No. 798,840. PATENTED SEPT. 5, 1905.

J. B. SUTHERLAND.

DEODORIZING APPARATUS.

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Fig. 1.

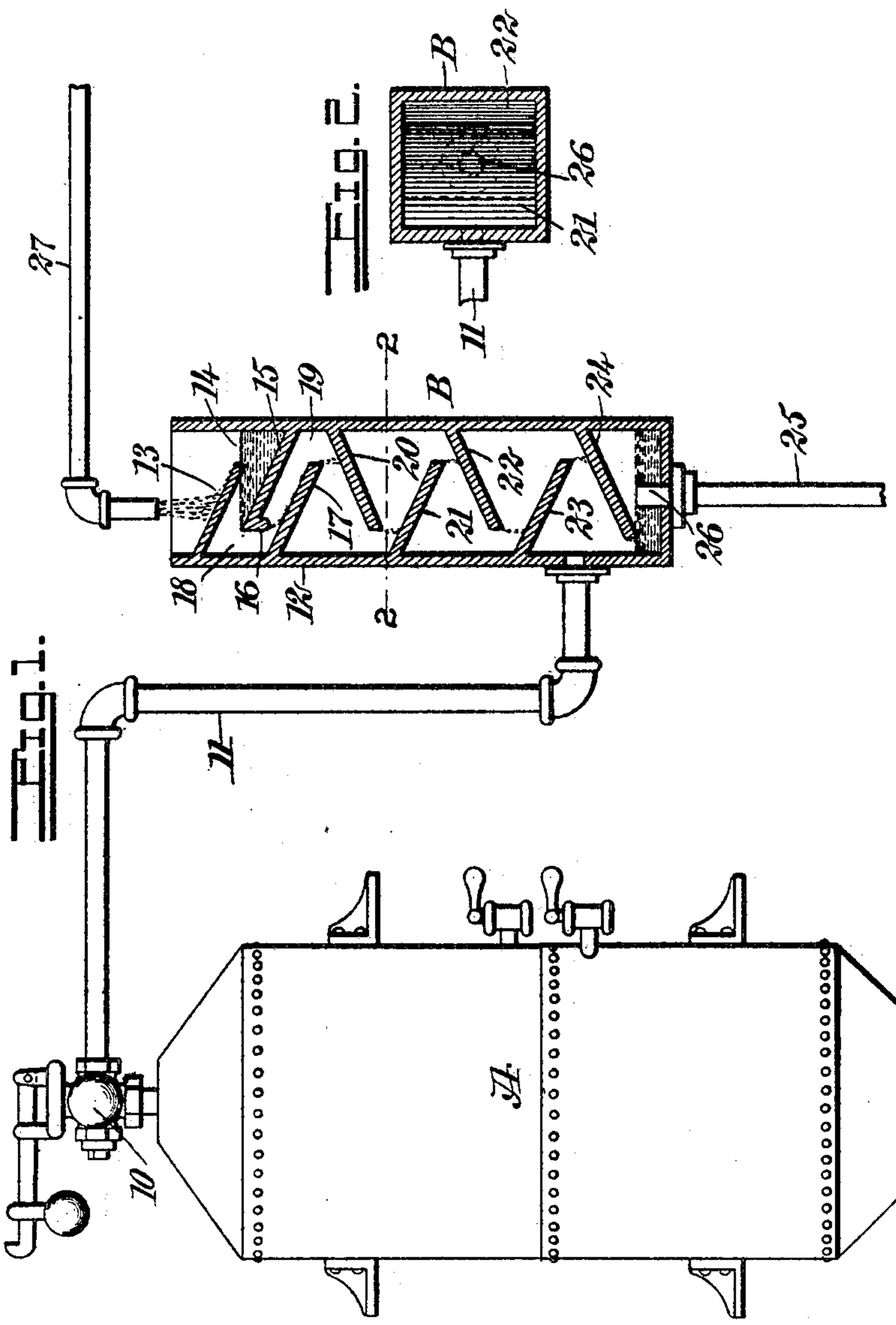

Fig. 2.

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DEODORIZING APPARATUS.

No. 798,840. Specification of Letters Patent. Patented Sept. 5, 1905.

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To all whom it may concern:

Be it known that I, JOHN B. SUTHERLAND, a citizen of the United States, and a resident of Seattle, in the county of King and State of Washington, have invented a new and Improved Deodorizing Apparatus, of which the following is a full, clear, and exact description.

The purpose of my invention is to provide an apparatus for preventing the escape of objectionable odors or gases from cooking-tanks, rendering-tanks, or the buildings which contain said tanks, said vessels being of that character ordinarily used in packing-houses, slaughter-houses, or fertilizer-works; and a further purpose of the invention is to provide a simple, economic, and readily-applied means whereby the causes of the odors are effectually trapped in their passage from the rendering-tank to the catch-basin or sewer.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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 both the figures.

Figure 1 is a side elevation of a rendering-tank and a vertical section through the deodorizer connected therewith, and Fig. 2 is a horizontal section taken practically on the line 2 2 of Fig. 1.

