

No. 672,715.

Patented Apr. 23, 1901.

C. B. SCHOENMEHL.
GALVANIC BATTERY.

(Application filed Oct. 30, 1900.)

(No Model.)

2 Sheets—Sheet 1.

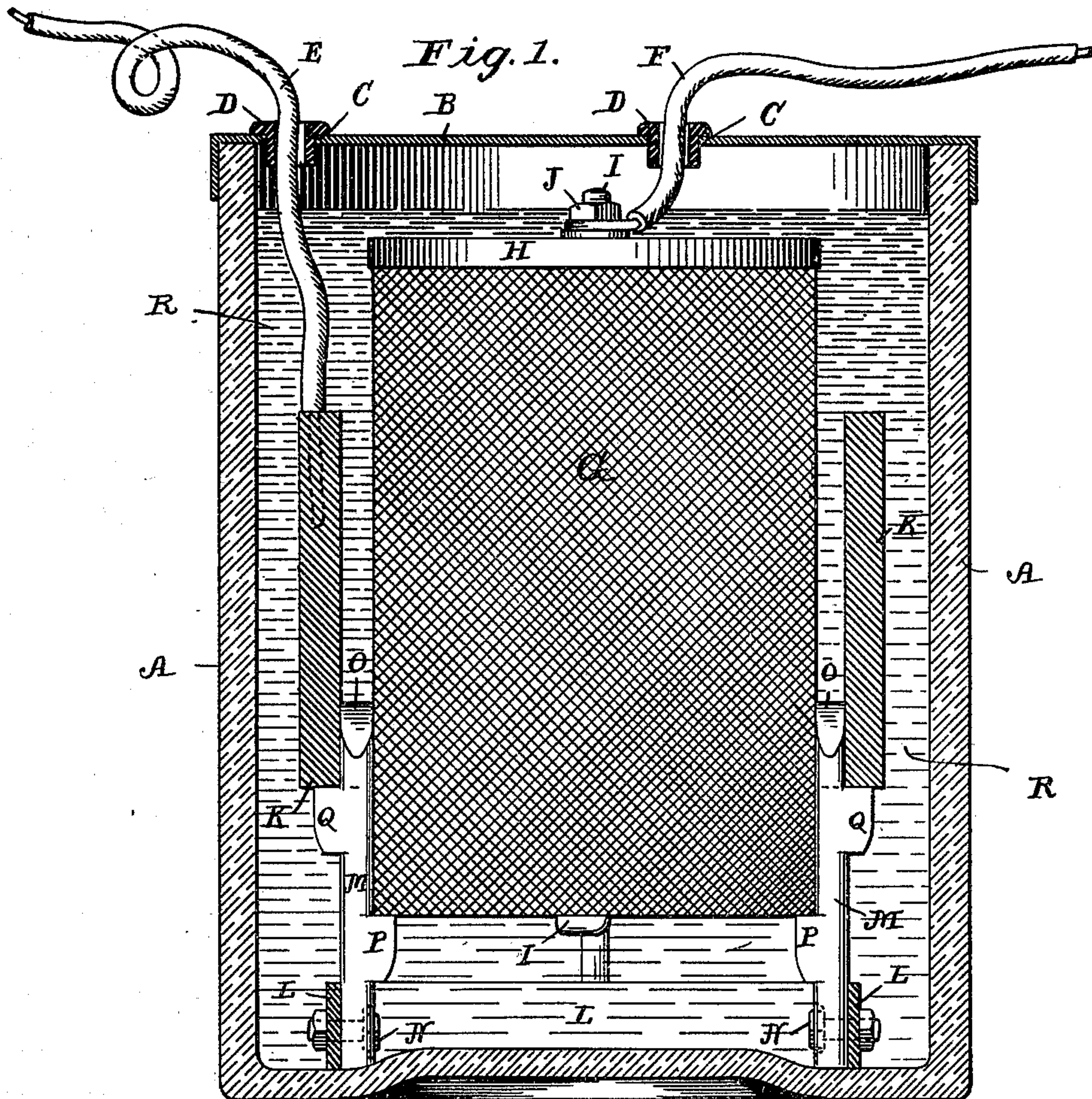


Fig. 2.

