O. J. ST. PIERRE.

SKATE ATTACHING MEANS.

APPLICATION FILED OCT. 23, 1920.

1,405,951. Patented Feb. 7, 1922.

Fig. 1

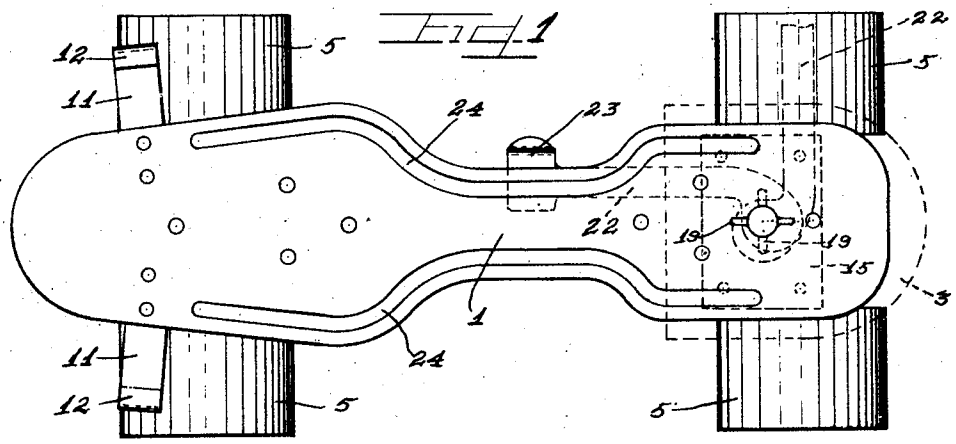


Fig. 2

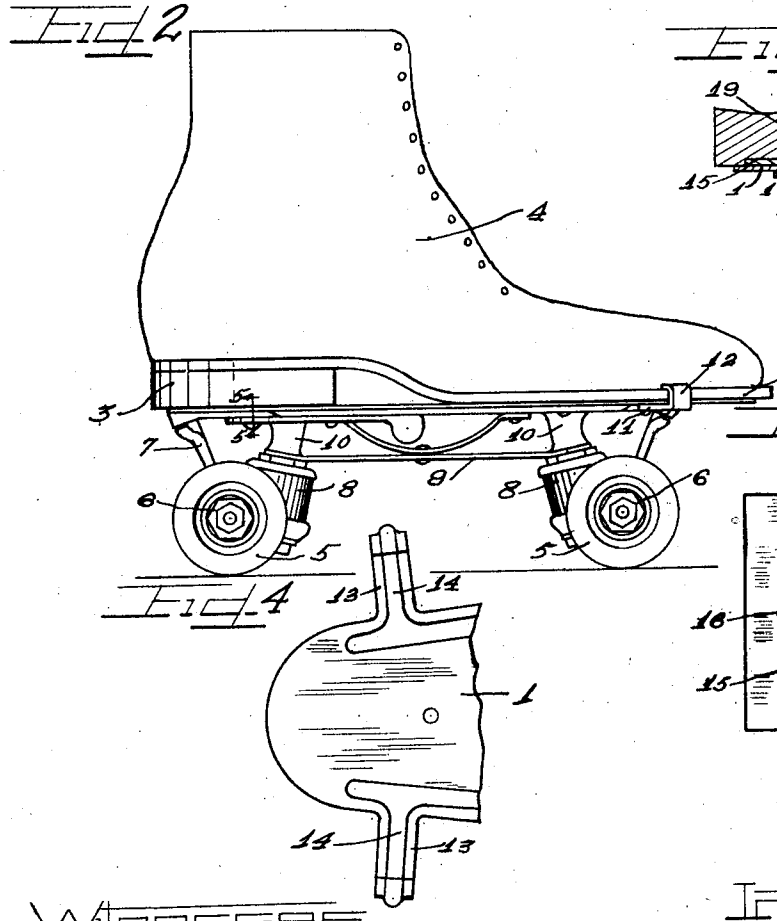


Fig. 5

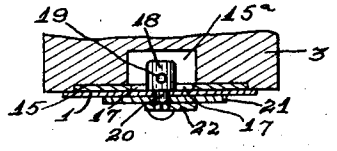


Fig. 3.

