

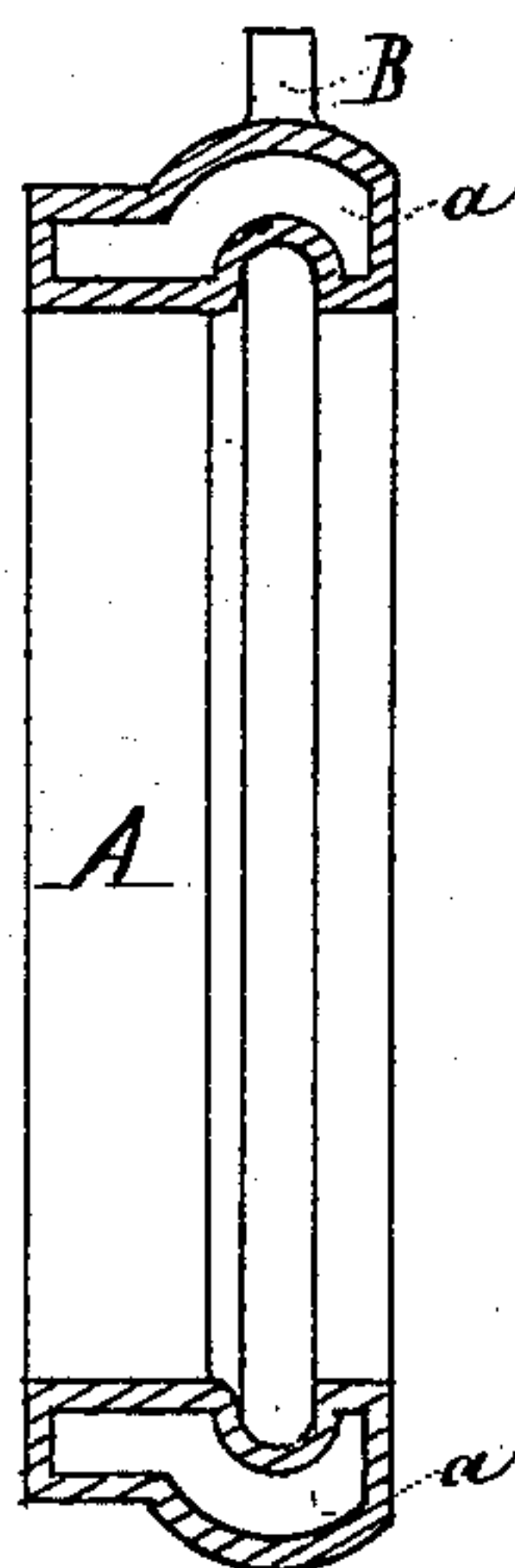
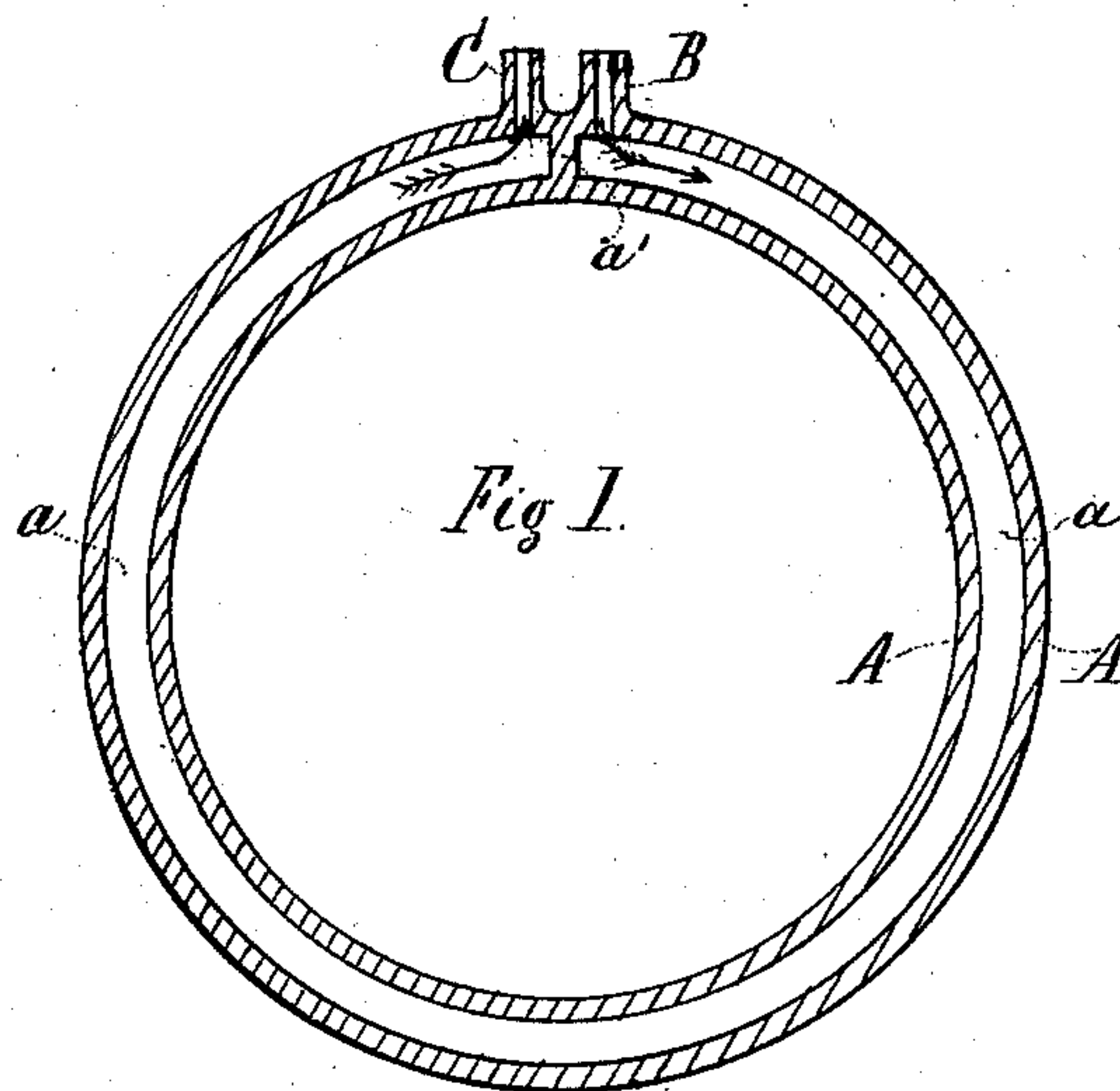
(No Model.)

