

W. H. THAYER.
SHUTTLE FOR SEWING MACHINES.

No. 103,797.

Patented May 31, 1870.

Fig. 1.

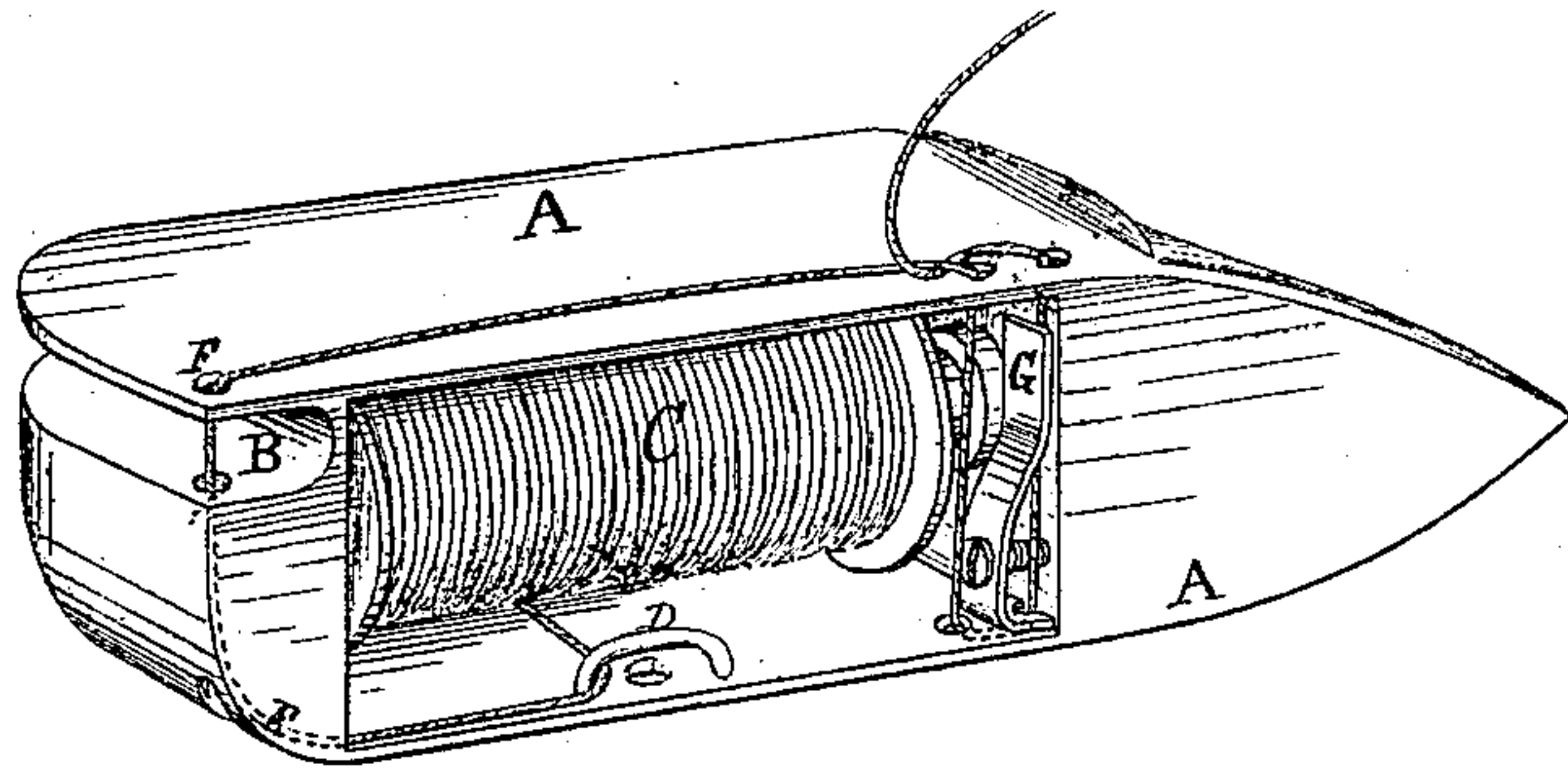
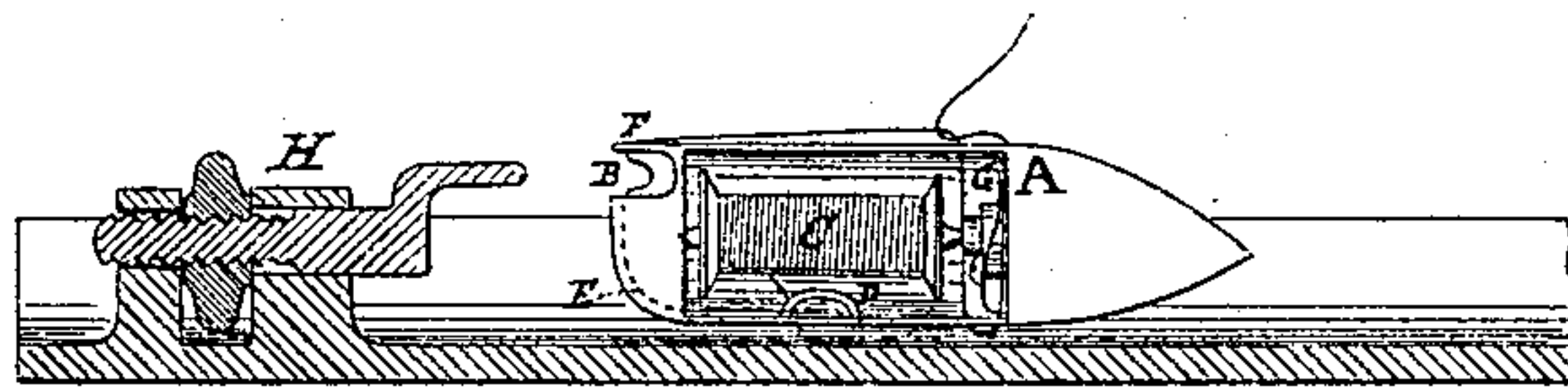


