

Dec. 31, 1940.

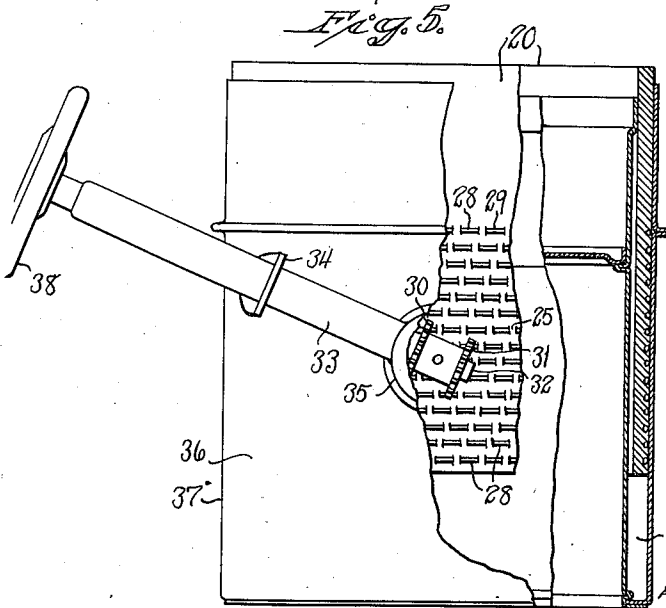
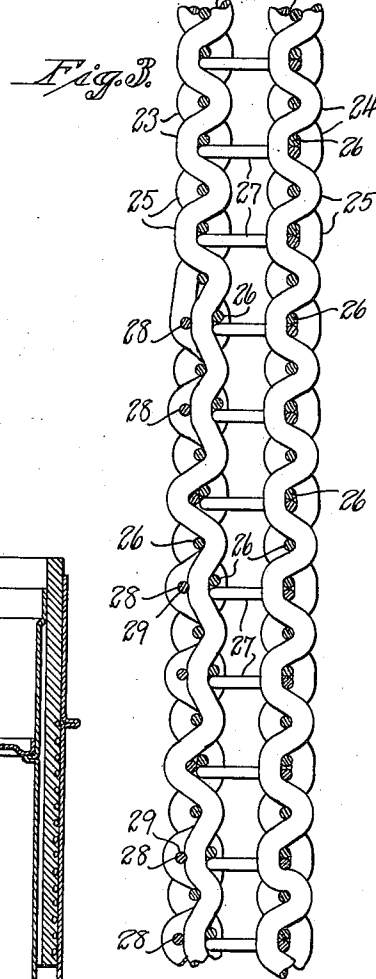
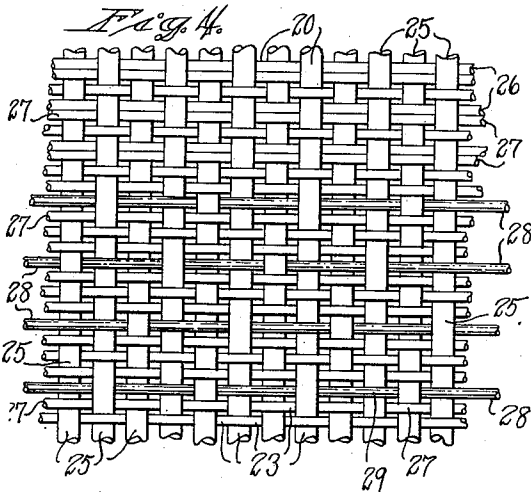
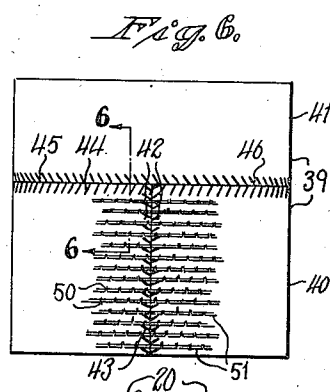
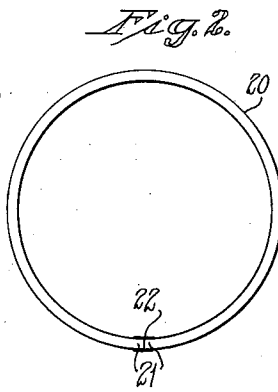
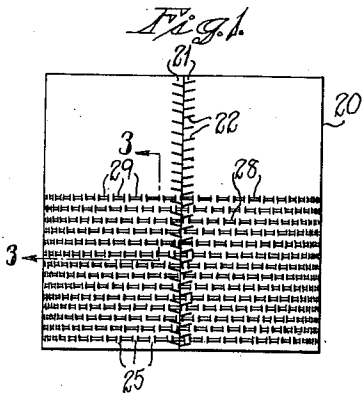
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2,226,792

