No. 879,519. PATENTED FEB. 18, 1908.

A. R. CAVIS.

CASTER.

APPLICATION FILED OCT. 25, 1907.

Fig. 1.

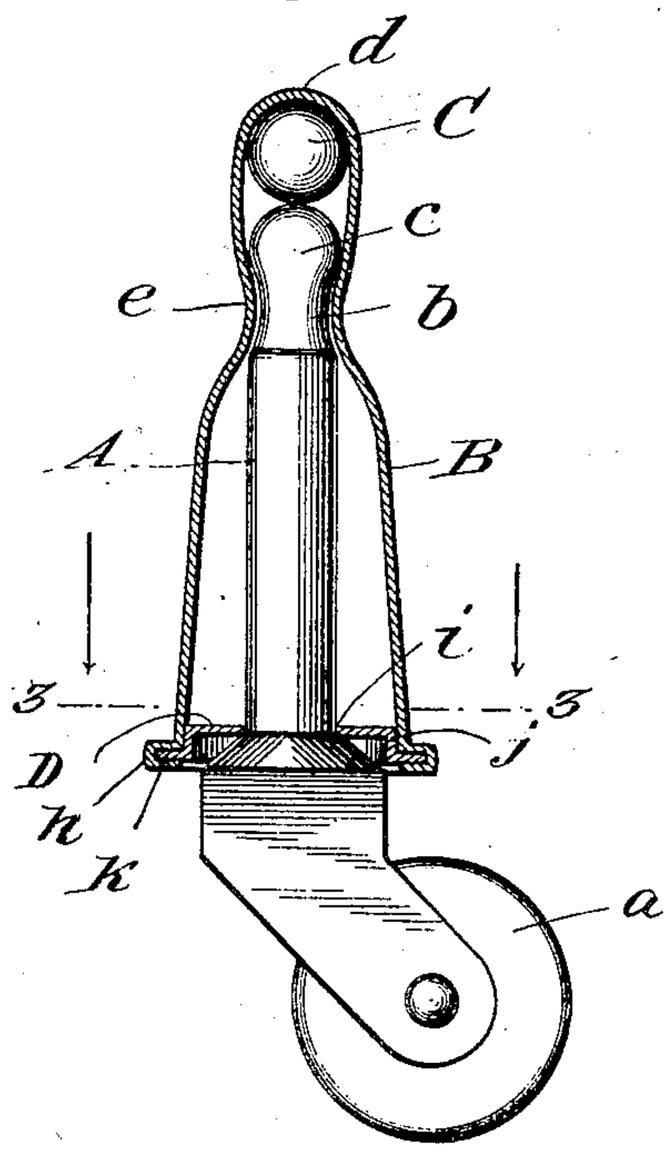


Fig. 2.

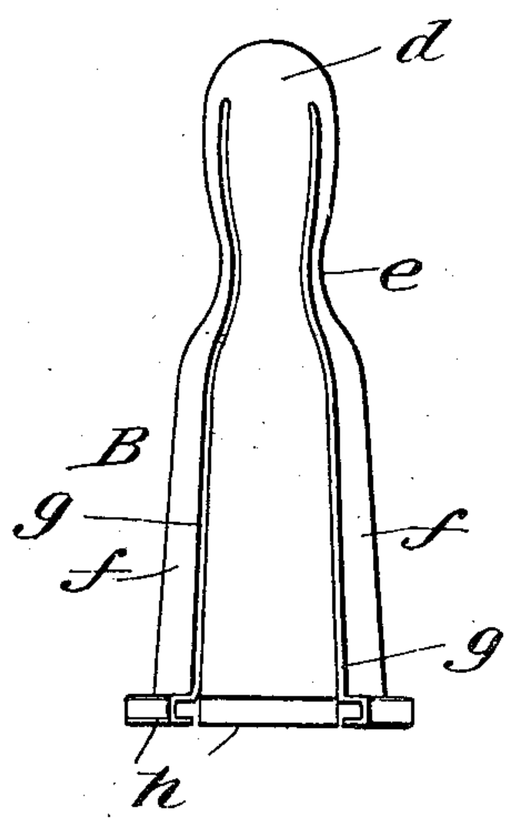


Fig. 3.

