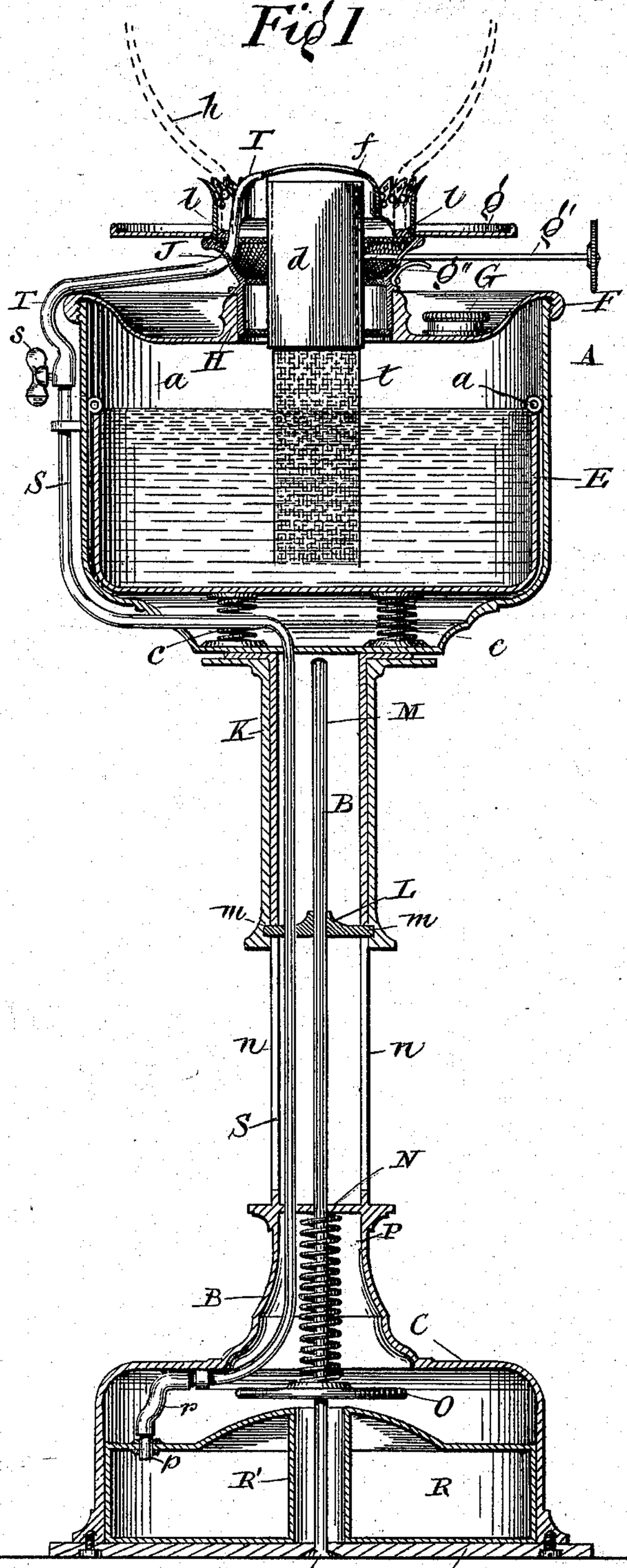
(No Model.) 3 Sheets—Sheet 1.

J. V. MOORE.

LAMP.

No. 568,036. Patented Sept. 22, 1896.

