HOXSIE & REED.

Manufacture of Flexible Tubing.

No. 54,909. Patented May 22, 1866.

Fig: 2.

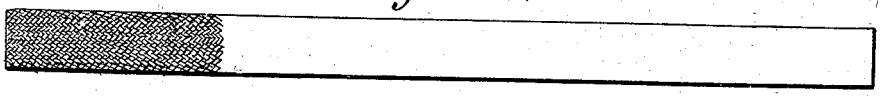


Fig: 1.

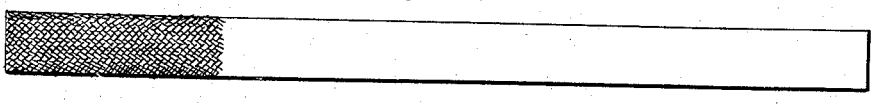


Fig: 3.

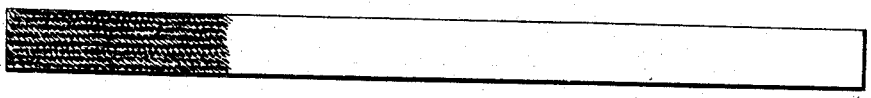


Fig: 4.

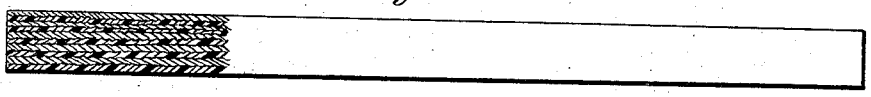
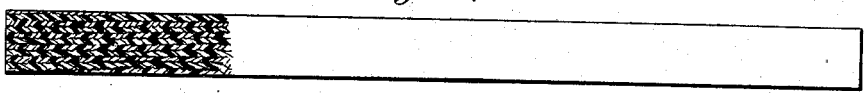


Fig: 5.



Witnesses.

Isaac A Brunell

Silliman A Chanell

Inventors.

D. K. Hoxsie

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UNITED STATES PATENT OFFICE.

DAVID K. HOXSIE AND THOMAS L. REED, OF PROVIDENCE, R. I.

IMPROVEMENT IN THE MANUFACTURE OF FLEXIBLE TUBING.

Specification forming part of Letters Patent No. **54,909**, dated May 22, 1866.

To all whom it may concern:

Be it known that we, DAVID K. HOXSIE and THOMAS L. REED, both of the city and county of Providence, and State of Rhode Island, have invented a new and Improved Finish for Flexible Tubing of the kind generally used for conveying illuminating-gas; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents one variety of finish, improved finish on flexible tubing. Fig. 2 represents another variety of said finish, and Fig. 3 represents some of the proposed patterns or styles of the said finish.

The finish of flexible tubing for the above-mentioned purpose heretofore has been of braid or webbing composed of a small number of strands—say from eighteen to twenty-four—each strand being composed of from two to four distinct threads, which, in braiding, are laid on the tubing in square or diamond shaped wales, generally in two or more contrasting colors of cotton and varnished, or of mohair or worsted without varnish.

The square or diamond-shaped wales give the tubing a scaly and snake-like appearance, which the form of the tubing, the cold glazed surface, and its attitudes in hanging from the chandelier or coiling about the portable fixture are calculated to heighten and render more real, especially when two or more contrasting colors are combined in the finish, and this effect is known to render the tubing so repulsive in appearance, more particularly to females, as to exclude it from the household, whereby the use of the article is limited to a considerable extent.

The mode of braiding with few strands of a number of threads each and forming a wide flat wale seems to have been originally adopted in the imported oil-tubing, wherein successive overlaying coverings of webbing are stuffed with linseed-oil to render the tubing impervious, for which process the wide flat wales are best adapted, because it covers the tubing more completely and lies more flatly and without ridges or seams, as is the case of a large number of single strands; and this kind of braiding, which is much a necessity in the imported tubing, is imitated in a finish of mohair or worsted, in which also the same scaly and snake-like appearance is preserved, and is therefore as objectionable on this account as the other.

The object of our invention is, therefore, to remove this repulsive appearance of the tubing, and to give it a finish more nearly resembling familiar and pleasing objects.

Our invention consists of a finish of webbing or braid (generally of worsted) composed of many strands of single threads plaited in small stitch-like wales so minute as not to be distinguishable except by close inspection, so that a combination of contrasting colors will produce shades and mixtures, geometrical figures, checks, plaids, &c., as in familiar and well-known fabrics, like the carpet, hangings, and furniture of the room or the drapery about the person.

In producing our improved finish we have employed forty-eight (48) single strands, plaited with a slow-feeding movement of the machine, which gives a long wale at a very acute angle with the outline of the tubing, and produces a very smooth evenly-appearing surface, like that shown in Fig. 1. We have also employed ninety-six (96) single strands with a feeding movement which will plait the strands at an angle of about forty-five degrees, which gives a short fine wale, in appearance like a stitch, and produces a close and even surface, like that shown in Fig. 2.

The minuteness of the wale, when so large a number as ninety-six single strands are plaited together upon the surface of the tubing, prevents the same from being discernible as a feature of the finish, and by the use of contrasting colors the same may be so disposed among the many strands as to produce, by the minuteness of the wale, a great variety of ornamental shades, mixtures, geometrical figures, checks, plaids, &c., which are familiar and pleasing to the eye and not in the least repulsive in effect.

Having described our invention, what we claim, and desire to secure by Letters Patent, is—

In combination with flexible gas-tubing, as a finish for the same, a covering of webbing or braid of many single strands plaited in minute stitch-like wales, substantially as described, for the purpose specified.

In testimony whereof we have hereunto set our hands this 3d day of January, A. D. 1866.

D. K. HOXSIE.
THOMAS L. REED.

In presence of—
ISAAC A. BROWNELL,
STILLMAN H. CHANDLER.