

Y. L. YON.  
SELF OILING ARBOR FOR SHELL ROLLERS.  
APPLICATION FILED AUG. 3, 1910.

985,649.

Patented Feb. 28, 1911.

Fig. 1.

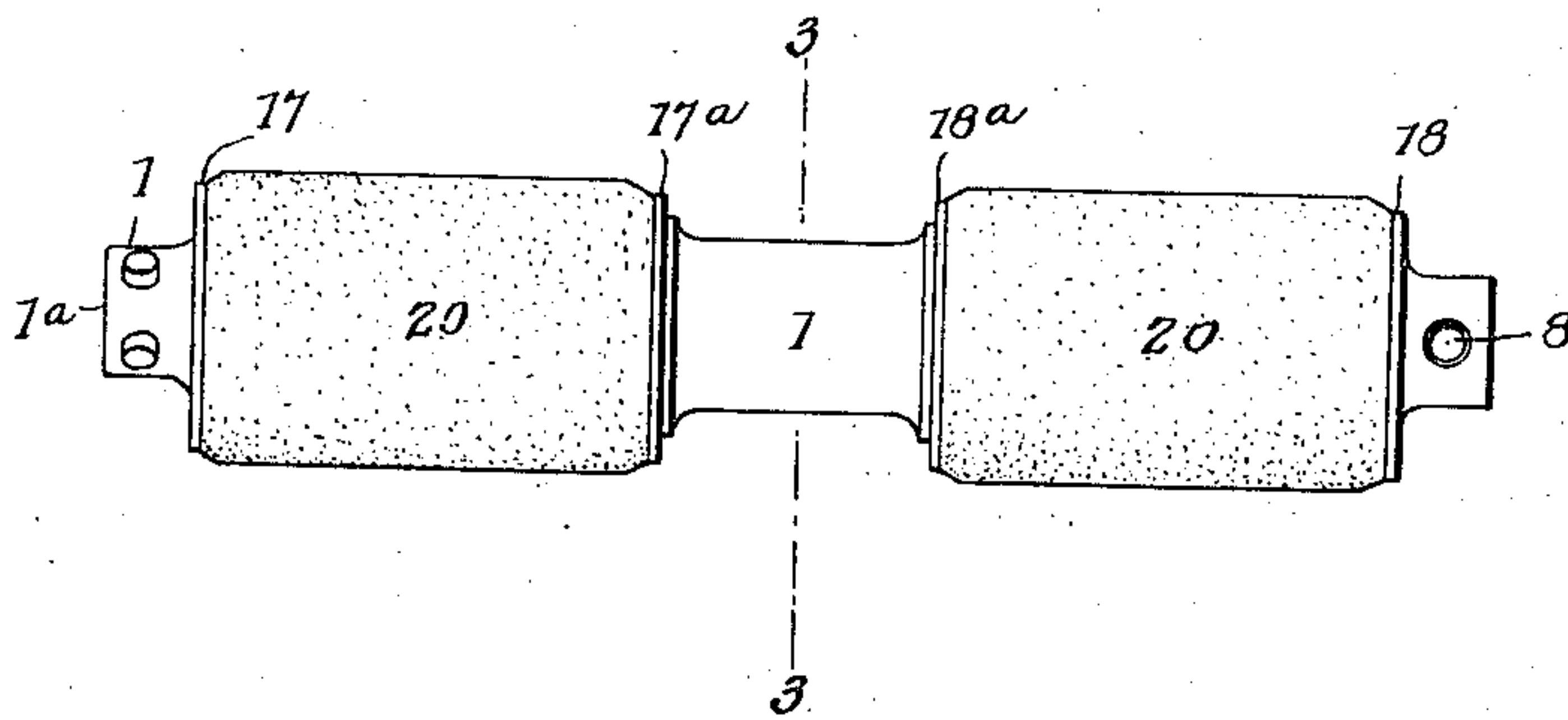


Fig. 2.

