

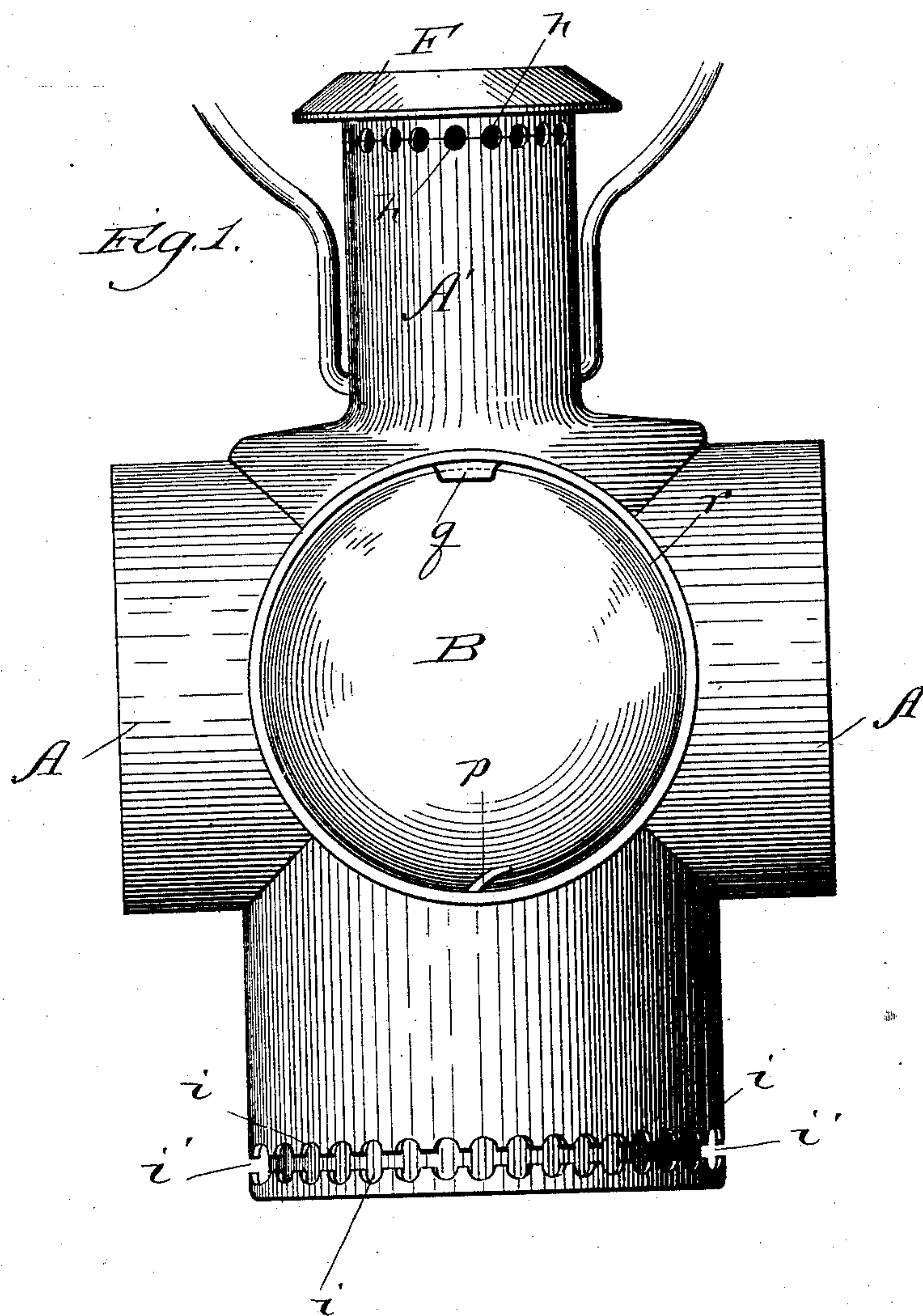
(No Model.)

3 Sheets—Sheet 1.

A. A. STROM.  
SIGNAL LANTERN.

No. 363,771.

Patented May 24, 1887.



Witnesses:  
Chas. E. Gaylord.  
A. S. Fair

Inventor:  
A. A. Strom,  
By Dyrenfort & Dyrenfort,  
Attorneys.

(No Model.)

