(Model.)

H. S. COMBS.

ROLLER SKATE.

No. 333,996. Patented Jan. 12, 1886.

Fig. 1.

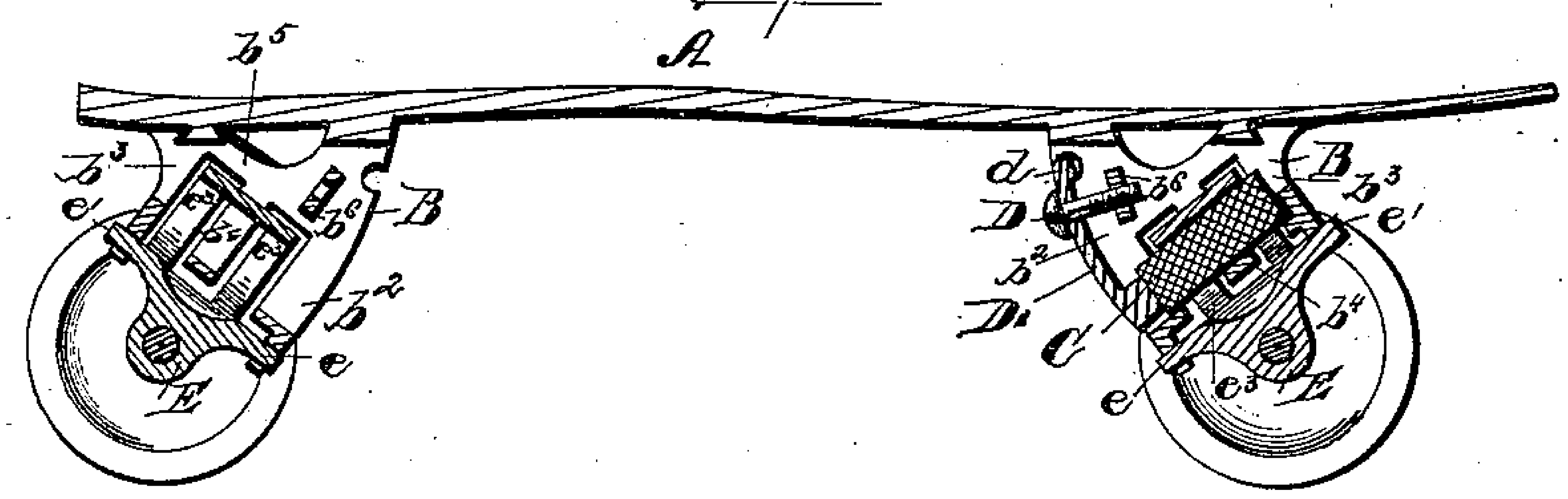


Fig. 3.

