

March 17, 1925.

F. R. STANLEY ET AL

1,529,967

ROLLER SKATE

Filed Nov. 19, 1923

Fig. 2

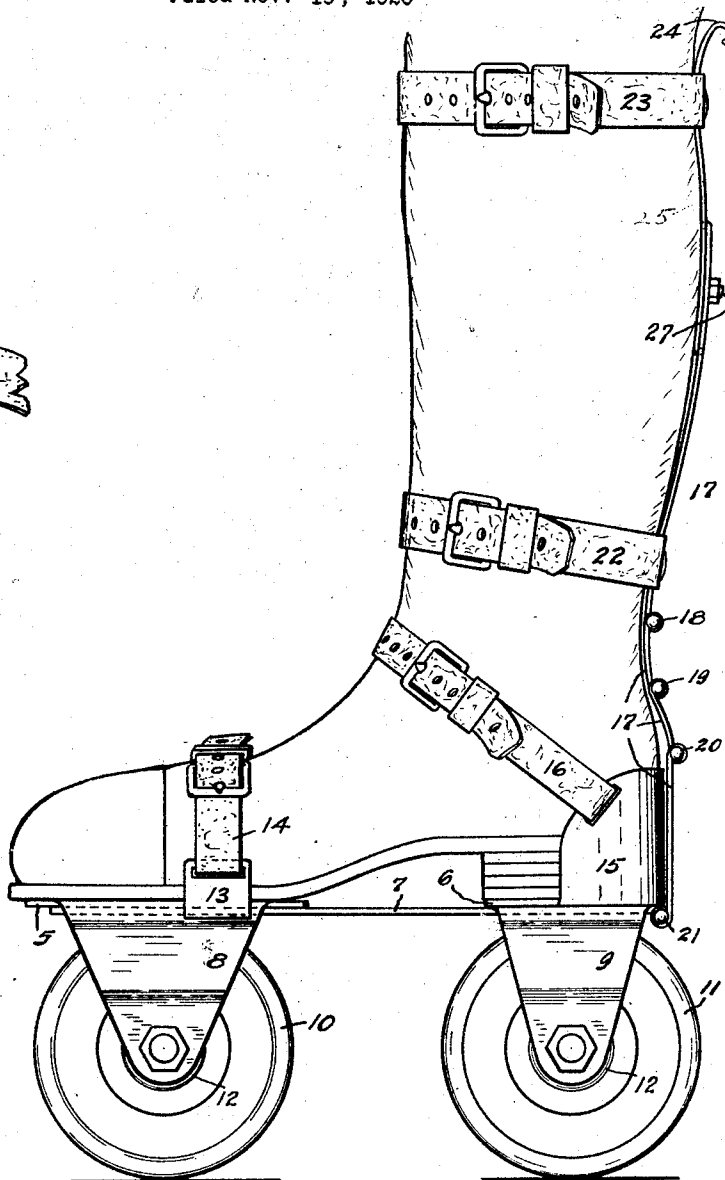
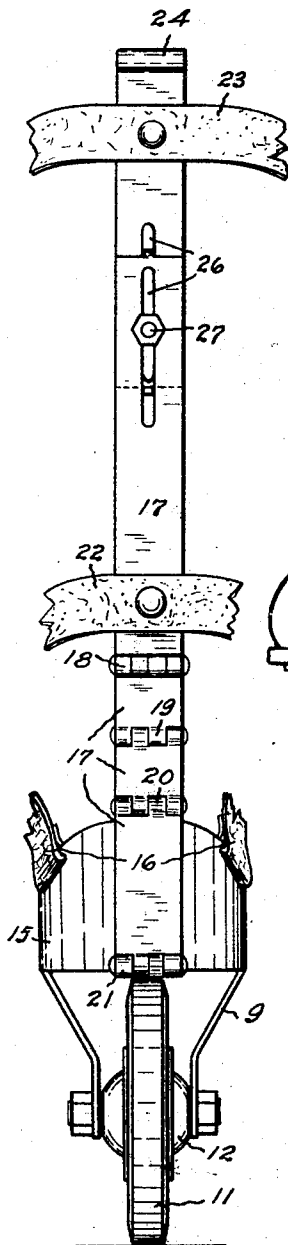


Fig. 1

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UNITED STATES PATENT OFFICE.

FREDERICK R. STANLEY AND MAUDE E. STANLEY, OF SEATTLE, WASHINGTON.

ROLLER SKATE.

Application filed November 19, 1923. Serial No. 675,527.

To all whom it may concern:

Be it known that we, FREDERICK R. STANLEY and MAUDE E. STANLEY, citizens of the United States, residing at Seattle, in the county of King and State of Washington, have invented a certain new and useful Improvement in Roller Skates, of which the following is a specification.

Our invention relates to improvements in roller skates and an object of our invention is to provide a roller skate having single rollers instead of the usual double rollers, and to provide on said roller skate, simple and efficient means for bracing and supporting the ankle and leg of the person wearing the skate.

Another object is to provide a skate of this nature in which relatively large skate wheels may be used thereby making an easy running skate upon which exceptionally high speed may be attained in use.

