

(No Model.)

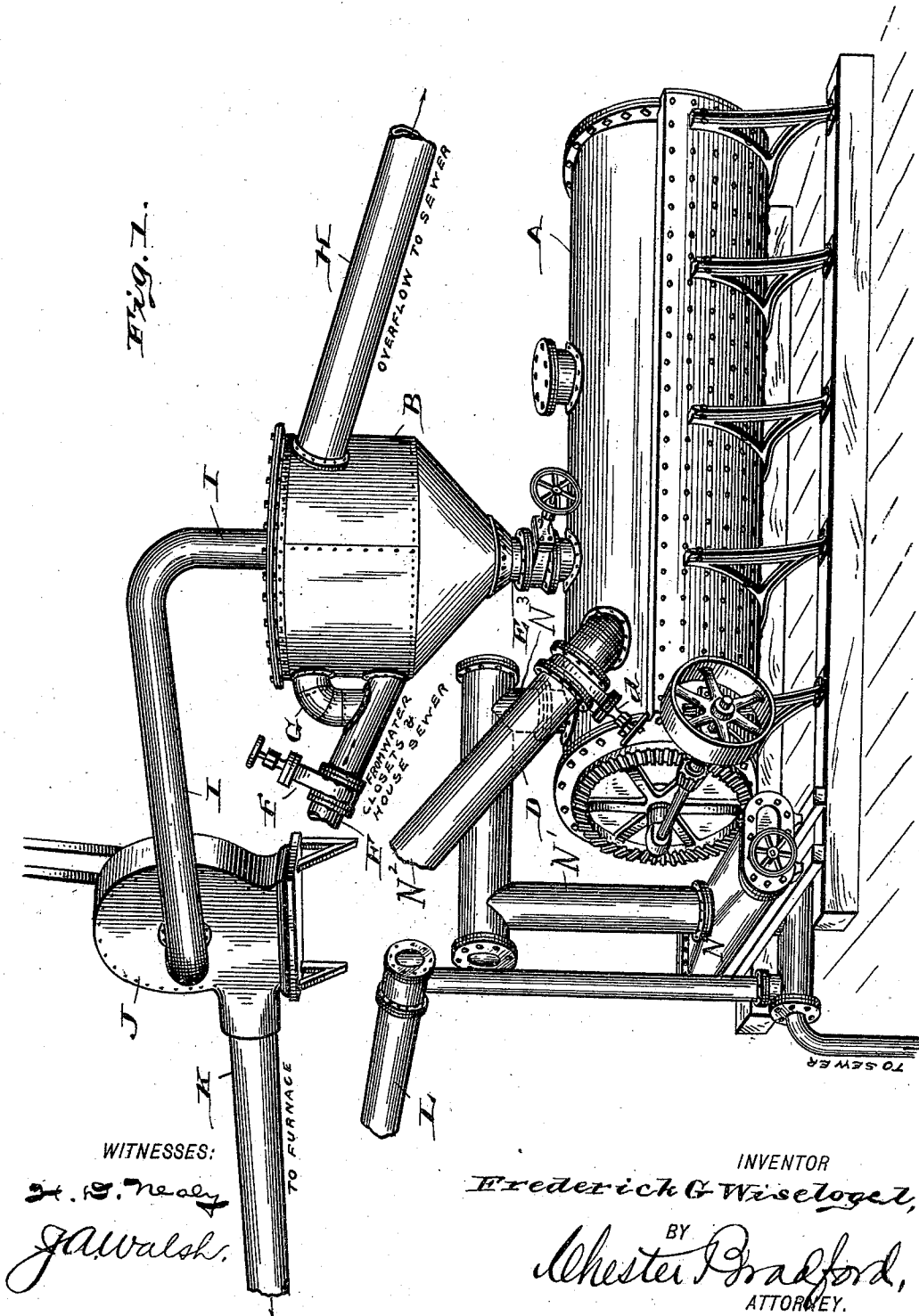
2 Sheets—Sheet 1.

F. G. WISELOGEL.

APPARATUS FOR REDUCING GARBAGE FOR FERTILIZERS.

No. 554,206.

Patented Feb. 4, 1896.



