

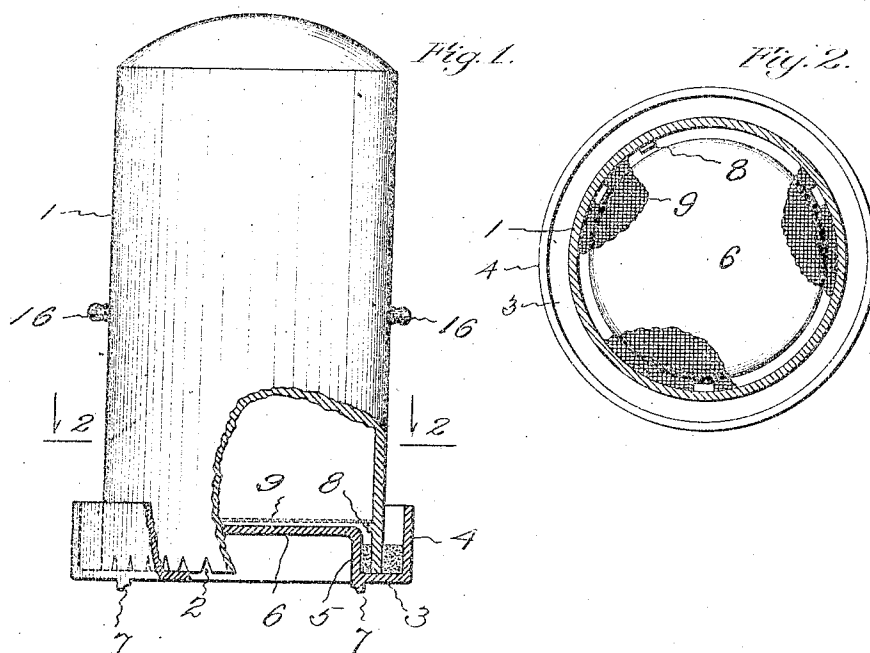
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COKING OVEN.

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Witnesses.

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UNITED STATES PATENT OFFICE.

HORACE J. WICKHAM, OF MANCHESTER, AND FREDERICK C. ROCKWELL
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COKING-OVEN.

No. 827,767.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, HORACE J. WICKHAM, residing at Manchester, and FREDERICK C. ROCKWELL and WILBUR L. SHEPARD, residing at Hartford, in the county of Hartford and State of Connecticut, citizens of the United States, have invented a new and useful Coking-Oven, of which the following is a specification.

This invention relates to an oven which is designed to hold blocks of peat while being baked and transformed into coke.

The object of the invention is to provide an oven which will hold a large quantity of peat and which can be sealed very easily, so that gases evolved by the process of coking can flow out and relieve the interior pressure, but flames or gases of combustion emitted from the furnace cannot enter the oven.

The oven shown in the drawings for the purpose of illustrating the invention has a chamber for receiving the blocks of peat to be coked and a base which supports the lower end of the chamber and contains fine sand or the like granular heat-resisting substance, which seals the chamber, as more particularly hereinafter described, and pointed out in the claims.

Figure 1 of the accompanying drawings shows a side elevation, with part broken away, of a vertical coking-oven which embodies the invention. Fig. 2 shows a horizontal section on the plane indicated by the line 2 2 on Fig. 1.

In the design illustrated the chamber in which the compressed blocks of peat are placed is formed of a cast-iron cylinder 1, that has a closed dome-shaped top. The lower end of the cylinder is open, and preferably the edge has notches 2, which will permit the passage of gas from the interior when the oven is being used. This cylinder, which may have any desired cross-sectional shape and may be any required size, may be made of other material than cast-iron and the top may be formed integral or attached to the cylinder, as convenient.

The base which is shown for this cylinder is preferably formed of cast-iron, and it has a flat bottom 3, upon which the lower edge of the cylinder rests, an exterior side wall 4, which encircles the outside of the lower end of the cylinder, an interior side wall 5, which extends around the inside of the lower end of

the cylinder, and a tight reëntrant bottom 6. Ribs 7 are preferably formed on the under side of the base for guiding the oven when it is moved into the furnace. The base may be formed of other material than cast-iron, if desired.

On the interior wall of the cylinder are inwardly-projecting lugs 8, and resting on these lugs is a grating 9, preferably made of interwoven wire, although it may be made of other material, if desired. The cylinder may have outwardly-extending lugs 16 for lifting it and turning it over.

Peat which has been pressed into blocks of the desired shape and size is packed into the cylinder, and after it has been filled and the grating placed in position the cylinder is turned over and set with its lower edge in the trough formed by the side walls of the base. When this is in position, sand or a similar granular heat-resisting substance is packed in the trough about the lower edge of the cylinder, so as to seal the joint. If the trough is filled with sand first, the cylinder is rotated a little, so as to work its lower edge down into the sand.

In practice a number of these ovens after being filled with peat are placed in a furnace and subjected to the action of a hot fire for approximately two hours. The heat from the fire passes up into the reëntrant bottom of the base and around the sides of the cylinder, and the gases which are generated in the interior and are forced out through the sand take fire, and the combustion of these gases also aids in heating the oven and coking the peat.

In these ovens the gases generated by heating the peat when under sufficient pressure will percolate through the sand seal and escape; but air from the outside or the flames or products of combustion cannot enter the cylinder containing the peat.

By the use of these very simple ovens sealed in this manner the product—that is, the coked peat—which is produced is very uniform and satisfactory. The desirable qualities which render the coked peat readily ignitable and which keep the blocks firm, so that they can be handled, are not impaired.

The invention claimed is—

1. A coking-oven consisting of a cylindrical peat-receiving chamber having one

end closed and the other end open, and a base receiving the open end of the peat-chamber, said base having an exterior wall that encircles the outside of the lower end of the cylinder, an interior wall that extends around the interior of the lower end of the cylinder, and a reëntrant bottom, substantially as specified.

2. A coking-oven consisting of a cylindrical peat-receiving chamber having one end closed and the other end open, a screen extending across the chamber near the open end, and a base receiving the open end of the peat-chamber, said base having an exterior wall that encircles the outside of the lower end of the cylinder, and an interior wall that extends around the interior of the lower end of the cylinder, substantially as specified.

3. A coking-oven consisting of a cylindrical peat-receiving chamber having one end closed and the other end open, a screen extending across the chamber near the open end, and a base receiving the open end of the peat-chamber, said base having an exterior wall that encircles the outside of the lower end of the cylinder, an interior wall that extends around the interior of the lower end of the cylinder, and a reëntrant bottom, substantially as specified.

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