

R. J. STUART.

Improvement in Skate Fastenings.

No. 124,228.

Patented March 5, 1872.

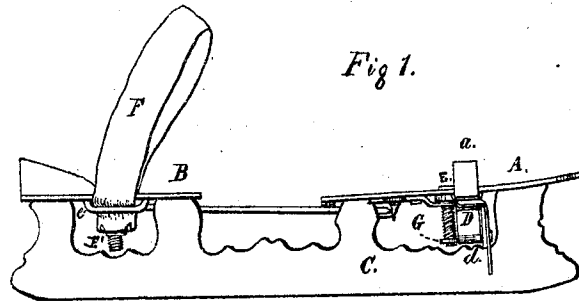


Fig 2.

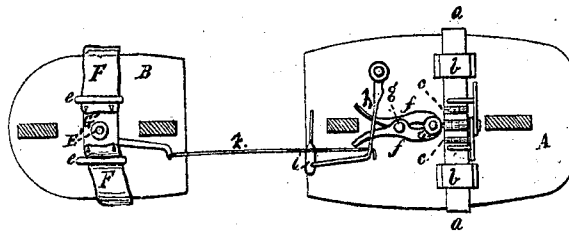


Fig 4.

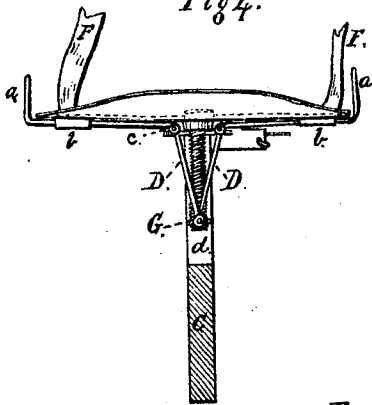


Fig 3.

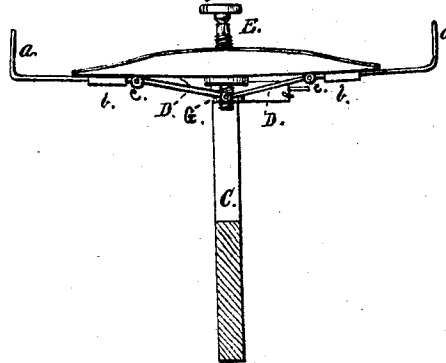
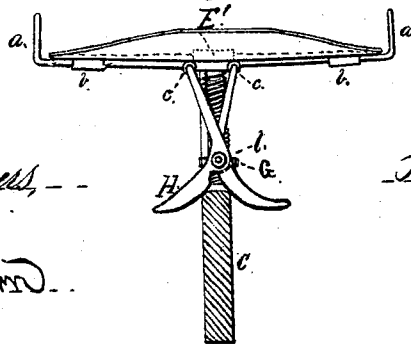


Fig 5.



Witnesses.

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ROBERT J. STUART, OF YONKERS, NEW YORK.

IMPROVEMENT IN SKATE-FASTENINGS.

Specification forming part of Letters Patent No. 124,228, dated March 5, 1872.

Specification describing certain Improvements in Skate-Fastenings, invented by ROBERT J. STUART, of Yonkers, in the county of Westchester and State of New York.

Nature and Objects of the Invention.

My invention relates to that class of skates which are secured to the feet by clamps or fastenings in place of the ordinary straps and buckles; and consists in the construction and arrangement of parts fully described hereafter, which act automatically to hold the skates securely in place upon the feet and prevent them working loose.

Description of the Drawing.

Figure 1 is a side elevation of a skate with my improved fastenings applied thereto. Fig. 2 is an under-side view of the same. Figs. 3 and 4 are end views, partly in section, the former showing the position of the parts when the skate is ready to receive the foot of the wearer, and the latter showing the clamps as closed to grasp the sole of the boot. Fig. 5 is a modification of the hinged levers, shown in the other views, which act to hold the clamps together.

General Description.

