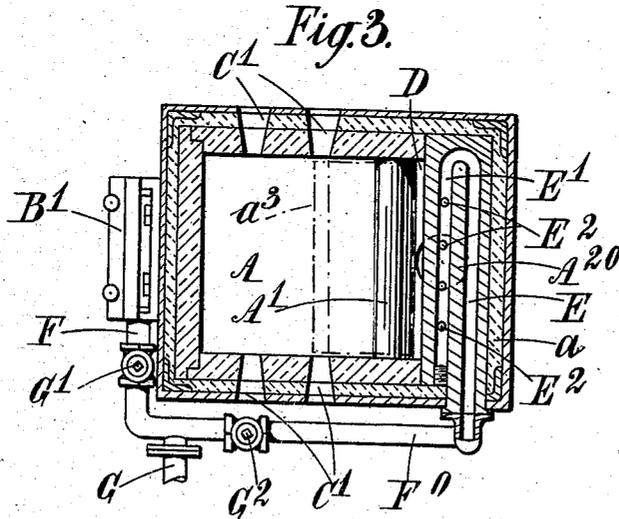
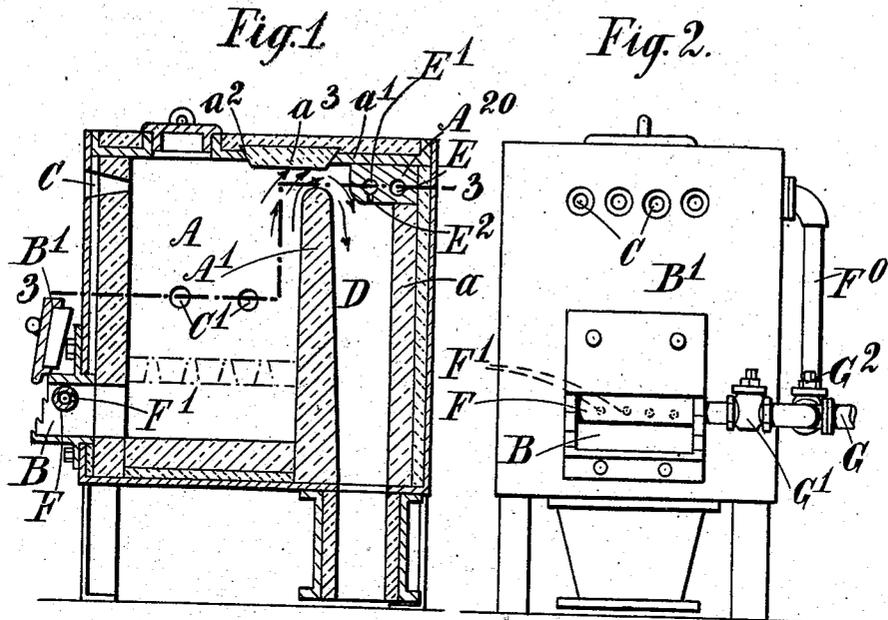


C. MOREHEAD.
 STOVE FOR DRYING MOLDS.
 APPLICATION FILED NOV. 14, 1907.

899,752.

Patented Sept. 29, 1908.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES MOREHEAD, OF RUGBY, ENGLAND.

STOVE FOR DRYING MOLDS.

No. 899,752.

Specification of Letters Patent.

Patented Sept. 29, 1908.

Application filed November 14, 1907. Serial No. 402,072.

To all whom it may concern:

Be it known that I, CHARLES MOREHEAD, a subject of the King of Great Britain, and residing at Rugby, in England, have invented certain new and useful Improvements in Stoves for Drying Molds, of which the following is a specification.

This invention relates to stoves for drying molds and the like, and particularly to that form of stove through which air from an induction opening flows under the action of a propelling jet of air which has been heated prior to its issue through the jet openings. In the specification of British Letters Patent No. 512 of 1906 granted to me, I have described and illustrated such a stove; in it an air heating conduit is situated in the bridge for the purpose of heating the propelling air before it reaches the jet openings or injector device.

