

(No Model.)

2 Sheets—Sheet 1.

S. R. RUST.
METAL TOY PLANE.

No. 282,468.

Patented July 31, 1883.

Fig. 1.

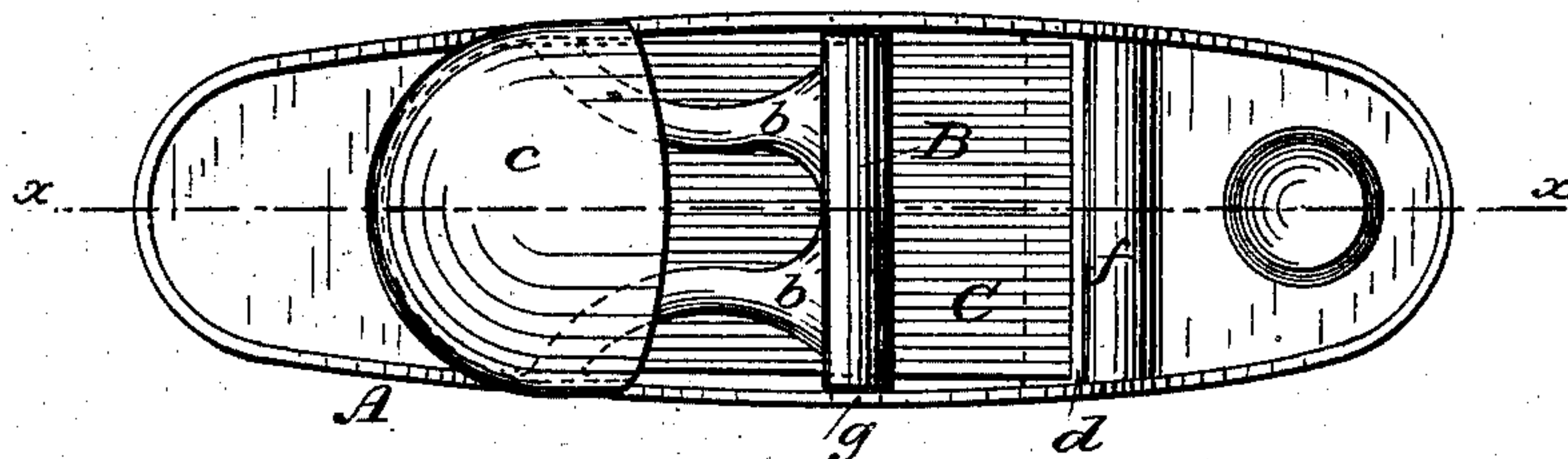


Fig. 2.

