

(No Model.)

J. S. NEWELL & H. D. STONE.

ROLLER SKATE.

No. 302,016.

Patented July 15, 1884.

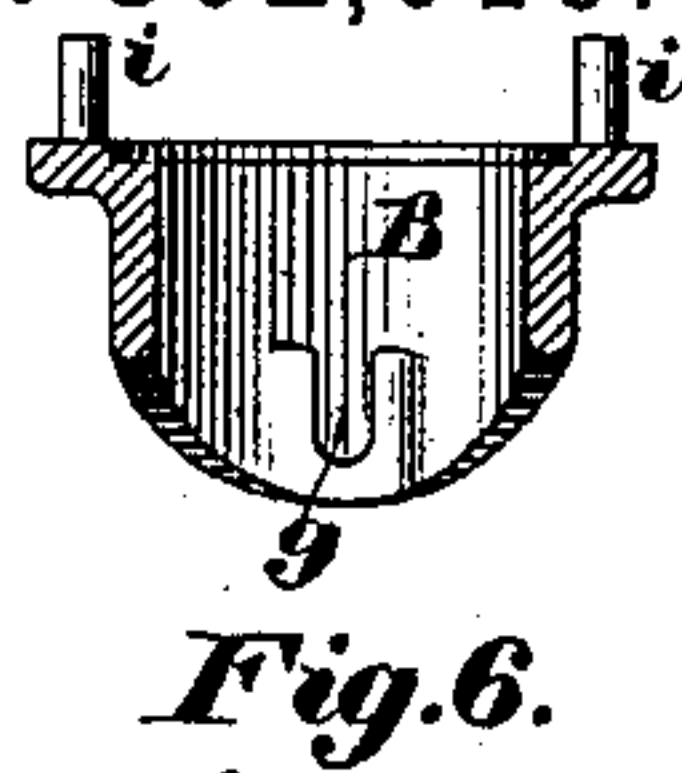


Fig. 6.

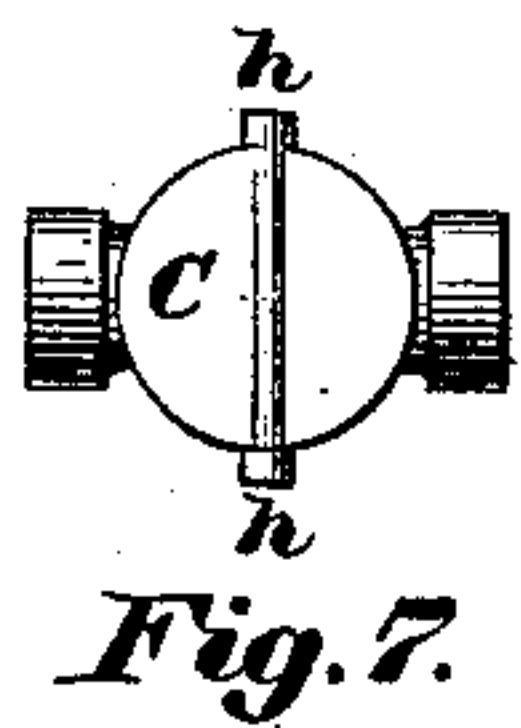


Fig. 7.

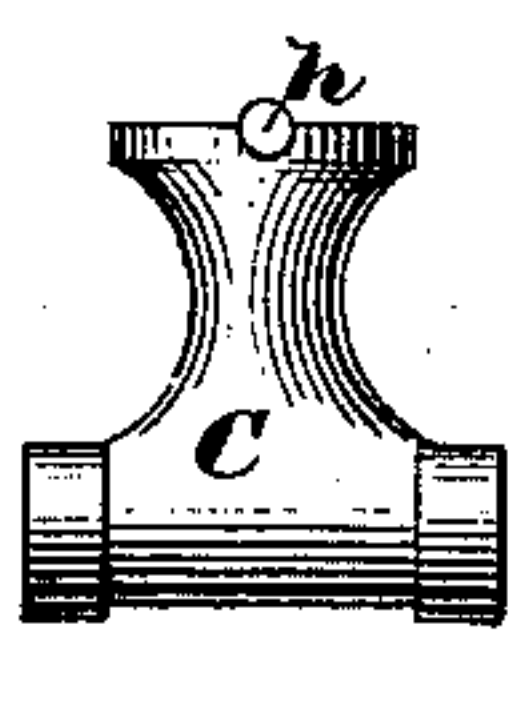


Fig. 8.

