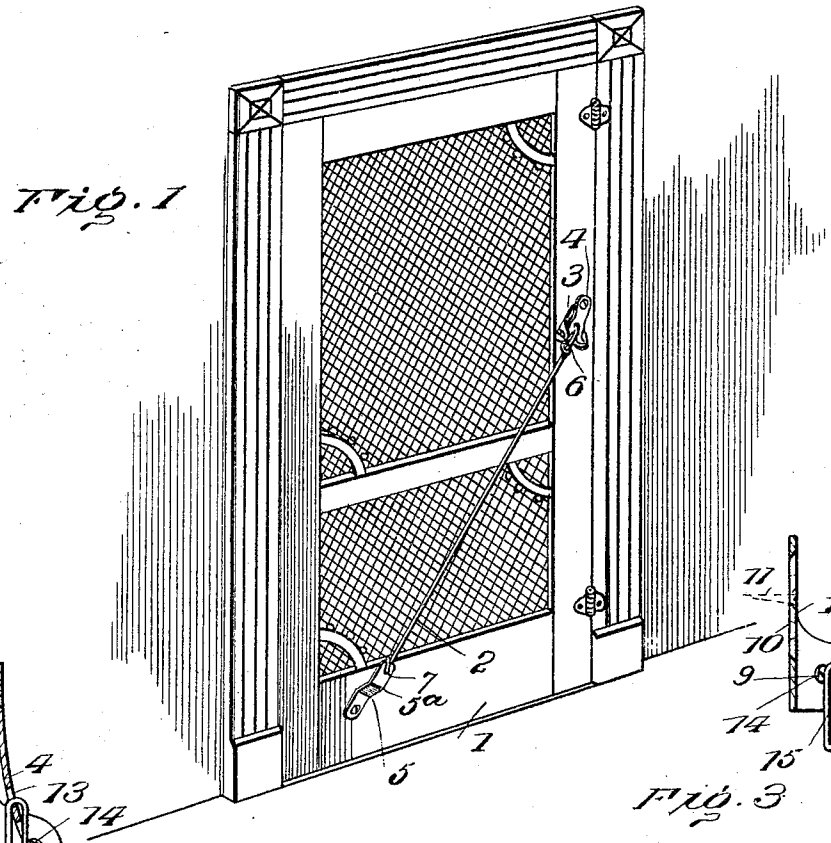
No. 799,772. PATENTED SEPT. 19, 1905.

E. ANDERSON.

DOOR STAY.

APPLICATION FILED FEB. 18, 1905.

Fig. 1



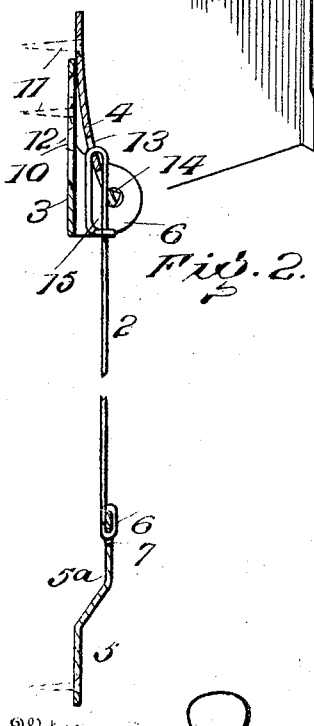


Fig. 2.

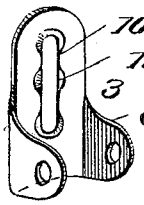


Fig. 4

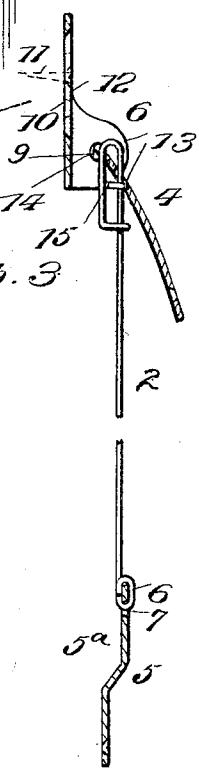


Fig. 3

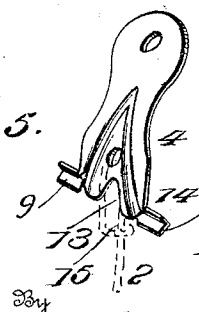


Fig. 5.

Witnesses:

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EDWARD ANDERSON, OF CHICAGO, ILLINOIS.

DOOR-STAY.

No. 799,772. Specification of Letters Patent. Patented Sept. 19, 1905.

Application filed February 18, 1905. Serial No. 246,298.

To all whom it may concern:

Be it known that I, EDWARD ANDERSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Door-Stays, of which the following is a specification.

This invention comprises a novel form of stay particularly designed for application to screen-doors or doors of skeleton construction for reinforcing the door structure against sagging at a point remote from its pivotal support.

