Dec. 30, 1958 W. A. LORD 2,866,222

CASTOR

Filed June 7, 1955

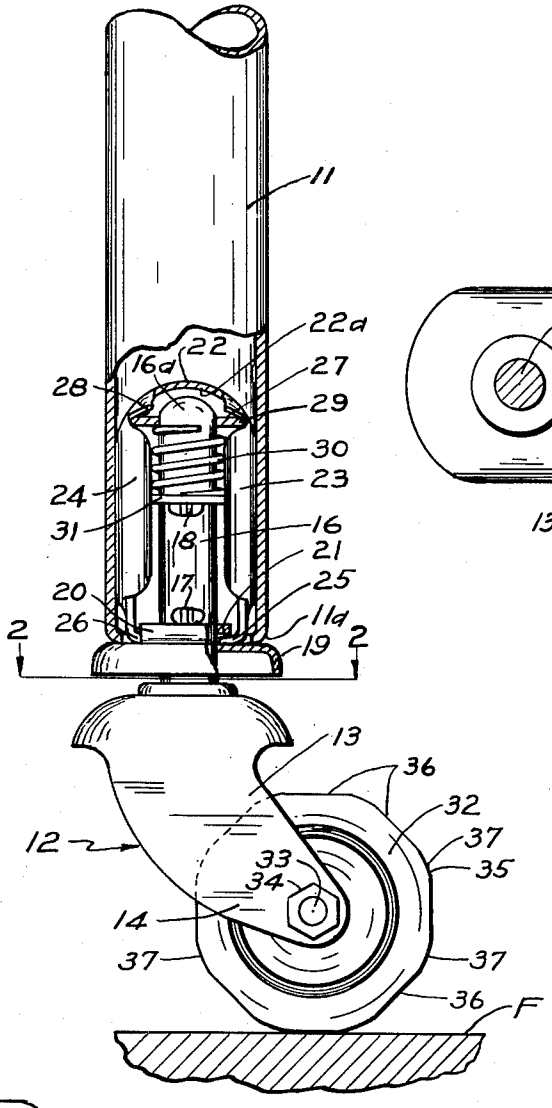


FIG. 1

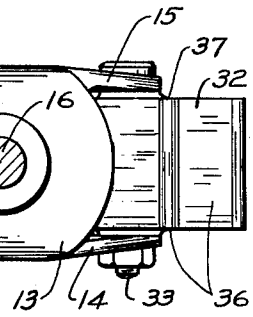


FIG. 2

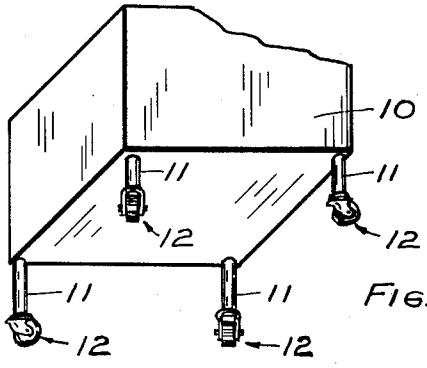


FIG. 3

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United States Patent Office 2,866,222 Patented Dec. 30, 1958

2,866,222

CASTOR

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Application June 7, 1955, Serial No. 513,829

1 Claim. (Cl. 16—45)

This invention relates to mobile apparatus for supporting an article as on a floor, and more specifically relates to castors for supporting such an article.

It has long been a problem in connection with articles or machinery such as washing machines and the like which are mounted on wheels to facilitate easy motion thereof, to restrict the undesired movement of such articles when they are supported on an inclined surface or floor. Particularly in the case of washing machines, they are generally utilized in the basement of a house where the floor is inclined toward the floor drain. The vibration of the machine tends to cause the machine to continuously roll on its wheels downwardly on the inclined floor. Apparatus has been konwn in the past which was for the purpose of restricting such movement of such machines, but has not proved highly successful because the cost of such apparatus must be kept at a minimum and because such apparatus rapidly goes out of order.

An object of my invention is the provision of a new and improved castor of simple and inexpensive construction and operation for supporting an article such as a washing machine on a floor and restricting undesired movement of the article along the floor.

Another object of my invention is the provision of a novel castor for supporting an article on a floor which permits the article to be readily and easily moved and which also will hold the article in a fixed position when the movement thereof has ceased without requiring the operation of any releasing or locking mechanism.

A further object of my invention is the provision of a mobile support for an article which will restrict both travel and turning of such an article on the floor when it is desired to hold the article in a stationary position, and which also permits the article to be turned or pushed in a single direction when such movement is desired.

These and other objects and advantages of my invention will more fully appear from the following description made in connection with the accompanying drawings wherein like reference characters refer to the same or similar parts throughout the several views and in which:

Fig. 1 is an elevation view, partly broken away, of the invention shown attached to a leg of an article;

Fig. 2 is a detail section view taken on a substantially horizontal plane as indicated at 2—2 in Fig. 1; and

Fig. 3 is a perspective view of an article including my invention.

As best shown in Fig. 3, an article or machine **10** such as a washing machine is provided with suitable frame means to which the depending legs **11** are secured. Each of the legs **11** has a castor, indicated in general by numeral **12** thereon. The castor **12** is shown in detail in Figs. 1 and 2 and is shown attached to one of the legs **11**.