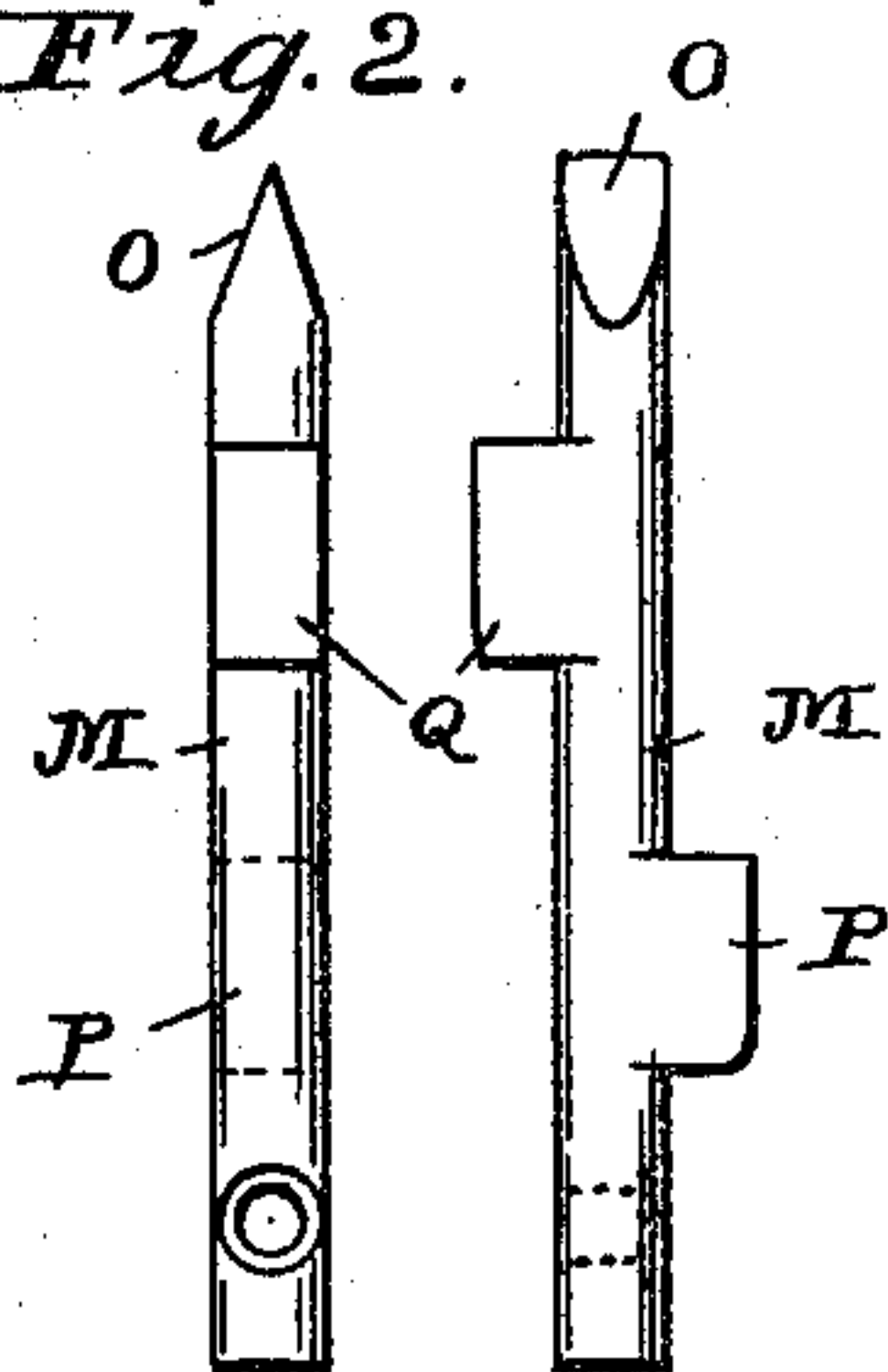


Fig. 4.

