

(No Model.)

S. F. DRAPER.  
ART OF MANUFACTURING LAMP WICKS.

No. 467,871.

Patented Jan. 26, 1892.

Fig. 1.

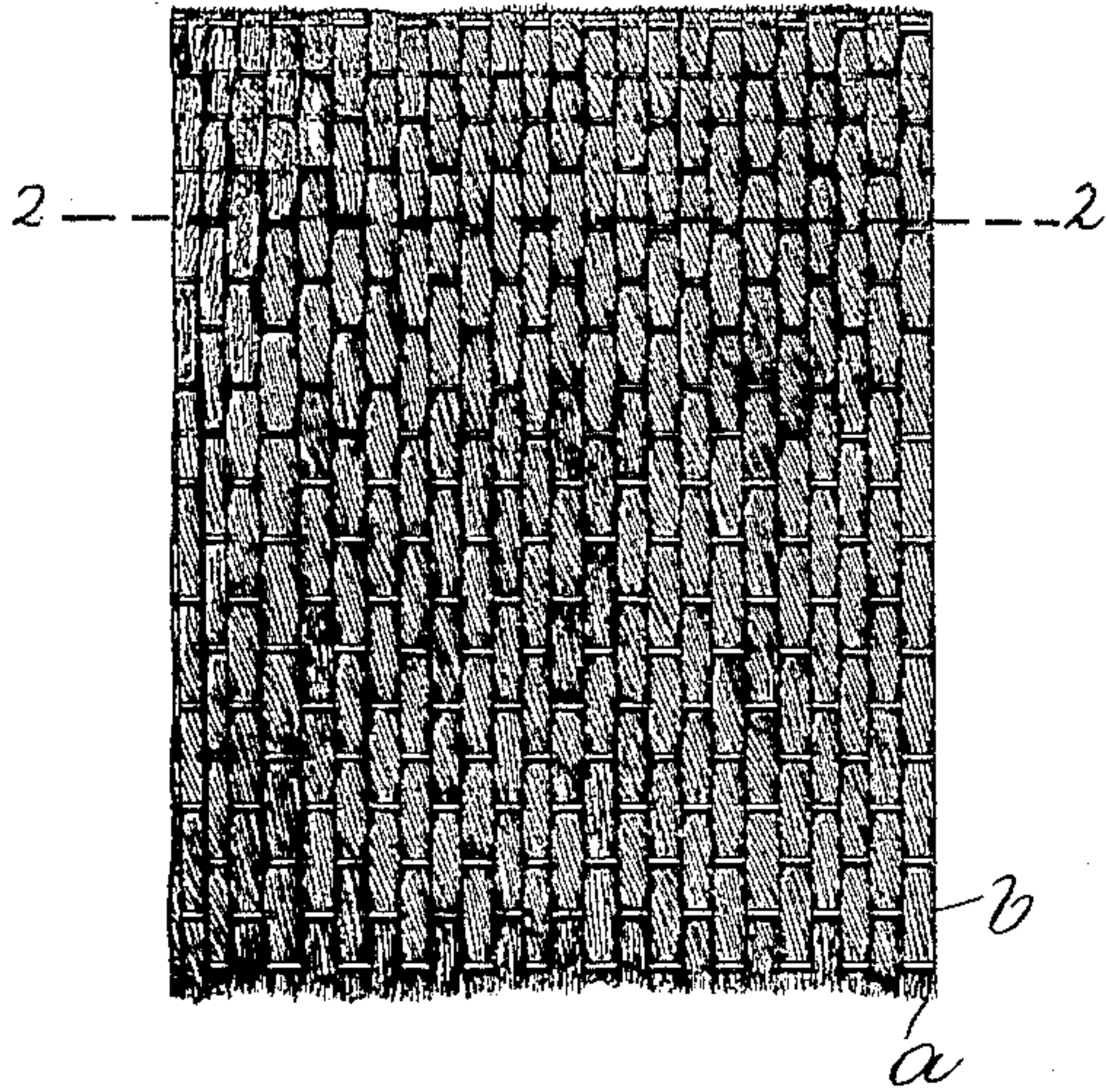


Fig. 2.



Fig. 3.

