June 2, 1931. S. I. BERGER 1,807,890

SKATE

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Fig. 1.

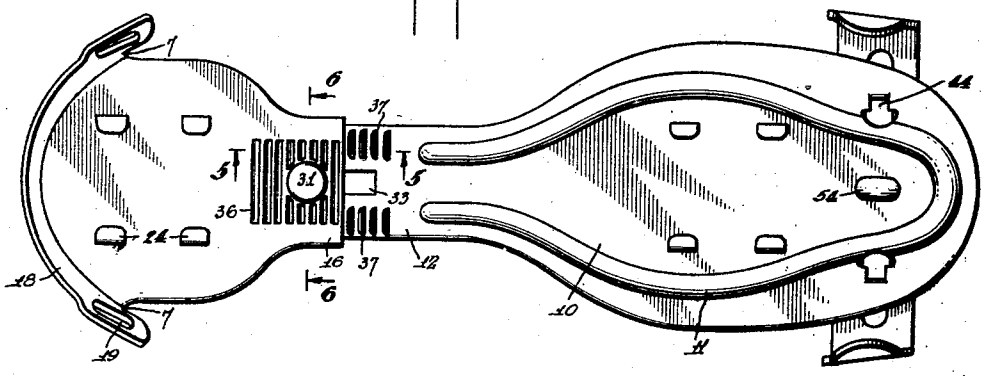


Fig. 2.

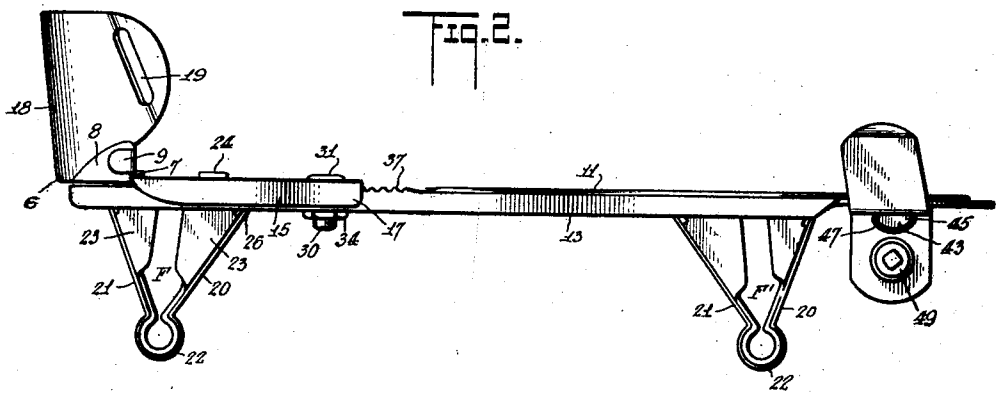
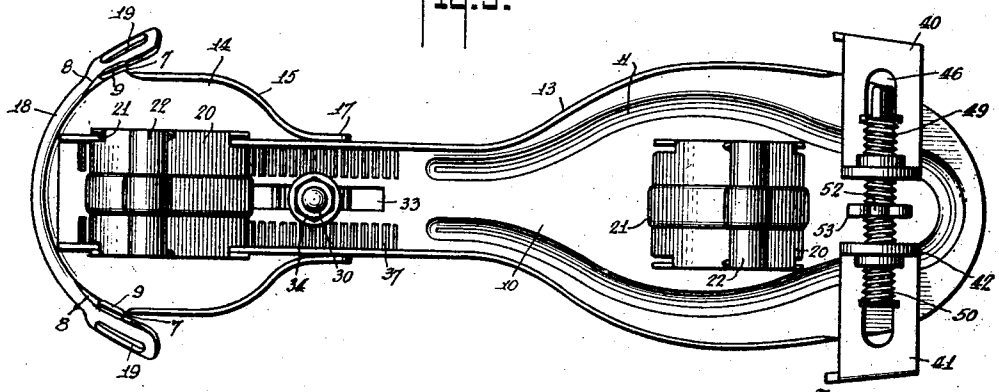


Fig. 3.



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Fig. 4.

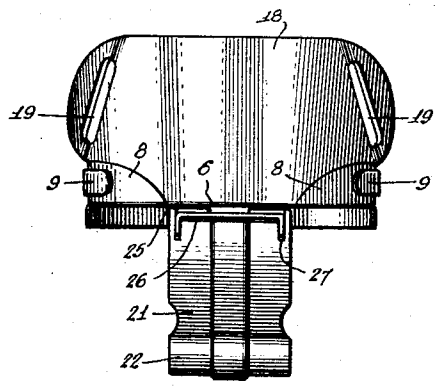


Fig. 5.

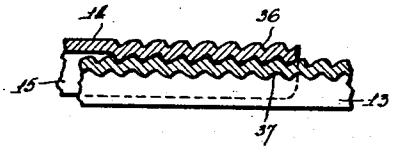


Fig. 6.

