

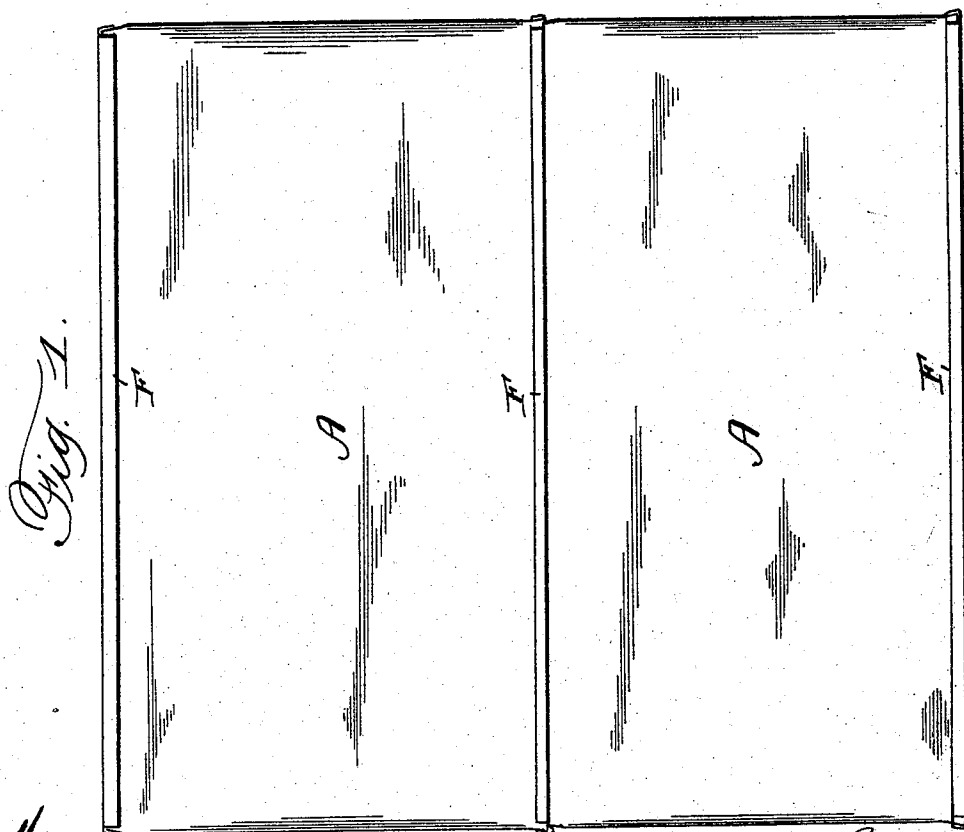
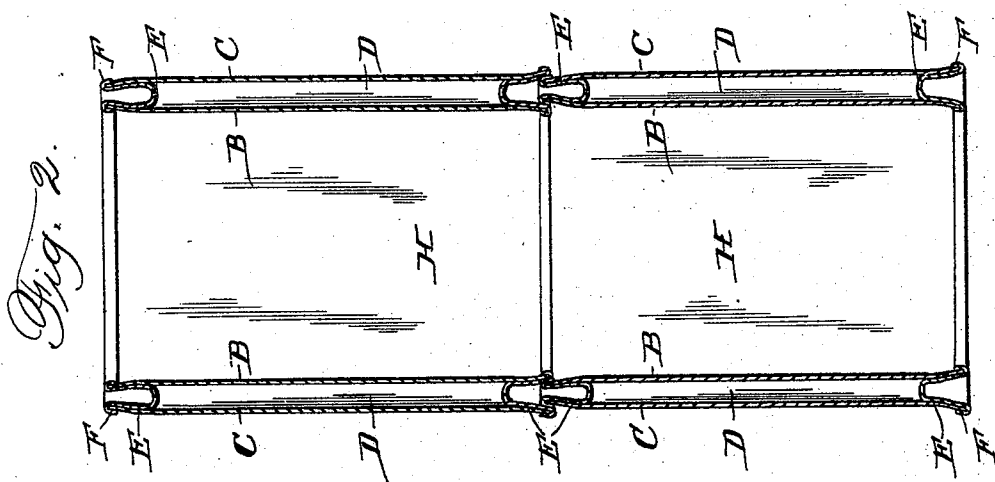
(No Model.)

2 Sheets—Sheet 1.

C. SPINDLER, Jr.
HOT AIR PIPE.

No. 527,734.

Patented Oct. 16, 1894.



Witnesses:
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M. A. Dru

Inventor:
Charles Spindler, Jr.
By H. R. Reeves Attorney

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

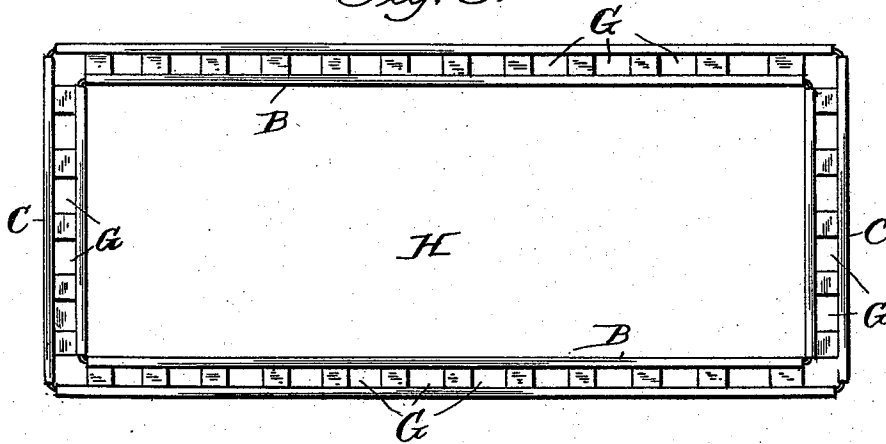


Fig. 5.

