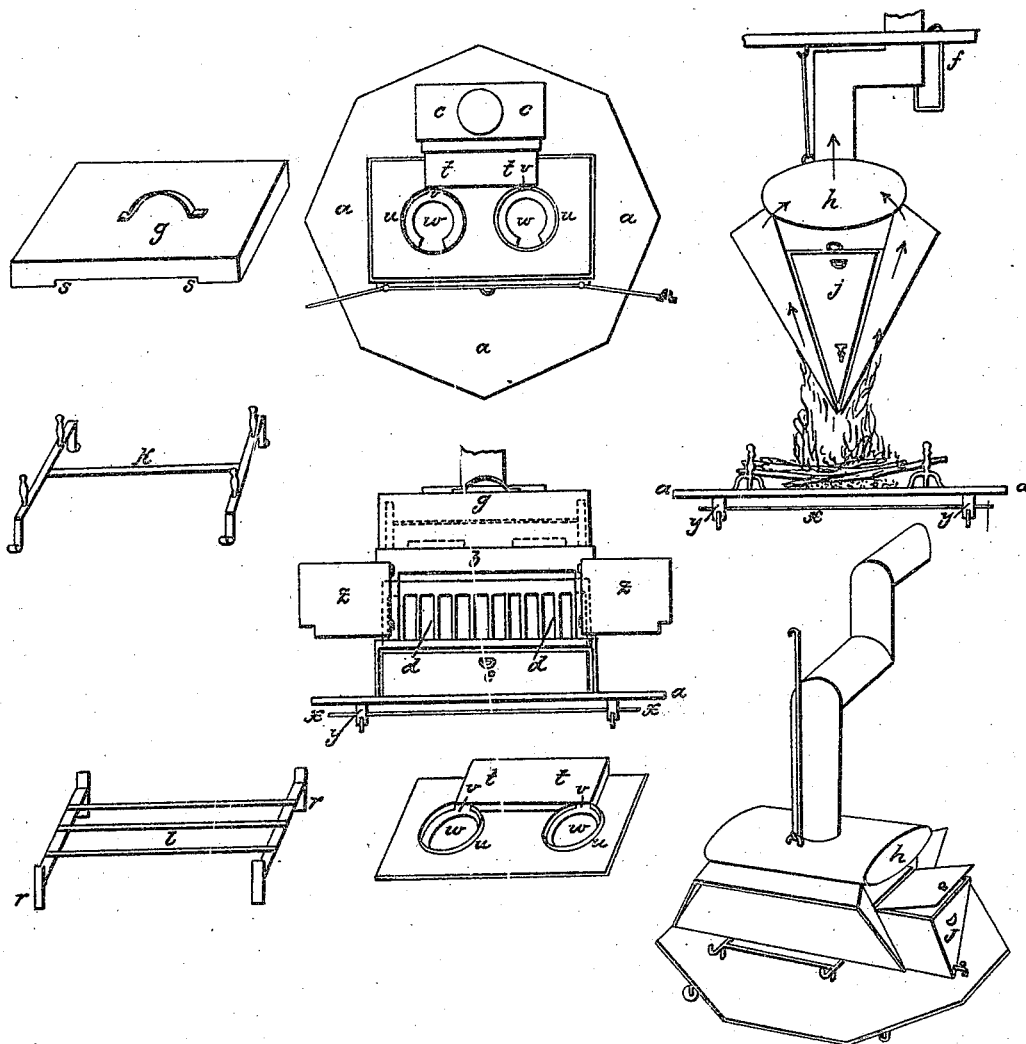


D. STEPHENS.

Cooking Stove.

No. 431.

Patented Oct. 18, 1837.



UNITED STATES PATENT OFFICE.

DANIEL STEPHENS, OF KIRTLAND, OHIO.

FIRE APPARATUS FOR COOKING AND WARMING APARTMENTS.

Specification of Letters Patent No. 431, dated October 18, 1837.

