

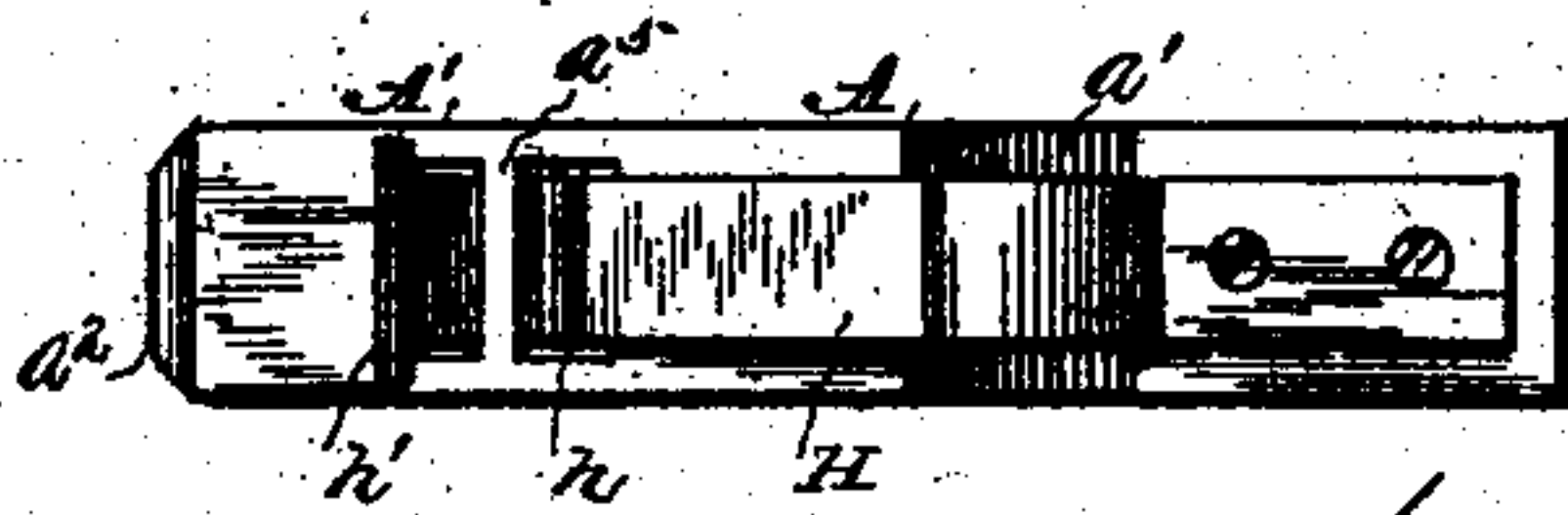