The invention includes a suitable stay-rod which is preferably connected with the lower portion of the door at one end and with the upper rear portion at its opposite end, a take-up device of peculiar formation being utilized in combination with the stay-rod for regulating the tension of the latter in supporting the parts to which it may be applied, said take-up device constituting an essential feature of the invention.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment thereof is shown in the accompanying drawings, in which—

Figure 1 is a perspective view showing the invention applied to a screen-door of common construction. Fig. 2 is a sectional view showing the take-up device in operative relation to the stay-rod. Fig. 3 is a view similar to Fig. 2, a take-up lever being thrown into the position assumed thereby when the door is being reinforced or braced by the invention. Fig. 4 is a detail perspective view of the supporting-plate forming a part of the take-up device. Fig. 5 is a detail perspective view of the take-up lever.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In carrying out the invention the simplicity and cheapness of the device which comprises the same is had in view in order to increase the desirability and practicality of the stay means both from the standpoint of the manufacturer and the user thereof.

Minutely describing the invention, the door is indicated 1 in the drawings and is of a structure similar to many screen-doors at present in use. As before mentioned, the invention consists of a stay-rod 2 and a take-up device, which comprises a supporting-plate 3 and a lever 4, carried by said plate. The stay-rod 2 may be made of stout wire or like material within the contemplation of the invention, and the lower end of this rod is secured to a bracket 5, attached to the lower forward portion of the door 1. A screw or like fastening may be used to secure the bracket 5 to the door, and the end portion of the part 5 at which the stay-rod 2 is connected is deflected outwardly, as shown at 5^a, so as to space this portion a short distance from its support. It is preferred to bend the lower extremity of the stay-rod 2 into the form of an eye 6, which receives an end portion of the bracket 5, the rod being passed through an opening 7 near said end of the bracket 5 and looped so as to form the member 6, above described. The extremity of the stay-rod 2 which is secured to the bracket 5 is bent about the member 5 in such a manner as to prevent all play or movement with relation thereto.

The upper end of the stay-rod 2 is attached to the take-up lever 4, and this lever is pivoted to the supporting-plate 3. Projecting from the supporting-plate 3 are spaced offstanding lugs 8, having openings therethrough to receive journal-lugs 9, which project laterally from the lever 4 at one end of the latter. The plate 3 is formed with a longitudinal slot 10, through which a fastening, such as a screw 11, may be passed in order to secure the plate to the door 1, and at suitable intervals in the length of the slot 10 the plate 3 is countersunk, as indicated at 12, to receive the head of the fastening 11, above mentioned. It will thus be seen that the plate 3 may be adjusted without necessitating removal of the fastening 11, since this member may be unscrewed a short distance until the head thereof is out of the countersunk portion 12, receiving the same, whereupon the plate may be readily moved longitudinally to take up any play or sagging of the door after continued use of the stay at a former adjustment of the latter. The lever 4 is curved or slightly offset in its length, and said lever is bifurcated adjacent the pivoted end thereof, the bifurcated portions being indicated at 13. The portions 13

of the lever 4 are connected by a cross-bar 14, and the upper end portion of the stay-rod 2 is looped about the cross-bar 14, as shown at 15, to attach said rod to the take-up device.

Since the bar 14 is connected at a point between the ends of the lever 4, said lever will have a sort of cam action when thrown toward the plate 3, so as to place a tension upon the rod 2 and brace the outer portion of the door relative to the inner or hinged portion thereof. The curvature of the take-up lever is such that when the same is forced toward and against the supporting-plate 3 the point of strain of the connection or stay-rod 2 upon the lever will be moved into a plane intermediate that of the plate 3 and the line of axis of the journal-lugs 9, so that the lever is held automatically hard against the plate 3 by the increased strain or tension placed upon said lever by movement of the latter toward the door. To fasten the lever 4 against the plate 3, so that the same may not be tampered with by mischievous children or for any like reason, said lever is provided near its outer end with an opening 16, through which a small nail or similar securing member may be passed for the above purpose.

The lever 4, as well as the other parts of the device, with the exception of the stay-rod 2, is preferably stamped from sheet metal, and the journal-lugs 9 are corrugated lengthwise thereof to increase the rigidity of these parts in an obvious manner. It is preferred to corrugate the lever 4 longitudinally also to strengthen the same, as described with reference to the members 9.

Having thus described the invention, what is claimed as new is—

In combination with a screen-door or like support, a stay or brace therefor comprising a bracket secured to the lower portion of the door and outwardly deflected near one end, a stay-rod connected with the deflected portion of the bracket at one end of said rod, a take-up device consisting of a supporting-plate provided with a longitudinal slot, a fastening passing through the slot of the supporting-plate to secure said plate to the door, spaced lugs projecting outwardly from the supporting-plate and having openings therein, a take-up lever, lateral journal-lugs projecting from one end of the take-up lever and mounted in the openings of the spaced lugs of the supporting-plate, said lever being curved in its length and bifurcated from the end adjacent the journal-lugs, and a bar connecting the bifurcated portions of the lever, the stay-rod being provided with a loop receiving the bar of the take-up lever, substantially as described.

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

EDWARD ANDERSON. [L. S.]

Witnesses:
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O. C. FLETCHER.