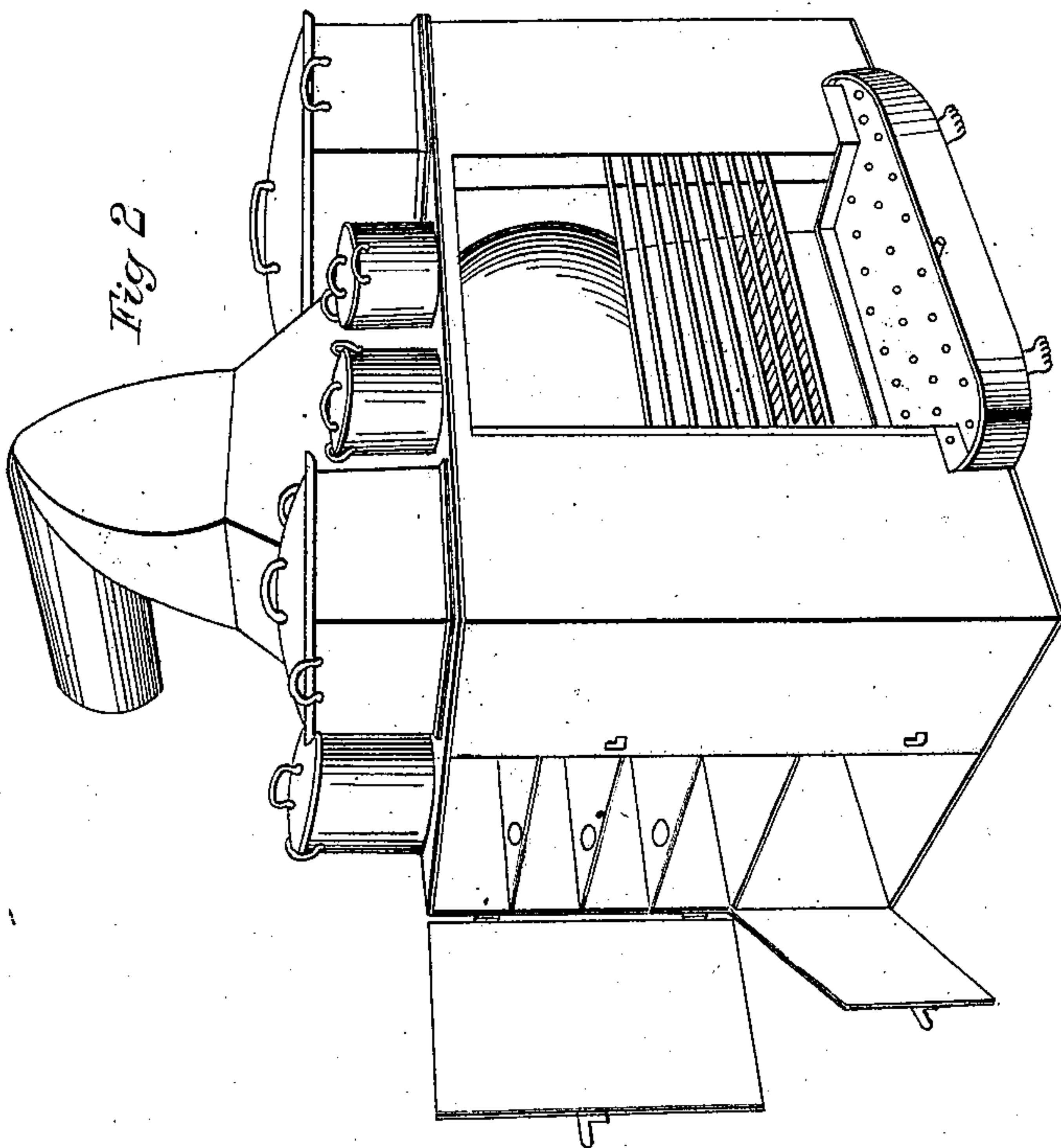
