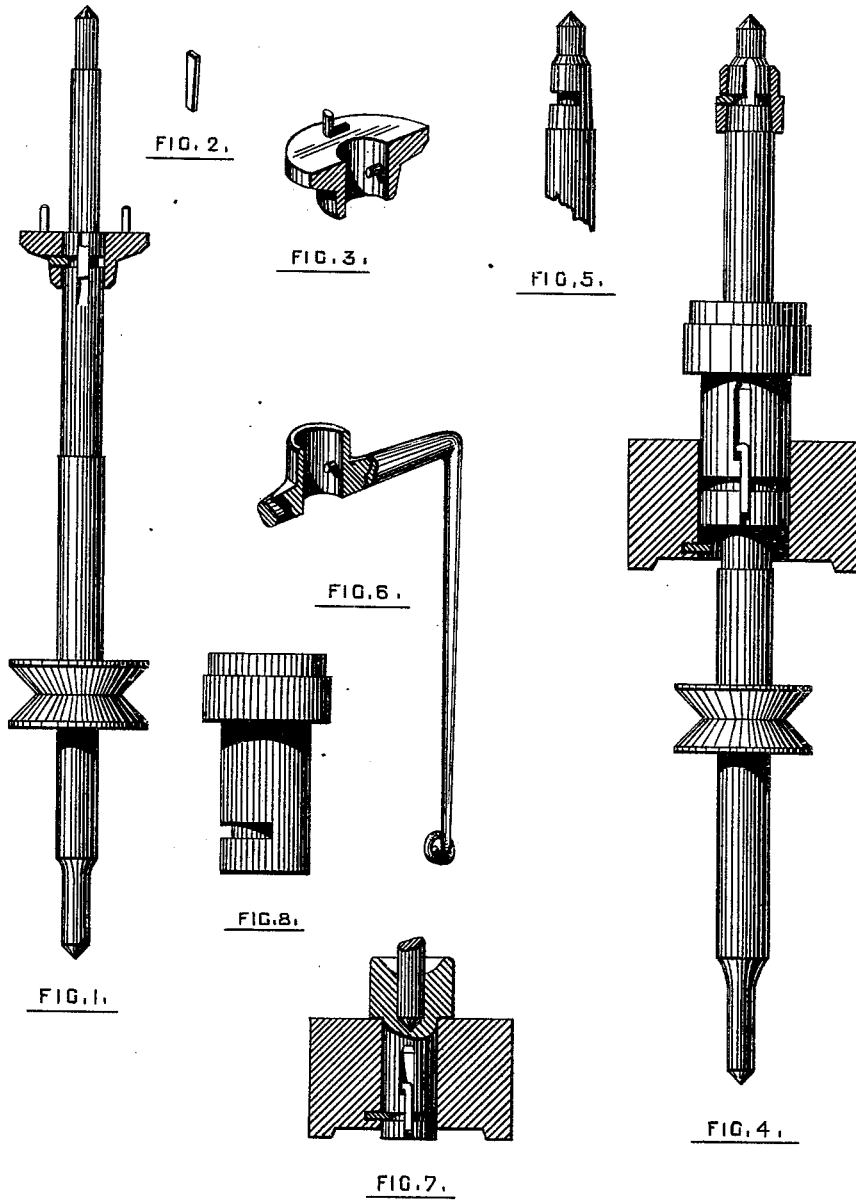


A. ALDRICH.

FASTENINGS FOR BOLSTERS, &c.

No. 185,847.

Patented Jan. 2, 1877.



WITNESSES.

*Walter Vincent*  
*J. T. Rich*

INVENTOR.

*Aaron Aldrich*

# UNITED STATES PATENT OFFICE.

AARON ALDRICH, OF PASCOAG, RHODE ISLAND.

## IMPROVEMENT IN FASTENINGS FOR BOLSTERS, &c.

Specification forming part of Letters Patent No. **185,847**, dated January 2, 1877; application filed December 15, 1875.

*To all whom it may concern:*

Be it known that I, AARON ALDRICH, of Pascoag, in the State of Rhode Island, have made certain new and useful Improvements in Fastenings for Bolsters, Collars, Steps and Fliers; and I do hereby declare that the following specification, taken in connection with the drawing, making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a spindle, showing the manner of attaching the collar. Fig. 2 is the key. Fig. 3 is the collar detached. Fig. 4 represents the spindle, rail, and bolster combined, the upper end of the spindle being constructed to receive the flier. Fig. 5 is a view of the upper end of Fig. 4, showing the groove. Fig. 6 is a view of the flier. Fig. 7 is a view of the bolster and step and rail when placed in position. Fig. 8 is a view of the bolster, showing the groove.

The object of my invention is to reduce the friction and render the different parts, consisting of the bolster, collar, step and flier, self-adjusting to each other, and, at the same time, while preventing any perpendicular movement, to allow them to rotate within certain well-defined limits, and consists in the improvements hereinafter set forth.

The principle of the fastenings, as well as the results arising from the peculiarity of construction, is the same in the case of the bolster as in that of the collar, flier, and step. The description of one will, therefore, suffice for the others.

The bolsters now in common use are placed in the rail and held by a set-screw. The jar of the machine soon works them loose enough for them to fly or be pulled out, and not only break the whirr, but bend and spoil the spindle.

The set-screw produces a pressure upon one side of the bolster, which throws it out of its perpendicular position, and causes it to bind upon and spring the spindle, and produce an uneven twist in the yarn.

In my invention, as shown in Figs. 7 and

8, I make in the bolster near the bottom a groove, extending nearly around, across which extends another groove, running perpendicularly.

The inside of the hole in the rail into which the bolster slips is provided with a suitable pin, which, being received in the perpendicular groove, allows the bolster to slide down to its position, and, upon being turned in either direction, the pin will pass into the circular groove, and thus retain the bolster in its perpendicular position, while it permits it to rotate a certain distance in either direction.

In the rotation of the bolster the pin is prevented from finding its way to the perpendicular groove, and thus allowing the bolster to jump out, by a key which drops down across the circular groove, as shown in Fig. 7.

The key may, in practice, be dispensed with, as the pin will generally pass by the perpendicular groove, in which case the perpendicular groove will not extend across, but only into the circular groove.

It will now be readily seen that the parts secured together in this way will not bind or become injured, but will adjust themselves to each other, and that the friction will be materially reduced by the rotary movement or play of the parts, and that the spindle may be run in either direction without unscrewing the collar or flier.

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

The method of fastening or uniting bolsters, collars, steps, or fliers, herein described, to the rail or spindle, by a circumferential groove in said bolster, collar, step, or spindle, interlocking with a pin which projects from the inside of the rail, collar, or flier, and then securing said parts in place by means of a key inserted in a longitudinal groove formed in the rail or spindle, as set forth.

AARON ALDRICH.

Witnesses:

WALTER B. VINCENT,  
J. T. RICH.