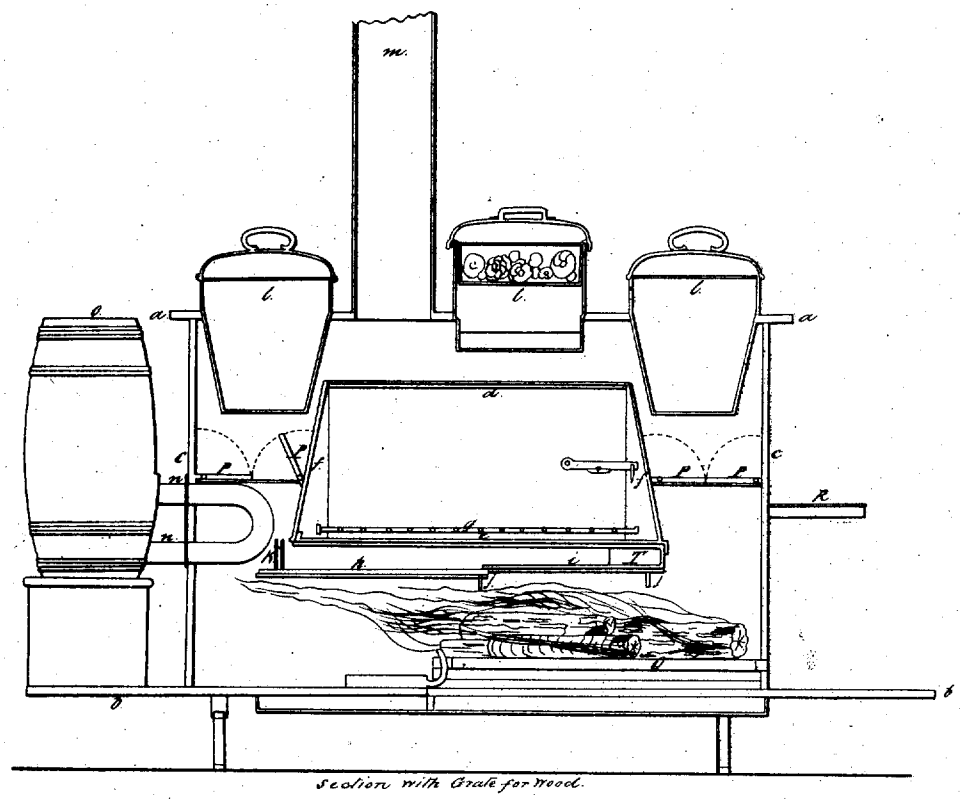
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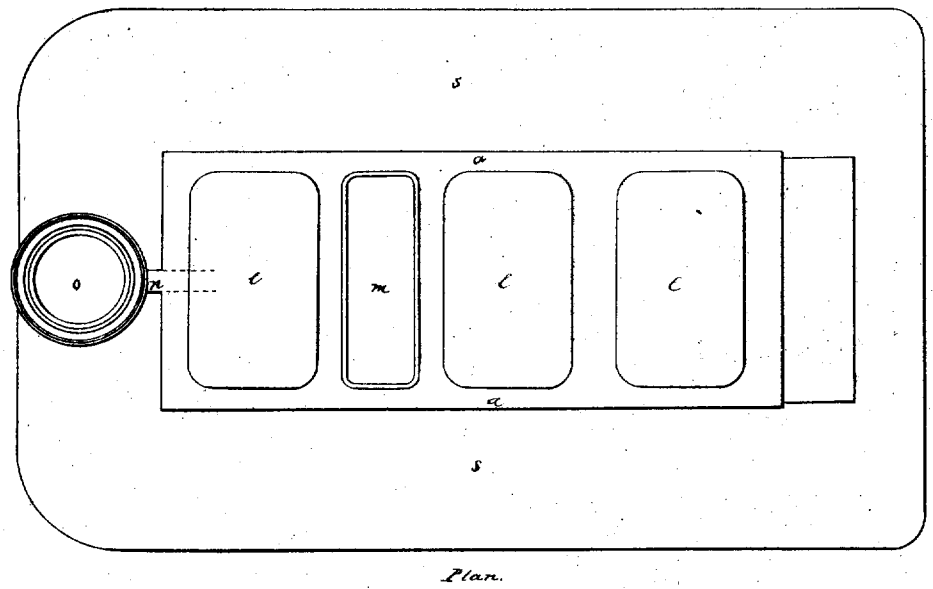
PATENTED JULY 20, 1831.

