No. 785,601. PATENTED MAR. 21, 1905.

W. C. FISCHER.

CASTER.

APPLICATION FILED MAR. 3, 1904.

Fig. 1.

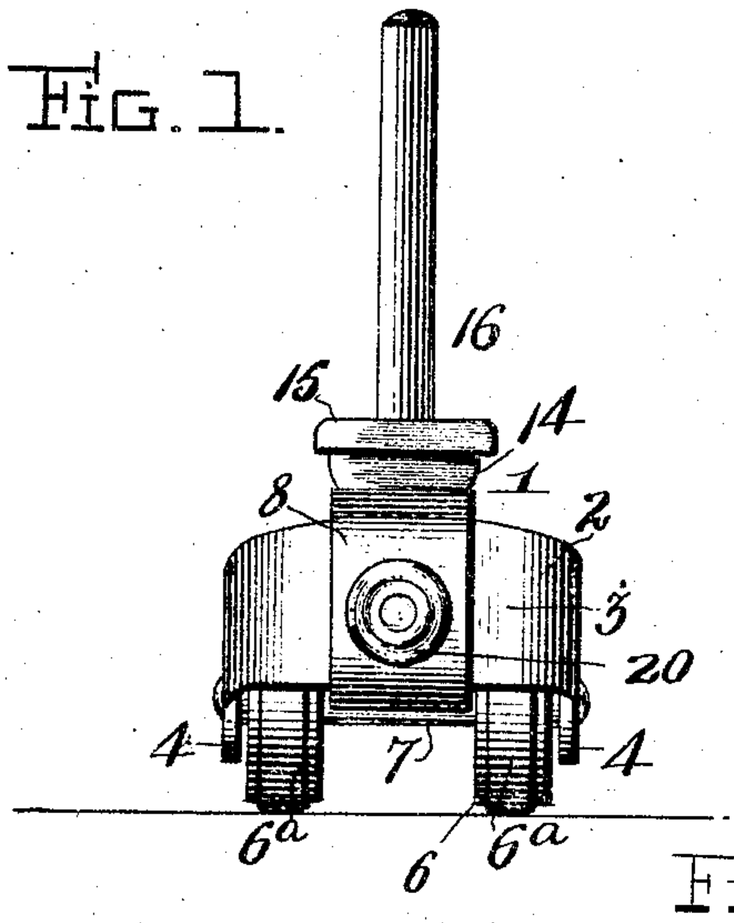


Fig. 2.

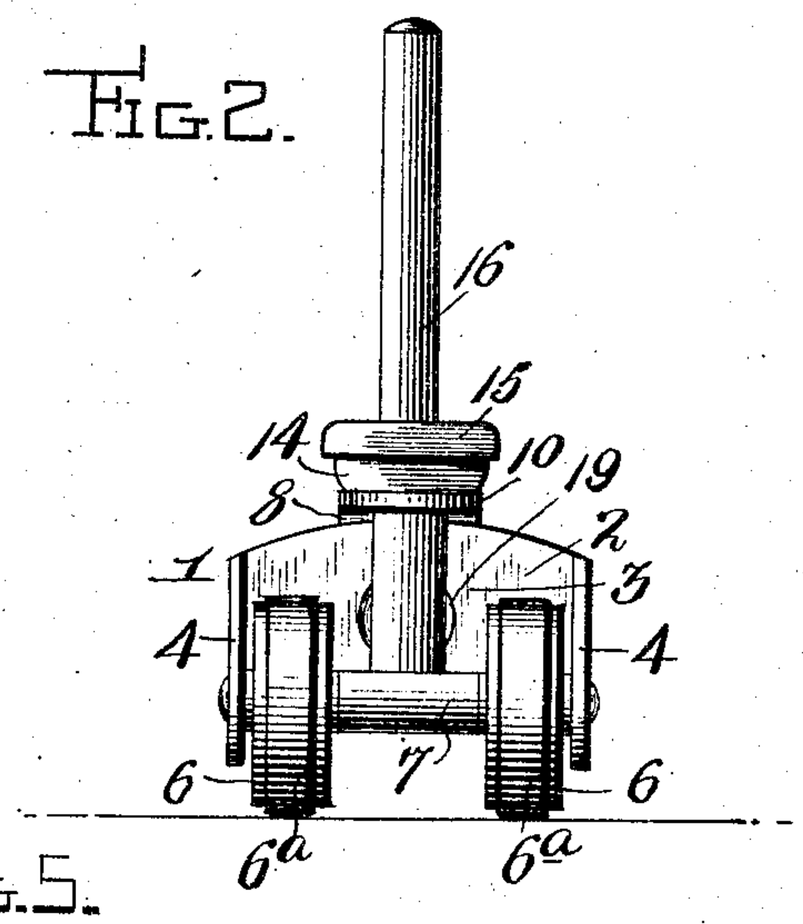


Fig. 5.

