(No Model.)

L. C. BALDWIN.

APPARATUS FOR PAINTING BOBBINS.

No. 331,757. Patented Dec. 8, 1885.

Fig. 1.

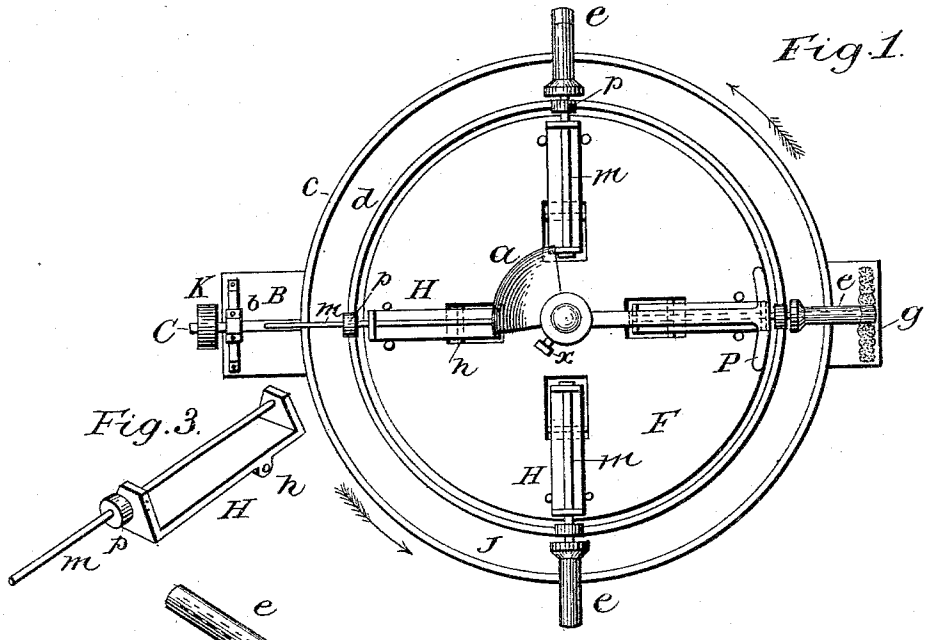
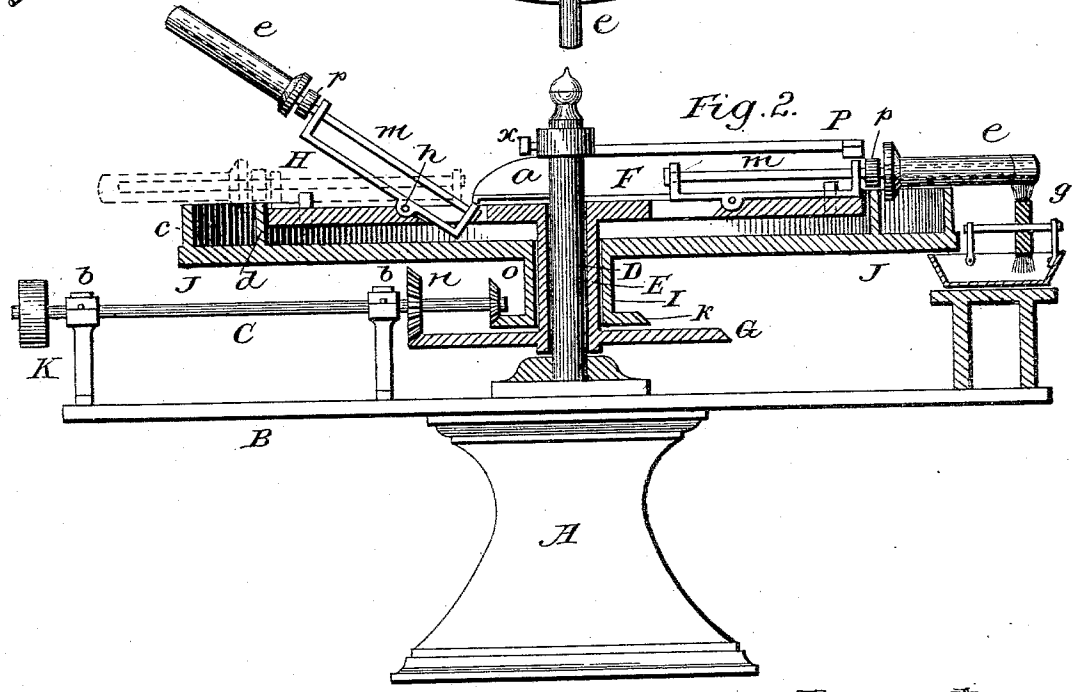


Fig. 3.

Fig. 2.



Witnesses:
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LUTHER C. BALDWIN, OF MANCHESTER, NEW HAMPSHIRE.

APPARATUS FOR PAINTING BOBBINS.

SPECIFICATION forming part of Letters Patent No. 331,757, dated December 8, 1885.

Application filed February 14, 1885. Serial No. 155,953. (No model.)

To all whom it may concern:

Be it known that I, LUTHER C. BALDWIN, of Manchester, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Apparatus for Painting Bobbins and other Like Articles, of which the following is an exact description.

