

F. S. Bissell,

Grate.

No. 106,772.

Patented Aug 30, 1870.

Fig. 3.

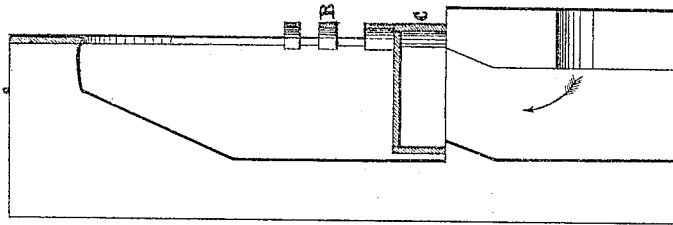


Fig. 1.

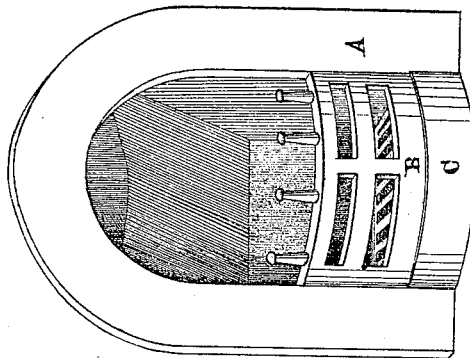
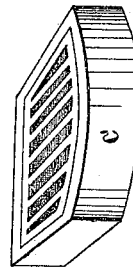


Fig. 2.



Witnesses,

H. A. Daniels
J. W. Peters

Frank S. Bissell Inventor, by
Chas. S. Whitman Attorney

United States Patent Office.

FRANK S. BISSELL, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 106,772, dated August 30, 1870.

FIRE-PLACE GRATE.

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

To all whom it may concern:

Be it known that I, FRANK S. BISSELL, of Pittsburg, in the county of Allegheny and in the State of Pennsylvania, have invented a new and useful Improvement in Grates; and do hereby declare that the following description, taken in connection with the accompanying drawing hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvement, by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to secure by Letters Patent.

My invention relates to that class of grates commonly known as the "low-down" grate, and the nature thereof consists in providing a cold-air box or chamber for the purpose of raising the bottom basket or grating above the level of the hearth of the fire-place, thereby creating a receptacle into which cold air may be admitted, and obviating the serious objections heretofore urged against the ordinary low-down grate, to wit: that the very high heat created on the level of the stone or marble hearth caused the same to break or crack in pieces, and also materially lessening the distance between the top rim of the arch or front of the chimney-flue, (in the rear of which the smoke of said grate passes up the chimney,) and the top of the front of the grate-basket, thus preventing the puffing out of smoke.

In the accompanying drawing, which illustrates my invention and forms a part of the specification thereof, in which corresponding parts are illustrated by similar letters—

Figure 1 is a view in perspective, illustrating a low-down grate of the ordinary form, with my invention applied thereto.

Figure 2 is a perspective view of the cold-air box.

Figure 3 illustrates the position of the cold-air chamber and grate, above an ash-pit and cold-air flue of the ordinary form.

Within the casing A is the bottom grate, B, which said bottom grate B is placed at the top of the cold-air box C.

C designates the cold-air box or chamber, on the top of which the said bottom grate B rests, and the bottom of which is entirely open, in order that the cold air may be freely admitted or retarded from below. The said cold-air box or chamber fits closely between the two jams of the arch or grate-front beneath the top of the front of the grate-basket, and may be removed, when it is desirable, with the greatest facility.

The said cold-air box being constantly supplied with cold air, (or shut off at pleasure,) serves to protect the hearth from the downward radiation of heat from the grate-basket, and, by lessening the opening between the top of the front of the grate-basket and the top rim of the arch, prevents the puffing out of smoke.

Having thus described the construction and operation of my invention,

I claim and desire to secure by Letters Patent—

The combination of casing A, grate-basket B, and cold-air chamber C, when constructed and operating as described.

In testimony that I claim the foregoing, I have hereunto set my hand this 30th day of April, 1870.

FRANK S. BISSELL.

Witnesses:

J. DONALDSON,

WILLIAM H. COLLINGSWOOD.