

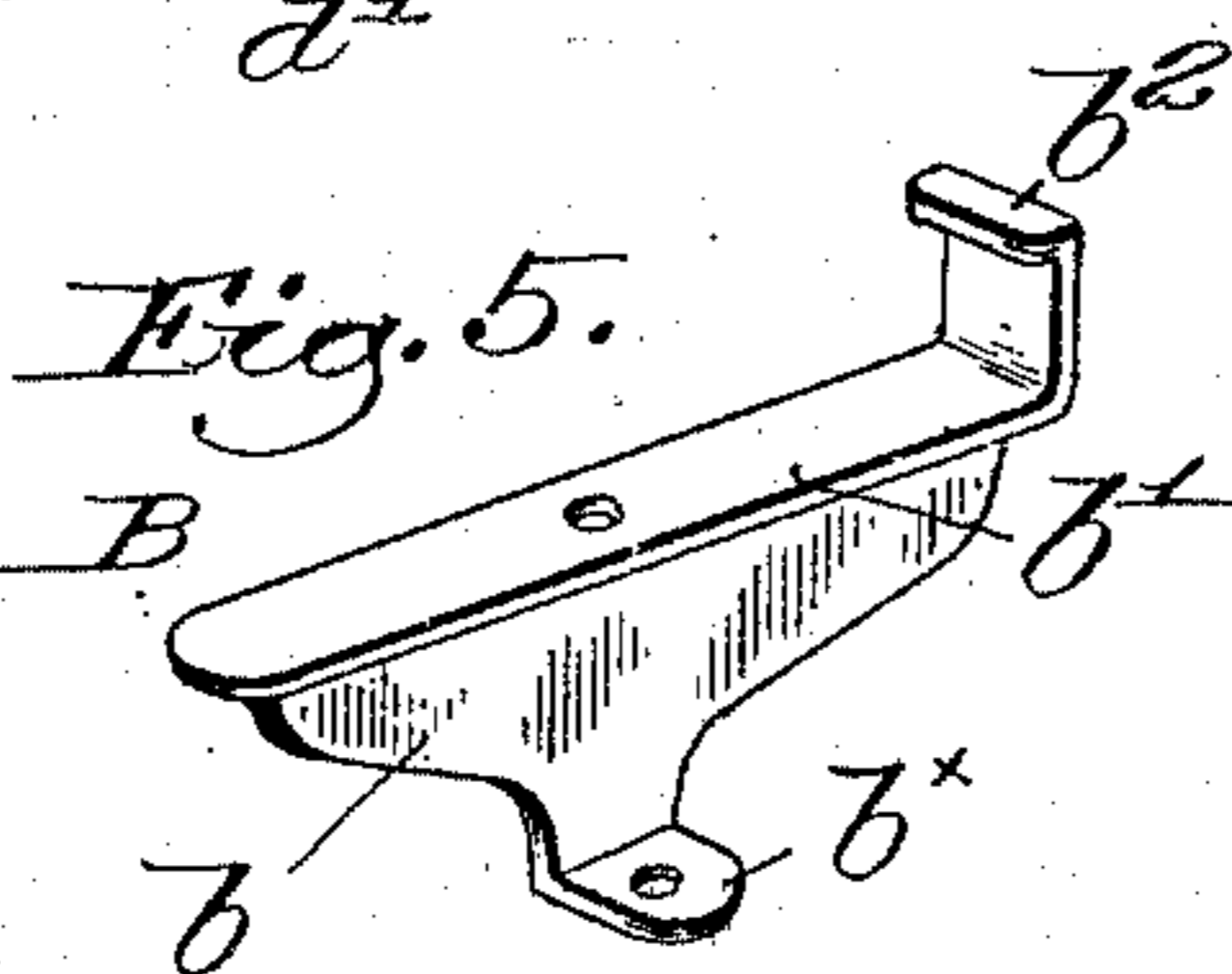
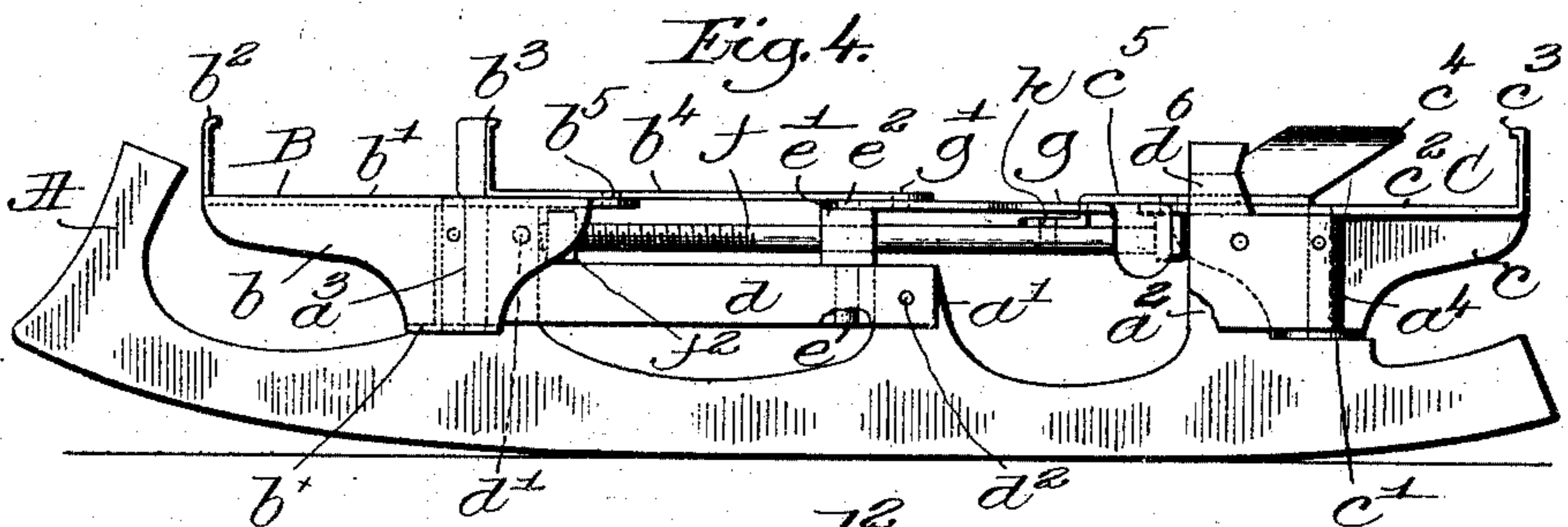