WICK

Filed Aug. 31, 1938

2 Sheets-Sheet 1



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Dec. 31, 1940.

G. WALTERS

2,226,792

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2 Sheets-Sheet 2

Fig. 8.

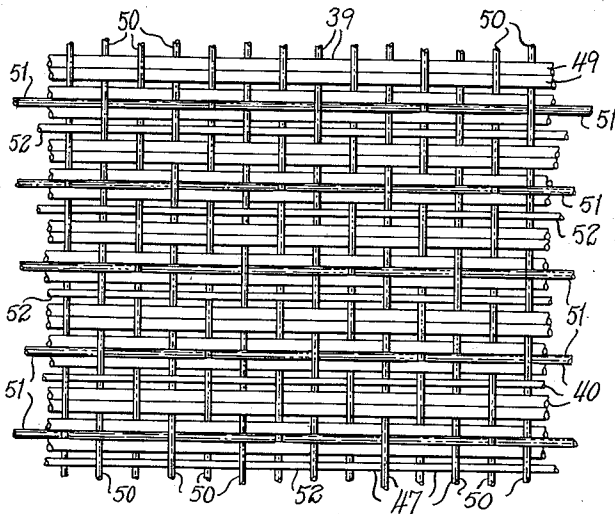


Fig. 7.

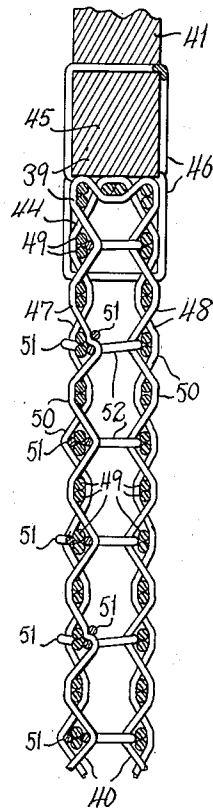


Fig. 9.

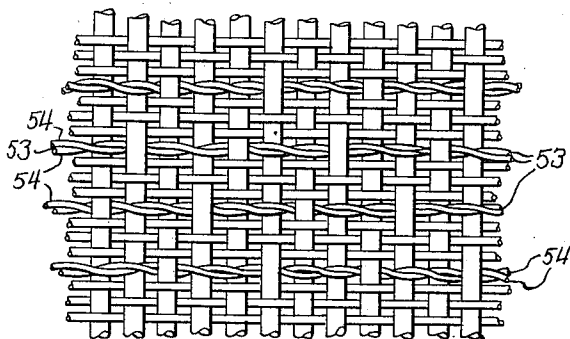


Fig. 10.

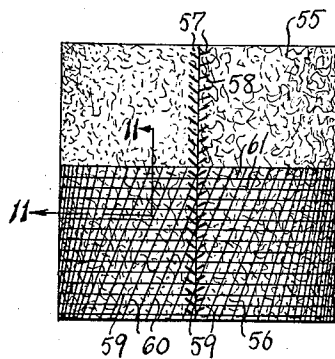
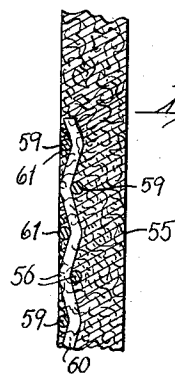


Fig. 11.



