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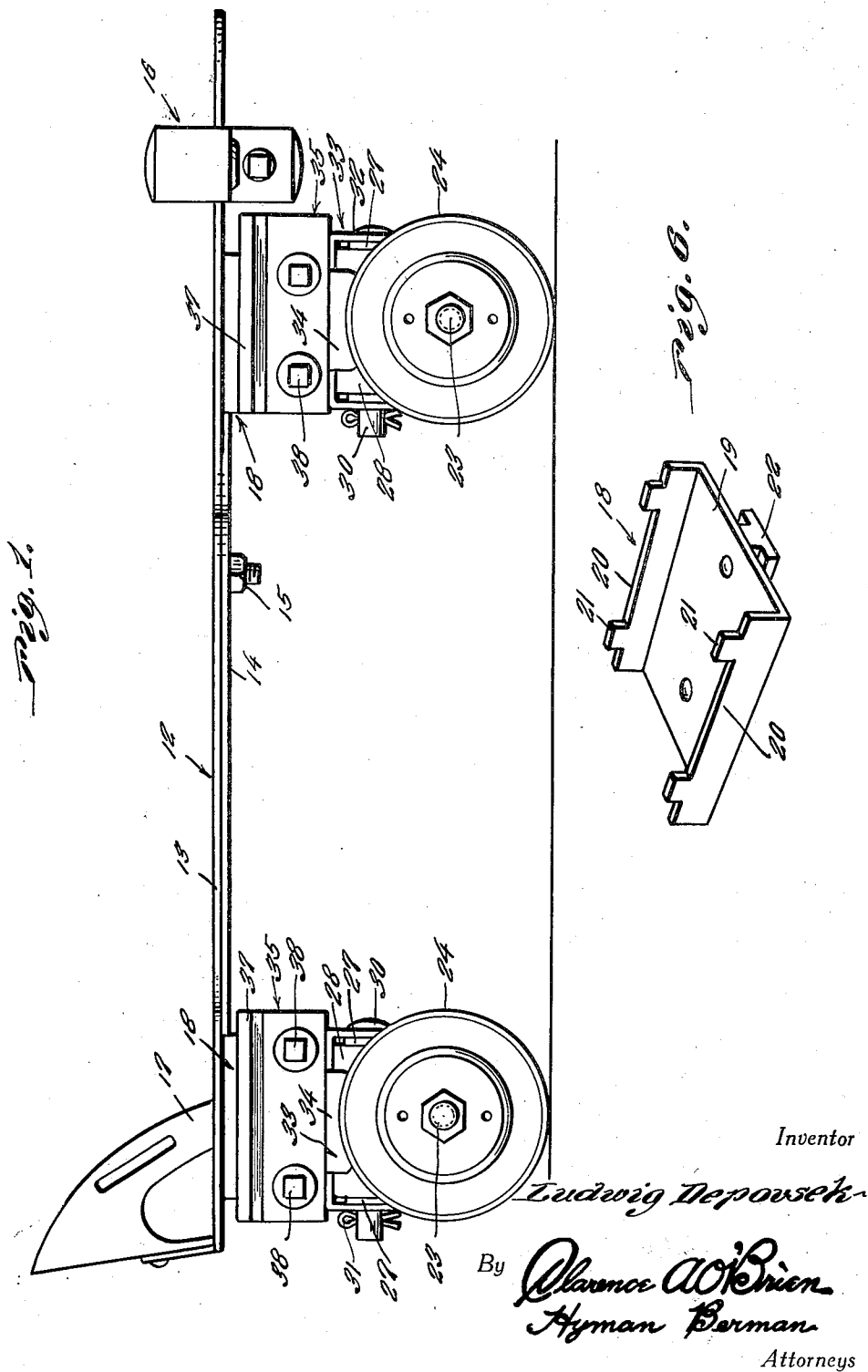
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INTERCHANGEABLE DUPLEX ROLLER UNIT

Filed Dec. 22, 1936

3 Sheets-Sheet 1



Nov. 9, 1937.

