

No. 669,054.

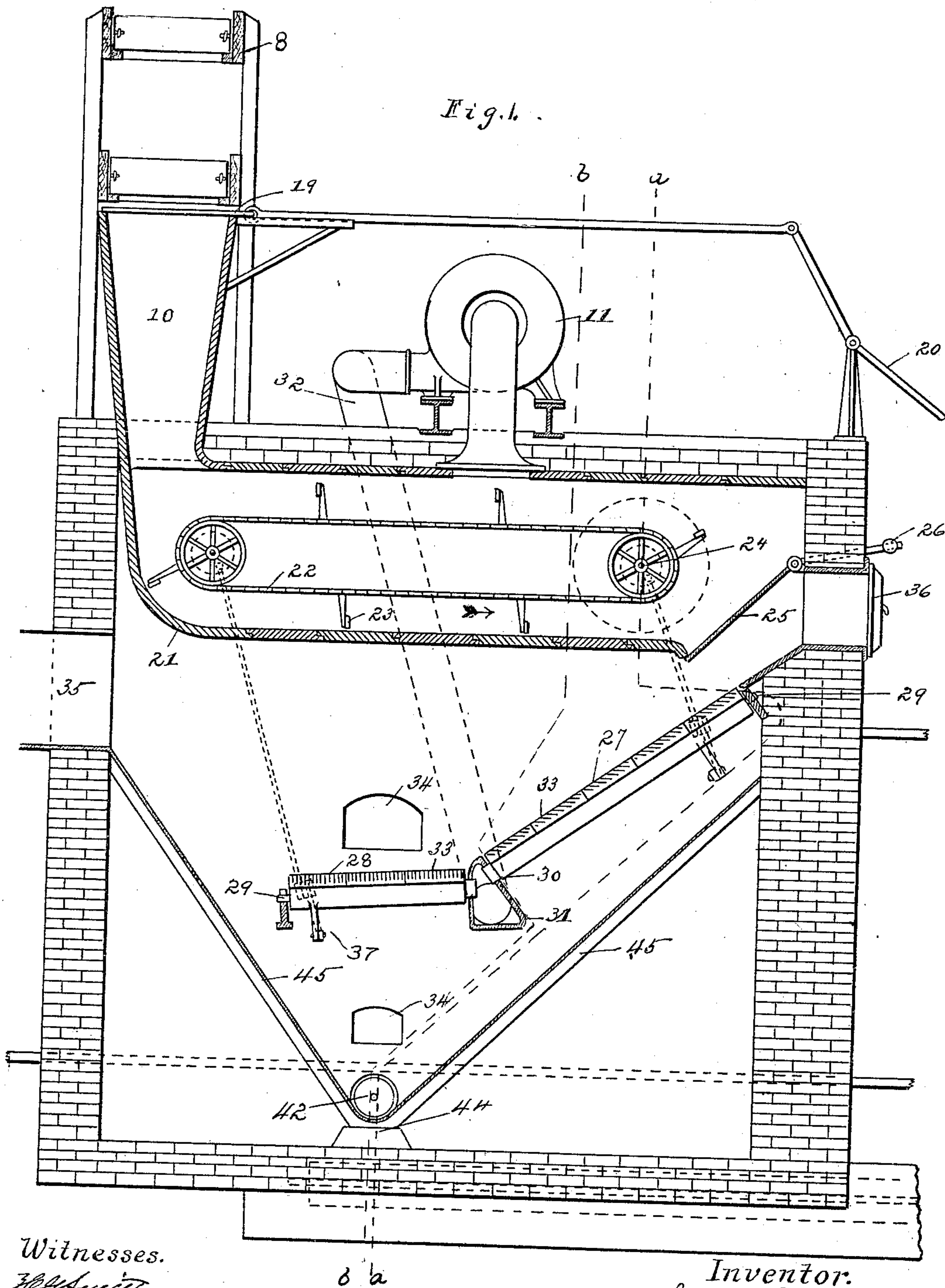
Patented Feb. 26, 1901.

