(No Model.)

R. E. & W. S. OLDS.

MULTIPLEX VAPOR BURNER.

No. 521,622. Patented June 19, 1894.

Fig. 1.

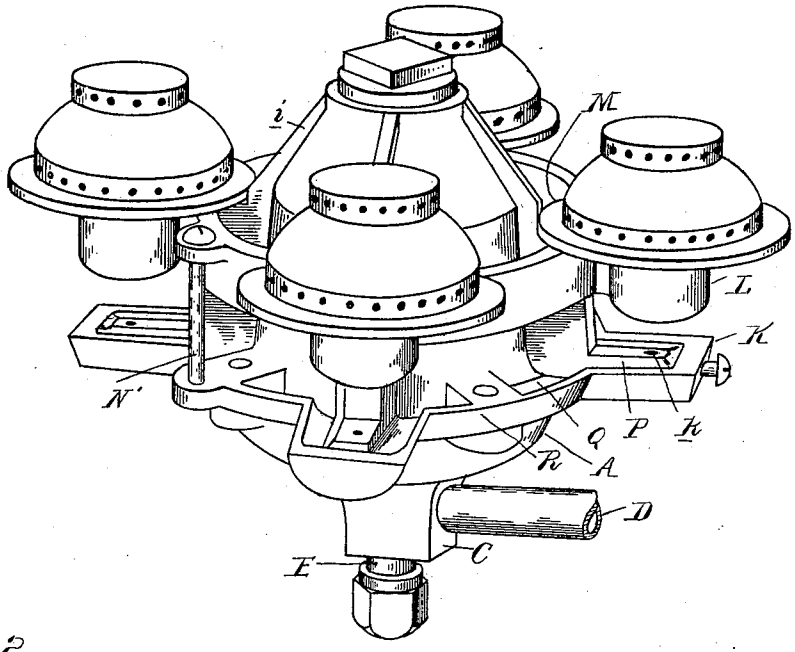
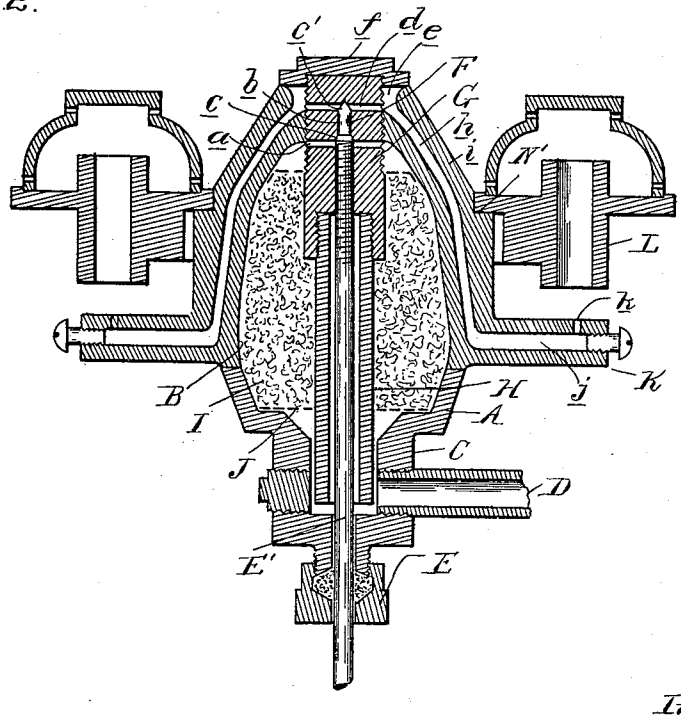


Fig. 2.



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MULTIPLEX VAPOR-BURNER.

SPECIFICATION forming part of Letters Patent No. 521,622, dated June 19, 1894.

Application filed January 27, 1894. Serial No. 498,179. (No model.)

To all whom it may concern:

Be it known that we, RANSOM E. OLDS and WALLACE S. OLDS, citizens of the United States, residing at Lansing, in the county of Ingham and State of Michigan, have invented certain new and useful Improvements in Multiplex Vapor-Burners, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the peculiar construction of a generator or retort, having an educt pipe and an induct pipe for the fluid to be vaporized, a valve controlling the educt pipe and a series of conduits leading to a corresponding series of heating plates, extending laterally around the retort, and burners for each heating plate or arm; further in the peculiar construction, arrangement and combination of the various parts.

In the drawings, Figure 1 is a perspective view of our improved device. Fig. 2 is a vertical, central, section thereof.