Fig 1



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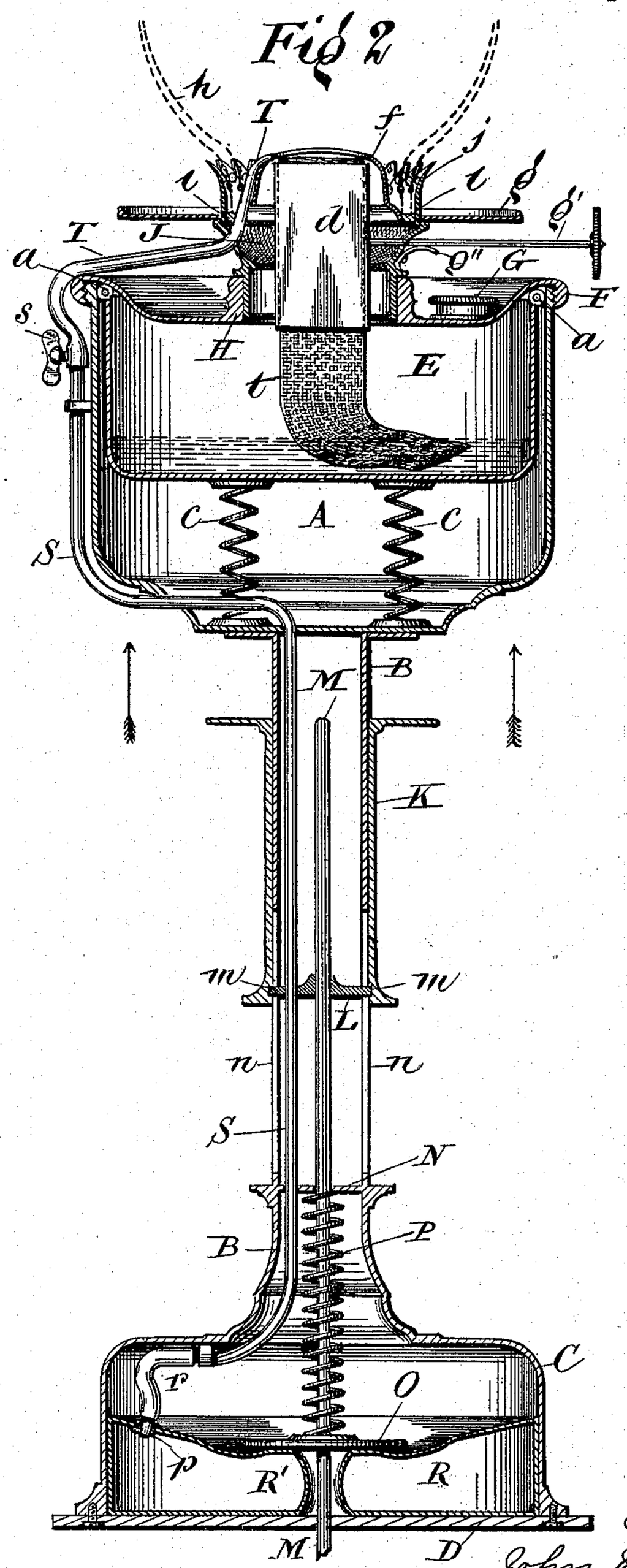
(No Model.) 3 Sheets—Sheet 2.

J. V. MOORE.

LAMP.

No. 568,036. Patented Sept. 22, 1896.

Fig 2



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(No Model.) 3 Sheets—Sheet 3.

J. V. MOORE.

LAMP.

No. 568,036. Patented Sept. 22, 1896.