A represents a cooking or rendering tank or drier of any approved type, provided at its top portion with a safety-valve 10, and B represents the improved deodorizer, connected at its lower portion with the said safety-valve by a line of pipe 11. The body 12 of the deodorizer is of box formation, rectangular in cross-section, and of any desired depth and is open at the top, but otherwise closed. A baffle-partition 13, located at the upper portion of the box-body, is secured on the left-hand side thereof and at the front and back and has a downward inclination in direction of the right-hand side of said body, stopping short of said right-hand side to create a passage-way 14. A second baffle-partition 15 is located beneath the upper partition 13, being secured on the right-hand side of the body at the front and rear of the same; but this partition 15 is given an upward inclination in direction of the left-hand side of the body, the inclination being such that the level of the liquid received in the pocket thus formed will be to a greater or less extent above the lower edge of the upper partition 13, as is shown in Fig. 1, thereby forming a complete water seal at the upper end of the body 12.

The partition 15 is provided with a downwardly-extending lip 16 at its upper edge, which serves to direct the overflow liquid from said pocket upon the upper surface of a third baffle-partition 17, as a passage-way 18 intervenes between the lip portion of the partition 15 and the body. The partition 17 is given a downward inclination in direction of the right-hand side of the body, a passage-way 19 intervening between the lower edge of the partition 17 and the body, and below the partition 17 a fourth partition 20 extends downward from the right-hand side of the body in direction of its left-hand side, while a fifth partition 21 is located below the partition 20, extending downwardly from the left-hand side of the said body. A sixth partition 22 is located below the partition 21, extending downwardly from the right-hand side of the body, a seventh partition 23 is located below the partition 22, extending downwardly from the left-hand side of the body, while an eighth partition 24 extends down from the right-hand side of the body, as is also shown in Fig. 1. There is a space between opposing partitions and likewise a passage-way between the lower end of each partition and the opposing wall of the box-body.

The connecting-pipes 11 are made to enter the box-body B between the lower partition 24 and the next partition 23 above, and an outlet-pipe 25 is introduced into the bottom of the box-body B, the said outlet-pipe being provided with a stand-section 26, which is carried above the bottom of the box-body B to such an extent that the lower edge of the lower partition 24 will be lower than the upper end of the said stand-section 26 of the outlet-pipe 25. This outlet-pipe 25 is connected in any suitable or approved manner with the catch-basin or a sewer. By extending the inner section 26 of the outlet-pipe 25 in the manner described the water in the bottom of the box-body B will have a level higher than that of the lower edge of the lower partition 24, thus forming a water seal at the bottom of the box-body as well as at the top.

Water from any suitable source of supply is carried through suitable pipes 27 to the upper portion of the box-body, and said water flows from said pipes 27 onto the upper

face of the upper partition 13. The water is delivered in such quantities only as to provide for the upper and lower water seals mentioned and so that the water will practically drip from one partition onto the other.

The steam or vapor escaping from the tank A passes into the pipes 11 and from thence into the lower portion of the deodorizer B, and as there is a water seal at the top and at the bottom of the deodorizer there can be no escape of the gas or vapor, which must pass off through the outlet-pipe 25.

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

1. A deodorizer, consisting of a box-body having baffle-partitions extending from opposite sides in opposite directions, all of said baffle-plates having a downward inclination, spaces intervening between the lower ends of the baffle-partitions and opposing faces of the box, and an upwardly-extending baffle-partition located between the two upper downwardly-extending baffle-partitions, a space intervening the upper end of the said intermediate baffle-partition and opposing wall of the box-body, whereby the said intermediate baffle-partition constitutes a pocket for the reception of liquid, and an outlet-pipe which enters the lower end of the box-body, having an extension within the box-body, extending up above the level of the lower edge of the lowest baffle-partition.

2. A deodorizer, consisting of a box-body open at the top, two upper baffle-partitions extending from the same side of the box-body in a downward direction, spaces intervening between the lower edges of the said partitions and opposing surfaces of the box-body, an upwardly-inclined baffle-partition located between the two aforesaid downwardly-inclined partitions, a space intervening between the upper edge of the upwardly-inclined partition and opposing surface of the box-body, the said upwardly-inclined partition being provided with a downwardly-extending rib at its upper edge, and a series of baffle-partitions extending downwardly and alternately from opposite sides of the said box-body, spaces intervening between the lower edges of the latter partitions and opposing surfaces of the box-body, the upper edge of the upwardly-inclined partition being above the level of the lower edge of the uppermost partition, and a discharging-pipe which enters the bottom portion of the box-body, which discharge-pipe is provided with a section extending upwardly within the box-body to a point beyond the horizontal plane of the lower edge of the lowest baffle-partition, a tank, a connection between the said tank and the said deodorizer at a point between the upper and lower partitions, and means for supplying water to the deodorizer.

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

JOHN B. SUTHERLAND.

Witnesses:
GEO. N. PARSONS,
A. HAMILTON.