

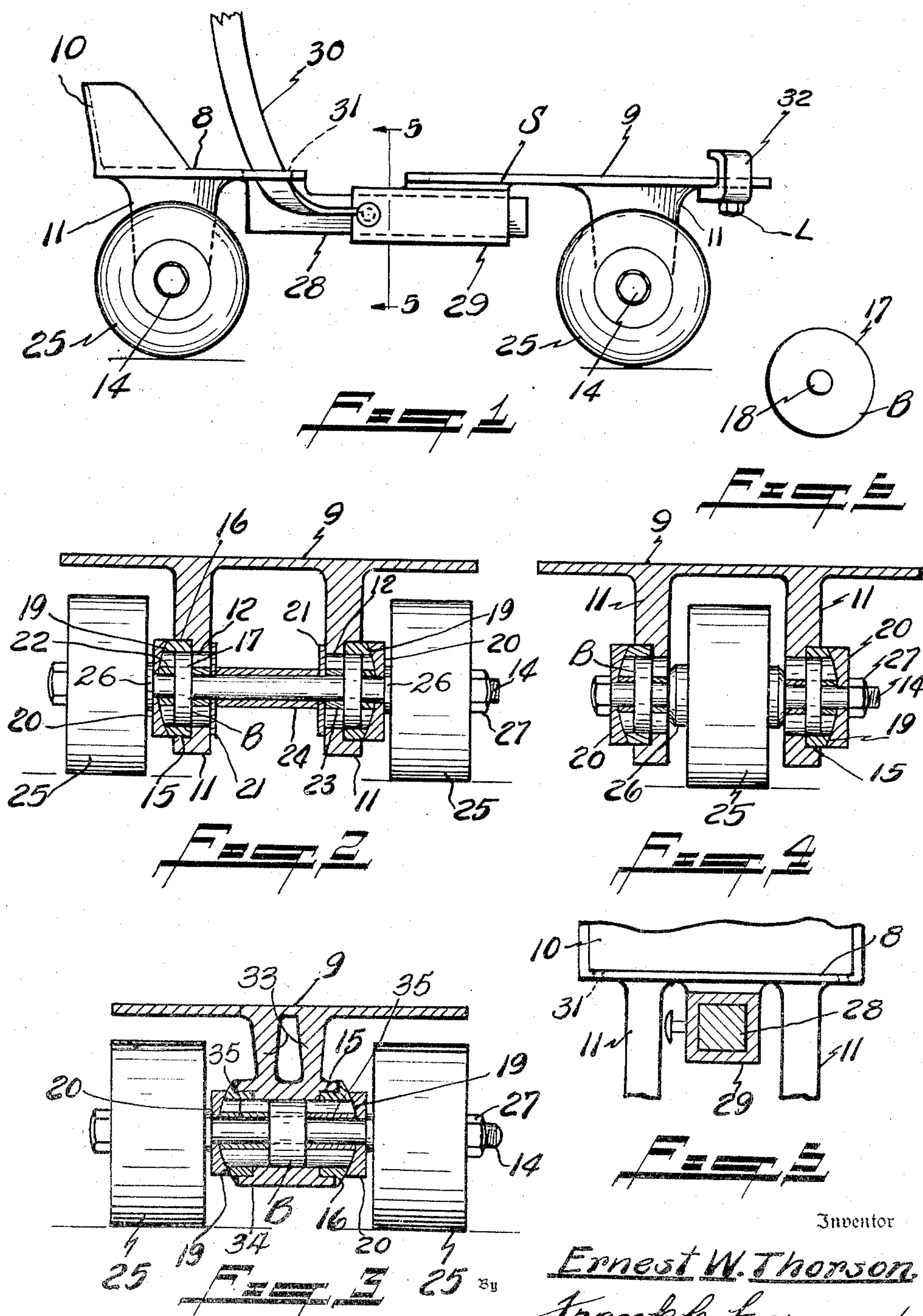
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ROLLER SKATE

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ROLLER SKATE

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This invention relates to roller skates and has for its object the provision of a new and improved form and arrangement of lightweight parts by means of which a light, smooth operating skate is obtained with a minimum of labor and expense.

It is one of the salient objects of the present invention to provide a lightweight skate made up of magnesium or other lightweight metals, and in which the conventional pivotal connection between the brackets and the rollers is eliminated.

Another object is to design a roller skate in which the bearing and roller assembly is readily removable and replaceable as a unit, to the end that the conventional two roller assemblies may be replaced and interchanged with single roller assemblies, and further providing that worn or scored rollers or other parts may be easily replaced so that the skating operation will be smooth and effortless.

A further object still is to provide a skate structure which is automatically adjustable to the foot of the wearer, and in which the roller mounting is yieldable, so that curves and corners are readily negotiated, and without undue wear on the edges of the rollers.