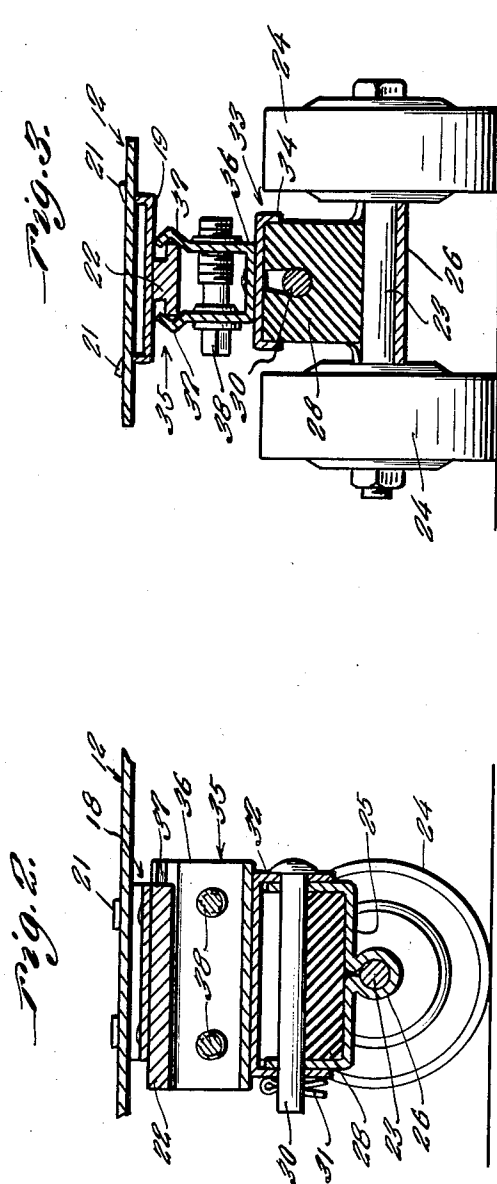
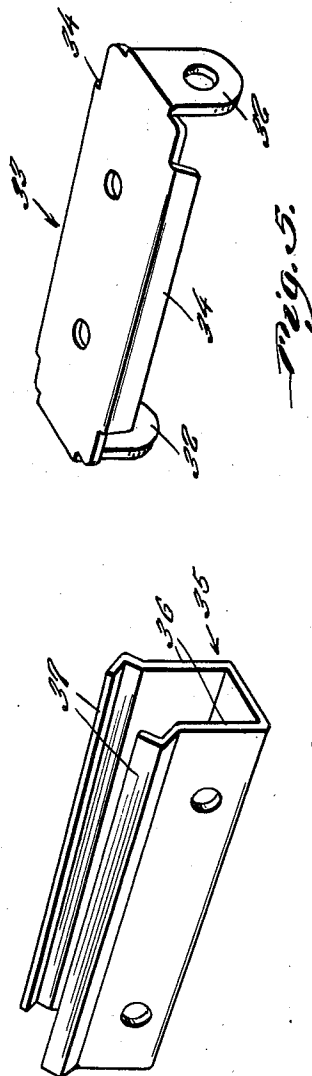
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3 Sheets-Sheet 2



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INTERCHANGEABLE DUPLEX ROLLER UNIT

