

W. H. Doane,
Journal Box.

N^o 49,584.

Patented Aug. 22, 1865.

Fig. 1

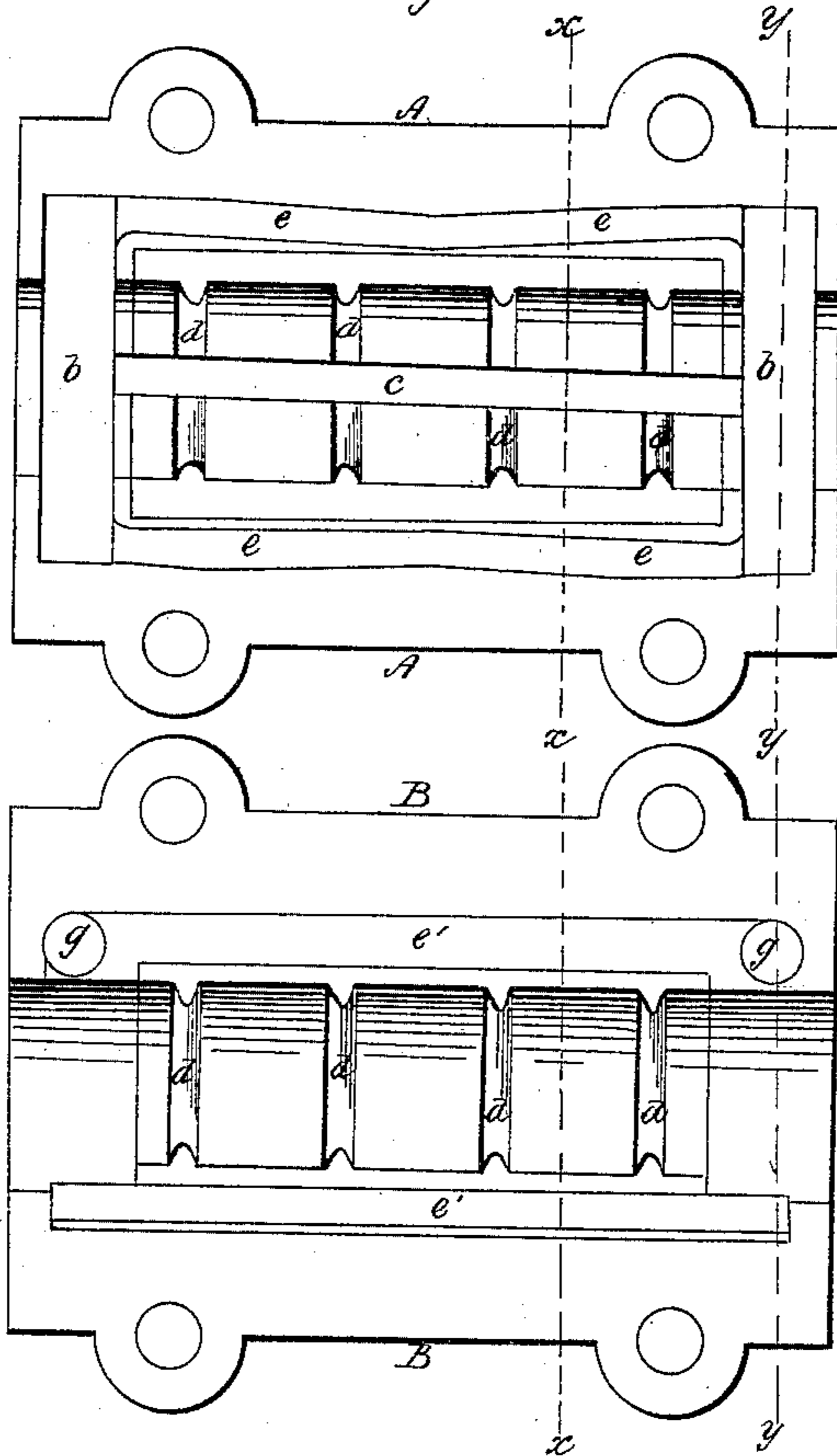


Fig. 2.

