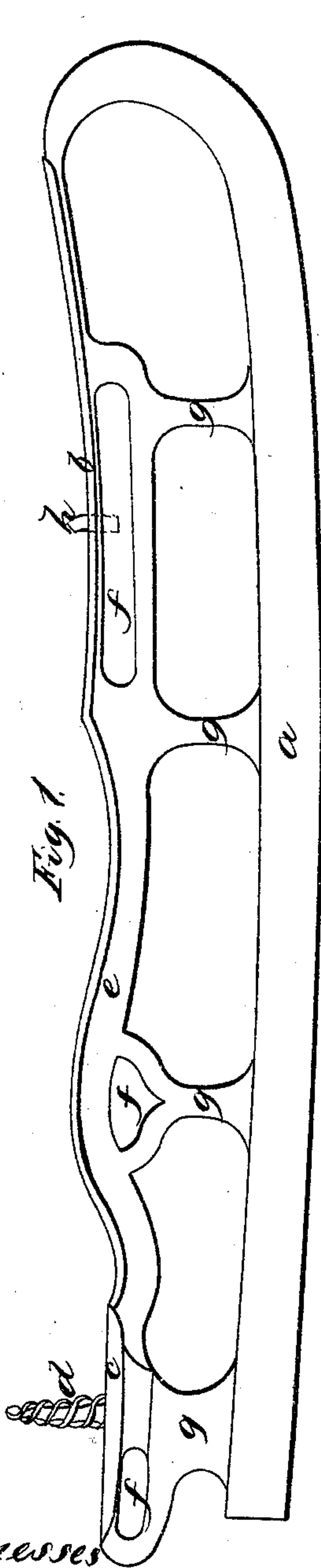


*J. Kinzer,*

*Skate,*

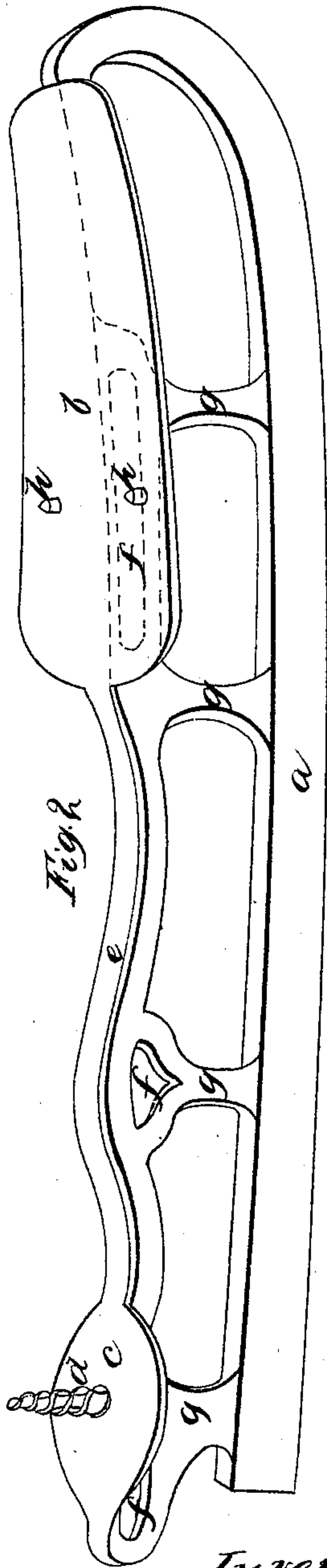
*N<sup>o</sup> 57,335.*

*Patented Aug. 21, 1866.*



*Witnesses*

*W. K. Jennings*  
*O. H. Baldwin*



*Inventor*

*Jacob Kinzer*

# UNITED STATES PATENT OFFICE.

JACOB KINZER, OF PITTSBURG, PENNSYLVANIA.

## IMPROVED SKATE.

Specification forming part of Letters Patent No. 57,335, dated August 21, 1866.

*To all whom it may concern:*

Be it known that I, JACOB KINZER, of the city of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Method of Manufacturing Cast-Iron Skates; and I hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawing, making part of this specification.

The invention consists in making a skate complete in one piece of cast-iron, its various parts being so arranged and proportioned as to mutually depend upon and support each other, thus forming a skate at once cheap, durable, light, and symmetrical, requiring no adjustment of parts or arrangement of pieces.

The general nature and design of this skate will be seen by referring to the drawing, and I proceed to describe its manner of construction.

As the form of the pattern from which the mold is made is the shape of the skate when completed, a description of one is a description of the other.

I make the runner *a* broad, after the generally-approved plan—say five-sixteenths of an inch in width and about half an inch in depth—the forward end of the runner *a* being bent or curved up to meet and unite with the front end of the foot-rest.

At four different places along the runner arms or braces *G G G G* are carried up and connected at their opposite ends with the foot-rest *b*, the instep-piece *e*, and the heel-piece *c*. These arms or braces are proportioned in length to the height required for the skate, the upper ends of the braces coming under the center of the foot-rest *b*.

The instep-piece *e* and the heel-rest *c* are divided into two arms, leaving spaces *f f f*, through which the straps for fastening the skate are to be inserted, and at the same time adding strength and symmetry to the skate.

The space under the foot-rest *c* is about two inches in width, so that a wide strap may be used. The other spaces are narrower, less strain being required to hold the skate on at these points.

The foot-rest *b* varies in width, according to

the size of the skate, but is made sufficiently broad and long to make an easy and firm rest for the foot. The heel-rest *c* is proportioned with the same regard to the size of the skate.

The instep-piece *e* is connected with the foot-rest *b* and heel-piece *c*, and, while strengthening both, is strengthened in its turn by one of the braces *g*.

The part of the screw *d* in the heel-piece *c* should project in the pattern, as shown in the drawing.

When the mold is completed and the pattern withdrawn, I take a wrought-iron gimlet-pointed screw—say an inch or more in length—and place it in the hollow of the mold with the head and a portion of the large end of the screw projecting down into the space for the heel-piece. The mold being now ready to receive the metal, it is poured in, and running through all the various spaces forms the runner, foot-rest *b*, braces *g*, instep-piece *e*, heel-piece *c*, and closing around the head and projecting end of the screw holds it so firmly that it is impossible it should ever become loose or get out of place.

In this manner of forming the screw I claim two important advantages—first, a great saving of time, labor, and expense; and, second, obtaining a screw which is not liable to break or get out of order, thus overcoming one of the greatest difficulties in the manufacture of skates. I then drill two holes in the foot-rest *b*, into which are inserted the pins *h h*, projecting both above and below the foot-rest. The upper ends of these pins, being sharpened, serve to keep the skate from sliding sidewise on the foot, while the lower ends are intended to go through corresponding holes cut in the strap and keep it from being moved or displaced. The bottom of the runner *a* is then ground off and the skate japanned or painted, when it is ready for the insertion of the straps and for use.

I claim—

As an article of manufacture, a cast-iron skate, substantially as shown and described.

JACOB KINZER.

Witnesses:

W. K. JENNINGS,

W. H. BALDWIN.