To all whom it may concern:

Be it known that I, DANIEL STEPHENS, of Kirtland, in the county of Geauga and State of Ohio, have invented a new piece of household fire economy, called the "Lafayette Fire Apparatus" for the use of cooking and also for warming rooms and houses; and I do hereby declare that the following is a full and exact description of the same.

10 The formation of my invention consists in the following, viz. The first marked *a* in the respective figures on the drawings, is a cast iron hearth usually of an octagonal or eight square form two feet broad one third
15 of an inch thick with a plain surface except the edge which has a bead a quarter of an inch high.

Beneath this hearth are one or two pieces of sheet iron *x* nearly of the size of the
20 hearth with a space of an inch between the hearth and first plate and also an inch between the second and the first for the purpose of preventing the heat from burning the floor, these may be attached to the hearth
25 by means of wire or they may be attached to the four legs *y, y* which are usually three inches long. The portion marked *c* is a cast iron box or stove eighteen inches long and twelve broad and eight high with two doors
30 *z, z*, on each side, and one on each end hung on hinges and fastened with a button; the doors extend from the bottom to within an inch and a half of the top and an inch and a quarter of the corners; the side doors are to
35 have a notch an inch square at each of the lower corners where they meet for the admitting of air for draft. On the top of this box are two round apertures *w, w*, for the reception of boilers, etc.; at one side of
40 these apertures (which are six inches broad) are two notches *v, v*, three inches long and an inch and a half broad for the draft. Around these apertures are eminences *u, u*, raised an inch and a half high and an inch
45 and a half from the apertures forming two circles except at the opposite side of the notches where there is a space left of four inches in length where one wing of each runs directly toward each other and unites
50 in the center and the other two which are outside run directly to the edge. On the inner edges of these there is a furrow or half groove a quarter of an inch deep for the reception of a cast plate *t, t*, to be fastened
55 with screws. The outer edge of this plate is formed into a pipe three inches long and a little elevated thus forming a flue. There is

a round plate of cast iron just fitting down into the eminence with an eye in the middle this serves as a damper to throw the fire
60 all under one boiler. There are to be two griddles with bales and two lids or covers fitting the top of the eminence with an eye in the middle of each, to handle them by. To these apertures may be fitted boilers or
65 other cooking utensils.

The part marked *c* is a drum with one flat pipe fitting the pipe of the stove and the other pipe is a round one, eight inches in diameter. The part marked *d* is a grate, 70 eighteen inches long and twelve broad, the bottom bars of this grate which are square at the end and flat in the middle fit into mortises at each end so that for coarse coal they may be turned edgewise and flatwise for
75 fine; this grate may be made in two distinct parts. The upper part is made of four bars fastened at the ends and with uprights or fingers six inches long pointing downward, and resting on the lower part of the grate
80 within an eminence raised on the outer upper edge a quarter of an inch high and a half an inch thick except at the corners where it is an eighth of an inch thick leaving room for the stove corners or legs which
85 are to extend so much below the doors, the legs of this grate are three inches long placed in a position to receive a drawer.

The part marked *e* is a drawer or ash box just fitting the dimensions of the grate and
90 stove and made of sheet iron, with a handle on each side.

The part marked *g* is an oven made of tin or sheet iron eight inches high and of the same size of the stove, it is a plain box
95 similar to the ash box; it has a notch *s, s*, on one side large enough to fit the flue of the stove and a handle on the top instead of the sides this must be inverted on the top of the stove which stove answers the purpose of the
100 bottom of the oven.

A wrought iron grate or gridiron is to be used; this is marked *l*, it is composed of several pieces of wrought iron two or three running lengthwise, and two crosswise, fast-
105 ened to the ends of the bars that run lengthwise, at each end of the two cross bars are fastened a strip of iron, *r, r*, seven and a half inches long, about three inches from one end thus forming two sets of legs one set three
110 inches long and the other set over four inches when turned over.

