

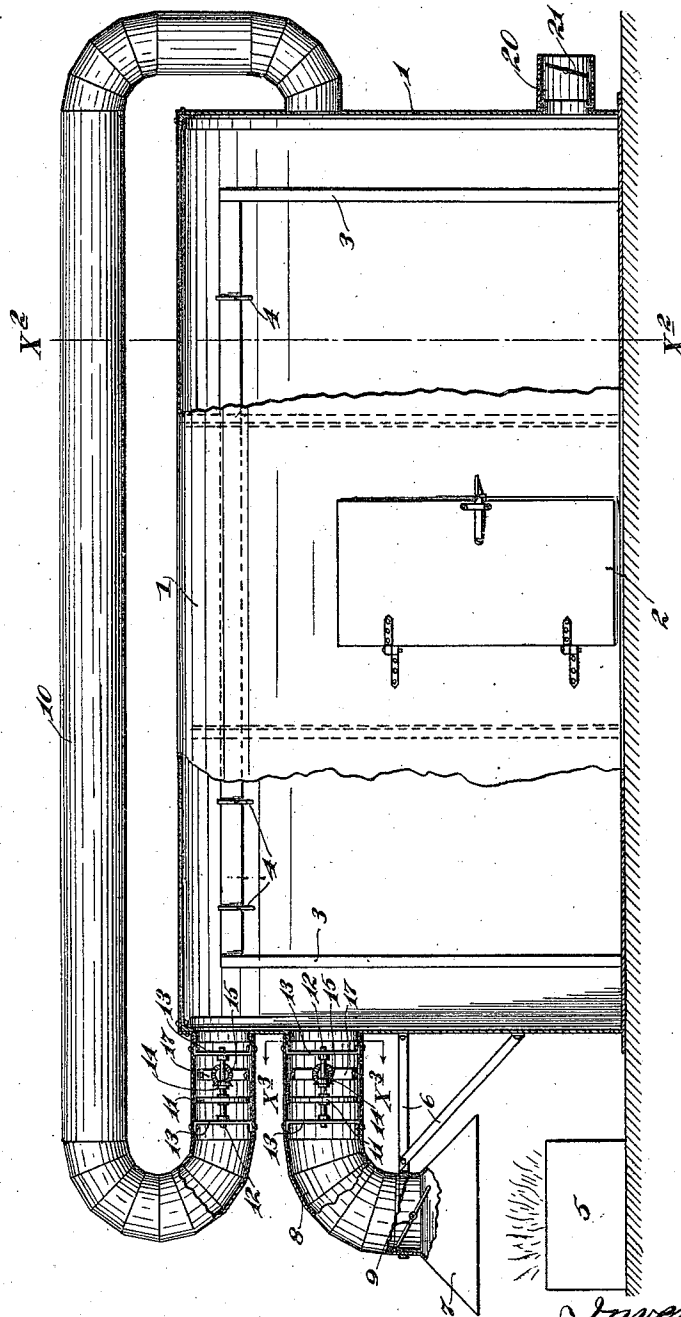
N. O. DAVIDSON.
SMOKE HOUSE.
APPLICATION FILED DEC. 10, 1909.

973,010.

Patented Oct. 18, 1910.

2 SHEETS-SHEET 1

Fig. 1.



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2 SHEETS-SHEET 2.

Fig. 2.

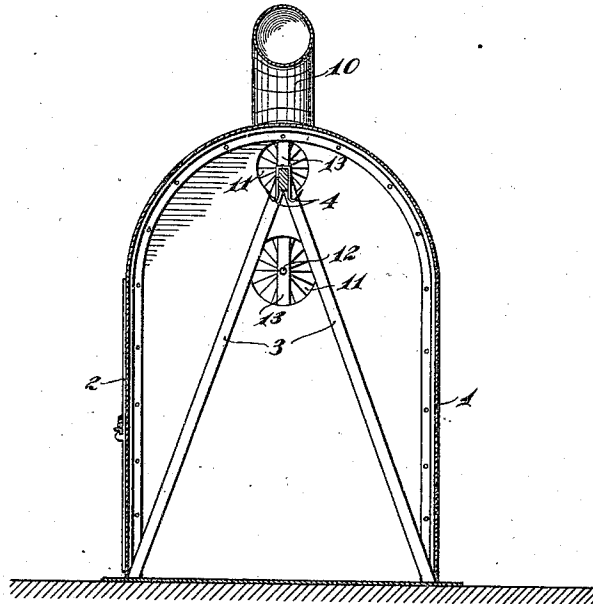


Fig. 3.

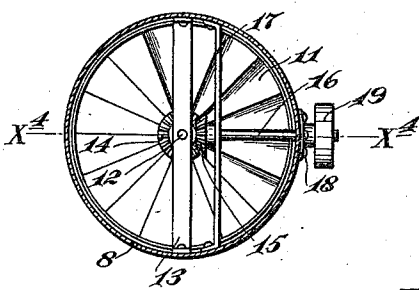


Fig. 4.

