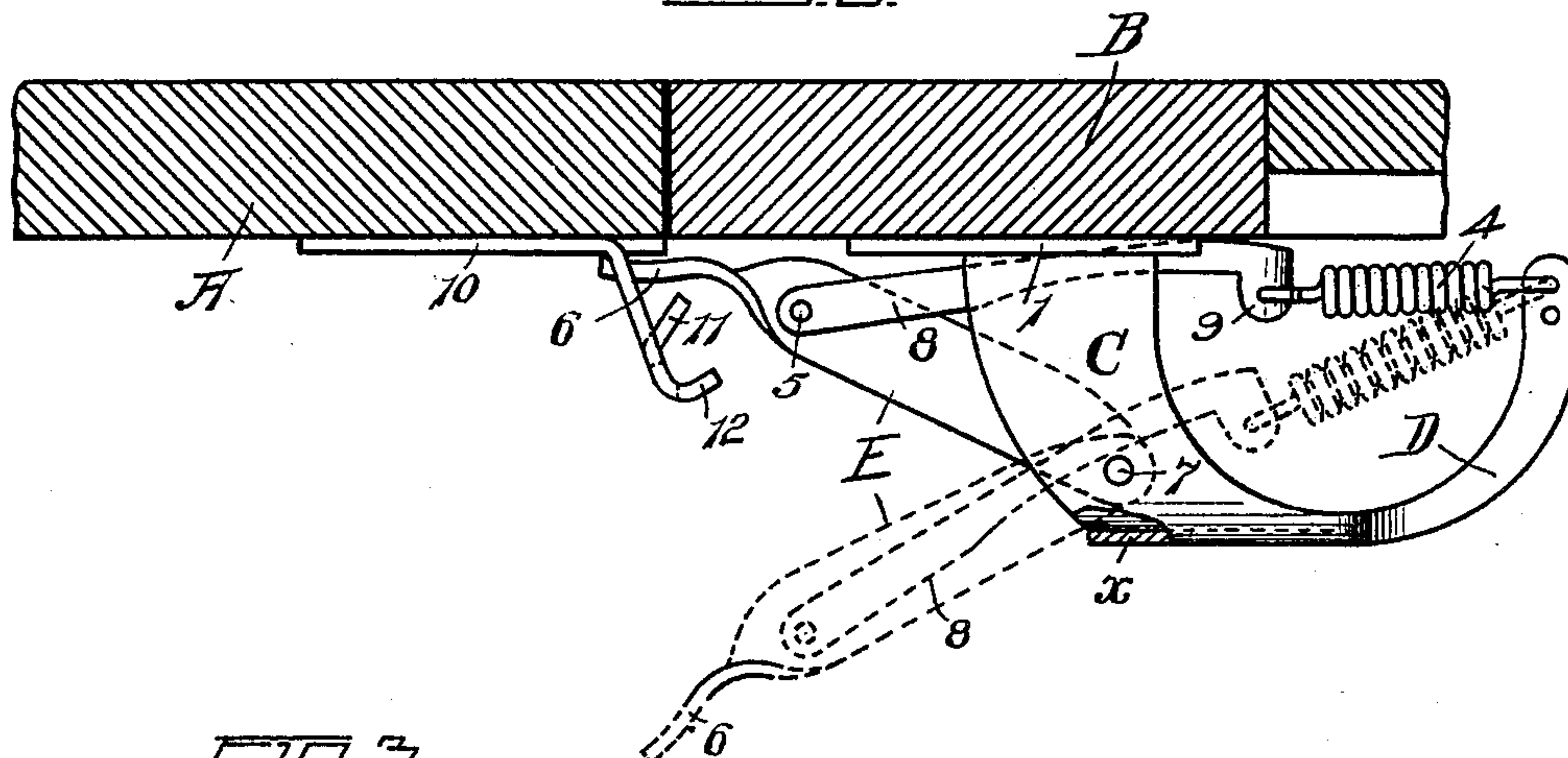
