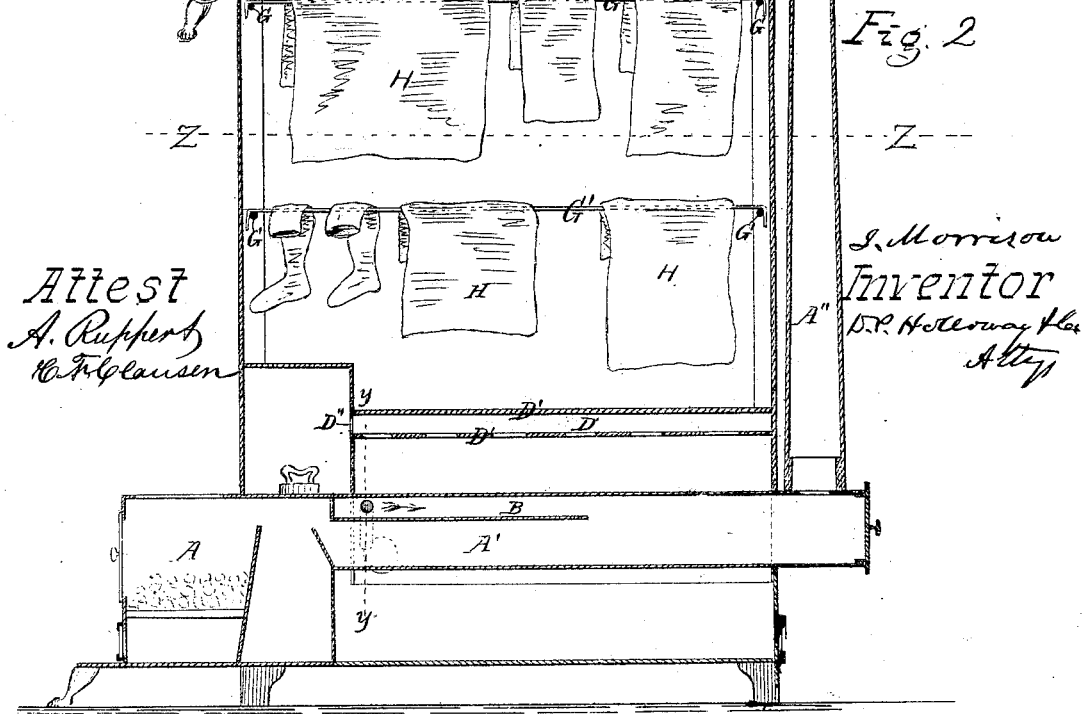
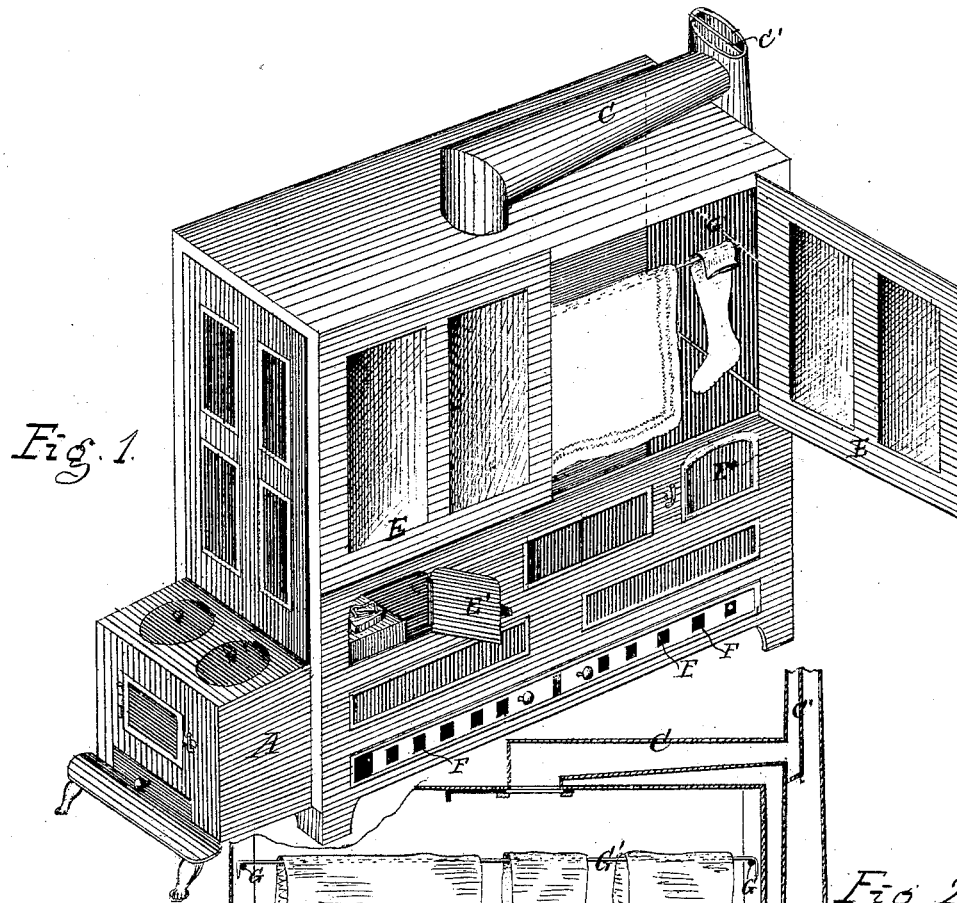


