No. 693,464. Patented Feb. 18, 1902.

H. S. TOMPKINS.

BURNER FOR LAMPS.

(Application filed Apr. 5, 1901.)

(No Model.)

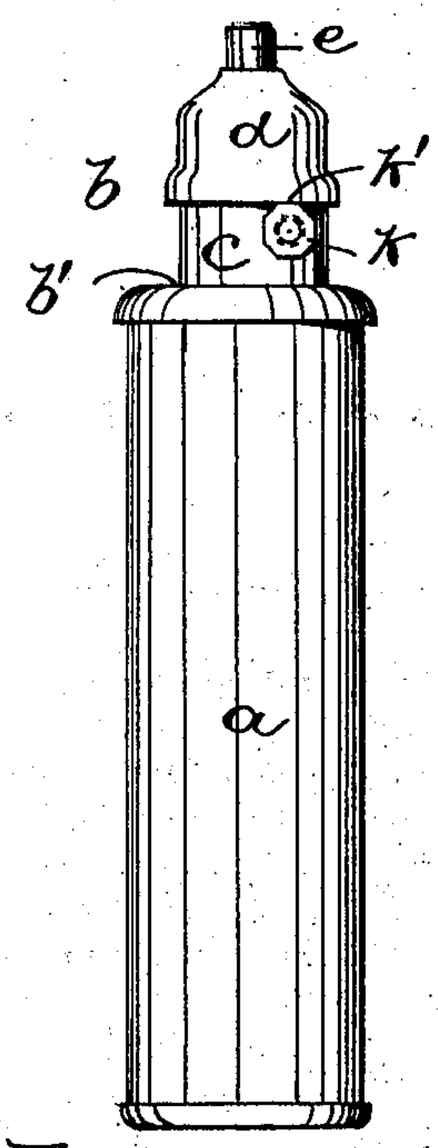

Fig. 1.

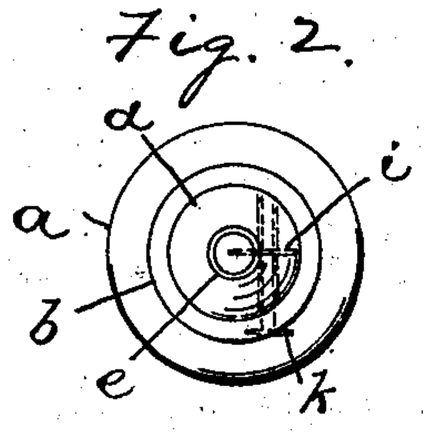

Fig. 2.

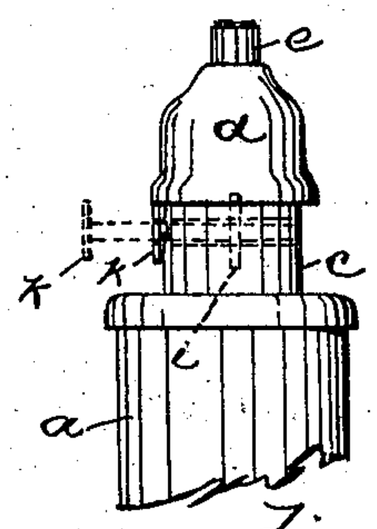

Fig. 3.

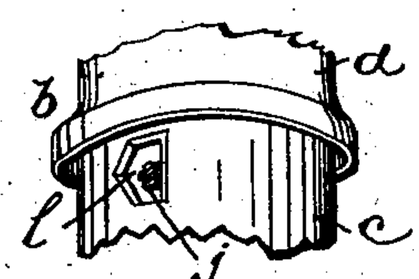

Fig. 8.

