R. Tillman,

Skate.

No. 45,093. Patented Nov. 15, 1864.

Fig. 1.

Fig. 4.

Fig. 2.

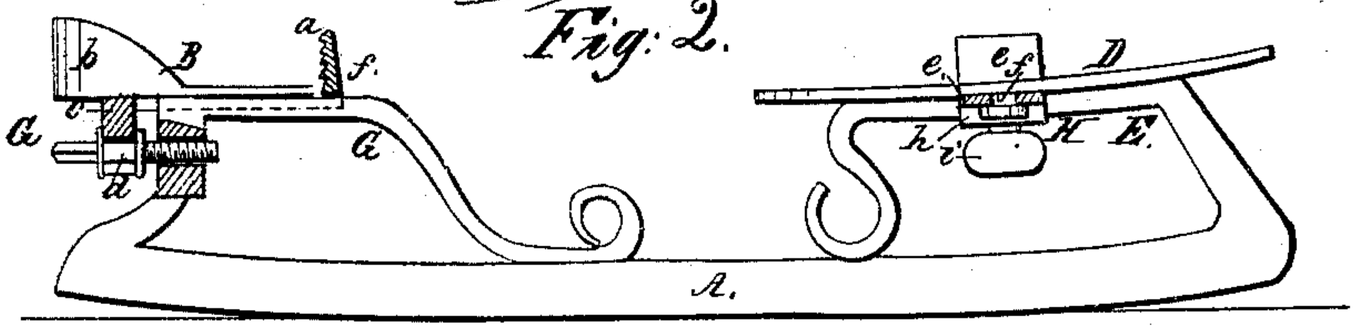
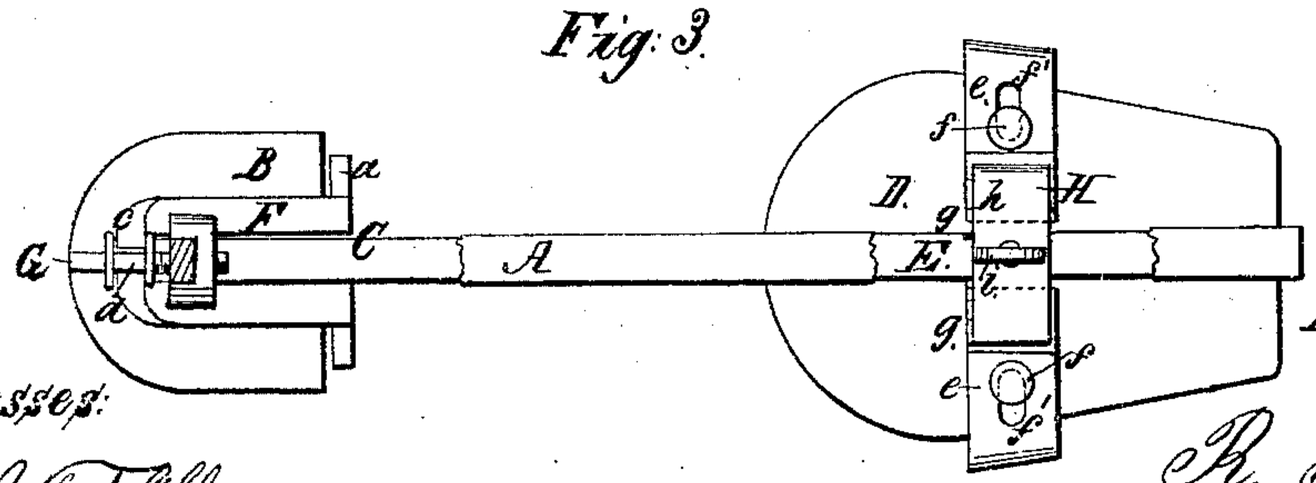


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

R. TILLMANN, OF NEW YORK, N. Y.

IMPROVEMENT IN SKATES.

Specification forming part of Letters Patent No. **45,093**, dated November 15, 1864.

To all whom it may concern:

Be it known that I, R. TILLMANN, of No. 229 William street, in the city, county, and State of New York, have invented a new and Improved Skate; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a perspective view of my invention, showing its practical operation. Fig. 2 is a sectional side elevation of the same. Fig. 3 is an inverted plan of the same. Fig. 4 is a transverse vertical section of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a skate with an adjustable heel and an adjustable toe clamp. The heel-clamp consists of a slide provided with a slot to fit over a suitable guide which extends from the heel-post, and with a projecting flange on its inner end to catch over the breast of the heel, and with a forked lug applied, in combination with a screw provided with a double collar or neck and screwing into the heel-post of the skate, in such a manner that said slide can be dropped easily over the guide and screw, and by the action of the screw a positive motion is imparted to it in either direction. The toe-clamp consists of two slides, moving in a lateral direction, and provided with ratchet teeth, to operate in combination with a spring-catch, in such a manner that said slides are allowed to close up and to take a firm hold of the edges of the sole, but they are prevented from releasing the sole by the spring-catch engaging with the ratchet-teeth on their under side.

A represents the skate-iron, which connects with the heel-plate B by means of the standard C and with the toe-plate D by means of the standard E, as clearly shown in Fig. 2 of the drawings. The standard C forms the guide for the slide F, which forms the principal working part of the heel-clamp. This slide is slotted, and made to drop over the upper edge of the horizontal portion of the standard C close under the heel-plate, and it is provided with a vertical flange, *a*, which is drawn up against the breast of the heel and presses the same up against the curved rear flange, *b*, of the heel-plate. The slide F is furnished at its rear end with a forked lug *c*, which drops into a neck, *d*, formed by two collars secured at the proper distance apart to the screw G, which serves to operate the slide. This screw is tapped into the heel-post, and in other skates of a somewhat similar construction to mine the lug projecting from the slide is furnished with a round hole, through which the head of the screw passes, and a shoulder or collar on the shank of the screw bears on the inside of the lug, and causes the slide to move in one direction by the action of the screw, but in the opposite direction it has to be pushed by hand or other power.

By my improvement the screw imparts to the slide a positive motion in either direction, and the skate can be readily attached or detached.

The toe-clamp H consists of two slides, *e e*, which move in a lateral direction, one opposite the other, on the under side of the toe-plate D. Each slide is held in place by a screw or bolt, *f*, passing through a slot, *f'*, and secured in the toe-plate, and said slides are also provided on their under surfaces with ratchet-teeth *g* which point outward, as clearly shown in Fig. 4 of the drawings. A spring-catch, *h*, which is fastened to the standard E by means of a thumb-screw, *i*, serves to retain the slides in the desired position. The ends of this catch form hooks, which drop in the ratchet-teeth on the under surfaces of the slides and prevent the same from spreading, but the peculiar shape of the ratchet-teeth allows of closing up the slides so that they take a firm hold on the edges of the sole.

By this arrangement a skate can be readily secured to the foot of the skater. The heel-clamp and toe-clamp accommodate themselves to boots of different size, and the ex-

pense of manufacturing my skate is trifling compared with the great advantages obtained by the same.

I claim as new and desire to secure by Letters Patent—

1. The forked lug *c*, projecting from the outer or rear end of the slide F, and applied in combination with the neck *d* in the shank of the screw G, in the manner and for the purpose set forth.

2. The serrated laterally-moving slides *e e*, in combination with the spring-catch *h* and toe-plate D, constructed and operating substantially as and for the purpose described.

R. TILLMANN.

Witnesses:
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