May 14, 1957 E. B. DRISKELL 2,791,983

APPARATUS FOR PAINTING RINGS ON THE HEADS OF BOBBINS

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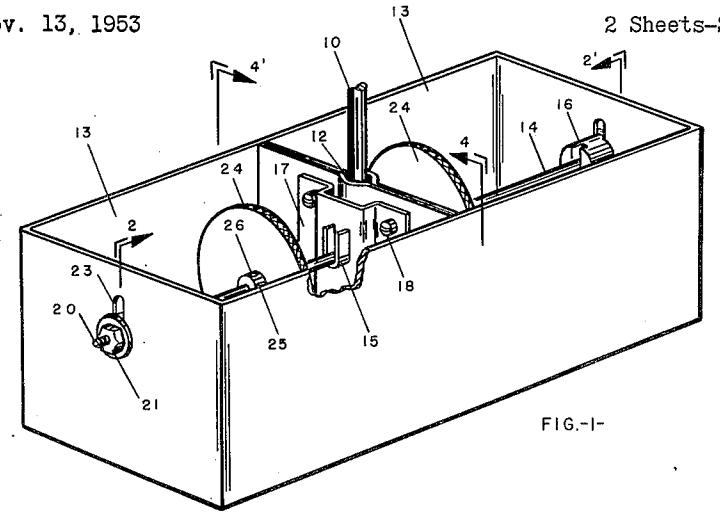

