No. 895,794. PATENTED AUG. 11, 1908.

I. O. RUSSELL.

DOOR HANGER.

APPLICATION FILED JULY 26, 1907.

Fig. 1.

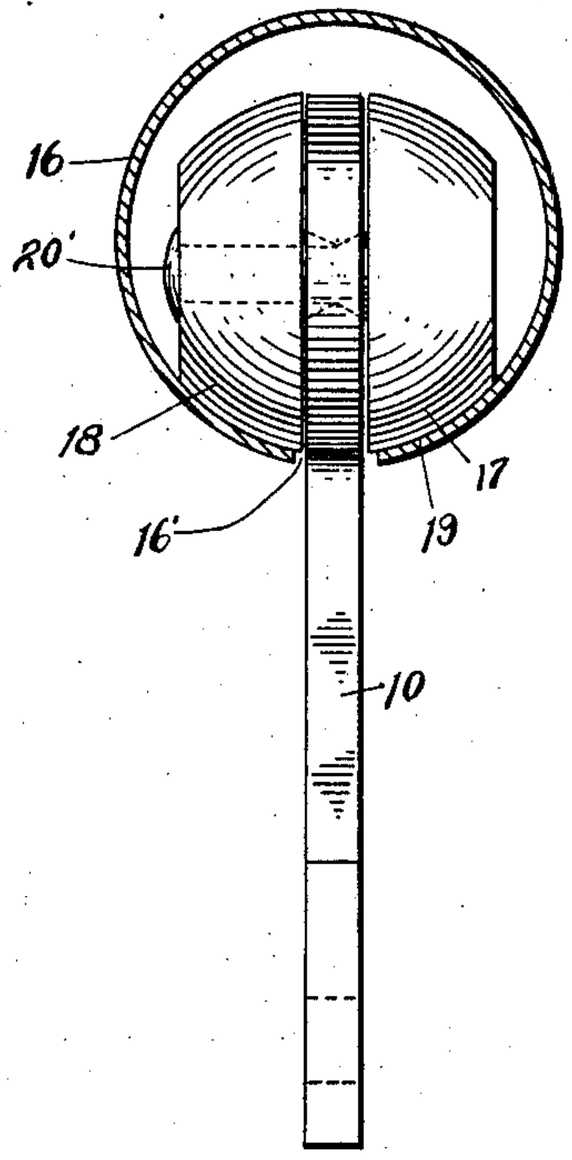


Fig. 2.

