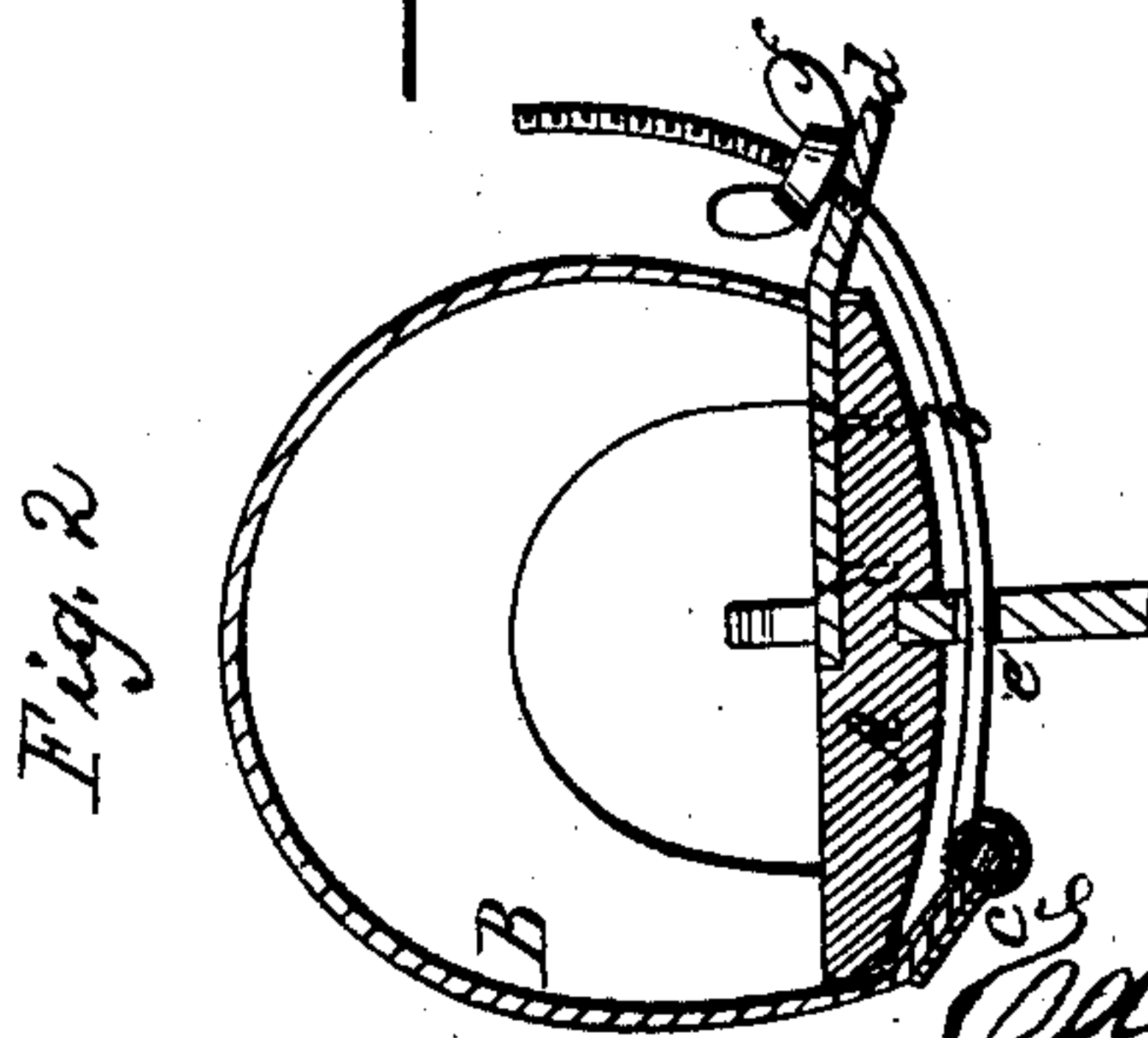
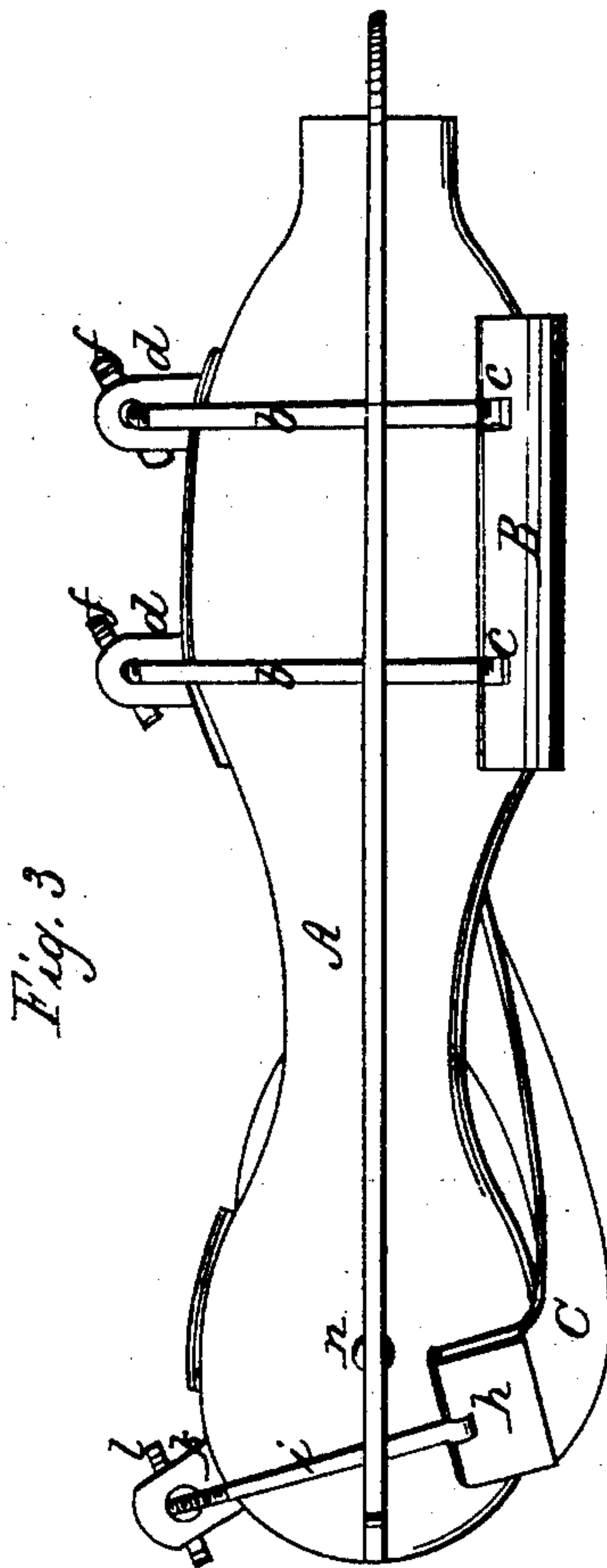
