

No. 681,959.

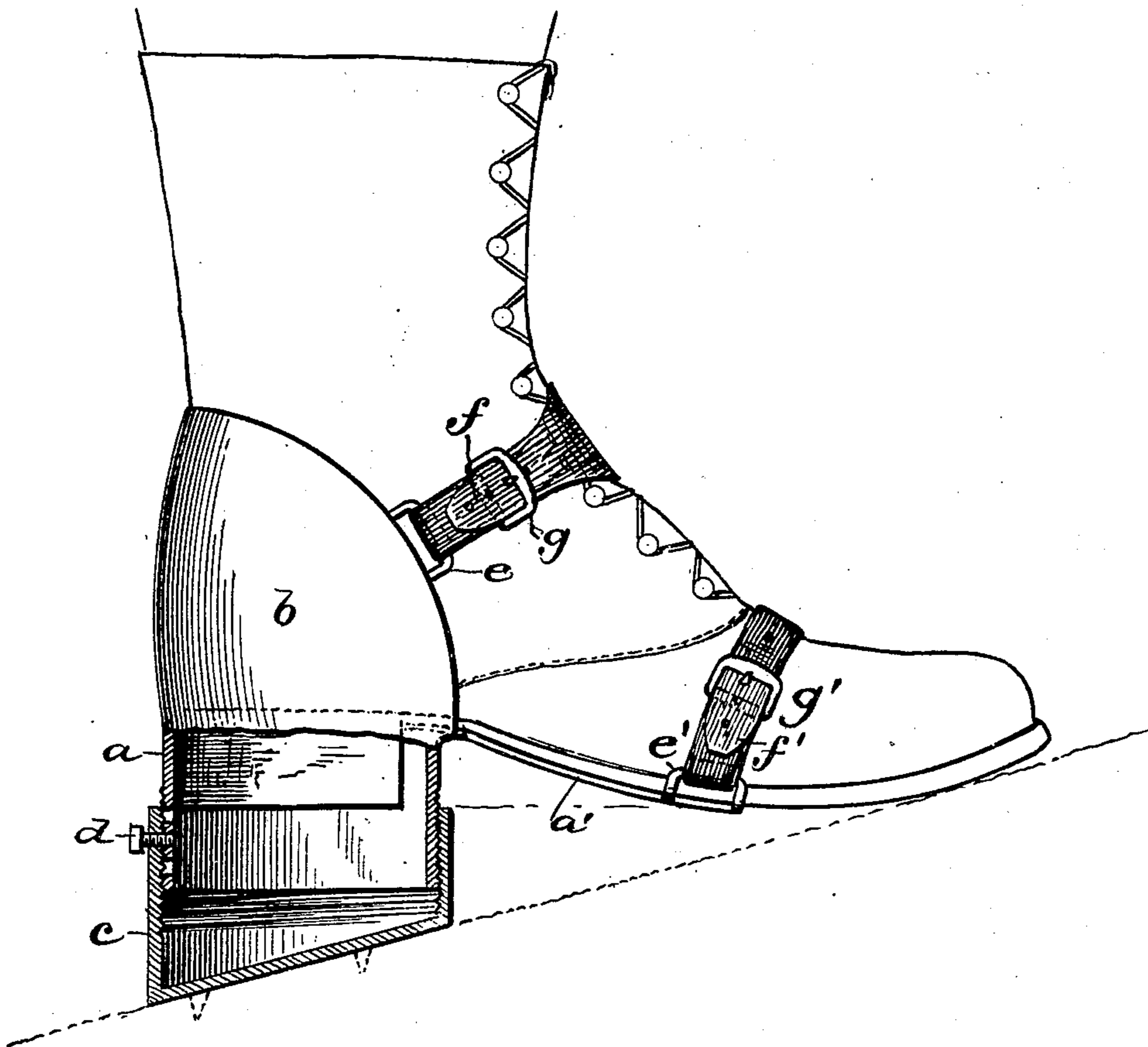
Patented Sept. 3, 1901.

