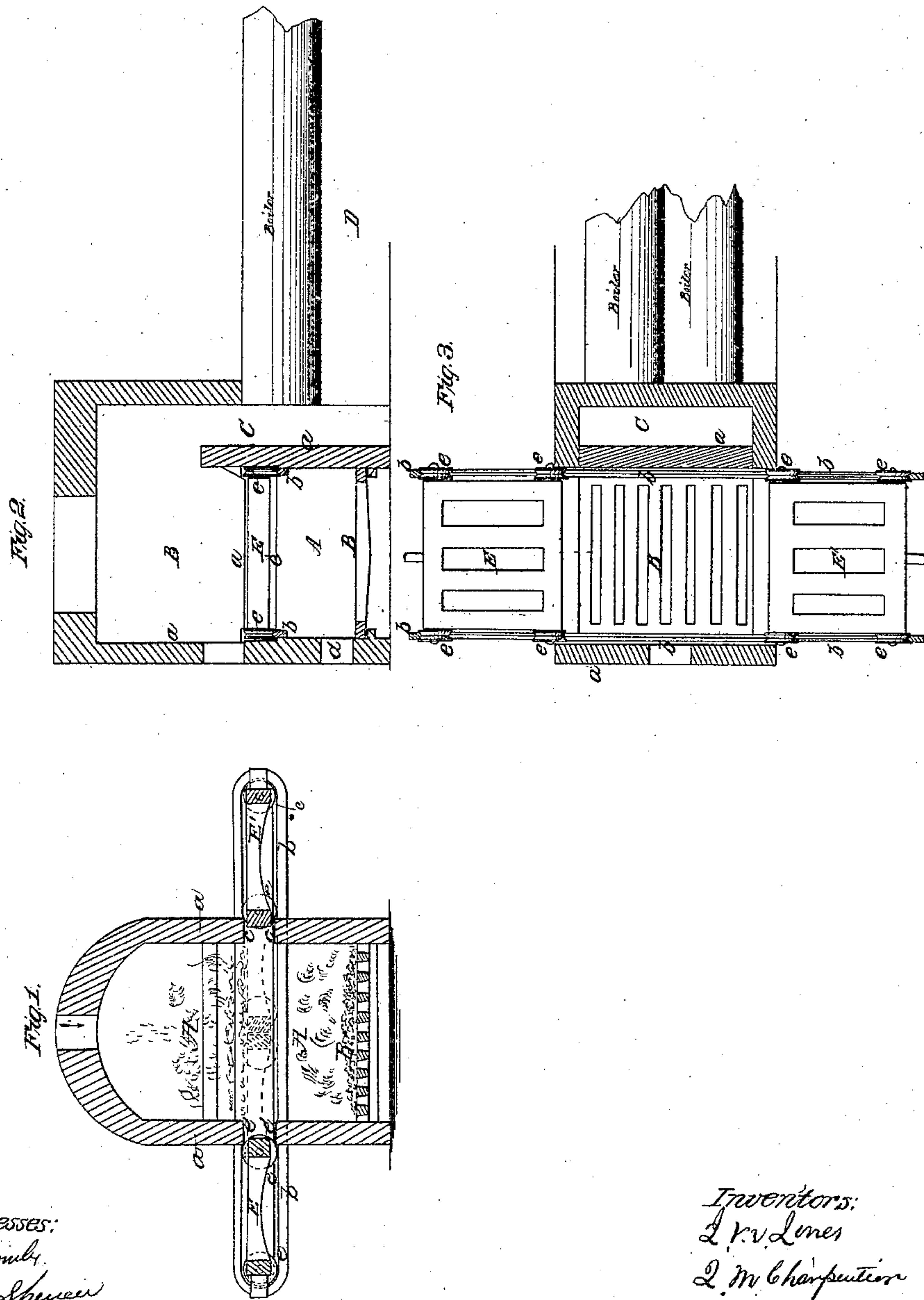


No. 30,107.

PATENTED SEPT. 18, 1860.

J. M. JONES & J. M. CHARPENTIER.
FURNACE FOR BAGASSE, &c.



Witnesses:
J. W. Brown
R. S. Spencer

Inventors:
J. M. Jones
J. M. Charpentier
per Munn & Co
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN M. JONES, OF NEW ORLEANS, AND JOSEPH M. CHARPANTIER, OF ST. MARY PARISH, LOUISIANA, ASSIGNORS TO THEMSELVES, AND A. B. CHARPANTIER, OF NEW ORLEANS, LOUISIANA.