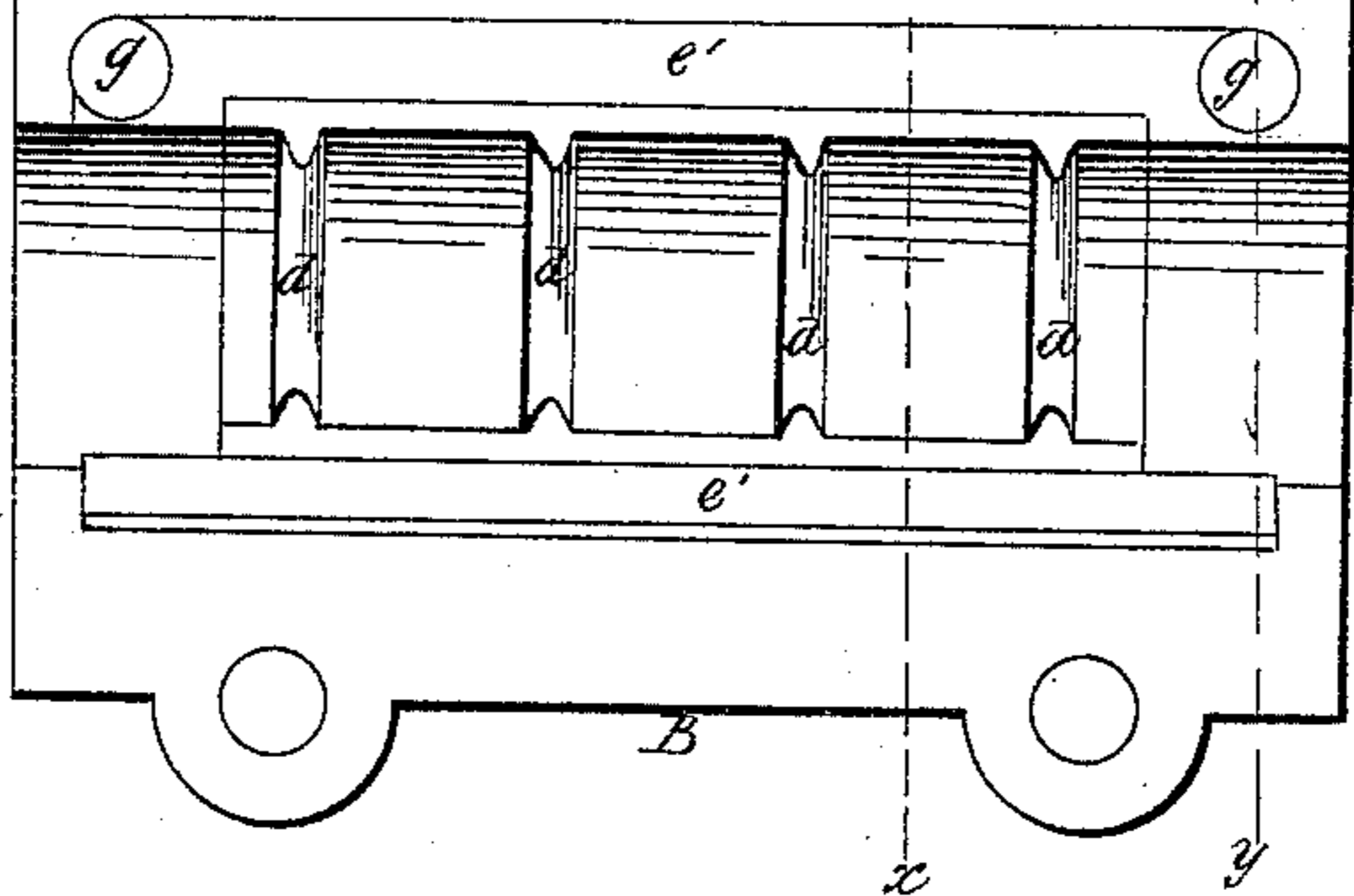


Fig. 3.

