

No. 814,900.

PATENTED MAR. 13, 1906.

F. A. BREEZE.  
ROLLER STAND.  
APPLICATION FILED OCT. 27, 1904.

Fig. 1.

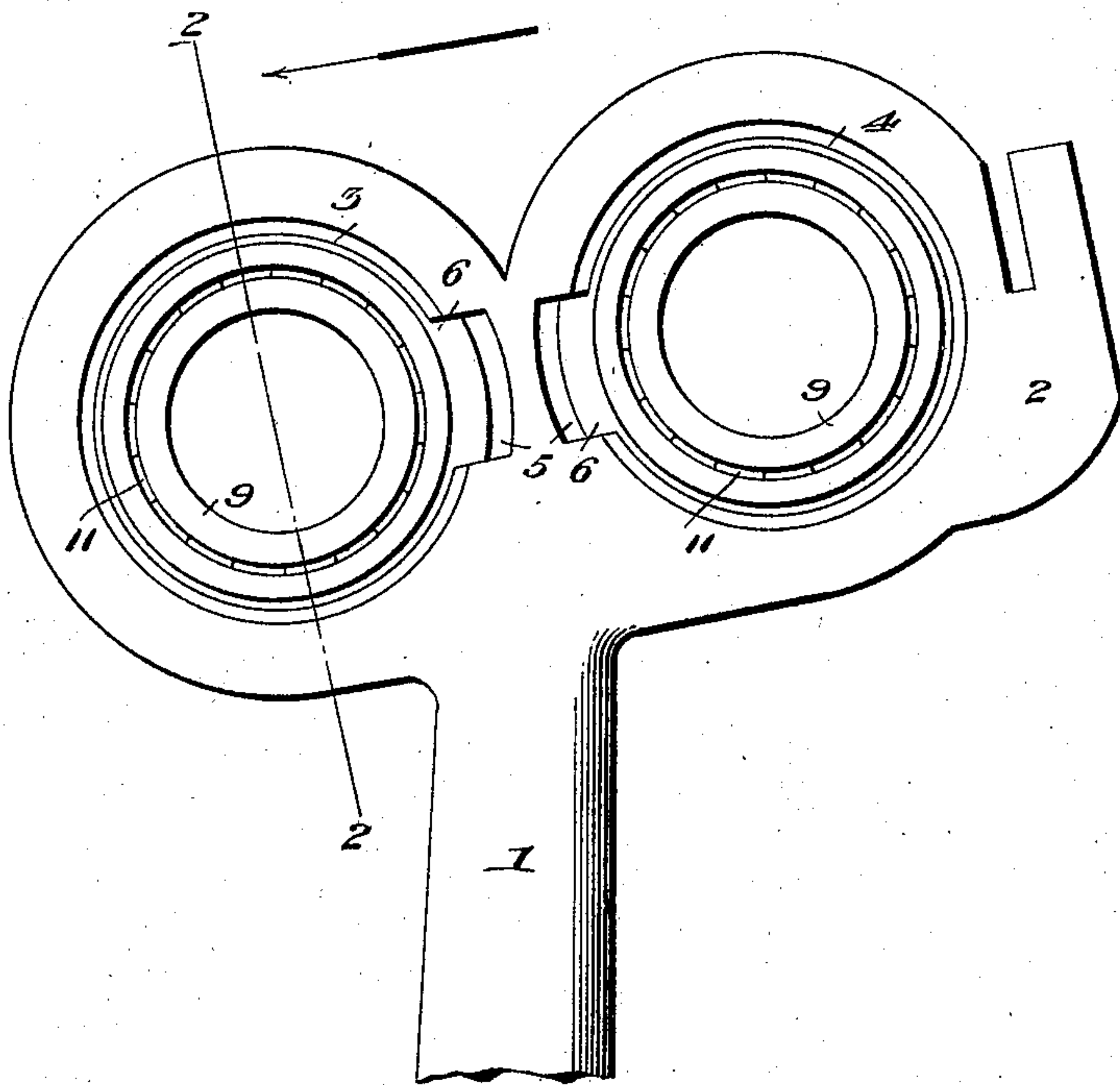
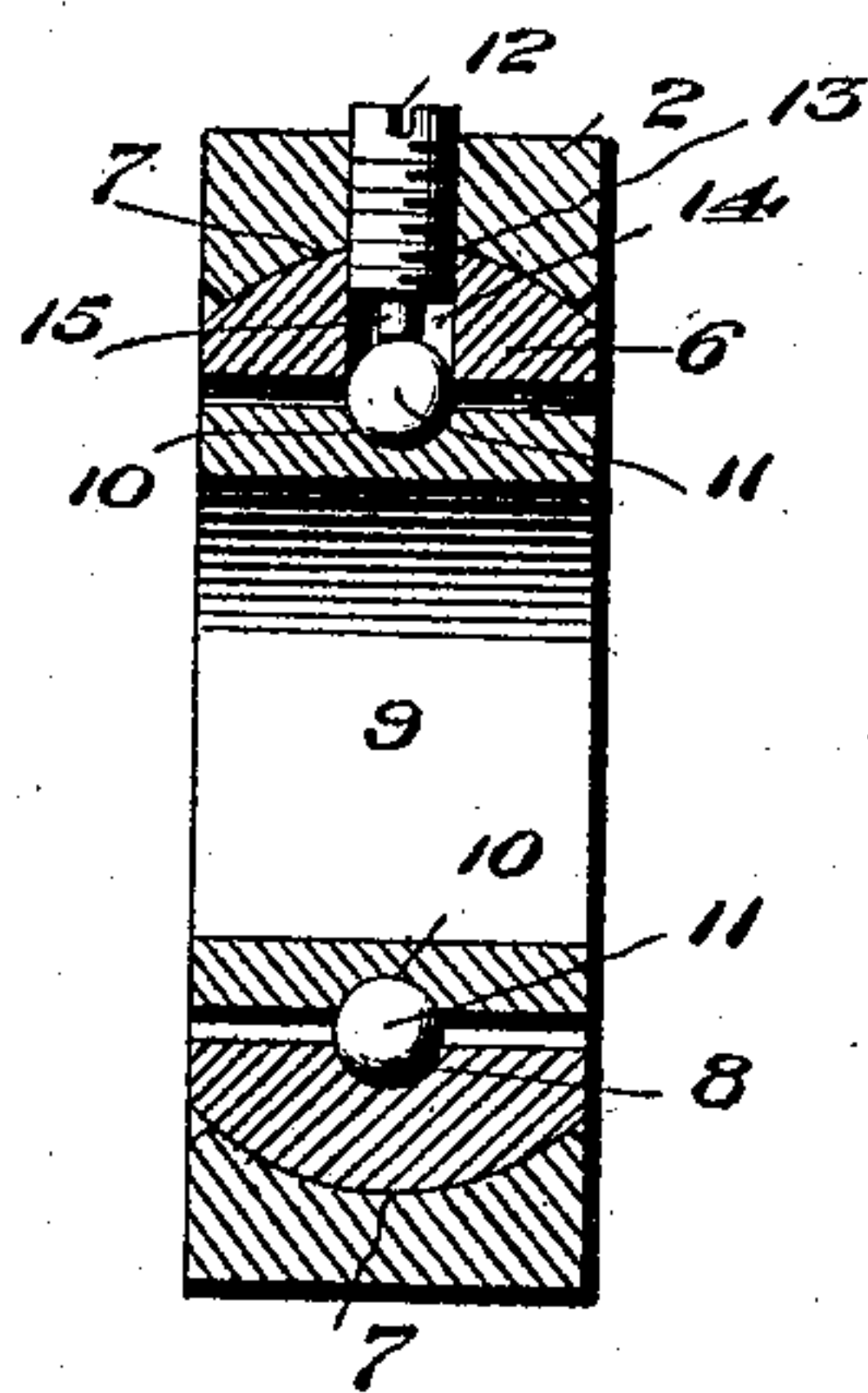


