June 16, 1925. 1,542,231

W. S. GARFIELD

COMBINED CORNER SHIELD AND CASTER

Filed Dec. 4, 1923

Fig. 1.

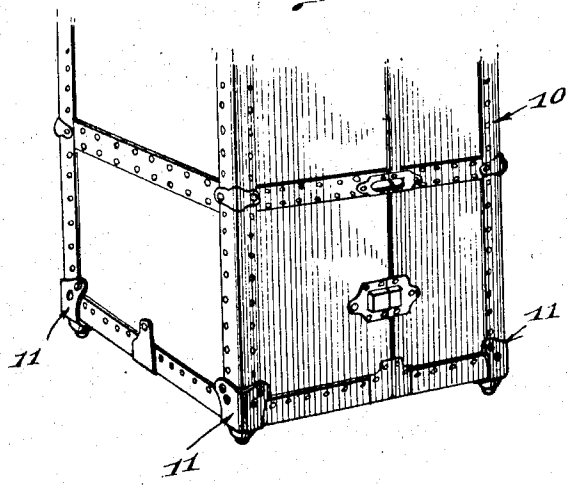


Fig. 2.

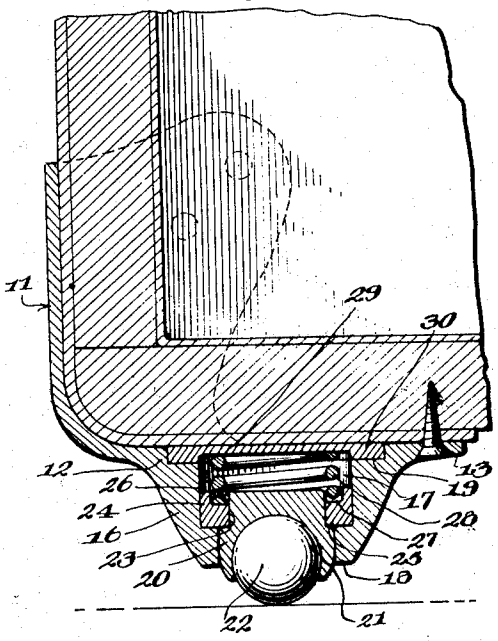


Fig. 3.

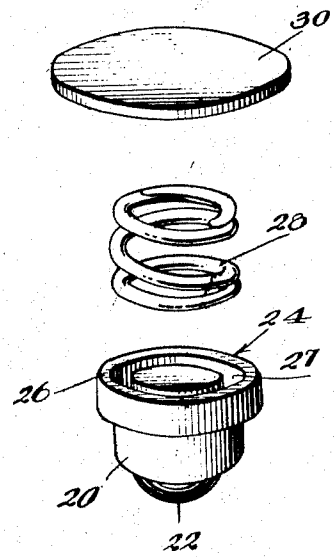
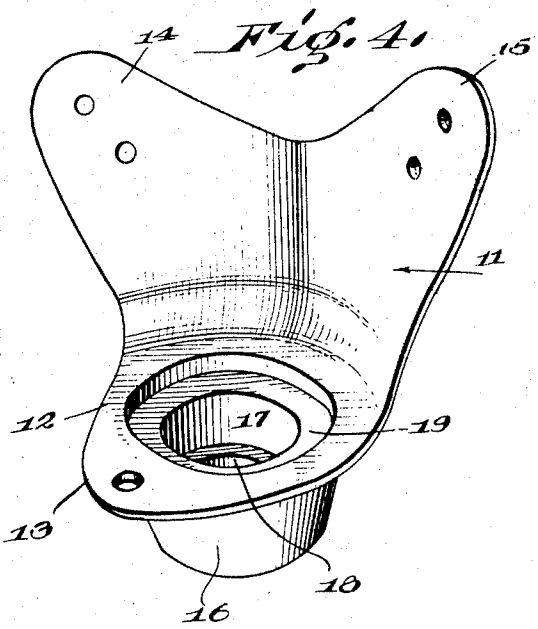


Fig. 4.