One feature of the present invention is that the air heating conduit and injector, instead of being situated in the bridge are situated within the stove in the angle between the top inner face of the rear wall and the inner or lower face of the upper wall. In this situation, though the block of refractory material, say cast iron, in which the air conduits and injector are formed, gets quite hot enough to sufficiently heat the air passed through it, it is not nearly so subject to the eroding action of the current of hot gas passing from the main chamber of the stove to the vertical outlet flue, as it was when it constituted, as hitherto, the upper portion of the bridge so that the hot gas stream flowed over it as over a weir. The block of cast iron or other refractory material, consequently, lasts longer than in the earlier types of stove, so that the stove need seldom be stopped for repair and its efficiency is consequently increased while the cost of its maintenance is reduced.

In the accompanying drawings:—Figure 1 is a central vertical section through a stove constructed according to the present invention; Fig. 2 is a front elevation of the same, and Fig. 3 is a horizontal section on the line 3—3 of Fig. 1.

Like letters indicate like parts throughout the drawings.

The fire space or chamber of the stove is indicated at A, and communicating therewith, preferably at the bottom, is an air inlet B, controlled by a damper or shutter B¹

which is preferably adjustable. Additional air ports C C¹ are provided in the front and side walls of the chamber A. At the back of the bridge A¹ of the chamber is a vertical flue D which communicates at its upper end with the top of the chamber A, and at its other end with an outlet adapted to fit over the mouth of the mold to be dried. Along the front of the air inlet B is arranged a pipe F having a number of holes F¹ on its inner side.

The pipe F and the conduit E hereinafter referred to, are both connected, the latter by way of the pipe F⁰, with a supply pipe G through which air under pressure can be forced into the furnace. A cock G¹ controls the supply of compressed air to the pipe F and a cock G² controls the supply of compressed air to the pipe F⁰ and conduit E.

All the parts thus far set out in connection with reference letters are as in the aforesaid specification of British Letters Patent No. 512 of 1906.

According to the present invention, a cast iron block A²⁰ (or a block of refractory material) cored to form an air heating conduit E and a second conduit E¹ which is a continuation of the first conduit and which is provided with openings E² forming an injector, is situated within the chamber A in the angle where the top inner face of the rear wall *a* meets the inner or lower face of the upper wall *a*¹. The conduits E and E¹ are so disposed within the block A²⁰ that the openings E² point down the center, approximately, of the vertical flue D.

The stream of gases flowing from the chamber A into the flue D is found to have less effect upon the block A²⁰ than upon the upper end or marginal portion of the bridge. Wear of the latter, inasmuch as it no longer has any special internal structure, is less detrimental to the life of the apparatus than would be any wearing of the block A²⁰, which latter is less exposed to wear by reason of its situation, in "dead space" in the angle aforesaid.

In starting up the furnace air is forced through the pipe F and the holes F¹ until combustion in the furnace has set in. When the furnace has been started the cock G² is opened and air is introduced into pipe F⁰ and conduit E where it is heated and flows into the injector E¹ and thence through the jet openings E² into the vertical flue D taking

with it the heated gases from the furnace and incidentally tending to keep the heated gases away from the block A²⁰.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In a drying stove the combination with the stove body of a bridge, and an air heating conduit and injector situated within the stove above the outlet between the top of the bridge and the stove wall and in the angle between the top inner face of the rear wall and the lower face of the upper wall.

2. In a drying stove the combination with the stove body of a bridge, and an air heating conduit and injector formed in a block of refractory material situated within the stove above the outlet between the top of the bridge and the stove wall and in the angle between the top inner face of the rear wall and the lower face of the upper wall.

3. In a drying stove the combination with

the stove body of a bridge, and an air heating conduit situated within the stove above the outlet between the top of the bridge and the stove wall and in the angle between the top inner face of the rear wall and the lower face of the upper wall.

4. In a drying stove the combination with the stove body of a bridge, and an air injector situated within the stove above the outlet between the top of the bridge and the stove wall and in the angle between the top inner face of the rear wall and the lower face of the upper wall.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES MOREHEAD.

Witnesses:

CHARLES H. FULLER,
J. A. FOSTER.