Fig. 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## ROLLER-STAND.

No. 814,900.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed October 27, 1904. Serial No. 230,247.

*To all whom it may concern:*

Be it known that I, FRANK A. BREEZE, a subject of the King of England, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Roller-Stand, of which the following is a specification.

This invention relates to certain new and useful improvements in roller-stands for spinning-machines; and it has for its objects, among others, to provide the stand with a universal ball-bearing designed to adjust the ball-race to a right angle with the upper feed-roller, thereby saving and avoiding the necessity of any particular work in fitting the roller-stand to the rail or frame of any textile machine already in use or otherwise.

The present invention has for a further object to insure the maintenance of the full strength of the roller throughout the machine, thus lessening the number of roller-stands required to carry the feed-rollers.

The ball-bearing in the roller-stand is provided with a cone or sleeve which is so constructed and arranged that when the rollers become creased by the wear of the sliver of any thread or textile material the rollers can be readily adjusted endwise, thus producing substantially the same result as if a new feed-roller were put in. By the present improved construction any extra heavy top rollers will make but a slight difference in the power required to drive the feed-rollers from that required with light top rollers. Feed-rollers fitted with roller-stands constructed in accordance with my present invention will require much less power than is required to run feed-rollers now in use.

Other objects and advantages of the invention will hereinafter appear, and the novel feature thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is an end elevation of the upper portion of the roller-stand embodying my present invention. Fig. 2 is a section on the line 2 2 of Fig. 1 looking in the direction of the arrow.

Like numerals of reference indicate like parts in both views.

Referring to the drawings, 1 designates the stand, the upper portion of which only is

herein shown, it being understood that except for the improvements, as will now be described, the stand may be of any well-known or approved form of construction. The upper end of the stand is formed with the right-angled extension 2, which is somewhat inclined from the right angle with the vertical portion of the stand, as shown in Fig. 1, and in this extension are the circular openings 3 and 4. The inner walls of these openings are curved, as seen in Fig. 2, and at suitable points, in this instance shown as adjacent each other, there are formed the recesses or apertures 5 for the purpose of permitting of the introduction of the rings 6, which constitute one portion of the ball-race. These rings are formed with the curved outer surface 7, as seen clearly in Fig. 2, and upon their inner faces with the concave annular groove 8, as seen clearly in Fig. 2, for the reception of the balls. These rings are held in position by friction solely with the exception of the security provided by the employment of a screw which is employed for a purpose which will soon be made apparent. The rings are of such a thickness as to extend inward beyond the inner circumference of the openings in which they are placed, as shown by Figs. 1 and 2.

9 represents sleeves or cones disposed within the rings as shown and provided around their outer periphery with the concave annular grooves 10, forming, with the grooves 8 of the rings, the ball-races in which the balls 11 are disposed. The balls are retained in place and the rings are prevented from displacement by the screws 12, one for each bearing. Each of these screws is received in a screw-threaded opening 13 in the portion 2 of the stand and a coincident opening in the ring, as shown in Fig. 2. The screw extends within the opening 14 in the ring a sufficient distance to prevent displacement of the said ring and is provided with an extension or teat 15, which is designed to prevent displacement of the balls and yet not interfere with the proper operation thereof, the ring turning on the said screw as a pivot. Neither does the screw interfere in the least with the proper movements of the ring within the portion 2 of the stand.

The parts are assembled as follows: The screw being removed, the ring is placed in position by placing it in line with the aperture 5 and then forcing it inward till it can be



turned within the opening in the portion 2 of the stand. The sleeve or cone is then placed in position and the balls inserted through the opening in the portion 2 and the opening in the ring, and after the balls are all in place the screw is placed in position and the parts are held against displacement, but the ring and sleeve are free for movement.

In addition to the advantages hereinbefore specified the novel construction described possesses others which will be readily appreciated by those skilled in the art, and while the structural embodiment of the invention as herein disclosed is what I at the present time consider preferable it is evident that the same is subject to changes, variations, modifications, and departure from the precise construction outlined. I therefore do not wish to be restricted to the details of construction before set forth, but reserve the right to make such changes, variations, and modifications as come properly within the scope of the protection prayed.

What is claimed as new is—

1. A roller-stand provided with a ball-bearing mounted to automatically adjust itself to the desired angle with the feed-roll, said bearing embodying two concentric independently-movable members with a radial opening through one of said members and means for closing said radial opening.

2. A roller-stand provided with a universal roller and bearing mounted to automatically adjust itself with relation to said roller and embodying two concentric independently-movable members one of which has a radial

opening, and means movably mounted to close said opening.

3. The combination with the roller-stand, of a ring therein, a sleeve within the ring with a ball-race formed between the ring and sleeve, balls therein, and means for preventing displacement of the balls and allowing independent and universal movement of the ring and sleeve.

4. The combination with the roller-stand, of a ring therein, a sleeve within the ring, a ball-race being formed in the adjacent walls of the ring and sleeve, balls in said ball-race, and means entered from the stand and engaging the ring to hold the parts against displacement.

5. The combination with the roller-stand having an opening with rounded wall, of a ring therein with rounded outer face, a sleeve within the ring, balls interposed between the ring and sleeve, and means engaging the stand, the ring and the sleeve for securing the parts against displacement yet allowing universal movement.

6. The combination with the roller-stand having an opening, of a ring therein, a sleeve within the ring, interposed balls, and a screw engaged in an opening in the stand and in the ring and having a projection to prevent displacement of the balls.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

FRANK A. BREEZE.

Witnesses:

JAMES G. B. MCAULEY,  
JOHN H. EBERLE.