Jan. 11, 1966 TWO WHEEL TANDEM ROLLER SKATES PROVIDED WITH ANTI-MARRING DEVICES 5 Sheets-Sheet 1











fig6

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3,228,707 TWO WHEEL TANDEM ROLLER SKATES PRO-VIDED WITH ANTI-MARRING DEVICES George Davis, 1755 St. Claire, St. Paul, Minn., and Frank 5 Davis, 6723 Lakehurst, Dallas, Tex. Filed June 24, 1963, Ser. No. 289,941 1 Claim. (Cl. 280–11.23)

Our invention relates to skates and more especially 10 to a roller skate having a single pair of tandem wheels; and the objects of our improvements are first, to provide side guards arranged to engage the floor when the skate is tipped on the respective side beyond a predetermined third, in providing simple and highly efficient means for attaching the skate to the foot.

To the above end, generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claim.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

FIG. 1 is a side elevation of the improved skate;

FIG. 2 is a plan view of the same;

FIG. 3 is a view partly in side elevation and partly in section taken on the line 3-3 of FIG. 2;

FIG. 4 is a view principally in section taken on the line 4-4 of FIG. 3;

FIG. 5 is a fragmentary plan view of the skate attaching device; and

FIG. 6 is a detail view partly in edge elevation and partly in section taken on the line 6-6 of FIG. 1.

The chassis of the skate includes a foot plate 7, a heel 35plate 8, front and rear bearing brackets 9, and two tandem wheels 10. The rear end portion of the foot plate 7 is downwardly offset from the front portion thereof and at the junction of said two portions the foot plate 40 7 is provided with a transverse slot 11. Each bearing bracket 9 is in the form of an inverted U the arms of which are in downwardly converging relation and have on their free ends hubs 12 in which the end portions of a shaft 13 are mounted and secured.

45The wheels 10 are identical the one with the other and each thereof includes a pair of discs 14 the central portions of which discs are in direct contact with the other and have central bores through which the shaft 13 loosely extends. Said disks 14 outwardly of their cen-50tral portions, are outwardly offset to form ball-races 15 in which anti-friction balls 16 are mounted and support the wheel 10 on the shaft 13. Washer-like guards 17 on the shaft 13 hold the balls 16 in their races 15 and in turn said washers are held against outward axial move-55 ment by the hubs 12. It may be here stated that the bearing brackets 9 are welded or otherwise rigidly secured to the foot plate 7 on the under side thereof.

An annular rubber tread 18 is mounted between the discs 14 and is rigidly secured thereto by rivets 19 which 60 also connect said discs.

Rigid with the front end of the foot plate 7 is an upstanding two part segmental toe-flange 20 having in each section thereof an aperture 21.

The heel plate 8 loosely rests on the rear end portion of the foot plate 7 and has its front end portion formed with a long tongue 22. This tongue extends through

the slot 11 and into a guide 23 formed by the foot plate 7 and the front bearing bracket 9.

The heel plate 8 is held in different longitudinal adjustments relative to the foot plate 7 by a nut equipped bolt 24 which extends through an aperture in the tongue 22, and a longitudinal slot 25 in the foot plate 7. Formed with the rear end portion of the heel plate 8 is a segmental heel flange 26 having a pair of circumferentially spaced apertures 27.

A metallic skirt 28 is secured to the foot plate 7 at the perimeter thereof. The sides of the skirt 28 are in downwardly converging relation and encase the bearing brackets 9 and the major portions of the wheels 10. It will be noted that the lower edge portions of the skirt

angle, second, in improving the chassis of the skate and 15 28 form a relatively long narrow slot 29 considerably below the axes of the wheels 10 and in which slot said wheels work. By reference to FIG. 3 it will be noted that the skirt 20 at the ends thereof is upwardly and outwardly curved so as to not interfere with making a stroke 20 while skating.

On the front pointed end portion of the skirt 28 is a rubber bumper  $\overline{30}$ .

For securing the improved skate to the foot X we provide a pliable body member 31 of leather or other suit-25able material which is shaped to fit over the foot substantially from the toe to the ankle. This body member 31 at its front end portion is bifurcated and the prongs 32 thereof are in forwardly diverging relation. These prongs 32 have fixed to their free ends, wide hooks 33 30 which have separable interlocking engagement with the toe flange 20 through the apertures 21 and releasably connect said prongs to the foot plate 7. Obviously, the prongs 32 by their contact with the toe of the shoe on the opposite sides thereof, together with the body member 31 which is fitted over the top of the shoe Y securely and firmly hold the skate on the foot.

Integral with the two rear corners of the body member 31 are two straps 34 which extend through the apertures 27 in the heel flange 26 and are folded upon themselves and their free ends adjustably connected by buckles 34' to the inner end portions of said straps.

Formed in the body member 31 between the straps 34 is a V-shaped notch 35 and an elastic insert 36 is secured therein. This elastic insert 36 will give during skating action and thereby relieve strain and under pressure, on the foot.

On each side of the skirt 28 are front and rear side guards each of which is in the form of a ball 37 of rubber or other frictional material. These balls 37 are mounted in cup-like seats 38 in the skirt 28 to turn about vertically disposed axes, see FIG. 4. It will be noted that the balls 37 are located at the ends of the shafts 13 and below the same. The balls 37 have rolling contact with the seats 38 and are thereby frictionally held from turning too freely.

In case the skate is tipped beyond a predetermined angle the friction balls 37, on the respective side of the skate will be brought into engagement with the floor and thereby prevent the skate from scratching the floor or otherwise marring the same. These friction balls 37 when brought into engagement with the floor will also materially assist in holding the skate from slipping on the floor in case the skater falls.

The skirt 28 forms a housing for the skate and sub-65stantially, completely covers the same and at the same time materially adds to the appearance of the skate.

A roller skate having a frame, front and rear single wheels journalled on the frame, and a skirt on the frame, the lower edge portions of which are closely positioned to the wheels below their axes further including fric-tionally held friction balls journalled on the skirt at the sides of the wheels and below their axes.

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