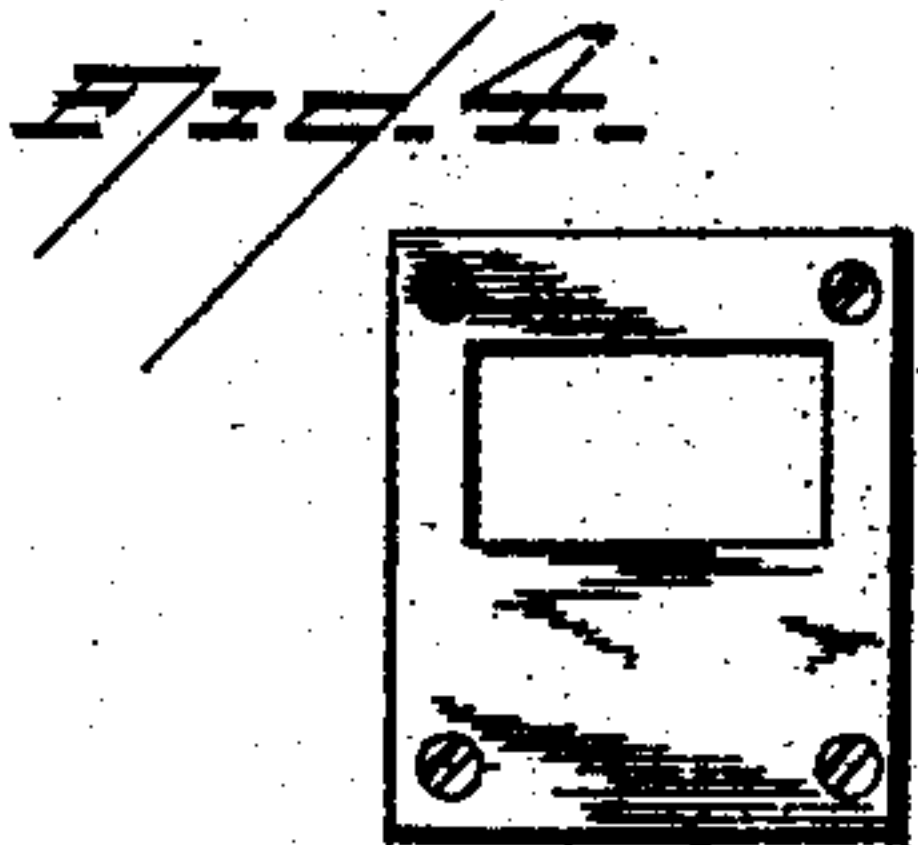
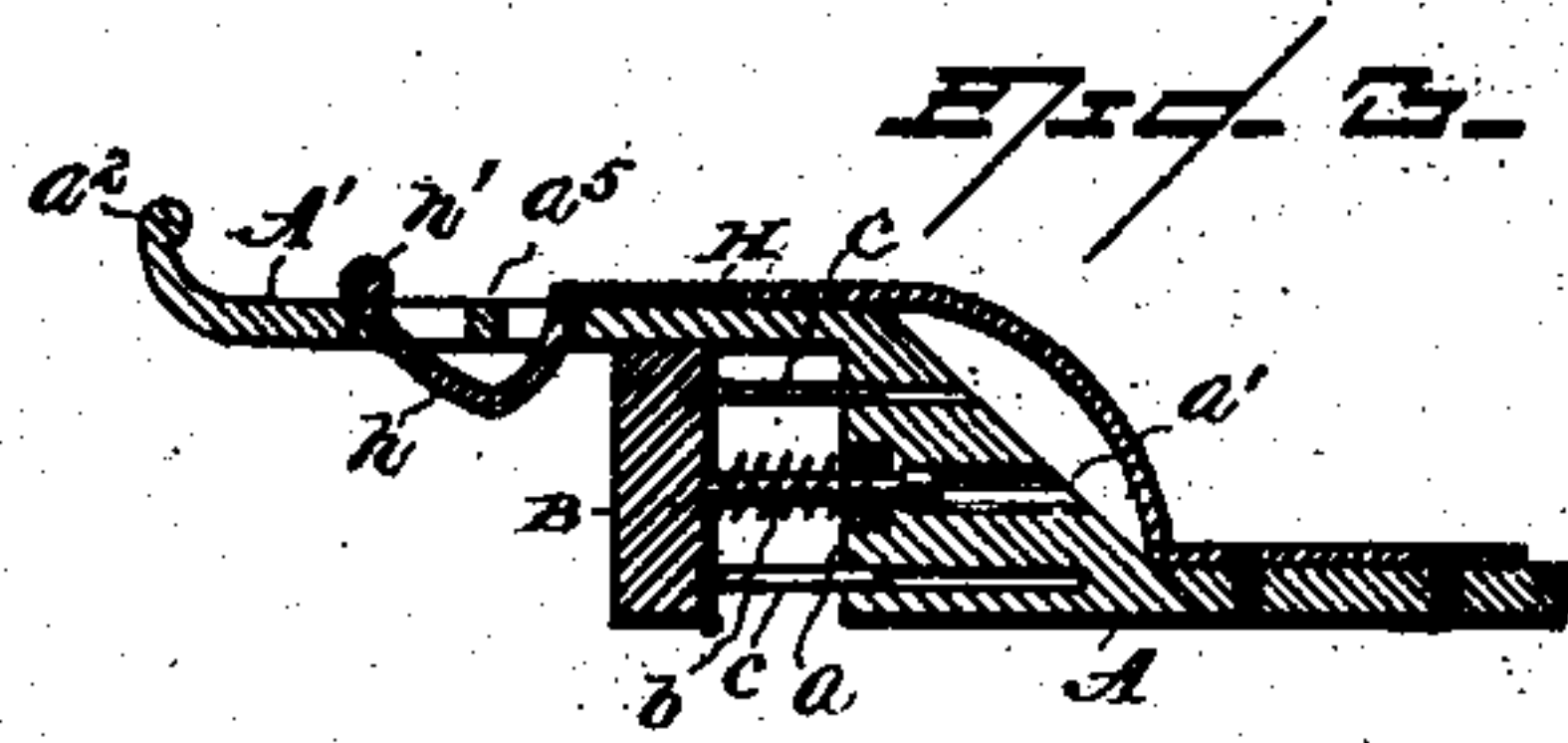