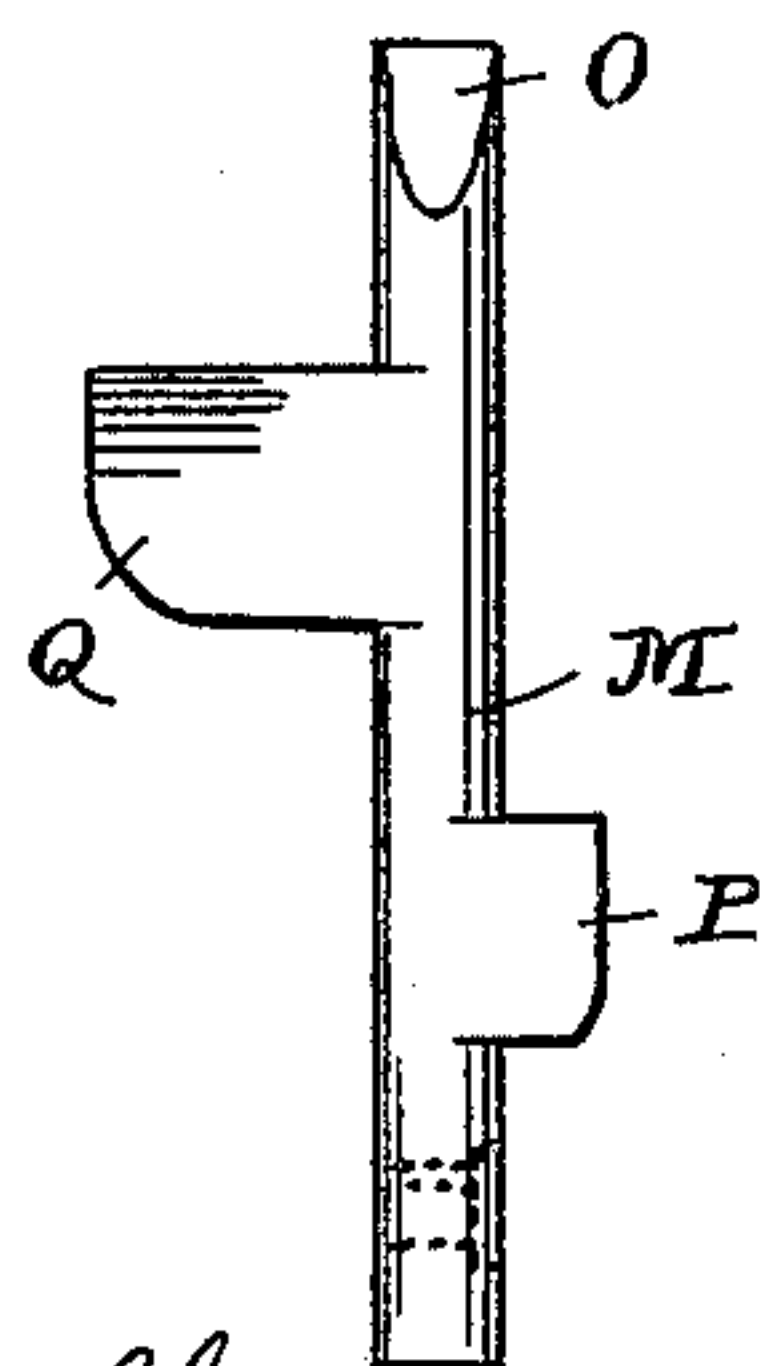
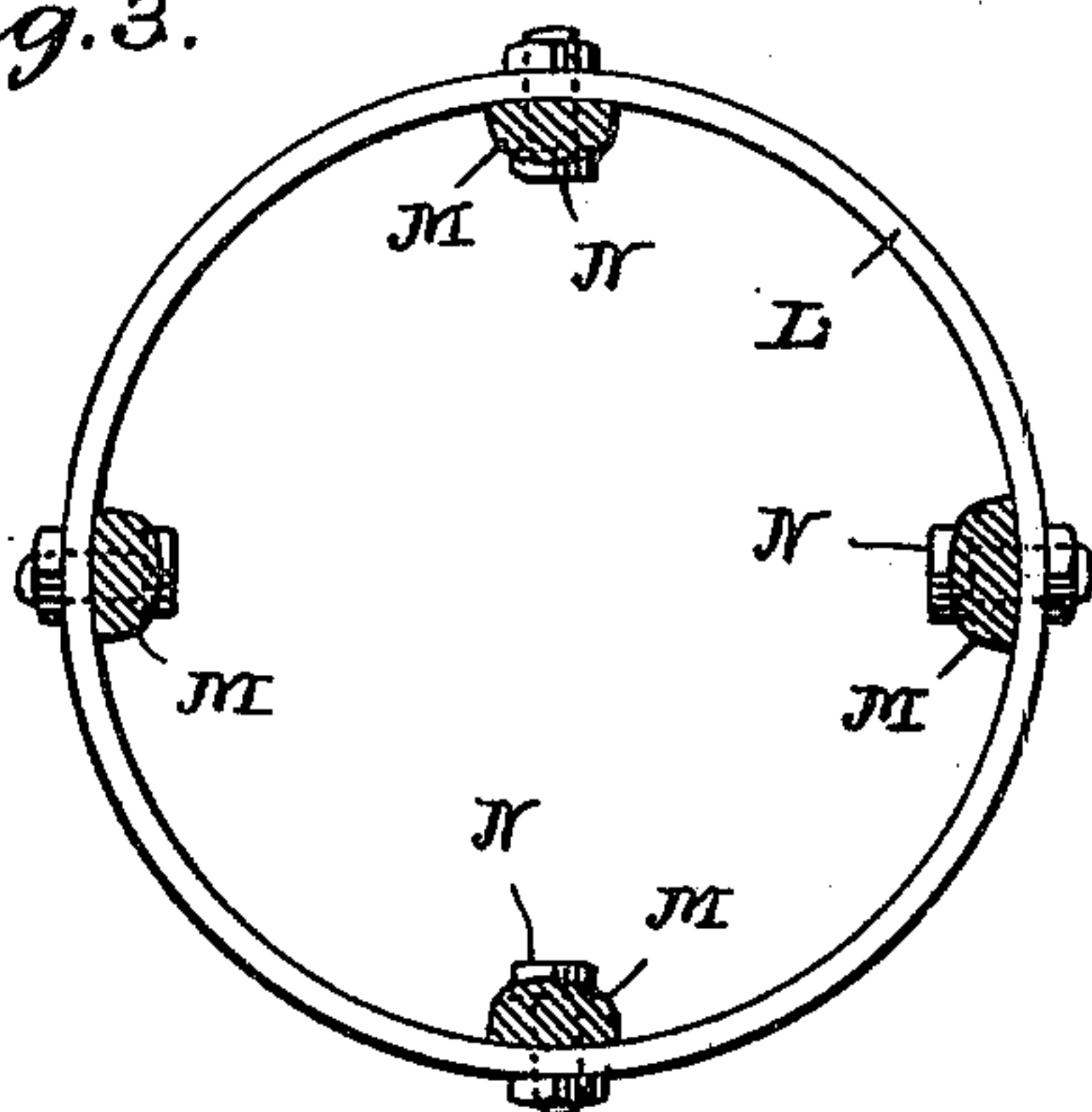


