

O. ARLUND.
SKATE.

APPLICATION FILED APR. 13, 1908.

908,536.

Patented Jan. 5, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

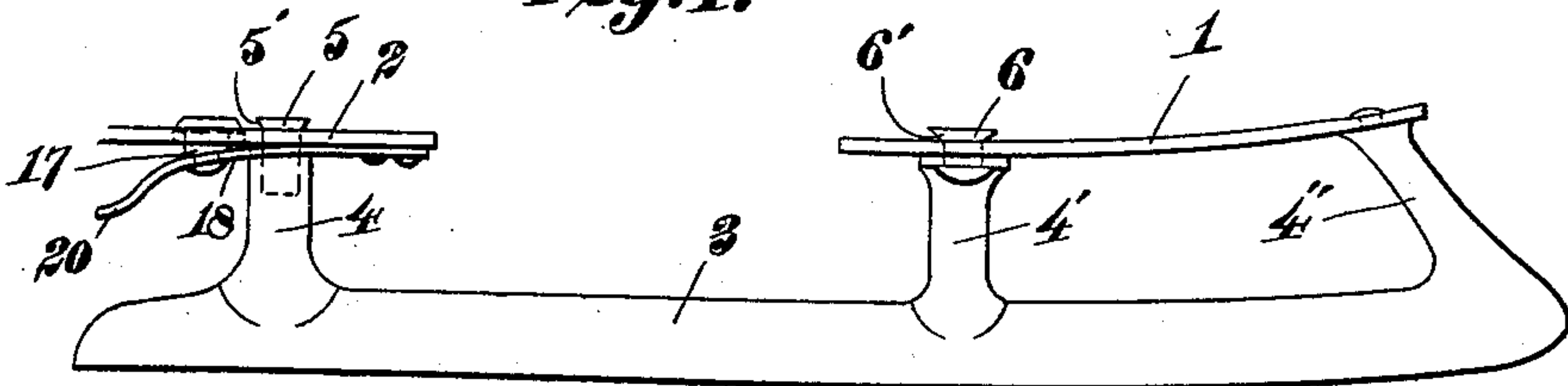


Fig. 2.

