

J. S. RUNYAN,
Fire Place Grate.

No. 109,550.

Patented Nov. 22, 1870.

Fig. 1

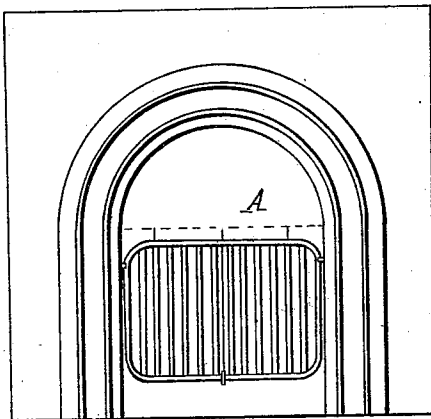


Fig. 2

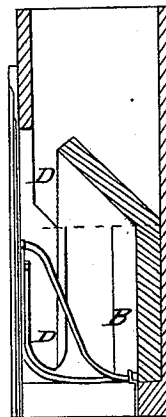
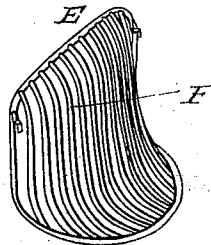
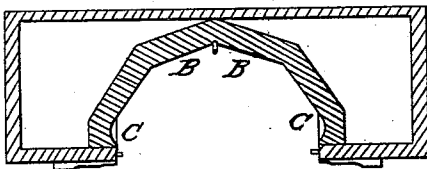


Fig. 3



Witnesses
Walter Morrison
Albert F. Ziegler

Inventor
John S. Runyan
Columbus
Ohio.

United States Patent Office.

JOHN S. RUNYAN, OF COLUMBUS, OHIO.

Letters Patent No. 109,550, dated November 22, 1870.

IMPROVEMENT IN FIRE-PLACE GRATES.

The Schedule referred to in these Letters Patent and making part of the same.

I, JOHN S. RUNYAN, of Columbus, in the county of Franklin and State of Ohio, have invented certain Improvements in Grate-Basket and setting for the same, of which the following is a specification

My invention relates to the construction of a fire-place for holding a grate-basket, and

It consists in forming vertical concavities or flues in the setting near the corners of the grate, for the purpose of preventing the smoke from puffing out at those points.

The grate-basket may be constructed as follows:

By an elliptic horizontal bar at top, with the bottom bar on a true circle, to and from which are vertical bars, inclined a little, the bars being vertical and elliptic, curved at top, and connected with horizontal bar at top, and, being convexed at bottom, admits of the ashes dropping through between the bars from top to bottom, thereby exposing a bright fire to the front of the grate, keeping up a stronger radiation than can be otherwise obtained.

The fire-brick tile setting is constructed with an elliptic curve at each corner, to admit of coal coming out full to the front of the grate, and the same extending up above the top of grate-frame, by which means, and in connection with the top, a square flue is formed, by which the corners are left open for a free passage of the smoke, to prevent the same from puffing out at those points.

The back wall is formed so as to form a deeper recess at center of grate than at any other point, to admit of large or small coal being used.

The top is brought forward by beveled curved fire-brick molded to shape, and forming a square flue.

Description of the Accompanying Drawings.

Figure 1 is a front elevation.

Figure 2 is a side elevation of elliptic curve setting.

Figure 3 showing elliptic curve and back wall of grate.

Figure 4, grate-basket.

A is front of grate and setting.

B B B, back wall set with fire-brick tile.

C C, elliptic curve at corners.

D D, elliptic curve from bottom of grate-basket, extending to flue above.

E, elliptic horizontal bar.

F, elliptic-curve convex bars forming grate-basket.

I claim as my invention—

A fire-place, constructed with the vertical concavities or flues D D near the sides of the grate-basket, substantially as and for the purpose set forth.

JOHN S. RUNYAN.

Witnesses:

WALTER MORRISON,

ALBERT F. ZIEGLER.