W. B. ALDEN.

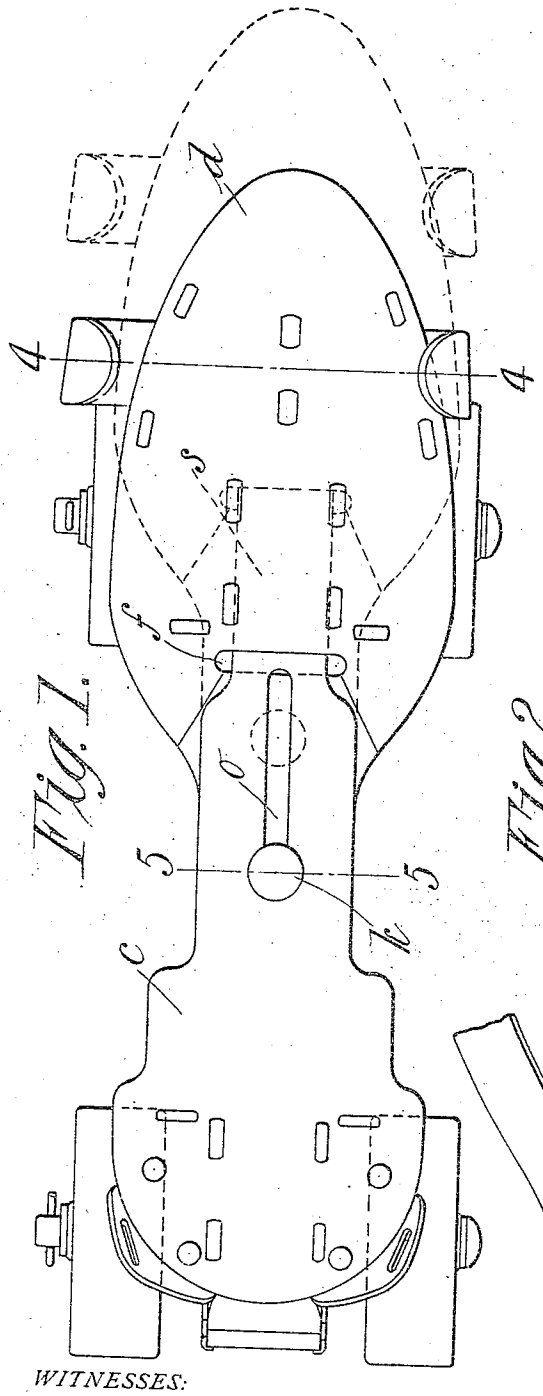
EXTENSIBLE SKATE.

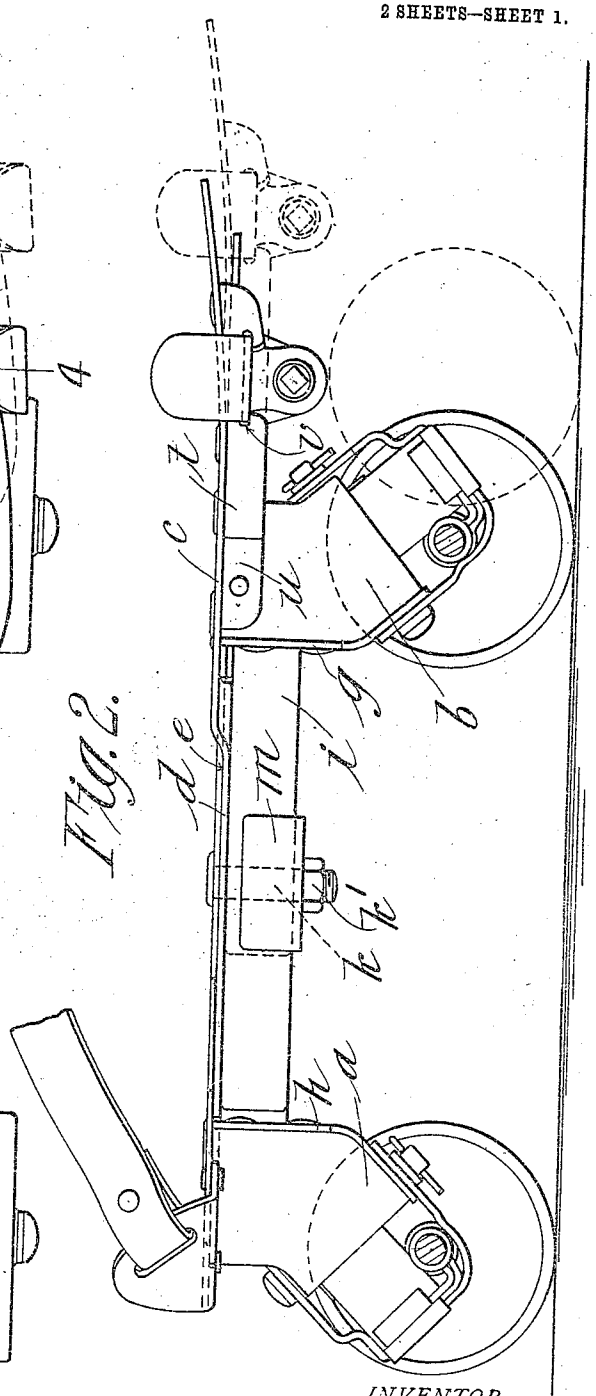
APPLICATION FILED AUG. 10, 1908.