J. L. WHITE.
GARBAGE CREMATORY.

(Application filed Jan. 24, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses.
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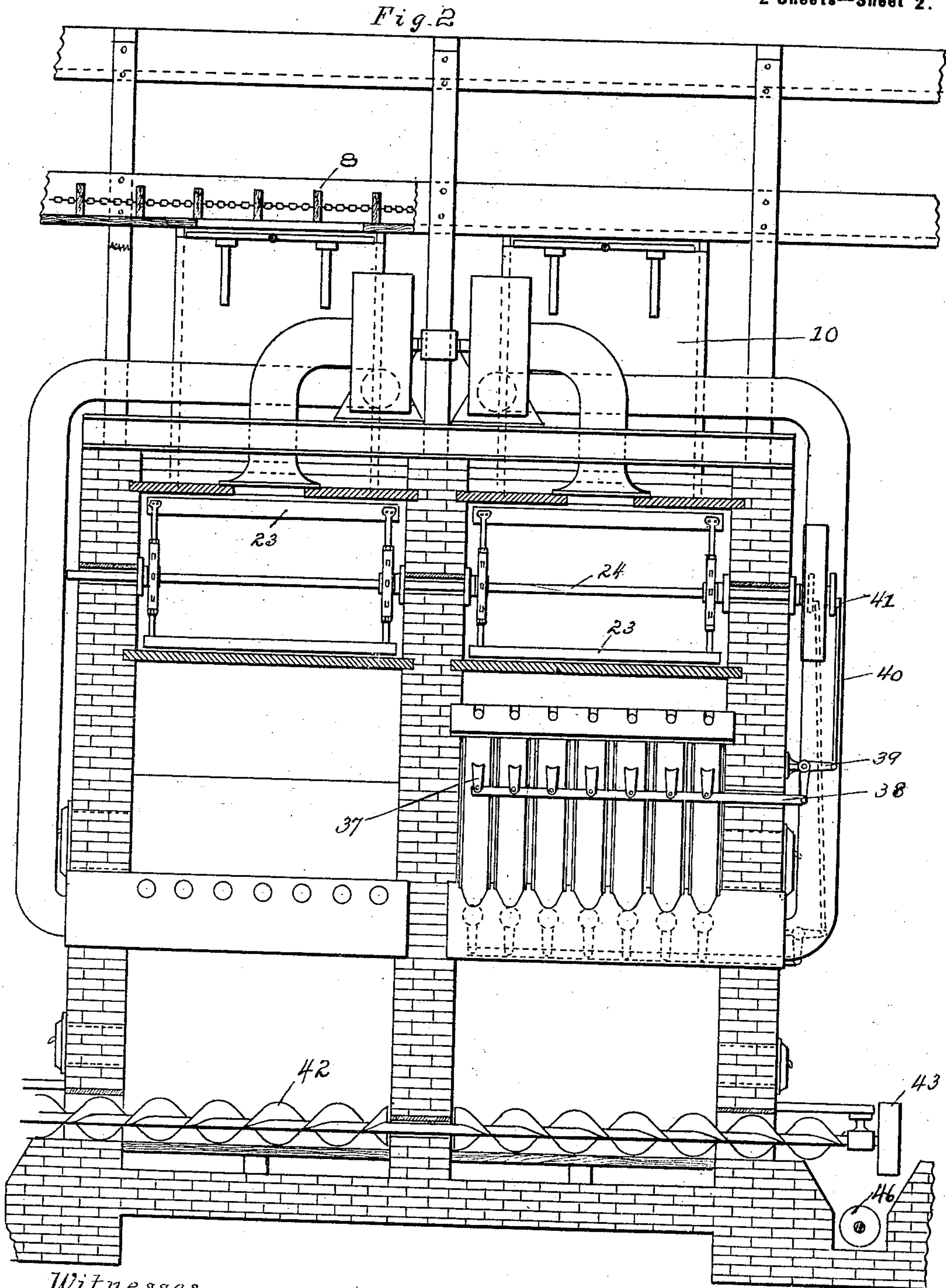
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(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

JAMES L. WHITE, OF WEST SUPERIOR, WISCONSIN, ASSIGNOR OF ONE-HALF
TO CHARLES C. TENNIS, OF CINCINNATI, OHIO.

GARBAGE-CREMATORY.

SPECIFICATION forming part of Letters Patent No. 669,054, dated February 26, 1901.

Application filed January 24, 1898. Serial No. 667,804. (No model.)

To all whom it may concern:

Be it known that I, JAMES LUTHER WHITE, a citizen of the United States, residing at West Superior, in the county of Douglas and State of Wisconsin, have invented certain new and useful Improvements in Garbage-Crematories; and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improved means for disposing of garbage and similar waste products by means of crushing, drying, and burning. With my improved means I propose to simply and cheaply dispose of garbage without occasioning any disagreeable odors and to secure by simple means some of the more important by-products.