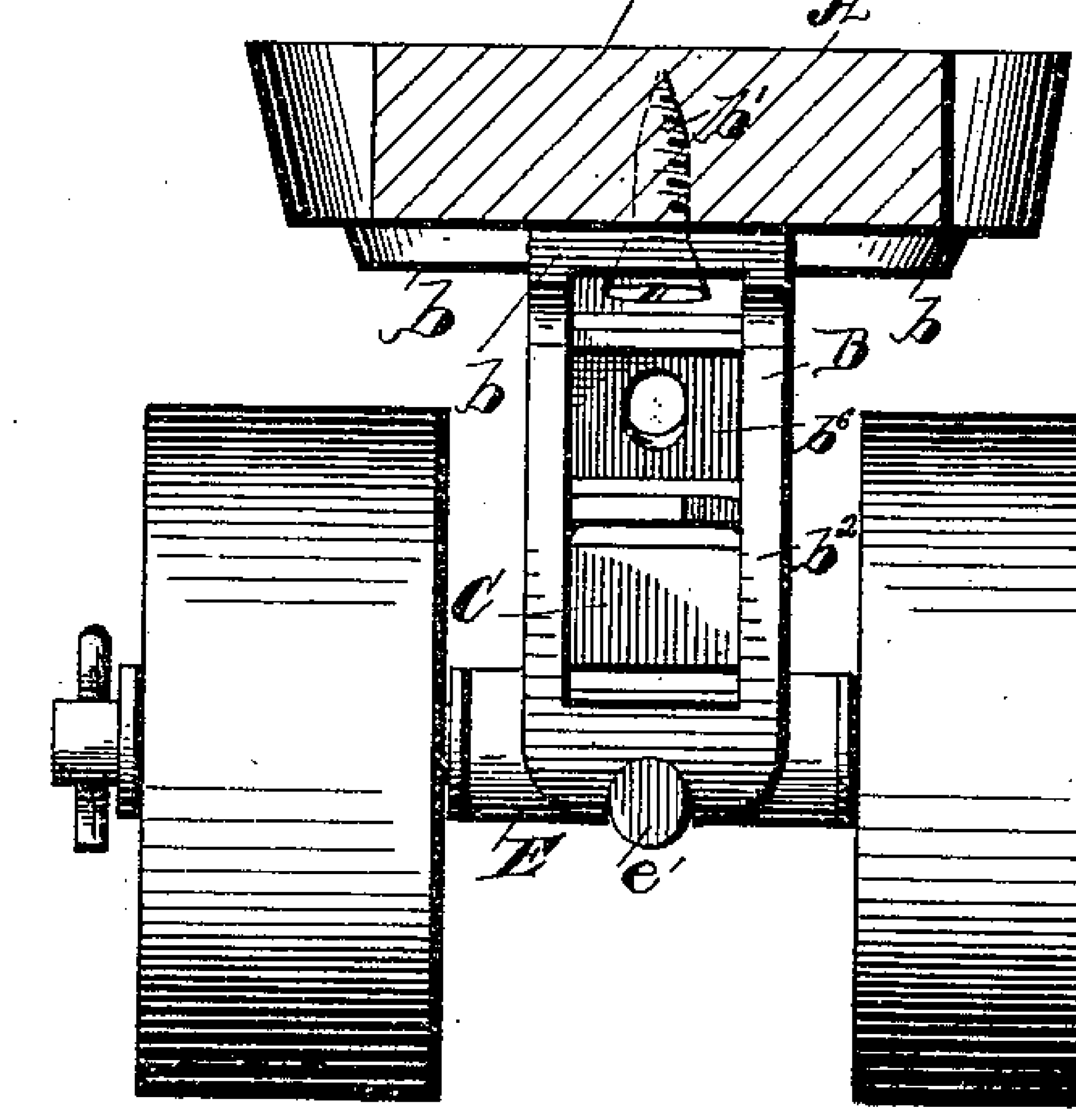


Fig. 2.

