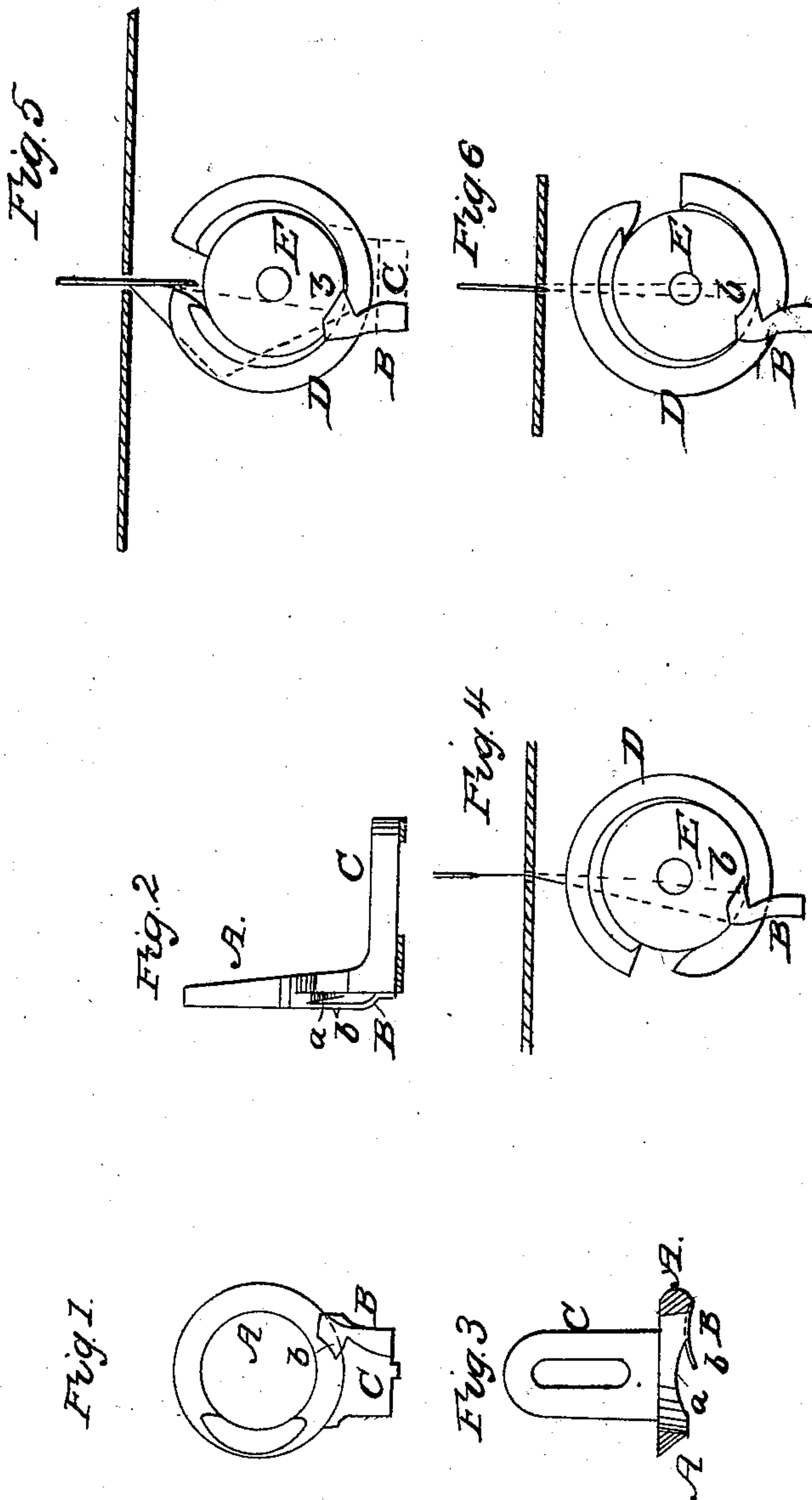


J. B. SECOR.

Loop Check of Sewing Machines.

No. 40,589.

Patented Nov. 10, 1863.



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# UNITED STATES PATENT OFFICE.

JEROME B. SECOR, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND W. H. BUTLER, OF SAME PLACE.

## IMPROVEMENT IN THE LOOP-CHECK OF SEWING-MACHINES.

Specification forming part of Letters Patent No. 40,589, dated November 10, 1863.