J. E. FENNO.

GRADE CLIMBING ATTACHMENT FOR SHOES.

(Application filed Nov. 2, 1900.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN EDWARD FENNO, OF HOISINGTON, KANSAS.

GRADE-CLIMBING ATTACHMENT FOR SHOES.

SPECIFICATION forming part of Letters Patent No. 681,959, dated September 3, 1901.

Application filed November 2, 1900. Serial No. 35,249. (No model.)

To all whom it may concern:

Be it known that I, JOHN EDWARD FENNO, of Hoisington, in the county of Barton and State of Kansas, have invented a new and
5 useful Improvement in Shoe Attachments, of which the following is a specification.

My invention is in the nature of an attachment to a shoe designed to facilitate walking when ascending grades, as in mountain-climbing, &c.; and it consists in a device to be fastened to the shoe something after the manner of a lady's skate and which comprises a vertically-extensible heel portion that is adapted to elevate the heel to such a position as to
15 cause the bottom of the foot to be substantially horizontal in advancing uphill, as will be hereinafter fully described with reference to the drawing, in which the figure is a side view of the attachment applied to a shoe.

20 In the drawing, *a* represents a vertical tubular portion which is adapted to receive the heel of the shoe and is formed with or attached to a shank-piece *a'*, extending along under the instep, and which tubular heel portion is
25 also formed with or attached to a counter portion *b*, curving up around and inclosing the heel of the foot, like the rear portion of a lady's skate. This counter portion has on its sides attaching-loops *e*, to which a strap *f* and
30 buckle *g* are secured and which are designed to be fastened around the instep to hold the attachment onto the shoe. The shank portion *a'* has similar attaching-loops *e'* for another strap *f'* and buckle *g'*, which fasten
35 over the ball of the foot to securely hold the device in place. The heel portion *a* is preferably of cylindrical shape outside and has formed on it external screw-threads adapted to be engaged by interior screw-threads on an
40 adjustable external cap-piece *c*, which screws on the outside of *a* and is arranged to be turned up or down thereon, so as to give a greater or less elevation to the heel. When the cap *c* is turned to the position that gives
45 a proper elevation to the heel to compensate for the rise in grade, said cap is fixed to such adjustment by a set-screw *d*, which passes through the side of the cap and enters one of a series of holes in the socket or tube *a*, and
50 thus prevents the cap from rotating thereon.

The bottom portion of cap *c*, which comes in contact with the ground, is made of any desired inclination to suit the average rise in grade and is to be made thick enough and hard enough to resist the wear to which it is
55 subjected. Said cap may also be provided with calks to prevent slipping, as shown in dotted lines.

In applying and using my attachment the heel is raised to a position to bring the bottom of the foot to a level or horizontal position, which will be the long side of a right-angled triangle whose hypotheneuse represents the grade. The climbing of the hill will
60 thus be divested of much of the strain upon the ankle and foot, and a more erect and comfortable attitude may be preserved with a smaller tax upon the vital powers.

Having thus described my invention, what I claim as new, and desire to secure by Letters
70 Patent, is—

1. A grade-climbing attachment for a shoe, comprising a hollow part adapted to receive the heel of the shoe, with devices for attaching said hollow part to the foot, and an adjustable extension for said hollow part substantially as described.

2. A grade-climbing attachment for a shoe, comprising a hollow part adapted to receive the heel of the shoe, with devices for attaching said hollow part to the foot, a screw-threaded extension for said hollow portion, and a locking device for holding said extension to its adjustment substantially as described.

3. A grade-climbing attachment for a shoe, comprising a hollow part adapted to receive the heel of the shoe, a rigidly-attached counter fixed to the said hollow part and extending over the heel of the foot, and a rigidly-attached shank extending under the instep, said counter and shank having attaching straps and buckles, and an adjustable extension of the said hollow part substantially as described.

JOHN EDWARD FENNO.

Witnesses:

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