W. E. WRIGHT.

Peat-Kiln.

No. 161,466. Patented March 30, 1875.

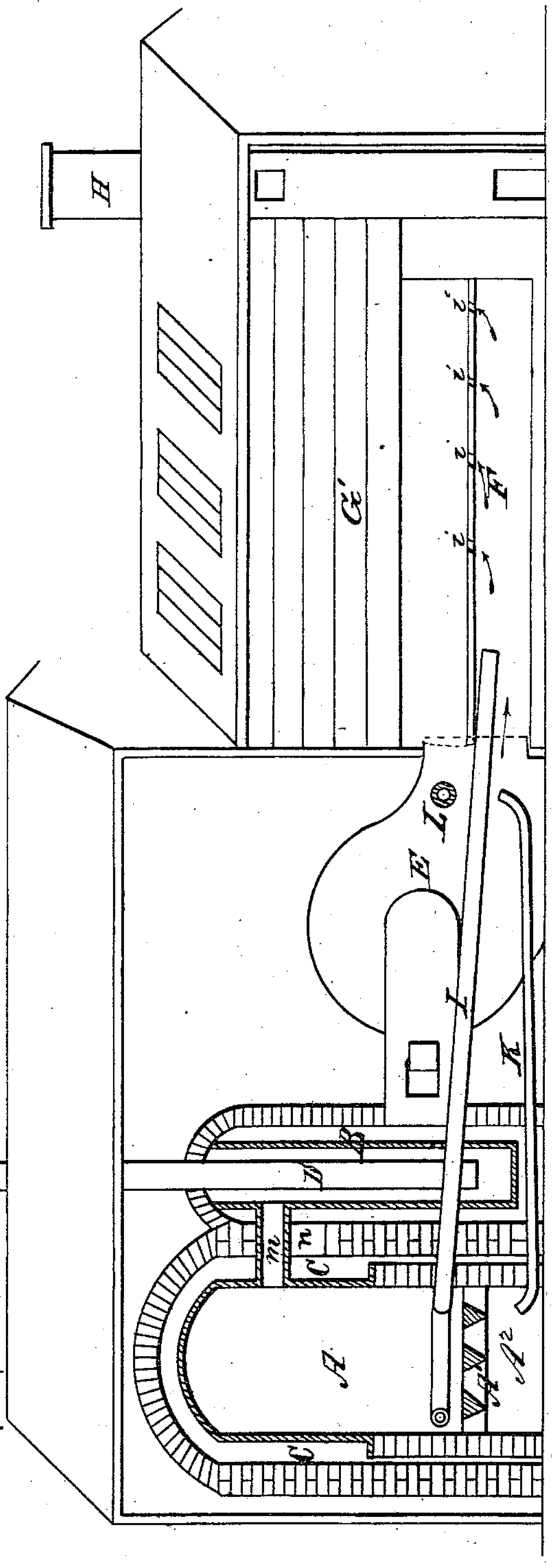

Fig. 2

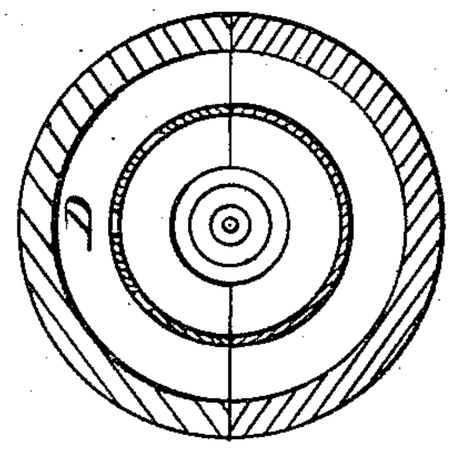

Fig. 3

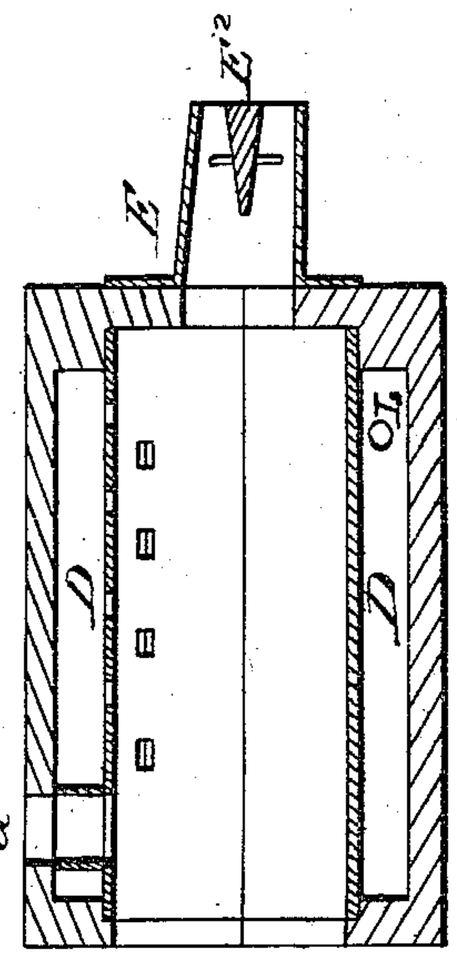

Fig. 1

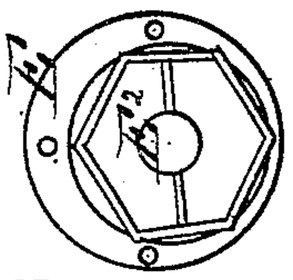

Fig. 4

WITNESSES

E. H. Bates

F. J. Masi

INVENTOR

W. E. Wright

Chipman & Fosmer & Co

Attorneys

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

WILLIAM E. WRIGHT, OF ROME, NEW YORK.