946,308.

Patented Jan. 11, 1910.

2 SHEETS—SHEET 1.

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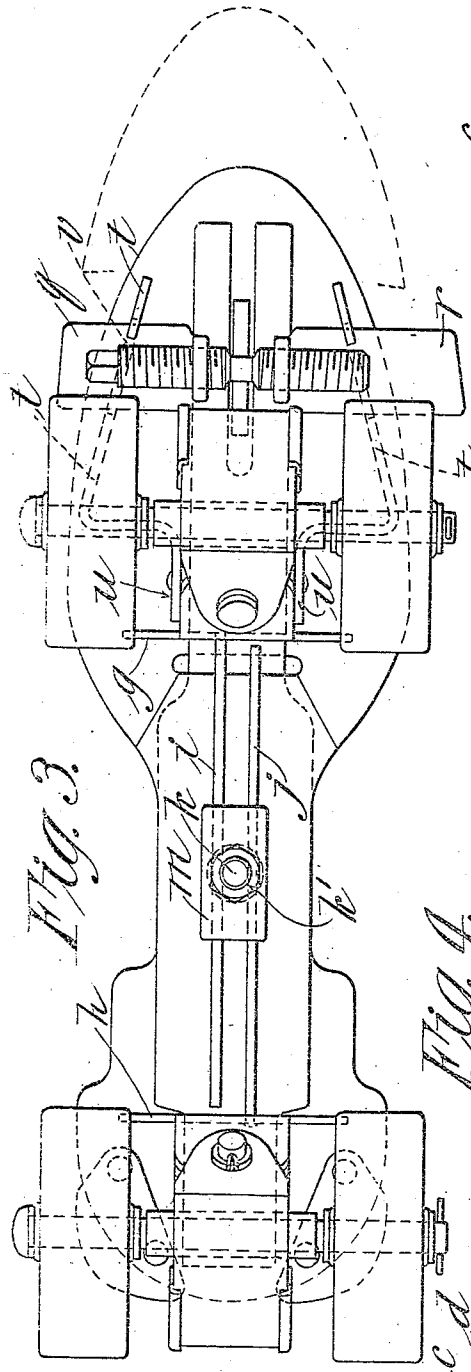

Fig. 3.

