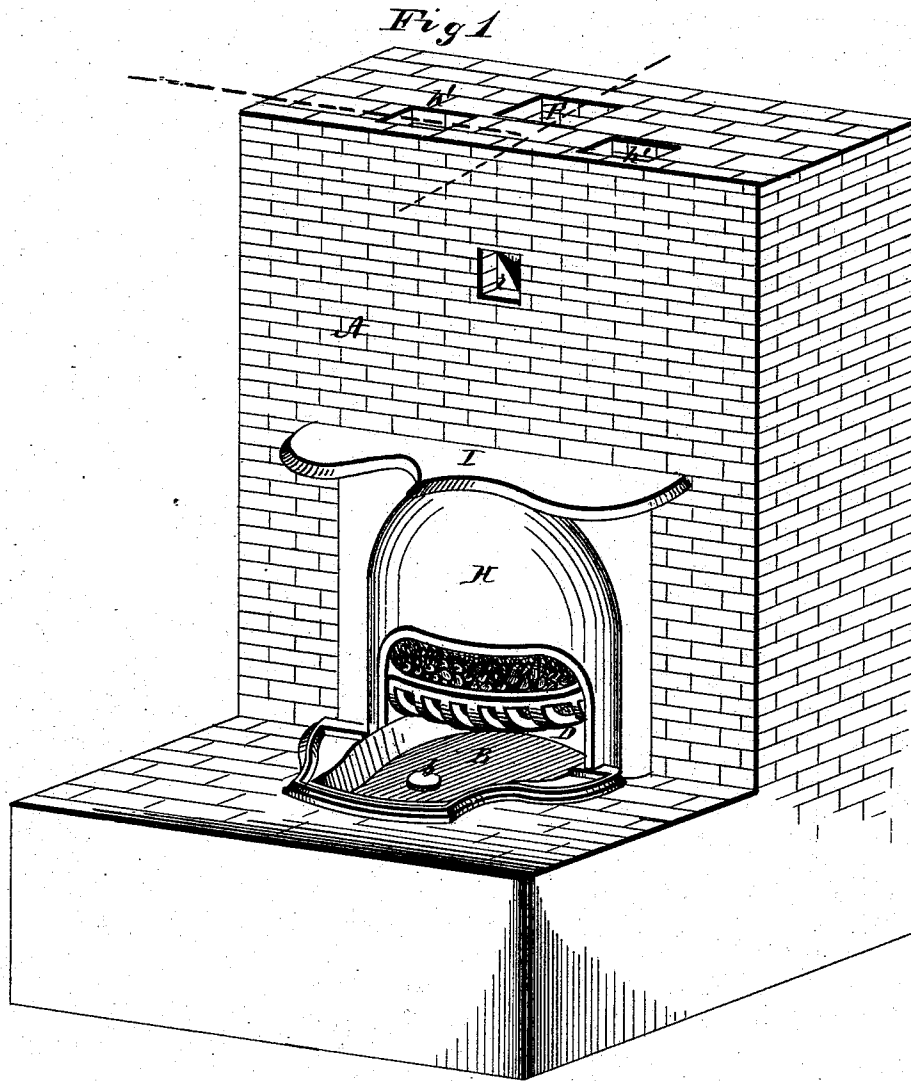


2 Sheets--Sheet 1.

A. T. BENNETT.
Fire-Places.

No. 156,755.

Patented Nov. 10, 1874.



WITNESSES.

