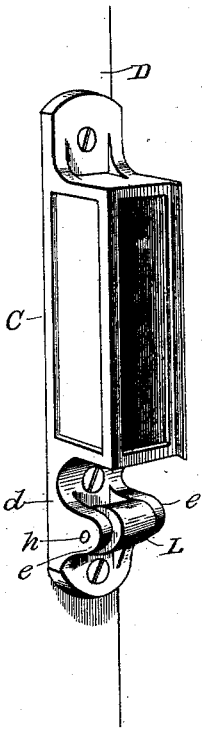
(No Model.)

J. H. CURRIER, Jr., W. S. HESP & S. CRUM.

LATCH TO PREVENT SAGGING.

No. 489,220. Patented Jan. 3, 1893.

Fig. 1.



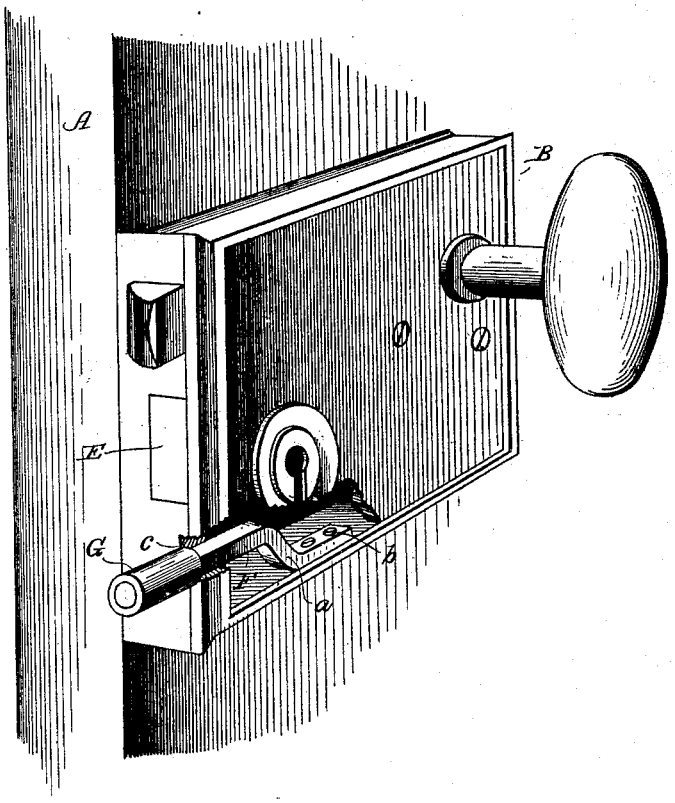


Fig. 3.

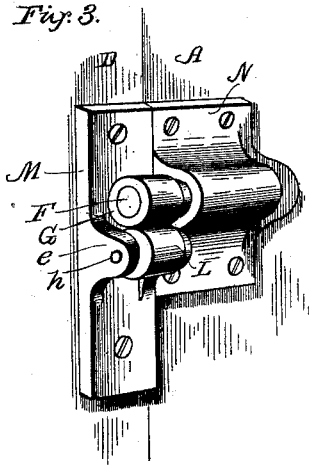
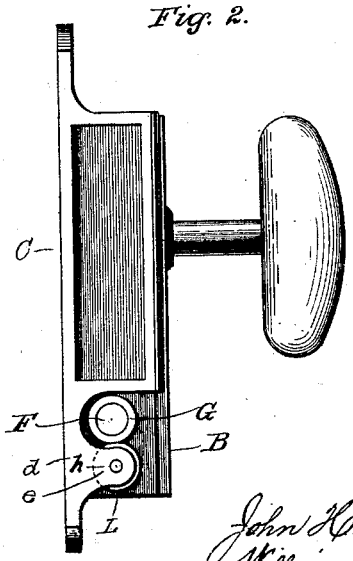


Fig. 2.



WITNESSES.
Victor J. Evans.
L. M. Marble.

INVENTORS.
John H. Currier Jr.,
William S. Hesp.
Samuel Crum
by W. A. Redmond Atty.

UNITED STATES PATENT OFFICE.

JOHN H. CURRIER, JR., WILLIAM S. HESP, AND SAMUEL CRUM, OF GARNETT, KANSAS.

LATCH TO PREVENT SAGGING.

SPECIFICATION forming part of Letters Patent No. 489,220, dated January 3, 1893.

Application filed March 8, 1892. Serial No. 424,168. (No model.)

