

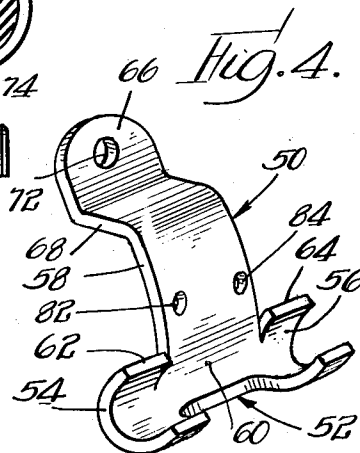
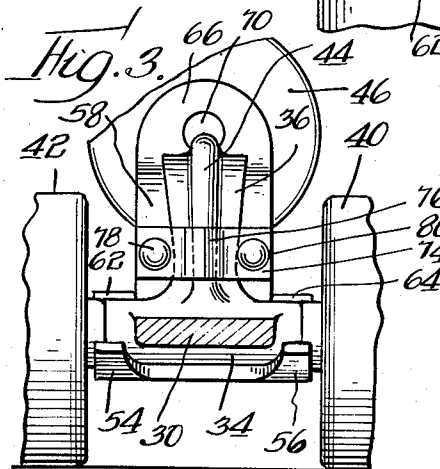
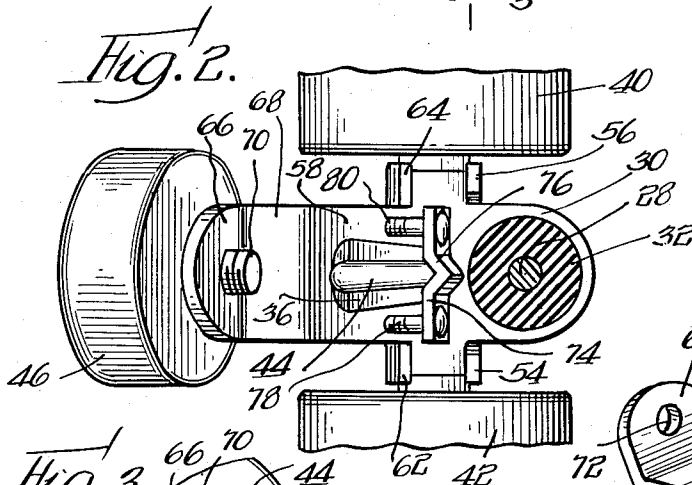
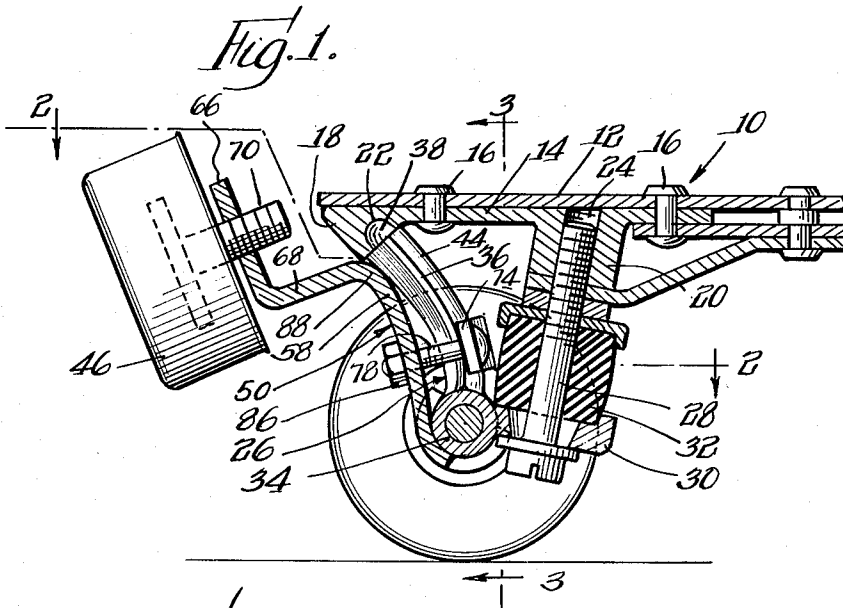
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DETACHABLE TOE STOP FOR A ROLLER SKATE

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DETACHABLE TOE STOP FOR A ROLLER SKATE

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Continuation of application Ser. No. 646,266, Mar. 15, 1957. This application June 24, 1959, Ser. No. 822,689

10 Claims. (Cl. 280—11.2)

The present invention relates to a novel roller skate structure, and more particularly to a skate structure including a brake element or toe stop.

This application is a continuation of my prior application Serial No. 646,266, filed March 15, 1957, for "Detachable Toe Stop for a Roller Skate."

