

Specification of George Stratton : fire-places.

Contributors

Stratton, George.

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A.D. 1817 N^o 4147.

SPECIFICATION

OF

GEORGE STRATTON.

FIRE-PLACES.

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
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Price 6d.

1854.





A.D. 1817 N° 4147.

Fire-places.

STRATTON'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, GEORGE STRATTON, of Piccadilly, in the County of Middlesex, Ironmonger, send greeting.

WHEREAS His most Excellent Majesty King George the Third did, by His
5 Letters Patent under the Great Seal of the United Kingdom of Great Britain
and Ireland, bearing date at Westminster, the Fifth day of August, in the
fifty-seventh year of His reign, did give and grant unto me, the said George
Stratton, my exors, admors, and assigns, His special licence, full power, sole
privilege and authority, that I, the said George Stratton, my exors, admors,
10 and assigns, should and lawfully might, during the term of years therein men-
tioned, make, use, exercise, and vend, within England, Wales, and the Town
of Berwick upon Tweed, my Invention of "THE METHOD OF SAVING FUEL BY
IMPROVEMENTS IN FIRE-PLACES, AND MORE EFFECTUALLY HEATING AND VENTILATING
BUILDINGS;" in which said Letters Patent there is contained a proviso that if I,
15 the said George Stratton, shall not particularly describe and ascertain the nature
of my said method, and in what manner the same is to be performed, by an in-
strument in writing under my hand and seal, and cause the same to be inrolled
in His Majesty's High Court of Chancery within six calendar months next and
immediately after the date of the said Letters Patent, that then the said Letters
20 Patent, and all liberties and advantages whatsoever thereby granted, shall
utterly cease, determine, and become void, as in and by the same, relation
being thereunto had, may more fully and at large appear.

Stratton's Improvements in Fire-places, &c.

NOW KNOW YE, that in compliance with the said proviso, I, the said George Stratton, do hereby declare that the nature of my said method and the manner in which the same is to be performed, are particularly described and ascertained in and by the Drawings hereunto annexed, and the following description thereof; (that is to say,)—

My Invention of a method of saving fuel by improvements in fire-places, and more effectually heating and ventilating buildings, consists, first, of a kitchen range, fire grate, or cooking apparatus, in which a much smaller quantity of fuel will be found fully adequate to the purposes of roasting, baking, steaming, &c. (and that upon an extensive scale), than is usually necessary for the supply of kitchen ranges of the ordinary construction; and, secondly, by a mode of warming and ventilating with a current of pure heated atmospheric air (unburnt and uncontaminated with deleterious matter) buildings of every description, and particularly hot-houses and churches, &c. Fig. 1 of the accompanying Drawings is a front view of my improved kitchen range, and Fig. 2 is a back view of the same, the back of the grate being removed for the purpose of shewing the action of the fire under the boiler and oven, and the particular construction of the rounding cheek. Fig. 3 is a section of the range, shewing the oven cheek; and Fig. 4 a section of the range shewing the boiler cheek. In all the Figures the respective letters refer to the same parts. A is the oven; B, the boiler; (b), a safety valve; C, the moveable cheek, connected with or attached to which is a flue or chimney D, for the purpose of conducting the heat, by means of the draft of the fire to, round, and under the oven, as seen in Fig. 2, but seen detached in two positions at Figs. 5 and 6. This moveable cheek and its chimney is intended to move backward and forward, by rack and pinion, or otherwise, in order to contract or extend the fire, which, however small, will be found to draw through the flue or chimney D, and heat the oven, observing that when the fire-place is considerably contracted the upper or open part of the flue must be covered over with a plate or plates *a, a*, Fig. 2, or with some similar contrivance, in order that the draft may be preserved through the fire. It is scarcely necessary to add, that the smoak thus passing from the fire on each side the range to the oven and to the boiler is intended to be delivered into the common chimney by separate flues in some such way as represented by the dotted lines, Fig. 1, and that a damper sliding into these flues will of course regulate the degree of heat. My said contrivance of a flue through the cheeks of a grate may be likewise applied to various grates not intended for cooking, and will be found of great advantage by heating the fronts, hobs, back, and sides or covers of ordinary stoves, and consequently throwing out a very considerable heat with

FIG. 1.