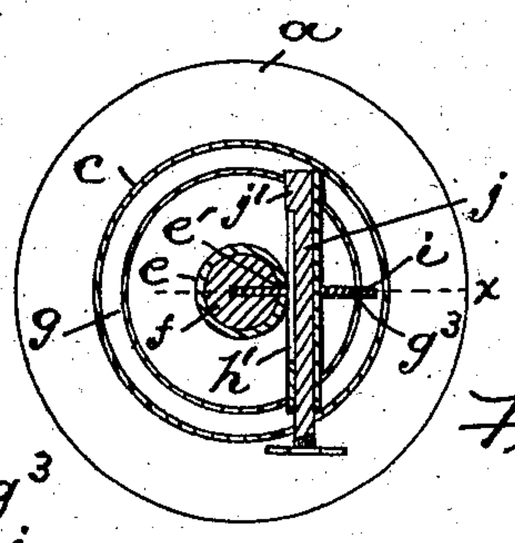

Fig. 5.

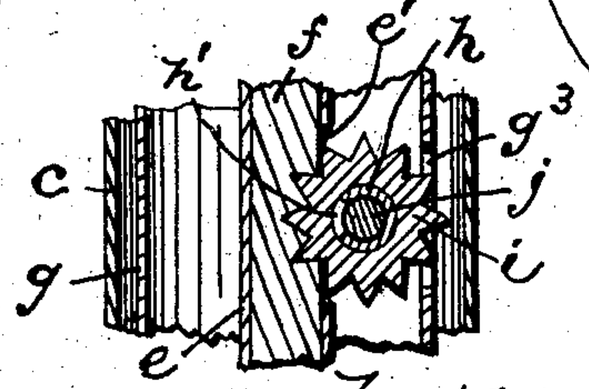

Fig. 7.

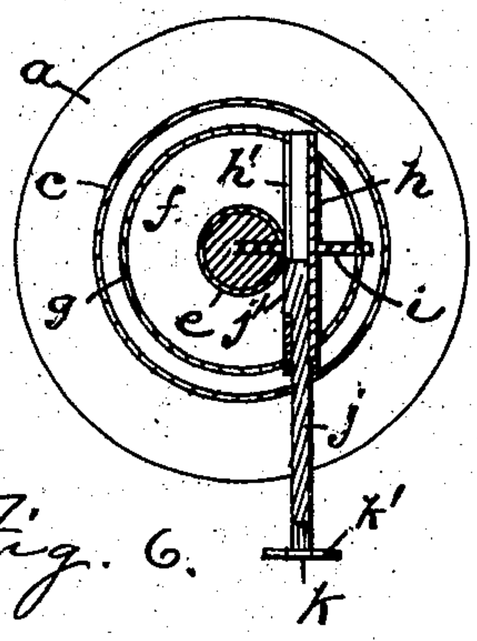

Fig. 6.

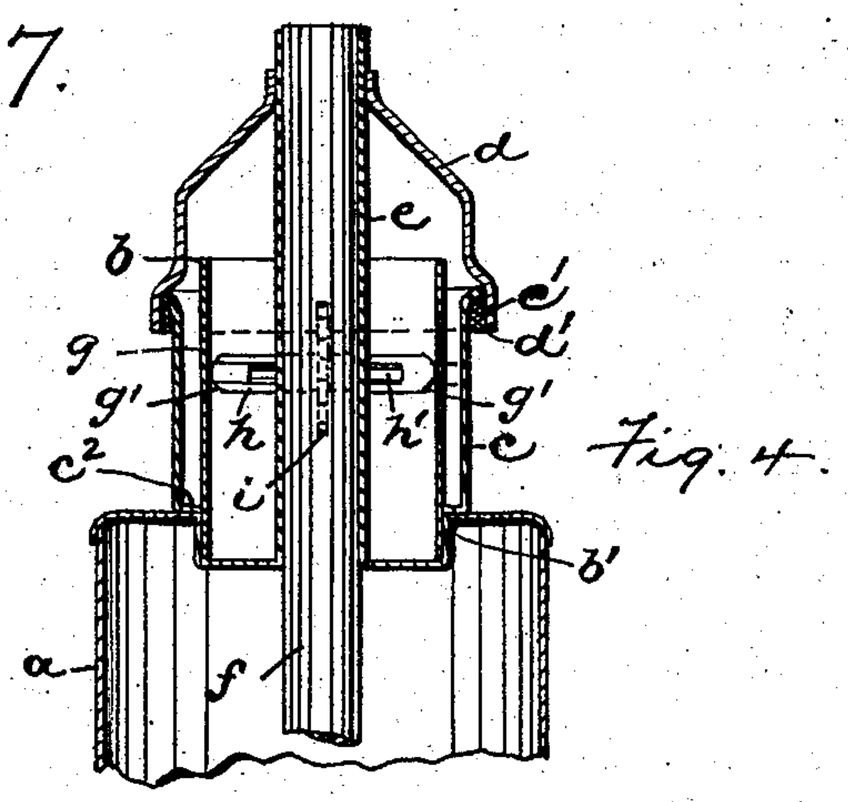

Fig. 4.