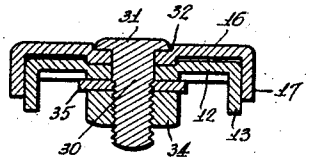
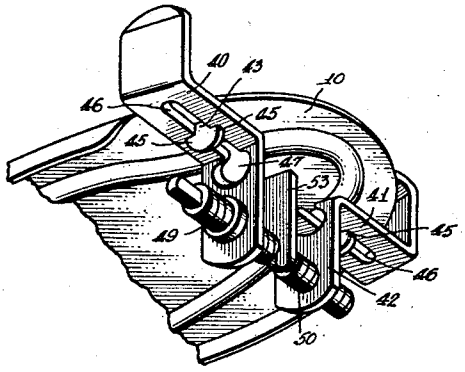


Fig. 7.



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UNITED STATES PATENT OFFICE

SAMUEL I. BERGER, OF NEWARK, NEW JERSEY

SKATE

Application filed February 3, 1928. Serial No. 251,535.

My present invention relates to foot plates or chassis more especially for roller skates.

Among the objects of the invention are to provide a skate chassis of light yet rugged and strong construction having a minimum number of separate structural parts all of which are stampings, which are easily assembled and which chassis admits of ready and secure adjustment to the length of the shoe.

Another object is to provide a shoe clamp of reduced number of parts and reduced weight, without sacrifice in the strength or effectiveness of conventional good clamps.

A feature of the invention is the provision of a pair of coacting sole and heel pieces, one of which has a shank slidable relative to the other for adjustment thereof, integral guide or track means being provided to prevent displacement of the respective parts, except in the direction of longitudinal adjustment.

Another feature is to provide a truck frame of sheet metal clenched over one of the pieces of the foot plate and serving to guide the adjustable shank therethrough.

Another feature is the provision of transverse corrugations on the shank and coacting foot plate member to aid in positioning the parts in any relative setting, appropriate clamp means being provided to rigidly secure the parts in said setting.

Another feature is the toe clamp construction the individual separable clamp pieces of which are held in position against the toe piece by downturned integral winged tongues struck out from the toe piece.

In the accompanying drawings in which is shown one of various possible embodiments of the several features of this invention,

Fig. 1 is a top plan view of a preferred form of skate.

Fig. 2 is a side elevation thereof.

Fig. 3 is a bottom plan thereof.

Fig. 4 is a rear end elevation thereof.

Fig. 5 is a detail sectional view taken on line 5—5 of Fig. 1 and on an enlarged scale.

Fig. 6 is a detail sectional view taken on line 6—6 of Fig. 1, and

Fig. 7 is a perspective view showing a detail of the sole clamp construction.

Referring now to the drawings I have shown a sheet metal sole plate 10 corrugated or embossed near its periphery at 11 for stiffening purposes, and having an integral rearwardly extending shank 12 with parallel sides. The main length of the sole plate and its shank, has a downturned flange 13 at each edge thereof for greater stiffness and ornamentation. A separate heel plate 14 is also provided with an integral upstanding ankle supporting flange 18, an integral downturned flange 15 and has also a short shank part 16 the flanges 17 of which straddle the flanges on the shank 12.

Preferably the supporting flange 18 has integral lateral ears 9 bent over the outer edges of upturned tabs 8 at the rear of the heel plate 14, the blank being laterally notched as at 7 to determine the angle between plate 4 and curved flange 18. These parts are thus connected by an integral bridge 6.

For enhanced security the truck construction of one of the plates is constructed and related with respect to the shank of the other to serve as a guide for the latter. For this purpose I provide an integral sheet metal truck frame F of generally triangular or V form having an inclined front wall 20 and an inclined rear wall 21 connected by an integral axle supporting loop 22. Both sides of the front and rear wall are provided with integral wings 23 extending at right angles thereto each having an integral tongue 24 protruding upward through a corresponding slot in the heel piece and clenched as shown. The upper edges of the wings 23 abut the bottom of the plate 14 as at 25 while the upper edges of the front and rear walls of the truck frame, terminate slightly below the heel piece as at 26 when the truck frame is affixed to the heel plate, and are notched at 27 adjacent wings 23. Space is thus afforded between walls 20 and 21 of the truck frame for the thickness and width of shank 12, while notches 27 accommodate the flanges 13 of the shank 12. Thus the truck frame affords a guiding gateway for the shank 12 of the sole plate, which accordingly is securely guided by the truck frame and held thereby substantially in contact with the heel

piece, and will not curl away even though the shank be of light metal.

To avoid additional dies the truck frame F' of the sole piece is identical with that described, although it does not perform the additional holding and guiding function.

For adjusting the parts I preferably provide a bolt 30 having a flat head 31 countersunk at 32 in the shank 16 of the heel plate and extending through an elongated slot 33 longitudinally of the shank 12 and tightened by a nut 34 having a lock washer 35 in contact with the shank 12 of the sole piece and extending between flanges 13 of the latter.