3 Sheets—Sheet 2.

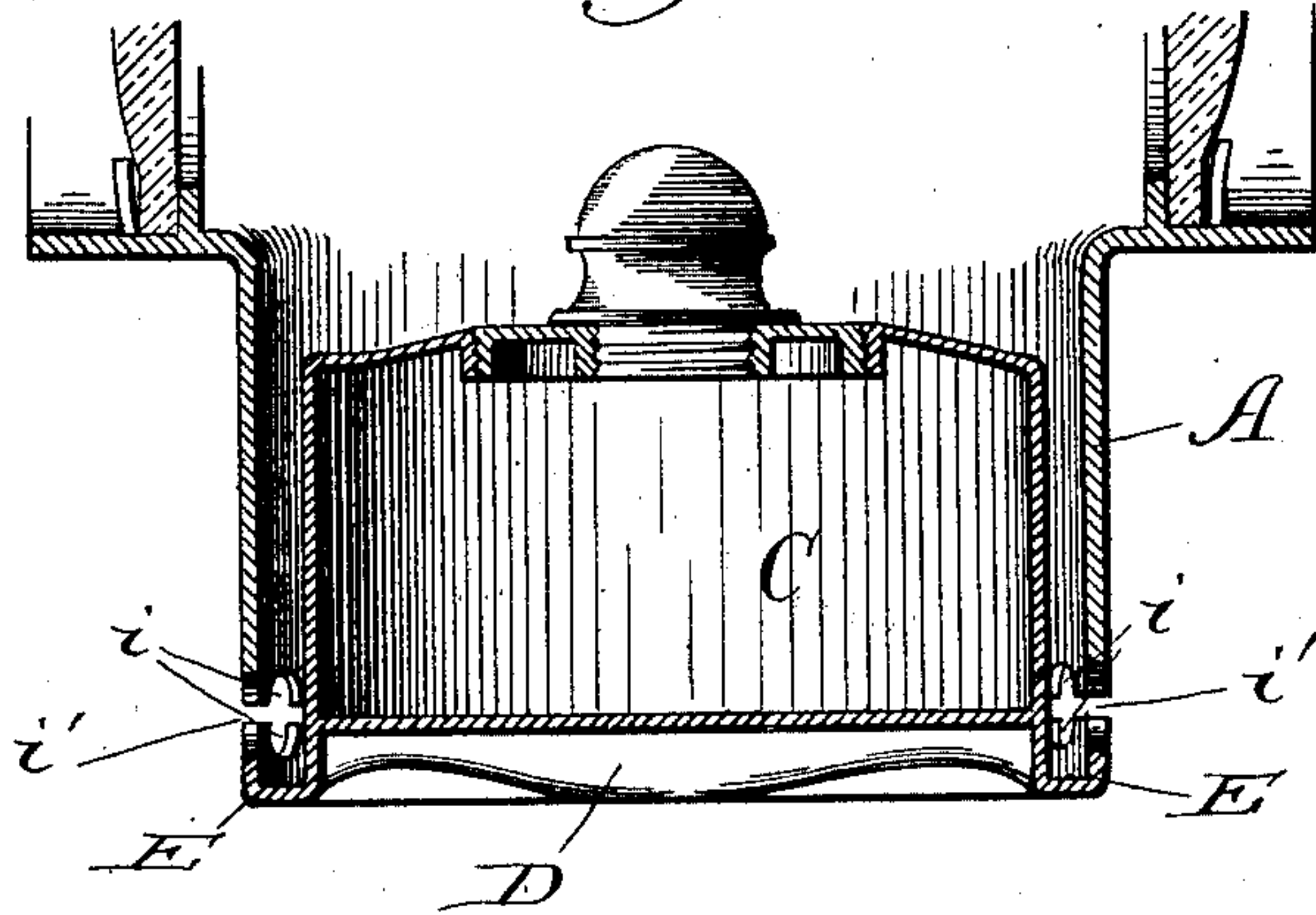
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