Fig. 3.



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2 Sheets—Sheet 2.

Fig. 5.

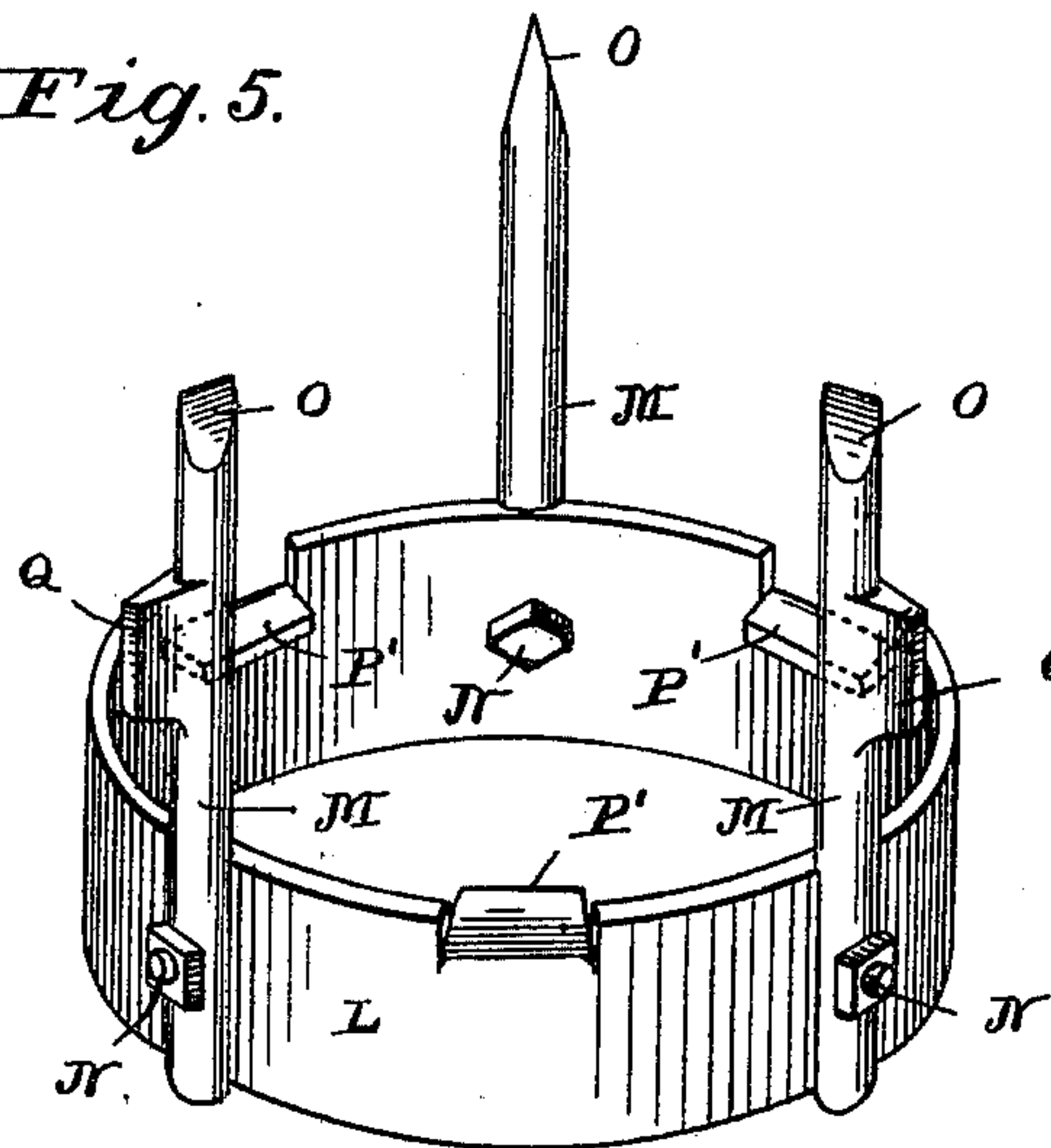


Fig. 6.