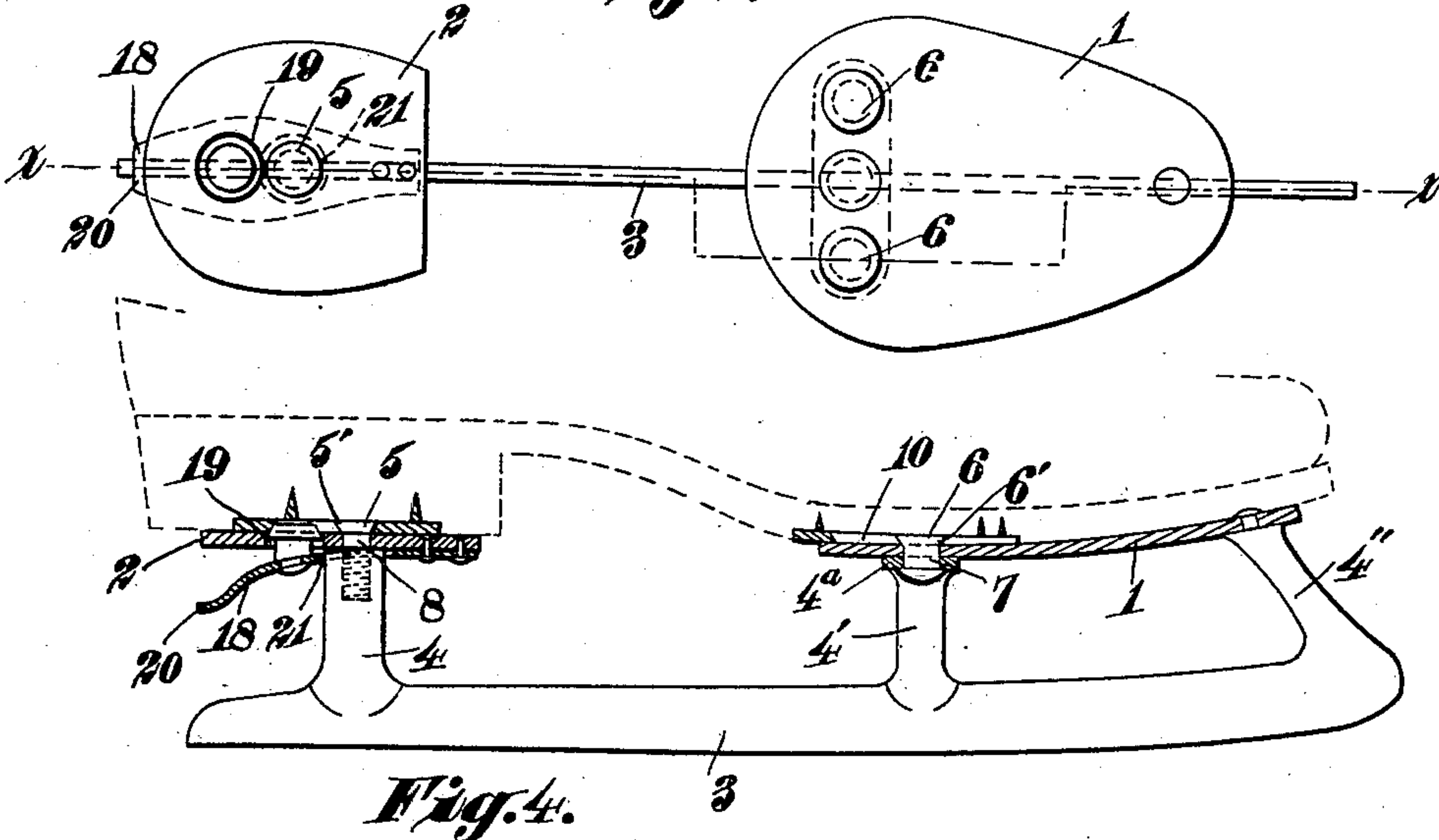


Fig. 4.