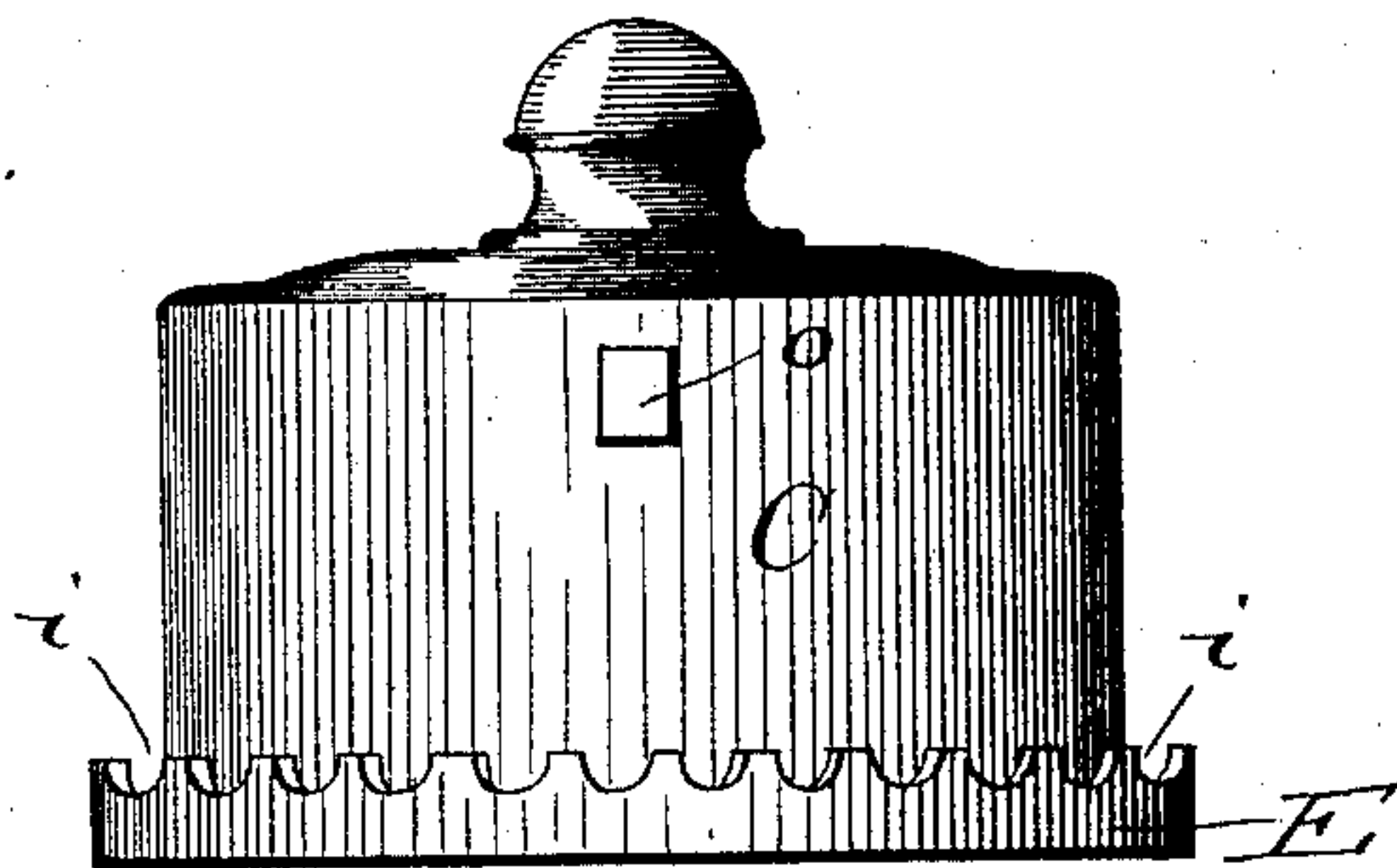
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