

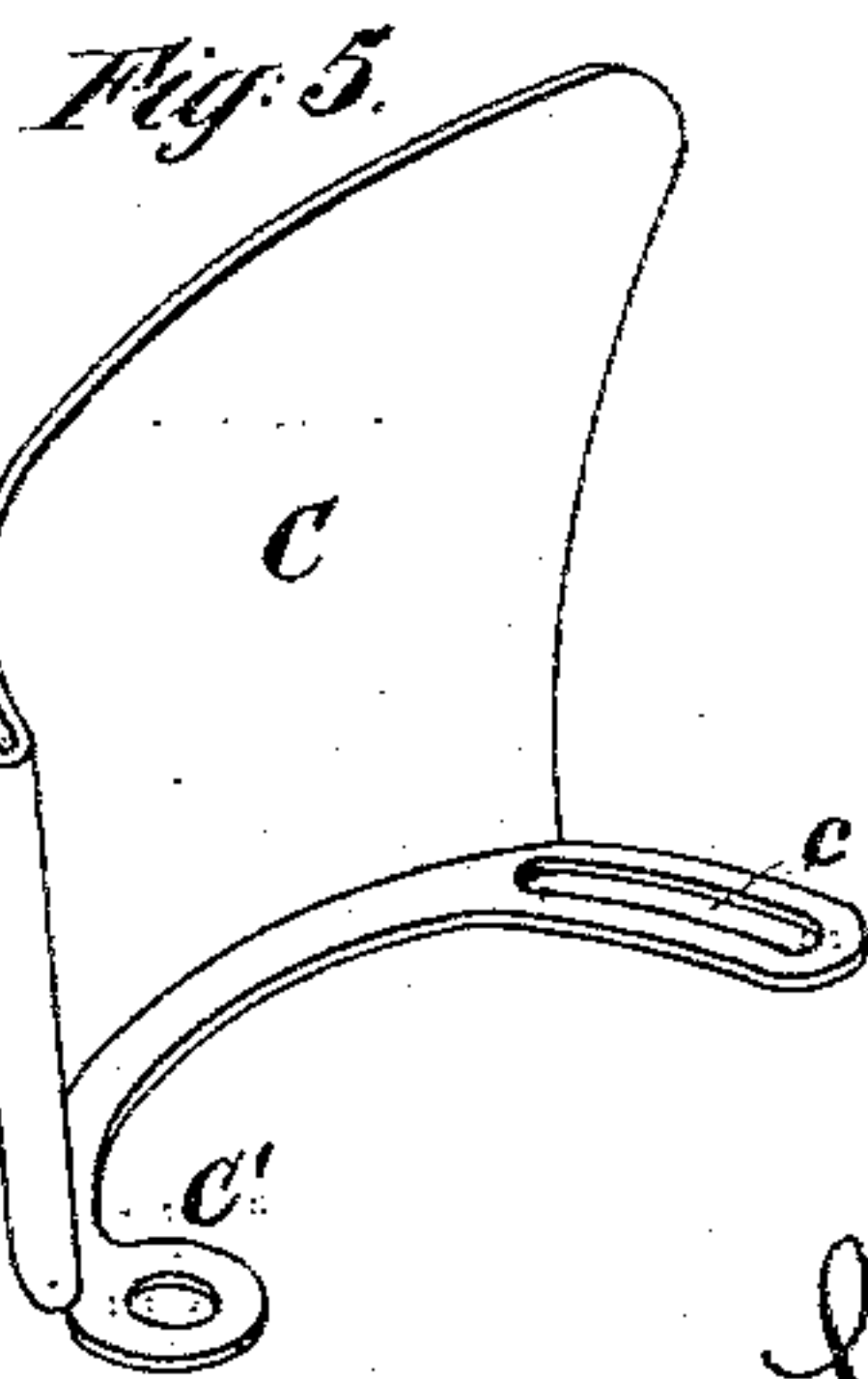
