Feb. 7, 1939. F. A. JEFFERSON 2,145,878

WICK

Filed Oct. 14, 1936

Fig. 1.

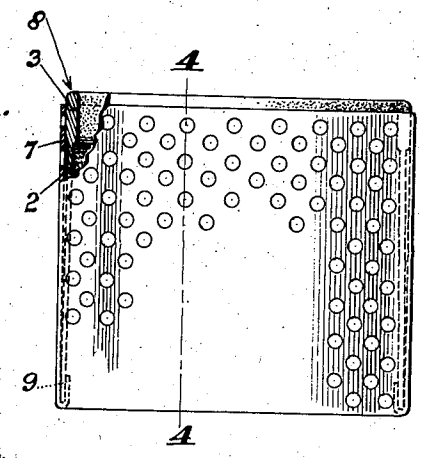
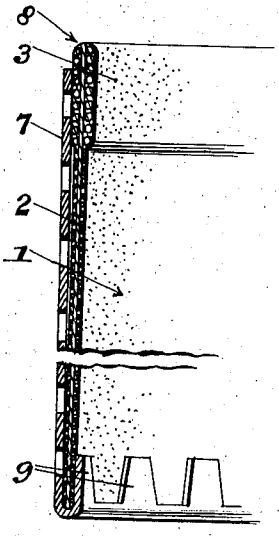


Fig. 4.



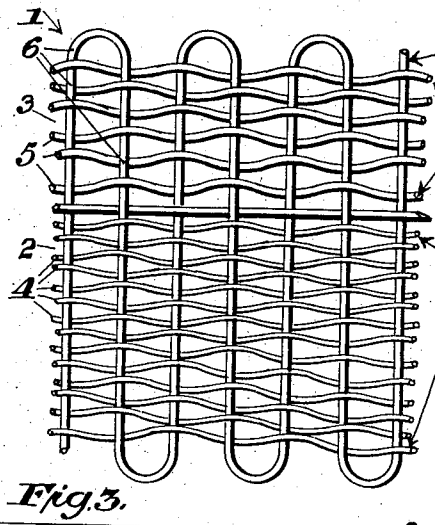


Fig. 2.

Fig. 5.

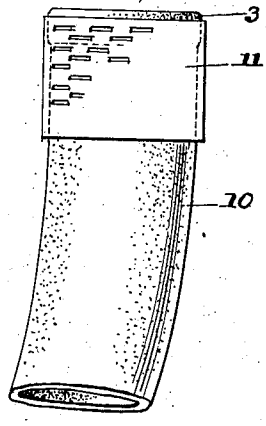
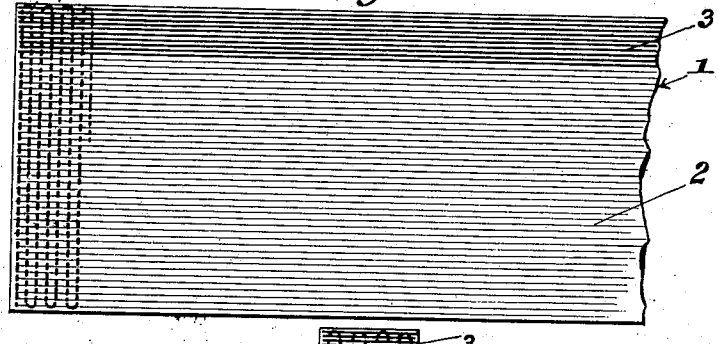


Fig. 3.



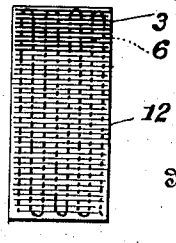


Fig. 6.

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2,145,878

WICK

Frank A. Jefferson, St. Petersburg, Fla.

Application October 14, 1936, Serial No. 105,607

4 Claims. (Cl. 67—70)

This invention relates to improvements in wicks, and its objects are as follow:

First, to provide a wick which has a body of highly absorptive material, to readily lift the oil by capillary attraction, and a margin which is also composed of absorptive material but which will not be charred by the flame burning at the edge thereof.

Second, to provide a wick of the foregoing character in which the main body is mainly composed of cotton and the margin is solely composed of asbestos, the margin and body being tied together by a binding thread which is also of asbestos.

Third, to combine a wick with the latter characteristics, with a tube that will adapt it to oil stoves, heaters, and the like, the foregoing asbestos margin being made thicker than the cotton body so that the margin has a sufficiently tight frictional fit in the tube to prevent its slipping down or crawling up in the tube, further to prevent the flame from getting below the asbestos margin and burning the cotton away.

Other objects and advantages will appear in the following specification, reference being had to the accompanying drawing, in which:

Figure 1 is a partially elevational and sectional view illustrating the improved wick combined with a tube for use in a stove,

Figure 2 is a diagrammatic view illustrating the details as to how the fabric body of the wick is made,

Figure 3 is a detail side elevation of a portion of the fabric, particularly illustrating the comparative sizes of the body and margin and illustrating some of the binding thread,

Figure 4 is an enlarged section taken substantially on the line 4—4 of Figure 1,

Figure 5 is a detail side elevation illustrating the adaptation of the wick as a heater wick, and

Figure 6 is a detail elevation showing how a section of the fabric in Fig. 3 is cut off to make a lamp wick.

