(No Model.) 3 Sheets—Sheet 1.

W. YOUNG.

Cooking Range.

No. 233,653. Patented Oct. 26, 1880.

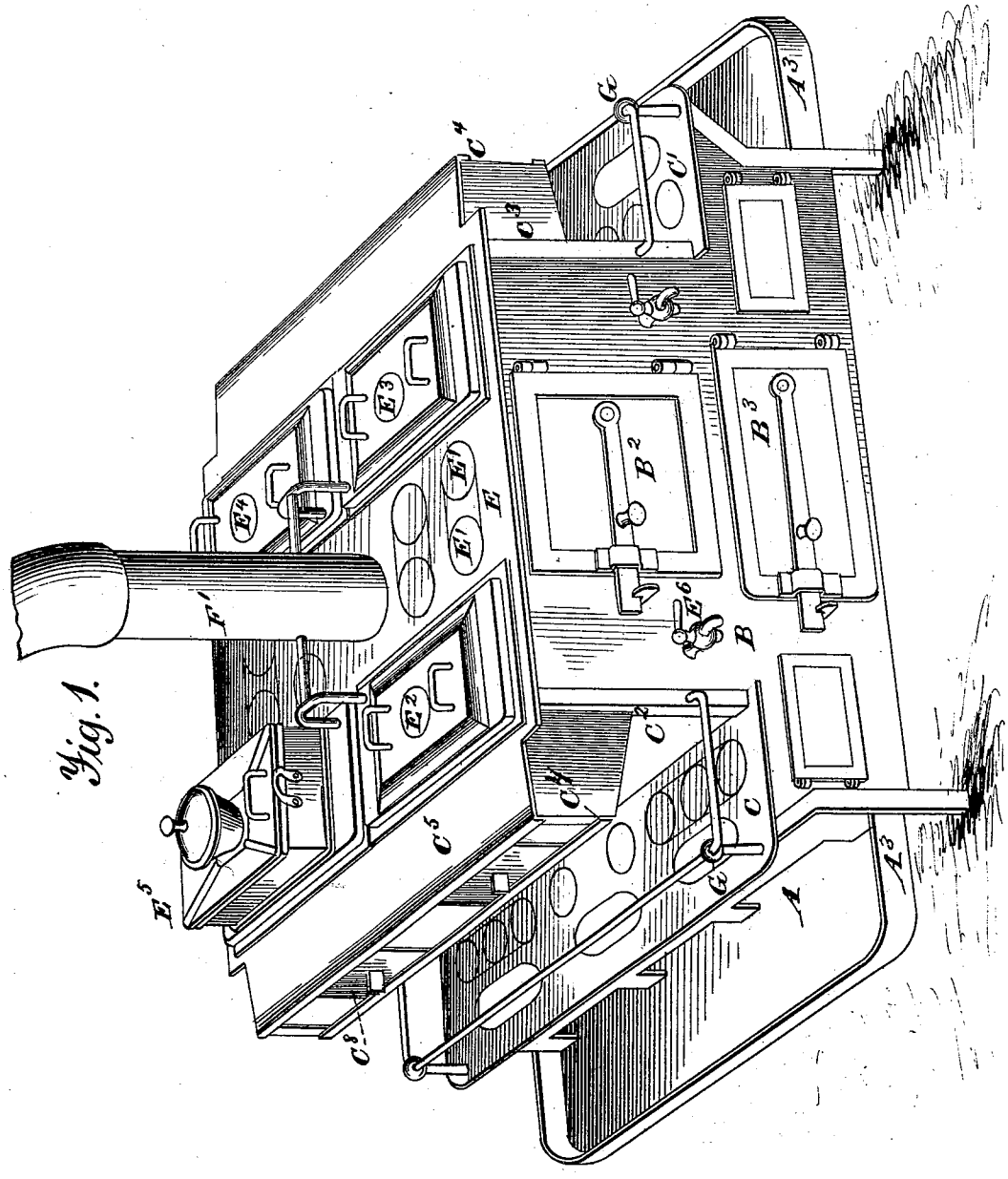

Fig. 1.