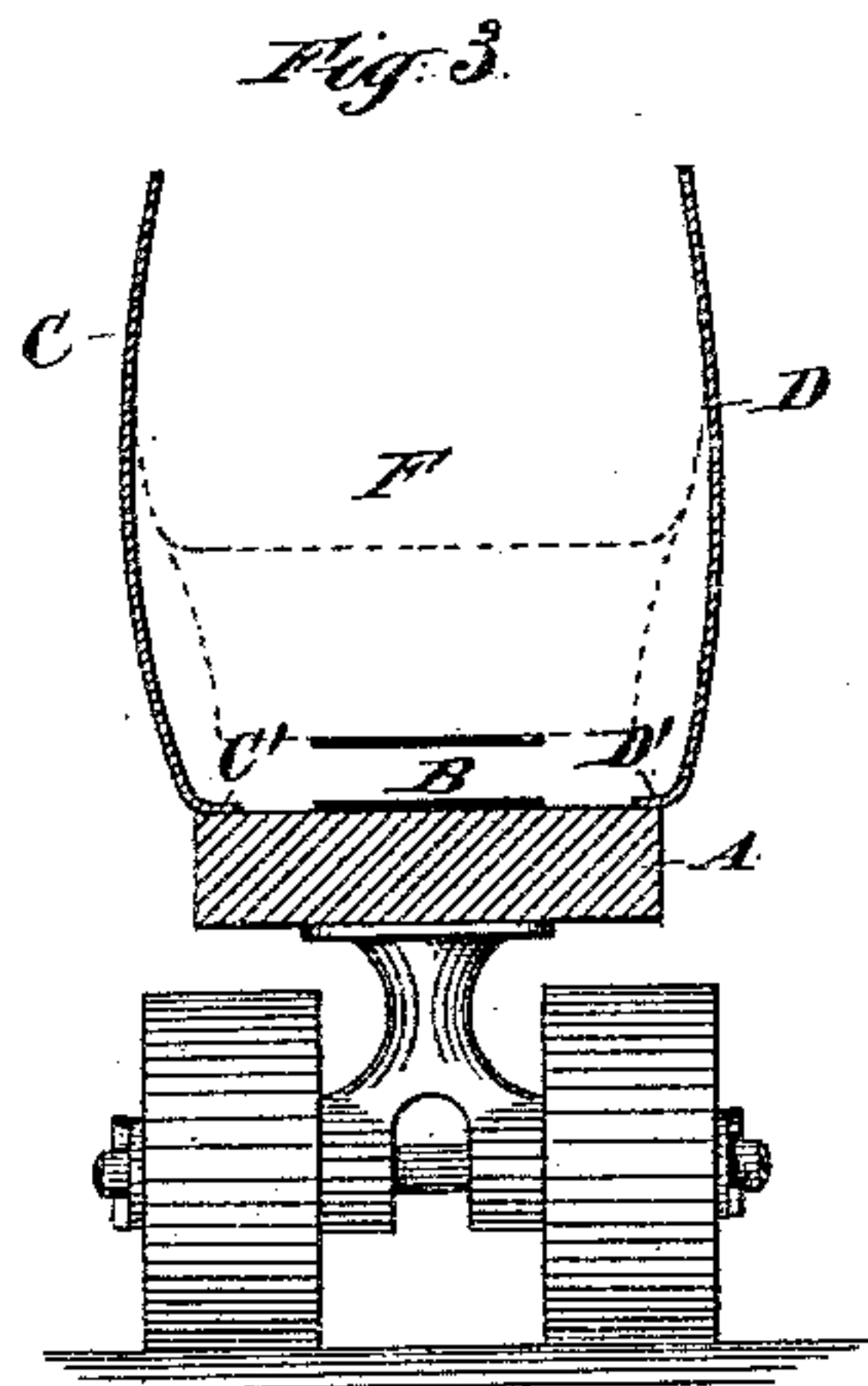
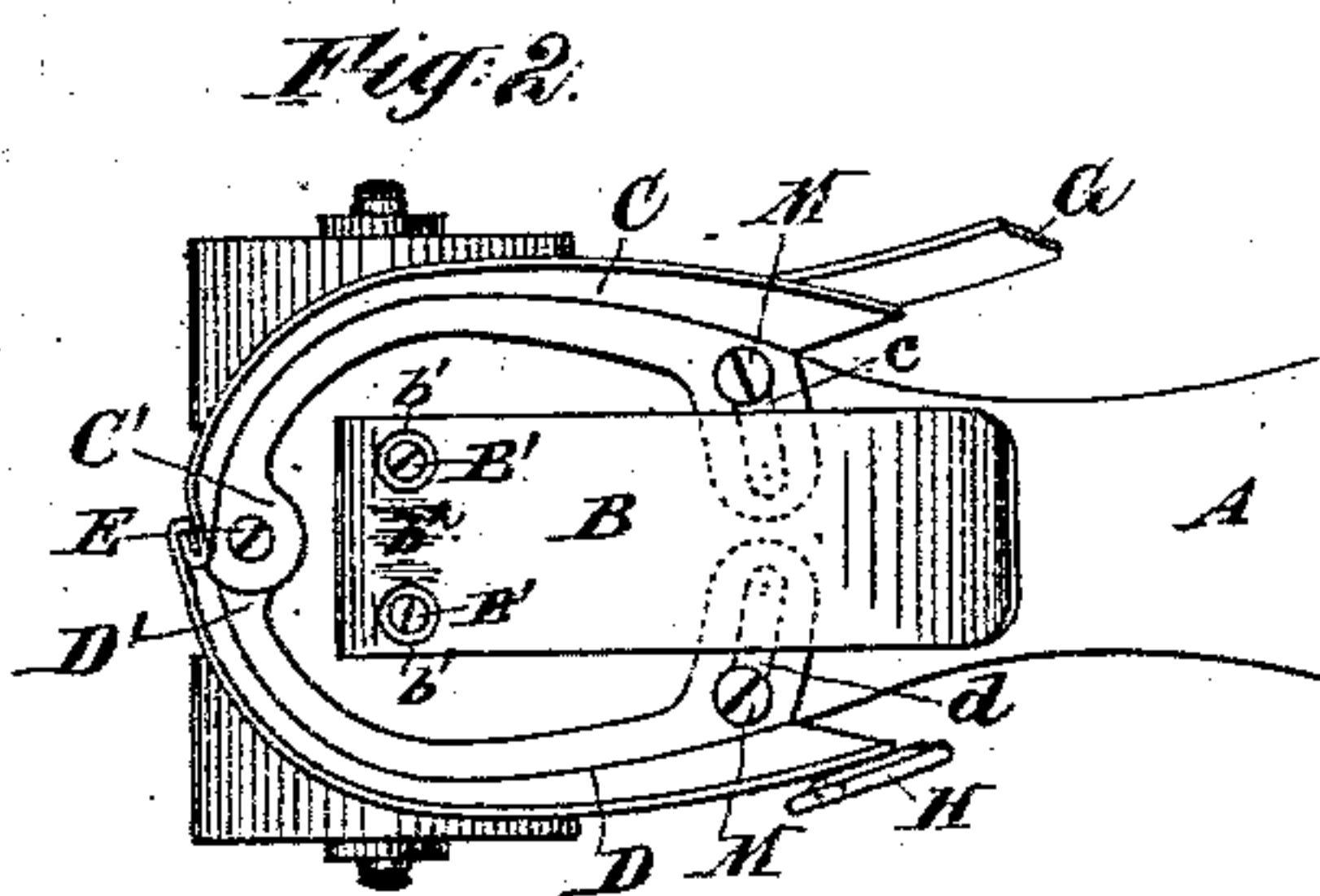