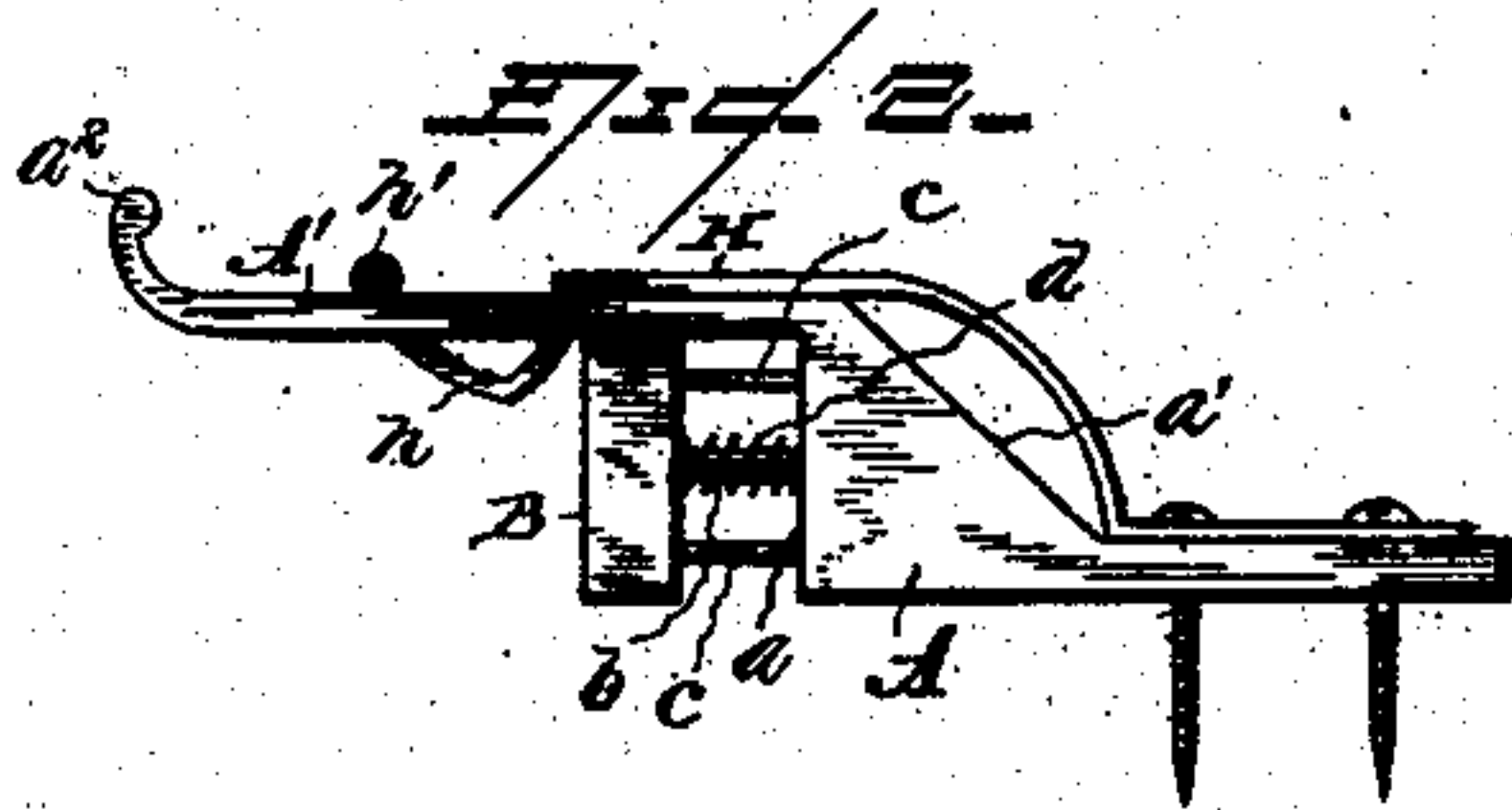
