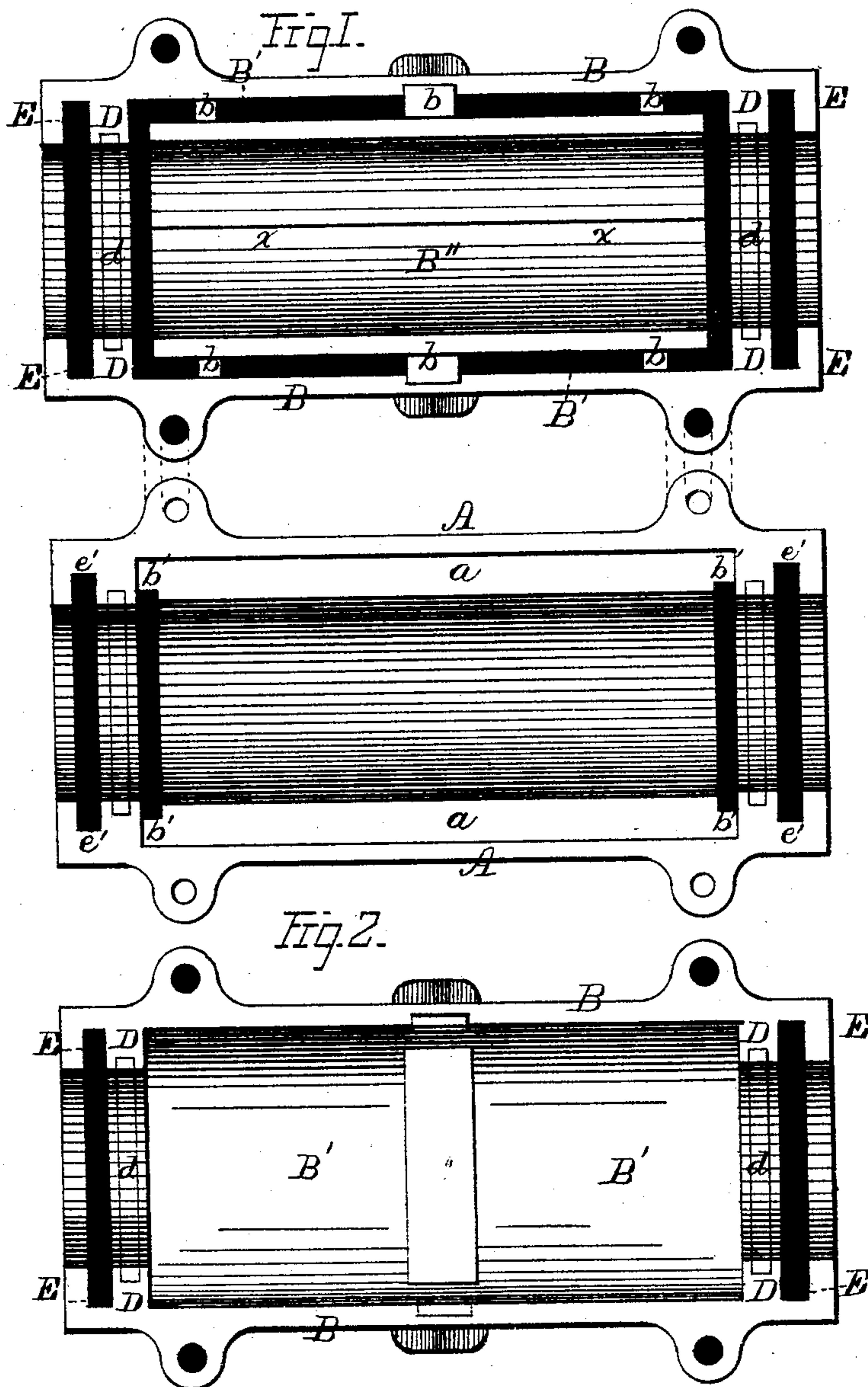


R. S. CATHCART.
Journal-Boxes.

No. 147,103.