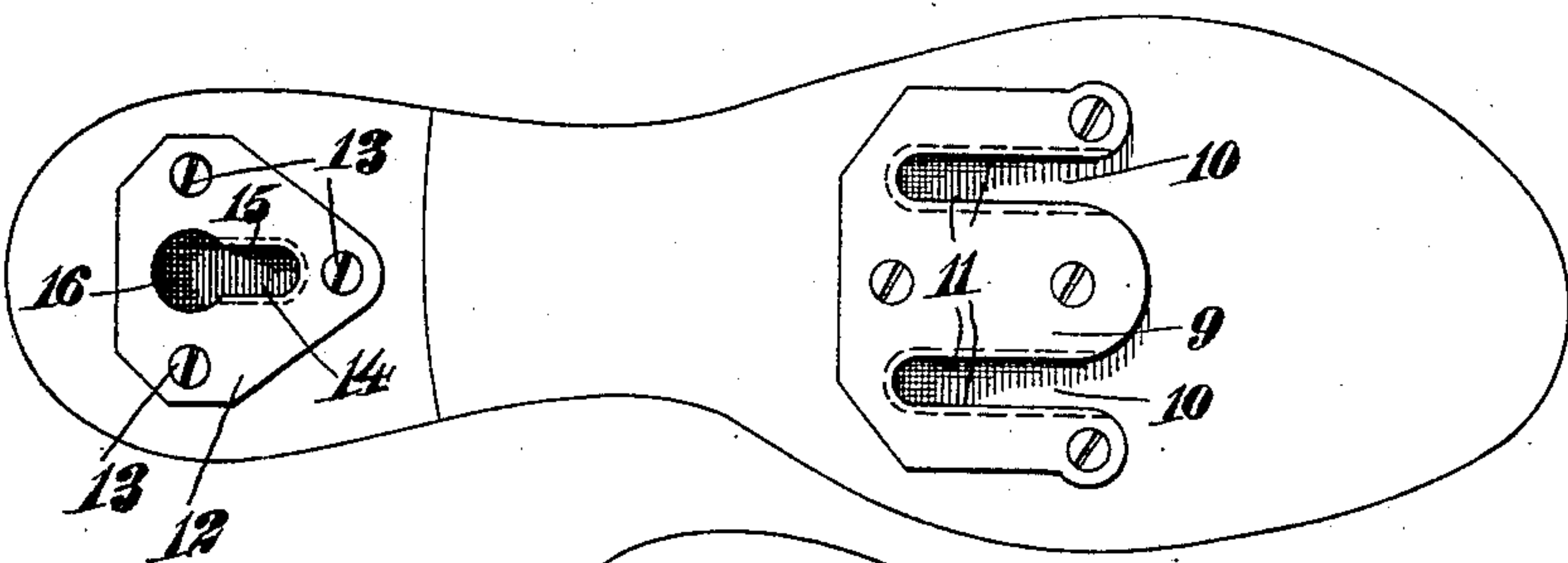
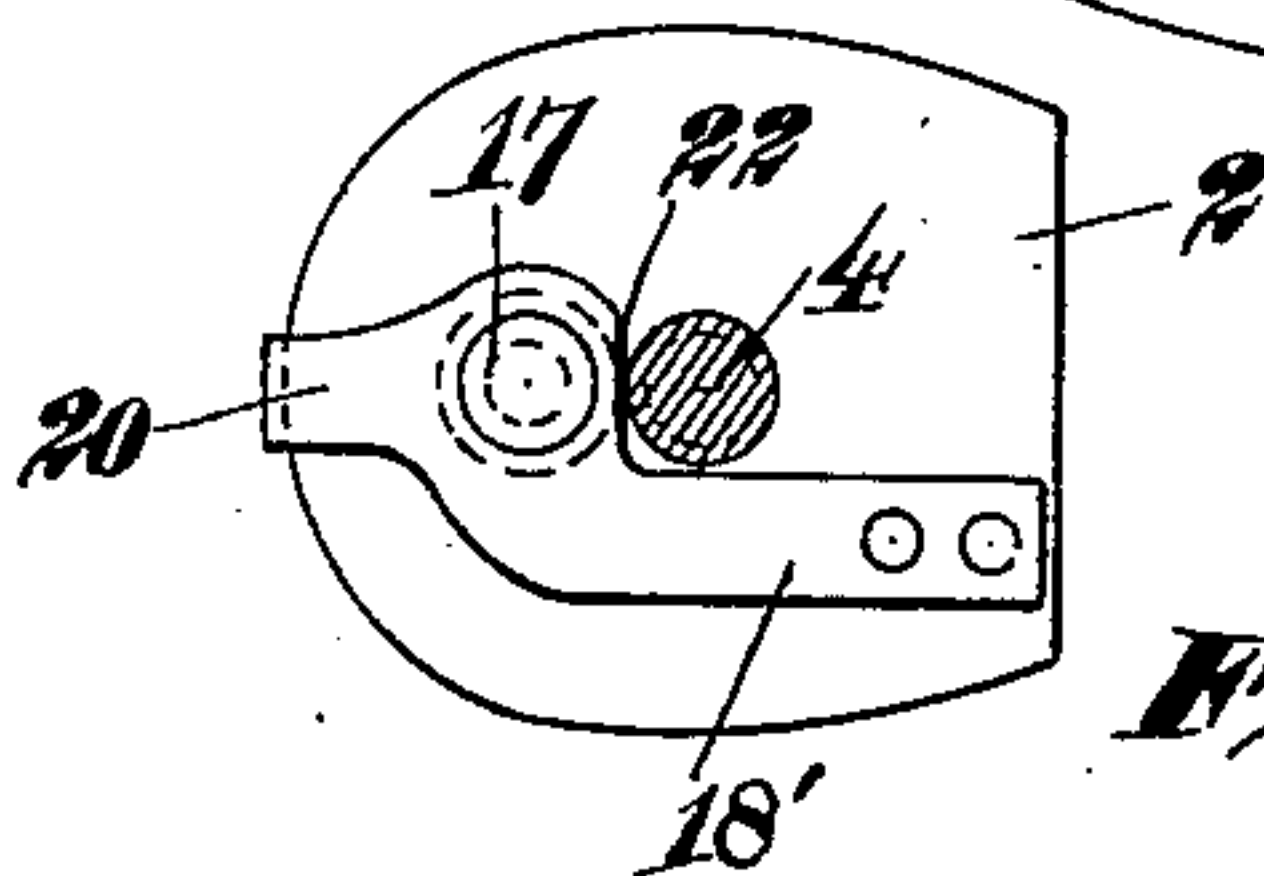


