

(No Model.)

C. H. FIFIELD.

Supplemental Flue for Furnace Registers.

No. 238,222.

Patented March 1, 1881.

Fig. 1.

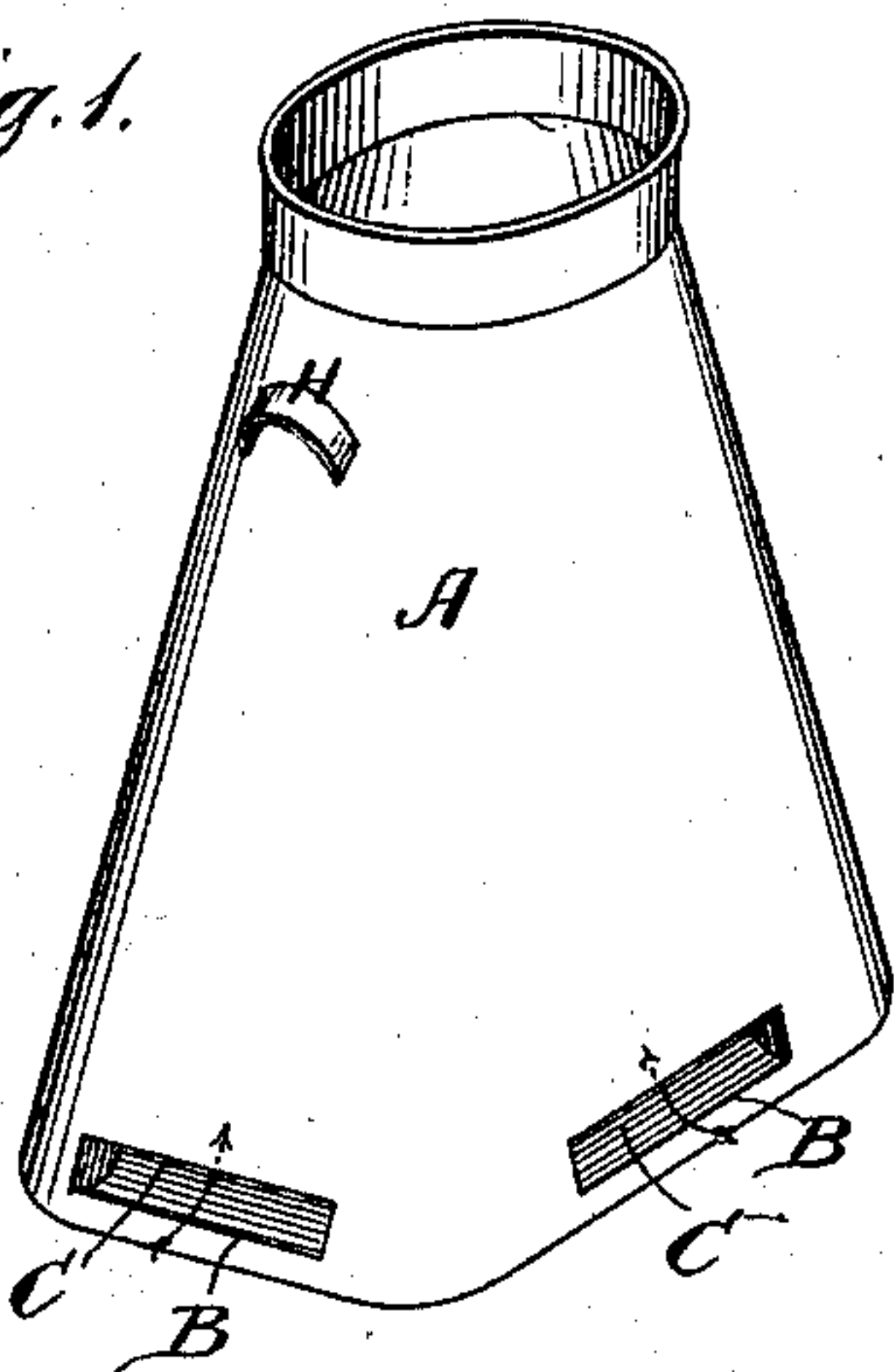


Fig. 2.