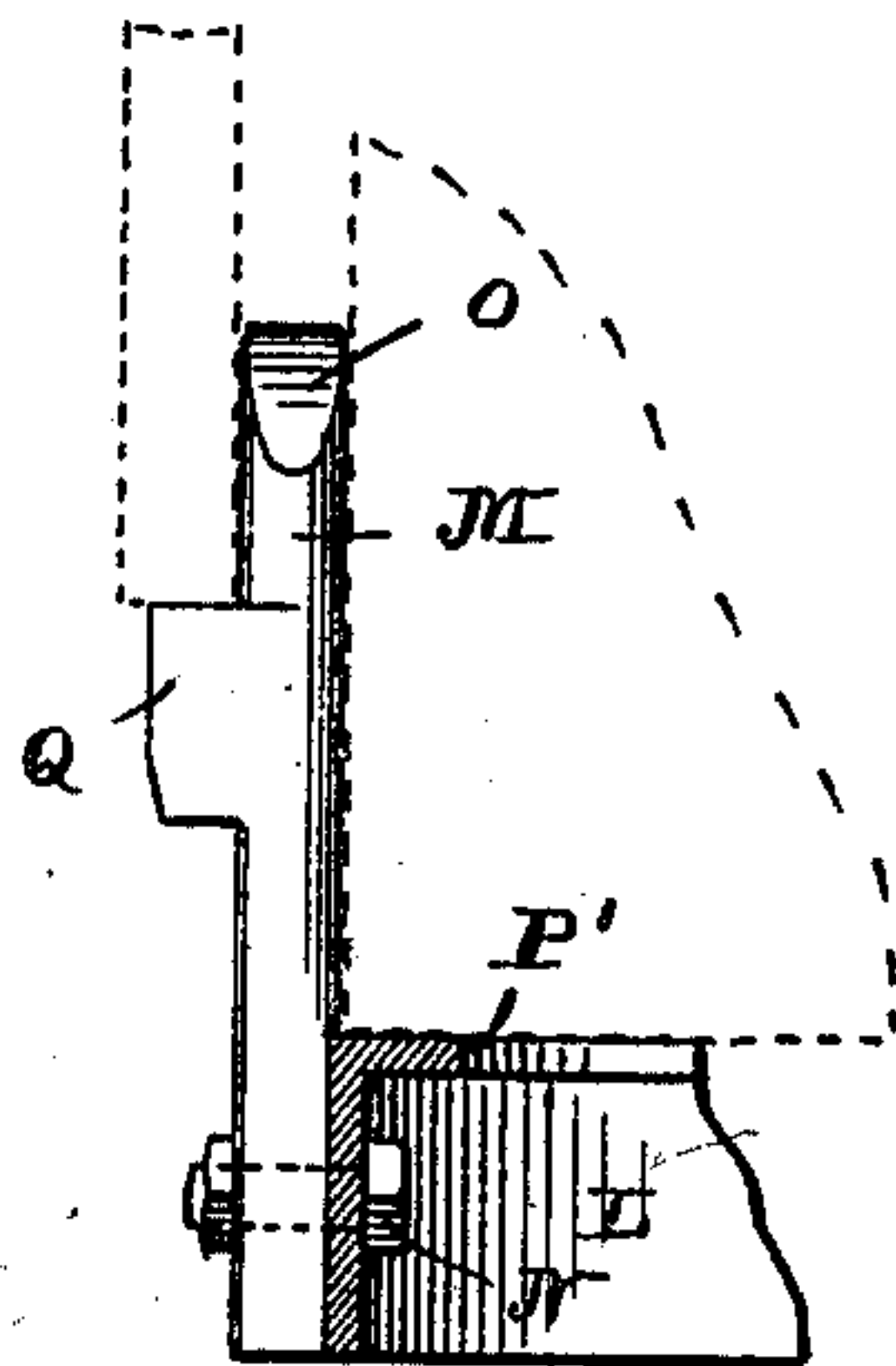
