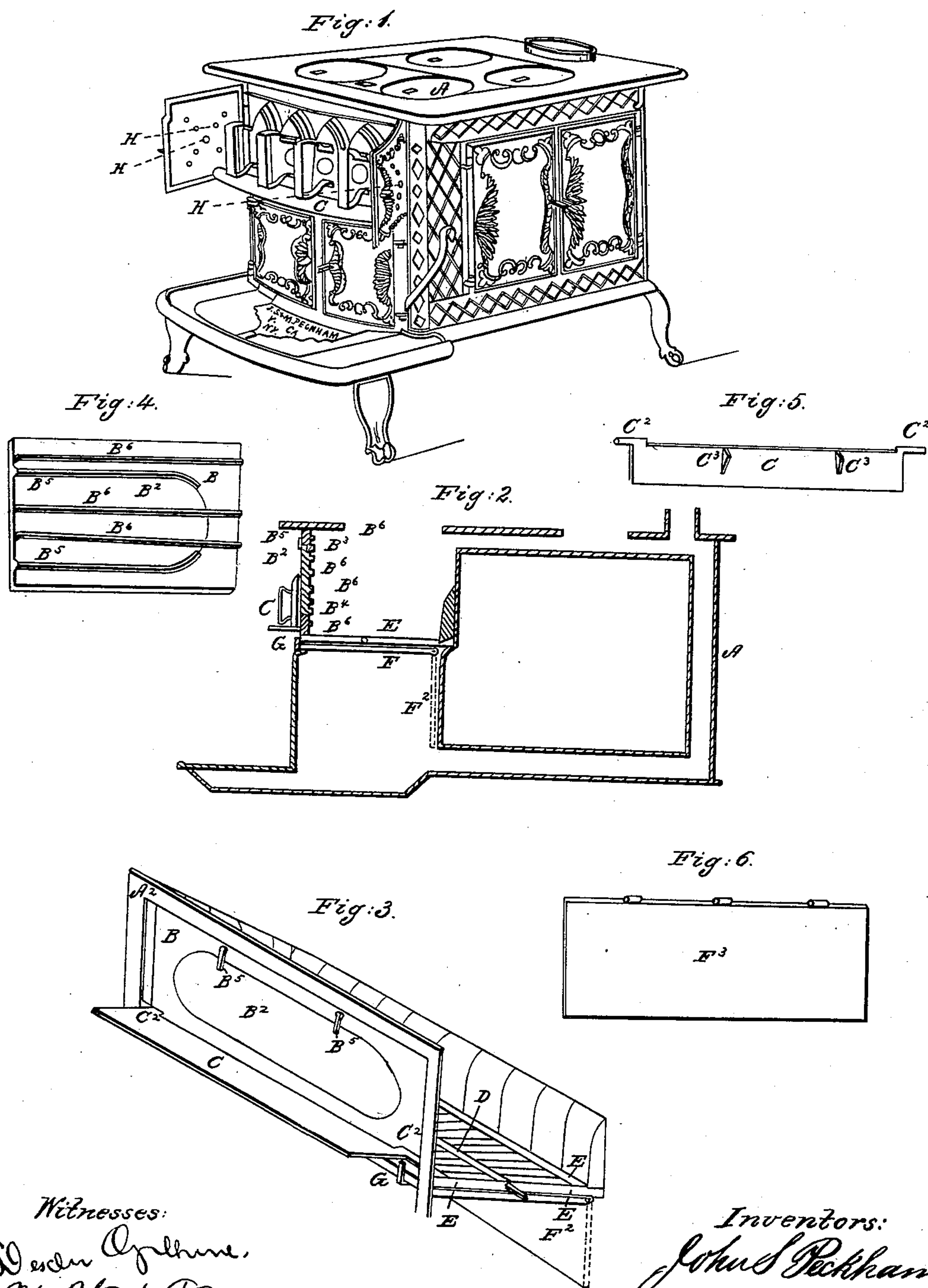


J. S. & M. PECKHAM.

Cook Stove.

