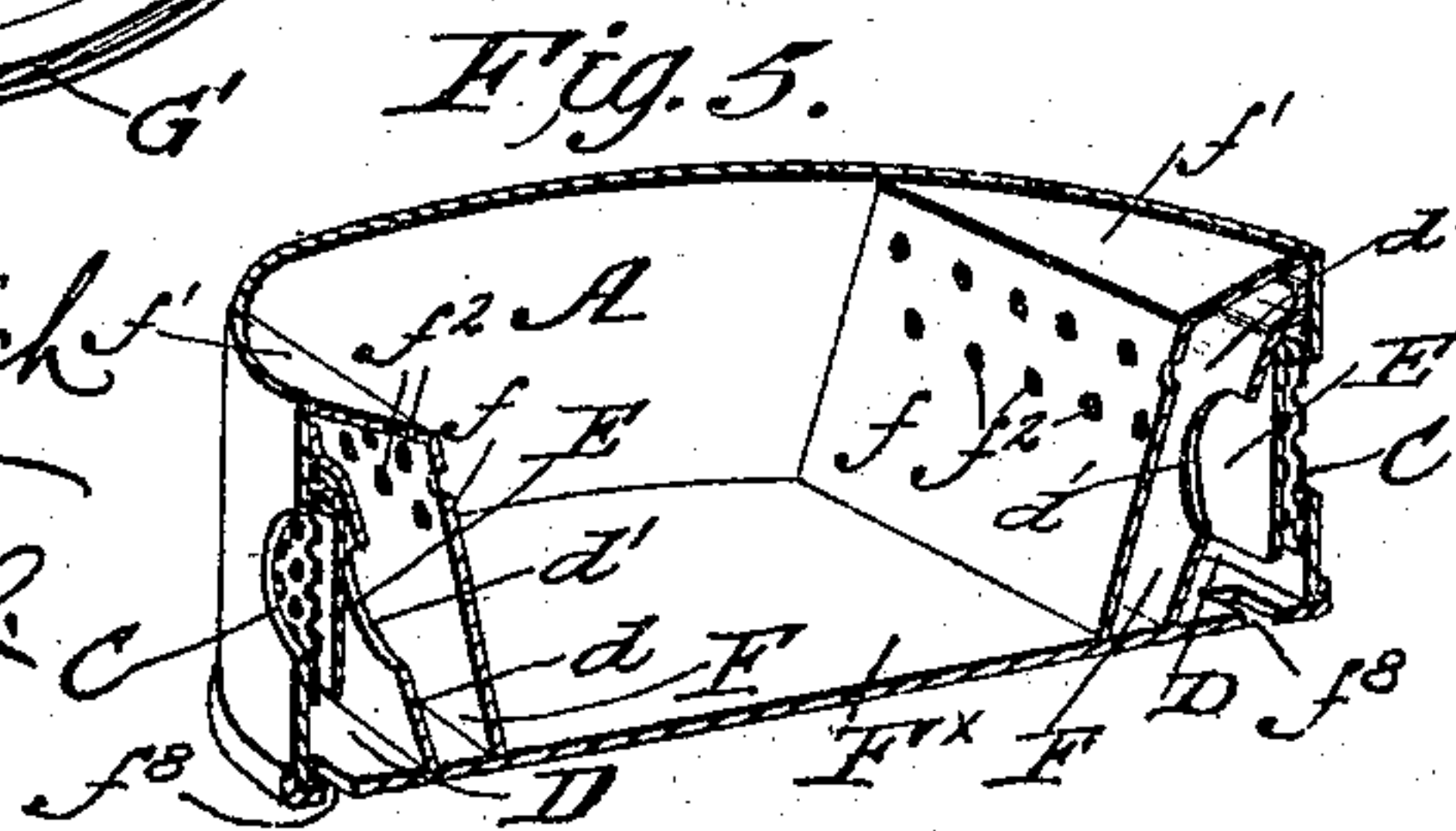
