W. REID.

SHUTTLES FOR SEWING-MACHINES.

No. 183,070. Patented Oct. 10, 1876.

FIG. 1.

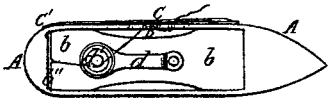

FIG. 4.

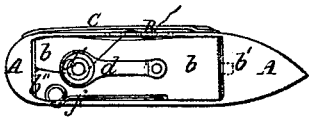

FIG. 2.

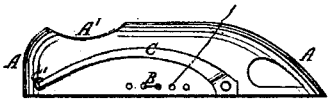

FIG. 5.

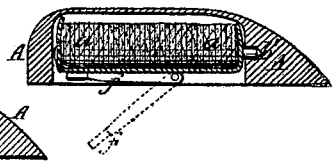

FIG. 3.

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WILLIAM REID, OF GLASGOW, GREAT BRITAIN.

IMPROVEMENT IN SHUTTLES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **183,070**, dated October 10, 1876; application filed August 13, 1875.

To all whom it may concern:

Be it known that I, WILLIAM REID, of Glasgow, in the county of Lanark, Great Britain, have invented an Improvement in Shuttles for Sewing-Machines, of which the following is a specification:

This invention relates, essentially, to the construction of shuttles adapted for holding and using hollow cops of thread for sewing-machines, whereby much more thread can be placed in the shuttle than formerly, and breakage of thread will in a great measure be prevented; moreover, since the thread is unwound from the interior of the cop, and passes through a hole or holes in the shuttle, and under a kink-removing spring, the unwinding process is more steady, and kinks are completely removed from the thread in its passage out of the shuttle, all in contradistinction to using these threads on bobbins or spools, as generally practiced.

Figure 1 on the accompanying sheet of drawings is a front view of the shuttle. Fig. 2 is a plan of the same, and Fig. 3 is a horizontal section corresponding to Fig. 2, showing the interior of the shuttle, and a section of the hollow cop within it, all in accordance with, and illustrative of, the best modification of shuttle and its fittings which I am at present aware of, for carrying my said invention into effect or practice.

Referring to these Figs. 1 to 3, the improved shuttle A is made with a plain hollowed-out recess, and has a section cut out at the back, near the rear end, oval or oblong, in the back view, but segmental in the plan, as seen at A′, Fig. 2, for the insertion of the cop *a* into the interior of the shuttle, and for the easy passing of the loop of the needle-thread over it.

The shuttle A has a thin sheet-metal fixed cover, *b*, the extreme rear end *b′*, Fig. 3, of which is bent inward to form a disk-like rest or guide for the rear end of the cop *a* to rest against, a small hole being formed through the bent or disk part for the thread to pass up through a slit between it and the inner end of the shuttle-recess from the interior of the cop *a*.

Upon the outer surface of the cover *b*, Fig. 1, a spring-presser or kink-removing spring, *d*, is fixed, preferably riveted at its front end, and having an eye at its other end working over a pin, *d′*, all within the flush or face of the shuttle.

On the upper side of the shuttle A, Fig. 2, a spring or thread-guide, C, is fixed, preferably riveted at its front end, and curving backward to the rear end of the shuttle into a hole, C′, in which the hooked part of the free end of the spring passes, and holds the spring along its whole length flush, or nearly so, with the body of the shuttle A, all in a usual manner.

When this improved shuttle A has to be used, the free end of the thread from the hollow interior of the cop *a* is threaded through the hole A′, and the hole in the disk end *b′* of the cover, as seen at Fig. 3, facilitated by a small hole, A″, in the rear end of the shuttle, and then drawn by a hook or pin up through the slot *b″*, and over its rounded edge, as seen at *b″* in Fig. 1; thence it is carried over or around the pin *d′*, under the kink-removing spring *d*, out through one or more of the ordinary tension-holes B in the edge of the shuttle, and finally under the guide-spring C, Figs. 1 and 2. The cop *a* is then placed in the shuttle A through the entrance A′, and pressed down tight between the front end and the back end disk *b′*, so that the thread will pass out through the hole therein and slot *b″*, when the whole is ready for use.

In using the hollow cop *a* with this shuttle A, the unwinding of the thread from the interior of the cop is maintained extremely steady, and any kinks which do run out in the process of unwinding are effectually removed by the spring *d*.

In some cases it is preferred to insert the cop from the front instead of from the back of the shuttle A, and in order to permit of this the lid or cover *b* (shown in Fig. 4) may be wholly removable, and jointed at the front end by a pin, *b′*, or it might be hinged at that end, and in either case it would be secured in position at the rear end by the spring *f*,

hinged to the side of the shuttle, so as to swivel outward, as seen in horizontal section in Fig. 5. Under this arrangement the hole A′ in the back of the shuttle A is dispensed with.

I claim as my invention—

The kink-removing spring *d* and perforated bearing *b′*, in combination with the sewing-machine shuttle, substantially as set forth.

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