(No Model.)

V. S. BEKOFSKY.

BALANCED COOKING STOVE.

No. 355,498. Patented Jan. 4, 1887.

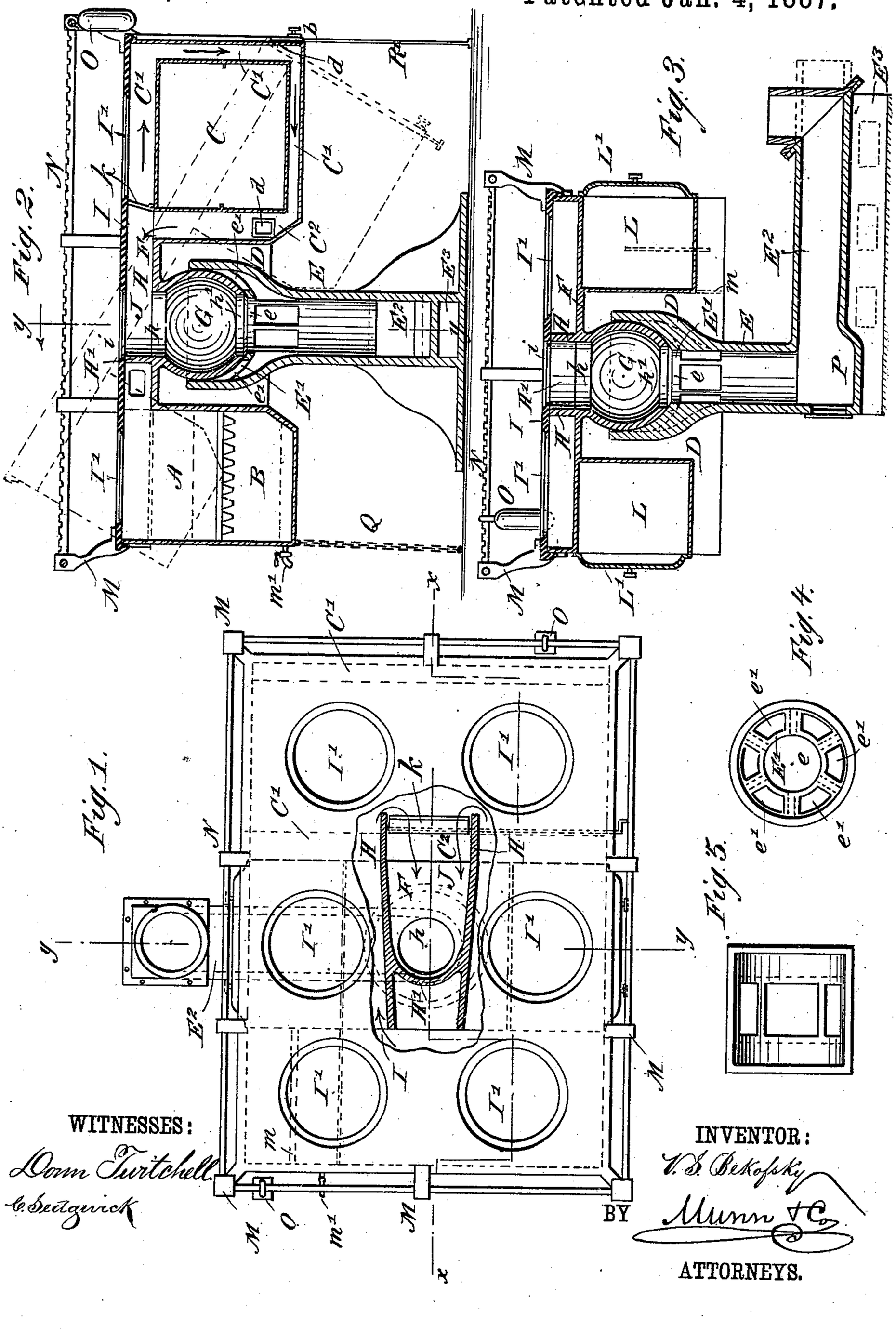

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

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BALANCED COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 355,498, dated January 4, 1887.

Application filed June 14, 1886. Serial No. 205,072. (No model.)

To all whom it may concern:

Be it known that I, VLADIMIR S. BEKOFSKY, of Jenchuan, Corea, have invented a new and Improved Balanced Cooking-Stove, of which the following is a full, clear, and exact description.

The object of my invention is to provide a practical balanced stove designed particularly for use on shipboard, the stove being accurately equiposed on its base or support, so that the stove proper will always maintain a horizontal position, no matter to what extent the ship may roll.

The invention consists, principally, in pivoting the body of the stove on a hollow base or support that constitutes the chimney to the stove.

The invention consists of the construction, arrangement, and combination of parts, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a broken plan view of my improved balanced stove. Fig. 2 is a sectional elevation of the same, taken on the line *x x* of Fig. 1. Fig. 3 is a transverse sectional elevation taken on the line *y y* of Fig. 2. Fig. 4 is a plan view of the upper end or top of the support, the same being constructed in semi-spherical form; and Fig. 5 shows a modification of the upper end of the support made in semi-cylindrical form.

The frame of the stove is constructed to form the fire-box A, the ash-pit B, and the separate oven C at the opposite end of the stove. The oven C is separated from the fire-box by the central space or chamber, D, which incloses the upper end of the base or support E. The fire-box A and the oven C are joined to the top plate, F, which is made integral with or is provided with a hollow ball, G, which is open at the top and bottom and fits in the semi-spherical seat or cup E′ of the base or standard E. On the top of the plate F are formed two ribs, H H, and a cross-rib, H′, which form a flue or passage, J, for conducting the products of combustion to the entrance *h* of the hollow ball G. These ribs also serve to strengthen the stove.