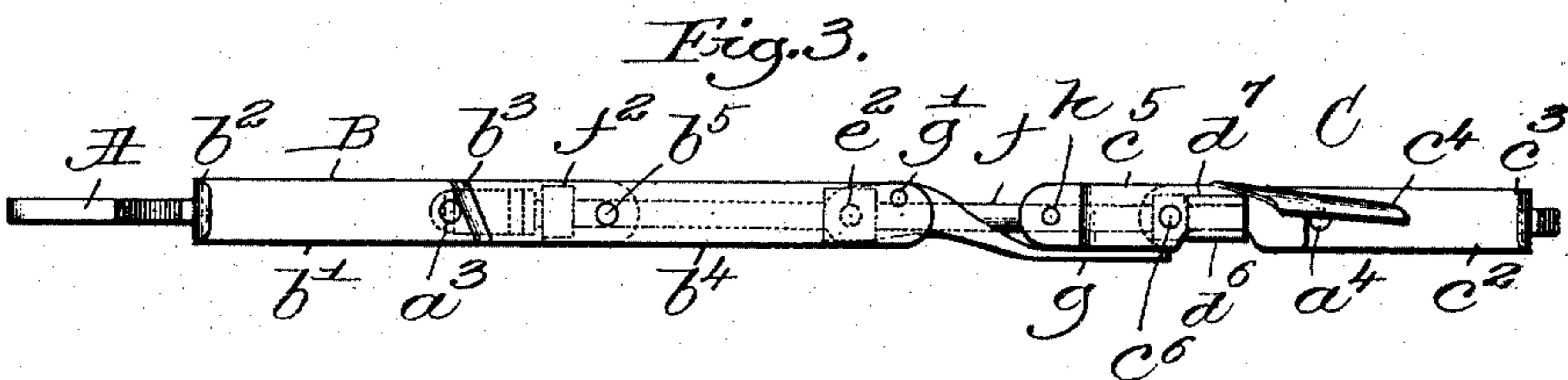
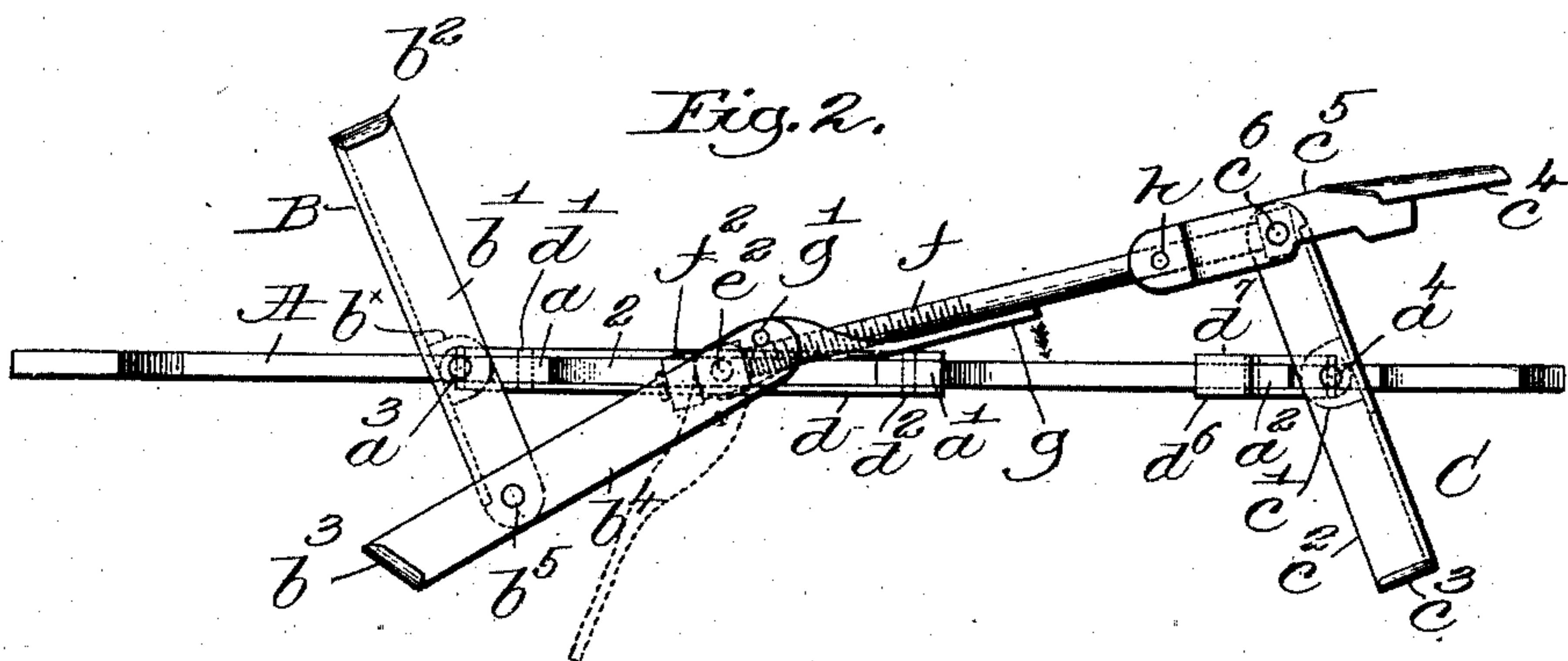
