A. GRAUMÜLLER.

CARBURETER.

APPLICATION FILED NOV. 26, 1906.

901,237. **Patented Oct. 13, 1908.**

Fig. 1.

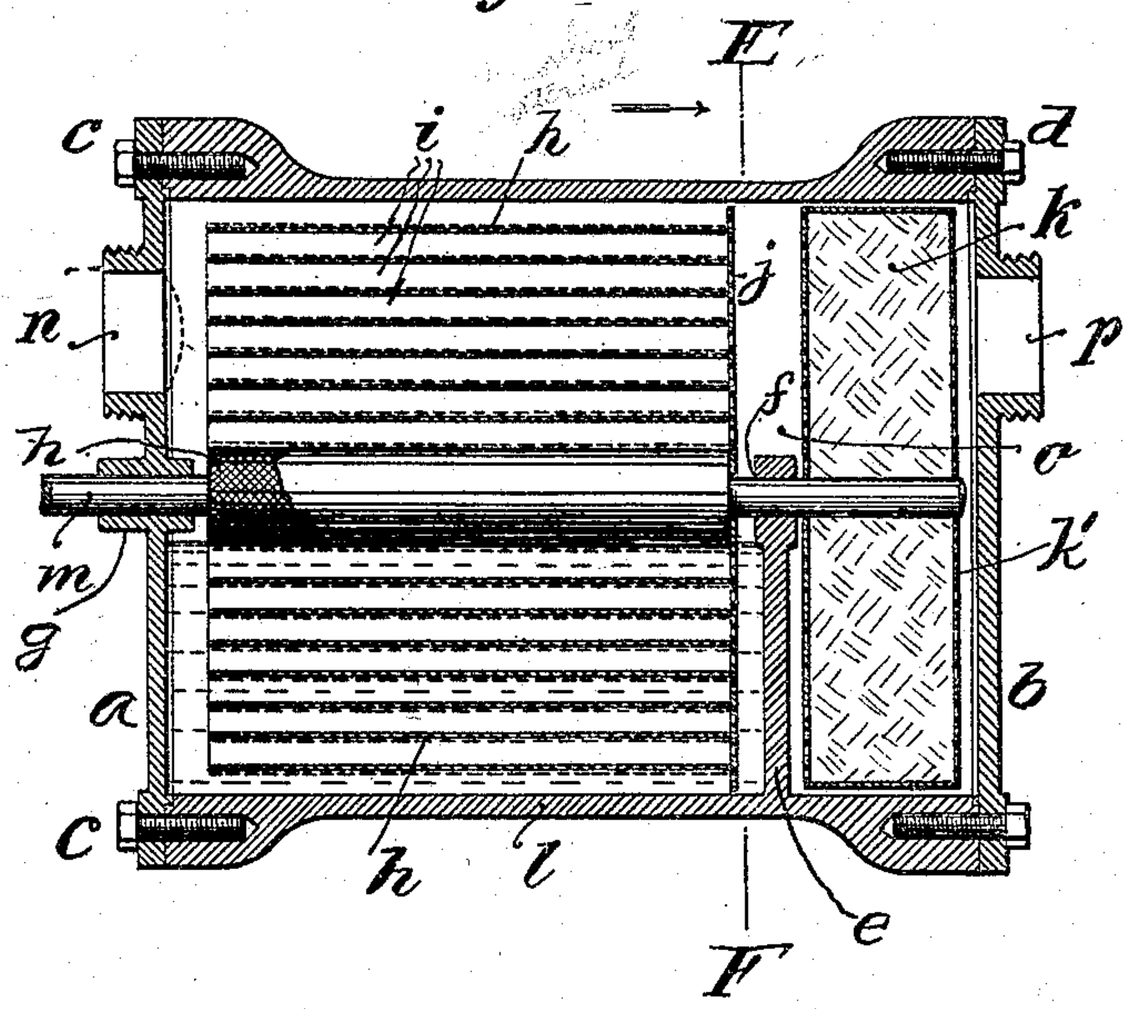
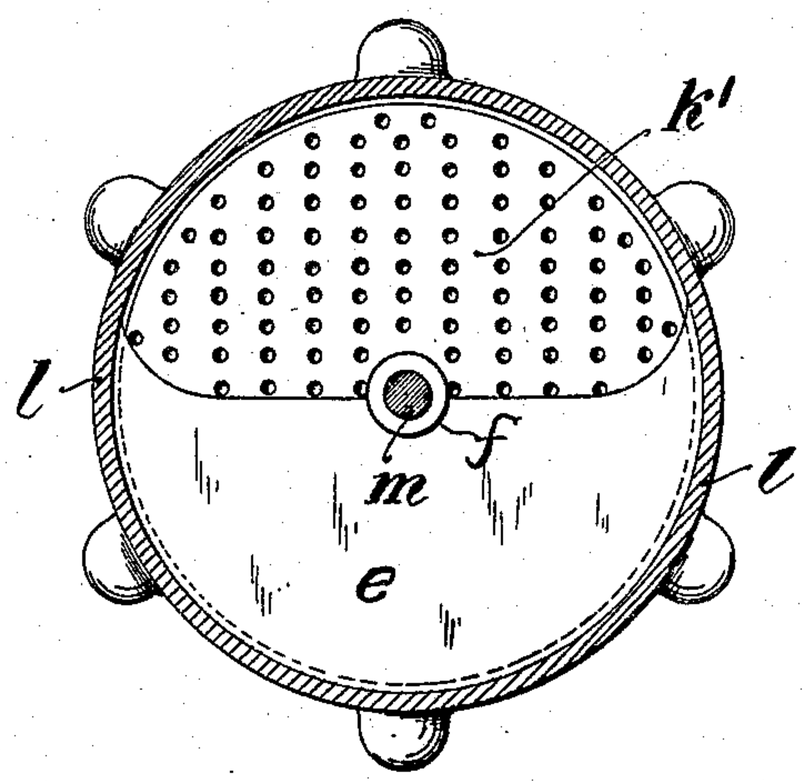