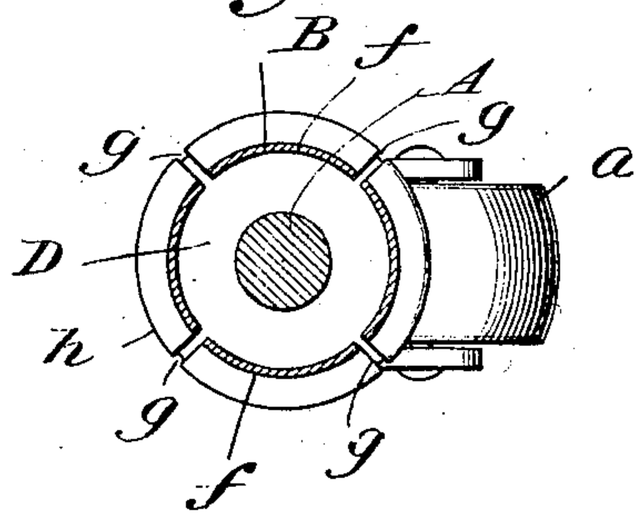
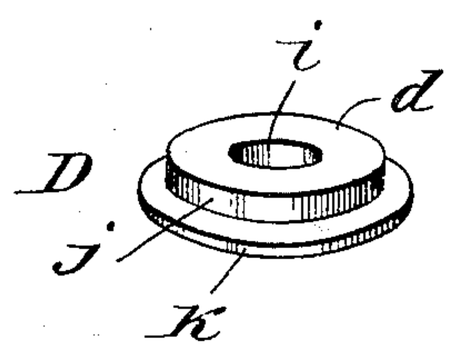


Fig. 4.



Witnesses

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CASTER.

No. 879,519. Specification of Letters Patent. Patented Feb. 18, 1908.

Application filed October 25, 1907. Serial No. 399,146.

To all whom it may concern:

Be it known that I, ADA R. CAVIS, citizen of the United States, residing at Caney, in the county of Montgomery and State of Kansas, have invented new and useful Improvements in Casters, of which the following is a specification.

My invention has relation to casters; and it contemplates the provision of a simple caster, suceptible of being easily and inexpensively produced, and constructed with a view of assuring a caster wheel assuming a position in line with the direction in which a piece of furniture is moved so as to render easy the movement of the said piece of furniture.

With the foregoing in mind the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a view, partly in vertical section and partly in elevation, of the caster constituting the best practical embodiment of my invention of which I am cognizant. Fig. 2 is an elevation of the socket comprised in the caster. Fig. 3 is a horizontal section taken in the plane indicated by the line 3—3 of Fig. 1, looking downward, and: Fig. 4 is a perspective view of the washer of the caster, removed.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is a pintle carrying a wheel *a* and having, by preference but not necessarily, a reduced portion or neck *b* adjacent to its rounded upper end or head *c*, for a purpose presently set forth.

B is the socket of my improvement. C is the anti-friction ball, and D the washer, all of which are designed to coöperate with the pintle A in the manner hereinafter pointed out in detail. The socket B is made of a single blank of sheet-metal, preferably of spring steel of suitable thickness; and it is provided with a rounded upper end *d*, a contracted intermediate portion *e* disposed about the proportional distance illustrated below the upper end, and resilient portions *f*, the latter being separated by slits *g* which extend from the lower end of the socket to a point adjacent to the upper end thereof and being provided at their lower ends with flanges *h* which are preferably of U-shape in cross-section, Fig. 1, and have their lower portions disposed horizontally, for a purpose which will presently appear.

In the rounded upper portion of the socket B is arranged the anti-friction ball C, and, as will be readily observed, the rounded upper portion *d* of the socket and the ball C are of such proportional sizes that the ball is enabled to freely turn or roll in said upper portion. It will be noted, however, that the ball C, which is preferably of steel, is prevented from dropping out of the upper portion of the socket by the contracted intermediate portion *e* of said socket, and from this it follows that the socket B and the ball C may be handled as one piece. The contracted intermediate portion *e* of the socket B also serves, when a pintle of the construction shown is employed, to engage the neck *b* of the pintle and in that way prevent the pintle from casually dropping out of the socket when a piece of furniture is lifted from the floor, and yet, as will be readily understood, a slight downward pull on the pintle A is all that is necessary to withdraw the pintle from the socket. For the reasons stated, I prefer to employ a pintle having a neck *b*, but at this point I desire it distinctly understood that when desired the ordinary pintle—*i. e.*, a pintle having a rounded upper end but having no reduced portion or neck *b*, may be employed in lieu of the pintle illustrated without involving departure from the scope of my invention as claimed.

