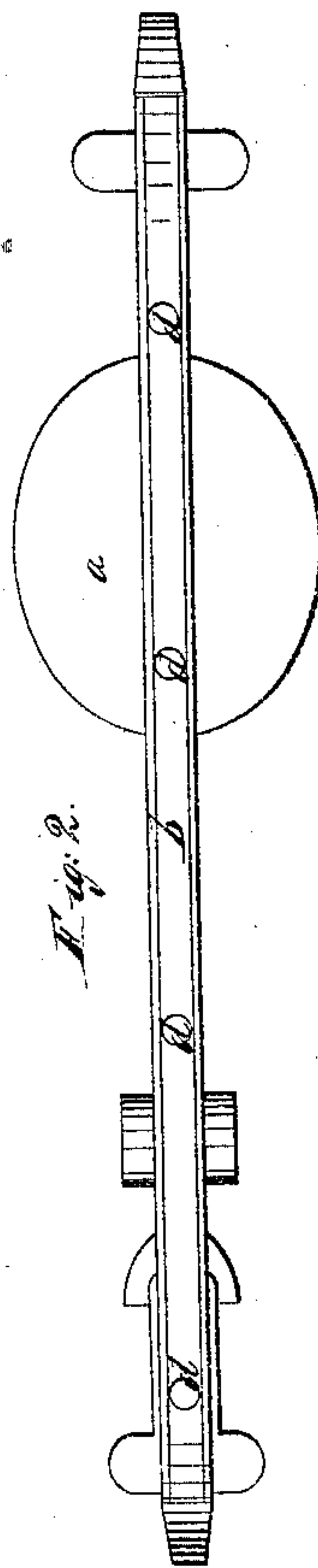
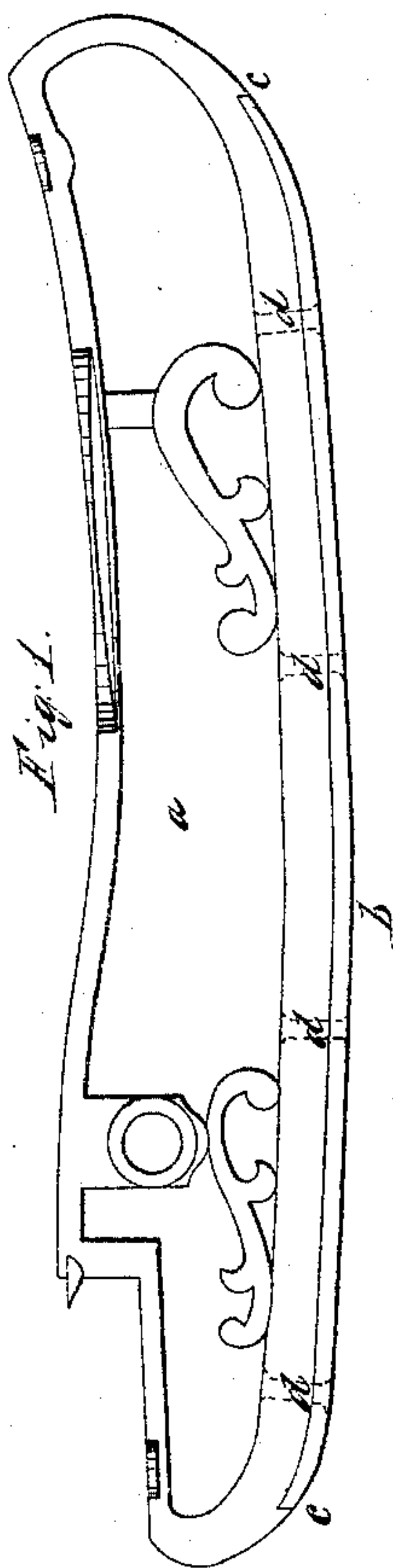
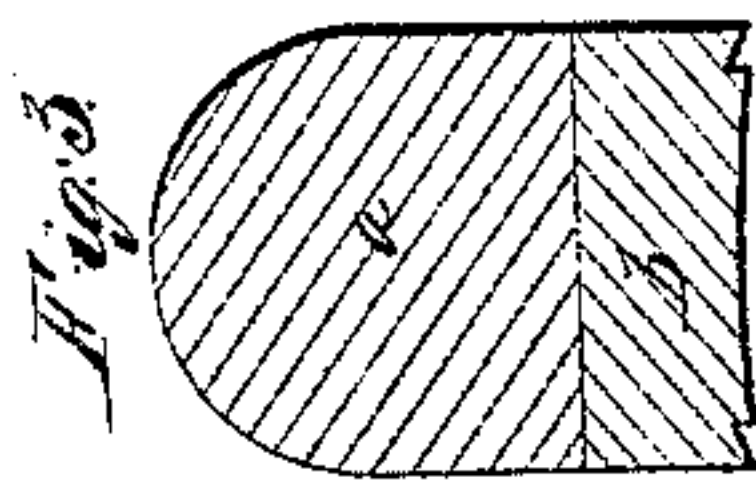


