(No Model.)

# J. R. BURCHFIELD

## TAILOR'S STOVE.

No. 255,767. Patented Apr. 4, 1882.

FIG. 1.

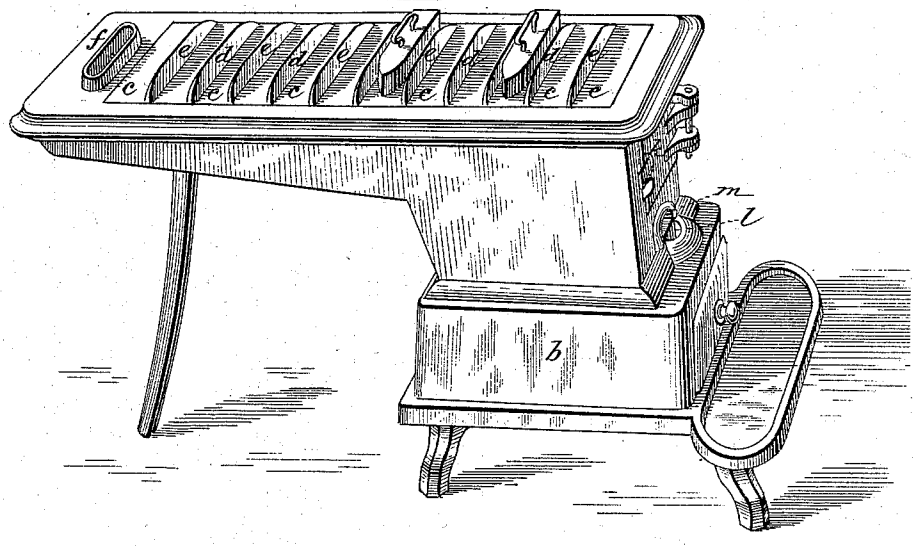



FIG. 2.

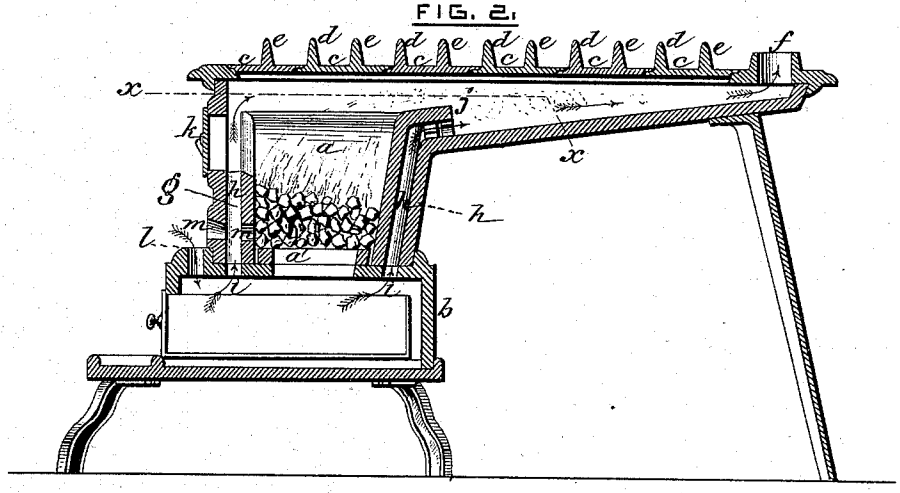



FIG. 3.

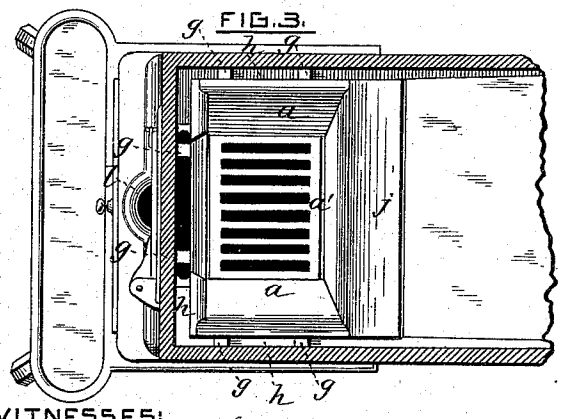
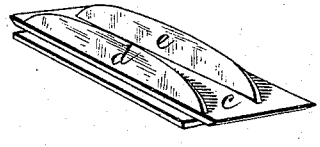



FIG. 4.




WITNESSES:

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N. PETERS. Photo-Lithographer, Washington, D. C.

# UNITED STATES PATENT OFFICE.

JAMES R. BURCHFIELD, OF SHARON, PENNSYLVANIA.

## TAILOR'S STOVE.

SPECIFICATION forming part of Letters Patent No. 255,767, dated April 4, 1882.

Application filed September 27, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES READE BURCHFIELD, a citizen of the United States, residing at Sharon, in the county of Mercer and State of Pennsylvania, have invented new and useful Improvements in Tailors' Stoves, of which the following is a specification.

For heating tailors' irons I have adapted a well-known form of cook-stove, with a view to obtain large heating capacity.

The objects of my improvements are to provide a large and quickly-heated surface for the irons; to prevent warping, and to render such heating-surface durable; to give convenience of access in placing and removing the irons; to obtain economy in fuel, and to produce a durable stove.