Various means have heretofore been suggested for mounting brake elements or toe stops on skate structures and while many of these structures function generally satisfactorily they are subject to one or more disadvantages. For example, certain prior structures are integrally or otherwise especially formed so that they are not adaptable for application to many skates now in general use. Other prior devices are relatively heavy, complicated and expensive or are insufficiently rugged and stable when applied to a skate to function properly.

An important object of the present invention is to provide a novel skate structure including means for supporting a brake element or toe stop, which means is of simple, light weight and economical construction and may be easily attached to a supporting portion of the skate structure.

A more specific object of the present invention is to provide a novel skate structure of the above described type including a novel sheet material brake element or toe stop supporting bracket which may be readily mounted to a wheel truck of the skate structure in a manner so that the bracket is securely retained against lateral shifting and is firmly supported.

Other objects and advantages of the present invention will become apparent from the following description and the accompanying drawings wherein:

Fig. 1 is a fragmentary partial longitudinal sectional view showing a forward portion of a skate structure incorporating the features of the present invention;

Fig. 2 is a sectional view taken generally along the line 2—2 in Fig. 1;

Fig. 3 is a fragmentary sectional view taken along the line 3—3 in Fig. 1; and

Fig. 4 is a perspective view showing a bracket constructed in accordance with the present invention for mounting a brake element or toe stop.

Referring now more specifically to the drawings wherein like parts are designated by the same numerals throughout the various figures, a skate structure 10 incorporating the features of the present invention is provided with a sole plate 12 to which is connected front and rear wheel assemblies as will be understood. However, only the front wheel assembly and forward portion of the sole plate have been shown herein in order to simplify the disclosure. This assembly comprises a hanger bracket 14 secured to the bottom surface of the sole plate by a plurality of rivets 16 and having an enlarged depending boss 18 adjacent its forward end and another depending boss 20 disposed rearwardly of the forward end. The bosses 18 and 20 are respectively provided with a rounded seat 22 and an internally threaded bore 24 for the purpose set forth below.

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A wheel truck bracket generally designated by the numeral 26 is connected with the hanger bracket by means of an action screw 28 which extends upwardly through a rearwardly extending apertured platform portion 30 of the wheel truck bracket and is threaded into the boss 20. A resilient cushion member 32 is disposed on the action screw and is clamped between the boss and the platform portion 30. The truck bracket has a transverse generally cylindrical axle portion 34 and an upwardly and forwardly extending brace or support arm 36 which has its lower end integral with the axle portion and which has a rounded tip 38 seating in the rounded socket 22 of the boss 18. Wheels 40 and 42 are respectively rotatably supported at the opposite ends of the axle portion 34. The upwardly extending brace or support arm 36 is provided with a longitudinally extending rib 44.

In accordance with the present invention a brake element or toe stop 46 which may be made of rubber or any other suitable anti-friction material is mounted on the wheel truck bracket by means generally designated by the numeral 50. This means comprises a sheet material, preferably steel, bracket having a lower end portion 52 provided with generally upwardly facing C-shaped sections 54 and 56 adapted to embrace the axle portion 34 of the wheel truck bracket. An intermediate portion 58 extends upwardly and forwardly from an integral junction 60 with the lower end portion 52, which junction is below upper ends of the C-shaped sections 54 and 56. As shown in the drawings the upper ends 62 and 64 of the C-shaped sections will partially overlie the axle portion 34 for preventing the bracket 50 from slipping downwardly. An upper end portion 66 of the bracket 50 is integrally joined to the intermediate portion 58 by a forwardly and downwardly extending section 68 so that the end portion 66 is disposed at an angle to the vertical. The brake element or toe stop 46 is secured to the upper end portion 66, and in the embodiment shown this is accomplished by turning a threaded stud element 70 which is embedded in the toe stop through an internally threaded aperture 72 in the upper end portion 66.

Fastening means is provided for securing the bracket 50 to the wheel truck bracket, and this fastening means comprises a transversely disposed body element 74 arranged across the inwardly or rearwardly facing surface of the support brace or arm 36 and having an offset portion or groove 76 which receives the rib 44 of the support arm. The interlocking rib and groove portion restrain the body element against lateral shifting. Screw elements 78 and 80 extend through apertures in opposite ends of the transverse bar of clamp element 74 and also through aligned apertures 82 and 84 in the intermediate portion of the bracket 50. Complementary nut members 86 are turned onto the ends of the screws and tightened until abutment means 88 provided by the upper end of the intermediate bracket portion 58 engages the brace 36. It will be appreciated that the toe stop mounting means described above is of simple construction so that it may be readily and economically produced and easily mounted on the skate structure. It will also be noted that the C-shaped configuration of the lower bracket end portion 52 enables this bracket portion to engage the wheel bracket axle portion in a manner to resist transverse shifting or pivotal movement of the bracket 50 and also downward movement of the bracket, and the securing or clamping means which is spaced above the C-shaped portions serves not only to retain the bracket 50 but also substantially to preclude any lateral shifting thereof. Engagement of the brace or support arm with the abutment portion of the bracket 50 serves to support

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the bracket so as to make the structure sufficiently rigid without unnecessarily increasing the weight thereof.

