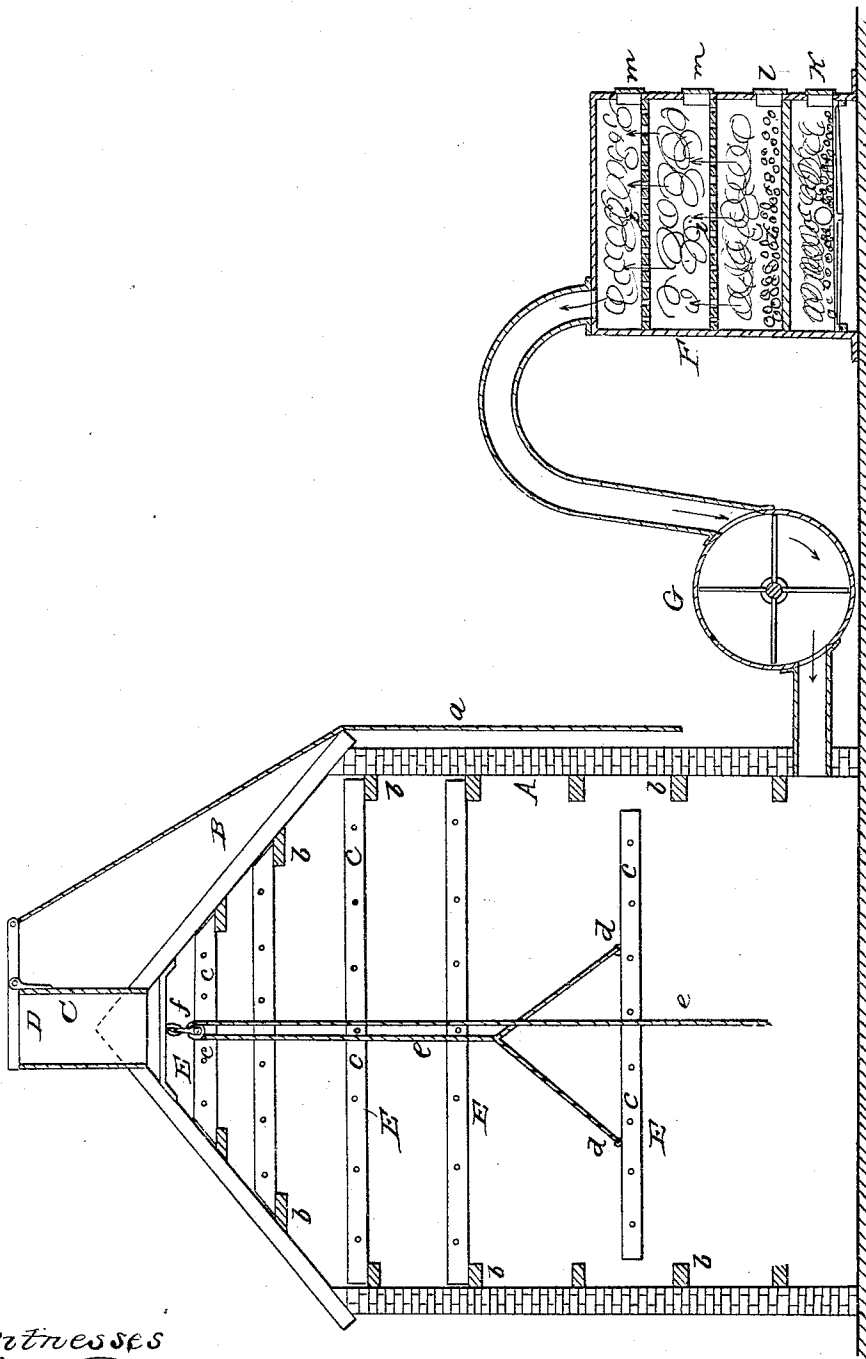


H. A. AMELUNG.
Smoke and Drying House.

No. 56,690.

Patented July 31, 1866.



witnesses
J. P. Hall
G. W. Reed

Inventor
H. A. Amelung

UNITED STATES PATENT OFFICE.

H. A. AMELUNG, OF NEW YORK, N. Y.

SMOKE AND DRYING HOUSE.

Specification forming part of Letters Patent No. 56,690, dated July 31, 1866.

To all whom it may concern:

Be it known that I, H. A. AMELUNG, of the city, county, and State of New York, have invented a new and Improved Smoke and Drying House; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming a part of this specification, said drawing representing a longitudinal vertical section of my invention.