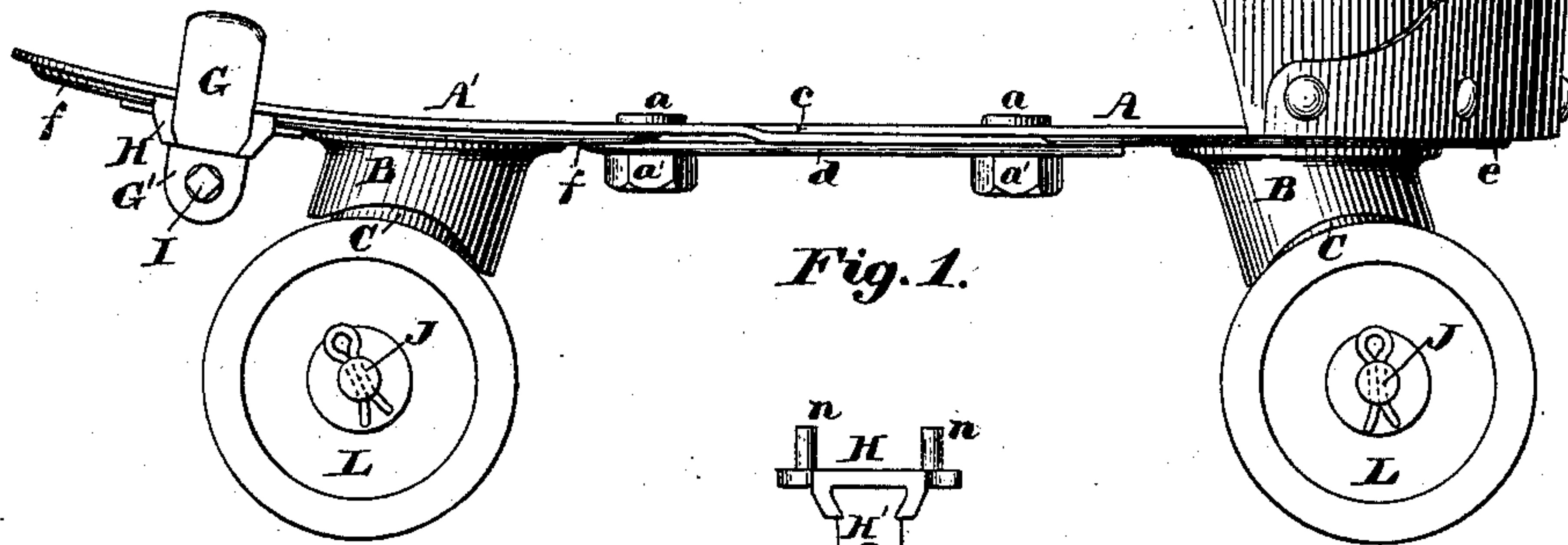


Fig. 1.

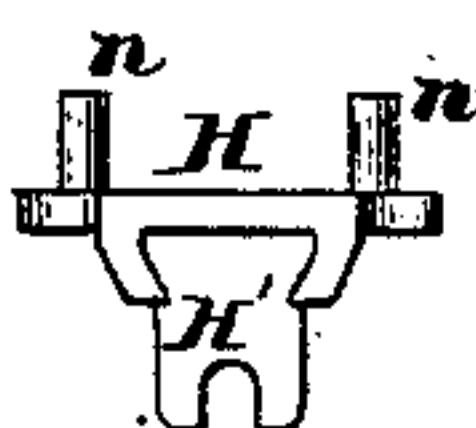


Fig. 9.

