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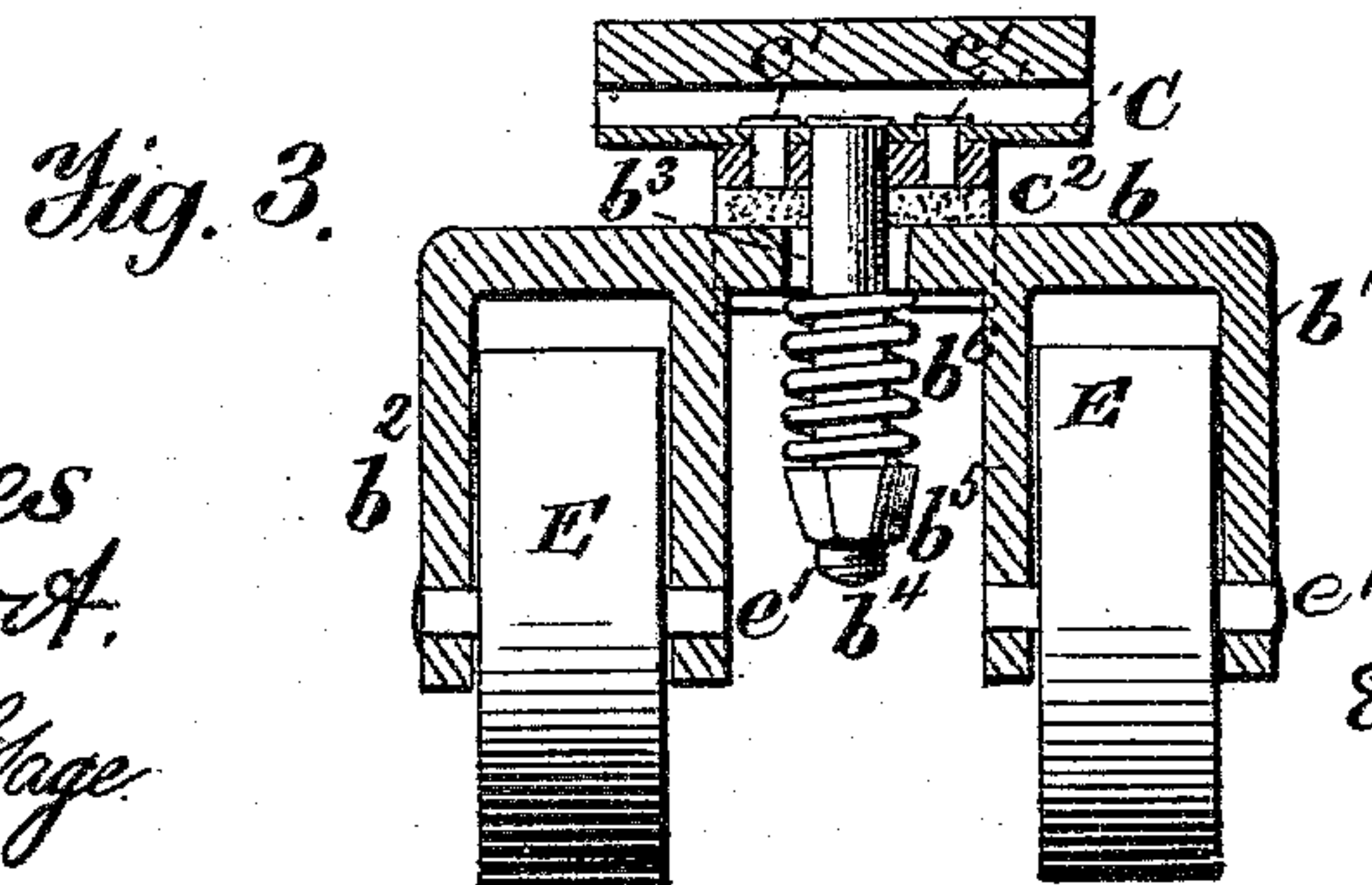
