

(No Model.)

C. F. BURLEIGH.

ABSORBENT CUSHION FOR HYDROCARBON BURNERS.

No. 264,402.

Patented Sept. 12, 1882.

Fig. 1

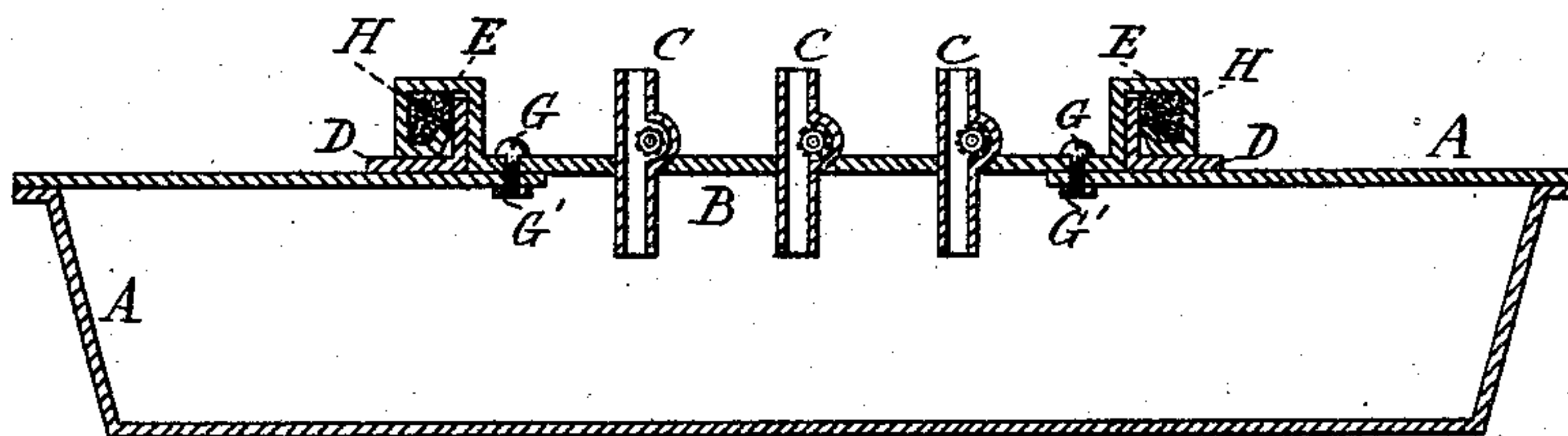


Fig. 2

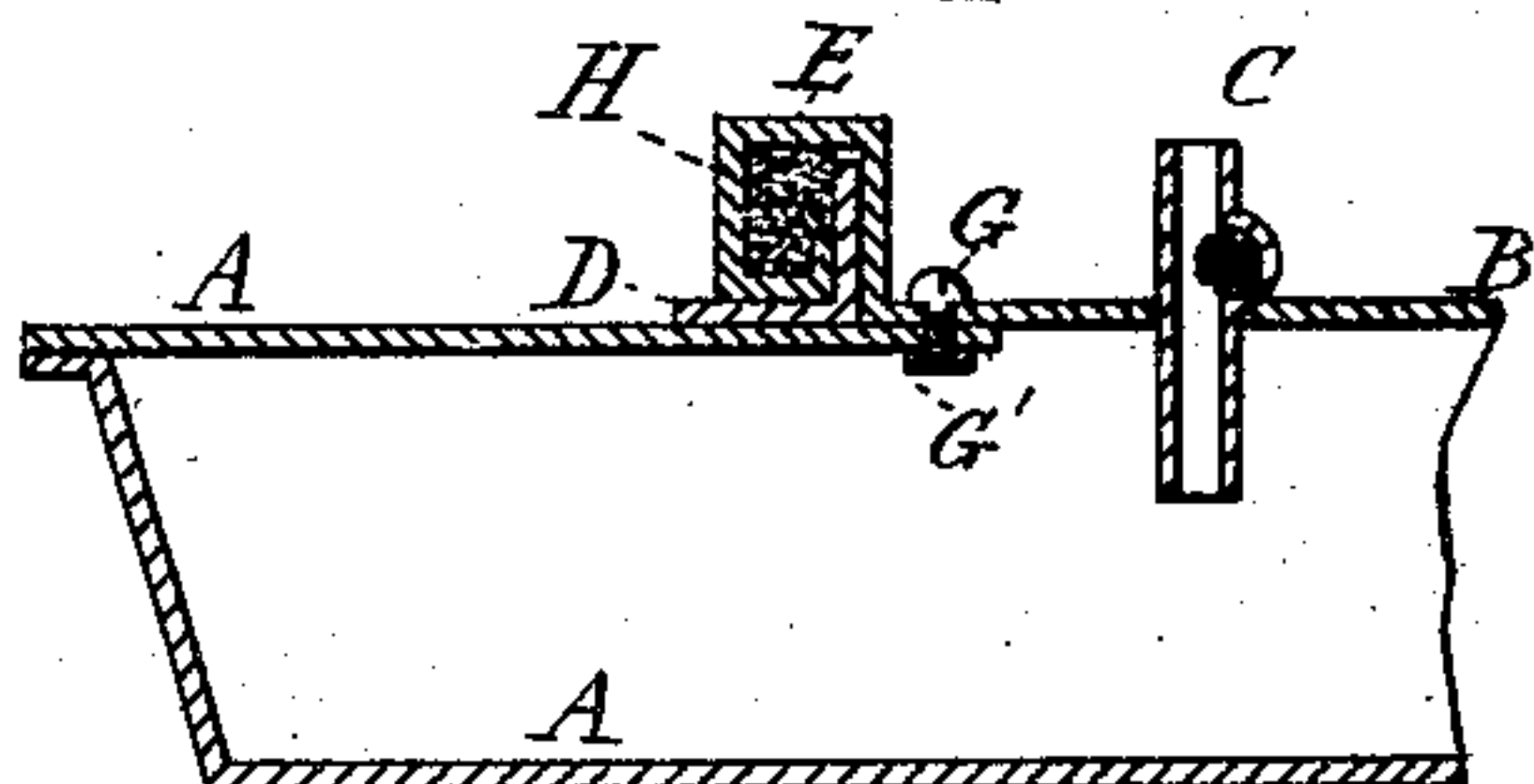


Fig. 3

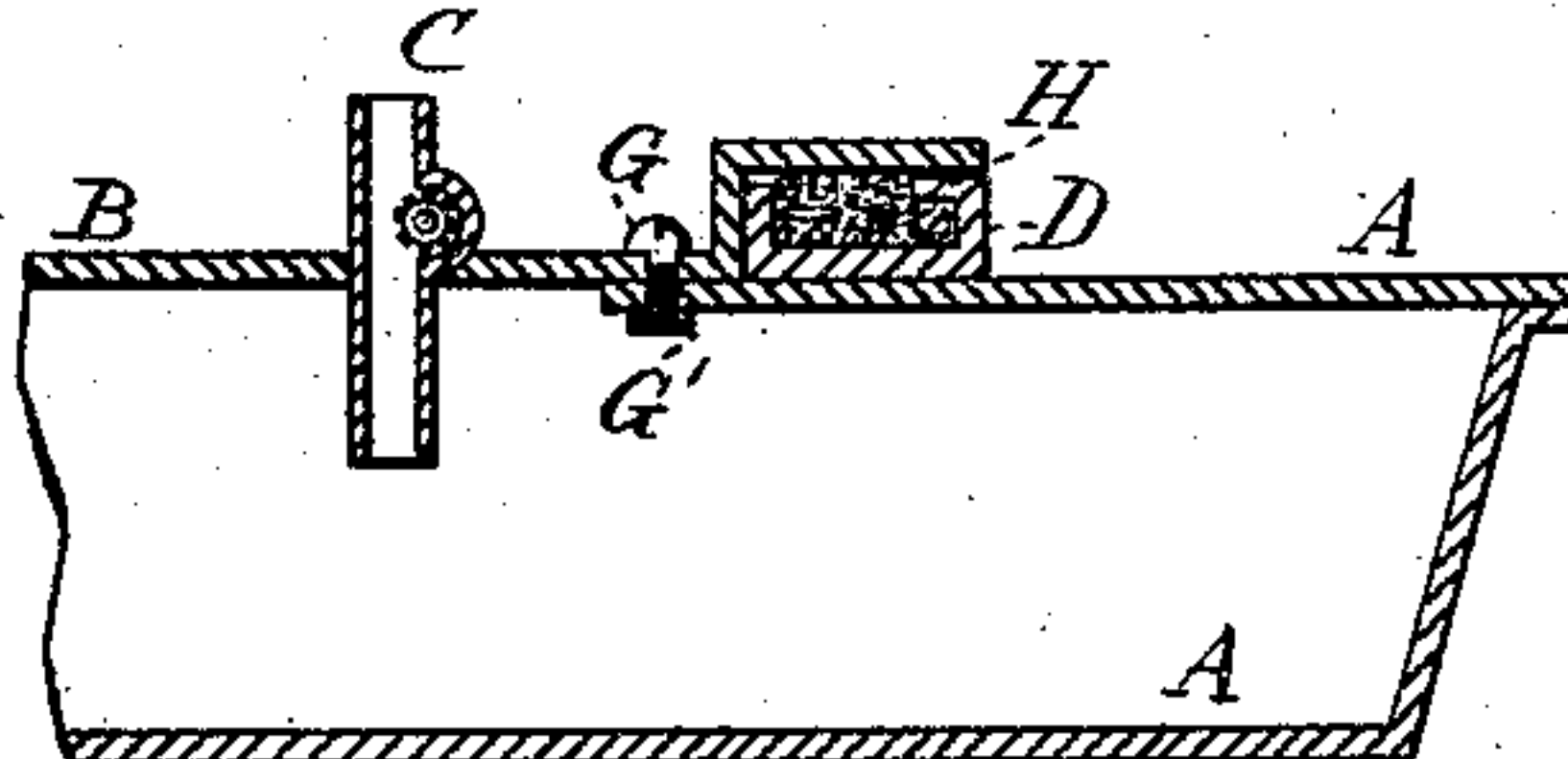