E. BATES & D. UPDEGRAFF.

COOKING STOVE.

2 SHEETS—SHEET 1.



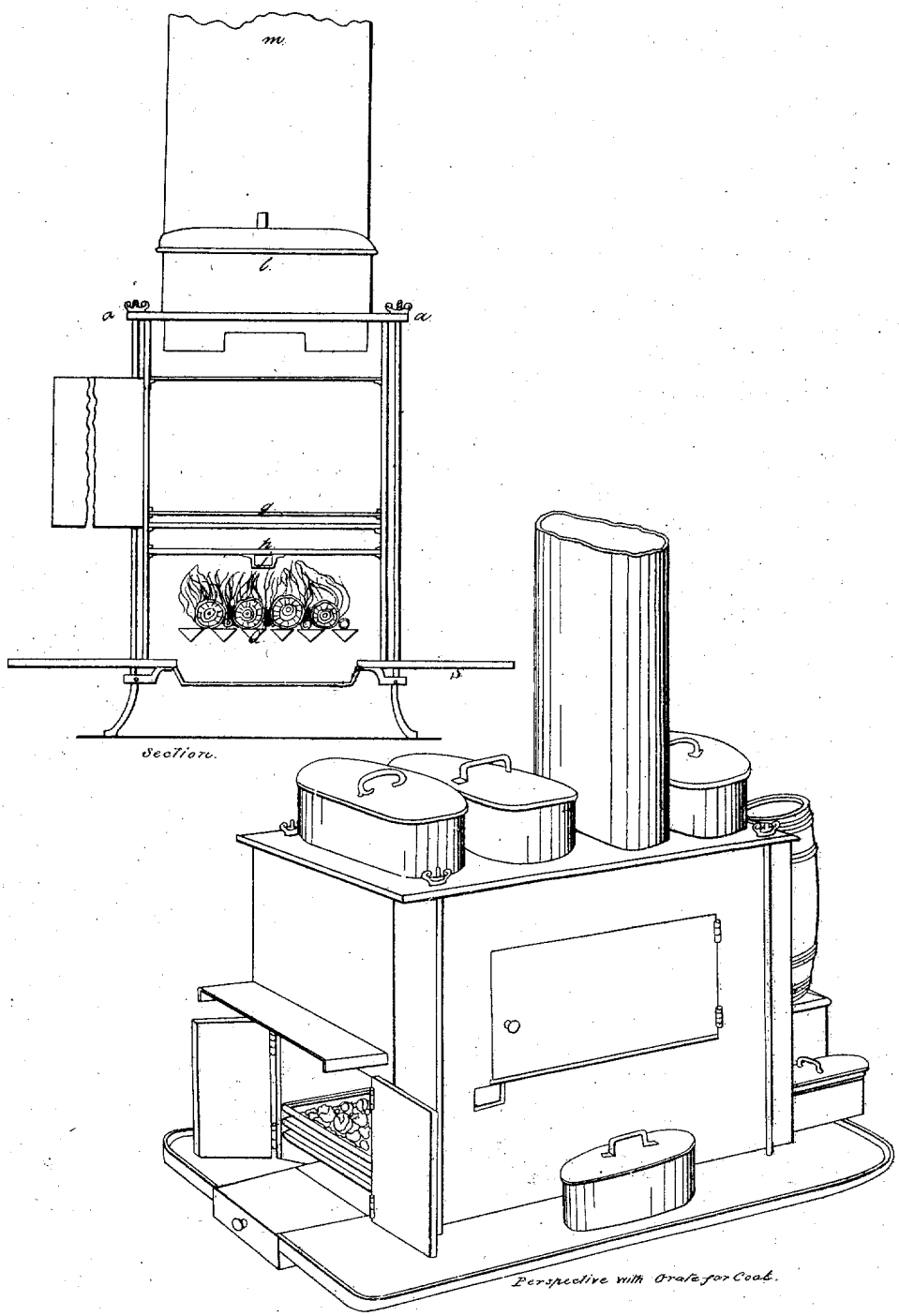


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PATENTED JULY 20, 1831.

