June 2, 1959 G. R. THOEMING 2,888,775

FOOT FOR STAND OR BASE

Filed June 8, 1956

Fig. 1

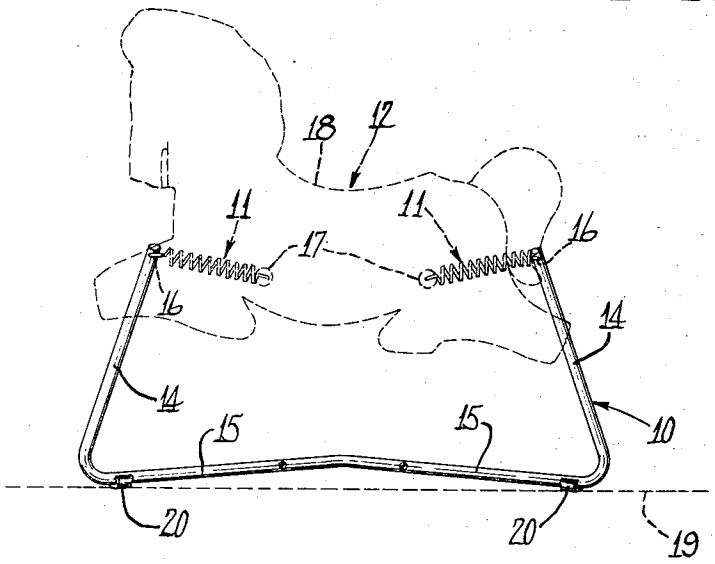


Fig. 2

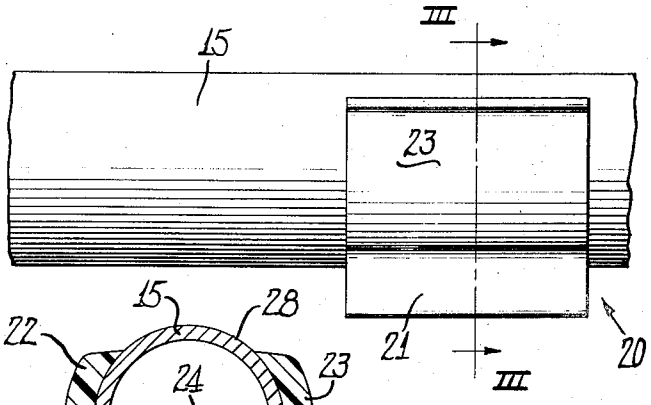
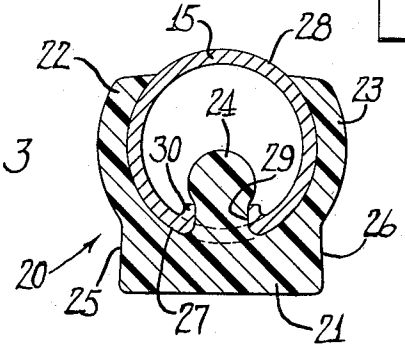


Fig. 3



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FOOT FOR STAND OR BASE

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3 Claims. (Cl. 45—137)

The present invention relates to a foot or bumper device for use with frames or bases as the floor contacting member.

While it will be understood that the foot device of the instant invention is of general utility and may be used with any number of various bases, it will be described herein in conjunction with a spring-suspended hobby horse, such as disclosed in the Baltz Re. 23,849, in which the base or frame therefor is formed of a tubular metallic construction. One of the problems that has arisen in connection with such a tubular metallic base is that of providing the same with floor contacting members that will prevent crawling or creeping of the hobby horse when in use by a child. Previously, a section of rubber tubing has been used for the purpose, secured in place by an adhesive or by means of a screw or rivet extending through both the tubing and frame. However, due to the use of rings at the top of the uprights of the base, such sections of tubing could not readily be slipped onto the tubular frame over these rings when replacement became necessary. Further, if a screw or rivet were utilized there was a possibility of the section of rubber tubing being torn during use.

