

H.P. Andrews & M.E. Rawson.
Inkstand.

Nº 83,126.

Patented Oct. 20, 1868.

Fig. 1

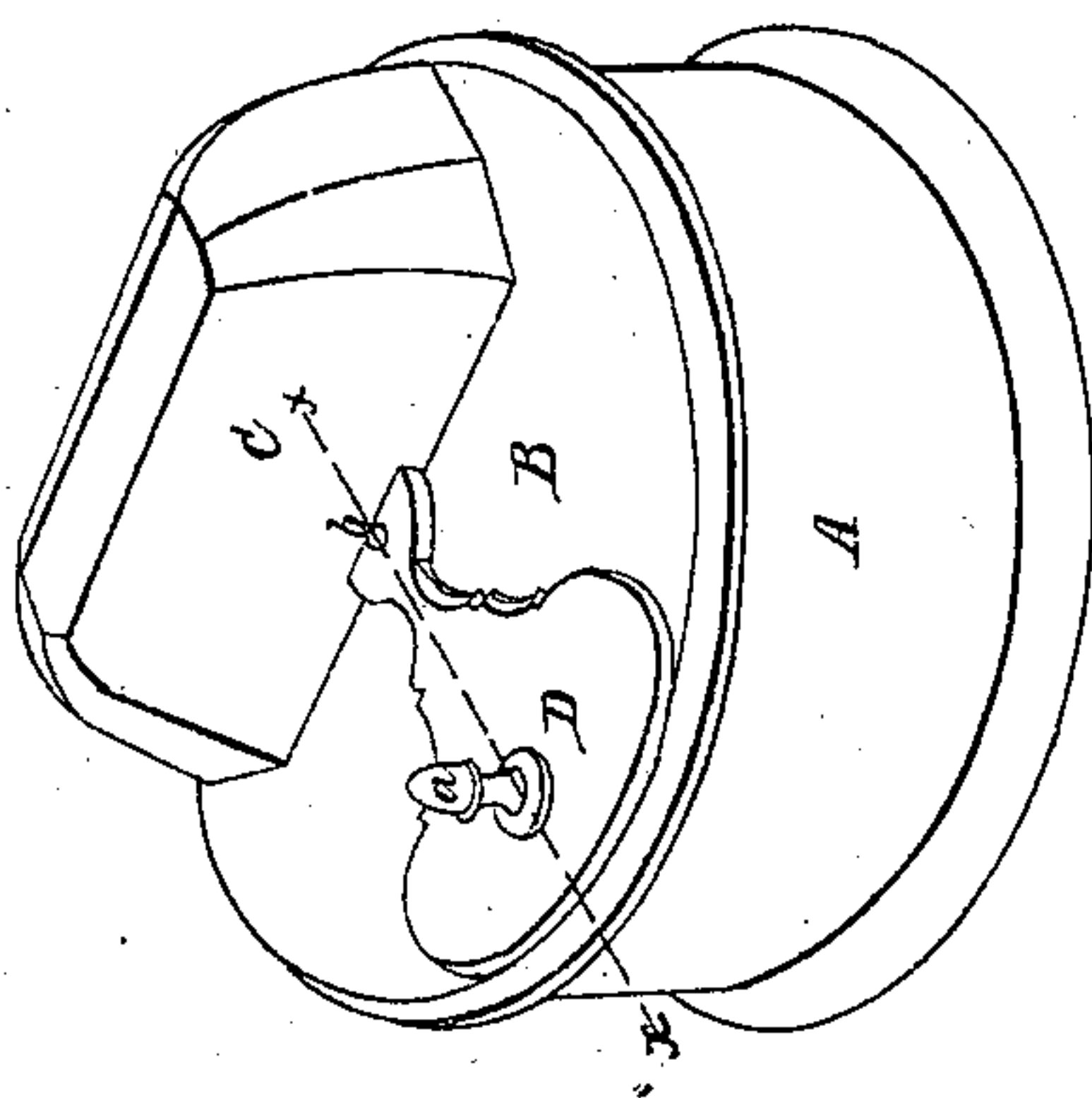


Fig. 3.

