

H. R. McALISTER.

Improvement in Brake-Shoes.

No. 130,734.

Patented Aug. 20, 1872

Fig 1

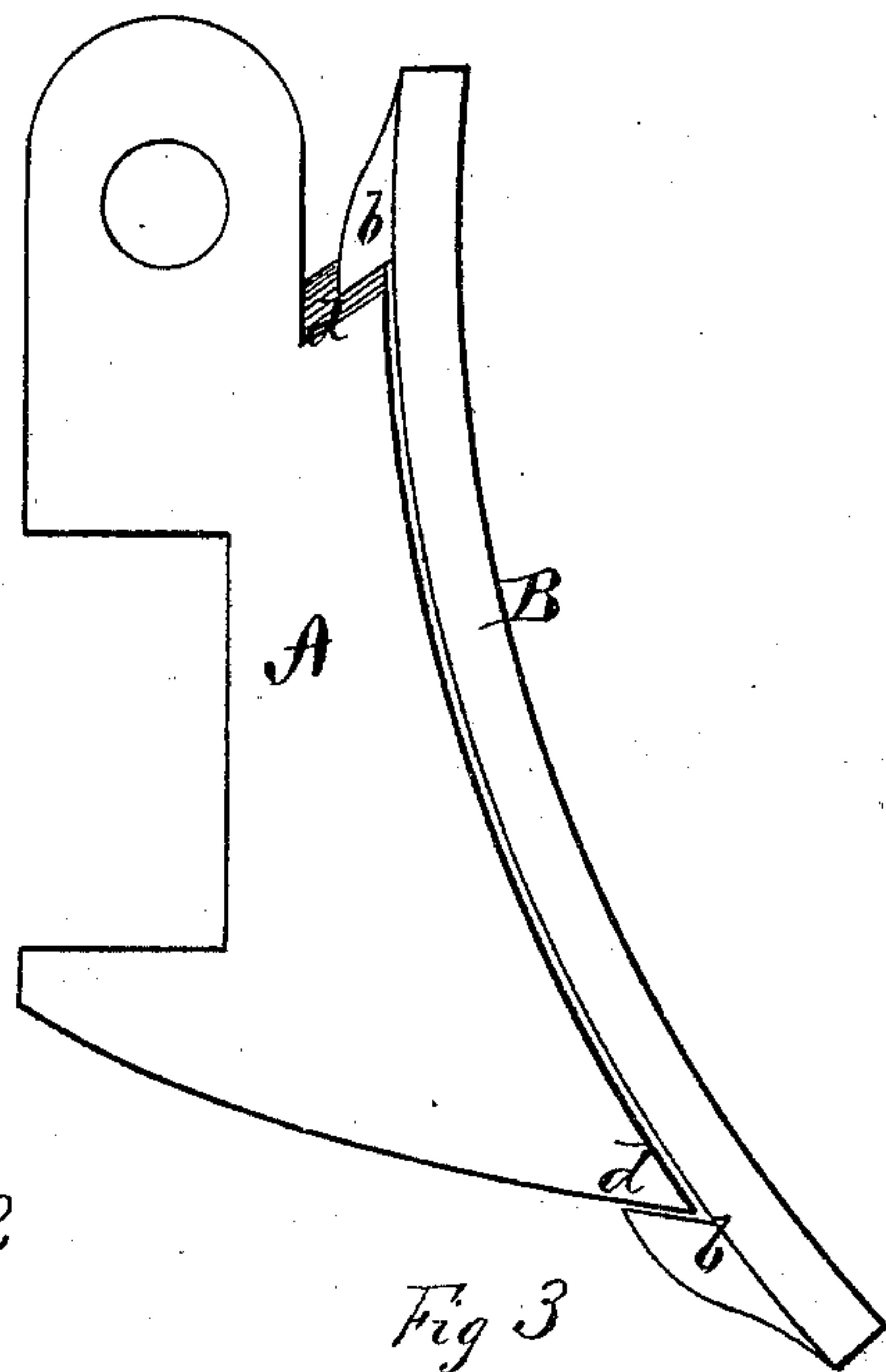


Fig 2

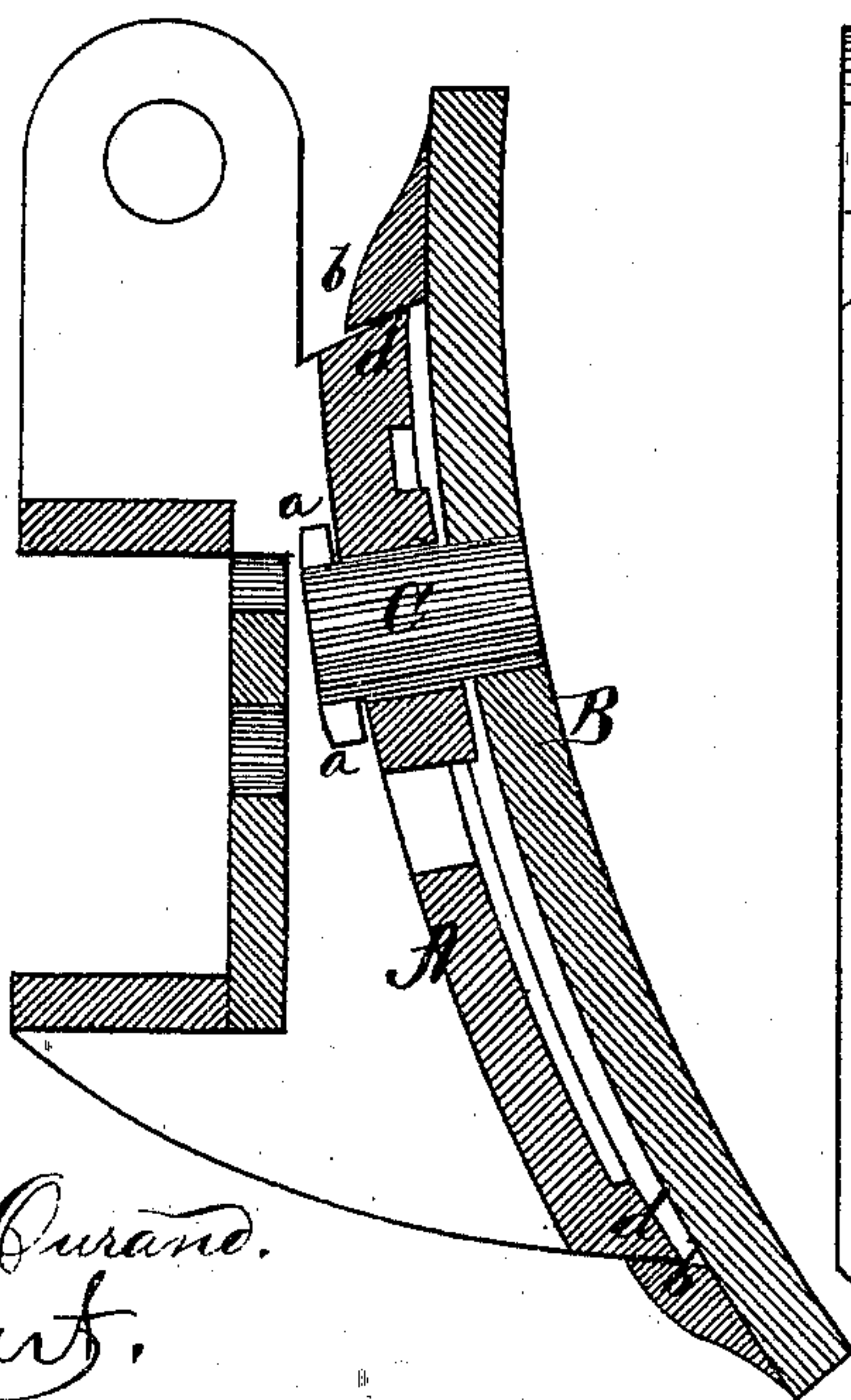