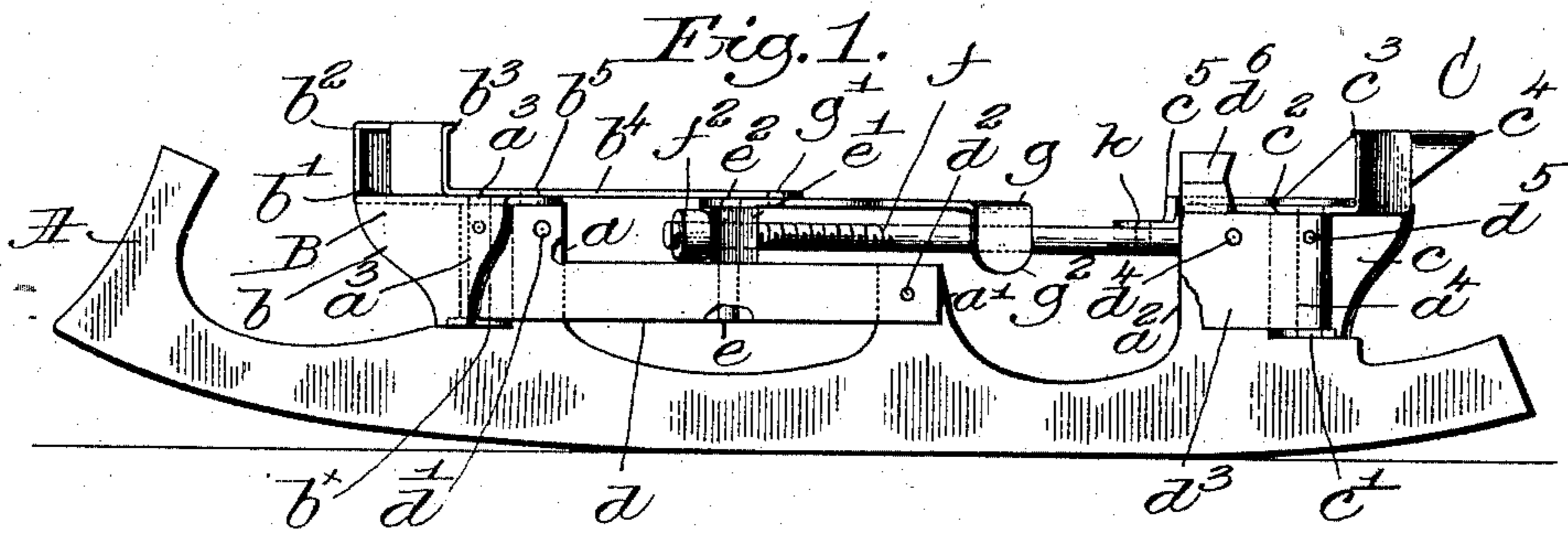
J. E. MARTIN.

