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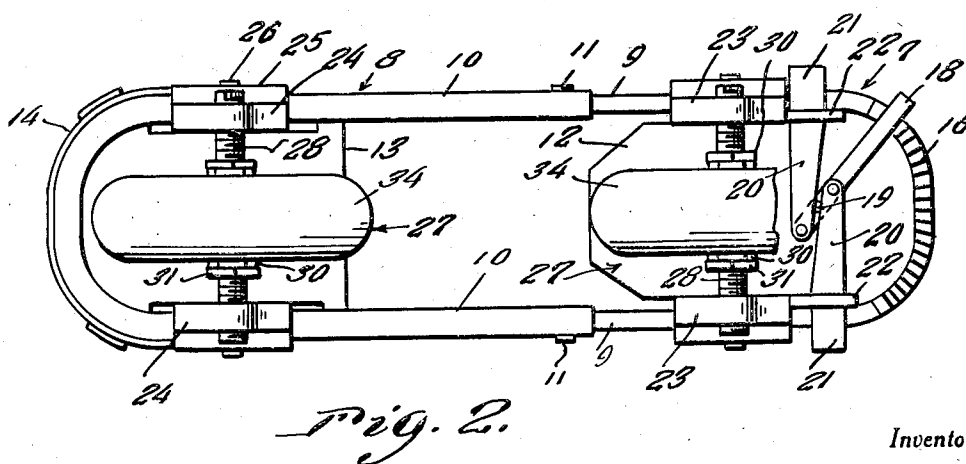
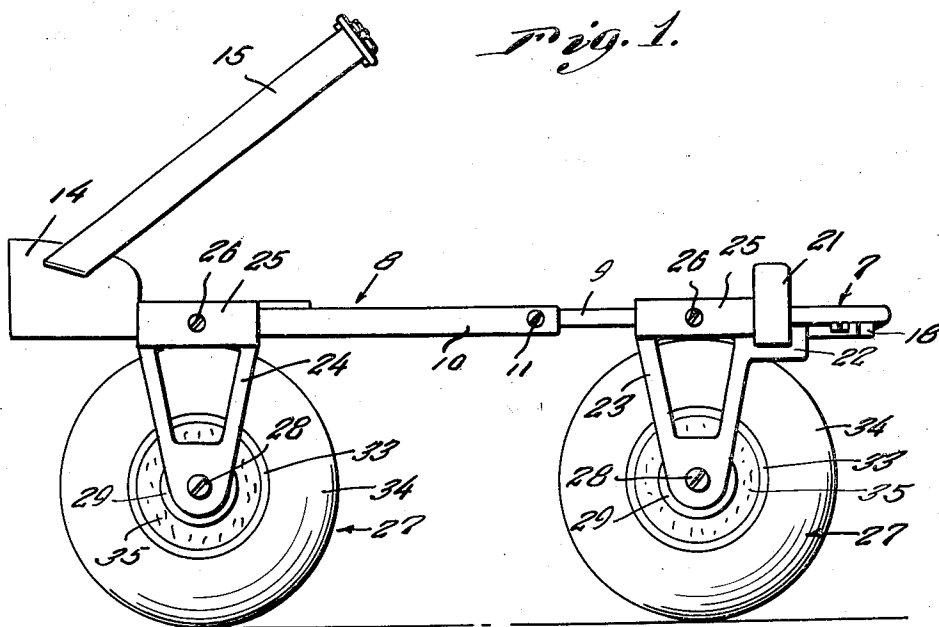
S. J. BUSBY

1,996,671

ROLLER SKATE

Filed May 22, 1934

2 Sheets-Sheet 1



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April 2, 1935.

