

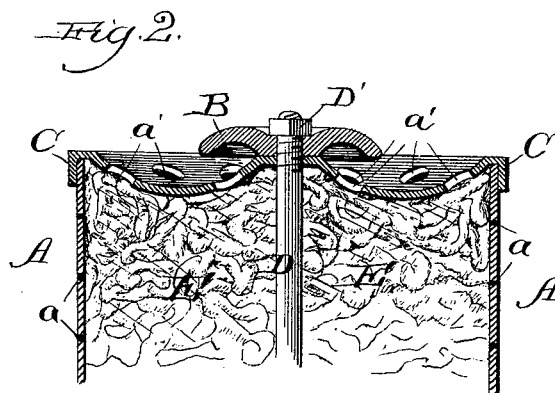
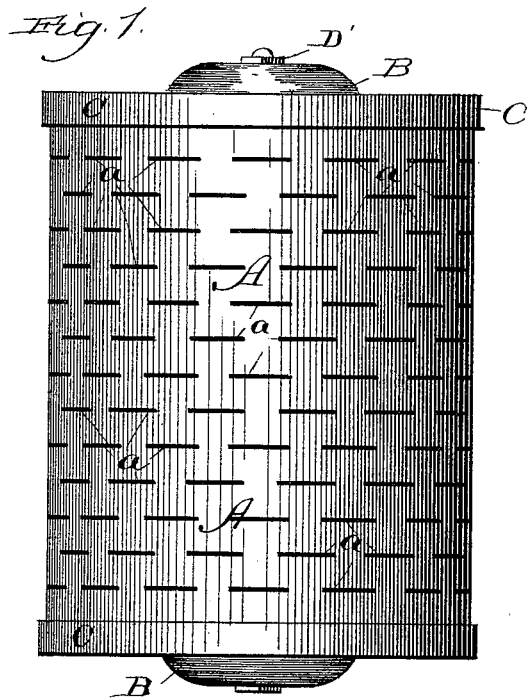
(No Model.)

T. T. PROSSER.

FIRE KINDLER.

No. 386,895.

Patented July 31, 1888.



Witnesses:
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UNITED STATES PATENT OFFICE.

TREAT T. PROSSER, OF LAKESIDE, ILLINOIS.

FIRE-KINDLER.

SPECIFICATION forming part of Letters Patent No. 386,895, dated July 31, 1888.

Application filed August 16, 1887. Serial No. 247,070. (No model.)

To all whom it may concern:

Be it known that I, TREAT T. PROSSER, a citizen of the United States, residing at Lakeside, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Kerosene-Oil Cylinders, of which the following, taken in connection with the drawings accompanying and forming a part hereof, is a full and complete description, sufficient to enable those skilled in the art to understand and make the same.

My invention relates to that class of appliances used for burning kerosene-oil for heating purposes in ordinary stoves or grates; and it consists of a cylinder filled with non-combustible porous or fibrous material—as mineral wool or material of like density and liquid-absorbent power—the said cylinder having cupped heads or ends, with holes therein, and a shell or case of sheet metal with a series of long slits cut therein and arranged longitudinally or perpendicularly upon said cylinder, as preferred.

I am aware that a cylinder or cup or saucer shaped receptacle filled with shredded non-combustible material, as asbestos, and covered at one end with a wire netting or gauze, has been heretofore constructed, and that oil or alcohol has been poured upon said netting, saturating the said shredded asbestos therewith, and that upon the application of a flame to the upper or outer surface of said netting or gauze such oil or alcohol has been burned and heat produced thereby, as in the common "alcohol-stove," so called, for the sick-room, and, further, that a cylinder has been formed of such wire or gauze netting and having said shredded asbestos therein, and that a flame for heating purposes has been heretofore obtained by the burning of the oil or alcohol with which said shredded asbestos is saturated; but in all such cylinders or saucer-shaped receptacles either a high-grade non-smoke-producing liquid, as alcohol, must be used, or the material placed therein, as the shredded asbestos, must be packed comparatively tightly, in order to prevent the too rapid feeding of the oil to the flame upon the outer surface of the wire-netting, or a large and offensive amount of smoke is produced, and the amount of heat obtained from a given quantity of oil thereby largely reduced below that which it is possible to obtain therefrom.

