A. LEIGH.

Ventilator for Cooking-Stoves.

No. 162,834. Patented May 4, 1875.

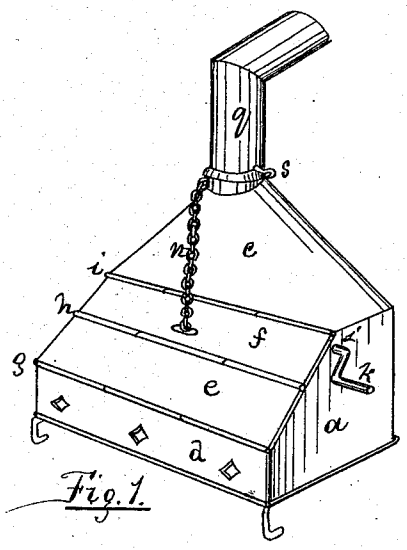

Fig. 1.

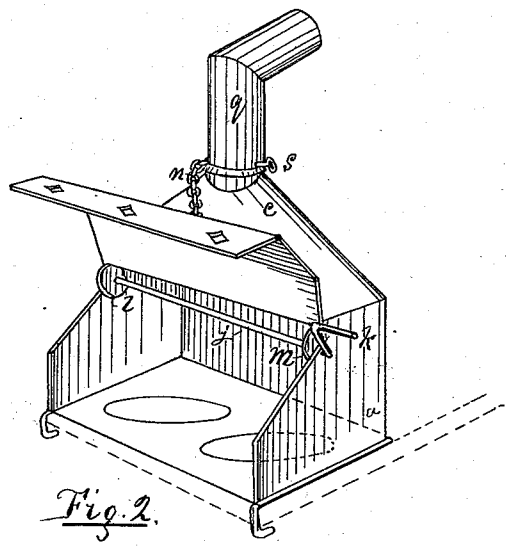

Fig. 2.

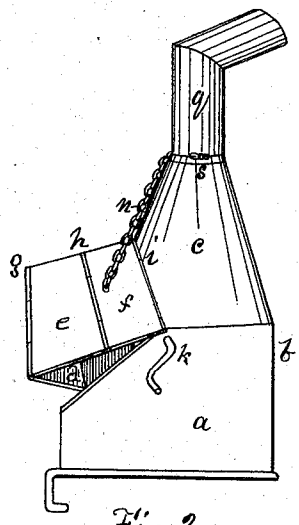

Fig. 3.

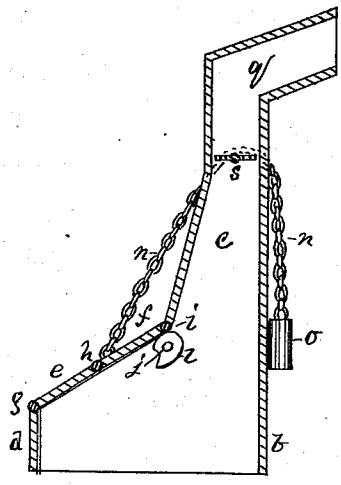

Fig. 5.

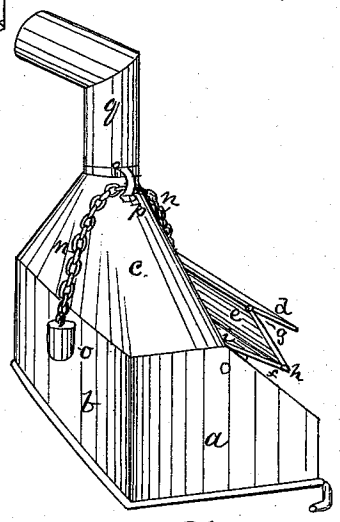

Fig. 4.

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UNITED STATES PATENT OFFICE.

ALFRED LEIGH, OF FLEMINGTON, NEW JERSEY.

IMPROVEMENT IN VENTILATORS FOR COOKING-STOVES.

Specification forming part of Letters Patent No. **162,834**, dated May 4, 1875; application filed March 3, 1875.