Fig. 3.

Witnesses;
A. A. Olson.
P. J. McAllister.



Inventor;
Fig. 5. Otto Arlund
by Joshua R. H. Potts.
Att'y.

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2 SHEETS—SHEET 2.

Fig. 6.

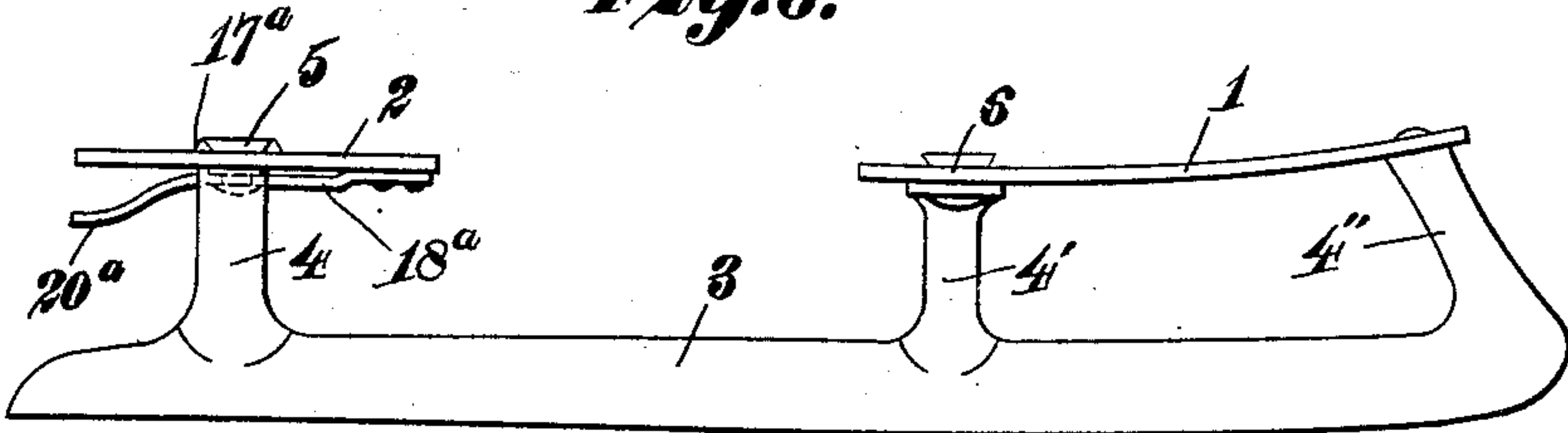


Fig. 7.