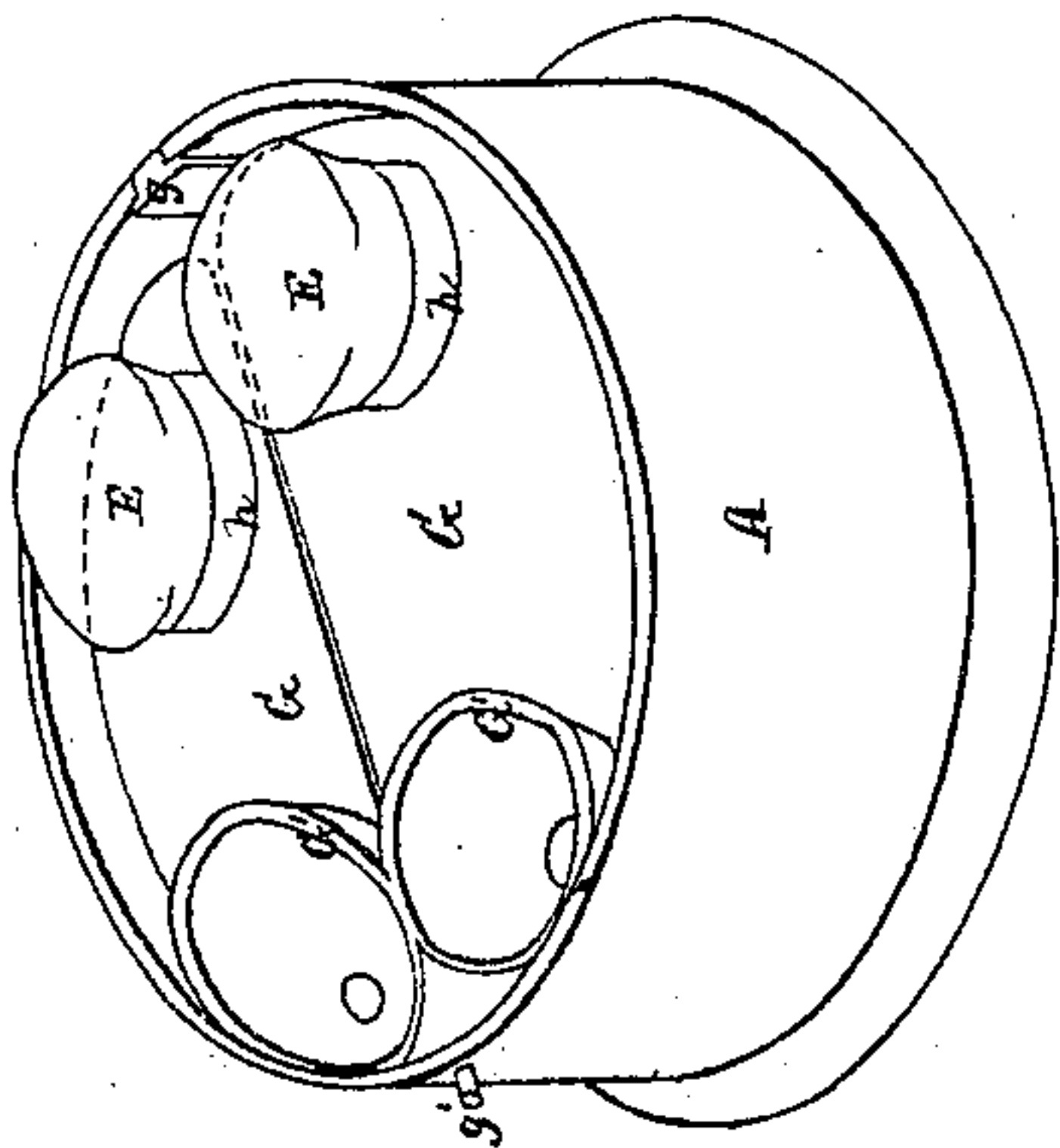


Fig. 2.