E. BATES & D. UPDEGRAFF.
COOKING STOVE.

2 SHEETS—SHEET 2.



July 20, 1831

Elisha Bates & Edward Upthegraff. Jefferson. Ohio.

Screw Auger

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A Machine composed in the Several Parts and Working part of the same, consisting a Description in the words of the said Elisha Bates and Edward Upthegraff Mentioning the Improvement in the Screwing Auger ——

To all to whom these Presents shall Come;

Be it known that we Elisha Bates and Edward Upthegraff of Jefferson County and State of Ohio have invented a new and useful improvement in a Screwing Auger and the following is an exact and full description of the same Auger as invented or improved by us.

The Auger containing within the body of it's flutes and a box or cup with plates screwed to the bottom top and two sides these plates are to be with drilled bottoms to be inserted through openings in the top of the flutes and to be fastened with screws a box to be placed at the back end, with circulating holes the inside and top of the back end into the back of the opposite and above the lower back corner of the cup & screws & the box drilled the same size double sliding plate & clear thro it open one & two inches & long off the head & so formed when closed a sliding gate for Auger to Cut with an ask for & receive the chips cut as with key & screw &c. but fastened on the principle of the box with holes & slots one the lower part to come half over to close by the side of the box the lower the bottom extending along the side & to open the small side holes & so as to let the chips out & be heated & kept warm. Cut for the openings in the top of the flutes, same like cut & screw the bottoms of cutting pieces & the cutting part of them with edges same shape of boring, paring, and the cutting of the cutting plate on the fore part & couple on gage for plane when the Auger is going over the part to be screwed, and shavings of boards to be confined or remained bright in the holes

Like may be to the single

in the Sides and Ends in Such a manner as may be proposed — For example in the Interior of a Common Fire Place Nine inches Square with four inches in the Back Side three inches from the Corners and Facing the Fire place in the Top and Bottom plates. On the Sides of the Back, for a large Family it may be three feet long, the Front high and Sixteen inches wide in the Clear. The Fire place open with the Arch in the front two Eleven inches high and Twelve inches and a half wide at extream the length and Width of the Arch, and is Eight inches high.

The Arch is Placed at about an equal distance from each end about 24 inches long and 12 high exclusive of the thickness of the plates.

The bottom plate rests on Legs on the Sides about a Yard each long only thinned at the out edge At the top it may be 9 inches Shorter The end plates may be Six inches high resting on the ends of the bottom plate in which are Legs running Across to keep the end plate out. Nogs are to be Applied on the outside by Legging the Side plates. The top plate of the Arch may be made of Sheet Iron to Applied as Legged at the Sides and bending down to meet the end plate and perpendicular of them about an inch. The Corners of the Arch are then the Side plates and are Even with the bottom and may also be Even and form Correspond with the Insides of the Arch in which case if the top of the Arch be Shorter than the bottom the Corner Studdles may extend on the Contracted Corners of the Opening with the Arch may be made a little lower than the Arch and as long as the Arch at top. A little lead on the outside of the Side plates will form Convenient Casting for the Arch Sheet Iron Nogs may be of any Convenient Shape and the Catches to inside of the Arch the Ties on which they are fixed and form Looping through and Running Screws Ends Going down into Wood Crook the top end of the Iron Catch and Let down into Nogs with the Arch and the Iron and Wedges Closely round the pin of the Catch made Square for the purpose and Nogging down or Key'd keeps it on.

It may be Convenient that Sliding Doors be made of Sheet Iron or the Common Materials, and have a Light Grate of Iron Grooves may Stands as Wide as the Arch, and including the Thickness of the Plates

