

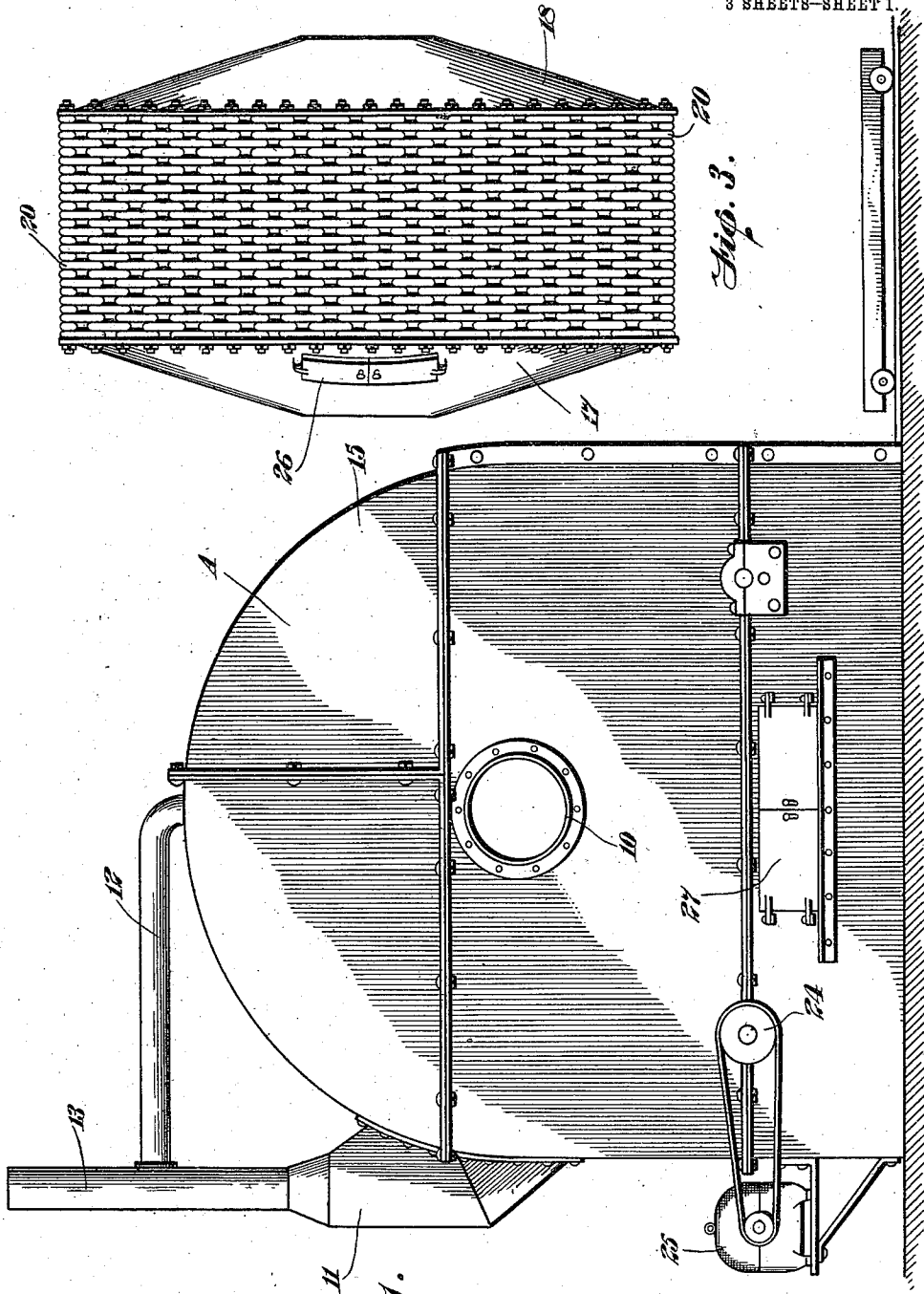
P. I. BOIS.
INCINERATOR.

APPLICATION FILED FEB. 7, 1910.

984,646.

Patented Feb. 21, 1911.