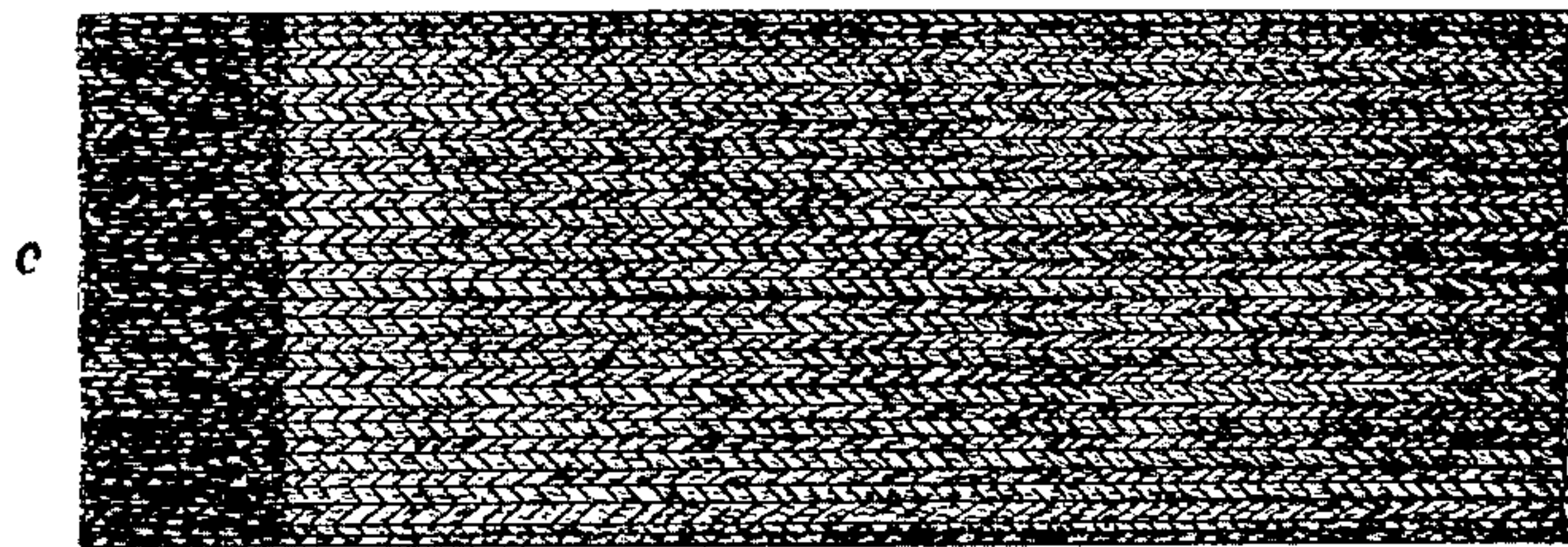
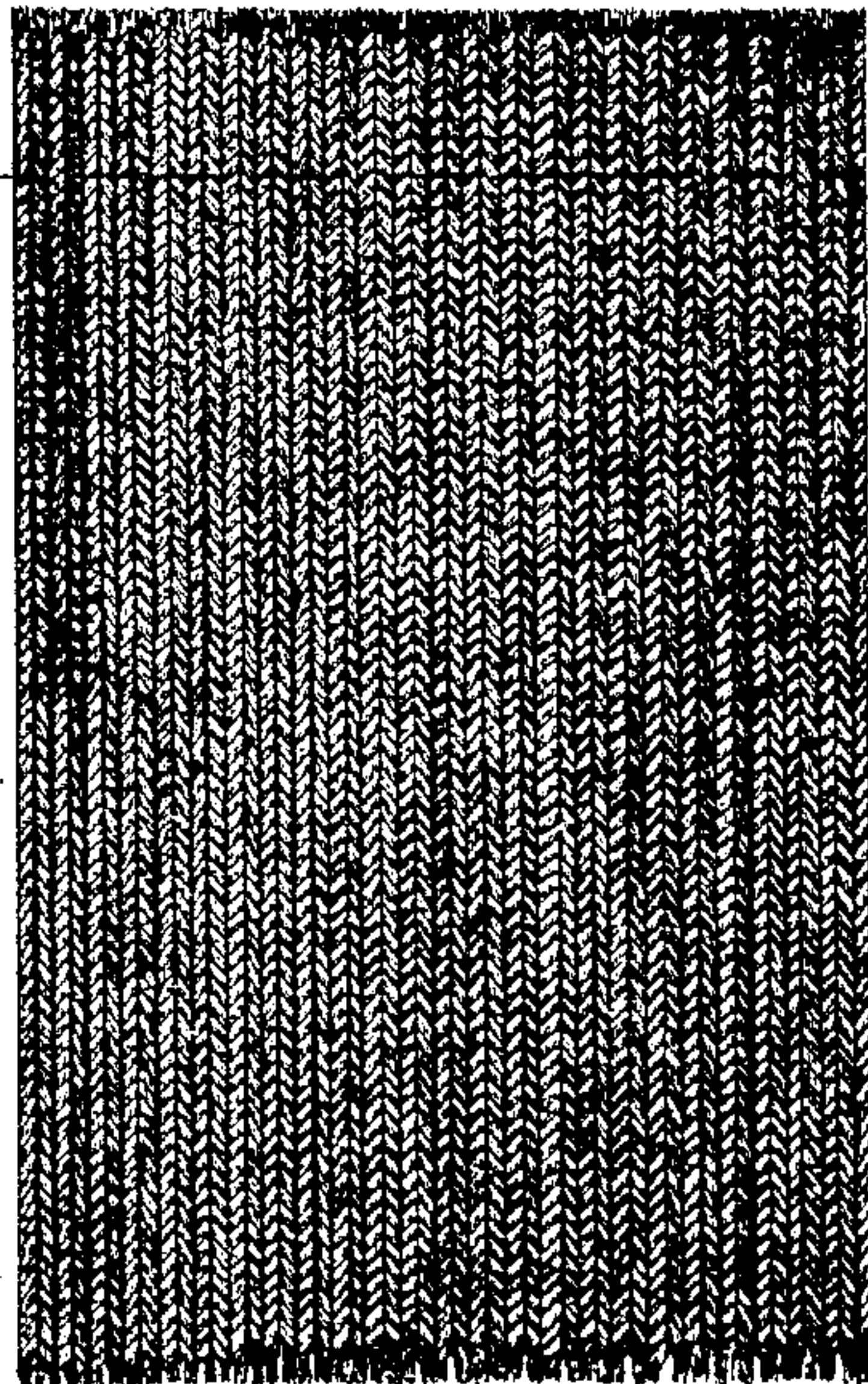