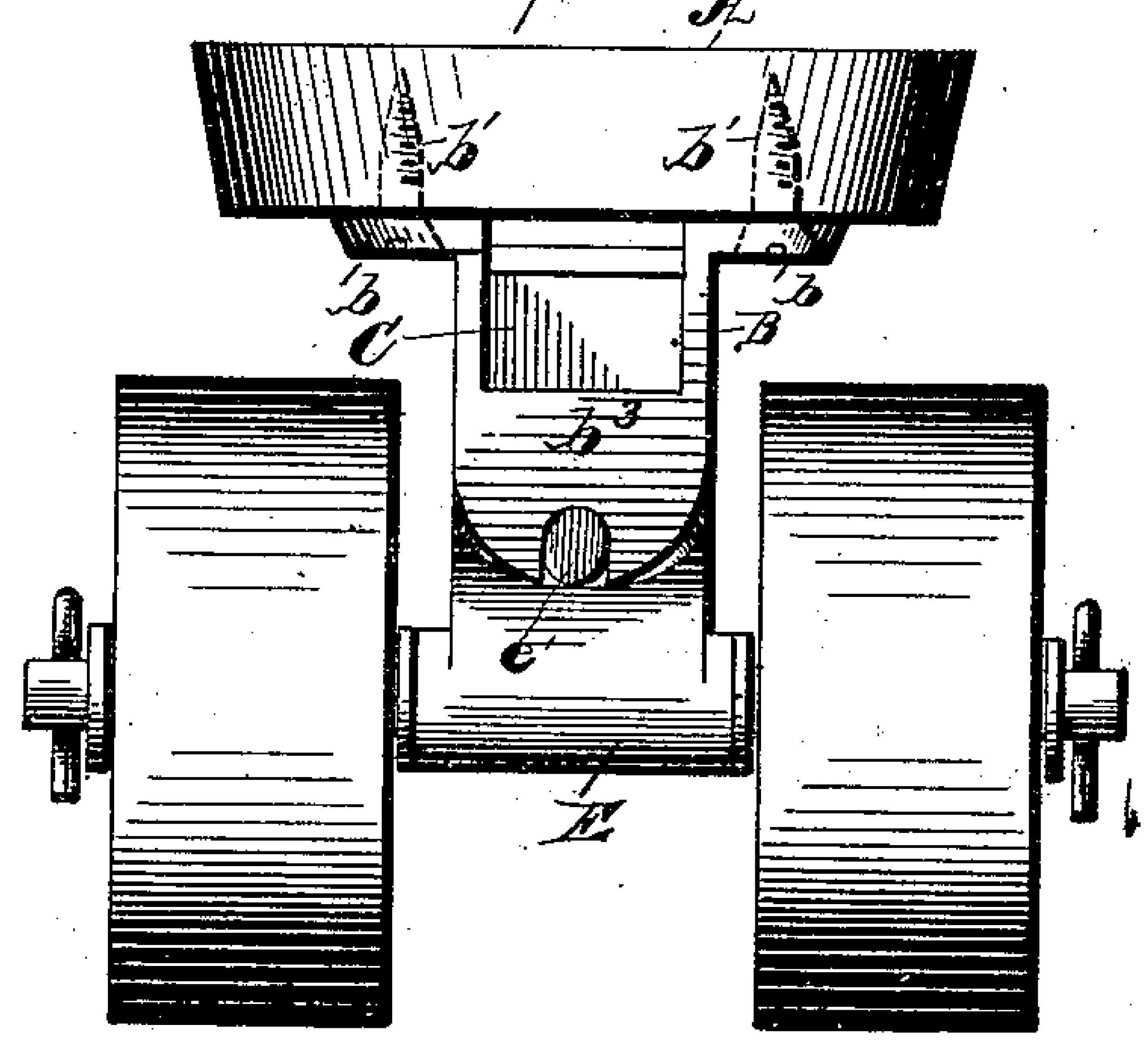


Fig. 4.

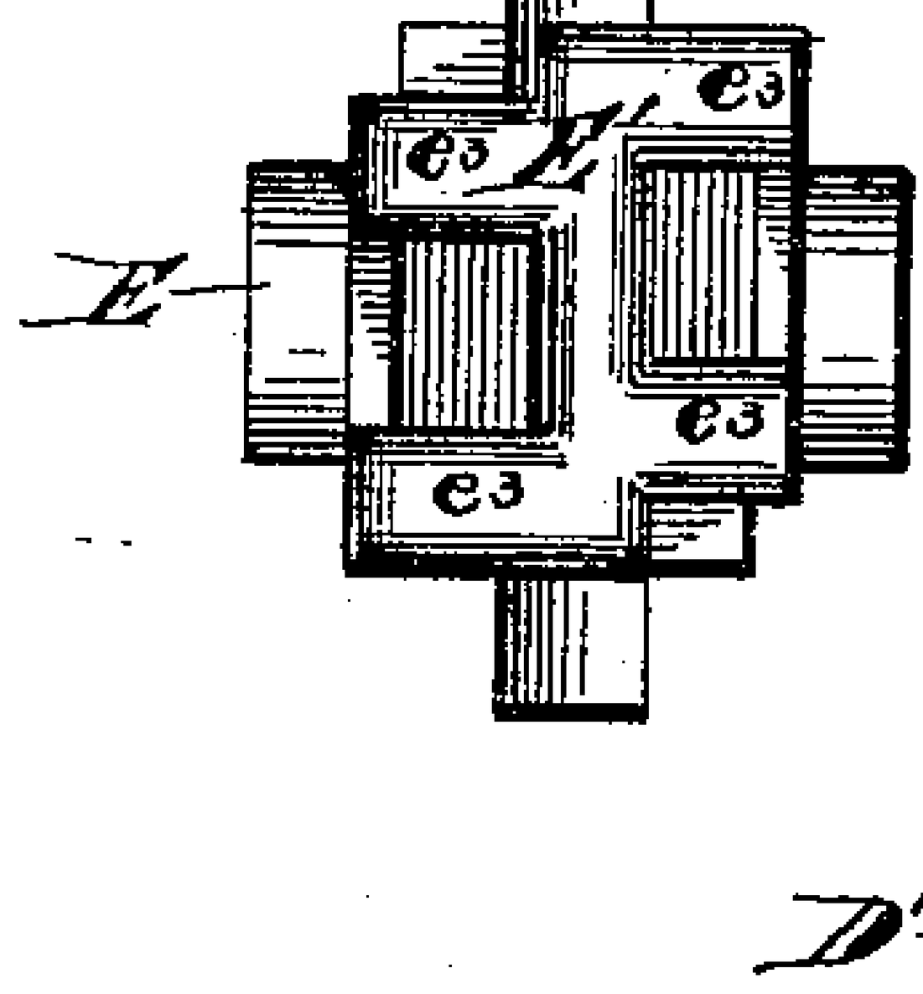


Fig. 5.