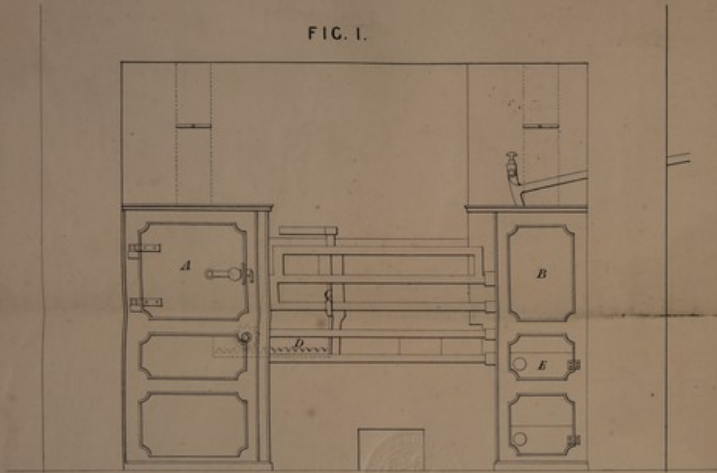


FIG. 2.

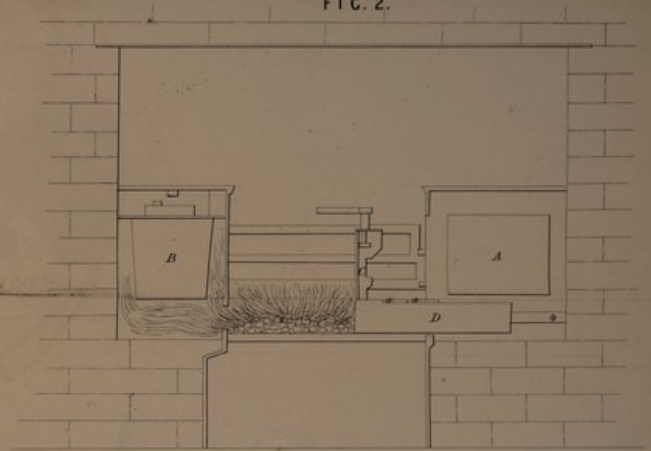


FIG. 3.



FIG. 4.



FIG. 5.

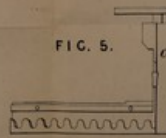
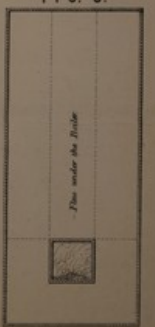


FIG. 6.

