H. RUPPEL.

WICK.

APPLICATION FILED OCT. 9, 1913.

1,089,966. Patented Mar. 10, 1914.

Fig. 1.

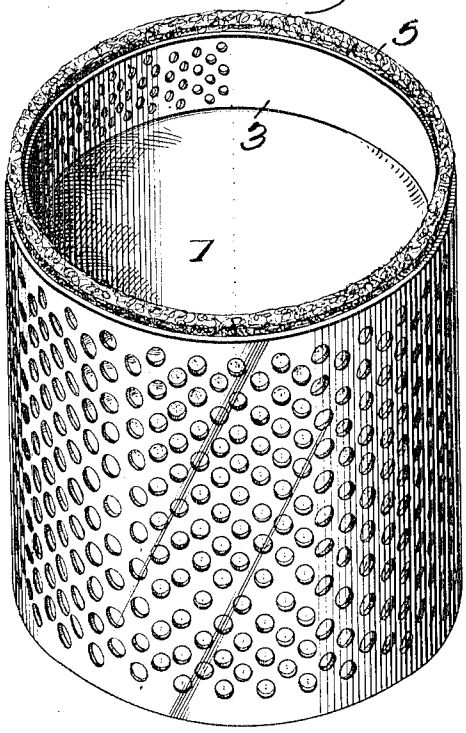


Fig. 2.

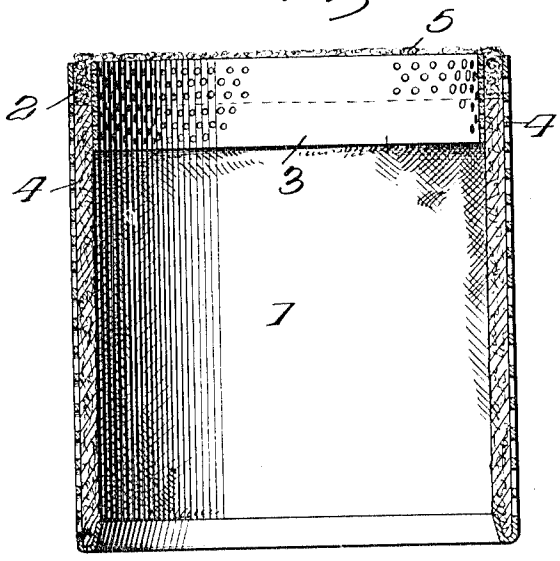
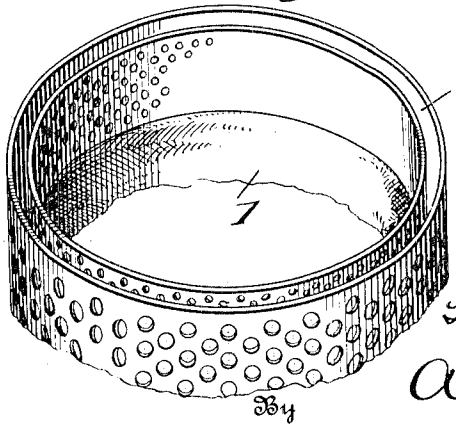


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY RUPPEL, OF CLEVELAND, OHIO, ASSIGNOR TO AMERICAN STOVE COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

WICK.

1,089,966. Specification of Letters Patent. Patented Mar. 10, 1914.

Application filed October 9, 1913. Serial No. 794,261.

To all whom it may concern:

Be it known that I, HENRY RUPPEL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Wicks, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in wicks, and particularly to annular wicks for use in heating and cooking burners, which are subjected to high degrees of heat for considerable lengths of time.

It is a recognized fact among those skilled in this art that the cotton wicks which are universally used in the burners of oil stoves are quite rapidly charred and carbonized, which carbonization and charred portion must be removed from time to time in order to get satisfactory results, and that by reason of this frequent removal of the carbonized and charred portions the wick has only a comparatively short life and the old wick must be removed and a new one substituted therefor. It is also recognized that this operation of renewing the old oily wick and the placing in the burner a new wick is a dirty disagreeable task and oftentimes one difficult to properly accomplish.

The object of my present invention is to provide a cotton wick with a renewable burning edge or top which can be readily removed and a new top or burning edge substituted therefor, the renewable portion being composed of non-combustible material, preferably mineral or asbestos wool, though other non-combustible materials, such as mica, may be utilized.

In carrying out my present invention, I provide the annular top or upper end of a cotton wick with a metallic annular cup having its upper end open, whereby mineral wool or wool-asbestos may be readily placed therein by the manufacturer, and readily removed and replaced by the housewife or servant when the said burning edge needs renewing.

In the accompanying drawing—Figure 1 is a perspective view of the preferred form of my present improvement. Fig. 2 is a vertical central sectional view of Fig. 1. Fig. 3 is a perspective view of the upper end of my improved wick with the mineral wool omitted from the open top cup carried by the cotton wick.