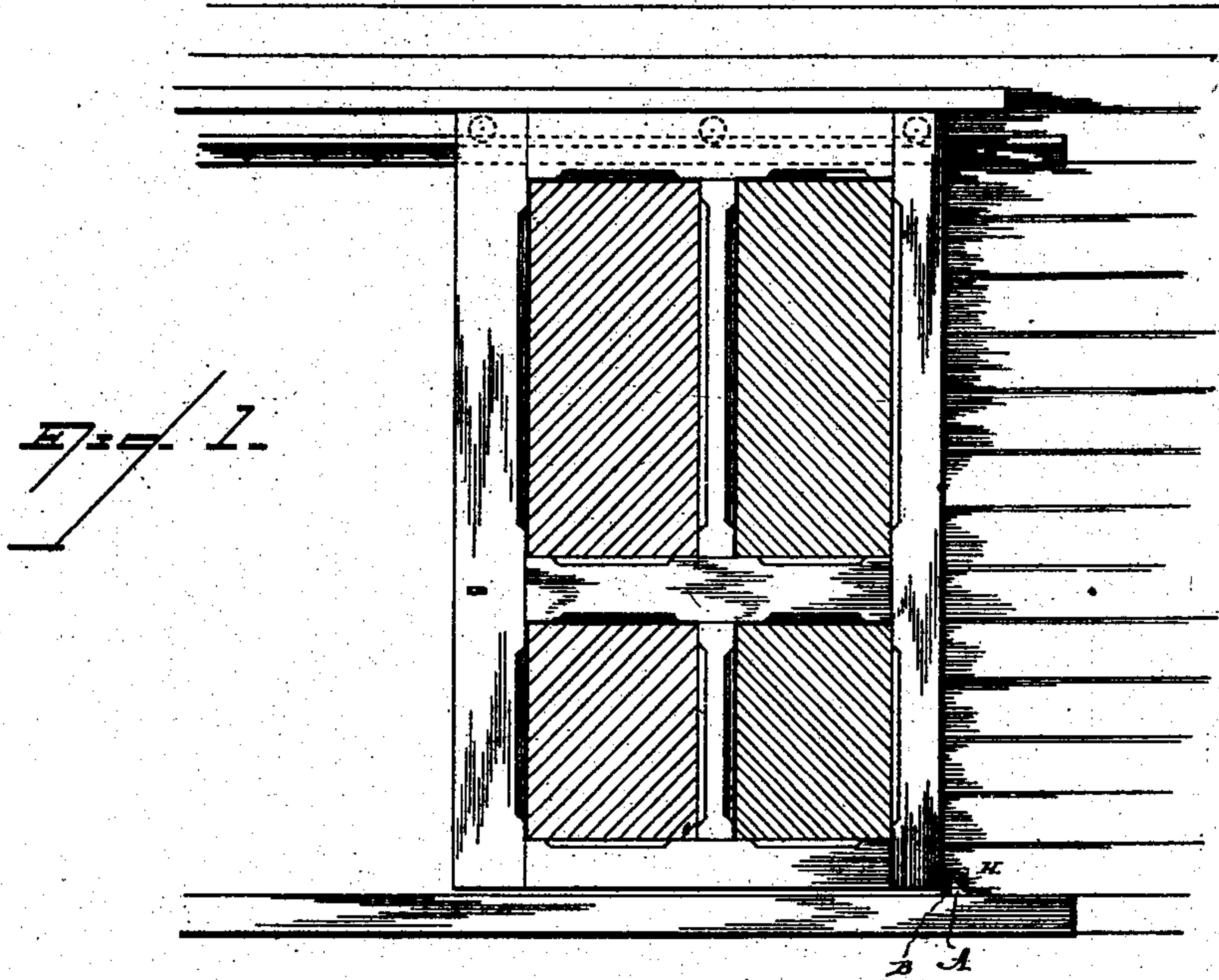
No. 693,187.