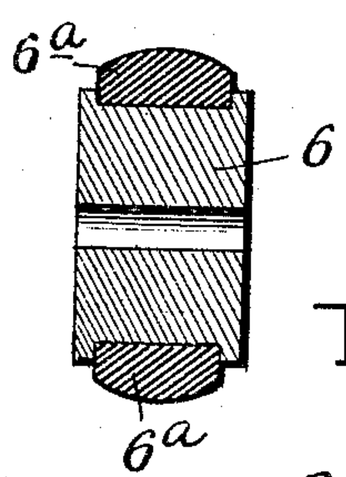


Fig. 3.

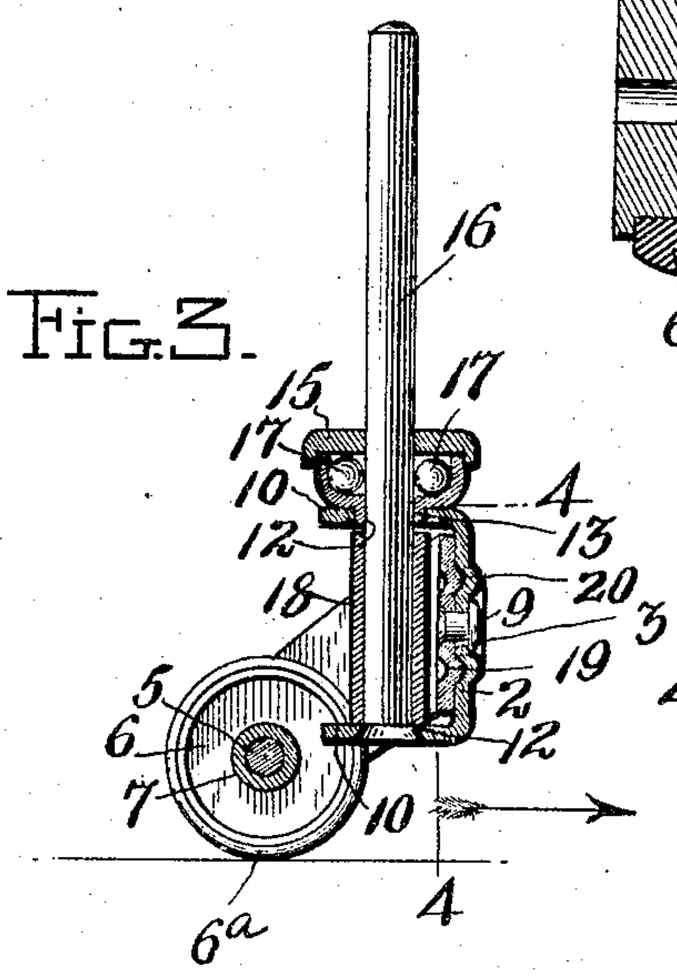
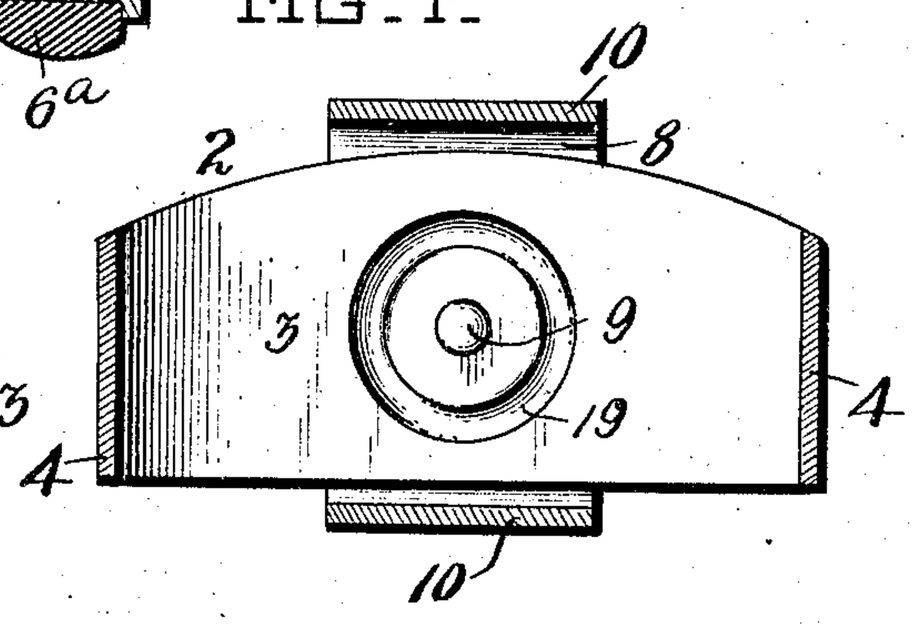


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM CHARLES FISCHER, OF NEW YORK, N. Y.

