W. WILSON.

Cooking Stove.

No. 58,705. Patented Oct. 9, 1866.

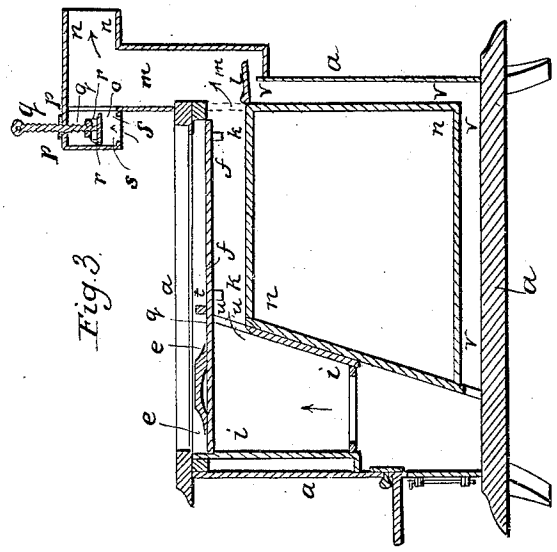

Fig. 3.

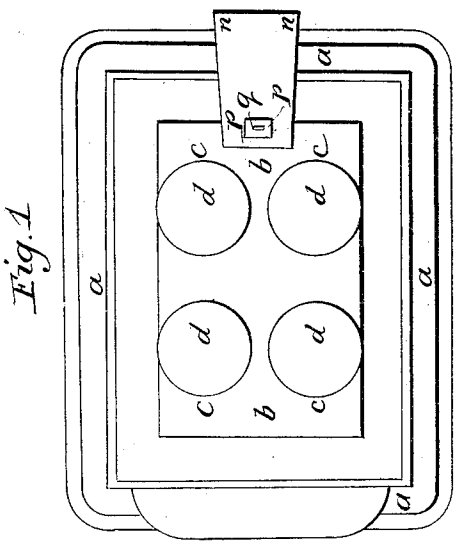

Fig. 1.

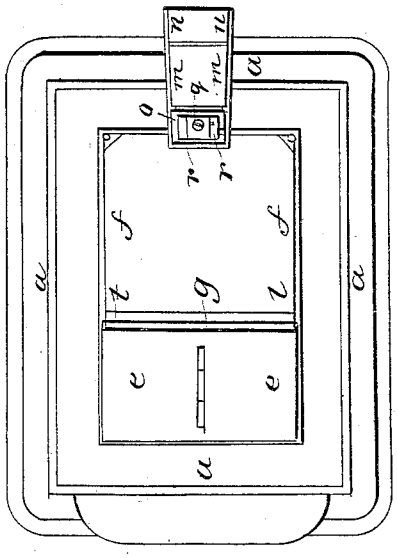

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM WILSON, OF BOSTON, MASSACHUSETTS.

COOKING-STOVE.

Specification forming part of Letters Patent No. **58,705**, dated October 9, 1866.

To all whom it may concern:

Be it known that I, WILLIAM WILSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Cooking-Stoves, and that the following description, taken in connection with the accompanying plate of drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements by which my invention may be distinguished from all others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

In the various cooking-stoves arranged with apertures and adjustable covers, no method has heretofore been adopted to prevent the gas, smoke, and dirt that arise from the fire from escaping into the room through the apertures every time they are uncovered. This escape of the gas, smoke, &c., is objectionable, not only on account of the disagreeableness and untidiness produced thereby, but is often injurious to the health of the person obliged to inhale the gas, &c. Moreover, in the ordinarily-constructed cooking-stoves the bottoms of the different receptacles are brought in close proximity to the fire, and soon become coated with soot, so that it is impossible to set them down without soiling whatever they come in contact with.

These objections are obviated by my improvements, which consist in so arranging intermediate plates or slabs at a sufficient distance below the top of the stove to receive the different receptacles inserted therein, as to form a supplementary top or cover to the stove, upon which the various utensils rest, and between the bottom of which and the top of the oven a draft chamber or flue is formed, through which all obnoxious particles are carried off, so that all communication between the fire-pot and the top of the stove is shut off and the escape of any gas, &c., through the apertures when uncovered is prevented, and the vessels inserted in the apertures are kept free from smoke and soot. Also, in so arranging and operating an elevating damper as to counteract the draft and regulate it with greater precision than has heretofore been possible by the use of the ordinary dampers heretofore employed for the like purpose.