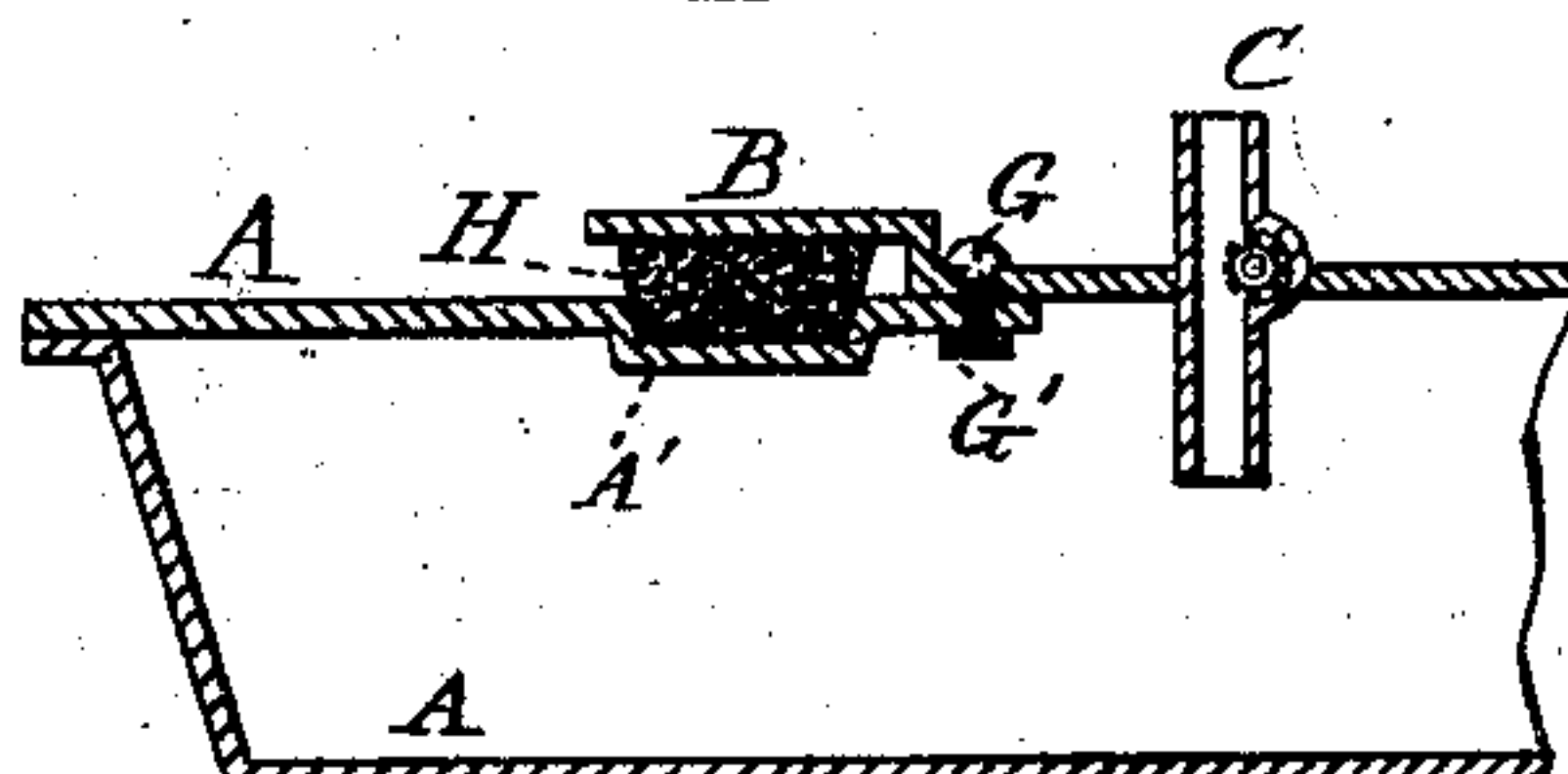


Fig. 4



Witnesses

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# UNITED STATES PATENT OFFICE.