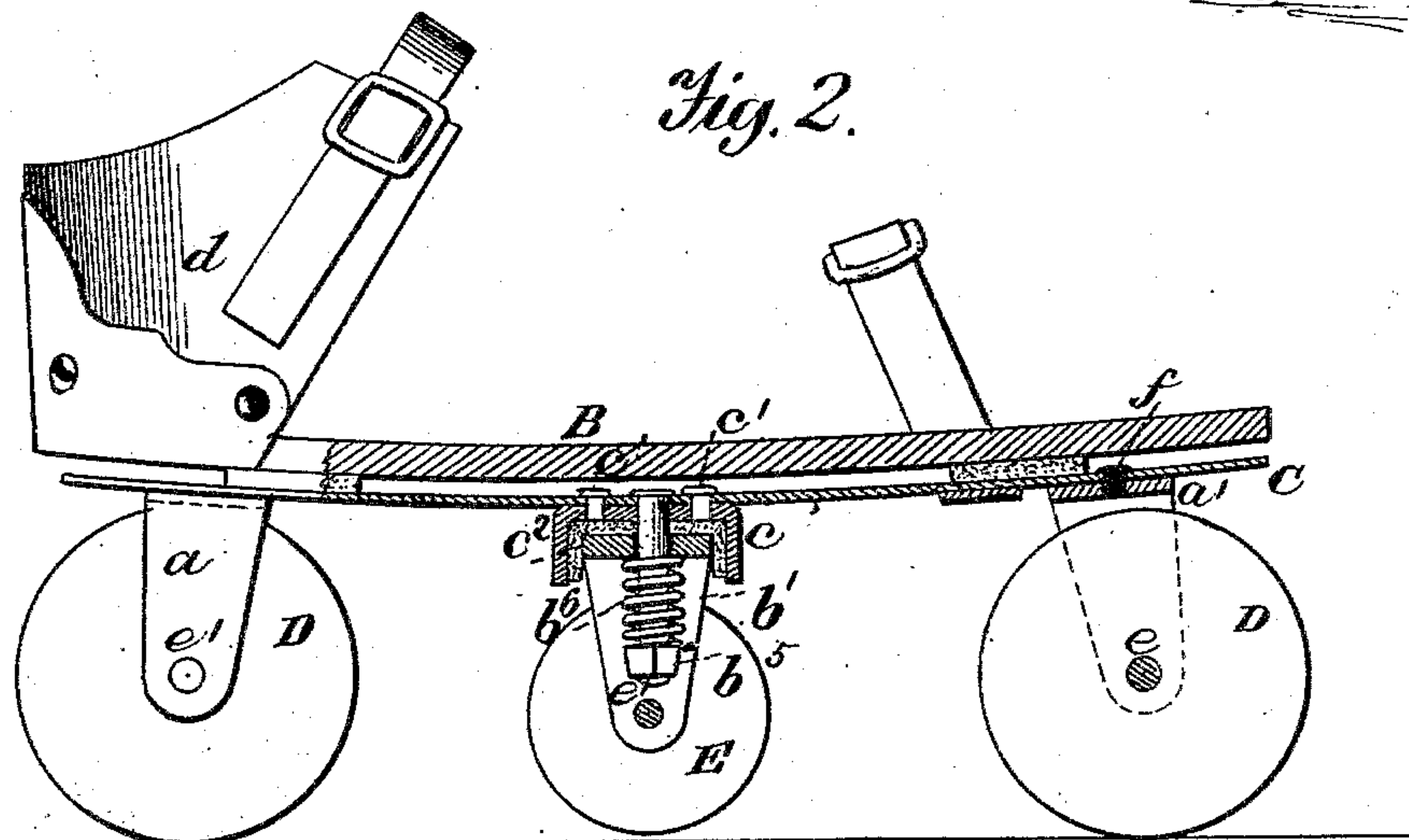
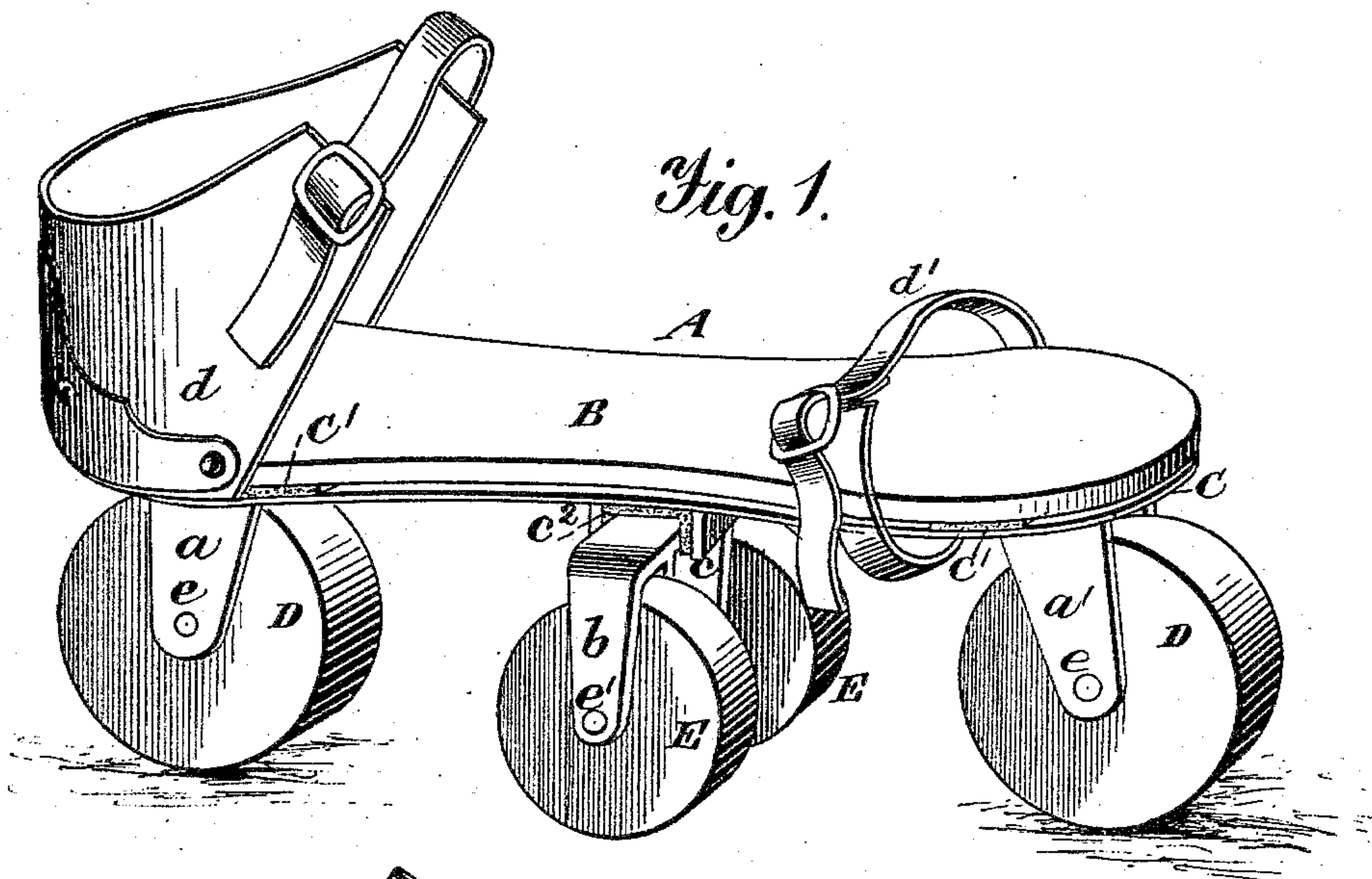
2 Sheets—Sheet 1.

