

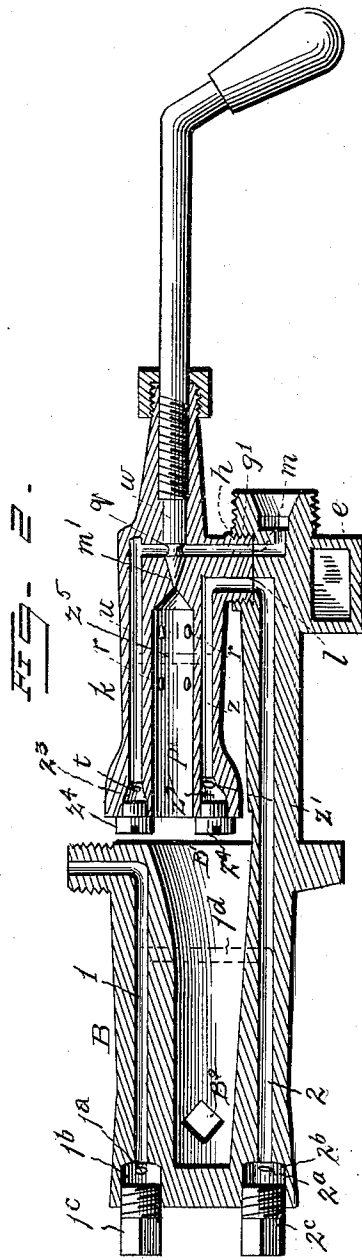
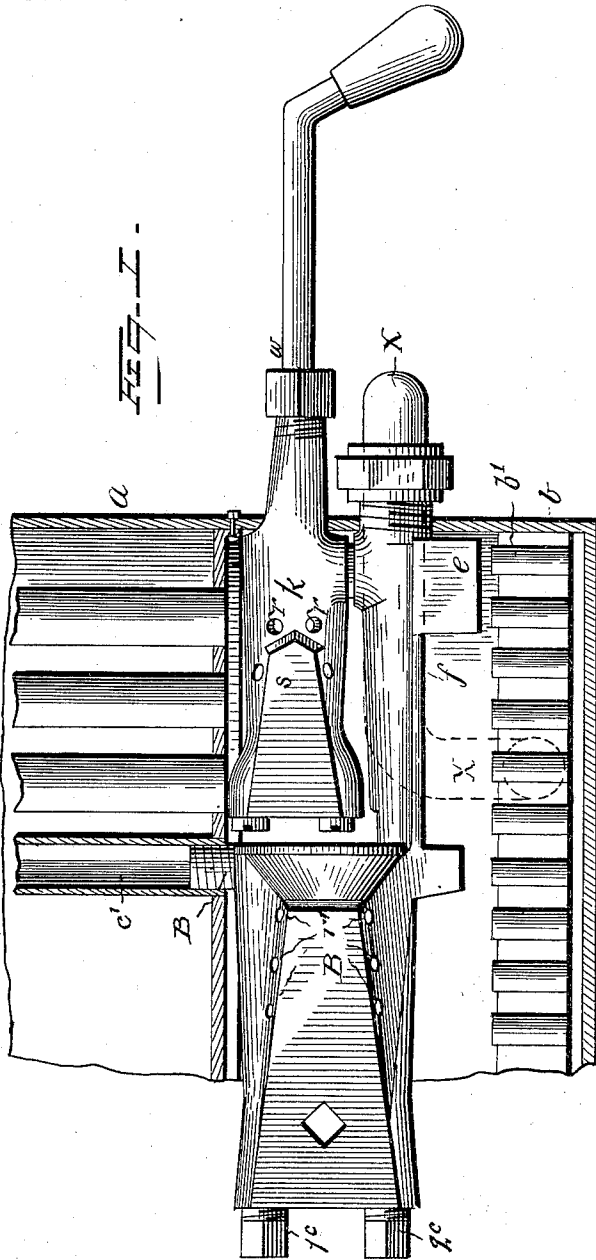
No. 726,558.

PATENTED APR. 28, 1903.

T. W. MORAN.
PILOT LIGHT AND GENERATOR.
APPLICATION FILED AUG. 20, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

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George M. Anderson.

Inventor
Thomas W. Moran

By

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His Attorney.

No. 726,558.