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INVENTOR

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Fig 3

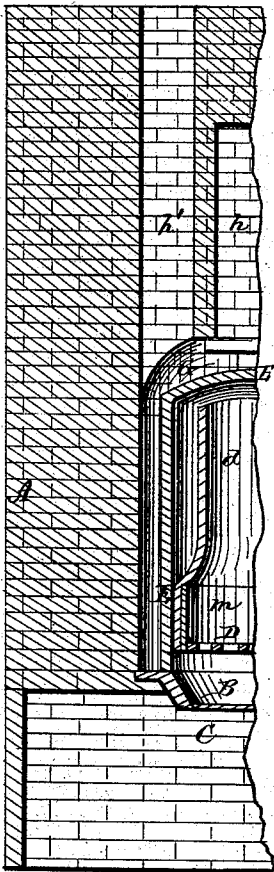


Fig 2

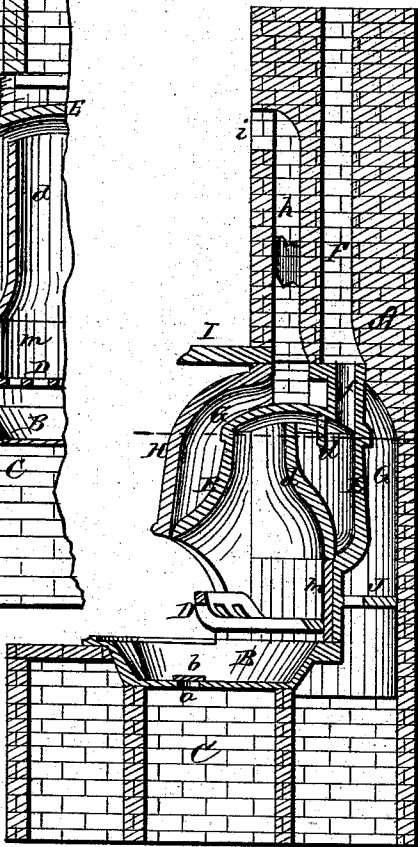
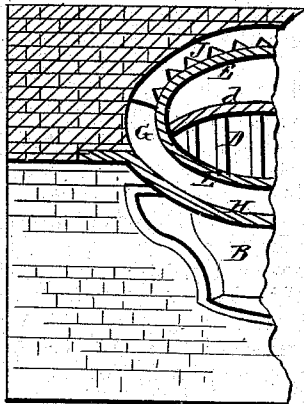


Fig 4



WITNESSES

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UNITED STATES PATENT OFFICE.

ALLAN T. BENNETT, OF BLOOMINGTON, ILLINOIS.

IMPROVEMENT IN FIRE-PLACES.

Specification forming part of Letters Patent No. **156,755**, dated November 10, 1874; application filed May 5, 1874.

To all whom it may concern:

Be it known that I, ALLAN T. BENNETT, of Bloomington, McLean county, and State of Illinois, have invented certain new and useful Improvements in Fire Places and Grates; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of an iron fire place and grate, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a perspective view of my fire place and grate. Fig. 2 is a transverse vertical section of the same through the line *x x*, Fig. 1. Fig. 3 is a longitudinal vertical section through the line *y y*, Fig. 1; and Fig. 4 is a horizontal section through the line *z z*, Fig. 2.

A represents the chimney, into which my iron fire-place is built. B represents the ash-pan, provided with an opening, *a*, which is protected by a suitable cover, *b*. By turning this cover to either side, a connection is made from the ash-pan B to the pit C below, into which the ashes may be dropped, if desired. D represents the fire-grate. E represents the fire-back and combustion-chamber, within which are arranged partitions or pieces *d d*, arranged as shown in Figs. 2 and 3, which compel the smoke and heat from the fire to take a circuitous course, for the purpose of bringing the heat into contact with a large heating-surface, or surface exposed to the air to be heated and discharged into the room. Around the chamber E, within the chimney A, is left or formed a space, G, in which the air is heated by contact with the fire-back or chamber E, the said air-space extending in front of said chamber to the front H, which extends from the front edge of the chamber E upward to the chimney, and forms a rest for the mantel I. In the lower rear part of the hot-air chamber

G is a horizontal notched plate, J, which forms a cool-air distributor, compelling the cold air to be brought near to and in contact with the heated surface of the fire-back or chamber E. *f* is the smoke-flue or smoke-collar in the chamber E, which connects the heater with the flue F in the chimney.

The cool air enters at the bottom and the back of the ash-pan and fire-box, rises through the openings in the air-distributor J, passes upward and around the fire-back and combustion-chamber E, and, being heated by contact therewith, passes into the hot-air flue *h*, and through openings *i* into the same room where the fire-place is, near the ceiling, and may also pass through other flues, *h'*, to the rooms above.

A blower may be used in connection with this fire-place, which blower should be made in two equal sections, meeting in the center of the grate, in front, when closed, and slid back in front of the grate through an opening in each side through the jamb at the line of union between the jamb and the front—that is to say, into the air-chamber; or said blower may be made to fold back on each side into a recess or panel made for that purpose.

m represents the fire-lining, made in sections or otherwise, as desired.

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

1. The combination, in an open fire-place heater, of the combustion-chamber E, with grate D and interior partitions *d d*, the front H, and chimney A, arranged to form an air-chamber, G, around the combustion-chamber E, all substantially as and for the purposes herein set forth.

2. In combination with the combustion-chamber E, chimney A, and air-chamber G, the cold-air distributor J, constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of March, 1874.

ALLAN T. BENNETT.

Witnesses:

THOS. SLADE,
CHAS. B. SLADE.