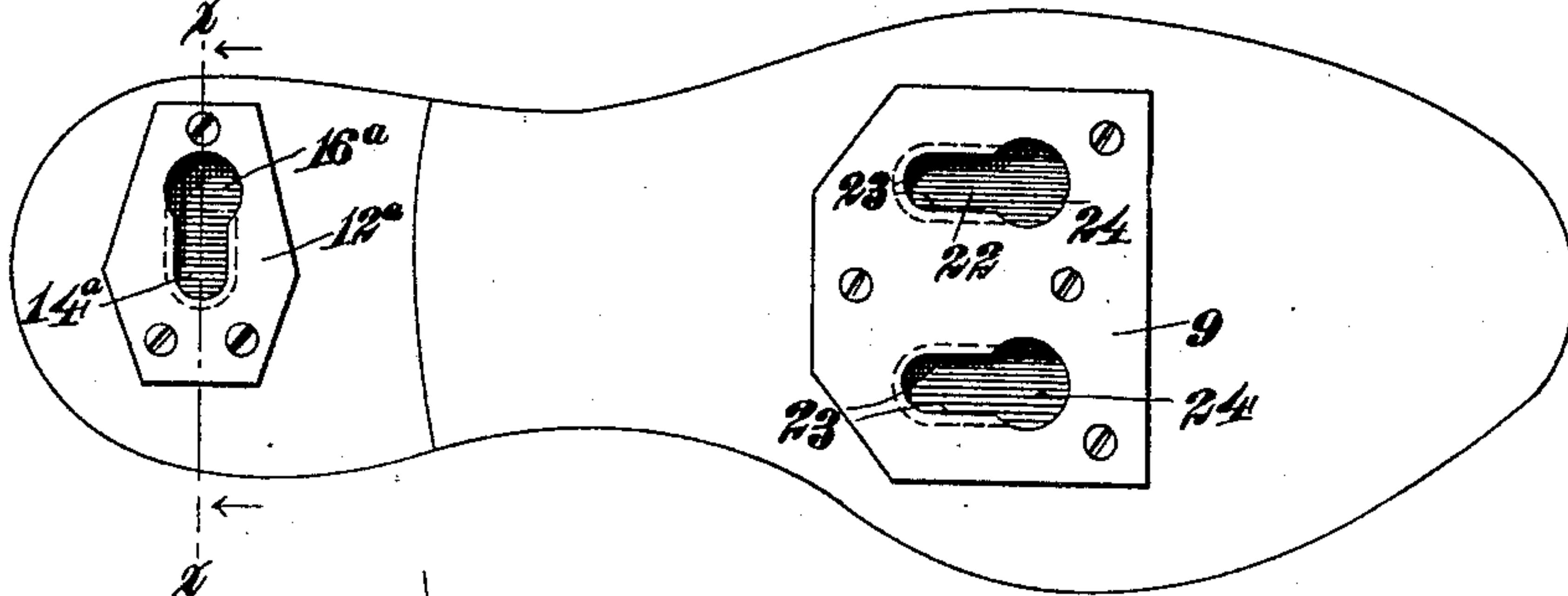
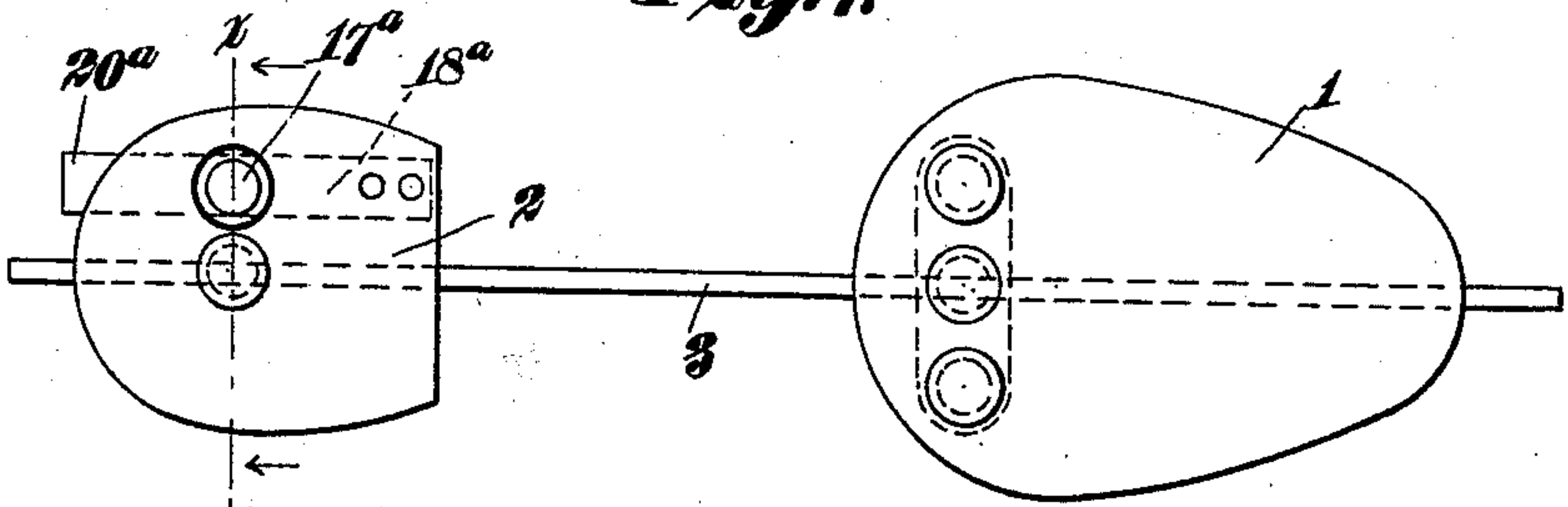


