Sept. 21, 1943. W. L. CHAMPION 2,329,825

BOBBIN COUNTER OPERATING MEANS

Filed July 21, 1941 2 Sheets-Sheet 1

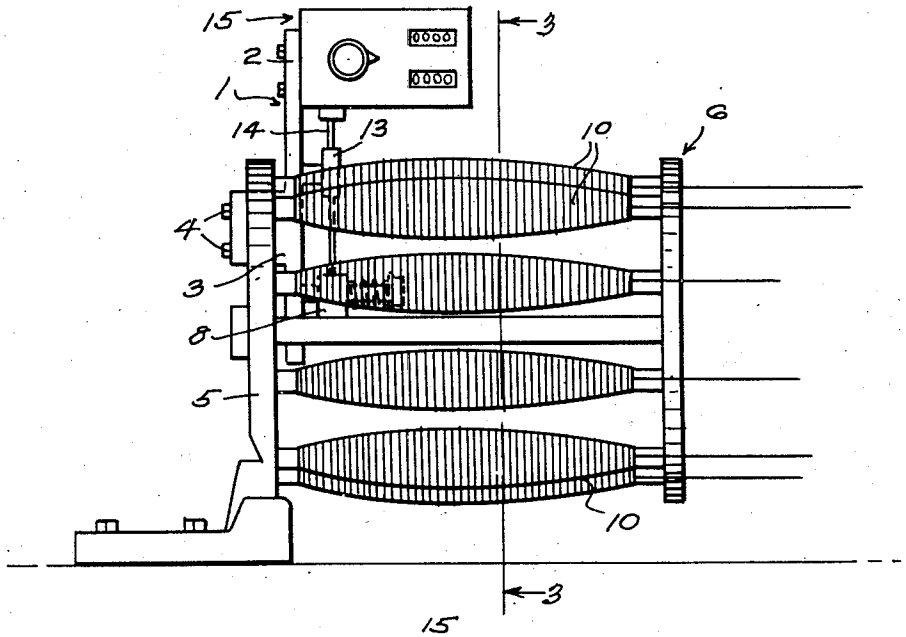


Fig. 1.

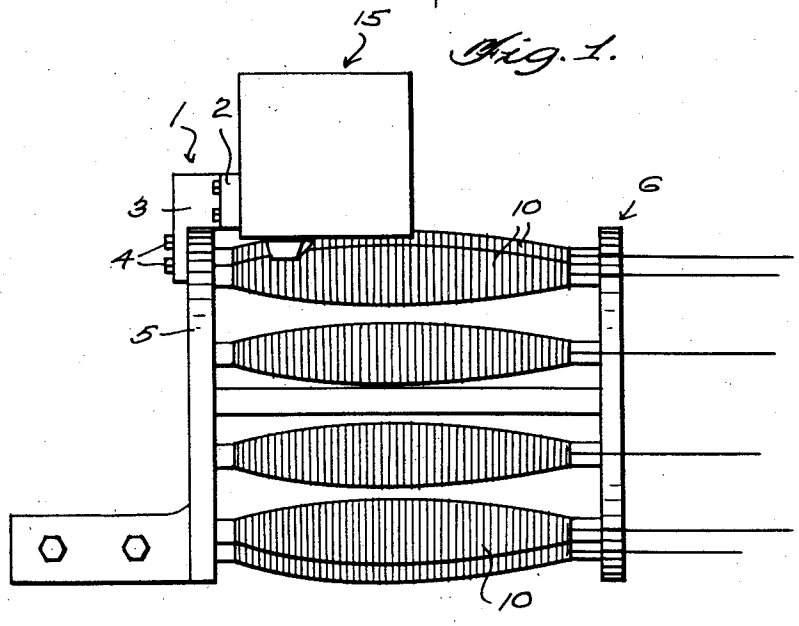


Fig. 2.

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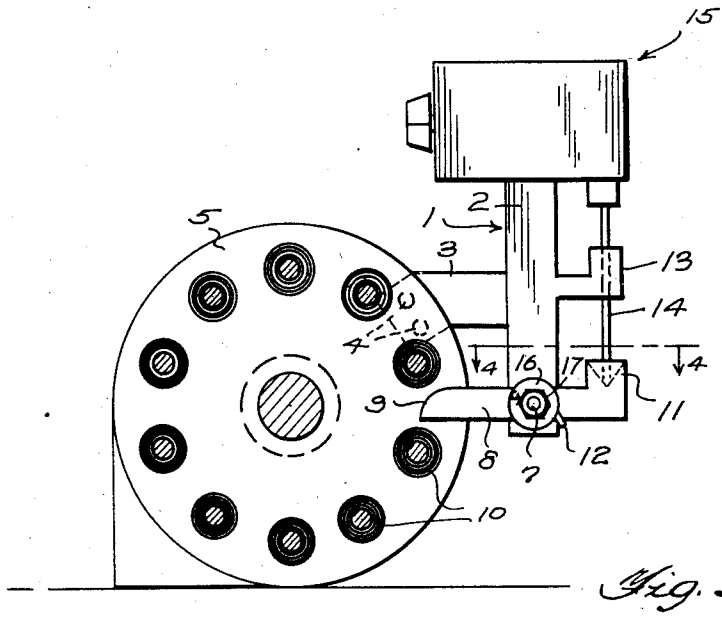


Fig. 3.