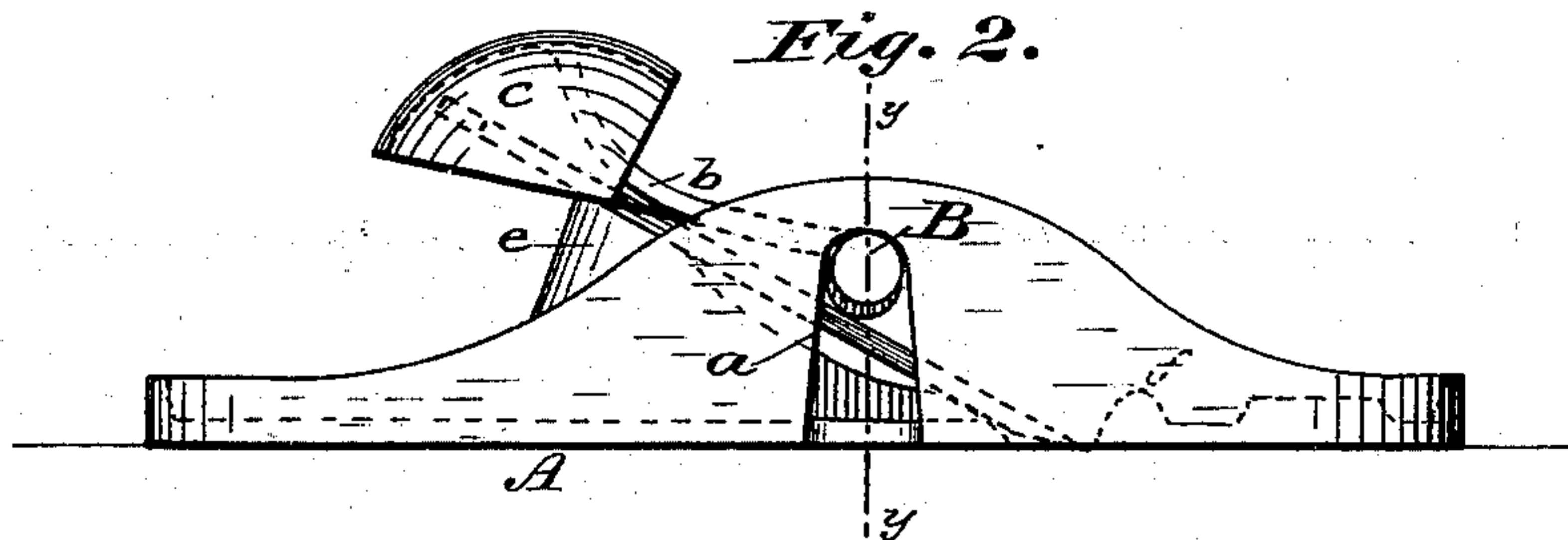


Fig. 3.

