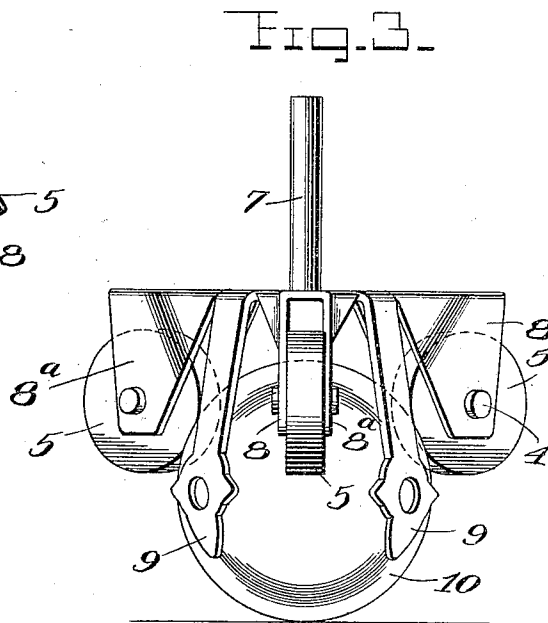
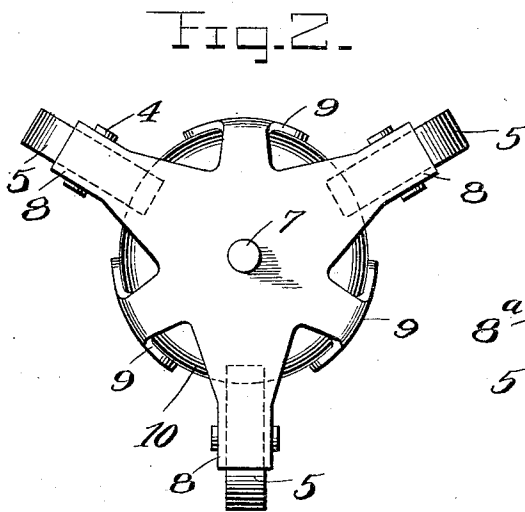
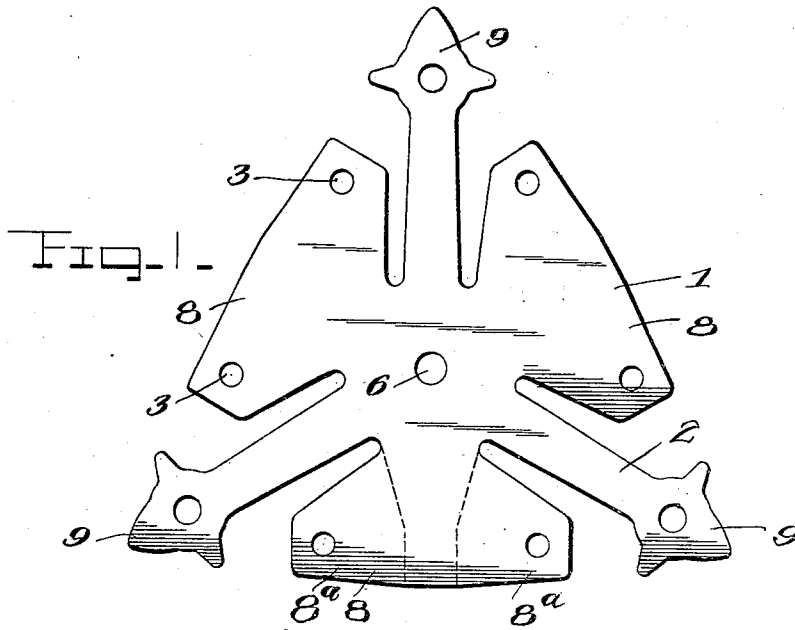


H. M. POWERS.
 BALL CASTER.
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Patented Aug. 24, 1909.



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BALL-CASTER.

931,958.

Specification of Letters Patent. Patented Aug. 24, 1909.