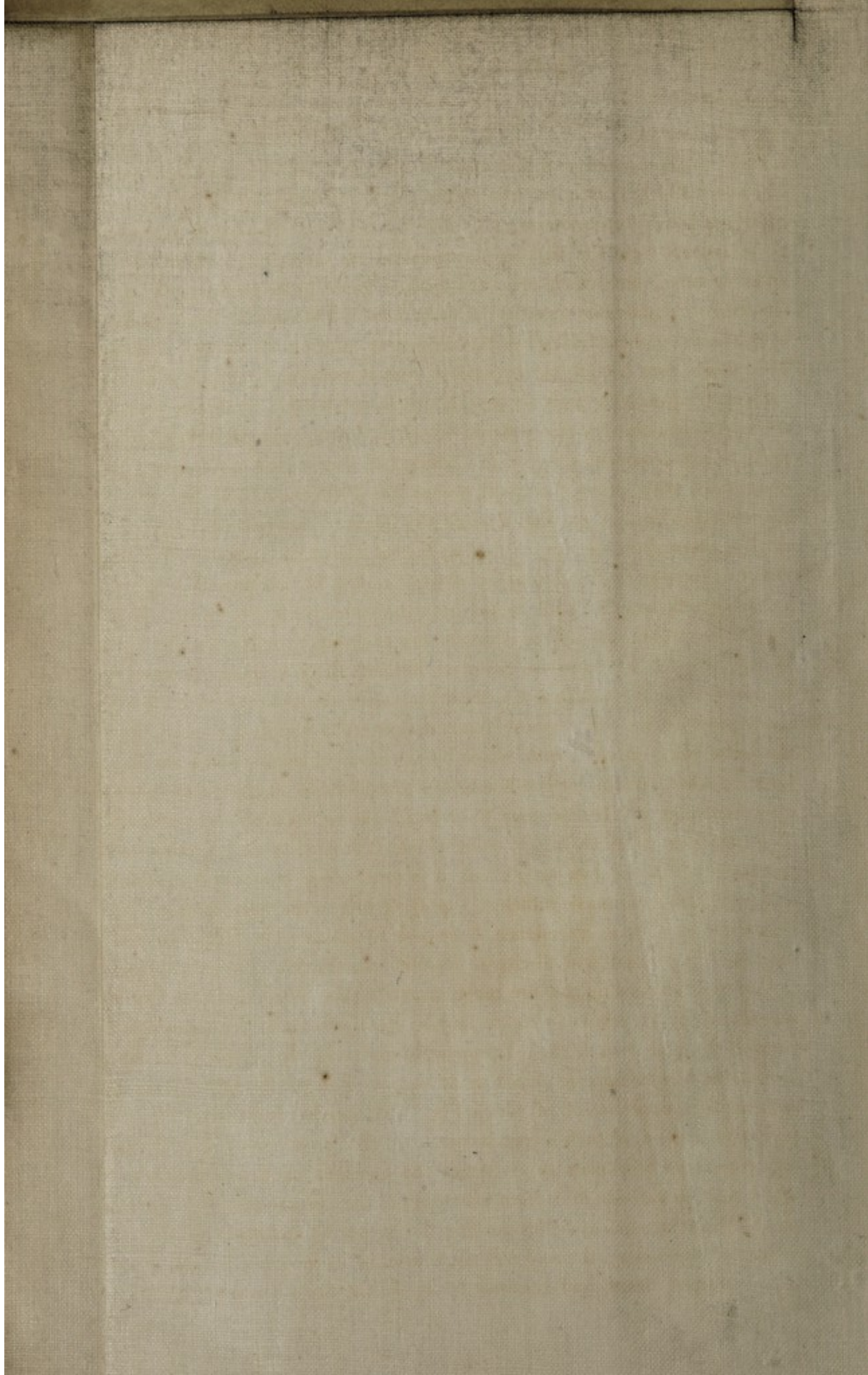


FIG. 8.



The omitted drawing is altered.

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a much smaller quantity of fuel than is ordinarily required for their supply. The mode which I adopt for the heating and ventilating buildings, and particularly of hot or forcing houses, is by causing a current of common atmospheric air to proceed into the building intended to be heated through passages, as
5 pipes or tubes, &c. which are encompassed with steam, and by that means throwing a considerable quantity of heat into the volume of atmospheric air so conducted without taking up the oxygen or altering its nutritive qualities. This object may be effected by various contrivances, and when it is not convenient to surround a large air vessel with steam the air may pass through a
10 worm pipe contained within a steam vessel, as a drum, say 18 inches by 2 feet high, or any ornamental figure, as a phoenix, a lion, a pine apple, or any such vessel filled with steam that shall occupy but little room, and yet retain the air sufficient time in passing through the steam to rarify it and render it fit for the atmosphere of hot or forcing houses and other places. This steam
15 vessel or vessels for there may be several in use at one time if required) is intended to be supplied with steam from the boiler before described, which, in case of the insufficiency of the common fire to produce so much steam as may be necessary for this extensive object of heating, the generating of steam may be increased by the addition of a small fire under the boiler in a grate exclusively provided for that purpose (and not generally required as at E, Fig. 1,
20 the boiler being supplied with water by a variety of modes which are already known; when building or hot-houses of a considerable magnitude are intended to be heated, it will be necessary to erect a boiler or boilers for the generating of steam upon a much larger scale, which I propose to do sometimes independently of the kitchen range, and as a great object is attained by affording a certain and continued sufficient supply of fuel to the fire for many hours consumption, without attendance, I propose to construct a hopper to contain coal that shall let fall and discharge its fuel into the fire; but as an objection to this mode of feeding the fire must naturally arise from the blistering and
30 warping of the materials of which it may be constructed near the fire, which will prevent the coal from falling, I propose to surround the hopper with water, that is, the hopper may be placed so as to pass through the boiler, or be surrounded by a water vessel, of which Fig. 7, an upright section, and Fig. 8, an horizontal section of such a contrivance, will give a sufficient idea to enable
35 any competent workman to construct the apparatus upon my principle, but which may be variable in its form, according to the circumstances and situation in which it is erected, and thus guarding the hopper by making it a water vessel or part of the boiler; the coal will not adhere in its progress, but fall down as it is consumed below and continue to supply the fire without any attendance

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after it is once filled. The same description of hopper may likewise be applied to the kitchen range when a continued supply of steam is required all night, by extending the boiler and placing a hopper surrounded by the boiler as before described, so as to supply the grate at E, Fig. 1, and the same kind of contrivance or hopper, surrounded with water, and be desirably applied to the fire-places of steam engine boilers, furnaces, and every other fire-place where a continued supply of fuel, unattended, may be desirable.

In witness whereof, I, the said George Stratton, have hereunto set my hand and seal, this Fifth day of February, in the year of our Lord One thousand eight hundred and eighteen.

GEORGE (L.S.) STRATTON.

AND BE IT REMEMBERED, that on the Fifth day of February, in the year of our Lord 1818, the aforesaid George Stratton came before our said Lord the King in His Chancery, and acknowledged the Specification aforesaid, and all and everything therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

Inrolled the Fifth day of February, in the year of our Lord One thousand eight hundred and eighteen.

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1854.