A. B. CLARK.

ROLLER SKATE.

No. 301,676.

Patented July 8, 1884.



Witnesses  
A. Ruppert.  
Alfred F. Sage.

Inventor.  
Alvin B. Clark  
by  
England & Blanchard  
Attys

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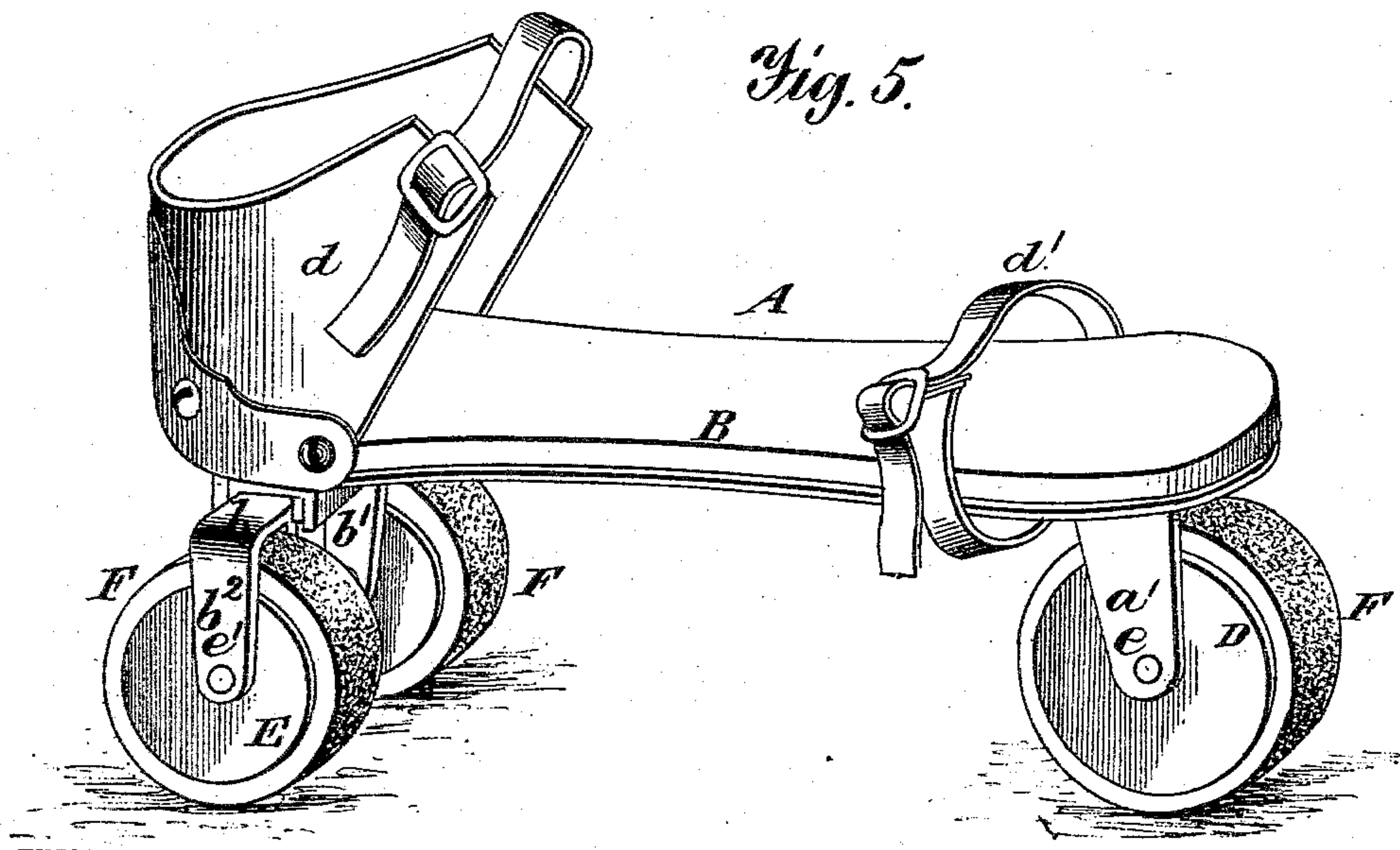
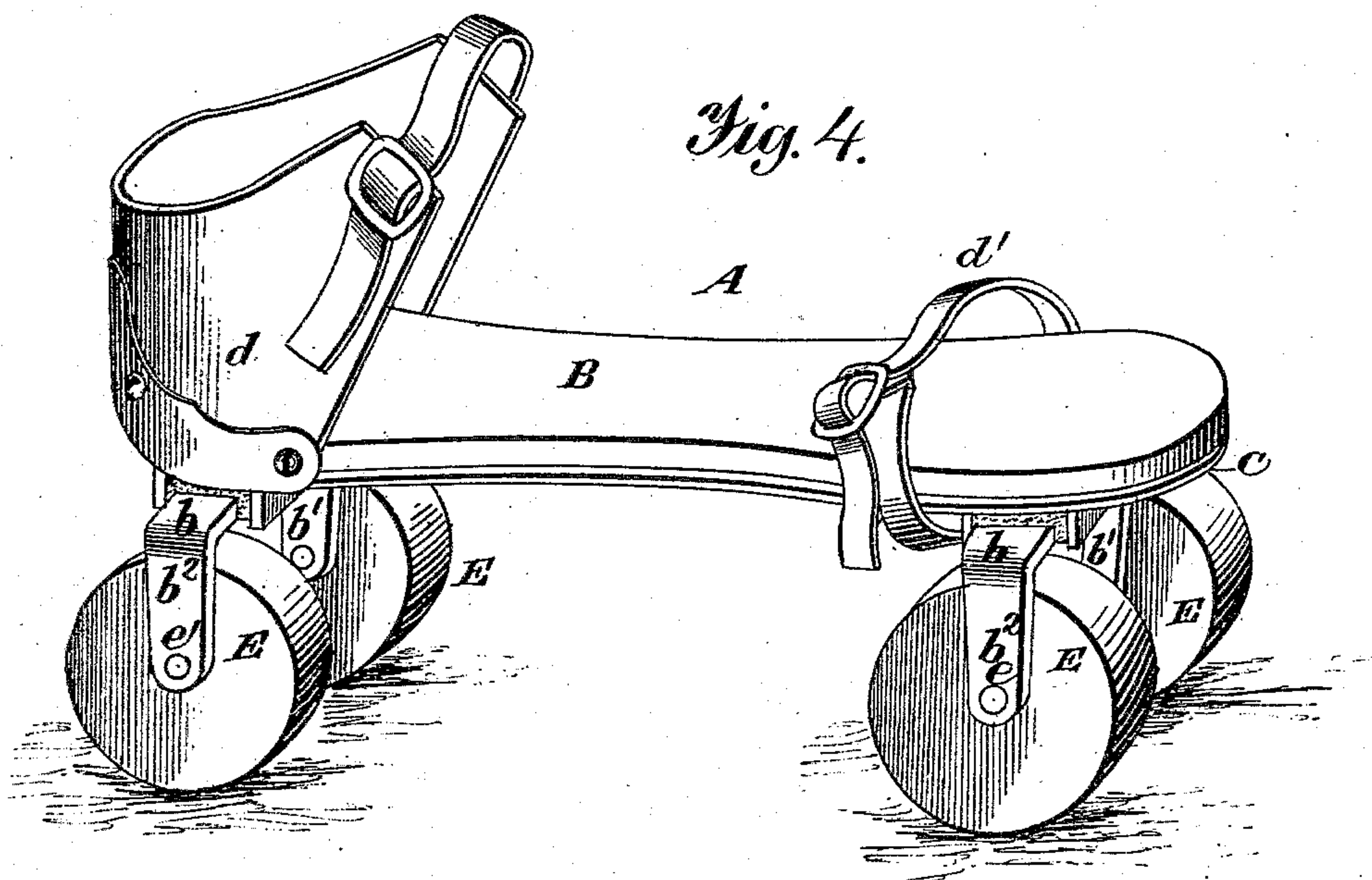
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# UNITED STATES PATENT OFFICE.

