F. HAINSWORTH.

Vapor Stove.

No. 113,513. Patented Apr. 11, 1871.

Fig 1.

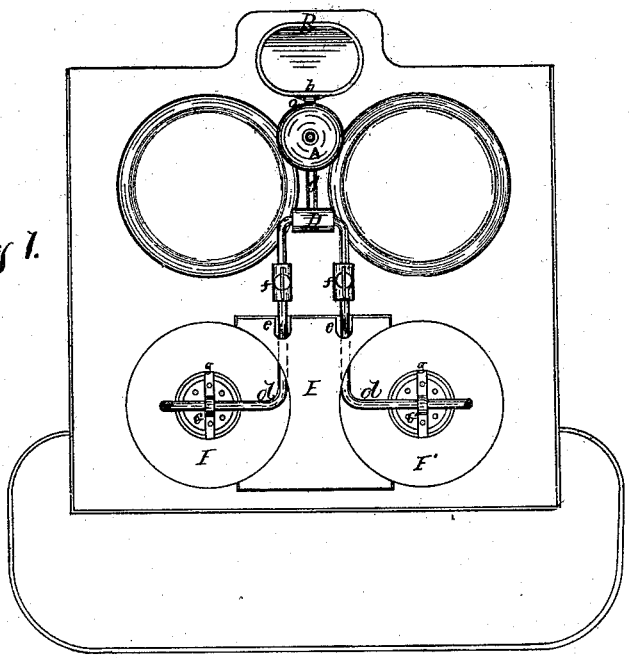


Fig 3.

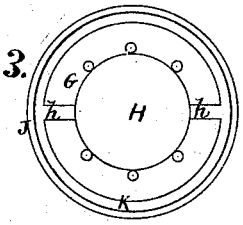


Fig 2.

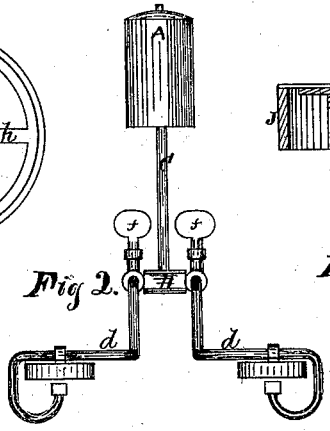


Fig 4.

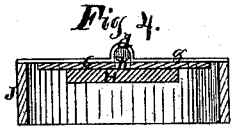
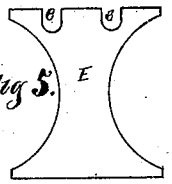


Fig 5.



Witnesses

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FREDERICK HAINSWORTH, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN GASOLINE ATTACHMENTS FOR COOKING-STOVES.

Specification forming part of Letters Patent No. **113,513**, dated April 11, 1871.

To all whom it may concern:

Be it known that I, FREDERICK HAINSWORTH, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Gasoline Attachments to Cooking-Stoves; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top view of an ordinary cooking-stove with my invention attached thereto. Fig. 2 is a front elevation of my invention detached. Fig. 3 is an inverted enlarged plan of the disk employed. Fig. 4 is an enlarged vertical central section of the same, and Fig. 5 is a top view of the bridge-plate detached.

Similar letters of reference indicate corresponding parts in the several figures of the drawings.

My invention has for its object to provide an attachment to cooking-stoves by the use of which gasoline vapor may be used for heating purposes in cooking; and to this end it consists in the detail construction of the disk employed, whereby the flame from the vapor is allowed to come in contact with and against the tube conveying the oil from the reservoir, by which means a greater flow of vapor is produced; also, in providing the periphery of said disk with a depending flange so arranged as to form an annular opening between its inner side and the outer side of the disk, in connection with an annular projection extending downward from the center of said disk, against which the vapor from the tube is discharged, whereby the flame is thrown outward against the flange and through the opening to the desired point; and also in providing the bridge-plate of the stove with apertures, through which the tube from the reservoir passes to the desired point of the disk.

In the drawings, A represents the reservoir containing gasoline-oil, which is provided near its upper end with a hook, *a*, which is secured within a loop, *b*, affixed to pipe B of the stove. Attached to said reservoir is a pipe, C, to the lower end of which is secured a coupling, D, within which said coupling is firmly affixed tubes *d d*, which extend forward upon or slightly above the upper surface of the stove to a point near the rear side of the bridge-plate E, and are then bent downward, passing through apertures *e e*, formed in said plate, to a point below the lower surface of the same, and are then bent to a horizontal position, and extend forward to or near the center of the openings F F of the stove, and are bent laterally outward and their outer ends curved, as shown in Fig. 2. Secured within said tubes near coupling D are stop-cocks *f f*, which are so arranged as to retain the oil within the reservoir or allow the same to escape therefrom through the tubes, as desired. Loosely affixed upon said tubes *d d* at or near the center of openings F F of the stove and over the curved ends of the tubes are perforated disks G G′. The said disks are made in two parts and connected together upon the upper side by a strap, *g*, passing across the same, and upon the lower surface by an annular projection, H, so arranged as to form an opening, *h*, between the two parts of the disk under and parallel with the tube.

Affixed to the outer ends of strap *g* and around the periphery of the disk is a flange, J, which extends downward below the lower surface of projection H, and is so arranged as to form an annular space, K, between its inner side and the outer side of the disk.

With my invention one or both disks may be used at the same time, as may be desired, in which the operation is as follows: The oil contained in the reservoir is conducted from the same through the respective tubes *d d* to and over the opening *h* of the disk. An amount sufficient to produce a flame is allowed to escape through the end of the tubes, and is ignited, the flame therefrom passing through said opening to and against the tubes above the disk, heating the same, by which means a vapor is generated from the oil, which is discharged against projection H of the disk, and the flame therefrom is thrown from the center outward against flange J and through opening K to the desired point.

It will be observed that the bridge-plate E of the stove is provided with apertures *e e*, cut through its rear side, and through which the respective tubes pass, the object of which is to make it both convenient and practical to attach the apparatus to any of the different forms

of stoves, as the bridge-plate only is necessary to be furnished, in connection with the apparatus, to render the attachment complete.

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

1. One or more perforated disks, G, provided with projection H, flange J, and openings *h* and K, substantially as and for the purpose described.

2. The bridge-plate E of a cooking-stove, provided with apertures *e e*, substantially as and for the purpose described.

3. In combination with the bridge-plate E, the tubes *d d*, disks G G′, and reservoir A, the whole arranged substantially as and for the purpose described.

FREDERICK HAINSWORTH.

Witnesses:
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