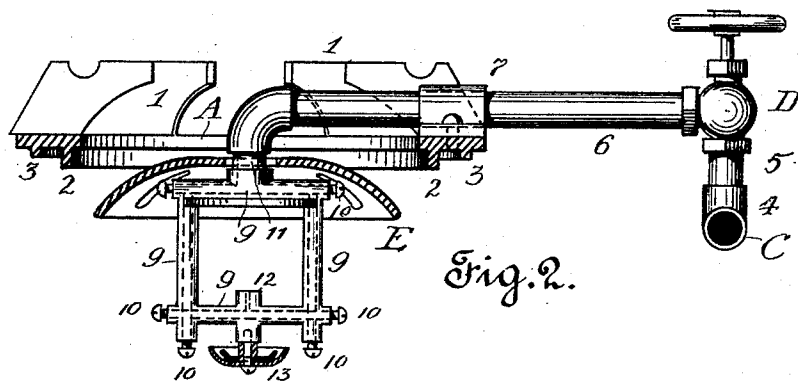
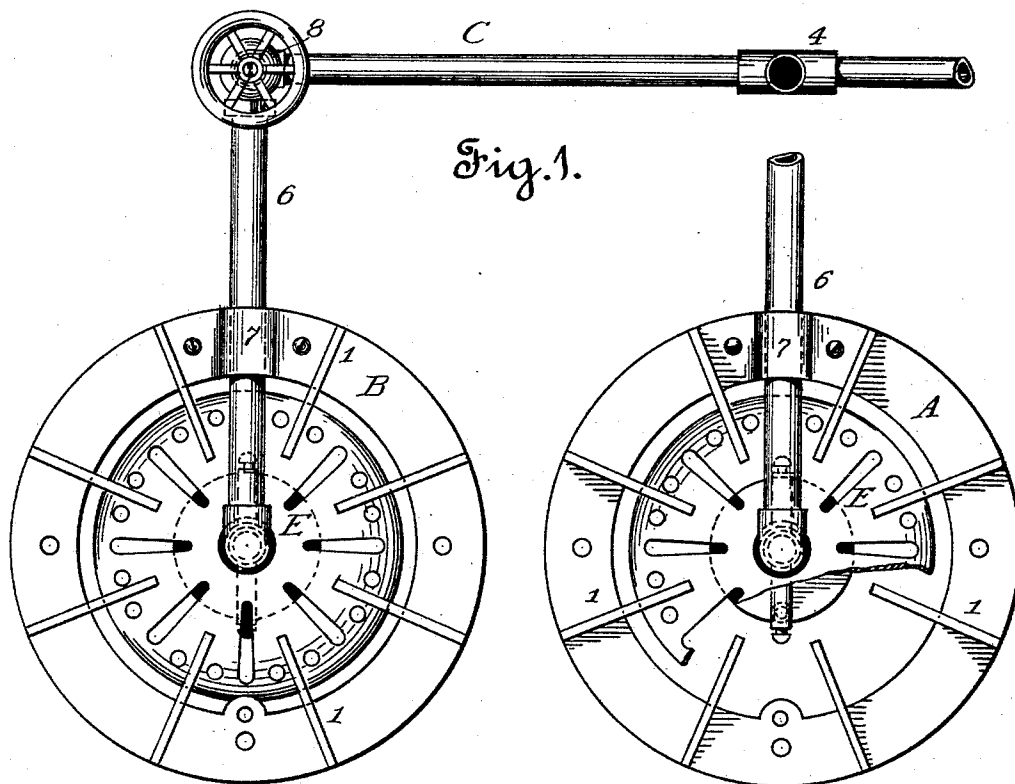


(No Model.)

E. I. NICHOLS.
VAPOR BURNER.

No. 519,819.

Patented May 15, 1894.



Witnesses.

H. H. Monteverde.
A. B. Bowers.

Inventor.
Emory I. Nichols
by *Spears & Seely*
Attorneys.

UNITED STATES PATENT OFFICE.

EMORY I. NICHOLS, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO JOHN BROWER, OF SAME PLACE.

VAPOR-BURNER.

SPECIFICATION forming part of Letters Patent No. 519,819, dated May 15, 1894.

Application filed May 31, 1893. Serial No. 476,027. (No model.)

To all whom it may concern:

Be it known that I, EMORY I. NICHOLS, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Vapor-Burners; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to improvements in vapor burners intended particularly for attachment to ordinary cooking stoves.