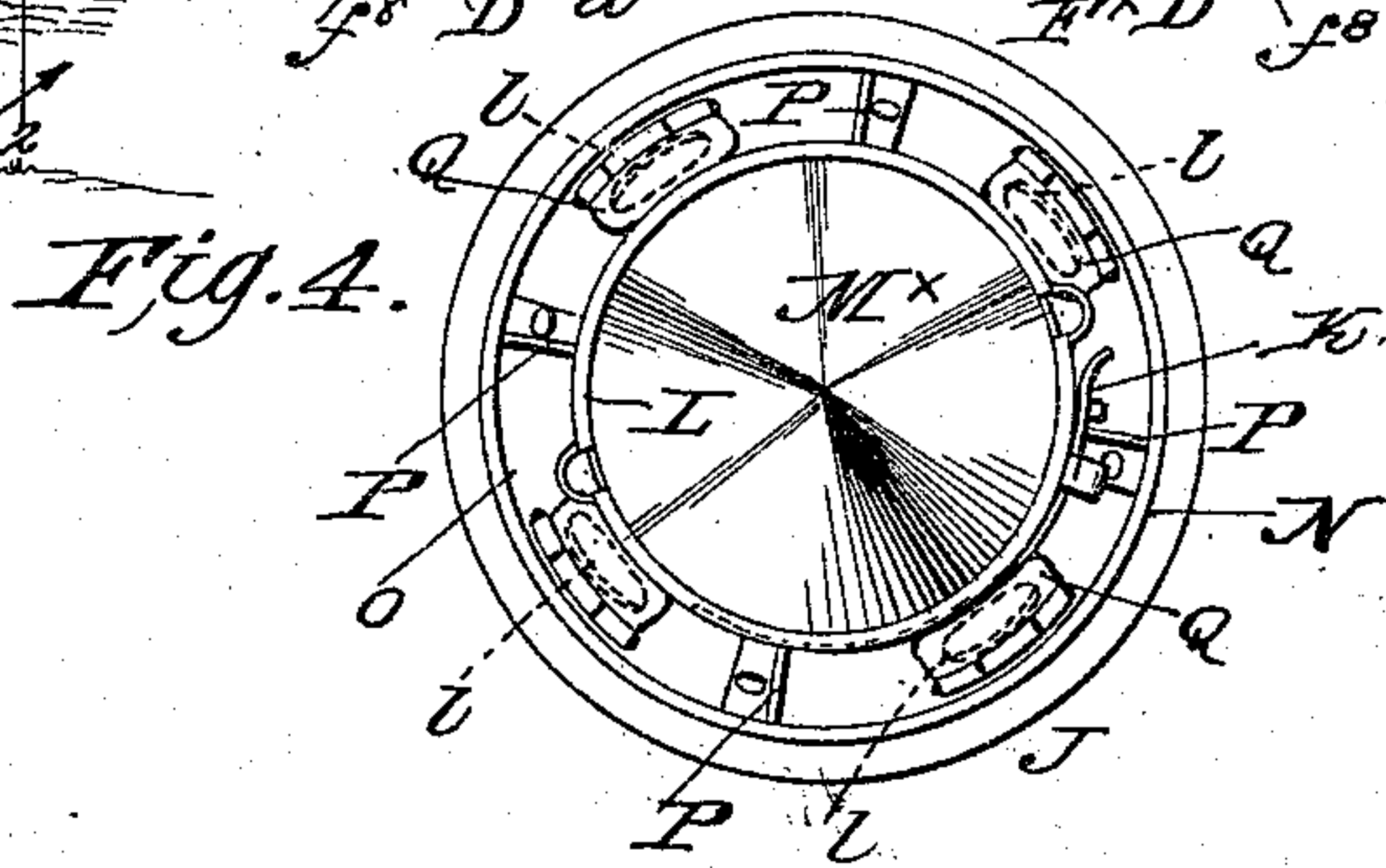
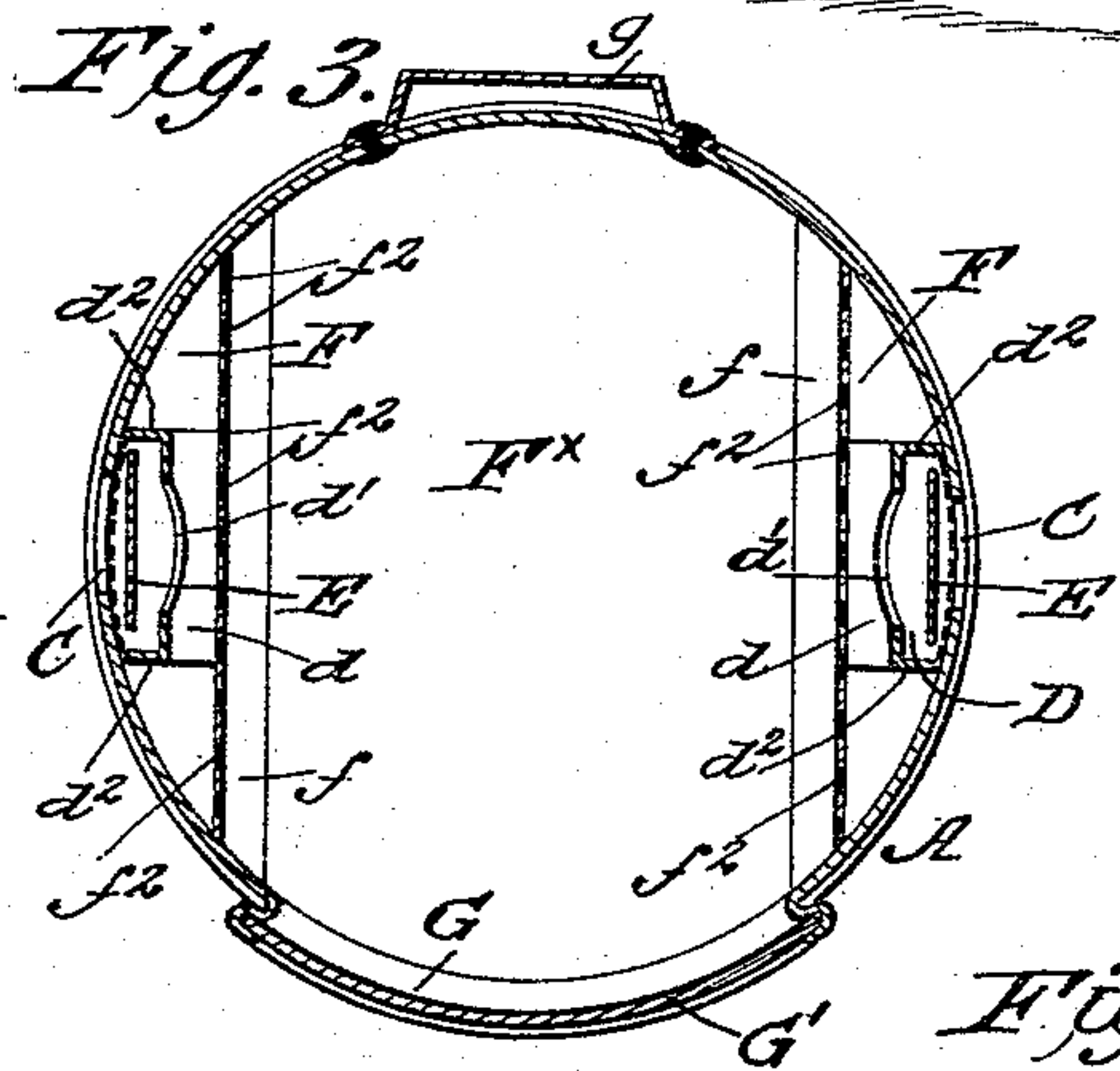