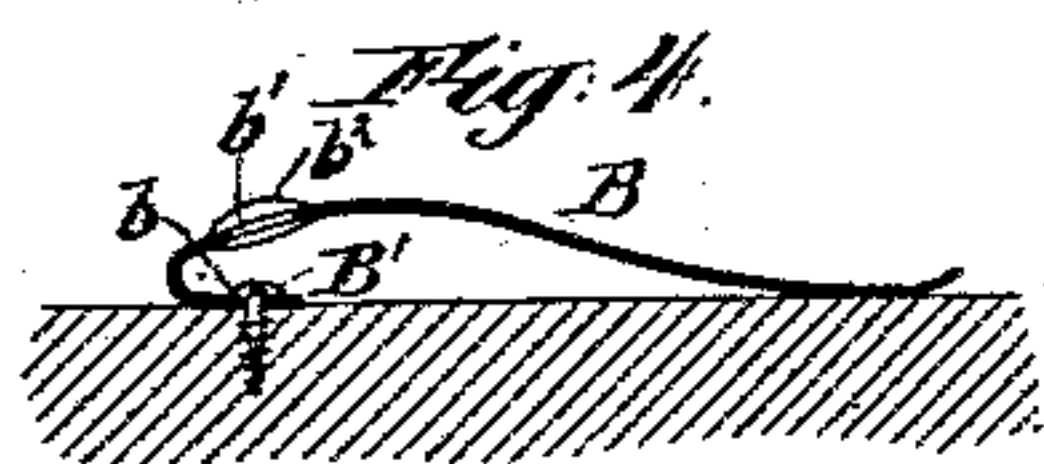
