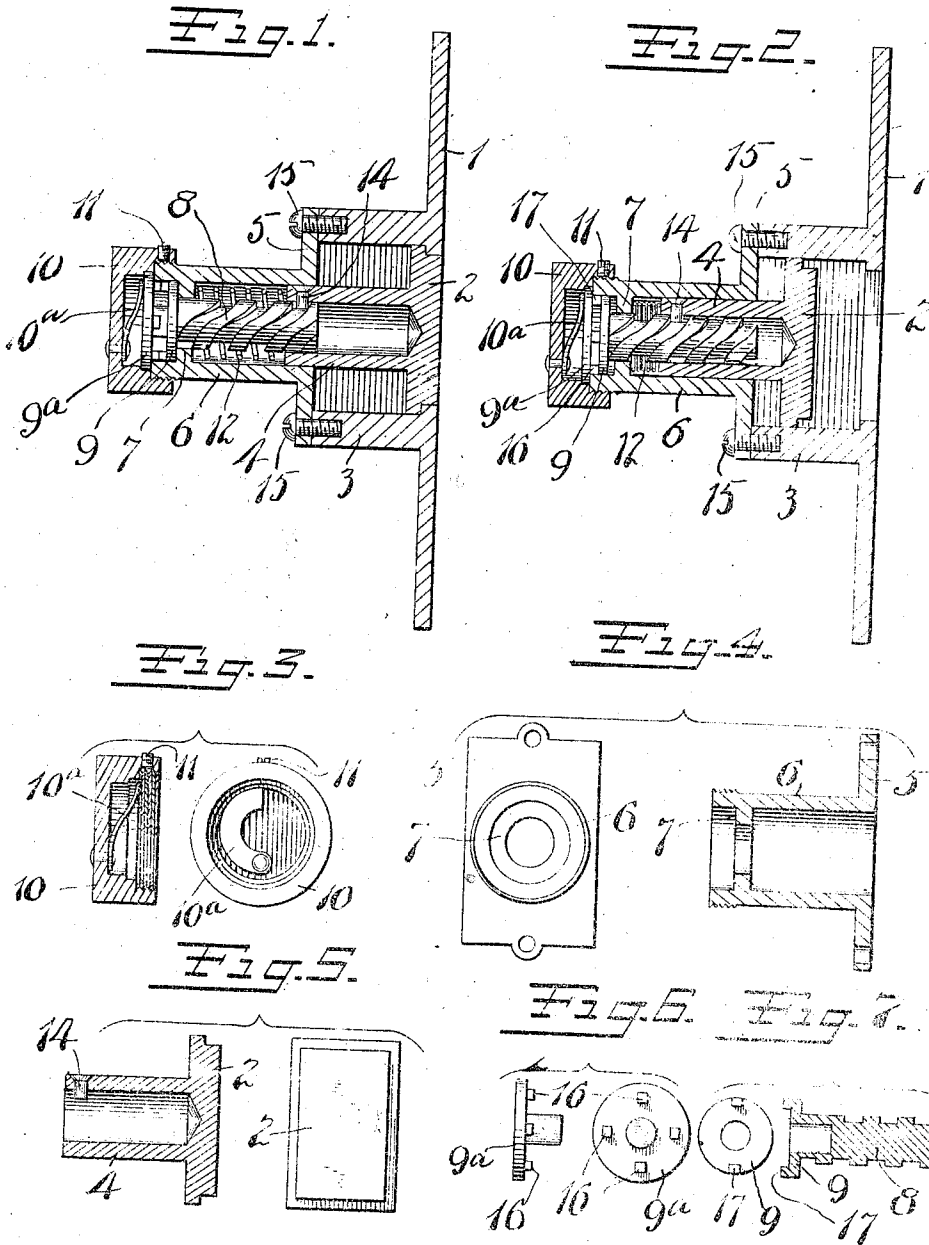


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 STRIKE PLATE FOR SPRING LATCHES.
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1,004,716.

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Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY G. VOIGHT, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO RUSSELL & ERWIN MANUFACTURING COMPANY, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

STRIKE-PLATE FOR SPRING-LATCHES.

1,004,716.

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To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, citizen of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Strike-Plates for Spring-Latches, of which the following is a full, clear, and exact description.

My invention relates to an improved strike-plate for spring latches, the object being to provide a construction whereby when the latch springs into the keeper opening in said strike-plate it will be retarded so as to prevent the disagreeable clicking noise. In many public institutions, such as hospitals and sanitariums, this clicking noise is a source of great annoyance, and it is to overcome this objectionable feature that my invention is mainly aimed. In the present invention the construction is such that the first advance movement of the latch into the keeper opening is free and unretarded.