This invention consists in the arrangement of perforated soot-catchers in the interior of the furnace in such a manner that no soot is allowed to pass into the smoke-house and to come in contact with the articles to be smoked or dried; finally, in the application of movable beams in the interior of the smoke-house, in combination with a suitable hoisting-tackle, in such a manner that the operation of introducing hams, meats, or other articles into the smoke or drying house and removing the same therefrom is facilitated.

A represents a smoke or drying house, constructed of brick or any other suitable material, and made as near air-tight as possible. It is provided with a conical roof, B, from which rises a tubular projection or chimney, C, and this chimney is closed by an adjustable valve or damper, D, to be operated from below by means of a cord or rope, *a*, or in any other suitable manner.

The interior of the house is occupied by a series of beams, E, which rest upon ledges *b* projecting from its sides, as clearly shown in the drawing. Each of these beams is furnished with a series of pegs, *c*, from which the hams, pieces of meat, or other articles to be dried or smoked can be conveniently suspended, and two or more staples, *d*, inserted in the upper edge of each beam, serve to fasten the hoisting-rope *e*, which extends over a pulley-block, *f*, under the ridge of the roof, so that each beam can be conveniently lowered, in order to attach or detach the articles to be dried or smoked, or raised when said articles have been attached. By means of these movable beams the labor of introducing the articles to be dried or smoked and removing the same after they have been smoked or dried is considerably lessened, and much valuable time is saved.

F is the furnace, which is made of sheet metal or other suitable material, and in which the smoke is created, or which may be used to heat the air used in drying. For the purpose of creating smoke the furnace is provided with a diaphragm, *g*, of sheet-iron or other suitable material, and placed at a convenient height above the grate *h*. Said diaphragm is covered with sawdust or other suitable material, from which the smoke is to be created, and the smoke rising from such material passes up through the soot-catchers *i*. These soot-catchers consist of foraminous plates of sheet metal or other suitable material secured in the furnace at a convenient distance from each other and from the diaphragm *g*, as clearly shown in the drawing. A door, *k*, in the lower part of the furnace serves to introduce the fuel to the grate, and the sawdust or other material from which the smoke is to be created is introduced through the door *l*. The doors *m* in the upper part of the furnace give access to the soot-catchers *i*, for the purpose of cleaning the same of any soot that may accumulate thereon and prevent the free passage of the smoke.

A fan-blower, G, or other equivalent device, serves to draw the smoke from the furnace and to force it in the house A. By closing the damper D on the chimney the pressure of the smoke or air in the house A can be raised, and its effect on the articles to be dried or smoked can thereby be increased to a considerable extent, and by opening the damper more or less after the house is filled a continuous current of smoke or air can be passed through the house, and the operation of drying or smoking hams, meats, or other articles can be accomplished in much less time than it can by the ordinary process.

In smoking no soot is allowed to pass into the house, or, if it should find its way therein, it is carried off by the forced current without being allowed to connect itself with the body of the meat and to heat the same, thereby preventing decomposition of mild-cured meats. In short, by my process the meat is smoked in one-third of the time as by the usual process. The smoke is rendered purer and passes the surfaces of the meat at least a hundred times where it passes but once by the old process. Furthermore, by my process about fifty

per cent. is saved in loss of weight, and the risk of fire and the insurance are lessened, as there is no fire connected with the smoke-house.

My apparatus is also applicable with great advantage for the purposes of drying meats or other matter by cold or hot air. The fan-blower can be used without heating the furnace for the purpose of forcing a cold current of air through the drying-room, and when heated air is requisite suitable pipes can be arranged in the furnace to heat the air as it passes through the same, and then through the blower into the drying-room.

In using my apparatus the effect of the external atmosphere on the meat or other articles to be cured is counteracted or prevented by the continuous current of dry air passing through the body to be dried, and carrying

off the humidity or moisture as it passes the surface of said body.

I claim as new and desire to secure by Letters Patent—

1. The application of one or more soot-catchers, *i*, in combination with the grate *h* and diaphragm *g* in the interior of the furnace *F*, in the manner and for the purpose substantially as herein set forth.

2. The movable beams *E*, in combination with the hoisting-tackle *e f*, or its equivalent, and with the drying or smoking house *A*, constructed and operating substantially as and for the purpose herein shown and described.

H. A. AMELUNG.

Witnesses:

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