March 8, 1927.

H. RITOW

1,620,232

SKATE

Filed Aug. 20, 1925

2 Sheets-Sheet 1

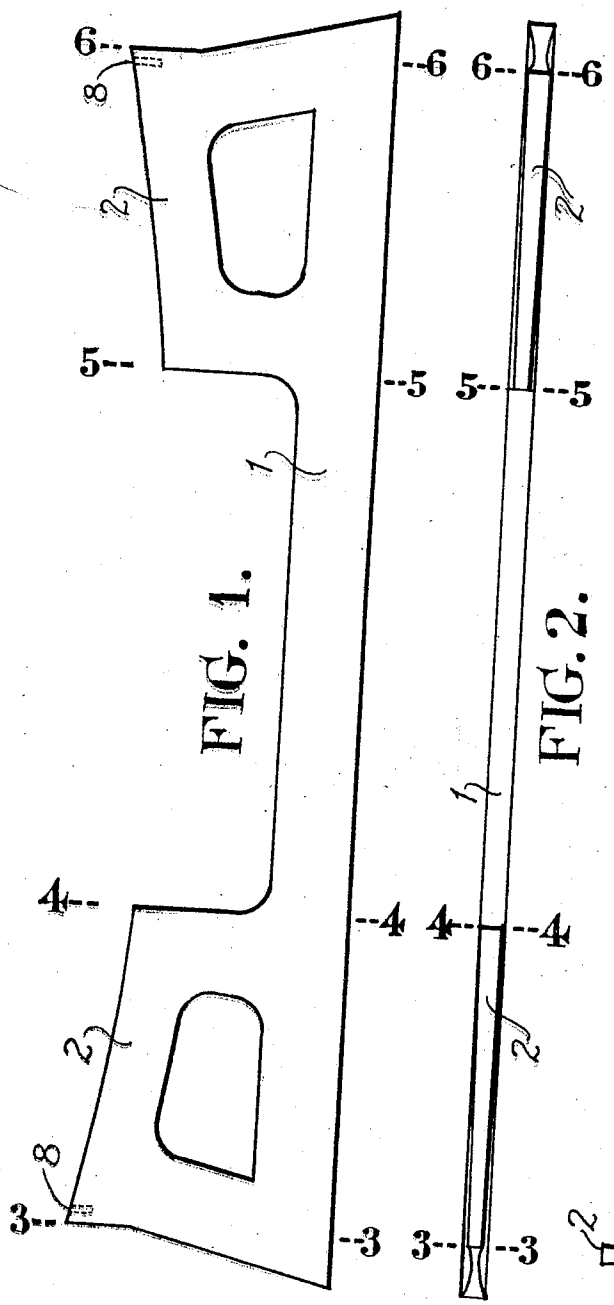


FIG. 1.

FIG. 2.

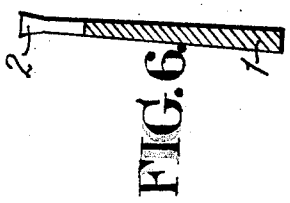


FIG. 6.



FIG. 5.

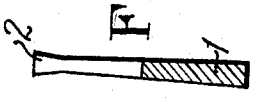


FIG. 4.



FIG. 3.

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FIG. 8.

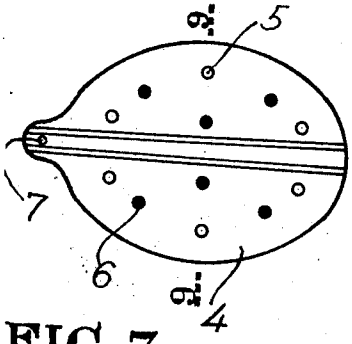


FIG. 7.

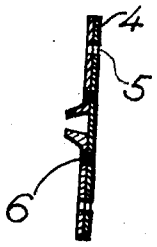


FIG. 9.

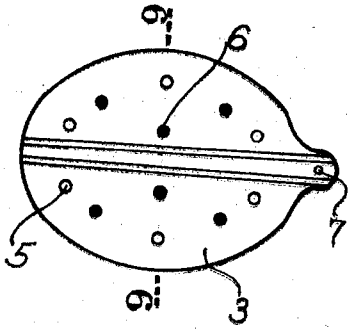


FIG. 10.

