

No. 682,047.

Patented Sept. 3, 1901.

R. B. DIXON.
BALL CASTER.

(Application filed Oct. 31, 1900.)

(No Model.)

Fig. 1.

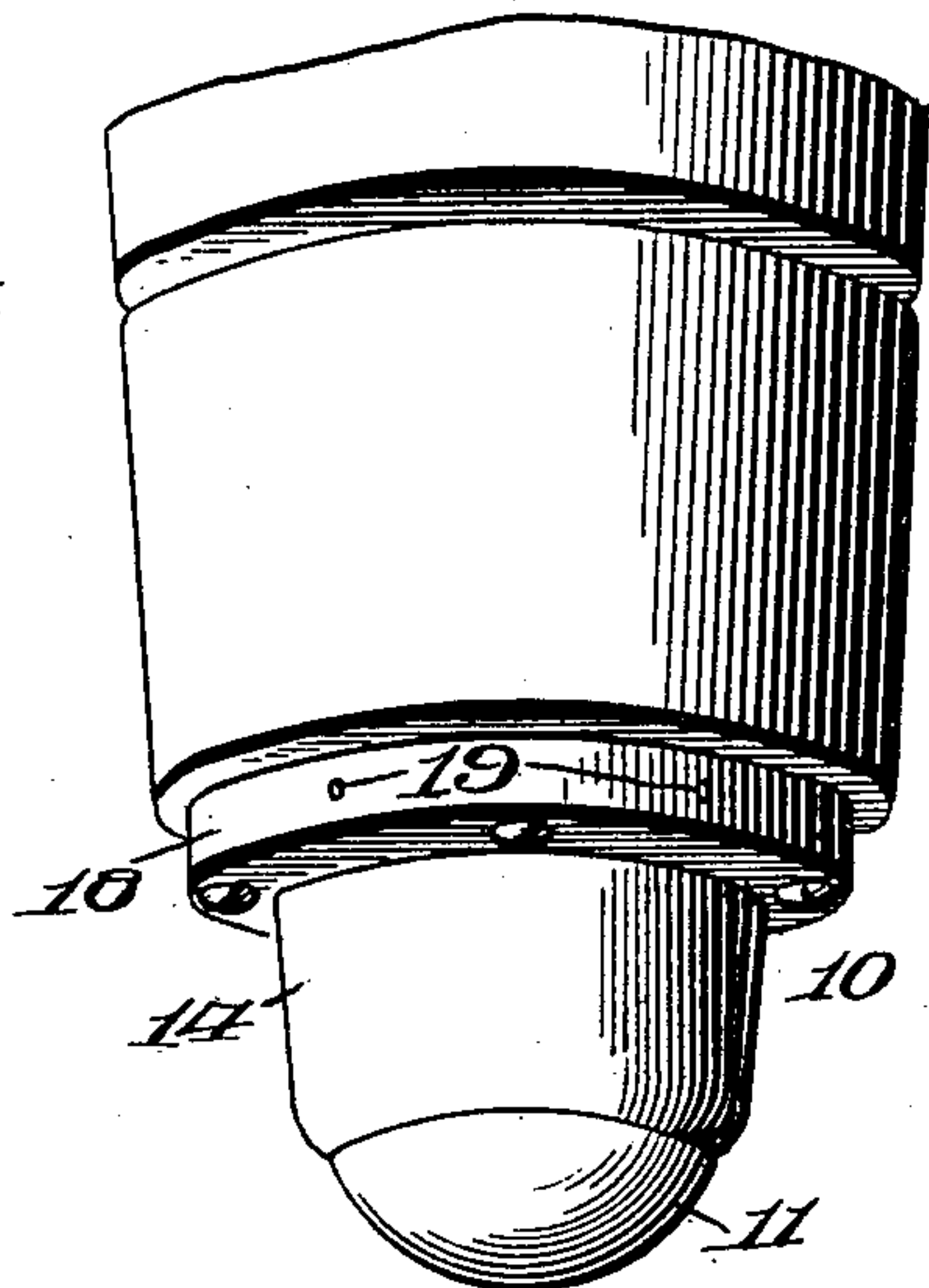


Fig. 2.

