

A. Westcott,

Door Spring.

N^o 7,692.

Patented Oct. 1, 1850.



UNITED STATES PATENT OFFICE.

A. WESTCOTT, OF SYRACUSE, NEW YORK.

DOOR-SPRING.

Specification of Letters Patent No. 7,692, dated October 1, 1850.

To all whom it may concern:

Be it known that I, A. WESTCOTT, of Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Door-Springs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which forms part of this specification and represents a view in perspective of a door and door-frame with my spring applied thereto.

In my improved spring the door is connected by a strap with the moving extremity of a jointed lever, whose opposite extremity is free to turn on a pivot and is acted upon by a spiral spring which tends to straighten the lever whenever it is flexed by the opening of the door. The movable extremity of the jointed lever is fitted with a grooved wheel which runs upon a track of such peculiar form that within a determined limit it will not prevent the spring from closing the door, but when the door is opened beyond this limit the track counteracts the tendency of the spring and thus allows the door to stand open. In the accompanying drawing the spring, lever, and track are made fast to a frame A which is screwed to the lintle B of the door. The jointed lever C is pivoted at the extremity nearer the hinge post D of the door frame, to the spring frame A, and its opposite extremity, or that nearer the lockpost E, is fitted with a friction wheel *a* which runs upon a track F, whose general direction is parallel with that of the lintle B. The rim of this friction wheel is grooved to guide it along the track which it traverses. An arm *b* projects from the hinged extremity of the lever C, and its upper end is secured to the movable end of a spiral spring G whose opposite end is made fast to the frame A. The movable extremity of the jointed lever is connected by a strap *c* with a bent standard H projected upwards from the upper edge of the door. This strap runs upon an upright friction roller *d* at the hinge-post end of the frame.

It will be perceived from the foregoing description that if the track F on which the friction wheel runs is level, the spring will shut to the door from any position to which it may be opened, provided it is not opened so far as to throw the extremity of the standard on the door behind a line drawn through the hinges of the door and the point on the lever at which the strap is attached, in which case the spring would keep the

door open. In my improved door spring the upper edge of the track, instead of being level, is curved, as represented in the drawing, a portion of its surface being raised as at *e*. By this device the descending inclination on the lock post side of the highest part *e* of the track will facilitate the action of the spring in closing the door, provided the door be not opened far enough to draw the friction wheel *a* past the rise. The descending inclination on the hinge-post side of the raised part *e* of the track counteracts the action of the spring and prevents it from shutting the door whenever the latter is opened so far that the friction wheel is drawn over the rise. The curve of this portion of the track is such that it will oppose enough resistance to the motion of the friction wheel to cause it to remain stationary in any position in which it is placed by the opening of the door, hence the latter will stand open, whenever it is in such a position as to bring the friction wheel upon this portion of the track.

In constructing these door springs for sale it will generally be expedient to construct the curved track in a single piece, but in some cases it may be well to make the raised part separate from the rest, in such manner that it can be slipped from one end of the track to the other, thus enabling the user to change the limit within which the door will close under the action of the spring. Another convenient manner of attaining this end will be by constructing the track much longer than the frame to which it is secured, and arranging it to slide to and fro in slots in which it can be made fast by a clamp-screw, it can then be slid to and fro to set the raised portion in any required position.

What I claim as my invention and desire to secure by Letters Patent is—

The door spring consisting essentially of a spring, jointed lever, strap and curved track, the latter being of the form herein described to control the action of the spring and the several parts together with the door and door-frame being arranged with respect to each other substantially as herein described.

In testimony whereof I have hereunto subscribed my name.

AMOS WESTCOTT.

Witnesses:

I. N. BABCOCK,
M. E. WHITE.