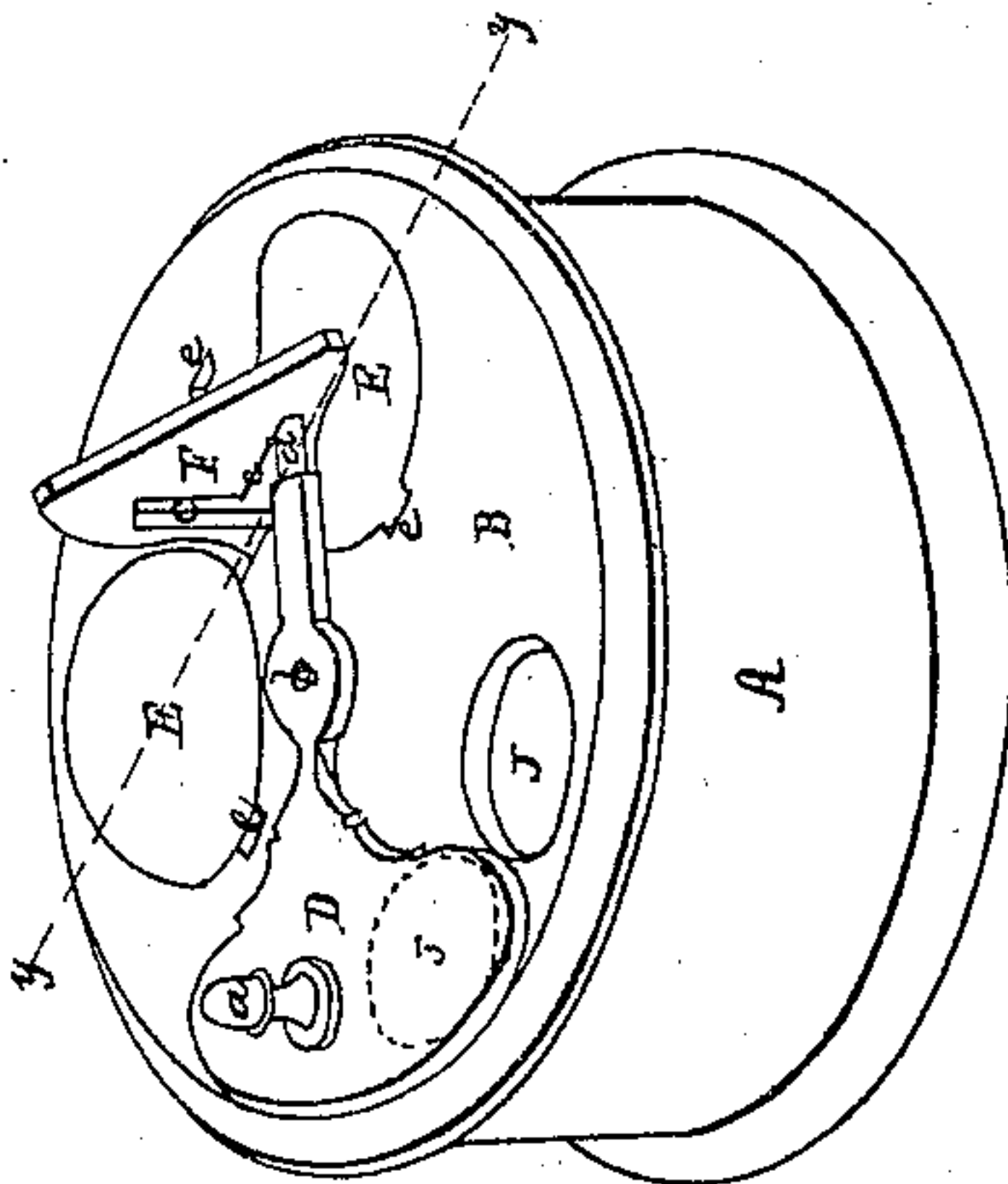