Fig 3

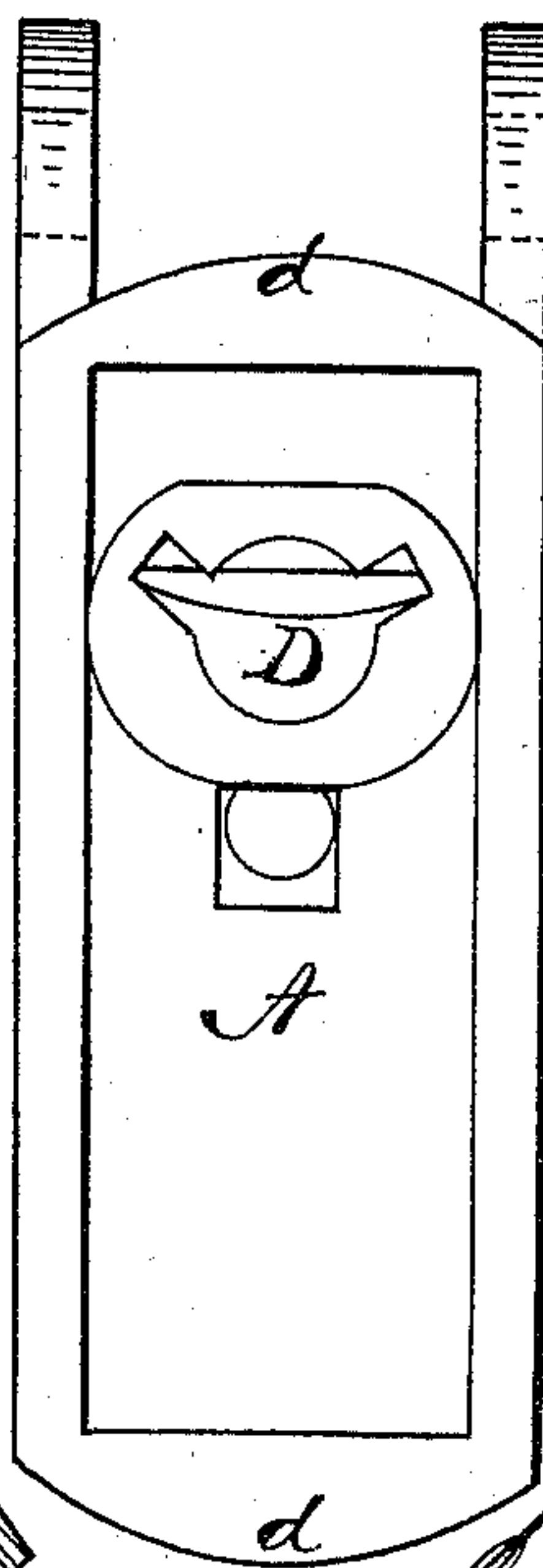
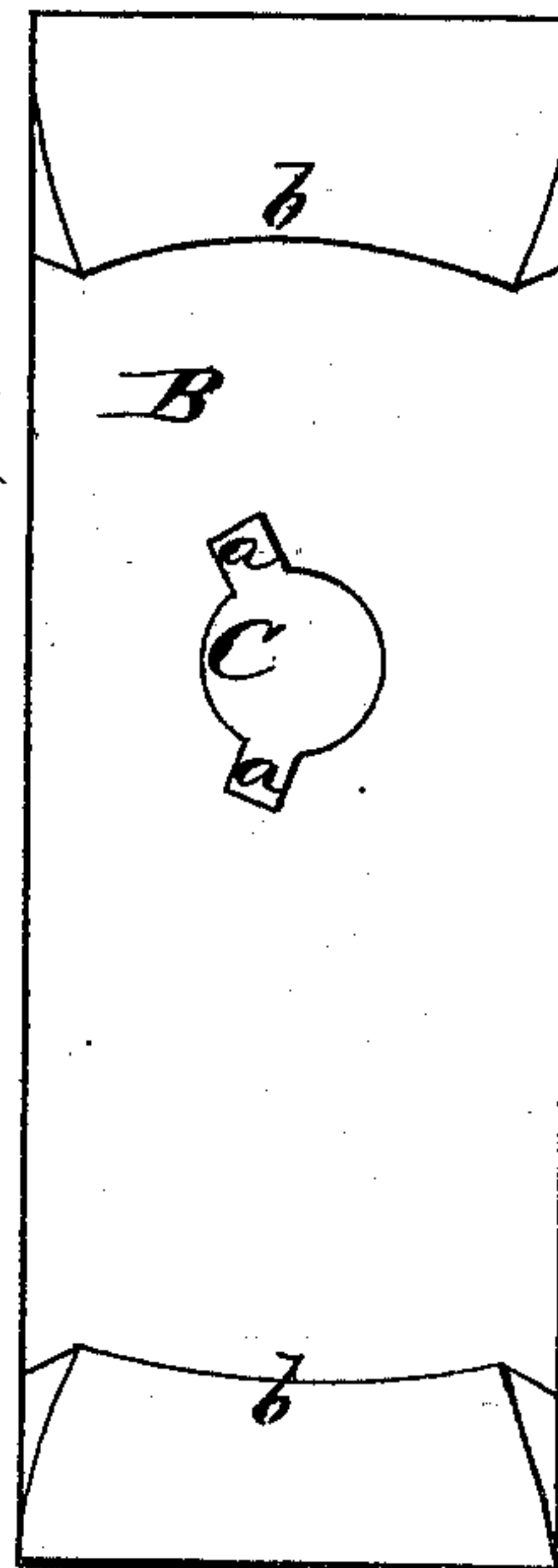