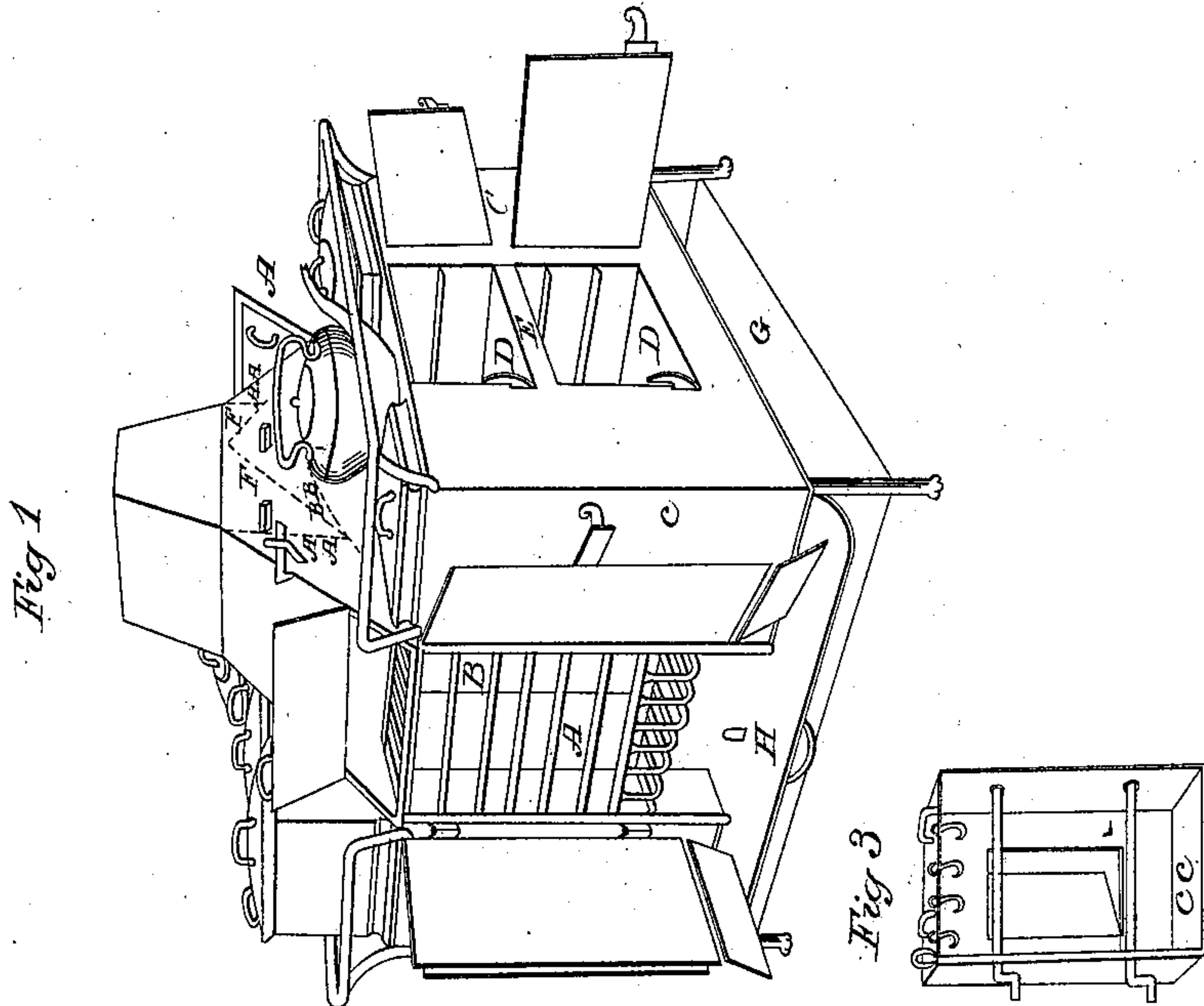