*To all whom it may concern:*

Be it known that I, JEROME B. SECOR, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to what is commonly known as the "Wheeler & Wilson" sewing-machine. In this machine what is known as a "loop-check," consisting of a pad or brush, is used to temporarily arrest the loop in its passage round the rotating hook for the purpose of preventing the latter from getting more than one loop upon it at a time, and this loop-check has been a source of many difficulties to persons operating the machine, more especially when one machine has had to be used for sewing materials of different thicknesses and with thread of different sizes. These difficulties are so well known to persons experienced in the use of this machine as to need no explanation here. Several devices have been invented with a view to remedy this evil, but all which are known to me have been more or less objectionable, most of them requiring essential alterations of the rotating hook or being otherwise difficult of application to machines already made.

The object of my invention is to obtain a loop-check which will work equally well for all kinds of work and which can be applied at small expense to machines now in use.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 in the drawings is an inner face view of the bobbin-ring with my improved loop-check attached. Fig. 2 is a front view of the same. Figs. 4, 5, 6 are face views of the rotating hook and bobbin, showing also the loop-check and illustrating the different stages of the operation of the check.

Similar letters of reference indicate corresponding parts in the several figures.

The bobbin-ring A is made in the usual form, except that the lower part of its inner face is provided with a recess, *a*, from one end of which recess there projects a thin pointed plate or tooth, *b*, denominated a "loop-check." The

object of the recess *a* is to allow the outer portion of the thread-loop to pass between it and the loop-check *b*. The said loop-check *b* may be formed of a piece of sheet-steel, B, which is secured at its upper part to the ring A and its lower part to the base C, to which said ring is attached; or, the said loop-check *b* may be made in one piece with the ring A. The said loop-check *b* projects horizontally along the face of the ring A and partially covers the recess *a*, as shown in the drawings, Fig. 3, one end of said recess terminating behind said loop-check. The point of said loop-check *b* occupies a position very slightly in front of a vertical line drawn through the center of ring A and base C.

The operation of this loop-check is as follows: When in the rotation of the hook D the portion of the loop which first passes over the outer face of the bobbin has been cast off the hook in the usual manner it almost immediately passes in a loose condition onto the check in the manner illustrated by Fig. 4, and as the rotation of the hook continues the loop is drawn tight and up to the base of the check, as shown in Fig. 5, and there held until the inner side of the loop slips off the hook, and the loop is left upon the check, after which the hook having entered a new loop and commenced drawing up, the preceding one draws the latter off the point of the check and draws it directly upward across the face of the bobbin, as illustrated in Fig. 6, where the loop is represented as having just escaped from the point of the check. In this operation, instead of the loop passing onward beyond the check and escaping therefrom in a forward direction, as it does with the other checks, it slips off the check in a backward direction, the reverse of that in which it came on.

I will now mention some of the advantages of my check. First, it is a fixture, never requiring readjustment, and allows the use of the coarsest and finest threads without such variations of adjustment of the bobbin-ring as are necessary with the brush-check, and without any failure in its operation; second, as it is not subject to any considerable friction by the loops, it neither wears itself nor injures the thread or silk by chafing, untwisting, or otherwise; third, its position on the bobbin-ring protects it from accidental injury and prevents



it from offering any obstacle to the cleaning of the machine and enables the operation of the rotating hook to be more distinctly seen; fourth, it obviates the necessity for the thread-guard under the work-plate, and thereby not only saves the expense of such guard, but obviates annoyance to the operator by the threads becoming entangled in such guard; fifth, it is more cheaply constructed and applied than any other check; sixth, it requires no oil on its surface for any kind of work; seventh, it allows variations in the set of the needle without serious injury to the beauty and strength of the seam; eighth, it causes the loop to be drawn up to the fabric as nearly as practicable in a line with the needle's motion from a point directly or very nearly opposite the needle-hole in the work-plate, as will be understood by reference to Fig. 5, thereby causing less strain and friction upon the thread than if the loop were drawn in or from any other direction; ninth, it permits the bobbin to run very loosely, thereby not only causing less strain on the upper thread in passing over the bobbin, but less strain upon the under thread, as with a loose bobbin the under thread is more easily unwound, and consequently there is less liability of breaking either thread in running at a high speed.

I am aware that Letters Patent were granted to John N. Wilkins on the 30th of September, 1862, for a loop-check consisting of a long finger extending obliquely through the bobbin-ring across the face of the bobbin. This therefore I do not claim.

Some of the advantages of my invention over the above are the following: First, that my loop-check is much less exposed, less subject to injury, and less likely to injure the fingers of the operator in the act of removing and replacing the bobbin; second, my check discharges the loop in a position directly beneath the thread-hole in the cloth-plate, and the loop is thereby adapted to be drawn up without side pressure or friction.

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

Having the lower face of the bobbin-ring A provided with a recess, *a*, and a loop-check, *b*, projecting over a portion of such recess, the whole constructed, arranged, and operating together substantially in the manner herein shown and described.

JEROME B. SECOR.

Witnesses:

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