Feb. 8, 1949. A. HIRSCHMAN 2,461,057

SKATE

Filed Jan. 31, 1947

FIG. 1.

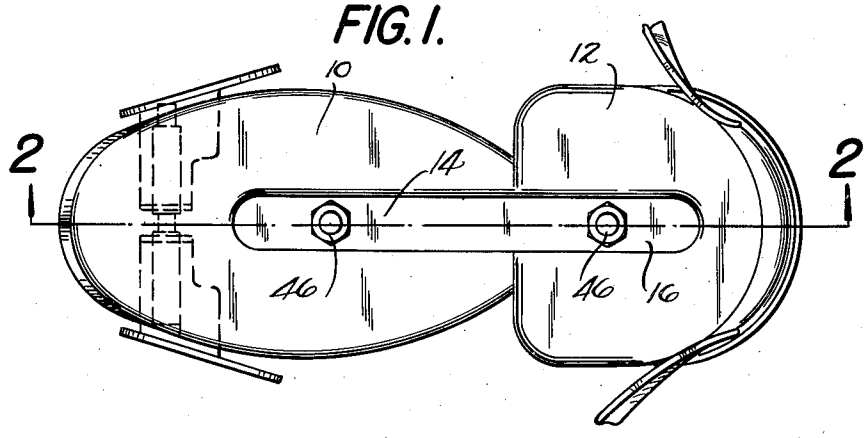


FIG. 2.

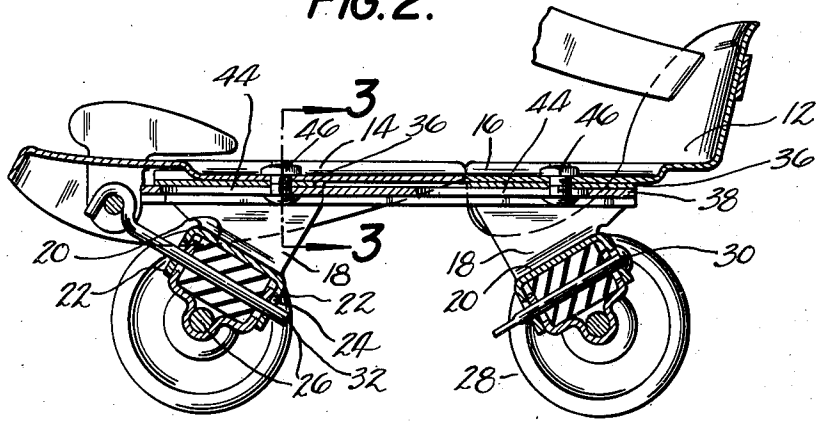


FIG. 4.

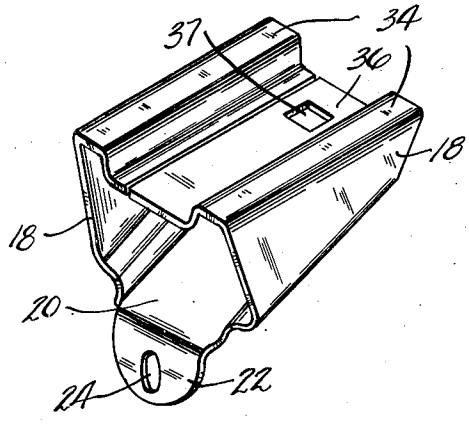
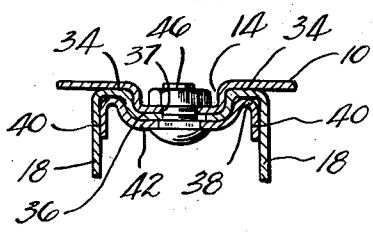


FIG. 3.



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SKATE

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3 Claims. (Cl. 280—11.27)

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My invention relates to improvements in skates.

More particularly it relates to that portion of a roller skate structure which has to do with the securement of wheels to the toe plate and to the heel plate of the skate.

An object is to provide a skate wherein the front wheels and the rear wheels may be secured to the toe plate and heel plate respectively by bracket mechanism which is simple, inexpensive, of sturdy construction and readily attachable.

More specifically an object is to provide a skate construction wherein an improved type of bracket is employed to secure a wheel assembly to either the toe plate or the heel plate of the skate. Such bracket is of novel construction and is applicable either to the heel plate or to the toe plate of the skate.

My improved bracket is independent of the plate to which it is attached and is detachable therefrom. There is provided a connecting bar which extends between the toe plate and the heel plate overlying a portion of each bracket and together with the brackets it is secured at opposite ends to the toe plate and to the heel plate. The entire construction includes the toe plate, the heel plate, the two brackets, the connecting bar which also serves as an extension bar, and the means for securing these parts together, such parts being so formed that they are secured together with the brackets disposed in alignment fore and aft.

The improved bracket is formed of sheet metal which is bent so as to provide opposite side walls connected at their lower edges by a portion adapted to carry an axle assembly. At the upper edges the side walls are bent inwardly towards each other forming a base portion which is so shaped as to exhibit a downwardly deformed channel adapted to engage with a corresponding channel portion of the heel plate or toe plate to which the bracket is secured and also to be engaged by a corresponding channel portion of the connecting bar whereby said parts are nested together in such a manner that the axle assemblies are properly aligned with the skate frame.

Other objects, advantages and meritorious features of the construction will more fully appear from the following description, appended claims and accompanying drawing wherein:

Fig. 1 is a plan of the skate embodying my invention,

Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1,

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2, and

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Fig. 4 is a perspective of the improved bracket.