To all whom it may concern:

Be it known that we, JOHN H. CURRIER, Jr., WILLIAM S. HESP, and SAMUEL CRUM, citizens of the United States, residing at Garnett, in the county of Anderson and State of Kansas, have invented certain new and useful Improvements in Devices for Preventing Doors and Gates Sagging; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a device for supporting doors and preventing doors and gates sagging at their free sides or edges and binding in the door-case and on the sill or threshold thereof, and it has for its object to provide a simple, durable, and effective device for the purpose named which may be employed either independently of or in connection with the lock of the door or the fastening of the gate, and it consists in the parts and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings forming a part of this specification—Figure 1 is a perspective view of a portion of a partly opened door and a portion of the door jamb showing our invention applied to a lock and its keeper; Fig. 2 an end elevation showing the lock and its keeper detached from the door and jamb and our invention in the position the parts assume when the door is closed; and Fig. 3 a perspective view showing our invention adapted for use independently of a lock or other fastening.

Similar letters refer to similar parts throughout the several views.

It is a frequent and common cause of complaint that doors and gates, properly hung in position, soon sag at one side or edge, the free side or edge, from their own weight and thus when closing interfere with and drag on the sills or thresholds of the door case or frame, and thus necessitating the door or gate being raised or lifted by hand every time it is either opened or closed in order to permit of it swinging free of the sills or thresholds and to enable it to be locked and unlocked. This sagging, as is well known, is owing to the fact that the door or gate is supported at only one side or edge from the door case or frame, the screws which secure the hinges in place to support the door or gate becoming loose owing to the constant downward and outward strain of the door or gate thereon and thus permitting the latter to sag or hang unevenly and rendering the opening and closing of the same difficult. Now, in order to overcome and obviate this difficulty we have invented means whereby the door or gate, when closing, is raised at its free edge to its correct position in the door case or frame, free of the sill or threshold, and there held while it remains closed and thus by removing a part of the weight of the door or gate off the hinges and supporting the same at both sides prevent the sagging of the same, and, also, preventing the wind shaking the door and causing a disagreeable rattling of the same.

In the drawings A represents a portion of a door having a lock B secured thereto to which one of the parts of our invention is secured, the other part being secured to or formed with the keeper C of the lock which is suitably secured to the door jamb D in position to receive the bolt E of the lock.

F represents a bar of metal which, in this instance, is bent downwardly, as at *a*, at a suitable distance from its end and then straightened out and perforated to receive the screws or rivets *b*, to secure the same to the inner face of the lower wall or rim of the lock, said lock having an opening *c* formed in its front wall through which the cylindrical end of the bar F projects or extends for the desired distance. The projecting end of the bar is round or cylindrical and carries thereon a loose roller G which may be secured against endwise or longitudinal movement in any desired manner, such, for instance, as by making the rounded portion of the bar slightly longer than the roller and securing the collar thereon. While we prefer that the roller G may be movably mounted on the bar, it is not absolutely necessary that it have this freedom of motion as it may be secured rigidly thereon, or the bar or the cylindrical portion of it which projects beyond the lock may be enlarged, and the roller, as a separate piece, dispensed with without affecting the operation or usefulness of the device. At the lower end

of the keeper C we extend its flange *d* and cast therewith, at right angles to the same, the lugs *e* between which we mount a friction roller L on a pin *h* inserted through the lugs, said keeper being arranged in such position that the roller L will be in line with the projecting end of bar F, or the roller G mounted or secured thereon if used, so that, when the door is closing the projecting end of the bar or the roller G will ride on the roller L and raise the free side or edge of the door up to its proper position as it enters the door casing and hold it in such position while the door remains closed or shut, thus preventing the sagging of the same by supporting it at both of its sides or edges.

In Fig. 3 we show the roller L mounted between lugs *e* projecting from a plate M which is made independent of the keeper C and is secured to the door jamb or gate post by screws, while the bar F carrying roller G is secured in or cast with a plate N which is formed with perforations for the insertion of screws to secure the same to the door or gate. The operation and result attained by the arrangement and construction of the device last described is the same as when the parts are connected with a lock and its keeper.

It will be observed that when a door or gate supplied with our invention is closed the axis of the roller G will be carried slightly beyond the axis of roller L and thus, while not acting as a fastening to secure the door or gate against being opened, it will prevent doors or gates which are loosely hung or fitted from being shaken and rattled by the wind. If desired the roller L may be made fast or rigid on its pin and the movable roller G be mounted on the door or lock, as it is only necessary that one of the rollers be loosely mounted although, as stated above both may be capable of rotary movement.

While we have described the simplest and least expensive manner of carrying out our invention we do not desire to be limited or restricted to the exact arrangement and construction set forth as many changes differing therefrom may be made without departing from the scope or spirit of our invention.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is:—

The combination, in a device for preventing doors sagging, of a bracket having perforated lugs secured to the side of the door casing, a friction roller journaled in said lugs, a lock secured to the door and provided with a projecting bar, and a roller journaled or mounted on said bar and adapted to ride onto and past the axis of said first named roller and come to rest against said bracket when the door is closed, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN H. CURRIER, JR.
WILLIAM S. HESP.
SAMUEL CRUM.

Witnesses:
MARY E. LINDSAY,
GEO. W. ILER.