Fig. 4

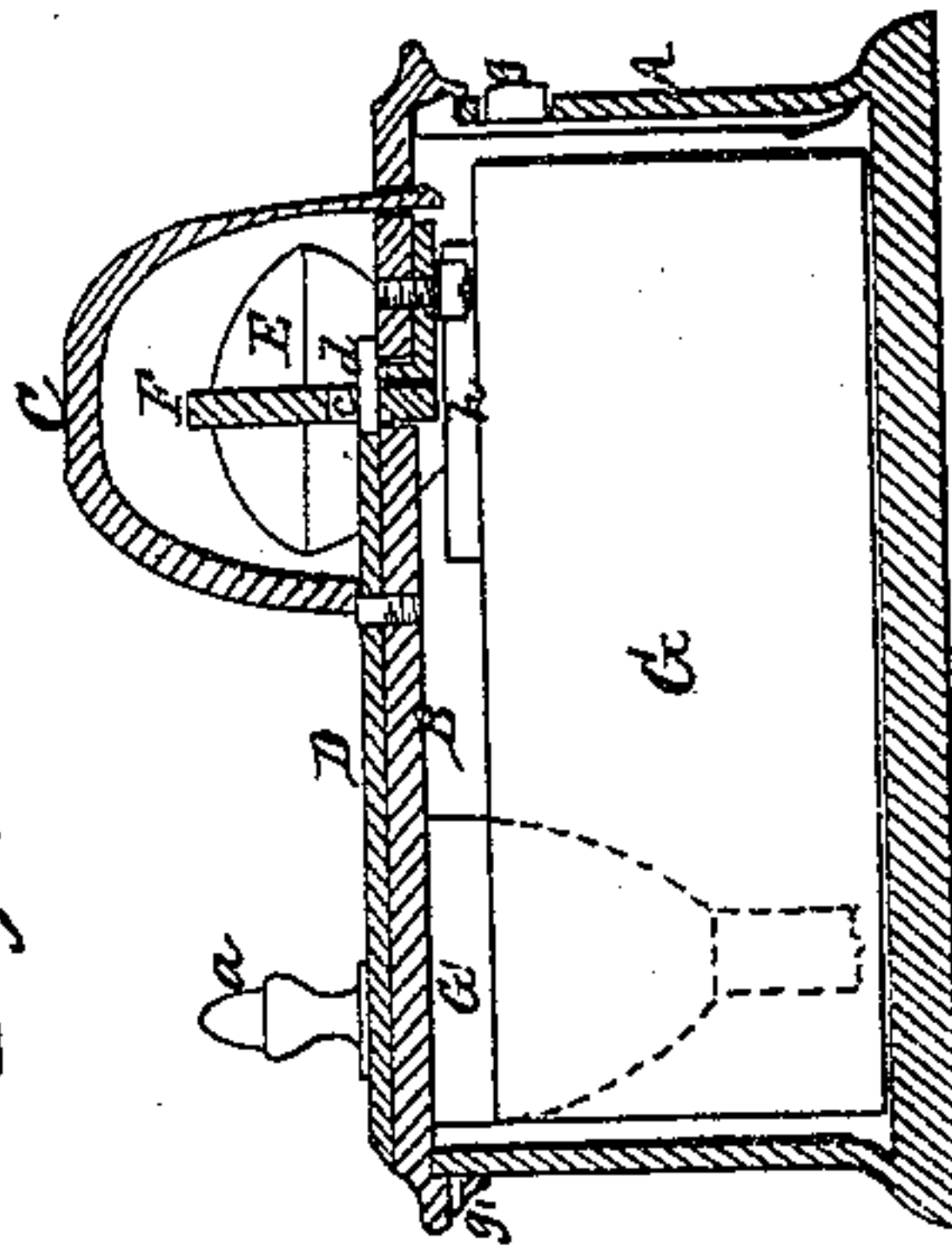