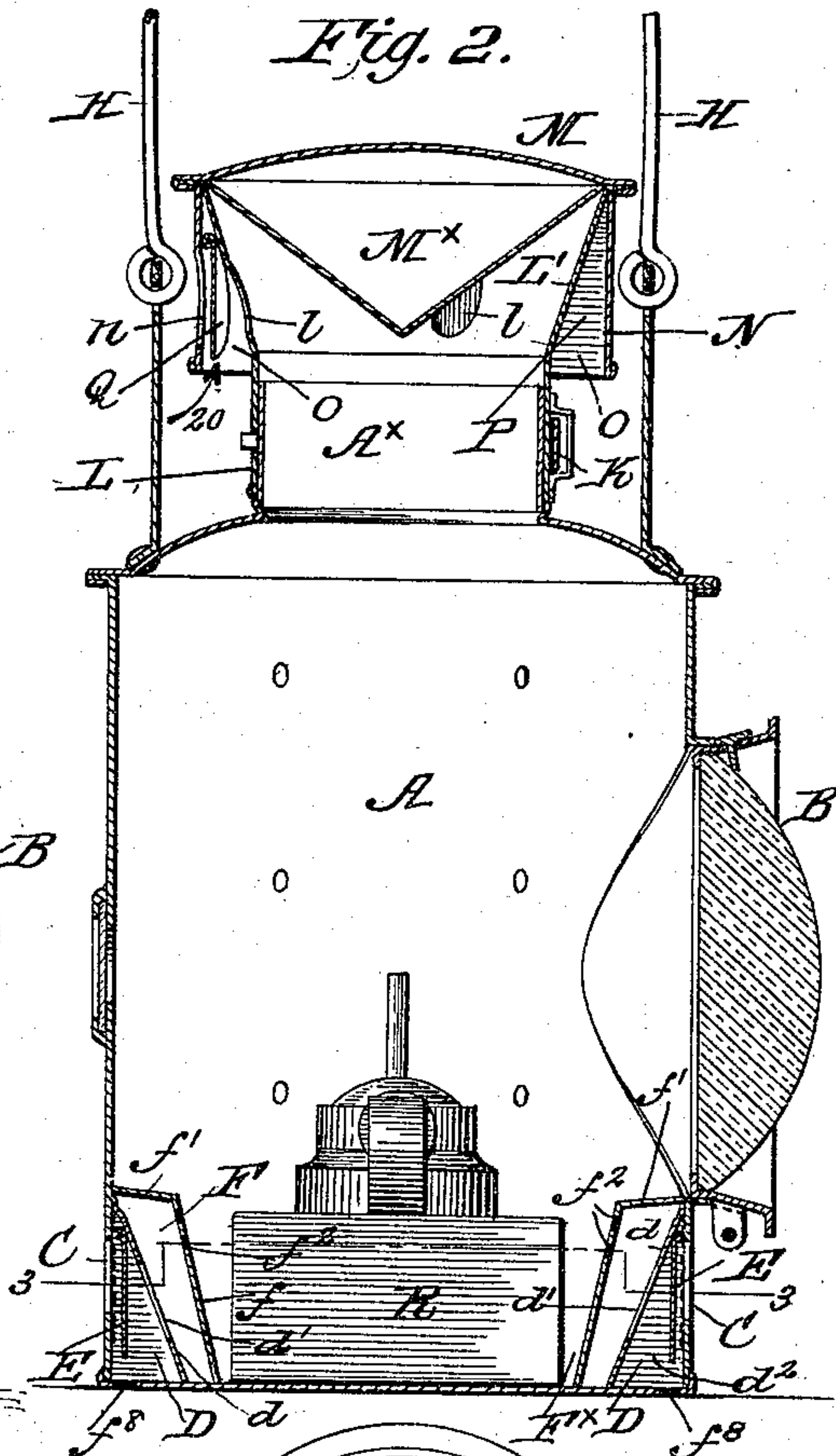