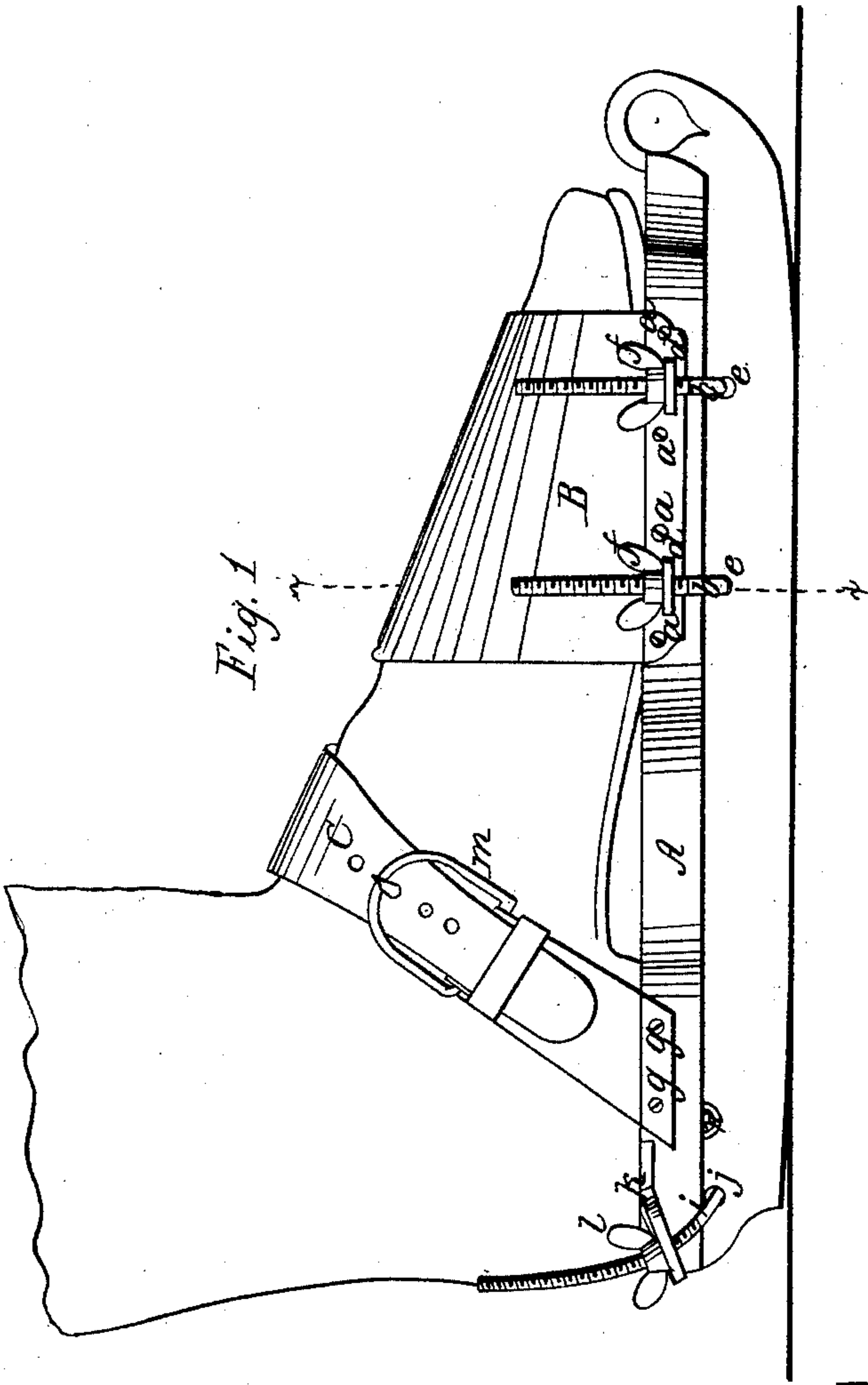