J. MORRISON.

Drying Apparatus.

No. 111,864.

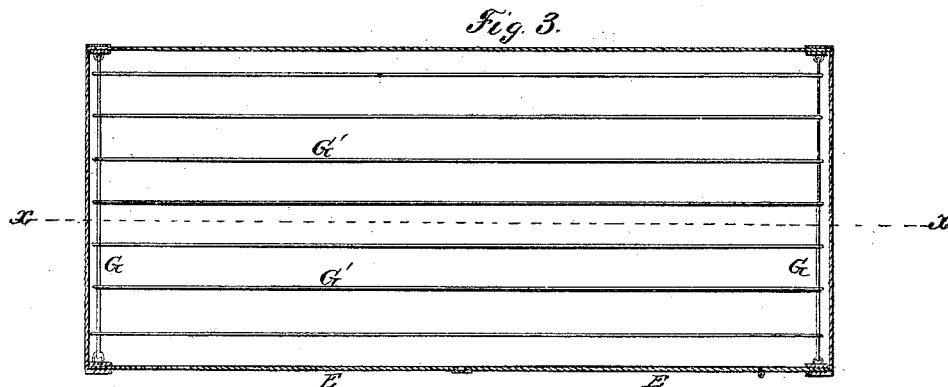
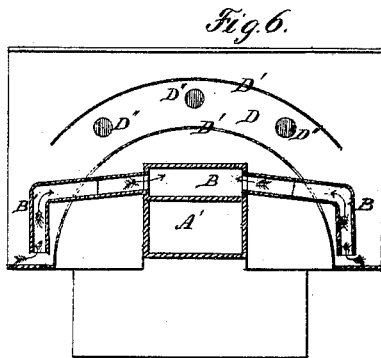
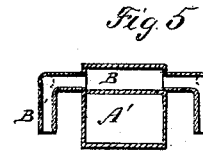
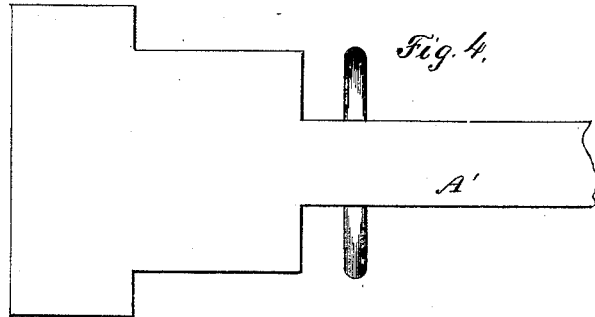
Patented Feb. 14, 1871.



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Drying Apparatus.

No. 111,864.

Patented Feb. 14, 1871.