*B. Spratley,
Cooking Stove.*

No 402,

Patented Sep. 25, 1837.



Witnesses

*John F. Thompson
Jonathan Elliot*

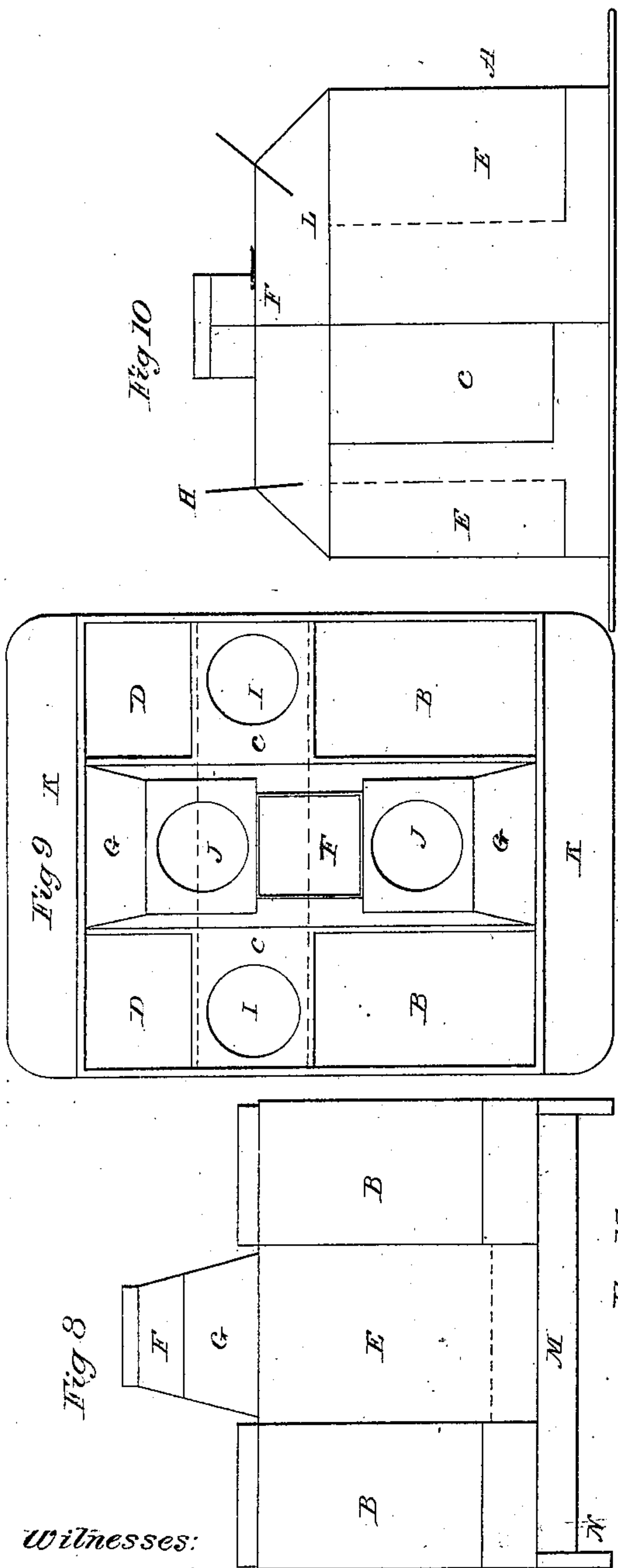
Inventor:

B. Spratley

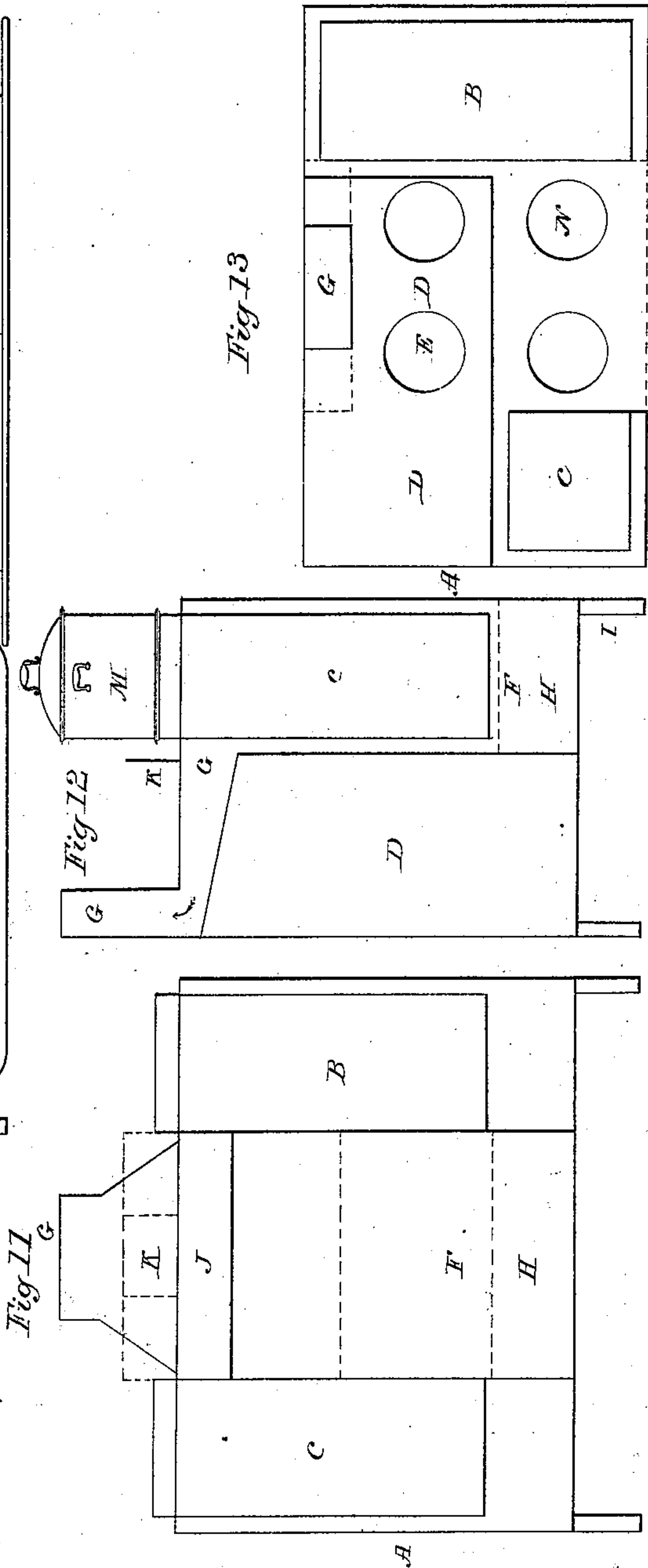
B. Spratley.
Cooking Store.

