

(No Model.)

B. J. DOWNS.  
OIL CUP.

No. 388,767.

Patented Aug. 28, 1888.

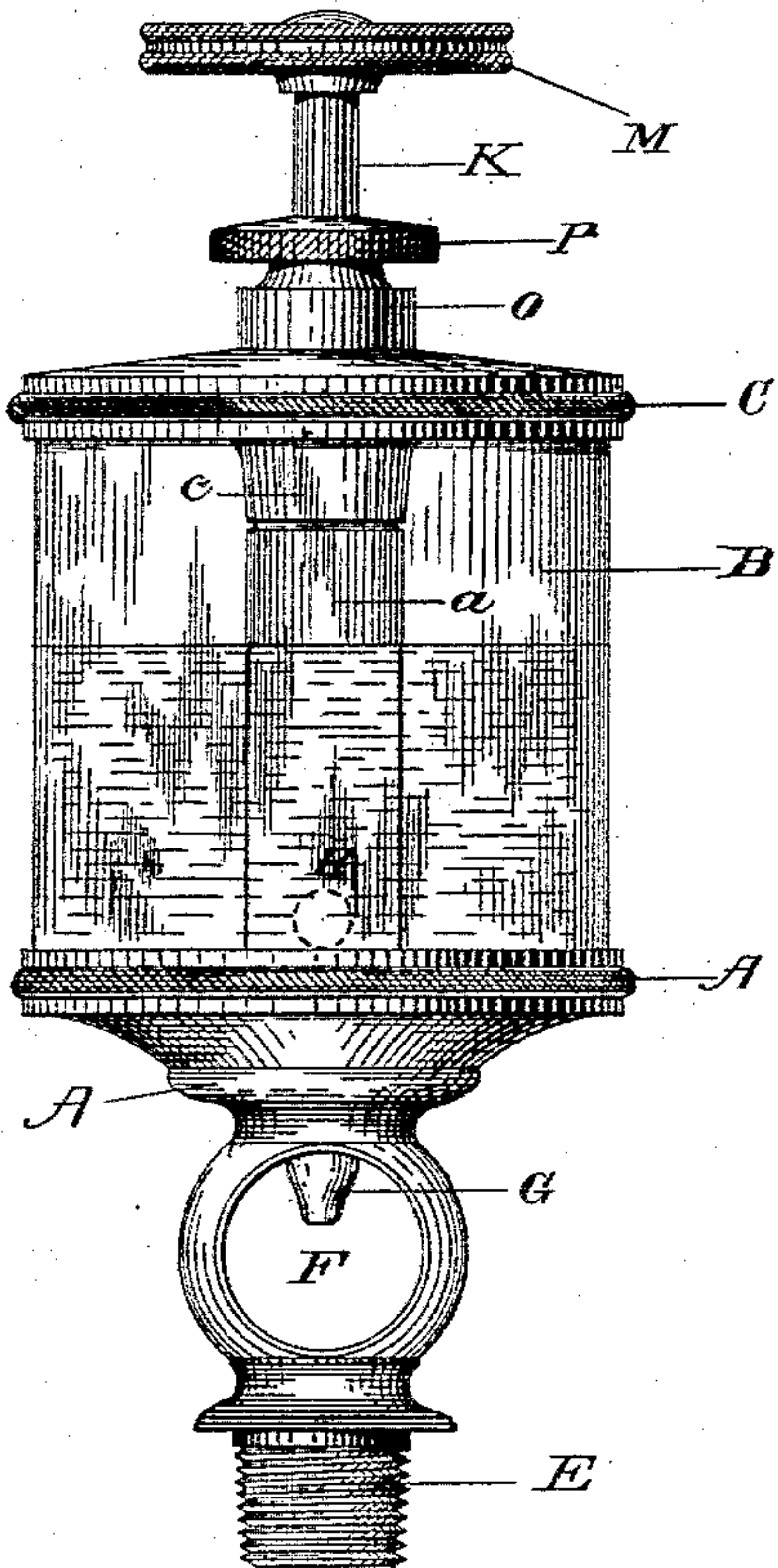


Fig. 1.