CASTER.

SPECIFICATION forming part of Letters Patent No. 785,601, dated March 21, 1905.

Application filed March 3, 1904. Serial No. 196,331.

To all whom it may concern:

Be it known that I, WILLIAM CHARLES FISCHER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Casters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in casters.

The object of the invention is to provide a double-wheeled caster the frame of which has a ball-bearing engagement with its spindle.

A further object is to provide a caster which will be strong and durable and which will quickly adapt itself to the irregularities of a floor.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a front view of a caster constructed in accordance with the invention. Fig. 2 is a rear view of the same. Fig. 3 is a longitudinal vertical sectional view. Fig. 4 is a detail vertical sectional view on the line 4 4 of Fig. 3. Fig. 5 is a detail sectional view of one of the caster-wheels.

Referring more particularly to the drawings, 1 denotes the caster, comprising the frame 2, consisting of a front plate 3 and rearwardly-projecting bearing arms or horns 4, in the ends of which are mounted a shaft or axle 5, on which is journaled two rollers 6, which are spaced apart by a sleeve 7, arranged on the axle as shown.

8 denotes a spindle-plate to the rear side of which is pivotally connected by a pivot-pin 9 the front plate 3 of the roller-frame 2. The ends of the spindle-plate 8 above and below the plate 3 are bent rearwardly at right angles to said plates to form bearing-brackets 10 for the spindle of the caster. The space between the bearing-brackets 10 is somewhat greater than the width of the front plate 3 of the roller-frame 2 to permit said frame to have a limited rocking movement with respect to the spindle-plate and brackets, so that when the caster runs over uneven places in the floor the same will tilt or rock on the pivot 9 and accommodate itself to such unevenness, and thus prevent strain on the spindle or on the leg of the furniture, and after the unevenness has been passed over the caster-frame and rollers will again right themselves. This rocking movement of the roller-frame is limited by the brackets 10.

In the brackets 10 are formed alined circular openings 12, in the upper one of which is secured a sleeve 13, on which is formed the lower member 14 of a ball-race. The upper member 15 of the ball-race is formed on the spindle 16. The lower end of said spindle passes down through the sleeve 13 and the opening 12 in the lower bracket 10 and is upset or headed to hold said spindle in place.

The upper member 15 of the ball-race is adapted to fit down over the lower member 14 of the same, and between them are disposed the balls 17, which form an antifrictional bearing between the spindle and the caster.

On the spindle 16 between the brackets 10 is disposed a sleeve 18, the ends of which engage the inner sides of said brackets to brace the same. The spindle above the upper member of the ball-race is extended upwardly, as shown, and adapted to be driven into the leg of a piece of furniture or, if desired, may be cut off short above said race member and secured to an attaching-plate. (Not shown.)

If desired, the front plate 3 of the frame may have formed therein an annular groove or corrugation 19, which is arranged concentric with the pivotal connection of said plate and is adapted to engage a similar corrugation or annular groove 20, formed in the spindle-plate 8. These corrugations serve to strengthen and brace the parts of the caster-frame, as will be understood.

The rollers 6 are preferably formed with an annular recess or groove in their peripheries, in which is seated a rubber tire 6^a, as clearly shown in Fig. 5 of the drawings, this rubber tire making the caster noiseless in its movements, as well as preventing the creasing or

bruising of the floors when the caster is used on heavy furniture.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A caster comprising a spindle-plate having upper and lower horizontal arms and a vertical intermediate portion, a roller-frame comprising a vertical plate having its intermediate portion disposed between the horizontal arms of the spindle-plate and bearing against and pivoted to the intermediate portion of the spindle-plate at a point midway between said arms and having its ends bent to form bearing-bars, said roller-frame having vertical angular movement limited by the upper and lower arms of the spindle-plate, a spindle carried by the lower arm of the spindle-plate and extending upwardly through and above the upper arm thereof and a sleeve on the spindle, between and bracing the arms of the spindle-plate, substantially as described.

2. A caster comprising a spindle-plate having right-angularly-disposed bearing-brackets formed on the same, alined openings formed in said brackets, a spindle mounted in said openings, a ball-race having one member secured to one of said brackets and the other member formed on said spindle, bearing-balls disposed in said race, a sleeve arranged on said spindle between said brackets to brace the same, a roller-frame pivoted to said spindle-plate between said bearing-brackets to have a lateral rocking movement, said movement being limited by said brackets, an axle or shaft mounted in the horns of said frame, rollers journaled on said axle and a sleeve arranged thereon to space said rollers apart, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM CHARLES FISCHER.

Witnesses:

SAMUEL J. GUTHRIE,

WILLIAM OTTEN.