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(No Model.)

3 Sheets—Sheet 2.

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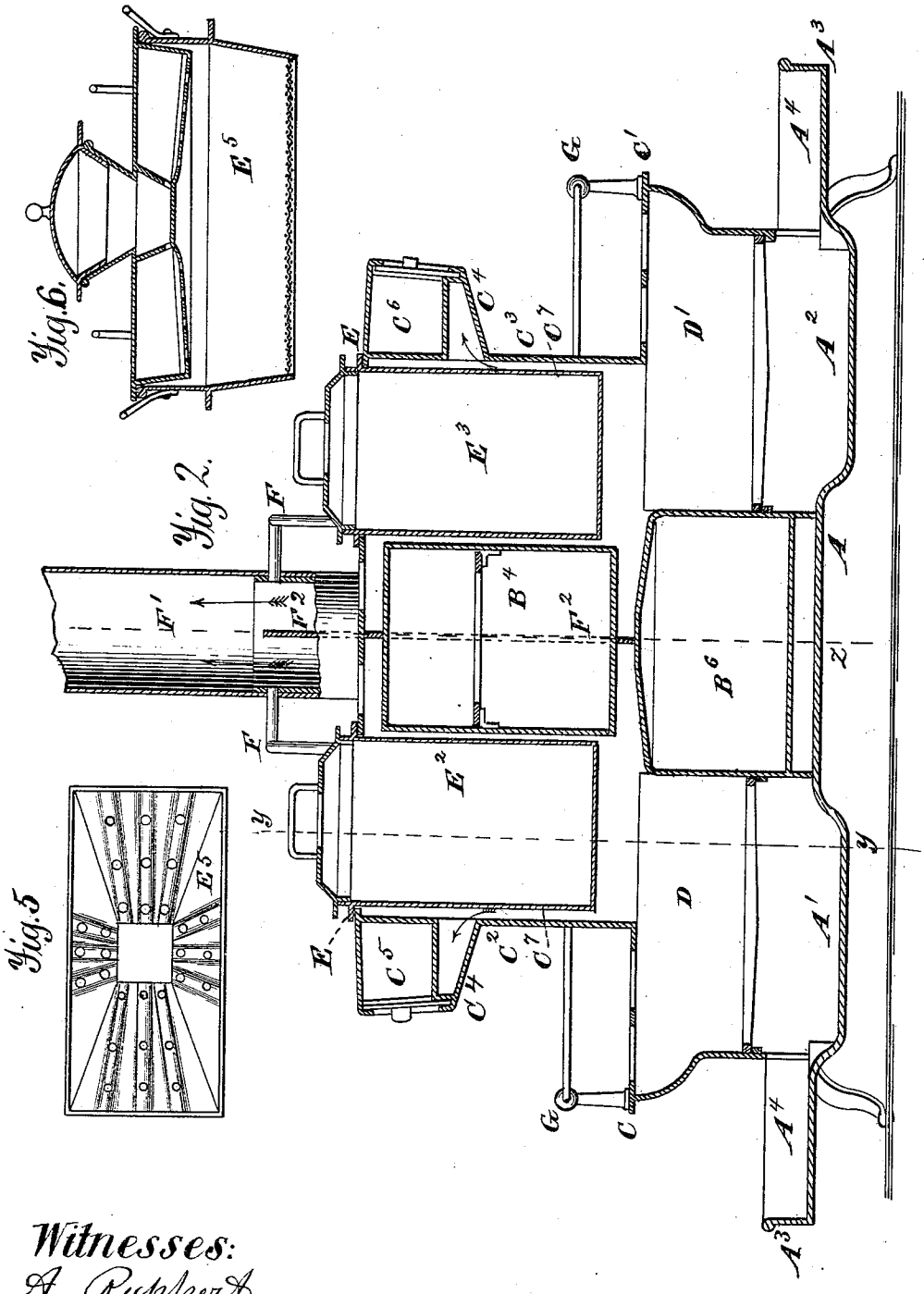

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(No Model.) 3 Sheets—Sheet 3.