Fig 4

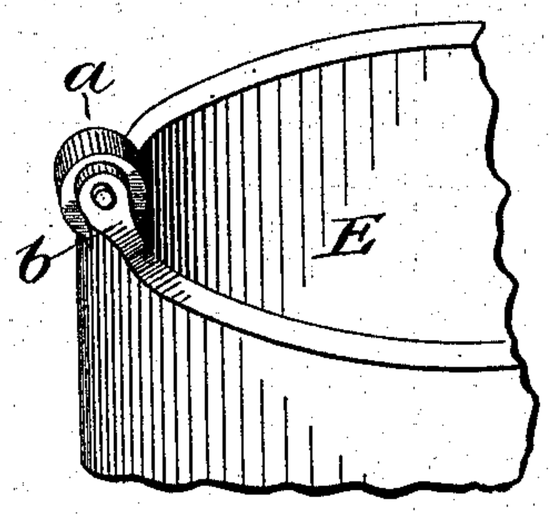


Fig 3

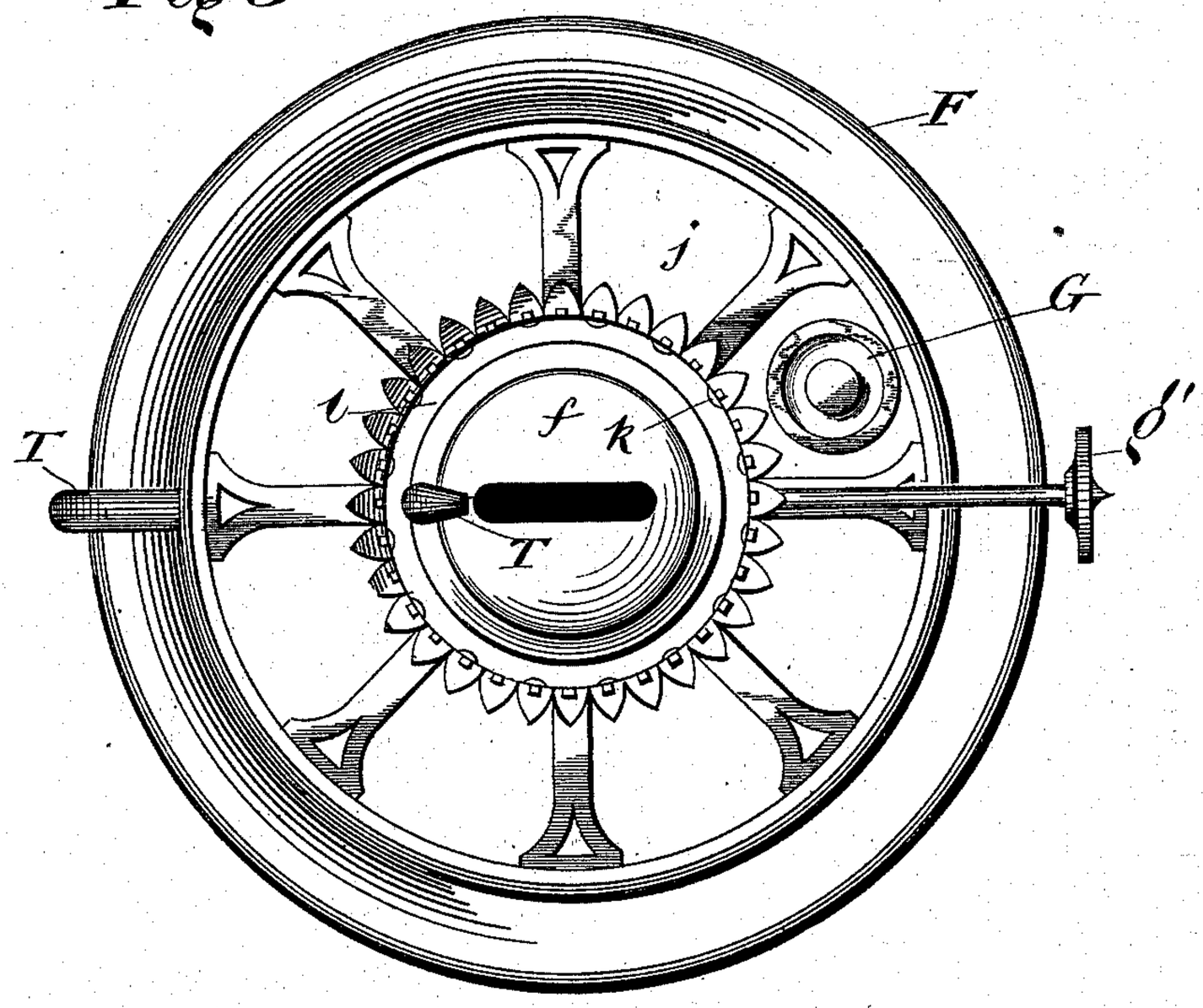
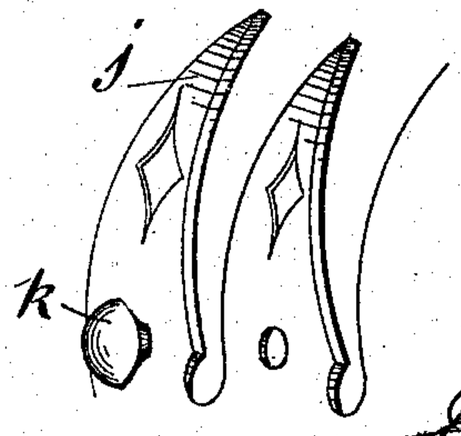


Fig 5



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UNITED STATES PATENT OFFICE.