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UNITED STATES PATENT OFFICE

2,226,792

WICK

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Application August 31, 1938, Serial No. 227,706

4 Claims. (Cl. 67—69)

This invention relates to improvements in wicks, and more particularly to wicks of tubular form adapted to be raised and lowered by gear-mechanism.

Heretofore, it has been usual to mount wicks of tubular form in perforated-metal tubular carriers, the perforations of which carriers intermesh with the usual gear-mechanism employed for raising and lowering the wick for adjusting the same. This carrier is comparatively expensive to make and requires additional expense for the assembly or mounting of the wick in the carrier for commercial sale or use.

One object of this invention is to provide a tubular wick with lower-cost means in place of the present type of tubular metal carrier, for engagement with the raising-and-lowering gear-mechanism.

Another object of this invention is to provide a tubular wick with low-cost means woven along with the wick when the latter is made, in order to take the place of the more expensive tubular metal carrier, for cooperative action with the raising-and-lowering gear-mechanism usually employed with the present type of carrier.

Another object of this invention is to provide an improved wick formed of simple elements readily manufactured and readily assembled to produce a durable, efficient construction at minimum cost.

With the above and other objects in view, as will appear to those skilled in the art from the present disclosure, this invention includes all features in the said disclosure which are novel over the prior art.

In the accompanying drawings, in which certain ways of carrying out the invention are shown for illustrative purposes:

Fig. 1 is a front elevation of a tubular wick illustrating one embodiment of the invention;

Fig. 2 is a top plan view of the wick shown in Fig. 1;

Fig. 3 is a diagrammatic vertical sectional fragmental view on line 3—3 of Fig. 1;

Fig. 4 is a diagrammatic front elevation of a fragment of the wick shown in Fig. 1;

Fig. 5 is an elevation, partly in section, illustrating a tubular wick made in accordance with the present invention and shown as mounted in an oil-chamber in conjunction with raising-and-lowering gear-mechanism;

Fig. 6 is a view similar to Fig. 1 of a modified form of the invention;

Fig. 7 is a diagrammatic vertical sectional view on line 7—7 of Fig. 6;

Fig. 8 is a diagrammatic front elevation of a fragment of the wick shown in Fig. 6;

Fig. 9 is a view similar to Figs. 4 and 8, illustrating a modified form having twisted instead of single raiser-wires;

Fig. 10 is a front elevation of a modified form of tubular wick formed of molded or felted fibers with wire screening embedded in the outer face of the wick; and

Fig. 11 is a vertical sectional view on line 11—11 of Fig. 10.

Referring to Figs. 1 to 5 of the drawings, the wick 20 illustrates a tubular wick made from a strip of wicking shaped into tubular form and having the ends or edges 21 abutted and joined together in any suitable way, as for example, by sewing with stitches 22 of thread or other suitable material. The wick 20 has two plies 23 and 24, each ply having longitudinal textile strands 25 interwoven with transverse textile strands 26, the two plies being connected by binder-strands 27. Raiser-wires 28 of any suitable metal, as for example, brass of suitable stiffness, such for example, as half-hard brass, extend transversely around the wick and are interwoven with the longitudinal strands 25, thus providing exposed raiser-wire sections 29 arranged in longitudinal groups at a suitable acute angle to the vertical to be properly engaged with the teeth of gears 30 and 31, which gears are rigidly secured to the shaft 32 rotatably mounted in tube 33, which tube is secured to members 34 and 35 respectively secured to the outer tubular wall 36 of the annular oil-chamber 37. A hand-wheel 38 secured to shaft 32 can be rotated in one direction or the other, to cause the gear-teeth of gears 30 and 31 engaging the raiser-wire sections 29 to raise or lower the tubular wick, depending on which direction the hand-wheel is rotated.

In the form of the invention illustrated in Figs. 6, 7 and 8, the wick 39 includes a lower portion or section 40, and an upper portion or section 41. The lower wick-section 40 is formed from a strip of wicking formed up to tubular form and having its adjacent edge-portions 42 suitably joined together as by stitches 43 of thread or the like. The lower wick-section 40 is secured to the upper wick-section 41 by having its top-edge portion 44 joined to the bottom-edge portion 45 of the upper wick-section 41 by suitable means, as by stitches 46 of thread or the like. The upper wick-section 41 may be of any suitable type, such as woven or felted construction, either seamless, or seamed or non-seamless, although the particular form illustrated in the drawings is seamless.