SKATE.

APPLICATION FILED JAN. 18, 1904.

928,528.

Patented July 20, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

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SKATE.

No. 928,528.

Specification of Letters Patent.

Patented July 20, 1909.

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To all whom it may concern:

Be it known that I, JOHN E. MARTIN, a citizen of the United States, residing at Somerville, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Skates, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention has for its object the production of a novel skate, the sole and heel-sustaining parts of which, and the parts which clamp the sole and heel, are capable of being folded to occupy a position substantially parallel with the skate runner.

Prior to my invention all clamp skates, so far as I am aware, have had the sole and heel supports fixed with relation to the runner, but the novel skate herein to be described has a pivoted sole-sustainer and a pivoted heel-sustainer. Both of said sustainers have at their opposite ends suitable lugs to engage respectively the edges of the sole and the edges of the heel, and a lever mounted on a sliding fulcrum between the sole-sustainer and heel-sustainer may be turned in one direction to cause the lugs to clamp firmly between them both the sole and the heel, the movement of the lever in the opposite direction releasing the lugs and permitting the skate to be detached from the sole and heel. The sole and heel-sustainers are free to be turned about pivots substantially parallel with the side of the skate runner. The sole-sustainer has at one end a fixed lug to engage one edge of the sole of the shoe, and the heel-sustainer also has at one end a fixed lug to engage one side of the heel of the shoe, and in the form in which my invention is herein illustrated, said fixed lugs are located at opposite sides of the runner. The sole-sustainer and the heel-sustainer each have two lugs, the lugs opposite the fixed lugs being herein named auxiliary lugs. Preferably in practice the auxiliary lugs will be carried by bars pivoted respectively on the ends of said sole and heel-sustainers, and the ends of said bars will be so connected by or through a lever on a sliding fulcrum and a rod, that by turning said lever the sole and heel-sustainers and their lugs may be made to clamp between them the sole and heel of the shoe.

Figure 1 in side elevation represents a

skate embodying my invention, the skate being supposed to be attached to a shoe; Fig. 2 a top view of the same; Fig. 3 a top view of the skate folded; Fig. 4 a side elevation of Fig. 3; Fig. 5 shows the sole support detached.

The runner A which may be of any usual shape has as herein shown three projections a , a' , a^2 , and two uprights or studs a^3 , a^4 , shown by dotted lines Figs. 1 and 4. The stud a^3 serves as a pivot for a sole support B shown detached Fig. 5, it comprising an upright body b having at its lower end an ear b^x having a hole to embrace said stud, the upper edge of the body being bent to form a bar b' to contact with the sole of a boot or shoe. The bar has at one end a lug b^2 and a hole in the bar fits over the upper end of the stud. The sole support to properly grasp the opposite edges of a shoe sole must have two lugs, and consequently there is a second lug b^3 represented as movably mounted with relation to the sole support. The second lug is shown as forming part of a bar b^4 pivoted on the bar b' by a stud b^5 said stud forming an integral part of bar b' .