Fig. 2.



Witnesses:

Phil. A. Garner
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UNITED STATES PATENT OFFICE.

WILLIAM H. THAYER, OF THOMASTON, CONNECTICUT.

IMPROVEMENT IN SHUTTLES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 103,797, dated May 31, 1870.

To all whom it may concern:

Be it known that I, WILLIAM H. THAYER, of the town of Thomaston, county of Litchfield, and State of Connecticut, have invented a certain new and useful Shuttle, particularly adapted for use with Sewing-Machines.

My invention consists in certain novel devices, and in their construction and arrangement, by means of which a sufficient quantity of thread is withdrawn by a positive motion from the bobbin or cop within the shuttle, and an even and regular tension of the thread is effected and maintained and the thread effectually prevented of itself from returning within the shuttle after it has once been withdrawn; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part of the same, is a true, clear, and exact description thereof.

Reference being had to the drawings, Figure 1 represents on a large scale, in perspective, one of my shuttles.

A is the case or shell, resembling, with a single exception, the exterior of many sewing-machine shuttles now in use.

B is a recess in the butt-end of the shuttle. It is this feature which renders its exterior specially noticeable. Its function will hereinafter be explained.

C is a bobbin, mounted in the usual manner within the shuttle, and is shown as if partially wound with thread.

D is a loop-staple fixed to the bottom of the case on its inside, through which thread is conducted direct from the bobbin.

E is a passage (shown in dotted lines) in the butt of the shuttle, through which thread from the loop-staple D passes upward across the recess B, through an aperture in the top of the rear end of the case.

F is an aperture, through which thread from passage E is drawn downward through the shuttle-case beyond the end of the bobbin through another corresponding aperture.

G is a check and tension-spring combined, and is arranged vertically to bear against the inner end of the front portion of the chamber within the shuttle.

The course of the thread from the bobbin to its delivery is as follows: Passing under the staple D toward the rear of the shuttle, enter-

ing passage E, thence upward across recess B, through aperture in top of case, downward across the interior of the shuttle, out of an aperture in bottom of case, thence forward slightly, returning through another aperture between the stop and tension-spring G and the inner surface of the end of the interior of the shuttle, through still another aperture in the top of the case slightly forward of the one before described. After being passed through this latter aperture I prefer to pass the end of the thread back between its rear portion and the surface of the shuttle-case, as in practice I find that it operates most satisfactorily when so arranged.

Fig. 2 represents in vertical section a portion of a raceway of a shuttle sewing-machine in which one of my shuttles is shown on a smaller but full-sized scale. The respective parts thereof are lettered as in Fig. 1.

H represents a draw-block arranged at the rear end of the raceway by means of a screw in such a manner that it may be adjusted longitudinally, if desired. The draw-block being stationary, with its inward projecting end arranged to enter the recess B in the rear end of the shuttle as the latter is carried toward it, serves the purpose of a drawing device, for if the thread be in position and crossing the recess vertically the stop-block, being engaged with the recess laterally, forces the thread into the recess, drawing the same from the cop or bobbin. By moving the draw-block forward or backward the quantity of thread drawn from the bobbin or cop is regulated, and may be adjusted to meet the exact requirement of the style of stitch desired.

The method of drawing the thread from the bobbin and the operation of the spring G in the regulation of tension being clearly obvious or explained, it only now remains necessary to call attention to the inclined upper ends of said spring, which is so arranged as to bear gently when the thread is passing in the direction of the arrow or outward from the shuttle, but which pinches and holds it fast against its possible return after having once been drawn out, thus effectually preventing the possibility of the so-called "kinking" of the thread within the shuttle, which generally results either in the retarding of its delivery or in the breaking of the thread.

Instead of the draw-block described, a stationary bar fixed across the raceway will serve a similar purpose.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The shuttle herein described, having the recess B and adjustable stop and tension-spring,

when all arranged for operation as shown and described, and for the purposes specified.

WM. H. THAYER.

Witnesses:

HIRAM PIERCE,
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