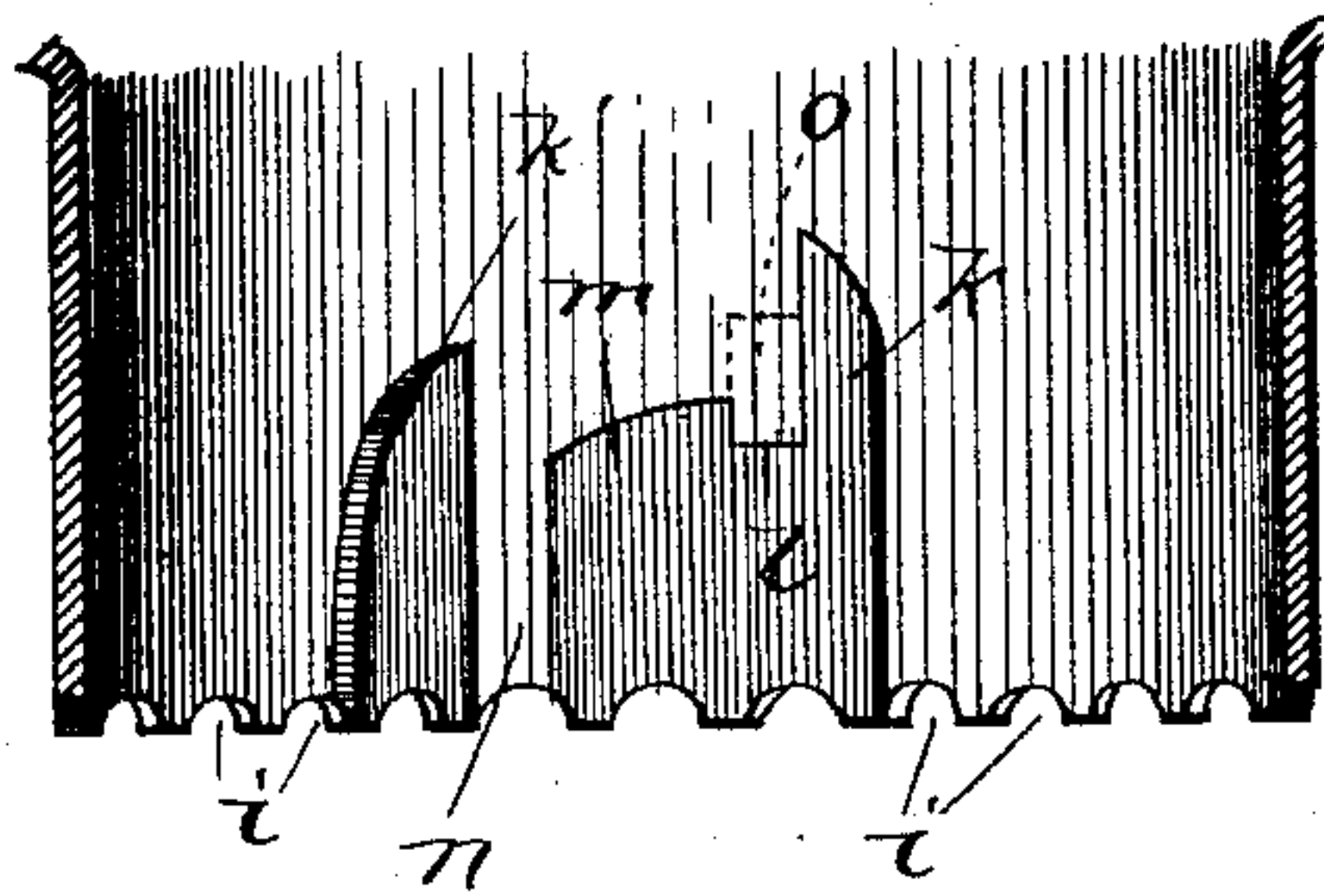
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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