

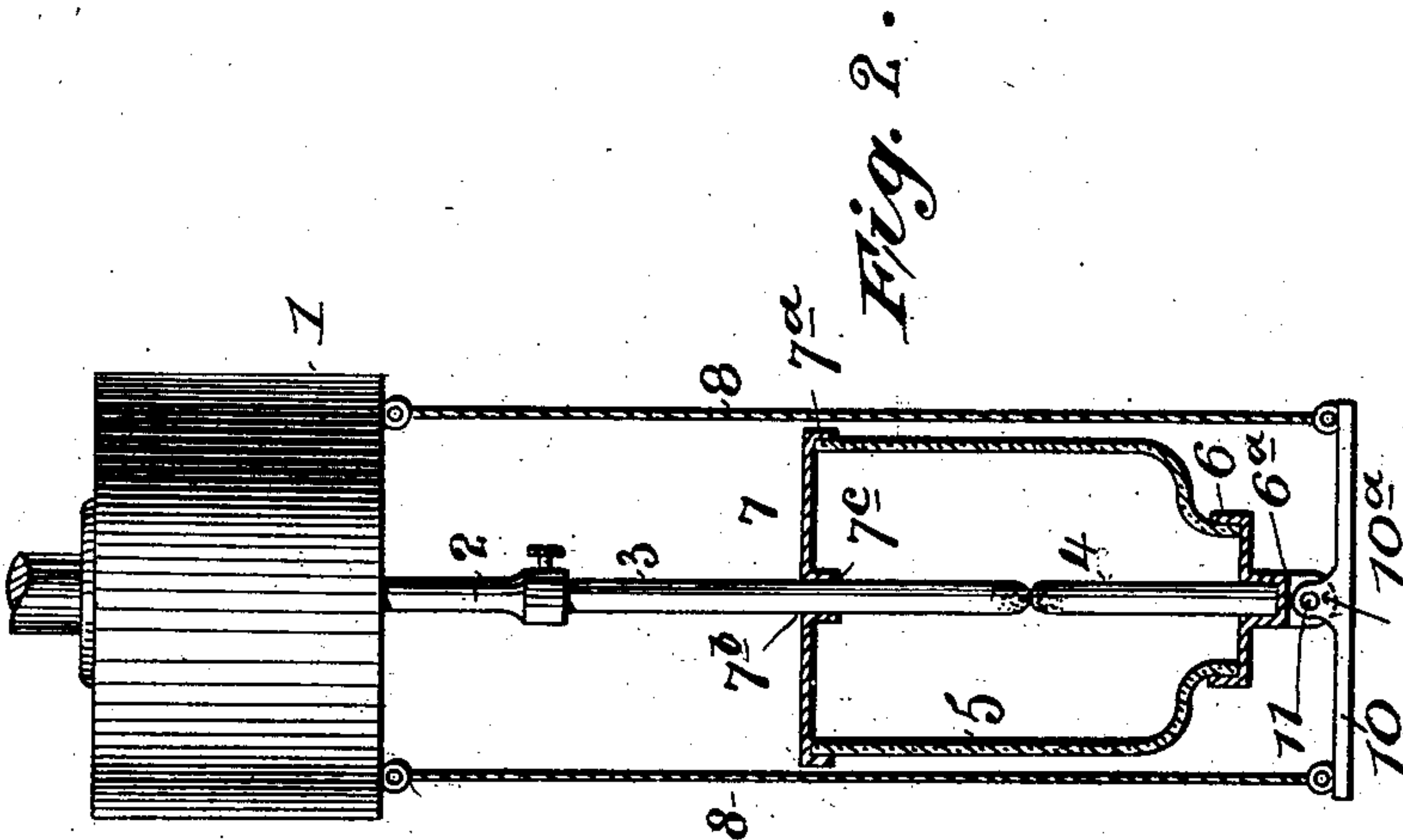
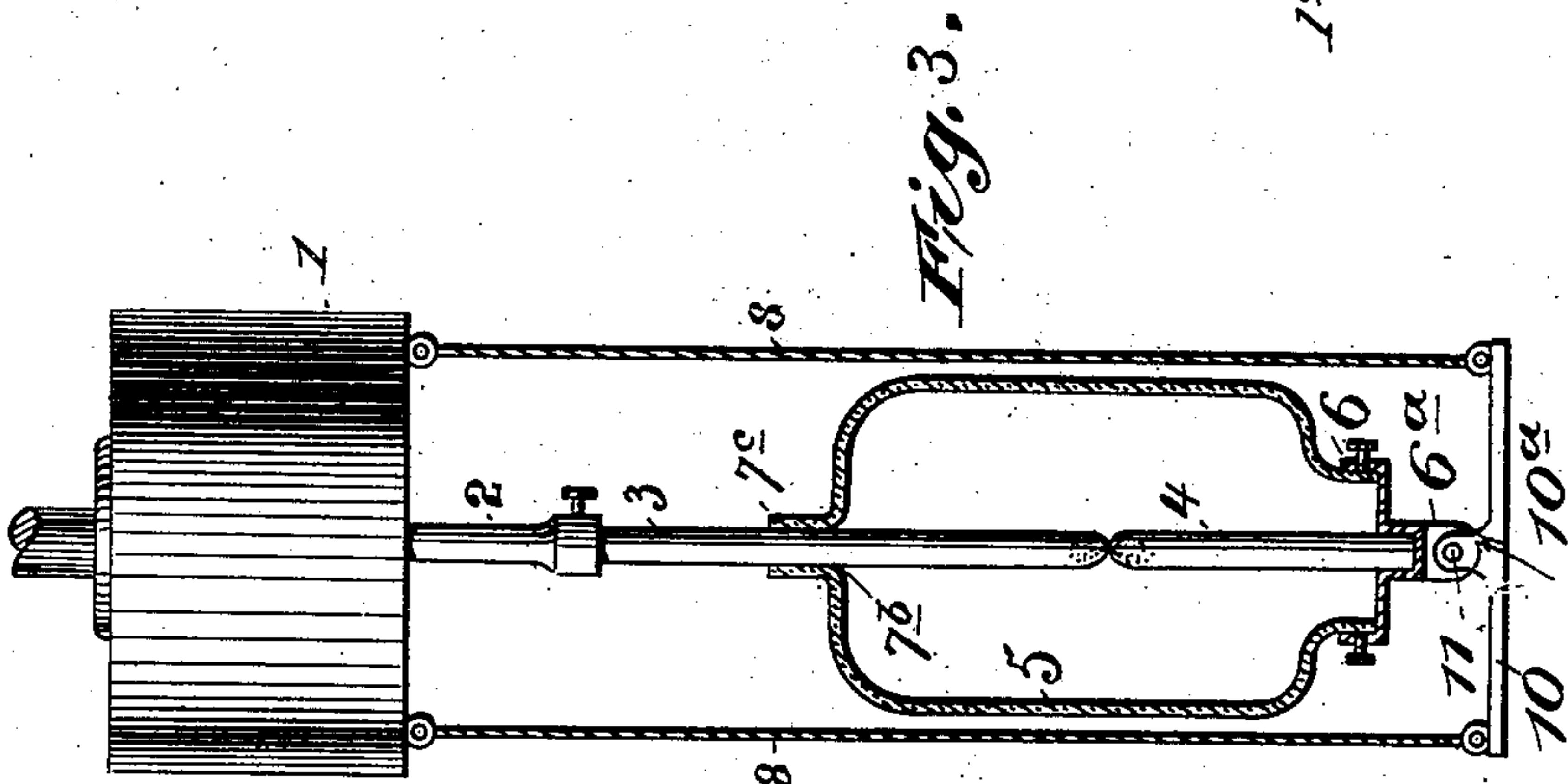