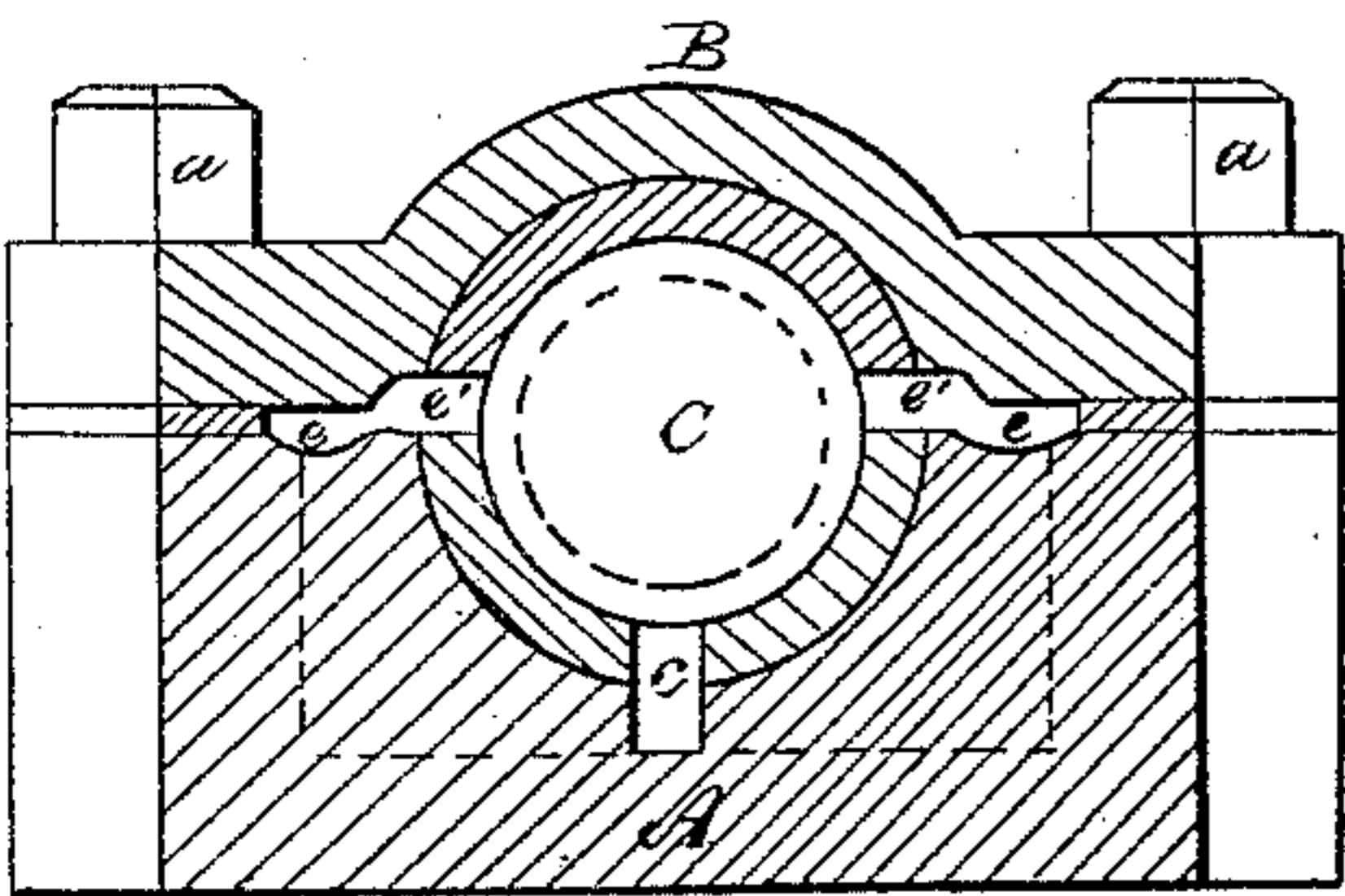
