

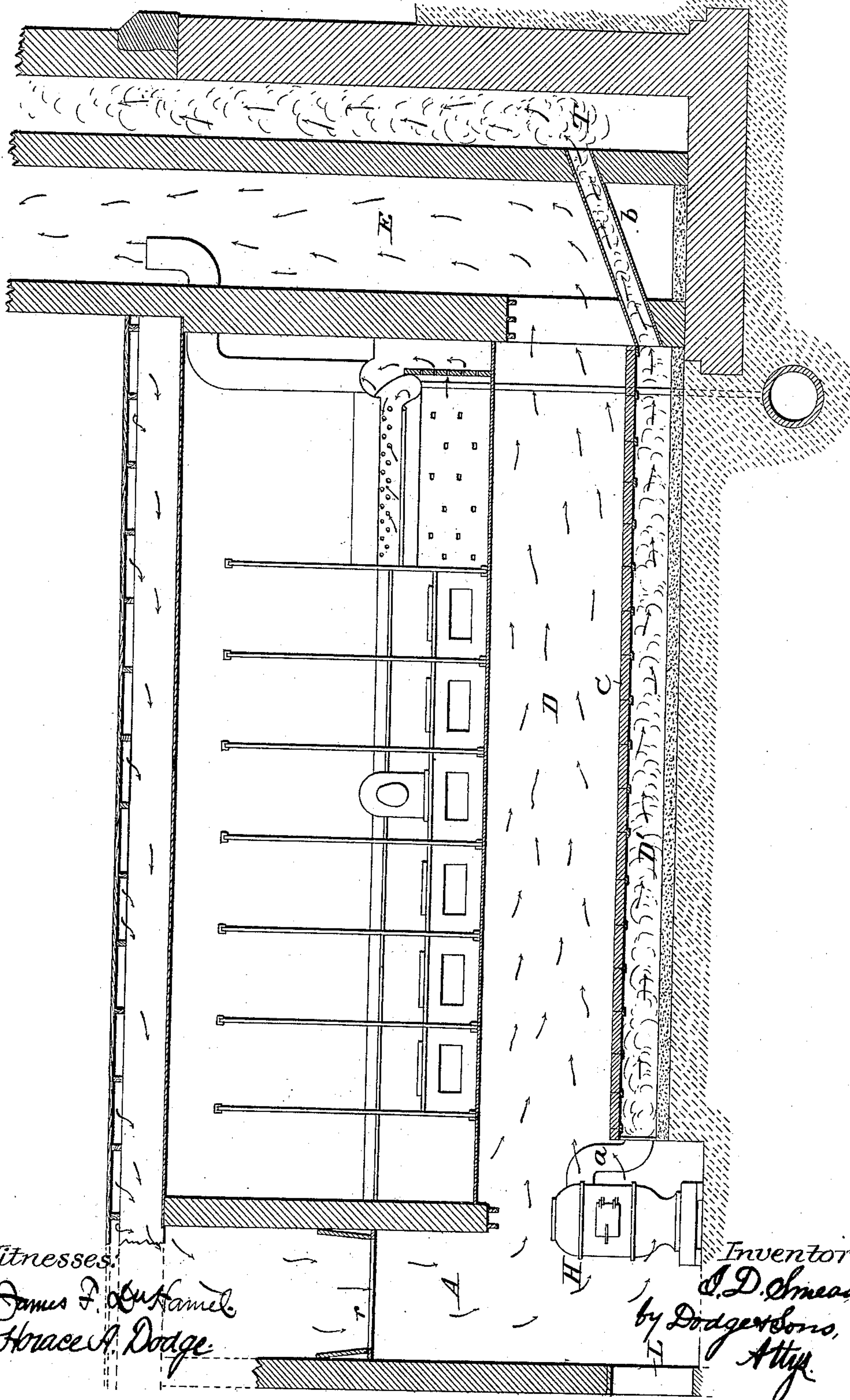
(No Model.)

I. D. SMEAD.

DRY CLOSET.

No. 387,263.

Patented Aug. 7, 1888.



UNITED STATES PATENT OFFICE.

ISAAC D. SMEAD, OF TOLEDO, OHIO.

DRY CLOSET.

SPECIFICATION forming part of Letters Patent No. 387,263, dated August 7, 1888.

Application filed April 6, 1888. Serial No. 269,806. (No model.)

To all whom it may concern:

Be it known that I, ISAAC D. SMEAD, of Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Dry Closets, of which the following is a specification.