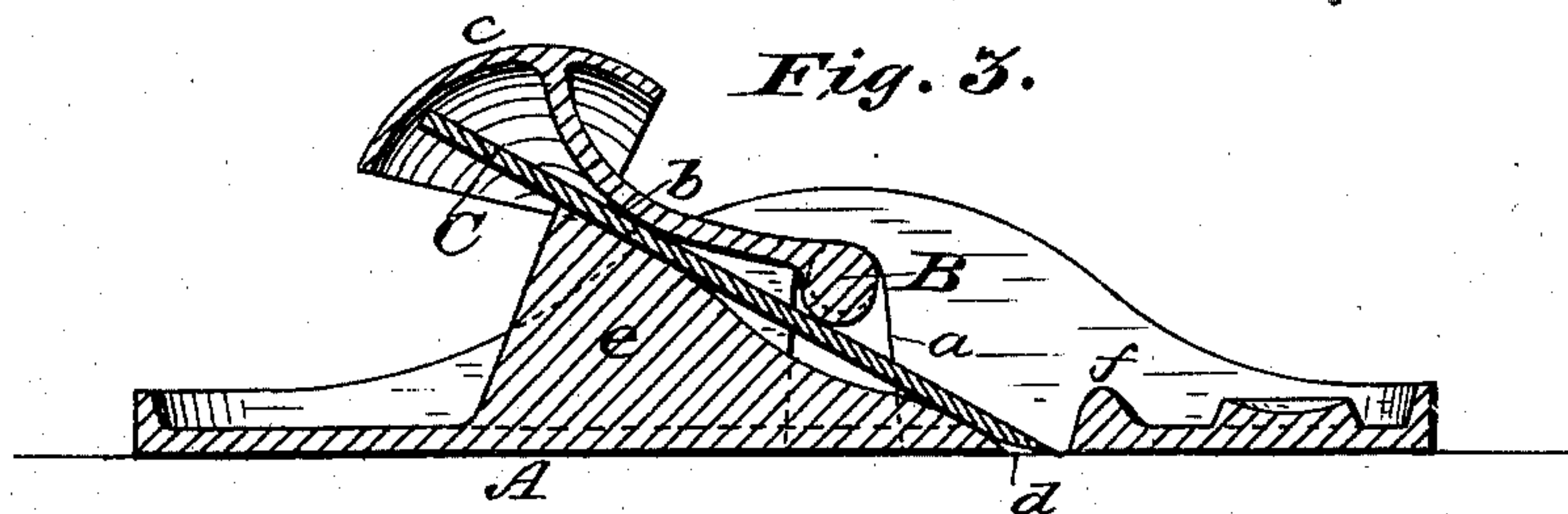
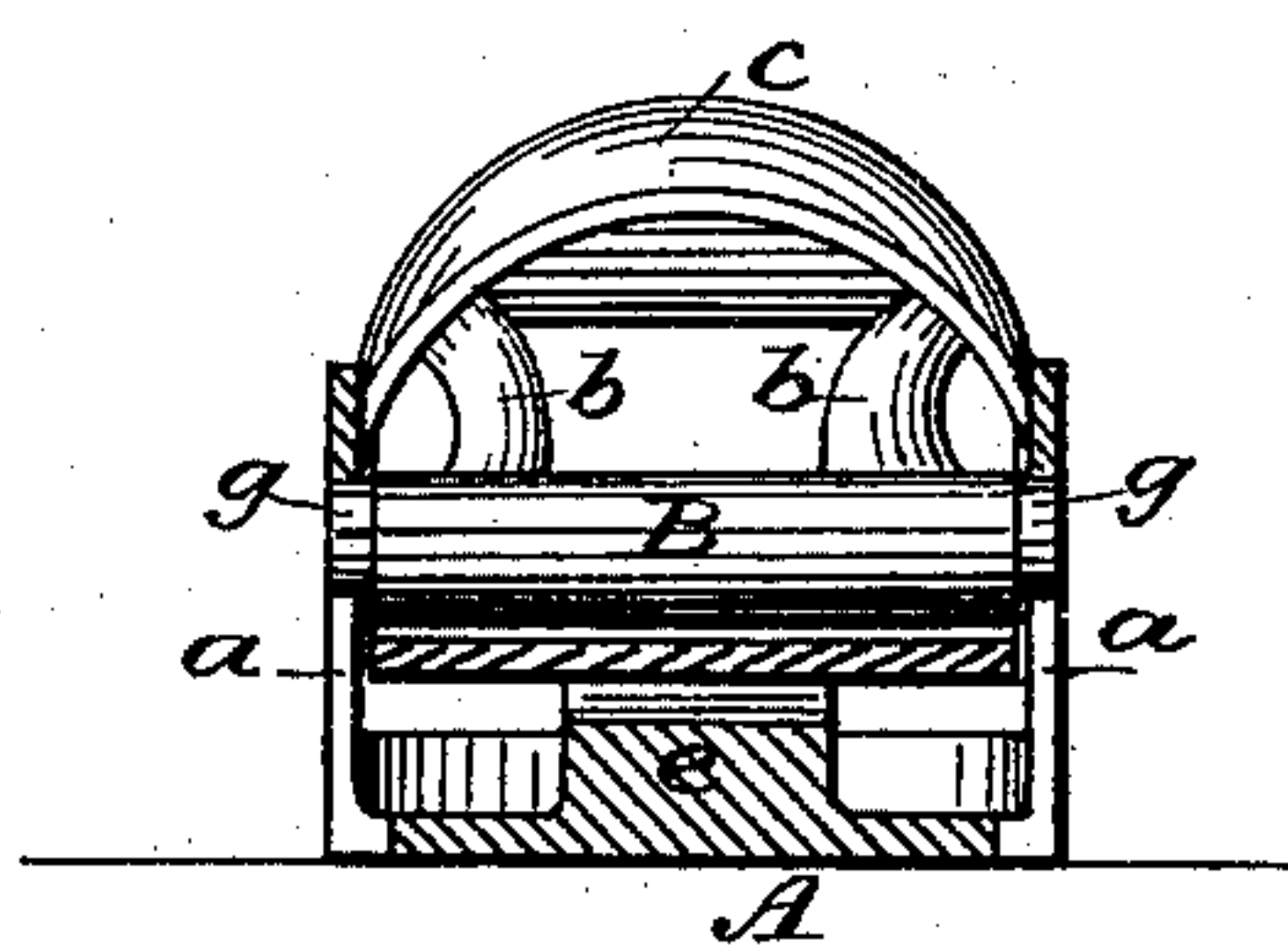


Fig. 4.