Fig. 8.

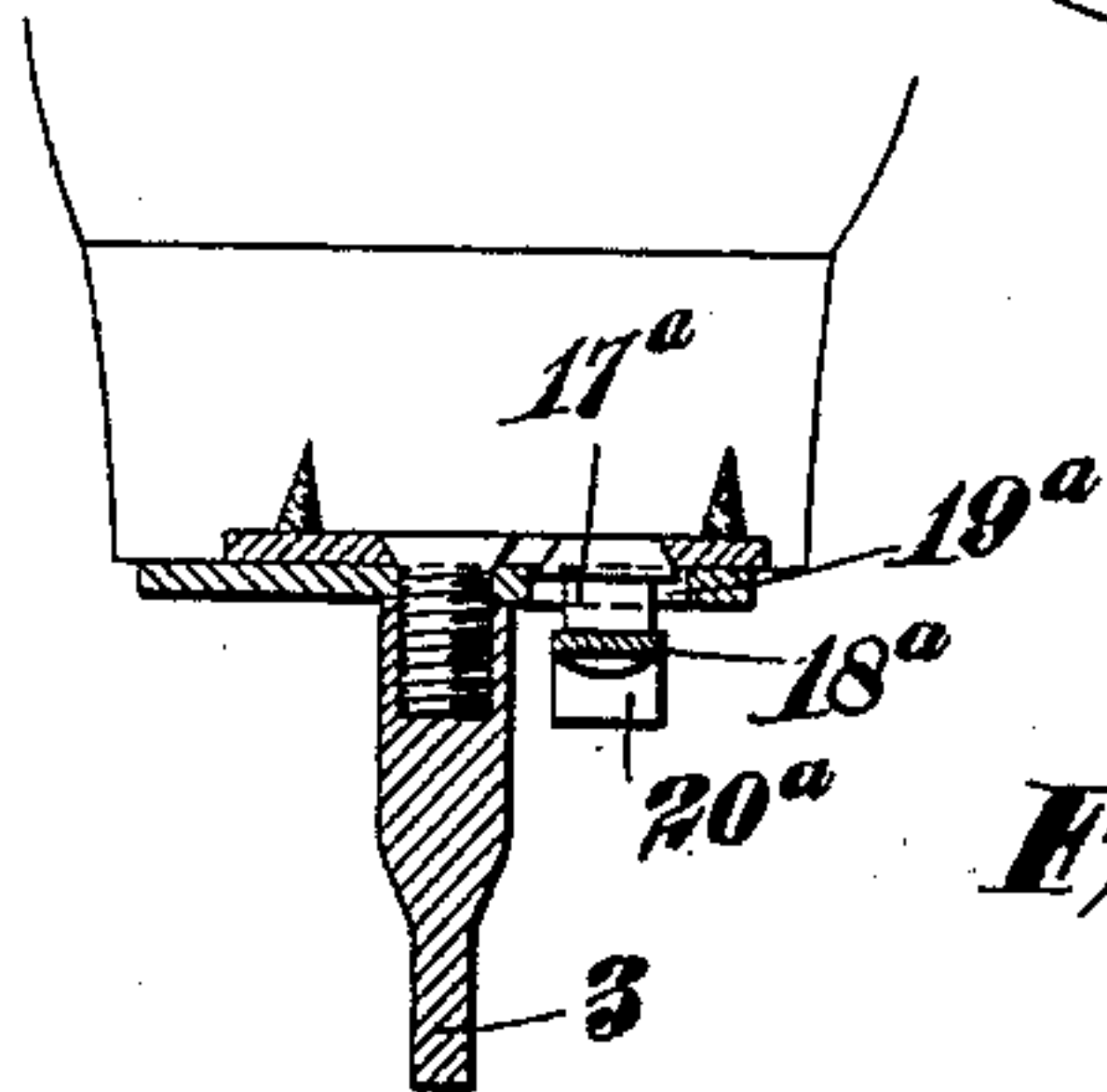


Fig. 9.

Witnesses;
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Inventor;
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UNITED STATES PATENT OFFICE.

OTTO ARLUND, OF SUPERIOR, WISCONSIN.

SKATE.

No. 908,536.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed April 13, 1908. Serial No. 426,841.

To all whom it may concern:

Be it known that I, OTTO ARLUND, a citizen of the United States, residing at Superior, county of Douglas, and State of Wisconsin, have invented certain new and useful Improvements in Skates, of which the following is a specification.

My invention relates to skates and the object of my invention is to provide improved means for attaching the skate to the shoe, whereby the skate may be readily attached or detached without the employment of clamps or straps.

A further object of my invention is to provide a device as mentioned, which shall be of simple construction and easily operated.

Other objects will appear hereinafter.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which—

Figure 1 is a side elevation of a skate embodying my invention in its preferred form, Fig. 2 is a top plan thereof, Fig. 3 is a bottom plan view of a shoe illustrating the attaching plates in position thereon, Fig. 4 is a vertical longitudinal section on the line $x-x$ of Fig. 2 illustrating the attaching plates also in section and a portion of the shoe being illustrated in dotted lines, Fig. 5 is a detail view of a slightly modified form of locking device, Fig. 6 is a side elevation of a modified form of my invention, Fig. 7 is a top plan view thereof, Fig. 8 is a bottom plan view of a shoe with the attaching plates in position thereon, and Fig. 9 is a section on the line $x-x$ of Figs. 7 and 8.