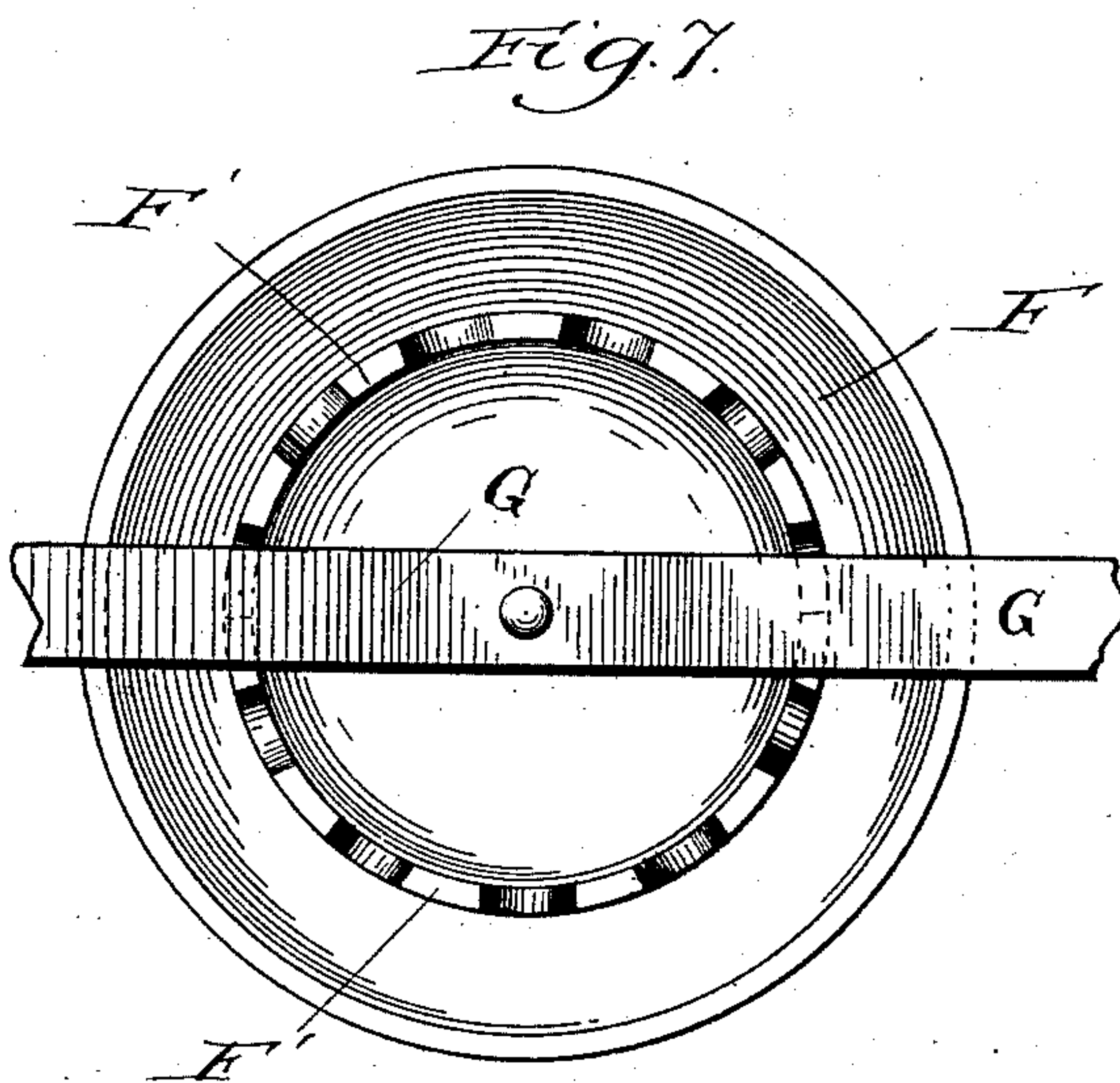
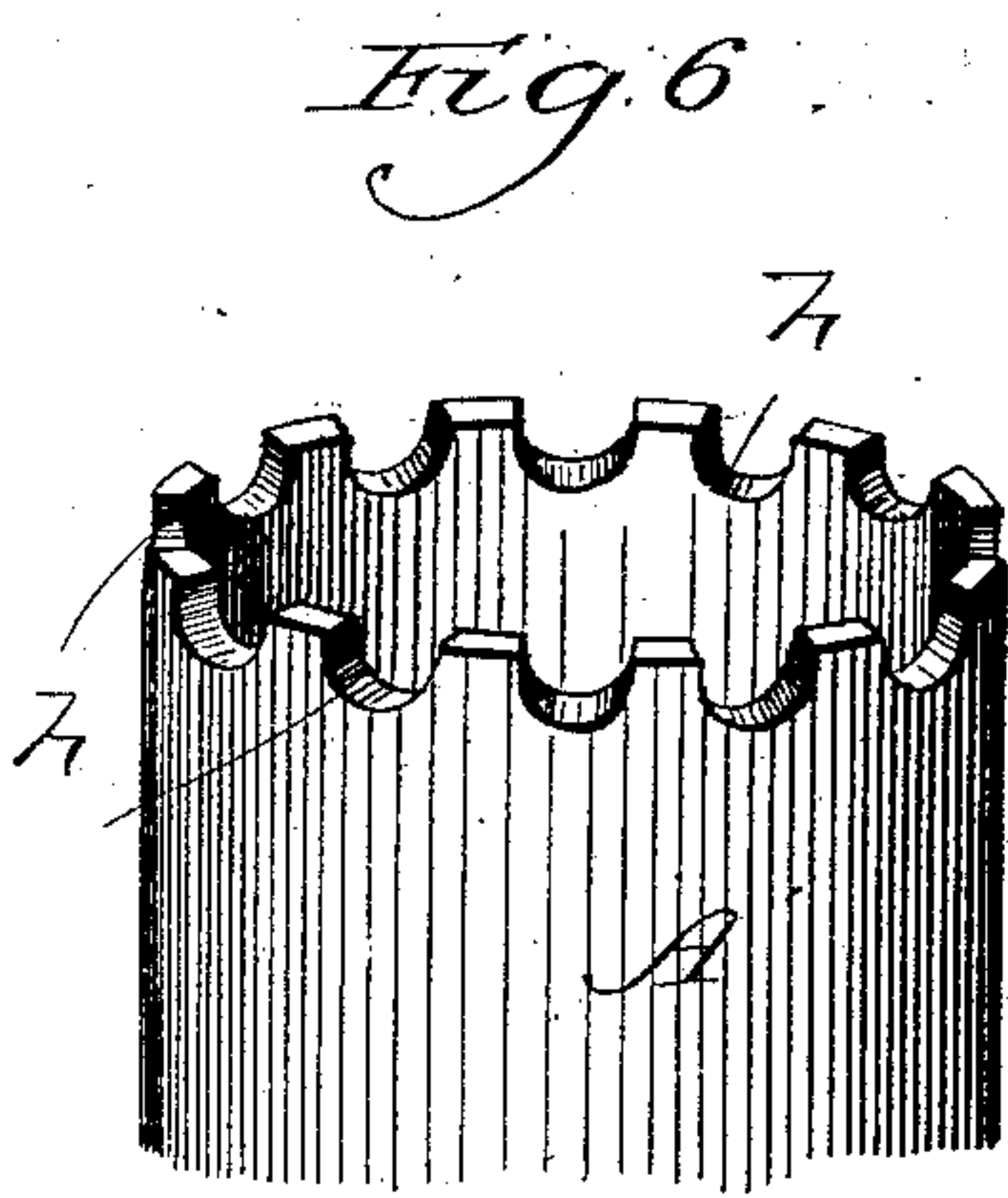
