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Fig. 1. Fig. 2.

The drawing illustrates a mechanical device, possibly a pump or engine component, shown in two views: a side view (Fig. 1) and a cross-sectional view (Fig. 2).

Fig. 1 (Side View): Shows the overall structure of the device. It features a central shaft (12) with a handle (16) at the top. The handle is connected to a lever (14) and a spring (13). The device is mounted on a base (8) and has a cover (16) with a handle (16'). The side view shows the internal components and the handle mechanism.

Fig. 2 (Cross-sectional View): Shows the internal components of the device. It features a central shaft (12) with a piston (15) moving within a cylinder (11). The piston is connected to a lever (14) and a spring (13). The device is mounted on a base (8) and has a cover (16) with a handle (16'). The cross-sectional view shows the internal components and the handle mechanism.

Key components labeled include:

- 11: Cylinder
- 12: Shaft
- 13: Spring
- 14: Lever
- 15: Piston
- 16: Handle
- 16': Cover handle
- 8: Base
- 2: Piston rod
- 2': Piston rod extension
- 2'': Piston rod extension (Fig. 2)
- 3: Piston rod extension (Fig. 2)
- 4: Piston rod extension (Fig. 2)
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- 99: Piston rod extension (Fig. 2)
- 100: Piston rod extension (Fig. 2)

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UNITED STATES PATENT OFFICE.

HORACE WYMAN, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO CROMPTON & KNOWLES LOOM WORKS, A CORPORATION OF MASSACHUSETTS.

WEFT-REPLENISHING-LOOM MAGAZINE.

938,540.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed April 13, 1906. Serial No. 311,496.

To all whom it may concern:

Be it known that I, HORACE WYMAN, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Weft-Replenishing-Loom Magazines, of which the following is a specification.

My invention relates to a magazine for weft replenishing looms, and the object of my invention is to provide a magazine, preferably stationary, and having a plurality of guide-ways or compartments for bobbins or filling carriers, which drop down by gravity to the lower end of the magazine to a discharge opening, at which opening a bobbin or filling carrier is yieldingly held preparatory to being transferred into a shuttle, to take the place of the bobbin or filling carrier in said shuttle, on which the filling is practically or substantially exhausted.

My invention consists in certain novel features of construction of my improvements as will be hereinafter fully described.

I have shown in the drawing portions of a magazine embodying my improvements sufficient to enable those skilled in the art to understand the construction of the same.

Referring to the drawing:—Figure 1 is an outer end view of a magazine embodying my improvements, and of a shuttle located below the magazine. The upper part of the magazine, and the lower part of the filling guide frame are broken away. Fig. 2 is a section, on line 2, 2, Fig. 1, looking in the direction of arrow *a*, same figure.

I have shown in the drawing a magazine having two compartments or guide-ways for the bobbins or filling carriers, and I have also shown bobbins or filling carriers loosely mounted on spindles, which spindles have an enlarged end at their tip end, to retain the bobbin on the spindle, but it will be understood that I do not limit my invention to this particular class of bobbins to be used in my improved magazine.

In the accompanying drawing, the magazine shown, consists of a rear plate 12, having two guide-ways 12' thereon for the heads of the bobbins or filling carriers, and two separate front plates 13, each having a guide-way therein for the tips of the bobbins. The two front plates 13 are in this instance secured to the rear plate 12 by four

rods 14. The two guide-ways 12' in the rear plate 12 of the magazine, and the two guide-ways in the two front plates at the front of the magazine, lead to a central discharge opening at the lower end of the magazine.

The bobbins 8 having the filling 11 wound thereon, are in this instance loosely mounted on spindles 2, having the inner head 2' with annular rings thereon, in the usual way, and in this instance the enlarged tip or end 2''. A spring-actuated latch 15 is in this instance mounted at the lower end of the magazine, at the front and at the rear of the magazine, and serves to yieldingly hold a bobbin or filling carrier at the discharge opening of the magazine, and above the shuttle 9, preparatory to being transferred into the shuttle, by any ordinary form of transfer mechanism, not shown.