Fig. 4.

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# UNITED STATES PATENT OFFICE.

SAMUEL F. DRAPER, OF BOSTON, MASSACHUSETTS.

## ART OF MANUFACTURING LAMP-WICKS.

SPECIFICATION forming part of Letters Patent No. 467,871, dated January 26, 1892.

Application filed August 25, 1890. Serial No. 363,023. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL F. DRAPER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in the Art of Manufacturing Lamp-Wicks, of which the following is a specification.

It is the object of my invention to provide such improvements in the art of manufacturing fibrous lamp-wicks as will render the same practically incombustible and which will afford a mode whereby the same can be manufactured in an economical and expeditious manner. I have ascertained that if coke carbon be reduced to an impalpable powder and thoroughly commingled with and "worked into" the fibers of a textile wick the same may be rendered to all intents and purposes incombustible. Considerable difficulty has, however, been experienced in working the carbon into or mixing it with the fibers of the yarns or thread after the same have once been woven into a wick. I have discovered that the yarns or strands which it is desired to weave, knit, or otherwise form into a wick may readily have powdered carbon commingled or mixed with their fibers before a wick is manufactured therefrom, and that wicks may conveniently be manufactured from carbonized yarns or threads.

My invention consists of first carbonizing yarns or threads by commingling powdered carbon with the fibers thereof and then forming such carbonized yarns or threads into a wick, all as will appear by the description hereinafter given.

In the drawings hereto annexed and forming a part of this specification, Figure 1 represents a side view of a lamp-wick woven in accordance with my improved method. Fig. 2 is a sectional view taken on the line 2 2 of Fig. 1. Fig. 3 is a side view of a wick knit in accordance with my improved mode. Fig. 4 is a modified form of the wick, hereinafter described.

The same letters of reference indicate the same parts or features in all of the views.

In carrying out my invention I take yarns or threads of a textile nature and suitably spun or twisted to form lamp-wicks, and while the same are in the skein or otherwise suitably "done up" I commingle powdered carbon, preferably coke carbon, therewith by

"tumbling" the skeins in a vessel containing the carbon, or soaking or saturating the skeins or yarns in water or other liquid having carbon mixed therewith, and subsequently the yarns or threads so treated, and afterward forming them into a wick by a process of weaving, knitting, crocheting, braiding, or otherwise, as by felting.

In Figs. 1 and 2 I have shown a wick formed by weaving, in which the yarns or threads comprising both the warps *a* and the wefts *b* may be supposed to be carbonized in accordance with my improved method and the entire wick formed of such carbonized yarns or threads, though in some cases it may answer as well to have only the warps *a* carbonized, while the wefts *b* may be left in their natural condition, or the warps may be left untreated and the wefts carbonized.

In Fig. 3 the wick is shown as constructed by the knitting process, in which the single yarn used may be supposed to be carbonized and the entire wick constructed of carbonized yarn. Obviously it is not necessary that the lower portion of the wick, which is in the oil, shall be made of carbonized yarn.

In Fig. 4 I indicate a wick which is knit from a yarn having the portion which forms the tip *c* carbonized, while that portion which forms the body *d* is left uncarbonized.

The essential part of my invention consists in carbonizing yarns or threads by mixing or commingling carbon therewith, and then manufacturing the same into lamp-wicks, whether the wick is composed in whole or in part of such carbonized yarns or threads.

Having thus explained the nature of my invention and in what manner the same may be performed, I declare that what I claim is—

The improvement in the art of manufacturing lamp-wicks, which consists in first carbonizing yarns or threads by mixing or commingling powdered carbon therewith and then forming such yarns or threads into a wick, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 19th day of August, A. D. 1890.

SAMUEL F. DRAPER.

Witnesses:

EWING W. HAMLEN,  
C. F. BROWN.