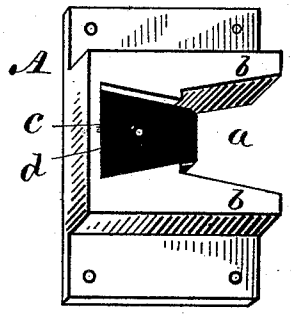
(No Model.) 2 Sheets—Sheet 1.

F. P. STONE.

LOCK STRIKE.

No. 417,845. Patented Dec. 24, 1889.

Fig. 1.



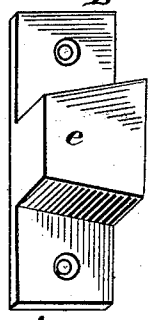


Fig. 2.

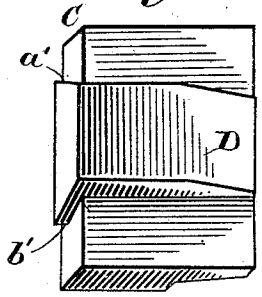


Fig. 3.

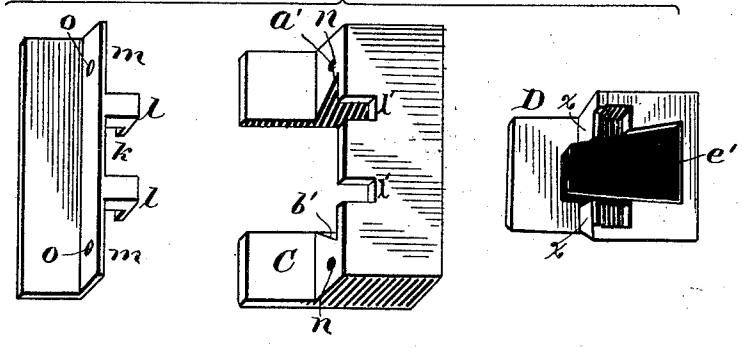


Fig. 4.

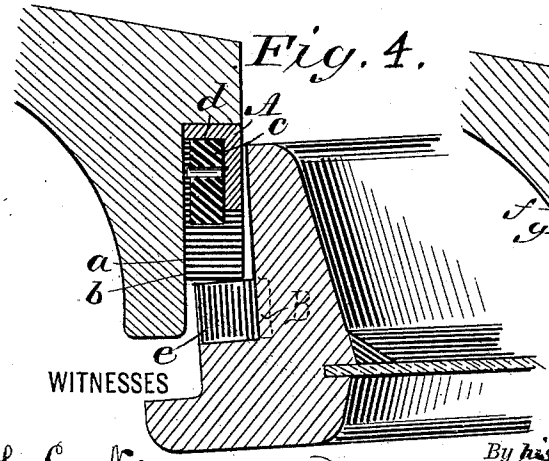
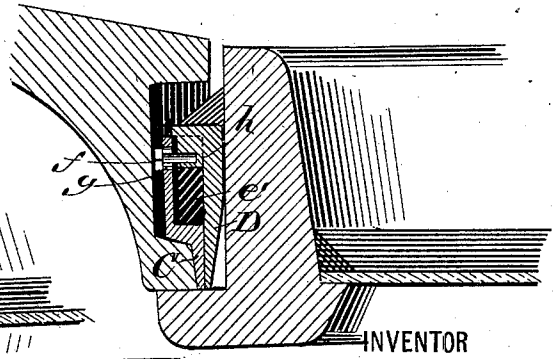


Fig. 5.



WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

F. P. STONE.

LOCK STRIKE.

No. 417,845. Patented Dec. 24, 1889.

Fig. 8.

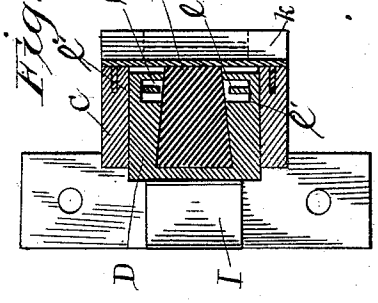


Fig. 10.

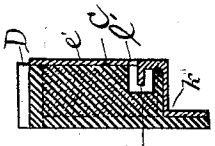


Fig. 9.

