

P. KERN.

Improvement in Door and Gate-Springs.

No. 116,196.

Patented June 20, 1871.

Fig. 1

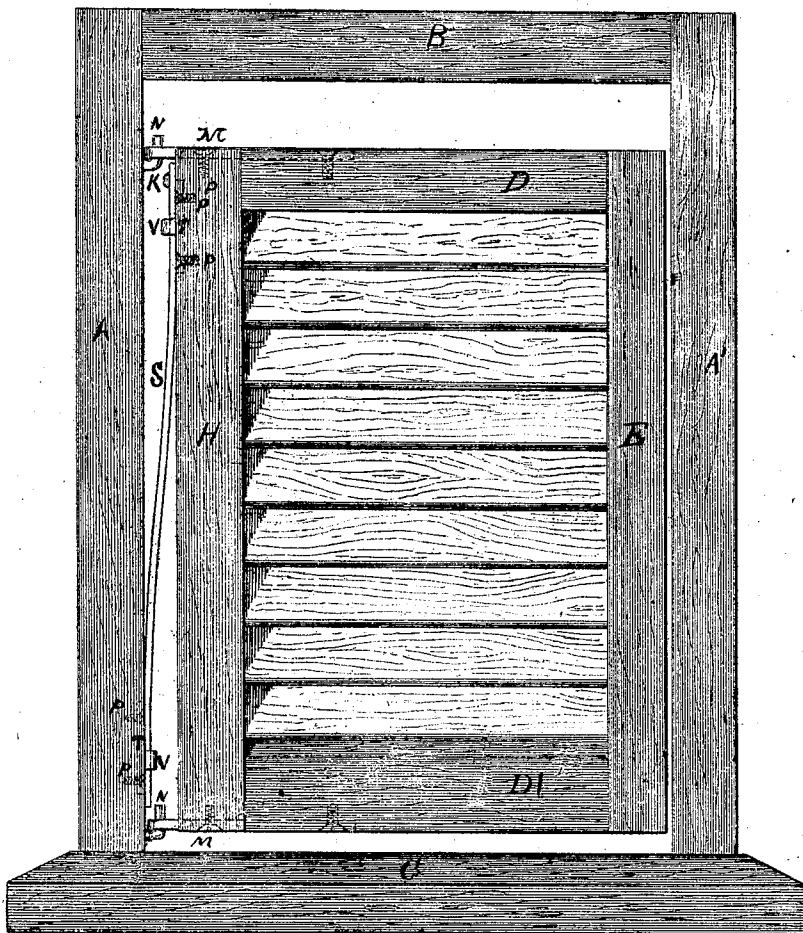


Fig. 2

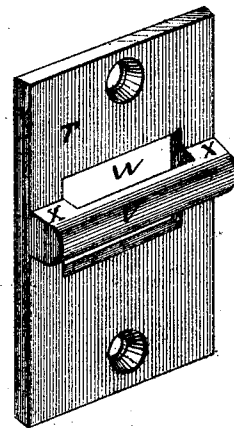
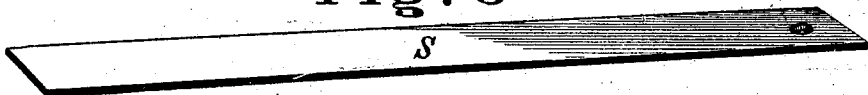


Fig. 3



Attest
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IMPROVEMENT IN DOOR AND GATE SPRINGS.

Specification forming part of Letters Patent No. 116,196, dated June 20, 1871.

To all whom it may concern:

Be it known that I, PHILIP KERN, of the city of Dayton, in the county of Butler and State of Ohio, have invented certain new and useful Improvements in Door and Gate Springs, of which the following is a specification:

My invention relates to a fastening device whereby the said spring may be easily and cheaply attached to the said door and frame, and whereby said door and spring may be quickly removed from the door-frame and as quickly replaced.

In the accompanying drawing, Figure 1 is a side elevation of saloon-door, to which is attached a flat spring in the position which I regard as novel, said elevation also showing the application of my device for attaching said spring to the door and frame. Fig. 2 is a full-sized elevation, in perspective, of the front, side, and end of my attaching device. Fig. 3 is a view, in perspective, of the front, side, and end of one of the varieties of spring used by me.

General Description.

A A' are, respectively, the right and left side pieces of the frame of saloon-door. B is the lintel or head-piece of said door-frame, while C is the sill or threshold of the same. E D H D' is a slatted door, of which E and H are, respectively, the right and left side pieces. D is the top, and D' the bottom of said door. This door swings upon hinges of any desired variety. For saloon-doors such hinges are preferred as will allow the door to be taken off from its hinges without unscrewing a part of each hinge. One simple style of such hinge is shown in Fig. 1 of drawing, the pivots of each hinge fastened to the side piece H being marked N, and the complimentary part of each hinge being designated by the letter M. S is a spring, usually made flat; but it may be made round or triangular, or of any desired shape, with flattened ends. This spring is of a suitable length, breadth, and thickness, and with sufficient strength to properly close the door when opened. Spring S is attached to the upper vertical edge of H, which faces the side piece A, and also is again attached to H a little lower down. The spring then crosses over to the inside of side piece A, and is at-

tached to the lower part of A at a short distance from the end of said spring. This spring might be attached so that it would cross in a direction exactly the reverse of what it now does—that is, the top of S might be fastened on the upper and inside portion of the frame A, and the bottom of S on the lower part of the edge of the door nearest the frame A. The spring is attached by any suitable fastening. The method of fastening I find most convenient is that shown in the drawing. I attach the upper point of the spring in the door at K by a screw. Just below K I attach a fastening (see Fig. 2) resembling a buckle. This fastening consists of a flat plate, T, having an arch or bridge, V, supported by shoulder X X, and raised high enough above the plate to allow the spring to be passed between said arch and the plate T. Plate T may be made light by casting a hole in the inside of the plate. In plate T are bored holes for the reception of screws or nails. This fastening is attached to the edge of the door, immediately below the screw K, by screws P P, so that the spring passes over the flat piece T and under the bridge V. To attach the lower end of the spring to side piece A I employ another of these fastenings, secured by screws at P P, taking care that the spring is passed under the bridge V of the fastening.

The advantages of such a fastening are that it is cheap and durable; that the spring, being attached to it without rivets, or the like, can be readily withdrawn from it when desired, and as readily replaced.

This spring and this fastening device are as readily applicable to a gate as to a door, and will permit said gate or door to be opened either way.

Claim.

What I claim as new is—

The spring S, when attached at one end to the door or frame, while the other end passes under a bridge, V, which resists torsion, but permits longitudinal movement, substantially as described.

PHILIP KERN.

Witnesses:

PHILIP M. SHUEY,
C. G. HALE.