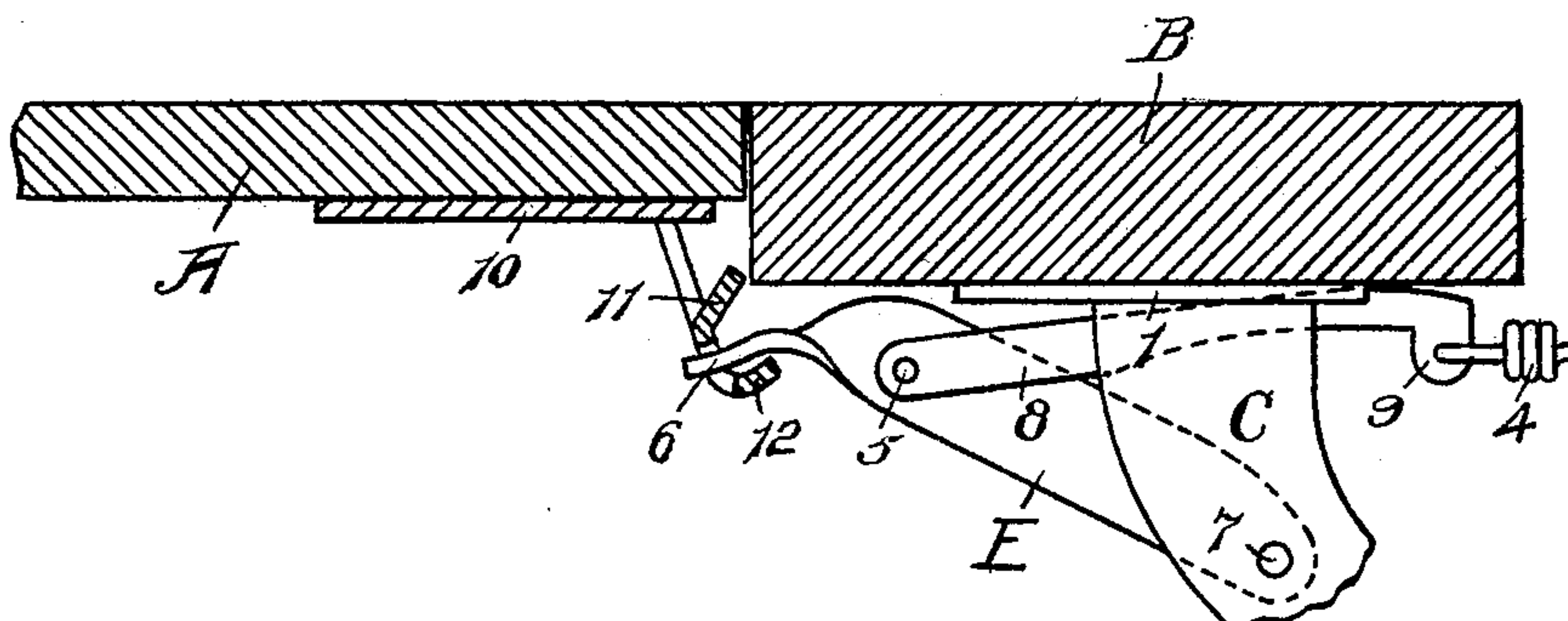


