H. L. WALKER.

Sewing-Machine Shuttles.

No. 168,067. Patented Sept. 21, 1875.

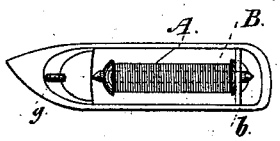

Fig. 1.

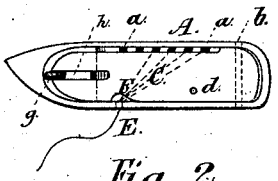

Fig. 2.

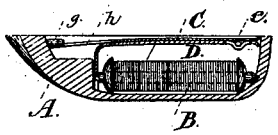

Fig. 3.

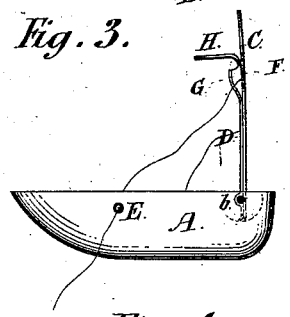

Fig. 4.

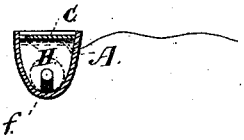

Fig. 5.

Witnesses;

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UNITED STATES PATENT OFFICE.

HUGH LEWIS WALKER, OF GUELPH, CANADA.

IMPROVEMENT IN SEWING-MACHINE SHUTTLES.

Specification forming part of Letters Patent No. **168,067**, dated September 21, 1875; application filed May 17, 1875.

To all whom it may concern:

Be it known that I, HUGH LEWIS WALKER, of the town of Guelph, in the county of Wellington, in the Province of Ontario, Canada, machinist, have invented certain new and useful Improvements in Sewing-Machine Shuttles, of which the following is a specification:

The objects of the invention are, first, to lessen the cost of manufacturing the shuttle; second, to facilitate the threading of the same; and, third, to provide an even, smooth tension, easily regulated and adjusted without the assistance of a screw-driver or any such tool. These objects are secured by simplifying the construction of the shuttle by dispensing with all set-screws for regulating the tension and centers for holding the bobbin; also in obtaining the tension by passing the thread between two spring-plates, which are riveted together, and are hinged to the shuttle, forming a cover for it and a holder of the bobbin, substantially as hereinafter described.

Figure 1, plan without spring-cover; Fig. 2, plan with cover; Fig. 3, longitudinal section; Fig. 4, elevation; Fig. 5, transverse section.

A is the body of the shuttle, in which the bobbin B lies. C is the top spring-plate, held to the bottom spring-plate D by the rivet *d*. The two thus held together are hinged on the pin *b* to the shuttle A, the hinge being formed by the pin *b* passing between the two spring-plates C and D, the end *e* of the latter being shaped as shown, so as to form the desired hinge. E is the thread-hole in the shuttle, and F is a notch cut in the plate C, which serves the purpose of a funnel to guide the thread through the hole E, the bridge G assisting in the action. The end H of the plate D is bent down, and when the lid of the shuttle formed by the two plates D and C is closed this bent end H presses against the end of the bobbin, holding it in position, the notch *f* fitting over the shank of the bobbin, as shown. The indentations *a*, made in the side of the plate D, as shown, are for the purpose of holding the thread at any desired tension it has been adjusted to, which adjustment and operation of the shuttle are effected as follows: Open the shuttle-lid formed by the two spring-plates C and D, and push the bobbin B into its place, as indicated by drawing; slip the thread I between these two plates, the shape of the end H facilitating this operation. When the thread is thus placed slide it up toward the rivet *d*. The stiffer the tension required the nearer must the thread be to the said rivet. When the thread I is in the desired position draw it into the notch it is opposite to, it being remembered that the thread must enter in the notched side of plate. When thus adjusted close the lid of the shuttle and pass the thread I through the eye E, the notch F in the plate C making the operation extremely easy to accomplish. The threading is now complete, and it will be found that not only is it and the adjustment of the tension simple and efficient, but that the tension is perfect in strength and regularity. A pin, *g*, in the shuttle and slot *h* in the cover C D are, it will be noticed, so relatively placed that when the cover is closed the slot *h* permits the plate C to pass the pin *g*, and one side of it to spring under the said pin *g*, thus locking the lid when closed. Among the advantages of my improved shuttle it will be noticed that there are no expensive spring-centers required to hold the bobbin in position, and no screw-driver necessary to regulate the tension; that should the spring-plate C and D be broken, or otherwise require renewing, no mechanical skill is required to take it off the shuttle and put another, which may be obtained from the factory, in its place; and, finally, that when the lid is closed the bobbin is securely locked in its proper position.

I claim as my invention—

1. The spring-plate D, having the notches *a*, the slotted bent end H, and the bridge G, combined with the spring-plate C, provided with the notch F, said plates being fastened together and pivoted to the shuttle, substantially as and for the purposes specified.

2. The spring-plate C, having the slot *h*, and spring-plate D, provided with the slot *f*, pivoted to the shuttle and riveted together, as shown, combined with the bobbin B and pin *g*, substantially as and for the purposes specified.

3. The shuttle-body A, provided with the pin *g*, in combination with the plate C, having the slot *h*, substantially as and for the purpose specified.

H. L. WALKER.

Witnesses:
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KENNETH MACLEAN.