No. 29,517.

Patented Aug. 7, 1860.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN S. PECKHAM AND MERRITT PECKHAM, OF UTICA, NEW YORK.

STOVE.

Specification of Letters Patent No. 29,517, dated August 7, 1860.

To all whom it may concern:

Be it known that we, JOHN S. PECKHAM and MERRITT PECKHAM, of the city of Utica, in the county of Oneida and State of New York, have jointly invented a new and useful Improvement in Coal-Stoves and Wood-Stoves having Grates for the Burning of Wood Therein.

The nature of our invention and improvement consists in adding to coal stoves and to wood stoves having a grate for the burning of wood therein, a flat iron heater formed of the guard plate or fire plate and a holder; the making of the said guard or fire plate in two parts; and perforating the doors which inclose or cover such guard or fire plate; and attaching a swinging cover to the bottom or under side of the grate or fire box; by means of which last attachment such fire box may be made air tight when desired; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making part of this specification.

Figure 1 is a perspective view of a coal cooking stove with the flat iron heater in front, with the flat irons represented in place in the holder. Fig. 2 is a sectional view of such stove, through its center, from front to rear, and showing the flat iron heater, including the guard plate and the manner of uniting the parts thereof, and showing its ribbed inner surface and the holder, with a flat iron thereon and the under cover of the grate in position when in use, and when out of use. Fig. 3 is a perspective view of the grate and under cover in position when in use or out of use and the flat iron heater. Fig. 4 is an inside view of one half of the guard or fire plate, showing its ribbed inner surface and the flanges by which the center piece is kept in place. Fig. 5 is a perspective view of the under side of the holder showing the shoulders and stops by means of which it is held in place, and Fig. 6 is a perspective view of the under grate cover, with the hinges by which it is attached to the grate frame.

In the figures A represents the stove; A² a part of the front plate of the stove to which the front doors are attached and which serves to hold the holder in place.

B represents the guard plate or fire plate or heater; B² is the center piece; B³ is the flange or shoulder on the upper side of B

and B⁴ the flange on the lower side of B², Figs. 2 and 4, for holding B², in connection with the buttons B⁵ B⁵, in its place; and B⁶ the ribs on the inner side of B and B². 60

C is the holder; C² C² are the shoulders or projections at the ends of the holder, for holding it in place, they resting between the front plate A² and the guard plate B, as seen in Fig. 3; and C³ C³, Fig. 5, are two stops on the under side of the holder, for maintaining it in its horizontal position; D is the fire grate; E is the fire grate frame. 65

F is the under cover of the fire grate, Figs. 2, 3 and 6; F represents the cover close up against the grate, making the grate an air tight box; and F² represents the cover swinging down on its hinges when not in use; F³ Fig. 6 represents the cover and its hinges. 70 75

G is a catch or button attached to the grate frame or front of the grate for holding up the cover F in place, when in use and H H H are the perforations in the doors of the stove covering the fire plate or heater. 80

Our improvement may be adapted to any of the common forms of stoves used with a grate and perhaps to any new form of such stoves.

Stoves of the description mentioned, are now usually made with a small opening in front at the top of the guard or fire plate; which space is closed by a pair of short doors; and the only means now used of checking the fire is by throwing open such small doors and suffering the cold air to rush into the stove on the top of the fire; which process, if continued for a length of time will extinguish a coal fire. In case of a wood fire, it will, in most stoves check the fire, it is true, but in both cases, with wood as well as coal, the heat of the stove is not retained and economized, but passes rapidly off with the rush of cold air through the stove. 85 90 95 100