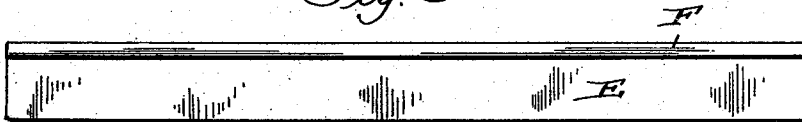


Fig. 7.

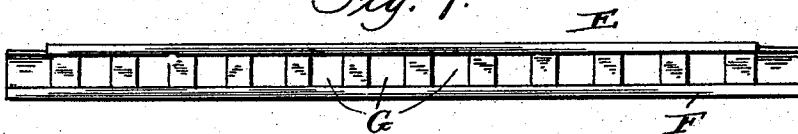


Fig. 6.

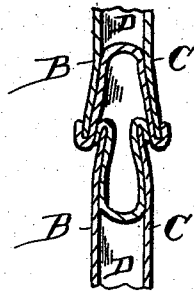
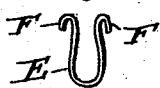


Fig. 4.

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UNITED STATES PATENT OFFICE.

CHARLES SPINDLER, JR., OF PEORIA, ILLINOIS.

HOT-AIR PIPE.

SPECIFICATION forming part of Letters Patent No. 527,734, dated October 16, 1894.

Application filed July 26, 1894. Serial No. 518,677. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SPINDLER, Jr., a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Hot-Air Pipes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to the construction and arrangement of pipes or flues adapted to convey hot air from a furnace up between the partitions or walls of buildings and discharging said hot air into the rooms thereof and among the objects in view is to provide an improved flue consisting of inner and outer sections and which is adapted to convey the hot air from a furnace to the desired points and at the same time permit of a circulation of cold air between the said sections of the flue in order to prevent heating and probable ignition of wood work with which said flue might be in contact or in close proximity.

A further object of the invention is to provide an improved construction of flue whereby the joints or sections thereof may be readily fitted and locked together securely to prevent accidental separation of said joints; and with the above and other objects in view, the invention consists in the novel construction, arrangement and combination of parts as hereinafter fully described, illustrated in the drawings and pointed out in the appended claim.

In the accompanying drawings: Figure 1 is an elevation illustrating two joints or sections of pipe constructed and arranged in accordance with my invention. Fig. 2 is a vertical transverse section thereof. Fig. 3 is a plan view of the same. Fig. 4 is an enlarged vertical section of the joint between the sections of the flue. Figs. 5, 6 and 7 are detail side, end and top views of one of the end pieces.

In carrying out my invention, I provide a flue or pipe consisting of a number of joints or sections A, the number thereof depending upon the height to which it is desired to carry the flue and also upon the height of the sections themselves, which sections may of course be made of various heights and also of vari-

ous widths and depths. Each of the sections A consists essentially of two pipes B C arranged one within the other the inner section B being somewhat smaller than the outer section C whereby an air space D will be left between the same. The space between the sections B, C at one end of each section A is contracted by bending the said sections B, C, into close proximity while the space between sections B, C at the opposite end of section A is widened by spreading slightly apart the said sections B, C.

For the purpose of holding the section B within the section C, I provide sections E somewhat of a U-shape and provided at the upper end with a bent over edge as seen at F and being cut away at intervals to provide openings G. I employ eight of these sections E, four for the upper and lower longitudinal edges of the sections and four for the upper and lower transverse edges, and each of the said sections E is adapted to be fitted over the ends of the sections B, C, so that the edges thereof will fit snugly within the bent over ends of the sections E. The sections E may then be soldered in place to the sections B, C. When thus arranged the openings G permit of circulation of air up between the sections B C of all the sections A of the flue.

In fitting the sections A together the contracted end of one section A is fitted within the widened or expanded end of the adjacent section, and so on for the entire height of the flue, and when so fitted together the same will be found to be firmly held in position and thus providing a continuous space H formed by the sections B for conducting the hot air to any desired point, while at the same time cold air is permitted to circulate between the sections B, C, to prevent excessive heating of the outer sections C.

In practice, those sections A opposite the register openings of the rooms will be provided with openings in the side to allow the hot air to enter the respective rooms.

My improved flue will be found very advantageous and its universal utility will be at once recognized.

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

The herein described flue consisting of a

number of sections A each comprising an inner pipe B, and an outer pipe C, having an air space between them on all sides said sections A having one end contracted by bending the pipes B, C, inwardly at their longitudinal and transverse edges and the opposite end expanded by bending the pipes B, C, outwardly at their longitudinal and transverse edges, and pieces E having bent-over edges F adapted to overlap the edges of the sections B, C, those sections E fitting upon the contracted end of the sections A being also contracted toward their open end to conform to the contracted space between the inwardly-bent ends of pipes B, C, and the sections E fitting upon the expanded end of sections A be-

ing expanded or widened toward their open end to conform to the widened space between the outwardly bent ends of pipes B, C, said sections A fitting together with the bent-over edges F of pieces E carried at one end of sections A fitting within the open end of the pieces E of the adjoining sections A, all of the pieces E being provided with openings G, as and for the purpose specified.

In testimony whereof I affix my signature in the presence of two witnesses.

CHAS. SPINDLER, JR.

Witnesses:

THEO. FANTZ,

CHAS. SPINDLER, Sr.