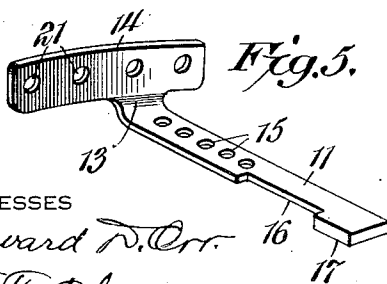
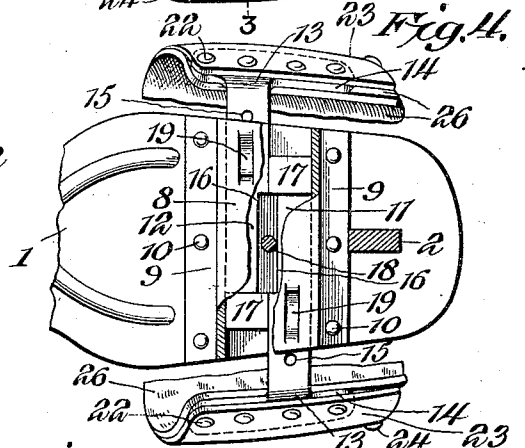
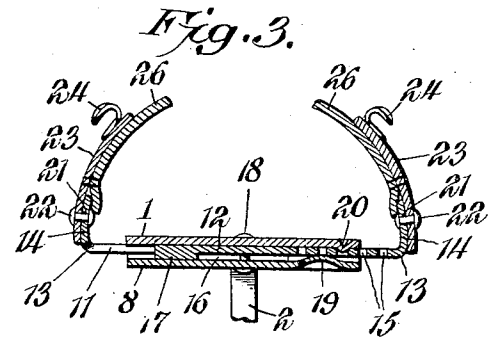
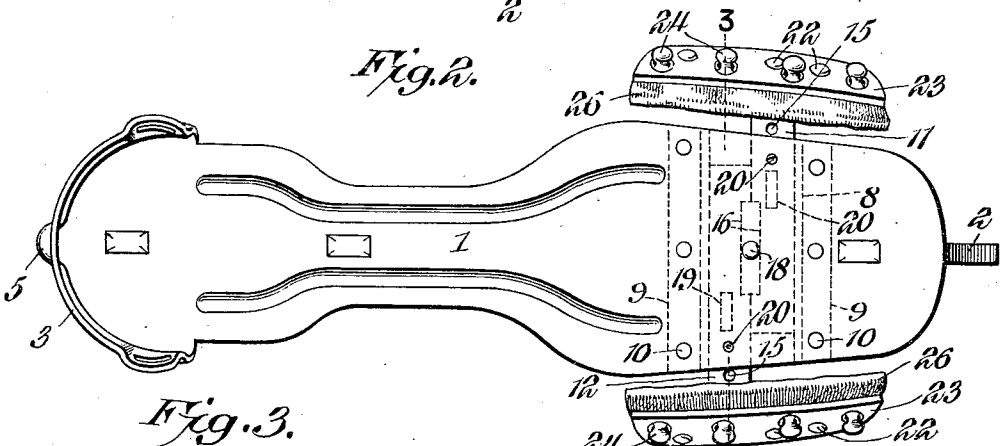
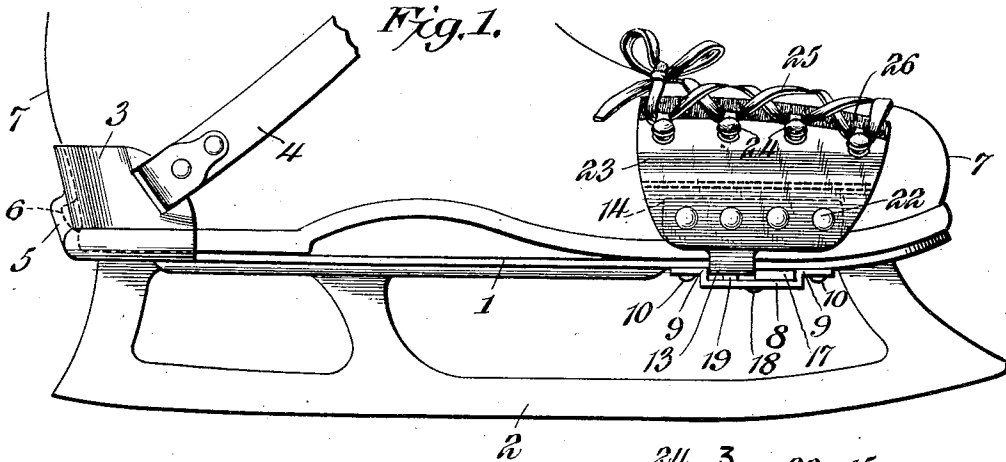