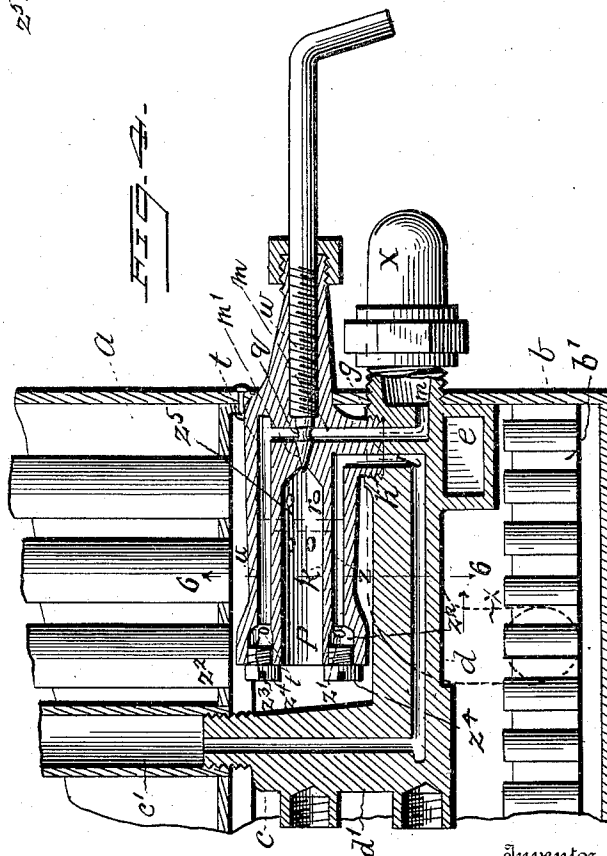
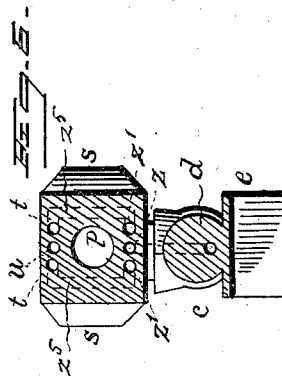
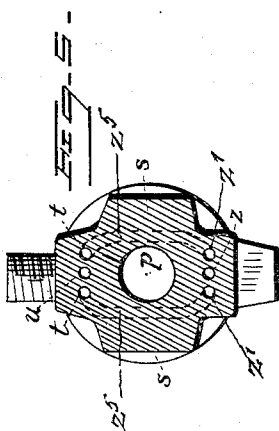
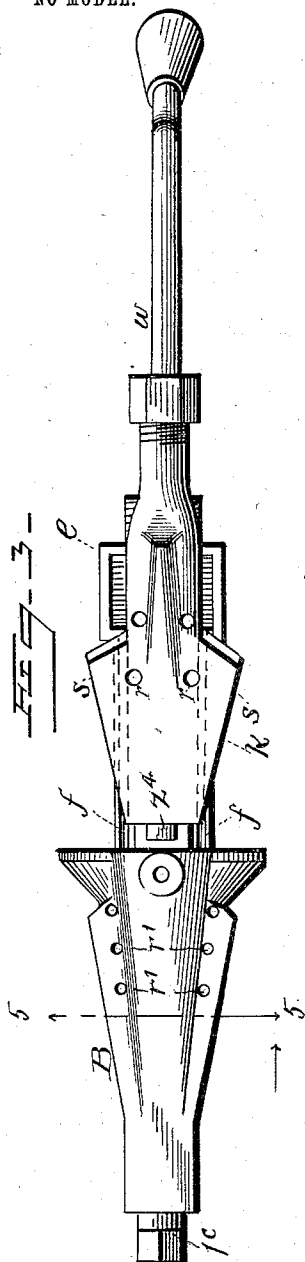
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NO MODEL.

2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS WILLIAM MORAN, OF LOUISVILLE, KENTUCKY.

PILOT-LIGHT AND GENERATOR.

SPECIFICATION forming part of Letters Patent No. 726,558, dated April 28, 1903.

Application filed August 20, 1902. Serial No. 120,416. (No model.)

To all whom it may concern:

Be it known that I, THOMAS WILLIAM MORAN, a citizen of the United States, and a resident of Louisville, in the county of Jefferson and State of Kentucky, have made a certain new and useful Invention in Pilot-Lights and Generators; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

The invention relates to compound generating and relighting burners or pilot-lights and is designed for use in connection with gasoline-burners, the object being to provide a pilot-light and generator from a solid piece with a series of one or more conduits for generating the gases; and the invention consists in the novel construction and combinations of parts, as hereinafter set forth.

Referring to the accompanying drawings, illustrating the invention, Figure 1 is a side view of my invention with double vaporizers and burners as applied. Fig. 2 is a central vertical longitudinal section of the same. Fig. 3 is a plan view of the same. Fig. 4 is a central vertical longitudinal section of the invention having a single vaporizer and burner as applied. Fig. 5 is a section on the line 5 5, Fig. 3; and Fig. 6 is a section on the line 6 6, Fig. 4.