The object of my invention is to obtain a cylinder of the character named in which the oil or other combustible liquid with which the non-combustible porous material contained in the cylinder is saturated may and shall, to a very large extent, if not entirely, become volatilized before being presented to the flame surrounding the cylinder when the liquid contents thereof are being burned, and a much cleaner flame thereby secured than where, as in the netted-wire cylinders or other shaped receptacles heretofore made and hereinbefore named, the oil or alcohol is volatilized by the direct action of the flame thereon.

A further advantage secured by me in my device is that I am enabled to use a much more porous material for the non-combustible packing of my cylinder, and a greater quantity of oil or other combustible liquid may therefore be held in saturation thereby, while the amount of the same burned per minute is not increased, and may even be diminished, being governed by the size and number of the slits in the shell of the cylinder and their peculiar shape; and therefore in a cylinder of a given size I am able to maintain a flame of a given size for a much longer period than has heretofore been done, as well as to secure a brighter and greater heat-producing flame.

An additional object sought by me is to obtain a cylinder of the character named which may be handled from both ends by the ordinary stove-cover lifters, this purpose being attained by the use of the washers placed outside of the heads of the cylinder, in the manner hereinafter described.

Figure 1 is a front elevation of my invention. Fig. 2 is a cross-section of the same.

Like letters refer to like parts throughout the several views.

A is the shell or case of the cylinder, and is preferably constructed of sheet metal, having the slits *a a a* punched or cut therein. The slits *a a a* are arranged either longitudinally or laterally around said shell or case A.

a' a' a' are holes in the cupped heads C C of the cylinder.

B B are washers placed on the outer side of the cupped heads C C of the cylinder.

D is a rod extending through the washers B B, cupped heads C C, and shell or case A, forming the cylinder. Rod D has a head at one end

thereof and a nut, D', at the other end thereof, and serves as a tie-rod, firmly holding the several parts of the cylinder together.

5 E is the packing used by me, and consists of mineral wool placed loosely packed in said cylinder.

In order to put my device together I put one head of the cylinder, having a washer on the outer side thereof, upon the said cylinder, and, 10 after passing the rod D through said washer and head and through the shell or case of the cylinder, I pack a sufficient quantity of mineral wool or other like material therein, after which I put the other head of the cylinder, with 15 its accompanying washer, in position and secure it firmly in place by nut D'. The device is now ready for use. One end of a common stove-lifter, a case-knife, or other like implement may be placed under the washer B, and 20 the outer edge or rim of the cupped head C acting as a fulcrum, the cylinder may be lifted by said stove-cover lifter in the same manner as in an ordinary stove-cover. Kerosene-oil is poured upon the cupped head C or in the 25 cup formed thereby, and, passing through holes *a a a* therein, the non-combustible material E is saturated therewith; or, if preferred, the cylinder is placed in a pail or bucket containing kerosene-oil and allowed to there remain a sufficient length of time to become saturated with said oil. The cylinder is then 30 placed in the fire-pot of an ordinary stove, or in

a grate or open fire place, and a flame applied thereto until a portion of the oil contained therein is vaporized and ignited, when such ignition 35 will continue until all the oil contained in said cylinder is consumed. The comparatively large amount of heating-surface formed by the sheet-metal shell of the cylinder surrounding the slits therein causes the oil in immediate contact with the heated under surface of such shell 40 or case to become volatilized before it emerges from said cylinder through the slits therein, and I therefore obtain, as already stated, a flame of great heating power and one producing but little smoke. 45

Having thus described my invention and its construction and operation, what I claim is—

The combination, in an oil-burning cylinder, of shell or case A, slits *a a*, arranged in series 50 on said shell A, cup-shaped heads C, perforations *a' a'* in said heads, washer B of less diameter than head C and extending from the center thereof over the cup-shaped portion a sufficient distance to be adapted to the placing 55 of a stove-lifter cover or other like article thereunder for the lifting of said cylinder, and porous non-combustible material placed in said shell or case, substantially as described.

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Witnesses:

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