3 SHEETS—SHEET 1.



WITNESSES,
J. H. *[Signature]*
Russell Smart

Fig. 1.

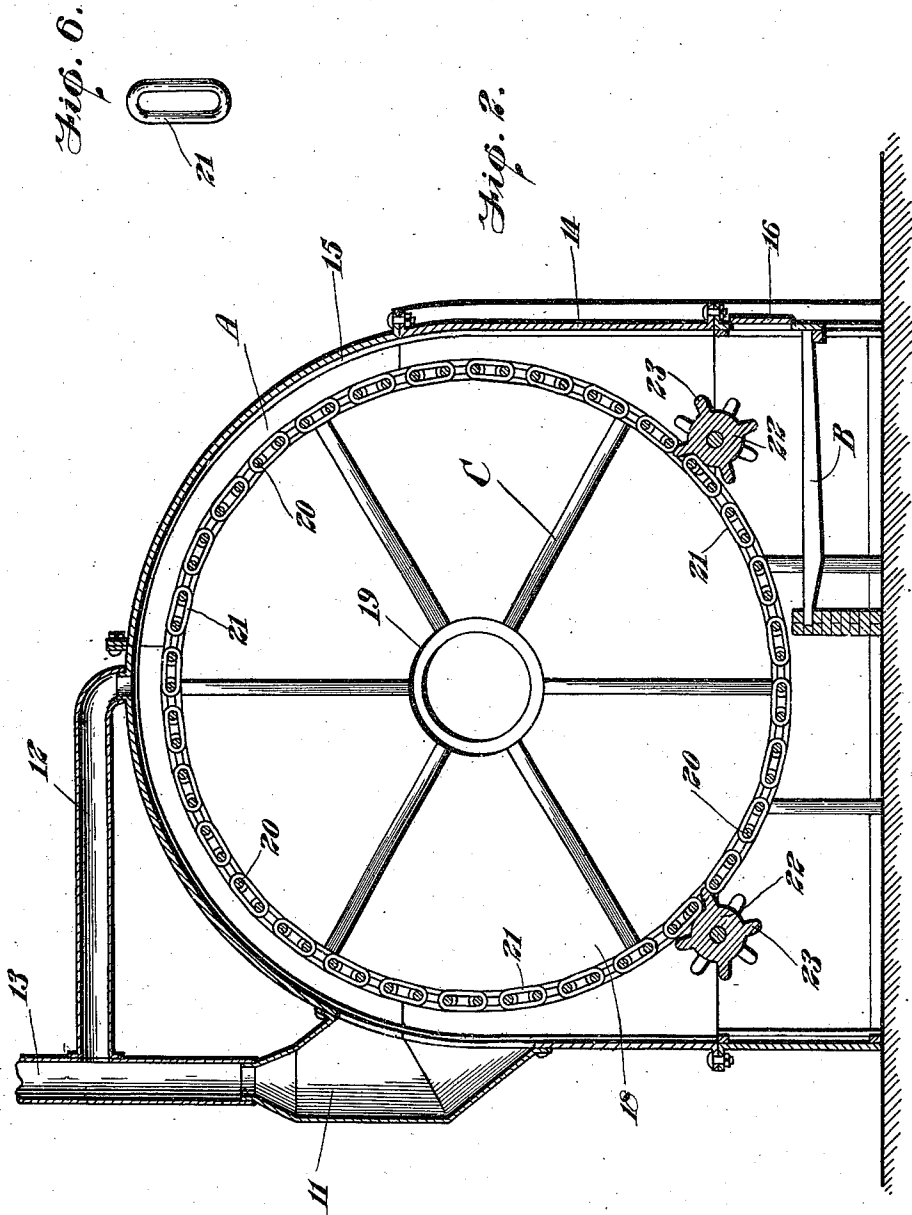
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

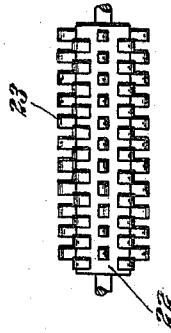


Fig. 5.