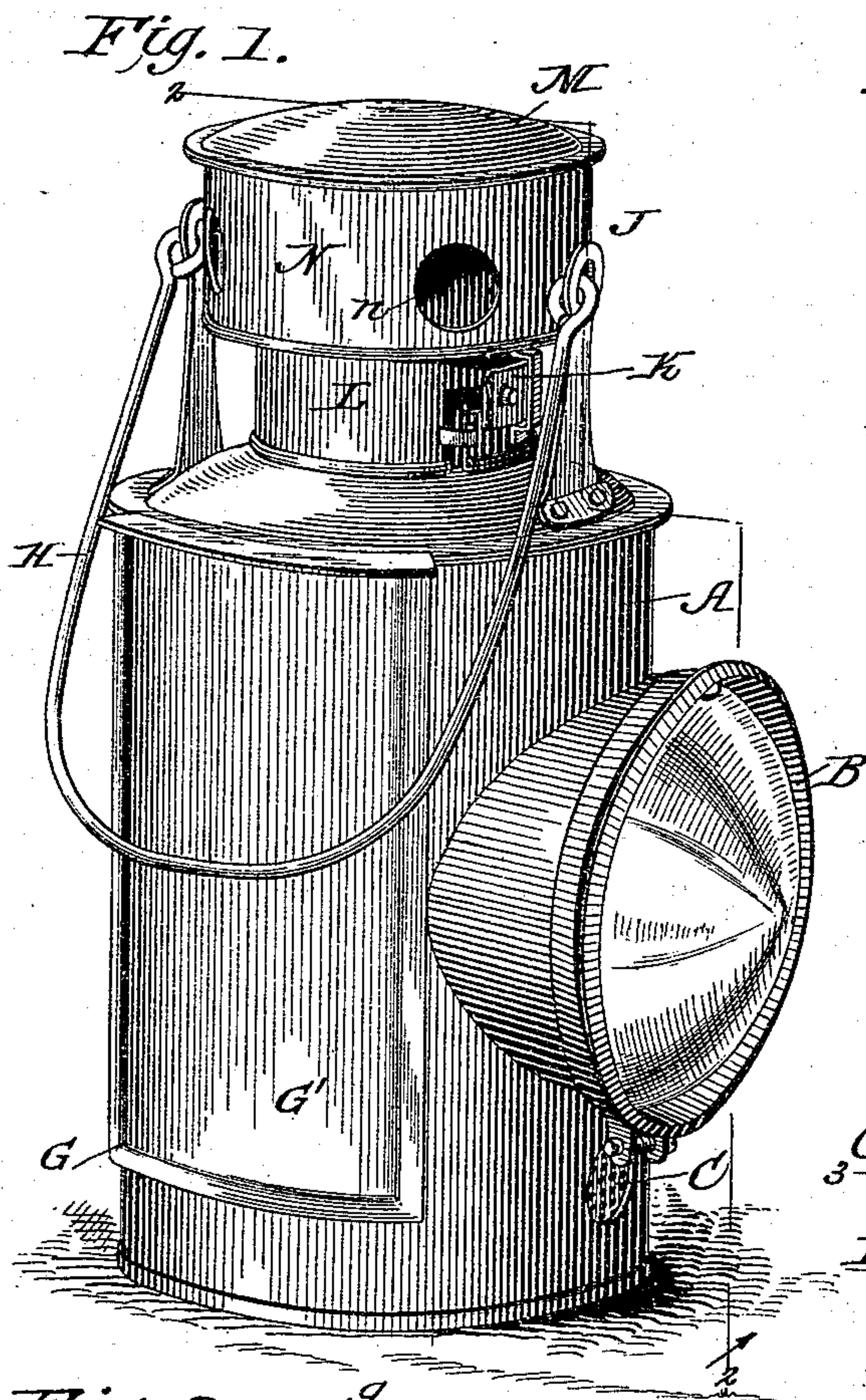