Patented Feb. 11, 1902.

F. L. TERRELL.
COMBINED DOOR BUFFER AND CATCH.

(Application filed July 10, 1901.)

(No Model.)



Witnesses

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by

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UNITED STATES PATENT OFFICE.

FRANK L. TERRELL, OF SWANTON, NEBRASKA.

COMBINED DOOR BUFFER AND CATCH.

SPECIFICATION forming part of Letters Patent No. 693,187, dated February 11, 1902.

Application filed July 10, 1901. Serial No. 67,781. (No model.)

To all whom it may concern:

Be it known that I, FRANK L. TERRELL, a citizen of the United States, and a resident of Swanton, in the county of Saline and State of Nebraska, have invented certain new and useful Improvements in a Combined Door Buffer and Catch, of which the following is a specification.

The object of this invention is to provide a combined buffer and catch which is especially adapted for application to sliding doors of all kinds for the purpose of receiving the impact of the opening movement of the door and to engage and hold said door open.

A further object of the invention is to provide a device of this character which shall be simple in construction, strong, and durable.

The invention consists of a block having a guiding-arm projecting forwardly therefrom, a movable buffer-plate at the inner end of the arm, a spring or springs interposed between the buffer-plate and block, and a flat spring or catch having the hook portion thereof projecting through the guiding-arm from the upper side thereof.

The invention further consists in the particular construction and combination of the parts constituting the device, all as will be hereinafter fully set forth, and specifically claimed.

In the accompanying drawings, which form a part of this specification, and in which like letters of reference indicate like parts in the several views, Figure 1 is a side elevation illustrating the application of my invention. Fig. 2 is a side elevation of the device. Fig. 3 is a longitudinal vertical sectional view. Fig. 4 is a detail view of the keeper-plate. Fig. 5 is a plan view of the device.

Referring to said drawings, A designates a metal block which forms the body portion of the device, the face a being disposed at right angles with the base, while the rear surface a' is inclined forwardly, as shown. The base portion of the block is extended rearward to provide an increased bearing, and said extended base portion has two or more holes through which the securing-screws are passed for holding the block firmly in place. Formed integrally with the metal block A, and projecting forwardly from the upper end thereof, is a horizontal arm A' , forming the guid-

ing-arm, with its free end curved upward, as shown at a^2 , to insure its entrance into the keeper-plate, hereinafter referred to. Below this guiding-arm and bearing against the under side thereof is a buffer-plate B, which is connected to the block A by a rod b , projecting centrally from the rear side thereof, the rear end of said rod having a head which limits the forward movement of the plate. The buffer-plate is disposed vertically or parallel with the face a of the block and in its rearward movement comes in contact with said face, being guided by the aforesaid rod and by pins c , which project from the rear side thereof into holes in the block A. Mounted upon the rod b and interposed between the buffer-plate and face of the block is a helical spring d , forming a spring-cushion to receive the impact of the door as it is opened against the block. The face of the block A is preferably recessed, as shown, to receive the helical spring when it is compressed and protect the same from injury when the plate moves rearward.

