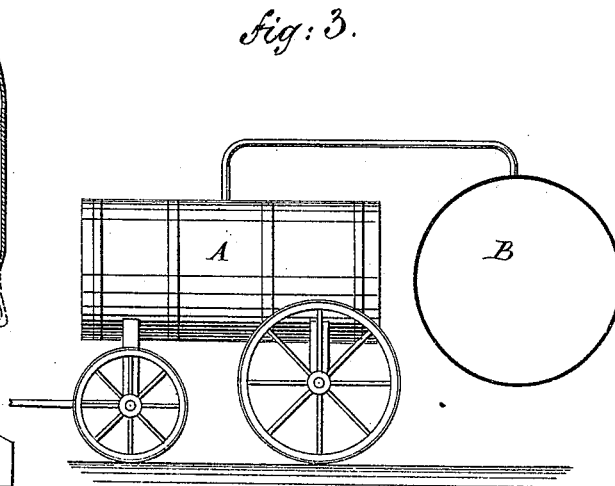
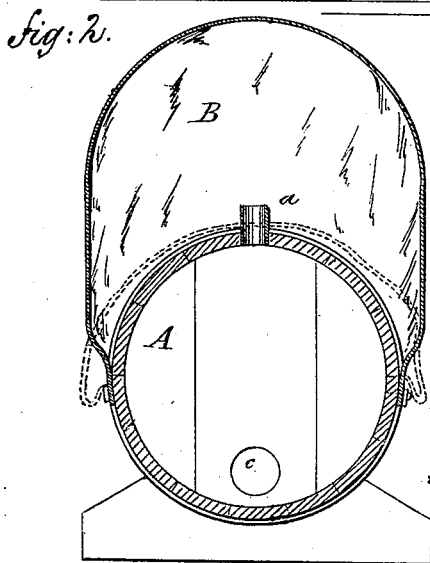
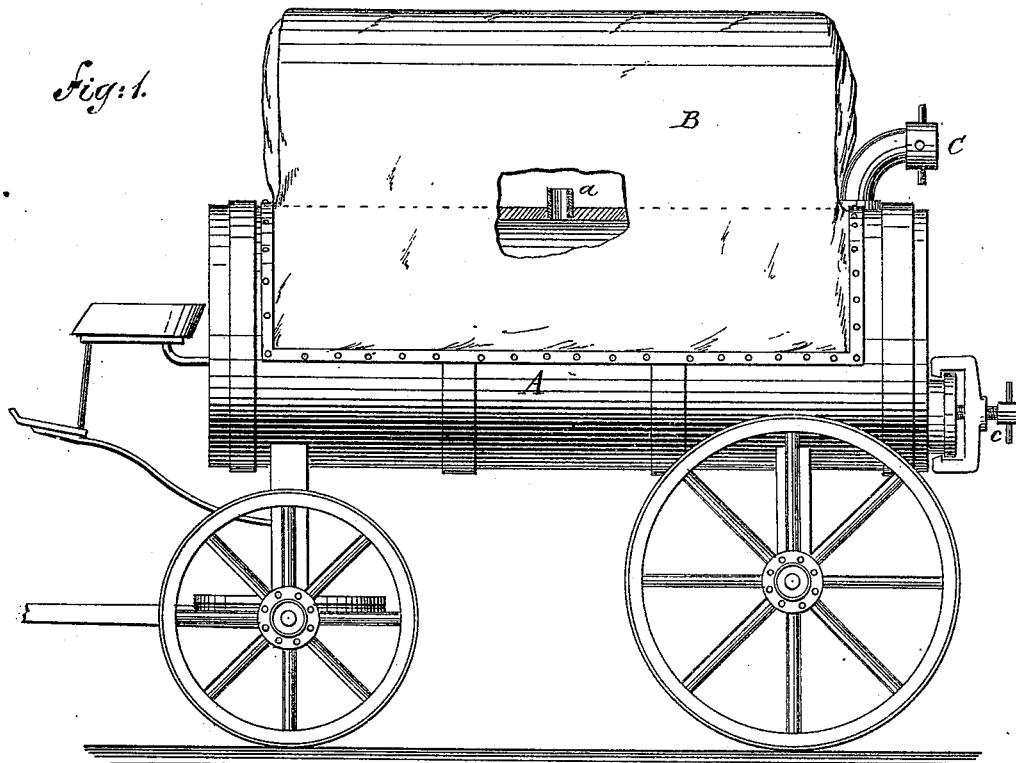


A. W. JOHNSON.
EXCAVATING APPARATUS.

No. 187,283.