for each longer than the door. So the finger of a child may be catched by of an iron door. A safeguard is also contrived to this, for each edge of each door does not look apart many inches. They should be longer in the edge of the door than the thickness of the jamb, to admit the hooks on the under side of the cross bar by which from each corner it just through & prevent the goods from slipping out of the notches. So if the door should be so large as the inside of the room should projection on the edge of the doors will answer. The floor at the bottom of the room is formed by bottom plate of the room, and two sliding plates separating it from the back floor except the ventilator hereafter to be described. The bottom sliding plate rests in a notch on a ledge on each side plate, extending from a little back of the back corner of the room to the front plate. The ledges are half an inch thick and one inch wide. The notch is a quarter inch deep. This back sliding plate reaches from the middle of the room. The front sliding plate laps half an inch on the front end of this and rests on the upper surface of the ledge and extends to the front corner of the room — which are upright lines of the plate marks. The bottom plate of the room has a ledge on the inside surface at the front end half an inch at its greatest thickness and one inch wide on which the upright line of the front sliding plate reaches. Each sliding plate has on its inside edge, near its front edge a staple by which to push it backward or forward, with a poker with a crooked end. At the back end of this floor is a plate running across the door and resting with its lower edge in notches in the ledges of the sliding plates which close with the back sliding plate, and extending perpendicularly half an inch back of the room over the inside when its lower corner. This keeps fuel coming forward by the ledges at the back of the room, and the notches in these of the lower floor, and from going back by upright ledges on the side plates reaching up as high as the staple of this floor. The end floors are formed by the ends of the door and the ends of the room. The top floor is between the top of the room over the tops of the doors. The timbers for the top of the door are formed like coal chute doors [illegible] high, the longer dimension of each reach the door. [illegible] two doors forming a chute over the door

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The dimensions mentioned in these letters are for the passage of the fire.

The boiler may be made of any thickness but long enough in the body to cover the opening designed for it in the top of the stove. The bottom designed for the fire, should be formed in the same manner as the bottom of the boiler. Nine designed for the coal shoot may be by inches deep, opening to meet the sides of the boiler and rounded at the corner. The boiler inclined to the middle opening on the top of the stove should not descend into the fire more than two inches deep. This shoot to be divided in the bottom as the other. The openings in top of the stove for boilers &c. three in number are 14 inches long in the direction across the stove, and eight inches wide the corners rounded as may be desired. The rim at the back end may be 3/4 inches of each. The opening for the steam pipe is 9 inches across the stove and 6 inches between it and the openings on each side is a space of 1/4 inch. The boiler at the back end of the stove may be made of wood or any other suitable material. In the former case, the sides must the stove may be faced within. It may be in the form of a key of Communicating dimensions and when attached to the stove stand in a trough of Communicating height.

Into these are two tubes of about 1/4 inch in diameter made of copper or other suitable material and bent in the middle so as to bring the straight parts nearly parallel with each other about 6 inches apart from center to center. The ends of each tube must be fixed water tight in the boiler one end of each as near the bottom as possible and the other end at a point immediately on the bottom rim. When these tubes are inserted in the boiler the tubes should be long enough to admit the boiler to stand on each end a height sufficient for the tubes extending through an opening in the back plate of the stove into the back flue nearly to the back end of the bottom of the flue. The opening in the back plate may be seven inches from the bottom by three high and wide enough to admit the tubes. It may be proper or convenient to have a door in forming the tubes to the boiler they should first through a plate of sheet iron or other suitable material large enough to cover the opening in the back plate and the sides to form a tank and be united to the boiler by rivets or strong solder from the boiler and to stand the tubes. In the stove may be made

for this opening. When the bolts are inserted, and fastened by a lock at one side and a bolt at the other as in any of the Governor keys.

The bottom plate of the shoe may be thickened out at the sides of the shoe about 4 inches on each side rounded off in a circular form or short bits of steel may be made and attached to the ends for the screws to pass through. These shoes may be designed to suppose small metal bolts with circulating holes similar in principle to those of the back bolts. — A bolt exhibited in these holes or keys at the sides of the shoe. To admit the bolts of the side bolts the openings of similar size may be made in the side plates, and covered with plates suspended by a pivot (back) at the upper end and immediately above the openings. A cover is used for some cases of shutting in the bolts but not for locking, may be made to put the bottoms of the top bolts as far as opened by the key. They should for the bolts to be closely made perforated with a number of small holes. They give without the action of the key in some degree, but serve to prevent the bolts from much of the dust that would collect upon them. In each plate are the clamp pins made of thin plates of metal or steel wire long enough to reach above the shoe without grinding all the ends and side inwards for the bolts above the plate without binding against each other or the other plates. They are fixed on gudgeons near their ends edges passing through the side plates and bearing the ends against a small spiral spring similar to those described for the screws of the cover. The handles should be so placed when the clamp pins are down and from each other as the clamp pins are opened would incline to stand up against the sides of the plates. They should be placed so low down in the plates as not to reach the bottom of the holes when opened.

