

H. BLESKA.
Fire Places.

No. 153,039.

Patented July 14, 1874.

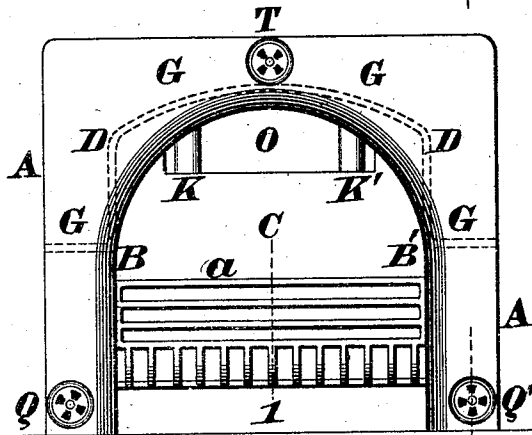
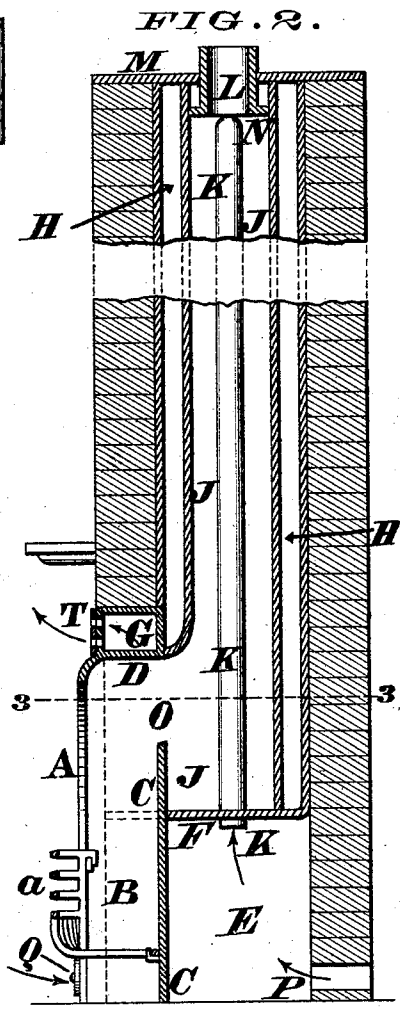
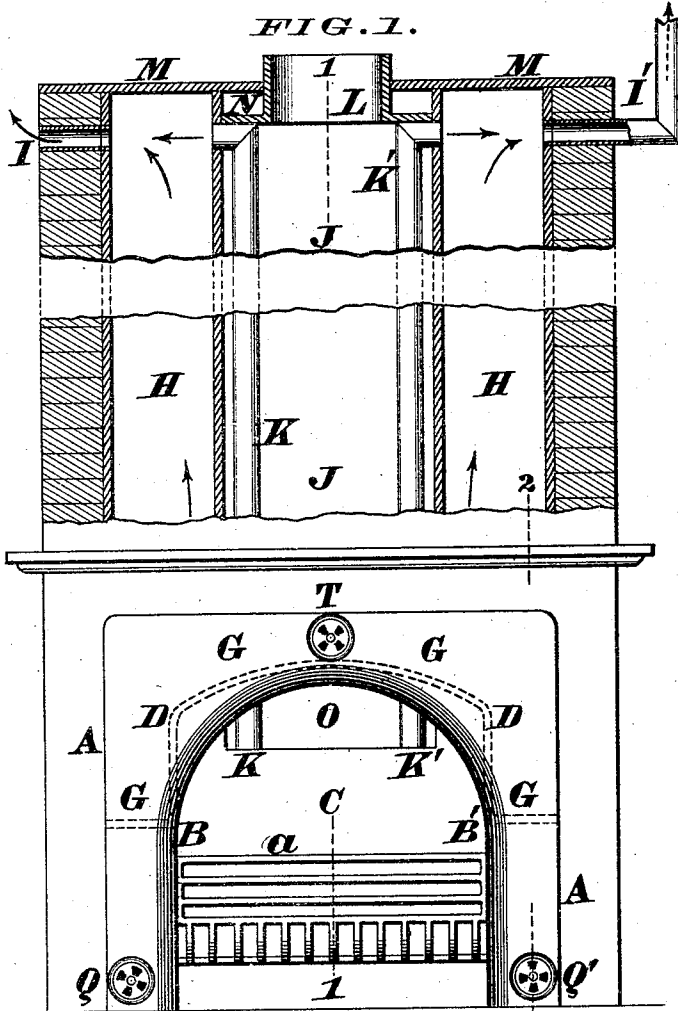
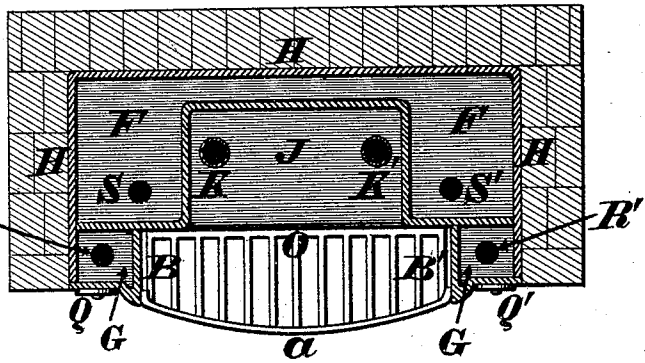
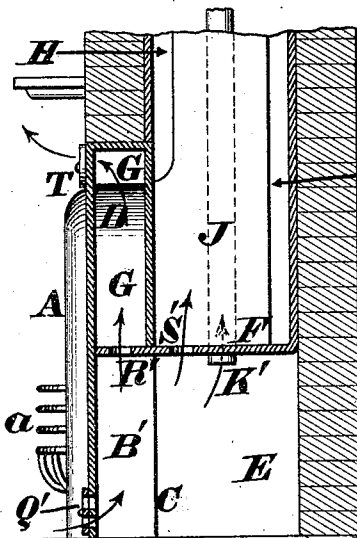


FIG. 4.