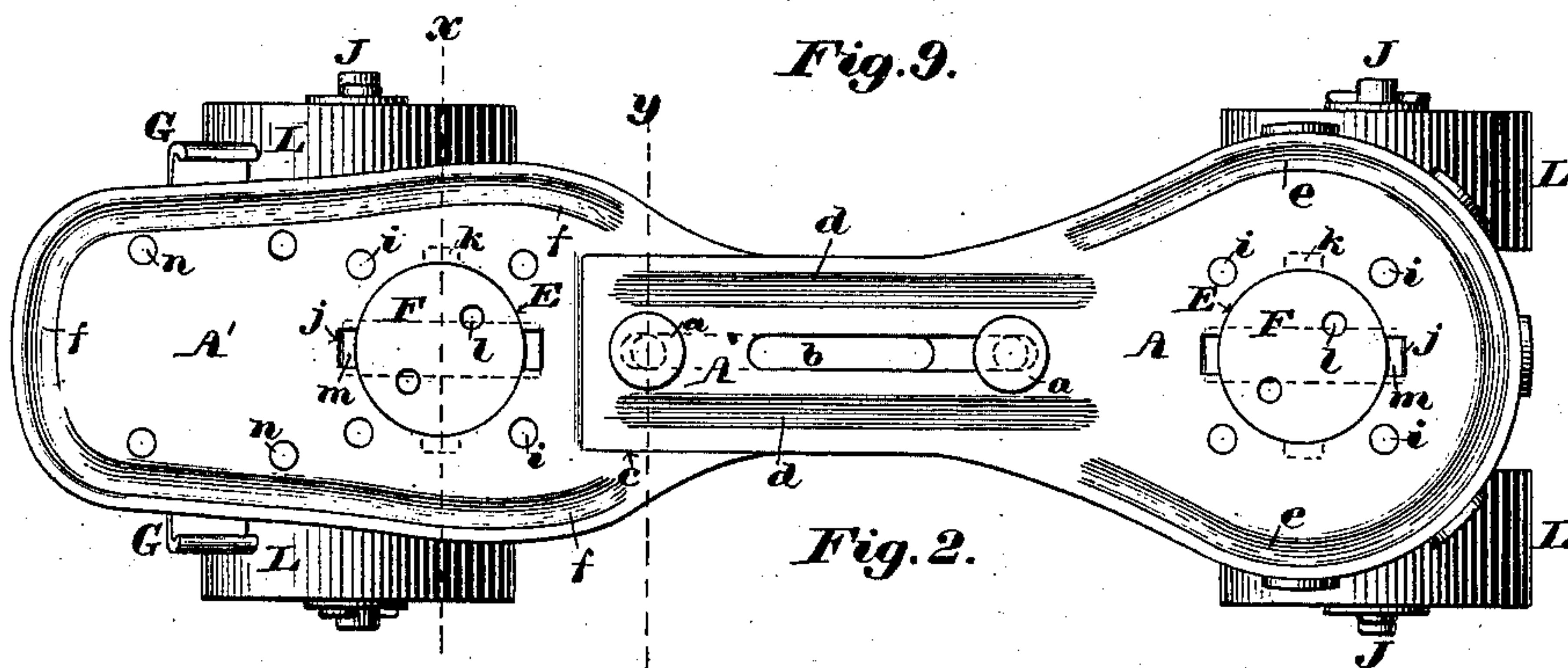


Fig. 2.