My present invention relates to that class of dry closets in which the deposits are dried by a current of air drawn through the vault; and the invention consists in so arranging a heater in connection with the vault of the closet that the smoke and heat from such heater shall pass through and be utilized in said vault, as hereinafter more fully set forth.

The drawing is a longitudinal vertical section through that portion of the building in which the dry closet is located, the section being taken through the dry closet or vault.

This invention is an improvement on the dry closet, for which Patents Nos. 363,971, 352,157, and 314,834 have heretofore been granted to me, the construction of the vault in this being the same as that shown in the latter of said patents, in that it has a transverse horizontal partition, C, extending from end to end, thus dividing the vault into two parts or ducts—an upper one, D, and a lower one, D'—as represented in the drawing, it being understood that this horizontal partition between the upper and lower ducts is to be composed of brick or similar absorbent material, as described in my prior patent, No. 363,971.

In practice I have been in the habit of locating a small furnace or heater at the bottom of the vent-shaft E, as shown in Patent No. 352,157, to create a draft through the vault, more especially when the building was not heated. Instead of that I now locate the heater at or near the opposite end of the vault, as shown in the drawing, in which H indicates the heater, and which in this instance is represented as being set just within the mouth or entrance of the vault, though it may be set more or less in the vault. Its smoke-pipe *a* is connected with the lower duct, D', as shown, so that the smoke and its attendant heat is conducted through said duct D' underneath the horizontal partition C, thereby heating said partition and aiding to more rapidly dry up and evaporate the moisture thereon. At its

opposite end the duct D' is connected with the smoke stack or flue T (which, as shown, is usually located or built adjoining the vent-shaft E) by a pipe, *b*. In some cases the smoke-stack consists of a metal pipe located within the vent-shaft and extending out the top of the same, and in such cases the pipe *b* will of course be connected with it. Another advantage of this plan is that the heat from the furnace or heater H is utilized to heat the air as it enters the vault or duct D, thereby increasing its absorbent or evaporative capacity, which is thus applied throughout the entire length of the vault, and as it is a well-settled law that the affinity of dry air for moisture increases at a greater ratio than the increase of its temperature, it follows that this adds greatly to the evaporative or absorbent power of the current of air passing through the vault, and this, added to the effect produced by the smoke and heat passing under the partition C, increases greatly the efficiency of the apparatus.

When the air is taken from the rooms of the building to the foul-air-gathering room A, and from thence through the vault to the vent-shaft, the fire in the heater H should not be started until the current through the vault and vent-shaft has become established, and which it will do almost immediately after the fire is started for warming the rooms of the building.

In the summer time, or when no fire is required to warm the rooms, communication with the rooms may be cut off by closing the doors in the foul-air room A, as described in Patent No. 352,157, and as indicated in the accompanying drawing, in which case the air will enter through the opening L, the latter of course being provided with a door for closing it when not in use, the same being fully shown and described in the patent referred to and therefore not necessary to be shown in this case. By this means it will be seen that the air passing through the vault will be heated, even when no fire is used for warming the building, and that when the warm air from within the building is used it will be heated that much more.

The tall vent-shaft used in connection with these dry closets in the large school and similar public buildings insures a draft through

the vault at all times, so that there is little or no tendency of the current of air to pass backward into the rooms, even when the doors in the foul-air room A are not closed and the rooms are not heated, yet in such cases I consider it better to close the doors, so as to render it absolutely certain that the current will pass in the direction intended—that is, through the vault to the vent-shaft, and from thence out into the atmosphere above the building.

Having thus described my invention, what I claim is—

1. The combination, in a dry closet, of a vault having a duct, D, connected to the vent-shaft E at one end for the passage of a current of air, and a separate duct, D', underneath the former and connected at one end to a smoke-flue, T, for the passage of smoke, with a heater located at or near the entrance or mouth of said vault and having its smoke-pipe connected

to the lower duct, substantially as and for the purpose set forth.

2. The combination, in a dry closet, of a vault provided with the two horizontal ducts D and D', arranged one over the other and separated by a horizontal partition of absorbent material, the upper of said ducts being connected with a vent-shaft for the passage of air, and the lower of said ducts being connected with the smoke-flue T, and a heater, H, located at or near the mouth of said ducts and having its smoke-pipe connected to the lower duct, substantially as and for the purpose set forth.

In witness whereof I hereunto set my hand in the presence of two witnesses.

ISAAC D. SMEAD.

Witnesses:

FRANK L. STEVENS,
ANNA C. KOEHLER.