My invention consists in an improved crematory-furnace for burning the partially-dried residuum of the garbage. This furnace consists, essentially, of a drying-chamber arranged near the top thereof, a combustion-chamber immediately below the same, an endless conveyer for moving the dried material slowly across the floor of the chamber and depositing it upon the grate, a continuously-rocking grate for shaking the burned material, and a blower for forcing the gases evolved by the drying operation into the furnace, whereby the combustion will be rendered more perfect.

In order to better understand the nature of my invention, attention is called to the accompanying drawings, in which—

Figure 1 is a side view, partly in section, of a portion of the complete furnace. Fig. 2 is a section of the entire device, the right of which is taken on the lines *a a* of Fig. 1 and the left half on the lines *b b* of Fig. 1.

In the above views corresponding parts are designated by the same numerals of reference.

Referring to the drawings, which represent a side and front section, respectively, of the furnace, 8 represents the conveyer for passing the garbage to a point adjacent to the furnace, and 10 the hopper. The hopper is closed by means of a flap or valve 19, controlled by the lever 20, situated conveniently at the front of the furnace. Refuse after

passing from the hopper falls upon the drying-floor 21. The drying-floor is preferably constructed of some heat-withstanding material—such as, for instance, fire-brick. An endless conveyer 22, having arms 23, is situated above this drying-floor and serves to slowly move the refuse across the floor in the direction of the arrow. This conveyer derives motion from the rotary shaft 24, which runs commonly through all the furnaces.

25 is a trap having the counterbalance 26 thereon, so as to automatically remain closed; but when a sufficient amount of refuse is piled up against it it will open and allow the refuse to drop upon the inclined grate-bars 27.

28 represents the horizontal grate-bars. The bars 27 and 28 are mounted in bearings 29 at one extremity and 30 at the other and are revolvably secured to the hollow chamber 31. This chamber has a pipe or passage 32, which communicates with the fan 11. The grates 27 and 28 are hollow and have orifices 33 therein. A blast of air delivered through them will greatly assist combustion.

34 34 are draft-openings for admitting air to assist combustion.

35 is an entrance to the smoke-pipe 12, and 36 is a door through which fuel may be introduced for starting the fire.

In order to assist combustion and at the same time keep the grates free from ashes, they are made to partake of a rocking motion, which is caused in the following manner: Each grate-bar has a depending arm or lever 37 cast integral therewith and connecting with a cross-bar 38, which also connects with the depending arms of all the grate-bars in that series. The bar 38 connects outside of the furnace with a bell-crank 39, by which by means of a pitman 40 and a crank 41 on the shaft 24 an intermittent motion is given to the grates.

To remove the ashes and unburned material, I provide an endless conveyer 42, which is operated by means of a pulley 43 and a belt. (Not shown.) This conveyer works in a trough 44, formed by the two inclined shields 45 45. The end of the furnaces has a transverse conveyer 46 similar to the conveyer 42. This will remove ashes to any place desired.

Having now described my invention, what

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

1. In a garbage-burning furnace a casing, a horizontal partition therein dividing it into
5 a lower combustion-chamber and an upper drying-chamber, the drying-chamber being provided with a feed-opening at one end and with an opening at the other end providing communication with the combustion-cham-
10 ber, means for moving the garbage along said partition from the entrance to the exit of the drying - chamber, the combustion - chamber having an exit for the products of combus-
15 tion and a main grate, an inclined grate arranged to deliver the garbage to the main grate from the entrance to the combustion-chamber, the bars of said grates being hollow and perforated and having a common tubular support at their adjacent ends said support
20 being adapted to supply a gaseous element to the interior of said grate-bars, in combination with means for withdrawing the gases from the drying-chamber and supplying them to said tubular support.
2. In a garbage-burning furnace a casing,
25 a horizontal partition therein dividing it into

a lower combustion-chamber and an upper drying-chamber, the drying-chamber being provided with a feed-opening at one end and with an opening at the other end providing 30 communication with the combustion-chamber, means for moving the garbage along said partition from the entrance to the exit of the drying - chamber, the combustion - chamber having an exit for the products of combus- 35 tion and a main grate, an inclined grate arranged to deliver the garbage to the main grate from the entrance to the combustion-chamber, the bars of said grates being hollow and perforated and having a common tubular 40 support at their adjacent ends said support being adapted to supply a gaseous element to the interior of said grate-bars, in combination with a fan for withdrawing the gases from the drying-chamber and supplying them, 45 to said tubular support.

This specification signed and witnessed this 30th day of November, 1897.

JAMES L. WHITE.

Witnesses:

H. L. SMITH,
R. I. TIPTON.