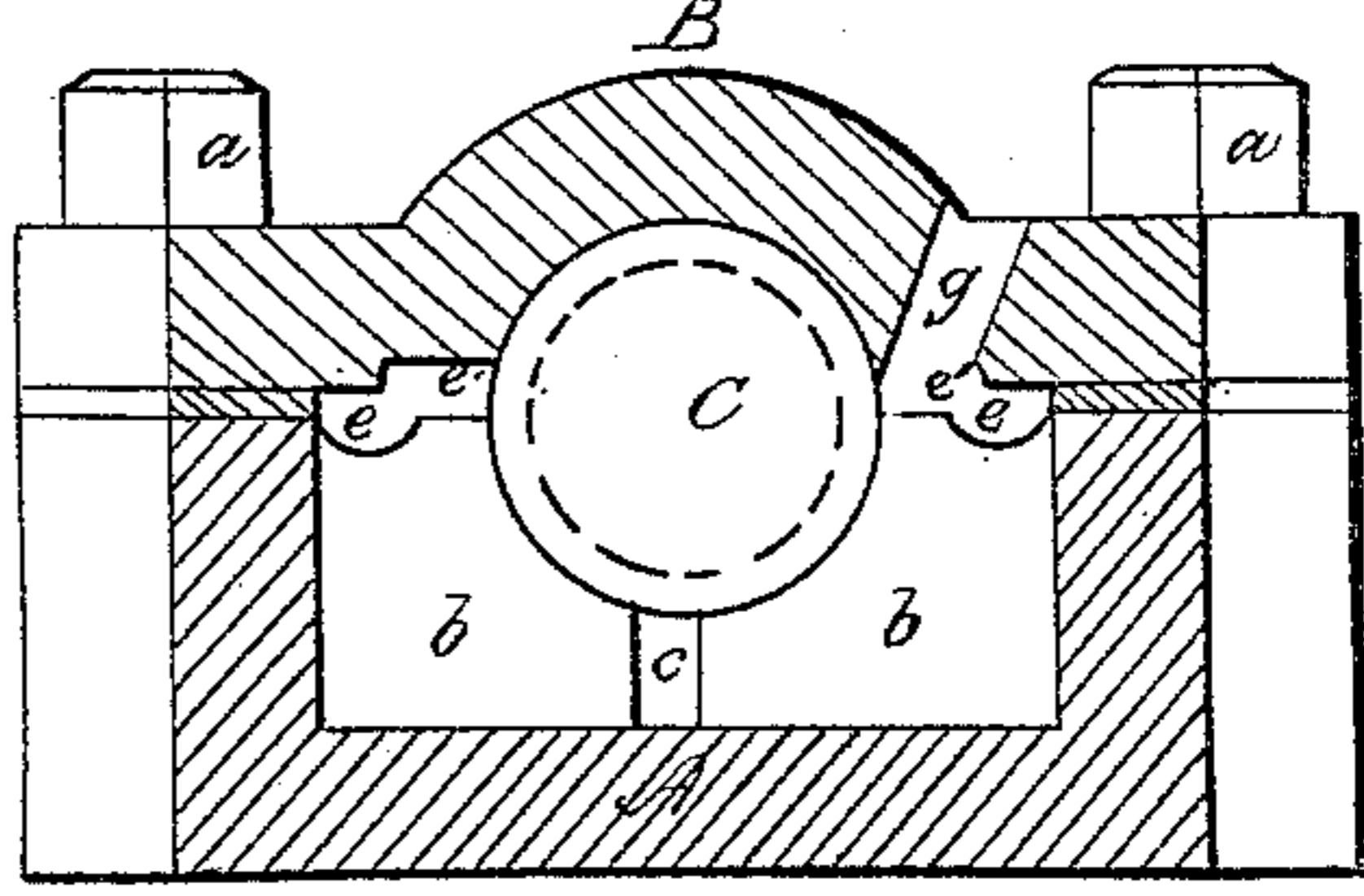