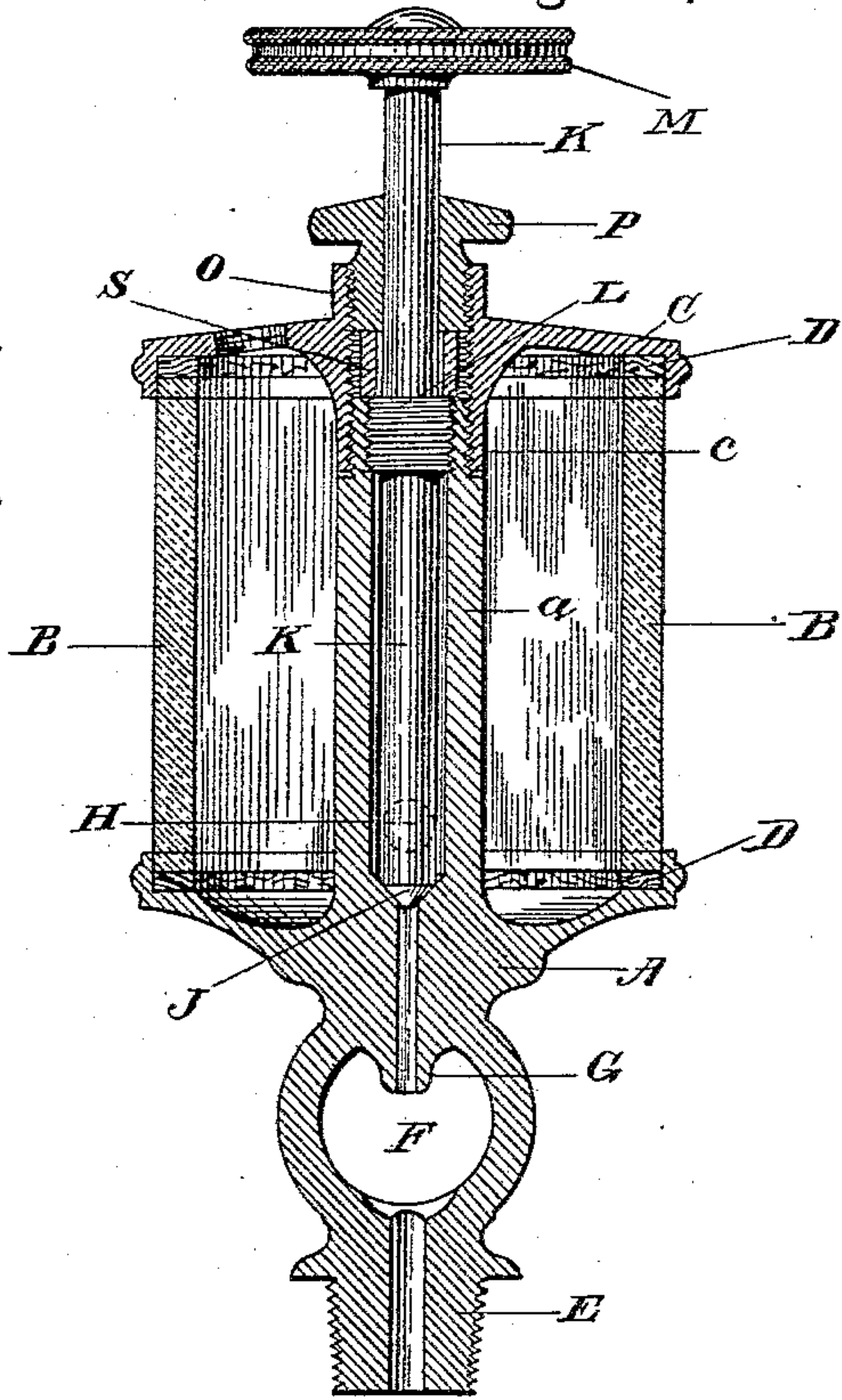


Fig. 2.