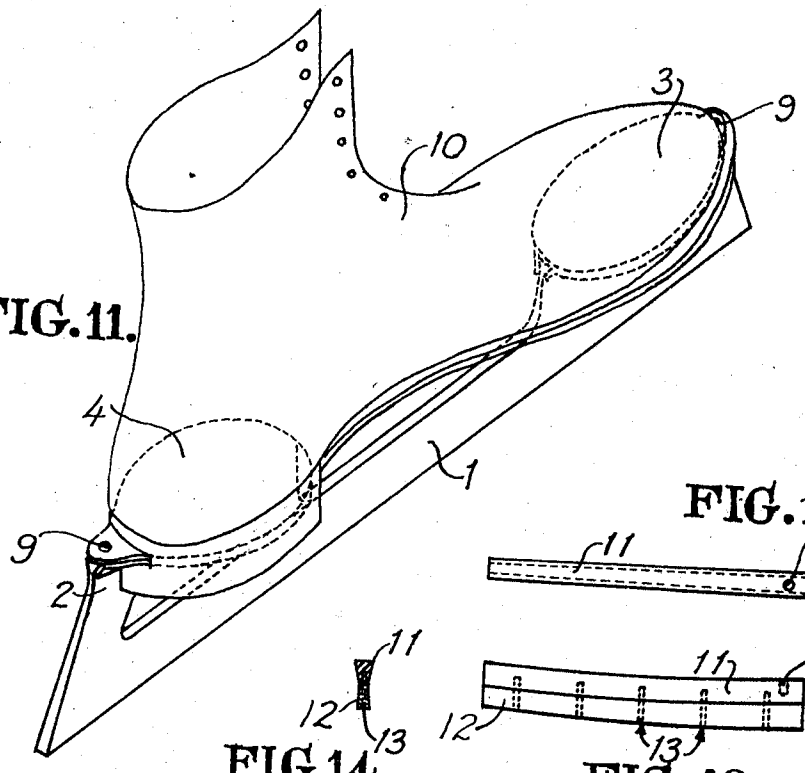


FIG. 11.

FIG. 12.

FIG. 13.

FIG. 14.

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Patented Mar. 8, 1927. 1,620,232

UNITED STATES PATENT OFFICE.

HERMAN RITOW, OF CHICAGO, ILLINOIS.

SKATE.

Application filed August 20, 1925. Serial No. 51,407.

The present invention has relation to an improvement in that class of ice skates or roller skates in which the skates are firmly connected to the shoes.

The object of the present invention is to provide a skate and shoe combination such that the skate can be easily removed from the shoe or replaced thereon, yet when connected to the shoe is as firmly attached thereto as is an ice skate that is riveted to a shoe.

I attain these objects by a novel arrangement of grooved plates riveted to the shoes with skates fitting in the grooves, as illustrated in the accompanying drawings, in which,—

Fig. 1 is a full face view of a preferred form of skate,

Fig. 2 is a top edge view of the said preferred form of skate,

Fig. 3 is a section taken on line 3—3 of Figs. 1 and 2,

Fig. 4 is a section taken on line 4—4 of Figs. 1 and 2,

Fig. 5 is a section taken on line 5—5 of Figs. 1 and 2,

Fig. 6 is a section taken on line 6—6 of Figs. 1 and 2,

Fig. 7 is a bottom view of a preferred form of grooved heel plate,

Fig. 8 is a side view of the said preferred form of grooved heel plate and of the preferred form of sole plate shown in Fig. 10,

Fig. 9 is a cross section taken on line 9—9 of Figs. 7 and 10,

Fig. 10 is a bottom view of a preferred form of grooved sole plate,

Fig. 11 is a perspective view of a shoe with the preferred form of skate, heel and sole plates attached thereto,

Fig. 12 is a top edge view of a piece fitting into the groove of either sole plate or heel plate when the skate is removed,

Fig. 13 is a side view of the said piece shown in Fig. 12, and Fig. 14 is a section taken anywhere transversely of the said piece shown in Figs. 12 and 13.

Similar numerals refer to similar parts throughout the several views.

The integral parts of the device are the skate blade 1, the sole plate 3, the heel plate 4, the shoe 10 and the groove-filling pieces 11, of which there are two for each shoe.

The top edges 2 of the skate 1 are cut to a circular arc with a radius that depends on the size of the shoe. Each of these edges, 2, is tapered in the direction from the forward edge backwards, as clearly shown in Fig. 2. At the same time these edges, 2, are narrower below the top of the skate than they are at the top, as shown in Figs. 3, 4, 5 and 6.

The sole plate 3 and the heel plate 4 are curved to the same radius as the top edge, 2, of the skate 1, as can be seen in Fig. 8. The sole and heel plates are each grooved to fit the top edges 2 of the skate 1. The three pieces of metal that make up each plate are riveted together by the rivets 5, and the holes 6 are provided in these plates to permit rivets connecting the plates to the shoe to pass through said holes 6 and through the adjacent leather of the sole or heel, respectively.

The plates, when in place upon the shoe, are imbedded in leather except at the place of the grooves, where similar grooves are left in the leather. When the skates are removed the filling pieces, 11, are fitted into the grooves. The leather strips, 12, are connected to the filling pieces 11 by small screws 13, and are of such thickness that when the filling pieces 11 are inserted in the heel and sole plates the leather strips 12 just fill the grooves in the leather, making the walking shoe one that is completely soled and heeled. Instead of leather, rubber heels and soles and rubber strips can be used.