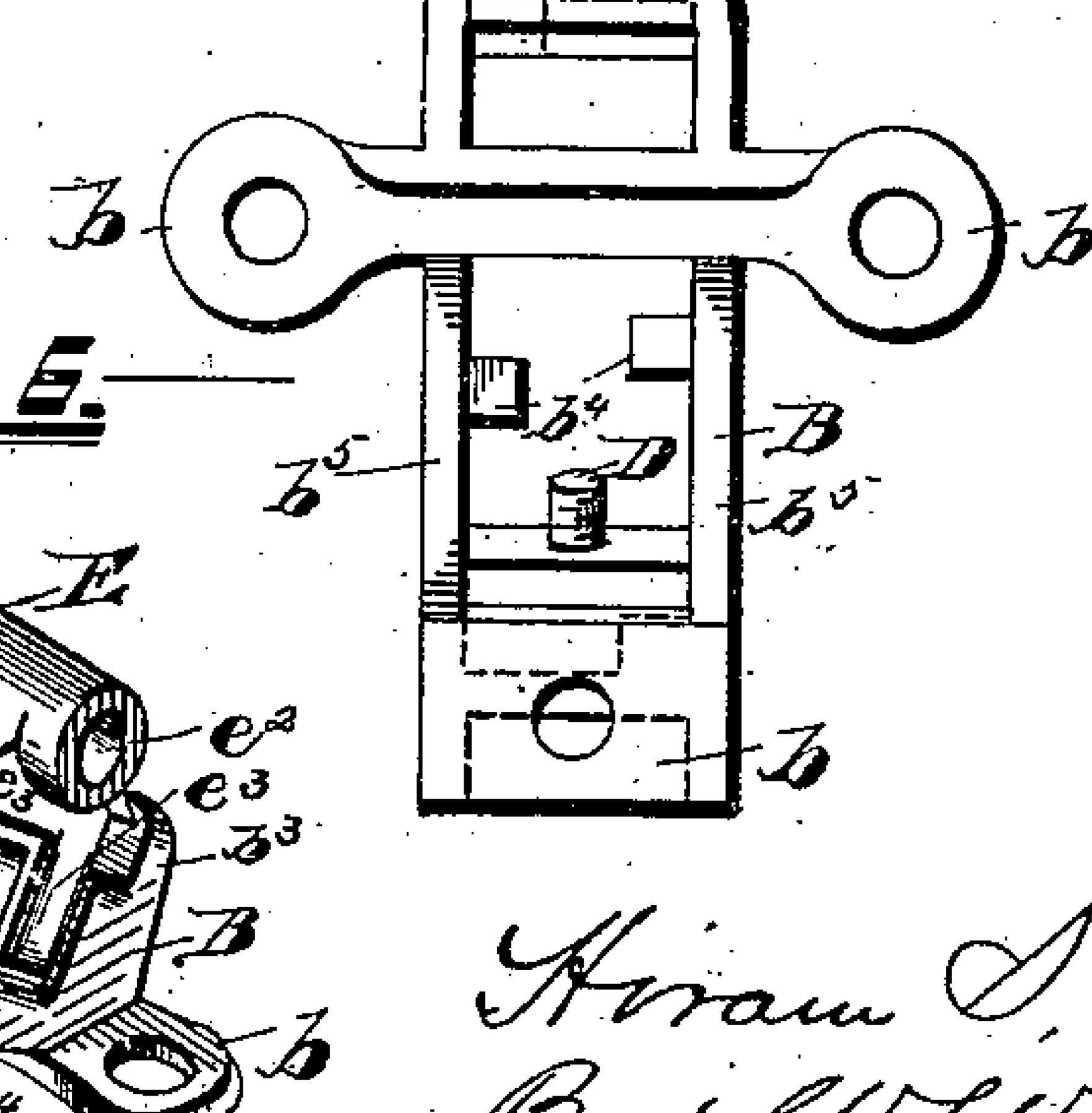