Patented Feb. 13, 1877.



Witnesses:
H. C. Mahanberg
W. L. Moore

Inventor:
Albert W. Johnson
per [Signature]
Atty

UNITED STATES PATENT OFFICE.

ALBERT W. JOHNSON, OF NEW HAVEN, CONNECTICUT, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN MATTHEWMAN, OF SAME PLACE.

IMPROVEMENT IN EXCAVATING APPARATUS.

Specification forming part of Letters Patent No. 187,283, dated February 13, 1877; application filed August 24, 1876.

To all whom it may concern:

Be it known that I, ALBERT W. JOHNSON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Excavating Apparatus; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification.

This invention is in the nature of an improvement in apparatus for excavating cesspools and other places, and matter giving out foul effluvia; and the invention consists in a tank for receiving and containing fecal and other foul matter, combined with a flexible or other air-tight receptacle inclosing one or more openings made in the upper portion of the tank, substantially in the manner hereinafter more particularly described.

In the accompanying sheet of drawings, Figure 1 is a side view of my invention; Fig. 2 a cross-section of same, and Fig. 3 a side view, showing stench-reservoir connected to tank by a pipe.

Similar letters of reference indicate like parts in the several figures.

In apparatus for excavating cesspools and other places, the contents of which are charged with foul effluvia, a tank to receive and contain the matter is an essential feature of the apparatus. This tank is usually on wheels, and the tanks of this kind heretofore used employ some kind of a deodorizing or disinfecting contrivance, such as burning charcoal, chloride of lime, per-manganate of potash, carbolic acid, and other substances, to render innocuous the effluvia within the tank, as it and its contents are transported through the streets. As a substitute for these deodorizing contrivances, I construct my tank A, which may be of any size, shape, or material desired, with one or more openings, *a*, in or near its upper surface. Combined with such a tank is a receptacle, B, which may inclose the opening *a*, or otherwise form a complete air-tight inclosure or connection therewith. This receptacle may be made of any flexible mate-

rial, such as sheet-rubber, or painted canvas, or the like; or it may be made of metal or other material, constructed to contract its area telescopically or otherwise, and it may be combined with the tank by securing it permanently to the tank so as to form an air or gas tight joint; or, it may be a complete and separate reservoir, and connected to the tank by a tube, only when the tank is in actual use. The tank, constructed and combined with the reservoir as described, is operated in the following manner:

The fecal, or other foul matter, is forced into the tank through the flexible tube or hose C, which enters the tank at its top. As the matter is forced into the tank, the air that is displaced, together with the noxious effluvia and gases, ascend through the opening *a*, into the reservoir B, which, as it is filled, distends and holds the foul air and gases closely above, and out of contact with the matter in the tank, so that it cannot escape through any opening that might happen to be in the tank, or be disturbed by the agitation of the mass within the tank, as it is transported through the streets.

When the stench-reservoir B is permanently affixed to the tank, and not in use, it lies in a collapsed state close to the surface of the tank, and out of the way, and when it is secured to the tank by a flexible tube, it may be screwed to the tank at its top, or fixed thereto by any suitable coupling, such as will permit the foul air to pass through the tube into the stench-reservoir. If the stench-reservoir and tank are detachably connected when the operation of filling the tank is completed, the opening in the tank and reservoir may be closed by gas-tight cocks applied thereto, and the stench-reservoir then removed or disconnected.

After the tank is filled, and the stench-reservoir distended by being filled with effluvia, the tank is emptied through the outlet *c*, and the effluvia remains in the tank to find exit from the reservoir through a cock into the open air, or into a flue at the place of deposit.

From the foregoing it is obvious that, by my apparatus, noxious matter may be trans-

ported without giving offense, and without the employment of deodorizing chemicals or fire, and in a much more efficacious way, since in no possible way can the foul air escape, providing the apparatus is properly constructed.

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

1. The combination with a tank for containing noxious matter of a contractile and expansible stench-reservoir, substantially as and for the purpose described.

2. The combination of a tank for containing

noxious matter, a contractile and expansible stench-reservoir, and communicating passages or openings, substantially as and for the purpose described.

3. The combination of a tank for containing noxious matter, and a contractile and expansible stench-reservoir, secured permanently and directly together, substantially as shown and described.

ALBERT W. JOHNSON.

Witnesses:

CHARLES R. WHEDON,
WM. A. WRIGHT.