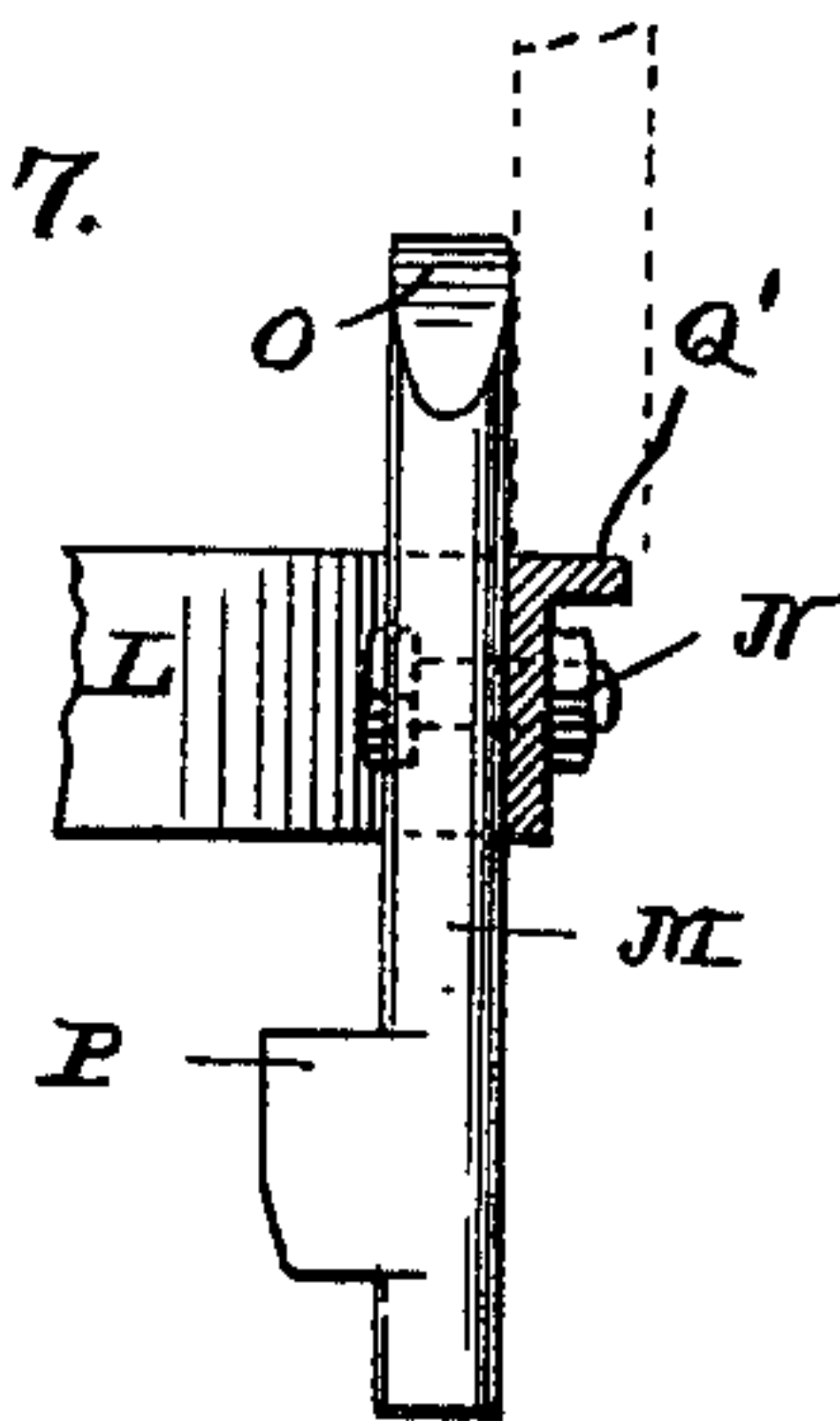


