H. A. ACER.

FURNACE PIPE.

APPLICATION FILED JAN. 25, 1922.

1,429,822. Patented Sept. 19, 1922.

Fig. 1.

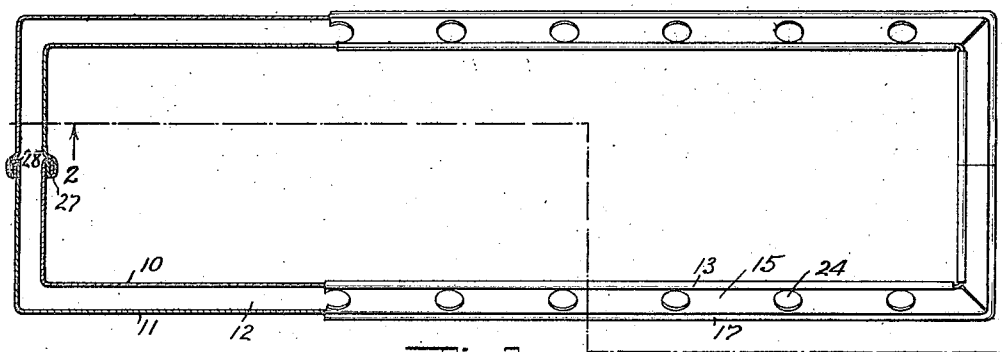


Fig. 2.

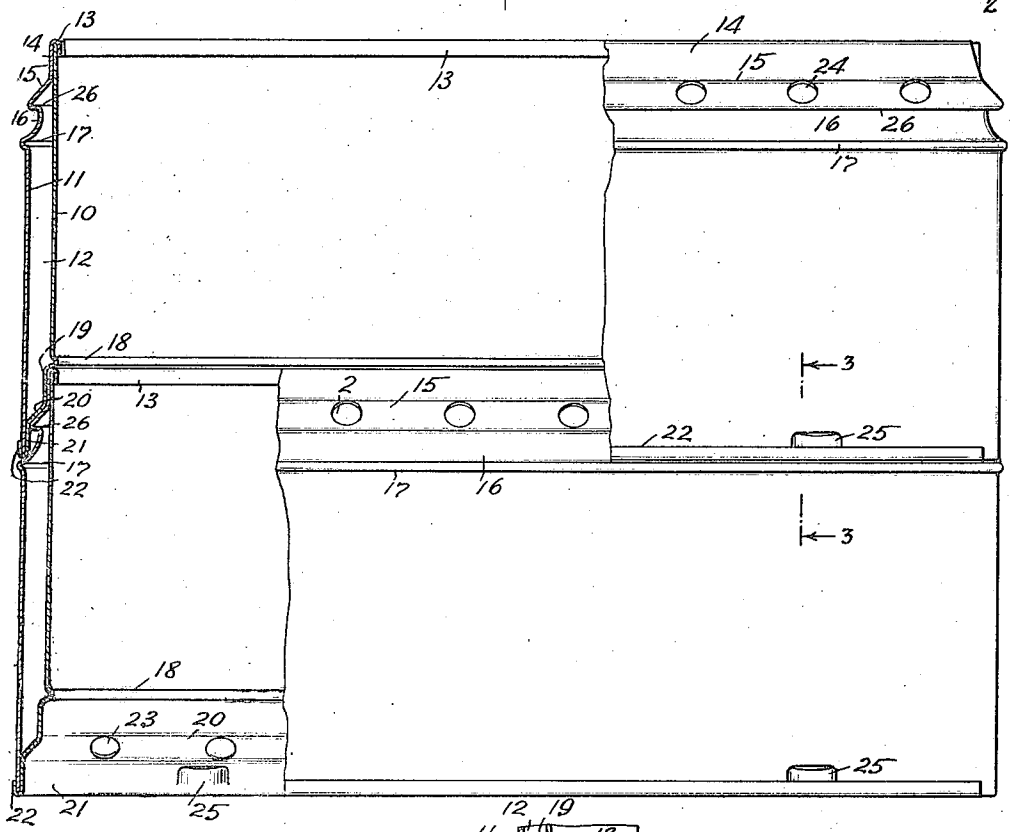
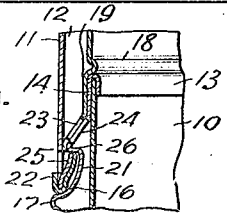


Fig. 3.



WITNESSES

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Patented Sept. 19, 1922. 1,429,822

UNITED STATES PATENT OFFICE.