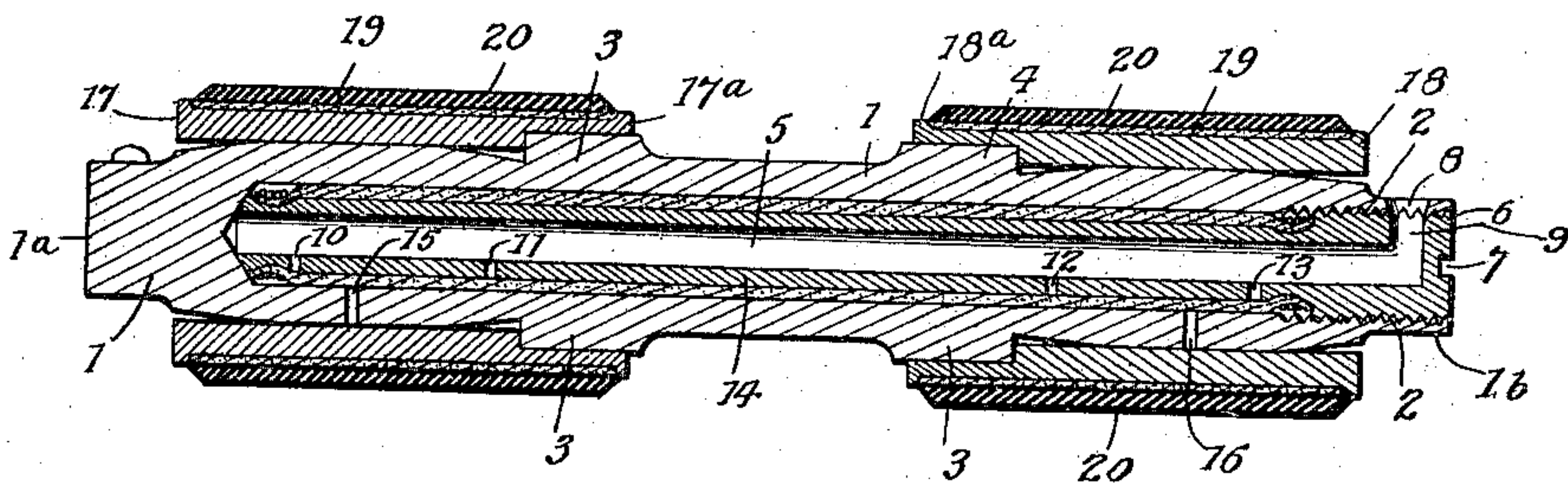
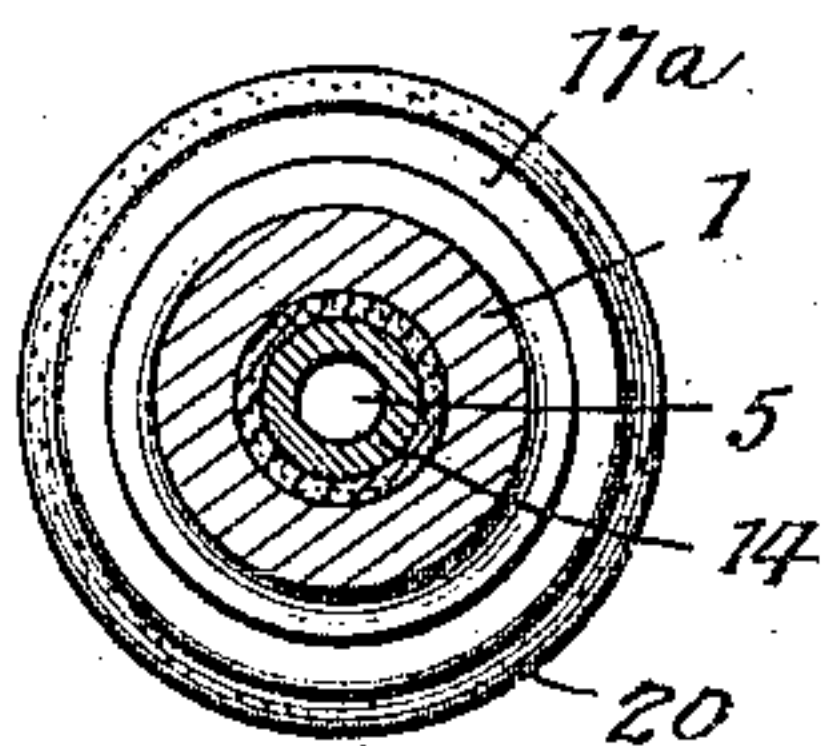


Fig. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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SELF-OILING ARBOR FOR SHELL-ROLLERS.

985,649.

Specification of Letters Patent.

Patented Feb. 28, 1911.

Application filed August 3, 1910. Serial No. 575,203.