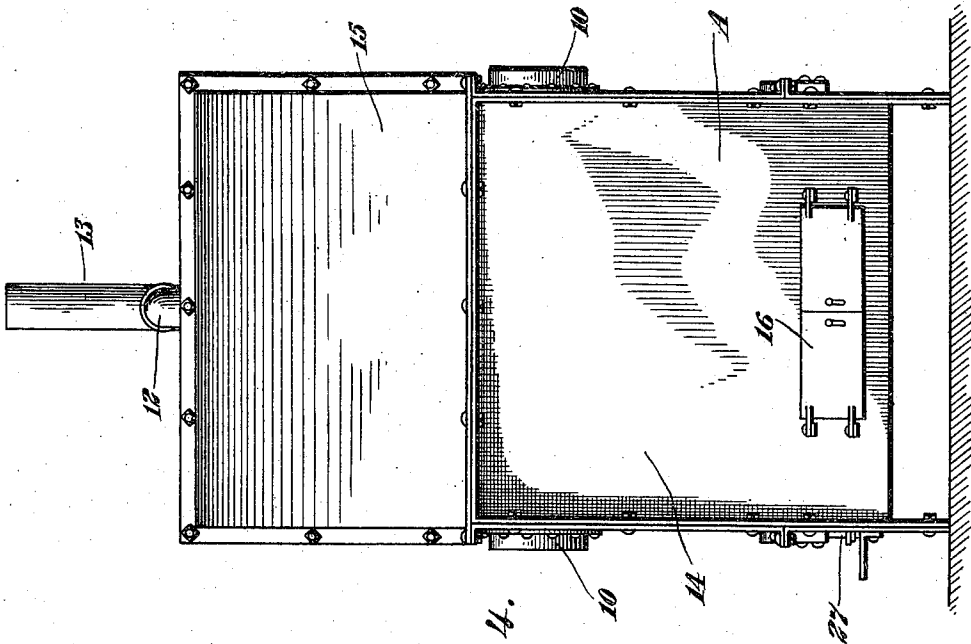


Fig. 4.

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UNITED STATES PATENT OFFICE.

PIERRE ISIDORE BOIS, OF OTTAWA, ONTARIO, CANADA.

INCINERATOR.

984,646.

Specification of Letters Patent.

Patented Feb. 21, 1911.

Application filed February 7, 1910. Serial No. 542,614.

To all whom it may concern:

Be it known that I, PIERRE ISIDORE BOIS, of the city of Ottawa, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Incinerators, of which the following is a specification.

My invention relates to improvements in incinerators for burning refuse and the like, and the objects of my invention are to provide an incinerator of simple construction and few parts, which will be easy to clean and effective in operation.

Further objects are to provide simple means for driving and cleaning the periphery of the rotating incinerating drum carrying the refuse.

In its construction the invention includes a casing having means for heating the same, a rotary drum within the casing having the periphery formed by chain links supported on transverse bars, and cleaning members for the drum comprising cylindrical members having teeth adapted to fit between the links, all as hereinafter more fully set forth and described in detail in the accompanying specification and drawings.

In the drawings: Figure 1 is a side elevation of the incinerator. Fig. 2 is a longitudinal section through the same. Fig. 3 is an elevation of the drum. Fig. 4 is a front view of the incinerator. Fig. 5 is a detail of one of the driving members. Fig. 6 is a detail in plan of one of the links forming the periphery of the drum.

In the drawings like characters of reference indicate corresponding parts in each figure.

Referring to the drawings, A represents the casing of suitable form to inclose the incinerating drum and provided on opposite sides with apertures 10 through which the refuse and the like may be introduced into the drum in the interior. The casing is also provided with smoke and gas outlet conduits 11 and 12 leading through the side and top, respectively, and joining a common flue 13.

To permit the ready removal of the drum from the interior, the front portion 14 and half of the top portion 15 are made removable, this being accomplished in the embodiment illustrated by bolting said sections to the remaining sections of the casing.

Suitable means are provided for producing the requisite amount of heat within the casing to effect the destruction of the refuse. In the embodiment illustrated a grate B is

provided opposite a suitable charging door 16 in the casing, the products of combustion and heated gases from the grate being adapted to rise through the incinerating drum C within the casing to the outlet conduits 11 and 12.

