

tending higher up, even to the top of the oven, and intervening between it and the fire-pot, the oven-plate forming its back, and its front plate f^x extending upward almost to the top, and the exit for the air being over its upper edge, and so that it can pass downward between the plate f' and the fire-pot casing i' to the space below the grate, and thence to the fire.

At q is shown another chamber, auxiliary to the chambers before described, or it may be used separately and distinctly therefrom. This chamber is situated below the bottom of the stove, and is simply a box, or the equivalent thereof, fastened, in any suitable manner, to the said bottom plate c of the stove, which also forms the top of the said auxiliary chamber q . This chamber has communication with the space below the grate, or with the chamber p , or with the tubes m , and chambers n and o , as may be desired, and also has ingress openings at r , which said openings may be situated in either the back, sides, front, or bottom of the box forming said auxiliary chamber. At s are tubes, chambers, or the equivalent thereof, forming passages for air along and under the bottom plate of the stove c , and deriving heat from the bottom flues of the stove. These tubes or chambers s may communicate directly with the tubes m , and chambers n and o , or with the chamber p , or with the auxiliary chamber q ; with either arrangement it forms a complete introductory, air passing therein becoming warmed by the heat imparted by the bottom flues of the stove. They have apertures for inlet at S^1 , and for communication with the chamber p at S^2 . Thus several chambers are provided having proper communication with each other, so that all can be used together, or each used by itself separately, or by different combinations, arranged so as to be very effective in heating the draft-air to the fire, the object of said chambers or tubes, used either with or separately or in combination with other parts of the stove, being, after fire is started, to heat draft-air, to keep up steady and rapid combustion of fuel, heated air being found useful for that purpose, and the means used being considered better and more effectual than by the ordinary means through front grate or front plate or side plates of the stove, and furnishing chambers contiguous to the fire, where draft-air is powerfully heated, and utility of stove for heating and cooking purposes much increased. At u is shown the curved plates, which are used to contract the

passage, so as to keep and concentrate the products of combustion within the fire-pot or chamber of combustion, so they may be all destroyed before the escape beyond the direct influence of the flame and heat within the same. These plates may be straight or curved, as deemed best; back of the same, through the jambs of the stove, at v or any other suitable point, I have apertures, through which a fresh supply of oxygen may be admitted, to add its good offices in aiding and promoting the combustion of gases.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. Tubes m , with inlet and outlet openings communicating through the bottom of the stove, thence into chambers n and o , as arranged and set forth.
2. The combination of communicating chambers n and o , tubes m , and fire-pot i , constructed and arranged as set forth.
3. The opened and communicating chambers p and p' , with partitioned plate f' , extending nearly to the top of said chambers, and chamber j' , all in combination, as arranged and set forth.
4. The auxiliary chamber q , or its equivalent, with ingress and egress openings, in combination with the bottom plate of the stove, tubes m , or chamber p , constructed, arranged, and operating in the manner substantially as described and set forth.
5. The flue-strips u , in combination with the fire-pot i , top oven-plate g , jamb e , with openings v , substantially as described and set forth.
6. The tubes m , chambers n and o with apertures, dampered or not, the hot-air chamber j , or their equivalents, and fire-chamber i , all in combination and operation, as described and set forth.
7. The chamber q , tubes, or their equivalent, s , each with ingress and egress openings, dampered or not, in combination with hot-draft chambers p and n , all communicating and operating substantially as described and set forth.
8. The communicating chamber p and j' , with opened partitioned plate f' , and chamber o , as constructed and arranged, all in combination and operation, for the purpose set forth.

