N. G. SIMONDS.

APPARATUS FOR SMOKING HAMS.

No. 195,730. Patented Oct. 2, 1877.

FIG. 1.

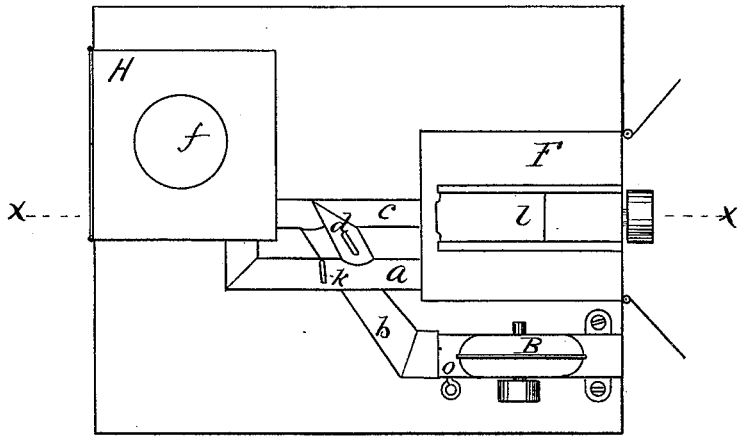


FIG. 2.

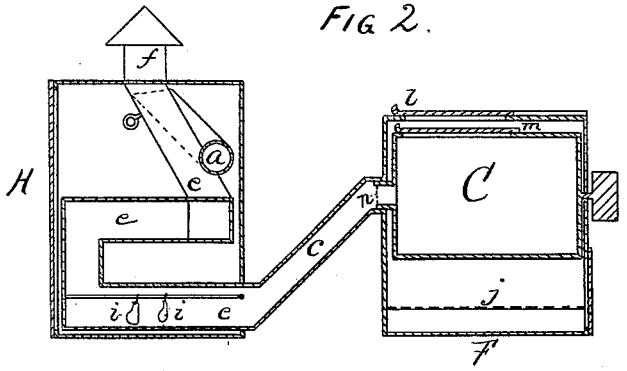


FIG. 3,

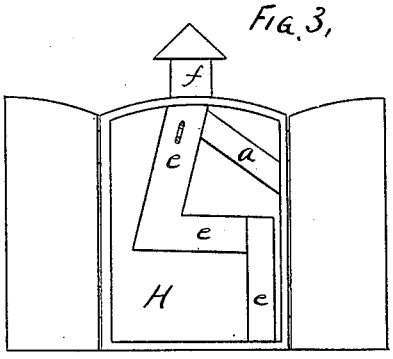
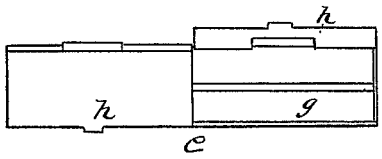


FIG. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

NATHANIEL G. SIMONDS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN APPARATUS FOR SMOKING HAMS.

Specification forming part of Letters Patent No. **195,730**, dated October 2, 1877; application filed September 1, 1877.

To all whom it may concern:

Be it known that I, NATHANIEL G. SIMONDS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful or Improved Apparatus for Smoking Hams and other Articles, which invention is fully set forth in the following specification, reference being had to the accompanying drawing.

The object of my invention is to furnish a smoking apparatus which shall be efficient in preserving hams, and any other articles that may be properly treated thereby, that will enable the temperature of the smoke-house to be suitably regulated, so as to avoid any undue shrinkage of the hams and excessive waste by dripping, and also effect a saving in fuel, from which the required smoke is derived.

In the drawings, Figure 1 is a top or plan view of my apparatus. Fig. 2 is a vertical section of the same, taken on line *x x*, Fig. 1. Fig. 3 is a front elevation of the smoke-house with the doors open. Fig. 4 is an enlarged view of detached portions of the ham-boxes or smoke-flue.

In the drawings the several parts of my apparatus are distinguished as follows: H represents the smoke-house; F, the furnace; C, the revolving cylinder within the furnace; B, the blower. *a* is the draft or chimney pipe of the furnace, and leads into the chimney of the smoke-house. *b* is the blast-pipe; *c*, the pipe which connects the cylinder with the smoke-house, and *d* a branch pipe connecting pipes *a* and *c*. Within the smoke-house is a circuitous smoke-flue, *e*, into one end of which the pipes *b* and *c* lead directly, while its opposite end terminates in the chimney *f* of the smoke-house.