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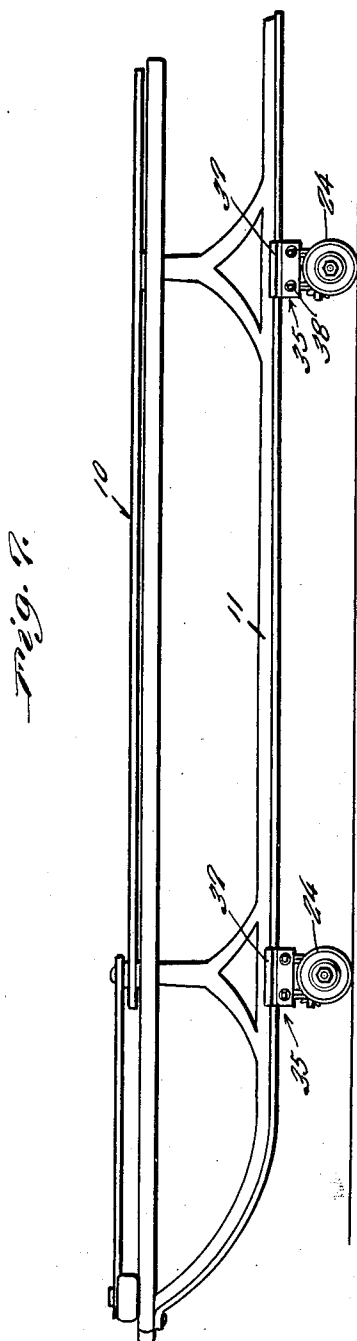
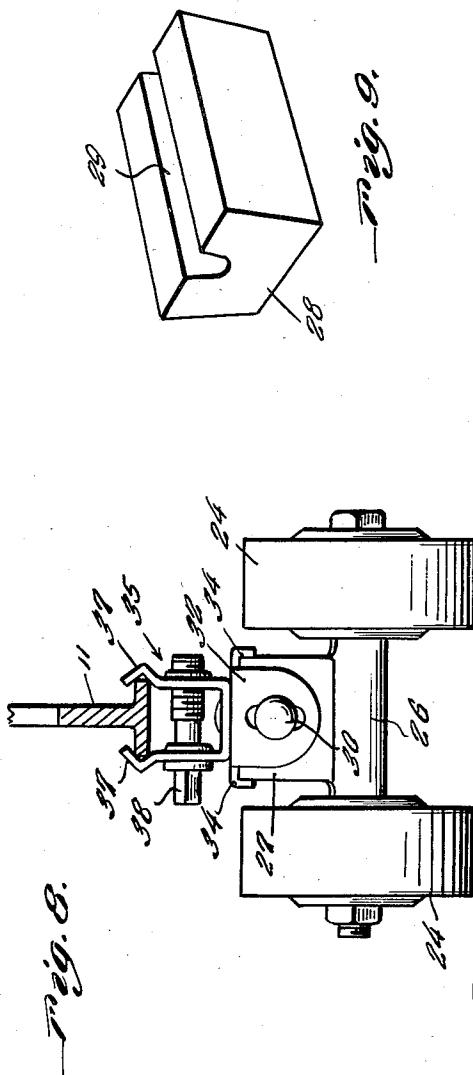


Fig. 9.

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UNITED STATES PATENT OFFICE

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INTERCHANGEABLE DUPLEX ROLLER UNIT

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2 Claims. (Cl. 280—11.28)

The present invention relates to an ingenious twin roller unit and special adaptation attaching means associated therewith designed to provide a miniature detachable truck usable either in connection with a so-called skate or a sled as the case may be.

Elaborating somewhat on the preceding introductory general statement, it is to be pointed out that the invention was structurally perfected for use in the construction of a new type roller skate, the idea being to detach the wheeled units from the skate frame and to apply them to the runners of a sled for use in an amusing and delightful manner. Inasmuch as the novelty is predicated on the specific construction of the roller unit per se, it is obvious that the invention, therefore, comprehends the provision of a support, either a skate frame or sled, and a detachable roller equipped device therefor.

My primary object is to provide an axle and wheel assembly and clamp-equipped means associated therewith susceptible of serving adequately and effectively in either of the aforementioned capacities.

Other more specific structural features and advantages of the invention will become apparent from the following description and drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the several views:—

Figure 1 is an elevational view of a roller skate equipped with the improved interchangeable detachable duplex roller units or trucks.

Figure 2 is a detail sectional view taken centrally through one of the roller units as applied to the skate in Figure 1.

Figure 3 is a sectional view at right angles to Figure 2 showing the construction and method of application to the skate.

Figures 4, 5 and 6 are detail perspective views.

Figure 7 is a side elevational view showing the roller unit applied to a sled.

Figure 8 is a view which may be said to be taken on the plane of the line 8—8 of Figure 7 showing the device applied to the runner of a conventional sled.

Figure 9 is a perspective view of the rubber cushioning and filler block.

Referring first to Figure 7 it will be observed that the numeral 10 designates a conventional sled having runners 11 T-shaped in cross sectional form. The improved two-roller truck or unit is applicable to this runner 11 or may be applied to the skate 12 shown in Figure 1. Therefore, although it may be said that I have invented

a new skate, and although I have not invented a new roller supported sled, it is necessary that the reader apply the desired generic interpretation to the invention as it is described. So far as the skate 12 is concerned, it comprises overlapping plates 13 and 14 joined together as usual as at 15. At the front is a so-called toe clamp for the shoe sole indicated at 16 and at the back is a foot rest 17 to accommodate a buckle-equipped strap (not shown).