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Cooking Range.

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Fig. 3.

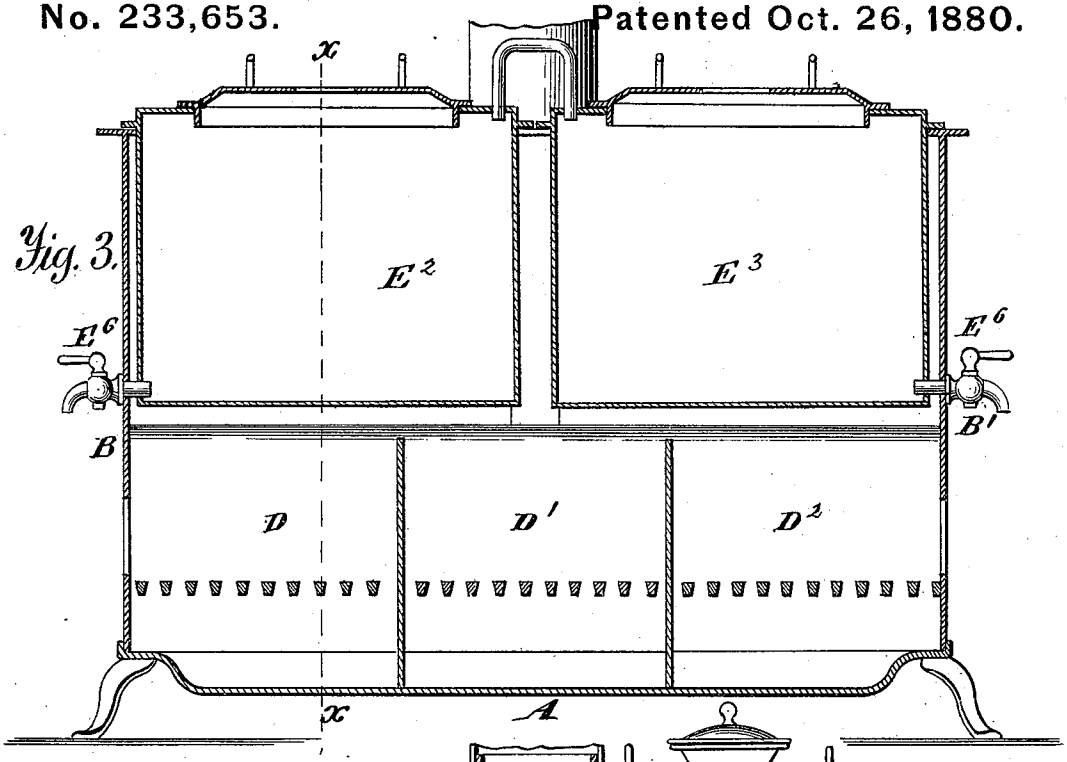
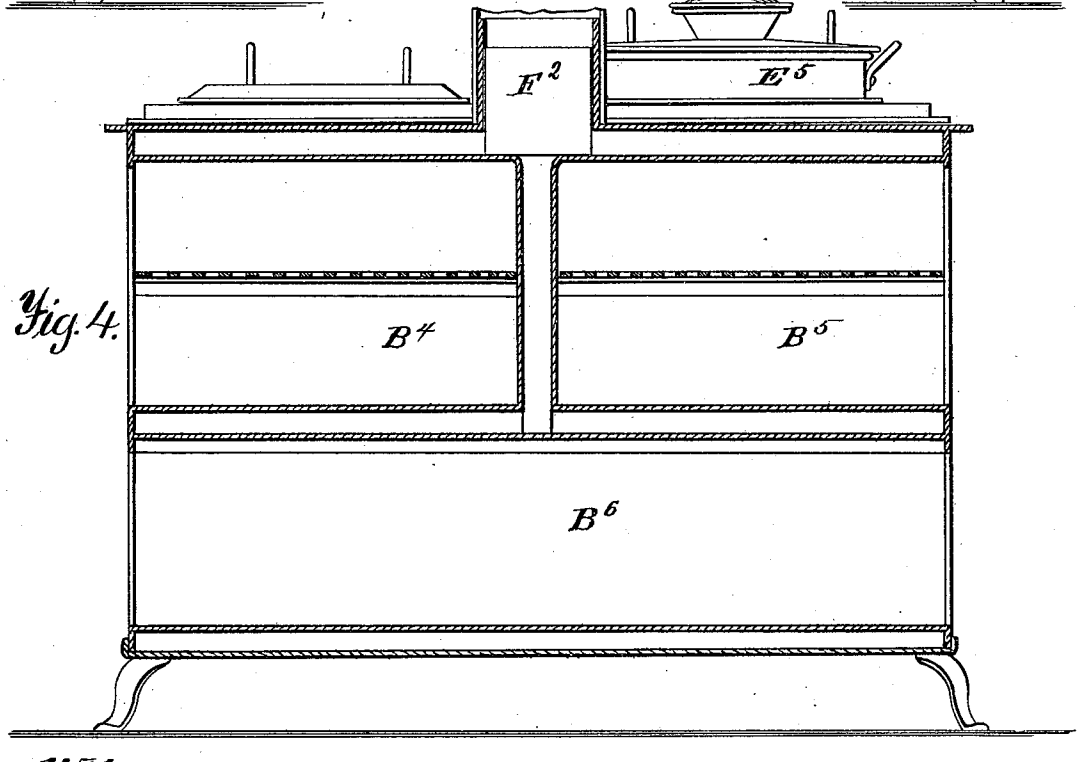