Covering the fire-box A, the oven C, and the ribs H H′ is the cast-iron plate I, formed with the stove-holes I′. The concave portion or seat E′ of the stand E, which receives the ball G, (and thus pivotally supports the stove,) has the opening *e* formed in the middle thereof to correspond with the opening *h*, and numerous openings, *e′*, are formed in said concave surface, as shown clearly in Fig. 4, so that the draft will not be impeded. The opening *e* is a continuation of the hollow body of the support or stand E, so that said stand constitutes the chimney of the stove, and connected to the bottom of the stand is the horizontal pipe E^2, which extends as far as convenient, and to which a vertical pipe may be connected by an elbow or other suitable joint, as shown in Fig. 3; and to prevent burning of the deck I form an air-space, E^3, below the horizontal portion E^2 of the chimney, through which air-space air can freely circulate, as will be understood from Fig. 3.

The flame and products of combustion from the fire-box A may be caused to pass directly into the flue J, and thence to the chimney, as indicated by the arrows in Fig. 1; or they may be caused to pass through the spaces C′ C^2, surrounding the oven C, and thence to the flue J, as indicated by the arrows in Fig. 2. To turn the flame and products of combustion into the spaces surrounding the oven, the damper *k* must be turned to a vertical position, as shown in Fig. 2, which closes the mouth of the flue J, and to cause the flame and products of combustion to pass directly through the flue J said damper must be turned to a horizontal position to close the vertical space C^2 at the back of the oven.

Between the fire-box A and the oven C are formed boxes L L, which may be closed by the doors L′, and which receive heat from the fire-box, oven, and top plate, I, and radiated heat from the hollow ball G, so that they serve as warming-ovens, which may be used for heating plates, &c. The back and bottom plates, which form the warming-boxes L, also constitute brace-plates for strengthening the stove. From the top of the stove rise the arms M, which support the rods N, which may be notched at their upper edges, and on these rods are placed two movable weights, O. These weights are provided with open hooks, so that they can be easily shifted upon the rods N and

easily removed from said rods and placed upon the opposite side of the stove, or opposite any kettle or pan placed upon the stove, for properly counterbalancing and keeping the stove in an upright position.

Instead of using the hollow ball G and semi-spherical cup to receive the same, as shown in Figs. 2, 3, and 4, I may use a cylindrical or semi-cylindrical connection, as shown in Fig. 5. With the former arrangement the stove is pivoted universally, while with the latter the stove will tip only in two directions. When the stove stands at an angle to the support E, the lower opening, *h'*, in the ball G will be partially closed by the sides of the cup E', which tends to interfere with the draft. To avoid this the cup portion E' is provided in its sides with numerous openings, *e'*, sufficient in number and size, so the aggregate area of the openings in the cup E' will never be less than the sectional area of the support E, in consequence of which the draft will be constant. The horizontal part E^2 of the chimney has a small pocket, P, formed in it immediately below the hollow support E, for accumulating any soot or ashes that may pass down from the stove, and one end of the fire-box A may have a transverse partition, *m*, fitted in it to form a water-heating reservoir at one end of the fire-box, from which reservoir water may be drawn through the cock *m'*.

On smooth water the stove may be chained to the deck by four chains, Q; or, in place of these chains, four legs, R', may be used for holding the stove in an upright position, and the latter may be constructed to be readily detached from the stove or to move vertically in guides, and provided each with a set-screw, *b*, for securing the leg in elevated position.

The space surrounding the oven C may easily be cleaned through the small opening *d*, and the vertical portion of the chimney or hollow support E and the hollow ball G may be cleaned through the central opening, *i*, in the top plate, I.

By constructing the stove as described the same is accurately balanced upon its stand, so as always to maintain a horizontal position irrespective of any inclination of its support E, and every part of the stove is easily accessible for cleaning, and as the warming-chambers L L, between the fire-box and the oven, retain a large part of the radiated heat and confine it in the central space, D, the stove will be much more economical in its consumption of fuel than any common stove of the same dimensions; and, besides, the stove is cheap to manufacture and easy to manage, and while being balanced to always maintain its level on shipboard it has a central draft, and all direct connection of the stove with a pipe off from the center of the stove is avoided.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of a pivoted or balanced stove and a hollow vertical support constituting a flue, and arranged centrally, or substantially so, to the main body of the stove, substantially as described.

2. The hollow vertical support or stand E, formed with a socket at its upper end and constituting a flue, in combination with the stove pivoted in said socket upon a hollow bearing, substantially as described.

3. The stove provided with the hollow ball G, having openings *h h'*, in combination with the hollow base E, having the open or grated socket E', substantially as described.

4. The hollow support E, having the horizontal extension E^2, in combination with the stove pivoted upon the support, substantially as described.

5. The fire-box A and oven C, arranged at opposite ends of the stove, in combination with the horizontal flue J, joining the central vertical chimney-base, E, and the partition H', cutting off the entrance to the fire-box from the flue J, substantially as described.

6. The oven C, having the surrounding spaces C' C^2, combined with the fire-box, the flue J, and the central chimney-support, E, substantially as described.

7. The oven C, having the surrounding spaces C' C^2, in combination with the flue J, central chimney-base, E, and damper *k*, arranged to close flue J and space C^2, substantially as described.

8. The body of the stove pivoted centrally upon a vertical hollow base and provided with the side rods, N, in combination with the movable weights O, placed upon said rods, substantially as and for the purposes set forth.

9. The hollow vertical support E, connected with the horizontal extension E^2, in combination with the body of the stove pivoted upon the vertical support E, and the air-flue E^3, formed below the horizontal extension E^2, substantially as and for the purposes set forth.

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