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM H. DOANE, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND
J. A. FAY & CO., OF SAME PLACE.

IMPROVED JOURNAL-BOX.

Specification forming part of Letters Patent No. 49,584, dated August 22, 1865.

To all whom it may concern:

Be it known that I, WILLIAM H. DOANE, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Journal-Box; and I 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 top view of the bottom half of the journal-box. Fig. 2 is a bottom view of the upper half of the box. Fig. 3 is a vertical transverse section taken at the point indicated by red line *x x* in Figs. 1 and 2. Fig. 4 is a vertical transverse section through the box, taken at the point indicated by red line *y y*.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain improvements on journal-boxes which are termed "self-lubricating" because there is employed in their construction a capillary substance for conducting the lubricating-oil from chambers beneath the journal to the surface of the latter, so as to keep it continually supplied with oil as long as any remains in said chambers.

The object of my invention is to so construct a journal-box operating upon this principle that it can be more conveniently cleaned of sand and viscous oil; also, to provide for conducting the pure oil from chambers at the extremities of the box to the middle of the length of the same by means of a capillary substance, and to provide for conducting the oil which escapes from the journal back again into said chambers, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

My improved journal-box consists of two sections, A and B. A is the lower section or bed, and B is the upper section or cap, which is secured upon the bed by means of bolts *a a a a*.

The lower half of the journal-box has two rectangular chambers, *b b*, at its ends, which are intended for containing oil for lubricating the journal C, and which supply oil to the journal by means of a capillary substance of a suitable description introduced into the groove *c*, which

extends along the bottom of the semicircular groove in this section A, as shown in Fig. 1. This groove *c* extends obliquely from one chamber *b* to the other, and may be as deep as the bottom of these chambers.

The bearing in the section A for the journal C is made of hardened metal by the well-known process of bushing, and, if desirable, ribs or beads *a a* may be cast on this bearing-surface for the purpose of entering annular grooves in the journal C and preventing end play thereof. On each side of the bearing for the journal C is a groove, *e*, which inclines toward the chambers *b b*, and which receives the oil escaping from the journal and conducts it back into these chambers *b*. These longitudinal grooves or chambers *e e* are intended for preventing the oil which will escape from the journal C when it rotates very rapidly from insinuating itself between the two halves of the journal-box and escaping therefrom.

The cap B of the journal-box is constructed with longitudinal channels *e' e'*, communicating with the journal, and intended for allowing the superfluous oil to escape freely from the journal into the grooves or channels *e e*, which conduct it back into the oil chambers *b b*.

If desirable, a packing of any suitable substance may be introduced between the edges of the two halves of the journal-box, as shown in Figs. 3 and 4; but this packing is not absolutely necessary to prevent the escape of the oil, as the grooves or channels above mentioned will obviate this difficulty.

One great advantage of my improved journal-box over others is that I have a continuous slot extending lengthwise through the bearing and communicating with oil-chambers at each end. Such slot being filled with cotton-wick or any other suitable capillary substance, it will supply oil uniformly to the journal; and when the oil in the box becomes thick it is only necessary to remove the cap B and journal C, when access can be had to every portion of the box to clean it.

The chambers *b b* may be supplied with oil at any time through the holes *g g* in the cap of the box. (Shown in Figs. 2 and 4.)

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A journal-box which is constructed with end chambers, *b b*, and a channel or groove, *c*, extending lengthwise through the box, substantially as described.

2. The channels *e e*, in combination with the end chambers, *b b*, and channels *e' e'* in the cap B, substantially as described.

3. Providing for conducting the oil from the journal C back into the chambers *b b* at the extremities of the journal-box, substantially as described.

WILLIAM H. DOANE.

Witnesses:

WILLIAM C. HARD,
J. T. DETWILER.