In connection with the magazine a guide-frame 16, preferably of oval or elliptical shape, with curved outer edges, and provided with a knob 16', is supported in any suitable way at the front of the magazine, and the free ends of the filling 11 pass out between the two front plates or guide-ways 13, and over the edges of the guide-frame 16, and are wound around the knob 16' thereon, which serves to retain the filling from the bobbins against their respective guiding surfaces, as shown in Fig. 2.

Between the two front plates of the magazine there is an open space, extending from the top to the bottom of the magazine. The top of the right hand plate is shown broken away in Fig. 1, to show the bobbins in the guide-way. When the bobbins are being placed in the magazine, the operator preferably stands at the left of the magazine, and takes a bobbin in his left hand and places it into one of the guide-ways, and at the same time takes with his right hand the loose end of the filling thread 11 and passes it through the open space at the top, between the two front plates or guide-ways 13, and draws it around the curved shaped side of the frame 16, and winds it around the knob 16', as shown in Fig. 2.

Any ordinary style of bobbin or filling carrier used in weft replenishing looms may be used with my improved magazine, and the guiding of the filling through the opening between the adjacent guide-ways or compartments for the tips of the bobbins or

filling carriers, at the front of the magazine, will operate equally well in a magazine with three or more compartments for the bobbins or filling carriers.

5 It will be understood that the details of construction of my improvements may be varied if desired.

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

10 1. A stationary magazine for a weft replenishing loom, having a plurality of guide-ways for the heads and the tips of bobbins or filling carriers, and an opening
15 between two adjacent guide-ways for the tips of the bobbins, for the passage of the filling from the bobbins.

2. A stationary magazine for a weft replenishing loom, having a plurality of
20 guide-ways for the heads and tips of bobbins or filling carriers, and an opening between two adjacent guide-ways for the tips of the bobbins, for the passage of the filling from the bobbins, and means to separate the
25 fillings to cause them to contact against their respective guiding surfaces.

3. A stationary magazine for a weft replenishing loom, having a plurality of compartments for bobbins or filling carriers,
30 and comprising a rear plate having guide-ways for the heads of the bobbins or filling carriers, and a plurality of front plates, each having a guide-way for the tips of the bobbins or filling carriers, and an open space
35 between said front plates, from the top to the bottom thereof, for the filling threads to pass through.

4. A magazine for weft replenishing looms, having a plurality of compartments

for bobbins or filling carriers, and comprising a rear plate having guide-ways thereon
40 for the heads of the bobbins or filling carriers, and two separate front plates, each having a guide-way for the tips of the bobbins or filling carriers, and each front plate
45 having rods or bars connecting them with the rear plate, and means connected with the rear plate to secure the magazine in position.

5. The combination with a magazine, having a guide-way for the heads of the spindles, and a guide-way for the headed tip
50 ends of the spindles, of spindles contained in said guide-ways, and loose bobbins mounted on said spindles, and having the filling
55 thereon drawn off from one side of the bobbins, to allow said bobbins to rotate.

6. The combination with a stationary magazine, having a plurality of guide-ways for the heads of the spindles, and the headed
60 tip ends of the spindles, and an opening between the guide-ways for the tip ends of the spindles, for the passage of the filling from the bobbins, of spindles contained in said guide-ways, and loose bobbins mounted on
65 said spindles, and having the filling thereon drawn off from one side of the bobbins, to allow said bobbins to rotate.

7. A stationary magazine having a plurality of guide-ways for the heads of the
70 spindles, and the enlarged tip ends of the spindles, and an opening between the guide-ways for the tip ends of the spindles for the passage of the filling from the bobbins.

HORACE WYMAN.

Witnesses:

J. C. DEWEY,
M. HAAS.