(No Model.) 2 Sheets—Sheet 1.

J. A. PALMER.

CASING FOR HOT AIR FLUES OR PIPES.

No. 457,455. Patented Aug. 11, 1891.

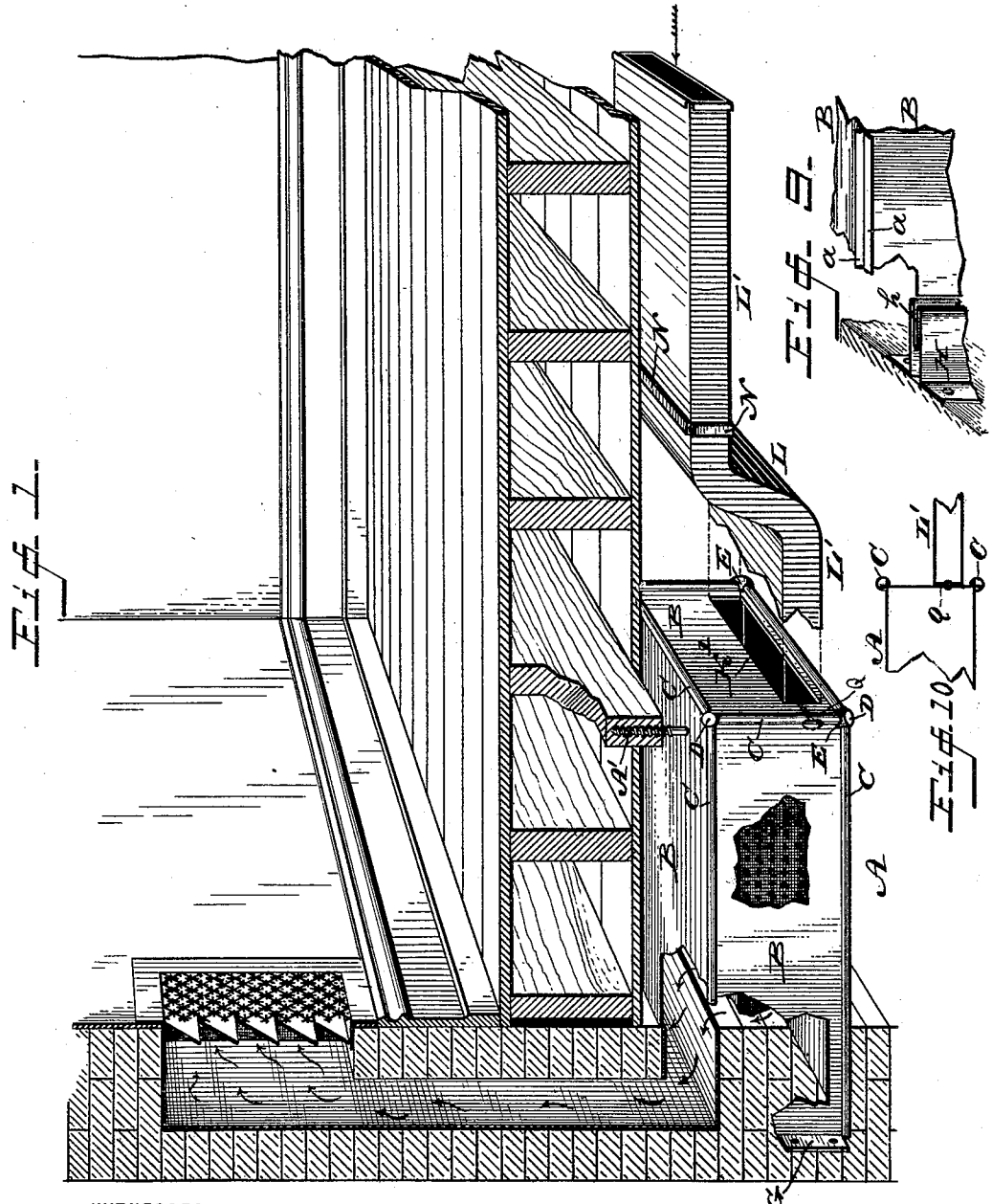


Fig. 1.

Fig. 9.

Fig. 10.

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(No Model.) 2 Sheets—Sheet 2.

J. A. PALMER.

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Fig. 2.