In the drawings the letter *a* designates the lower end of a boiler of an automobile, and *b* the fire-box under the same.

c represents a tubular casting forming a section of the gasoline-supply pipe and usually of right-angle form, being fed from the central feed-pipe *c'*. This casting is designed to be located within the fire-box, having a radial relation thereto, and consists of a horizontal portion *d* and a vertical portion *d'*. It should be provided with a lighting or drip cup *e*, located at the lower rear part of the device, and channels *f f*, leading thereto. At the outer end of the portion *d* is provided a threaded seat *g* for the vertical nipple *h* of the hollow burner-head *k*, such nipple forming an upward extension of the oil-supply pipe and having two separated perforations

or conduits, one, *l*, connecting central lower passage *z* in the wall of burner-head *k* with the bore of the horizontal portion *d* of casting *c*, and the other, *m*, connecting central upper passage *u* in the wall of head *k* with the main burner by means of curved pipe *X*. This burner-head has also a radial relation to the fire-box within which it is located, extending parallel to and above the horizontal portion *d* of casting *c* toward the vertical portion thereof, the hollow mixing interior *p* of said head having air holes or perforations *r* through the sides of said head.

On each side of head *k* are heat-holding enlargements or body-lugs *s*. Upper and lower lateral reverting passages *t* and *z'* communicate forwardly with passages *u* and *z* at *z² z³*, chambers or recesses being formed in the burner-head at these points and closed by plugs *z⁴*, providing means of access to said passages for cleaning the same. These lateral reverting branches *t* and *z'* are connected at their rear ends at *z⁵*. (Shown in dotted lines.) This construction is designed to provide means for the circulation of the gasoline or vapor around the fire before it is delivered through the needle-valve to the burner in the form of gas. It is therefore a starting-generator. When the valve is slightly opened, the gasoline will run down into the drip-cup, where it may be lighted with a match and will heat the parts and generate the necessary gas for starting the main fire.

In Figs. 1, 2, and 3 is shown a modification of the invention, having a tubular casting *B* in place of casting *c*. In this construction the oil is admitted from central feed-pipe *c'* to forwardly-extending passage 1 of casting *B*, such passage communicating forwardly with lateral reverting branches 1^a thereof at 1^b, a chamber or recess being formed in the burner-head at this point and closed by plug 1^c. These lateral branches 1^a extend downwardly at 1^d, communicating with lateral reverting branches 2^a of passage 2, such passages 2 and 2^a communicating forwardly at 2^b, a chamber or recess being formed at this point and closed by a plug 2^c and the horizontal passage 2 extending rearwardly under and parallel to the burner-head *k* to threaded seat *g'* of casting *B* and in register with passage *l* in the vertical nipple *h* of burner-head *k*. This tubular

casting B is open at both ends B' B² for entrance and exit of the vapor or flame. The hollow mixing interior of head or casting B has air holes or perforations *r'* through the sides thereof.

Referring to Fig. 4 of the drawings, the course of the oil is from the central feed-pipe *c'* through the bore of tubular section *c* thereof to conduit *l*, which it ascends, thence through lower central passage *z*, through lateral branches *z'* thereof, through upwardly-extending conduits *z⁵*, through lateral branches *t* to upper central passage *u*, to conduit *m*, through which the oil descends, such conduit opening into the hollow interior of the burner-head for the discharge of vapor thereinto at *m'*, such opening being controlled by needle-valve *w*. The oil passes around the needle-valve at *q* and from the conduit *m* by pipe X to the main burner *b'*.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a casting arranged for attachment to an oil-supply pipe of a hydrocarbon-burner, the combination with the oil-supply pipe to the burner having an upward extension provided with two separated passages or conduits for ascent and descent respectively of the oil, of the hollow burner-head carried by said upward extension and having upper and

lower oil-circulating passages communicating respectively with said separated passages and having reverting connected branches, said passage for descent of the oil having an opening into the hollow interior of the burner-head, and a valve for controlling said opening, substantially as specified.

2. In a casting arranged for attachment to an oil-supply pipe of a hydrocarbon-burner, the combination with the angular oil-supply pipe to the burner having an upward extension provided with two separated passages or conduits for ascent and descent respectively of the oil, of the hollow burner-head carried by said upward extension and parallel to and overlying a horizontal portion of said oil-supply pipe, said head having upper and lower oil-circulating passages communicating respectively with said separated passages and having reverting connected branches, said passage for descent of the oil having an opening into the hollow interior of the burner-head, a valve for controlling said opening, and the plugs for providing access to said circulating passages, substantially as specified.

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

THOMAS WILLIAM MORAN.

Witnesses:

C. H. JENKINS,
E. H. LINDSAY.