(No Model.) 2 Sheets—Sheet 1.

R. C. FAY.

DEVICE FOR RETAINING SPINNING SPINDLES IN AND ASSISTING IN REMOVING THEM FROM THEIR SOCKETS.

No. 253,026. Patented Jan. 31, 1882.

Fig: 1.

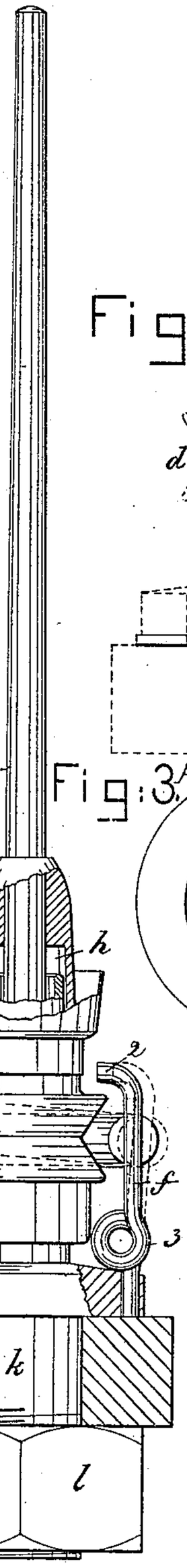


Fig: 2.

Fig: 3.

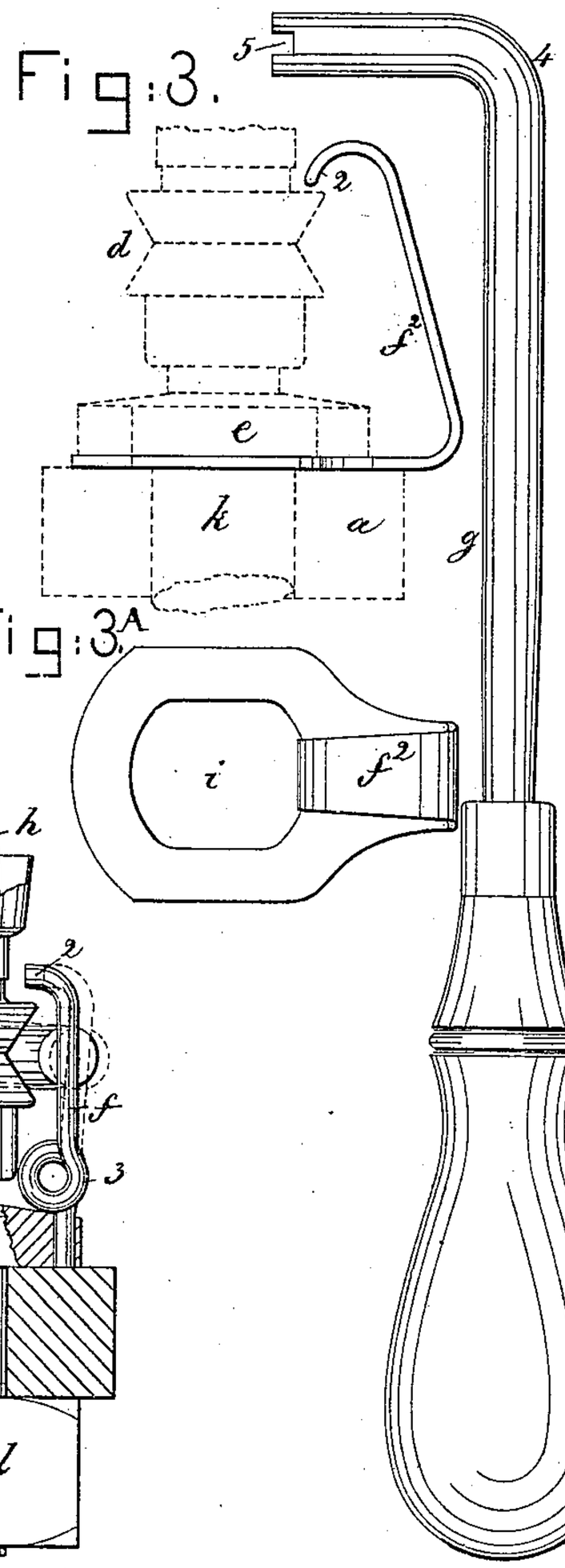


Fig: 3A.

Witnesses.

L. F. Connor.

B. J. Noyes.

Inventor.

Rimmon C. Fay,

by Crosby & Gregory, Attys

(No Model.) 2 Sheets—Sheet 2.

R. C. FAY.

DEVICE FOR RETAINING SPINNING SPINDLES IN AND ASSISTING IN REMOVING THEM FROM THEIR SOCKETS.

No. 253,026. Patented Jan. 31, 1882.

Fig: 4.