(No Model.)

J. FORSYTHE.
LAMP.

No. 543,443.

Patented July 23, 1895.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JAMES FORSYTHE, OF PITTSBURG, ASSIGNOR OF TWO-THIRDS TO WILLIAM L. NEWBAKER AND GEORGE A. JACKSON, OF WILKINSBURG, PENNSYLVANIA.

LAMP.

SPECIFICATION forming part of Letters Patent No. 543,443, dated July 23, 1895.

Application filed May 17, 1894. Serial No. 511,562. (No model.)

To all whom it may concern:

Be it known that I, JAMES FORSYTHE, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Lamps, of which the following is a specification.

My invention relates to that class of lamps provided with air-inlets and deflector devices so constructed as to prevent the lamp being blown out by the wind; and it has primarily for its object to provide a lamp of this character of a simple and inexpensive structure, having air-valve devices arranged to positively and effectively serve for their intended purposes.

It has also for its object to provide a lamp having air-valve devices constructed to prevent the lamp from being smothered by becoming clogged with soot or by the condensations freezing in the bottom, and thereby closing off the air-holes.

The invention consists in the novel features of construction and peculiar combination of parts hereinafter first described in detail and then particularly pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved lamp. Fig. 2 is a vertical section taken practically on the line 2 2, Fig. 1. Fig. 3 is a horizontal section taken on the line 3 3, Fig. 2. Fig. 4 is an inverted view of the top or hood section; and Fig. 5 is a perspective view, partly in section, of the lower or base portion.

In the accompanying drawings I have shown my improvement in the nature of a railroad signal-lamp; but I desire it understood that in their practical application the valve and air cut-off devices can be used on any style of lamp or lantern requiring protection from the wind.

Referring to the accompanying drawings, A indicates the outer casing of the lamp or lantern, which in the preferred construction is made cylindrical, as shown, and provided at one side with a bull's-eye B of the usual construction. At the lower edge, at points under the bull's-eye and diametrically opposite, the outer casing has screened air-inlets C C, to the rear of which are arranged air-

chambers D, formed by the downwardly and inwardly inclined walls d , having air passages or openings d' arranged in line with the inlets C and the end walls d^2 .

E indicates flap or swing valves, hung at the upper end of the walls d , which are adapted to normally hang down at the rear of the inlets C and to swing back to close off the openings d^2 when forced back by the direct air-pressure through the inlets C.

It will be noticed by reference to Fig. 3 that the air-chambers are projected at diametrically-opposite points transversely to the projection of the bull's-eye. To provide a convenient pocket or receiving-chamber for the lamp, additional transverse air-spaces are formed over the spaces D, as shown at F, such spaces having inner walls f , which extend entirely across the casing and the top portion f' , such walls f having air-inlets f^2 , as shown.