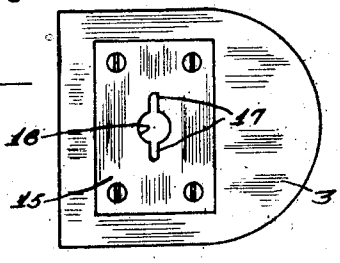


Fig. 4

Witnesses

Rudolph T. Berg.

Charles W. Hills Jr

By

Inventor

Octave J. St. Pierre

Charles W. Hills Atty.

UNITED STATES PATENT OFFICE.

OCTAVE J. ST. PIERRE, OF CHICAGO, ILLINOIS.

SKATE-ATTACHING MEANS.

1,405,951. Specification of Letters Patent. Patented Feb. 7, 1922.

Application filed October 23, 1920. Serial No. 419,087.

To all whom it may concern:

Be it known that I, OCTAVE J. ST. PIERRE, a subject of the King of England, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Skate-Attaching Means; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form a part of this specification.

This invention relates to skate attaching means and particularly to a device which is adapted to be used to detachably secure a permanently adjusted skate quickly in position on the heel of the skater's shoe. The general demand among skaters for securely attached skates has occasioned the general adoption and use of skating shoes with the skates permanently attached thereto by riveting or otherwise. This arrangement however presents several disadvantages and inconveniences which offset the advantages afforded thereby. The skater is obliged to provide himself with a separate pair of shoes to be worn to and from the rink or ice and considerable time is consumed changing these shoes before and after skating. In case of a broken skate it is necessary for the wearer to remove the shoe to replace the same and in case of accident it is difficult for the skater to remove these shoes in time to be of assistance. These last disadvantages are particularly serious in cases of professional skaters and rink instructors, who often find it desirable, or even imperative, that they be able to change or remove their skates very quickly.

It is an object, therefore, of this invention to provide a skate which may be quickly and firmly secured in position for use.

It is another object of this invention to provide a skate having rotatable attaching means whereby the same may be removably secured to the heel of the shoe.

It is an important object of this invention to provide a skate having permanently adjusted attaching portions and having means for removably securing the skate to a shoe after said attaching portions are in position.

Other and further important objects of this invention will be apparent from the disclosures in the specification and the accompanying drawings.

The invention (in a preferred form) is shown on the drawings and hereinafter more fully described.

On the drawings:

Figure 1 is a top plan view of a roller skate provided with the improved attaching means of this invention.

Figure 2 is a side elevation of the roller skate with the shoe attached thereto.

Figure 3 is a bottom plan view of a shoe heel adapted for use with the improved attaching means of this invention.

Figure 4 is a fragmentary plan view showing one construction of the permanently adjusted attaching means.

Figure 5 is an enlarged fragmentary section taken on the line 5—5 of Figure 2.

As shown on the drawings:

The device of this invention is illustrated in the drawings in connection with one type of a roller skate, but it is evident that the device may also be used with various types of ice skates and with other types of roller skates, the type of roller skate illustrated and described herein being for the purpose of explaining the device. Said roller skate comprises a foot plate 1, on which are adapted to be supported the sole 2 and the heel 3 of a skating shoe 4. Secured to the bottom of the plate 1 are the usual rollers 5, which are journalled on suitable bearings at 6 and which are connected to the plate 1 by a frame 7. In order to minimize the jar of the skate traveling over rough surfaces and to afford flexibility thereto, resilient cushions 8 are provided between the plate 1 and the rollers 5, and said cushions 8 are connected and supported from the plate 1 by a suitable truss frame 9 and brackets 10. The forward portion of the plate 1 is secured to the sole 2 of the skating shoe 4 by means of clamps 11, which are permanently adjusted to the proper width and riveted to the underside of the plate 1, as clearly shown in Figures 1 and 2. To secure said clamps 11 firmly over the edge of the sole 2 of the shoe 4, the outer ends 12 thereof are bent upwardly and inwardly so that the edge of said sole will slide into the same the proper distance and be tightly engaged thereby. If desired,

said forward attaching means may be constructed as shown at 13 in Figure 4 by stamping the same from the metal of the plate 1 and providing corrugations 14 therein to add rigidity to the construction without adding materially to the weight thereof.