No. 402.

Patented Sep. 25. 1837.



Witnesses:
Henry de Mupf
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Inventor:
B. Spratley

UNITED STATES PATENT OFFICE.

BENJI. SPRATLEY, OF PORTSMOUTH, VIRGINIA.

GALLEY AND COOKING-STOVE FOR VESSELS AND DOMESTIC USE.

Specification of Letters Patent No. 402, dated September 25, 1837.

To all whom it may concern:

Be it known that I, BENJAMIN SPRATLEY, of the town of Portsmouth, in the county of Norfolk, in the State of Virginia, have invented a new and Improved Galley and Cooking-Stove for Vessels of War, Merchant Vessels, and for Domestic and other Uses; and I do hereby declare that the following is a full and exact description.

10 *Description of Benjamin Spratley's improved galley and cooking stove.*—The improvement in this galley which is chiefly intended for ships consists in the arrangement and construction of the boilers ovens
15 and backs of the furnaces or fire places. The heat is applied to the bottom and sides of the boilers, and to the top, bottom, and sides of the ovens in such quantities as may be required for boiling, baking,
20 roasting, or cooking in any other manner at one and the same time. The backs of the furnaces which may be made of sheet, wrought or cast iron, soap stone or fire clay are so contrived that they may be readily taken out and renewed without taking
25 the galley asunder which is not the case with any other galley or cooking now in use or that has ever been in use so far as the knowledge of this inventor extends. This
30 galley has steamers for fish, potatoes, &c., which are fitted nicely upon the main boilers and may be shipped or unshipped at pleasure. Over the ovens are holes upon which tea kettles stew pans or other utensils
35 may be used. These holes when not in use are stopped with covers. Stew pans, frying pans or broiling irons may be placed and used upon the gratings over the fire or they may be put in the ovens when not in use for
40 baking. The ovens are provided with shelves or drawers which may be readily taken out for placing the bread or biscuit upon them or for any other purpose.

The galley has two furnaces or fire places; the advantages of which are that the heat is more equally distributed among the boilers ovens &c. and that the fire used for cooking the provisions of the crew may be withdrawn and those boilers cleaned without in the least interfering with the cooking for the officers.

Each furnace is supplied with a kitchen or roaster to be of the width of the mouth of the fire place and of sufficient depth. Below the main bottom of the galley is a second bottom to prevent the heat from the main

bottom from setting fire to the deck beneath the galley. In case the coal on board ship should be expended the grates may be taken out with ease and wood used for cooking in which case the space between the main and the lower bottom may be used for baking broiling and so forth.