S. C. JOHNSON.  
SKATE.

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1,017,551.

Patented Feb. 13, 1912.



WITNESSES

Howard D. Orr.

J. T. Chapman.

Simon C. Johnson, INVENTOR,

BY

E. J. Siggers.

ATTORNEY

# UNITED STATES PATENT OFFICE.

SIMON C. JOHNSON, OF DE KALB, ILLINOIS.

## SKATE.

1,017,551.

Specification of Letters Patent.

Patented Feb. 13, 1912.

Application filed February 20, 1911. Serial No. 609,675.

*To all whom it may concern:*

Be it known that I, SIMON C. JOHNSON, a citizen of the United States, residing at De Kalb, in the county of Dekalb and State of Illinois, have invented a new and useful Skate, of which the following is a specification.

This invention has reference to improvements in skates whether of the type known as roller skates or of the type known as ice skates, and its object is to provide a means whereby the skate may be secured to the foot of the user without the necessity of employing keys, levers, or other actuating devices, while, at the same time, the skate is readily adapted to feet of different widths and may be used by persons wearing overshoes without the necessity or removing such overshoes.

In accordance with the present invention there is provided a toe clamping means slidable transversely with relation to the length of the skate in suitable supports fast to the body of the skate, and these slidable members are provided with automatically operating locking means rendered active by the securing of the skate to the foot of the user. In addition to this the heel receptacle of the skate is so shaped that a person wearing a pair of overshoes with the removing heel boss may as readily apply the skates as though the overshoes were absent.

The invention will be best understood from a consideration of the following detailed description, taken in connection with the accompanying drawings forming a part of this specification, with the understanding, however, that while the drawings show a practical embodiment of the invention it is susceptible of other embodiments and, therefore, the invention is not confined to the exact showing of the drawings.

In the drawings:—Figure 1 is a side view of a skate embodying the present invention as applied to the foot of a user where the foot covering is protected by an overshoe. Fig. 2 is a plan view of the skate as viewed from above. Fig. 3 is a section on the line 3—3 of Fig. 2. Fig. 4 is a bottom plan view of the foot receiving plate of the skate with parts shown in section and broken away. Fig. 5 is a perspective view of one of the clamp members for the toe portion of the skate.

Referring to the drawings, there is shown

a foot plate 1 which may be taken as typical of any foot plate whether continuous from one end to the other as usually constructed for roller skates, or either continuous from one end to the other or made up of toe and heel sections as is customary in ice skates, since so far as the salient features of the present invention are concerned the particular construction of the foot plate and of the support engaging parts carried by the foot plate, whether for use upon ice or upon other surfaces, is immaterial.

In the particular showing of the drawings, the foot plate has secured to it a runner or blade 2, such as is commonly employed in connection with ice skates, but it will be understood that the usual rollers of roller skates may be substituted for the blade 2 without in any manner affecting the operation of the invention.

The foot plate 1 is provided with a heel guard 3, which in the main may be like heel guards as usually employed in skates, and this guard has attached thereto the usual heel strap 4, whereby the heel end of the skate may be secured to the foot of the user.

