

ECKEL & SCHUYLER.

Rendering Apparatus.

No. 57,104.

Patented Aug. 14, 1866.

Fig. 1.

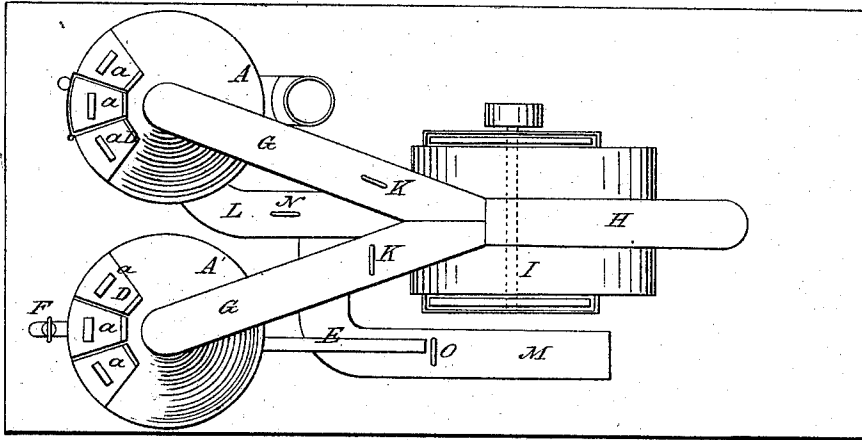


Fig. 2.

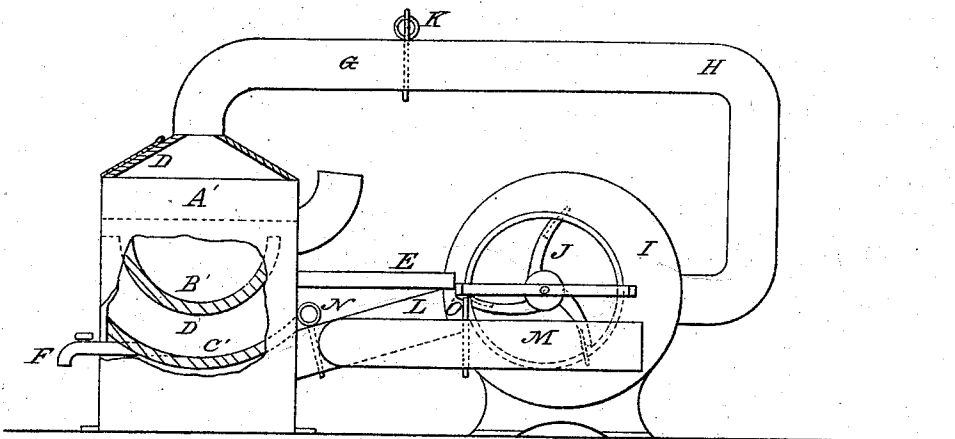
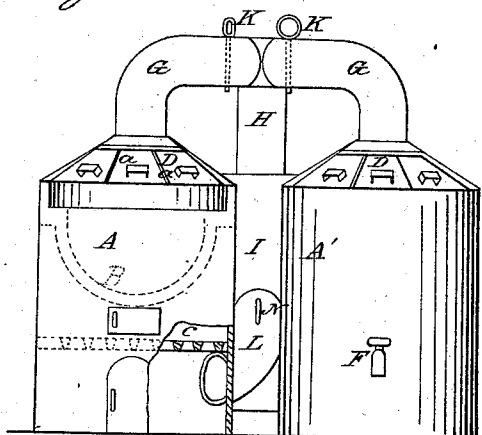


Fig. 3.



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UNITED STATES PATENT OFFICE.

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IMPROVED APPARATUS FOR RENDERING TALLOW.

Specification forming part of Letters Patent No. 57,104, dated August 14, 1866.