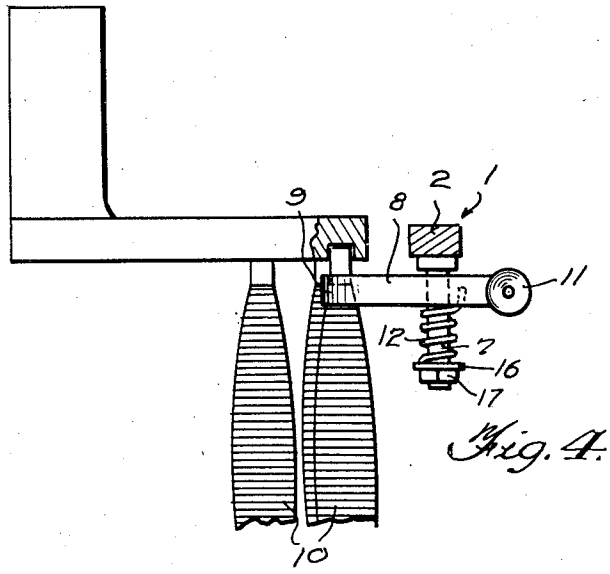


Fig. 4.

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UNITED STATES PATENT OFFICE

2,329,825

BOBBIN COUNTER OPERATING MEANS

William L. Champion, Mocksville, N. C.

Application July 21, 1941, Serial No. 403,441

1 Claim. (Cl. 235—98)

The present invention relates generally to new and useful improvements in bobbin counting mechanisms for looms of a nature similar to that constituting the subject matter of my United States Patent Number 2,233,306, issued on February 25, 1941.

The primary object of this invention is to provide in a manner hereinafter set forth, novel means for operatively connecting the mechanism of my aforementioned patent to the filling magazine of a conventional loom for actuation by the bobbins therein.

Another very important object of the invention is to provide a counter supporting and operating means of the character described which is adapted to be expeditiously installed for operation on the usual hopper stand of the filling magazine without the necessity of making material structural alterations therein.

Other objects of the invention are to provide a bobbin counter operating means which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact and which may be manufactured an installed at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in front elevation, showing a bobbin counter supporting and operating means constructed in accordance with the present invention installed and ready for operation.

Figure 2 is a top plan view thereof.

Figure 3 is a cross sectional view, taken substantially on the line 3—3 of Figure 1.

Figure 4 is a view in horizontal section, taken substantially on the line 4—4 of Figure 3.

Referring now to the drawings in detail, it will be seen that the embodiment of the present invention which has been illustrated comprises a bracket which is designated generally by reference numeral 1, which bracket may be of any suitable metal or other material.

The bracket 1 includes a post 2 from an intermediate portion of which a horizontal attaching arm 3 extends. The arm 3 is rigidly secured at 4 to the hopper stand 5 of the filling magazine 6 of the loom.

Projecting horizontally from the lower end portion of the post 2 is a pin or the like 7. Journalled on the pin 7 is a feeler or lever 8. The lever 8 is provided with a rounded end portion 9 which is disposed in the path of the bobbins 10 in the filling magazine 6. On the other end portion of the lever 8 is a substantially conical socket 11 the purpose of which will presently be set forth. A coil spring 12 on the pin 7 is connected to the lever 8 for returning said lever to its normal position after each counting operation. One end of the coil spring 12 is secured, as by soldering, beneath the lever 8. The other end of the coil spring 12 is anchored in a disk 16 on a nut 17, which nut is screwed tightly on one end portion of the pin 7. With the lever 8 in the position shown in Figure 3 of the drawings, the spring 12 is not under tension.

Also mounted on the post 2 at an intermediate point is a guide 13. Slidable in the guide 13 is a Bowden wire or rod 14 the lower end of which is engaged in the socket 11. The upper end of the wire or rod 14 is operatively connected in any suitable manner to the mechanism of a counting unit 15 which is mounted on the upper end of the post 2.

It is thought that the operation of the invention will be readily apparent from a consideration of the foregoing. Briefly, as the filling magazine 6 rotates the downwardly moving bobbins 10 therein successively engage and actuate the lever 8 against the tension of the return spring 12. Thus, the end of the lever 8 which carries the socket 11 is swung upwardly. In this manner the wire or rod 14 is forced upwardly in the guide 13 for actuating the counting unit 15. As the bobbins clear the lever 8, said lever is returned by the spring 12 for the next operation. The construction and arrangement is such that, when necessary, the loom operator or attendant may rotate the filling magazine 6 in the opposite direction, or counterclockwise as viewed in Figure 3 of the drawings, without interference by the lever 8. That is, when this occurs the lever 8 is swung away from the rod or wire 14 and the counting unit 15 is not operated.

It is believed that the many advantages of a counter mechanism operating means constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

In combination, a bracket including a post, an

arm on an intermediate portion of the post for mounting said post on the hopper stand of a loom filling magazine, a counting unit on the upper end of the post, a pin projecting horizontally from the lower end portion of the post, a lever journalled, at an intermediate point, on the pin for swinging movement in opposite directions, said lever having one end portion disposed in the path of bobbins in the filling magazine for engagement and actuation by said bobbins, a coil spring on the pin operatively connected to the lever for returning said lever to its normal position from opposite directions, a substantially conical socket on the other end portion of the lever, a guide on the post, and a rod slidable in the guide, said rod having one end engaged in the socket and its other end operatively connected to the counting unit for actuating said unit.

WILLIAM L. CHAMPION.