To all whom it may concern:

Be it known that I, ALFRED LEIGH, of Flemington, Hunterdon county, and State of New Jersey, have invented a new and improved apparatus for catching smoke, steam, and odors from articles in process of cooking on a stove-top, and conveying the same to some suitable outlet, of which the following is a specification:

My invention consists of an apparatus intended to be placed on top of a stove, covering partially or wholly articles undergoing the various processes of cooking, covering and inclosing them in such manner that all smoke, steam, or odors emanating therefrom will be caught, concentrated, and conveyed to any suitable outlet. It is also very useful for retaining and concentrating heat around and about the various articles cooking on the top of the stove, &c. The apparatus is formed of any suitable sheet metal, and of any desired shape at the bottom. A portion of the roof is composed of three plates or flaps, hinged each to each, and also to the body proper of the apparatus, said plates in length reaching from side to side of the casing, the object being to admit of such exposure of the interior of the inclosure as may be desirable for inspecting the articles beneath. The casing above the flaps is funnel-shaped, contracting as it reaches upward, finally ending in a pipe-collar, to which is attached a movable outlet-pipe, which may be turned to any side or angle to reach any suitable outlet or place of discharge. It may be connected to the exit-pipe of the stove, the said outlet-pipe of the apparatus being provided with a revolving damper for the purpose of retaining heat within the inclosure. Apertures therein permit escape of smoke, steam, odors, or noxious gases sufficiently for ordinary purposes when the damper is closed. It also consists of a crank-rod provided with cams for raising the said cover or flaps when desired; and it further consists of a chain and weight attached to the flaps, and in combination therewith, reaching over behind the apparatus, and arranged to hold the said covers or flaps at any height desired, preventing any possibility of their falling.

This apparatus effectually conveys all effluvia arising from cooking processes away from the stove, preventing their escape into the apartments, thereby assisting to keep the atmosphere pure, acting as a ventilator. In summer when the heat in the room is too oppressive for comfort the apparatus may be opened, so as to ventilate perfectly; or, if fire is burning in the stove, it, by covering the top of the same, prevents escape of heat into the room, conveying it away out of the house, thereby exercising a comforting influence.

Figure 1 is a perspective view of the apparatus, lid entirely closed. Fig. 2 is a perspective view of the same, showing lid or cover entirely open. Fig. 3 is a perspective view, showing lid or cover partially open. Fig. 4 is a reverse view, in perspective, showing rear, with chain and weight, and the cover in another position. Fig. 5 is a vertical section, lid closed, dotted lines showing position when open entirely, also showing damper at exit-pipe.

a represents the ends of the apparatus; *b*, the back. *c* represents the contracted or funnel-shaped portion reaching upward. *d*, *e*, and *f* are flaps or divisions of the cover or lid, hinged, respectively, at *g*, *h*, and *i*, so as to admit of folding in various positions for the purpose of facilitating access to the interior. At *j* is a rod having crank at *k*, and provided with cams at *l* and *m*, so arranged that by turning the crank as desired the cams, coming in contact with the lid, will force it upward about as shown in Fig. 2, or even farther back. At *n* is a chain connected to flap *f*, and, running upward over the apparatus, at or near the exit-pipe collar or other suitable point, passes over and is connected to a weight at its outer end, marked *o*. It is also provided with suitable guides or guards at *p* to prevent it becoming detached. As the lid is forced upward by the cam-connection the weight *o* draws the chain over and assists effectually to hold the lid in proper position. The exit-pipe is at *q*, and is arranged so as to connect with the exit-pipe of the stove or any other suitable outlet desired. At *s* is arranged a check-draft damper in the exit-pipe *q* or collar of the apparatus, and is used when it is desirable to retain heat within the inclosure below. Apertures therein permit the escape of odors, gases, &c., even when closed. The cover, being formed of three flaps hinged together, is very convenient.

In Fig. 3 the flap *d* is shown folded underneath, leaving the front of the inclosure open, illustrating one of the advantages of this combination of flaps—very useful while frying fish, broiling, or in baking buckwheat-cakes on holes in stove-top. The flaps remain folded, as shown. Cakes, meat, fish, &c., may be readily turned without removing the casing or raising the cover, while all smoke, odors, &c., are effectually carried off.

The crank-rod *j*, with the cams *l m*, will throw back the cover as a whole when desired, but there are frequent occasions where the folding of the flaps in manner shown, or in other ways easily seen, is very desirable and useful, and it is for that reason that the flaps are multiplied in my apparatus.

The flap *d* is provided with apertures to permit ingress of air to promote currents within the inclosure for the purpose of more effectually driving off the smoke, odors, &c., toward the outlet.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The crank-rod *j*, with cams *l m*, in combination with flaps *d*, *e*, and *f*, as and for the purpose described and set forth.

2. In combination with flaps *d*, *e*, and *f*, the chain *n*, provided with weight *o*, arranged substantially in manner and for the purpose set forth.

3. The hood or inclosure, provided with folding flaps *d*, *e*, and *f*, crank-rod *j*, having cams *l m*, funnel-shaped or contracted top *c*, exit-pipe *g*, having check-damper *s*, all arranged and combined as described and set forth.

ALFRED LEIGH.

Witnesses:

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