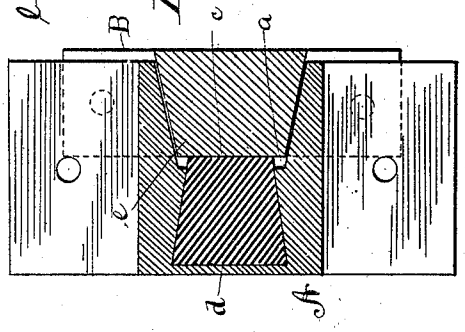


Fig. 7.

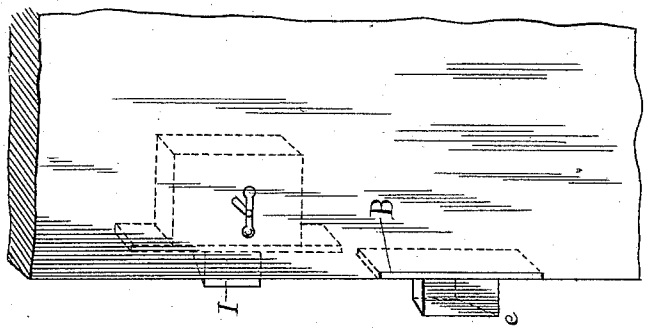
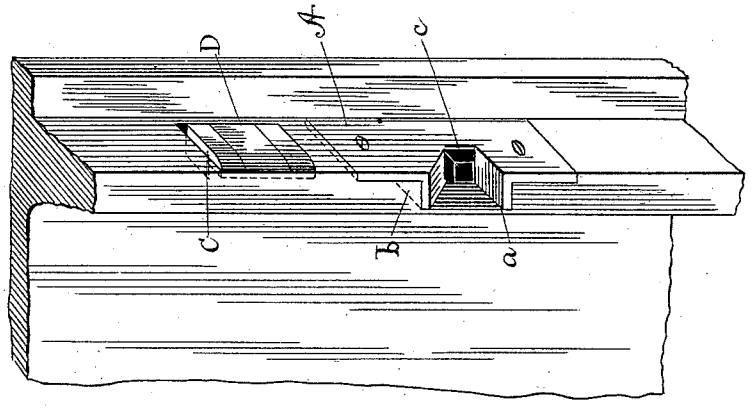


Fig. 6.



Witnesses
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Inventor
Frank P. Stone.
By his Attorneys
Marcus D. Hopkins

UNITED STATES PATENT OFFICE.

FRANK. P. STONE, OF CHICAGO, ILLINOIS.

LOCK-STRIKE.

SPECIFICATION forming part of Letters Patent No. 417,845, dated December 24, 1889.

Application filed June 12, 1888. Serial No. 276,806. (No model.)

To all whom it may concern:

Be it known that I, FRANK. P. STONE, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented new and useful Improvements in Door-Bumpers and Lock-Strikes, of which the following is a specification.

My invention relates to improvements in door-bumpers which are used to prevent striking of doors against frames where they are subject to any motion or shock, as in coaches, carriages, and other vehicles, and in lock-strikes in the same situations contrived to hold doors closed against jambs, and at the same time to relieve the strain upon the lock-bolt.

My invention consists of the devices illustrated in the accompanying drawings, which I will describe in detail, and then define succinctly in my claims.

Figure 1 represents a back view of jamb-plate and door plate or bumper. Fig. 2 is a front view of the lock-strike. Fig. 3 shows the corresponding parts of the plate C and the tongue D with an angular plate *k*, bearing two lugs *l l*, which may be used instead of the set-screw *f*. Figs. 4 and 5 illustrate the use and correspondence of the several parts combined, being a horizontal transverse section of a jamb and door-edge with devices attached. Fig. 6 is a perspective view of a section of a door-jamb with my improved lock-strike and the jamb-plate of my bumper attached. Fig. 7 shows a perspective view of a corresponding section of a door carrying an ordinary latch and the door-plate of my bumper. Fig. 8 is a plan view of the plate and latch-bolt of an ordinary latch and a vertical central section of my lock-strike detached, the parts being in the position which they occupy in use. Fig. 9 is a central vertical section of the two parts of my improved bumper combined as in use. Fig. 10 is a longitudinal section of my lock-strike detached.