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BURNER FOR LAMPS.

SPECIFICATION forming part of Letters Patent No. 693,464, dated February 18, 1902.

Application filed April 5, 1901. Serial No. 54,504. (No model.)

To all whom it may concern:

Be it known that I, HARRY S. TOMPKINS, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Burners for Lamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates more particularly to burners for vehicle-lamps; and the objects are to provide a burner in which the wick-spindle shall not project laterally to be in the way when the burner is being inserted into the lamp, to provide a telescopically-extensible wick-spindle that can be collapsed into small compass when desired or can be extended to afford finger-hold for turning, to provide means for locking the wick-spindle against inadvertent turning after the wick has been adjusted to the proper height, and to secure other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved burner for lamps and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 is a side elevation of my improved burner as applied to a lamp-font looking at the wick-spindle endwise, and Fig. 2 is a plan of the same. Fig. 3 is a side elevation showing in dotted lines the wick-spindle extended. Fig. 4 is a vertical central section of the burner, taken parallel to the wick-spindle. Figs. 5 and 6 are horizontal cross-sections through the center of the wick-spindle, one showing the wick-spindle collapsed and the other extended. Fig. 7 is a detail section on line x, Fig. 5; and Fig. 8 is an enlarged view of the recess or seat for the wick-spindle head or finger-piece to lock the same against turning.

In said drawings, a indicates a long cylindrical lamp-font, such as is commonly used in coach or carriage lamps, to enter the socket or seat in the lamp from its bottom. The burner b is located at the top of said font, being preferably detachably screwed into the same, as at b', and said burner must have no parts projecting laterally beyond the outer surface of the font, or else it cannot be inserted into the lamp. The burner consists of a lower cup-like part c and a cap d, seated upon said lower part and joined thereto, as at c', said parts being pressed out of sheet metal and inclosing when united an interior chamber. Through said chamber a vertical wick-tube e extends centrally, projecting both above and below the burner and fastened to the parts c d, and within said wick-tube is placed the ordinary wick f.

In carrying out my invention I place in the lower cup-like part c of the burner a cylindrical or rolled piece of sheet metal g, seated at its lower end in the reduced bottom c^2 of the lower part of the burner. This cylindrical piece stands upright around the wick-tube and has its walls apertured, as at g' g', to provide bearings for a horizontally-disposed sleeve or hollow shaft h, passing through the space between the cylindrical support g and wick-tube e in the same relation to the latter that a wick-spindle usually bears and adapted to turn in its bearings. One end of said sleeve h is exposed by an opening in the side or wall of the burner, while the other end terminates inside the burner and preferably close to its wall. Said sleeve carries at its middle portion a toothed or spur wheel i, fast thereon and working at opposite edges in vertical slits e' and g^3 in the wick-tube and cylindrical support, respectively, whereby the spur-wheel is guided and the sleeve h is held against longitudinal movement. The teeth of the spur-wheel i, entering the wick-tube e, engage the wick f, as is usual, to raise or lower the same as the spur-wheel and its hollow shaft are rotated. To effect such rotation, a rod or spindle j slides inside the tube or hollow shaft h, having at its outer end outside the burner a finger-piece k, by means of which it can be rotated, and at its inner end