*E. Behr.*

*Skate Fastening.*

*N<sup>o</sup> 23,344.*

*Patented Mar. 29, 1859.*



*Witnesses*  
*John W. Jackson*  
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# UNITED STATES PATENT OFFICE.

EDWARD BEHR, OF NEW YORK, N. Y.

## MODE OF FASTENING SKATES.

Specification forming part of Letters Patent No. 23,344, dated March 29, 1859; Reissued August 2, 1870, No. 4,088.

*To all whom it may concern:*

Be it known that I, EDWARD BEHR, of the city, county, and State of New York, have invented a new and Improved Mode of

5 Fastening Skates; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

10 Figure 1, represents a side elevation of a skate constructed and fastened according to my improvement. Fig. 2 is a transverse vertical section of do, the line *x, x*, Fig. 1, indicating the plane of section, and Fig. 3,

15 is an inverted plan of do.

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

The common mode of fastening skates by straps which are secured in buckles by means

20 of a series of holes is very objectionable, not only because the straps themselves if properly tied, cause great pain to the foot but also because it is impossible in most cases to properly tie the strap on account of the

25 distance of the holes in the same, and these holes, when put too close together weaken the strap, and if the strap is sufficiently tight, the holes sometimes tear out and the pleasure is spoiled.

30 To overcome these difficulties is the object of this invention, and it consists in fastening the skates by means of screws, which are attached to a toe-cap and to a heel strap in such a manner that the strain of the cap

35 and of the strap can be adjusted by turning the screws and that the foot can be cramped in the toe cap and by means of the heel strap without causing any pain and still confining the same perfectly to the skate.

40 To enable other skilled in the art to fully understand use and construct my invention I will proceed to describe it.

A, represents a skate constructed in the usual manner, and B, is a toe cap, which is

45 rigidly attached to one side of the stock of the skate, by means of screws or tacks *a*, and to the other side of the toe cap two screws *b*, are fastened by means of a hinge *c*, which is rigidly attached to the end of the

50 cap as clearly represented in Fig. 2. The

screws *b*, are bent so as to conform to the under side of the stock of the skate and two ears *d*, are rigidly attached to that side of the stock to which the toe cap is fastened. The screws pass through openings *l* in the

55 skate iron and through holes in the ears *d*, and nuts *f*, serve to draw up or release the screws. In the same manner the heel strap C, is attached to one side of the stock by means of screws or tacks *g*, and a hinge *h*,

60 is fastened to its lower end from which a screw *i*, extends through an opening *j*, in the skate iron and through an ear *k*, on the other side of the stock. This ear is rigidly attached to the back end of the stock and

65 in such a position that by turning the nut *l*, which fits on the screw *i*, the heel strap is drawn up tight or relaxed according to the direction in which the nut is turned. This strap consists of two parts which are

70 united by a buckle *m*, so as to be able to adjust the same to different sized feet without too much screwing.

The operation is as follows:—The foot is placed on the stock the toes being passed

75 through the toe cap as clearly represented in Fig. 1, and the heel strap C, is drawn up as tight as it can conveniently be done by means of the buckle *m*, and now the nuts *f*, and *l*, are turned on. The toe cap is

80 drawn up perfectly tight to the foot by means of the screws *b*, and the turning of the nuts requires no extra exertion so that ladies even will be able to fasten their

85 skates without assistance and at the same time the toe cap being made of a pretty wide piece of leather, so that it covers a larger part of the foot than the common straps, the pressure of the same on the foot causes no pain. And in the same manner

90 the back part of the foot is secured to the stock by turning the nut *l*, the heel being kept in its place by a spike *n*, which projects from the upper side of the stock in the usual manner. The great advantage of

95 these screws is that when the skate becomes a little loose on the foot, it requires but one or two additional turns of the nuts in order to fasten the same again perfectly tight, and the nuts can be operated without being

100



obliged to sit down and with the greatest ease.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is.

The arrangement of the screws *b*, and the screws *i*, or their equivalent in combination

with the toe cap *B*, and with the heel strap *C*, substantially as and for the purpose described.

EDWARD BEHR.

Witnesses:

WM. TUSCH,  
JOHN W. JACKSON, Jr.

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