Fig. 2.



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UNITED STATES PATENT OFFICE.

ALEXANDER GRAUMÜLLER, OF DRESDEN, GERMANY.

CARBURETER.

No. 901,237. Specification of Letters Patent. Patented Oct. 13, 1908.

Application filed November 26, 1906. Serial No. 345,071.

To all whom it may concern:

Be it known that I, ALEXANDER GRAUMÜLLER, a subject of the Emperor of Austria-Hungary, and resident at Dresden, Kingdom of Saxony, Germany, have invented certain new and useful Improvements in Carbureters, of which the following is a specification.

My invention relates to air carbureting devices especially such as are adapted for use with oils, in which the air to be carbureted is continually passed over rotating surfaces saturated with the oil and thus brought repeatedly into contact with the oil.

The object of the invention is to provide an improved device of this character which will effectually perform its functions in the least possible time and which will be economical to construct, not readily injured and may be quickly and easily taken apart and put together when desired.

With this object in view the invention consists in the improved construction, arrangement and combination of parts hereinafter fully described and afterwards specifically claimed.

In the accompanying drawing, which illustrates one embodiment of my invention, Figure 1 is a vertical, longitudinal, sectional view of a carbureter constructed in accordance with my invention, and Fig. 2 is a transverse sectional view taken on the plane indicated by the broken line E—F in Fig. 1.

Like reference characters indicate the same parts in both figures.

Referring specifically to the drawing, *l* indicates a cylindrical metal tank or drum, disposed horizontally and provided with heads *a*, *b* secured in place by screw bolts *c*, *d* threaded into the walls of the drum at the ends thereof.

Forming an integral portion of the drum, if desired, is a partition *e* which is disposed vertically and transversely in the drum, between the heads thereof and preferably nearer the head *b* than the head *a*, therefore dividing the lower portion of the drum into two unequal spaces. This partition *e* reaches only a short distance above the axial center of the drum *l* in order to leave the upper portion free, as at *o*, for the passage of the air which is forced into the drum through an inlet *n* in head *a* above the center thereof.