*B. Irving*

*Skate.*

*N<sup>o</sup> 37,169.*

*Patented Dec. 16, 1862.*



*Witnesses:*  
*Monroe W. Wheeler*  
*Charles H. Corbett*

*Inventor:*  
*Benjamin Irving*

# UNITED STATES PATENT OFFICE.

BENJAMIN IRVING, OF NEW YORK, N. Y.

## IMPROVEMENT IN SKATES.

Specification forming part of Letters Patent No. **37,169**, dated December 16, 1862.

*To all whom it may concern:*

Be it known that I, BENJAMIN IRVING, of the city, county, and State of New York, have invented a new and useful Improvement in the Manufacture of Skates; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, of which—

Figure 1 is an elevation, Fig. 2 a plan, and Fig. 3 a section, of the runner of my improved skate.

Similar letters refer to the same parts.

The nature of my invention, as a new article of manufacture, consists in an improved skate, the body of which, being equally adapted to either foot, is made of iron or other comparatively soft metal or material, and with shoes or runner-plates of steel, these shoes or runner-plates having a groove near each edge of the under or supporting surface for giving them a proper hold upon the ice, without regard to the foot they may be upon.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct the body of the skate *a* in any of the known forms, usually of cast metal, with broad soles to fit the boot of the wearer upon its top, and the greater part of the runner cast in the same piece. To the lower side of the runner, when properly dressed, a thin strip of steel or other hard metal, *b*, is fitted and secured by means of the dovetails *c c* and rivets *d d d*, thus securing a superior surface for contact with the ice, while the body of the skate

is of cheaper metal. There are numerous methods by which the shoes *b* may be secured to the body *a* of the skate, among which are soldering, brazing, and by means of a longitudinal tongue upon the shoe *b* and a corresponding groove in the body *a*.

I usually form the tread of the skate, or that part which comes in contact with the ice, in such a manner that the lower outline of its cross-section presents a narrow groove upon each edge for the purpose of holding to the ice against slipping sidewise when the skate is turned over to one side, while the line joining the grooves is straight or slightly concave, thus preventing the skate cutting into the ice when upright.

It is convenient and economical to roll the metal for the shoes *b* in long strips, after the usual mode of rolling iron rods, and to the shape required. Afterward the strips may be cut into the proper lengths and bent to fit the body of the skate.

What I claim as a new article of manufacture is—

An improved skate, the runner or shoe of which is made of a plate of steel, with a narrow groove near each edge, when the body or frame of the skate is made of iron or some other softer metal or material, and when said frame is adapted equally to either foot, substantially as herein described.

BENJAMIN IRVING.

Witnesses:

NORMAN W. WHEELER,  
CHARLES H. CORBETT.