As best shown in Figs. 1 and 4, the washer D is provided with a central aperture *i* and also with a downwardly disposed flange *j* and an outwardly extending horizontal flange *k;* the said angular formation at the margin of the washer being calculated to lend stiffness and strength thereto. The flange *k* of the washer, which is preferably of steel, is disposed in the U-shaped flange *h* of the socket B, and consequently it will be observed that there is no liability of the washer being forced upward within the socket, but on the other hand the washer is securely retained in the position illustrated and enabled to hold the pintle in a perfectly upright position while permitting said pintle to freely turn on its axis.

My novel caster is adapted to be used to advantage in pieces of furniture of various

description, but is more especially designed for use in heavy pieces of furniture, since as will be readily appreciated, the bearing of the upper end of the pintle against the ball C enables the pintle to readily turn about its axis so that at the beginning of the movement of a piece of furniture, the wheel *a* or other anti-friction device carried by the pintle will assume a position in line with the direction of movement of the piece of furniture and will freely turn. This will be appreciated as a material advantage when it is remembered that it is the failure of the wheels of ordinary casters to assume a position in line with the direction of movement of pieces of furniture that causes such ordinary casters to tear and damage carpets and other floor coverings.

In addition to the practical advantages hereinbefore ascribed to my novel caster, it will be noted that the upper rounded end of the pintle A and the ball C are inclosed in the socket, and hence their opposed surfaces are not likely to be deteriorated by the collection thereon of dust and moisture.

As before stated, the construction herein illustrated and described constitutes the best embodiment of my invention known to me, but it is obvious that in the future practice of the invention such changes or modifications may be made as fairly fall within the scope of my invention as defined in the claims appended.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

1. The combination of a caster socket formed of a single piece of resilient sheet-metal and having a rounded upper portion closed at its top, a contracted intermediate portion and resilient lower portions separated by upright slips and also having flanges of U-shape in cross-section at the lower ends of said resilient portions, an apertured washer having a downwardly extending flange and also having a horizontal flange extending outward from the depending flange and disposed in the flanges on the resilient portions of the socket, an anti-friction ball, of larger diameter than the said contracted portion of the socket, arranged to turn in the rounded upper end portion of the socket, and a pintle carrying a wheel and extending upward through the apertured washer and into the socket and having a rounded upper end opposed to the anti-friction ball and also having a reduced portion disposed in the contracted intermediate portion of the socket.

2. The combination of a caster socket having a rounded upper end portion closed at its top and also having a contracted intermediate portion, an anti-friction ball, of larger diameter than the said contracted portion, arranged to turn in the upper end portion of the socket, and a pintle carrying a wheel and arranged in the socket and having a rounded upper end opposed to the anti-friction ball and also having a reduced portion disposed in the contracted intermediate portion of the socket.

3. As an article of manufacture, a caster socket having a rounded upper end portion and a contracted intermediate portion and also having an apertured washer at its lower end and an anti-friction ball, of larger diameter than the said contracted portion, arranged to turn in its said rounded upper end portion.

4. The combination with a caster socket formed of a single piece of resilient sheet-metal and having a rounded upper portion, a contracted intermediate portion and resilient portions separated by upright slits and also having flanges of U-shape in cross-section at the lower ends of said resilient portions; of an anti-friction ball of larger diameter than the said contracted portion, arranged to freely turn in the said upper end of the socket, and a washer provided with a central aperture and having its edge portion disposed in the flanges on the resilient portions of the socket.

5. The combination with a caster socket formed of a single piece of resilient sheet-metal and having resilient portions separated by upright slits and also having flanges of U-shape in cross-section at the lower ends said resilient portions; of an apertured washer having a downwardly extending flange and also having a horizontal flange extending outward from the depending flange and disposed in the flanges on the resilient portions of the socket.

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

ADA R. CAVIS.

Witnesses:
J. W. EBY,
W. F. GLEECK.