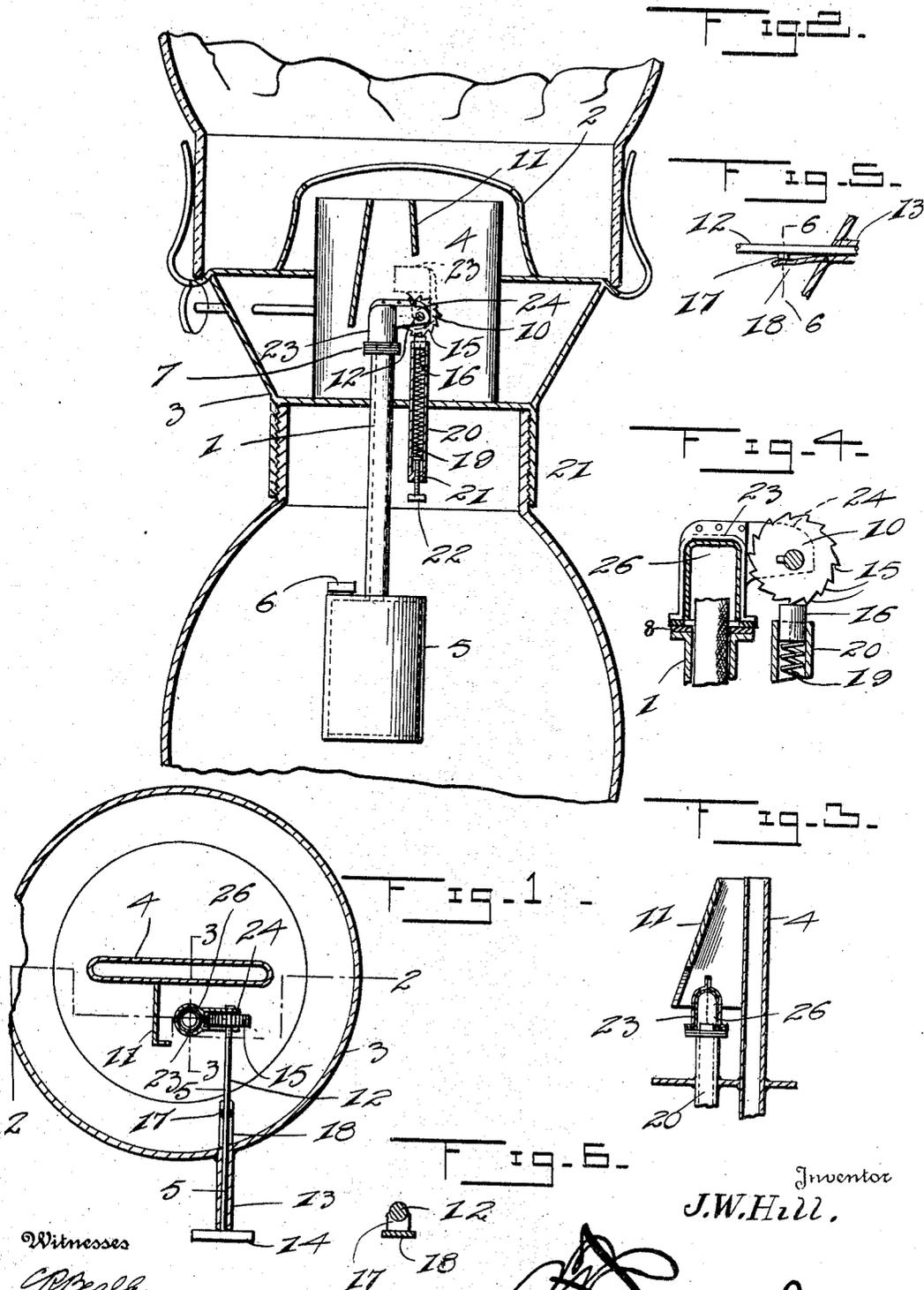


J. W. HILL.
 LAMP IGNITING DEVICE.
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1,237,337.

Patented Aug. 21, 1917.



Witnesses
 C. H. Beall.
 J. H. Riley.

Inventor
 J. W. Hill.
 By *A. R. Raudenbush, Jr.*
 Attorney

UNITED STATES PATENT OFFICE.

JUDSON W. HILL, OF PLEASANT HILL, OHIO, ASSIGNOR OF ONE-FOURTH TO NATHAN H. POWELL AND ONE-FOURTH TO FORD R. SENG, OF PLEASANT HILL, OHIO.

LAMP-IGNITING DEVICE.

1,237,337.

Specification of Letters Patent.

Patented Aug. 21, 1917.

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To all whom it may concern:

Be it known that I, JUDSON W. HILL, a citizen of the United States, residing at Pleasant Hill, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Lamp-Igniting Devices; 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.

The invention relates to lamp igniting devices.

The object of the present invention is to improve the construction of igniting devices for lamps and to provide a simple, practical and comparatively inexpensive igniting device adapted to be readily applied to a lamp burner and capable of enabling the same to be lighted without the use of matches and adapted also to extinguish the lighting means and clean the device so that the same will be in proper condition for a succeeding operation.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing

Figure 1 is a vertical sectional view of a portion of a lamp provided with an igniting device constructed in accordance with this invention,

Fig. 2 is a horizontal sectional view of the same,

Fig. 3 is a detail vertical sectional view illustrating the arrangement of the hood for directing the flame of the igniting device to the lamp wick,

Fig. 4 is a detail sectional view illustrating the construction of the extinguishing means,

Fig. 5 is a detail sectional view illustrating the manner of mounting the spring for checking the shaft of the igniting device,

Fig. 6 is a detail sectional view on the line 6-6 of Fig. 5.

