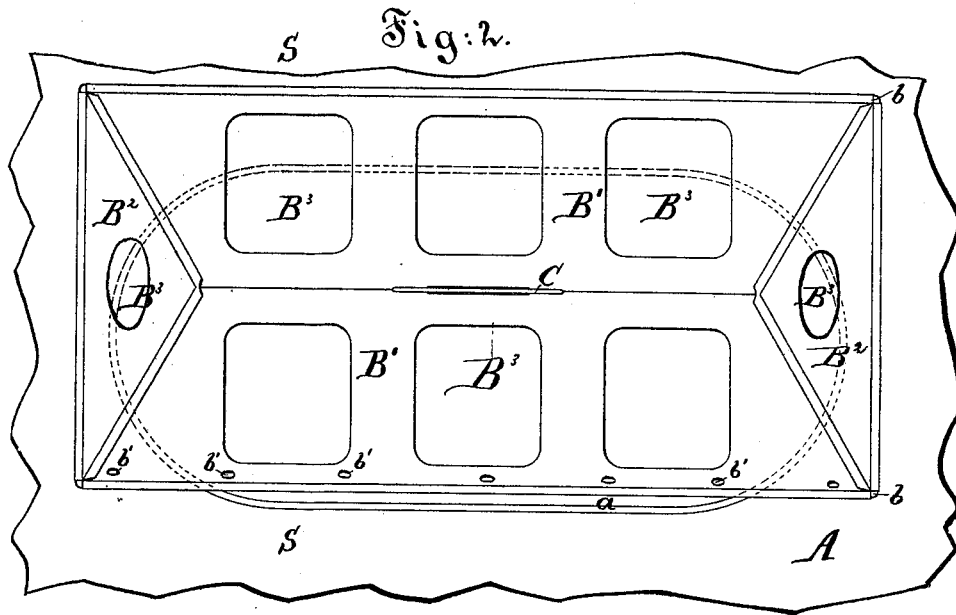
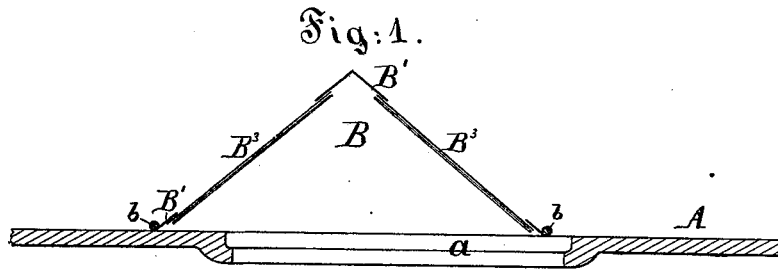


A. B. SUMMERS.
PORTABLE ILLUMINATED COVER FOR STOVES.

No. 195,673.

Patented Sept. 25, 1877



Witnesses:
A. Henry Gentry
Chas. C. Stetson

Inventor:
A. B. Summers
 by his attorney
J. S. Stetson

UNITED STATES PATENT OFFICE.

ALEXANDER B. SUMMERS, OF BROOKLYN, ASSIGNOR TO HIMSELF AND JOHN A. SQUIRES, OF NEW YORK, N. Y.

IMPROVEMENT IN PORTABLE ILLUMINATED COVERS FOR STOVES.

Specification forming part of Letters Patent No. 195,673, dated September 25, 1877; application filed June 20, 1877.

To all whom it may concern:

Be it known that I, ALEXANDER B. SUMMERS, of Brooklyn, Kings county, State of New York, have invented certain new and useful Improvements Relating to Portable Illuminated Covers for Stoves, of which the following is a specification:

Others have appreciated the importance of a removable part which can cover the stove-holes and allow the light of the glowing coals to shine out through mica in the removable piece.