Fig 4



Witnesses:

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UNITED STATES PATENT OFFICE.

HUGH R. McALISTER, OF HARRISBURG, PENNSYLVANIA.

IMPROVEMENT IN BRAKE-SHOES.

Specification forming part of Letters Patent No. 130,734, dated August 20, 1872.

To all whom it may concern:

Be it known that I, HUGH R. McALISTER, of Harrisburg, in the county of Dauphin and in the State of Pennsylvania, have invented certain new and useful Improvements in Brake-Shoes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the mode of connecting the liner of a brake-shoe to the shoe proper, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view of the entire brake-shoe, and Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a front view of the shoe proper, and Fig. 4 is a rear view of the liner.

A represents the shoe proper of a car-brake, and is constructed in any of the known and usual ways, to be attached to the brake-bar. B is the liner, curved in the usual manner to fit the circumference of the car-wheel for which it is intended. On the rear side of the liner B projects a round pin or bolt, C, provided at its outer end with two side lugs, *a a*, placed to one side of the center of the bolt, as shown in Fig. 4. At or near each end of the liner, on the rear side, is a curved dovetailed flange, *b*, which fits over the beveled and curved upper and lower edges of the shoe A. These flanges are not on the same circle, though they have the same center—namely, the bolt C—the distance between said bolt and the lower flange being double that between the bolt and the upper flange. In the front surface of the shoe D is a hole corresponding in size or a little larger than the bolt C, and in said hole are notches made corresponding with

the lugs *a a*. These notches are on the upper side of the hole, as shown in Fig. 3, so that the liner B will have to be turned to one side when inserting the bolt C in the hole, and then, by turning the liner down in position, the curved and dovetailed flanges *b b* pass over the beveled edges *d d* of the shoe.

The bolt C is not absolutely necessary to retain the liner in its place. It is merely intended as a convenience in putting the liner on the shoe. The liner is held in place by the flanges *b b*, being parts of concentric circles having radiuses of different lengths, and the edges *d d* of the shoe corresponding therewith.

In a full-sized shoe the liner hangs, so to say, on the upper flange, and any jarring or shaking motion would sway the lower end of the liner with the upper end as a center of motion. It will readily be seen that with the flanges in the shape shown the liner, under such circumstances, cannot come off. If, however, the motion of the liner by the jarring should be such as to transfer the center from the upper end, such transfer will invariably be to the middle of the liner. This being, also, not the center of the flanges, the liner cannot work off.

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

The liner B, provided on its rear side with curved and dovetailed flanges *b b*, the curve of one of the flanges being sharper than that of the other, in combination with the correspondingly-curved and beveled edges *d d* on the shoe A, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of June, 1872.

HUGH R. McALISTER.

Witnesses:

EDM. F. BROWN,
C. L. EVERT.