In the accompanying drawings, Figure 1 is a vertical section of the entire device assembled ready for use and in its normal position. Fig. 2 is a similar view showing the parts in a different position. Figs. 3, 4, 5, 6 and 7 each show two views of different details.

1 represents a strike-plate having the usual keeper opening.

2 represents a filler plate which normally occupies the filler opening flush with the surface of the strike-plate.

3 is a box-like rearward extension on the plate 1. The filler plate 2 is guided in the box 3.

4 is a rearward sleeve-like extension on the filler plate 2.

5 is a cap for the rear of the box 3.

6 is a sleeve-like extension at the rear of the cap 5.

7 is a contraction intermediate the length of the bore of the extension 6.

8 is a shaft having a spiral thread thereon.

9 is a head on the rear of the shaft 8. This head normally lies just to the rear of the contraction 7.

9^a is a friction disk or plate, to the rear of the head 9 and normally out of operative engagement therewith.

10 is a head block at the rear end of the extension 6 and secured thereto in any suitable manner, as by a thread. The plate 9^a is located preferably between the head block

10 and the end of the extension 6, and is capable of rotation.

10^a is a brake carried within the head block 10 and bearing against the plate 9^a. The spring 10^a may or may not be adjustable as desired.

The head block 10 may or may not be adjustable on the extension 6 as desired.

11 is a lock screw for the head block.

12 is a spring surrounding the shaft 8, the ends of said spring bearing against the contraction 7 and the rear end of the extension 4.

14 is a pin carried by the extension 4, the end of said pin projecting into the spiral on the shaft 8.

15—15 are screws arranged to hold the cap 5 against the rear end of the box 3.

16—16 are lugs projecting forwardly from the plate 9^a.

17—17 are lugs projecting rearwardly from the head 9.

The normal position of the parts is as shown in Fig. 1. In this position the spring 12 holds the filler plate 2 projected, and the engagement of the pin 14 and the spiral shaft 8 tends to draw the head 9 forwardly, so that the lugs 17 will clear the lugs 16 on the plate 9^a. When the spring latch bolt engages the filler plate 2, it will, under the influence of its spring, press said plate 2 inwardly. The first of this movement is comparatively free, it being necessary to overcome only the strength of the spring 12, which is comparatively light. Since the latch bolt may partake of its first movement against but little resistance, the forward end or nose of the latch bolt enters into the keeper opening sufficiently so that there is no danger of the door swinging open. As soon as the plate 2 has been repressed or pressed in to a slight degree, it will, by reason of the engagement of the pin 14 in the spiral shaft 8, cause the head 9 to move backwardly and away from the contraction 7, thus bringing the lugs 17 into engagement with the lugs 16, which lugs operate after the manner of a clutch to couple together the head 9 and the plate 9^a. Any further repression of the filler plate 2 will cause, through the aforesaid pin and spiral connection, rotation of the head 9, and through the medium of the clutch lugs, a corresponding rotation of the plate 9^a. The brake 10^a bearing against the plate 9^a re-

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tards the free rotation thereof to a sufficient extent to retard the inward movement of the filler plate 2, and correspondingly retard the advance movement of the latch bolt (not shown). Thus the latch bolt approaches its fully projected position comparatively slow, and sufficiently slow to prevent the afore-said annoying click. When the latch bolt is retracted, the clutches instantly release, so that the head 9 will turn with comparative freedom, and thereby permit the filler plate 2 to quickly follow out the retracting latch until said filler plate assumes its normal closing position indicated in Fig. 1. In Fig. 2 the parts are shown in the position they would assume with the latch bolt projected into the keeper opening, repressing the filler plate 2.

What I claim is:

1. In a strike-plate for spring latches, a face plate having a keeper opening therein, a filler plate for said opening movable to and fro, a friction device, means of connection between said friction device and said filler plate, including a clutch, said clutch being arranged to engage when the filler plate is repressed and disengaged when the filler plate is advanced, and a spring for advancing said filler plate.
2. In a strike-plate for spring latches, a

face plate having a keeper opening therein, a filler plate adapted thereto and arranged to be movable in and out, a rotatable shaft at the rear of said plate, a spiral connection between the plate and shaft whereby said shaft will be rotated when said plate is moved in or out, a rotatable friction plate, a brake therefor, a clutch between said shaft and said friction plate whereby said shaft will be connected with said friction plate when said filler plate is moved inwardly and will be disconnected from said friction plate when said filler plate moves outwardly, and a spring for advancing said filler plate.

3. In a strike-plate for spring latches, a face plate having a keeper opening therein, a filler plate adapted to said opening and movable in and out, and a friction brake for retarding the inward movement only of said filler plate.

4. In a strike-plate for spring latches, a face plate having a keeper opening therein, a filler plate adapted to said opening and movable in and out, and a rotary friction device for retarding the inward movement only of said filler plate.

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Witnesses:

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