FIG.-1-

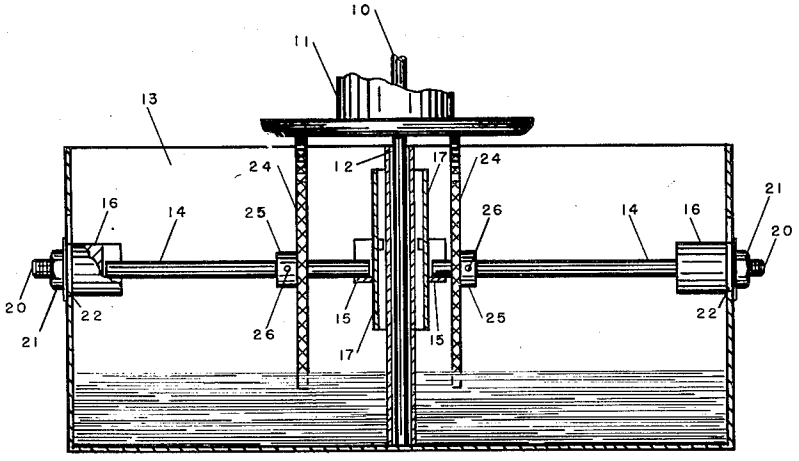

FIG.-2-

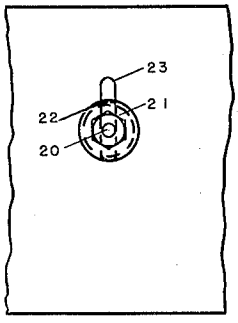

FIG.-3-

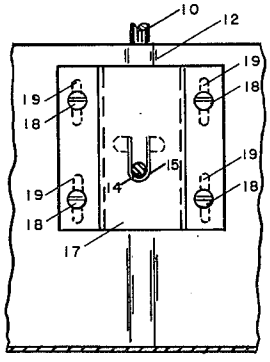

FIG.-4-

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APPARATUS FOR PAINTING RINGS ON THE HEADS OF BOBBINS

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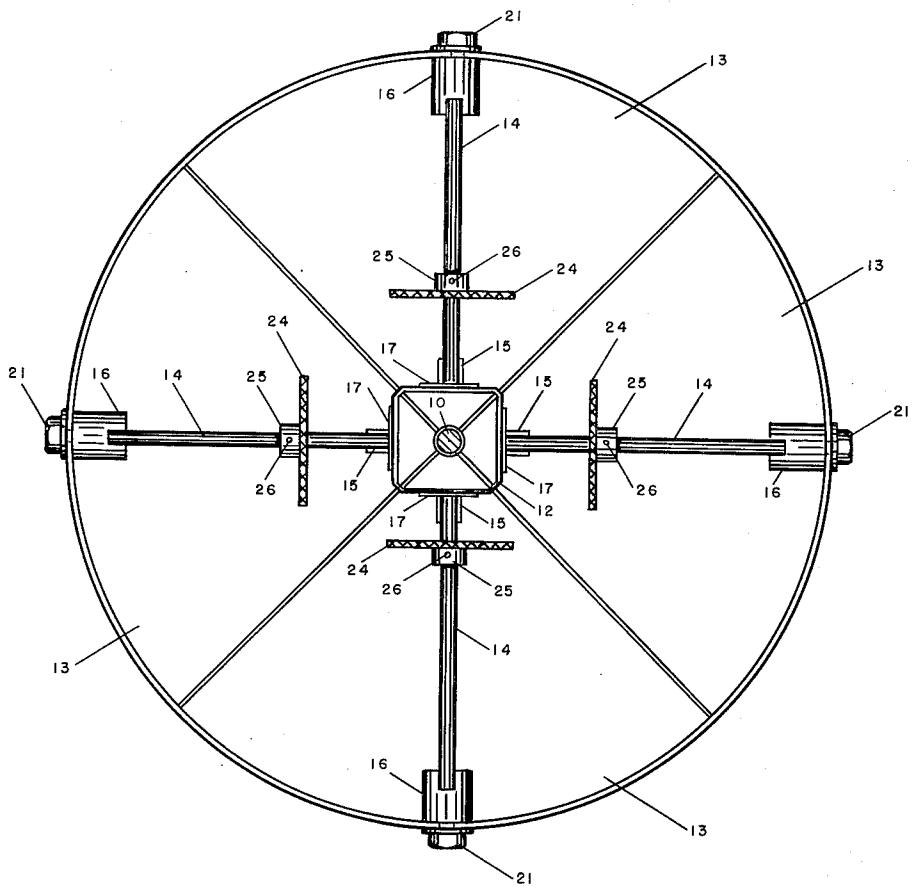

FIG. - 5 -

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APPARATUS FOR PAINTING RINGS ON THE HEADS OF BOBBINS

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Application November 13, 1953, Serial No. 391,901

4 Claims. (Cl. 118—219)

This invention relates to an apparatus for placing identifying markings on flanged-twister bobbins and more particularly to an apparatus for painting a number of concentric rings on the flange of a bobbin.

It is generally necessary in a textile mill that many different yarns be handled simultaneously. It is therefore imperative that the bobbins on which the yarn or thread is wound be clearly marked for positive identification as a single mistake can prove very costly. In many instances it is not possible to visually distinguish the different types of thread or yarn being employed and a mistake may not be noticed until the yarn is woven into cloth or even until the cloth is dyed thereby spoiling many yards of material.

To avoid such costly mistakes it has been customary in the prior art to place distinctive markings upon the yarn after it is wound on the bobbin or to place permanent markings on the bobbins and always employ the same bobbins for use with a specific size or type thread. Such marks have heretofore been applied by hand and have comprised a dot, cross, dash or the like or a series of such marks in a specific positional relationship. Marking the bobbins in this manner is slow and tedious and results in numerous costly errors. For example if different colors are employed it is necessary for the marker to change brushes which consumes considerable time. In addition it is relatively easy for the marker to become lax in this routine type of operation and thereby mark the bobbins erroneously or in such an indistinguishable manner that subsequent mistakes are inevitable.

It is an object of this invention to overcome the difficulties of the prior art by providing an apparatus for clearly marking bobbins in a novel manner.

According to this invention there is provided a simple apparatus on which a bobbin can be placed and rotated to result in a number of concentric rings of any desired width, color, and spacing being painted on the flange of the bobbin.

The apparatus of this invention is simple and readily constructed. It can be operated by anyone without special skill and, being hand operated, it can be employed in substantially any location. In addition, it provides a method of marking bobbins which is vastly superior to prior art procedures in that once properly marked the bobbins are almost incapable of confusion and the apparatus makes possible a very large number of clearly distinguishable markings. A further advantage is that bobbins marked by the apparatus can be clearly distinguished without likelihood of confusion almost irrespective of their position. Other advantages of the new apparatus and this procedure for marking bobbins will be readily apparent to those skilled in the art.

The invention will now be more particularly described with reference to the accompanying drawings in which:

Figure 1 is a view in perspective according to the one embodiment of this invention.

Figure 2 is a vertical cross section substantially along the line 2—2 of Figure 1.

Figure 3 is an elevation of one end of the apparatus shown in Figure 1.

Figure 4 is a vertical cross section substantially along the line 4—4 of Figure 1.

Figure 5 is a top plan view of a modified form of the invention having four cells.

Referring more specifically to the drawings, a vertical cylindrical spindle 10 adapted to receive a bobbin 11 is rigidly mounted on a suitable support 12. Substantially circumscribing the support 12 and formed integrally therewith are a number of containers 13 adapted to hold, in each instance, a quantity of paint. A shaft 14 in each of the containers 13 is mounted radially with respect to the spindle support 12 and in a horizontal plane, the shafts 14 being free to rotate around their longitudinal axes by virtue of bearings 15 and 16. Bearings 15 are, in each instance, rigidly affixed to a plate 17 which in turn is secured to spindle support 12 by means of screws 18. Slots 19 in each of the plates 17 provide for adjustment of the vertical positions of the bearings 15. Bearings 16 are affixed to the walls of the containers 13, in each instance, by means of a bolt 20 and nut 21. Bearings 16 are, in each instance, also provided with a shoulder 22 fitting into slot 23 to prevent rotation of the bearing block and retain it in operative position. The slot 23 in the container wall is provided, in each instance, for adjustment of the vertical positions of bearings 16 and by adjusting the vertical positions of both bearings 15 and bearings 16, the heights of shafts 14 can be varied.

