(No Model.) 2 Sheets—Sheet 1.

H. B. DEWEY.

HOT AIR DUCT FOR FURNACES.

No. 369,169. Patented Aug. 30, 1887.

Fig. 1.

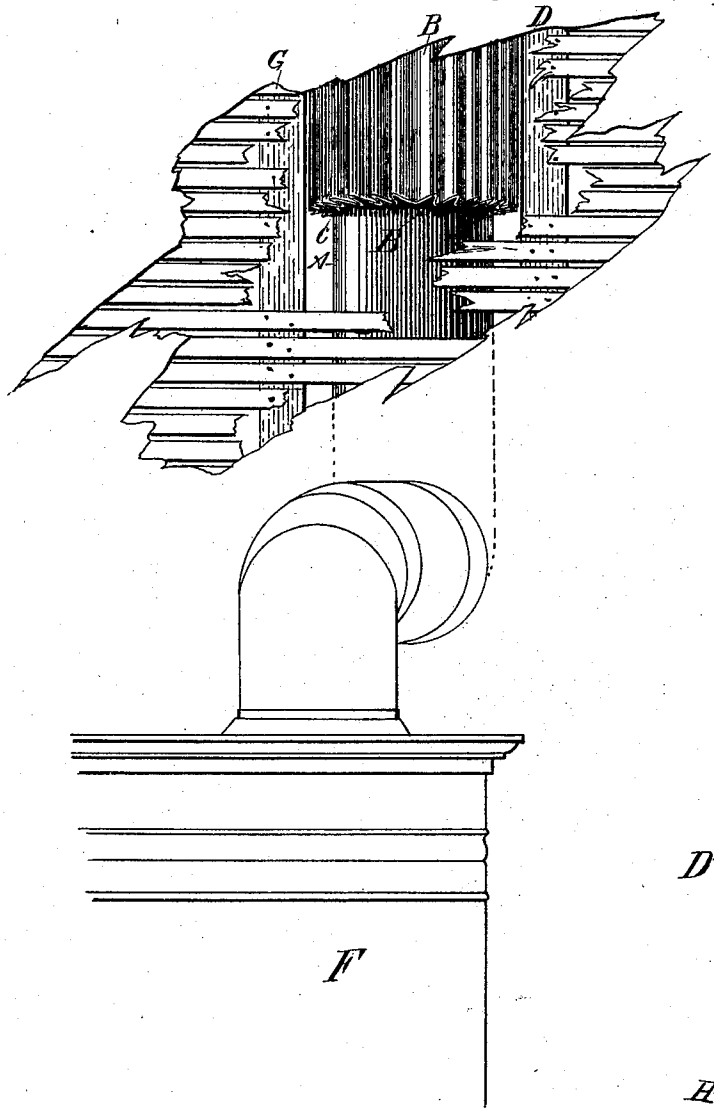
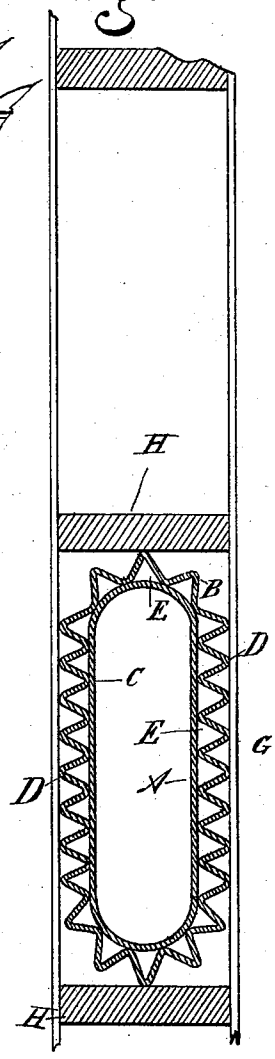


Fig. 2.