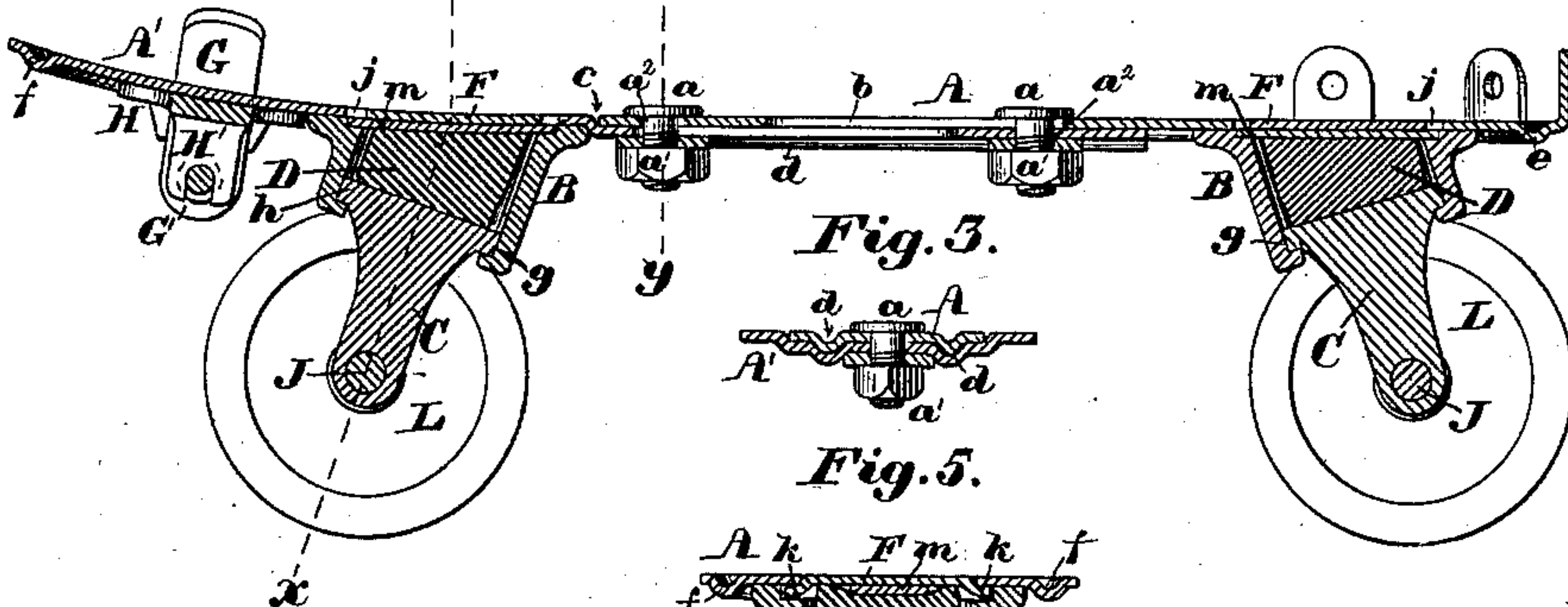


Fig. 3.



Fig. 5.