IMPROVEMENT IN PEAT-KILNS.

Specification forming part of Letters Patent No. **161,466**, dated March 30, 1875; application filed August 29, 1874.

To all whom it may concern:

Be it known that I, WILLIAM E. WRIGHT, of Rome, in the county of Oneida and State of New York, have invented a new and valuable Improvement in Peat-Kilns; and I do hereby declare that the following is a full, clear and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a detail view of my peat-kiln. Fig. 2 is a vertical sectional view. Figs. 3 and 4 are detail views of the same.

This invention relates to certain novel improvements on the drier for which Letters Patent were granted to me bearing date on the 23d day of July, 1872, wherein an apparatus was shown for drying peat and other substances, consisting of an air-heating furnace, an exhausting and injecting fan, a distributing-chamber, a drying-chamber, and an ejecting-flue.

The nature of my present invention consists in a double-wall drier, combined with rotating knives, and having the upper portion of its inner wall thickly perforated, whereby the peat can be subjected to dry heated air during the process of disintegrating it. It also consists in an angular outlet for the peat, having an isolated core in it, for the purpose of forming a hole in the stream of peat as it is expelled from the drier, thereby exposing a large surface of the peat for the action of heated air in the subsequent drying process, and allowing the center of the tubular pieces of peat to be dried equally with the exterior.

In the annexed drawings, Fig. 1 designates that portion of the apparatus in which the peat is thoroughly disintegrated, and at the same time subjected to the first drying process. This apparatus consists of two cylindrical walls, inclosing a space, D, into which heated air is forced by means of a fan or forcing-engine, the air being drawn from a hot-air reservoir, C, Fig. 2. Inside of this apparatus, Fig. 1, revolving knives or other suitable disintegrating instruments are placed, and as they operate on the peat hot air is admitted through perforations made through the upper half of the inner wall, the hot air being introduced between the walls in any convenient manner. The peat is thus subjected to the primary drying while it is being disintegrated and thoroughly stirred. G, Fig. 1, designates the passage through which the peat is supplied inside of the disintegrating-chamber, and E, Fig. 1, designates the discharge-nozzle, which is made tapering and angular, and in the center of which is a core, E^2, which will form a hole in the center of the stream of peat as it is forcibly expelled from the apparatus. The tapered shape of the nozzle will condense the peat during its expulsion.

The peat thus treated is ready for the second and final process of drying, which is performed in a chamber, G′, Fig. 2, upon frames or belts of wire-cloth, substantially as described in my Letters Patent above referred to. This chamber G′ has an outlet-flue, H, for the warm air saturated with moisture, and it communicates with a fan-case, E, Fig. 2, which case also communicates with the hot-air reservoir C, Fig. 2. The air admitted into the reservoir C, Fig. 2, is heated and forced by a fan in case E into the drying-chamber through inlets *i i*. A, Fig. 2, designates the furnace, having a grate, A^1, and an ash-pit, A^2, and communicating with a smoke-chamber, B, by means of a horizontal pipe, *m*, from which chamber the products of combustion are carried off by means of a pipe, D, Fig. 2. The furnace A is partly surrounded by the space C, which forms a hot-air reservoir, and communicates with a space surrounding chamber B by means of a passage, *n*, through which pipe *m* is carried. I am thus able to heat the air before it is forced into the drying-chamber without mixing with this heated air, smoke, and sparks. I designates an iron pipe, which is placed in the furnace A, into which pipe exhaust or waste steam is discharged from the steam-chest of the engine used to run the disintegrators in Fig. 1. This pipe I may also lead from the boiler direct. K designates a pipe to convey air from a blower into the ash-pit of furnace A, in order to give draft to the fire, and complete combustion. L designates an outlet from the fan-case E, for conveying hot air into the double-wall drier and disinte-

grator, Fig. 1. F designates a distributing-chamber, into which the hot air is forced by the exhausting and injecting fan in case E before this air is distributed through perforations *i i* into the drying-chamber G′.

I shall heat the feed-water for my steam-boiler by means of a pipe-coil arranged in the flue or chimney D.

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a drier for a peat-kiln, a cone, E^2, centrally arranged in its outlet E, for the purpose herein described.

2. The double-wall drier, having the upper portion of its inner wall D perforated, the angular outlet E, and the isolated cone E^2, all combined and arranged substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM ELY WRIGHT.

Witnesses:
SAMUEL ALAND,
M. D. BARNETT.