A and B represent the toe and heel-plates, and C the runner of a skate, of ordinary construction. The plate A has two jaws or clamps, *a a*, which slide in suitable bearings *b b* on the under side of it, and have their ends bent up so as to properly grasp the edge of the sole. The inner ends of these clamps are hinged at *c c* to the jointed levers D, and are moved and held by them. The lower end D of these jointed levers has a screw-nut, G, in which the lower end of the vertical screw-piston E works. This piston moves up and down through a hole in the toe-plate A, and has a flat head, which projects slightly above the level of the plate A when the skate is fastened upon the foot. As thus arranged these parts assume the position shown in Fig. 3 when the skate is about to be placed upon the foot. The clamps *a a* are extended, the hinged levers D are opened to nearly a horizontal position, and the piston E is raised and projects above the toe-plate. If the foot be now placed upon the plate A and pressed

down upon the piston E the hinged levers D will be forced together, and will act to draw the clamps *a a* toward each other, and so gripe the edge of the boot-sole between them. In this manner the fastening operates automatically to grasp the foot of the wearer and hold the skate in place by the act of pressing the foot upon the head of the piston E. In order to prevent the piston rising up during the motions of the skater, as when the pressure of the foot is removed from the plates each plate has a hinged catch which embraces the piston E and engages with a groove or notch cut in the piston, so that it cannot rise until the catch is withdrawn. This catch (see Fig. 2) is formed of the two jaws *ff*, hinged at *g* and held against the piston E on either side by the slotted bar *h*, which holds the opposite ends of the jaws *f f* apart. The bar *h* is held in place, when the jaws are pressed against the piston, by the latch *i*, which engages with the end *j* of the bar and holds it down.

A similar arrangement of clamps may be applied to the heel-plate B, or the parts represented may be used. These consist of an endless leather strap or band, F, passing through loops *e e* on the under side of the plate B, and secured to the screw-nut G', in which the vertical piston E' works. This piston projects through the plate B and operates in the same manner as the one in the toe-plate A. This fastening acts in the same manner as the one on the toe-plate, and operates automatically, when the heel is pressed upon the plate, to tighten the strap by forcing the nut G' down and holding it in that position. A catch similar to that described above embraces the bolt G' and holds it from rising. This one is connected with the bar *h* by the link *k*, so that the two catches operate at the same time.

In place of the hinged levers D the modification shown in Fig. 5 may be used. This consists of two levers, H, pivoted at *l*, and connected at *c c* with the clamps, the lower ends of the levers being curved so as to embrace the runner C. When the piston E is pressed down these levers are forced against the runner and their lower ends spread apart by it, so that their upper ends act to draw the clamps *a a* together and gripe the edge of the boot-sole between them. The pistons E E' are screw-

threaded and work in the screw-nuts G G' so that their length above the plates A B may be regulated and the extent of motion of the clamps adjusted at pleasure to suit any width of sole, as the height of the piston above the plate when the clamps are opened to receive the foot governs the extent of motion of the clamps toward each other.

By this arrangement the parts are rendered both adjustable and automatic in their operation, and when properly constructed and applied to a skate will act to hold it securely in place upon the boot.

Claims.

1. The combination, with the plates A B attached to the runner C, of the automatic fastening, consisting of the piston E, jaws or clamps *a a*, and their connecting-levers D D, constructed, arranged, and operating substantially in the manner and for the purpose set forth and specified.

2. The screw-piston E and nut G, for adjusting the range of motion of the clamps *a a* to

the desired width, arranged and operating substantially as described.

3. The jaws *f f*, in combination with the grooved piston E, for locking the clamps *a a* in position upon the foot of the wearer, substantially as described and specified.

4. The fastening, consisting of the strap F, nut G', and piston E', applied to the plate B and combined with a locking device, constructed and operating substantially as described and specified.

5. The locking devices for the heel and toe fastenings, in combination with rod K, the parts being so constructed and arranged that the two fastenings may be simultaneously unlocked or locked, substantially as described and specified.

6. The combination, with the jaws *f f* and piston E, of the cam-levers H, constructed, arranged, and operating substantially as described and specified.

Witnesses: ROBERT J. STUART.
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