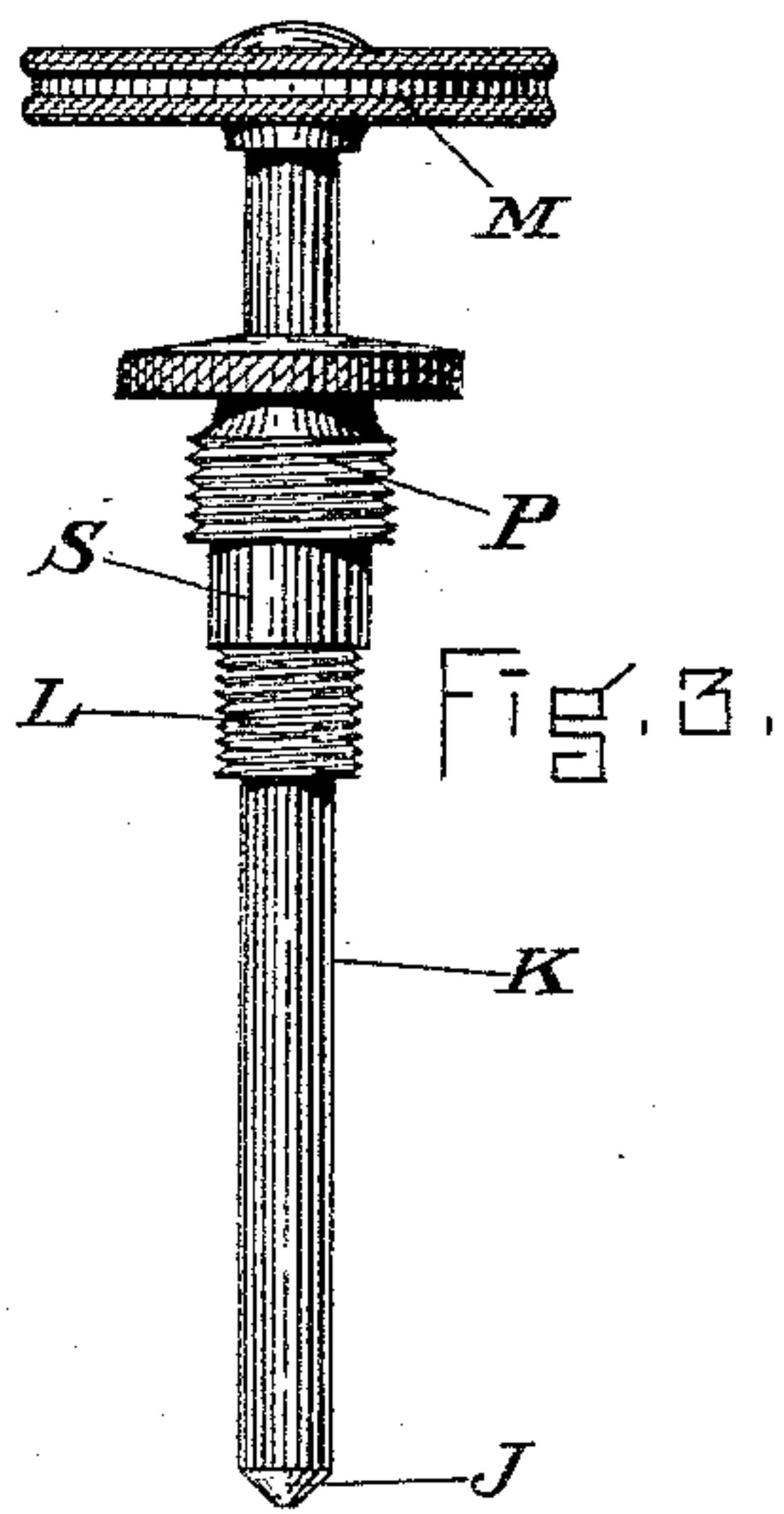


Fig. 3.

WITNESSES,

*Henry Marshall*  
*E. T. Alexander*

INVENTOR,

*Benjamin J. Downs*  
*by H. H. Fennell*  
*att'y*



# UNITED STATES PATENT OFFICE.

BENJAMIN J. DOWNS, OF SOMERVILLE, ASSIGNOR TO THE STAR BRASS MANUFACTURING COMPANY, OF BOSTON, MASSACHUSETTS.

