(No Model.)

J. CARNES.

OIL BURNER.

No. 394,245. Patented Dec. 11, 1888.

Fig. 1

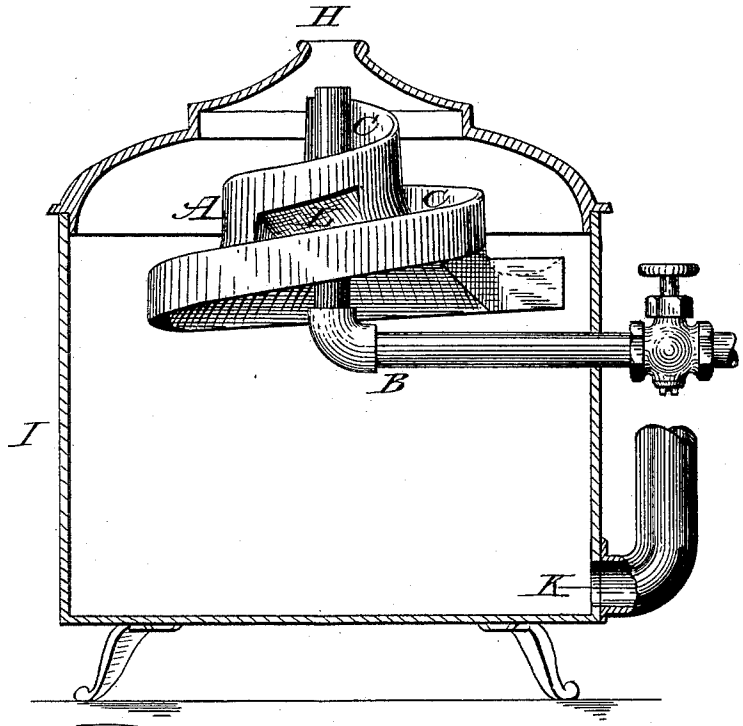


Fig. 2

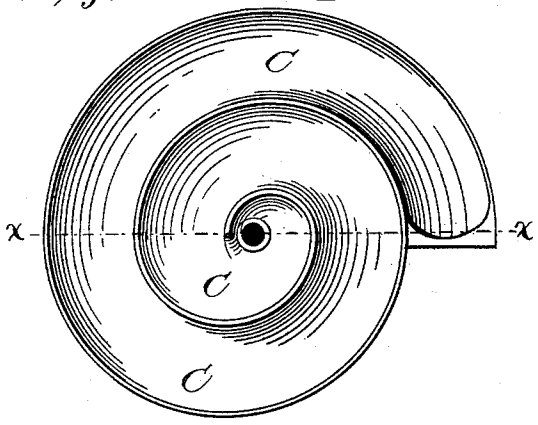
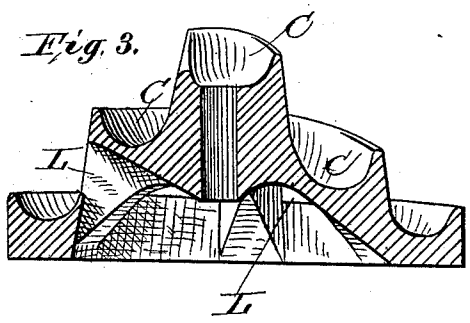


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN CARNES, OF LIMA, OHIO.

OIL-BURNER.

SPECIFICATION forming part of Letters Patent No. 394,245, dated December 11, 1888.

Application filed April 29, 1887. Serial No. 236,592. (No model.)

To all whom it may concern:

Be it known that I, JOHN CARNES, a citizen of the United States, and a resident of Lima, in the county of Allen and State of Ohio, have invented a new and useful Oil-Burner, of which the following is a specification.

My invention is an improved oil-burner for burning crude or refined oil, without steam, in heating or cooking stoves.

Figure 1 is a perspective view of burner, with the stove in section. Fig. 2 is a plan view of the burner. Fig. 3 is a central vertical section of the burner.

A is my burner, consisting of a hollow cone constructed with a spiral groove, said cone being provided with side openings for the passage of air to the flame.

B is an oil-pipe, through which oil is conducted up through the center of the spiral to the top of the groove; C, the spiral groove; I, a stove; H, an air-hole above the burner or grate; K, an exit for smoke below the burner.

Between the coils of the spiral groove are air-spaces L.

The operation of my device is as follows; Oil is admitted through pipe B from a tank situate in any convenient position, and drops out the top onto the declining spiral groove, where it is set fire to. As the oil spreads over the concave surface and follows around the turns of the groove while burning, it soon heats the burner until the oil that follows is turned to gas as it flows over the heated surface and is consumed. It is a well-known fact that cold air admitted to a stove has a tendency to drop to the bottom of the stove and stay there until heated as hot as the smoke and flame, while the heated gases seek the top and remain there or escape out the chimney. To take advantage of this fact, I locate my cold-air supply or draft at the top and exhaust or smoke escape at the bottom of the stove. By this means the heavier and colder airs are drawn off from the bottom, while the gases remain in the top of the stove, where I also locate my burner in the midst of them and consume them, instead of letting them escape from above the fire, as is usual. By this means I get a perfect draft. The cold air is carried off at the bottom, while the lighter gases and smoke are consumed by the fire above. By this means it will be readily seen that I not only prevent the escape of much of the inflammable gases usually wasted, but provide a practical smoke-consumer besides.

What I claim is—

1. An oil-burner consisting of a hollow cone constructed with a surrounding spiral groove, said cone being provided with side openings for the passage of air, as and for the purpose set forth.

2. The combination, with the stove having an air-entrance at the top and smoke-exit near the bottom, of the hollow cone constructed with a surrounding spiral groove, having side openings for passage of air, and located in the top of the stove, beneath the air-entrance, as and for the purpose set forth.

JOHN CARNES.

Witnesses:
W. A. CAMPBELL,
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