

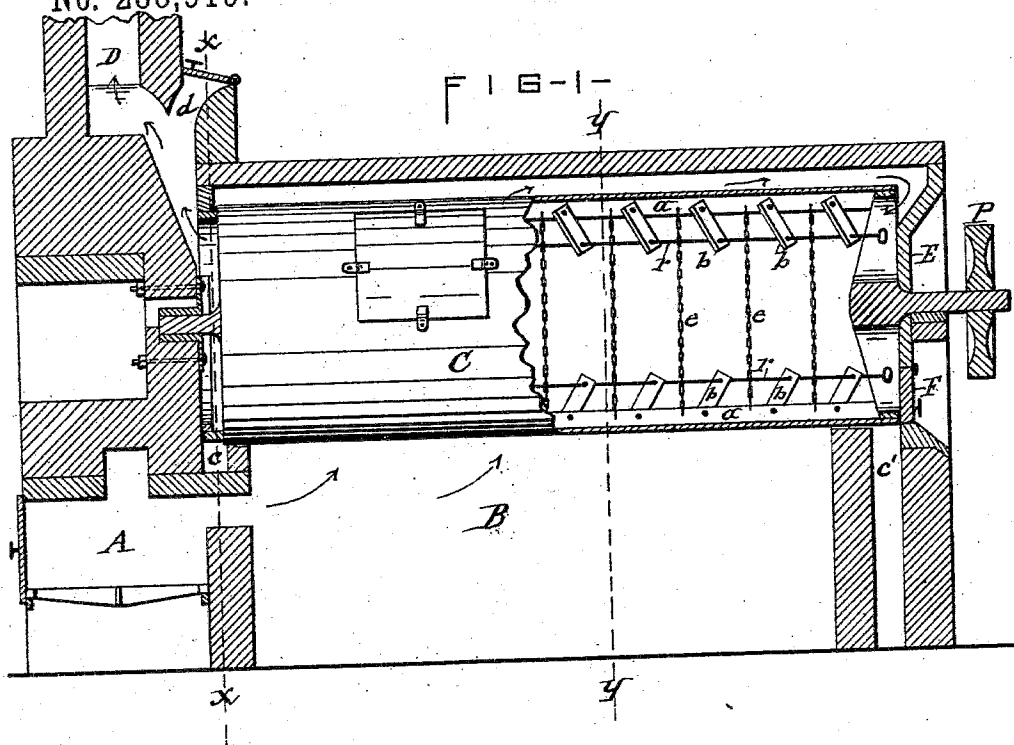
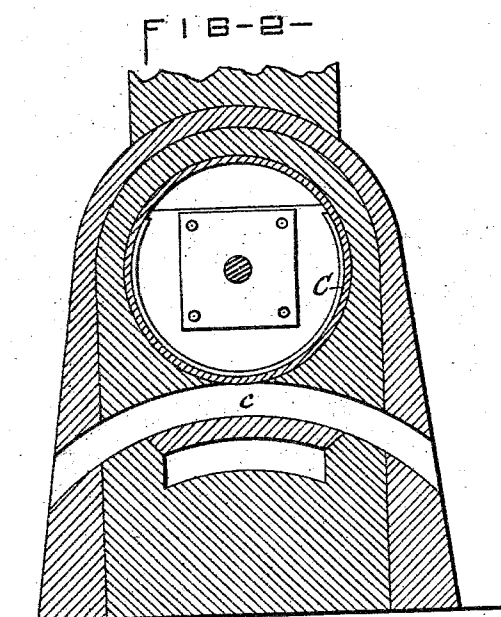
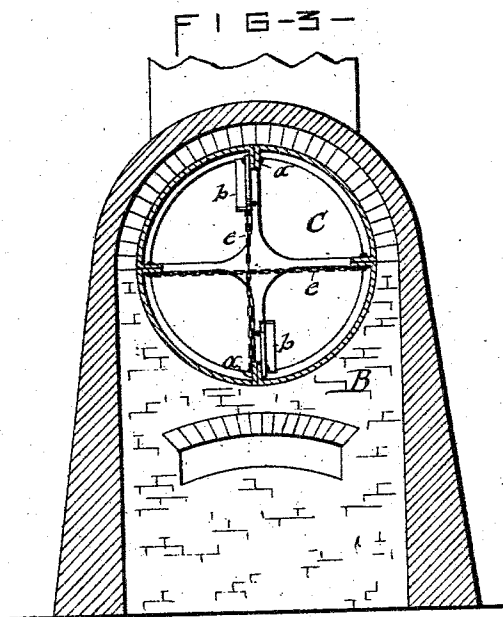
(No Model.)