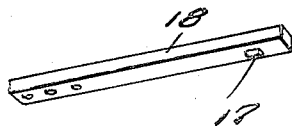
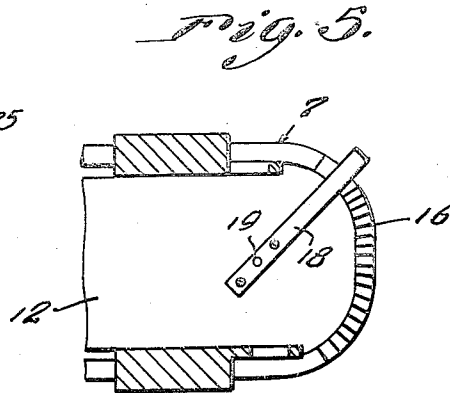
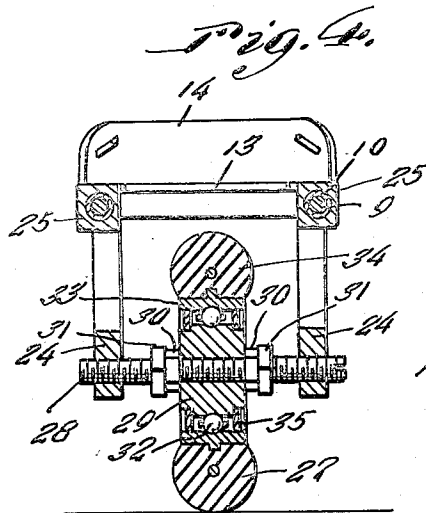
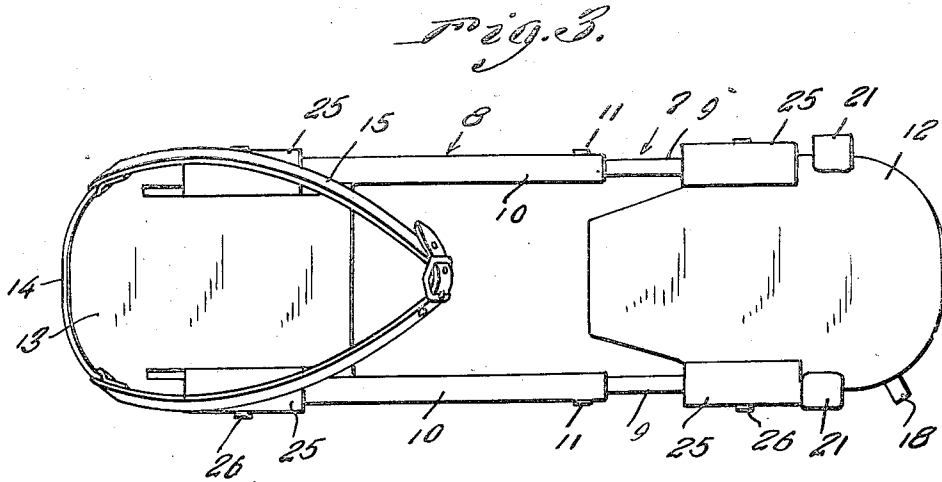
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ROLLER SKATE

Filed May 22, 1934

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

1,996,671

ROLLER SKATE

Samuel Jay Busby, Battle Creek, Mich.

Application May 22, 1934, Serial No. 727,004

3 Claims. (Cl. 208—178)

This invention relates to an improved roller skate of the rubber tired two-wheel ball bearing type.

My primary aim is to provide a skate construction wherein two wheels are employed and in which the wheels may be disposed in true longitudinal alinement with respect to each other or may be individually adjusted in lateral directions, that is at right angles to the longitudinal dimension of the structure so as to permit them to be alined to assume predetermined balancing positions with respect to each other.

The principal novelty as will be hereinafter explained is predicated upon the particular wheel supporting and adjusting means, the longitudinally extensible framework, associated heel and toe plates and quick adjustable toe clamp.

Other features and advantages will become more readily apparent from the following description and drawings.

In the drawings:

Figure 1 is a side elevational view of a skate constructed in accordance with the principles of my invention.

Figure 2 is a bottom plan view thereof.

Figure 3 is a top plan view of Figure 1.

Figure 4 is a transverse vertical sectional view.

Figure 5 is a fragmentary horizontal sectional view through the frontal portion of the structure, and

Figure 6 is a perspective detail view.

I first call attention to the framework. This is composed of a pair of forward and rear complementary sections 7 and 8 respectively, each being of general U-shaped form. The solid arm portions 9 of the front section telescope into the tubular arm portions 10 and are held in adjusted position through the instrumentality of set screws 11. This allows the length of the skate to be regulated according to the foot of the wearer. Mounted on this frame is a substantially flat suitably shaped toe plate 12 and a heel plate 13, the latter being provided with a heel rest or abutment 14. The numeral 15 merely designates the ankle strap. Referring to Figure 2 it will be observed that the underside of the central or bight portion is formed with rack teeth 16 forming a segmental retaining rack. This is adapted to accommodate a retaining tooth 17 on the under side of a clamp adjusting and retaining lever 18. This lever as shown in Figure 5 is pivoted adjacent one end as at 19 to allow it to swing in a predetermined arc. It is operatively connected with the complementary shank portion 20 of the toe clamps 21. As shown in Figure