In carrying out the invention provision is made of a fabric body 1 (Fig. 3) which, as will be seen by the distinction in the shading, consists of a main body 2 and a margin 3. The main body 2 mainly consists of cotton thread or some other highly absorptive material. The margin 3 consists solely of asbestos thread or some other non-inflammable but also absorptive material.

Attention is directed to Fig. 2 which discloses the details of the fabric. The previously mentioned body 2 comprises the cotton warp threads 4. The margin 3 comprises the absorptive warp threads 5. These two classes of threads run longitudinally of the fabric and they are held together by a binding thread 6 which is composed of asbestos and constitutes the filling as is presently made plain.

The asbestos threads 5 are a fraction thicker than the cotton threads 4. The result is that the margin 3 (Figs. 1 and 4) is slightly thicker than the main body 2. To illustrate one example of the differences in thickness, the body 2 will be made .95'' thick and the margin or rim 3 .97'' thick. The purpose and advantage of this slight extra thickness or the margin is three-fold:

Reference is made to Fig. 4 wherein the wick is shown combined with a tube 7 for the purposes of an oil stove. By virtue of the margin 3 having the slightly excess thickness the wick is first prevented from crawling up in the tube, second, prevented from sagging in the tube, and, third, makes such a good joint that the flame of the burning oil at the edge 8 will not get below the asbestos margin and burn the cotton wicking.

In order to arrive at the arrangement in Figs. 1 and 4 it is necessary to cut off a suitably long portion of the fabric 1 and fasten the ends together so as to make the tube, using staples (not shown) or some suitable equivalent. The tubular wick is then fitted in the tube 7 (Fig. 4) where it is held at the bottom by tabs 9. The marginal top is supported in the tube in the manner already described.

When it is desired to provide a heater wick, as in Fig. 5, it is necessary to have a portion 10 of the wicking extend below the tube 11. Here the wicking is held solely by the frictional contact by the oversize margin 3 and and the adjacent wall of the tube 11. In each of Figs. 1, 4 and 5 the tubes have perforations. In Fig. 1 they are in the form of round holes, while in Fig. 5 they are in the form of slots. In each case the customary toothed wheel by which the wick is adjusted up and down will engage in the perforations for the purpose stated.

But in Fig. 6 the corresponding toothed wheel (not shown) grips the fabric directly as is commonly done in adjusting a lamp wick.

In Fig. 6 the lamp wick is designated 12. This is a perfectly flat piece, and comprises a section cut off from one end of the fabric 1 (Fig. 3). At this point it is desired to explain more in detail how the fabric 1 is made.

There is no ordinary limit to the length in which the fabric 1 (Fig. 3) can be manufactured. It is made on any simple loom. The threads 4 and 5 (Fig. 2) are the warp threads as, in fact,

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they are designated on the drawing and referred to in this description. These warp threads are raised and lowered by the harnesses of the loom in the customary manner of weaving, and as the harnesses are alternated, the shuttle inserts the asbestos filling 6 which becomes the binding thread.

The proportions of the cotton and asbestos are approximately 60% cotton and 40% asbestos. The actual proportions, obviously, can be varied a little, but they are substantially correct as stated, with the clear intent that the predominating amount of cotton shall serve the ready absorption of the oil while the less amount of asbestos will also aid in absorbing the oil, but will insure the prevention of any charring or burning of the cotton.

I claim:

1. A wick composed of a body stratum of inflammable and absorptive threads, a flame-edge comprising a marginal stratum of non-inflammable and absorptive threads, said strata being in edge to edge contact, and a binding thread of non-inflammable and absorptive material interwoven with the threads of both strata from the flame-edge to the opposite edge.

2. A wick composed of a body stratum of inflammable and absorptive threads, a flame-edge comprising a marginal stratum thicker than said body stratum of non-inflammable and absorptive threads, said strata being in edge to edge contact, and a binding thread of non-inflammable and absorptive material interwoven with the threads of both strata from the flame edge to the opposite edge.

3. A textile fabric wick, said wick consisting of a body of cotton warp threads, a margin for a flame-edge consisting of asbestos warp threads in edge contact with one edge of said cotton body, and a filling of asbestos thread interwoven with the threads of both the cotton body and the asbestos margin, said filling thread extending from the flame-edge of said margin to the opposite edge of said body.

4. A wick composed of a body of cotton warp threads, a margin of asbestos warp threads which are larger than said cotton warp threads, thereby making said margin thicker than said body, an asbestos filling thread interwoven with the body and margin threads, extending from the far edge of the margin to the far edge of the body and securing the near edges of said body and margin in tight contact, and a tube in which the wick is contained, with a portion of which tube the outer surface of the asbestos margin makes frictional contact, said body being suspended midway of the thickness of the asbestos margin so that there is a space between the body and the tube.

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