The object of the invention is to provide an adjustable means of attachment, so that the vapor burner made and sold separately, can be applied without change in construction either of stove or burner, and to any of the various standard sizes of stove, without greater difficulty than is involved in lifting and replacing an ordinary stove plate or lid. The result is that the burner may be kept on hand as a separate attachment and the stove used in the ordinary way until it is desired to use the burner, when the latter can be instantly substituted for the stove lids and thus attached ready for use.

My invention is illustrated in the accompanying drawings, in which—

Figure 1, is a plan view. Fig. 2, is a side elevation partly in section.

The burner is shown in the drawings as adapted to the two holes of a stove, but by extending the tubes other burners can, if desired, be supplied for other holes.

A, and B, represent annular iron plates, provided on their upper surfaces with raised ribs 1, upon which the culinary vessel rests when the burner is in use. The lower surface of the plates are formed with depending circular ribs or flanges such as shown at 2 and 3, so spaced as to conform to the difference in diameter of standard sizes of stove holes, such as numbers 6, 7, and 8, and thus make the plates universally applicable to any stove.

C, represents the oil supply pipe, supposed to be connected to a reservoir of coal oil or other liquid fuel, (not shown). Secured to this pipe is a T-coupling 4, in which is swiveled a pipe 5.

D, is the valve which is shown merely in elevation, as it forms no part of the invention.

It need only be understood that any kind of valve which will regulate the supply of oil may be employed. From the valve chamber a branch pipe 6, extends to the burner passing through a lug 7, on the burner plate. The construction of the other burner is the same excepting that, being secured to the end of the supply pipe, it is swiveled in an elbow 8, instead of a T-coupling. It will be seen now that as both burners are swiveled to the supply pipe they can be brought nearer together or farther apart according to the size of the stove and the distance between the stove holes, so that the flanged burner plates accurately fit the different sizes of holes. The construction of the burners is shown in Fig. 2. Each burner is composed of a series of tubes 9, disposed in the form of a rectangle and formed by boring straight passages, intersecting one another and having the ends closed by screws 10. This makes a very cheap construction, gives a large surface for vaporizing and at the same time equalizes the supply, where the burner tubes meet and the vapor is ignited. The upper horizontal tube is connected by an elbow to the branch supply pipe at 11, a space being left for a loose plate E, having a plurality of slots or holes to spread the flames uniformly. The orifice where the vapor escapes and is burned is shown at 12. A small cup 13, preferably containing a little asbestos, depends from the lower tube of the burner in which a small quantity of oil is lighted to produce sufficient heat to commence the process of vaporization in the burner tubes.

I thus provide an independent vapor burner attachment adapted to be applied to all standard sizes of stoves, simply by being substituted for the stove lids. By providing separate flanges on the burner plates, I can fit any regular size of stove hole; while by swiveling the oil pipes I can spread the burners apart or bring them nearer together, and thus conform them to the varying distances between the holes of differently sized stoves.

I am aware that vapor burners for cooking stoves are not new; and my invention is an improvement upon a class already existing. The special construction which comprises my invention fits it for any special form of cook-

ing stoves, or at least for any of the standard forms, and it may be applied to any one of these stoves by the purchaser without the aid of tools or a mechanic.

5 I claim—

1. A vapor burning apparatus for cooking stoves, consisting of a reservoir, a main pipe leading therefrom and arranged along the stove, a branch pipe extending from said
10 main pipe over the top of the stove, and turned down into the stove hole at its center, an annular plate adapted to support the vessel to be heated and connected to said branch pipe and a burner nozzle connected to the down-
15 wardly turned end of said branch pipe, and arranged under the said stove hole, the parts being combined and constructed substantially as described.

2. A vapor burning apparatus for cooking

stoves consisting of a reservoir, a main pipe 20 leading from said reservoir, and arranged horizontally along the cooking stove, branch pipes swiveled to said main pipe, and extending over the top of said stove and having downwardly turned ends, supporting burner 25 nozzles at the center of the stove holes, and annular plates connected with said branch pipes, and fitted to the stove holes, all constructed and combined, substantially as described.

30 In testimony whereof I have affixed my signature, in presence of two witnesses, this 18th day of May, 1893.

EMORY I. NICHOLS.

Witnesses:

JOHN COFFEE,
L. W. SEELY.