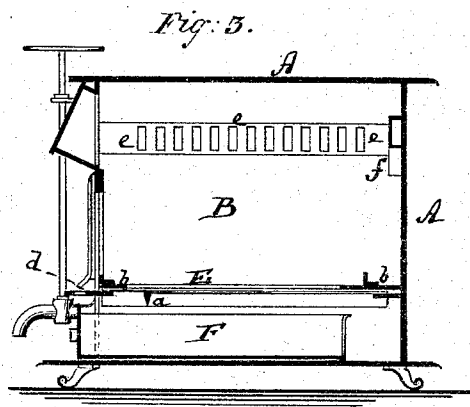
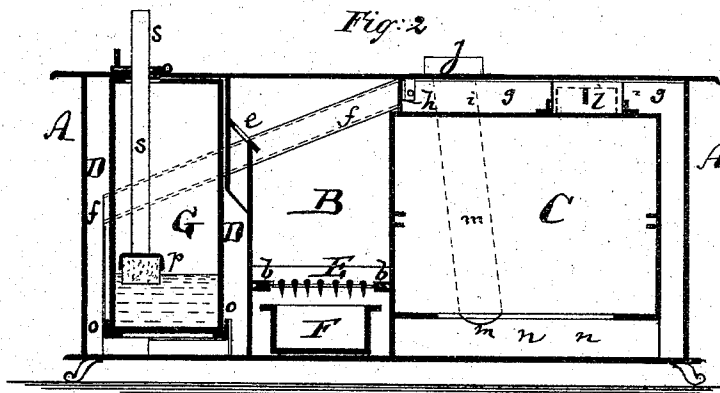
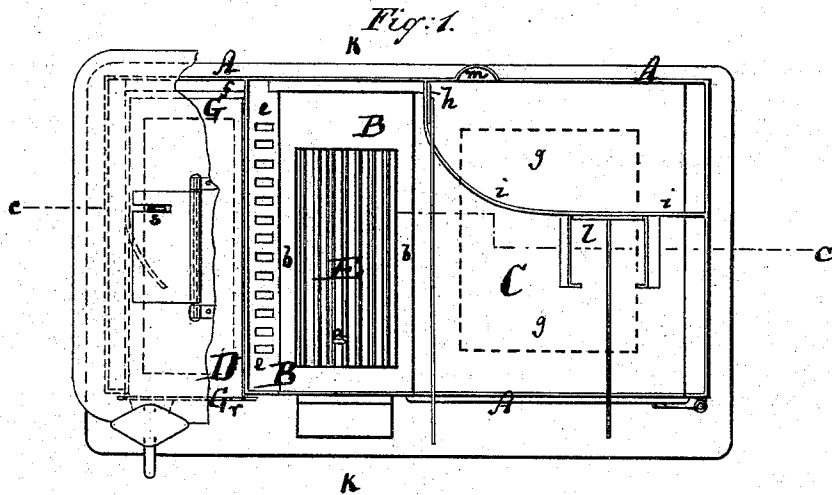


W. RUBENCAMP.
Reservoir Cooking-Stoves.

No. 156,712.

Patented Nov. 10, 1874.



Witnesses:

Thos. Rastig.
J. v. Briesen

Inventor:

W. Rubencamp
by A. v. Briesen
his attorney

UNITED STATES PATENT OFFICE

WILHELM RÜBENCAMP, OF BETHLEHEM, PENNSYLVANIA.

IMPROVEMENT IN RESERVOIR COOKING-STOVES.

Specification forming part of Letters Patent No. **156,712**, dated November 10, 1874; application filed March 13, 1874.

To all whom it may concern:

Be it known that I, WILHELM RÜBENCAMP, of Bethlehem, in the county of Northampton and State of Pennsylvania, have invented a new and useful Improvement in Cooking-Stoves, of which the following is a specification:

Figure 1 is a top view, partly in section, of my improved cooking-stove. Fig. 2 is a vertical section of the same on the line *c c*, Fig. 1. Fig. 3 is a vertical transverse section on the line *K K*, Fig. 1; and Fig. 4 a detail top view of the grate.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to several improvements in the construction and arrangement of cooking-stoves, and has for its object to provide a better circulation of the smoke within the stove for the purpose of distributing the heat where it may be needed, all as hereinafter more fully described.