Patented Feb. 3, 1874.



WITNESSES=

Jas. C. Hutchinson.
 John R. Young

INVENTOR.

R. S. Cathcart, by
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Fig. 3.

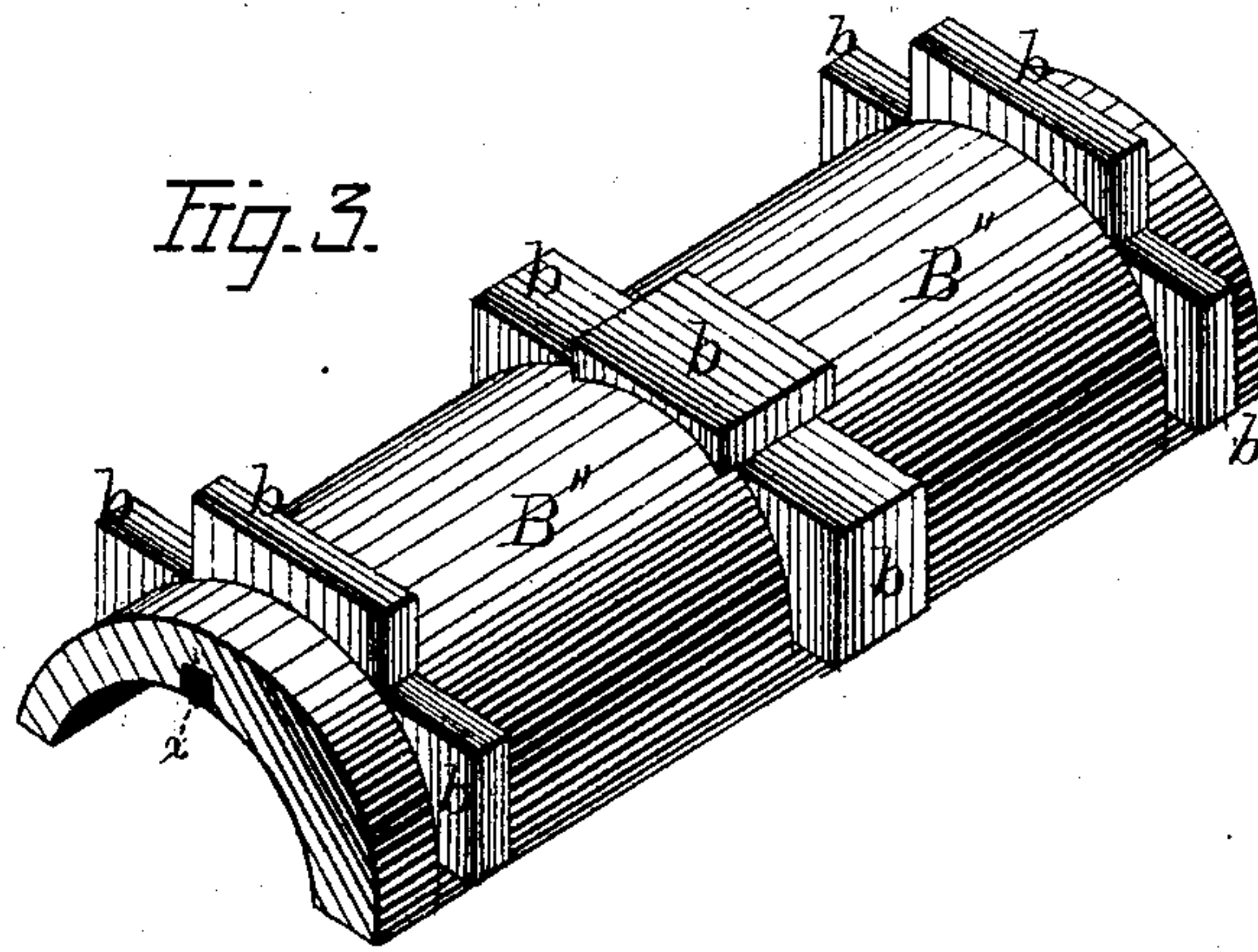


Fig. 4.

