May 29, 1956 W. SCHWEITER ET AL 2,747,805

DEVICE FOR THE PLACEMENT OF THE THREAD DURING QUICK TRAVERSE WINDING

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Fig. 1

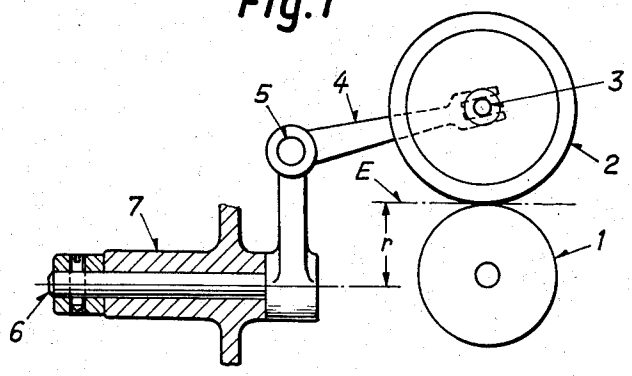


Fig. 2

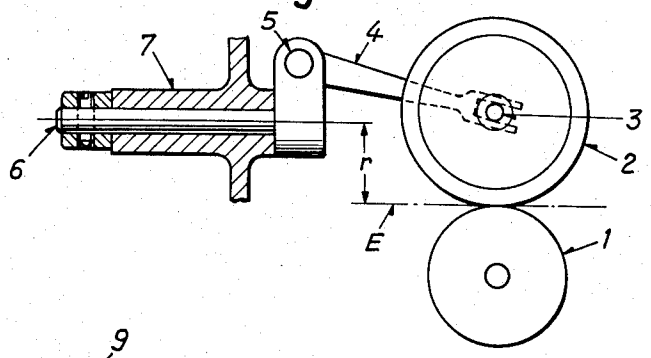
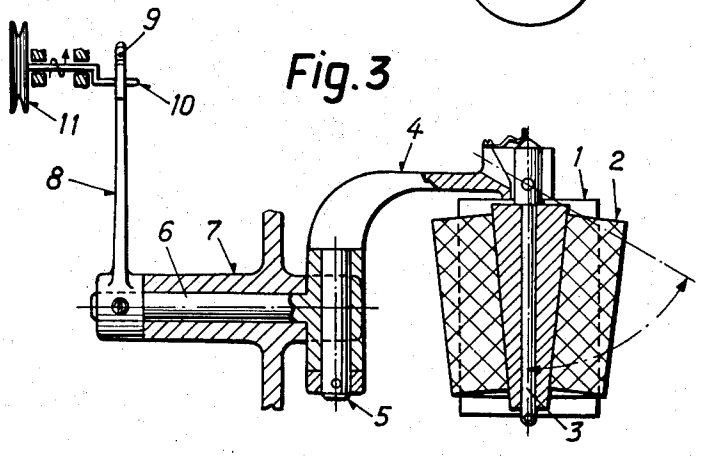


Fig. 3



INVENTORS:
WALTER SCHWEITER
KARL MARX
BY Leon M. Strauss
ATT.

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DEVICE FOR THE PLACEMENT OF THE THREAD DURING QUICK TRAVERSE WINDING

Walter Schweiter and Karl Marx, Horgen, Switzerland, assignors to Schweiter Limited, Horgen, Switzerland, a Swiss company

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2 Claims. (Cl. 242—18)

The present invention relates to a device for placing the thread during the winding operation on quick traverse winding machines.

It is known to impart a tilting motion to the bobbin on the grooved cylinder during the winding operation. A purpose therefor is to continuously transfer the pressure of the bobbin from one edge of the bobbin to the other, thus preventing the formation of a thickened portion. It has been proposed to rock the bobbin about an axis traversing its centre of gravity, whereby in addition to a tilting motion there is also produced a lateral displacement. This lateral displacement, however, increases with the diameter of the bobbin to be wound and acts detrimentally as the bobbin increases in size, the displacement causing the edges to be stripped off. To overcome this disadvantage it has been proposed to tilt the bobbin about an axis, which intersects the line of contact between the bobbin and the cylinder. In this known arrangement no lateral displacement of the bobbin on the cylinder is effected, which in turn has the disadvantage that the edges become too hard.