Fig. 7.



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UNITED STATES PATENT OFFICE.

CHARLES B. SCHOENMEHL, OF WATERBURY, CONNECTICUT, ASSIGNOR TO
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GALVANIC BATTERY.

SPECIFICATION forming part of Letters Patent No. 672,715, dated April 23, 1901.

Application filed October 30, 1900. Serial No. 34,883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. SCHOENMEHL, a citizen of the United States, and a resident of Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Galvanic Batteries, of which the following is a specification.

My invention relates to supports for the elements contained in galvanic batteries, whereby said elements may be retained at a certain position within the battery-jar with fixed relation thereto and to each other.

It is the object of my invention to produce a device for supporting both the positive and negative elements of batteries independent of both the jar and cover and in such a manner that neither of said elements will come in contact therewith, thus making it possible to attach an insulated wire direct to both of said elements without the use of the customary intermediate rods or binding-post.

With the above and other minor objects in view my invention resides and consists in the novel construction and combination of parts shown upon the accompanying sheet of drawings, forming a part of this specification, and upon which similar characters of reference denote like or corresponding parts throughout the several figures, and of which—

Figure 1 shows a central vertical cross-section through a battery the elements of which are supported by my improved device. Fig. 2 shows a detached edge and side view, respectively, of one of the supporting-columns comprising a part of my invention. Fig. 3 is a sectional plan view of the several supporting-columns and the means for retaining them in position. Fig. 4 shows a side elevation of a modified form of supporting-column which may be used in connection with metal or other jars. Figs. 5, 6, and 7 show further modifications of my element-supporting device and wherein the support for one of the elements is formed upon the metal ring which holds the columns.

Referring in detail to the characters of reference marked upon the drawings, A indicates a battery-jar, which may be of any desired shape or construction, and B a cover there-

for, which, as indicated, may be formed of sheet metal. A suitable depolarizing agent in liquid form is indicated by R. Within the cover are two holes C C, each of which is provided with insulating-sleeves D D, through which the wire connections E F of the positive and negative elements of the battery pass.

