J. BOLTON.

Shuttle-Carriers or Drivers for Sewing-Machines.

No. 169,079. Patented Oct. 26, 1875.

Fig. 1.

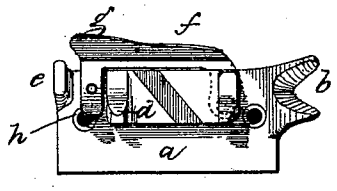


Fig. 2.

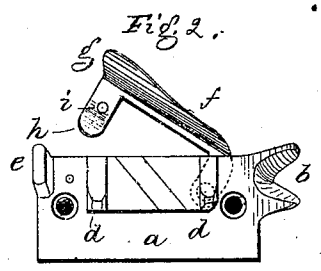
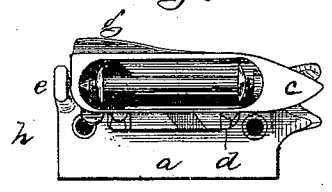


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES BOLTON, OF CHICAGO, ILL., ASSIGNOR TO SINGER MANUFACTURING COMPANY, OF NEW YORK, N. Y.

IMPROVEMENT IN SHUTTLE CARRIERS OR DRIVERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **169,079**, dated October 26, 1875; application filed September 11, 1875.

To all whom it may concern:

Be it known that I, JAMES BOLTON, of Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Shuttle Carriers or Drivers for Sewing-Machines, of which the following is a specification:

This invention relates to the carriers or drivers of sewing-machine shuttles; and consists in the combination, with a carrier or driver, of a movable latch or holder, constructed substantially as hereinafter described, to hold the shuttle down in the carrier or driver during the sewing operation, and to permit the shuttle to be lifted from the carrier or driver, when, for any reason, it is desired to remove the shuttle from the carrier or driver, which is often necessary.

Figure 1 is a face view of a shuttle-carrier with the latch closed. Fig. 2 is a similar view with the latch opened; and Fig. 3 represents the shuttle in place in the carrier.

The carrier *a* is of the kind used in the well-known Singer sewing-machine, it being provided with the prongs *b* to receive between them the point of the shuttle *c*, with the lugs *d d*, or inclines on which the lower side of the shuttle rests, and with the driving projection *e* adapted to bear against the heel of the shuttle, all in the usual manner. The curved back of the shuttle rests on the inclined projections or lugs *d*, and the face of the shuttle rests and moves against the face of the shuttle-race.

To remove the shuttles from the carriers to fill them with thread, or to adjust the tension of the shuttle-thread, or for other purposes, as is often done, it is customary to introduce the finger-nail or a small hook under the usual spring-guard at the top of the shuttle, such spring being a long thin arm attached at one end to the shuttle, and adapted to throw back the slack thread of the shuttle, and also to put a certain amount of tension on the shuttle-thread, and the lifting of the shuttle by this spring disturbs its position with relation to the body of the shuttle, and in a great measure destroys its usefulness, and the shuttle-thread is not controlled as perfectly after such spring is bent out of shape or out of its true position, and the stitching is not as perfect as it would be were the spring in its proper condition and position.

The heel of the shuttle when supported in the ordinary carrier is apt to be drawn up as the loop of needle-thread is drawn over the heel, and the stitch is not perfectly formed. To obviate these evils, a latch, *f*, provided with a guard, *g*, and lifting-finger *h*, is pivoted or connected with the carrier, such connection being herein shown as a stud projecting from the carrier, (see dotted lines, Figs. 1 and 2,) the end of the latch *f* being provided with a hole to fit over such stud. This latch *f* is cut from thin sheet metal in the form shown, its upper edge being turned over as a guard, *g*, toward the shuttle-race face, so as to overlap a portion of the upper side of the shuttle when the latch is turned down, as shown in Figs. 1 and 3, the extreme outer upper end of the latch overlapping the heel of the shuttle to a considerable extent, sufficiently to keep the shuttle closely down in the carrier when the machine is in operation. The lifting-finger *h* is curved to embrace and extend under the shuttle, and when for any reason it is desired to remove the shuttle from the carrier, it is only necessary to take hold of the overlapping guard *g* at its end and turn the latch on its pivot, such movement of the latch (see Fig. 2) causing the lifting-finger *h*, under the shuttle, to lift the heel of the shuttle from the carrier when it may be easily removed by the operator.

This invention may be applied to any other class of carriers or drivers. A small teat or opening, *i*, on or in the latch, presses against the carrier, or fits over a pin on the carrier, and holds the latch down in the position shown in Figs. 1 and 3.

I am aware that a spring-latch to hold a shuttle down in a carrier is not new, and such a latch I do not claim; but

Having described my invention, I claim—

1. The combination, with a shuttle carrier

or driver, of a latch, provided with a lifting-finger, whereby the shuttle may be lifted from the carrier, substantially as described.

2. The combination, with the shuttle-carrier and shuttle, of a pivoted latch, provided with a guard and lifter to hold the shuttle down when sewing, and to lift it from the carrier when desired, substantially as described.

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

JAMES BOLTON.

Witnesses:
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