## OIL-CUP.

SPECIFICATION forming part of Letters Patent No. 388,767, dated August 28, 1888.

Application filed April 2, 1888. Serial No. 269,258. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN J. DOWNS, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain  
5 new and useful Improvements in Regulators for Lubricating-Oil Cups, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of this invention is to furnish an  
10 oil-cup adapted to supply, drop by drop, to the bearing of a rotary shaft a limited and regular amount of lubricating-oil, and to provide for such apparatus an adjustable stop to control the opening of the valve, so that when  
15 once set correctly such stop will limit the valve movement at the same point on successive days, and the valve may be repeatedly closed and opened again to the exact extent desired.

20 My invention is embodied in a cup having the construction herein set forth, and especially referred to in the appended claims.

In the drawings, Figure 1 is an elevation of my improved cup complete. Fig. 2 is a vertical section of the same. Fig. 3 represents  
25 the valve with its stop and sleeve, as hereinafter described.

A is the base of the cup; B, the glass body thereof, and C the cap. The base and cap have  
30 peripheral flanges, which inclose the ends of the body, and central tubular stems, *a* and *c*, threaded to engage with each other to hold them both against the ends of the cylindrical body B, with suitable interposed gaskets, D,  
35 of cork or other material. The glass body B and the base and cap thus united by screwing their stems together constitute the oil-holding cup. The oil is supplied to the cup through an opening in the cap shown in  
40 Fig. 2.

The base A has a depending tubular extension, E, threaded at bottom to screw into the cap of the bearing to be lubricated, and preferably formed with an enlarged transverse  
45 opening, F, through it, to render visible the successive drops of oil descending through the nipple G, which constitutes the lower terminus of the stem *a*. The oil enters this stem through a lateral oil-hole, H. Below this oil-inlet, and

above or within the nipple G, is the valve-  
50 seat. The valve J is the conical termination of the valve-rod K, which rod has an enlarged threaded portion, L, engaging with an internal thread at the top of the stem *a*, so that rotation of the valve-rod by turning its hand-  
55 wheel M will open or close the valve and let on or shut off the flow of oil.

Now, to enable the engineer, without special care and observation, to insure a uniform flow day after day, I provide an adjustable stop, P,  
60 serving to limit the opening movement at a given point. The central boss, O, of the cap C is internally threaded to engage with the threaded portion P' of the stop P, which surrounds the valve-rod. This stop may be  
65 screwed more or less into the boss O, and thus bring its lower end at any desired distance above the threaded enlargement L on the valve-rod. The stop, being internally smooth to fit  
70 the cylindrical rod, will not turn with the valve, and hence when the valve rises a specified distance its movement will be checked by the stop P. Thus the opening of the valve will be controlled by the stop, and when it is  
75 desired to increase or diminish the oil-flow the stop may be adjusted accordingly.

I interpose between the stop P and the enlarged threaded portion L of the valve-rod a loose sleeve, S, surrounding the rod and forming a non-rotary extension of the stop. This  
80 sleeve, combined with the stop, constitutes a positive lock, preventing any possibility of turning the stop-nut by rotating the valve-rod or the valve by rotating the stop.

I claim as my invention—

1. The cup having a body, B, and the base and cap formed with the threaded tubular stems *a* and *c*, said base having the transverse opening F through it, and the nipple G therein to render the oil-feed visible, in combination  
90 with the valve having on its rod the threaded enlargement L, screwing within stem *a*, and with the threaded stop P, screwing into cap C, substantially as set forth.

2. The base A, with tubular stem *a*, and depending extension E, with valve-nipple G at  
95 the bottom of said stem, and the cap C, provided with threaded central stem portion en-

gaging with stem *a* to hold the body B in position, in combination with the valve-rod J K L M, the adjustable stop P, engaging with the cap C, and the sleeve S, interposed between  
5 the stop and the part L of the rod, substantially as set forth.

In testimony whereof I have signed my name

to this specification, in the presence of two subscribing witnesses, on this 29th day of March, A. D. 1888.

BENJAMIN J. DOWNS.

Witnesses:

A. H. SPENCER,  
ELIHU G. LOOMIS.