No. 737,463. PATENTED AUG. 25, 1903.

C. F. PEARSON.

VAPORIZER FOR EXPLOSIVE ENGINES.

APPLICATION FILED FEB. 14, 1903.

NO MODEL.

Fig. 1.

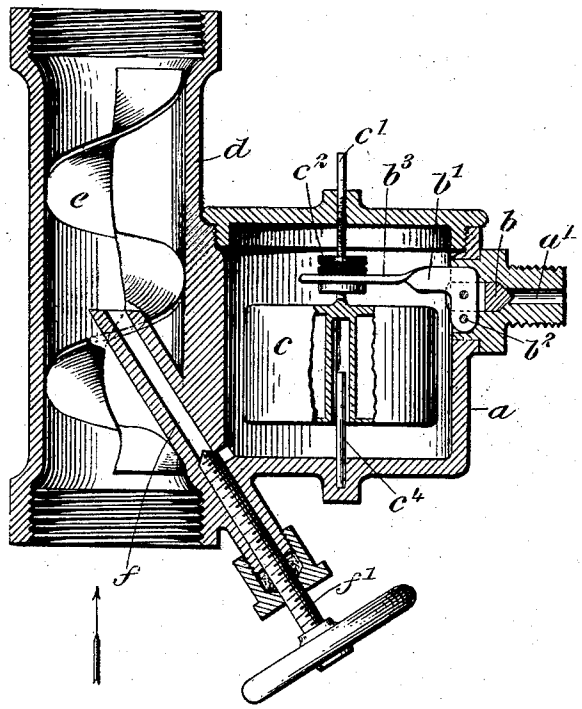


Fig. 2.

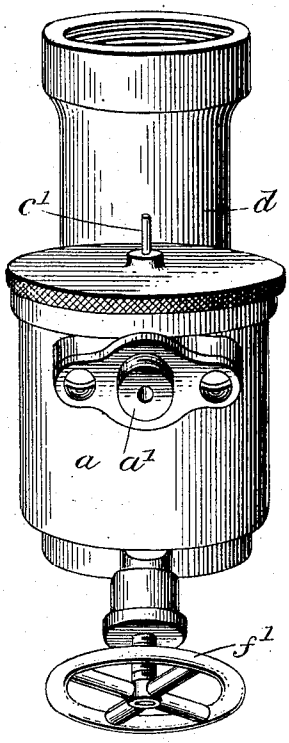
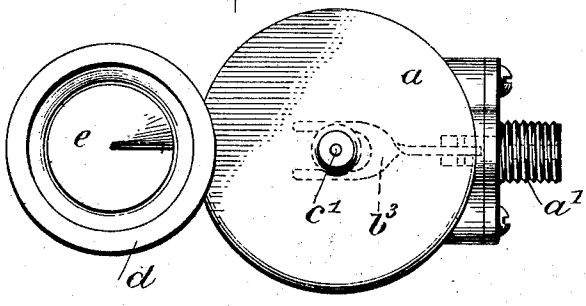


Fig. 3.



WITNESSES

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No. 737,463. Patented August 25, 1903.

UNITED STATES PATENT OFFICE.

CARL F. PEARSON, OF CHICAGO, ILLINOIS.

VAPORIZER FOR EXPLOSIVE-ENGINES.

SPECIFICATION forming part of Letters Patent No. 737,463, dated August 25, 1903.

Application filed February 14, 1903. Serial No. 143,288. (No model.)

To all whom it may concern:

Be it known that I, CARL F. PEARSON, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Vaporizer for Explosive-Engines, of which the following is a full, clear, and exact description.

This invention relates to a vaporizer intended especially for use in connection with internal-combustion engines; and the leading feature of the invention lies in improved means for imparting a rotary movement to the air, thus effecting a more immediate association between the air and the oil.

The invention also involves various minor features, all of which will be fully set forth hereinafter.

This specification is an exact description of one example of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional view of the invention. Fig. 2 is an end elevation thereof, and Fig. 3 is a plan view of the invention.

a indicates the oil-receptacle, into which passes the supply-pipe *a'*. Seated in this pipe is a valve *b*, which acts to control the passage of the oil through the supply-pipe. This valve is carried on an elbow-lever *b'*, the short arm of which projects downward and is fulcrumed in the cup *a* at the point b^2. The long arm b^3 of the lever *b'* projects horizontally and is formed with a fork straddling a collar c^2, which is threaded on the stem *c'* of a float *c*. The float is guided loosely by a central opening in the float. The stem *c'* plays loosely in the top of the cup *a*, and by adjusting the position of the collar c^2 the height of the oil in the cup *a* may be regulated at will.

d indicates the mixing-tube, which is preferably cast integral with the cup *a* and through which the air is drawn in the direction of the arrow indicated in Fig. 1. In this tube *d* is placed a spiral partition-plate or baffle *e*, which may be removably or immovably secured therein, as desired, and which causes the air passing through the tube *d* to take up a spiral movement. Projecting from the bottom of the cup *a* upward into the lower portion of the tube *d* is an oil-nozzle *f*, commanded by a needle-valve *f'*. This nozzle extends into the lower course of the spiral *e*, so that as the air rushes through the tube it sucks out a certain quantity of the oil, carrying the oil around through the spiral and effectively carbureting the air. The oil is kept at the proper level in the nozzle *f* by means of the float *c*, and thus may be regulated at will by the screw-collar c^2, as before explained.

Various changes in the form, proportions, and minor details of my invention may be resorted to at will without departing from the spirit and scope thereof. Hence I consider myself entitled to all such variations as may lie within the intent of my claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of walls forming an air-passage, an oil-nozzle projecting into the passage, and a spiral partition placed in said passage, said nozzle projecting diagonally with respect to the same and extending into the courses of the spiral partition.

2. A vaporizer having walls forming an air-passage, a spiral partition located in the passage, and an oil-supply nozzle projected diagonally into the passage and discharging into the spiral partition.

3. A vaporizer having walls forming an air-passage, a spiral partition located in the passage, an oil-supply nozzle projected diagonally into the passage and discharging into the spiral partition, and means for maintaining a predetermined height of oil in the supply-nozzle.

4. A vaporizer comprising walls forming an air-passage, a spiral partition placed in said passage, to give the air a spiral movement, an oil-supply nozzle projected diagonally into said air-passage and discharging in the spiral partition, an oil-receptacle communicating with the nozzle, a valve controlling the oil-

flow through the nozzle, a valve controlling the admission of oil into the oil-receptacle, and a float actuating the latter valve.

5. A vaporizer having means forming a spiral air-passage, and an oil-supply nozzle projected diagonally into said passage and discharging in direction of the course thereof.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CARL F. PEARSON.

Witnesses:
GUS. E. JOHNSON,
MAURICE TALEN.