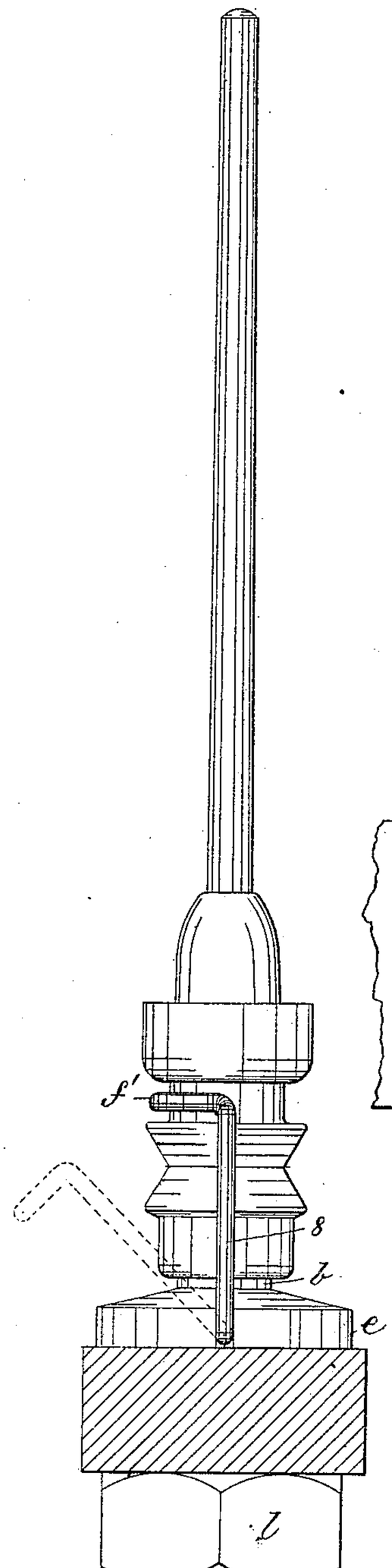


Fig: 5.

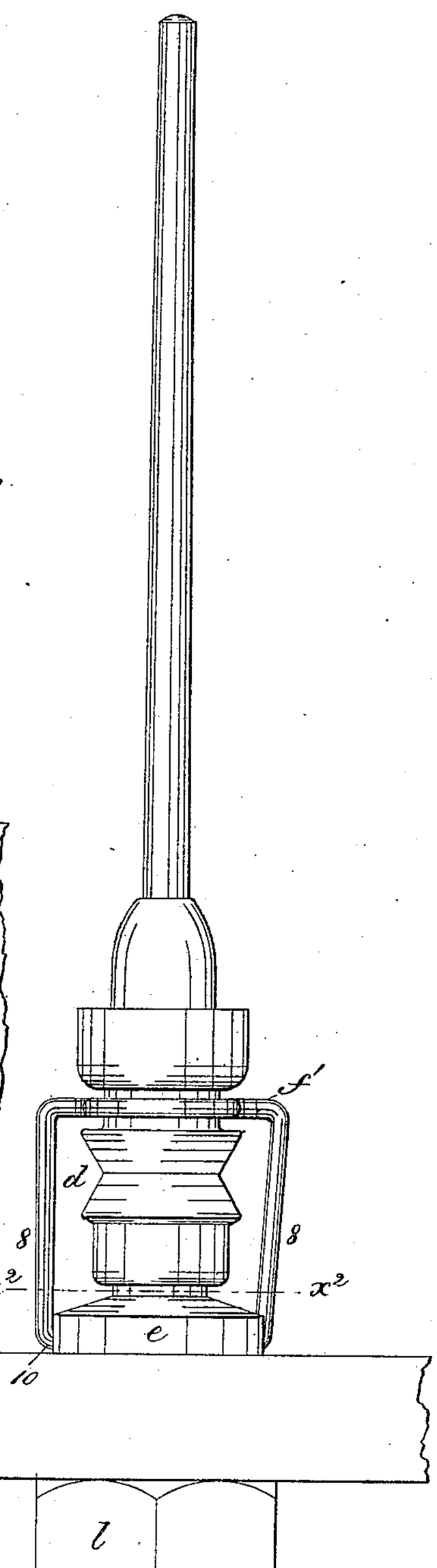


Fig: 7.

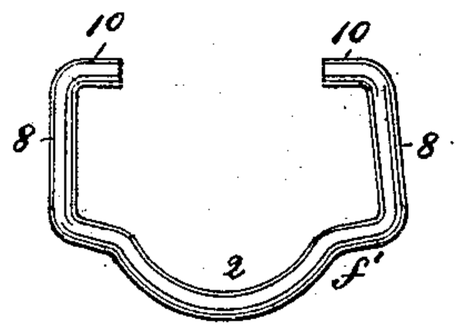
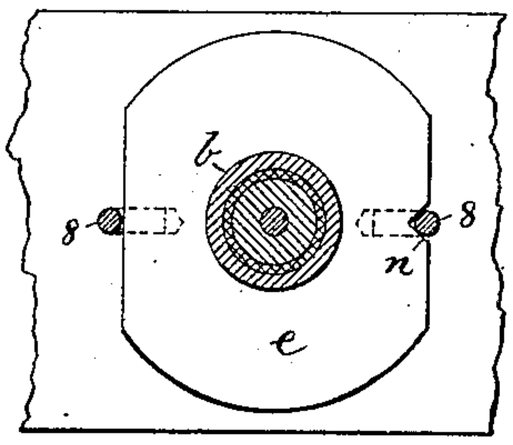


Fig: 6.