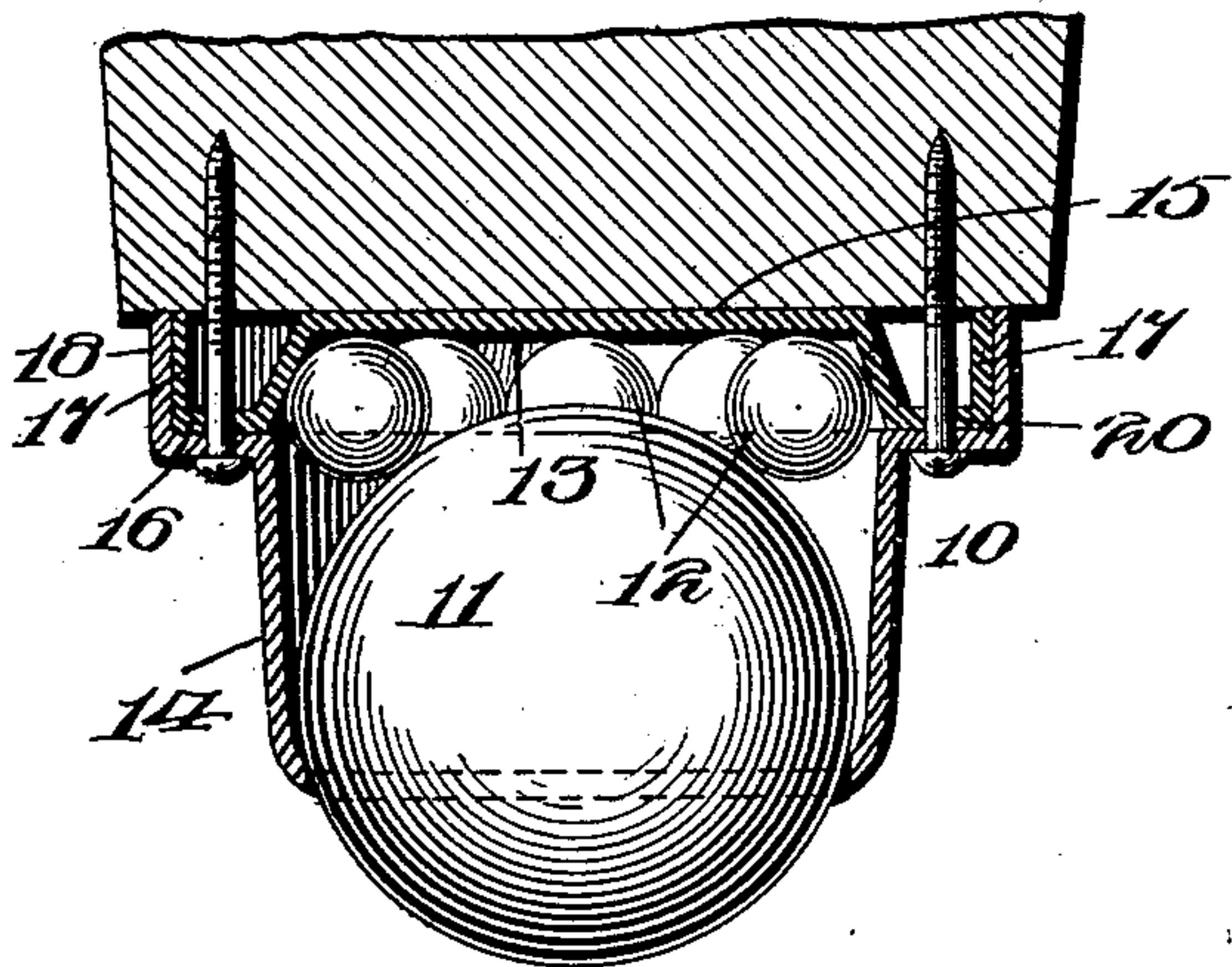