I am aware that efforts have been made to provide what is commonly referred to as a non-combustible top or burning portion of a wick and that various kinds of non-combustible material, including asbestos, has been used, but so far as I am aware, none of these constructions have gone into any appreciable practical use. This may be due to the fact that such non-combustible material becomes saturated with carbon and becomes hot and thereafter ceases to be a good conductor of oil, and hence is unsatisfactory in providing the proper capillary action necessary to get the required quantity of oil at the top or burning portion of the wick to provide the proper amount of oil vapor for said operation of the burner.

So far is I am aware, it is new to provide a cotton wick with a readily renewable non-combustible top or burning portion, whereby the non-combustible material may be readily and quickly applied not only by the manufacturer, but readily and quickly removed and renewed by the housewife or servant.

In carrying out my present invention, I provide the top of an annular cotton wick 1, with an annular open top-cup portion 2, which projects a short distance above the top of the cotton wick. As here shown, this cup portion is formed by means of an inner perforated metallic wall 3, which is suitably secured to the inner side of the top of the wick and projects therebeyond a short distance, and the outer annular perforated metallic ring 4, which projects a corresponding distance above the top of the cotton wick, the two metallic walls 3 and 4 forming the open top cup portion 2. Placed within the open top cup is a suitable quantity of, preferably, mineral wool 5, which is in engagement with the top of the cotton wick. A sufficient amount of this mineral wool 5 is placed in the cup to extend a short distance above its top, as shown to provide an exposed lighting and vaporizing surface. The mineral wool is in sufficient quantity to form a substantial contact with the cotton wick, but is preferably not packed very tight and by reason of this relatively loose packing of the mineral wool, it is a good capillary conductor of the oil and by contact with the

cotton wick, the oil is quickly carried throughout the mineral wool and to the top thereof for lighting purposes. This character of filling by reason of its fibrous nature is also readily lighted, because the heat of a match will quickly raise the temperature of the oil in the exposed fibers at the top to quickly vaporize the oil therein and the vapor is immediately lighted. For this reason, it is preferred to use mineral wool rather than the sheet or card asbestos, because the latter has its fibers closely packed and to that extent capillary action is retarded and the sheet asbestos will become more quickly hardened by the accumulation of carbon and more quickly lose its capillary qualities. Also preferably in a wick of this character, the outer perforated wall 4, which has its projecting top forming the outer wall of the cup 2, extends down the whole length of the wick and is turned around the lower edge, as shown at 6, so that the perforated wall 4 also performs the function of a raiser for the wick with which the usual cog wheel (not shown) engages in a manner well understood by those skilled in this art and need not be illustrated for the purpose of understanding this invention.

The cup portion of the wick will extend down upon the burner (not shown) far enough to prevent the charring of the cotton wick or, in other words, the cup is of sufficient depth so that the quantity of mineral wool therein will provide all of the vapor necessary for the burner and will receive all of the high degree of heat, thus leaving the cotton portion of the wick practically in its original condition for the quick transmission of the oil therethrough by capillary action to the mineral wool.

With a wick of the improved construction, the cup is readily and quickly filled with mineral wool by the manufacturer when it is sold either with or without the burner, and the mineral wool is quickly and readily removable by the housewife or servant when it should become so carbonized as to retard its proper action, and new asbestos wool readily put in its place. By means of this construction, the housewife or servant can very frequently and readily renew the top or burning portion of the wick and thus keep the wick practically new and the burning portion of the wick clean and in the best possible condition for satisfactory and odorless operation. No special tool is required to remove the mineral wool and to put new mineral wool in its place. The tines of a fork which are always readily at hand can be used to remove the mineral wool and to refill the cup with clean mineral wool, and this mineral wool is cheap and readily obtained.

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

1. An improved wick, comprising an annular cotton wick having at its upper end inner and outer annular metal walls extending upward beyond the end of the wick with their inner surfaces in vertical lines with the outer and inner surface of the wick to form a projecting open top annular channel of a width corresponding to the thickness of the wick, and a removable and renewable asbestos filling within the channel for the purpose described.

2. An improved wick comprising an annular cotton wick having on its lower portion a metallic wick raising member and at its top and outside annular metal wall in the same vertical plane as the said raising member, the wall projecting beyond the top of the wick, an inner annular wall secured to the top of the wick and projecting thereabove with its upper end in a horizontal plane with the outer annular wall, the inner and outer annular walls being perforated, and a removable and renewable non-combustible fibrous material within the space between the projecting ends of said inner and outer annular walls, substantially as and for the purpose described.

3. An improved wick comprising an annular lower cotton portion having an outer perforated wall throughout its length and projecting beyond its top, and an inner perforated wall secured to the top edge of the wick and extending only a short distance on the wick, the said inner wall projecting above the top of the wick a distance substantially corresponding to the projecting portion of the outer wall, the two walls forming an open top cup, a non-combustible material removably placed in the cup in contact with the top of the cotton wick and projecting beyond the walls, substantially for lighting purposes.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

HENRY RUPPEL.

Witnesses:
G. J. GIFFORD,
J. E. GILBERT.