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FURNACE PIPE.

Application filed January 25, 1922. Serial No. 531,669.

To all whom it may concern:

Be it known that I, HERBERT A. ACER, a citizen of the United States, and a resident of Medina, in the county of Orleans and State of New York, have invented a new and Improved Furnace Pipe, of which the following is a description.

My invention relates to furnace pipes and more particularly to the heater pipes of hot-air furnaces.

The general object of my invention is to provide an improved heater pipe of the type referred to, whereby a novel arrangement of double walls serves to conserve the heat and minimize the radiation from the pipe.

The nature of the invention and its distinguishing features and characteristics will clearly appear as the description proceeds.

Reference is to be had to the accompanying drawings forming a part of this specification, it being understood that the drawings are merely illustrative of one example of the invention.

Figure 1 is a partly sectional plan view; Figure 2 is a view partly in section and partly in side elevation of two pipe sections embodying my invention, the two pipe sections being sectioned at the left of the figure, the section line 2—2 indicating the section as taken through the upper pipe section, the lower pipe section being broken away to a less extent;

Figure 3 is a transverse vertical section as indicated by the line 3—3, Figure 2.

In carrying out my invention in practice, I form each pipe section with double walls, the numeral 10 indicating the inner wall; 11, the outer wall; and 12, the intervening air space.

The outer wall at the top of each pipe section is carried inwardly to the upper edge of the inner wall and seamed over the same as indicated at 13. From the seam 13 the material of the outer wall extends at the outside of the inner wall close thereto for a given length as at 14 and then obliquely outward as at 15, then turned under and carried laterally outward to form an entrant member 16 extending about the section and said member 16 at its lower end being carried outwardly beyond the oblique portion 15 and terminating in a bead or corrugation 17.

At the bottom of the air space of each section the inner wall is formed with a bead 18 above the lower edge of the outer wall and extending about the section at the interior. From the bead 18 the material of the inner wall is carried slightly outwardly and then downwardly parallel with the outer wall as at 19, then obliquely outward as at 20 to correspond with the oblique portion 15 and from the oblique portion 20 said inner wall is carried downwardly as at 21 parallel with and lying close against the inner surface of the outer wall 11. The lower edge of the inner wall is seamed as at 22 over the lower edge of the outer wall 11.

With the described arrangement the upper portion of the outer wall is received within the lower portion of the inner wall of the next section above and the described lower portion of the inner wall 10 receives and fits outside of the upper portion of the outer wall of the next lowermost section. With one section imposed on another the bead 18 of one section will rest on the seam 13 of the section beneath. At the same time the seam 22 of one section will rest on the bead 17 of the section beneath.

The oblique portion 15 of each section is formed with air holes 23, there being a series of holes at each side of a pipe section. The oblique portion 20 of one section is formed with air holes 24 registering when the one section is imposed on the other with the air holes 23 above. Thus, air may rise in the air space and pass from one section to another to discharge at the usual hot air register, (not shown). The maintaining of the air space about the inner wall of the heater pipe minimizes the radiation of heat from the outer wall and the heat taken up by the air from the inner wall is dissipated to the minimum extent while being conveyed to the air register.

In order to lock the sections the outer wall 11 of each section above the seam 22 is indented as at 25, forming individual tongues, as seen in Figure 3, the indented members being so located that when the pipe section is placed on the upper portion of a corresponding pipe section, the indented members will engage beneath a shoulder 26 presented by the upper portion of the outer wall 11 at the juncture of the oblique member 15 with the entrant member 16.

The inner and outer walls preferably are formed in half sections joined at the medial line of the ends, the numerals 27 and 28, in Figure 1, indicating the seams of the inner and outer walls respectively.

I would state in conclusion that while the illustrated example constitutes a practical embodiment of the invention, I do not limit myself strictly to the exact details herein illustrated, since, manifestly, the same can be considerably varied without departure from the spirit of the invention as defined in the appended claim.

Having thus described my invention, I claim:

A heater pipe for hot-air furnaces formed in sections, each section having double walls, the outer wall at the top of a section being carried laterally inward to the inner wall and the inner wall at the top being carried laterally outward to the outer wall, said upper portions and lower portions of the respective walls having air holes therein in vertical alinement so that the holes at the upper portion of one section will register with the holes in the lower portion of a section above, there being indentations forming inwardly extending individual tongues in the lower portion of the section and a shoulder in the inwardly directed upper portion of the outer wall section adapted to interengage with said tongues for locking two adjacent sections together against longitudinal and transverse movement.

HERBERT A. ACER.