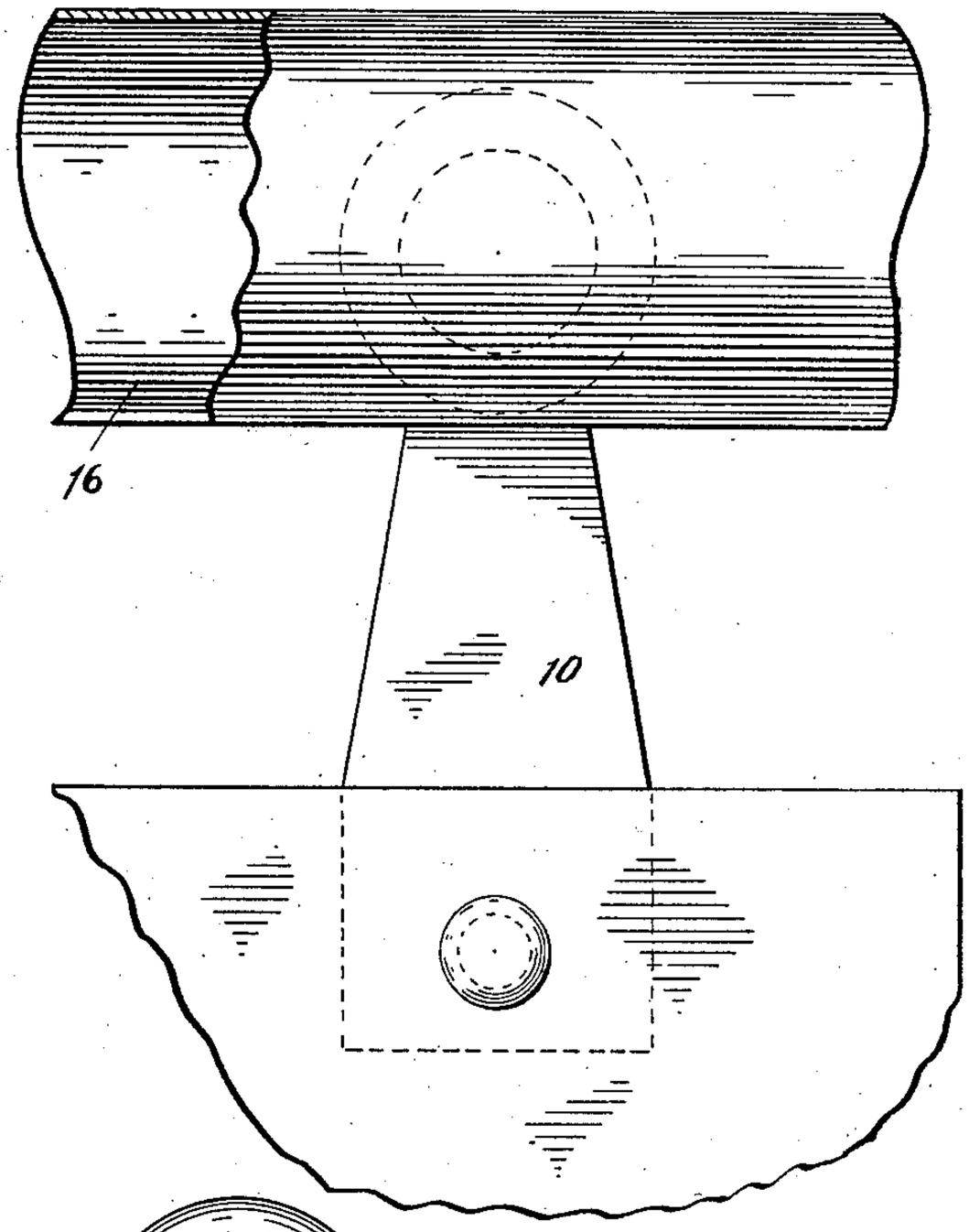


Fig. 3.

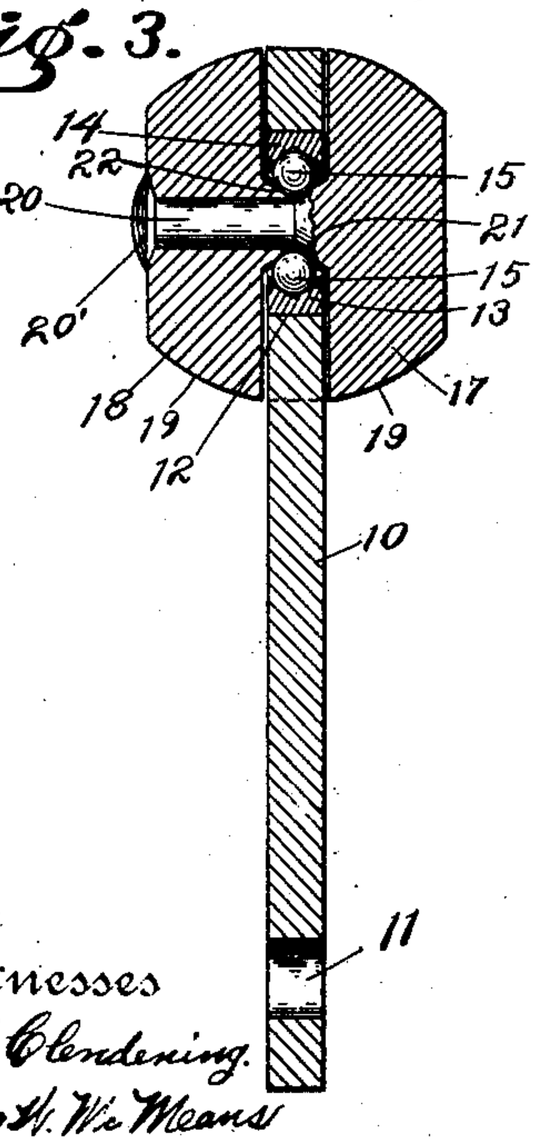
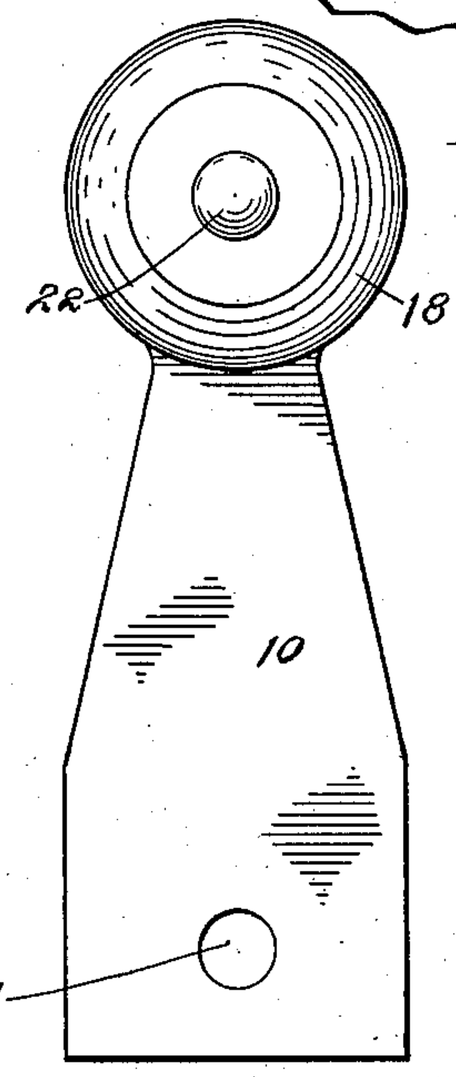