It is often desirable when going skating to wear a pair of rubber overshoes, but with skates as ordinarily constructed it is necessary to discard such overshoes and often the feet of the wearer become chilled because of the removal of the extra protection of the overshoes. One reason for the necessity of discarding the overshoes when using skates as ordinarily constructed is because most overshoes are provided with a small boss or projection at the back of the heel, which prevents the proper positioning of the heel of the overshoe in the heel guard 3. To overcome this trouble the heel guard 3 has an outset portion 5 in the central portion of the rear wall, and this outset portion provides a cavity of a size to receive the boss usually found on the back of the overshoe, such boss being indicated in Fig. 1 at 6 upon an overshoe indicated at 7. Because of the cavity provided at the outset portion 5, the heel of the overshoe may be brought snugly against the inner wall of the heel guard 3 the same as though the boss 6 were omitted.

At the toe end of the foot plate 1 there is secured a guard plate 8 in transverse relation to the under face of the foot plate, the plate being provided at its edges with angle

flanges 9 by means of which the plate 8 is secured to the plate 1 through the intermediary of rivets 10, the angle flanges 9 serving to space the plate 8 away from the corresponding face of the foot plate 1, so that there is provided a transverse channel or passage on the under side of the foot plate 1, the term under side being used with relation to the ordinary operative position of the skate. Normally lodged in the space or channel formed by the plate 8 are two strips 11, 12, respectively, each of a width that when the two strips are side by side they will fill the space between the flanges 9 of the plate 8 snugly, yet at the same time not so tightly but that the strips 11 and 12 may be moved longitudinally in opposite directions transverse to the length of the plate 1. These strips 11 and 12 project from opposite sides of the foot plate 1 and at what may be termed the outer end each plate is bent at an angle, as best shown at 13, Fig. 5, and then into a laterally extended head 14 also best shown in Fig. 5, the head 14 extending to a greater degree on one side of the strip supporting it than on the other side thereof. Each strip 11 and 12 is formed with a longitudinal series of perforations 15 which because of their function may as well be cavities, but perforations are not so liable to retain dirt or other deleterious matter. The row of perforations 15 extend from near the bend 13 part way toward the other end of the strip and from a point adjacent the termination of the row of perforations the strip is incut on one edge, as shown at 16, to form a longitudinal recess, this recess extending to a point a short distance from the end of the strip remote from the lateral extension 14, and such end of the strip may be thickened, as indicated at 17. The thickened portion 17 is approximately the same as the depth of the space defined by the plate 8 and corresponding portion of the plate 1, while the remainder of the strip 11 or 12 is considerably thinner.

When the two strips 11 and 12 are in place between the plates 1 and 8, the two elongated recesses 16 face each other and traversing the space thus provided is a pin 18 which may be fast at the ends to both the plate 1 and the plate 8. If there be no reason for the subsequent removal of the strips 11 and 12 the pin 18 may be an ordinary rivet, but if it be desirable that provision be made for the subsequent removal of the strips, then the pin 18 may be a screw or a bolt. Whatever be the character of the pin 18 it operates as a stop pin preventing the movement of the strips 11 and 12 in the direction of their length beyond the sides of the foot plate 1 to a greater extent than determined by the length of the recess 16.

The plate 8 has springs 19 in position to engage the strips 11 and 12, there being a

spring 19 for each strip, so that the perforated end of the strip is urged constantly toward the corresponding face of the foot plate 1, but the spring will yield to force exerted in a direction to move the perforated end of the strip 11 or 12 toward the plate 8. The springs 19 may be struck up from the plate 8 or may be separately formed and attached thereto, both expedients being common in like structures.

The foot plate 1 has stop members 20 in position to engage any one of the perforations 15 of the strips 11 and 12 to hold the corresponding strips in different degrees of projection from the sides of the plate 1. The preferred way of forming the stop members 20 is by indenting the metal of the plate 1 toward the plate 8, but this does not preclude the formation of the stop members in any other suitable way.