BAGASSE-FURNACE.

Specification of Letters Patent No. 30,107, dated September 18, 1860.

To all whom it may concern:

Be it known that we, JOHN M. JONES, of the city of New Orleans, in the parish of Orleans and State of Louisiana, and JOSEPH M. CHARPANTIER, of the parish of St. Mary and State of Louisiana, have invented a new and useful Improvement in Furnaces for the Use of Bagasse or other Refuse Matter as Fuel; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figures 1, and 2, are vertical sections at right angles to each other of a furnace constructed according to our invention. Fig. 3 is a horizontal section of the same.

Similar letters of reference indicate corresponding parts in the several figures.

The object of our invention is to afford facility for cleaning out the fire chamber of the furnace without stopping its operation and to provide for the economical use of coal or wood when there is no supply of bagasse or refuse matter at hand; and our invention consists in the employment for these purposes of a movable grate, arranged and operating in combination with fixed grate or bed substantially as hereinafter described.

A represents the fire chamber having upright walls *a, a*, and having at its bottom the fixed grate or bed B, constructed as in other bagasse furnaces. C, is a drop flue forming a communication between the upper part of the said chamber and the main flue D, in or over which are situated the boiler or other apparatus which the furnace is to be employed in heating.

E, E', is the movable grate made in two sections each of said sections E, and E', being furnished with grooved wheels *e, e*, to run on parallel horizontal rails *b, b*, which extend right through the fire chamber at the height of a few feet above the grate or bed B, and project for a sufficient distance from opposite sides thereof to support the two sections of the grate E, E', outside of the chamber one on one side and the other on the opposite side as shown in Fig. 3, and in black outline in Fig. 1. Openings *c, c*, are provided in the walls *a, a*, for the two sections of the grate to run in and out

of the chamber on the rails *b, b*, and the said sections should be constructed in such manner as to close the said openings either when outside of the furnace as shown in black outline in Fig. 1, or when in the fire chamber as shown in red outline in the same figure. The two sections of the grate, when run into the fire chamber, should meet in the middle thereof so as to form a complete grating of the full horizontal area of the furnace or nearly so.

When the grate E, E', is run out of the furnace as shown in Fig. 3, and in black outline in Fig. 1, the operation of the furnace is precisely the same as that of most other bagasse furnaces, and it is in this condition that we intend it to operate at all times but when it is necessary to clean out the fire chamber or when for the want of bagasse or refuse matter it becomes necessary to use coal or wood.

When it becomes necessary to clean out the fire chamber the grate E, E', is run into the furnace as shown in red outline in Fig. 1, and the fuel fed in upon it. This fuel soon becomes ignited by the heat of the furnace and the fire on the grate or bed B, below and when this is the case the contents of the lower part of the fire chamber can all be raked out through the door *d*, provided above the grate or bed B, without any intermission of the operation of the furnace which is kept up by the fire on the grate E, E'. When the fire chamber has been thus cleaned out the two sections E and E', of the upper grate are withdrawn and the fire thus allowed to drop from them to the lower grate or bed B, when the operation of the furnace proceeds as at first described till the fire chamber again requires cleaning out. In case of there being no bagasse or refuse fuel at hand as for instance at the time of starting up the furnace of a boiler employed to drive a sugar mill, the grate E, E', is run into the furnace and a fire of wood or coal made upon it and kept up till a supply of bagasse is obtained from the mill, when the grate E, E', is withdrawn and the fuel allowed to fall therefrom on to the grate or bed B, where it serves to ignite the bagasse. In like manner a fire of wood or coal may be used on the grate E, E', in case of the supply of bagasse running out.

What we claim as our invention and desire to secure by Letters Patent is—

1. The employment of a movable grate E, E', applied to a furnace and operating
5 in combination with the fixed grate or bed B, thereof substantially as and for the purposes herein described.

2. The division of the movable grate E, E', into two sections to run in and out of

the furnace on opposite sides thereof and 10 meet in the middle of the interior thereof substantially as herein described.

JOHN M. JONES.

JOSEPH M. CHARPANTIER.

Witnesses:

A. B. CHARPANTIER,

H. O. AMES.