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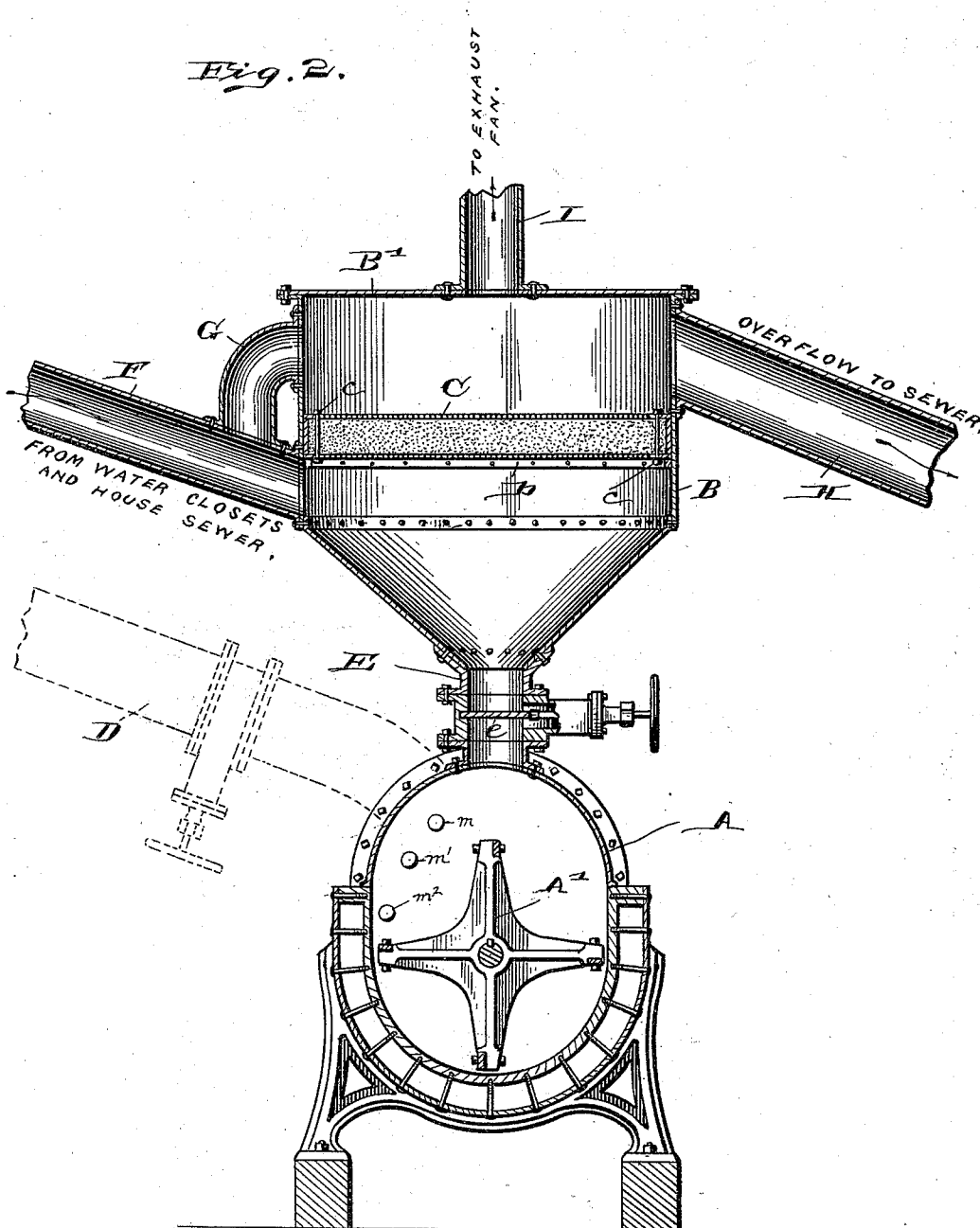
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WITNESSES:

H. S. Neely,
J. Jawalok,

INVENTOR

Frederick G. Wiselugel,
BY
Chester Bradford,
ATTORNEY.

UNITED STATES PATENT OFFICE.

FREDERICK G. WISELOGEL, OF INDIANAPOLIS, INDIANA.

APPARATUS FOR REDUCING GARBAGE FOR FERTILIZERS.

SPECIFICATION forming part of Letters Patent No. 554,206, dated February 4, 1896.

Application filed February 2, 1895. Serial No. 537,123. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK G. WISELOGEL, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Systems and Apparatus for the Reduction of Garbage, Sewage Matter, &c., of which the following is a specification.

My said invention relates to an improved system and apparatus for the sanitary reduction of garbage, night-soil, sewage matter, waste, &c., from cities, towns, hospitals, prisons, camps, &c.; and it consists in the apparatus therefor, which will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a perspective view illustrating my improved apparatus connected and in position for use, and Fig. 2 a vertical sectional view of those portions in which the most novelty resides.

Briefly speaking, the apparatus involved consists of a drier A, which forms the subject-matter of my Letters Patent, No. 536,677, dated April 2, 1895, a receiving-tank B containing a filtering-partition C, and various pipes, D, E, F, G, H and I, leading to the drier and to and from the tank, with suitable valves in certain of said pipes, and, preferably, a fan J and a pipe K leading therefrom to a suitable furnace. (Not shown.)

The construction is simple, and will be readily understood upon a mere inspection of the drawings.