To all whom it may concern:

Be it known that we, JOHN J. ECKEL and ISAAC S. SCHUYLER, of the city, county, and State of New York, have invented a new and Improved Device for Rendering Tallow; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan or top view of our invention; Fig. 2, a side view of the same, partly in section; Fig. 3 a front view of the same, partly in section.

Similar letters of reference indicate like parts.

The object of this invention is to avoid the dissemination of vapors and unpleasant odors from kettles in which tallow is being rendered, and to utilize said vapors by injecting them into the fire-chambers under the kettle or under a steam-boiler, rendering them available as fuel.

The rendering of tallow in open kettles is attended with a very offensive smell—so much so that the process is, as a sanitary measure, prohibited in the densely-occupied portions of large cities, and in New York city establishments of this kind in the suburbs, with the exception of our own, now using this improvement, have received warning to close unless they also adopt it.

The invention consists in cooking the offal or meat containing the tallow in covered or partially-covered kettles, and drawing the vapors therefrom by means of a suction or vacuum produced by a fan, bellows, pump, or other mechanical device, and by the same device, when practicable, injecting the vapors into the fire-chamber underneath the kettle, or into the fire-chamber underneath a steam-boiler when the tallow is rendered by steam.

A A' represent two jackets or cases, in which the ordinary rendering-kettles B B' are fitted, covered at the top, one, B, having a fire-chamber, C, underneath it. The covers D of these jackets or cases are provided or formed with lids *a*, to admit of the offal or meat being readily inserted in the kettles and the tallow and scraps removed therefrom. The contents of the kettle B are heated by a fire under-

neath, but those of kettle B' are heated by steam, a jacket, C, being placed below said kettle to form a steam-chamber, D, into which steam is admitted from a steam-boiler through a pipe, E, the water of condensation being allowed to escape through a cock, F.

From the top of each jacket or case A A' a pipe, G, passes, the ends of which communicate with a common pipe, H, leading into the case I of a fan or blower, J. Each pipe G is provided with a valve, K, by which either jacket or case may be cut off from the case I when desired.

L is a pipe which leads from the fan-case into the fire-chamber C of the jacket or case A, and M is a pipe which leads from the fire-chamber of a steam-boiler into pipe L, L being provided with a valve, N, between the junction of M and the fire-chamber C, and M being provided with a valve, O, so that either fire-chamber may be cut off from the fan-case, as desired.

The operation will be readily understood. When both kettles are used the valves K of the pipes G, as well as the valves N O of the pipes L M, are opened, the kettles B B' supplied with the offal or meat containing the tallow, the fire kindled in the fire-chamber C, and steam from the boiler admitted into chamber D, the fan or blower J is put in motion, and a suction thereby produced in the pipes G H, which draws the vapor from the contents of the kettles into the case I, the fan or blower injecting the vapor through pipe L M into the fire-chambers underneath the kettle and steam-boiler, said vapor being thereby consumed and rendered available as a fuel, and the escape of unpleasant odors avoided.

In case only one of the kettles is used, the pipes which form a communication between it and the case of the fan or blower and fire-chamber are cut off by closing the valves in said pipe.

In certain cases, where economy of fuel may not be much of an object, the blower or fan may impel the vapors from the kettles through a coil immersed in cold water, and the vapor be thereby condensed. This of course would prevent any smell escaping from the building.

We would remark that it is essential to draw the vapor from the confined kettles, in order to preserve the scraps, which are a very

salable article, being used as a manure and also as food for stock.

Rendering tallow in a confined kettle without a vent has been essayed and abandoned, on account of the vapor under pressure macerating and reducing to a pulpy mass the scrap, which is incapable of being compressed into cakes and furnished in merchantable form.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In rendering tallow, the drawing off of the vapor or vapors from the contents of covered or confined or partially-confined kettles

by means of a suction or a vacuum produced in pipes by any suitable mechanical means.

2. The injecting of the vapor or vapors drawn off from the kettles into the fire, by which the contents of the kettles are cooked, either by a direct application of the fire or through the agency of steam generated by the same, substantially as set forth.

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Witnesses:

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