J. M. Yates,

Skate.

No. 37,934. Patented Mar. 17, 1863.

Fig. 1.

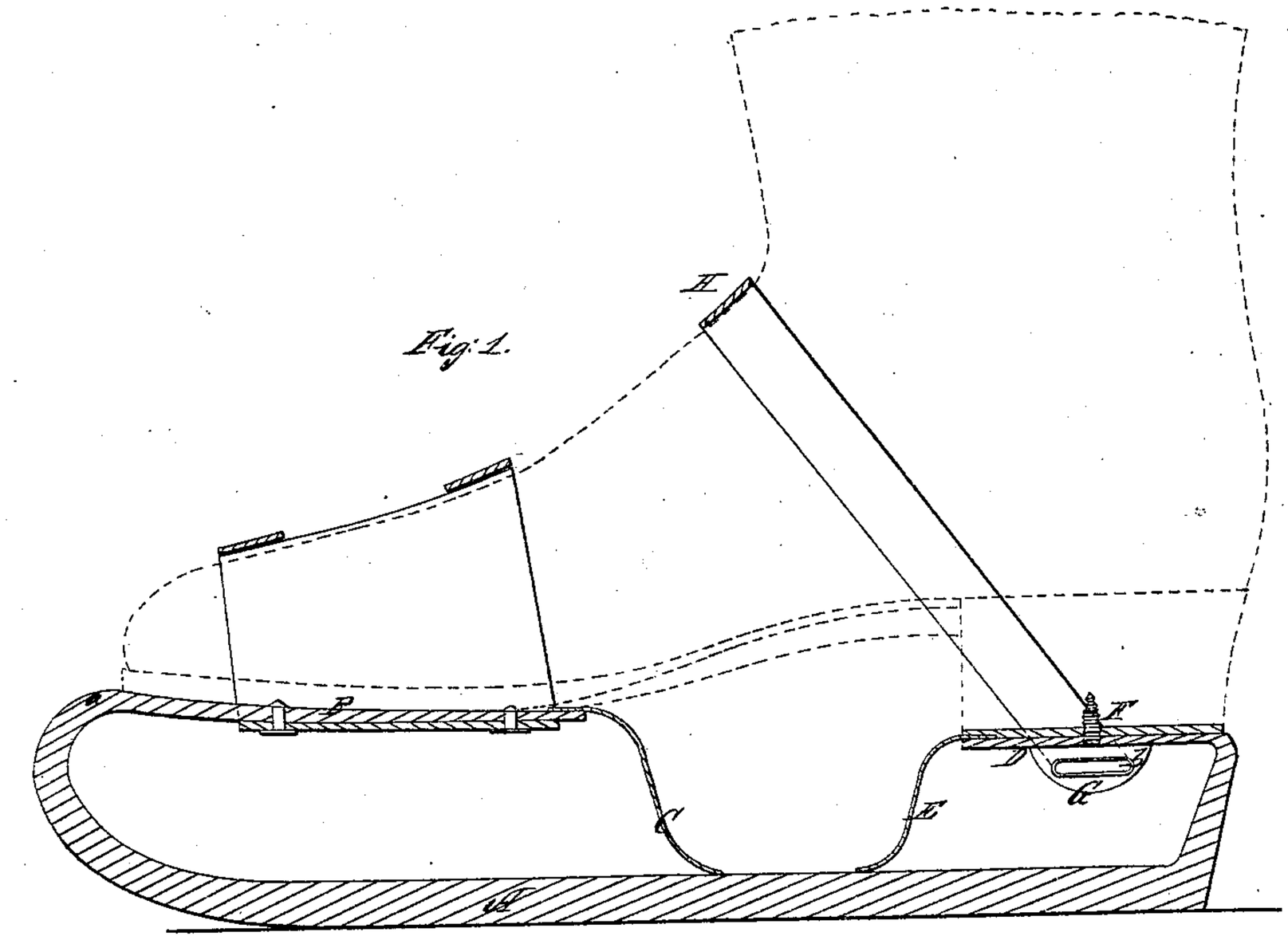
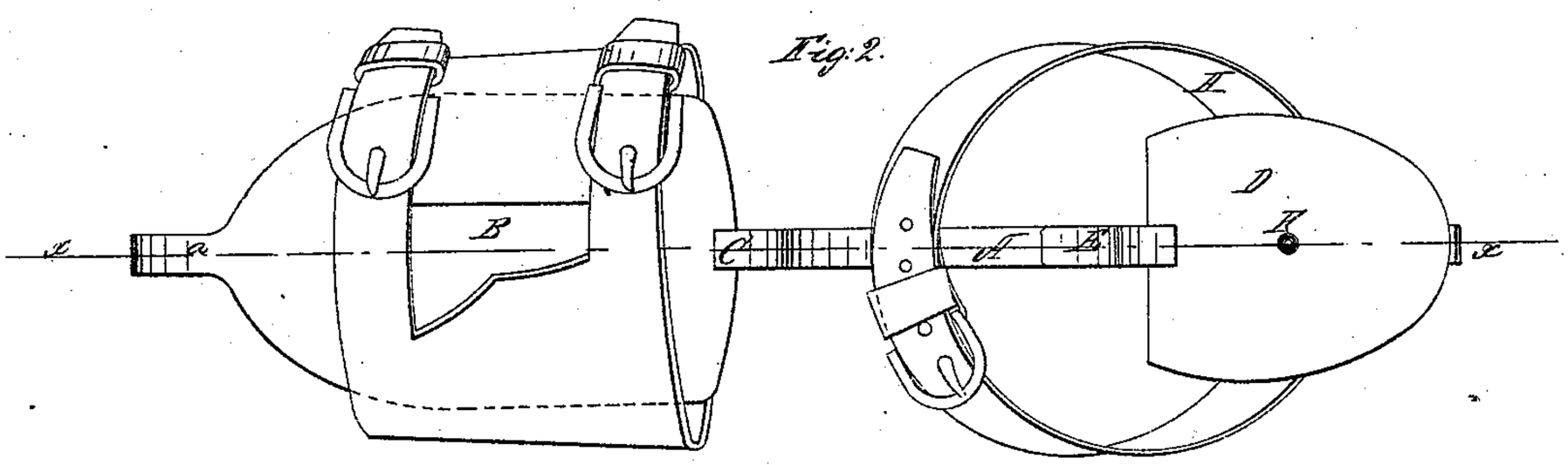