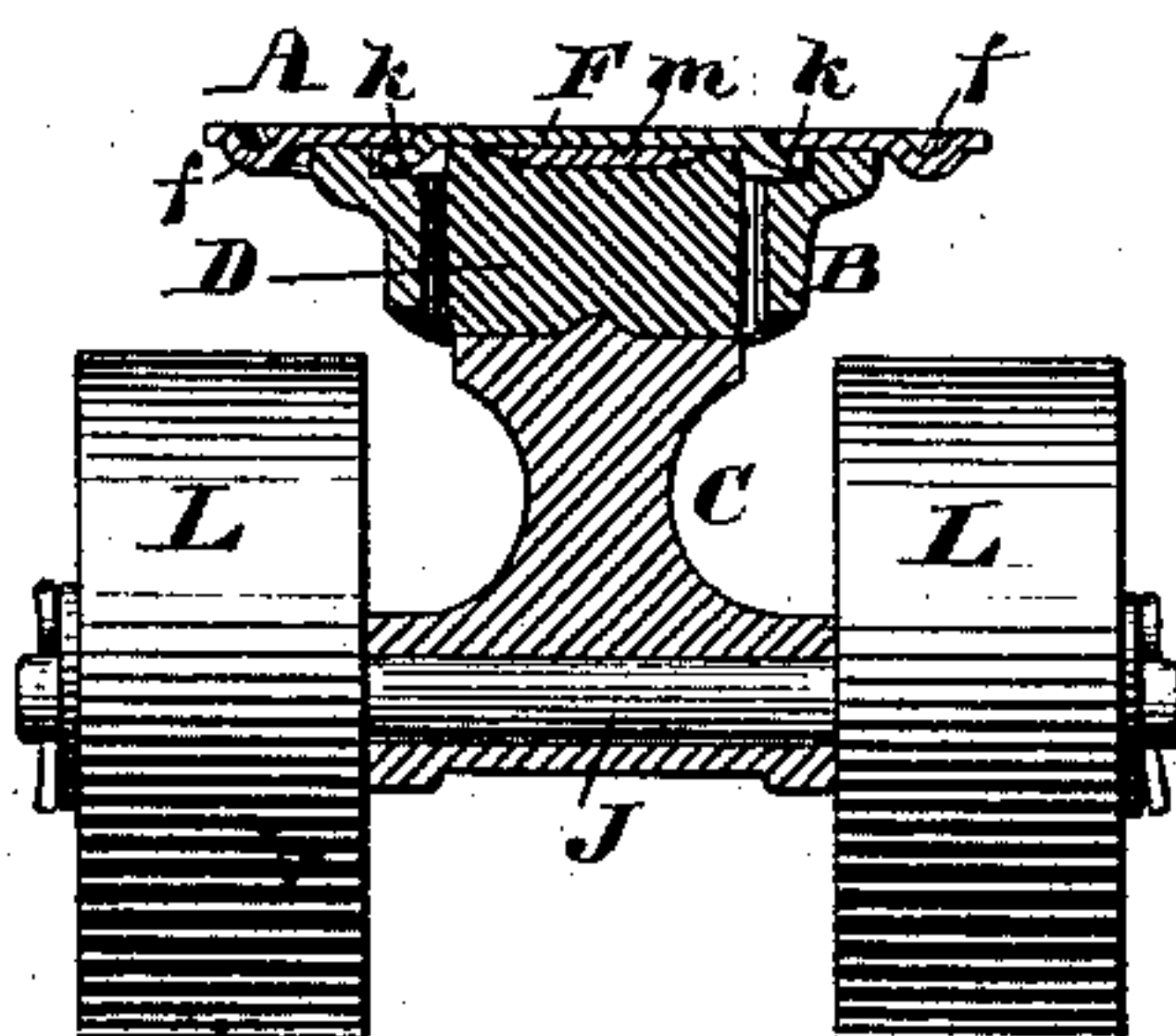


Fig. 4.

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# UNITED STATES PATENT OFFICE.

JAMES S. NEWELL, OF NEWTON, AND HENRIE D. STONE, OF BOSTON, MASS.

## ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 302,016, dated July 15, 1884.

Application filed March 24, 1884. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES S. NEWELL, of Newton, in the county of Middlesex and State of Massachusetts, and HENRIE D. STONE, of Boston, in the county of Suffolk and State aforesaid, have invented jointly certain new and useful Improvements in Roller-Skates, of which the following, taken in connection with the accompanying drawings, is a specification.

Our invention relates to the construction of roller-skates, and especially to that class of such skates which are adjustable to different lengths; and it consists in certain novel constructions, arrangements, and combinations of parts, which will be readily understood by reference to the description of the drawings, and to the claims to be hereinafter given.

Figure 1 of the drawings is a side elevation of a roller-skate embodying our invention. Fig. 2 is a plan of the same with the heel-strap removed. Fig. 3 is a central longitudinal section of the same. Fig. 4 is a transverse section on line *x x* on Figs. 2 and 3. Fig. 5 is a transverse section on line *y y* on Figs. 2 and 3. Fig. 6 is a central section of the spring-receiving socket detached from the other parts, and showing the bearing for supporting the axle-carrying stand in elevation. Figs. 7 and 8 are respectively a plan and elevation of the axle-carrying stand, and Fig. 9 is an end elevation of the toe-clamp-carrying stand detached.

The foot rest or support is made from thin sheet-steel in two parts, which overlap each other, and are adjustably secured together by means of the two bolts *a a* and nuts *a' a'*, said bolts being each fitted to a hole, *a²*, in one of said parts, and passing through and adapted to be freely moved lengthwise of said support in a slot, *b*, cut in the other part, and extending longitudinally thereof, as shown in Figs. 2 and 3. The part *A'* of said foot-support has formed in its upper surface a rectangular recess, *c*, of a depth just equal to the thickness of the metal, to receive the forward end of the part *A*, so that the upper surfaces of the two parts, or those portions thereof upon which the boot rests, shall be substantially in the same plane. Both of the parts *A* and *A'* have formed in their upper surfaces two long and parallel depressions, *d d*, and corresponding projections

upon their under sides, so arranged that the projections on the under side of the part *A* fit into the depressions in the upper surface of the part *A'*, and serve to guide the parts when being adjusted, and aid in preventing lateral movement of one part upon the other when clamped together, as shown in Fig. 5. The part *A* has formed in its upper surface the curved depression *e*, extending around the heel portion thereof, near its outer edge, and a corresponding projection on its under side, and the part *A'* has a similar depression, *f*, around its outer edge, with a corresponding projection upon its under side, these depressions and projections being formed by bending or embossing the metal in suitable dies, for the purpose of stiffening the foot-support, and thus rendering it practical to use thinner metal therefor and make a lighter skate.

*B B* are two sockets made in the form of flanged rings, the axes of which are oblique to their flanged upper ends, and have formed in the front and rear sides of their inner surfaces the bearings *g g*, open at their upper sides, as shown in Fig. 6, said bearings being designed to receive the trunnions *h h* of the axle-carrying stand *C*. (Shown in Figs. 7 and 8.) The sockets *B B* each have cast thereon and projecting upward therefrom a series of pins, *i i*, which pass through holes formed in the plate *A* or *A'*, and are headed down thereon, for the purpose of securing said rings firmly to the plates *A* and *A'*, by which means a great saving in labor is made over riveting said rings to said plates by the use of ordinary rivets, inasmuch as the number of holes to be drilled or punched is reduced one-half by having the rivets formed upon and integral with the rings *B B*.