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## ABSORBENT CUSHION FOR HYDROCARBON-BURNERS.

SPECIFICATION forming part of Letters Patent No. 264,402, dated September 12, 1882.

Application filed July 15, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES F. BURLEIGH, of Pawtucket, county of Providence, and State of Rhode Island, have invented certain new and useful Improvements in Absorbent Cushions for Hydrocarbon-Burners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates especially to appliances employed upon stoves wherein hydrocarbon oils are consumed as fuel, and has for its object the production of a device whereby any vapors or gases generated within the oil-pot during combustion at the burners will be taken up by a cushion of absorbent material located between the oil-pot and the burner-plate, thus obviating the danger of escape of gas or vapor.

To accomplish this end my invention consists essentially in placing a cushion formed of cork or an equivalent material between the burner-plate and top of the oil-pot at the point of union therebetween, said cork being placed in such a position as to absorb and retain the gases generated around the burner during combustion of the oil, and preventing the escape of said gases around the burner in such a manner as to cause ignition thereof; and my invention involves certain novel and useful combinations or arrangements of parts and peculiarities of construction and operation, all of which will be hereinafter first fully described, and then pointed out in the claims.

In the drawings, Figure 1 is a vertical section through the burner and oil-pot of a hydrocarbon-burning stove, plainly illustrating my device; and Figs. 2, 3, and 4 are sectional views of a portion of an oil-pot and burner, showing modified forms of arrangement.

Like letters of reference, wherever they occur, indicate corresponding parts in all the figures.

A is the oil-pot, formed of sheet or cast metal in the usual manner, and open at top for the reception of the burner-plate B, supporting the wick-tubes C.

Surrounding the opening in the top of the oil-pot is a collar, D, attached thereto by means of solder, or formed therewith.

In Figs. 1 and 2 plate B is provided with a raised edge, E, bent in such a manner as to pass over collar D and extend down upon the exterior thereof, leaving a space therebetween, the body of plate B extending downward upon the interior of the collar nearly to the top of the oil-pot.

Within the turned edge E, and extending entirely around the burner-plate, is located an absorbent cushion, H, composed of cork or an equivalent substance. This cushion is held in place by turning the lower edge of rim E thereover, as plainly shown in Figs. 1 and 2. In Fig. 1 the cushion is shown as wedge-shaped in cross-section, and in Fig. 2 as oblong.

In the arrangement shown in Fig. 3 cushion H is held in place by bending the outer edge of collar D backward upon the cushion, and in Fig. 4 the cushion is placed in a depression, A', cast, stamped, or otherwise formed around the opening for the burner-plate, and collar D is dispensed with.

G are screws located at the corners of plate B, passing through the top of the oil-pot, and engaging with screw-threaded projections or nuts G', located upon the interior of the oil-pot. By this means the burner may be securely and firmly held in place upon the oil-pot.

When constructed and arranged in accordance with the foregoing description the vapors or gases arising from the heated oil and seeking an exit between the burner-plate and oil-pot will encounter the absorbent cushion, and as the temperature of said cushion will remain below that of the metal of the structure such vapors or gases will be condensed or absorbed and cannot reach the exterior of the oil-pot. By locating said cushion upon the exterior of the collar the effectiveness of the device is greatly increased, and in such a position it will not directly absorb the oil from the interior of the oil-pot, but only the gases, &c., which pass between the top of the oil-pot and the burner-plate.

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

1. In a hydrocarbon-oil burner of the character herein specified, a cushion of cork secured to the burner-plate bearing the wick-tubes,



substantially as and for the uses and purposes shown and described.

2. In a hydrocarbon-oil burner for stoves, a removable burner-plate wherein are located  
5 the wick-tubes, the edges of said plate being bent over and holding in place a cushion of cork, which presses against a collar upon the oil-pot, substantially as shown and described.

3. In a hydrocarbon-oil-burning stove, a  
10 burner-plate wherein are located wick-tubes, the edges of said plate being bent over, as set forth, and holding in place an absorbent cushion, in combination with a collar affixed to or forming a part of the oil-pot, substantially as  
15 shown and described.

4. In a hydrocarbon-oil burner for stoves, a

cushion of absorbent material located and held in place upon the oil-pot, as set forth, in combination with a burner-plate adapted and arranged to be secured in place thereon, substantially as shown and described.

5. Oil-pot A, bearing-collar D, burner-plate B, having bent edges E, and cushion H, the whole combined and arranged to operate substantially as shown and described. 25

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

CHAS. F. BURLEIGH.

Witnesses:

J. B. MEEKER,

J. D. ROGERS.