In accordance with the present invention there is provided an improved foot or bumper which is replaceable, locks in place on the frame base and improves the stability of the toy. Such feet or bumpers are preferably formed of a substantially solid block portion with upstanding arcuate arms to resiliently grip the frame and with upstanding bulbous fingers to interlock in a recess or aperture in the frame. A preferred material for the feet or bumpers is polyethylene, although other semi-rigid, resilient plastics or elastomers may be satisfactorily utilized.

It is, therefore, an important object of this invention to provide an improved foot to support and stabilize an article that is subjected to vibration and a tendency to move, or creep.

It is a further important object of this invention to provide a new and improved foot or bumper for a tubular base having apertures or recesses therein at the places thereon for engagement with the floor or other supporting surface, the foot or bumper being in the form of a block with a pair of upstanding intergral frame gripping arms and an upstanding interlocking finger to extend into the aperture or recess in the frame and become interlocked therewith.

Numerous other objects, features and advantages of the present invention will become apparent from the following detailed description of the invention and from the accompanying drawings illustrating a preferred form of the invention, and in which:

Figure 1 is an elevational view of a frame base stand for a spring-suspended hobby horse, having feet or bumpers thereon incorporating the principles of the present invention;

Figure 2 is an enlarged elevational view of a section

of the base of the frame with a foot or bumper thereon; and

Figure 3 is a sectional view taken substantially along the line III—III of Figure 2.

Figure 1 illustrates an improved form of stand **10** for supporting by means of springs **11** a hobby horse **12**, shown in dotted outline form. While only one-half of the frame is shown, the frame **10** has four upstanding portions **14—14** formed integrally with the intermediate base portions **15—15**. Said base portions are secured together in such a manner that the upstanding portions **14—14** form uprights for the horse **12**, with points of attachment for the springs **11** at the corners of a rectangle. The top of each of the uprights **14** is provided with rings **16** for securing the springs **11** thereto. The springs **11** hook into the rings **16** and also into screw eyes at the ends of the bars **17** which extend transversely through the horse **12**. With this arrangement, the horse **12** is supported by the four springs **11** in such manner that the child riding on the saddle portion **18** of the horse may ride it through a variety of movements. During the course of such riding, the frame **10** is subjected to relatively high forces tending to move the entire assembly in any of a variety of directions along the floor or other supporting surface, indicated generally at **19**.

In order to prevent this undesirable tendency of the assembly to creep, anticreeping feet members **20—20** are secured onto the frame base stand at the regions of the frame base stand which would normally contact the floor or supporting surface **19**. These feet or bumpers **20** serve also to prevent marking or marring the floor **19**, in addition to being operative as anticreep devices by supporting the remainder of the frame and assembly out of contact with the floor **19**.

One of the feet **20**, all of which are identical, is shown in enlarged views and in cooperative arrangement and assembly with the frame base portion **15** in Figures 2 and 3. The foot **20** therein shown is an embodiment of this invention which is particularly cooperative with a tubular frame for supporting the same.

While feet or bumpers embodying the principles of this invention may be formed from any number of desired materials, it is preferred that the materials be resilient, yet semirigid. It is also preferred that the materials be of a semirigid resilient elastomer or resilient plastic; a preferred embodiment of the invention being formed of injection molded polyethylene.

In the form of the invention illustrated in Figures 2 and 3, the foot **20** is formed with four distinct portions thereon including a base block **21**, a pair of arms **22** and **23** respectively and a finger **24**. The base block **21** is a relatively thick and wide portion for the foot **20**, all of the parts of the foot **20** being integrally formed. The base block portion **21** is the portion of the foot upon which the weight of the entire package or assembly rests.

The arms **22** and **23** extend upwardly from the side faces **25** and **26** of the base block **21** and are coextensive in length with the base block **21**. In the embodiment shown in the drawings for use in conjunction with a tubular frame portion **15**, the arms **22** and **23** are arcuately formed and of sufficient thickness to be semirigid, yet resilient. By arcuately forming the arms **22** and **23** and correspondingly arcuately recessing the upper surface of the base block, as at **27**, there is formed an inner cylindrical surface on the feet or bumpers **20** of substantially the same diameter as the outer surface **28** of the frame portion **15** whereby the feet or bumpers **20** will snugly conform and adhere to the frame. By providing the arms **22** and **23** with sufficient height so that the cylindrical inner surface of the feet or bumpers **20** are of greater arc dimension than a semicircle, the resiliency of the arms and their cooperative arrangement with the base

block portion 21 will provide a positive grip on the tube frame portion 15 to securely hold the same onto the tube frame portion 15.

