

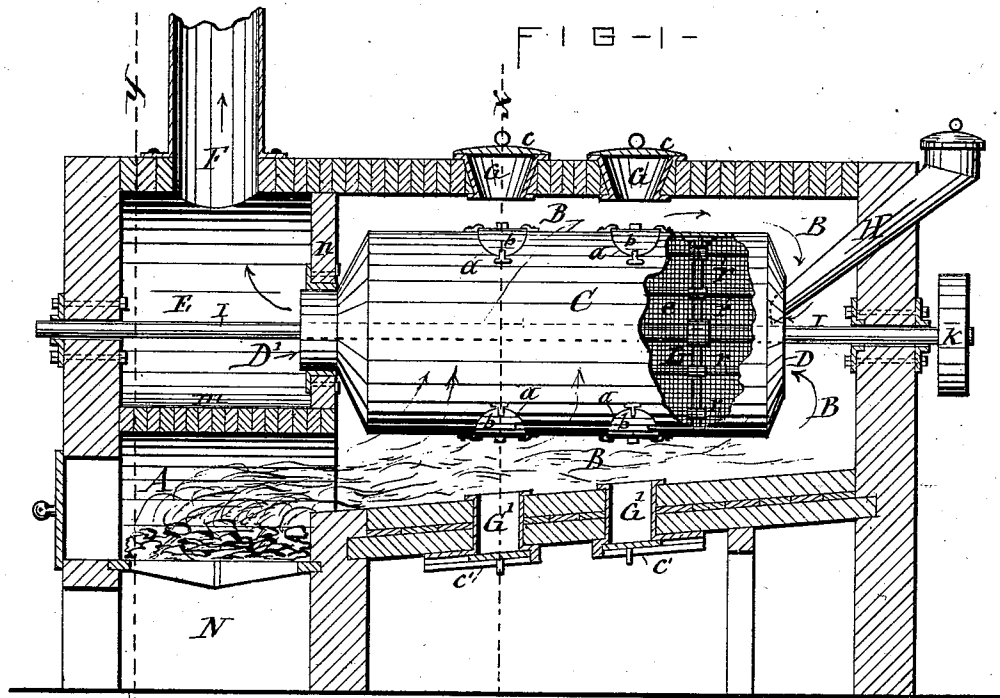
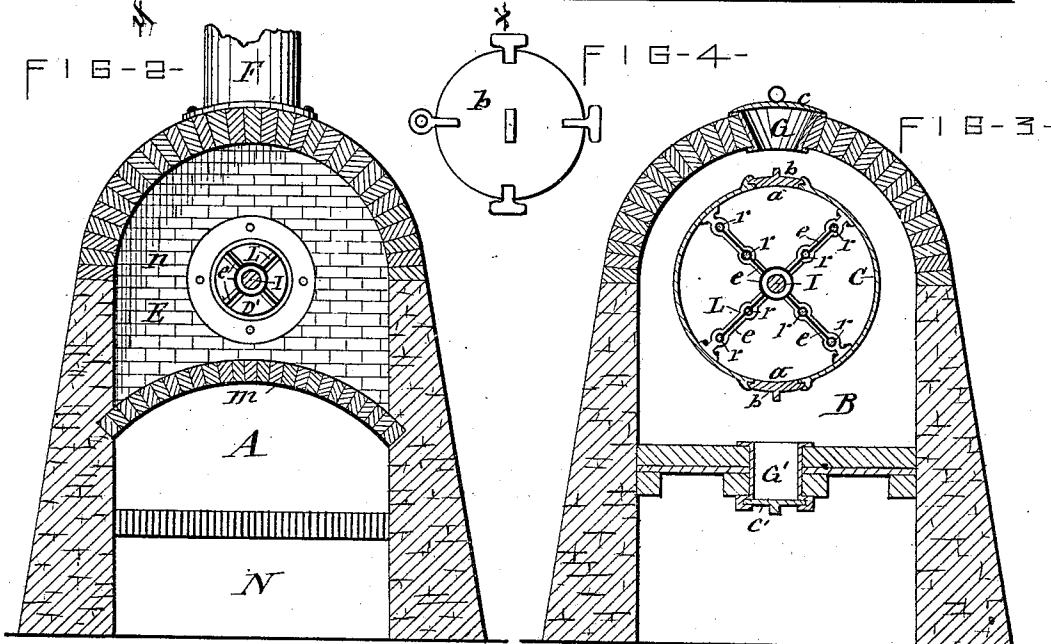
(No Model.)

H. BREER.

APPARATUS FOR DESICCATING ANIMAL MATTER FOR FERTILIZERS.

No. 255,925.

Patented Apr. 4, 1882.