The mechanism of this invention which is used for removably securing the rear portion of the skate to the heel 3 of the shoe 4 will now be described. In order to adapt said heel 3 for use with the removable attaching means of this invention a recess 15ª is centrally formed in said heel and is covered by a metal plate 15 secured thereover and flush with the bottom of the heel 3. A central aperture 16 is provided in said plate 15 and extending transversely from each side of said aperture 16 is a longitudinal slot 17, which is adapted to receive a rotatable locking device which will now be described.

Rotatably mounted in the plate 1 directly behind the rear bracket 10 is a cylindrical boss 18, which is adapted to be engaged through the aperture 16 in the plate 15 and which has a transverse pin 19 extending therethrough which is adapted to enter the recess 15ª in the heel 3 through the slot 17 in the plate 15. The lower portion 20 of said boss 18 is reduced and extends downwardly through the plate 1 and a washer 21, and at the outer end thereof is squared and has non-rotatably secured thereon a lever 22 which is curved outwardly around the bracket 10 and has a finger grip 23 formed on its outer end which is positioned near the middle of the plate 1 when the skate is adjusted in position on the shoe. For conveniently securing said lever 22 in adjusted position the finger grip 23 thereon is adapted to frictionally engage under an integral ridge or corrugation 24, which is formed in the plate 1 for the purpose of adding rigidity to the same. Said lever 22 is of course so arranged on the squared portion of the reduced extension 20 of the cylindrical portion 18, that when it is in the outward position shown in dotted lines in Figure 1 the transverse pin 19 therein is in register with the longitudinal slot 17 extending from the aperture 16 in the plate 15, and so that when it is in adjusted position with the finger grip 23 thereon engaged under the ridge 24, said transverse pin will be turned out of register with the slot 17 and thus locked in the recess 15ª in the heel 3 to secure the rear portion of the skate to said heel.

The operation is as follows:

When it is desired to attach the skate to the shoe, the sole 2 of the shoe is placed on the plate 1 and moved outwardly until it is engaged under the upwardly and inwardly turned ends 12 of the clamps 11 thereon. The lever 22 is at the same time turned outwardly so that the transverse pin 19 secured on the cylindrical boss 18 is in register with the slot 17 in the plate 15 and said cylindrical boss 18 and transverse pin 19 are thus allowed to enter the recess 15ª in the heel 3 of the shoe. The lever 22 is then turned inwardly until the finger grip 23 thereon is fixedly engaged under the projection 24 on the plate 1 and the skate is locked in position on the shoe.

The reverse of the operation just described is effected when it is desired to remove the skate from the shoe, and it is apparent from the above that the putting on or the removal of the skate may be very quickly accomplished. Since it is possible to have the forward clamps 11 permanently adjusted, there is little danger of the same injuring the sole of the shoe and at the same time they may be arranged to secure the skate very firmly thereto. Due to the fact that the skate may be easily removed from the shoe and quickly and firmly secured in position thereon, the arrangement of this invention makes it possible for the skater to wear his skating shoes to and from the place where the skating is to be done, or to successfully skate with ordinary street shoes by simply providing the recessed heel and the apertured slotted plate 15. Since the skates are easily and quickly removed, they are particularly valuable for rink instructors and professional skaters who often find it necessary to quickly replace a broken skate or to remove both of the skates to give assistance in case of accident. The arrangement is also very desirable for use in connection with ice skates since it obviates the necessity of the skater's removing his street shoes and putting on cold skating shoes which have been carried to the ice.

I am aware that numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted otherwise than necessitated by the prior art.

I claim as my invention:

In a skate, a boot, the heel of said boot having a recess, a plate permanently secured to the heel covering said recess, said plate having a hole with extensions, whereby the hole is longer in one direction than in a direction at right-angles thereto, a boot-supporting plate including a heel portion and a sole portion, clamps permanently secured to the sole portion in non-adjustable position to engage the edges of the sole of the boot, a stud rotatably mounted in said heel portion of the boot-supporting plate, said stud having a head with lateral projections fitting the projections of said hole, whereby said head in one position of said stud is adapted to pass through said hole and in other positions of said stud cannot pass through said hole, said stud extending below said boot-supporting plate, a lever se-

cured to the lower part of said stud, the stud being adapted to be rotated by movement of the lever, and a corrugation at the edge of said boot-supporting plate adapted in the position of the lever corresponding to securing position of the stud to engage the distal end of said lever to retain the same in said position.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

OCTAVE J. ST. PIERRE.

Witnesses:
CARLTON HILL,
EARL M. HARDINE.