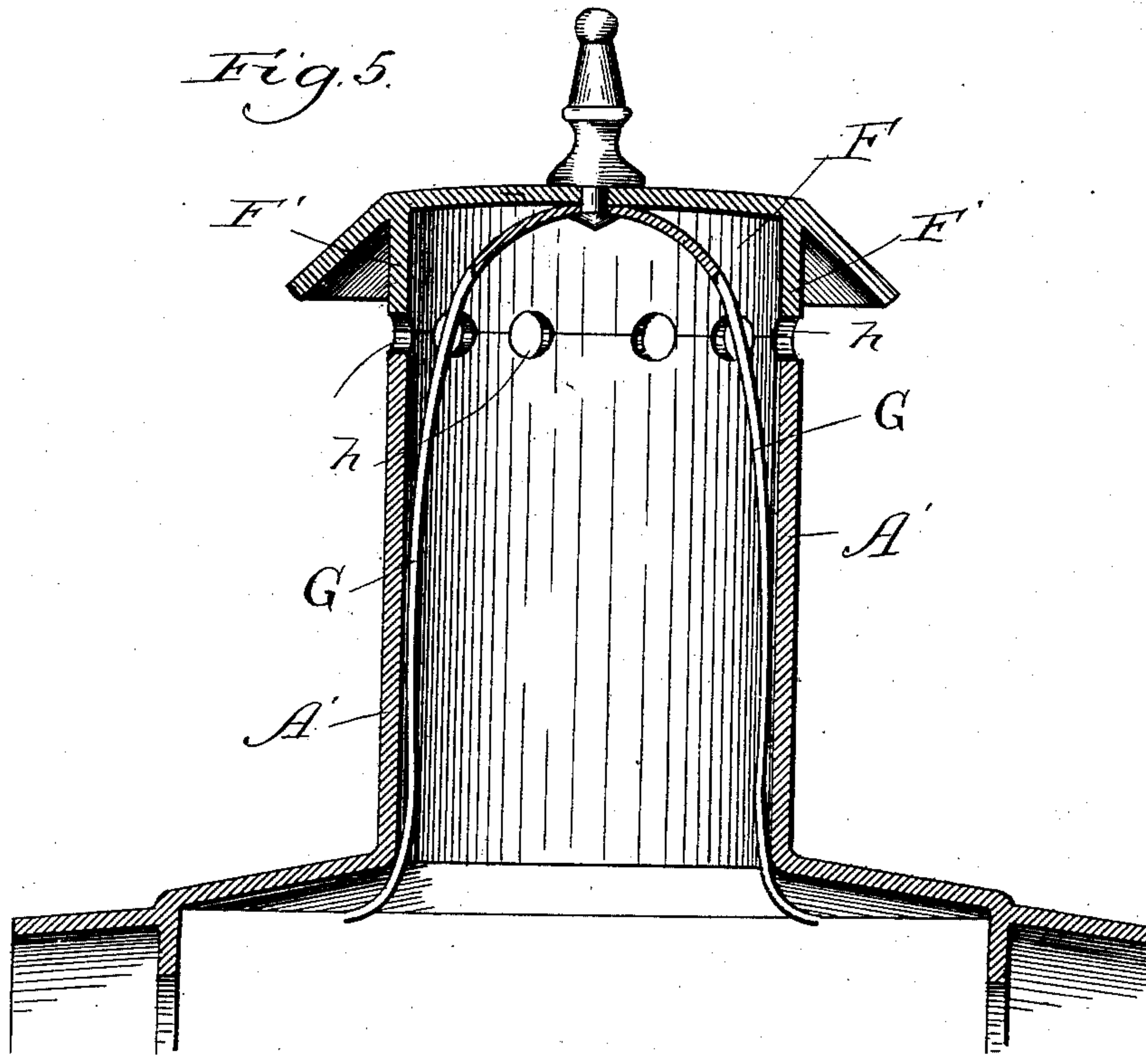
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3 Sheets—Sheet 3.