The heel support C is composed of a metallic body c having at its lower end an ear c' that embraces the stud a^4 , while the upper portion of said body is turned over to constitute a bar c^2 to sustain the tread end of the heel of a boot or shoe. The heel sustainer that it may grasp the side walls of the heel of a shoe must have two lugs, the one c^3 rising from one end of said bar, and as herein shown the second lug c^4 is extended from a bar c^5 pivoted on the bar c^2 at c^6 . The opposed lugs b^2 , b^3 , grasp between them the sole, and the opposed lugs c^3 , c^4 , the heel of a shoe.

The uprights a , a' , and the stud a^3 , are inclosed by a band d , confined to the uprights by rivets d' , d^2 , the band as shown at the left Figs. 1 and 2 inclosing the stud a^3 , while the upper side of the band constitutes a rest for the bar b' of the sole sustainer. The space between the parallel members of the band is entered loosely by the foot e of a fulcrum block e' having a hole that is entered by the threaded end of a rod f , the rear end of which is connected with the stud or pivot c^6 , the threaded part of said rod being passed through the hole in the fulcrum block where it receives a nut f^2 . The fulcrum block has at its top a stud e^2 on which is pivoted a lever

g, the latter being jointed between its ends loosely by a pin *g'* with the bar *b*⁴. The bar *c*⁵ is shown as connected by pin *h* with rod *f* between its ends.

5 It is supposed that the lugs *b*², *b*³, *c*³, *c*⁴, Fig. 2, are in position to engage respectively the sole and heel of a shoe, the nut *f*² at such time contacting with the fulcrum block and the lever *g* occupying its operative position
10 with the lip *g*² arrested at the completion of its operative stroke by contact with some part of the skate, as for instance the rod *f*.

The upright *a*² and stud *a*⁴ are inclosed by a metal strip *d*³ connected therewith by rivets *d*⁴, *d*⁵, and the underside of the bar *c*² rests
15 on the upper edge of the strip. The strip has an extension *d*⁶ having an overturned lip *d*⁷ having a recess below said lip in which may enter a portion of the heel sustainer when the
20 latter is turned to occupy a position parallel with the runner, the edge of the extension or lip nearest the stud *a*⁴ constituting a stop against which acts the breast of the heel of the shoe whose tread face contacts with the
25 heel sustainer.

To separate the lugs of the opposed pairs farther than shown in Fig. 2, so that the sole and heel of a boot may be readily placed against the sole and heel support between
30 said lugs, I may turn the lever *g* in the direction of the arrow Fig. 2, and the skate having been applied to the shoe, the lever *g* will be turned into the full line position. If the skate is to be folded to be carried in the
35 pocket or in a pocket book, then the sole and heel support will be turned on the studs *a*³, *a*⁴, until they are brought into a position substantially parallel with the runners, the nut *f*² being moved forwardly substantially to
40 the side of the projection *a*, the foot of the fulcrum block sliding in the space 2 toward the rear end of the skate.

I believe myself to be the first to produce a skate in which the sole and heel of the shoe
45 contact with a pivoted sole and heel sustainer which in its operative position crosses the runner, and which supports are capable of being folded into a position substantially in the line of the length of the runner, and so
50 also I believe that I am the first to provide a pivoted sole support and heel support capable of being turned into a position to cross the runner with lugs to engage the opposite edges of the sole and of the heel of a boot or
55 shoe, and consequently the invention is not to be limited to the exact construction shown for the said pivoted sole support, and heel support, and their lugs, and I consider as within the scope of my invention any form of
60 pivoted sole and heel supports having at their opposite ends lugs to engage the side edges of the sole and heel, and any connections however constructed between said sole support and heel support, whereby by turn-
65 ing a lever said lugs may be made to grasp

harder and harder the edges of the sole and heel.

Having fully described my invention, what I claim and desire to secure by Letters Patent is:—

1. In a skate, a runner, a pivoted sole-sustainer having at one end a main lug and provided at its other end with a movable auxiliary lug, a sliding fulcrum block, a lever
70 connected at one end with said block and operatively connected between its ends with the part of said sole-sustainer having said auxiliary lug, whereby the movement of said lever causes said lugs to clamp between them
75 the edges of the sole.

