

(No Model.)

M. H. C. SHANN.
FURNACE.

No. 518,629.

Patented Apr. 24, 1894.

Fig 2

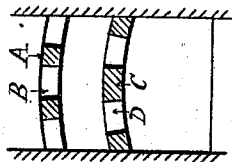
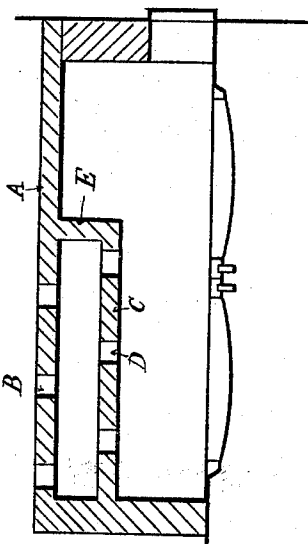


Fig 1



Witnesses
Alfred E. B. Hanson
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Inventor:
Montague H. C. Shann

UNITED STATES PATENT OFFICE.

MONTAGUE H. C. SHANN, OF BRISBANE, QUEENSLAND.

FURNACE.

SPECIFICATION forming part of Letters Patent No. 518,629, dated April 24, 1894.

Application filed January 29, 1894. Serial No. 498,393. (No model.) Patented in Queensland July 13, 1893, No. 2,409.

To all whom it may concern:

Be it known that I, MONTAGUE H. C. SHANN, a subject of the Queen of Great Britain and Ireland, and a resident of Brisbane, Colony of Queensland, have invented a certain new and useful Improvement in Furnaces, of which the following is a specification.

The invention has been patented in the Colony of Queensland, Australia, July 13, 1893 No. 2,409.

My invention relates to improvements in furnaces, whereby an inferior coal may be used without the production of smoke, and a higher efficiency be got, and consists in lining the sides and end of the furnace with fire-brick or similar material. The top I arch over for the entire length with fire-brick or other similar substance. In said arch, from the back end, I provide a series of holes, for about two-thirds of its length. Underneath the perforated portion of said arch I provide another arch, of similar material, also perforated, but with the holes not opposite the holes in the upper arch. The front and back ends of the space between the arches I close with similar material.

The object of the above arrangement is to compel the distilled gases from the coal on the dead plate, together with the cold air admitted through the furnace door, to be projected downward on the hotter fuel, and from thence to thoroughly mix them by passing them through the white-hot perforated arches before they are robbed of any of their heat.

In order that my invention may be better understood, I now refer to the accompanying drawings which form a part of this specification.

Like letters indicate similar parts in both figures.

Figure 1 is a longitudinal section, and Fig. 2 is a cross section.

(A) is the top arch over the entire length.

(B) is the series of holes in (A).

(C) is the bottom arch.

(D) is the series of holes in (C).

(E) is the deflector which closes the front end of the space (F) between (A) and (C).

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a furnace, the fire box, the grate bars, the arch A extending across the top of the fire box, perforations in the rear part of said arch, a second perforated arch beneath the first and extending below the perforated part only thereof and an imperforate part E at the end of the second arch between it and the first, substantially as described.

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

MONTAGUE H. C. SHANN.

Witnesses:

ALBERT E. B. SWANSON,
A. COLEMAN.