J. B. CHEVALLARD, JR.

LIGHTING DEVICE.

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1,108,970.

Patented Sept. 1, 1914.

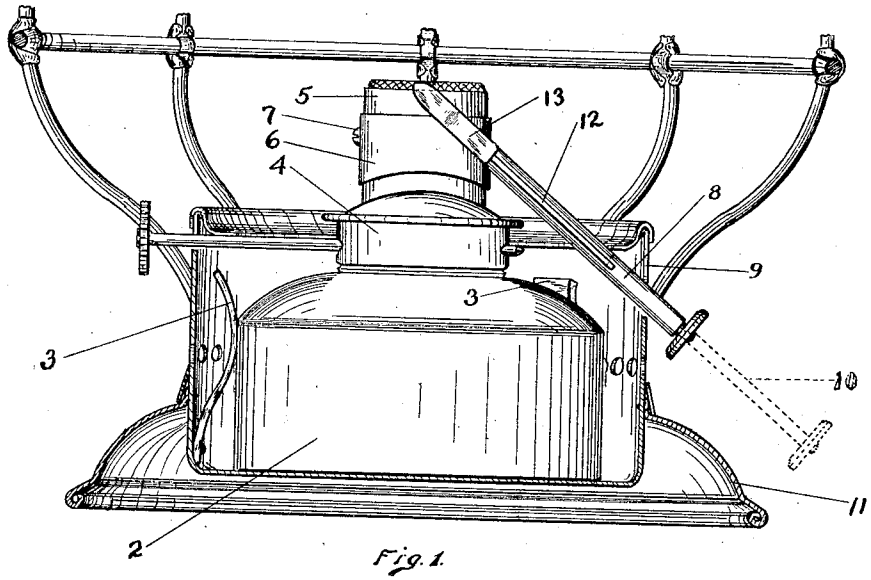


Fig. 1.

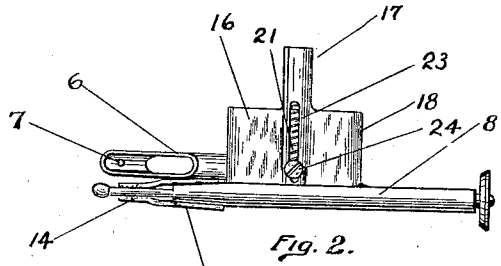


Fig. 2.

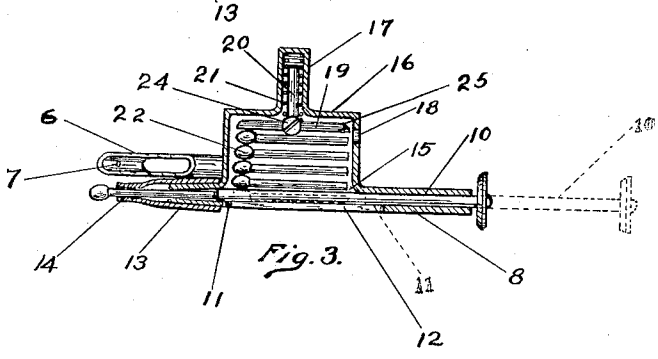


Fig. 3.

Witnesses

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LIGHTING DEVICE.

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To all whom it may concern:

Be it known that I, JOHN B. CHEVALLARD, Jr., a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Lighting Devices, of which the following is a specification.

My invention relates to lighting devices of the type used in connection with all oil burning lamps etc., and has particular relation to that type of device in which a match is adapted to be lighted whenever desired to light the wick of such oil burning lamps.

My invention contemplates the provision of a guide member for lighting and presenting a match to a position adjacent the wick, so that the same may be lighted, and automatically feeding an additional match into position for ignition from a suitable match magazine. This structure of device is particularly adapted to railroad lanterns or miners lights, where the flame may at times become accidentally extinguished. Further, by carrying the matches in a match magazine in a position to be automatically fed to the presenting mechanism, they are always kept in a dry state and ready for use, but are remote enough from the flame itself that they do not become over-heated during the normal burning of the lamp.

My invention also resides in the specific structure shown in the accompanying drawing, in which similar characters of reference designate corresponding parts, and in which:

Figure 1 is a view showing a portion of a railroader's lantern partially in section and partially in side elevation, with my invention applied thereto. Fig. 2 is a top plan view of my invention shown detached and, Fig. 3 is a horizontal section of the structure shown in Fig. 2.

