

J. COX & G. E. HOPKIN.
 Portable Range.

No. 165,660.

Patented July 20, 1875.

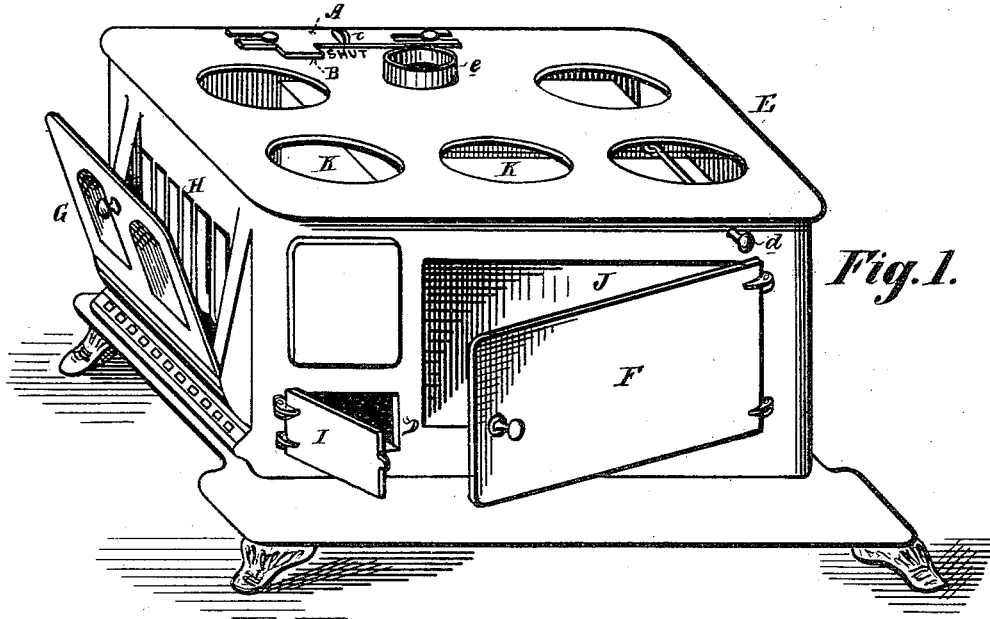


Fig. 1.

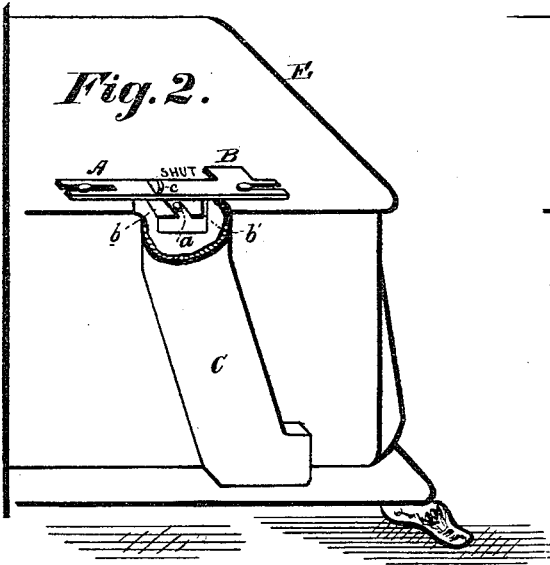


Fig. 2.

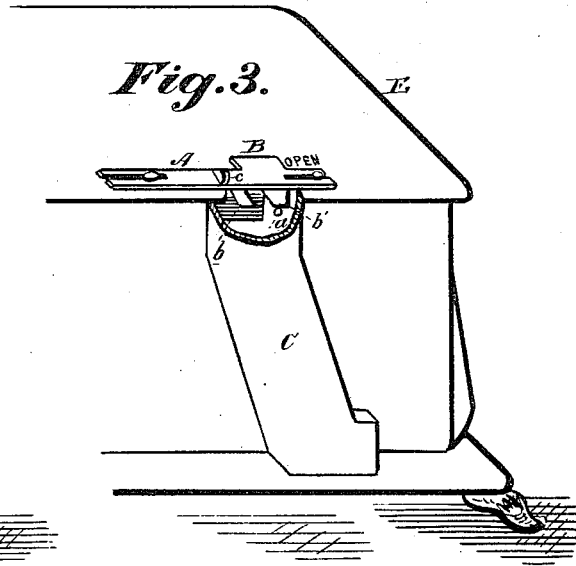


Fig. 3.