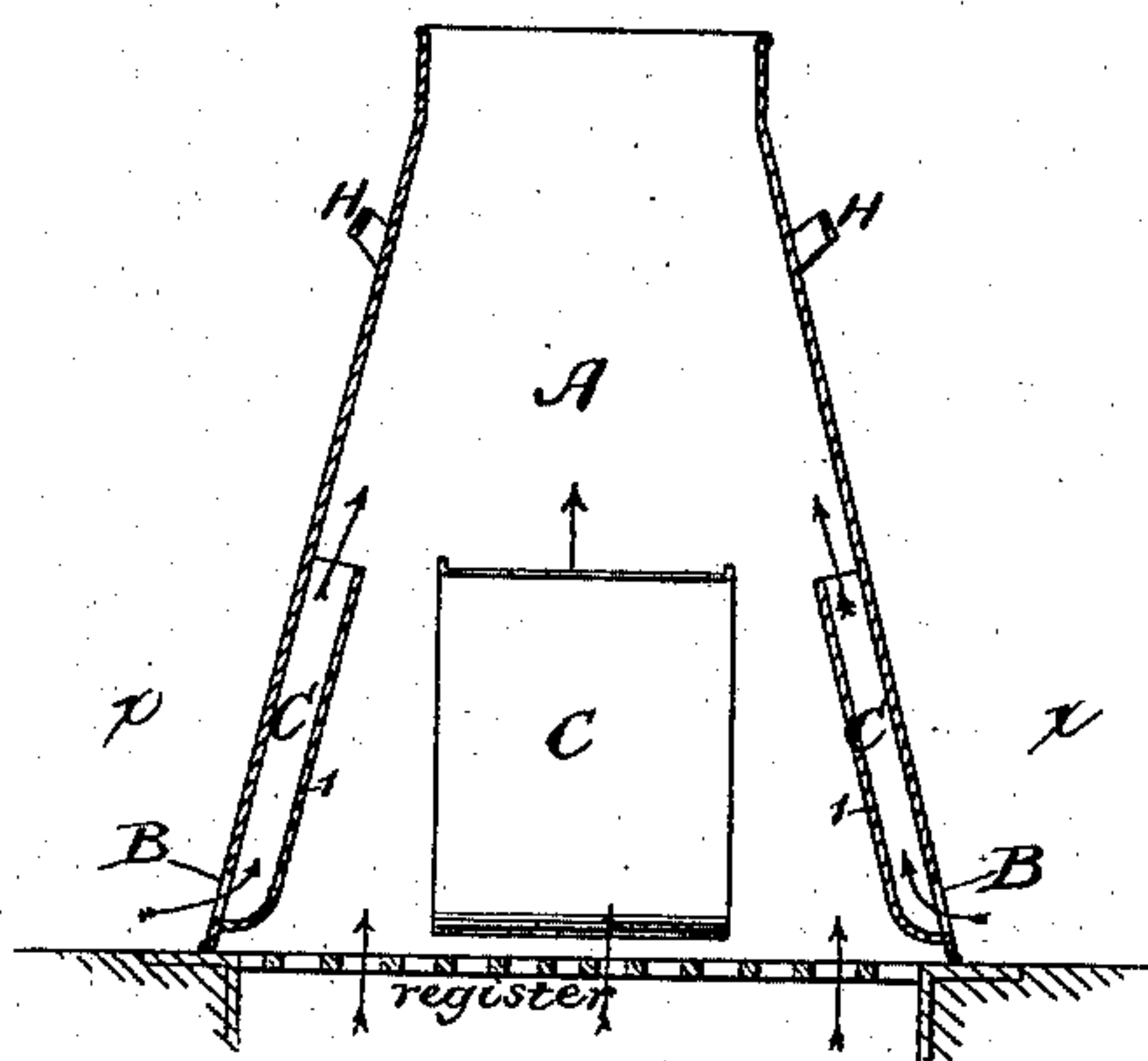
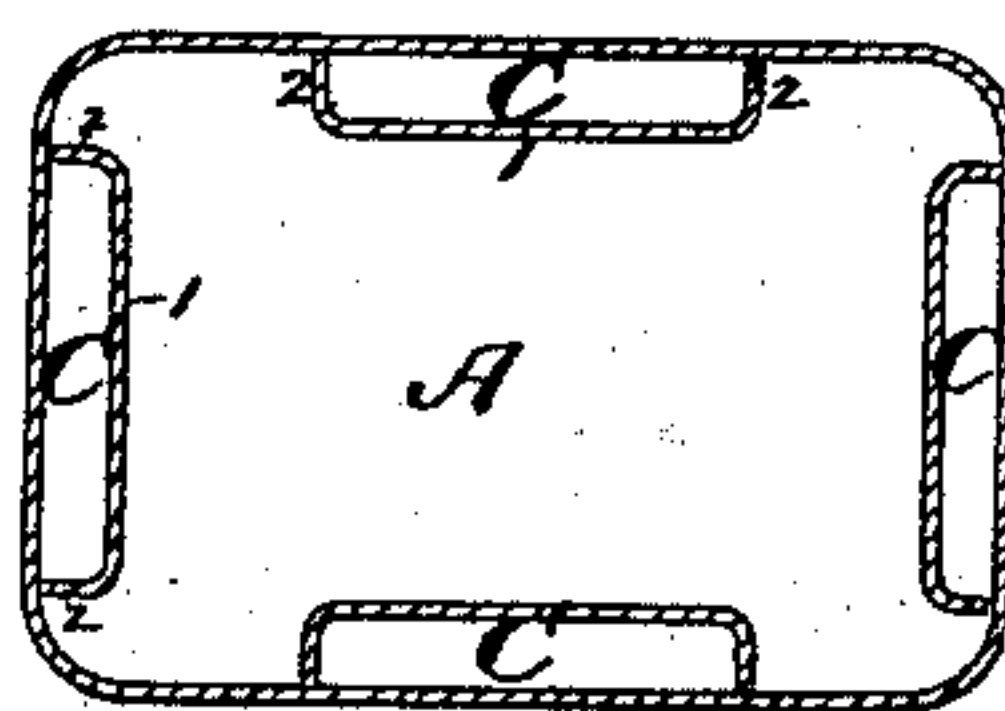