Other objects are to provide a skate of this nature that is strong and simple in construction, efficient and durable in operation and not expensive to manufacture.

Other and more specific objects will be apparent from the following description taken in connection with the accompanying drawings.

In the drawings Figure 1 is a view in side elevation of a skate constructed in accordance with our invention as it may appear when secured to the foot.

Fig. 2 is a detached view in rear elevation of the same.

Referring to the drawings, throughout which like reference numerals designate like parts, we have shown a roller skate embodying a toe plate 5 and a heel plate 6 adjustably connected with each other in a manner common to roller skates by a flat bar 7.

The toe plate 5 and heel plate 6 are provided respectively with downwardly and inwardly bent side flanges 8 and 9 that serve as bearing brackets between which, skate wheels 10 and 11 of relatively large diameter are mounted. The skate wheels 10 and 11 are preferably, though not necessarily, of rubber or fibre or are provided with rubber or fibre threads to render them noiseless and somewhat resilient and elastic in operation and said wheels are journaled on roller bearings 12 to secure the greatest ease and smoothness of operation.

The toe plate 5 is provided with adjust-

able clips 13 to which are secured straps 14, the clips 13 being arranged to fit against, but not to clamp onto, a shoe sole and the straps 14 being arranged to secure the toe plate to the foot. The clips 13 prevent the toe from slipping sidewise on the toe plate but do not injure the shoe sole or pull it loose from the shoe, while the strap 14 relieves the shoe of all possible strain.

A metal plate 15 is secured to the heel plate 6 for supporting the heel portion of a shoe and a heel strap 16 of the usual form is secured to the metal plate 15.

In a single wheel roller skate of this nature we find it absolutely necessary to provide means for bracing or supporting the ankle and leg of the wearer and we further find that such bracing means must afford very little, or no flexibility or movement sidewise and must be entirely flexible lengthwise of the skate to permit free forward and rearward bending of the ankle. The leg and ankle bracing means which we provide is preferably constructed of a plurality of pieces of relatively thin, flat, resilient metal 17 connected together by pivotal joints 18, 19 and 20, the lowermost piece 17 being connected with the rearmost portion of the heel plate 6 by pivotal joint 21. The brace member 17 is provided just above the location of the ankle joint and just below the location of the knee joint respectively with straps 22 and 23 or other suitable fastening means for securing the brace member to the leg of the wearer. The brace member 17 terminates just below the knee of the wearer and is curved rearwardly at the top end as at 25 to avoid injury to the leg. The three pivot joints 18, 19 and 20 are located relatively close together directly to the rear of the ankle joint of the wearer thereby affording the greatest possible freedom to the ankle joint in bending forwardly and rearwardly but bracing the ankle securely against bending sidewise. The three pivot joints 18, 19 and 20 also permit the brace member 17 to fit snugly against, and to conform to, the shape of the leg. The pivot members of the pivotal joints 18, 19 and 20 extend crosswise of the skate and consequently afford very little flexibility in a sidewise direction.

The upper section of the brace 17 is preferably made in two parts which are adjustable lengthwise as by a slot 26 and screw 27 to fit legs of different length.

We also find that braces affording flexibility longitudinally of the skate may be secured to other parts of the skate at or near the location of the heel and arranged to extend upwardly along the leg of the wearer at locations other than directly at the rear of the leg for bracing the leg and ankle. It is also possible to provide a very satisfactory leg and ankle brace made of a single piece of flexible spring metal having no pivotal points at all but having a rigid connection with the rear of the heel plate and arranged substantially the same as the brace member 17.

The relatively large single wheels arranged in the medial plane of the skate have a very much greater tendency to tip sideways than do ordinary small, double, roller skate wheels and for this reason make it necessary to use the ankle and leg brace 17. The large single wheels 10 and 11 mounted on ball bearings run easily and smoothly and are exceptionally well adapted for use on sidewalks, pavements and like places where the user is liable to encounter sand and pebbles.

We also find that a leg and ankle brace of this nature is very useful especially for persons with weak ankles, when used on ice skates.

The foregoing description and accompanying drawings clearly disclose what we now regard as a preferred form of our in-

vention but it will be understood that this disclosure is for illustration only and that such changes in the device may be resorted to as are within the scope of the following claims.

We claim:

1. In combination with a roller skate, a brace member secured to the heel portion of said skate and arranged to extend upwardly along the back of the leg, means for securing said brace member to the leg at points just below the knee and just above the ankle respectively and a plurality of transverse pivot joints in said brace member directly to the rear of the ankle.

2. The combination with a roller skate, of a brace formed of a plurality of sections of flat flexible material hinged together by pivots that are arranged crosswise of the skate to afford flexible movement longitudinally of the skate, the uppermost section being relatively long and terminating just below the location of the knee and the lower sections being shorter and affording a plurality of pivotal connections directly to the rear of the ankle joint, the lowermost section being hinged to the heel portion of a skate and means for securing said brace to the leg.

Seattle, Washington, November 10th 1923.

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