We make our guard plate or fire plate to cover the entire front of the grate, as seen in Figs. 1, 2 and 3, so as to make the stove air tight in front. But as this form causes the plate to heat very much and consequently to expand greatly, and hence causes the plate to break; and also, as it is not uncommon for such plate, however made, whether to cover the entire front of the grate, or with an opening at the top, to become greatly heated in the center and to burn out, we make our fire plate in two 105 110

parts; that is, we make an elliptical opening in the center, of about two thirds the size of the whole plate, as seen in Figs. 2, 3 and 4, into which we fit a plate of corresponding form, as seen in Figs. 2 3 and 4. Such oval plate has a flange on its under and inner side, and there is a corresponding one on the inner, upper side of the outside part of the guard plate ($B^3 B^4$, Figs. 2 and 4) by means of which such elliptical center plate is kept in its place with the aid of the buttons $B^5 B^5$, as seen in Figs. 2 and 3. Both parts of said guard plate (B and B^2) are correspondingly ribbed on their inner surface ($B^6 B^6$) to protect them against the fire, in the usual way. By this arrangement of the guard plate, however great the heat of the center part may be, the other part is never overheated so as to injuriously burn the iron; and when the center part does burn out or breaks it can be taken out and another put in its place with far less labor and in much less time and at less cost than if the plate was all in one piece. As the guard plate, when the doors are closed upon it, becomes very hot, which heat extends to such doors and burns or discolors them, we perforate our doors with from eight to twelve small holes, as seen in Fig. 1, (H, H, H), by means of which the overheated air between the guard plate and the doors escapes and cold air passes in and reduces the temperature of the guard plate, and of course of the doors.

Attached to the grate frame at the back side and on its under side, is the under cover of the grate, hung on hinges, or in any other proper manner. This cover is a plain plate of iron of nearly the dimensions of the grate frame, Fig. 6. When the fire is first made, or a great heat is needed, the cover is allowed to swing down, as seen in Figs. 2 and 3, in which case it has no effect upon the fire. When however the fire is becoming too hot or it is desired to stop its burning, or it is desired to maintain an equable temperature for a time as in ironing, baking or the like, the lower grate cover F is turned up on its hinges and close upon the grate frame and there held fast by the button or catch G , as seen in Figs. 2 and 3. This lower cover, together with the close guard plate thus form the grate into an air tight fire box; and hence, when the fire is at the proper heat its further burning is checked and a uniform temperature maintained for a great length of time; an end highly desirable in stoves where grates are used, but which has not hitherto been attained. In this mode it is effected easily, readily and economically.

The front of the guard plate and the holder B^2 form the flat iron heater as seen

in Figs. 1, 2 and 3. The guard plate has been described. For heating flat irons however it need not be in two parts; nor need it close up the front of the grate; but it may be in any other of the common forms. The flat iron holder is a flat plate of iron of the length of the width of the opening of the upper doors and from about four to six inches in width. It has a shoulder or projection at each end ($C^2 C^2$) by means of which it is held in its place. To put it in its place it is held up diagonally in front of the guard plate and one arm is first passed into the space between the front plate of the stove and the guard plate and then the other end is put in, when it is brought down to the top of the lower part of the stove; and it is there held in a horizontal position by such arms resting between the fire plate and the stove and also by the stops $C^3 C^3$ on its underside. Instead of the holder being made to be removed from the stove when not in use, it may rest there permanently; it being turned up against the guard plate. Or instead of a separate plate of iron for a holder, the upper door may be made to swing downward, instead of sidewise, and be held in a horizontal position by stops or otherwise, and become the holder.

The objects and advantages gained by our improvement and invention are: We supply to this class of stoves, what is much needed, a means of heating flatirons when the stove is used in cooking or washing; and we make an air tight coal stove, or air tight wood stove where a grate is used; of great importance at all times, for the regulation and economizing heat, but particularly in warm weather, and when ironing or performing any other service which requires a constant and equable temperature; while we make a guard plate which when burned out, may be restored with but little labor and little cost; and our perforated doors prevent the overheating of such plate or of the doors themselves.

What we claim and desire to secure by Letters Patent is,

1. The guard plate B ; the holder C ; and the under grate cover F^2 constructed and operating substantially as described, in combination.

2. The said guard plate B , holder C ; perforated doors H and under grate cover F^2 constructed and operating substantially as described, in combination.

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