The use and operation of the apparatus are as follows: Assuming that the apparatus is employed, for instance, in connection with a hospital or prison, the swill and garbage for a certain period, coming from the culinary department, is run directly into the drier A from the pipe D, which connects with the sinks or garbage-receptacles in said culinary department, the valve *d* meantime being open, and the valve *e* in the pipe E leading from the tank B being closed. The matter so discharged into the drier (which is, for the time being, also a separator) is subjected to heat, and all the grease in such garbage rises to the top of the mass under the influ-

ence of such heat, aided by the operation of the stirrer A', which is continually revolving in the drier, as fully explained in my above-mentioned patent. Meantime the night-soil and sewage matter from the water-closets, &c., is being discharged into the tank B through the pipe F, together, of course, with a considerable amount of water. The direct discharge is into the lower portion of said tank, below the filtering-partition C. The solid matter settles to the bottom, while the water raises through said filtering-partition to the upper part of the tank, whence it runs off to the sewer through the pipe H. Should the discharge down the pipe F be greater than the capacity of the filter to properly separate, the water will rise through the by-path pipe G, which is connected to the pipe F, and pass thence directly into the upper portion of the tank B, and thence through the pipe H to the sewer, but this by-path will not carry off the solid matter, which will, as before, be discharged into the bottom of the tank B and settle into the space immediately above the valve *e*. At the end of the predetermined period the valve *d* is closed, the grease is drawn off from the drier A through the appropriate one of the series of faucets *m'*, *m''*, or *m'''*, (indicated by dotted lines in Fig. 2,) or by any of the common and well-known means found suitable and desirable for the purpose, or so much thereof as can be economically secured and carried away to be refined and used for soap-grease or some such purpose.

The water has been largely evaporated under the action of the drier. A valve *f* in the pipe F is then closed and the valve *e* opened, permitting the solid matter which has accumulated in the tank B to be discharged through the pipe E into the drier among the garbage already accumulated therein. The valve *e* is then closed, and the mass of garbage, &c., being subjected to an intense heat, and being continually stirred by the stirrer A' without any fresh supply of liquid matter, is soon thoroughly dried, after which it is removed from the drier and taken away and converted into fertilizers, while a fresh charge is introduced and the operation repeated. The noxious vapors and gases are drawn away through the pipe I to the fan J, and thence blown off

through the pipe K to the furnace. (Not shown.) Those from the drier itself are drawn off to the same furnace from the pipe L through the pump N and pipes N', N², and N³, connecting said pump with the top of said drier.

The tank B, as shown, is hopper-shaped at its lower end, and is connected to the drier by the pipe E in which the valve *e* is situated. The filtering-partition C is composed of two plates having a band or rim between their edges which fits inside the body of the tank and rests on a rim *b* provided for the purpose. The two sides are held together by the bolts *c*. When the cover B' of the tank is removed, it is obvious that this filtering-partition can be lifted out and cleaned, repaired, or renewed without difficulty.

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

1. The combination, in an apparatus for treating garbage, night-soil, &c., of a drier, a receiving-tank, a pipe connected to said drier through which the garbage is discharged therein, a valve in said pipe, a pipe connecting the tank and the drier through which night-soil, &c., may be discharged into said drier from said tank, a valve in said pipe, and a pipe connected with said tank through which the sewage matter is discharged therein, said several parts being arranged and operating substantially as set forth, whereby the garbage may be first partially treated and grease extracted therefrom, and then, together with the solid sewage matter, reduced to a dry state, substantially as described.

2. The combination, in an apparatus for treating garbage, night-soil, &c., of a drier, a

tank mounted thereon, a valve between the drier and the tank, a pipe leading from water-closets, &c., into said tank below a filtering-partition therein, said filtering-partition, and an overflow-pipe leading from above said filtering-partition, said several parts being arranged and operating substantially as set forth.

3. The combination, in an apparatus for treating night-soil, garbage, &c., of a receiving-tank having a discharging-pipe with a valve therein, a filtering-partition in said tank, a pipe leading from the water-closets or other source of supply to below said filtering-partition, a by-path leading from the upper side of said pipe to above said filtering-partition in said tank, and an overflow-pipe leading from above said filtering-partition to the sewer, substantially as shown and described.

4. The combination, in an apparatus for treating night-soil, garbage, &c., of a receiving-tank, a filtering-partition in said tank, a pipe leading into said tank below said filtering-partition, an overflow leading from above said filtering-partition to a sewer, and a pipe leading from the top of said tank to an exhaust-fan, and a pipe leading therefrom to a furnace whereby the noxious gases, vapors, &c., can be drawn from said tank and driven into said furnace and consumed, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 30th day of January, A. D. 1895.

FREDERICK G. WISELOGEL. [L. S.]

Witnesses:

JAMES A. WALSH,
H. D. NEALY.