H. BREER.

APPARATUS FOR DESICCATING FERTILIZERS.

Patented Nov. 20, 1883.

No. 288,919.



WITNESSES—
Wm. E. Raymond—
A. Laane—

INVENTOR—
Henry Breer—
per Wm. Laane & Co.
his Atty.

UNITED STATES PATENT OFFICE.

HENRY BREER, OF DE WITT, NEW YORK, ASSIGNOR TO CAROLINE H. BREER,
OF SAME PLACE.

APPARATUS FOR DESICCATING FERTILIZERS.

SPECIFICATION forming part of Letters Patent No. 288,919, dated November 20, 1883.

Application filed September 1, 1883. (No model.)

To all whom it may concern:

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

This invention relates to the class of desiccating apparatus for which I have obtained Letters Patent of the United States, No. 255,925, and is designed more particularly as a further improvement on the construction shown in the pending application, filed March 9, 1883.

The object of my present invention is to facilitate the movement of the substance under treatment toward the gate or discharge-door at the end of the desiccating-cylinder, and also to collect and carry off such liquid as may leak from the ends of the desiccating-cylinder; and to that end my invention consists in the combination, with the rotary desiccating-cylinder, of the devices hereinafter fully described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a longitudinal vertical section of a desiccating apparatus provided with my improvements, a portion of the desiccating-cylinder being broken away to illustrate the devices connected to the interior thereof; and Figs. 2 and 3 are vertical transverse sections taken, respectively, on lines *x x* and *y y* in Fig. 1.

Similar letters of reference indicate corresponding parts.

A represents the furnace or fire arch of the apparatus. B is an elongated combustion-chamber communicating with the fire-arch, and C denotes the rotary desiccating-cylinder extended the length of the combustion-chamber and journaled in suitable boxes in the end walls of said chamber, the combustion-chamber being built around the cylinder C, so as to completely inclose the same and have a space between them for the circulation of the products of combustion, which are caused to enter the cylinder at the upper part of the farther end thereof and escape to the chimney D at the front end of the apparatus, as indicated by arrows in Fig. 1 of the drawings. A plate, E, secured to the end wall of the combustion-chamber,

closes the greater portion of the rear or farther end of the cylinder C, and forms the necessary inlet for the products of combustion at the upper portion of said cylinder. The lower portion of the plate E is constructed with a door, F, through which to discharge the contents of the cylinder. A chute, *d*, is provided at opposite end of the cylinder for introducing thereto the animal matter to be desiccated. A pulley or gear-wheel, P, attached to the outer end of the trunnion or axle of the cylinder, and connected with a suitable motor, imparts rotary motion to the cylinder C, while the contents thereof are subjected to the heat of the products of combustion impinging upon the exterior of the cylinder and circulating through the interior of the same. Chains *ee*, extended across the interior of the cylinder, serve to thoroughly agitate and break up the animal matter during the process of desiccating. The cylinder C is constructed of boiler-iron or stout sheet metal, and with longitudinal flanges *a a*, to which the chains *ee* are attached.

b b represent scoops, in the form of pieces of angle-iron, pivoted at the ends of one of their sides to the flanges *a*, so as to project radially from the cylinder-shell. Each set of said scoops is connected at the free ends thereof by a rod, *r*, which is extended to the end of the cylinder, so as to be accessible through the door F. By means of said rod the scoops *b b* can be swung into any desired angle of inclination, and thus cause them to cast the animal matter with greater or less force toward the discharge end or door F of the cylinder C, and thus remove the contents of the cylinder as rapidly as it becomes desiccated.

In order to maintain the surroundings of the desiccating apparatus dry and clean, I form in the end walls of the combustion-chamber B two channels, *cc*, respectively under the two ends of the cylinder C, so as to collect the leakage therefrom, said channels being extended through the side wall, where suitable provision can readily be made for taking care of said leakage.

Having described my improvements, what I claim is—

1. In combination with the rotary cylinder, scoops hinged to the inner periphery of said

cylinder, and adjusting-rods connected to said scoops, for regulating the inclination thereof, substantially as specified.

2. The combination, with the rotary cylinder C, of the longitudinal flanges *a*, angle-irons *b*, pivoted at the end of one of their sides on the flange *a*, and the rod *r*, connected to the free ends of the angle-irons, substantially as described and shown.

10 3. In combination with the rotary cylinder C, the channels *c c'*, arranged under the ends

of the cylinder, substantially as and for the purpose set forth.

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 August, 1883.

HENRY BREER. [L. S.]

Witnesses:

FREDERICK H. GIBBS,
WILLIAM CHANDLER RAYMOND.