While the preferred embodiment of the present invention has been shown and described herein, it is obvious that many details may be changed without departing from the spirit and scope of the appended claims.

The invention is claimed as follows:

1. A roller skate structure comprising a sole plate, wheel truck bracket means supported beneath said sole plate and including transverse axle means, an action screw assembly and a support arm fixed to the axle means and in engagement with said sole plate; a brake supporting bracket member having a body portion positioned forwardly of the support arm and having at the lower end of the body portion thereof a generally C-shaped section facing upwardly toward the sole plate in underlying engagement with the axle means, and with a portion of the C-shaped section disposed above the horizontal plane extending through the axle means and partially overlying the axle means to assist in preventing downward movement of the bracket member, the portion of the C-shaped section adjacent the action screw assembly terminating on the axle means and exteriorly and independently of said action screw assembly to thereby provide for ready assembly and disassembly of the bracket member with respect to the wheel truck bracket means without alteration of the wheel truck bracket means during such assembly or disassembly, a brake member mounted on the upper end of the body portion of said bracket member, and releasable fastening means engaging the support arm and an intermediate portion of the body portion of the bracket member between its upper and lower ends for securing the bracket member to the wheel truck bracket means with the C-shaped section in engagement with the axle means and a portion of the body portion of the bracket member in engagement with the support arm.

2. A roller skate structure as claimed in claim 1, wherein the body portion of the bracket member comprises a relatively narrow strap portion, and wherein the C-shaped section comprises a pair of C-shaped end portions positioned outwardly at opposite sides of the lower end of said strap portion.

3. A roller skate structure as claimed in claim 1, wherein the upper end of the body portion of said bracket member projects upwardly to lie in a plane substantially parallel to said body portion of the said bracket member.

4. A roller skate structure comprising a sole plate, wheel truck bracket means supported beneath said sole plate and including transverse axle means, an action screw assembly and a support arm fixed to the axle means and in engagement with said sole plate; a brake supporting bracket member having a body portion positioned forwardly of the support arm and having at the lower end of the body portion thereof a generally C-shaped section facing upwardly toward the sole plate in underlying engagement with the axle means, the portion of the C-shaped section adjacent the action screw assembly terminating on the axle means and exteriorly and independently of said action screw assembly to thereby provide for ready assembly and disassembly of the bracket member with respect to the wheel truck bracket means without alteration of the wheel truck bracket means during such assembly or disassembly, a brake member mounted on the upper end of the body portion of said bracket member, and releasable fastening means engaging the support arm and an intermediate portion of the body

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portion of the bracket member between its upper and lower ends for securing the bracket member to the wheel truck bracket means with the C-shaped section in engagement with the axle means and a portion of the body portion of the bracket member in engagement with the support arm.

5. A roller skate structure as claimed in claim 4, wherein the front end of the bracket member is offset forwardly from the body portion thereof to receive the said brake member.

6. A roller skate structure as claimed in claim 5, wherein the offset end of the bracket member extends upwardly and substantially parallel to the body portion of the bracket member.

7. A roller skate structure as claimed in claim 6, wherein the offset end of the bracket member is disposed above the point of contact between the body portion of the bracket member and the support arm.

8. A roller skate structure comprising a sole plate, wheel truck bracket means supported beneath said sole plate and including transverse axle means, an action screw assembly and a support arm fixed to the axle means and in engagement with said sole plate, a brake supporting bracket member having a body portion positioned forwardly of the support arm and having at the lower end of the body portion thereof a generally C-shaped section facing upwardly toward the sole plate in underlying engagement with the axle means adjacent the lower end of the action screw assembly, the portion of the C-shaped section adjacent the action screw assembly terminating on the axle means and exteriorly and independently of said action screw assembly to thereby provide for ready assembly and disassembly of the bracket member with respect to the wheel truck bracket means without alteration of the wheel truck bracket means during such assembly or disassembly, a brake member mounted on the upper end of the body portion of said bracket member, said support arm being provided with a centrally located and longitudinally extending inner rib portion, and releasable fastening means including a transverse clamping plate with a central offset portion interfitted with said rib portion and securing means engaging the intermediate portion of the body portion of the bracket member and said clamping plate for securing the bracket member to the wheel truck bracket means with the C-shaped section in engagement with the axle means and with an upper portion of the body portion of the bracket member in engagement with an outer portion of the support arm.

9. A roller skate structure as claimed in claim 8, wherein the upper end of the bracket member is offset forwardly from the body portion thereof to receive the said brake member.

10. A roller skate structure as claimed in claim 9, wherein the offset end of the bracket member is disposed substantially parallel to the body portion of the bracket member.

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