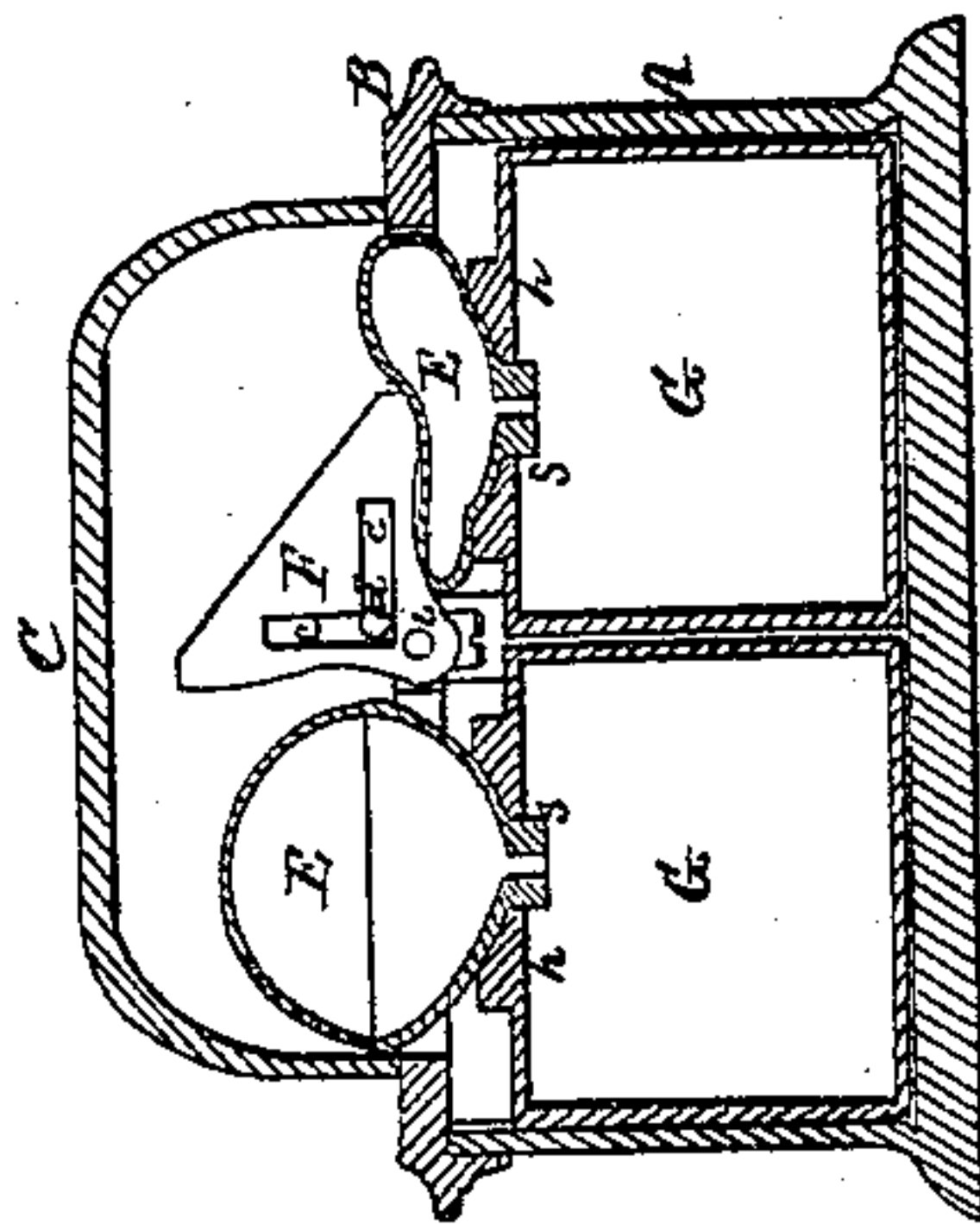