FIG. 2.



103.



Inventor:

Witnesses .

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UNITED STATES PATENT OFFICE.

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DOOR-CLOSER.

No. 824,538.

Specification of Letters Patent.

Patented June 26, 1906.

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To all whom it may concern:

Be it known that I, WILLIAM L. GIERSDORF, a citizen of the United States, residing at Council Bluffs, in the county of Pottawattamie and State of Iowa, have invented certain new and useful Improvements in Door-Closers, of which the following is a specification.

My invention relates to a new and useful improvement in door-closers, and has for its object to provide a door-closer which does not depend upon the thickness of the door for actuating it, but may be applied to any door.

Preferably my door-closer is used on light doors and screen-doors; and to this end my invention consists in the use of a spring-actuated arm movably held within a saddle, which is secured to the door casing or jamb, and a plate provided with lips suitably secured to the edge of the door and adapted to strike the aforesaid arm and set the same in motion to close the door; and it further consists of the construction and arrangements of parts, all as more fully hereinafter described, and definitely pointed out in the claim.

In the drawings, Figure 1 shows a front elevation of my improved door-closer with the door closed. Fig. 2 is a plan view thereof, showing the parts in full lines when the door is closed and in dotted lines when the door is open, while Fig. 3 shows a plan view of my improved door-closer as used when the door does not set flush with the door casing or jamb.

As shown in the drawings, A designates the door, and B the door casing or jamb, to which the U-shaped saddle C is secured, which saddle is preferably made of sheet metal and provided with the ears 1 1 and bent at right angles thereto and secured to the door casing or jamb B by means of the screws 2. This saddle C is further provided with the curved arm or brace D, to which the coiled spring 4 is secured, and which saddle at the point marked X is constructed to provide a stop for the closing lever-arm E and keep the same from passing too far beyond the center line. Pivotally held within this U-shaped saddle C by means of the pin 7 is the closing lever-arm E, which is provided with the lip 6. Pivotally held, by means of the pin 5, near the lip end of the lever-arm E is the strap 8, which is provided with the ear 9, to which the coil-spring 4 is secured, while the opposite end of said spring is secured to the curved arm or brace D, as clearly shown in Fig. 2.

Secured to the door A by means of the screws 13 is the plate 10 in operative relation to the lip 6 of the closing lever-arm E, said plate 10 being bent so as to form an obtuse angle, the bent end or portion of said plate 10 being provided with the two lips 11 and 12, the lip 11 being adapted to actuate the closing lever-arm when the door sets flush with the door casing or jamb, as shown in Fig. 2, and the lip 12 being adapted to perform the same duty when the door sets in, as shown in Fig. 3. As shown in Fig. 2 of the drawings, the lip 11 is arranged to strike the lip 6 of the lever-arm E as the door is swung closed and carry the same past the center line or dead-center, when the coiled spring 4 will pull the closing lever-arm E down against the plate 10, thereby providing a door-closer that will automatically close the door and hold the same in a closed position until the door is again opened, when the plate 10 will raise the closing lever-arm E and cause the coiled spring 4 to give until the closing lever-arm E has passed the center line or dead-center, in which position it will be held by the coiled spring 4 until the door is again opened.

In using my door-closer on a door, as shown in Fig. 3, which does not set flush with the door casing or jamb B, I place the plate 10 back a little ways from the meeting edges of the door and the door-casing, as shown in Fig. 3, so that the lip 12 will strike the lip 6 of the closing lever-arm E as the door is swung closed and carry the same past the center line or dead-center, when the coiled spring 4 will pull the closing lever-arm E down against one end of the lip 11 of the bent plate 10, as clearly shown in Fig. 3, in which position it will be held by the coiled spring 4 until the door is again opened. When the door is opened, the lip 11 will raise the closing lever-arm E and cause the coiled spring 4 to give until the closing lever-arm E has passed the center line or dead-center, in which position it will be held by the coiled spring 4 until the door is again closed.

As above stated, I provide a door-closer which does not depend upon the thickness or size of the door, but can be used on any door, but preferably on light doors and screen-doors, which it has been found often warp and leave an open space at the top or bottom of the door, through which flies and other bugs may enter. It will also be noticed that my door will obviate the use of the spring-hinge usually used on screen-doors. It is of course under-

stood that these door-closers may be made of any suitable material and size.

Having thus described my invention, what I desire to secure by United States Letters
5 Patent is—

In a door-closer, the combination of a U-shaped saddle, a closing lever-arm having a lip, and pivotally held within said U-shaped saddle, a strap pivotally secured to said closing lever-arm, a coiled spring secured to the de-
10 pending lip or ear of said strap, the opposite end thereof being secured to the curved arm or brace of aforesaid U-shaped saddle, the curved back of said U-shaped saddle provid-

ing a stop to limit the backward movement 15 of the aforesaid closing lever-arm, a plate bent in the shape of an obtuse angle and provided with two lips for actuating the aforesaid closing lever-arm, the parts arranged and operating substantially as and for the 20 purpose set forth.

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

WILLIAM L. GIERSDORF.

Witnesses:

CHAS. H. VON MANSFELDE,
IDA M. WALTERS.