ALVIN B. CLARK, OF RICHMOND, INDIANA.

## ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 301,676, dated July 8, 1884.

Application filed March 11, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, ALVIN B. CLARK, a citizen of the United States, residing at Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Roller-Skates, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in roller-skates; and it consists in attaching to the body of the skate rollers in such a manner that the body of the skate will have a lateral rocking movement to conform to the various positions of the skater's foot, and, further, by the manner of attachment a certain degree of elasticity is obtained, which is highly important in a durable, easy-working, and perfect skate.

The object of my invention is, first, to construct a skate that will have an elastic metallic bed-piece; second, to attach to the same rollers that are formed plain or with elastic tires; third, to connect said rollers to the under face of a body or foot part in such a manner that one or more may be held to the front and rear of the skate-body, and one or more be held to the center or midway of said body, and said connection may be either rigid or elastic; fourth, to form a roller-skate with one or more rollers at each end of the body of the skate, and one or more about midway the same, in such a manner that the middle rollers will only have a bearing when the body of the skate is rocked laterally; fifth, to arrange the rollers either centrally or at the ends of the skate-body in such a manner as to permit the body of the skate to have a rocking lateral movement, while the under face of the rollers have a level bearing; sixth, to so arrange said rollers on the under face of the skate-body that two of the same may be in front and one in the rear, or that two may be in the rear and one in front in the form of a tricycle; seventh, to prevent the binding or tendency to straight lines while the skater is turning or performing various evolutions on said skates. I attain these objects by means of the peculiar arrangement and construction of the various parts of my device, which will be more fully pointed out and described in the specification and claims, reference being had to the drawings accompany-

ing this application, and forming part of the same, in which—

Figure 1 is a perspective view of my invention, showing one roller at each end and two oscillating rollers located midway between. Fig. 2 is a vertical sectional view of the same, showing manner of attachment to spring-plate or bottom of body. Fig. 3 is a vertical sectional view of roller-frame, showing central pin, spring, elastic packing, and manner of attachment to body-plate. Fig. 4 is a perspective view showing two rollers attached to each end of skate-body; and Fig. 5 is a perspective view showing one roller attached to front of body, and two rollers attached to the rear, forming a tricycle.

Similar letters refer to similar parts throughout the drawings.

