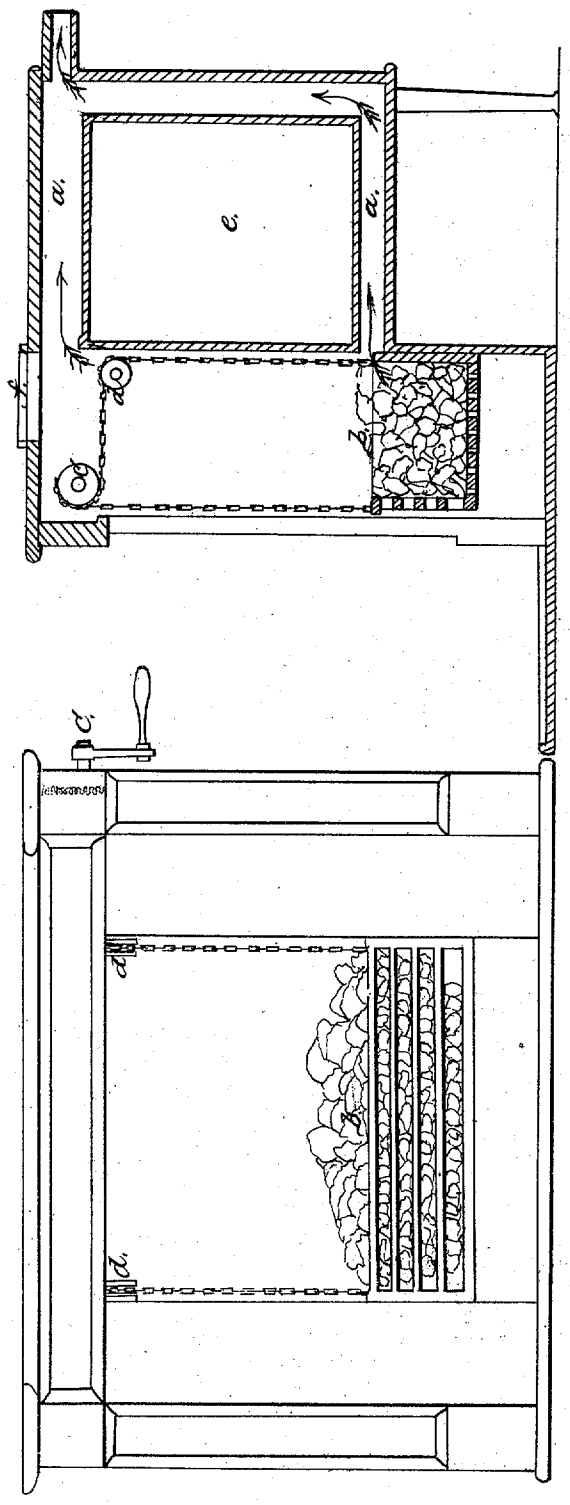
O. WILSON.

COOKING STOVE GRATE.

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Patented Mar. 23, 1836.



Mar. 23. 1836

Orin Wilson of Concord, Mass:
Letters Patent

The Schedule referred to in these Letters Patent, and making part of the same containing a description in the words of the said Orin Wilson himself, of his improvement in the Cooking Stove Grate and its appendages, applicable to other stoves fireplaces &c.

To all whom these presents shall come: Be it known that I, Orin Wilson of Concord, County of Middlesex, and State of Massachusetts, have invented a new and useful improvement in the Cooking Stove grate and its appendages, the same being applicable to other stoves fire frames & fire places, and that the following is a full and exact description thereof.

Material – The stove fire frame, fireplace and grate, may be made of any convenient form and suitable material: The parts containing the boilers, oven dampers, and flues, may be constructed after any approved pattern to which the moveable grate hereinafter to be described can be adapted with its appendages – Structure of fire place – The front of the stove is so constructed as to form an open fire place or fire frame of any size required, and may be attached to the stove by screws and bolts or (if of metal cast or made in connexion with the other parts as convenience may require – An aperture is made in the back part or plate of the fire frame (which is the front of the stove) at a suitable distance from the hearth to admit the heat or smoke from the grate beneath (when resting on the hearth) into the stove, underneath and near the cap or Top of the frame which may be of the same piece and equal height with the Top of the stove is another aperture to admit the heat and smoke into the stove – Grate. A grate or pan to contain the wood or coal is made in form and size adapted to the fire place or frame, the bottom of the grate is perforated to promote the circulation of air an separate the ashes: the front of the pan is guarded with bars of metal, in the usual manner to prevent the fire coals from falling off the grate, the sides and back of the grate are made close in the form of the sides of a disk or pan – Cylinder behind and near to the frontis piece or front plate at the

top of the frame is a cylinder equal in length with the grate aforedescribed. The axle of the cylinder has its bearings in the sides of the frame—one end of the axle is extended through the side of the frames far enough to receive a ratchet to hold it in any position required, and a crank by which the cylinder is turned around. (Chains) four chains (two at each end) are attached to the cylinder: two of which extend in a perpendicular line from and beneath the front line of the periphery of the cylinder to the front corners of the grate to which they are attached. The length of each of the other chains exceeds the pair first mentioned by the depth of the width of the grate or pan; from the cylinder they pass in a horizontal direction into the back part of the frame, thence over two pulleys downward in a perpendicular line to the back part of the grate or pan to which they are also attached. Operation. by turning the crank the chains are wound on or off the cylinder and the grate consequently elevated or depressed as the case may require. Advantages. When it is required to have the benefit of an open fire, the grate is made to descend low enough to admit the passage of the smoke through the lower aperture in the back part of the plate or frame afore described. dampers may be applied to throw the surplus heat into the flues or around the oven boilers &c. as circumstances may require. The grate may be so elevated as to close the lower aperture, or leave it beneath the grate or pan, in which position the smoke & heat ascend, a part passing over the top of the back plate of the frame, through the top of the stove or flue (as the case may be) into the chimney and a part is thrown out into the room. Operation continued. When it is required to heat the room less and the boiler, and oven of the stove more the grate is elevated to its highest point, the dampers being adjusted to facilitate the operations, the fire is thereby brought in closer contact with the boilers, and oven, while the front part or frame is cooled and the atmosphere in the room less heated than it is by other methods in other stoves in common use.

Claim. What I claim as my own invention and not heretofore known or used is the moveable grate or pan whether operated with chains and pullies, rack and pinion or other mechanical powers: the peculiar adaptation and arrangement and combination of the several parts of the stove, fire frame or fire place to the said moveable grate for the use

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and purposes herein described and set forth —

Witnesses
Isaac Cutler
Andrew Barr

Orin Wilson

Drawings made

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