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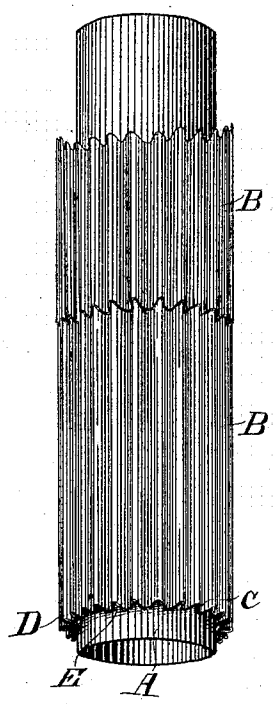
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FIG. 3.



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UNITED STATES PATENT OFFICE.

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HOT-AIR DUCT FOR FURNACES.

SPECIFICATION forming part of Letters Patent No. 369,169, dated August 30, 1887.

Application filed March 17, 1886. Serial No. 195,506. (No model.)

To all whom it may concern:

Be it known that I, HOSEA B. DEWEY, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Hot-Air Ducts for Furnaces; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in hot-air flues for furnaces; and it consists in providing the several sections of flues of the ordinary construction, which lead from the furnace through the walls of the building between the lath to the several apartments to be heated, with an exterior corrugated wall, the interior bends of the corrugations of the exterior wall bearing against the exterior of said flues, and the exterior bends being adapted to bear against the lath and studs of the surrounding wall through which said flues pass. The objects of said exterior wall are twofold: first, to serve as a protecting shield around the hot-air flue, whereby the same is prevented from being jammed or broken by contact with the timbers of the building, and also by which the combustible material of the wall is prevented from coming in contact with and being ignited by the hot-air flue, while the spaces between said corrugations permit of the plaster entering through and clinching upon the inside between the lath and said shield; second, to provide an air-space between said interior hot-air flue and the outer bend of said exterior wall, which prevents the points of contact of said exterior wall from becoming heated to such a temperature as would endanger the building.

The construction of my improvements are explained by reference to the accompanying drawings, in which—

Figure 1 represents a side view of my improved flue in connection with a furnace and surrounding wall, the lath and plaster being partially broken away to disclose the flue. Fig. 2 represents a horizontal section of the flue and surrounding wall, showing the lath and studding in contact with the exterior bends of the outer wall of the flue. Fig. 3 represents a perspective view of a series of sections joined together.

Like parts are represented by the same reference-letters throughout the several views.

A represents the series of interior hot-air flues through which the hot air passes from the furnace to the rooms to be heated.

B is the corrugated sheet-metal exterior wall, which surrounds said series of flues A. The corrugations of the exterior B extend longitudinally from one end of the several sections to the other, thus permitting said exterior to readily conform to the surface of the flue A. The inward bends, C, of the corrugations bear against the exterior surface of the inner flue, A, and said exterior is attached at such points of contact to the surface of the flue A by rivets or solder, as desired. The outer bend, D, of the corrugations form a bearing-surface for the surrounding walls and timbers, and, owing to their arched shape, they add great strength to the flue, which prevents it from being either bent or jammed by any ordinary pressure which may be brought to bear against it by the lath or timbers of the inclosing-wall.

By the outward bends of the corrugations a series of air-spaces, E, is formed around the inner flue for the passage of cold air between the inner flue, A, and the apex of such corrugations, whereby that part of the exterior wall which is liable to be brought in contact with the lath or studs of the wall, as shown in Fig. 2, is prevented from becoming heated, except only to the low and safe degree of heat.

In flues as heretofore constructed having a smooth even surface which bears against the inner surface of the lath of the surrounding wall such smooth surface prevents the plaster of the wall (which is usually laid on after the flues are in place) from entering through between the lath and clinching, as it should, upon the inside, and the plaster when thus laid against the smooth surface of a flue is liable to become loose and drop off.

It is obvious that with my improved form of flue when inserted in the wall, as shown in Figs. 1 and 2, the corrugations in the flue afford ample space for the plaster to enter between them and clinch up the inside of the latch.

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

The combination, with the furnace F and with the wall of the building G, of the interior hot-air flue or duct, A, and the corrugated exterior wall or bearing, B, the inwardly-projecting bends C of the corrugations being secured against the interior flue, A, and the outwardly-projecting bends of said corrugations being adapted to bear against the surrounding wall G, substantially as and for the purpose specified.

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

HOSEA B. DEWEY.

Witnesses:
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