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

ISAAC O. RUSSELL, OF INDIANAPOLIS, INDIANA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-FOURTH TO CYRUS J. CLARK AND ONE-FOURTH TO JOHN H. BERTING, BOTH OF INDIANAPOLIS, INDIANA.

DOOR-HANGER.

No. 895,794. Specification of Letters Patent. Patented Aug. 11, 1908.

Application filed July 26, 1907. Serial No. 385,598.

To all whom it may concern:

Be it known that I, ISAAC O. RUSSELL, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Door-Hangers, of which the following is a specification.

The object of my invention is to produce a hanger for sliding doors of such character that it will be very substantial yet cheap to manufacture and easy to operate.

The accompanying drawings illustrate my invention:

Figure 1 is an end elevation showing the hanger in position within a suitable supporting track; Fig. 2 a side elevation of the hanger, a section of track, and a section of pulley; Fig. 3 a transverse vertical section, and Fig. 4 a side elevation.

In the drawings 10 indicates a plate of any desired shape and of any material, such for instance as ordinary iron plate, provided at its end with one or more bolt holes 11 and at its upper end with a single opening 12 adapted to receive a stationary ring 13 of suitably hardened material, provided in its interior with a race-way 14 of suitable form to hold the balls 15 in a vertical plane against transverse displacement. The hanger 10 is supported in a tubular track 16 by means of a pair of rollers 17 and 18 each having a segmental face 19, the curvature of which corresponds with the curvature of the interior of the tubular track 16. Formed preferably integral with head 17 is an axial spindle 20 and, closely adjacent the inner face of the roller 17, a ball cone 21. The roller 18 is bored axially to fit upon spindle 20 and at its inner face is provided with a cone 22, the two cones 21 and 22 coacting with the series of balls 15. Roller 18 may be held upon spindle 20 in any desired manner but I find a convenient means to be a mere heading over of the end 20′ of spindle 20. The roller 18 may be rigidly secured to spindle 20, but I prefer to so form the fastening means 20′ that the two rollers 17 and 18 may have a relative rotation, if necessary.

It will be noticed that a single row of balls 15 serves to support the entire weight placed upon plate 10 and also, by reason of its coaction with the cones 21 and 22, the race-way 14 of ring 13 serves to prevent the inner faces of the rollers 17 and 18 from contacting with the plate 10 and thus eliminates all possibility of a rubbing friction between said rollers and the plate. Plate 10 projects downwardly through a longitudinal slot 16′ formed through the track 16.

I claim as my invention:

1. A door hanger comprising a main member having a transverse perforation with a ball race therein, a pair of segmental-faced rollers arranged one upon each side of said main plate and connected by a spindle passing through the ball race the two rollers being relatively rotatable, and a series of balls arranged between said ball race and said spindle, and a tubular track adapted to receive said rollers within its interior.

2. The combination, with a tubular track, of a coacting hanger comprising a main plate having a perforation in its upper end, a ring mounted in said perforation and provided with a race-way adapted to receive a series of balls and hold the same in a vertical plane, the said series of balls, a roller, a spindle formed integral with said roller and projected through the race-way, a cone around said spindle adjacent said roller, a second roller rotatably mounted upon said spindle with the main plate between the two rollers and a second cone coacting with said balls.

In witness whereof, I, have hereunto set my hand and seal at Indianapolis, Indiana, this twenty-second day of July, A. D. one thousand nine hundred and seven.

ISAAC O. RUSSELL. [L. s.]

Witnesses:
THOMAS W. MCMEANS,
KARL CLENDENING.