The lateral extensions 14 are each formed with a series of perforations 21 for the passage of rivets 22 or other suitable devices whereby flexible members 23 are secured to the extensions 14, these flexible members 23 being preferably formed of suitably shaped pieces of leather, the leather pieces 23 being each secured near one edge to the corresponding extension 14 by the rivets 22 and near the other edge carrying a suitable number of lacing hooks 24, the purpose of the leather pieces being to partially embrace the toe end of the foot covering of the user of the skate and the lacing hooks 24 being provided for the application of a suitable piece of lacing 25, whereby the skate may be attached to a shoe in a yielding yet firm manner, the lacing 25 admitting of a certain conformity of the leather side pieces 23 to the shape of the foot and to motions of the foot.

In order to protect the foot of the wearer from the direct pressure of the lacing 25 upon the foot covering the leather pieces 23 and in part the side extensions 14 are provided with linings 26 of felt or other suitable material, which may be of suitable length to practically overlies the portion of the foot covering between the adjacent edges of the leather side pieces 23 when the lacing is applied and secured in place.

The extent of the leather pieces and the linings therefor in the direction of the length of the foot is subject to considerable variation, and these parts may be sufficiently extensive to practically incase the entire toe portion of the foot, thus protecting the toe portion of the foot of the wearer against chilling while so extensive a portion of the foot is engaged by the fastening devices that effect on the circulation is avoided.

When the skate is applied to the foot of the wearer the front clamp members made up of the strips 11 and 12 with the lacing members carried thereby, are spread apart by exerting a force upon each member 11

and 12 in a direction to release it from the corresponding stop member 20 when the strips 11 and 12 may be moved away one from the other in a direction to separate the clamp members. When the foot is placed on the skate, or the skate on the foot covering, the clamp members may be caused to move toward the foot until in engagement therewith by pressing the strips 11 and 12 against the action of the springs 19 until released from the stop members 20, when the strips 11 and 12 may be moved longitudinally in opposite directions so that the clamp members approach the foot until in engagement therewith, when on releasing the clamp members the springs 19 will cause the strips 11 and 12 to move so that the stop members 20 enter the appropriate ones of the perforations 14. Now, on the application of the lacing 25 the strips 11 and 12 are held firmly in position where the stop members 20 enter the perforations 15, so that movement of the clamp members away from the foot is prevented and the skate is firmly held to the foot against accidental displacement. When it is desired to remove the skate the lacing is loosened and the clamp members spread in the manner already described when the skate may be readily removed from the foot of the wearer.

It will be observed that the lateral extensions 14 have been described as extending more to one side of the corresponding strip 11 or 12 than on the other, but this is simply for the purpose of bringing the body of one clamp member directly opposite the body of the other clamp member since the strips 11 and 12 are on opposite sides of the center line of these two members.

Other arrangements may be provided for the same purpose, and consequently the invention is not confined to the particular formation of the strips and supports for the lacing leathers.

What is claimed is:—

1. A skate having foot gripping members movable transversely of the foot receiving portion of the skate and also toward and from such foot receiving portion in a direction substantially perpendicular to the first direction of movement, and locking means for holding the foot gripping members in different positions of transverse adjustment, said foot gripping members being movable in a direction away from the foot receiving portion of the skate substantially perpendicular thereto and having a normal constraint toward said foot receiving portion of the skate.

2. In a skate, foot gripping members slidable with relation to the foot receiving portion of the skate in a direction transverse and substantially parallel therewith and also movable in a direction substantially perpendicular to the foot receiving portion of the

skate, and locking means active to the foot clamping members when the latter are moved toward the foot receiving portion of the skate in a direction substantially perpendicular thereto.

3. In a skate, clamp members provided with stem portions, a retaining member on the skate for receiving the stems of the clamp members and in which said stems are slidable in opposite directions one past the other and substantially parallel one to the other and with the foot receiving portion of the skate, and said stem members being also movable from and toward the foot receiving portion of the skate in a direction substantially perpendicular thereto, and stop members for engaging and holding the stems of the clamp members against movement substantially parallel with the foot receiving portion of the skate beyond the

same.