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UNITED STATES PATENT OFFICE.

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COMBINED CORNER SHIELD AND CASTER.

Application filed December 4, 1923. Serial No. 678,526.

To all whom it may concern:

Be it known that I, WALTER SUMNER GARFIELD, a citizen of the United States, and a resident of Dothan, in the county of Houston and State of Alabama, have invented certain new and useful Improvements in Combined Corner Shields and Casters, of which the following is a specification.

This invention relates to an improvement in combined corner shields and casters especially designed for use on trunks or other baggage.

The object of the invention is to provide a device of this character which protects and reinforces the corners of the trunk and which also mounts the trunk in such manner that it may be smoothly and easily moved across the floor.

A further object is to provide a device of this character having the foregoing enumerated advantages and capacities and which is also practically indestructible though of compact and simple construction and ornamental appearance.

Other objects and advantages of the invention reside in certain novel features of the construction, combination and arrangements of parts which will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawings forming part of this specification, and in which:

Figure 1 is a fragmentary perspective view, showing the invention applied to a wardrobe trunk;

Figure 2 is a fragmentary view in vertical section through a lower corner of the trunk and the combined corner shield and caster applied to said corner;

Figure 3 is a group view in perspective, showing the ball carrier, spring and abutment plate prior to assembly; and

Figure 4 is a perspective view of a combined corner shield and caster detached and with the parts shown in Figure 3 removed therefrom.

Referring to the drawings, the numeral 10 designates a wardrobe trunk to which, for the sake of illustration, the present invention is shown applied. It is to be understood however that the invention is equally well adapted for use on other types of trunks and other forms of baggage.

In the embodiment shown in the drawings, each lower corner of the trunk has a combined corner shield and caster designated generally at 11 applied thereto. These combined corner shields and casters are all of identical construction so that a common description will serve for all.

Each corner shield comprises a body portion 12 having attaching wings 13, 14 and 15 integral therewith, the attaching wings being apertured in order that screws or other suitable fastening means may be conveniently employed for firmly securing the corner shield in position. It is to be understood that when applied to the trunk the inner face of the body portion 12 and the inner surfaces of the wings 13, 14 and 15 all fit flush up against the contiguous portion of the trunk, these parts being shaped and formed to this end.

A caster housing or casing 16 is integrally formed with the body portion 12 of the shield and projects outwardly therefrom. A cylindrical guide opening 17 is formed in the housing 16. Around the outer end of this opening 17 an inwardly directed annular flange 18 is integrally formed with the housing 16. An annular recess 19 is machined or otherwise formed in the body portion 12 around the inner end of the guide opening 17.

A ball carrier, designated generally at 20, is provided and is formed with a socket 21 in which a ball 22 is rotatably mounted and retained. For the sake of illustration the socket 21 is shown as being formed of a single piece of metal, the marginal portion of the metal being rolled, spun or swaged inwardly to prevent accidental displacement of the ball. Of course it is to be understood that in lieu of this expedient a retaining cap may be provided and may have screw threaded connection with the body portion of the ball carrier. Inwardly beyond the socket 21 the ball carrier is somewhat reduced as at 23, and on this reduced portion a collar 24 is fitted and fixed. The collar 24 may be shrunk on the reduced portion 23 of the ball carrier or it may be screw threaded or otherwise suitably connected thereto. One end of the collar abuts the shoulder 25 formed around the inner end of the reduced portion 23 of the ball carrier. The opposite end of the collar 24 is formed with a marginal flange 26 which enlarges the peripheral area of the collar and which provides a seat 27 for a purpose which will presently appear. A compression coil spring 28 is provided and one end of the spring 28 is received in

the seat 27. The opposite end of the spring is received in a seat 29 provided therefor in a plate 30.

