

W. A. MACK.
SEWING MACHINE.
APPLICATION FILED APR. 18, 1911.

1,043,329.

Patented Nov. 5, 1912.

Fig. 1

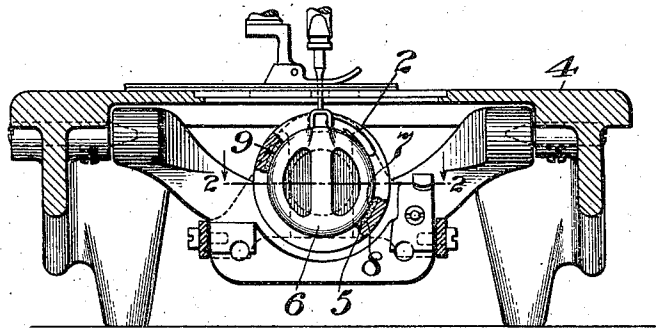


Fig. 2

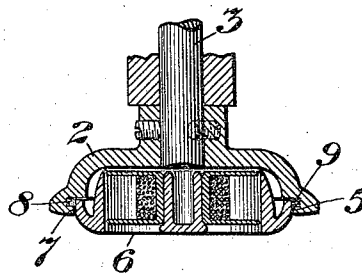
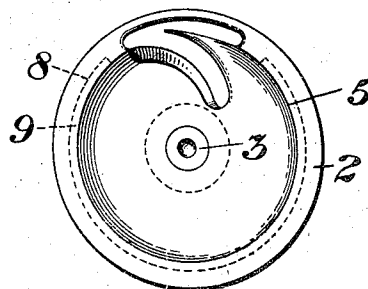


Fig. 3



WITNESSES:
Chas. J. Claggett
N. M. Cassidy

INVENTOR
William A. Mack

BY
Chas. J. Claggett
his ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM A. MACK, OF CLEVELAND, OHIO, ASSIGNOR TO THE STANDARD SEWING MACHINE COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

SEWING-MACHINE.

1,043,329.

Specification of Letters Patent.

Patented Nov. 5, 1912.

Application filed April 18, 1911. Serial No. 621,777.

To all whom it may concern:

Be it known that I, WILLIAM A. MACK, citizen of the United States, and resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification.

My invention relates to sewing machines and has special reference to that class of sewing machines employing a rotary loop-taker and a non-rotary bobbin-case seated within a race-way in said loop-taker. In this class of machines, when adapted to run at a high rate of speed, as for instance, from four to five thousand stitches per minute, it is necessary that some means be provided for maintaining a constant lubrication of the contacting surfaces of the loop-taker and bobbin-case, and it is also necessary that in maintaining such lubrication the lubricant should be confined substantially to the adjacent contacting surfaces so as not to soil the needle thread when it is being passed about the bobbin-case by the loop-taker.

With the knowledge of such requirements in mind, it has been the object of my invention to provide an improved lubricating means for the contacting surfaces of a loop-taker and bobbin-case having the necessary characteristics referred to.

To this end my invention consists in the novel construction, arrangement and combination of parts hereinafter described in detail and particularly pointed out in the appended claims.

Referring now to the accompanying drawings forming part of this specification, in which I have shown only so much of a sewing machine as is necessary to illustrate my invention,—Figure 1 is a front end view of the bed-plate of a sewing machine and its supported loop-taker and bobbin-case, with certain of the parts partly broken away to more clearly illustrate the invention. Fig. 2 is a central cross-section through the loop-taker and its supported bobbin-case, taken on the line 2—2 of Fig. 1. Fig. 3 is a front view of the loop-taker with the bobbin-case removed.

Similar reference characters indicate like parts in the several figures of the drawings. The loop-taker shown in the present case,

indicated at 2, is of the so-called "hook" type, and is directly mounted on the front end of an operating shaft 3 journaled in suitable bearings at the under side of the bed-plate 4. This loop-taker is of the usual open cup-shaped form having a circular race-way 5 formed therein at its face side, in which is adapted to be seated a non-rotary bobbin-case 6 which is formed with a peripheral bearing surface 7 for location in said race-way. A latch of suitable construction, such as that indicated by dotted lines in Fig. 1 and as more fully disclosed in Letters Patent No. 1,005,250, granted to me October 10, 1911, is adapted to removably hold the bobbin-case in its said operative connection with the loop-taker and also hold the same against rotary movement.

In accordance with my invention, the loop-taker is formed with an elongated recess or groove 8 in the wall of its race-way 5 which extends lengthwise of the latter and terminates at its opposite ends adjacent the point and heel respectively, of the loop-taker, as shown. Located and retained within this groove 8 is a lubricating means, indicated at 9, for engaging with and lubricating the adjacent or opposed rim of the bobbin-case. This lubricating means may be of any kind suitable for the purpose, the same preferably being an oil-saturated strip of absorbent material, such as a strand of woolen yarn, which latter will readily absorb and retain oil or like lubricant. With this described means, a lubrication of the rim of the bobbin-case at its point of engagement with the loop-taker will be constantly maintained, and the lubricant, by reason of the location of its containing groove 8 adjacent the rear side of the race-way and back from the face of the loop-taker, will be sufficiently confined to prevent such undue spreading of the same as would tend to soil the thread.

What I claim is:

1. In combination, a rotary loop-taker provided with a race-way having an elongated groove therein, a non-rotary bobbin-case seated in said race-way, and lubricating means located in said groove in the race-way for contact with the adjacent surface of the bobbin-case.

2. In combination, a rotary loop-taker having a race-way, and a non-rotary bobbin-

case seated in said race-way, said loop-taker being provided with an elongated groove in its race-way terminating at its opposite ends adjacent the point and heel respectively of the loop-taker, and lubricating means located in said groove for contact with the adjacent surface of the bobbin-case.

Signed at Cleveland, in the county of Cuyahoga, and State of Ohio, this 4th day of April A. D. 1911.

WILLIAM A. MACK.

Witnesses:

CHAS. C. EMMONS,
H. W. CORNING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."