(No Model.) 2 Sheets—Sheet 1.

J. RUTHVEN.

CARBURETING APPARATUS.

No. 494,442. Patented Mar. 28, 1893.

Fig. 1.

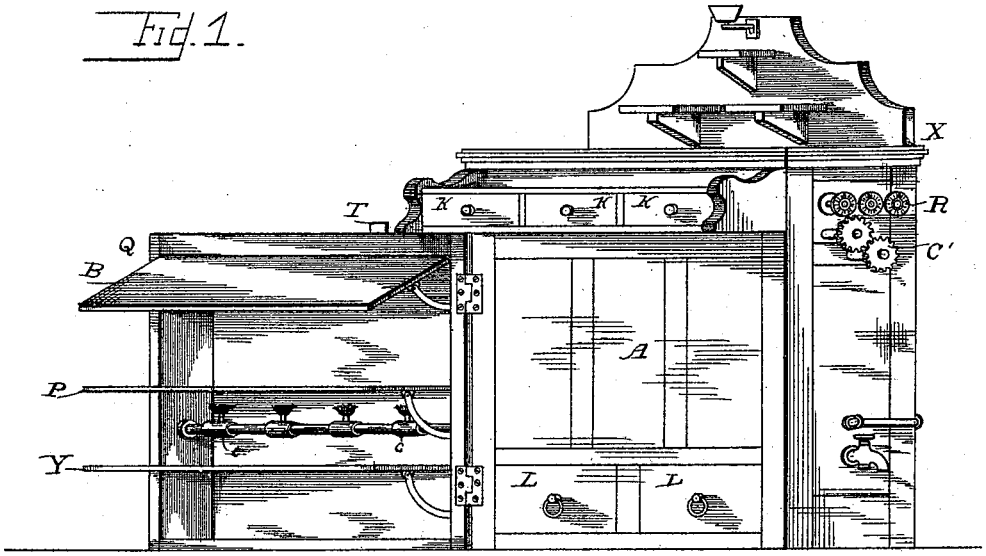


Fig. 2.

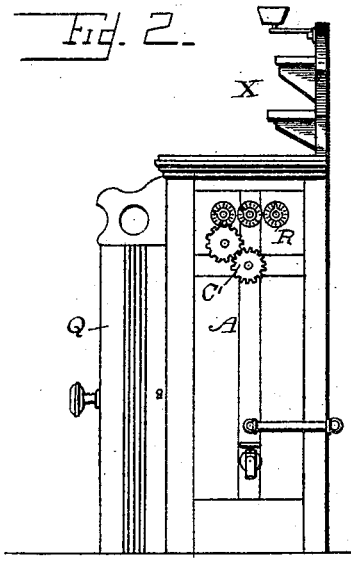
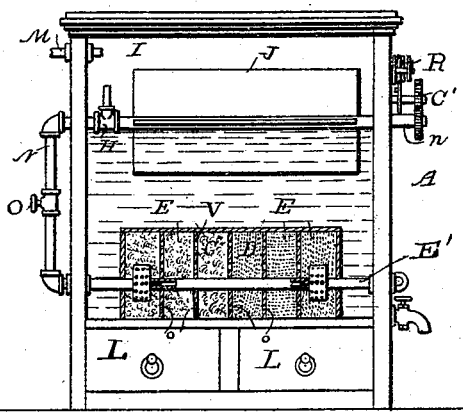


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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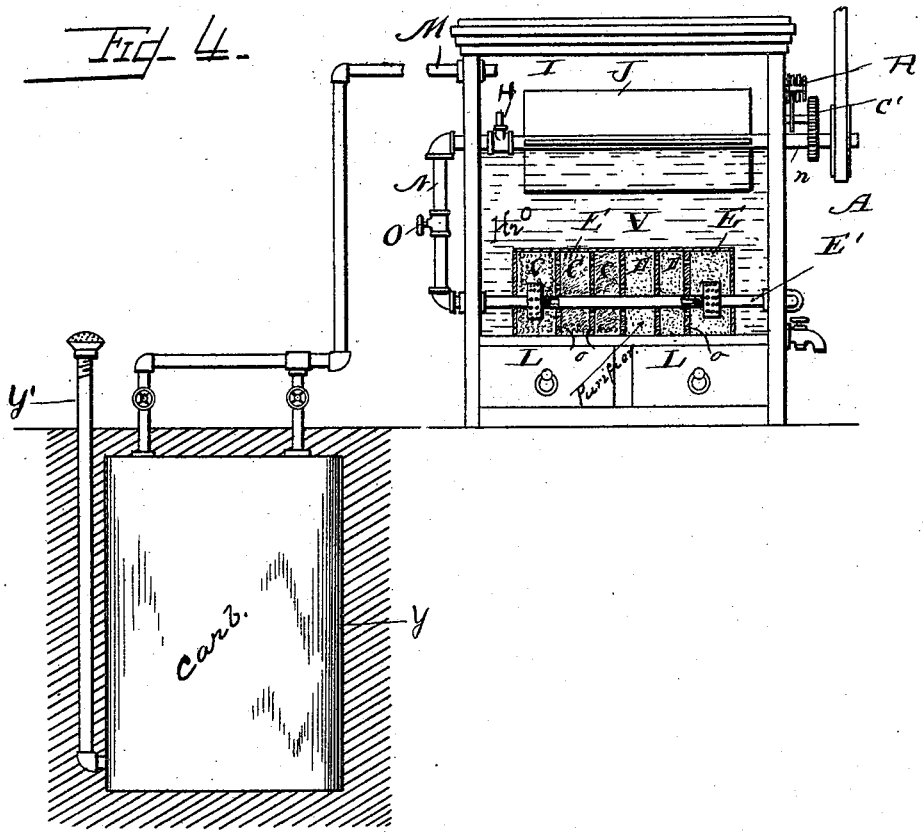
Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN RUTHVEN, OF TOPEKA, KANSAS.