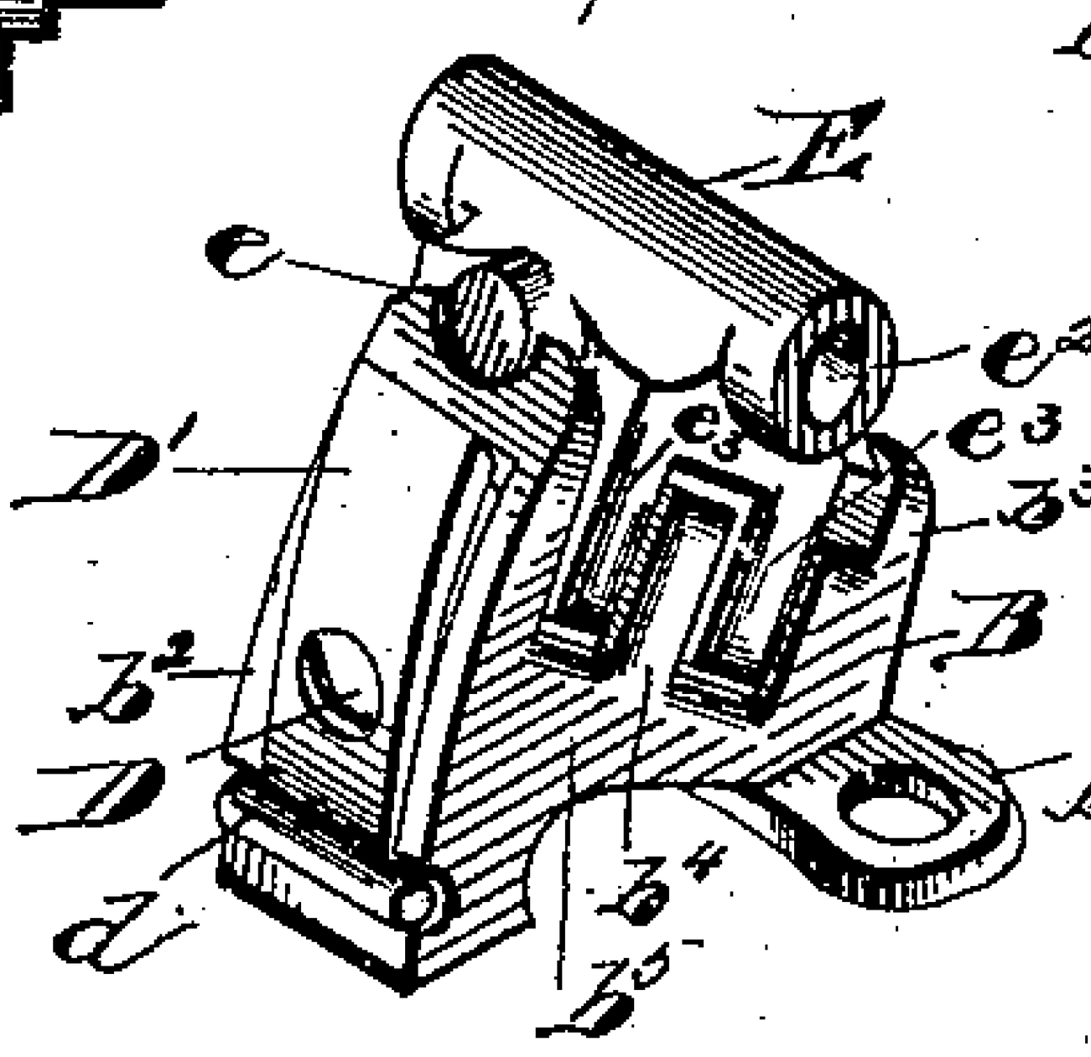


