(No Model.)

J. SOMERVILLE & W. H. Y. WEBBER.

GAS COOKING STOVE,

No. 342,232. Patented May 18, 1886.

Fig. 1

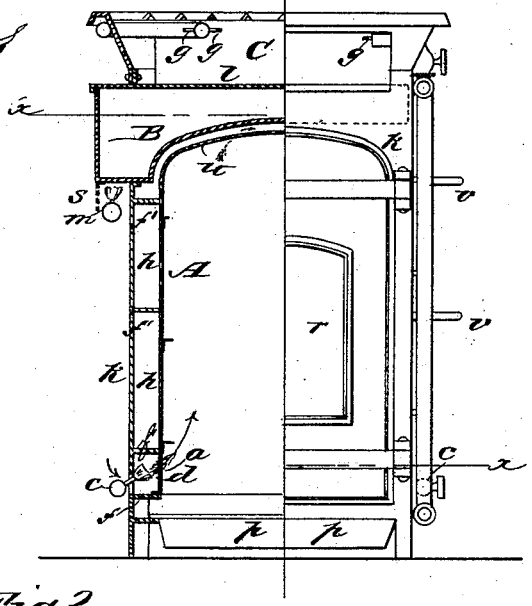


Fig. 2

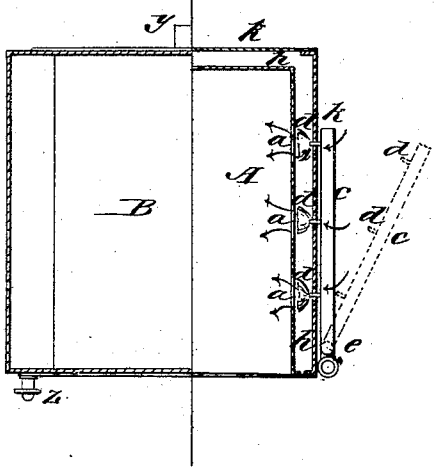
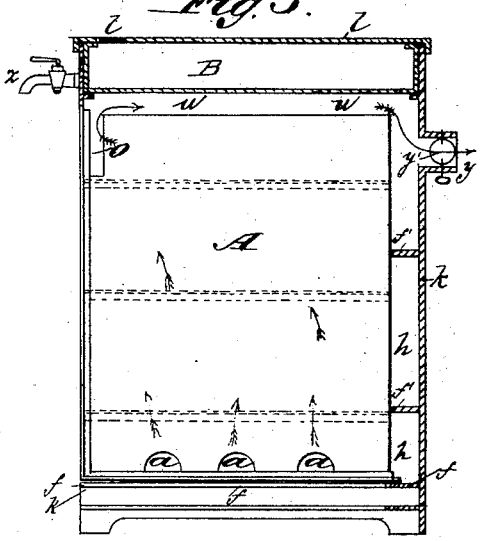


Fig. 3.



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GAS COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 342,232, dated May 18, 1886.

Application filed March 18, 1885. Serial No. 159,299. (No model.) Patented in England October 2, 1884, No. 13,084.

To all whom it may concern:

Be it known that we, JOHN SOMERVILLE, of Bankside, Southwark, Surrey county, England, and WILLIAM HOSGOOD YOUNG WEBBER, of Amel Overhill Road, Forest Hill, Surrey county, England, have invented certain new and useful Improvements in Gas Cooking-Stoves, of which the following is a full, clear, and exact description.

This invention more particularly relates to gas cooking-stoves which have a roasting or baking oven; and it consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a half elevation and section of a gas cooking-stove embodying our invention. Fig. 2 is a horizontal section of the same on the irregular line *x x* in Fig. 1, and Fig. 3 is a side elevation of the removable lining of the oven and part of the outer casing and reservoir with the boiling attachment removed.

The oven A is rectangular in plan, slightly higher than its width or length, and may be provided with the usual means of suspending viands for cooking. It is formed of a lining which we make of inoxidizable metal—such as copper—or of iron rendered inoxidizable on the surface by a protecting coating of enamel, tin, copper, &c., or the black oxide produced by what is known as the "Bower-Barff" process. This lining or oven-chamber A is not attached to the frame-work of the stove in any way, but is readily removable for cleaning or other purposes. It slides into its place upon flanges *f*, formed upon the casing *k*, and is supported against lateral movement by other flanges, *f'*, which also act as baffles to prevent the products of combustion of the heating flames of the burners *d* from making their way round the outside of the lining in the space *h* to the flue *y*. The products of combustion consequently enter holes *a a* in both sides of the lining at or near its bottom, and escape from the oven by an opening, *o*, in the top near the front. The course of the draft is shown by the arrows in Figs. 1 and 2. There is a clear space, *h*, round the lining, which serves as a hot-jacket. We prefer to dispense with the heat-absorbing packing with which the space is commonly filled; but we are not precluded from filling it wholly or in part with any suitable packing cemented or otherwise secured to the casing or flanges, so as not to interfere with the free moving of the lining.

The front end of the lining or oven-chamber A is rabbeted in the front plate, and held in place by the door *r*, and the bottom is closed by the sliding dripping-pan *p*, so that while cooking is going on the influx of air is as much as possible confined to the holes *a a*. The oven-heating burners *d*, which are preferably of the ordinary flat-flame illuminating type, are fixed upon the gas-supply tubes *c*, which are hung to swivel or swing, as at *e*, either at the front or back. The number and power of these burners may be varied according to the size of the oven; but in any case they will project their flames, as shown, through holes in the outer casing of the stove corresponding to the holes *a a* in the lining, and will be swung into the position indicated by the dotted lines in Fig. 2 for lighting.

The flames will not enter the inside of the oven, except slightly, and will not therefore take up the area of the oven, but will radiate their heat freely into it, and also send the products of combustion as already described.

The waste products of combustion, after issuing from the oven at *o*, pass over the top of it in the space *u*, Fig. 1, and travel to the outlet-flue *y*, underneath the boiler B, which is made to conform to the shape of the stove and oven, as shown, and has a large heating-surface in proportion to its capacity.

For heating the boiler when the oven is not used, there is a separate set of burners, *m*, protected by a perforated screen, *s*. The boiler thus forms an integral part of the stove, and its cover *l* is the bottom of the upper portion, C, of the stove, in which are disposed the boiling and grilling burners *g g*. The boiler is filled through an opening in the cover, and is emptied by the cock *z*.

To prevent too sharp a draft through *u u*, we may place the flue-outlet *y*, which is controlled by a damper at a lower level than the bottom of the boiler.

To render the stove as convenient for use as possible, we place plate-racks on the sides, as at *v v*.

We prefer to use flat-flame illuminating burners for all purposes.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In a gas cooking-stove, the combination, with the casing thereof, provided with inlet-apertures and an outlet, of a swiveled gas-supply pipe on the outside of the casing, and provided with burners constructed to register with the inlet-apertures in the casing, substantially as set forth.

2. The combination, with the outer casing, *k*, having apertures in its lower edge and flanges *f f'* on its inner sides, of the removable inner casing having openings *a*, in alignment with those of the outer casing, an outlet-opening, *o*, and the swinging supply-tube *c*, having burners *d*, adapted to enter the chamber or space between the inner and outer apertures, substantially as set forth.

3. The combination, with the inner and outer casings having inlet-openings and outlet-openings *o y*, of the flanges *f f'* between the side walls of said casings, the reservoir resting on top of the outer casing, a space, *u*, being formed between the bottom of said reservoir and top of the inner casing, and the openings *o y*, communicating with said space *u*, substantially as set forth.

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