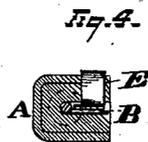
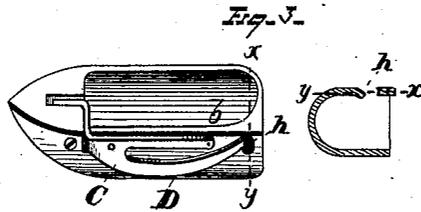
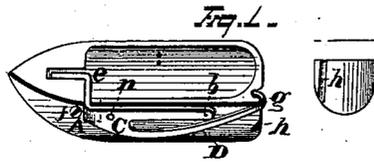


G. W. BAKER.  
SEWING-MACHINE SHUTTLE.

No. 183,528.

Patented Oct. 24, 1876.



WITNESSES  
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# UNITED STATES PATENT OFFICE

GEORGE W. BAKER, OF CLEVELAND, OHIO.

## IMPROVEMENT IN SEWING-MACHINE SHUTTLES.

Specification forming part of Letters Patent No. 183,528, dated October 24, 1876; application filed July 7, 1876.

*To all whom it may concern:*

Be it known that I, GEORGE W. BAKER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Sewing-Machine Shuttles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in sewing-machine shuttles; and consists, essentially, in a tension-spring combined with a lever or thread-controlling spring.

In the drawing, Figure 1 represents an isometric view of a shuttle embodying my invention. Fig. 2 is a similar view of the tension-spring and thread-controlling spring detached. Fig. 3 is a side and sectional view of a shuttle provided with a recess on its side for guiding or retaining the thread-controlling spring. Fig. 4 is a sectional view, showing the bobbin retained in its place by the projecting arm of spring.

C is the tension-spring, hinged to the side of the shuttle A, and bearing on the surface thereof. Its bent arm *e* enters the shuttle, as shown, holds the bobbin in its place by resting on its spindle, and is operated on by the screw *f* when it is desired to increase or decrease the tension. D is the thread-controlling spring, the hooked end *g* whereof rests and moves in groove *h* of the heel of the shuttle. The opening *n* is for the passage of the thread. The spring C, with its spring-arm D, swings on the side of the shuttle about the pivot *b*, so that when the bent end *e* moves outward the hook *g* of spring-arm D runs in and is guided by groove *h* in the heel of the shuttle.

The tension-spring and thread-controlling spring are formed in one piece, and no solder-

ing of any of these parts to the shuttle is required. The cost of manufacture is thus reduced, a cheaper article is the result, and the parts are less liable to get out of order.

The purpose served by the groove or recess *h*, and by the projection therein of the hooked end of arm D, is to prevent the thread from becoming disengaged from its controlling-spring D. It may readily be passed under the spring D by simply passing it around under the end of the hook *g*.

Instead of employing the groove *h* at the end of the heel of the shuttle, I sometimes employ the equivalent device, (shown in Fig. 3,) being simply a hole, *h'*, into which the hook *g* can drop, this hole having an inclined wall at the back, as shown in the sectional view of Fig. 3, so that when the arm D is turned out, with the tension-spring C around the pivot *b*, the hook *g* will readily slide up the incline and disengage from the said hole.

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

1. The combination, with a shuttle-case, of the tension-spring C, provided with arm *e*, and thread-controlling spring D, the springs formed in one piece, and pivoted at *b* to the outside of the shuttle-case, substantially as and for the purpose specified.

2. The springs C D, pivoted to the outside of the shuttle at *b*, the spring C, provided with arm *e*, in combination with the shuttle, having an open front bearing for the bobbin, and a rear groove, *g*, for the reception and retention of the spring D, substantially as and for the purpose set forth.

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

GEORGE W. BAKER.

Witnesses:

WELLS W. LEGGETT,  
WM. BEHRENS.