Fig. 4.



Witnesses:
A. Ruppert,
C. M. Connell.

Inventor:
William Young

UNITED STATES PATENT OFFICE.

WILLIAM YOUNG, OF WASHINGTON, DISTRICT OF COLUMBIA.

COOKING-RANGE.

SPECIFICATION forming part of Letters Patent No. 233,653, dated October 26, 1880.

Application filed July 15, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM YOUNG, a citizen of the United States, residing at Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Cooking-Ranges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in cooking-ranges to be used on board vessels, in hotels, and in other places where it is necessary to cook large quantities of food in a short period of time; and the objects of my improvements are, first, to provide a double range, the parts of which are so constructed and arranged that one portion may be used separately or the two portions at the same time, the fire-boxes of each of the compartments being separated into two or more chambers, so that a fire may be maintained in one or more or in all at the same time, as occasion may require; second, to provide such a combination and arrangement of the parts as is necessary to produce the effects described. I attain these objects by the devices illustrated in the accompanying drawings, and by their combinations and arrangements.

Figure 1 is a perspective view of the device, showing the parts in position for use. Fig. 2 is a sectional elevation on line *x x* of Fig. 3, showing the fire-boxes, the ovens, the water-heaters, pipes for conducting steam to the outlet-pipe, and such pipe. Fig. 3 is a sectional elevation on line *y y* of Fig. 2, showing the divided fire-boxes, the fire-grates, the water-heaters, and cocks for drawing water therefrom. Fig. 4 is a sectional elevation on line *z z* of Fig. 2, showing the central ovens and the flues through which the heat passes around them. Fig. 5 is a plan view of the lower plate of the cover of the coffee-boiler, showing channels and perforations through which water passes to the boiler, and Fig. 6 is a sectional elevation of the boiler and its cover.

Similar letters refer to similar parts throughout all of the views.

In constructing my improved device, which I have denominated the "anchor cooking-range," I provide a bottom plate, A, of the required length and width, and form in it two depressions, A' A^2, which are arranged so as to come directly below the grates in the fire-boxes. Upon the outer ends of this plate there are raised flanges A^3, which prevent ashes or coals from falling onto the floor upon which the range is placed, and they also serve to prevent any dish or article that may be set upon the portion of plate A to which they are attached, which constitutes the hearths A^4, from being slid off in the event of a storm at sea.