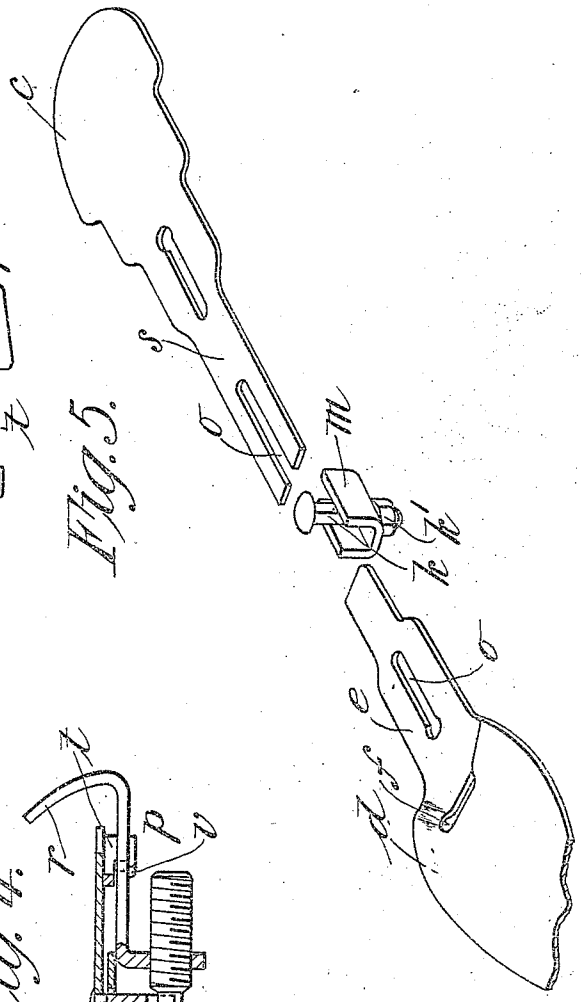

Fig. 5.

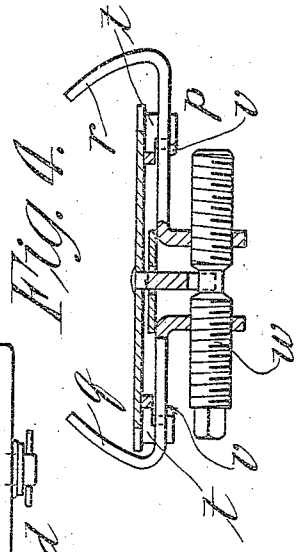

Fig. 4.

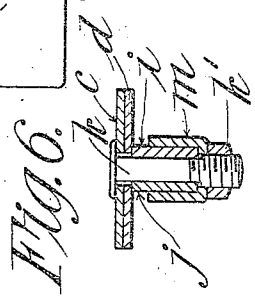

Fig. 6.

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# UNITED STATES PATENT OFFICE.

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## EXTENSIBLE SKATE.

946,308. Specification of Letters Patent. Patented Jan. 11, 1910.

Application filed August 10, 1908. Serial No. 447,740.

*To all whom it may concern:*

Be it known that I, WILLIAM B. ALDEN, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Extensible Skates, of which the following is a specification.

My invention relates to improvements in extensible skates, the object of the invention being to produce a skate that can be readily changed in length to permit its easy adjustment to different sizes of shoes and which, in its fully extended position, will possess the requisite rigidity to vertical pressure between the truck brackets.

The invention consists in providing the heel and sole plates with an extension member attached to each and located longitudinally thereof, said members being slidable one past the other underneath the plates, and in the employment of suitable clamping means to lock the sole and heel-plates and their respective extension members rigidly together to prevent the longitudinal movement of one plate relative to the other.

In the drawings forming part of this application,—Figure 1 is a top plan view of the assembled skate showing in dotted lines one of its extended positions, and in full lines the closed or contracted position. Fig. 2 is a side elevation of the same. Fig. 3 is a bottom plan view of the assembled extension skate the dotted lines showing a second position of the sole-plate. Fig. 4 is a vertical detail sectional view on the line 4—4 of Fig. 1 taken through the sole-clamping device. Fig. 5 is a detail perspective view of the extensible parts of my invention before assembling. Fig. 6 is a detail vertical sectional view of the clamping device on line 5—5, Fig. 1.