Witnesses:
A. Ruppert,
C. F. Clausen

J. Morrison
Inventor:
D. S. Holloway & Co.
Attys

United States Patent Office.

JACOB MORRISON, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO MATILDA D. MORRISON, OF SAME PLACE.

Letters Patent No. 111,864, dated February 14, 1871.

IMPROVEMENT IN PORTABLE LAUNDRIES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JACOB MORRISON, of Indianapolis, county of Marion and State of Indiana, have invented a new and useful Improvement in Portable Laundries; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing making part of this specification, in which—

Figure I is a perspective view of my laundry, showing the stove or fire-box in which the fuel is burned, the hot-air chamber in which the drying is done, a portion of the up-take through which the products of combustion pass, the pipe which conducts the steam from the drying-chamber to the up-take, the damper for admitting air to the apparatus, and the doors for allowing access to the interior thereof.

Figure II is a longitudinal section on line *xx* of Fig. III, showing the fuel in the fire-box, the flue for leading the products of combustion to the up-take, the passage through the up-take, the passage for the steam from the drying-chamber, the arrangement of the shelves or rods for supporting the articles to be dried, and the arrangement of the tubes or passages for producing a downward draught for exhausting the air from the drying-chamber.

Figure III is a plan view on line *xx* of Fig. II, showing the arrangement of the supporting rods or shelves in the drying-chamber.

Figure IV is a plan view of the flue for the passage of the products of combustion.

Figure V is a vertical transverse section on line *yy* of Fig. II.

Figure VI is a vertical transverse section on line *yy* of Fig. II, showing the tubes for producing the downward draught and the passage for distributing the heated air within the drying-chamber.

Corresponding letters refer to corresponding parts in all the figures.

This invention relates to what I shall term portable laundries; and

It consists in such a device, when constructed in sections, so that it may readily be taken apart and closely packed for transportation, or so that it may be placed in position in a house, where it could not be if it were not thus constructed, and so that it may be easily removed from one room to another; and

It further consists in the combination and arrangement of some of the parts of which it is composed, as will be more fully described hereafter.

A in the drawing refers to the fire-box or pot, it consisting of a projection formed upon the front portion of the device, which is provided with grates for the fuel to rest upon, an ash-pan below such grate, the usual or any convenient doors for the insertion of the fuel and the removal of the ashes, and apertures in its top for the reception of vessels of any kind,

such apertures being covered with removable covers in the usual manner. The top plate or sheet of the fire-box extends rearward into the drying-chamber for some distance, as shown in Fig. I, and forms a convenient place for heating sad-irons and for warming various kinds of food. From the point where this platform ceases this plate or sheet is reduced in width, as shown in Fig. IV, such reduced portion extending rearward through the drying-chamber and through the rear wall thereof, where it receives the up-take.

This plate, in conjunction with a bottom one and with two side plates or sheets, forms the flue A', as shown in Fig. II, through which the gaseous products of combustion pass from the fire-box to the up-take.

Within the flue A', and at some point of its length, there is provided another flue, B, by adding sheets or plates of metal, as shown in Fig. II, its purpose being to receive the ends of tubes, pipes, or flues B' B', which communicate with the drying-chamber for a purpose soon to be described.

A' refers to the up-take, which consists of any suitably-formed pipe, which is placed at the rear end of the drying-chamber, its lower end resting upon the top plate of flue A', and its upper portion extending for any desired distance above the upper surface of the drying-chamber.

B refers to the flue above alluded to, it extending through a portion only of the drying-chamber and having a closed front end, but an open rear end, in order that the passage of the heated gases through the flue A' may induce a current through such flue.

B' B' refer to the tubes or flues which have their inner ends attached to and in communication with the flues B, from which they extend outward and downward, as shown in Figs. V and VI, their lower and outer ends opening into the lower portion of the drying-chamber, in order that, as the draught is induced through the flue B, the cooler portion of the air in said chamber may be carried off through such tubes or pipes, and, if desired, the greater portion of the air may be exhausted from such chamber by a damper or valve which covers the outlet from such chamber to the eduction-pipe for the steam which may at any time be generated therein.