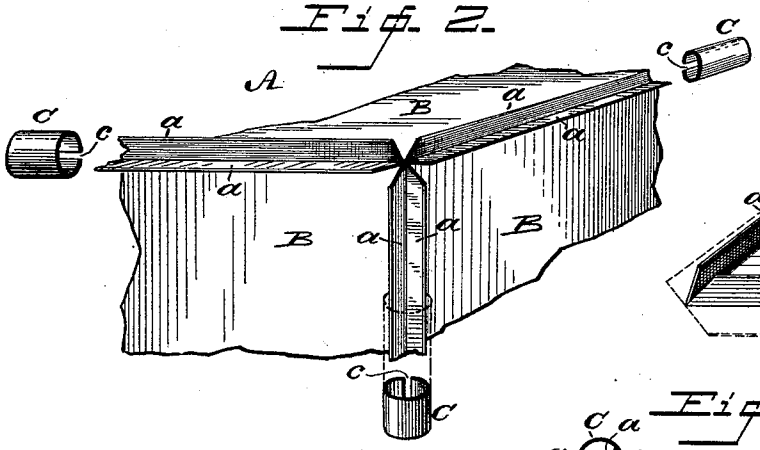


Fig. 4.

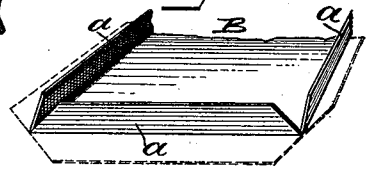


Fig. 3.

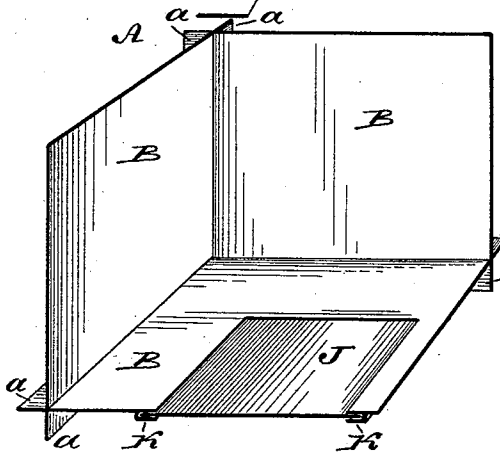


Fig. 5.

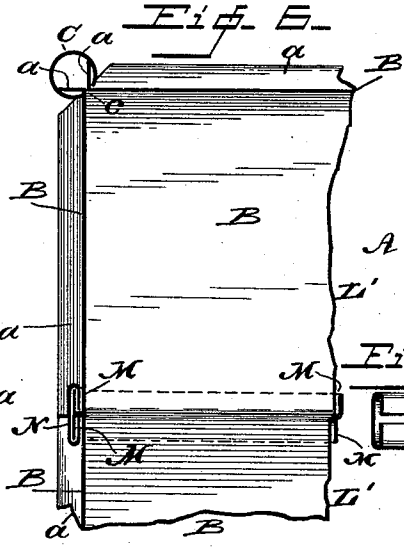


Fig. 6.

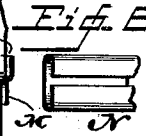
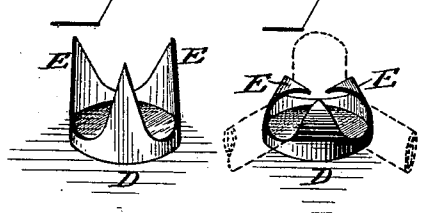


Fig. 7. Fig. 8.



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UNITED STATES PATENT OFFICE.

JAMES A. PALMER, OF PHILADELPHIA, PENNSYLVANIA.

CASING FOR HOT-AIR FLUES OR PIPES.

SPECIFICATION forming part of Letters Patent No. 457,455, dated August 11, 1891.

Application filed January 31, 1890. Serial No. 338,800. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. PALMER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Casings for Hot-Air Flues or Pipes, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a casing for a hot-air flue or pipe or other means for warming buildings by indirect radiation, said casing being formed of separable horizontal and vertical plates, each having flanges which, when united, form angles, tubular beads fitting over said flanges, corner-caps, and a plate having an opening therein and a door therefor.

It further consists of a casing, a supporting-bracket therefor constructed of a plate bent so as to form a slot adapted to receive the rear edge of said casing, and means for closing the bottom of said slot, as hereinafter described.