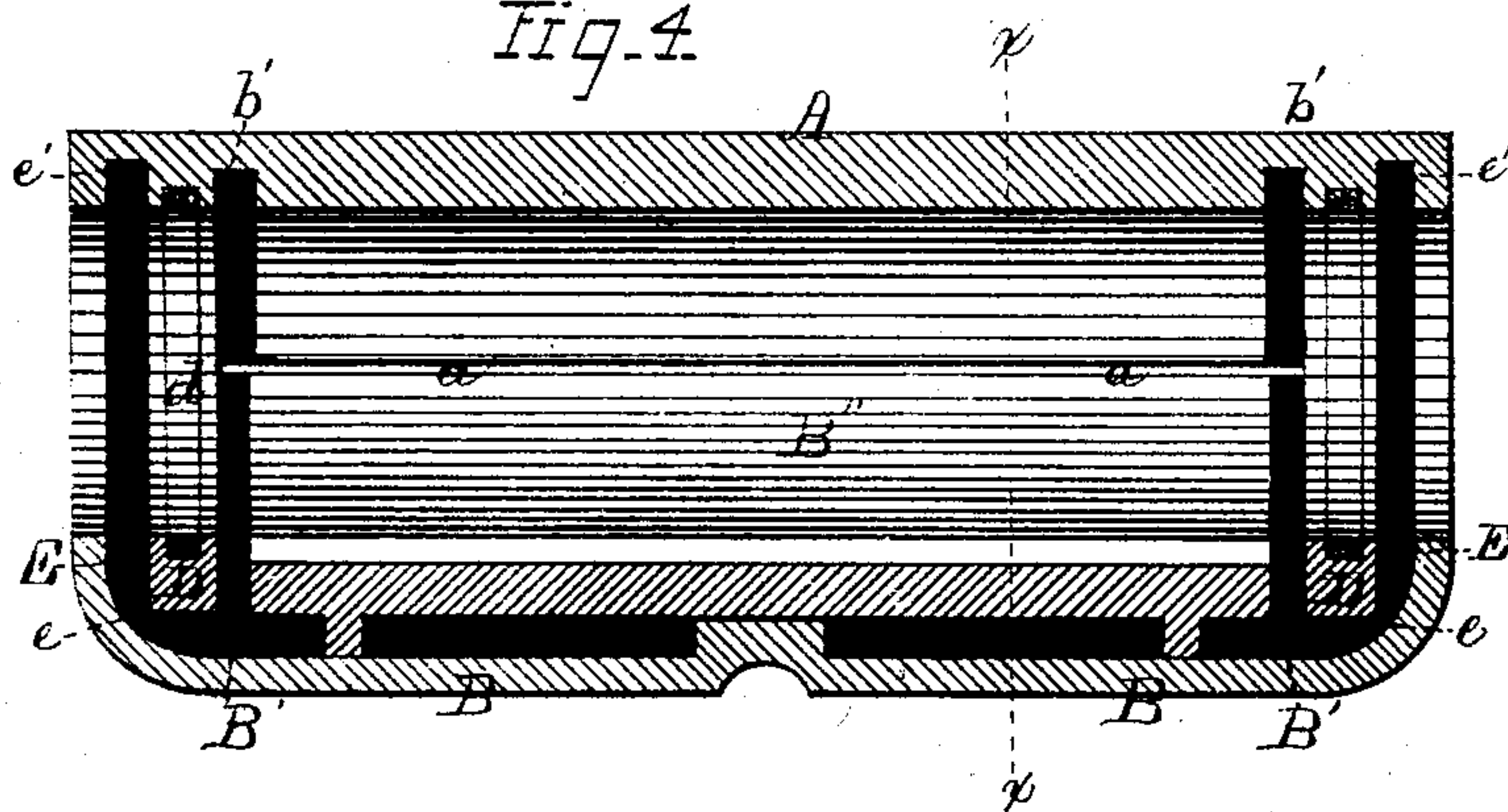
