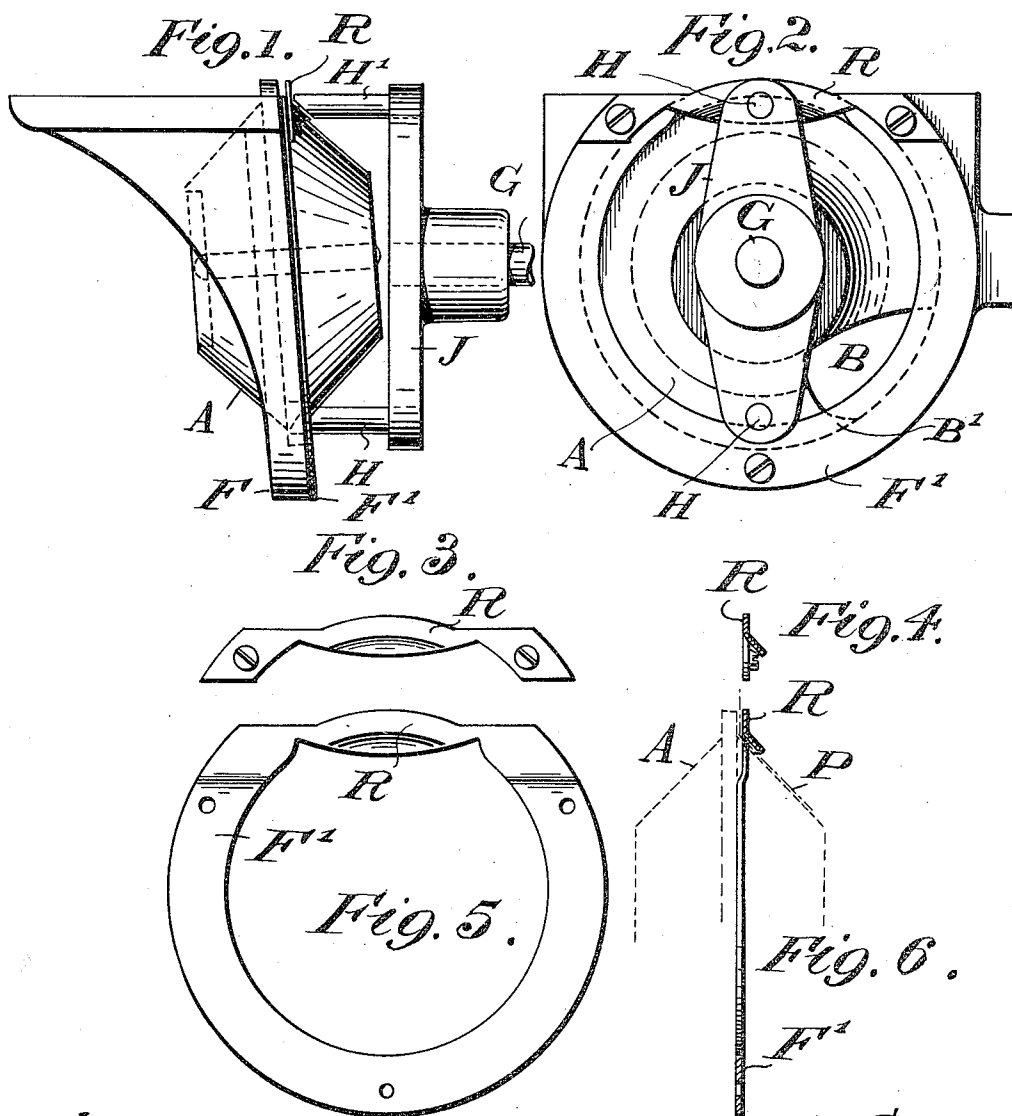


F. J. T. & H. C. BELL.
SEWING MACHINE.
APPLICATION FILED JULY 11, 1910.

1,064,595.

Patented June 10, 1913.



Witnesses:

Geo. A. Hamilton
S. V. Lockwood

Inventors:

Frederick John Turner Bell
and Hardy Cecil Bell
by *Geo. P. Whittelsey*

UNITED STATES PATENT OFFICE.

