(No Model.)

T. S. SMITH.

STAIR ROD AND CARPET SECURER.

No. 362,794. Patented May 10, 1887.

Fig. 1.

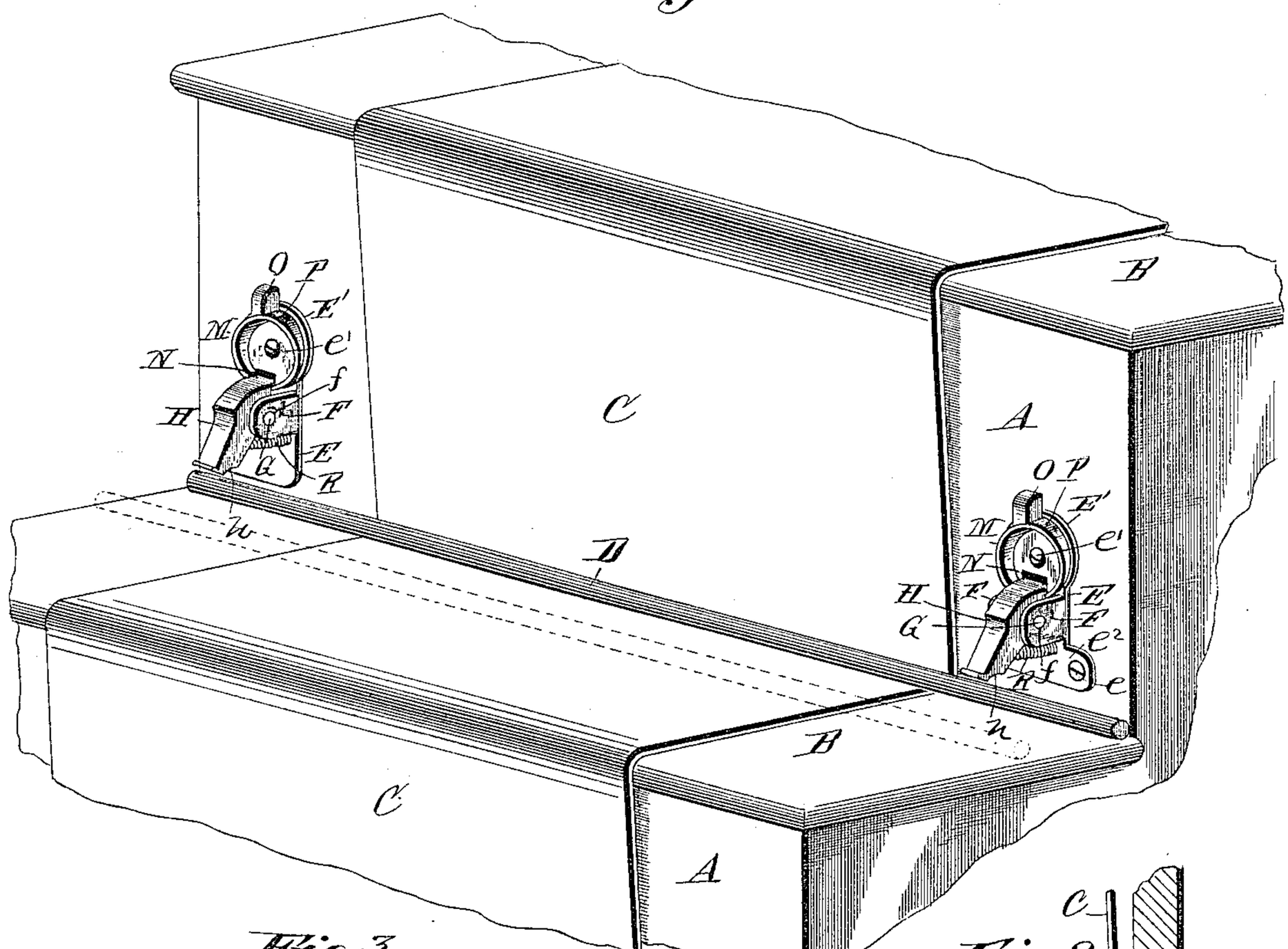


Fig. 3.