2. In a skate, a runner having a pivoted heel sustainer provided at one end with a main lug and having at its other end a movable auxiliary lug, a sole sustainer comprising
80 a bar having a main lug and a bar having an auxiliary lug, a pivoted lever, a movable fulcrum for said lever, said lever being loosely connected to the auxiliary lug bearing bar on the sole sustainer, and a rod loosely connected
85 with said movable fulcrum, said lever and rod jointly operating said sole and heel sustainers, whereby movement of said lever causes the lugs of both sustainers to move
90 one toward the other to grasp between them the sole and heel of a shoe.

3. In a skate, a runner, a pivoted heel sustainer having lugs, means to turn said sustainer that said lugs may be made to clamp
95 a heel between them, and a heel breast stop having a recess that said heel sustainer may enter when the heel sustainer is put into a position substantially parallel with the runner, the skate being then folded.

4. In a skate, a runner having a stud rising therefrom, a brace connected with the runner
105 and inclosing said stud, a sole sustainer having a main and an auxiliary lug, and adapted to be turned about the upper end of said stud, and a lever operatively joined with said sole sustainer and having a sliding
110 fulcrum.

5. In a skate, a runner having a stud rising therefrom near the heel end thereof, a heel-sustainer having one arm pivoted on said
115 stud above the runner, and a brace connected with the runner and inclosing said stud.

6. In a skate, a runner, two studs in line with the width of the runner, two pairs of clamping sustainers, each comprising two
120 lug bearing arms one pivoted to the other, one arm of each pair of arms being pivoted on each of said studs respectively, and a device to move said clamping sustainers that their lugs will meet the edges of the sole and heel, and clamp the same to hold the skate in
125 position attached to the sole and heel of a shoe.

7. In a skate, a runner, a pivoted sole sustainer, and a pivoted heel sustainer, each of
130 said sustainers having lugs, a lever intermedi-

ate said sole and heel sustainers, and connected with the sole sustainer, a sliding fulcrum for said lever, said fulcrum pivotally connected with one arm of said sole sustainer, and a rod connecting said fulcrum to the heel sustainer, the effective length of said rod being made adjustable to enable the lugs to be readily adapted to the sole and heel.

8. In a skate the combination of a runner, a sole sustainer mounted on a pivot parallel with the side of the runner and having a lug at one end, and a bar pivoted on the opposite end of said sole sustainer and having a lug at one end, a stud, parallel strap members secured to the runner to receive and guide said stud between them, a lever connecting said stud with said bar, whereby the turning of said lever will cause the stud to slide and the operation of the sole sustainer and bar.

9. In a skate, a runner, a sole sustainer comprising a body mounted on a pivot parallel with the side of the runner, and having at one end a lug, and a bar pivoted on the opposite end of said body and having a lug at one end, a sliding fulcrum block connected with one end of said bar, means to guide and sustain said fulcrum block loosely, the sliding of said fulcrum block forwardly toward the front end of said skate causing said lugs to be separated to receive between them the sole of a shoe, and a heel sustaining member comprising a body having at one end a lug, and a bar pivoted to the opposite end thereof and provided at one end with a lug, a rod and a lever, the opposite end of said bar being operatively connected through said rod and lever with said sliding fulcrum block, whereby by turning said lever, the fulcrum block may be moved toward the heel of the runner, the lugs of both the sole sustainer and heel sustainer then approaching each other and

clamping between them the sole and heel to thus confine the skate to said sole and heel.

10. In a skate, a runner, a pivoted sole support and a pivoted heel support, each comprising two bars having lugs, one bar of each pair being pivoted on the runner and the second bar of each pair on its mate, and means intermediate the two members of said supports that are pivoted on their mates whereby said supports may be turned that the lugs of said supports may be made to approach one the other and grasp between them the sole and heel.

11. In a skate, a runner, a pivoted sole support and a pivoted heel support, each comprising two arms provided with lugs, one arm of each support crossing the runner when open in their operative positions, all of said arms being adapted to be turned to occupy a position substantially parallel with the skate runner when the latter is closed.

12. In a skate, a runner having two studs, two parallel bars with a space between, a heel sustainer and a sole sustainer each having lugs to engage the edges of the sole and heel, said heel and sole sustainers being pivoted to turn about said studs, a fulcrum block guided between said bars, said block having a hole, a rod extended through the hole of said block and having an adjusting nut, a lever connected at its end with said block and between its ends with a part of the sole support, the rear end of said rod being operatively joined with the heel support.

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

JOHN E. MARTIN.

Witnesses:

GEO. W. GREGORY,
EDITH M. STODDARD.