a lateral projection or lug j', lying in a longitudinal slot h' in the side of the hollow shaft and serving to key the spindle-rod and hollow shaft together, while permitting independent longitudinal movement. For convenience in manufacture the slot h' is open at the inner end of the hollow shaft h, and the lug j' is so placed that the end of the spindle-rod will strike the wall of the burner before the lug passes out of the slot. At the outer end of the hollow shaft its slot is closed to positively prevent the spindle-rod being wholly withdrawn. Said lug projects from the spindle-rod only a distance about equal to the thickness of the metal of the hollow shaft in order to permit it to pass the spur-wheel i, or said spur-wheel may be notched in radial alinement with the slot in the hollow shaft. When the burner is being introduced into the lamp, the spindle-rod j is pushed inward to the position shown in Figs. 2 and 3; but when adjustment of the wick is desired the spindle-rod is temporarily withdrawn to its extended position for such adjustment, as will be understood. To lock the spindle against inadvertent turning, I have made the finger-piece k angular in form and adapted when pushed in to lie beneath the lower edge d' of the upper portion d of the burner, whereby the straight portion, as at k', of the peripheral finger edge of the finger-piece fits beneath the lower edge d' of the upper portion of the burner and prevents turning, or I may cut or form a seat l in the side of the burner, as shown in Fig. 8, into which a portion of the angular finger-piece sits, the other portion projecting tangentially from the curved wall of the burner to provide a finger-hold for withdrawal of the spindle-rod and the seat l being shaped according to the shape of the finger-piece, so as to prevent any turning when the finger-piece is therein.

While my invention is particularly designed for carriage-lamps, it will be seen that it can be applied to any other lamp where a long projecting wick-spindle is undesirable, such as bicycle-lamps, lanterns, or the like. Moreover, while I have shown the invention as applied to a cylindrical wick it is obvious that the invention is equally applicable to flat wicks by a slight change of parts which are already common in the art.

Having thus described the invention, what I claim as new is—

1. In a burner, a wick-spindle comprising a hollow shaft and a spindle-rod therein, one of said parts being held against longitudinal movement and having a wick-raising spur-wheel fast on itself, and the other sliding telescopically on the first and being keyed to rotate therewith.

2. In a burner, the combination with a wick-raising spur-wheel, of a spindle-rod passing through said wheel and being keyed to rotate therewith, but having an independent longitudinal movement, and stop means preventing disconnection of said spindle-rod and spur-wheel.

3. In a burner, the combination with a wick-raising spur-wheel, of a spindle rod or shaft for said spur-wheel which is capable of independent longitudinal movement, and means connecting said spur-wheel and spindle-rod to always rotate in unison.

4. In a burner, the combination with a spur-wheel adapted to engage the wick, of a hollow shaft and a spindle-rod sliding longitudinally in said hollow shaft and keyed thereto, and means for limiting the sliding of the spindle-rod, substantially as set forth.

5. In a burner, a curved support g surrounding the wick-tube inside the walls of the burner, a hollow shaft having bearings in the walls of said curved support, a spur-wheel fast on said shaft and working at opposite edges in slits in the wick-tube and curved support, and a longitudinally-sliding spindle-rod keyed in said hollowed shaft against independent rotation, substantially as set forth.

6. In a burner, a supporting-cylinder g between the wick-tube and walls of the burner, a hollow shaft having bearings in said cylinder and carrying a fixed spur-wheel and having a longitudinal slot in one side and a spindle-rod sliding longitudinally in said hollow shaft and having at its outer end a finger-piece and at its inner end a lug projecting into the slot of the hollow shaft, substantially as set forth.

7. The combination of a burner, and a wick-spindle telescopically adjustable to different lengths, said burner having a seat or recess and the wick-spindle having a peripheral projection adapted to engage said seat or recess when the spindle is pushed in to prevent rotation.

8. The combination with a burner, of a telescopic wick-spindle having an angular finger-piece at its outer end the wall of the burner having a correspondingly-shaped recess or aperture to receive said finger-piece when the spindle is pushed in, and prevent turning.

9. The combination with a burner, of a telescopic wick-spindle having an angular head or finger-piece, and a recess or seat being formed on the outer wall of the burner, and adapted to receive one edge of the finger-piece when pushed in, while the other edge remains exposed to permit withdrawal.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of April, 1901.

HARRY S. TOMPKINS.

Witnesses:
CHARLES H. PELL,
C. B. PITNEY.