Attached to the sides of plate A are the plates B B′, the lower portions of which extend from one of the hearths A^4 to the other. Each of the plates B and B′ is provided with doors B^2 and B^3, the former giving access to ovens B^4 and B^5, each of which extends about half the way across the range transversely, they being divided by a hollow heating-flue or partition, soon to be described, while the latter gives access to the ends of an oven, B^6, which extends entirely across the range, as shown in Fig. 4 of the drawings.

The upper portions of the plates B B′ are shortened, so as to leave a projection at each of their ends, said projections being covered with plates C and C′, which are provided with a series of apertures, as shown, for the reception of boilers, kettles, or cooking-utensils of different shapes and diameters, said apertures, when not occupied by such devices, being covered by plates in the usual manner. These plates C C′ also form the upper walls of the fire-boxes D, D′, and D^2, which are arranged upon each end of the range.

From the plates C C′ there extend upward plates C^2 C^3, the length of which is equal to the length of the range at the point where they are placed, they being provided upon their upper portions with projections C^4 C^4, which form the lower walls of heating-flues for the ovens C^5 and C^6, which project outward from the upper edges of plates C^2 and C^3 above the furnaces D, D′, and D^2, from which the heat for use in said ovens is derived, it being conducted thereto through flue C^7, as shown by the arrows in Fig. 2 of the drawings. These ovens extend across the ends of the range, and are provided with sliding or other suitably-ar-

ranged doors C^8 C^8, they being peculiarly adapted to the cooking of meats and other substances requiring a high degree of heat, owing to their proximity to the furnaces.

The top of the range consists of a plate, E, or of a series of plates, as desired, it having in it a series of apertures, E′, of various sizes and forms, for the reception of cooking-utensils, and also for the reception of water-heaters E^2, E^3, and E^4 and of a coffee-boiler, E^5. These water-heaters pass down through the plate E, and are provided with flanges, which rest upon said plate, and thus prevent them from passing down below the point desired, each two being united, if preferred, so that both can be lifted out together, or they may be made separate, so that one may be removed, and thus room be made for applying the coffee-boiler in the place of one of them. For the purpose of drawing the water from these heaters cocks E^6 are provided, which pass through the walls of the range and enter into or are otherwise secured to them, so that by turning the key thereof water can at any time be drawn from the heaters without removing the covers therefrom.

In constructing these heaters I prefer to apply to them, at the points where the cocks enter, a portion of solder or of other metal for the purpose of increasing their thickness at these points, so that a screw-thread may be formed in them for the reception of a thread upon the end of the cock, which arrangement admits of the cock being unscrewed and withdrawn whenever it becomes desirable or necessary to remove the heaters.

It is apparent that what has been herein designated as water-heaters may, whenever occasion requires, be used as boilers and for cooking vegetables or other substances that require to be boiled. These heaters or boilers are each furnished with covers, in the centers of which there may, if preferred, be formed an aperture to be covered with any suitable cover, which may be readily removed for the purpose of enabling the attendant to see the condition of the contents.

In structures of this character, and especially when they are used in a small or closed room, it is desirable to avoid the escape of steam from the heaters and boilers into such room, and hence for providing against such a result there is attached to each of the heaters a pipe, F, the inner ends of which communicate with the interiors thereof, while their outer ends enter the pipe F′, through which the products of combustion pass to the atmosphere, by which means any steam that may be generated in said heaters or boilers is conducted away and prevented from passing into the room.

In order that, while having the general appearance of a single range, the same may be converted into two separate and distinct cooking-ranges, capable of separate or simultaneous use, the parts above described are divided at their centers by a partition, F^2, which passes up between the ovens B^4 and B^5 and extends into the pipe F′, by which means the two sections are separated and made capable of either joint or separate use, as desired, the only point where the flues of the two sections become one being in said pipe F′.