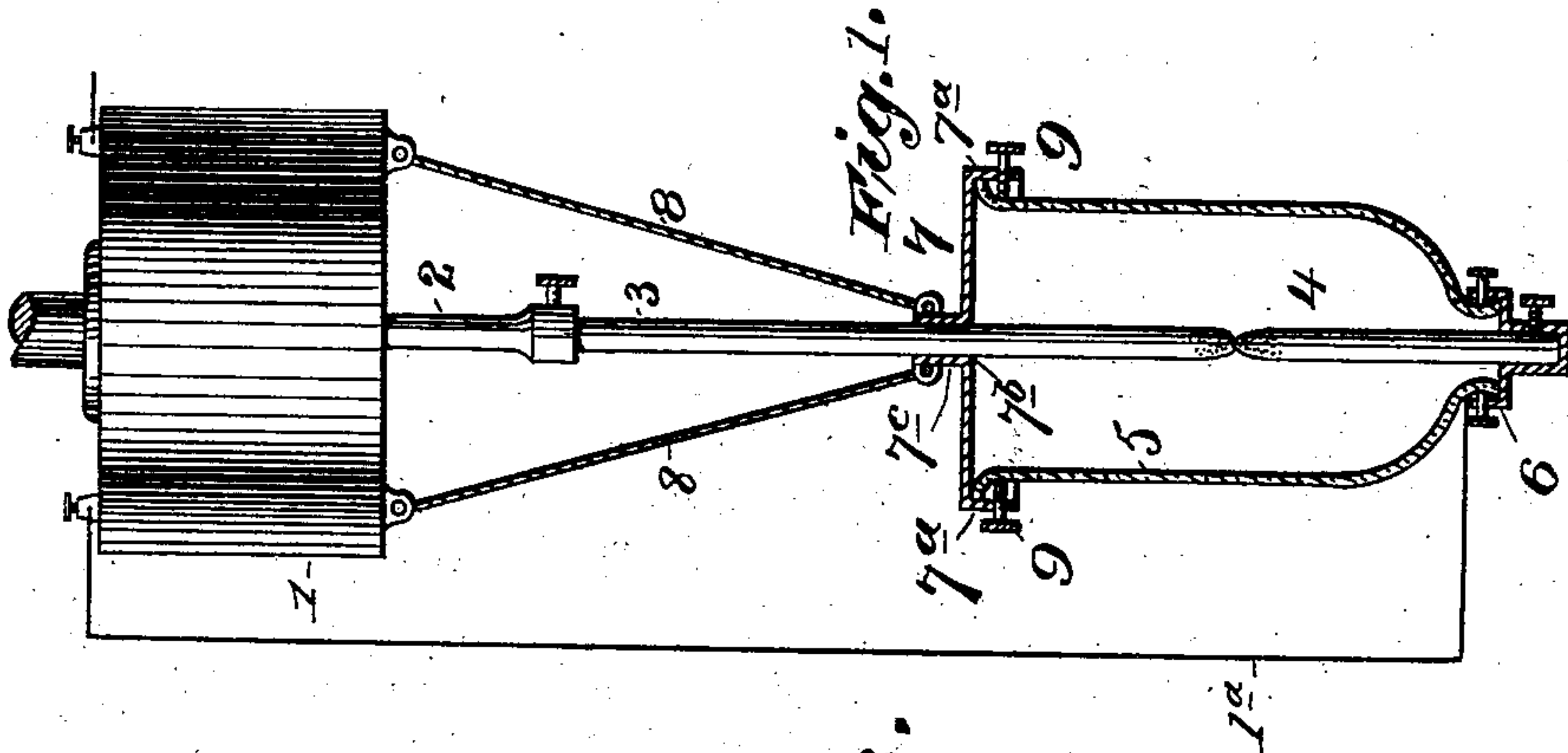
No. 694,410.