The part marked *h* is a draft or flue for the reception and conveyance of smoke and

is formed of sheet iron in the following manner, first there is an oval or flattened drum fourteen inches long, and the same broad, and four deep, with an eight inch pipe projecting or rising from one of the flat sides; after rising four feet it forms an elbow, and running horizontally four feet farther it forms another elbow, and rising again perpendicularly it enters an aperture in the ceiling, or upper floor, where a hook being made fast marked *f*, enters a hole on the under side of the second elbow upon which it can be turned in different positions. But if the pipe enters a chimney, or runs through a wall horizontally, a third elbow must be formed about six or eight inches above the second in which case a bolt being made fast to the ceiling must enter the third elbow at a hole at the top and pass down through a hole on the under side of the second elbow where there is a screw cut and a nut screwed on to answer the purpose of the hook *f*. There must be a joint just above the second elbow in both cases, and left something loose so as to admit of its turning at pleasure.

A piece of sheet iron thirty inches long and twenty broad having the edges turned in a quarter of an inch on each of the two sides a line is then drawn from one of these sides to the other at an equal distance from each end and the sheet bent upon this line to a triangle then a notch is cut a quarter of an inch deep at each of the four corners on the ends three inches from the corners, then a line is drawn from each of these notches to the two bent corners and then bent to nearly a right angle, the opposite way of the other bend; thus forming a back and two jambs on each side. Then bend a quarter of an inch of each end toward each other to a right angle and hook these into the two apertures made at the two sides of the drum being an inch wide and thirteen and a half long; then take a piece of sheet iron fifteen inches long, and three broad, and fasten on the top of each of the jambs to serve as a mantle-piece, and the draft is finished, except a loop close to the pipe into which a large wire is hooked suspended from the ceiling for the support of the boiler which is marked *j*, made of tin, or brass, twenty inches long and ten deep of a triangular form so as to fit between the two backs of the draft having a lid or cover at one end, similar to the lid of a lady's work-basket, and at the lower corner under the lid is a spigot to draw off the water and at each end a handle or ear to handle it by.

The part marked *k* is an andiron twelve inches long and the same broad made in the same form of the gridiron except there is one bar running lengthwise instead of two or three and the legs are two inches long, and the uprights or posts six inches long.

To set the Lafayette fire-apparatus in operation, select that corner or other part of the room where you would wish to have it; when the center is wanted, and if the pipe is to pass through the ceiling, make the aperture in the ceiling half way between the place in the corner and the center, if the room be large; but if the room be small, make it a little one side then fasten the hook *f* to the ceiling in a situation not to interfere with the turning of the pipe, then fasten two small hooks one over the center and one at the corner on which the wire may be hooked; after hanging the draft, place the hearth beneath, and on the hearth the andiron if wood is used, but if coal place your grate (or the lower part of the grate may be used for wood if you choose,) then build your fire, remembering to have the bottom of the draft within one or two inches of the top of the grate, when you want to cook, place from one to four tin reflectors around the fire, with one edge resting on the hearth and the other on a small stool as high as the hearth, and if you want to heat water place your triangular boiler into the space of the draft; if this is not large enough place the stove over the grate with the corners resting on the corners of the lower part of the grate in a groove left for that purpose; and then place on the large boilers, at the same time drawing the hearth a little toward you so that the flue of the stove will correspond with one of the apertures in the draft, or if you should choose you may place the drum *c* instead of the draft; and if you should choose to bake and not by reflectors, place the gridiron on the top of the stove and after putting the thing to be baked thereon slide down the oven *g* over it; you may have the doors open or shut or take them off, but if you should want the center of the room just draw the hearth into the corner, at the same time unhitching the wire at top, and hitch it again at the corner, providing your draft is up at the time.

What I claim in the above is—

The manner of constructing and combining the hearth, or plate *a*, which is to sustain the fire, with a stove, or with a boiler, in connection with a pipe suspended from the ceiling, or otherwise affixed as herein described, with the general construction and arrangement of the apparatus, as herein shown.

I also claim the apparatus for the draft, suspended from the ceiling, as described.

The above sizes and dimensions are given that the proportion may be understood, and probably would do for a small size but any size may be made whatever.

DANIEL STEPHENS.

Witnesses:

JOHN LIPP,
JAMES H. WYNN.