H designates the catch, which consists of a flat spring-plate secured to the rearward extension of the block A, from which it is curved upward in the rear of the body portion of the block and then forward upon the guiding-arm A' , through which it is threaded to locate the hook portion h thereof below the under surface of said arm, the forward or free end of said catch or plate having a cross-bar h' , by which its downward movement is limited. In order to firmly connect this catch or spring plate to the block and guiding-arm, the forward end of said spring is threaded through the guiding-arm, as hereinbefore stated, and to this end the said arm is provided with transverse slots forming the cross-bar a^5 , which serves as the stop for limiting the upward movement of the catch while the downward movement is limited by the cross-bar h' . It will be noted that the hook portion of the catch is rounded, so that the door can be readily disengaged by using sufficient force to oppose the power of the spring, and that provision is made for securing a better engagement of the catch in case the device is applied to a sliding door in which the inclination of the rails is such as to require more power to hold it open. For this pur-

pose the hook portion of the catch may be projected below the guiding-arm to a more or less extent.

In connection with the buffer and catch or stop-block, hereinbefore described, the rear end of the door is provided with a recess to receive the guiding-arm, and at the forward end of said recess is a wear-plate I, having an opening through which the guiding-arm passes, the edge of the plate at the lower end of the opening forming the part with which the catch engages.

From the foregoing description, in connection with the accompanying drawings, the construction and operation of my invention will be readily understood, for upon the opening movement of the door the guiding-arm will engage and pass through the opening in the plate I on the door, so that the said door will be guided to the catch and buffer-plate, the latter receiving the impact or jar, while the former springs into engagement with the plate I.

Though I have shown and described the device as applied to a sliding door, it will be understood that it could be applied to any other style of door and could be used to stop and hold a swinging door. The device may be located at the points x , Fig. 1, to engage the upper end of the door. I do not therefore limit myself to the particular use to which the drawings show it applied, nor do I desire to limit my protection by patent to the particular construction and arrangement of the parts, as immaterial changes could be made without sacrificing any of the advantages of the invention.

Having thus described my invention, I claim—

1. In a combined buffer and catch for doors, the combination, of a block having a forwardly-projecting guide-arm, a spring-catch having its hook portion depending below the guide-arm, and a spring-buffer at the inner end of the guide-arm, substantially as shown and described.

2. In a buffer and catch for doors, the combination, of a block having a guide-arm projecting forwardly therefrom, a spring-plate

attached to the block and having a hook portion extended below the under side of the guide-arm, a buffer-plate slidable below the arm at the inner end thereof, and a spring interposed between the buffer-plate and block, substantially as shown and described.

3. In a buffer and catch for doors, the combination, of a block having a guide-arm projecting forwardly therefrom, a buffer-plate having a rod projecting through a hole in the block, and a helical spring mounted upon the rod and interposed between the plate and block; together with a spring-catch having its hook portion located in front of the buffer-plate, substantially as shown and described.

4. In a buffer and catch for doors, the combination, of a block having a guide-arm projecting forwardly therefrom, said guide-arm being provided with transverse slots, a flat spring secured to the rear end of the block and curved over the guide-arm, the free end of said spring being passed downward and upward through the slots, and a cross-bar at the forward end of the spring; together with a buffer-plate having a supporting-rod, and a spring interposed between said plate and the block, substantially as shown and for the purpose set forth.

5. In a combined buffer and catch for doors, a block having a guide-arm projecting forwardly from the upper end thereof, said guide-arm being provided with transverse slots presenting a cross-bar, a flat spring secured to the rear end of the block and having its forward or free end extended over the guide-arm and passed under the cross-bar to form a hook portion depending below said guide-arm, a cross bar or head at the free end of the spring or catch, a buffer-plate slidably mounted below the guide-arm, and a spring interposed between said buffer-plate and block, substantially as shown and described.

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

FRANK L. TERRELL.

Witnesses:

S. F. DODGE,
THEO. TURNEY.