A is a hollow casing within which is formed the chamber B forming what we shall call the generator or retort. This chamber at its lower end is provided with a longitudinal nipple C centrally apertured and into which the induct pipe D is secured, preferably entering an aperture at one side. The central aperture in the nipple is provided with a packing nut E secured around a suitable valve stem E′ of the needle valve F. This valve at its upper end is provided with a screw-threaded portion adapted to engage a screw-threaded bearing in the plug G which is secured into a central screw-threaded aperture in the top of the retort.

H is a tubular standard secured into the lower end of the plug G and surrounding the stem E′. Around this plug and pipe is packed suitable fibrous material, such as asbestus, as shown at I, which is confined within the sides of the retort and between the screens J at the ends. The plug at the top of the retort is provided with lateral ports *a* leading into the stem of the valve and with a longitudinal port *b* through which the upper end of the valve passes. The valve is provided with two beveled valve seats *c c′*, one adapted to close the lower end of the port *b* and the other the upper end thereof, both being seated simultaneously when the stem is turned. The port *b* connects with the radial passages *d* which extend to the side of the plug and connect into an annular channel *e* surrounding the plug and within the top of the retort, the top of this passage being formed by a screw cap *f* screwed onto the upper end of the plug and bearing with its edges against the top edge of the retort around the passage way *e*. From this passage way *e* and communicating therewith, there extends a series of conduits *h* which are preferably formed through exterior ribs or flanges *i* formed integral with the body of the retort. These passages connect with lateral passages *j* formed in laterally extending arms K on the sides of the retort. The passages *j* at their outer ends are provided with feed jets *k* arranged beneath burners L. These burners are secured to a ring M which is secured in position by means of clamping bolts N drawing the under face of the ring against shoulders N′ upon the exterior of the retort.

The parts being thus constructed their operation is as follows: Fluid being supplied under pressure into the pipe D will enter the lower end of the retort and be fed into the chamber B therein. When the stem E′ is turned to withdraw the valve seats *c c′* from their bearings on corresponding seats formed in the plug, the fluid will pass from the retort through the passages *a b d* into the channel *e* and this will be fed by gravity through the passages *h* and *j*, finding exit through the apertures *k* when the fluid will enter the grooves P in the upper face of the arms K and into the wells or grooves Q on the upper face of the flanges R on the exterior of the retort. The fluid being ignited will heat the retort to a sufficient temperature to generate the gas therein, which will be fed through the ports and passages described to the burners L and there may be lighted and burned in the usual manner.

What we claim as our invention is—

1. In a gasoline burner, the combination with a generator having a series of passages therein, an inlet, an exit at the top of the generator connected with the series of passages, lateral arms on the generator having passages therein connecting with the passages in the generator, an annular flange on the

generator having a fluid channel into which the passages in the lateral arms lead, and burners above the open ends of the passages in the arms, substantially as described.

2. In a gasoline burner, the combination with the burners and generator, of conduits connecting the generator and burners, an inlet in the lower portion of the generator, a plug in the upper portion having lateral ports *a*, lateral ports *d*, and a vertical passage connecting the lateral ports, and a valve controlling the passage, substantially as described.

3. In a gasoline burner, the combination with the burners and generator, of conduits connecting the generator and burners, an inlet in the lower portion of the generator, a plug in the upper portion having lateral ports *a*, lateral ports *d*, and a vertical passage connecting the ports, a valve and the beveled faces *c c'* on the valve adapted to close the lower and upper ends respectively of the passage, substantially as described.

4. In a gasoline burner, the combination with the burners and retort having a supply port at its lower end and an educt port at its upper end, a connection between the educt port and burners, reticulated diaphragms at the top and bottom of the retort, a fibrous non-combustible material between the diaphragms, a valve controlling the educt port having its stem extending through the retort, and a tubular standard surrounding the valve stem having its upper end secured to the retort and separating the valve stem from the fibrous material, substantially as described.

5. In a gasoline burner, the combination of the retort casing centrally apertured at top and bottom a plug fitting the top aperture and extending through the casing, a screw cap engaging the top of the plug, inclosing a channel around the plug, from which a series of feed conduits connect, a port leading from the retort to the channel through the plug, a valve to control said port having its stem projecting through the lower end of the retort, substantially as described.

6. In a gasoline burner, the combination with the burners and circular retort, an inlet in the lower portion of the retort, a plug in the upper portion, educt ports in the plug, an annular channel *e* surrounding the plug, into which the educt ports lead, conduits connecting the annular channel and burners, and a detachable cap *f*, forming the upper wall of the annular channel, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

RANSOM E. OLDS.
WALLACE S. OLDS.

Witnesses:
CHARLES F. HAMMOND,
HARRIS E. THOMAS.