A galley for a frigate of the first class will be three feet ten inches from the bottom of the legs which rest upon the deck and will be six feet square, occupying about one half the space required for a galley for the same ship made on the old plan. This galleg intended to burn anthracite coal, but any other fuel may be employed. It is estimated that four bushels of coal will be sufficient to cook breakfast dinner and supper for the crew of a frigate of the first class.

The flues are provided with dampers which with the doors below may be so regulated as to suit the convenience of the cook. The draft doors to the grates or furnaces are so contrived that it is impossible for the fire to fall out when they are shut. The cooking stove is to be made upon the same principles and plan except that it has but one fire place and to be fitted up with the necessary boilers and utensils similar to those for the galley.

Description of the drawings accompanying this specification.—Figure 1 is a perspective view of the ship's galley. Fig. 2 is a perspective view of the cooking stove. Fig. 3 is a roaster; Fig. 4 a vertical section through the middle of the galley from front to rear. Fig. 5 is a perspective view of the movable grate and back, the grate being in its place against the back and the back on its stand. Fig. 6 is a perspective view of the movable grate detached. Fig. 7 is a perspective view of the movable back and stand detached from the grate. Fig. 8 represents the outlines of the form of the front of the ship's galley, the particular parts being described by references on the drawing itself. Fig. 9 shows the form of the ship's galley or top as seen from above in outline, the different parts being described in the drawing with references. Fig. 10 is the outlines of a vertical section of the galley showing the places for the two grates one in front and one at the back with the place for the oven, the flue, mouth of the flue, and dampers. Cooking stove: Fig. 11 shows the front outlines of the cooking stove, the spaces for the grate, boilers, mouth of the flue, dampers, the

flue and top, and the space between the bottom of the grate and the main bottom as described minutely in the references on the drawings. Fig. 12 is a vertical section of a side of the cooking stove in outline, showing the oven which forms the back of the fire place, the flues and top and one of the boilers. Fig. 13 shows the top outlines of the cooking stove with the fire places for the grate and fire place, boilers, oven, flue and top, &c., as particularly described in the references in the drawings.

The cooking stove is made upon the same principle as the galley except that it has but one grate and fire place and fewer utensils and is of course of smaller dimensions according to the number of persons to be served. It is indeed one half of the ship's galley reduced to suit domestic purposes. Being the same in principle and similar in construction as far as it goes, with the ship's galley, it is therefore brought into the same patent.

The novelty of the cooking stove consists 1st. In having a movable grate and back so that both or either of them may be removed without detaching the other parts of the stove. 2. That the backs may be of cast iron, soap stone or fire brick, and that no matter of what material, the putting it in or taking it out for repairs, cleaning or otherwise will not derange the other parts of the stove. 3. That it applies the heat to the bottoms and sides of the boilers and distributes it equally throughout. 4. That from the construction of the oven and its combination with the other parts of the stove it throws a uniform heat through the oven and makes it bake as well above as below, and in greater quantities and less time than those of the usual form. 5. The construction of a double bottom for kiln drying, bread and other purposes, are for preventing or at least diminishing danger from fire. 6. In the economy of fuel and the saving of space while at the same time the stove answers all its purposes in less time and equally as well as those of larger dimensions.

The parts of the ship's galley applicable to the cooking stove are the same as those described in the drawings and references in Figs. 12 and 13 and the construction of which are more particularly set out in the specifications for the galley so that it is not necessary to describe them here. The advantages of this stove are that it requires much less room, will cook more provisions, and in a greater variety of ways, and in less time than any ship's galley or stove now in use.

Description of the ship's galley with references as it appears in the drawings at full, in Fig. 1.—The galley has two grates one on each side and opposite the other as represented by letters A A. They are mov-