In line with the lamp-pocket F^x the casing has an opening G, held closed by the slide G' , and at the side opposite such opening the casing has an eye or bail portion g , whereby it is adapted to be held on a support, it also having preferably a hand-bail H, as shown.

J indicates the top or hood portion of the lamp or lantern, which may be fixedly connected with the body or detachably joined therewith by means of a bayonet-joint and spring-catch K, as shown, and such hood comprises a neck portion L, (which slips over the neck or projection A^x of the body,) which terminates in an outwardly-flared portion L' , provided with a series of air-passages l .

M indicates the top which fits over the flared portion L' , the under face of which is formed into an inverted-cone deflector M^x , which projects down into the flared body L' , as shown.

N indicates an annular rim held pendent from the outer edge of the top M and which has a series of air passages or openings n , held in line with the air-passages l . It will be noticed by reference to Figs. 2 and 4 that by flaring the top outward, as at L' , the side walls will be held inclined similar to the walls d at the bottom, so as to form a valve-chamber O inside the rim N and such chamber, it will be noticed, is divided by radial partitions P,

whereby to form independent sections for each set of air-passages n and l . In each of the valve-sections is pivoted a flap-valve Q , which is adapted to swing up against the inclined side walls when the air blows directly in the opening u , it being manifest that by forming the annular valve-chamber in separate sections only such valves which receive the direct wind-pressure will be swung to close off the particular opening or openings l . It will also be observed that by forming the several parts as shown such valves will be swung inward by air-blasts which blow upward under the rim N , (see arrow 20,) the valves in the bottom being also hung to swing backward by such upward air-blasts as may pass up through the bottom of the lamp-casing, which enter through the supplemental inlets f^8 , which open into the spaces D .

R indicates the lamp, which may be of any ordinary construction, and seats in the way or recess formed by the side walls of the spaces F .

From the foregoing description, taken in connection with the drawings, it will be seen that by arranging the valve devices in the manner shown, no matter which way the wind blows, the air-passages to the windward will be held closed, while the others remain open, and by providing an inverted-cone-like deflector in the top the currents of air through the passages will be deflected and not have a counteracting effect on each other.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a lamp or lantern as described, a hood portion, having its upper end flared outward, having a closed top, a pendent vertical annular rim surrounding the flared portion, a series of division plates connecting such rim and flared portion, whereby to form a series of independent spaces, said rim and flared portions having coincident air openings, and flap valves hung one in each of such spaces, arranged to close over the openings in the outer rim when the air enters from below and to swing back and close over the openings in the flared portion when the wind pressure is direct through the outer openings all substantially as described and for the purposes specified.

2. In a lamp, a hood portion having an upper outwardly flared end having a closed top,

having a pendent annular rim, whereby an annular space is formed, division members forming such space into sections, coincident air passages formed in the said rim and flared end, one set for each section, and a gravity or swing valve held in each of such sections, all arranged substantially as shown and described.

3. As an improvement in lamps or lanterns substantially as described, a body portion having a neck member terminating with an outwardly flared portion having a closed top, a vertical annular rim surrounding the flared portion, whereby an annular space open at the bottom is formed, said space being radially divided to form a series of chambers, said rim and annular portions having coincident air passages, and flap valves hinged to the inner face of the annular rim to close normally over the outer openings and be held thereover when the draft is from below, and adapted to be swung back by direct wind pressure, to close over the openings in the flared portion of the hood all substantially as shown and for the purposes described.

4. In a lamp or lantern as described, a casing having a series of internal air spaces D having inclined walls d , the casing and walls having aligning air passages C and d' respectively, hinged flap valves held in the said spaces to normally hang over the passages C , and openings f^8 in the bottom of the casing entering the spaces D and so arranged that air drafts therethrough will serve to keep the flap valves over the passages C as and for the purposes specified.

5. The combination with the casing having a lamp holding seat portion or chamber at the bottom, having its side walls connected by a top portion f' with the casing to form chambers F , the said side walls having air passages f^2 , of air spaces D held within the spaces F , having their inner walls d inclined and connected with the casing, said walls and the casing having coincident air holes d' and C respectively and the flap valves E hinged in the chambers D to normally hang over the openings C all arranged substantially as and for the purposes described.

JAMES FORSYTHE.

Witnesses:

JOHN W. MOORE,
GEO. A. JACKSON.