Witnesses:

Edw. E. Kellogg.

L. F. Kelen

Inventor:

Solon R. Rust,

By J. C. Buckle

Attorney.

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2 Sheets—Sheet 2.

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Fig. 5.

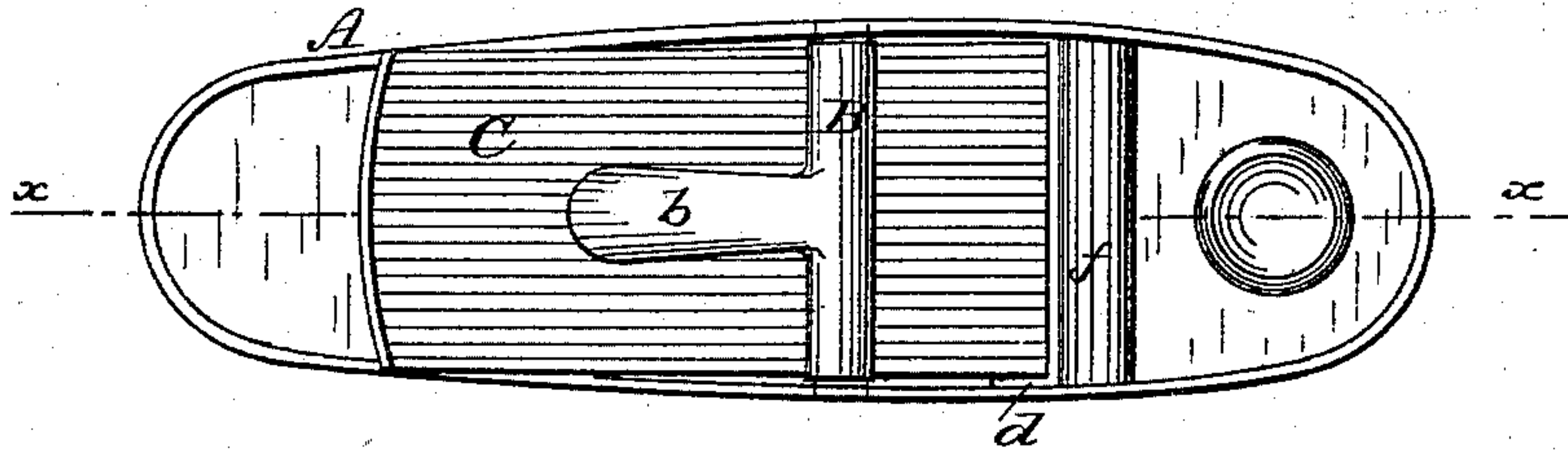


Fig. 6.