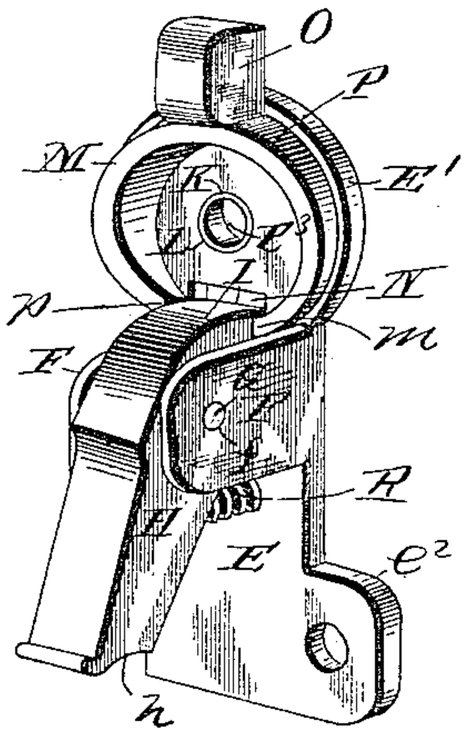


Fig. 4.

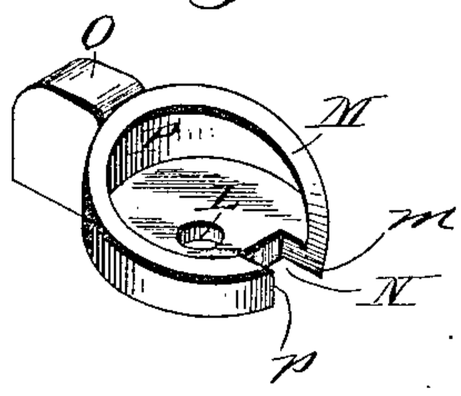
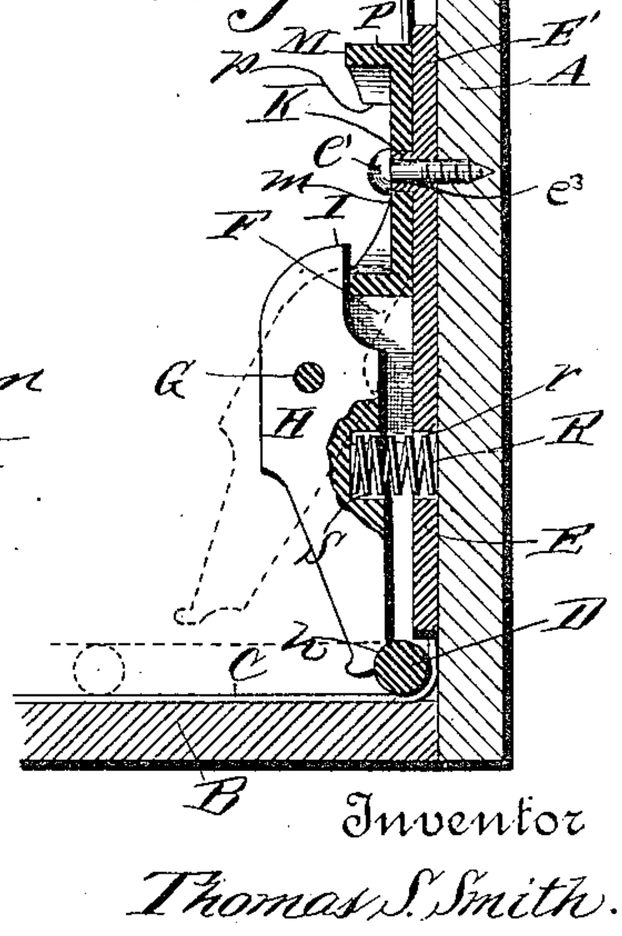


Fig. 2.



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UNITED STATES PATENT OFFICE.

THOMAS S. SMITH, OF WASHINGTON, DISTRICT OF COLUMBIA.

STAIR-ROD AND CARPET SECURER.

SPECIFICATION forming part of Letters Patent No. 362,794, dated May 10, 1887.

Application filed December 22, 1886. Serial No. 222,279. (No model.)

To all whom it may concern:

Be it known that I, THOMAS S. SMITH, a citizen of the United States, residing at Washington, (Georgetown,) in the District of Columbia, have invented a new and useful Improvement in Stair-Rod Fixtures or Securers, of which the following is a specification.

My invention relates to an improvement in stair-rod securers, and has for its objects, primarily, the provision of means whereby the rod which retains the carpet in place may be instantaneously released from the fixtures forming the securing means, and drawn straight out, thus avoiding the inconvenience of being obliged to draw the rod laterally in order to release it, and also obviating the necessity of taking out screws or other like means employed in the present form of stair-rod securers.

A further object of my invention is to provide a securing-fixture by means of which the carpet may be more easily and also more satisfactorily laid than is possible with the present appliances.

In the accompanying drawings, Figure 1 is a view of a portion of a staircase, showing my improved rod-fixture in position for use. Fig. 2 is a vertical sectional view of the same, through one of the fixtures, showing in dotted lines the rod released by the latch and the path followed in withdrawing the said rod. Fig. 3 is a detached perspective view of my fixture. Fig. 4 is a detached view of the rotating cam-plate.