I will now proceed to describe in detail the arrangement and operation of my improvements, which are represented in the accompanying plate of drawings, Figure 1 being a plan or top view of my improved cooking-stove complete; Fig. 2, a top view of the same with the top removed, and Fig. 3 a central vertical longitudinal section of the same.

a a a in the drawings represent the outer casing of a cooking-stove, constructed with an adjustable top, *b b*, having apertures *c c c c*, fitted with removable covers *d d*, &c. Placed at a suitable distance below the top *b b*, to allow the insertion of the various receptacles used, are plates or slabs *e e* and *f f*, of iron, soap-stone, or other suitable material. The plate or slab *e e* is made adjustable, so that it can be removed for broiling or other purposes, and is rabbeted on its edge at *g*, so as to form a closely-fitting joint with the plate or slab *f f*, which remains stationary. Between the plate *f f* and the top of the oven *h h*, opening into the fire-pot *i i*, a flue or draft-chamber, *k k*, is formed, having at its end an ordinary damper, *l l*, opening into a funnel, *m m*, one elbow, *n n*, of which connects with the chimney-flue and the other projects over the top of the stove and forms an air-box, *o o*, having in its top a nut, *p p*, in which works a screw, *q q*, attached to a valve or damper, *r r*, which is raised or lowered thereby, so as to open or close an aperture, *s s*, formed in the bottom of the air-box *o o*.

By arranging and operating the damper *r r* in this manner the draft can be regulated with more exactness than has heretofore been possible by the use of a revolving damper.

Extending across the plate or slab *f f* near its edge is a bar, *t t*, for the purpose of preventing the smoke, &c., from rising above the opening *u u* of the draft-chamber *k k* when the plate or slab *e e* is removed.

Underneath and at the back of the oven *h h* a chamber, *v v*, is formed, through which the heat, &c., finds a passage when the chamber *k k* is closed, or when it is necessary to heat the oven for baking purposes, and is opened or shut by means of the damper *l l*.

The operation of my improved stove is as

follows: It being desired to heat the receptacles placed in the top *b b* of the stove *a a*, the plate or slab *e e* is adjusted in its proper position, and forms, with the other plate or slab *f f*, a perfectly tight-fitting cover, that entirely separates the top *b b* from the fire-pot *i i*, and consequently prevents the vessels inserted therein, which rest upon the top of the said plates or slabs *e e* and *f f*, from becoming soiled from the smoke, &c., arising from the fire, and precludes the possibility of any gas, smoke, &c., escaping through the apertures *c c* when uncovered. By turning the damper *l l* back upon the top of the chamber *v v* all exit for the heat, smoke, &c., is closed, except through the flue or chamber *k k*, the opening of which being at the top of the fire-pot *i i*, all the heat, &c., must necessarily rush through the chamber *k k*, below the slabs or plates *e e* and *f f*, thereby sufficiently heating them for the purposes required, and producing a sharp and intense draft, whereby all obnoxious particles arising from the fire are carried off.

By raising the valve or damper *r r* by means of the screw *q q* the aperture *s s* is opened, and a current of cold air is admitted into the funnel *m m*, where, meeting with the heated air, the latter is retarded in its progress, and the intensity of the draft is thereby lessened. By this means a slow fire may be kept for a longer period with greater economy of fuel, and the heat can be regulated with more exactness than has been possible by the methods heretofore adopted.

For baking purposes, &c., the damper *l l* is turned up against the end of the draft-chamber *k k*, and closes it, thereby compelling the heat, &c., to pass down through the chamber *v v*, underneath and up the back of the oven *h h*, as usual in the cooking-stoves heretofore in use.

Having thus described my improvements, I shall state my claims as follows: What I claim as my invention, and desire to have secured to me by Letters Patent, is—

1. In cooking-stoves, the use of the removable intermediate plate, *e e*, and slab *f f*, arranged as described, and for the purpose specified.

2. In combination with the above, the arrangement of the draft-chamber *k k*, as and for the purpose specified.

3. The use of an elevating-damper, *r r*, arranged and operating in the air-box *o o* substantially as and for the purpose herein set forth.

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Witnesses:
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