Attest.

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UNITED STATES PATENT OFFICE

HENRY BLESKA, OF CINCINNATI, OHIO.

IMPROVEMENT IN FIRE-PLACES.

Specification forming part of Letters Patent No. **153,039**, dated July 14, 1874; application filed May 18, 1874.

To all whom it may concern:

Be it known that I, HENRY BLESKA, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Air-Heating Attachment for Fire-Places, of which the following is a specification:

The object of my invention is to utilize the large amount of waste heat that usually escapes up the chimney from a fire-place, and to render it effective for warming air, which is then discharged, either directly into the room where the fire-place is located, or into any other apartment or hall of the house; and I accomplish this result by a peculiar arrangement of air-heating pipes and chambers which are concealed within the chimney, the details of said appliances, together with their mode of operation, being hereinafter fully explained.

In the accompanying drawings, Figure 1 is an elevation of a fire-place provided with my air-heating attachment, the upper portion of the chimney-pier being shown in section. Fig. 2 is a vertical section, from front to rear, of the same at the line 1 1. Fig. 3 is another vertical section, at the line 2 2; and Fig. 4 is a horizontal section on the line 3 3.

The grate-frame A, together with its basket a, jambs B B', fire-back C, throat O, and arch D, may be of the represented or any other preferred form. Surrounding the lower portion of the fire-back and jambs is an air-chamber, E, which may draw its supply of air either through an opening, P, communicating with the external atmosphere, as shown in Fig. 2, or else through registers Q Q', as represented in Figs. 1 and 3. This chamber is separated from the chimney by a horizontal partition or diaphragm, F, whose shape is clearly shown in Fig. 4; and it will be seen, by referring to this illustration, that said diaphragm is provided with two distinct sets of perforations, R R' and S S', of which the two former apertures are for the purpose of admitting air to chamber G. The chamber G is formed around all that portion of the jambs B B' which is situated above the partition F; and it also surrounds the arch D, in order that the air which has been warmed by contact with these heated portions of the grate-frame may be discharged through a register,

T, directly into the room in which the fire-place is located. The other two inlets, S S', are provided for the admission of air into a large chamber, H, which completely occupies all the available space within the chimney-pier, in order that the flue from the grate may be arranged within said chamber, and at the same time be of sufficient area to insure a good draft. The chamber H may be carried up as far as the ceiling of the room, or even higher, if desired, and it is provided with exit-pipes I I' for the discharge of heated air. The pipe I may discharge heated air into the room in which the grate is situated, while the pipe I' can be arranged to conduct the warm air to a remote hall or apartment of the house. These pipes may be provided with registers or other devices for regulating the flow of air. Located within the chamber H, and communicating with the throat O, is the flue proper, J, which is traversed by two or more pipes, K K', whose lower ends open into the common air-chamber E. The upper or discharging ends of these pipes communicate with chamber H, as shown in Fig. 1. L is a neck through which the products of combustion escape from the flue, and this neck is secured to a cap, M, and partition N, the latter being arranged so as to prevent smoke and gases entering the chamber H.

It will be seen that the portion of my heating apparatus which is located behind the grate or in the pier can be made of stout sheet-iron or light cast-iron, and readily applied to any chimney before the grate is built in; or an old grate can be removed together with a portion of the chimney-breast, so as to admit the heater; but the chamber around the jambs and arch of frame A must be constructed with the grate.

The operation of my apparatus will readily be understood by referring to Figs. 2 and 3, from which it will be seen that after fire is kindled in grate a the products of combustion will escape through throat O into flue J, and thence out by the neck L, thus heating the various members C H K K'. The air which enters from the common inlet-chamber E through apertures R R' to the chamber G is heated by being brought in contact with the jambs B B' and arch D, after which the warm

air is discharged in greater or less quantities through the regulator T. The air which enters from the chamber E through perforations S S' is warmed by contact with the exterior of flue J, which radiates the heat in every direction, and this warmed air is then discharged through pipes I I', as previously described. In addition to the two previously-described sources of heated air, another one is furnished by the series of pipes K K', which, being located within the flue J, are completely surrounded with the products of combustion.

From the above description it will be seen that any waste of heat up the chimney is completely checked, and on this account the grate is rendered as economical as a stove, with the advantage of not encroaching on the available space in a room; and it also ob-

viates the danger attendant upon the use of such warming apparatus.

I claim as my invention—

The combination of air-inlets P, the distributing and heating air-chamber E, vertical air-heating tubes K K', the main air-heating chamber H, and outlets I I' for the heated air, constructed and arranged within the chimney of a fire-place, with reference to a fire-back, C, and large flue-tube J, substantially as herein shown and described, for the purpose specified.

In testimony of which invention I hereunto set my hand.

HENRY BLESKA.

Attest:

GEO. H. KNIGHT,
ERNST BLESKA.