2 and by adjusting the lever the clamps can be moved toward and from each other for adjustment and clamping purposes. The shank portions 20 are slidable through guides 22 carried by the front pair of hanger brackets 23. I also provide a similar pair of rear brackets 24 and these are of such form as to support the wheel assembly. Moreover each bracket is provided at its top with an attaching head 25 held on the adjacent part of the frame by a set screw as at 26. This allows the desired adjustment procedure. If desired these brackets can be made integral with the heel and toe plates 13 and 12.

It will be observed that the rubber tire equipped wheels are denoted by the numerals 27 and each wheel construction and mounting is the same and a description of one will suffice for both. Referring to Figure 4 it will be seen that the depending brackets are formed at their lower ends to provide threaded mountings for a horizontal threaded shaft 28. Mounted on this shaft between the brackets is a transversely adjustable hub 29 which is moved from one side to the other by the adjusting and retaining nuts 30. The numerals 31 designate lock nuts. This hub serves as a ball race to accommodate anti-friction balls 32 and these are located within the limits of a rim or felly 33 carrying the rubber tire 34. The numerals 35 designate cover rings or plates. Thus it will be seen that each wheel is made up of a hub, a tired rim surrounding the hub and anti-friction balls located between these parts and the cover plates 35. This entire wheel unit can be moved from one side to the other, that is with respect to the longitudinal or axial dimension of the skate structure. This permits the wheels to be disposed in direct longitudinal alinement as shown in Figure 2 of the drawings or allows one wheel to be shifted to one side or the other with respect to the other wheel. Stated otherwise the wheels are adjustable in relation to each other so as to permit them to be brought into predetermined relationship for different balancing positions with respect to the frame structure.

The gist of the invention is found in a longitudinally extensible frame composed of U-shaped frame sections telescopically connected together with an ankle strap and heel rest arrangement and plates at the rear, and a toe plate and clamping means at the front. The toe clamping means comprising the adjustable clamp 20 and the lever and rack arrangement is believed to be novel. In addition novelty is predicated upon the pairs of depending adapter brackets which are adjustable and removable and which are constructed to ac-

commodate the horizontal threaded wheel supporting shafts 28. The principal novelty however is predicated upon the adjustable wheel units or assemblies which are shiftable from side to side so that they may be disposed in different positions with respect to each other.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Minor changes in shape, size, and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

Having thus described my invention, what I claim as new is:

1. A roller skate comprising a longitudinally extensible frame, heel and toe plates carried thereby, forward and rearward adjustable wheels suspended from said frame, a toe clamp embodying a pair of complementary hooked shoe sole engaging hooks provided with shank portions, guide means for said shank portions, an operating lever pivotally connected with said shank portion for adjusting the clamps toward and from each other, the adjacent part of the frame structure being provided with rack teeth and said lever being provided with a retaining tooth cooperable with said teeth.

2. A roller skate of the class described comprising a frame structure including a pair of U shaped complementary sections, the arm portions of one section being of tubular formation to

slidably receive the companion arm portions of the remaining section, set screws carried by said first named arm portions to maintain said sections in predetermined adjusted position, a pair of wheel unit hangers arranged in opposed relationship and adjustably mounted on and depending from the respective frame sections, means on said frame sections for securing the frame structure to the foot of the wearer, and substantially duplicate wheel units and mounting means therefor adjustably supported between said pairs of hangers.

3. A roller skate of the class described comprising a longitudinally extensible frame, forward and rear wheel unit hangers mounted on and depending from said frame, said hangers being longitudinally adjustable on said frame, each hanger being provided at its lower end with a screw threaded axle hole, said hangers being of duplicate construction and arranged in opposed pairs, a threaded axle forming shaft having its end portions adjustably mounted in said axle holes between each pair of hangers, and a laterally shiftable and bodily adjustable wheel unit carried by each shaft, said unit embodying a hub structure slidably mounted on the shaft, adjusting and retaining nuts on the shaft for moving and retaining the hub structure, said hub structure constituting an anti-friction ball race, a wheel embodying a rim and a tread, said tread surrounding the hub in concentric relation, and anti-friction balls and retaining means therefor cooperable with the rim and hub structure.

SAMUEL JAY BUSBY.