For security of the parts, I preferably provide an integral ratchet lock construction between the heel piece and the shank 12 of the sole piece. This ratchet comprises a series of integral transverse corrugations 36 pressed into the shank 16 of the heel piece, and two similar sets of narrow corrugations 37 pressed upward from between the edges of the shank 12 at opposite sides of the slot 33 therein. Thus, in adjusting the length of the chassis, after the nut 34 is loosened, the ratchet teeth 37 can be ratcheted over those on the heel plate 16 and when the nut 34 is again tightened in adjusted position of the skate, the ratchet lock 25 will prevent creeping that might be incurred were two smooth plates frictionally clamped.

The sole clamp comprises the usual pair of clamp pieces 40 and 41 extending under the sole piece 10 and having each a downturned lug 42. Each of these clamp pieces is held adjustably in position against the lower face of the sole piece by means of an integral tongue 43 struck down from the material of the sole piece and leaving a correspondingly shaped opening 44 therein. This tongue has a shank substantially of the thickness of the metal of the clamp pieces 40 and 41 and has integral laterally extending wings or keys 45 sustaining the clamp piece. To permit assembly, the elongated adjustment slot 46 in each of the clamp pieces terminates in an enlarged key slot 47 at the downturned lug 42, through which the keys are readily inserted, in sliding the clamp plates for original assembly of the device. The adjustment construction is preferably a screw having oppositely directed threads 49 and 50 on opposite halves thereof and threaded into corresponding screw holes in the clamp lugs 42. The middle 52 of the screw is retained centrally in position against displacement by a hanger piece 53 riveted at 54 through the sole piece.

It will thus be seen that there is herein described apparatus in which the several features of this invention are embodied, and which apparatus in its action attains the various objects of the invention and is well suited to meet the requirements of practical use.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A skate chassis comprising a sole piece and a heel piece, said pieces having marginal guide conformations lengthwise thereof for adjustment to the length of the foot, and clamp means for securing the skate in adjusted position.

2. A skate base comprising a sole piece and a heel piece, each piece having a shank, marginal flanges on one of said shanks constituting a track for the other to permit longitudinal adjustment thereof, and clamp means for securing said pieces in any position of adjustment.

3. A roller skate comprising a pair of complementary foot pieces including a heel plate and a sole plate, each of said plates having an integral shank said shanks superposed, one of said shanks forming a guide track for the other to permit adjustment thereof, one of said plates having a truck frame clenched thereto the sides of said truck frame straddling the shank end of the other of said foot pieces.

4. A skate truck construction comprising a pair of complementary foot pieces including a sole piece and a heel piece, each having a shank integral therewith, a sheet metal truck frame, having side walls extending through said heel piece and clenched thereover, the shank of said sole piece being guided snugly between the sides of said truck piece, said truck piece determining a passage-way for the shank, and means to lock the two foot pieces together in any position of adjustment.

5. A skate frame including a heel piece, a sheet metal truck frame comprising integral lateral wings extending through the heel piece and clenched thereover, a sole piece having an integral shank of the width of and guided between the wings at opposite sides of said truck frame, the forward and rear walls of said truck frame presenting passage-ways at the heel piece for lodging the width of said shank and permitting displacement of the latter.

6. A roller skate frame including a heel piece, a unitary truck frame comprising a V shaped sheet metal piece having integral wings at opposite sides of the two arms thereof, said wing pieces extending through corresponding slots in the heel piece and clenched over the latter to lodge the truck frame in position, a sole piece having a shank unitary

therewith, the upper edges of the wings constituting abutments against the heel piece and determining narrow gate-ways at the upper ends of the V arms for passage therethrough of said shank in substantial engagement with the heel piece, and means for locking the sole piece and heel piece together in any position of adjustment thereof.

7. A skate frame comprising a sheet metal heel piece, a sheet metal sole piece, clamp means on one of said pieces extending through a longitudinal slot in the other for holding the parts in any position of adjustment thereof, said pieces having coacting transverse stop corrugations to prevent slipping from any setting.

8. A roller skate base comprising a heel piece having integral depressed transverse corrugations near the forward end thereof, a sole piece having an integral longitudinally slotted shank, upstanding corrugations transversely of said shank at opposite sides of said slot and adapted to mesh with the corresponding corrugations of the heel piece, and clamp means for restraining the sole and heel plates in any position of adjustment thereof.

9. A roller skate frame comprising a sole piece having an integral shank provided with downturned lateral flanges, a heel piece having a sheet metal truck frame secured thereto, said truck frame comprising a front wall, a rear wall, integral lateral wings extending through and abutting said heel piece and clenched thereover, the front and rear walls of said truck frame presenting channel shaped gate-ways adjacent said heel piece for the passage of said shank therethrough in close contiguity to said heel piece.

10. A skate frame comprising a heel piece having a shank end with a downturned flange, a sole piece having a shank with downturned flanges straddled by the flanges of said heel piece, clamp means for retaining said sole and heel pieces securely assembled in any position of adjustment thereof, said clamp means including a flat headed bolt at the upper face of said heel plate and a nut at the lower face of said shank, said nut extending between the downturned flanges.

Signed at Newark, in the county of Essex and State of New Jersey, this 16th day of January A. D. 1928.

SAMUEL I. BERGER.