Nov. 28, 1933. J. R. DENNIS 1 936,663

WICK

Filed March 22, 1933

Fig. 1.

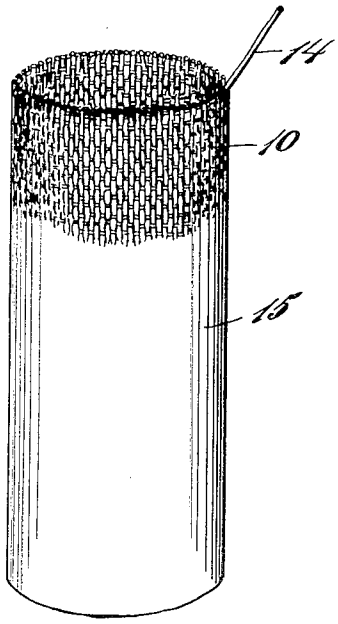


Fig. 2.

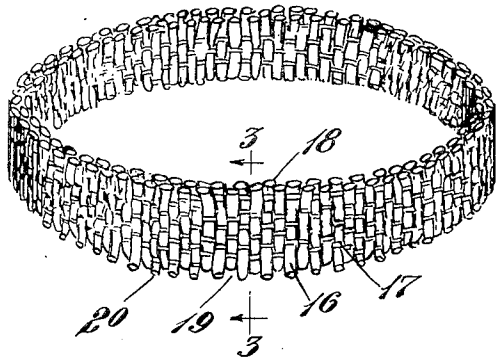


Fig. 3.

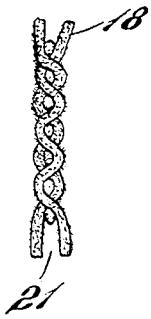
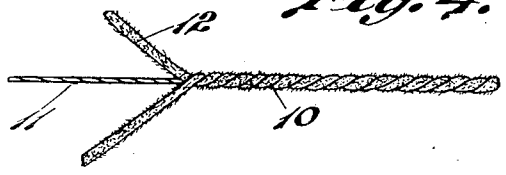


Fig. 4.



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UNITED STATES PATENT OFFICE

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WICK

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Application March 22, 1933. Serial No. 662,017

6 Claims. (Cl. 67—69)

This invention relates to a wick of a type used for range oil burners and the like and has for one of its objects the provision of a seamless circular wick formed of wire core strands.

Another object of the invention is the provision of a construction which may be made in extended tubular lengths and cut off to the width desired and formed for use in any particular burner.

Another object of the invention is the provision of a construction which, by reason of its stiffened strands, may be used to provide gas circulating spaces beneath the wick for the better feed of the range oil type of burner forming a gas prior to combustion.

Another object of the invention is the provision of a construction which may have its upper edge spread to increase the flame area and will be maintained with this enlarged area by reason of a stiffening core in the strands which go to form this wick.

A further object of the invention is the provision of a wick, which, by reason of the wire core strands, may be bent into a desired shape and will maintain that shape without readily collapsing upon itself.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawing:

Fig. 1 is a perspective view of a length of tubular wick formed in accordance with this invention.

Fig. 2 is a perspective view showing a section cut off with its warpwise ends exposed and extending beyond the body of the wick for certain advantageous results.

Fig. 3 is a sectional view on line 3—3 of Fig. 2.

Fig. 4 is an enlarged view of one of the strands which go to make up the tubular wick of this invention.

It is found desirable in the formation of wicks to provide a wick, the strands of which will have a stiffened core, such for instance as wire covered with asbestos, which when woven into a wick gives the wick some stiffness that it may assume a desired shape and stand by itself in a wick groove of a burner base or the like, and in order that this may be provided in a construction which will not require a lapping of the wick or some fastening for holding a length of wick in band form I have woven these stiffened core strands into a tubular form which may be provided in lengths of any extent and then formed, the individual wicks desired by cutting this tubular formation into the lengths desired, and I find upon constructing a wick in this manner that the strands having a stiffening core serve the advantageous purpose of protruding beyond the body of the wick to a sufficient extent to provide spaces below the wick and along the bottom thereof so that when the wick is supported in a groove of a burner base, the gases formed may freely circulate beneath the wick and acquire an even distribution about the combustion space of the burner to afford uniform burning, and I have also found that when the tube is cut off to form a wick of this character, by reason of the stiffened core strands, the warpwise strands will extend outwardly from the body rather than fall down as in cases where the same are not stiffened, and thus provide a means whereby by spreading these stiffened strands slightly, I may widely increase the surface at the upper edge of the wick where burning takes place, and by reason of the stiffening in the strands they will maintain this position until manually changed by bending the strands back again, and the following is a detailed description of the present embodiment of this invention illustrating the preferred means by which these advantageous results may be accomplished.