A. A. STROM.  
SIGNAL LANTERN.

No. 363,771.

Patented May 24, 1887.



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# UNITED STATES PATENT OFFICE.

AXEL A. STROM, OF AUSTIN, ASSIGNOR TO PETTIBONE, MULLIKEN & COMPANY OF CHICAGO, ILLINOIS.

## SIGNAL-LANTERN.

SPECIFICATION forming part of Letters Patent No. 363,771, dated May 24, 1887.

Application filed July 6, 1886. Serial No. 207,171. (No model.)

*To all whom it may concern.*

Be it known that I, AXEL A. STROM, a citizen of the United States, residing at Austin, in the county of Cook and State of Illinois, have  
5 invented certain new and useful Improvements in Signal Lamps; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates particularly to the class  
10 of lamps or lanterns used for railroad purposes on switch-stands and in other connections for signaling.

It is my object to provide a construction whereby the use of the objectionable spring or  
15 springs for holding the oil-reservoir in place may be dispensed with, and means whereby the necessary draft and ventilation shall be afforded.

To this end my invention consists in the general construction whereby my objects are attained; and it also consists in certain details  
20 of construction and combinations of parts, all as hereinafter more fully set forth.

In the drawings, Figure 1 represents a signal-lamp in elevation, showing the construction at the base and top for securing the necessary draft and ventilation; Fig. 2, a sectional view of a portion of the lamp, showing the construction whereby air-spaces are provided at the base of the lamp and the web or  
30 handle by which to turn the oil-cup; Fig. 3, a view in elevation of the oil-cup; Fig. 4, a sectional view showing the internal construction of the lamp-body toward its lower vertical portion to permit the adjustment and retention of the oil-cup in position without springs; Fig. 5, a sectional view in elevation of the top or chimney portion of the lamp, showing the construction whereby ventilating-openings  
40 are provided without boring holes; Fig. 6, a perspective view of a detail of the construction shown in Fig. 5, and Fig. 7 a bottom plan view of the chimney-cap.

A is the body of the lamp, provided with the  
45 usual openings or receptacles, *r*, for the lenses B, which commonly fit against shoulders in the openings *r*. Each such opening is provided in the manufacture of the lamp-body with means for holding the lens in place, preferably in the form of a lip, *q*, on one side of the

opening, between which and the shoulder referred to the edge of the lens is inserted in adjusting the latter, and a flexible lug, *p*, opposite the lip *q*.