able and may be taken out at pleasure to remove the cinders and ashes and to clean the backs. B represents the back which is so arranged as also to be taken out for cleaning or repairing without disturbing any other part of the galley. This back may be made of iron or soap stone or fire clay and may be used for coal or wood. The taking out of the movable grate which is of one piece makes it a fire place for wood, while the grate as it stands can be used for any kind of coal. The grate A on the far or other side is precisely like the one in front and gives the advantage of cooking two messes at once for a large crew in much less than the ordinary time. C the boilers which extend down near the bottom and are immediately in contact at the side with the fire while they also receive heat at the bottom. D D the oven or ovens immediately between the two stoves so that equal heat is received and diffused from each side. E is a division between the upper and the lower oven which is an extension of the plate or bar of iron running across from the bend of one of the backs of the fire place to the other so as to distribute the heat equally through the two ovens and to answer as a support for the backs of the stoves and for the galley also, as the same is further described in the drawings in detail. F on each side of the top represents the form of the flues coming up to an angle according to the size of the stove: this concentrates the heat over the top oven and makes it bake as well as the lower oven which is principally heated from beneath. G is an additional bottom of iron extending all the way around and is intended to prevent the heat from communicating to the berth or other deck of a vessel and to act as a guard against fire and to answer for kiln drying damaged or moldy or damp bread and other provisions. H is a sliding hearth to each grate to prevent fire from falling on the deck and to serve for placing cooking utensils on, that are in immediate use and also to keep the meats warm. A A is the form of the outer flue or smoke pipe and may be made either inclined upward as described in the drawing, or straight up as shown by the dotted lines A, A, so as to make room for other small boilers or steamers. B, B, is intended to show the top of the oven underneath the flues and may be rounded as described by the dotted lines so that the dirt may not lodge there. C, C, is a movable roaster—but when it is necessary, sliding spits may be used before the grates, after the manner of those now in use upon the old galleys.

Description of the parts of the galley as seen by the drawings in detail. Movable back and grate.—a is the movable grate of the galley which may be fastened in its place by pins or by screws running into the up-

rights or legs, or by cleats on each side. *b* is the grate of the galley as it stands connected with the movable back. *c* is a stand of iron upon four legs of any proper elevation according to the size of the galley, and running partly under the oven of the galley: it is intended to support the back of the fire place and though described as of iron may be made of soapstone or fire clay. *d* is the frame of the movable back of the fire place the lower part of which is lodged upon the stand (*c*) and is kept firm in its place by two grooved chocks one at each end of the stand. *e* is the upper part of the back which is bent downward and lodges upon a shoulder of the flue of the galley and is kept firm by a good fit and if necessary by the addition of a sliding clamp attached to the flue and falling upon the bend (*e*). *f* shows the formation of the movable stand (*c*) as apart from the grate. *a* and *f* show the movable grate and movable back as detached from each other.

Description of the grate and back as connected with the galley as shown by the drawings in detail.—*a a* shows a vertical section of the grate. *c c* is the stand, *c* running in part under the oven of the galley while the fore part supports the back of the oven in the grooved chocks. *d d* is the movable back *d* fixed in its place in the galley. *e e* is the upper part of the back which is bent downward and falls upon the shoulder of the flues where it is kept firm by a taut or tight fit, or a sliding clamp, if necessary. *g g* is a plate of iron running across from the bend of one of the backs of the fire place to the other, and forming one of the divisions of the oven while it answers as a support for the backs and a conductor of heat in baking. *p p p p* are iron slides in the oven for baking and may be removed at pleasure. *k k* are the sides of the flue, the angle or elevation of which may depend upon the size of the vessel and height of the galley. This arrangement of the flues concentrates the heat over the oven and causes it to bake as well above as from below. *l l* are dampers or valves for the regulation of the heat. *m m*

are vertical ends of the upper grate or bars over the fire place upon which frying pans and other utensils may be placed. *n n* are sliding hearths so as to prevent danger from fire, and to serve for placing the roasters on, and for keeping the meats warm. *o o* is an additional bottom which prevents the heat from communicating with the deck of a vessel and will serve to kiln dry all the bread for a ship's crew and make the galley safer as to fire.

The advantages of this stove are that it requires less room, will cook more provisions and in a greater variety of ways than any cooking stove now in use. It may be made very ornamental and will produce as much heat in the room as the common grate.

What I claim is—

1. The employment of two grates or fire places situated on opposite sides of the galley, their flues uniting together in one common pipe, and the backs being made movable for the purpose of adapting the fire place to the burning of either wood or coal, the respective parts being combined, arranged, and constructed substantially in the manner described.

2. The construction of a galley with a double bottom in the manner and for the purposes set forth.

3. The manner described of constructing and combining the oven with the other parts of the galley.

4. The general arrangement and combination of the respective parts as described by which room is economized, while the instrument is equally efficacious with those of a much larger size on the usual construction.

5. For backs so constructed as described that they may be readily taken out and replaced with the same or with new ones without taking the galley to pieces, which cannot be done with galleys of the usual construction.

B. SPRATLEY.

Witnesses:

H. M. MORFIT,
WILLIAM WATERS.