*To all whom it may concern:*

Be it known that I, YANCEY L. YON, a citizen of the United States, and a resident of Edgefield, in the county of Edgefield and State of South Carolina, have made certain new and useful Improvements in Self-Oiling Arbors for Shell-Rollers, of which the following is a specification.

My invention relates to improvements in textile machinery, more particularly in shell roller arbors, and it consists in the combinations, constructions and arrangements herein described and claimed.

The main object of my invention is to provide a shell roller arbor, which shall be self oiling, thereby doing away with the necessity of constantly oiling these rollers which run at a high rate of speed, and are, consequently, in frequent need of lubrication.

A further object of my invention is to provide a simple form of reservoir, which may be inserted in the arbor itself, and which may be readily filled without withdrawing it from the arbor.

A further object of my invention is to provide means for distributing oil gradually and evenly upon the bearing surfaces.

My invention is illustrated in the accompanying drawings in which—

Figure 1 is a face view of a shell roller constructed according to my invention, Fig. 2 is an enlarged central section through the device at right angles to Fig. 1, and Fig. 3 is a section along line 3—3 of Fig. 1.

In carrying out my invention, I make use of a hollow arbor 1. This is provided with reduced end portions 1<sup>a</sup> and 1<sup>b</sup>, which may be inserted in the cap bars of the frame, not shown. The end of the arbor, near the reduced portion 1<sup>b</sup> is threaded, as shown at 2, internally. At 3 and 4 are shoulders while the bearing surfaces are between the shoulders 3 and the reduced portion 1<sup>a</sup>, at one end of the arbor, and the shoulders 4 and the reduced portion 1<sup>b</sup> are at the other end.

The reservoir proper consists of a cylindrical tube 5, which has an enlarged end 6, provided with threads arranged to engage the threaded portion 2 of the interior of the arbor 1. The enlarged end 6 of the reservoir is closed and is provided with a slot 7 for the insertion of a screw-driver or other tool. When the reservoir is inserted within the arbor and screwed to its proper posi-

tion, the interior of the reservoir may be filled through an opening or conduits 8 in the arbor, which registers with a communicating passage 9 leading to the interior.

In order to distribute the oil evenly, I provide perforations or conduits in the lower side of the reservoir, these perforations being shown at 10, 11, 12 and 13, respectively. Around the outer portion of the reservoir is bound a piece of cloth, preferably woolen cloth, 14 upon which the oil drops. The end portion of the arbor is provided with the oil passages or conduits 15 and 16, respectively, leading to the bearing surfaces.

The shells are shown at 17 and 18. It will be noticed that these shells have reduced portions 17<sup>a</sup> and 18<sup>a</sup> adapted to fit over the shoulders 3 and 4, respectively. In order to reduce friction, the outer surfaces of the arbor are curved, as shown in the figure.

On the outer surfaces of the shells are preferably arranged two layers—an inner layer 19 of woolen cloth, and an outer layer 20 of soft leather, such as kid.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood.

The reservoir 5 is inserted in the open end of the arbor and screwed into place, when the passage 9 will register with the opening 8. The oil is then poured into the reservoir through this opening 8 and passes down through the perforations 10, 11, 12 and 13. It is taken up by the woolen cloth gradually and passes through the openings 15 and 16 to the bearing surfaces.

Obviously, more or less perforations, or perforations of a different size might be used to regulate the flow of the oil without departing in the least from the spirit and the scope of the invention.

I claim:—

1. In a self oiling shell roller, a hollow arbor having bearing surfaces, said arbor being closed at one end and being threaded internally and having an opening at the other end and having oil passages on its under side, a hollow oil reservoir open at one end and having an enlarged threaded portion at the other end, said reservoir being arranged to enter said arbor and to be screwed into the threaded portion thereof, and having oil passages through its sides, an oil distributing fabric surrounding said

oil reservoir between the exterior thereof and the interior of the arbor, said arbor having oil passages on its under side leading to said bearing surfaces and an oil conduit near one end adapted to be brought into registration with one of said passages through the sides of the reservoir.

2. In a self oiling shell roller, a hollow arbor having bearing surfaces, said arbor being closed at one end and being threaded internally at the other end, a hollow oil reservoir open at one end and having an en-

larged threaded portion at the other end, said reservoir being arranged to enter said arbor and to be screwed into the threaded portion thereof, and into contact with the closed end of said arbor, said reservoir and said arbor having passages for conducting oil to the bearing surfaces.

YANCEY L. YON.

Witnesses:

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