On the assumption then that I feel that I have invented a skate having detachable roller units applicable to a sled of the type seen in Figure 7 it will be noted that the skate is modified to accommodate a pair of duplicate attaching or hanger fixtures of the type shown in Figure 6 and unitarily denoted by the numeral 18. Each device comprises a channel-shaped member 19 having upstanding flanges 20 provided with tongues or lugs 21 adapted to be bent through openings in the base portion of the skate for secure anchorage purposes. On the web portion is a T-shaped key 22 corresponding in cross-sectional dimension to the runner 11 seen in Figure 7 and designed to accommodate the detachable twin or double roller unit or truck. The latter unit is of composite construction and the parts will be considered individually.

The aforementioned skate roller unit comprises an axle 23 having appropriate ball-bearing equipped wheels 24 mounted on the opposite ends thereof as in the ordinary skate construction. A substantially U-shaped fixture or receptacle 25 is attached to the axle by way of a knuckle or bearing 26 as seen to advantage in Figure 2. The upstanding ears or ends 27 of this fixture serve to accommodate a cushioning rubber block 28. The block is provided with a bolt reception groove 29 to accommodate the assembling bolt 30 held in place by the cotter key 31. The bolt extends through apertures in the upstanding ears 27 and through slots in overlapping down-turned ears 32 on the cap member 33. This is in effect a capping plate and is provided with longitudinal marginal parallel flanges 34 embracing the adjacent longitudinal edges of the cushioning block 28. Consequently the axle unit comprises a box-like enclosure with a bolted on cap 33 and cushioning means to provide the desired resilient properties.

Riveted or otherwise secured to the cap plate 33 is an adapter bracket 35 of the type seen in Figure 4. This includes spaced parallel resilient jaws 36 terminating in V-shaped grips 37. These grips are adapted to engage the longitudinal edge portions of the head part of the T-shaped key 22

seen in Figure 6. The method of engagement is disclosed to advantage in Figure 3 and it will be observed that this is accomplished by use of a clamping bolt 38 of which there may be two or more. Thus it will be observed from Figure 3 that I have an axle and supporting rollers therefor, an enclosed cushioning device attached to the axle and providing a mounting for the adapter fixture 35, this being provided with resilient clamping jaws engageable with the hanger device 18 attached to the skate or other support. This same device enables the roller unit to be applied to the sled runners as seen in Figure 7. Consequently, it is of the desired convertible nature.

As before indicated the claims to be hereinafter asserted are drawn on a roller skate on the one hand, a sled on the other, the interchangeable device usable in connection with either the roller skate or sled, as well as the roller device or unit per se. The inventive idea apparently comprehends such an arrangement.

It is thought that the description taken in connection with the drawings will enable a clear understanding of the invention to be had. Therefore, a more lengthy description is thought unnecessary.

While the preferred embodiment of the invention has been shown and described, it is to be understood that minor changes coming within the field of invention claimed may be resorted to if desired.

What is claimed is:—

1. An attachment of the class described comprising an elongated member having its ends extending upwardly and its intermediate part having a transversely extending bearing part, a shaft passing through said part, a roller on each end of the shaft, a resilient block resting on said member and extending between the ends thereof and having a longitudinally extending groove in its top part, a second elongated member having its ends turned downwardly and overlapping the ends of the first member, a pin passing through the two sets of ends and through the groove in the resilient block and an elongated channel-shaped member having its bight fastened to the top face of the second member, the flanges of the channel-shaped member being resilient and terminating in outwardly extending V-shaped gripping parts, and bolts passing through the flanges for causing said parts to grip a part of a member to which the attachment is to be connected.

2. In combination with a base part having slots therein, a channel-shaped member having projections at the upper edges of its flanges for fitting in the slots and adapted to be bent over to attach the channel member to the base part, a T-shaped member attached to the under face of the channel member, a wheel carrying body and clamping means connected with the body and engaging the T-shaped member.

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