Patented Mar. 4, 1902.

M. S. OKUN.  
ELECTRIC ARC LAMP.

(Application filed Sept. 16, 1896. Renewed Aug. 20, 1901.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

MOSES S. OKUN, OF NEW YORK, N. Y.

## ELECTRIC-ARC LAMP.

SPECIFICATION forming part of Letters Patent No. 694,410, dated March 4, 1902.

Application filed September 16, 1896. Renewed August 20, 1901. Serial No. 72,693. (No model.)

*To all whom it may concern:*

Be it known that I, MOSES S. OKUN, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Arc-Lamps, of which the following is a specification.

My invention relates to that class of arc-lamps wherein the carbons are burned in a globe that is closed from the outside air to retard their consumption; and the object of the invention is to provide improved means to enable a carbon to feed freely and properly through an aperture leading into the globe.

The invention consists in an arc-lamp provided with an arc-inclosing globe having an opening for the passage of a carbon, means to support the globe and to permit it to have motion of translation laterally, and a lower-carbon carrier connected with the globe to move therewith.

The invention further consists in the novel details of improvement and the combinations of parts, that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part hereof, wherein—

Figure 1 is a side elevation, partly in section, of an arc-lamp embodying my invention in its simplest form; and Figs. 2 and 3 are similar views showing modified means for movably supporting the globe.

In the accompanying drawings, in which similar numerals of reference indicate corresponding parts in the several views, the number 1 indicates a mechanism box or casing in which suitable carbon-feeding mechanism may be contained.

2 is a carbon-feeding rod.

3 4 are carbons, and 5 is a globe suspended from the box or casing 1. The globe 5 is closed below the arc and is shown provided with a bottom plate or cup 6 to close its lower end, a tight fit being made between the globe and part 6. The carbon 4 is shown carried by the part 6; but the arrangement for closing the lower end of the globe and for carrying the carbon 4 may be varied as desired, and any suitable means for feeding carbon 3 can be provided.