C refers to a steam-eduction pipe, one end of which communicates with the drying-chamber, while its other end terminates in a vertical flue, C', which is formed within the up-take A". This pipe or passage is designed as a passage for the escape of any steam or vapor which may be generated within the drying-chamber, its inner end being controlled by a damper or valve, so that, at any time when it becomes desirable, its mouth may be closed or partially closed, and the air drawn from such chamber through the pipes B' B', as above described.

D refers to a horizontal flue, which may be of the

segmental form shown in Fig. VI, or of any other suitable form, it being located directly above the flues A and B. The lower sheet or plate of this flue is provided with a series of perforations, in order that the heated air may pass freely into the space between it and the plate or sheet which forms the top of said flue, so that it may be deflected by such sheet and made to pass below its lower edges, and thus be distributed throughout the entire chamber.

The two sheets constituting this flue are designated by the letters D' D', and their front ends may be joined together by a perforated plate, D'', as shown in Fig. VI, in order that any heated air from the sad-iron heating-chamber may enter the drying-chamber through them.

E E refer to doors, which are hinged to the plates or sheets which form the drying-chamber, and are so constructed that they can be opened to give access to said chamber, and closed so as to form nearly air-tight joints, and thus prevent the escape of heated air through them or the entrance of cold air. These doors may be constructed with glass panels, so as to enable persons to look into the chamber without opening them, or they may be of metal entirely, as preferred. It will however be found most convenient to construct them with glass panels.

E' E' refer to doors, which are so located as to open into the sad-iron heating-chamber and into the rear end of the drying-chamber. Below these doors and upon the sides of the chamber dampers are located which cover a series of apertures for the admission of air to the chamber above, the slides being so arranged that the quantity of air so admitted may be regulated at pleasure.

G G refer to rods or clasps, which hold the plates composing the drying-chamber together, they being of such a length as to have hooks formed upon their ends to enter staples or holes in eyes formed upon the interior surface of the side plates of the device, which plates are furnished with grooves or channels for the reception of the top, bottom, and end plates, as shown in Fig. III. Owing to the fact that the plates of this device are constructed in the manner shown, the side plates being furnished with recesses to hold all the other plates of which the device is composed, with the exception of the up-take and the steam-education pipe, it follows that, by removing these hooks or rods G G, all of the parts may be separated and carried to any position where it may be desirable to erect them and quickly put together. I have, however, contemplated the use of bolts running through the side-plates

or flanges formed thereon for holding the parts in position in place of the hooks or rods above described.

G' G' refer to rods, which are secured to the rods G G and extend across the drying-chamber at right angles to them, and are for the purpose of supporting the articles H H for drying. I have described this chamber as a drying-chamber, but it is apparent that it may be used for warming food or anything else which it may be desirable to warm, and even in some of its parts for cooking food.

This device as a whole is well adapted for warming apartments, while its front end is capable of being used as a stove for boiling any kettle or the contents thereof that will fit it.

In constructing this device it is proposed to use cast plates of metal or sheets of wrought metal, or both combined, when found desirable.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. A portable laundry, the side plates or sheets of which are constructed with grooves or channels, and which are so arranged with reference to the other plates or sheets of the device as to hold said sheets in position by a series of rods or bolts, substantially in the manner set forth, for the purpose of enabling the parts to be separated and united, as herein described.

2. The combination and arrangement of the drying-chamber, the steam-education pipe C, and the flues B and B' B', substantially as and for the purpose set forth.

3. The combination and arrangement of the horizontal flues A' and B, substantially as and for the purpose set forth.

4. The combination of the flues A', B, and D, and the sad-iron heating-chamber substantially as and for the purpose set forth.

5. In a drying apparatus, constructed substantially as described, the combination of the valve or damper in the mouth of the pipe C, and the pipes or flues B B' B', substantially as and for the purpose specified.

6. The arrangement of the slides which admit the air to the drying-chamber in regulated quantities, such slides being in the side walls of the chamber, as shown.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JACOB MORRISON.

Witnesses:

D. P. HOLLOWAY,
B. EDW. J. ELLS.