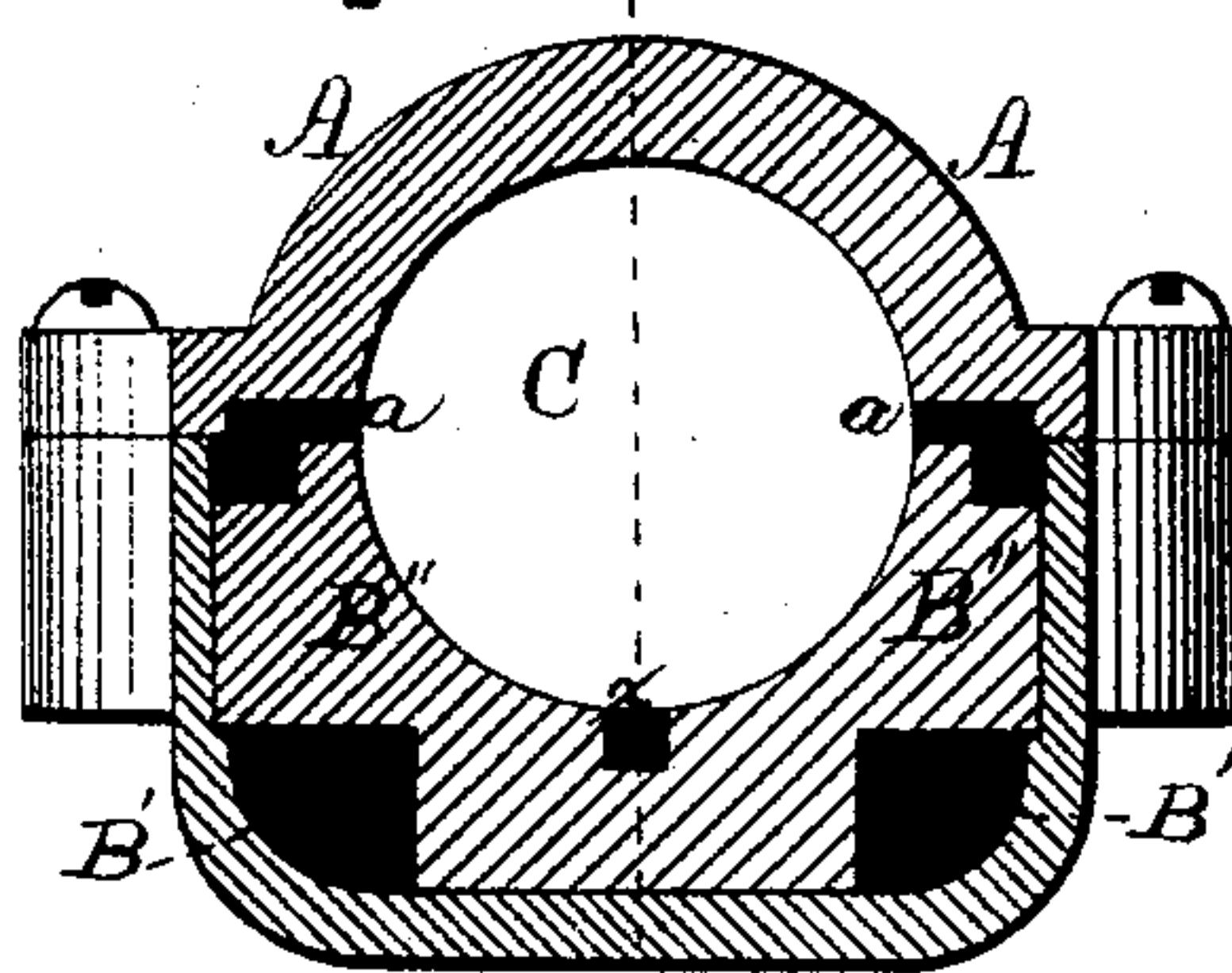