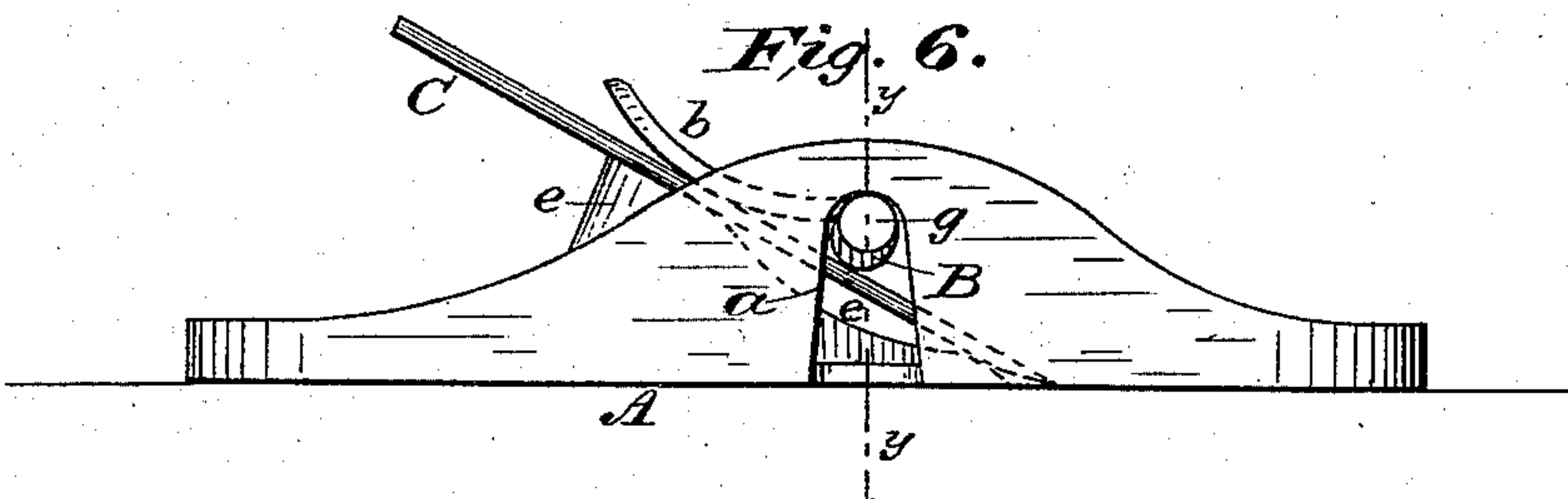


Fig. 7.