In the accompanying drawing, the letter *A* represents the outer casing or wall of the stove. The same is made of suitable size and shape, and of metal or other material. Within the same is formed a fire-space, *B*, an oven, *C*, and a space, *D*, for the water-reservoir, the fire-space being between *C* and *D*, as indicated in Fig. 2.

The grate *E* of the fire-space has its bars made rounded at the upper face, as shown in Fig. 2, so that the ashes and small pieces of coal that may accumulate thereon will more readily fall through into the ash-space or ash-pan *F* than they will on a grate whose bars are flat at the top.

Another peculiarity of the grate is, that near the front end there is a small cross-bar, *a*, arranged between two of the grate-bars for the purpose of giving a hold to the hook or poker for removing the grate entirely from the stove. At the edges the grate is guided between two pairs of rails, *b b*, which are secured beneath the fire-space in the stove, and which will be covered by the brick lining of the fire-place, so that the grate cannot be obstructed in its free movement for shaking the coal by contact with the aforementioned brick lining.

When it is desired to shake the grate it is only necessary to put the end of a poker or

hook through an aperture, *d*, in the front end of the grate; but for entirely removing the grate the hook is placed from beneath behind the cross-bar *a*, and the grate can then be completely withdrawn without requiring it to be handled.

Near the upper end of the fire-place is, at the side of the water-reservoir, an inclined partition, *e*, which forms part of the wall between *C* and *D*, said inclined partition *e* being perforated at suitable intervals, as indicated in Fig. 3. The smoke or products of combustion can go through this perforated partition *e*, find its way into the space *D* and surround and circulate around the water-reservoir *G*, thence—that is to say, from the space *D*—the smoke will pass through an inclined channel, *f*, that extends along the back of the stove, and find its way into the space *g* that is above the oven *C*. The end of the passage *f* can be closed by means of a damper, *h*. When said damper is closed the products of combustion will, instead of escaping by passing through *D* and *f*, pass directly into the space *g* through the opening in a partition, *i*, that is placed across such space *g*, and thence into the smoke-pipe *j*. In the partition *i* there is also a damper, *l*, which, of course, must be opened when *h* is closed, and vice versa.

In order to produce a draft all around the oven *C* I extend a small pipe, *m*, from the lower end of the smoke-pipe down into the lower smoke-chamber *n*, which is below the oven, so that the suction caused by the ascent of the smoke in the pipe *j* will cause smoke to be drawn around the oven and up through the pipe *m*, thus insuring a proper circulation of the products of combustion around the oven when it is desired to use the oven. The same pipe *m* will also answer the purpose of receiving soot from the chimney or stove-pipe and depositing it in the lowermost chamber *n* of the oven—that is to say, beneath the oven.

The water-reservoir *G* is placed upon rails *o o* that are built into the chamber *D*, and can be moved out bodily through the front of the stove with all its attachments, so that it may be used at a distance from the stove if required. A floater, *p*, is placed within the water-reservoir, and from it an arm, *s*, extends upward through an aperture in the top of the water-

reservoir and in the top of the stove. I may have a graduated scale marked upon the said arm *s*, so that the height of the water within the reservoir can at all times be perceived. The front plate of the water-reservoir, which is marked *r* in Fig. 1, laps partly over the front of the stove and forms part of the front when the reservoir is in place.

I wish to preserve my right to apply for a patent on the novel construction of the grate here referred to, without any bar by reason of its having been described in this specification.

I claim as my invention—

1. The combination of the fire-place B, perforated partition *e*, chamber D, and passage *f*, with the dampers *h* *l* and partition *i* and stove-pipe *j*, all combined for operation as specified.

2. In a stove, the pipe *m*, that extends downward from the stove-pipe *j* into the smoke-chamber *n* below the oven, substantially as specified.

W. RÜBENCAMP.

Witnesses:

JAMES EYNON,
EZRA CRESSMAN.