Referring to the drawings in detail, *a* and *b* designate the rear and forward truck frames; *c* the heel-plate, and *d* the sole-plate, the same being shown in perspective view in Fig. 5. It will be observed that the heel-plate *c* is made with a narrow portion at its forward end which is adapted to slide on the depressed or dropped portion *e* of the sole-plate *d*, and through the transverse opening *f* therein. On account of this depression in the sole-plate *d* the upper surface of the heel and sole-plates, when assembled, will lie in substantially the same horizontal plane.

The forward and rear truck-frames are provided with uprights *g* and *h* to which are secured in any suitable manner the longitudinally extending members *i* and *j*, as shown in the bottom plan view in Fig. 3 and are located in opposite sides of the median line of the skate and on opposite sides of the lock-bolt *k* (see Fig. 6). The extension members *i* and *j* pass, or lie within, the tightening clip *m*. The shank portion of the lock-bolt *k* engages the slots *o*, *o*, in the heel-plate and sole-plate, these slots being in registration when the skate is reduced to its smallest dimension.

The usual sole-clamping device is shown at *p* in Fig. 4 for operating the clamping side members *q* and *r* in opposite directions.

By providing a slot in both the heel and the sole plate it is unnecessary to secure the locking-bolt to either plate, and when the nut on the locking-bolt is turned up it will bind together the overlapping portions of the two plates, and of the extension members *i* and *j* more satisfactorily than if the bolt were secured in one of the plates rigidly.

The operation of my improvement is as follows: The reduced or narrow portion *s* of the heel-plate *c* is withdrawn or pushed into the sole-plate *d* until the proper distance between the sole and heel-plates is effected. The nut $k^1$ of the lock-bolt *k* is then tightened, which causes the clip *m* to draw the members *i* and *j* firmly against the underside of the sole-plate and at the same time clamps the overlapping portions *e* and *s* firmly together to prevent any movement of the same relative to each other. The clip *m* further prevents any lateral or transverse movement of the members *i* and *j* when the skate is used. The lock-bolt *k* serves further to space the members *i* and *j* from each other as well as to effectually lock these members to the sole and heel plates.

In order to strengthen or reinforce the clamping members *q* and *r* and transmit the strain thereon to the forward truck-frame, I provide the side braces *t* which extend from the truck at the point *u* forward of the sole-plate *d* and are notched, as shown at *v*, for receiving the clamping members *q*

and *r*, and at the same time permitting them to slide therein when the usual tightening screw *w* is operated.

What I claim, is:—

1. An extensible skate having in combination with the truck frames thereof, sole and heel-plate members directly secured to the truck-frames, longitudinally extending plate members one secured to the front truck-frame and one secured to the rear truck-frame, and means for clamping the longitudinally extending members to the sole and heel-plate members, the longitudinally extending members being arranged with their flat sides in vertical planes.

2. An extensible skate having in combination with the truck-frames, sole and heel-plates secured to the truck-frames and having sliding engagement with each other, a member carried by each truck-frame, and means, including a U-shaped clip and a lock-bolt, extending through said clip and between said members, for locking said members and plates together, said plates being spaced from each other to receive the lock-bolt, substantially as described.

3. An extensible skate having interconnected separate heel and sole plates, flat members, one carried by each truck-frame, spaced from each other and arranged with their flat sides in vertical planes, a clip, and means for drawing the clip into engagement with the said members and at the same time locking the members and plates together.

4. An extensible skate having in combination with the trucks thereof, flat members, one carried by each truck, spaced from each other and arranged with their flat sides in vertical planes, overlapping sole and heel-plates, a clip embracing the member carried by each truck, a bolt passing through the clip and overlapping plates and between said members, and a nut for securing said members and plates together.

5. An extensible skate-frame comprising forward and rear truck-frames, sole and heel-plates secured thereto and having an adjustable overlapping engagement with each other, parallel longitudinally extending plate members arranged with their flat sides in vertical planes, one being secured to the forward truck-frame and one to the rear truck-frame, and means comprising a clip and bolt device for locking said sole and heel-plates and said members together, whereby a rigid truss for the sole and heel-plates is provided, as described.

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