Witnesses

L. F. Connor.

B. J. Noyes.

Inventor

Rimmon C. Fay,

by Crosby & Gregory, Attys

UNITED STATES PATENT OFFICE.

RIMMON C. FAY, OF MILFORD, ASSIGNOR TO THE HOPEDALE MACHINE COMPANY, OF HOPEDALE, MASSACHUSETTS.

DEVICE FOR RETAINING SPINNING-SPINDLES IN AND ASSISTING IN REMOVING THEM FROM THEIR SOCKETS.

SPECIFICATION forming part of Letters Patent No. 253,026, dated January 31, 1882.

Application filed July 25, 1881. (No model.)

To all whom it may concern:

Be it known that I, RIMMON C. FAY, of Milford, county of Worcester, State of Massachusetts, have invented an Improvement in Devices for Retaining Spinning-Spindles in and Assisting in Removing them from their Sockets, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to a retaining-spring to maintain a sleeve-whirled spindle in position with the pintle of the spindle in the bolster-bearing and tubular support, and to a key for operating the said retaining-spring, the key, as the spindle is lifted to be oiled, serving to catch and remove the usual band from the whirl.

Figure 1 represents in side elevation and partial section a spindle provided with one of my improved retaining-springs; Fig. 2, a detail of the key for moving or retracting the spindle-stop or retaining-spring and throwing off the band; and Figs. 3 and 3^A, modifications to be referred to. Figs. 4, 5, and 6 represent two elevations and a section on the dotted line x^2 x^2, Fig. 5, of yet another modification of my invention; and Fig. 7, a top view of the retainer of Fig. 5 separated from the collar.

The rail *a*, tubular support *b*, spindle *c*, and sleeved whirl *d* are and may be of usual construction, they not being of my invention.

Heretofore in this class of spindle the sleeve-whirl has been held down in operative position by a hooked or bent rigid wire screwed into the collar *e*, which hooked wire, when the spindle was to be lifted to be oiled, had to be engaged and partially rotated to remove its bent end from above the whirl. Instead of this common rigid hook, I have devised a retaining-spring, *f*, having a portion, 2, to project over the whirl and prevent the latter rising except when the retaining-spring is sprung outward, as in dotted lines, which may be quickly done, as the spring part 3 or shank thereof readily admits of such movement.

To spring the retaining-spring outward, I have devised the key *g*, made as a handled bar or rod, bent at 4 and slotted at 5 to fit the retaining-spring, as in Fig. 1. As the spindle is lifted the bar or rod composing the key, the slotted end of which is engaged with the retaining-spring, as in Fig. 1, to spring it back, as in dotted lines, acts as a check to arrest the upward movement of the band with the whirl and remove the band from the groove of the whirl. The retaining-spring will preferably be applied to the frame at the rear of the spindle. The key may be passed between adjacent spindles and be easily and quickly applied to the retaining-spring to throw it back with the expenditure of but little strength. The retaining-spring *f* enables very considerable time to be saved as compared with the time necessary to turn about on its axis the hooked wire device heretofore commonly used.

In Fig. 3 I have shown a modification wherein the retaining-spring f^2 is made of sheet-steel, the base of the spring having an opening, *i*, to receive the part *k* of the tubular support when the said retaining-spring is inserted between the collar *e* and the upper side of the rail *a*, the tightening of the nut *l* against the under side of the rail holding the said retainer in place.

In the modification, Figs. 4, 5, 6, and 7, I have shown the retaining-spring made as a loop of wire, as represented at f', the two legs 8 of the loop being bent, as at 10, to be sprung into openings on the sides of the collar *e* when the loop is partially expanded. One edge of the collar is provided with an incline, *n*, near the pivotal point of the loop, so that as the retainer is turned backward, as in dotted lines, one of the legs 8 riding on the said incline will spread the loop and give to it a tendency to resume its upright position, as in full lines, Fig. 4.

I claim—

1. The combination, with the whirl-spindle, of the retaining-spring, which may be sprung back away from above the whirl when it is desired to raise the whirl, as and for the purpose set forth.

2. The spindle, its whirl, and the tubular support and retaining-spring attached to the tubular support, combined with the slotted key to engage and operate the retaining-spring and throw off the band, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RIMMON C. FAY.

Witnesses:

WM. F. DRAPER,

WM. F. DRAPER, Jr.