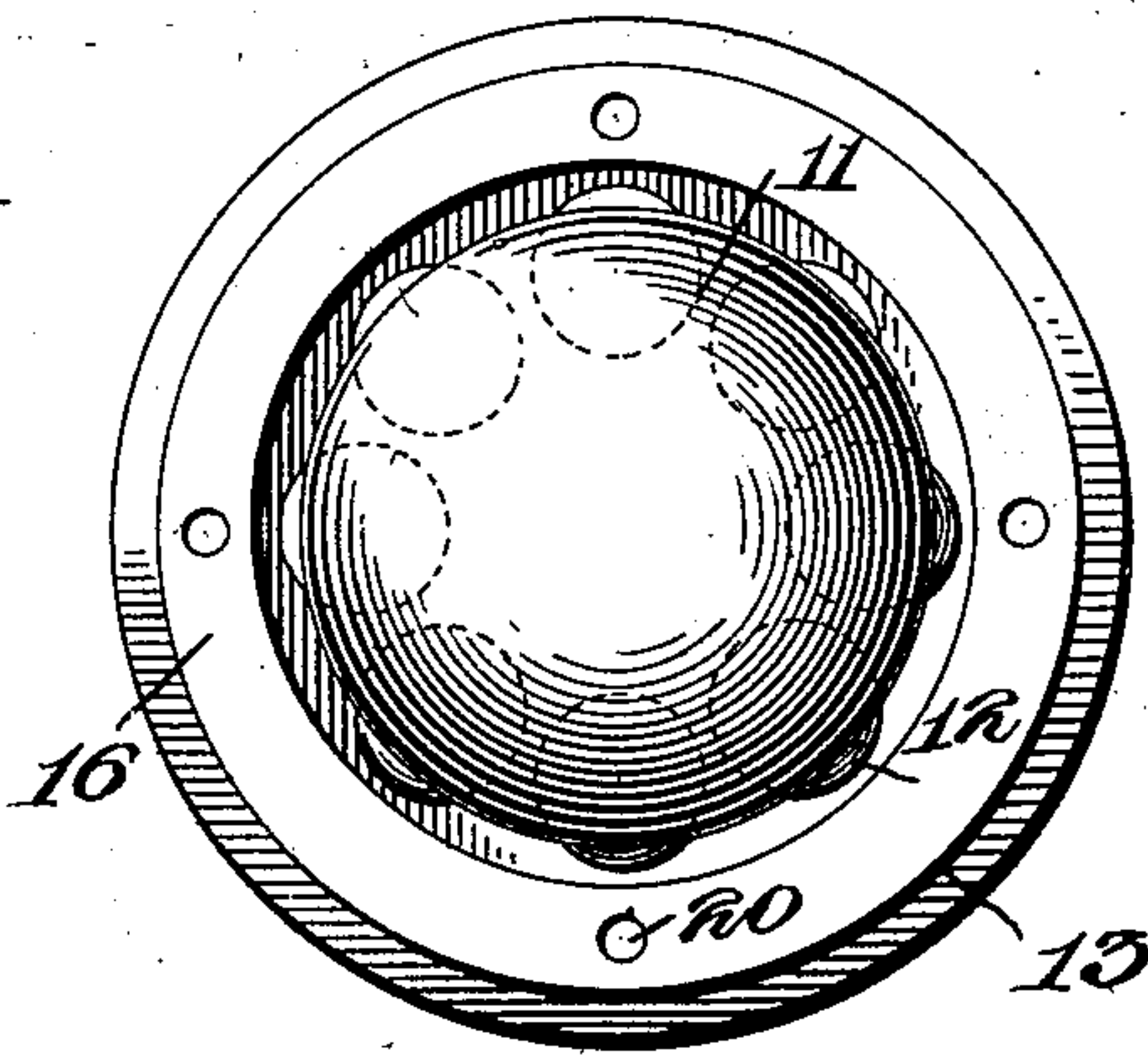