Referring to the drawings, in which similar letters denote corresponding parts in all the figures, A designates the riser, and B the tread, of a portion of a staircase provided with the carpet C, which is held in place by the usual stair-rod, D.

E is the base-plate of my stair-rod-securing device, which base-plate is secured to the riser of the stair by the screws e e', one of which passes through an opening in the lug e^2 on the outer edge of the base-plate, and the other through an opening, e^3, in the circular head E′ of the said base-plate.

F F′ are outwardly-extending ears, formed integrally with the base-plate E, and having aligned openings f f therein, in which are rigidly secured the outer ends of the pivot-pin G. The latch H, pivoted on the pin G between the ears F F, is provided at the lower end with the curved recess h, adapted to fit the curved surface of the rod D, and at the upper end with the contact-point I.

R is a spiral spring, the inner end of which rests in an opening, r, in the base-plate, and the outer end of which is seated in a recess, S, in the under side of the latch H.

It will be seen that the spring R has a tendency to push the lower end of the latch H away from the base-plate, so that as soon as the contact-point I is released the rod D will be freed by the latch.

The opening e^3 in the head of the base-plate is provided around its upper edge with the bushing or sleeve K, formed integrally with the base-plate, the opening in which is a direct continuation of the opening e^3 in the base-plate. Said sleeve or bushing K is adapted to enter an opening, L, in the cam-plate M, the outer end of the said sleeve being flush with the outer surface of the cam-plate. The screw e' passes through the sleeve K and the opening e^3 in the plate, and secures said cam-plate M in position on the base-plate.

The cam-plate M is circular in form, having a recess, N, in the peripheral edge, of sufficient size to receive the contact-point I of the latch H, and provided with the thumb-hold O on the opposite edge thereof. P is a beveled flange around the edge of the plate M, the highest point of which flange is on the side opposite to the recess N, said flange gradually decreasing in height from said highest point to the edges of the recess N, where on one side said flange is reduced to an edge, as at m, and on the other side there is a shoulder, p, the object of which will be hereinafter explained. It will be clearly seen that the manner of attaching the cam-plate to the base-plate E enables the said cam-plate to be easily rotated, even when the screw e' is drawn down very tightly, since the contact of the screw is against the sleeve or bushing K.

The operation of my invention is as follows: The device is in the position indicated in dotted lines in Fig. 2, with the contact-point in the recess N, and it is desired to secure the rod D in position. Place the said rod in the position shown in full lines in Fig. 2, and turn the cam-plate M by moving the thumb-hold O

from the center of the stair. This will cause the edge *m* of the beveled flange P on the side of recess away from the center of the stair to pass under the contact-point I of the latch and raise it, thereby throwing the lower end of the latch down against the force of the spring R until the recess *h* in the end of the said latch bears on the said rod and presses it firmly against the carpet C in the position shown in full lines in Fig. 2. To release the rod D, rotate the cam-plate M in the opposite direction to that turned before—that is, toward the center of the stair—and when the said plate has been turned sufficiently to allow the contact-point I to be forced into the recess N by the action of the spring R the rod D will be free to be drawn straight out, as shown in dotted lines in Fig. 2. The cam-plate is intended to turn only to the right—or, rather, in a direction away from the center of the carpet—when in its unlocked position, Fig. 1. The shoulder *p* prevents the cam-plate working in that direction.

Having described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a stair-rod securer, the base-plate E, having the cam M secured thereto, in combination with the latch H, substantially as described, for the purpose set forth.

2. In a stair-rod securer, the base-plate E, having the head E′, having the bushing K, and the latch H, secured to the said base-plate, combined with the cam-plate M, adapted to be secured to the head E′ of said base-plate around the bushing K by the screw e^2, which secures the base-plate to the stair, substantially as described, for the purpose set forth.

3. In a stair-rod securer, the base-plate E and the spring-actuated latch H, combined with the circular cam-plate M, having an opening, L, to rotate upon the sleeve or bushing K, recess N, flange P, increasing gradually in height from an edge on one side of the recess N to a point opposite said recess, and from thence decreasing more gradually in height to form an abrupt shoulder, *p*, on the opposite side of recess N from the said edge, and the thumb-hold O, substantially as described, for the purpose set forth.

4. In a stair-rod securer, the base-plate E and spring-actuated latch H, having contact-point I, combined with the cam-plate M, having beveled flange P to work against contact-point I, and the recess N in the cam-plate to receive the contact-point when the latch is released, substantially as described, for the purpose set-forth.

5. In a stair-rod securer, the spring-actuated latch, combined with the cam to lock the latch, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

THOMAS S. SMITH.

Witnesses:
E. G. SIGGERS,
H. J. ENNIS.