

A. S. HOPKINS.

Method of Securing Spindle-Steps in their Supports.

No. 168,022.

Patented Sept. 21, 1875.

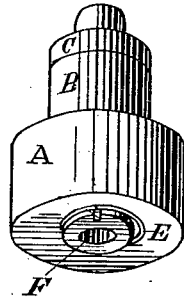


Fig. 1.

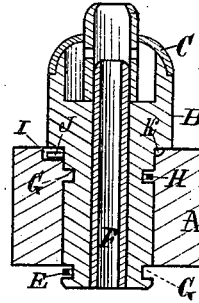


Fig. 2.

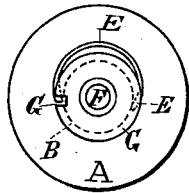


Fig. 3.

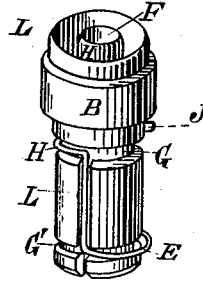


Fig. 4.

Witnesses;
H. E. Metcalf,
L. F. Tilton.

Inventor;
Addison S. Hopkins,
Per C. A. Shaw
Atty.

UNITED STATES PATENT OFFICE.

ADDISON S. HOPKINS, OF PASCOAG, RHODE ISLAND.

IMPROVEMENT IN METHODS OF SECURING SPINDLE-STEPS IN THEIR SUPPORTS.

Specification forming part of Letters Patent No. 168,022, dated September 21, 1875; application filed August 12, 1875.

To all whom it may concern:

Be it known that I, ADDISON S. HOPKINS, of Pascoag, in the county of Providence, State of Rhode Island, have invented a certain new and useful Improvement in Methods of Securing Spindle Steps, Bolsters, &c., in their Supporting-Rails, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is an isometrical perspective view; Fig. 2, a vertical longitudinal section; Fig. 3, a bottom view; and Fig. 4, a view of the step detached from the rail.

Like letters of reference indicate corresponding parts in the different figures of the drawing.

My invention relates to means for automatically securing spindle steps, bolsters, &c., in their supporting-rails; and consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a simpler, cheaper, and more effective device of this character is produced than is now in ordinary use.

The nature and operation of my invention will be readily obvious to all conversant with such matters from the following description:

In the drawing, A represents a section of the rail; B, the step, and C the cap. No special novelty being claimed for the step in itself considered, an elaborate description of the same is deemed unnecessary. The body of the step is provided with grooves G' G, which extend entirely around it, or nearly so, and are connected by a vertical groove of equal depth, as seen in Fig. 4.

A spring-catch, L, preferably formed of elastic steel or brass wire, has its body inserted in the connecting-groove. This catch is provided with two laterally-projecting arms, E H, which, when the step is being placed in

position, fall alternately into the grooves G' G. These arms are bent so as to partially enfold the body of the step, but in such a manner that when the arm H is in the groove G the arm E will be thrown slightly out of the groove G', as shown in Fig. 4. The step should be of such length that when it is in position in the rail it will project below or pass through it sufficiently to bring the upper edge of the groove G' flush with the lower side of the rail. The hole through the rail is countersunk at K, and provided with a notch, I, to enable the step and its catch to be inserted with greater facility.

In the use of my improvement the arm E is depressed or forced into the groove G'. The lower end of the step is then inserted in the rail until the arm H comes into contact with the top of the same, when the end J of the arm H is forced into the groove G, which may be easily accomplished by at the same time slightly turning the step, and by the aid of the notch I. When the step is fully inserted in the rail it will be obvious that the arm H will be retained in the groove G, while the arm E will, by the torsional action of the catch, be thrown out of the groove G', and act to lock or secure the step in the rail, as best shown in Figs. 1 and 2. To remove the step it is only necessary to depress the arm E, at the same time slightly turning the step as it is withdrawn.

Having thus explained my improvement, what I claim is—

The improved means of securing the step B in the rail A, described, the same consisting of the connected grooves G G', and the catch L, provided with the arms E H, substantially as and for the purpose set forth and specified.

ADDISON S. HOPKINS. [L. S.]

Witnesses:

MELVIN O. BAILEY,
HORATIO L. HOPKINS.