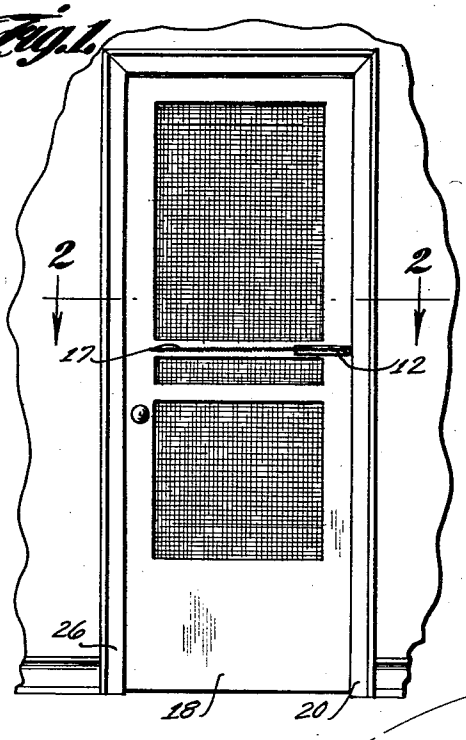
May 31, 1955 A. J. JORGENSON 2,709,274

SPRING MOUNTING FOR DOOR CLOSERS

Filed April 16, 1954

Fig. 1.



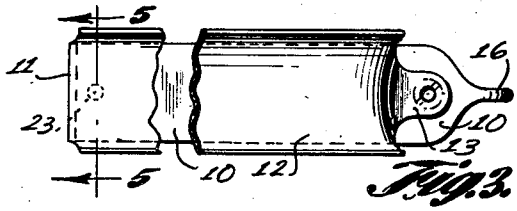


Fig. 3.

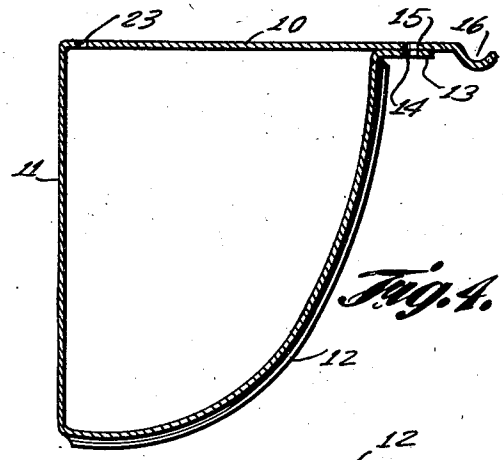


Fig. 4.

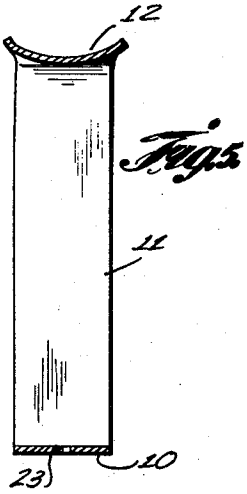
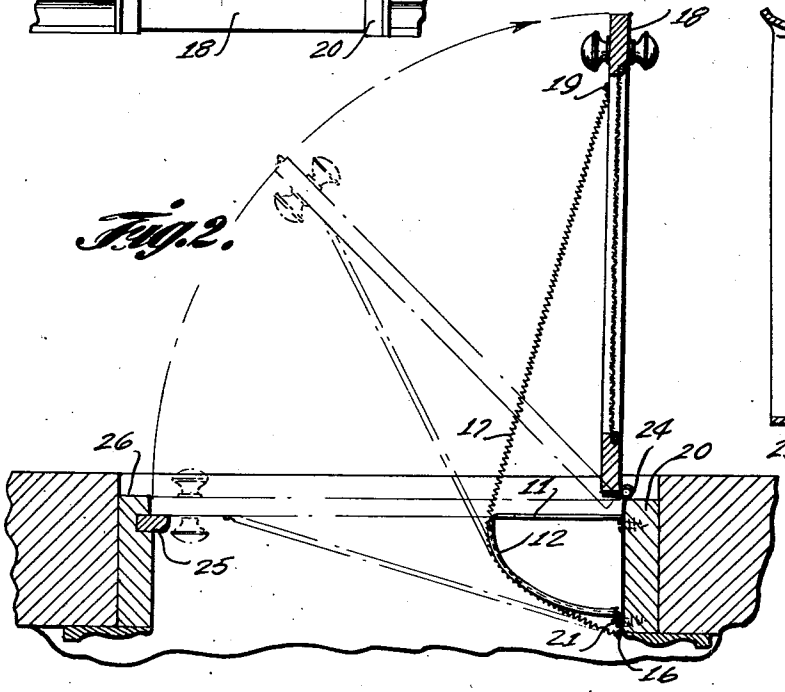


Fig. 5

Fig. 2.