The upper open end of the globe 5 is provided with an opening for the passage of the

upper carbon. The upper open end of the globe 5 is shown tightly closed by a cover 7 in Figs. 1 and 2, which is so connected with the globe that it will not have independent movement thereon during the operation of the lamp. I have shown a flange 7<sup>a</sup> depending from the cover 7 and surrounding the end of the globe. The cover 7 has an aperture 7<sup>b</sup> for the passage of the carbon 3, said aperture being of such a size that the carbon 3 will retard the passage of air therethrough into the globe, while at the same time feeding freely therein. At the aperture 7<sup>b</sup> the cover 7 may have a sleeve or extension 7<sup>c</sup> to guide the carbon straight. In Fig. 3 the cover 7 is dispensed with and the aperture 7<sup>b</sup> for the carbon is formed directly in the globe.

The globe 5 is to be so supported that it can have side movement or motion of translation laterally relatively to the box or casing 1, as well as oscillatory movement. For this purpose I have shown in Fig. 1 the globe as suspended from the box 1 by cords, wires, or other suitable flexible or yielding connections 8. These connections 8 are in Fig. 1 shown extending from the box or casing 1 to the cover 7, being fastened near the center thereof for the purpose of permitting the globe to have ready oscillatory movement. In this case the cover is to be suitably fastened to the globe 5 to sustain the latter. I have shown screws 9 connecting the cover and globe. With this arrangement the capacity of the globe to have motion of translation laterally, as well as oscillatory motion, enables the aperture 7<sup>b</sup> to keep in line with the upper carbon to allow free passage of the carbon and to avoid pressure and friction between the carbon and the walls of said aperture, whereby the carbon can feed freely and without hindrance. The carbon 3 serves as a guide to keep the movably-suspended globe in proper position, so that the two carbons will properly aline. The return-circuit for the lamp may lead from the lower carbon through a wire 1<sup>a</sup> to the line-wire.

In Figs. 2 and 3 the same principle of a yielding support for the globe-comprising the flexible connections 8 8, is shown; but in this case the connections 8 8 extend to a supporting bar or plate 10, to which the globe 5 is connected at its lower end. In this case the



connections 8 8 are not close to the center of the globe. Therefore to permit perfect oscillatory movement of the globe I have shown the globe movably connected with the bar or plate 10. For this purpose a pivot 11 is shown passing through a lug 10<sup>a</sup> on the bar or plate 10 and through a corresponding lug or lugs 6<sup>a</sup> on plate or cup 6. This combination of the flexible connections 8 8 with the pivotal support for the globe enables the latter to have motion of translation and oscillatory motions in all directions in order to keep the aperture 7<sup>b</sup> in line with the carbon.

In Figs. 2 and 3 the return-circuit from negative carbon 4 may be through plate or cup 6 to support 10 and connections 8 to the box 1 and thence to the main line in suitable manner.

I do not limit my invention to the precise details of construction and the arrangement shown, as they may be varied without departing from the spirit of my invention.

Having now described my invention, what I claim is—

1. An arc-lamp provided with an arc-inclosing globe having an opening for the passage of a carbon, means to support the globe and to permit it to have motion of translation laterally, and a lower-carbon carrier connected with the globe to move therewith.

2. An arc-lamp provided with an arc-inclosing globe having an opening for the pas-

sage of a carbon, means to support the globe and to permit it to have motion of translation laterally as well as lateral oscillatory or pivotal movement, and a lower-carbon carrier connected with the globe to move therewith.

3. An arc-lamp provided with an arc-inclosing globe having an opening for the passage of a carbon, means to support the globe and to permit it to have a progressive movement laterally, and a lower-carbon carrier connected with the globe to move therewith.

4. In an arc-lamp, a regulating mechanism, a globe and a flexible connection between said globe and said mechanism to allow the globe to have movement independent of said mechanism to permit adjustment of the globe relatively to a carbon, the globe having an opening for the passage of a carbon, and a lower-carbon carrier connected with the globe to move therewith.

5. In an arc-lamp, a regulating mechanism, a globe, and a movable or yielding suspension-support connecting said mechanism with said globe to permit adjustment of the globe relatively to a carbon, the globe having an opening for the passage of a carbon, and a lower-carbon carrier connected with the globe to move therewith.

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