JOHN VINCENT MOORE, OF LONDON, ENGLAND, ASSIGNOR OF ONE-HALF TO WILLIAM BROWN, OF SAME PLACE.

LAMP.

SPECIFICATION forming part of Letters Patent No. 568,036, dated September 22, 1896.

Application filed August 2, 1895. Serial No. 557,985. (No model.) Patented in England July 18, 1895, No. 13,737.

To all whom it may concern:

Be it known that I, JOHN VINCENT MOORE, a subject of Her Majesty the Queen of Great Britain, residing at 8 Crowland Road, Stamford Hill, London, in the county of Middlesex, England, have invented certain new and useful Improvements in Lamps for Burning Mineral or Vegetable Oils, (for which I have obtained a patent in Great Britain, No. 13,737, bearing date July 18, 1895,) of which the following is a specification.

My invention relates to improvements in and in connection with table, pedestal, or standard, hanging, and other lamps, the principle of which, while applicable to colza and other vegetable-oil lamps, is more particularly adapted for use in the construction of such lamps as are intended to burn paraffin and other hydrocarbon oils.

Figure 1, Sheet 1, is a vertical section of such a lamp as it would appear when charged with oil and in actual use. Fig. 2, Sheet 2, is a like section illustrating the automatic feed of the oil to the burner and the manner of operation of the parts for automatically extinguishing the lamp when no longer required or when dropped or knocked over. Fig. 3, Sheet 3, is an enlarged plan view of same. Fig. 4 is a diagram illustrating the manner in which I prefer to mount the antifriction-rollers upon the oil chamber or well. Fig. 5 is a diagram of so much of the chimney-rack as will serve to illustrate the manner in which I attach thereto resilient plugs, against which the chimney-glass rests.

I carry my invention into effect by constructing, of any suitable metal, glass, porcelain, or other suitable material, or any desired combination thereof, a chamber A, preferably but not imperatively circular in plan, and this I firmly mount upon a tubular standard B, having a hollow and preferably circular base C, provided with a removable bottom D.

Within the chamber A, I place a preferably metallic chamber E of the same shape in plan, but of lesser diameter, and preferably half or thereabout the depth of A, the upper edge of E being provided with three or more antifriction-rollers *a*, carried in brackets *b*, (shown enlarged by Fig. 4,) which may be fixed upon E, the said rollers being to permit the said chamber to freely rise and fall within the chamber A without friction. Beneath the chamber E, I provide three or more suitable, but preferably spiral, springs *c*, of such power, collectively, as to raise E gradually to its highest position as this is emptied, as at Fig. 2, and to collapse when E is filled, as at Fig. 1.

The chamber A is provided with a preferably metallic cover F, shaped as shown, and in this a feeding-aperture is formed, covered by a screw-cap G. The cover F has also a central aperture surrounded by a boss H, which receives the flange of the burner J, and I prefer that the said flange shall be retained therein by friction rather than by that of a screw-thread.

The burner J may be provided with a wick-passage *d*, chimney-rack *j*, wick-cap *f*, globe-gallery *g*, and wick-regulator *g'* in the usual way, but in order that the wick may not be spontaneously lowered when in use by vibration or other causes, I rivet, solder, or otherwise fix upon any suitable part of the burner J a small spring *g''*, which abuts against the wick-regulator *g'*, as shown in Figs. 1 and 2.

In order that the chimney-glass *h* (shown by dotted outline in Figs. 1 and 2) may not be subjected to the usual hazard of breakage by contact with the cold or hot metal of the rack *j*, I form in each or any number of the sections of the latter suitable openings, into each of which I force and fix a cork, asbestos, or other non-conducting plug *k*, (shown more graphically by the enlarged diagram, Fig. 5,) and against these the outer surface of the flange of the glass *h* would collide, while the lower edge of same would rest upon a washer or ring *l*, of the same material as *k*, placed around the lower surface of the wick-cap *f*, Figs. 1, 2, and 3.