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To all whom it may concern:

Be it known that I, HARRY M. POWERS, a citizen of the United States, residing at Brunswick, in the county of Frederick and State of Maryland, have invented new and useful Improvements in Ball-Casters, of which the following is a specification.

This invention relates to builders' hardware and more particularly to an improvement in the construction of ball casters.

The object of this invention is to construct a caster frame with a plurality of equally distant anti-friction rollers transmitting the weight to the upper surface of a ball and a plurality of equally distant depending arms adapted to engage the ball and retain the same in place against the rollers. The ears forming the bearings for the rollers and the retaining arms alternate with each other and are so arranged that the entire frame may be stamped out of a single piece of flat resilient metal.

The blank as stamped to form the frame is triangular in outline, so that there is very little metal lost or wasted in stamping the blanks from a sheet. By forming the ears and retaining members separate and distinct from each other should any one of them become displaced or damaged, the damage will not be transmitted to any of the others. The depending arms which engage the ball are bent downward from the top of the base and being of resilient metal the ball may be removed and replaced without difficulty. As these arms are entirely independent of the roller bearings they act independently thereof and perform but the one function of retaining the ball in its proper position in relation to the rollers.

While the invention is illustrated in the preferred form upon the accompanying sheet of drawing, yet it is to be understood that minor detail changes may be made without departing from the scope thereof.

Figure 1 is a plan view of a blank as stamped for the base. Fig. 2 is a top plan view of the complete caster. Fig. 3 is a side elevation of Fig. 2.

As shown in Fig. 1 the blank comprises a central circular portion or base from which extends an alternating series of equally spaced projecting ears 1 and retaining members 2 of the same number. In stamping the blanks corresponding perforations 3 are made in the opposite extremities of each ear 1 to receive

the axle 4 of the wheel 5 and form a bearing therefor. At the same time a central perforation 6 is made in the blanks for securing the post 7 of the caster.

Each ear is bent downward as indicated in dotted lines on Fig. 1 until the opposite sides 8 and 8^a are parallel, as readily seen in Figs. 2 and 3. The axles 4 of the small wheels 5 forming the anti-friction rollers are passed through the perforations 3 provided therefor in the ears 1 and are secured thereto. The retaining arms 2 are then bent downward, as shown in Figs. 2 and 3, until they are nearly at right angles to the top of the frame. The extremities 9 of these arms are slightly curved inward and are of such a length as to reach below the center of the ball to be engaged thereby.

A ball 10 of glass, metal, or any other material of sufficient size to be engaged by the anti-friction rollers 5 is then forced in between the retaining arms 2. The anti-friction rollers 5 will engage the upper side of the ball 10 while the retaining arms 2 extending below the center of the ball will retain the same in place.

It is seen that by this invention a ball caster may be constructed at a very small cost and with the minimum number of parts. While all of the parts are struck from a single blank of metal each is independent of the other to perform a separate function. As the arms are of resilient metal the ball may be changed whenever it is desired without affecting the normal relation of the other parts.

What I claim is:—

1. In a ball caster, a base, a plurality of depending ears, an anti-friction roller mounted in each pair of ears, a ball and a plurality of independent retaining arms engaging the ball and formed integral with the base.

2. In a ball caster, a base, a ball, a plurality of equidistant depending ears, anti-friction rollers mounted therein and arranged to engage the upper sides of the ball, alternating, resilient, depending, retaining arms extending below the center of the ball and engaging the lower sides thereof.

3. In a ball caster, a base, a ball, a plurality of equidistant bearing members having their upper surfaces in the same plane with the top of the base, and side members formed by integral ears extending at right-angles to the base and parallel to each other,

anti-friction rollers mounted in bearings in the depending ears, and a plurality of independent alternately spaced integral spring arms engaging the ball and retaining the
5 same in position.

4. A ball caster frame blank, comprising a sheet of resilient metal having a plurality

of outwardly extending equidistant retaining arms and alternating therewith a plurality of independent bearing ears.

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