Like numerals of reference designate cor-

responding parts in the several figures of the drawing.

In the accompanying drawing in which is illustrated the preferred embodiment of the invention, the igniting device comprises in its construction, a sparking device and a wick tube 1 preferably consisting of a small tube extending through the lower portion of burner below the cap 2 thereof and soldered or otherwise secured to the lamp burner 3 which may be of any desired construction and which is provided with the usual wick tube 4. The wick tube 1 of the igniting device is connected at its lower end with a reservoir or receptacle 5 preferably in the form of a cylindrical tank having a threaded closure plug 6 at the top to enable it to be readily filled as required. The igniting device which is relatively small and which may be applied to various styles of burners is carried by the burner 3 and the wick tube 1 is provided at its upper end with an exteriorly arranged flange 7 having a washer 8 of asbestos or other suitable material arranged on the upper face of the flange and adapted to receive an extinguishing cap 9 which is carried by a wheel 10 constituting one of the elements of the sparking device. The flange 7 is located a short distance below the upper extremity of the pipe or tube 1 which contains the wick 11 of the igniting device and which terminates short of the upper end of the main wick tube 4 of the burner, the flame from the igniting device being directed to the wick of the lamp by an upwardly tapered hood 11 provided at the top with an opening and suitably mounted on the main wick tube 4 or otherwise supported in position as shown with its open upper end at the top of the said main wick tube. When the igniting device is lighted the flame therefrom will be caused to ignite and light the main wick of the burner.

The sparking device comprises the said wheel 10 which is mounted on a shaft 12 journaled in suitable bearings of the burner. The bearings are preferably formed by a tube 13 and the shaft is provided at its outer end with a hand wheel or disk 14 adapted to be turned by the operation or by rotating the wheel 10 to cause the periphery thereof which is provided with projections or spurs 15 to engage a piece of sparking material 16 to coact with the wheel 10 for producing

a spark. The wheel 10 is constructed of steel and the spurs or projections moving the surface of the sparking material produce a spark and the wick of the igniting device is lighted thereby. In order to facilitate the production of a spark, the shaft which carries the rotary wheel or movable element 10 is provided with a lug or projection 17 which is engaged by a substantially flat spring 18 mounted on the tube 13 and adapted to retard the rotation of the shaft 12 while the spring engages the lug, so that a relatively strong turn is necessary to rotate the shaft, which will cause the lug to snap past the spring and thereby produce a relatively quick movement of the projections of the wheel 10 over the sparking material and gives a good spark. The spring 18 engaging the lug 17 on the shaft 12 prevents accidental displacement of the cap 23 (which will be more fully hereinafter described) off of the supplemental tube 11. The flint or coating sparking element is maintained in contact with the wheel by a coiled spring 19 arranged in a tube or holder 20 disposed vertically and provided at its lower end with a threaded perforation 21 which receives a screw 22 adapted to be adjusted for controlling the tension of the spring to maintain the said relatively fixed sparking element in contact with the sparking wheel. The screw 22 is adapted to be adjusted from time to time as the flint becomes worn or used.

The rotary sparking wheel carries a cap 23 constructed of suitable metal and provided with a flange 24 located at one of the side faces of the wheel 10 and rigidly connected therewith preferably by being fixed to the shaft 12 but it may be mounted in position in any other desired manner. The extinguishing cap which is adapted to be carried to and from the upper end of the wick tube 1 fits over the same and against the flange thereof and extinguishes the light of the igniting device after the lamp has been lighted. The cap is provided with an interior packing 26 of asbestos or other suitable material. The cap 23 is carried to and from the wick tube by the partial rotary movement of the shaft 12 and the rotation of the shaft to the right produces a spark and ignites the wick of the tube 1 and the rotation of the shaft to the left returns the cap to the tube 1 and at the same time moves the wheel 10 over the sparking material in a

reverse direction cleaning the sparking material and placing the same in proper condition for the succeeding action of the igniting device. The protections or teeth 15 of the wheel 10 are arranged at an angle to the radii of the wheel so as to engage the sparking material and dig into the same when the wheel is rotated to the right and to pass over the sparking material without digging into the same when the wheel is rotated to the left. The cap forms an air tight closure for the wick 1 so that the contents of the tank will not be permitted to evaporate when the igniting device is not in use.

What is claimed is:—

1. The combination with a lamp burner, of a supplemental wick tube, and a sparking device including a shaft, a rotary sparking element mounted on the shaft, a relatively fixed coating sparking element bearing against the periphery of the rotary sparking elements, a cap secured on the shaft and arranged to be placed on and removed from the supplemental wick tube by the rotation of the shaft, a projection carried by the shaft and yieldable means arranged in the path of the projection for retarding the rotation of the shaft and prevents accidental movement thereof, so that the cap is prevented from being accidentally displaced from said supplemental wick tube.

2. The combination with a lamp burner, of a supplemental wick tube, and a sparking device including a shaft, a rotary sparking element mounted on the shaft, a cap carried by the rotary sparking element and arranged to be placed on and removed from the supplemental wick tube by the rotation of said element, a relatively fixed sparking element arranged to be engaged by the rotary sparking element, a tube forming a bearing for the shaft, a projection carried by the shaft, a spring mounted on the tube and extending into the path of the projection for retarding the rotation of the shaft and preventing accidental movement thereof, so that the cap is prevented from being accidentally displaced from said supplemental tube.

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

JUDSON W. HILL.

Witnesses:

CHAS. T. PERKINS,
F. C. LONGNECKER.