Upon the tubular standard B, I mount a sleeve or sliding collar K, to the lower end of which is connected a diaphragm or plate L, having wings or projections *m m*, which slide in vertical slots *n n* in the standard B and serve as guides for the sleeve K. Through the center of the diaphragm or plate L is passed and firmly fixed thereto a rod M, the upper end of which terminates about level with the

top of K, while its lower end passes freely through a diaphragm or plate N, fixed within the standard B, and continuing on passes through a central hole in the bottom plate D, the length of said rod being such that when the sleeve K is in its highest position the lower end of M is flush with D, as shown in Fig. 1. The said rod M carries a fixed and preferably circular plate O, and between this and the diaphragm N is surrounded by a spiral spring P, which is placed in tension when upward pressure is imparted to the rod M, occasioned by the weight of the lamp when this is stood upon a table or other flat surface, as at Fig. 1, or by an upward pressure upon the sleeve K, by which the lamp must be carried from place to place.

Within the base C, I provide an air-proof collapsible chamber R, made of rubber, rubber composition, air-proof cloth, or the like, shaped in plan to correspond with that of the chamber or base C, and in this is formed a central aperture R′, through which the lower end of the rod M passes freely. The said chamber R is provided with an exhaust-nozzle *p*, to which is connected one end of a short length of elastic tubing *r*, the opposite end of which is connected to the lower end of a fixed tube S, which extends upward and passes through the fixed plate N, and freely through a hole in the diaphragm L, and preferably into the lower portion of the chamber A, whereat it is bent or curved and passes outwardly through an air-tight hole in the side of same, from which point it is again bent upward and fixed to the outer surface of A or hidden within some ornamentation thereon and terminating a short distance below the top of same, and upon this end of S is placed and secured thereto by a thumb-screw or its equivalent *s* the lower end of metal tube T, fixed to the burner J, and terminating with a nozzle bent or curved so as to be level with and pointing along the combustion end of the lamp-wick *t*, as shown in Figs. 1, 2, and 3, the said fixation of T upon S also serving to fix and hold in position the burner J.

In practice as the oil in E is consumed the weight of its bulk would be gradually lessened and the chamber E would be as gradually raised by the tension of the springs *c*, thereby feeding the oil to the burner.

In actual use the lamp would stand upon a table or other flat surface, when the weight of the lamp would cause the said flat surface to force upwardly to its full height the rod M, thereby compressing and placing in tension the spring P and placing the sleeve K close up against the chamber A; but should the lamp get knocked over by accident, so that the bottom D left the table or other flat surface, the tension of the spring P would immediately press downward the rod M, causing the plate O to compress the air-chamber R, as at Fig. 2, when the air therein would be forced through the conduit *r* S T, and issuing from the nozzle of the latter would immediately extinguish the wick *t*.

To remove the lamp from place to place, the hand would grasp the sleeve K, when the weight of the lamp would keep this close up to the chamber A in the same manner as when the lamp was standing upon the table, and should the person so carrying the lamp stumble or the lamp fall from any cause, so that the upward pressure upon K was released, the tension of the spring P would operate in the manner previously described and the lamp be extinguished before reaching the ground.

In lamps of this type as hitherto made and used many accidents have occurred through blowing down the chimney to extinguish the light when no longer needed, but according to my invention all that is needed to extinguish the light would be to lower the flame by the governor *g′* and lift the lamp by the chamber A, as indicated by the arrows in Fig. 2, thus removing the upward pressure upon the rod M and allowing the spring P to operate upon the chamber R in the manner previously described, and so extinguish the light.

The lamp can be easily cleaned by removing the cover F.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

In combination, the burner, the reservoir, the hollow standard having a base with a bellows therein, a sliding sleeve surrounding the hollow standard, a spring-rod extending up through the hollow standard and having a connection extending outwardly to the surrounding sleeve, and the disk on the rod for operating the bellows, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOHN VINCENT MOORE.

Witnesses:
S. J. EARL,
GEO. THOS. HYDE.