Fig. 5



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Letters Patent No. 83,126, dated October 20, 1868.

IMPROVEMENT IN INKSTANDS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, H. P. ANDREWS and M. E. RAWSON, of Cleveland, in the county of Cuyahoga, and State of Ohio, have invented a new and improved Inkstand; and we 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 perspective view of the improved inkstand complete.

Figure 2 is a perspective view of the inkstand with the cap of the flexible stopples removed to expose these stopples and the devices which compress them.

Figure 3 is a perspective view of the body of the inkstand, with the top removed to expose the ink-vessels and flexible stopples.

Figure 4 is a diametrical section through the inkstand, taken in the plane indicated by red line *x x* in fig. 5.

Figure 5 is a cross-section through the inkstand, taken in the vertical plane indicated by red line *y y* in fig. 2.

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

This invention relates to certain novel improvements on inkstands which are provided with flexible diaphragms, or elastic bags, and also with devices for flexing or collapsing the same in the act of uncovering the supply-cups, whereby the ink is caused to rise from the ink-reservoirs into said supply-cups when they are uncovered, and to return back into the reservoirs when these cups are covered.

An instance of this kind is found in the Letters Patent, No. 18,060, wherein the ink-reservoir is provided with an elastic diaphragm, a hinged cover for its supply-cup, and a device which will cause the ink to rise in this cup when its cover is raised.

It has been found very difficult to attach an elastic diaphragm to an ink-reservoir so that its joint will remain air-tight, and unless a tight joint is preserved, the inkstand fails to perform its office.

To remedy this objection, the nature of the first part of our invention consists in an elastic self-fastening stopple, constructed with an air-chamber, and adapted to fit tightly into a hole made in an ink-reservoir for the purpose of serving as a means for condensing the air in such reservoir and thereby causing the ink to rise in the supply-cup, as will be hereinafter explained.

The second part of our invention consists in providing for collapsing or flexing the elastic bag or diaphragm of an ink-reservoir by means of a supply-cup cover, which is adapted to slide upon the top of the inkstand, and a rocking pressure-arm, constructed, arranged, and operating as will be hereinafter explained.

The third part of our invention consists in an inkstand which is constructed with two ink-reservoirs, and also with a cover which is adapted for closing both of the supply-cups thereof at one and the same time; said cover being provided with means which will cause

the ink to rise into either one of the supply-cups in the act of exposing the same by moving the cover, as will be hereinafter described.

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

In the accompanying drawings, A represents the body or outer casing of the inkstand, which may be made cylindrical or of any other suitable shape or design, and which may be made of metal or other suitable material.

This case is constructed with a fixed bottom and a removable flat top, B, which latter is held in its place upon the upper edge of the cylinder A, by means of a pin-fastening, *g*, diametrically opposite which is a spring thumb-latch, *g*, as clearly shown in fig. 4.

There are four holes made through the top plate B, two of which, J J, are openings leading to supply-cups G' G', of two independent ink-reservoirs G G. The other two holes receive through them the hollow enlargements E E, of tubular stopples *s s*, as clearly shown in figs. 2 and 5.

At or near the centre of the top plate B, is a fixed perpendicular stud, *b*, which is at equal distance from the centres of the two holes J J, and which receives upon it and forms a pivot for the arm of a vibrating cover, D, for the holes J J.

This cover is adapted for closing both of the holes J J, when in the central position indicated in fig. 1, and by sliding it toward the right or left hand, either one of the said holes J may be uncovered, and the ink-cup beneath it exposed, as shown in fig. 2.

The post *a*, which is affixed in the centre of the sliding cover D, is intended as a finger-piece by which to slide the cover.

This cover is held down snugly in place upon the flat surface of the top plate B by means of a cap, *c*, which is fitted upon this plate by means of frictional holding-studs, and which also serves to enclose the devices for effecting the raising of ink in the supply-cups.

The rear extension of the sliding cover D is rounded as shown at *d*, and fitted into a right-angular slot, *e*, made through a triangular pressure-plate, F, as shown in figs. 2 and 5.

This plate F is pivoted near its right angle to the top plate B in any suitable manner, so that it will be caused to oscillate by moving the cover D.