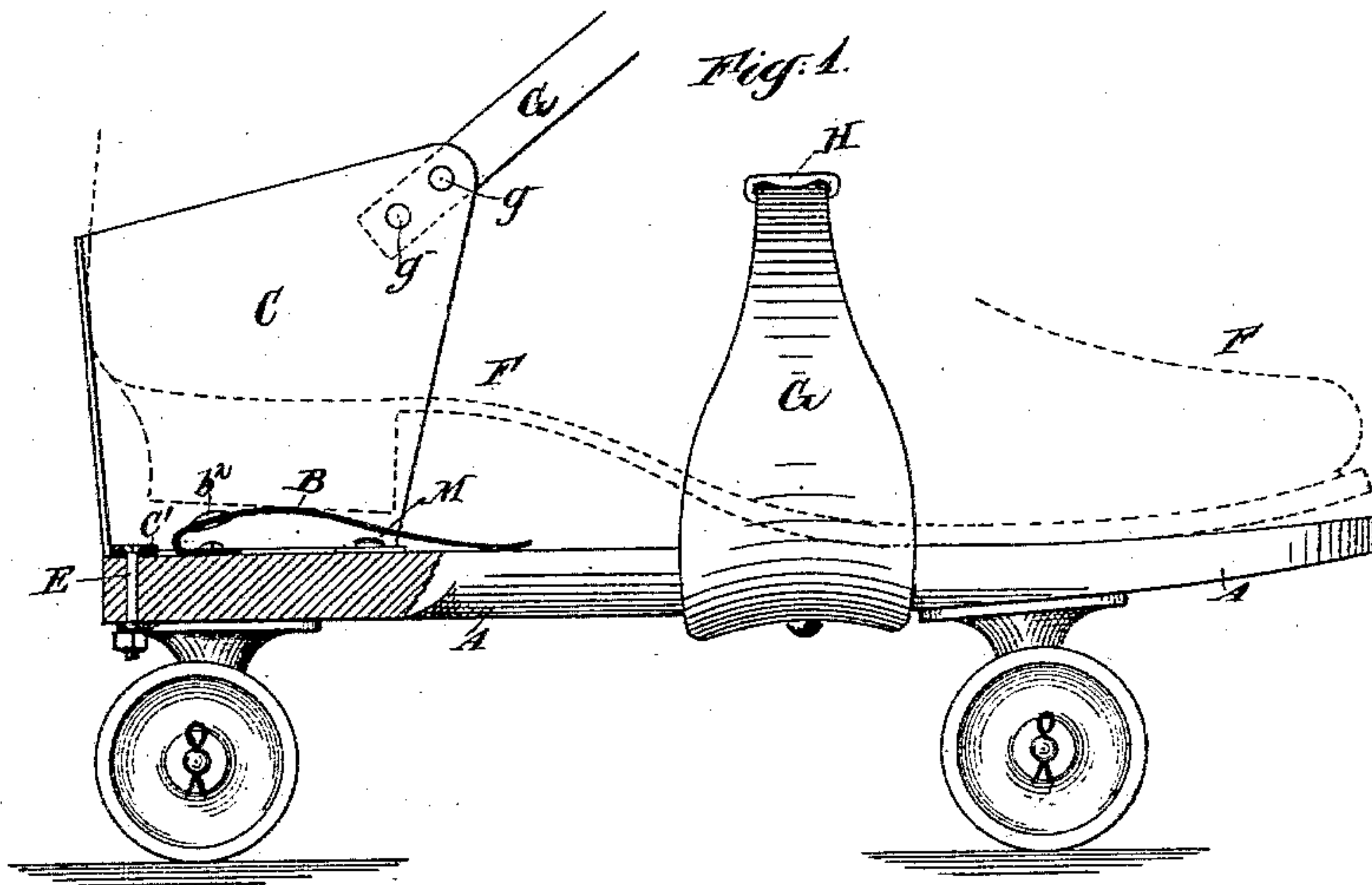
(No Model.)