The drum C, in accordance with the present invention is formed with frusto conical side members 17 and 18 having central apertures 19 through which the refuse may be introduced and being connected at the peripheries by crossbars 20 which are connected by series of links 21, thereby, providing a plurality of openings in the periphery through which the heated gases and products of combustion may have access to the interior of the drum.

The drum is supported on two cylindrical members 22 which are provided with teeth 23 adapted to fit between the links on the drum and so clean out the openings. One or both of these members, is utilized to drive the drum slowly during the heating thereof. In the embodiment illustrated one of the members has a pulley 24 thereon which is belted to a suitable motor 25.

To permit the cleaning out of any incombustible matter from the drum, a door 26 is provided near the periphery adapted to register with a corresponding door 27 provided in the side of the casing.

In the operation of the incinerator, the refuse or the like to be destroyed, is dumped through the apertures 10 in the casing and through the openings 19 in the drum into the interior. A fire is built on the grate B and the drum is gradually rotated, the continuous heat and motion quickly destroying the refuse and the gases passing out through the flue 13.

To clean out any incombustible material, the same may be withdrawn through the door 27, and if it is necessary to remove the drum as a whole, the front part of the casing may be removed and the drum may be rolled forwardly.

It will be observed that the products of combustion from the fire on the grate B pass transversely through the drum, flowing through the conduits 11 and 12, thus insuring that the products of combustion contact with substantially all the material in the drum.

As many changes could be made in the above construction, and many apparently widely different embodiments of my inven-

tion within the scope of the claims could be made without departing from the spirit or scope thereof, it is intended that all matter contained in the accompanying specification and drawings, shall be interpreted as illustrative and not in a limiting sense.

It will be noted that the perforated drum forms means for sifting and separating the constituents of the materials placed in it and it might, without heating, be used as an ash sifter or polisher or for any use where it is desired to separate or sift solid articles from powder or the like.

It will be understood that the retention of the steam in the upper portion of the casing is temporary only, as the steam will pass through the conduit 12. The greater draft, however, is through the conduit 11, and consequently the top of the casing will be more or less quiescent.

What I claim as my invention is:

1. An incinerator comprising in combination a drum formed with frusto conical side members connected at the periphery by transverse crossbars and chain links connecting the crossbars, a casing inclosing the drum having a flue leading therefrom, a cylindrical member journaled in the casing and being adapted to support the drum and having teeth entering the spaces between the links, means for driving said cylindrical member and a grate in the casing beneath the drum.

2. An incinerator comprising a drum having a chain periphery and a side with an aperture for the introduction of refuse, a casing completely inclosing the drum and having an aperture adapted to register with the aperture in the side of the drum, cylindrical members journaled in the casing and supporting the drum, one of which has teeth adapted to enter the spaces between the chain links on the periphery of the drum, means for driving one of said cylindrical members, a grate in the casing and means

for causing the products of combustion therein to flow through the drum.

3. An incinerator comprising a drum having a chain periphery and a side with an aperture for the introduction of refuse, a casing completely inclosing the drum and having an aperture adapted to register with the aperture in the side of the drum, cylindrical members journaled in the casing and supporting the drum, one of which has teeth adapted to enter the spaces between the chain links on the periphery of the drum, means for driving one of said cylindrical members, a grate in the casing, and separate conduits for the products of combustion leading from the side and top of the casing.

4. An incinerator comprising a drum having a chain periphery, means for introducing material into the drum, a casing inclosing the drum, cylindrical members journaled in the casing and supporting the drum, one of which cylindrical members has teeth adapted to enter the spaces between the chain links on the periphery of the drum, means for driving one of the cylindrical members, an outlet flue leading from the side of the casing below the top, whereby, the upper part of said casing will form a temporary retainer for the steam and gases in which they may commingle and combine prior to passing out of the flue, means for rotating the drum, and a grate in the casing below a portion of the periphery of the drum, the products of combustion of the fire on the grate being adapted to pass through the drum.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

PIERRE ISIDORE BOIS.

Witnesses:

RUSSEL S. SMART,
M. GILBERTSON.