In the bottom plate of the front end is an opening through each side, about three inches long and one of wide. They are closed and opened by clamps or stoppers on the outside of the shoe, of which the ends project on each side through holes of the shoe above the bottom of the other ends fixed in over the clamps of the cover to which they are fastened with long screws. The bottom plate and the recessed [illegible] with the cover. Keys may be made through the clamps

and are fitted by screws to the right length. Short handles of any convenient form may be affixed to the dampers by means of which they are attached must not be so thick as the groove of the front sliding plate to touch them in being pushed back.

The doors to the fire place may be hinged as common and made to open to the left from the other half, and to the fire both inside, the frames which they turn fitting through the doors and receiving handles as already described. That to the left may be made to open to the right half of the opening through which fitting this a stop to receive the upper edge of the door, which will be shut upon them as the handle is turned.

The bottom of the grate is 20 inches long and 12 wide, resting by thin edges on the sides of the ash pit and extending forward a quarter of an inch each side of the door. The back for wards may be about 12 inch wide at top sloped off to a point at bottom 4½ or 5 inch deep and a quarter of an inch apart for coal they may be wider. At the back end of the grate is a plate attached by hooks (in holes drilled into the ends of the grate) 12 inches long and 5 wide to cover the ash pit when the grate is drawn forward. To cover the grate there must be a front and two sides. The sides are six inches high having 4 bars. The ends on the inner sides have each a groove to receive a projection on the ends of the front grate. About half the thickness of the upright end of the side grates (taken away the thickness of the bar) is cut down to the height of the front grate which is about 4 inches high (having 2 bars).

The sides then rest upon these cut steps and are let upon bevils standing downward and forward on the outer sides to receive a corresponding bevil cut into each end of the top bar of the front grate by which the side grates are held together, the ends of the front grate have small tongues under the bevil cut to fit the grooves in the ends of the side grates.

The back is attached to the bottom by a hook at the bottom of each side grate standing inward and resting between the 2 cross bars on each side of the bottom grate without screws them.

Read Sheet with

cast with the bottom plate or made of sheet iron and riveted to it. In this case there should be Lugs on the side of the ash pit about 4 inches from each side standing down and one inch behind the sheet iron which is riveted. A catch by which this pit and door is at the front and under the hearth is to be made & slide in order of the ash pit like a damper. The front end of it should be so deep as to reach up to the bottom of the bottom plate, the other part should be shallow as not to come in contact with the grate. In the bottom plate behind the ash pit a second ash pit can be made deeper nine as the ash pit and extending back to within 9 inches of the back of the stove.

The openings of the top may be closed when the boilers are out as for the purposes by covers with edges raised at pleasure and edges at bottom adapted to the size of the holes in the top. These may be used for baking &c. Thin plates may be also used to cover these holes having holes in them adapted to receive small pots &c. to answer the purpose of the stove. Tapered steamers may be made of tin fitted to the size of the boilers and suspended from the top by strips of tin hooked on the edge of the boiler. The covers for the boilers must be made to allow room for these steps.

A plate of sheet iron about 6 inches wide attached to the front plate over the flue and extending across the stove with the ends bent down about an inch. The fire by the use of the dampers may be thrown to either end of the stove, and by putting either end of the top plate forward when the stove is first up the pipe may be placed over the back or front end. When it is desired to heat the room to the hottest state throw both sliding plates forward and open the dampers of the front flue.

If the heat is wanted particularly in the front end of the room keep the damper open upon and push back both plates. To take off a portion of the heat extend the sliding plates so as to exclude the fire from the bottom flue. If it is necessary to cool it still more open the side doors and let in the cold air into the flues. Thus the upper back plate particularly from the back dampers or to this and push the front back. Stoves may often be particularly with coal

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than the first three and than the goals and about 6 inches

Stevens Thompson Chief 4 March 29 1831
Ezekiel Harris Elisha Bell
Benjamin D. Hall David Updegraff

Asst.

3435 ad