Referring to the drawings, A represents a roller-skate formed after or in accordance with my invention, the body or upper part, B, being formed of any suitable material, (preferably of wood,) and of any desirable shape.

To the under face of body B is secured a metal plate, C, said plate being formed of sufficient thickness to be durable and slightly elastic. Between said body B and plate C is placed elastic packing or pads, to prevent jarring while the skate is in use.

Brackets or bearings *a* and *a'* are formed to receive the wheels or rollers D, their lower ends being perforated to receive screw-bolts *e* and *e'*, the perforations on each side of said brackets being screw-threaded to receive said bolts and hold them in place, said bolts *e* and *e'* forming bearings for the rollers D, said rollers being centrally perforated to loosely fit over said shafts. Brackets *a* and *a'* are bent at right angles, and are held by their upper surfaces to plate C by means of bolts *f*. The central bracket, *b*, is formed double to inclose two rollers, E. Said rollers are formed similar to rollers D, and have like central perforations to loosely fit on bearing-pins *e'*, said pins or bolts being screw-threaded, like bolts *e*. Said bracket *b* is formed with vertical projections having screw-thread perforations to receive bolts *e'*. The upper portion of bracket *b* is formed with a central elongated perforation, *b<sup>3</sup>*, adapted to loosely receive pin or bolt *b<sup>4</sup>*. One end of said bolt is formed screw-threaded



and provided with an internally-screw-threaded nut,  $b^5$ . A coiled spring,  $b^6$ , is placed between said nut  $b^5$  and the inner face (or lower face) of bracket  $b$ , as shown in Figs. 2 and 3, the purpose of which is to hold the bracket  $b$  in place and permit of its oscillating or rocking movement.

I do not confine myself to this particular form of spring, as any other suitable spring may be used without departing from the spirit of my invention. Bolt  $b^4$  is formed with a flat head adapted to rest against the upper face of plate C, around a perforation formed in said plate to receive said bolt. A short metallic receiving-bracket,  $c$ , having perforations to receive bolts  $c'$ , by which it is held to plate C, is formed with angular projecting flanges, between which the upper part of bracket  $b$  rests, a flexible pad,  $c^2$ , being inserted between said brackets, as shown in Figs. 2 and 4, said pad being formed of rubber or other suitable material, said bracket and pad being centrally perforated to receive bolt  $b^4$ . This form of construction is usually placed midway between the ends of body B and plate C, as shown in Figs. 1 and 2; but in other forms of construction, when desirable, said bracket  $b$  may be placed at either end of plate C, as shown in Figs. 4 and 5.

The great advantage of this construction over skates where the roller-brackets are rigidly secured to the skate-body is that the body of the skate accommodates itself to the foot of the wearer, and permits of an easy and free movement in any direction desired. When the oscillating bracket  $b$  is used near the center of body B, with a single roller in front and rear, while moving in a straight line the rollers E do not touch the floor, pavement, or surface on which rollers D move, but the moment a turn or curve is made then one or the other of rollers E touches the surface, bears a portion of the weight, and aids in turning, and prevents the slipping that usually occurs with

rollers in front and rear. Retaining-straps  $d$  and  $d'$  are secured to the body B in the usual manner, by which the skate is held to the operator's feet. Rollers D and E are formed of any suitable material, (preferably of wood,) and may be used plain, or their peripheries may be covered with elastic bands F, which may be shrunk into concavities formed in said peripheries, or may be attached in any other suitable manner. Said tires or bands F may be formed of rubber or any other elastic material.

Having thus described my invention, what I desire to secure by Letters Patent is—

1. The combination, with the body of the skate and the plate secured thereto, of the double bracket having rollers mounted on independent shafts, and secured to the plate by means of a screw-bolt passing through an elongated slot in the bracket between the rollers, substantially as specified.

2. The combination of the body of the skate with the double bracket  $b$ , having rollers independently mounted therein, connecting-bolt  $b^4$ , and spring  $b^6$ , substantially as described.

3. The combination, with the plate attached to the body of the skate, of the double bracket  $b$  and rollers E, the intervening elastic pad  $c^2$ , and the connecting-bolt and spiral spring, substantially as specified.

4. The combination, with the body of the skate and the metallic plate having intervening elastic pads, of the end brackets and rollers, the intermediate double bracket, and independently-mounted rollers, and the elastic connections, whereby the bracket is secured to the plates, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

ALVIN B. CLARK.

Witnesses:

JOS. C. RATLIFF,  
ROBERT F. FURNAS.