J. R. WEBBER.

Heating Drums.

No. 153,870. Patented Aug. 4, 1874.

Fig. 1.

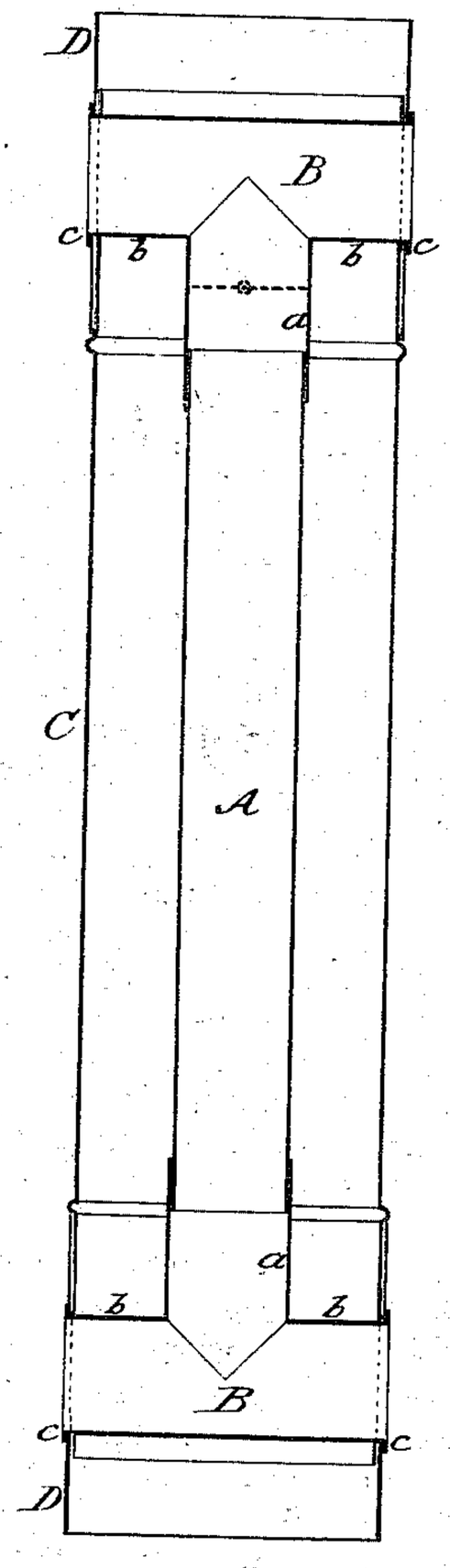


Fig. 2.

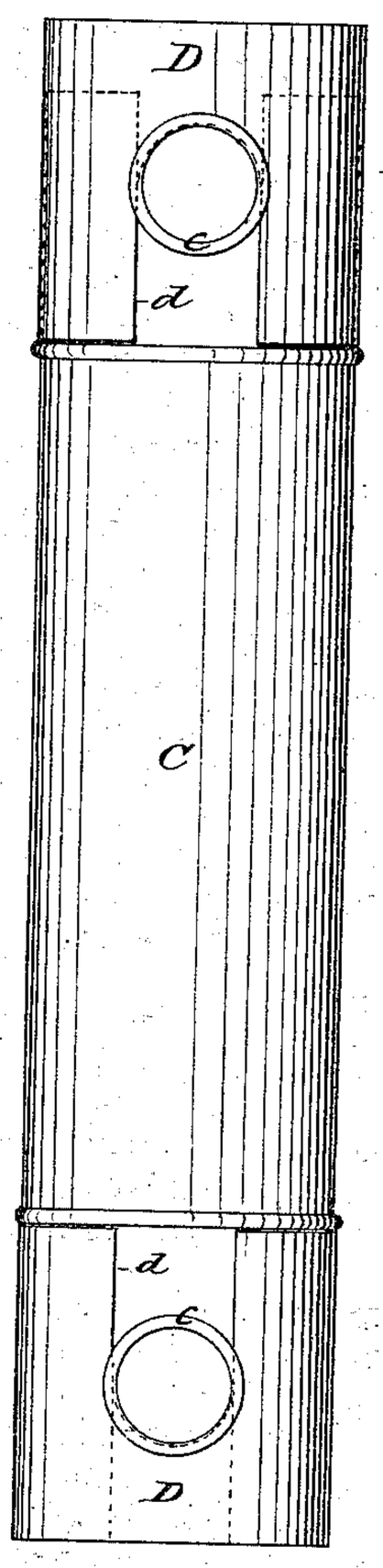


Fig. 3.