The heating-surface is composed of comparatively thin and narrow plates lap-joined, each plate constituting a holder for two irons, and formed with top-surface bridges or carriers to sustain it under the weight of the irons, prevent its warping, and thereby maintain a close joining of the holders in relation to each other and to the top plate of the stove. The bridges or carriers for the holders are top-surface ribs, one of which extends along the edge of said holder, and they serve, by reason of their vertical edgewise relation to the thin flat holder, to carry and sustain it, so as to counteract the warping which would otherwise take place at the lapped or matching joints. Such bridge or carrying-rib is provided along that edge of each holder which forms the under part of the joint-lap with the contiguous holder, so that such bridge-rib serves to carry the edge on which it is formed and the lapping edge of its contiguous holder in close joining relation. Were it not for the carrying and sustaining function of these bridge-ribs, which never become red-hot, it would not be possible to use such a thin heating-surface of edge-lapping holders or plates without warping under the action of the heat and weight of the irons. The fire-box forms a bridge to protect the bottom plate of the top chamber, and an air-space surrounds said fire-box to protect the plates of the stove and to supply heated air to promote combustion of the gases. The fire-box and the grate are supported directly upon the top plate of the ash-chamber, so that they may be easily removed and replaced.

Referring to the accompanying drawings, Figure 1 represents in perspective a stove embracing my improvements; Fig. 2, a vertical longitudinal section of the same; Fig. 3, a horizontal section taken above the fire-box; and Fig. 4, one of the thin plate-holders for the irons, showing what I call the "rib-bridges" or carriers therefor.

I use a stove unlike other heaters for tailors' irons, which may be provided with top covers suited to receive cooking-utensils. It is the top of such a stove that I provide with separate bridged plates, forming a thin heating-surface capable of supporting a weight of from ten to twelve irons.

The fire-box *a* is comparatively small, of suitably-joined cast-iron plates set upon the top of the ash-chamber box *b*, so as to be easily removed when burned out and replaced by new ones. The grate *a'* is also set upon the top of the ash-chamber box, so as to be easily replaced. That portion of the stove which forms the combustion-chamber and the heating-surface is fitted upon said box and extends in rear thereof to give a top heating-chamber and surface for ten or twelve irons. The top plate of this chamber has an oblong rectangular opening suited to receive, say, six iron-holders or plates, *c*, about three-eighths of an inch thick and seven inches wide, to transmit the heat quickly. These holders or cover-plates are set in the top plate, and are lap-joined at their edges—not, however, as ordinary covers, but one edge of each holder laps under and the other edge laps over the correspondingly-formed edges of the contiguous holders, so as to make a close top. With such a thin heating-surface exposed to red heat and the weight of the irons the plate would quickly warp and open at the joints and render the top as a heater practically useless. Therefore, while obtaining the advantage of an extended thin top-heating surface of lap-matching plates, I provide against the warping of these thin plates so that they will preserve a close top until they are destroyed by the heat. Each of these thin

plates has a top bridge-rib or carrier, *d*, about two inches wide, formed along that edge which laps under the contiguous plate, and a similar middle longitudinal top bridge-rib, *e*. These bridge-ribs, being on the upper surface of the plates, never become red hot, and although formed integral with the plates, they carry and sustain them in close joining relation. This function is especially prominent of the edge-rib bridges, which, carrying the edges of their integral plates true, carry also in true relation the overlapping edges of the contiguous plates, while the middle bridge-ribs carry the body of the plate. These bridge-ribs, occupying vertical edgewise relation to the thin plates, are not liable to be warped, and in resisting the tendency of the thin flat part to warp they serve as carriers for the thin heating-surface and sustain it, as stated. Each lap-joined plate thus sustained forms a holder for two irons, and the maximum heating-power of the surface is at a point above the bridge of the fire-box, the exit-flue *f* being at the rear end of the heating-surface.

The fire-box castings are formed with vertical ribs *g*, so as to keep them from the surrounding plates of the stove, and form an air-space, *h*, around the box, which opens above the fire-box into the combustion-chamber and below the fire-box into the ash-chamber by the openings *i* in the top plate of the ash-chamber, as shown in Fig. 2.

The back of the fire-box is formed with a bridge, *j*, extending over the air-space *h*, and protecting the bottom plate of the combustion-chamber at a point where it would otherwise be burned out by the direct impingement of the heat from the fire-box.

The fuel is supplied through the front door, *k*, and an opening, *l*, in the top of the ash-box chamber supplies air to the grate and to the combustion chamber around the top of the fire-box.

Provision is made for raking the fire through holes *m* in the front plate and in the fire-box.

As the fire-bridge extends over the rear air-space the air is caused to enter the combustion-chamber at a point back of the fire-box, and to ignite the hot gases passing out in the rear part of said chamber.

I claim—

1. The top heating-surface of the stove, formed of thin plates or holders for the irons, lap-joined and provided with top bridge-ribs, one of which extends vertically along the lapped edge of said plate, substantially as described, for the purpose specified.

2. In a stove for heating tailors' irons, the top heating-surface formed of thin lap-joined plates or holders, the lap of one edge of each plate being under and the lap of the other edge being over correspondingly-formed edges of the contiguous plates, each plate having a bridge-rib extending vertically along the top surface of that edge which underlaps, and a similar middle top longitudinal rib, substantially as described, for the purpose specified.

3. The fire-box formed with the vertical ribs *g* and the fire-bridge *j*, in combination with the ash-chamber box *b* and the combustion-chamber, the said fire-box being supported upon the ash-chamber box, and forming a surrounding air-space, *h*, opening into the latter and into the combustion-chamber around the top and beneath the bridge of said fire-box, substantially as described, for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

J. R. BURCHFIELD.

Witnesses:
A. E. H. JOHNSON,
J. W. HAMILTON JOHNSON.