WITNESSES =
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UNITED STATES PATENT OFFICE.

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APPARATUS FOR DESICCATING ANIMAL MATTER FOR FERTILIZERS.

SPECIFICATION forming part of Letters Patent No. 255,925, dated April 4, 1882.

Application filed February 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY BREER, of De Witt Centre, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Apparatus for Desiccating Animal Matter for Fertilizers, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

The purpose of this invention is to dry or desiccate meat and other animal matter derived from carcasses and designed for fertilizing purposes.

The invention consists in a novel construction and combination of a horizontal revolving cylinder arranged in the combustion-chamber of a furnace, and receiving through it the products of combustion, and provided with ports respectively for the introduction of the substance to be treated and for the delivery of the dried substance, and provided also internally with suitable means for separating and stirring the substance in process of drying or desiccating, all as hereinafter more fully described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a longitudinal vertical section of my invention. Fig. 2 is a transverse section on line *yy*; Fig. 3, a transverse section on line *xx*, and Fig. 4 a detail view of one of the covers of the cylinder-ports detached.

Similar letters of reference indicate corresponding parts.

A denotes a fire-arch or furnace with a sub-jacent ash-pot, N. B is a large combustion-chamber communicating with the furnace A; and E is the smoke-box, which is provided with the smoke-stack F, and is separated from the furnace and the combustion-chamber by an air-tight arch, *m*, and partitions *n*, as shown in Figs. 1 and 2 of the drawings.

Longitudinally through the combustion-chamber B and through the smoke-box E is extended a shaft, I, journaled in suitable bearings in the end walls of the apparatus, the outer end of said shaft being provided either with a pulley, K, or other suitable means for imparting thereto a rotary motion. Upon that

portion of the shaft I which is located in the combustion-chamber are rigidly secured two or more spiders, L, in the form of a hub having radial arms or spokes, to the end of which is attached an iron cylinder, C, which incloses the spiders and shaft and revolves with the frame. Said cylinder is extended from the partition *n* nearly the length of the combustion-chamber. The ends of the cylinder C are only partly closed to prevent the contained substance in process of drying from escaping from the cylinder while the same is in motion. A central opening, D, at the rear end of the cylinder admits the products of combustion from the combustion-chamber B. Another opening, D', in the center of the opposite end of the cylinder communicates with the smoke-box E, and allows the products of combustion to escape from the cylinder C to the said smoke-box and stack F. The side of the cylinder C is provided with ports *a a*, closed by removable covers *b b*, and in the top and bottom of the combustion-chamber B are openings G G' in range with the ports *a a*, and provided with removable covers *c c'*. The object of the upper holes, G, is to give access to the interior of the cylinder C, either for introducing or spreading the substance to be treated or cleaning or repairing the interior of the cylinder. The lower holes, G', are designed for receiving through them the contents of the cylinder, the ports *a* being for that purpose brought over the openings G'. The bulk of the substance to be treated is introduced through a spout, H, which passes through the rear of the combustion-chamber and partly enters the opening in the rear end of the cylinder. A removable cover applied to the outer end of the spout prevents the escape of the products of combustion through said spout.

A series of wire nettings, *e e*, are arranged radially from the shaft I to the circumference of the cylinder C and extended longitudinally from end to end of the cylinder, said nettings being secured to the shaft I and to longitudinal rods *r r*, connected to the spokes of the spiders before described. By the interposition of these wire nettings the substance un-

der treatment in the cylinder is constantly stirred and successively dashed against said wires during the rotation of the cylinder, thereby breaking up the lumps and spreading the said substance and preventing its becoming scorched.

Having described my invention, what I claim is—

1. The horizontal revolving cylinder C, having end-openings, D D', and provided with the ports *a* and covers *b* over said ports, in combination with the furnace A, combustion-chamber B, smoke box and stack E F, and openings G, provided with covers *c*, substantially as described and shown.

2. In combination with the furnace A, combustion-chamber B, and smoke-box E, the longitudinal revolving cylinder C, provided with ports *a* and covers *b*, the spout H, discharge-openings G', and covers *c'*, as described and shown.

3. In combination with the furnace A, combustion-chamber B, and smoke-box E, arranged as shown, the horizontal shaft I, provided with pulley or gear K, the spiders L, fixed to said shaft, the cylinder C, secured to the spiders and having end openings, D D', and ports *a*, with covers *b*, the rods *r*, radial wire-netting *e*, secured to said rods, and openings G G', with covers *c c'* in the combustion-chamber, all arranged as described and shown.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 23d day of January, 1882.

HENRY BREER. [L. S.]

Witnesses:

C. H. DUELL,
WM. C. RAYMOND.