Referring to Figs. 1 to 4 inclusive in the drawings, 1 indicates the sole-plate and 2 the heel-plate of a skate, which are connected to the runner 3 by the posts 4, 4' and 4''. Extending upwardly from the plates 1 and 2 and preferably above the posts 4 and 4' are flattened studs 5 and 6, there being one stud 5 extending centrally from the heel plate 2 and a pair of studs 6 extending above the plate 1 at substantially the ball of the foot. These are inverted frusto-conical members forming means for attaching the skate to the shoe or rather to plates secured to the heel and sole of the shoe. The studs 6 constitute the heads of rivets or screws 7 extending through the plate 1 and the spread head 4^a of the post 4' and the stud 5 constitutes the head of a screw 8 tapped through the plate 2 and into the rear post 4. The studs are

slipped into longitudinal slots or recesses formed in plates which are secured to the heel and sole of the shoe and are automatically locked therein by a spring latch which prevents accidental displacement of the studs and separation of the skate from the shoe.

9 indicates a plate secured to the sole of the shoe and preferably at about the ball of the foot. This is provided with a pair of parallel longitudinally disposed slots or recesses 10 having the inclined side walls 11 which are engaged by the inclined walls or periphery 6' of the studs 6. The slots or recesses 10 extend through the front edge of the plate 9 and the skate is placed in position by slipping the studs into said slots by a backward longitudinal movement.