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

HIRAM S. COMBS, OF DETROIT, MICHIGAN, ASSIGNOR TO FRANK H. LEAVENWORTH, OF SAME PLACE.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 333,996, dated January 12, 1886.

Application filed December 18, 1884. Serial No. 150,651. (Model.)

To all whom it may concern:

Be it known that I, HIRAM S. COMBS, of Detroit, county of Wayne, State of Michigan, have invented a new and useful Improvement in Roller-Skates, and I do hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists of the combinations of devices and appliances hereinafter specified, and more particularly pointed out in the claims.

My invention relates to roller-skates, and has for its objects, first, simplifying their construction without diminishing their strength and utility; second, to dispense with an undue multiplication of parts; third, to hold the hanger and tilting bearing together by means of an elastic cushion; fourth, to provide means for adjusting the compression of said cushion for persons of different weights; fifth, the construction of the foot-plate and bearing integral therewith; and, sixth, the general construction and arrangement of parts.

In the drawings, Figure 1 is a longitudinal vertical section of my improved roller-skate, showing the cushion in place at the forward end and omitted at the rear end. Fig. 2 is a rear elevation. Fig. 3 is a front view of my device with the foot-plate in section and the jaw D′ removed. Fig. 4 is a separate plan view of the bearing E. Fig. 5 is a separate plan view of the hanger. Fig. 6 is a separate view of the bearing and hanger secured together.

I carry out my invention as follows: A represents the foot-plate. B is the hanger secured thereto, or made integral with said foot-plate. I do not limit myself to this integral construction of the two parts A and B; but I would have it understood that I contemplate such a construction as coming within the scope of my invention, as the foot-plate and said hanger may conveniently be made of malleable castings, the one part integral with the other.

It has been customary heretofore to make bearings of different patterns separate from the foot-plate and attach the same thereto by screws or other suitable means, and such a construction is also contemplated by my invention, as my bearing B may be separate and attached to the foot-plate in the usual manner, if preferred, as shown in Figs. 2 and 3.

I do not confine myself either to the integral construction here described, or to the separate construction of the hanger and its attachment to the foot-plate. This hanger, if made separate, should of course be provided with suitable flanges, b, through which screws b' may be inserted to secure it to the foot-plate. This hanger is provided with end pendants or brackets, b^2 and b^3, and intermediate fingers, b^4, hooked at the top. The interior is open to receive the elastic cushion C.

b^5 represents side arms connecting the pendants.

b^6 is a cross-piece to receive the compressing-screw D.

D′ is the pressure-jaw trunnioned to the pendants b^3, as shown at d, to engage against the cushion. It will be noticed that the lower end of said jaw is free to move in or out relative to the cushion, so that by loosening or tightening the screw D any desired adjustment of the compression upon the cushion may readily be obtained.

The pendants b^3 and b^2 I prefer to broaden upon opposite sides, and to curve the ends of the broadened portion which engage over the elastic cushion, so that the intermediate fingers will be mismatched.

E is the axle-bearing for the trunnioned connection with the hanger, as shown at e and e', provided with a sleeve, e^2, for the axle. This bearing is provided with an open basket-work, E′, composed preferably of mismatched fingers e^3, united at the top, the construction of the bearing and of the hanger being such that the fingers of the one will fit into intermediate spaces of the other, leaving a free interior opening to receive the elastic cushion, the construction being such, also, that when the bearing is in place and the cushion inserted the bearing and the hanger will be held firmly together by said cushion. This method of fastening the axle-bearing and the stationary hanger together I believe to be

novel, and I desire to cover it broadly. This construction also permits said bearing to be tilted laterally. By constructing these two parts B and E as described I obtain a stationary part in the hanger with a movable part of the bearing directly opposite, so that there is no shearing strain upon the cushion. The jaw D′ enables me to secure an endwise compression of the cushion.

When the bearing is located in place in the hanger, by laterally compressing the cushion it may be inserted in place, the jaw D′ being removed, the pendants b^2 being provided with a face to hold the cushion from working up. The ends of the fingers b^4 of the hanger are left open sufficiently to receive the connecting ends of the fingers of the bearing.

This construction of a roller dispenses with many parts heretofore essential, cheapening the construction in consequence, and still providing a skate of great stability and other desirable qualities of such devices.

What I claim is—

1. The combination, with the hanger formed with hooked pendent fingers between its front and rear brackets, of the axle-bearing formed with fingers fitting between the fingers of the hanger, and an elastic cushion interposed between said hanger and bearing, and engaged by said fingers to hold the hanger and bearing together, substantially as described.

2. The combination, with the hanger formed with fingers between its front and rear brackets, and having recesses in the ends of said brackets, of the axle-bearing having fingers fitting between the fingers of the hanger and formed with a sleeve to receive the axle, and trunnions to fit in the recesses of the brackets and a cushion between the hanger and the bearing, substantially as described.

3. The combination, with the hanger and the axle-bearing held together by an elastic cushion, of the compression-jaw trunnioned at one end to the front of one bracket of the hanger and at the other end on the same side of the bracket bearing against the elastic cushion, and a screw passed through said jaw and engaging with a part of the hanger to hold the jaw to its place and regulating the tension of the cushion, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

HIRAM S. COMBS.

Witnesses:
N. S. WRIGHT,
M. B. O'DOGHERTY.