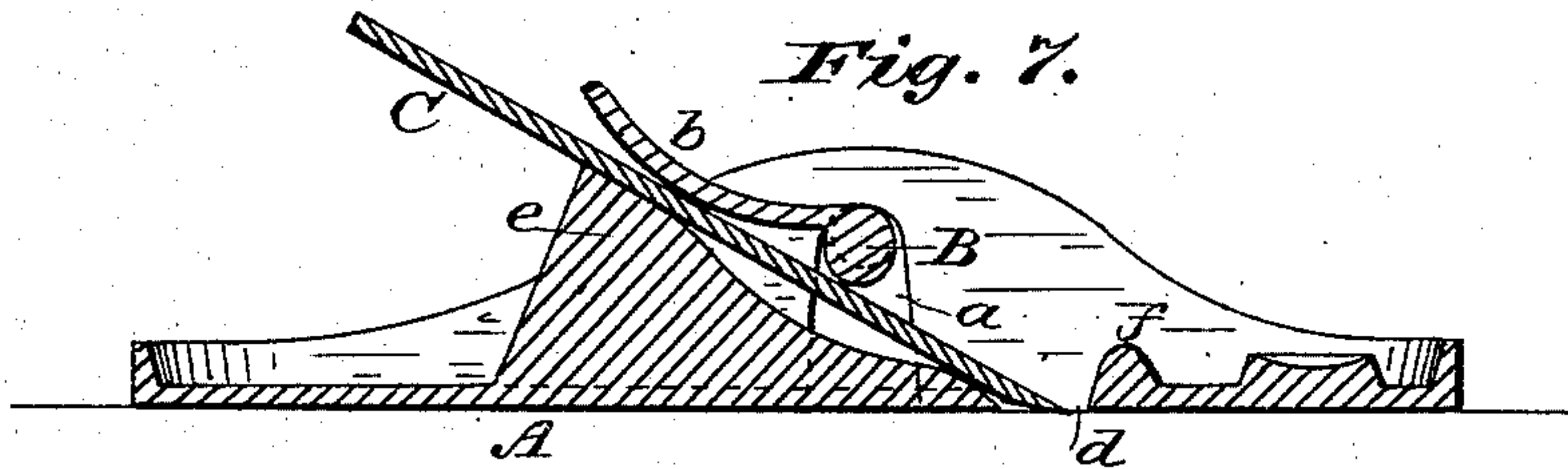
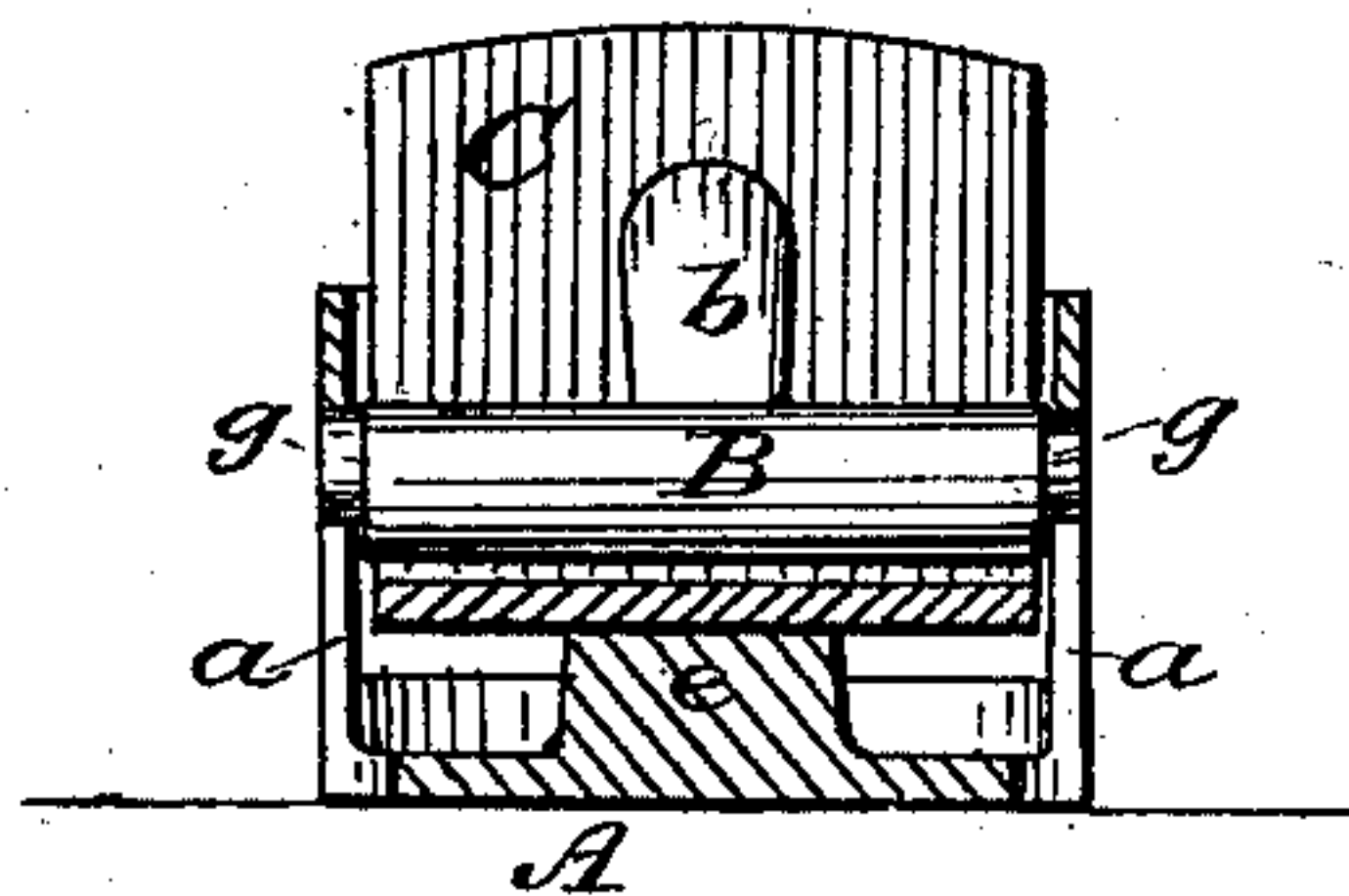


Fig. 8.



Witnesses:
Edw. D. Kellogg.
L. D. Kellogg.

Inventor:
Solon R. Rust,
By J. C. Brecht,
Attorney.

UNITED STATES PATENT OFFICE.