In the axial line of the drum the partition *e* is provided with a bearing *f* for a shaft *m* which also has a bearing in the head *a* at *g*, the shaft projecting through this last named bearing, as plainly seen in Fig. 1, in order that suitable power may be applied to rotate it.

Secured upon the shaft *m* between the head *a* and the partition *e* are a number of cylinders *l*, of progressively increasing diameters, and held at suitable distances apart and concentric with the shaft and each other, by any suitable means, said cylinders each being unbroken or without perforations and surrounded or incased in a thin layer of absorbent material as shown at *h*.

The cylinders *i* are open at their inlet ends, nearest the head *a*, but partially closed by a perforated head *j*, at their exit ends nearest the partition *e*, the partition being larger in diameter than the outer cylinder *i*, and snugly fitting the tank or drum *l*. Upon the shaft *m*, between the partition *e* and head *b* is a drum, as at *k'*, having perforated heads, and filled with a mass of any suitable stringy or fibrous material *k*. There is provided in the head *b* above the center thereof, an exit *p* for the carbureted air or gas.

The space in the drum *l* between the head *a* and partition *e* being filled with oil high enough to immerse the lower side of the inner one of the cylinders *i*, air is projected by any suitable means into the drum through the inlet *n* and the shaft turned by any suitable means, whereby the cylinders *i* and drum *k'* are rotated. The air passing about the outer cylinder *i* and between the adjacent cylinders comes into close contact with the layers of absorbent material and is carbureted thereby, the passage of air through the perforations of the head *j* serving to delay it sufficiently to insure long enough contact with the oil to thoroughly accomplish the carbureting. During the passage of the air, the rotation of the cylinders *i* serves to keep their absorbent coverings thoroughly and freshly saturated, thus further insuring complete carbureting. After the air has passed through the perforations of the head *j*, it enters the space *o*, from thence passing through the drum *k'*, which, by reason of its rotation, presents all parts of its filling *k* in the path of the carbureted air or gas whereby the gas is thoroughly purified and dried, ready to be forced out through the outlet *p* in the head *b* to be distributed or stored in any usual manner.

What I claim as new is—

1. A carbureter comprising a fixed drum

with an air inlet at one end and a gas outlet at the opposite end, a rotatable shaft journaled in the axis of said drum, and a series of concentric cylinders of progressing sizes mounted on said shaft, each covered with absorbent material, open at their inlet ends and provided with outlets at their exit ends, substantially as described.

2. A carbureter comprising a fixed drum with an air inlet at one end and a gas outlet at the opposite end, a rotatable shaft journaled in the axis of said drum, and a series of concentric cylinders of progressing sizes mounted on said shaft, each covered with absorbent material, open at their inlet ends and partially closed at their outlet ends by a perforated disk, substantially as described.

3. A carbureter comprising a fixed drum with an air inlet at one end and a gas outlet at the opposite end, a rotatable shaft journaled in the axis of said drum, a series of concentric cylinders of progressing sizes mounted on said shaft, each covered with absorbent material, open at their inlet ends and provided with outlets at their exit ends, and a drum having perforated ends mounted on a shaft near the exit end of the fixed drum and filled with fibrous material, substantially as described.

4. The herein described carbureter comprising a fixed horizontal drum having an air inlet at one end and a gas exit in the other, a transverse partition therein extending from the bottom to slightly over the center thereof, a shaft centrally journaled in the inlet head of the drum and in the partition and extended to near the exit end, a series of concentric unbroken cylinders of progressively increasing sizes mounted on said shaft between the inlet end and the partition, each cylinder being covered with absorbent material and being open at its inlet end, a perforated disk on the exit end of said cylinders, and a drum of perforated material mounted on the shaft between the partition and the exit end and filled with fibrous material, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ALEXANDER GRAUMÜLLER.

Witnesses:

WOLDEMAR HAUPT,

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