Still a further object is to provide a skate which dampens and absorbs the noise of the operating parts and their contact with the surface over which they travel.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts, hereinafter more fully described, illustrated in the accompanying drawing and more particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportion, and minor details of construction, without departing from the spirit, or sacrificing any of the advantages of the invention.

In the drawing:

Fig. 1 is a side-elevational view of my improved roller skate.

Fig. 2 is an enlarged, transverse, sectional view through the front wheels and bearing.

Fig. 3 is also a side-elevational view showing a modified construction.

Fig. 4 is a view similar to Fig. 2 showing a single wheel construction.

Fig. 5 is a fragmentary transverse-sectional view taken on the line 5—5 of Fig. 1.

Fig. 6 is a face view of one of the resilient bearings.

Referring now more particularly to the drawing in which I have shown the preferred embodiment of my invention; the letter "S" indicates the roller

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skate in general, and includes a two-piece frame structure comprising heel and toe plates 8 and 9 respectively, these parts being automatically and telescopically adjustable with relation to each other, and are formed as clearly shown in Fig. 1 of the drawing.

The heel plate 8 is preferably in the form of a die casting, being formed with an upstanding flange 10, and spaced-apart downwardly projecting legs 11 are formed integral therewith, and horizontally aligned openings 12 are provided in said legs as shown, and accommodate bearings B in which an axle 14 is journaled.

Each opening 12 is countersunk as shown at 15 and accommodates a tubular insert 16, which is mounted therein, a resilient disc 17, preferably formed of rubber, being mounted in said insert, said disc being formed with a centrally disposed opening 18 to accommodate the axle 14.

The outer end of the insert 16 is ground to a spherical radius 19, and a preferably steel cap 20 forms a closure for the outer end thereof, the inner face of the cap being ground to fit the spherical end of the insert 16. Washers 21 are mounted on the axle 14 and engage the inner face of the legs 11, and spacers 22 are interposed between the caps 20 and the bearings B; similar spacers 23 are provided on the axle between the washers 21 and the bearings, and the sleeve 24 is in turn interposed between the respective washers 21.

Rollers 25 are provided on the outer ends of the axle 14 and are formed with hubs 26 that bear against the cap 20. Any suitable securing means, such as a nut 27 or the like, can be threaded on the ends of the axle for securing the parts in assembled relation.

A forwardly projecting, preferably square extension 28 is formed integral or can be secured to the heel plate 8 and is telescopically accommodated in a socket 29 formed integral with the toe plate, so that the parts are longitudinally extensible to suit shoes of different sizes.

Straps 30 are anchored to the socket 29 in any desired manner and are threaded through eyes 31 provided on the heel plate 8 so that the skate can be easily secured in position, and it will be obvious that tension on the straps tends to draw the toe and heel plates toward each other and maintain the skate tight at all times.

Clamps 32 are provided on the toe plate 9 as shown, and are secured in position on the toe plate 9 by means of bolts L, and slotted openings (not shown) are provided in the clamp to per-

mit necessary adjustment to suit shoes of various sizes.

In Fig. 3 of the drawing I have shown a slightly modified construction in which the legs 33 terminate in a single housing 34; this is counter-bored similar to the construction shown in Fig. 2, and a single resilient bearing B is provided in said housing, tubular spacers 35 being interposed between the bearing and the inner face of the cap 20, otherwise, the assembly is the same as previously described in Fig. 2.

In Fig. 4 of the drawing I have shown another slightly modified construction in which the skate is formed with a single wheel front and rear, the spacer 24 being eliminated and the nuts 27 bear directly against the end of the caps 20, the action, however, is substantially the same as above described, and I wish to direct particular attention to the fact that this roller and axle assembly is interchangeable with the double roller assembly of Fig. 2.

From the foregoing description, it will be obvious that I have perfected a very simple, quiet, practical and inexpensive, lightweight, easily operating roller skate.

What I claim is:

1. In a roller skate comprising a heel and toe plate, depending legs on said plates, aligned, stepped openings in said legs and adapted to accommodate an axle, tubular inserts mounted in said stepped openings and formed with a spherical radius on the outer face thereof, a metal cap fitted to said spherical face, a bearing disk mounted in each insert in engagement with said axle, rollers on said axle adjacent said caps, and spacers on said axle for positioning said bearing disks in said tubular inserts.

2. In a roller skate of the class described, comprising a frame formed with depending legs having aligned, horizontally disposed countersunk openings therein, a tubular insert mounted in each countersunk opening with its outer face projecting beyond said legs, a cap fitted to the outer face of each insert, a resilient bearing disk mounted on each insert and formed with a centrally disposed opening therein, an axle spanning said legs and projecting through the openings in said resilient bearing disks, rollers on the ends of the axles adjacent said caps, and spacers on said axle for positioning said bearing disks in said tubular inserts.

3. The combination defined in claim 2 in which washers are mounted on the axle and bear against the inner face of the legs, and a spacer on said axle and interposed between said washers.

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