Fig. 5.



WITNESSES=

*Jas. E. Hutchinson—
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UNITED STATES PATENT OFFICE.

RODNEY S. CATHCART, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND THE STRAUB MILL COMPANY, OF SAME PLACE.

IMPROVEMENT IN JOURNAL-BOXES.

Specification forming part of Letters Patent No. **147,103**, dated February 3, 1874; application filed January 3, 1874.

To all whom it may concern:

Be it known that I, RODNEY S. CATHCART, of Cincinnati, in the county of Hamilton and in the State of Ohio, have invented certain new and useful Improvements in Journal-Boxes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a plan view of the inner sides of the sections of my improved box. Fig. 2 is a like view of the casing of the lower section, the box being removed. Fig. 3 is a perspective view of the lower side of the detachable box of the lower section. Fig. 4 is a vertical longitudinal section of the complete journal-box upon a central line, and Fig. 5 is a cross-section upon line *x x* of Fig. 4.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to render more certain and effective the lubrication of the bearing-surfaces of journal-boxes; to which end it consists in a journal-box provided with a central oil-chamber which is separated from the outer air by means of packed partitions, and has communication with the end reservoirs through openings formed within the lower sides of said partitions, substantially as and for the purpose hereinafter specified.

In the annexed drawings, A and B represent the upper and lower sections, respectively, of my journal-box, having exteriorly any desired form, and provided with half-round longitudinal grooves, which, together, constitute the usual cylindrical opening C for the reception of the journal of a shaft. The lower section consists of a shell, B, provided with a central recess, B', within which is fitted a detachable box, B'', that has a considerably smaller size, exteriorly, than said recess, and, by means of bearings *b* at its center and near its ends, is suitably sustained within said shell, so as to leave a space between their contiguous sides and bottoms. The box or bearing B'' has a considerably less length than its casing, and between each of its ends and the end of the recess within the latter is placed a partition,

D, which divides the space into substantially equal parts, the outer portion of which, E, forms a reservoir for receiving and containing oil, and communicates with the inner space or chamber B' by means of an opening, *e*, that passes in and through the lower side of said partition D. The upper section A is made solid, and is provided with grooves *b'* and *e'*, that correspond in size and position to and form continuation of the recess B' between the end of the box B'' and the partition D, and the reservoir E outside of said partition. If desired, a groove, *a*, may be formed within the lower edge of each side of the upper section, and a third groove, *z*, within the longitudinal center of the lower box B'', for the purpose of permitting a circulation of oil along the journal. The partitions D and D are each provided with a central groove, in which is inserted a strip of leather, *d*, or other suitable material, and between the contiguous edges of the sections is placed a packing-gasket, so that when said sections are confined together their joint and the joint between said partitions and the shaft-journal shall be substantially air and oil tight.

The box is now ready for use, as follows: The recess B' is filled with oil and the upper section A placed in position and secured, after which said oil will be prevented from leaving said recess by the packed partitions D and D, the openings *e* and *e* passing through the latter being at so low a point as to prevent the admission of the air that would be required before any oil could escape. The reservoirs E and E are now filled through suitable openings *e'*, and as the oil within the chamber B' becomes exhausted by wear its place is supplied by the inward passage of the contents of said reservoirs, the operation described being continued until the supply of oil within said reservoirs is exhausted.

In consequence of the peculiar construction of the journal-box, the lubricant is caused to remain in close connection with the journal so long as a sufficient quantity is contained within the outer chambers or reservoirs to cover the communicating openings; and by its use is rendered practicable the highest rate of speed without requiring more frequent attention to the

oiling of the journal than is required in case of machinery having a low rate of speed.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

A journal-box provided with a central oil-chamber which is separated from the outer air by means of packed partitions and has communication with the end reservoirs through openings formed within the lower sides of said

partitions, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of December, 1873.

RODNEY S. CATHCART.

Witnesses:

GEO. S. PRINDLE,
WILLIAM FITCH.