The shape of the top edges 2 of the skate and the shape of the grooves in the plates 3 and 4 is that of a curved tapered wedge as Figs. 1 to 9, inclusive, show, so that when the skate edges 2 are moved into the grooves of the plates, the skate is very rigidly wedged into the plates which are in turn riveted to the shoe. In skating with the improved skates there is merely a tendency to wedge the skates more and more tightly

into the grooves, yet, when desired, a slight tap on the back of the shoe skate will suffice to loosen the skate out of the grooves. To prevent the skate from slipping forward the tapped holes 8 are provided in the skate 1, the holes 7 are drilled in the plates 3 and 4, and the screws 9 are used to connect the plates with the skate, passing through the holes 7 and into the holes 8. See Figs. 1, 7, 10, and 11. The same screws 9 serve the purpose of keeping the filling pieces 11 in place when the skates are removed.

To use the skates, the owner would wear the shoes with the riveted plates 3 and 4, with the fillers 11 in the grooves. He proceeds to the skating ground, loosens and removes the screws 9, pulls out the fillers 11, then slides the skates into the grooves, all without removing the shoe from his foot. By tapping on the ground or on something hard with the forward point of the skate, that is as though kicking with the toe, the skate blades are thoroughly wedged into the grooves and the screw 9 are now set into the tapped holes 8. The skates being now firmly connected to his shoes, the owner can skate in comfort and ease.

When ready to return home, the owner removes screws 9, taps the ground with the rear point of the skate, that is as though kicking with the heel and removes the skate blades 1. The fillers 11 are reset into the plates and the screws 9 once more fix the fillers in a firm position. The skate blades are cleaned and placed in the owner's pocket or carried in the hand if desired, all the above being accomplished without the removal or changing of the shoes worn. The owner may now walk home on the improved shoes.

In this manner the carrying of heavy shoes and skates to and from the skating ground, the removal and checking of walking shoes in a crowded room before skating, the waiting in line for your shoes after skating and changing again are all avoided, the improved skate and shoe making these annoyances and the consequent loss of time all unnecessary.

There are many skates on the market that are attached to and removed from shoes at will, but none has the rigidity of connection to the shoe so much desired by the skater and for which advantage he is willing to go through the trouble of carrying heavy shoes and skates, to change shoes twice and to wait in a crowded room each time he wishes to skate.

The improved skating device avoids all the inconveniences of riveted shoe skates but retains their rigidity of connection and should therefore appeal to a wide skating public for their convenience and comfort.

It is possible to make the improved skate and shoe with straight edges 2 and with the plates 3 and 4 and their grooves being straight as well and I do not limit myself to curved edges, plates and grooves.

I claim:—

1. In combination a skate blade and shoe and means for removably attaching the two to each other, said means including a vertically curved groove permanently formed in said shoe, and a correspondingly curved edge on said skate, the curvature of the two being identical whereby the skate may be removably positioned within the groove.

2. In combination a skate blade and shoe, means for removably attaching the two, said means including a plurality of vertically curved grooves permanently formed in said shoe, and an equal number of correspondingly curved edge portions on said skate blade, the curvature of mating grooves and skate portions being identical, and the curvature of all of the grooves being formed along the same arc whereby the skate may be removably positioned within the groove.

3. In combination a skate blade and shoe and means for removably attaching the two to each other, said means including a vertically curved groove permanently formed in said shoe, and a correspondingly curved edge on said skate, the curvature of the two being identical whereby the skate may be removably positioned within the groove, and a filler member identical in size, and shape with the groove adapted to be inserted therein when the skate has been removed to provide a smooth surface for the sole of the shoe.

4. In combination a skate blade and shoe and means for removably joining the two, said means including a plurality of vertically curved dove-tailed wedge-shaped grooves permanently formed in said shoe, an equal number of correspondingly curved wedge-shaped dove-tailed edge portions on said skate blade, the curvature of each groove and its mating skate portion being identical, the curvature of all of the grooves being formed along the same arc whereby the skate may be removably positioned within the groove.

5. In combination a walking and skating shoe, means for fitting such shoe for skating including a plurality of vertically curved grooves within such shoe, a skate member provided with curved upwardly extending dove-tailed wedge-shaped portions, one adapted to be inserted in each of such grooves, the curvature of such wedge portions being identical with that of the grooves, and means for adapting such shoe for walking including filler members adapted to be inserted in such grooves when the wedge-shaped portions of the skate have been removed.

6. In combination a walking and skating shoe, means for fitting such shoe for skating

including a plurality of vertically curved grooves within such shoe, such grooves being formed along the same arc, a skate member provided with curved upwardly extending dove-tailed wedge shaped portions, one adapted to be inserted in each of such grooves, and means for adapting such shoe for walking including filler members identical in size and shape with such upwardly extending wedge-shaped portions, adapted to be inserted in such grooves when the wedge-shaped portions of the skate have been removed.

In witness whereof I sign my name this seventeenth day of August, nineteen hundred and twenty-five.

HERMAN RITOW.