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SPRING MOUNTING FOR DOOR CLOSERS

Anton J. Jorgenson, St. James, Minn.

Application April 16, 1954, Serial No. 423,711

1 Claim. (Cl. 16—72)

This invention relates to a spring mounting for screen and storm doors, or for doors used for other purposes, and in particular a bracket having an arcuate spring track adapted to be mounted on a door frame whereby with a conventional door spring extended over the bracket and positioned with one end attached to a door hinged to the frame and the other attached to the bracket a resilient closing force is applied to the door from a point spaced from the hinge thereof.

The purpose of this invention is to provide an improved mounting for a door closing spring whereby the spring is spaced from the surface of the door and the possibility of forming grooves in the door is eliminated.

With the conventional door spring, one end of the spring is attached to the door and the other to the frame and when the door swings to the open position the spring rubs against the door eventually causing a groove in the surface of the door and with the spring mounted in this manner the force of the spring is applied directly toward the hinges of the door. With this type of mounting excessive loads are applied to the spring and with the door passing over the center in the full open position the spring is required to use the edge of the door as a fulcrum in order to start the closing movement of the door. With this thought in mind this invention contemplates a bracket having an outwardly extended arcuate track adapted to be mounted on a door frame at the hinged side of the door whereby with the spring trained over the bracket the force for closing the door is applied from a point spaced outwardly from the hinge.

The object of this invention is, therefore, to provide means for mounting a spring on a door, such as a screen or storm door, whereby the spring is supported in an outwardly extended position to provide tension on a line of force extended from the free side of the door to a point spaced outwardly from the hinges thereof.

Another object of the invention is to provide means for mounting a door spring whereby it is impossible for the spring to come in contact with the surface of the door.

A further object of the invention is to provide a door spring mounting bracket that is adapted to be supplied as a separate and independent unit and that may be used on doors now in use.

A still further object of the invention is to provide a door closing spring bracket which holds a spring outwardly in spaced relation to hinges of a door in which the bracket is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a base plate having an arm extended from one end with an arcuate track, substantially semi-circular in cross section connecting the extended end of the arm to the extended end of the base with a hook on the extended end of the base and with a spring trained over the track with one end connected to the hook and the other to the extended edge of a door, hinged to a frame, on which the base plate is mounted.

Other features and advantages of the invention will appear from the following description taken in connection with the drawing, wherein:

Figure 1 is an elevational view showing a screen door in a door frame with a spring secured to the door and trained over a spring mounting bracket positioned on the door frame.

Figure 2 is a sectional plan taken on line 2—2 of Fig. 1 with the parts shown on an enlarged scale, showing the door in the open position, in full lines and in closed and partly closed positions in broken lines.

Figure 3 is an elevational view looking toward the arcuate track of the bracket and showing the device with part of the track broken away.

Figure 4 is a sectional plan through the bracket with the parts as shown in Fig. 3.

Figure 5 is a cross section through the extended end of the bracket, being taken on line 5—5 of Fig. 3.

Referring now to the drawing wherein like reference characters denote corresponding parts the improved door spring mounting of this invention includes a bracket having a base **10** with an arm **11** extended outwardly from one end, a track **12**, arcuate in cross section, connecting the extended end of the arm to the end of the base opposite to that from which the arm extends, the end of the track being connected to the base with a flange **13** having an opening **14** extended therethrough and with the opening **14** positioned to register with a similar opening **15** in the base.

The extended end of the base is provided with a hook or finger **16** to which one end of a spring **17** is attached and, as shown in Figure 2, the opposite end of the spring is attached to the inner surface of a door **18** with a suitable fastener **19**.

The bracket is attached to a jamb or side of a door frame, such as the member **20** with a screw **21** extended through the openings **14** and **15** and with a screw extended through an opening **23** in the opposite end of the base.

With the door mounted in the frame with hinges **24** it is resiliently urged against a stop **25** in the member **26** at the opposite side of the frame by the spring and with the door in the open position, as illustrated in Figure 2, the force of the spring is applied from the end of the bracket whereby the door is adapted to be closed with a positive swinging action.

The bracket may be positioned as shown in Figs. 1 and 2, however, it will be understood that the bracket may be mounted at any other suitable point on the door. It will also be understood that the spring mounting may be used on doors of any type or description.

It will be understood that modifications, withni the scope of the appended claim, may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

A door closer comprising a bracket having a base with an arm extended outwardly from one end at right angles thereto and having an arcuate track, also arcuate in cross section, a flange on one end of the arcuate track for connecting the extended end of the arm to the end of the base opposite to that from which the arm extends, a hook on the end of the base outwardly of the connection of the arm to the base, and a spring adapted to be trained over the track with one end attached to the hook on the base of the bracket and the opposite end attached to the face of a door hinged to the frame upon which the bracket is positioned.

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