The castor **12** includes a frame or support member **13** which has a pair of depending support arms **14** and **15** respectively. An upstanding spindle or shaft **16** is affixed to the upper portion of frame **13** as by welding. Shaft

16 has a pair of outstanding lugs or abutments **17** and **18** respectively formed therein.

Means are provided for attaching the frame member **13** and spindle **16** to the machine leg **11**, and in the form shown, the leg **11** has an inturned lip **11***a* formed at the lower end thereof.

A circular support element **19** having down-turned marginal edge portions has the central portion **20** thereof stamped upwardly to provide opposed slot openings **21** in the support element **19**. The support element **19** receives and is retained against the inwardly turned flange **11***a* of leg **11**. A retaining element indicated in general by numeral **22** is constructed of spring metal material and is shaped substantially as an inverted U and has a pair of depending arms **23** and **24** which engage and are continuously urged against the inner side of the hollow leg **11** and which are provided at their lower ends with a pair of in-turned hooks **25** and **26** respectively which extend inwardly through the slot openings **21** in the support element **19**. The inner surface **22***a* at the upper portion of the retaining element **22** provides a bearing with the upper end portion **16***a* of the shaft **16** which, when weight is carried by leg **11**, will shift into engagement with the surface portion **22***a*.

A pair of spaced grooves are formed adjacent the upper portions of the depending arms **23** and **24** and receive therein a guide disc **29** which is thereby restricted from vertical movement. Disc **29** has an enlarged central opening to permit the upper end portion of shaft or spindle **16** to slidably pass therethrough. A compression spring **30** is interposed between the disc **29** and the abutments **18** on shaft **16**. A washer **31** provides an abutment connection between the spring **30** and the lug **18**.

The central portion **20** of support element **19** is provided with a central aperture to slidably receive the spindle **16** therethrough.

A castor wheel or roller **32** is journalled on the depending arms **14** and **15** of the frame **13** and is supported therefrom by a bolt or axle **33** retained by nut **34**. The outer peripheral surface **35** of castor wheel **32** is provided with a plurality of flattened surface portions **36** which are spaced apart from each other with rounded surface portions **37** interposed therebetween. The castor wheel **35** may be constructed of any suitable material and may be constructed of a firm and resilient material such as hard rubber.

In the operation of the present invention, the weight of the machine or article **10** is carried on the castors **12**. When the castor wheel **32** engages the floor surface F, the frame **13** and spindle **16** will shift slightly upwardly with respect to leg **11** and support element **19**, causing the upper end portion **16***a* of spindle **16** to engage the inner surface **22***a* of retaining element **22**. Substantially all of the weight is thereby carried through the end of spindle **16** and the upper portion of retainer **22**.

The article may be readily and easily pushed across the floor surface F by manual or other means and the castor wheels or rollers **32** will roll over the floor surface.

When the positive pushing force, tending to move the machine **10** is removed, the castor wheels **32** will come to rest on one of their respective flattened peripheral surface portions **36**. The machine or article **10** will thereby be restricted from further movement along the floor unless a positive and substantial force is applied to the machine to again get it under way. Where the machine **10** is of the nature of a washing machine having an enclosed source of power, the vibration or jiggling of the machine when resting on an inclined floor will not be sufficient to cause the machine to travel across the floor and down the incline.

When the machine is again to be pushed across the

floor, a substantially greater force is necessary to start the machine in motion because the castor wheels **32** are resting on their flattened surface portions **36**, than is necessary to maintain the machine in motion after it has been started. The rounded surface portions **37** permit the castor wheel **32** to be rolled over the floor surface without extreme exertion by the person pushing the machine.

It will be noted that in the present form of the invention the castor wheel has a substantially octagonal shape with the angle corners of the eight surfaces rounded off. It should be understood that the castor wheel **32** may be provided with more or less flattened surface portions than is shown in the drawings and in addition, the flattened surface portions may be spaced from each other at varying distances. Where the size of the rounded surface portions **37** is increased relative to the size of the flattened surface portions, the castor wheel **32** will be adapted to be more easily pushed or rolled across a floor.

The castor wheels **12** applied to the machine **10** also restrict turning of the machine **10** as it stands on an inclined floor. In order for the machine to be turned, several of the castor wheels **32** must revolve and the flattened surface portions **36** thereof restrict revolution when they are seated on the floor surface.

It will be noted that I have provided for an article to be supported on a floor, a castor which permits the article to be moved across the floor when desired, but when the positive pushing forces are removed from the article, the castor will retain the article in a stationary position.

It should also be noted that I have provided a novel castor which, when used with other castors of a similar type in supporting an article on a floor, restricts the

article from turning without the application of a positive or turning force on the article.

It will, of course, be understood that various changes may be made in the form, detail, arrangement and proportion of the parts without departing from the scope of my invention which consists of the matter described herein and set forth in the appended claim.

What I claim is:

A castor for supporting an article on a floor, comprising a frame, means for swivelly attaching said frame to the article for movement about a vertical axis, and a castor wheel journalled in a fixed position on said frame for rotation about a horizontal axis and for rolling on the floor, said castor wheel having an outer peripheral surface symmetrically formed about said axis and having a plurality of regularly spaced flattened surface portions spaced therearound and extending across the entire width thereof, whereby when said castor is mounted on such an article the article may be moved along the floor with rolling of said wheel and will thereafter be retained in a stationary position when one of said flattened surface portions engages the floor.

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