The invention is shown as embodied in a roller skate exhibiting a toe plate 10 and a heel plate 12. The toe plate is deformed downwardly as at 14 providing a portion which appears as an upwardly open channel and a downwardly projecting ridge. The heel plate is similarly deformed as at 16 providing a corresponding portion which appears as an upwardly open channel and a downwardly projecting ridge.

A pair of brackets are provided one for each plate. These brackets are of similar construction. One of the brackets is shown in Fig. 4. Such bracket is formed of sheet metal so bent as to exhibit a pair of side walls 18 connected at the bottom by a wall portion 20 which is turned downwardly at each end as at 22. Such downwardly turned portions are perforated as at 24 to receive therethrough a pin which connects an axle assembly thereto.

The front axle assembly is indicated as 26. The rear axle assembly is indicated as 28. Each axle assembly includes the axle proper, the wheels, and a part secured to the axle and receivable between the ears 22 of the bracket. The rear axle is secured to its bracket by the pin 30. The front axle is secured to its bracket by the pin 32.

The side walls 18 of the bracket are bent toward each other at their upper edges providing a base portion 34 which is downwardly deformed as at 36 presenting an upwardly open channel shape to nest over the downwardly projecting ridge 14 of the toe plate or the similarly downwardly projecting ridge 16 of the heel plate. This portion 36 which presents the upwardly open channel also presents a downwardly projecting ridge. When the bracket is thus positioned with respect to its plate, it is aligned so that the wheel assembly carried thereby will be disposed normal to the center line of the skate frame.

There is provided a connecting bar 38 which is channel shaped in cross section in that it exhibits a pair of side walls 40 snugly receivable as shown between the side walls 18 of either bracket. This is illustrated in Fig. 3. This connecting bar 38 is downwardly deformed as at 42 providing an upwardly open channel which is adapted to nest over the downwardly deformed portion 36 of the base of either bracket.

This connecting bar is also slotted lengthwise adjacent to each end as at 44 and received therethrough is a connecting bolt 46. This bolt extends through the slot in the connecting bar and an aperture 37 in the base portion 36 of the bracket and

a provided aperture in the toe plate or heel plate. The bolt includes a nut which is adapted to tighten the several parts in nested relationship as described.

The axle assembly, the bracket, the connecting bar and the plate are readily removable by loosening the bolt connection 46 so that the bracket may be replaced as desired. By loosening the bolt 46 the length of the skate may be varied due to the slotted area of the connecting bar.

What I claim is:

1. In a roller skate having a toe plate and a heel plate each deformed on the longitudinal axis thereof to provide a depressed upwardly opening channel of corresponding shape, a separate wheel supporting bracket for each plate having top, bottom and side walls cooperating to form a tubular structure of substantially rectangular cross section, the top wall of each of said brackets being deformed longitudinally of the skate to provide a depressed upwardly opening channel of a size to slidably fit the opposite side walls of the channel of the plate with which it is associated, a connecting bar extending between said toe and heel plates and overlying the underside of the top walls of said brackets, said connecting bar being deformed to provide a depressed longitudinally extending upwardly opening channel slidably fitting the channels of said brackets, said depressed channels of said plates, brackets and connecting bar nesting within one another whereby the brackets are held in alignment with the plates and between the plates and the connecting bar, and means acting through said channels to secure the parts together.

2. In a roller skate, a toe plate and a heel plate, each plate being deformed on the longitudinal axis of the skate to provide a depressed upwardly opening channel corresponding in shape to the channel of the other plate and having opposed vertically extending side walls aligning with those of the channel of the other plate, a separate correspondingly shaped wheel supporting bracket formed from a single metal sheet bent into a tubular structure of rectangular cross section having top, bottom and side walls, the top wall of each of said brackets being wider than the channel of the plate with which it is associated and being deformed longitudinally of the skate to provide a depressed upwardly opening channel having opposed vertically extending side walls

spaced apart sufficiently to slidably embrace the vertical walls of the channel of the plate, an elongated connecting plate extending between said brackets and overlying the underside of the top walls thereof, said connecting plate having a width greater than the width of the channels of the top walls of said brackets and being deformed to provide a depressed longitudinally extending upwardly opening channel slidably fitting the top wall channels of said brackets, the opposite side margins of said connecting plate being turned down and engaging the side walls of the brackets, said depressed channels of said toe and heel plates, said brackets and said connecting plate nesting within one another whereby the brackets are held in alignment with the toe and heel plates and between the same and the connecting plate, and bolt and nut assemblies extending through said channels and adjustably securing the parts together.

3. In a roller skate, a roller wheel supporting bracket composed of sheet metal bent into a tubular structure of substantially rectangular cross section and providing a pair of parallel side walls connected at the bottom by an inclined supporting wall and at the top by a horizontal supporting wall, said inclined bottom wall provided with downwardly turned fore and aft axle supporting ears for supporting a roller wheel axle assembly, and said horizontal top wall having the central longitudinal section thereof deformed to provide a depressed upwardly opening channel extending normally to the roller axis of the axle assembly, the opposite side walls of the channel being spaced inwardly from the side walls of the bracket and extending vertically for the major portion of their height.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
944,991	Hille	Dec. 28, 1909
1,071,721	Finlay	Sept. 2, 1913
1,525,443	Gibson	Feb. 10, 1925
1,837,921	Planert	Dec. 22, 1931
2,021,435	Smith	Nov. 19, 1935