

(No Model.)

B. L. STOWE.
FIRE HOSE.

No. 460,924.

Patented Oct. 6, 1891.

Fig. 1.

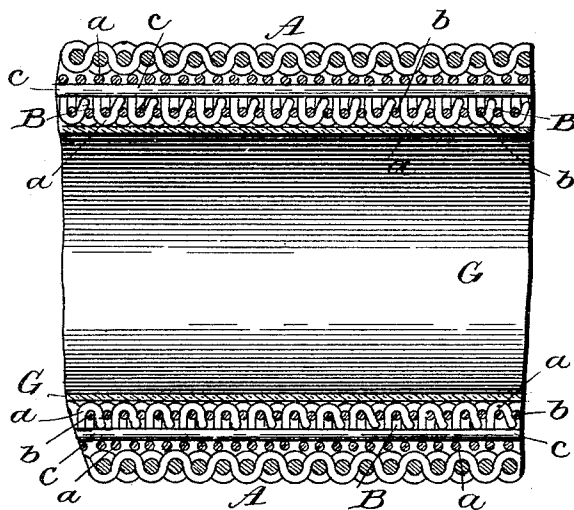
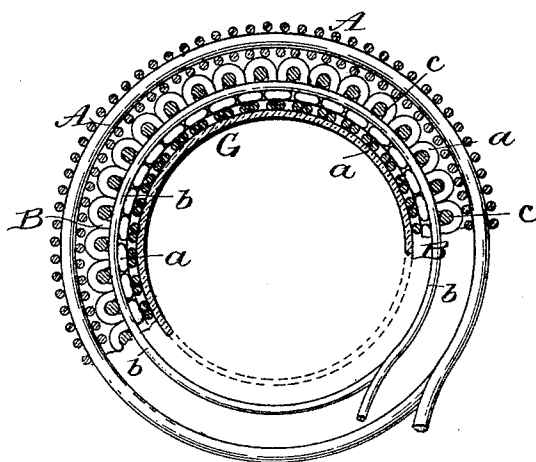


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

BENJAMIN L. STOWE, OF BROOKLYN, NEW YORK.

FIRE-HOSE.

SPECIFICATION forming part of Letters Patent No. 460,924, dated October 6, 1891.

Application filed April 2, 1890. Renewed September 12, 1891. Serial No. 405,459. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN L. STOWE, of Brooklyn, county of Kings, and State of New York, have invented a certain new and useful Improvement in Fire-Hose, of which the following is a specification.

The fire-hose which I have invented is a combination knit and woven hose having a woven exterior, a knitted interior, and a rubber lining applied to the inner face of the knitted portion. The knit portion of the fabric comprises, in addition to the knitting-warp, a weft or filling and straight longitudinal strands, which are incorporated in the body of the fabric, as illustrated, for example, in my Letters Patent No. 222,327, of December 2, 1879. I prefer to employ a knit fabric the loops of whose stitches are upon the inner surface of the fabric. A piece of hose possessing these characteristics is represented in the accompanying drawings, in which—

Figure 1 is a longitudinal section, and Fig. 2 is a cross-section, of the hose.

A is the seamless woven exterior of the hose. It is a one-ply fabric in this instance; but it may, if desired, be a multiply-woven fabric.

B is the seamless knitted interior. In addition to the usual knitting-warp *a*, which forms the stitches, (the loops of which are laid upon the interior of the knitted ply or tube,) it has incorporated in it a weft or filling *b* and straight longitudinal strands *c*. A tubular knitted fabric of this general kind is well known in the market and is illustrated in my Letters Patent No. 222,327, above referred to, among others.

G is the rubber lining.

In the particular structure shown in the drawings the woven and knitted portions are separate seamless tubes, the woven tube being drawn over the knitted one as a jacket. Instead of being thus made separate, they can, however, be knitted and woven simultaneously and together, so as to form a multiply seamless knitted and woven tube, in which the knitted and woven plies are interlaced or interlooped in order to form a solid multiply-

combined knitted and woven fabric, as set forth in my application for Letters Patent, Serial No. 215,762, filed October 9, 1886.

Manufacturers of knitted hose claim certain advantages for their hose which, they assert, woven hose does not possess—viz., slight elongation under hydraulic pressure and a smooth water-way when rubber-lined—while, on the other hand, woven-hose manufacturers claim for their product better wearing qualities and no expansion under hydraulic pressure. By combining both kinds of fabrics and a rubber lining in one hose I secure whatever advantages either kind possesses and by the same means neutralize whatever defects either kind may have. Moreover, as the loops of the stitches of the knitted tube are upon the interior of that tube the latter possesses a smooth even interior admirably adapted to receive the rubber lining, which, when laid, will be smooth and without indentation to offer resistance to the passage of water.

The woven exterior, possessing as it does great strength and wearing capacity, thoroughly protects the knitted interior and imparts to the hose a durability which merely knitted hose would not possess. By combining these two in one, as described, I am enabled to produce a cotton fire-hose which possesses all the advantages incident to either a woven or a knitted hose without the defects of either, separately considered.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

A combined fabric fire-hose having a knitted interior B, in which are incorporated a filling or weft and straight longitudinal strands, a woven jacket or exterior A, and a rubber lining C for the inner face of the knitted interior, as and for the purposes hereinbefore set forth.

BENJAMIN L. STOWE.

Witnesses:

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