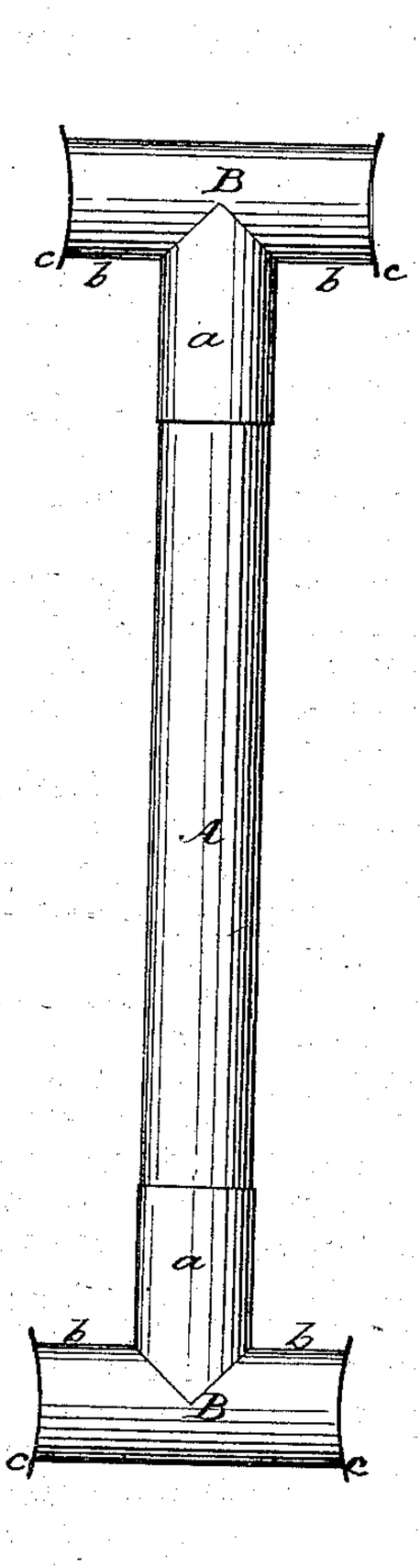
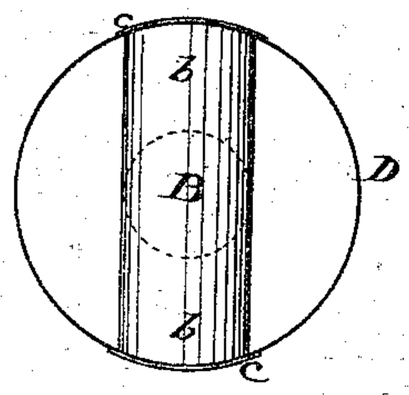


Fig. 4.



Witnesses:
T. C. Brecht.
A. H. Norris.

Inventor:
J. R. Webber
by
James L. Norris.
his Atty.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

JONATHAN R. WEBBER, OF SEDALIA, MISSOURI.

IMPROVEMENT IN HEATING-DRUMS.

Specification forming part of Letters Patent No. **153,870**, dated August 4, 1874; application filed July 27, 1874.

To all whom it may concern:

Be it known that I, JONATHAN R. WEBBER, of Sedalia, in the county of Pettis and State of Missouri, have invented certain new and useful Improvements in Heating Attachment for Stove-Pipes, of which the following is a specification:

This invention relates to that class of devices in which a supplementary pipe is located within the stove-pipe proper, and communicates with the external atmosphere at both of its ends in such a manner that air entering the lower end of said pipe passes up the same and escapes at its upper end, being heated in its passage by the products of combustion passing from the stove up the stove-pipe, so that said supplementary pipe assists in heating an apartment without an increase in the amount of fuel used.