In the drawings, I have shown the lantern as comprising a base portion 1 of ordinary construction carrying an oil receptacle 2, the latter being held in its applied position by means of a plurality of leaf springs such as is shown at 3. The upper portion of the oil receptacle carries the burner 4, the wick tube 5 forming a portion of such burner and being the means of attachment for my invention, as at present shown.

The wick tube 5 is embraced by a band member such as is shown at 6, this band member assuming the general contour of the tube and being further provided with a small set screw 7, so that the same may be securely locked in its position, if desired. This embracing member carries a guide tube 8 upon one side in such a manner that the center of this tube is somewhat spaced from the outer surface of the embracing member and also in an inclined position, so that the open mouth portion will lie adjacent the wick. In its applied position, this guide tube usually extends through the base member 1, for which purpose a slot 9 is provided. Operating back and forth within the guide tube is a plunger element 10 carrying a pin 11 adapted to fit within the slot 12 carried by the guide tube itself and serving as a means for limiting the movement of the plunger in both its forward and reverse positions. The outer end of this guide tube carries igniting springs 13 adjacent its open end, which igniting springs are provided with serrations 14 at their outer ends and are adapted to normally lie in engagement with each other, but be forced apart by the forced movement of a match between them. The guide member 8 is also provided with an opening 15 opposite the slotted portion 12, this opening serving as a means of communication between the interior of the tube and a match magazine 16, which magazine is provided with a rearwardly extending housing 17 and with an aperture 18 adjacent the side opposite that by means of which it is attached to the guide tube. Within this match magazine, there operates a follower head 19 provided with a rearwardly extending leg 20, which leg serves to center a coiled spring 21 normally forcing the follower head toward the guide member. It will be apparent that this spring bears in the lower end of the housing 17 and also against this follower head and in this manner any matches that may be stored within the magazine, such as is shown at 22, will be normally forced into the guide tube. The upper surface of the match magazine is also slotted, as is shown at 23, and a hand grip of any desired nature 24, rigidly attached to the follower head, passes through this slot to permit its manual operation.

The operation of my device is as follows: The attachment as a whole, is applied by passing the embracing member 6 over the wick tube as is clearly shown in Fig. 1 and

subsequently holding the same in applied position by tightening the set screw 7. The match magazine should then be filled and this may be accomplished by forcing the follower head 19 to its rearmost position by engagement of the hand hold 24. When this follower head is in its rearmost position, the desired number of matches may be inserted in the magazine by passage through the aperture 8. If the operating plunger 10 is in the position shown in full lines in Fig. 3, withdrawing movement to the position shown in broken lines, will permit the entrance of one of these matches into the interior of the guide member 8 by the action of the spring 21 upon the follower head. Return movement of the plunger will then cause engagement of the lower end of the match and force it out through the open end of the guide to engage the serrated surfaces of the springs 13 and in this manner cause it to be ignited to subsequently ignite the wick of the lamp. Return movement of the plunger to the position shown in dotted lines will again permit the automatic placing of a match into a position for use and a push upon the plunger will cause the ejection of the previously burned match and also lighting the newly presented match. In this manner, the wick of an oil burner may be lighted at any desired time, by the simple operation of the plunger 10.

One corner of the follower head 19 is slightly beveled, as is shown at 25, this structure permitting the plunger 10 to force the follower head rearwardly a slight distance should the match magazine be empty. It is desirable to cause a binding of the plunger 10 for all positions, in order that the same will not fall by gravity to its retracted position. As long as the magazine is filled with matches, the tension of the spring will be such that the matches themselves will be caused to engage the plunger to hold it in its inward position and I have, therefore, so constructed the magazine and the guide tube, that the follower head will also be permitted a slight movement into the guide tube. Therefore, movement of the plunger from the position shown in broken lines to that in full lines, will cause a slight rearward movement of the follower head against the tension of the spring to frictionally hold the plunger in its inward position.

What I claim is:

A lighting device comprising a tubular guide, a plunger in said guide, said guide being open at its upper end, a match igniter disposed adjacent the upper open end, a box-like match magazine carried by said guide and in communication therewith throughout its length, said magazine being provided with an aperture in its end adjacent the side opposite to that attached to said guide, a follower head on the inside of said magazine, the corner of said follower head with which said plunger first contacts when it is moved to eject a match being beveled, and spring means for forcing said follower head toward said guide, said spring means being such as to permit the follower head to be moved to a position in the rear of said magazine behind said aperture to permit loading of the magazine.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN B. CHEVALLARD, JR.

Witnesses:

C. C. SHEPHERD,

GEO. C. FAIRBANKS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."