12 indicates the heel plate which is secured to the heel of the shoe as by the screws 13. This is provided with a longitudinal recess 14 to receive the stud 5 and having the inclined side walls 15 to engage the inclined walls or periphery 5' of the stud 5. The recess 14 does not extend through the edge of the plate as do the slots or recesses 10, hence it is provided with an enlarged portion 16, through which the stud is inserted. The portion 16 is arranged directly behind the main portion 14 of the recess. After the studs 6 are engaged with the walls of the slots 10 as before described, the skate is drawn back sufficiently to permit the stud 5 to enter the portion 16 of the recess, after which, it is shoved forwardly, shoving the stud into the portion 15. After the studs are properly positioned in their respective recesses, a spring latch automatically engages the portion 16 of the recess 14, locking them in position and preventing accidental disengagement thereof.

The latch comprises a pin or stud 17 fixed to a spring arm 18, the latter being secured to the underface of the plate 2 on the skate and the former extending through a recess 19 in the plate into engagement with the portion 16 of the recess 14. The stud 5 being in engagement with the front end of the recess 14 and the pin 17 being in engagement with the rear wall of the portion 16, it is obvious that the skate will be held firmly in position until the pin 17 is retracted. To facilitate ready retraction of the pin, the rear end of the spring arm 18 is curved downwardly and outwardly forming a finger piece 20. As shown in Figs. 1 to 4 the spring arm 18 is arranged centrally of the plate 2

and is apertured as at 21 to receive the post 4. With this construction the spring arm must be placed in position before the skate is assembled.

5 In Fig. 5 I have illustrated a modification of the latch wherein the spring arm 18' is arranged to one side of the post 4 and is offset as at 22 to receive the pin 17. With this construction the latch may be secured in
10 place after the skate is assembled, and may be readily replaced if required.

In Figs. 6 to 9 inclusive I have illustrated a further modification. As shown therein the plates 1 and 2 are provided with the studs 6 and 5 as in the foregoing modification. The plate 9 is replaced by a plate
15 9^a having a pair of similar recesses 22, the side walls 23 of which are inclined similarly to the walls 11 and for a like purpose. Instead of extending the slots or recesses 22 through the front edge of the plate, the front ends of the slots are enlarged as at
20 24 to permit entry of the studs 6, after which the studs are drawn back to the rear end of
25 the recesses.

The plate 12 is replaced by the plate 12^a on the heel of the shoe having an aperture or slot 14^a similar to the slot 14 except that it extends transversely of the heel instead
30 of longitudinally thereof, the enlarged portion 16^a being to one side instead of to the rear of the portion 14 thereof. The latch in this form comprises a substantially straight spring arm 18^a having its end bent
35 downwardly forming the thumb piece 20^a, and the pin 17^a which extends through an aperture 19^a in the heel plate and into the

portion 16^a of the recess. To secure the skate to the shoe, the studs are inserted in the portions 24 of the slots 9^a and are then
40 drawn back into the portions 22. The stud 5 is then placed in the portion 16^a of the slot or aperture in the plate 12^a, and then moved into the portion 14^a by a slight torsional movement of the skate or a slight
45 lateral movement of the heel portion, a spring latch locking the skate into position by the pin 17^a entering the portion 16^a of the slot. It is obvious that by depressing the
50 spring latch, the skate may be readily detached by a slight lateral movement of the heel and then a forward movement of the skate.

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

In a device of the class described, in combination with the sole and heel plates of a skate, studs on said sole plate adapted to engage corresponding slots in the shoe plate,
60 a fixed stud on said heel plate adapted to engage a corresponding slot in a shoe plate secured to the heel and a spring latch carried by the heel plate and adapted to enter the slot behind the fixed stud on the heel
65 plate, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OTTO ARLUND.

Witnesses:

IDA HIRSCH,
G. G. NEWTON.