In assembling the parts the ball carrier 20 with the ball 22 therein and the collar 24 fixed thereto is inserted through the inner end of the guide opening 17 of the shield before the shield is applied to the trunk. In the assembly, the peripheral surface of the collar 24 and its flange 26 has a sliding fit in the guide opening 17 and the large bearing area provided by the flange 26 insures proper sliding movement of the ball carrier and prevents jamming. After the ball carrier has been assembled as described, the spring 28 is inserted into the guide openings 17 through the inner open end thereof and the lower end of the spring is engaged with the seat 27. The plate 30 is then placed on the top of the spring 28 above the recess 19 and when the shield is applied and secured to the trunk the plate 30 is forced into the recess 19 and compresses the coil spring 28 by virtue of its engagement with the adjacent portion of the trunk. The coil spring 28 being thus tensioned projects the ball carrier and the ball beyond the caster housing, as shown to advantage in Figure 2. The outward movement of the ball carrier and the ball is limited by the engagement of the collar 24 with the flange 18. The inward movement of the ball carrier and ball is resiliently resisted by the spring 28.

In use, the balls 22 enable the trunk to be easily moved and when used on a wardrobe trunk greatly facilitates the opening and closing of the trunk. The casters also serve to aid the shield in protecting the corners of the trunk for should the trunk be roughly handled and a caster forcibly strike a rigid object, the shock of such impact will be largely absorbed by the caster which will move inwardly against the tension of the spring 28 and thus cushion if not absorb the shock and prevent fracture of the shield and possible damage to the corner of the trunk. The same action of course prevents the ball and ball carrier from being broken or damaged. In this manner the reinforcing and protective action of the corner shield and the advantages of a smooth and easy running caster are had and the combined device is rendered practically indestructible or unbreakable.

I claim:

1. A combined corner shield and caster for use on trunks, said shield comprising a body portion, a caster housing connected to the body portion, a ball carried by the caster housing and spring means for projecting the ball from the housing and for resiliently resisting inward movement thereof.

2. A combined corner shield and caster for use on trunks, said corner shield comprising a body portion having attaching wings, the body portion and the attaching wings being adapted to be secured flush up against the trunk, a caster housing integral with said body portion, said caster housing having a guide opening therein and having an inwardly directed marginal flange around the outer end of said opening and a recess around the inner end of said guide opening, a ball carrier arranged in said housing and having a socket therein, a ball rotatably mounted in said socket, a collar fixed to the carrier and having a flange enlarging the peripheral area of the collar and providing a spring seat, the periphery of the collar being slidably engaged with the wall of the guide opening, a compression coil spring having one end engaged with the spring seat of said collar, and a plate having a spring seat engaged with the opposite end of said coil spring, the plate being received in the recess of the body portion and being held therein by engagement with the trunk.

3. A combined corner shield and caster for use on trunks, said shield comprising a body portion connected to the trunk, a caster housing connected to the body portion, a ball mounted on the caster housing, and yieldable and resilient means coacting with the ball for normally projecting the ball from the housing and for resiliently resisting inward movement thereof.

4. In a device of the character described, a caster housing having guide openings provided with an inwardly directed marginal flange around its outer end, a ball carrier arranged in the housing and having a socket, a ball rotatably fitted in the socket, a collar fixed to the carrier and having a flange enlarging the peripheral area of the collar and also providing a spring seat, the periphery of the collar being slidably engaged with the wall of the guide opening, a compression coil spring having one end engaged with the spring seat of said collar, and means providing an abutment for the other end of said coil spring.

5. In a device of the character described, a caster housing having a guide opening, a ball carrier mounted in the housing and having a socket, a ball rotatably fitted in the socket, a collar fixed to the carrier and having its periphery slidably engaged with the guide opening, and spring means co-operable with the collar for projecting the ball carrier and the ball from the housing.

WALTER SUMNER GARFIELD.