FREDERICK JOHN TURNER BELL AND HARDY CECIL BELL, OF BURY, ENGLAND.

SEWING-MACHINE.

1,064,595.

Specification of Letters Patent.

Patented June 10, 1913.

Application filed July 11, 1910. Serial No. 571,325.

To all whom it may concern:

Be it known that we, FREDERICK JOHN TURNER BELL and HARDY CECIL BELL, both subjects of the King of Great Britain and Ireland, and both residents of Bury, in the county of Lancaster, England, have invented new and useful Improvements in Sewing-Machines, of which the following is a specification.

10 This invention relates to sewing machines in which the underthread spool, bobbin, reel or cop (hereinafter referred to as a bobbin) is contained within a casing or holder which is rotated by means of pins mounted on a face plate or equivalent rotating on an axis which is inclined to the axis of rotation of the casing or holder, so that the pins alternately engage with and disengage from corresponding driving holes in the holder or casing so as to permit, in their disengaged positions, the formation of a loop of needle thread around such holder or casing and the disengagement therefrom of the loop so formed.

25 The object of our invention is to furnish such a casing or holder or the accessories of such a casing or holder with an improved guard device which will act effectually to prevent the loop of needle thread while passing around the casing coming into contact with or becoming entangled with a disengaged driving pin.

30 The improved guard is shown in the accompanying drawings which are now referred to.

35 Figure 1 is a side elevation of the complete arrangement of reel carrying casing and driving plate and pins with a guard plate. Fig. 2 is an axial view of the same parts. Figs. 3 and 4 are respectively an elevation and a cross section of the guard plate shown in Figs. 1 and 2. Figs. 5 and 6 are views at right angles to each other of a modified arrangement of guard plate.

40 Referring to the drawings A is the circular hollow shell or casing to receive the under reel of thread and its carrier, which casing is deeply cut away or notched at B to form a hook B¹ to engage the loop of needle thread and pass it over the casing during its rotation. This casing is rotated by the pins H, H¹ carried by a cross bar J secured to the shaft G. These pins H and

H¹ are adapted to drive the casing around with them when the shaft G is rotated, by entering corresponding holes formed in the shell of the casing A. Owing to the angular disposition of the axis of the casing A and the shaft G to one another and as shown in Fig. 1 the pin which is uppermost is free from the casing so that the loop of needle thread may pass between the end of such pin and the casing.

F is the fixed race or guide in which the casing A rotates it being cut away at its upper part to form a gap in which the loop of needle thread is formed for engagement by the hook B¹.

Referring to Figs. 1 to 4 R is a thin guard plate which is so placed and disposed that it extends across the gap in the race F on that side which is nearer to the driving pins H and H¹. It is so placed as to be opposite to the path described by the driving pin which is out of engagement with the casing A and is interposed between the end of said pin and said casing. It is so placed as to be sufficiently far from the casing A as not to interfere with its rotation and to permit the passage between itself and the casing of the thread of the needle loop as shown at P in Fig. 6. In the form illustrated it is a thin sheet metal plate shaped to the contour of the casing and screwed by both ends to the race or guide F. A modification in the disposition of the guard plate is illustrated in Figs. 5 and 6. In this a side plate F¹ of the race F may itself be formed with an integral guard portion or plate R instead of having a plate separately attached to it, such integral guard portion being similarly raised off the casing. One side of the gap in the race F only is shown as fitted with the guard plate but if desired both sides may be similarly fitted.

What we claim is:—

In a sewing machine, a bobbin casing of a double conical form, rotating means therefor having pins which are adapted to alternately engage with and disengage from said casing, a peripheral rim or flange around said casing, and a stationary race engaging on opposite sides of such peripheral rim or flange, that side of such race which is nearest the means for rotating the casing being continuous and without break and being so

formed at that part opposite to which the
disengaged driving pin passes as to permit
the passage of the needle thread between it-
self and the casing and to directly interpose
5 itself between the casing and the end of the
disengaged driving pin.

In witness whereof we have hereunto set

our hands in the presence of two subscrib-
ing witnesses.

FREDERICK JOHN TURNER BELL.

HARDY CECIL BELL.

Witnesses:

WILLIAM GEO. HEYS,

JOHN O'CONNELL.

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