Figure 1 represents a sectional perspective view of a portion of a building, showing my invention applied thereto. Fig. 2 represents a perspective view of a portion of the improved radiator or heater casing. Fig. 3 represents a similar view of a portion of the casing having an opening in the bottom thereof covered by a slide. Fig. 4 represents a perspective view of one of the sides of the casing, showing the manner of constructing the same. Fig. 5 represents a horizontal sectional view of a portion of the radiator or heater casing and duct attached thereto. Fig. 6 represents a detail perpective view of a portion of a tubular bead or molding employed for attaching the parts of the duct. Figs. 7 and 8 represent perspective views of the clamping buttons or caps to be fitted over the corners of the casing. Fig. 9 represents a broken perspective view of a device for securing the casing to a wall. Fig. 10 represents a vertical section of a damper and portions of the adjacent casing and cold-air duct.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a radiator or heater casing made up of sheet-metal plates B, having their corners cut off, as shown in Fig. 4, and their edges struck up, as at *a*, to form securing-flanges. The plates B are adapted to be placed together, as shown in Figs. 2 and 3, and held securely fastened by mounting thereover a tubular molding or bead C, having a slot *c* therein to allow the same to be placed in position on said flanges. When the lengths of the said molding or beading C are placed on the flanges of the said plates B, they are slid over the same and meet and form an open corner. To secure the said molding or beading against movement and close said corners, a button or cap D is provided having legs E intersected by curved recesses, as seen in Figs. 7 and 8. The said curved recesses of the button are mounted over the molding or beading, and the legs E are bent down inside of said molding or beading, thereby holding the button in place, and the button located at each corner overcomes and prevents any tendency of a sliding displacement of the said molding or beading.

The casing, as above described, is put up around a radiator or heater and may be fastened to the wall either by bending the rear end, as at G, and inserting bolts therethrough, or, as shown in Fig. 9, a clamping-bracket H may be secured to the wall to receive the edge of the casing. The said bracket H is formed by bending the metal inward to form a slot *h*, with a closed end into which the said rear edges of the casing are fitted and held in position thereby.

The cold air fed to a radiator located in a cellar is usually conducted thereto by a duct L from the exterior of the building, and it is desirable to have a convenient means of regulating the flow of cold air through the duct. This we have in slide-door J as constructed in the bottom of the casing, as seen in Fig. 3, and which moves in ways K, formed by bending down the metal around the opening. When this slide is opened, the exterior supply of air can be shut off, and air from the cellar can be admitted to the heater, and being of somewhat higher temperature is more readily and quickly heated. Where the duct is connected to the casing, an opening K′ is formed, in which is placed a damper Q, which will enable the ready regulation of the quantity of fresh air delivered under the radiators. This

damper can be worked automatically by thermostats located in the different rooms or apartments, or it can be adjusted by a handle and pulley.

The radiator, as shown in Fig. 1, is suspended from a beam by a bolt A′ or other suitable fastening, the said casing being held in position by the heater or radiators.

The ducts and casing are made in sections L′, whose ends are flanged, as at M, and when two sections are fitted together the flanged portions coincide, and thereover is mounted a tubular flat sleeve N, all of which is fully shown in Figs. 1, 5, and 6.

The sections of the duct are preferably made flat; but if constructed otherwise the sleeve N is in like manner employed, it being understood that the several constructions can be varied in form for different purposes.

The improved casing and duct hereinbefore set forth may be readily placed in position, and also be easily removed when desired. When the parts are separated, they may be arranged in compact form for transportation and set up by any one having common mechanical ability. Soldering, riveting, bolting, and wiring are wholly dispensed with, and at the same time a casing or a duct is provided which is practically air-tight. The flanges of the different plates may be arranged at any preferred angle.

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

1. A casing for a radiator or heater, consisting of horizontal and vertical separable plates, the horizontal plates having vertical flanges and the vertical plates having horizontal flanges, the flanges forming an angle, tubular beads fitted over said flanges, corner-caps having legs to embrace and secure said beads, the bottom plate having an opening therein and ways thereon, and a door movable in said ways, said parts being combined substantially as described.

2. A casing for a radiator or heater and a bracket for supporting the same against a wall, consisting of a plate bent or doubled to form a slot for the reception of the rear edge of said casing, and means for closing the bottom of the slot formed by said bent or doubled plate, substantially as described.

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Witnesses:
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