Mounted on each of the shafts 14 and adapted to revolve therewith is a disk member 24 positioned at a selected distance from spindle support 12. The disk members 24, in each instance, are provided with an integral flange 25 containing a set screw 26, so that the positions of disk members 24 on shafts 14 can be adjusted as desired. The peripheral edges of the disk members 24 are covered by a layer of felt, knurled or the like so as to retain a quantity of paint and provide a high coefficient of friction.

In operation, a quantity of a selected color of paint is placed in each of the containers or as many of the containers as desired so that the lower peripheral edges of the disk members 24 are in contact with the paint. The vertical heights of the shafts 14 are adjusted so that the upper peripheral edge of each of the disk members 24 is in the same horizontal plane slightly above the base of spindle 10 thus forming a support for the flange of a bobbin placed over the spindle. The bobbin 11 is then placed over spindle 10 and hand rotated. Frictional contact of the flange of the bobbin with disk members 24 results in their rotation and in the rotation of shafts 14 about their longitudinal axes. As disk members 24 rotate, their peripheral edges are supplied with a small quantity of paint as a result of their contact with the supply of paint held in containers 13. The contact of the upper edges of disk members 24 with the flange of bobbin 11 results in a transfer of paint and since disk members 24 are at varying distances from spindle support 12, a number of concentric rings are painted on the flange of the bobbin 11 as it is rotated.

With particular reference to Figure 5 of the drawings, there is illustrated an exceptionally advantageous embodiment of the invention suitable for painting up to four concentric circles on a bobbin flange and having the paint containers compacted into a circular arrangement. Corresponding parts in the embodiment of Figure 5 have been numbered in agreement with the above description.

It will be understood that the description hereinabove is illustrative only and that various changes and modifications may be made without departing the scope of this invention.

I claim:

1. An apparatus for distinctively marking flanged bobbins for purposes of identification comprising in combination a cylindrical spindle rigidly mounted with the longitudinal axis in a vertical plane and adapted to receive a bobbin, a number of disk members adapted to retain a quantity of paint on their peripheral edges, said disk members being adjustably mounted at selected varying distances from the axis of said spindle and freely rotatable in a vertical plane about a horizontal axis radial with respect to said spindle, the upper peripheral edges of said disk members being in substantially the same horizontal plane so as to form a support for the flange of a bobbin placed over said spindle, and means for supplying paint to the peripheral edge of each of said disk members.

2. An apparatus as in claim 1 wherein said means for supplying paint to the peripheral edges of said disk members comprises in each instance a receptacle adapted to hold a quantity of paint in contact with the lower peripheral edge of said disk member as it is rotated.

3. An apparatus for distinctively marking the flange of a bobbin with a number of concentric rings which comprises in combination a support for a spindle, a cylindrical spindle, adapted to receive a bobbin, rigidly mounted on said support with the longitudinal axis in a vertical plane, a number of paint containers substantially circumscribing said spindle support and formed integral therewith, a number of horizontal freely rotatable shafts within said containers and mounted radially with respect to said spindle support, a number of disk members adjustably mounted on said shafts at selected varying distances from said spindle support, each of said disk members being adapted to contact a quantity of paint held in one of said containers and the peripheral edges of said disk members being adapted to hold a layer of paint, and means for adjusting the vertical height of the said shafts whereby the upper peripheral edges of said disk members can be adjusted to a common height above the base of said spindle thereby forming a support for the flange of a bobbin placed over said spindle.

4. An apparatus for distinctively marking flanged bobbins for purposes of identification comprising in combination a spindle operatively positioned with its longitudinal axis extending at a substantial angle to the horizontal and adapted to receive a bobbin, a number of rotatable paint applying members adapted to retain a quantity of paint on their peripheral edges, said paint applying members being adjustably mounted at spaced distances from the axis of said spindle and freely rotatable about an axis radial with respect to said spindle, the corresponding tangential portions of the peripheral edges of said paint applying members lying in substantially the same plane, said plane being normal to the axis of the spindle so that said members form a support for a flat end flange of a bobbin placed over said spindle, and means for supplying paint to the peripheral edge of each of said paint applying members.

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