This smoke-flue *e*, which may be extended about the interior of the smoke-house in any convenient manner, also constitutes the receptacle within which the hams, or other articles to be smoked and preserved, are placed, and is constructed with openings, as shown at *g*, Fig. 4, provided with hinged lids for tightly closing the same, as at *h*, when the hams have been suspended therein by hooks resting upon bars, as shown at *i i*, Fig. 2.

When the hams are thus disposed throughout the said smoke-flue the operation of my apparatus in curing the same is as follows: A quantity of suitable combustible material being placed upon the fire-grate *j* in the furnace F and ignited, the smoke arising therefrom passes along the pipe *a* until it reaches the cut-off or damper *k*, which, being turned to obstruct the passage, deflects the current of smoke through the branch pipe *d*, whose damper is open, and thence into pipe *c*, whence it is forced into the smoke-house flue *e* and among the hams by the blast from pipe *b*, produced by the blower, which may be operated by any suitable motive power, the effect of said blast being to exhaust that portion of pipes *c* and *a* between the blast-pipe and the furnace, and force, by pressure, the smoke thus derived through the flue *e*, and in contact with the hams placed therein.

The revolving cylinder C, which rotates, when set slowly in motion by suitable motive power, above the furnace fire, may be employed to roast coffee, and when so employed the fumes and aroma arising therefrom are carried through the pipe *c*, by the means just described, into the smoke-house flue, and thus utilized in the process of preserving and flavoring the hams. The coffee thus roasted outside of the smoke-house will not be in any manner damaged, but will remain perfectly clean and suitable for table use, and a saving be effected by its preparation in conjunction with the aforesaid preserving process.

Any other suitable aromatic and spicy article or articles may be prepared, burned, or evaporated in said cylinder for the purpose of aiding in the preservation and flavoring of the hams.

The top of the furnace has a slide, *l*, Fig. 2, for the purpose of access to the cylinder, and the cylinder is provided with a similar slide, *m*, covering an opening therein, through which the same is charged and discharged.

The pipe *c* has a strainer, *n*, and a similar guard may be placed across pipe *a*, near the furnace, to prevent the passage therefrom of any flaming or ignited particles of combustible materials into the smoke-house. The air conducted into the smoke-house through the blast-pipe *b* not only serves to promote a cir-

culation of smoke through the circuitous smoke-flue *e*, but also to regulate the temperature in said flue and smoke-house.

Said blast-pipe has a cut-off, *o*, which may be employed to graduate the current of air thus forced into the smoke-pipes.

When sufficient smoke is produced by the operations carried on in the cylinder C, or it is desirable to employ the fumes therefrom exclusively, the damper *k* in pipe *a* is turned so as not to obstruct said pipe, while the damper in the branch pipe *d* is made to close its pipe, when the smoke and heat from the furnace will pass directly through pipe *a* to the chimney *f* of the smoke-house and escape therefrom, while the blast from pipe *b* will carry the fumes from the cylinder into the smoke-house, as before described.

If found desirable in regulating the temperature of the smoke-house through the blast-pipe, the air which supplies said pipe may be taken wholly or in part through a branch pipe leading from the furnace, instead of entirely outside, thus tempering the blast and facilitating the regulation of the temperature in the smoke-house and its flue.

Whatever drip falls into the trough of the smoke-flue may be readily drawn out through tap-holes made therein, or dipped out when the trough is opened, by raising the lids which cover the same, as before described; but by my method of smoking the hams and regulating the temperature about them at the same time it is believed much of the dripping from the meat, and consequent shrinking thereof, will be avoided.

A damper in the smoke-flue *e*, near chimney *f*, Fig. 3, serves, when turned to obstruct said pipe, to check the flow of the current of smoke in said flue, and thereby, when the blower is in operation, to compress and condense the smoke in the same about the hams, and when the flue is thus charged with smoke the blast may be shut off for a time until a fresh charge of smoke is needed.

What I claim as my invention is—

1. A smoking apparatus consisting of a smoke-conduit and meat-receptacle, *e*, a shelter-house, H, and an external smoke-producing furnace, F, combined and arranged to operate together and relatively to each other substantially as and for the purposes specified.

2. In a smoking apparatus, the combination of a smoke-house provided with a smoke-box, *e*, or its equivalent, a smoke-producing furnace, and a blower, all suitably connected by pipes to operate and produce the effects, substantially as and for the purposes described.

3. A meat-smoking apparatus consisting of a smoke-chamber, *e*, a smoke-producing furnace, F, and an aroma-generator, C, constructed, combined, and arranged to operate together substantially as and for the purposes specified.

4. A smoking and preserving apparatus, consisting of the house H, with its flue *e*, the furnace F, revolving cylinder C, pipes *a b c d*, with their dampers, and the blower B, constructed, combined, and arranged to operate together substantially as and for the purposes specified.

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