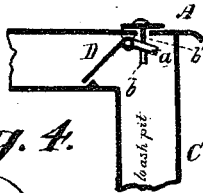


Fig. 4.

Witnesses { Ellwood Donsall
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UNITED STATES PATENT OFFICE.

JOSEPH COX AND GEORGE E. HOPKIN, OF PHILADELPHIA, PENNSYLVANIA,
ASSIGNORS TO COX, WHITEMAN & COX, OF SAME PLACE.

IMPROVEMENT IN PORTABLE RANGES.

Specification forming part of Letters Patent No. 165,660, dated July 20, 1875; application filed
May 31, 1875.

To all whom it may concern:

Be it known that we, JOSEPH COX and GEO. E. HOPKIN, both of the city and county of Philadelphia, State of Pennsylvania, have invented Improvements in Portable Ranges, of which the following is a specification:

The object of our invention is to provide a dust flue and damper with special improvements relating thereto, in the class of cook-stoves commonly called "portable ranges."

The characteristic plan of this range is very direct and simple. Of oblong form, square ends, level top plate, excepting pipe-flange at the back side of it, fire-chamber at one end, oven extending from this to the other end, and oven-door in front.

The regular flue from the fire-chamber passes over the oven, front of a central partition, down the end, and beneath the oven, where the said partition terminates, and the flue, circling around the end of it, is reversed in direction, and returns up the end at the back part of the oven and over it to the pipe-flange.

A direct draft is obtained by use of a damper in the said partition over the oven.

As heretofore made these portable ranges have been provided with no satisfactory means for abating the escape of dust, when occasioned by poking the fire, or preventing its passage into the regular flue, where it has lodged, to a considerable extent, upon the oven.

We have provided, in combination with a suitable dust-flue, an improved damper, with such devices that it reports its own condition and prevents mistakes.

This damper hangs upon points resting loosely in niches at the top of the dust-flue. It has a small arm extending back from the line of its bearings as a handle, to be used, however, through another device, which is placed upon the top plate of the range, just back of the pipe-flange; and consists of an oblong plate with a lengthwise slot in each end, through which it is attached, so as to slide easily back and forth. This sliding plate is provided on its under side with a cam and a wedge, between which the handle of

the damper is embraced, so that moving the sliding plate in one direction the cam presses down the handle and opens the damper in the other, the wedge raises the handle and thus closes it.

Another important function performed by this sliding plate, is the covering alternately, as it is used, the words "open," "shut," upon the top plate of the range, by which the operator, who does not see the damper, will always know how it stands by the uncovered word.

The importance of this improvement in a dust-damper, which operates also as a draft-check, is obvious.

The drawings herewith presented show an ordinary portable range with our improvement applied.

Fig. 1 is a perspective view of the range complete. Figs. 2 and 3 are limited back views, mainly perspective, with a part of the dust-flue broken away, the form of the under side of the sliding plate connecting with the damper-handle, also the end of the damper-handle, and a part of the damper are brought to view. Fig. 4 is a cross-section of a portion of the dust-flue, including the damper, shown endwise as it stands when closed.

Any letter used in more than one figure indicates the same part in all of them.

A is the sliding plate by which the damper is operated. It is perfectly obvious that this plate need not move in a straight line. It may be attached so as to move in a circular form or direction just as well. It may also be located in some other position upon the back or end plate, if desired. B is a part of the same outlying, so as to cover alternately the words "open," "shut." C is the dust-flue; D, the dust-damper; E, the top plate of the range; F, oven-door; G, the end door of the range, provided with mica windows and inclosing the grate and ash-pit; H, vertical portion of the grate; I, a front ash-pit door; J, oven; K, K, apertures for cooking utensils; a, operating-arm from the damper; b and b', the wedge and cam, extending down from the sliding plate and embracing the arm of the damper, by which it operates it. c is a thumb-piece;

d, handle to the damper in the partition around the oven, through which a direct draft is obtained; *e*, smoke-pipe flange.

We claim—

1. The top plate E, provided with the words "open," "shut," in combination with the sliding plate and cover A and B and damper D, as and for the purpose herein set forth.

2. The damper D, provided with arm *a* and hung upon points at the top of the dust-flue *c*, as and for the purpose herein set forth.

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GEORGE E. HOPKIN.

Witnesses:

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