To lock the foot or bumper 20 in position on the frame therealong, the frame portion 15 is apertured at 29 on the underside thereof, as by punching or drilling etc. and any burr 30 about the aperture 29 is bent inwardly. The aperture 29 receives the finger 24 which then positively axially places the foot or bumper 20 on the frame portion 15. The cooperation of the finger with the aperture 29, and the arms 22 and 23 with the outer surface 28 of the frame portion 15 then positively fixes and secures the foot or bumper onto the frame. To further lock and secure the foot or bumper onto the frame portion 15, the finger 24 is formed with a more or less bulb-like configuration so that the upper end thereof is larger than the aperture 29. Since the material from which the foot or bumper 20 is formed is resilient, the interlocking finger 24 may be deformed during its passage through the aperture 29 whereupon it will resume its original configuration and interlock with the tube portion 15.

While the cooperating four portions of the feet or bumpers 20 will securely lock the same onto the frame and provide feet effective to properly support the frame, it will be readily apparent that the feet or bumpers 20 are readily replaceable since by the application of appropriate forces, the arms 22 and 23 and the finger 24 may be appropriately deformed for removal of the feet or bumpers from the frame when, for any reason, it is desired or necessary to replace the same.

From the forgoing it will be readily observed that numerous variations and modifications of structures and devices may be made and effected without departing from the true spirit and scope of the novel concepts and principles of this invention. I, therefore, intend to cover all such modifications and variations as may fall within the true spirit and scope of the novel concepts and principles of this invention.

I claim as my invention:

1. A support device comprising a tubular frame member having a hollow horizontal tubular section, means defining a downwardly facing aperture through the wall of the tubular section, a foot support including a block of a semi-rigid resilient elastomer material, a pair of arms integral with said block, said arms and block having arcuate inner surfaces resiliently gripping said tubular section, and an upstanding finger connected to said block between said arms and extending into said aperture in said frame member to become interlocked therewith, said finger extending into contact with the means defining said aperture so that the foot support will not shift axially along said tubular section, said finger having a bulb-like shape with an upper end larger than the aperture and a smaller lower portion to lock the finger in said aperture and hold the foot support on said frame member.

2. A replaceable foot support for an apertured tubular frame subjected to vibration and forceful movement, said foot support comprising a semi-rigid resilient member having a substantially solid base portion and a plurality of upstanding portions integral therewith having inwardly facing surfaces for grippingly engaging the tubular frame, and a resilient bulb-like upstanding finger between said upstanding portions forcibly insertable into said aperture for interlocking engagement with the frame to anchor said member against displacement therefrom, said bulb-like finger having a distal end with tapered side surfaces for forcible insertion into the aperture and having an inner end connected to the inner surface of the base portion between said upstanding portions with the lateral sides of the inner end tapered to face said base portion to engagingly face the sides of the aperture and retain said foot support on the frame and prevent lateral shifting and rotation of the foot with respect to the frame.

3. A support device comprising a cylindrically shaped horizontal tube having an axially elongated aperture in the lower surface and adapted to bear a load on the tube, a foot support including a supporting base portion with a substantially flat lower surface, a pair of upstanding opposed side portions having facing surfaces lying in a cylindrical plane and meeting the tube in surface engagement, and a bulb-like axially elongated finger portion projecting upwardly intermediate said side portions and having a tapered upper end for forcible insertion into the aperture in the tube and having a lower end attached to said base portion and provided with downwardly facing tapered side surfaces engaging the sides of said aperture to continuously urge the foot support to locked engagement with the tube, said finger extending to both ends of the aperture to prevent relative lateral rotation and axial shifting of the foot support relative to the tube.

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