The oil-cup C is provided with lugs *o*, projecting from opposite sides, to support it, which  
55 lugs, on inserting the oil-cup into the lamp-body, are to enter recesses *n*, provided in opposite sides of the inner lower vertical portion of the lamp-body, which is also provided with  
60 oblique or curved shoulders *m*, one extending from an upper corner of each recess *n* to a shallow recess, *l*, flanked by a stop, *k*, a suitable stop or lug, *k'*, being also provided on the opposite side of the recess *n*. To adjust the  
65 oil-cup it is handled at the web D and inserted into the lamp-body in a manner to cause the lugs or supports *o* to enter the recesses *n*. The distance to which the oil-cup may be inserted is limited by a flange, E, of angular shape surrounding and forming a seat for the device,  
70 and having its edge fluted or provided with depressions *i*, to correspond with similar depressions *i* in the edge of the lower vertical portion of the lamp-body, which depressions  
75 afford air-spaces when the oil-cup is adjusted in position, this manner of their provision obviating the necessity for boring holes in the lamp-body, which is a common but expensive way of producing them in metal lamps. 80

The position of the supporting-lugs *o* on the oil-cup is such as to cause their lower sides to be on or about on a level with the highest points of the guiding-shoulders *m*, which are preferably, though not necessarily, oblique or  
85 curved, as shown, when the edge of the flange E is brought into contact with that of the lower vertical portion of the lamp-body, so that being stopped from further insertion by contact of the two edges, indicates the position at  
90 which the oil-cup is to be turned to cause the lugs *o* to be moved upon the guide-shoulders *m* toward the recesses *l*. When thus moved, on reaching the recesses *l* they drop into the latter, wherein they support the oil-cup, the  
95 drop of which leaves a narrow space, *i'*, between the fluted edges of the flange E and body of the lantern, which increases the air-space to desired dimensions.

The lugs *k* and *k'* merely afford stops to pre- 100



vent turning the oil-cup farther than is necessary in inserting or removing it, the last-named operation being performed by raising the oil-cup as far as the flange E will permit and turning it in the direction opposite to that for its insertion. The chimney portion A' is provided around its upper edge with depressions *h*, which, with similar depressions *h* on the adjacent edge of the cap F, hereinafter described, provide the necessary ventilating openings, and thus save the hitherto common operation of boring holes around the chimney for the purpose.

The cap F is provided with an annular flange, F', having the same diameter as the chimney A', whereby it coincides with the latter when adjusted, being held in place by the compressible spring device G, as shown in Fig. 5. The adjustment of the cap should preferably be such as to bring the depressions *h* in the edge of the chimney and those of the flange F' coincident, and form circular openings, though nicety of the adjustment is not essential, since ventilating openings would be provided even if the depressions *h* in the chimney and flange F' were not to coincide at all. For this reason it would in a manner answer the purpose if the depressions were provided only in one or the other of the chimney and flange F', and the same is true of the depressions *i* at the base of the lamp for affording draft-openings, which could be provided only in the flange E or edge of the lower vertical portion of the lamp-body A.

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

1. In a signal-lamp, the body portion A, provided with recesses *n*, guide-shoulders *m*, and recesses *l*, in combination with an oil-cup, C, provided with supporting-lugs *o*, and a flange,

E, having depressions *i* in its edge, substantially as described.

2. In a signal-lamp, the body portion A, provided with recesses *n*, oblique guide-shoulders *m*, recesses *l*, and stops *k* and *k'*, in combination with an oil-cup, C, provided with supporting-lugs *o*, and a flange, E, having depressions *i* in its edge, substantially as described.

3. In a signal-lamp, the body portion A, having depressions *i* in its lower edge and provided with recesses *n*, guide-shoulders *m*, recesses *l*, and stops *k* and *k'*, in combination with an oil-cup, C, provided with supporting-lugs *o*, a flange, E, having depressions *i* in its edge, and a handle, D, substantially as described.

4. In a signal-lamp, the chimney A', in combination with the cap F, provided with means, substantially as described, for holding it in position on the chimney and having an annular flange, F', to coincide with the chimney, and openings between the adjacent edges of the cap and chimney to afford ventilation, substantially as and for the purpose set forth.

5. In a signal-lamp, the chimney A', provided with depressions *h* in its edge, in combination with the cap F, provided with means, substantially as described, for holding it in position in the chimney and having an annular flange, F', to coincide with the chimney, and provided with depressions *h* in its lower edge, substantially as set forth.

6. In a signal-lamp, the body portion A, in combination with the oil-cup C, provided with supports *o*, and a flange, E, having depressions *i* in its edge, substantially as described.

AXEL A. STROM.

In presence of—

A. HENRY MULLIKEN,  
J. W. DYRENFORTH.