A is the jamb-plate, intended to be sunk into the jamb until the surface of the plate is flush with the surface of the jamb. The dovetail cavity *a*, facing outwardly, opens toward the door. Into the upper inside surface of the raised part *b*, which forms the sides of the cavity *a*, extends a rubber or metal spring *c*, having a fixed base at *d*, extending thence into the cavity *a* and tending to exert a force in the direction from *d* toward the cavity *a*.

B is the door-plate carrying the dovetail projection *e*, which is made to correspond with and fit into the dovetail cavity *a* when the door is closed. In use the jamb-plate and door-plate are placed in corresponding positions upon the jamb and door-face, respectively, as near the lock as they can be, so that when the door is closed the dovetails fit close and support the weight of the door, thus preventing sagging or straining, while the spring by its repellent force prevents rubbing or rattling of the door and door-frame against each other, which would otherwise take place to the injury of the finish of the parts.

C is a fixed plate carrying a tongue D, having a slightly-curved outside surface and dovetailed to slide along guides *a' b'*.

D is a sliding tongue.

e' is a metal or rubber spring.

k is an angular plate, and *o o* are screw-holes in the plate *k*.

l l are lugs made integral with the plate *k*.

x x are cavities in the sliding tongue D, made to receive the ends of the lugs *l l*.

l' l' are recesses cut into the plate C to admit the heads of the lugs *l l*.

n n are holes made to receive screws for connecting the angular plate *k* to the plate C.

In use the sliding tongue D, being fitted into the plate C, so that it will slide along the guides *a' b'*, provided for it, the angular plate *k* is fitted against the plate C. The projections of the lugs *l l* being entered into the recesses *l' l'*, the plate *k* is secured to the plate C by screws passing through the holes *o o*, screwing into the holes *n n*. In this position the ends of the lugs enter the cavities *x x*. The spring *e'*, pressing against the plate *k* and the front of the sliding tongue D, projects the tongue D beyond the plate C, as shown in Fig 2, and holds it yieldingly in this position. If a force sufficient to overcome the force of the spring *e'* is applied to the front of the sliding tongue D, it will drive it back until the ends of the lug *l* come in contact with the sides of the cavities *x x*, when further motion of the sliding tongue is resisted. Upon the tongue being released the spring *e'* at once projects it back into its normal position. This yielding action of the

lock-strike, when it is used to hold the door shut, relieves the strain upon the lock-bolt I, occasioned by a sudden jolt or shock, and that which is constantly exerted upon it by the action in the opposite direction of the spring *a*.

To accomplish the object of my invention, use has heretofore been made of ordinary rubber bumpers at the top and bottom of the door. The objection to that is that the bumpers tend to warp the door and strain the lock, and that in themselves they afford no support for the door itself. My invention is designed to remedy this deficiency by providing at the same time a support for the door, a protection for the door, and a relief for the lock-bolt.

The position of my bumper, as described, being as near the lock as possible, and also as nearly opposite the lock-strike, the strain is taken away from the ends of the door-sash and placed between two compensating springs, which may be adjusted so as to hold the door firmly to its place without its pressing rigidly against either the door-frame or the lock-bolt to the injury of either.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination of a spring lock-strike with a spring jamb-plate, the spring in each acting in opposite directions, substantially as set forth.

2. The combination of a jamb-plate A, having a dovetail cavity *a* and a spring *c*, with a door-plate B, carrying a dovetail *e*, substantially as set forth.

3. In a lock-strike, the combination of a sliding tongue and a spring to actuate the tongue in the direction of the path of the lock-bolt, substantially as set forth.

4. A lock-strike C, provided with a sliding tongue D, a spring *e'*, and lugs *l l*, substantially as described.

5. The combination of a jamb-plate A, having a dovetail cavity *a* and a spring *c*, a door-plate B, carrying a dovetail *e*, and a lock-strike C, provided with a sliding tongue D, spring *e'*, and lugs *l l*, substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

FRANK. P. STONE.

Witnesses:
W. W. CARLAND,
WALTER SHAVER.