The object of this invention is to furnish a heating attachment which can be readily applied to the stove-pipes now in use with but a slight alteration in their construction, and with little expense; and the invention consists of a cylindrical pipe, having at each end detachable T-shaped pipes or connections, which are arranged in a stove-pipe, so as to communicate with the external air at the top and bottom of said pipe, whereby air is admitted to the heating-chamber through the T-shaped lower end of said chamber, and is heated by the products of combustion passing up through the stove-pipe, which heated air escapes into the room at the upper end of the heat-generator, and aids in heating the room, greatly increasing the heating capacity of a stove without an increase in the amount of fuel used.

In the drawings, Figure 1 represents a vertical section of the stove-pipe having my improved heating attachment applied thereto; Fig. 2, a side elevation of the same; and Fig. 3, a detached view of the heating attachment; and Fig. 4, a transverse section.

The letter A represents a hollow cylinder, and B B the detachable T-shaped end connections, which consist of a vertical portion, *a*, and lateral arms or pipes *b b*, the outer ends of the latter being provided with flanges *c c*. C represents the section of a stove-pipe, each end of which is slightly smaller in diameter than its body to receive the ends of the sections of pipe D D, and each end of the section C is provided with elongated slots *d d* rounded or curved at their upper sides. The arms *b* of the end connections B are placed in the slots *d* of the section C at each end of the same, and, being of a circular form, fit in the rounded upper portions of the slots, and their flanges *c* overlap the edges of the slots and retain the arms *b* firmly in place. The cylindrical pipe A is arranged within the section C with its ends in the vertical arms *a* of the end connections or T-shaped pipes B, the diameter of the pipe A being such as to create a space between it and the stove-pipe section C, to permit the upward passage of the products of combustion. The ends of the sections D D are also provided with slots *d*, so that when passed onto the ends of the pipe C the space of the slots *a* not occupied by the arms *b* will be covered, and thus produce a tight joint.

The connections or T-shaped pipes B may be made of cast metal for large stoves, drums, or furnaces, or, for small stoves, may be struck up from sheet metal, which is easily accomplished, as they are made separate from the cylinder A.

The operation is as follows: The cold air entering the arms *b* at the lower end of the cylinder A is heated by the products of combustion passing up the stove-pipe from the stove or furnace, and the heated air escapes through the arms *b* at the upper end of the cylinder A into the room, thus serving to assist in warming the same, and creating a continuous circulation of air through the heating attachment, by which means the heating capacity of the stove is greatly increased without requiring an increase in the amount of fuel necessary.

A heating attachment constructed as above described can be applied to any of the stove-pipes now in use by merely providing the ends of the sections with slots *d*, as described, for the reception of the arms *b*, and by this means there is but little expense and trouble incurred in applying the same, and, further, during the heated term of the year, where the stove is employed for cooking purposes, and it is not required to heat the room to any extent, the heating attachment may be removed, and the sections of the pipe applied to each other so that the slots *a* will be out of coincidence, and,

when required, the heating attachment may be as easily applied, as before described.

In some instances I make the cylinder A of such length that the upper T-shaped connection extends into the upper room, and thus utilize the heat passing up the chimney from the stove to heat such room, and by adding another heating attachment two or more upper rooms may be heated in a like manner without increasing the quantity of fuel used.

If desired, a damper, as shown in dotted lines, Fig. 1, of the drawings, may be located within the vertical arm *a* of the detachable top section B, in order to regulate the heating capacity of the attachment.

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

A heating attachment for stove-pipes, consisting of the detachable sections B composed of the vertical arms *a* and lateral arms *b*, in combination with the hollow cylinder A and stove-pipe C with its slotted ends *d*, all constructed and arranged substantially as described, for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of October, 1873.

JONATHAN R. WEBBER.

Witnesses:

CHARLES ROLL,

W. H. HEWETT.