With reference to the drawing, 10 designates one of the strands which consists of a covering and wire core 11 which core is conveniently formed by a plurality of twisted wires which are of sufficiently soft material to permit the strand to be bent or manipulated for the fabrication of the wick, but these have sufficient stiffness to maintain these strands in different positions to which they are bent and have sufficient stiffness when combined with a plurality of other strands to support the wick in spaced position from any surface upon which the wick may rest. The strands of this character have, as their outer coating, some suitable fibrous material which, in this particular case is a combination of asbestos or other non-combustible material and cotton designated 12, or some other fibrous material supplying the capillary attraction for the oil, although any suitable material may be used. This coating is wrapped about the wires so as to adhere thereto and enable the strand to be manipulated in the fabrication of the wick. The combination of fibers forms a coating and the wires are not visible from the outer surface of the strand 10.

These strands 10 are placed in generally parallel relationship in the manner of warp threads and a woof or filling thread 14 is woven with these

warp threads over one and under another and continues helically about the structure forming a uniform one-and-one weave and providing a structure designated generally 15 of a tubular formation. This strand 14 may be one piece throughout an extended length of the tube intermeshing with the warps 10.

A structure thus formed may be cut off to the desired width for the formation of a wick which is to be positioned in the wick groove in the base of a range oil burner or for any other desired purpose. When cutting off the wick in this manner, I obtain a series of generally parallel threads which, as cut in short length, I will designate 16 with which the weft thread, now designated 17, is intermeshed. This weft thread may be removed from its upper and lower path of travel about the wick providing portions 18 of the ends of the warp 16 protruding beyond the body of the wick which portions serve to increase the burning edge of the wick, and if desired these may be bent inwardly and outwardly to provide a wick of extended area for a larger flame when such is desired. By similarly treating the lower edge of the wick, spaces such as 19 are provided along the lower edge of the wick while the ends 20 of the warps engage and support the wick. These spaces are increased by the staggered relation of the strands as at 21 and enable the gas formed in the burner to freely travel and acquire a desired distribution about the burner when in use.

A wick having these stiffened cores is thus formed seamless, which is exceedingly desirable in that the joint does not have to be abutted and clamped or lapped and clamped, and a structure is formed which, by reason of its inherent stiffness in addition to serving the desired functions above mentioned, also will maintain itself in substantially the position to which it is bent which is desirable in ease in positioning it in a burner for operation.

The foregoing description is directed solely towards the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

I claim:

1. A wick comprising a seamless circular band formed of right angularly extending woven strands each having a wire core, some of the strands extending parallel to the central axis of said band in tubular form and extending beyond the strands at right angles thereto at one edge whereby air spaces and greater area is provided along said edge.

2. A wick comprising a plurality of short length strands, each having a wire core and arranged in parallel relation to provide an enclosed area, and a single strand woven in and out with said short strands for a plurality of turns about said body.

3. A wick comprising a plurality of short lengths of strands arranged in parallel relation to provide a closed body and a single strand woven in and out with said short strands for a plurality of turns about said body, said single strand having a wire core.

4. A wick comprising a plurality of short length strands, each having a wire core and arranged in parallel relation to provide a closed body and a single strand woven in and out with said short strands for a plurality of turns about said body, and said single strand having a wire core.

5. A wick comprising a plurality of short lengths of strands arranged in parallel relation to provide a closed body and a single strand woven in and out with said short strands for a plurality of turns about said body, said strands of short length extending beyond the woven strands and being sufficiently stiff to maintain their extended position.

6. A wick comprising a plurality of short lengths of strands arranged in parallel relation to provide a closed body and a single strand woven in and out with said short strands for a plurality of turns about said body each of the strands of short length extending beyond the lower edge of woven strands and being sufficiently stiff to support the body of the wick above the bottom of the groove or the like and permit circulation of gases therebelow.

JOHN R. DENNIS.