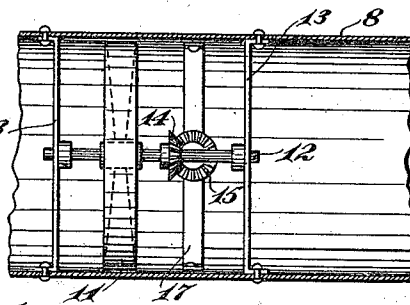
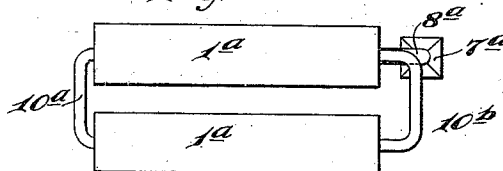


Fig. 5.



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UNITED STATES PATENT OFFICE.

NILS O. DAVIDSON, OF MACOUN, SASKATCHEWAN, CANADA.

SMOKE-HOUSE.

973,010.

Specification of Letters Patent.

Patented Oct. 18, 1910.

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To all whom it may concern:

Be it known that I, NILS O. DAVIDSON, a subject of the King of Great Britain, residing at Macoun, in the Province of Saskatchewan, Dominion of Canada, have invented certain new and useful Improvements in Smoke-Houses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide an improved smokehouse, and to this end, it consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

The invention is illustrated by the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a view in side elevation, with some parts broken away and some parts sectioned, showing the improved smokehouse and attachments for introducing smoke into the same and for the circulation of the smoke therethrough; Fig. 2 is a transverse vertical section taken on the line $x^2 x^2$ of Fig. 1; Fig. 3 is a detail in transverse vertical section on the line $x^3 x^3$ of Fig. 1; Fig. 4 is a section on the line $x^4 x^4$ of Fig. 3.

The smokehouse 1, which, as shown, is of rectangular form, is preferably made of sheet metal and, at one side, it is provided with a door 2, through which a person may pass into and out of the smokehouse. Within the smokehouse 1 is a suitable rack 3, upon which the meat or any other article to be smoked may be hung by hooks 4 or any other suitable device. Outside of the smokehouse, and preferably near one end thereof, is a fire box 5 in which the smoke-producing fuel is burned. Supported from the adjacent end of the smokehouse 1 by means of a bracket 6, is a hood 7, which immediately overlies the fire box 5 and is connected by a large smoke-admission tube 8 to one end of the smokehouse. In the upper portion of the hood 7 is a damper 9, by means of which the entrance passage through the hood and the smoke pipe 8 may be opened and closed, at will.

The numeral 10 indicates a large smoke-circulating pipe which leads from one end of the smokehouse and opens into the other end thereof. A fan is located in the smoke

pipe 8 and another fan is located within the smoke pipe 10. These two fan structures are preferably identical in form and, hence, a description of one thereof will serve as a description of both, reference being had to Figs. 3 and 4, which show the said fan located within the smoke pipe 8. The fan head 11 is secured to a short shaft 12, axially disposed within the pipe 8 and journaled in suitable bearings therein, afforded by transverse bars 13. The shaft 12 also carries a miter gear 14, that meshes with a miter gear 15, secured to the inner end of a shaft 16, which shaft is extended diametrically in the said pipe 8, and is journaled in suitable bearings afforded by a transverse bar 17 and a bearing 18 on one side of the said pipe. At its outer end, the shaft 16 is shown as provided with a pulley 19, which adapts the same to be driven by a belt, not shown. A short discharge pipe 20, provided with a damper 21, opens from the lower portion of one end of the smokehouse.

The operation is substantially as follows: The smoke produced by the fire burned in the box 5 will, when the damper 9 is opened and the fan in the pipe is operated, be drawn upward and forced into the smokehouse. In starting the device, the damper 21 of the discharge pipe 20 should be open until the air, which is relatively cool and, hence, relatively heavy as compared with the smoke-laden air, has been driven out of the smokehouse. Then the damper 21 should be moved into a closed position and the fan in the smoke pipe 10 starts into action so as to keep up the circulation of the smoke-laden air through the smokehouse. This action may be continued for a time while the fan in the pipe 8 is operated and the damper 9 in an open position. When, however, the smoke from the fire in the box 5 ceases, the damper 9 should be closed and the fan in the said pipe 8 stopped, thereafter the circulation of the smoke-laden air kept up by the operation of the fan within the circulating pipe 10. This forced circulation of the smoke-laden air insures good contact with the smoke of all portions of the articles being smoked and, furthermore, the movement of the smoke-laden air causes the smoke to more rapidly penetrate the articles being smoked.

What I claim is:

1. The combination with a smokehouse, of a smoke-admission pipe opening into the same and provided with a hood adapted to

overlie a fire at the exterior of the smokehouse, a circulating pipe or conduit opening from said smokehouse at one point and opening into the same at another point, and
5 fans located in said smoke-admission and circulating pipes.

2. The combination with a smokehouse, of a damper-equipped smoke-admission pipe opening into the same and provided with a
10 hood adapted to overlie a fire at the exterior of said smokehouse, a smoke-circulating pipe opening from said smoke-house at one point

and opening into the same at another point, fans located in said smoke-admission and circulating pipes, and a damper-equipped air
15 discharge pipe or passage opening from said smokehouse, substantially as described.

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

NILS O. DAVIDSON.

Witnesses:

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MARIE E. LA PALME.