SOLON R. RUST, OF PINE MEADOWS, ASSIGNOR TO THE MERIDEN PATENT NOVELTY COMPANY, OF MERIDEN, CONNECTICUT.

METAL TOY PLANE.

SPECIFICATION forming part of Letters Patent No. 282,468, dated July 31, 1883.

Application filed April 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, SOLON R. RUST, a citizen of the United States, residing at Pine Meadows, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Metal Toy Planes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in toy planes; and the object is to construct such planes in a very simple manner, so that the plane iron or bit can be easily adjusted to suit different cuts, and that they can be produced at a small cost.

My invention consists in the construction and arrangement of certain parts, as will be more fully described hereinafter, reference being had to the accompanying drawings and the letters of reference marked thereon.

Like letters indicate like parts in the several figures of the drawings, in which—

Figure 1 is a plan or top view of my improved toy plane. Fig. 2 is a side view of the same. Fig. 3 is a longitudinal section on line *x x*, Fig. 1. Fig. 4 is a vertical cross-section on line *y y*, Fig. 2. Figs. 5, 6, 7, and 8 are respectively similar views of a modification of the same.

In the accompanying drawings, A represents the main body or frame, cast in one piece with the bottom, sides, and lug for supporting the plane-iron, and hole through which said iron passes.

In the sides of the frame are arranged the holes or slots *a*, which are cast, milled, or bored, and then finished; and they form the bearings for the adjusting cam-bar B. This cam is provided with two stems or levers, *b*, which are attached to a head or cap, *c*, generally cast together. The object of said head is to fit the hand when in use and completely cover the top of the plane iron or bit C, thus making a full and entire protection for the inside of the hand, and prevent it from coming in contact with the plane-iron. This is a very

important feature of my invention, as with all planes of this kind heretofore made the hand comes in contact with the plane-iron.

In the rear of the opening *d* for the plane-iron is arranged an inclined lug, *e*, having a concave surface, upon the upper and lower ends of which the plane-iron rests, so as to form a spring or elastic bearing for said iron when the cam is clamped down. A strengthening and guiding rib, *f*, is placed at the front side of the opening *d*. The cam-bar is provided at each side with a journal, *g*, which fits into the holes or slots *a* in the sides of the frame, while the central part is made eccentric or cam-shaped, and when the cam is turned down it firmly clamps and holds the plane-iron against the lug *e*. By turning the cam in an upright position the plane-iron will be released, and can be adjusted or removed.

In the modification shown in Figs. 5 to 8 the cam-bar is provided with one lever or handle, *b*, only, and the head or cap is dispensed with, by which the cost of the plane is still further reduced.

The advantages of this plane will be readily appreciated, and among them are: cheapness in construction, a much greater pitch is obtained of the plane-iron, the concave in the lug on the bed of the body, on which the cutting-iron rests, forming a spring or elastic bearing under the cam-bar, making a very strong fastening device, the simplicity of its construction, and no liability of getting out of order.

The operation is as follows: The cam-bar is first placed in an upright position, with its journals *g* in the slots *a* in the sides of the plane-body. The plane-iron is then inserted in place, resting on the lug *e*, and is set to the desired depth of cut. The cam-bar handle is then moved backward, when the cam-bar B will firmly clamp the plane-iron in position, ready for use. To remove the plane-iron, the operation is merely reversed.

Having thus described my invention, what I claim is—

1. In a plane, the body A, having slots *a* in its sides, and a lug, *e*, provided with con-

cave face, in combination with the plane-iron C, and cam-bar B, having journals *g*, handles *b*, and cap *c*, all constructed and arranged as specified.

- 5 2. In a plane, the cam-bar B, provided with handles *b* and cap *c*, cast in one piece, in combination with a plane iron and body, A, having lug *e*, arranged as shown and specified.

In testimony whereof I hereby affix my signature in presence of two witnesses.

SOLON R. RUST.

Witnesses:

EDWD. E. KELLOGG,
G. H. RICE.