4. In a skate, clamp members provided with stem portions, a retaining member on the skate for receiving the stems of the clamp members and in which the stems of the clamp members are slidable in opposite directions, said stem members being also movable toward and from the foot receiving portion of the skate in a direction substantially perpendicular thereto, and stop members for engaging and holding the stems of the clamp members when said stems are moved toward the foot receiving portion of the skate, and means for limiting the movement of the stem members transversely of the skate.

5. In a skate, clamp members each provided with an elongated stem increased in thickness at the end remote from the clamp member, a retaining member on the skate adapted to receive the stems of the clamp members and along which said stems are slidable in opposite directions, means for retaining the stem members in the sustaining member, said stem members having a range of movement toward and from the foot receiving portion of the skate, in a direction substantially perpendicular thereto, and stop members active to the stem members when moved toward the foot receiving portion of the skate.

6. A skate provided with transversely slidable clamp members each provided with a stem member movable one alongside of the other, each stem member being of increased thickness at the end remote from the body of the clamp member, a retaining means carried by the foot receiving portion of the skate and adapted to receive the stem members with their thickened portions for slidable movement transversely to the skate, the thinner portions of the stem members being movable toward and from the foot receiving portion of the skate in a direction substantially perpendicular there-

to, a stop member for each stem, the stems being each provided with a series of means coacting with the stop member and with an elongated recess on one side matching a like  
 5 recess in the other stem, and means coacting with the recessed portions of the stems for limiting their movement transversely of the foot receiving member of the skate.

7. In a skate, oppositely movable clamp members each provided with lacing means and retaining means for the clamp members active to hold said clamp members in foot  
 10 securing position when the skate is attached to the foot of the wearer irrespective of the lacing means.

8. In a skate, clamp members movable transversely of the skate and also in a direction toward and from the foot receiving portion of the skate substantially perpendicular thereto, said clamp members having  
 20 a normal constraint toward said foot receiving portion of the skate, stop members active to hold the clamp members in adjusted positions when at the limit of their movement toward the foot receiving portion of  
 25 the skate, the said clamp members releasing from the retaining means when moved away from the foot receiving portion of the skate, and means for securing the clamp members  
 30 to the foot of a wearer.

9. In a skate, clamp members movable transversely of the skate and also in a direction toward and from the foot receiving portion of the skate substantially perpendicular thereto, said clamp members having  
 35 a normal constraint toward said foot receiving portion of the skate, stop members active to hold the clamp members in adjusted positions when at the limit of their movement toward the foot receiving portion  
 40 of the skate, the said clamp members releasing

ing from the retaining means when moved away from the foot receiving portion of the skate, and means for securing the clamp members to the foot of a wearer, said means  
 45 comprising related lacing studs on the clamp members for the reception of a lacing.

10. In a skate, foot clamping members each provided with a stem thickened at the end remote from the clamping member and  
 50 provided adjacent the clamping member with a longitudinal series of perforations and between said perforations and the thickened end with an elongated side recess, a plate provided with angle flanges attached  
 55 to the foot receiving portion of the skate and adapted to receive between said plate and foot receiving member of the skate the stems of the clamps in sliding relation one alongside of the other with the recesses  
 60 matching, springs carried by the flanged plate and engaging the stems to normally constrain them toward the foot receiving member of the plate, the said foot receiving member having stop members adapted each  
 65 to engage the perforations of the respective stem, and a pin extending between the plate provided with angle flanges and the foot receiving member of the skate in traversing relation to the recesses of the stems.  
 70

11. In a skate, means for securing the toe end of the skate to the foot of a user, and a heel guard provided with a cavity at the rear for receiving a rearward extension of the heel of an overshoe.  
 75

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

SIMON C. JOHNSON.

Witnesses:

GEORGE H. MILLER,  
 ALLEN C. HINDS.