C. W. KING.

SKATE.

No. 331,977.

Patented Dec. 8, 1885.



Witnesses:  
Charles R. Searle.  
C. Brooks

Inventor:  
Charles W. King  
by his attorney  
Thomas B. Stearns



# UNITED STATES PATENT OFFICE.

CHARLES W. KING, OF LYNDHURST, NEW JERSEY, ASSIGNOR TO HIMSELF  
AND HAINES W. SULLIVAN, OF BROOKLYN, NEW YORK.

## SKATE.

SPECIFICATION forming part of Letters Patent No. 331,977, dated December 8, 1885.

Application filed May 13, 1885. Serial No. 165,298. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES W. KING, of Lyndhurst, Bergen county, in the State of New Jersey, have invented certain new and useful  
5 Improvements in Skates, of which the following is a specification.

I will describe the invention as applied to a roller-skate. The construction may be in all respects similar when the invention is applied  
10 to skates for ice.

I provide a spring firmly secured on the upper face of the deck or main body of the skate, arranged to receive the concussions or blows when the skate is vigorously used. As  
15 arranged the spring yields without inducing any changes in the relations of the parts below. I make a hinged "counter" of sheet metal supported by screws which engage each in a slot in an internal flange or inward fold  
20 or arm at the base of each half. The straps are riveted or otherwise reliably secured to the front portion of my hinged counter on each side.

The accompanying drawings form a part of  
25 this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is a side elevation partly in section, and Fig. 2 a plan view showing the rear portion of a skate. Fig. 3 is a cross-section at the heel. Fig. 4 is a longitudinal section of a portion. Fig. 5 is a perspective view showing one-half of the hinged counter detached.

Similar letters of reference indicate corresponding parts in all the figures.

A is the main body, of ash or other strong wood. The rollers and the means of mounting and connecting them to the body A may be of any ordinary or approved construction. I  
40 have represented one of the simplest forms.

B is my spring, made of hard brass, steel, or other suitable elastic metal. It is held to the body A by screws B', inserted through holes b. The springs may be formed by cutting and  
45 punching by suitably-formed dies. They may be heated and bent by hand or by machinery in the form described, holes b' b' being produced in the blank, so located that when the spring is properly bent these holes b' will come

over the holes b, respectively, and allow a  
50 screw-driver to be operated, as will be understood. The dies which effect the bending are so formed that in completing the spring they corrugate the metal longitudinally, as indicated by b<sup>2</sup>, in the vicinity of the holes b'. The con-  
55 siderable reduction in the cross-section of the spring, due to the punching or otherwise producing of the holes b<sup>2</sup>, weakens the spring along that line. These corrugations stiffen the metal at this part and prevent the flexure from being  
60 excessive. The corrugations should be sufficient to so fortify this part as to nearly extinguish the elasticity there and allow all parts of the spring to endure alike. The back edge is stiffly held to the body A by the two  
65 screws B' B'. The front portion of the spring slides backward and forward on its bearing on the body as the spring is flexed in use. The boot of the wearer (shown by dotted lines F) may press directly on the swell of the curve.  
70 The spring works by flattening and arching again, accommodating the vigorous efforts of the skater and avoiding shocks.

I form my hinged counter of sheet brass, iron, or steel in two halves, C and D, which  
75 are counterparts each of the other, and are engaged together hookwise along a portion or the whole of their joining-line. They are also connected together and to the body A by a stout screw, E, which is inserted through a  
80 flange turned inward at the base of each half, as indicated by C' D'. These flanges are wide at the rear end, and also wide at the front. A slot, c d, in each, respectively, receives a screw, M, firmly set in the body A. The flanges C'  
85 D' may be narrow along the main portion of the distance between the front and rear.

The straps G and buckles H may be of any ordinary or suitable character. The heel-  
90 straps are secured to the two sides of my hinged counter by rivets g.

Modifications may be made in the forms and proportions without departing from the principle or sacrificing the advantages of the invention. The swell of the counter to allow for  
95 the corresponding form of the boot may be reduced until each part of the counter is a simple bent piece of metal, except for the



flange at the lower edge; or, on the other hand, the swell may be increased somewhat beyond that shown. The swell may be induced by dies acting on the sheet metal in a heated condition in the obvious manner.

The spring B may be narrower than shown, or it may be somewhat wider, care being taken not to widen the spring so much as to interfere with the drawing inward of the two halves of the counter to the fullest extent ever required. In what I esteem the best construction the arch of the spring extends over the heads of the screws M so far as to prevent their contact with the boot; but some degree of usefulness may be attained by a much narrower spring.

I claim as my invention—

1. In a skate, a spring, as B, mounted on the upper face of the body A, so as to serve between it and the boot, as herein specified.

2. In a skate, the counter C D, in two or

more parts, hinged to the body A, substantially as herein specified.

3. In a skate, the counter C D, in two or more parts, hinged to the body A by a screw or pivot, E, in combination with the body A, and with the pins M, received in slots *c d*, as herein specified.

4. In a skate, the strap G and metal counter having slotted flanges C *c* D *d* and screws M M, in combination with each other and with the body A, spring B, and confining means B', arranged for joint operation, substantially as herein specified.

In testimony whereof I have hereunto set my hand, at New York city, New York, this 6th day of May, 1885, in the presence of two subscribing witnesses.

CHARLES W. KING.

Witnesses:

CHARLES R. SEARLE,  
M. F. BOYLE.