When the cover D is moved to the left, to expose the right-hand opening J, the pressure-plate F will be moved toward the right-hand, and will press upon and collapse the stopple-enlargement E of the reservoir beneath said right-hand opening J, and cause the ink to rise in the supply-cup of this reservoir; and when the cover is moved toward the right to expose the left-hand opening J, said pressure-plate F will operate upon the stopple-enlargement of the reservoir which is beneath this opening, and cause the ink to rise in the supply-cup of this reservoir.

The two ink-reservoirs G G, which are within the case

A, are of a semi-cylindrical shape, and may be removed from their case at pleasure by first taking off the top plate B.

Each reservoir is constructed with a supply-cup, G', of a funnel-shape, with the contracted neck of the funnel extending down nearly to the bottom of its reservoir.

Each reservoir is also constructed with a circular concave seat, h, having a hole centrally through it, as clearly shown in fig. 5, into which hole is fitted tightly an elastic tubular stopple, s, having an enlarged hollow ball or bag, E, formed on its upper end, which bag constitutes an air-chamber for condensing air in the space above the ink in the reservoir, and thus causing the ink to rise in the fountain or supply-cup G'.

The stopple s and bag or ball E may be made of one piece of India rubber, or, if desirable, the India-rubber ball or bag may be made separate from the stopple, in which case the stopple might be made of glass or other material different from that of which the bag is made.

We prefer to construct the bag or ball and its stopple of one piece of vulcanized India rubber, as shown in the drawing, fig. 5.

It will be seen that when the stopple s is forced into the hole which is made for it through the top of the reservoir G, it will be compressed, but by its expansive nature it will make a perfectly tight joint, which will prevent the escape of air from said reservoir through the hole which is closed by it; and it will also be seen that by pressing upon and collapsing the bag or hollow ball E upon said stopple, the air in this ball will be forced into the reservoir above the ink therein, and thus cause some of the ink to rise in the supply-cup or fountain G'. When pressure is removed from said ball E, it will expand again and cause the ink which was raised in the supply-cup to return back into the reservoir.

When the several parts above described are adjusted in proper position, the reservoirs G G being supplied with writing-fluid, the fluid can be made to rise in either one of the supply-cups G, which is exposed by sliding the cover D laterally, as above set forth.

When the cover is adjusted in the central position shown in fig. 1, the oscillating pressure-plate F will be held between the two air-balls E E, and will not press up either one of these balls, consequently there will be no fluid in the supply-cups when these cups are covered.

The object of using two reservoirs is to adapt a single inkstand to contain writing-fluid of different colors or kinds, and to effect the covering of both supply-cups

of said reservoirs, and the raising of the fluids in these cups, by the movement of a single sliding cover or cap.

We do not confine our invention to the precise contrivances herein set forth, as the same results may be attained by modifying their form and arrangement. Nor do we desire to make claim broadly to the use of an elastic diaphragm or hollow ball in conjunction with a hinged cover to the supply-cup, whereby ink is caused to rise in such cup by the lifting of the cover and condensation of air in the reservoir.

We have produced a removable self-fastening air-vessel which will be perfectly air-tight when in place, and which is well adapted for the purpose intended. We have also provided for compressing or collapsing the said air-vessel by the movement of a cover to the supply-cup, which cover does not rise from the top of the inkstand or ink-well, but slides upon this top. We have also provided for the use of two ink-reservoirs in the same inkstand, and the covering of the supply-cups thereof by means of a single sliding cover or cap.

Having described our invention,

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

1. An ink-elevating elastic air-sack, constructed with a perforated corking end which is of thicker material than the body of the sack, substantially as described.
2. The horizontally-sliding cover D, pressure-plate F, one or more air-chambers E, and one or more ink-reservoirs G, combined and operating substantially as described.
3. The cover D, pivoted at b, and extended into a lever beyond said pivoted point, and connected with a laterally-rocking or rolling plate F, substantially in the manner described.
4. The ink-reservoirs G G, in combination with a case, A, which is provided with a removable top and means for effecting the raising of ink into supply-cups by the movement of a single cover to said cups, substantially as described.

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M. E. RAWSON.

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M. G. WATTERSON,
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