In using a cooking apparatus of this character it frequently becomes necessary to heat a small quantity of water or other substance, or to keep hot such material after it has been heated, or to broil a steak or some other substance without being under the necessity of building a fire in the entire fire-box of one section of the range, as such an operation would at times generate so much heat as to become annoying, and would always consume an unnecessary amount of fuel. For the purpose of obviating this difficulty the fire-box of each of the compartments of the range is divided into separate chambers, of which there are three; but the number may be increased, if desired, or only two need be used when the range is a very small one.

It will be seen upon referring to Fig. 3 of the drawings that the arrangement described divides the fire-box into three separate and distinct compartments, having no immediate connection with each other, except in the outlet-flue, and that the end ones are provided with doors; and it will also be seen that by making a fire in any one of them any substance to be cooked or kept warm after it has been cooked can be placed directly over such compartment, when the operation can be performed without having any fire in the other compartments, and hence with the expenditure of a small amount of fuel, while at the same time the oven C^5 or C^6, as the case may be, will be kept sufficiently hot to keep food placed in it in good condition to be placed upon the table.

When the apparatus is to be used on vessels there is placed around that portion thereof which is immediately above the fire-boxes a railing, G, which, however, may be employed at all times, if found desirable.

As an appendage to this range, and designed to be used in connection therewith, there is provided a coffee-boiler of peculiar construction, it consisting of a vessel, E^5, of substantially the form shown in Fig. 6 of the drawings, it being provided with flanges to support it upon the upper surface of one of the heaters or boilers E^2, E^3, or E^4, and with a perforated bottom, so that the berries of coffee or the parts of such berries placed therein shall be retained and the water or liquid coffee allowed to run through it into the lower vessel or into the heater or boiler. The cover of the boiler E^5 is hollow, its lower plate being perforated and provided with corrugations, as shown in Fig. 5, so that as water is poured in through the aperture in the upper plate it shall be directed to and delivered upon all parts of the coffee in the lower portion of the boiler. The upper plate of this cover being solid and forming a tight cover to the whole, it follows that

none of the aroma of the coffee will escape while the steeping or extracting process is going on, as any steam which may arise from the lower portion of the boiler will be condensed in the cover and returned through the apertures formed in the lower sheet of the cover, and hence the coffee will not be injured by having its flavor carried off while under treatment.

Having thus described my improved range and the mode of its operation, what I claim, and desire to secure by Letters Patent, is—

1. A cooking-range for use upon ships and in hospitals, hotels, and other places, combining in its construction two united compartments capable of being used either jointly or separately, the fire-box of each compartment extending across the range and being divided into two or more compartments which are capable of being used either jointly or separately, and an intervening cooking-oven, the parts being arranged with reference to each other substantially as shown.

2. In a double cooking-range, the combination of the furnaces of the two compartments thereof with the ovens B^4, B^5, and B^6, the latter of which extends entirely across the range and has a door at each of its ends, while the others, B^4 and B^5, are separated by a heating-flue, the arrangement of the parts being substantially such as is described, and for the purposes set forth.

3. The combination, in a cooking-range, of a divided fire-box, D or D′, water-heater E^2 or E^3, the flue C^7, of which the water-heater forms one of the walls, and an elevated oven, C^5 or C^6, the parts being arranged with reference to each other substantially as set forth, and for the purposes described.

4. In a double cooking-range, the combination of the ovens B^4, B^5, and B^6, their arrangement with reference to each other being substantially as described.

5. The combination of the water heaters or boilers with the ovens B^4 and B^5 and the furnaces of the range, said heaters or boilers being arranged as shown, whereby they are made to form one side of the flue leading from the furnaces to the outlet-pipe.

6. In a double cooking-range, and in combination with the flues thereof, the dividing-plate F^2, for directing the products of the furnaces in separate currents to the escape-pipe F′, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM YOUNG.

Witnesses:
G. E. HARRIS,
C. A. YOUNG.