The particular lower section 40 illustrated in the drawings is a two-ply fabric having plys 47 and 48, each ply having transverse textile strands 49 extending transversely around each ply of the wick-section 40 and interwoven with longitudinally-extending stiffening-wires 50 extending up and down each ply of the wick-section 40. The outer or face-ply 47 of the wick-section 40 has transverse raiser-wires 51 extending transversely around the wick and interwoven with the longitudinal stiffening-wires 50. Binder-strands 52 extend transversely around the wick-section 40 and serve to connect the two plys together.

In the form of the invention illustrated in Fig. 9, each of the raiser-wires 53 is composed of two wire-strands 54 twisted together.

Referring to Figs. 10 and 11, the tubular wick 55 is made from a strip of molded or felted wicking having a strip of screening 56 embedded in the outer surface thereof. The strip of wicking is shaped or formed or rolled up into tubular form and has its adjoining edge-portions 57 suitably joined together as by stitches 58 of thread or the like. The screening 56 has raiser-wires 59 extending transversely around the wick, and longitudinal or up-and-down wires 60 are interwoven with the wires 59, the wires 60 being arranged at a suitable acute angle to the vertical to bring the raiser-wire sections 61 in proper position for meshing with the gear-teeth of the raising-and-lowering gears. In making the wick 55, the screening 56 is laid on top of the screen of a mold or of the paper machine, and a suitable usual type of suspension of fibers of sulphite pulp and/or cotton and/or asbestos or the like in water is poured over the screening 56 and over the screen (not shown) of the paper machine or mold, whereby a strip of wicking similar to that illustrated in Fig. 11 is produced, with the wire-screen 56 embedded in one side thereof for a portion of the height thereof.

Wicks made according to the present invention thus have suitable means such as the raiser-wires which cooperate with the raising-and-lowering gears, and, therefore, it is not necessary to employ the usual type of perforated-metal tubular carriers, which latter are more expensive to make and apply to wicks. Applicant's wick may, therefore, be referred to as a "carrierless" wick. The invention may be carried out in other specific ways than those herein set forth without departing from the spirit and essential char-

acteristics of the invention, and the present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive, and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

I claim:

1. A tubular wick, comprising: a tubular wick for use in an annular oil-chamber of an oil-stove or the like; raiser-wire sections extending transversely around and secured to said wick and properly spaced apart to properly intermesh with and be engaged by teeth of gear-means connected to said oil-chamber to raise and lower said wick; and longitudinal stiffening-wire sections extending across said raiser-wire sections.

2. A tubular wick, comprising: a tubular wick for use in an annular oil-chamber of an oil-stove or the like, and including a top-portion and a main-portion; raiser-wire sections extending transversely around and secured to said main-portion but not said top-portion, and properly spaced apart to properly intermesh with and be engaged by teeth of gear-means connected to said oil-chamber to raise and lower said wick.

3. A tubular wick, comprising: a tubular wick for use in an annular oil-chamber of an oil-stove or the like, and including a top-portion and a main-portion; raiser-wire sections extending transversely around and secured to said main-portion but not said top-portion, and properly spaced apart to properly intermesh with and be engaged by teeth of gear-means connected to said oil-chamber to raise and lower said wick; and longitudinal stiffening-wire sections extending across said raiser-wire sections but not across said top-portion.

4. A tubular wick, comprising: a tubular wick for use in an annular oil-chamber of an oil-stove or the like, and including a top-portion and a main-portion; raiser-wire sections extending transversely around and secured to said main-portion but not said top-portion, and properly spaced apart to properly intermesh with and be engaged by teeth of gear-means connected to said oil-chamber to raise and lower said wick; and longitudinal stiffening-wire sections extending across said raiser-wire sections but not across said top-portion, and interwoven with said raiser-wire sections and said main-portion.

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