CARBURETING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 494,442, dated March 28, 1893.

Application filed April 13, 1891. Serial No. 388,812. (No model.)

To all whom it may concern:

Be it known that I, JOHN RUTHVEN, of the city of Topeka, in the county of Shawnee and State of Kansas, have invented a new and useful Improvement in Carbureting Apparatus, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a perspective of the apparatus embodying my invention. Fig. 2 is an end view of the same with the cooking attachment closed; and Fig. 3 is a view with the front portion removed showing the interior. Fig. 4 is a similar view, showing a carbureter in connection therewith.

The invention relates to that class of cooking, heating and lighting apparatus, wherein hydrocarbon vapor is produced by suction from a carburetor outside of the building, underground. The vapor so produced enters the casing and is conveyed to a purifying chamber, after leaving which it is led to the cooking, heating, and lighting devices. A register is also provided to measure the number of revolutions of the suction cylinder and the consequent amount of vapor used.

The invention consists in the novel construction and combination of parts as hereinafter specified.

In the drawings, the letter A designates a case or closure, having therein a water space or chamber I. In the upper portion of this chamber is a suction cylinder J carried by a shaft *n*, said shaft having bearings at one end in the wall of the case, and at the other end in an L-pipe or coupling pipe section H. The case is usually provided with an ornamental upper portion X, under which is the top plate proper of the case, and which is arranged so that the interior chamber is perfectly air and gas tight.

N designates a pipe connected at one end to the coupling H, and passing down outside of the casing to the lower portion of the water chamber, where it enters a purifying and drying chamber V. This chamber is divided into compartments, E, E, &c., which are nearly filled with different absorbent and purifying material, such as cotton, indicated at C, and charcoal—shown at D.

C′ designates the driving gear on the end of the spindle *n*, and which is operated by a spring or weight (not shown) or by any other suitable power. The rotation of this cylinder J causes a current of air to be drawn into the carburetor *y* (which is outside of the building, and underground), through an air-supply pipe *y′* leading thereto. The air passes through the hydro-carbon fluid in the carburetor to the opposite end of same, and becoming charged with hydrocarbon vapor enters the outlet pipe and is conducted to an inlet M at the upper portion of the casing. The water chamber I is filled, so as to submerge the purifying chamber V, and partially submerge the cylinder J. Should a leak occur in the chamber V, the water will enter therein, checking the escape of vapor, and thereby prevents any opportunity for the same to be improperly ignited. From the upper portion of chamber I, the vapor enters the coupling or pipe section H, the entrance of which is slightly above the axis of the cylinder I, and is conveyed through the pipe N to the chamber V, which it enters in a saturated and heavy state. A cock O is provided in the pipe N to regulate the flow. Escaping from the pipe N into the chamber V, it passes through the compartments E, E, &c., by means of perforations *o*, *o*, formed in the walls thereof, and is carried off in a purified state by the pipe E′.

R designates a register which is a connection with the gear of the shaft *n*, to record the number of revolutions of the cylinder and the consequent amount of gas produced. As each apparatus is provided with this register, it is evident that several may be connected to the same carburetor, and the amount used by each will be recorded.

Q designates a swinging cooking attachment, having a hinged connection with the forward portion of the case, and arranged to swing outwardly therefrom into the position shown in Fig. 1. This attachment is provided with a pipe having a series of burners *c*, *c*, &c., and which is supplied with gas by a branch from the pipe E′, said branch being flexible, or provided with a flexible section to permit the attachment Q to be opened and closed. Or said branch may be rigid and provided with a detachable coupling.

P is the cooking table, having a hinged or swinging support, and located over the burners *c*. B designates a plate or wing having a

similar support and arranged to check and carry all smoke and odors of cooking to a flue T at the back. To this flue may be connected a flexible pipe (not shown) for carrying off such odors and smoke.

Y is a swinging table under the burners, which serves to catch the drip from any article being cooked, or on which dishes or any other article may be placed. These tables B, P, and Y are designed to fold back into the frame Q when not in use, and said frame is then swung or closed against the case A, in the position shown in Fig. 2.

In the upper and lower portions of the case A are drawers K and L in which cooking utensils and dishes may be stored.

If desired a lamp may be placed on the upper portion of the case and supplied with gas by a branch from the pipe E'. The water in the chamber I may be drawn off by means of a faucet F.

In my former patent, No. 234,108, is set forth a device similar in some respects to that above described, and I disclaim in the present application, the construction set forth in said patent. The present invention differs from the former patent, however in several important features. In the first place, the carburetor is located externally of the case, and is connected with the fan chamber, by a pipe through which the vaporized air is drawn into the case. The carburetor is preferably exterior to the building. This arrangement is more desirable than inclosing the carburetor in the case. In the second place, I provide the case with a cooking attachment, which when closed, forms one side thereof, and the burners of which are supplied by a connection with the purifying chamber within. The arrangement and construction of the case is different from that of the former patent.

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

The combination with a case or closure A, having therein an air-tight chamber I, a suction fan operating in the upper portion of said chamber, a submerged drying and purifying chamber in the lower portion of said chamber I, and a pipe leading from the upper portion of said chamber I to said drying and purifying chamber, and from said chamber to the burners, of a carburetor located exterior to the building in which said case or cabinet is situated, an air-inlet pipe for said carburetor, and a pipe connecting said carburetor with the upper portion of said chamber I, substantially as specified.

JOHN RUTHVEN.

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