Said articles in their manufacture require to be painted on their ends, and in many cases they are painted over their entire surface. For painting such articles neatly and automatically I have invented this machine.

Reference is to be had to the accompanying drawings, which form part of this specification.

Similar letters indicate similar parts in all the figures.

Figure 1 is a top view of the machine. Fig. 2 is a vertical section of the entire machine on the line of the driving-shaft C, drawn on a larger scale. Fig. 3 is a perspective view of one of the spindles and its support when detached from the machine.

A represents any suitable support, upon which is fastened the table B, which supports the boxes *b b*, in which turns the driving-shaft C.

Upon the table B is fixed an upright shaft or post, D, upon which turns a sleeve, E, carrying the disk F upon its upper end, and having the bevel-gear G fixed upon its lower end. Upon the disk F at intervals, radiating from its center and projecting beyond its circumference, are placed spindles or mandrels *m*, held in position by the supports H, which are fastened to the disk F by a suitable hinge, *h*, in such manner that when the inner end of said support is depressed by means of the cam-plate *a* the outer end, together with the projecting spindle *m*, is inclined upward and outward, so that the bobbins or other articles may be more easily placed thereon or removed. The spindles *m* are provided with pulleys *p*, the object of which will be hereinafter shown. Upon the sleeve E turns a similar sleeve, I, to which is fastened the disk J, provided with annular flanges *c* and *d*, which project upward near the circumference of said disk, and in such position that when the spindles *m* rest in a horizontal position the pulleys *p* rest upon the edge of the flange *d*, while the edge of the flange *c* comes in contact with whatever articles may have been placed upon the spindles or mandrels *m*. A bevel-gear, *k*, similar to G, except of less diameter, is fixed to the lower end of the outer sleeve, I.

Power is applied to the machine at the pulley K, and motion transmitted to the disks F and J by the gears *n* and *o*, respectively. Both of said disks turn in the same direction, but by the arrangement of the gearing the disk J turns the faster, and the frictional contact of the flange *c* with the bobbin or other article *e* rotates said article upon its spindle or mandrel *m*, which also is rotated in the same direction by the contact of the inner flange, *d*, with the pulley *p*, thus avoiding any friction which the article *e* would encounter if the spindle remained fixed.

Either of the flanges *c* or *d* is removable, and the bobbins, or other articles may be fitted tightly upon the mandrels *m* and rotated, together with said mandrels, by the action of the inner flange, *d*, upon the pulleys *p*, or they may be fitted loosely upon said mandrels and rotated upon them by the contact of the outer flange, *c*, with said articles, as hereinbefore shown, said spindles or mandrels remaining fixed in their supports. The working edges of the annular flanges *c* and *d* may be serrated in order that they may more surely and easily turn the bobbins and spindles.

While being rotated by one or both of the flanges *c* and *d*, as hereinbefore described, the bobbins or other articles are carried by the revolving disk or table F over and in contact with a mechanically driven rotary paint-brush, *g*, the lower circumference of which dips in a receptacle containing paint or varnish, while the upper circumference touches the articles to be painted as they pass. Said articles are held firmly against the brush *g* by the presser P, which is fastened to the post D by the collar and set-screw *x*. The outer end of said presser bears upon the ends of the spindle-supports and holds them down upon the table F while they pass the brush. After being painted, the continued revolution of the table F brings the inner ends of the spindle-supports under the cam-plate *a*, which is fastened to the post D and inclined downward in the direction of the revolution of the disk or table F. The inner ends of said spindle-supports are

forced downward by said cam-plate through apertures made in the table F, and their outer ends are raised correspondingly, as shown in Fig. 2. While in this position the bobbins or other articles may be easily removed and replaced by others.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In apparatus for painting bobbins and other like articles, the mechanically-driven table F, turning upon a central post, D, and provided with one or more work-carrying spindles, *m m*, as and for the purpose set forth.

2. In machines for painting bobbins and other like articles, the disk J, provided with one or both the annular flanges *c* and *d*, arranged to rotate the work while being painted, substantially as shown.

3. In an apparatus for painting bobbins, the work-carrying spindles *m m*, provided with friction-pulleys *p*, and supported by the frames H, said frames being so hinged that by depressing their inner ends said spindles may be inclined upward and outward, as described, and for the purpose set forth.

4. In apparatus for painting bobbins, &c., the cam-plate *a*, arranged to depress one end and correspondingly raise the opposite end of the spindle-supports H, together with their spindles or mandrels *m*, as shown, and for the purpose named.

5. In bobbin-painting machines, the combination of the revolving table F, carrying spindle-supports H, armed with work-carrying spindles *m*, with the presser P, for holding the work in contact with the brush *g*, and the cam-plate *a*, for raising the spindles at a convenient angle for removing and replacing the bobbins after they have been painted.

6. In an apparatus for painting bobbins, the combination of the revolving table F, the work-carrying spindles *m*, the disk J, provided with the work-rotating flanges *c* and *d*, a device, P, for steadying the bobbins while being painted, the brush *g*, and a device, *a*, for inclining the spindles upward and outward, all substantially as specified, and for the purpose set forth.

LUTHER C. BALDWIN.

Witnesses:

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