Several have, in connection with mica windows in the fixed part of a stove, provided spaces variously arranged for admitting air. I have devised a removable cover which is adjustable in position to allow large and variable quantities of air to be admitted for lowering the draft, and admits small streams of air, through apertures provided, under all conditions. It affords unusual facilities for radiating the light of the fire in all directions into the apartment; and my experiments indicate that the heat produced in the apartment by a given amount of fuel is materially increased. I ascribe this latter to the thinness of my device, being made of sheet metal; to the dome-like chamber it provides for retaining the hot gases, and to the area which it affords for the radiation. I attach much importance to the fact that it may be shifted in position on the stove-top to allow liberal quantities to flow down past an edge and to move across the top of the fire, when desired.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is a section on the line S S in Fig. 2. Fig. 2 is a plan view of my improved cover.

Similar letters of reference indicate like parts in both figures.

A is the top of a stove, and *a* the elongated opening formed therein by the removal of the two covers over the fire, and also of the ordinary cross-bar between them.

B is my portable illuminated cover, the several parts being designated, when necessary, by B¹ B², &c. The sides and ends are plane, and inclined toward each other, as represented.

The two main sides, or front and back faces B¹ B², are the same piece of metal, simply bent at the top at a right angle, and engaging a ring or handle, C, as will be understood. The ends B² are joined to the sides B¹ by double-seaming. The lower edge of the whole is stiffened quite around by a wire, *b*. B³ are flat plates of mica, covering large apertures in the plates B¹ and B².

A series of holes, *b'*, are adapted to admit small streams of air under all conditions, which tend to make the device an efficient gas-burner; but the quantity admitted by this means is too small to be of appreciable effect on the draft of the stove.

When it is desired to admit larger quantities of air, the device can be adjusted backward, so as to uncover a narrow portion along the front edge of the opening *a* in the stove. By shifting the device forward and backward at will, the quantity of air thus inducted may be adjusted within wide limits.

The top of the stove and lower edge of my device, being both plane, allow the device to be thus shifted in position with great facility.

My form gives the desired effect with the least quantity of material. It allows the use of flat sheets of mica. The whole can be conveniently made of sheet metal, wired at the edge. Their form allows them to nest perfectly.

One of the important uses of my cover is to save the stove-top from being uselessly oxidized or burned. When a fire is intense, the covers and cross-bars, instead of remaining straight, become warped by the excessive heat, and it is always troublesome, and in some isolated districts absolutely impracticable, to procure duplicates. My invention allows the covers and cross-bars to be instantly removed at any moment, and my cover being applied in the proper position to admit just the right quantity of air, the fire may be maintained either at the same intense heat or at any desired lower degree of intensity, and the covers and cross-bars saved.

I have represented the construction which I esteem preferable when made with ordinary tools. I believe it practicable, however, to produce the device from good stamping-iron by

the aid of dies in a drop-press, screw-press, or hydraulic press of sufficient power. In such case, instead of making the edges or lines of junctions of the sides with each other and with the ends strictly angular, as shown, I should round them at a small radius. This tends to preserve the iron, and makes it less liable to split or burst in the stamping or pressing process. In such case, the inclined sides and ends may be exactly plane, as here shown, or slightly swelled, the mica used for the transparent portions yielding readily to a considerable curvature.

It will be understood that, although I have called it a "stove-cover," the device is equally applicable on cooking-ranges, and analogous devices, of whatever name, having flat tops and removable covers.

I am aware that many efforts have been before made to produce a removable cover for

stoves, which will allow the light from the glowing fuel to shine up through and illuminate the room; but I am not aware that any one has before attained the desired ends so completely as in my invention.

I claim as my invention—

The portable illuminated stove-cover described, having the sides and ends inclined to each other, with portions made transparent, as shown, and adapted to cover the entire space which is capable of being opened in the stove-top, and of being adjusted forward and backward thereon at will, as herein specified.

In testimony whereof I have hereunto set my hand this 12th day of June, 1877, in the presence of two subscribing witnesses.

ALEXR. B. SUMMERS.

Witnesses:

THOMAS D. STETSON,
A. HENRY GENTNER.