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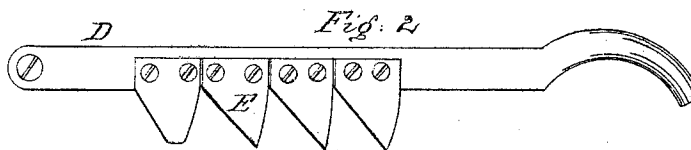
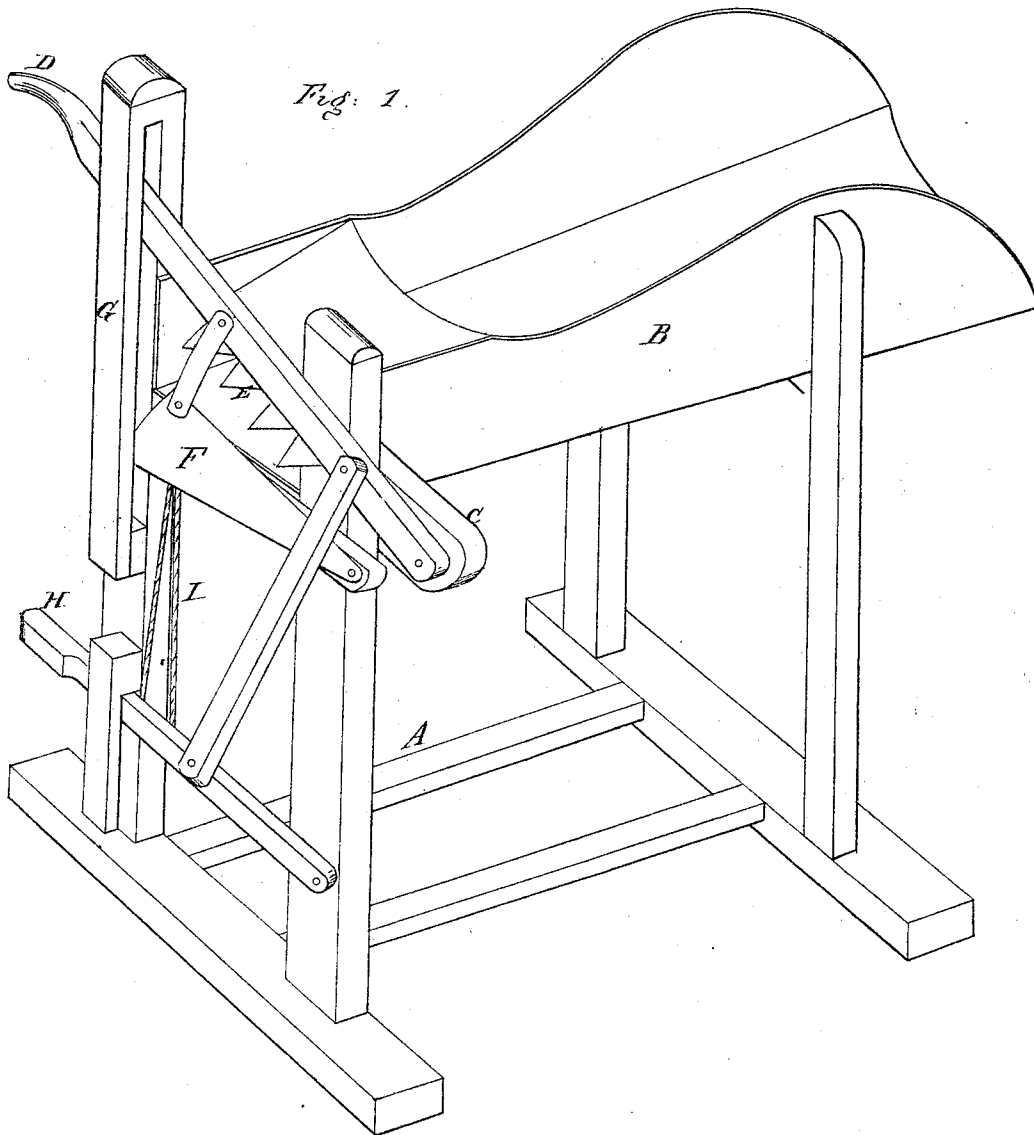
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