It is therefore, a primary object of the present invention to eliminate the defects of these and other devices heretofore known. It is a further object of the invention to provide means simplifying the winding operation and rendering same most efficient by the provision of a pivot member about which the bobbin rocks, said pivot member being mounted in a fixed bearing, which is arranged a predetermined distance amounting to at least one-fifth of the width of the grooved cylinder and extends at least approximately parallel to the plane passing through the line of contact between the grooved cylinder and the bobbin.

Still a further object of the invention is to provide means affording the location of the pivot member above or below the said plane to thereby attain an extremely uniform winding operation.

These and other objects and advantages will become more apparent from the following description, drawing and claims.

The invention is illustrated in the drawing which shows two possible embodiments.

Figure 1 shows the mounting of the pivot member below the plane through the line of contact between the grooved cylinder and the bobbin, and

Figure 2 shows the mounting of the pivot member above the plane through the line of contact between the grooved cylinder and the bobbin.

Figure 3 is a plan view of Figure 1, partly in section.

On the grooved cylinder **1** there rests the bobbin **2**, which is mounted to be rotatable about the spindle **3** which is pivotally connected to a lever **4**, which rocks about a pivot member **5**. The pivot member **5** is connected to the shaft **6** extending transversely thereto, which shaft is mounted in the fixed bearing **7**. The fixed bearing **7** is located below a plane E, and extends at least approximately parallel thereto. The plane E passes through the line of contact between the grooved cylinder **1** and the bobbin **2**. The distance *r* between the axis of the shaft

6 and this plane E forms the radius *r* in respect of the rocking motion, which radius is dependent on the width of the winding drum and amounts to at least one-fifth thereof.

Figure 2 shows a similar arrangement, in which the bearing **7** is located above the plane E. In both cases the bobbin **2** rocks to the extent of the radius *r*. This rocking radius is independent of the diameter of the wound bobbin, so that the tilting action and the lateral displacement of the bobbin on the grooved cylinder always remain the same from the commencement of winding up to completion of the wound bobbin. Owing to this mode of mounting of the pivot member **5** a particularly even winding is obtained at the edges of the bobbin, and the formation of a thickening and a hard edge are avoided.

In Figure 3 there are also seen means for obtaining the movement. On the shaft **6** there is mounted a lever **8** having at the end a slot **9**, in which there rotatably engages crank **10** driven by the pulley wheel **11**.

It can thus be seen that there has been provided according to the invention a device for placement of the thread on a bobbin which cooperates with a grooved cylinder, during the winding operation on quick traverse winding machines; comprising a pivot member operatively connected with said bobbin and about which said bobbin rocks, and a fixed bearing, on which said pivot member is mounted for rocking movement about a horizontal axis, said bearing axis being arranged a distance amounting to at least one-fifth of the width of said grooved cylinder and extending at least approximately parallel to the horizontal plane passing through the line of contact between said grooved cylinder and said bobbin.

Various changes and modifications may be made without departing from the spirit and scope of the present invention and it is intended that such obvious changes and modifications be embraced by the annexed claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent, is:

1. A device for placement of the thread on a bobbin which cooperates with a grooved cylinder, during the winding operation on quick traverse winding machines; comprising a pivot member operatively connected with said bobbin and about which said bobbin rocks, and a fixed bearing, on which said pivot member is mounted for rocking movement about a horizontal axis, said bearing axis being arranged a distance amounting to at least one-fifth of the width of said grooved cylinder and extending at least approximately parallel to the horizontal plane passing through the line of contact between said grooved cylinder and said bobbin.

2. A device for placing thread on a bobbin, which cooperates with a grooved cylinder, during the winding operation on quick traverse winding machines; comprising spindle means for rotatably supporting said bobbin, lever means with which said spindle means is pivotally connected, a member operatively connected with said lever means, and means for oscillating said member about an axis, said axis extending approximately parallel to the plane passing through the line of contact between said cylinder and said bobbin, the distance between said axis and said plane amounting to at least one-fifth the width of said cylinder, whereby oscillation of said member causes rocking of said bobbin for evenly distributing said thread on said bobbin.

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