The negative element G in the battery shown may be constructed in the usual or any preferred way—as, for instance, made in a basket form of either perforated sheet metal or wire-gauze. This basket in practice is filled with oxid of copper or a similar-acting substance and is provided with a cover H, as shown. The basket shown contains a central rod I, the head of which engages the bottom of the basket, and is provided with a washer and a nut J upon the opposite or top end by means of which the cover is secured in place and the field-wire F, before mentioned, attached. The positive element is also of a common construction, comprising a cylindrical zinc K, having the field-wire E attached thereto in any suitable way—as, for instance, by means of soldering at the uniting vertical edges. It is these two elements, therefore, that I desire to support within the jar independent of the cover in substantially the relation to each other shown in the drawings. My device for accomplishing the object is shown applied in Fig. 1 and in detail in the other figures. It preferably comprises a base-strip L, which may be in cylindrical, square, or any other suitable shape, and likewise provided with any form of fastening for the insulating-columns M. In the drawings I have shown said parts secured together in a simple manner, employing a bolt N, which, as will be seen, passes through a hole in the porcelain column and through a corresponding hole in the base, with a nut upon the outer side to clamp them together. The columns proper may be three or four in number, as desired, and are each substantially alike in construction, comprising a straight vertically-disposed body, with a top end O beveled off, as shown in Fig. 2. Adjacent to the lower end of the column I provide an inwardly-disposed lug P, which, as shown in Fig. 1, forms a rest or support for the

basket or negative elements and serves to retain it in a true vertical position and central of the said several columns. Upon this lug P and upon the opposite side of the column I arrange a second lug Q, which is substantially like the former one, but which projects outward instead of inward, and thus forms external support for the zinc ring which encircles the basket and incloses the top end of the column in the manner illustrated in the drawings. In some instances I prefer to form this upper lug Q deeper, as shown in Fig. 4, so as to have it extend out beyond the lower edge of the zinc, so as to engage the inner wall of the jar and prevent the zinc from coming in contact therewith, thus forming an insulation between the two. This insulation is desirable where metal jars are used. In the case of the use of said extension I would also bevel off the extended portion of said lug similar to that of the top end O of the column, so as to prevent the accumulation of sediment thereon, which would avoid any liability to short-circuit the battery.

In some instances I may elect to form lugs P⁰ or a ledge Q' integral with the strip L and arrange it upon either the inner or outer side of the columns to support one or the other of the elements, and thus require but one lug upon each column.

By reason of the foregoing it will be seen that I form an insulation between the two elements in a manner to prevent the accumulation of any substance therebetween which would be liable to short-circuit the battery and likewise insulate them from the jar and retain each and all of them at a fixed relation to each other, thus enabling me to secure the very best possible results from start to finish in the operation of the battery.

I am aware that separate or independent supports have been patented for supporting elements of a battery which in some respects resemble my present invention; but so far as I am aware nothing has been devised for simultaneously supporting both the positive and negative elements in the manner herein shown.

Therefore what I claim, and desire to secure by Letters Patent, is—

1. In a battery-element support, the combination with a suitable base, of a series of insulating-columns having inner and outer supports thereon for both the positive and negative elements.

2. In a battery-element support, the combination with a suitable base, of a series of insulating-columns having an inner and outer lug thereon for the support of both the positive and negative elements.

3. A battery-element support comprising a series of insulating-columns adapted to be located between the positive and negative elements and containing inner and outer supports thereon to retain the said elements in their relative positions.

4. A support for the elements of a battery comprising a series of vertically-disposed columns with means for retaining them in position, lugs secured to said columns and deflected in opposite directions to independently support a negative element upon one side and a positive element upon the other.

5. In a galvanic battery, the combination of a series of vertically-disposed insulating-columns having lugs upon the inner and outer sides, the former to support the negative element of the battery and the latter to support the positive, and likewise engage the jar in a manner to retain said element at a fixed position therefrom.

6. In a galvanic battery, the combination with a positive and negative element, of an insulating-column interposed between the two, and resting upon the jar, having supports upon their inner sides upon which to rest one of the elements and similar supports upon the outer side to accommodate the other element, substantially as described.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 25th day of October, A. D. 1900.

CHARLES B. SCHOENMEHL.

Witnesses:

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