Fig. 3.



Witnesses.

*W. C. Limco*

Inventor  
*Charles H. Fifield*  
by *Wright & Brown*  
Attys.

# UNITED STATES PATENT OFFICE.

CHARLES H. FIFIELD, OF SALEM, MASSACHUSETTS.

## SUPPLEMENTAL FLUE FOR FURNACE-REGISTERS.

SPECIFICATION forming part of Letters Patent No. 238,222, dated March 1, 1881.

Application filed December 18, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. FIFIELD, of Salem, in the county of Essex and State of Massachusetts, have invented certain Improvements in Supplemental Flues for Furnace-Registers, of which the following is a specification.

This invention relates to the device known as an improvement in hot-air registers described in Letters Patent of the United States granted to William B. Kehew and myself July 22, 1862.

The object of the present invention is to produce a simpler and cheaper device to accomplish the same result as the device shown in said patent—viz., to facilitate the upward passage of hot air from furnace-registers, and to prevent the accumulation of cold air over the same.

To this end my invention consists in the device which I term a "supplemental hot-air flue," constructed as described and claimed hereinafter.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of my improved supplemental hot-air flue. Fig. 2 represents a vertical section of the same, and Fig. 3 represents a horizontal section.

The same letters of reference indicate the same parts in all the figures.

In carrying out my invention I construct a casing or flue, A, of sheet metal, open at both ends, preferably tapered from one end to the other, and of suitable size and shape at the bottom or larger end to inclose the area covered by a furnace-register, so that when placed over a register the casing A constitutes virtually a continuation of the flue which conducts hot air from the furnace to the register. The height of the casing A is preferably about thirty inches, but may be varied from this, if desired.

B B represent perforations formed in the sides of the casing close to the bottom thereof. These perforations are preferably four in number, as shown, and they constitute orifices through which cold air from the lower portion of the room may enter the casing.

C C C C represent cold-air tubes or flues within the casing A, each formed by soldering or otherwise attaching a plate or sheet of

metal, 1, having flanges 2 2, to the inner surface of the casing A, the wall of the casing forming one side of each tube C and the flanged plate or strip 1 the other sides, as shown in Figs. 2 and 3. The lower ends of the plates are curved outwardly to meet the wall of the casing below the perforations B. Hence each tube C communicates at its lower end with one of said perforations, so that air entering the perforations will pass upwardly into the upper portion of the casing A, the tubes C being open at their upper ends, which may extend to the upper end of the casing A, or to any desired lower point.

It will be seen that by the described construction simplicity and economy are combined, the walls of the casing A being made to serve also as the outer sides of the tubes C, thus effecting a saving both in material and in weight.

I prefer to provide the casing with suitable handles, H, for convenience in moving it.

The described supplemental flue is intended to be placed over a register without being attached thereto or to the floor, so that it can be removed, if desired.

I claim—

The improved portable supplemental hot-air flue for furnace-registers, consisting of the sheet-metal flue or casing A, open at its ends, adapted to stand on one end in a vertical position on a floor and surround a furnace-register, and provided with perforations B near its lower end, and with the tubes or flues C, each formed by attaching a flanged or bent plate of metal to the inner surface of the casing, so that said inner surface serves as one of the sides of each tube, said tubes communicating at their lower ends with the perforations B, and opening at their upper ends into the flue or casing A, all as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 14th day of December, A. D. 1880.

CHARLES H. FIFIELD.

Witnesses:

MICHAEL GRUSH,  
DEAN C. SYMONDS.