Fig. 3.



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BALL-CASTER.

SPECIFICATION forming part of Letters Patent No. 682,047, dated September 3, 1901.

Application filed October 31, 1900. Serial No. 35,042. (No model.)

To all whom it may concern:

Be it known that I, RICHARD BENJAMIN DIXON, a subject of the Queen of Great Britain, residing at Toronto, in the Province of Ontario and Dominion of Canada, have invented a new and useful Ball-Bearing Caster, of which the following is a specification.

The present invention relates to casters, and more particularly to ball-casters; and the object is to provide an improved article of this character in which the balls are completely and securely incased, whereby they may be transported from place to place and attached to or detached from an article of furniture without the liability of the casing becoming separated and the balls lost.

A further object is to so construct the casing that it may be readily applied to a flat surface without the necessity of cutting said surface.

In order to accomplish these objects, the construction shown in the accompanying drawings and described in the following specification is provided; but it will be understood that the construction may be changed and modified within the scope of the appended claims.

In the drawings, Figure 1 is a perspective view of the improved caster. Fig. 2 is a longitudinal section of the same. Fig. 3 is a bottom plan view showing the retaining-cap removed.

Similar reference-numerals designate corresponding parts in the several figures of the drawings.

In carrying out the invention a casing 10 is provided, which carries the bearing-ball 11 and a plurality of antifriction-balls 12, arranged behind the same. The casing is made of two separate sections, a base-section 13 and a cap-section 14, each of which is preferably struck from a single blank of sheet metal. The base-section comprises a central cup-shaped raceway having a flat top 15 and inclined annular side walls. Extending from the edge of the inclined sides is an annular flange 16, the outer portion of which is bent or upturned to form an annular rim 17, spaced from the inclined walls and having its upper edge in the same plane as the bottom of the raceway. The antifriction-balls 12 are placed in the raceway, the number employed not

completely filling the same, whereby a space will be left, as shown in Fig. 3, to permit easy rotation of the same. The bearing-ball 11 is supported entirely by the antifriction-balls against contact with the walls of the base-section.

In order to hold the bearing-ball in position, the cap-section 14 is provided. This section comprises a substantially cylindrical casing having its lower edges turned inwardly to form a bearing edge for the ball 11. The diameter of the cap-section is slightly less than that of the ball-race, and the upper portion is flared outwardly to form an enlarged annular offset portion which is provided with an upright rim 18, which fits over the rim 17 of the base-section. This forms a bearing-rim outside of the ball-race and prevents distortion of the latter when the fasteners are applied. The two rims are secured together by means of rivets 19 or equivalent fastening means, whereby the entire casing is secured together, and the caster may be transported from place to place and attached to or detached from an article of furniture without any danger of the parts becoming separated and lost.

In order to secure the caster to an article of furniture, the flared portions of the casing are provided with openings 20 for the reception of screws or other equivalent fasteners, which will pass between the spaced bearing-rim 17 and the walls of the ball-race. By this construction a caster is provided the casing of which is made of stamped sheet metal and has a flat surface, so that the caster may be applied without the necessity of cutting or defacing the article to which it is applied. Furthermore, a three-point bearing for the antifriction-balls is provided, and by leaving a space between them a much easier movement will be obtained.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described ball-bearing caster will be readily apparent to those skilled in the art without further description, and it will be understood that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having now described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. A ball-caster adapted to be applied to an
5 article of furniture without recessing the same, said caster comprising a casing made of two sections, one of said sections being provided with a ball-race having a flat top, an annular side wall, and an annular upstand-
10 ing rim spaced from the latter forming an intermediate space, the other section having its upper portion covering the first-named section and surrounding and secured to the upstanding spaced rim thereof, a plurality of
15 antifriction-balls arranged within the ball-race, and a bearing-ball in contact with said antifriction-balls and projecting through the casing.

2. In a ball-caster adapted to be applied to
20 an article of furniture without recessing the same, a cap-section comprising a tubular shell having an enlarged annular offset por-

tion at its upper end formed with an annular rim, a bearing-ball projecting through the opposite end of said section, a plurality of anti- 25 friction-balls in contact with the bearing-ball, of an inner or base section arranged within the enlarged annular portion of the outer section, and comprising a ball-race having a flat top, an inclined annular side wall, and an 30 upturned annular rim spaced from the latter, the rims of the two sections fitting one within the other, and fastening means passing through the outer and inner sections between the inclined side wall of the ball-race and the 35 offset rims of the two sections.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

RICHARD BENJAMIN DIXON.

Witnesses:

H. T. J. LEE,

AGNES McELDERNY.