*D D* are pieces of rubber placed within the sockets *B B*, and between the upper ends of the axle-carrying stands *C C* and the under side of the plates *A* and *A'*, to serve as springs and render the skate yielding in a well-known manner. By compressing the rubbers *D D* to a greater extent than in their ordinary use the trunnions of the stand *C C* may be removed from the bearings *g g*, and then by turning said stand partially around they may be removed for the purpose of renewing the rubber when it becomes worn. As, however, it re-



quires a very heavy pressure to remove the stands C C in this way, other means of access to the rubber springs are provided by cutting a circular opening, E, in each of the plates A and A', directly over the springs D D, with two rectangular notches, j, cut in opposite sides of each of said openings, said openings being each closed again by a plate of steel, F, cut to the same shape as the opening, and having its projecting ears k offset an amount equal to the thickness of the metal, and after passing said ears through the notches j j the plate F is moved about a vertical axis about a quarter of a revolution to pass said ears k under the plate A or A' by means of a forked wrench placed in the holes l l in said plate, as shown in Fig. 2. To strengthen the plates F, a supplementary plate, m, having parallel sides, is placed beneath each of said plates F, and extends under the plate A or A', as shown in dotted lines in Fig. 2 and in section in Fig. 4. G G are two sliding toe-clamping jaws fitted to dovetailed bearings in the stand H, and arranged to be adjusted toward or from each other by means of the screw-spindle I, provided with right and left hand screw-threads, which work in corresponding female threads, formed in the ears G' of said jaws, said screw-spindle being prevented from moving endwise by the forked ear H', projecting downward from the stand H, and engaging a circumferential groove in said screw-spindle in a well-known manner. The stand H has cast therewith and projecting upward therefrom a series of pins or rivets, n n, which pass through holes drilled or punched in the plate A', and are riveted down thereon to secure said stand and plate firmly together.

J J are axles set in the supports or stands C C, and having mounted thereon the trucks L L in any well-known manner.

We are aware that roller-skates having extensible foot supports or plates have been made and used, and therefore we do not claim, broadly, an extensible or adjustable foot-support.

What we claim as new, and desire to secure by Letters Patent of the United States, is—

1. A roller-skate having a foot-support made in two parts of thin sheet metal, arranged to overlap each other and to be adjusted to vary the length of the skate, and having their surfaces embossed or struck up to form depressions upon one side, and corresponding projections upon the other side extending around

the outer portion of said foot-support, substantially as described.

2. The plates A and A', each provided with the bolt-hole  $a^2$ , the slot b, and the two parallel depressions d d, in combination with the bolts a a and nuts a' a', all arranged and adapted to operate substantially as and for the purposes described.

3. The combination, in a roller-skate, of the plate A, provided with the bolt-hole  $a^2$  and the slot b, the plate A', provided with the rectangular recess c, the bolt-hole  $a^2$ , and slot b, and the bolts a a and nuts a' a', all arranged and adapted to operate substantially as described.

4. The combination, in a roller-skate, of a foot-support made of sheet metal, the ring-socket B, provided with the open bearings g g, and the axle-carrying stand C, provided with the trunnions h h, integral therewith, substantially as described.

5. The combination, in a roller-skate, of a foot-support made of sheet metal, and perforated with a series of holes, and a spring-inclosing and axle-stand-carrying socket provided with a series of pins or rivets to fit said holes, and formed integral with said socket, substantially as and for the purposes described.

6. The combination, in a roller-skate, of a foot-support made of sheet metal, and having formed therein the opening E j, the ring-socket B, the axle-supporting stand C, the rubber spring D, and the plate F, provided with the ears k, and adapted to be removably secured in the opening E j, substantially as described.

7. The combination of a sheet-metal foot-support, with the toe-clamp stand H secured thereto by means of rivets n n, formed thereon and integral therewith, substantially as described.

8. The combination, in a roller-skate, of the plates A and A', each provided with the two longitudinal and parallel depressions d d, and one or more bolts for clamping said plates together in variable positions, substantially as described.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, on this 21st day of March, A. D. 1884.

JAMES S. NEWELL.  
HENRIE D. STONE.

Witnesses:

N. C. LOMBARD,  
WALTER E. LOMBARD.