Fig. 2.



Witnesses:

W. L. Partridge
Daniel Robertson

Inventor:

Joseph M. Yates

UNITED STATES PATENT OFFICE.

JOSEPH M. YATES, OF FULTONVILLE, NEW YORK.

IMPROVEMENT IN SKATES.

Specification forming part of Letters Patent No. **37,934**, dated March 17, 1863.

To all whom it may concern:

Be it known that I, JOSEPH M. YATES, of Fultonville, in the county of Montgomery and State of New York, have invented a new and Improved Skate; 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 a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same.

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

This invention relates to a skate, in which springs are employed to admit of a certain degree of elasticity between the foot of the wearer and the runner of the skate; and it consists in having the sole-plate of the skate formed of two parts—to wit, a heel-piece and a toe-piece—which are constructed out of the same piece of metal as the runner, and in such a manner as to have a spring-connection with it, said heel and toe pieces being also supported by springs, as hereinafter described, whereby the desired elasticity is obtained.

The invention also consists in having the screw or heel-spur of the skate attached to a button or revolving thumb-plate, which is slotted to admit of the heel-strap passing through it, whereby a proper bearing is obtained for the heel-strap, and the screw or spur rendered capable of being screwed directly into the heel in adjusting the skate to the the boot or shoe without the aid of a gimlet, or without turning the skate, as hitherto required.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the runner of the skate, the front part of which is curved upward and bent over backward, and then flattened or spread out by forging or otherwise, so as to form a thin plate, B, of sufficient breadth to form a good bearing-surface for the front part of the foot, and sufficiently thin to have a requisite degree of elasticity. To the back or inner end of the plate B there is attached a spring, C, which is curved downward and bears upon the upper side of the runner A, as shown clearly in Fig. 1. This spring C serves as a support for the back end of the plate B, and relieves the neck *a* at the front end of B of any undue strain. The back part of the runner A is bent or curved upward and then forward and flattened or spread out in a horizontal position to form a plate or support, D, for the heel. This plate D is also made thin, so as to have a requisite degree of elasticity, like the plate B, and the inner end of the plate D is supported by a spring, E, the lower end of which bears on the upper surface of the runner A. The lower ends of the springs C E are not attached to the runner, but simply rest upon and slide freely upon it under the spring of the plates B D. By this arrangement it will be seen that the plates B D will yield or give when the skate is in use, and a requisite degree of elasticity obtained between the foot of the wearer and the runner of the skate.

F is the screw or spur, which enters the heel of the boot or shoe. This screw or spur passes through the plate D, is allowed to turn freely therein, and has a thumb-plate, G, at its lower end, said thumb-plate being below the plate D. The thumb-plate G has an oblong slot, *b*, made through it for the heel-strap H to pass through. In applying the skate to the boot or shoe the strap H may be withdrawn from the thumb-plate G and the latter turned so that the screw F may enter the heel. Thus all gimlets are avoided, as well as the turning of the skate in order to bring the back part of the latter in close contact with the heel, and the thumb-plate serves as a convenient bearing for the heel-strap.

Any suitable toe-strap or fastening may be applied to the plate B.

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

1. Constructing the toe and heel plates B D and runner A all in one piece, by turning and bending over the ends of the runner and flattening the same, as set forth, in combination with the springs C E, attached to the plates B D and resting on the runner A, as set forth.

2. Attaching the screw or heel-spur F to a thumb-plate G, the latter having a slot made in it to allow the heel strap H to pass through, and the former being allowed to turn in the plate D, substantially as and for the purpose specified.

JOSEPH M. YATES.

Witnesses:

M. S. PARTRIDGE,

DANIEL ROBERTSON.