J. A. PARKS.

FLASK FOR PRODUCING CHILLED CASTINGS.

No. 278,174.

Patented May 22, 1883.



Witnesses.

Alexander Lowry  
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Inventor.

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# UNITED STATES PATENT OFFICE.

JOHN A. PARKS, OF NEW YORK, N. Y.

## FLASK FOR PRODUCING CHILLED CASTINGS.

SPECIFICATION forming part of Letters Patent No. 278,174, dated May 22, 1883.

Application filed July 15, 1882. Renewed March 31, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN A. PARKS, of the city, county, and State of New York, have made certain Improvements in Flasks for Producing Chilled Castings; and I hereby declare the following to be a full and clear description thereof.

This invention relates to an improved form or matrix for producing chilled castings; and it consists in constructing the said form or matrix with a water-chamber surrounding the part to be chilled, and forcing a stream of cold water through the said chamber or cavity, thereby keeping the form or mold cool, and at the same time causing it to retain its form, so that in casting a number of articles from the same form or matrix the articles will all be reasonably near perfect in form. This is of very great advantage in casting such articles as car-wheels, for by my improved device they will preserve their proper diameters and curvatures, though great numbers of them are cast from the same form or matrix, whereas by the present form of casting them they vary greatly from the form of a true circle, and thereby cause inevitable slipping of the wheels upon the rails, thus increasing the wear upon the roadway and rolling-stock of a railway.

The invention will be readily understood by reference to the accompanying drawings, of which Figure 1 is a sectional plan of my improved chill-mold for casting a car-wheel. Fig. 2 is a transverse sectional elevation of the same.

The chill-plate or matrix A, against which the casting is formed, is made with a water chamber or cavity, *a*, through which a stream of cold water is forced during the casting oper-

ation. An inlet-pipe, B, supplies water to this chamber, preferably from some water-forcing apparatus, and an outlet-pipe, C, provides a discharge-aperture for the escape of the water at the other extremity of the said chamber *a*. A bridge-wall, *a'*, closes the chamber *a* completely at a point midway, or thereabout, between the inlet B and the outlet C, so as to compel the water to flow completely through the whole length of the chamber *a*, the apertures B and C being placed close up to the opposite side of the partition or wall *a'* for this purpose. In this manner the whole surface of the matrix or form may be kept uniformly cool and nearly perfect in form, so that car-wheels or rollers of any description will be pretty uniform in curvature, and with all their radii very nearly equal. This form of water-chambered chill-plate may be used with great economy in casting many articles that do not need chilling, but which may be cast with a chill without injury or deterioration. Among such articles are window or sash weights or similar articles.

Having described my invention, I claim—

The herein-described mold or matrix, having inner and outer walls forming a direct circulating-passage for the cooling-fluid, and formed with a partition-wall closing said passage, and provided with inlet and outlet pipes at opposite sides of said partition, substantially as described.

JOHN A. PARKS.

Witnesses:

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