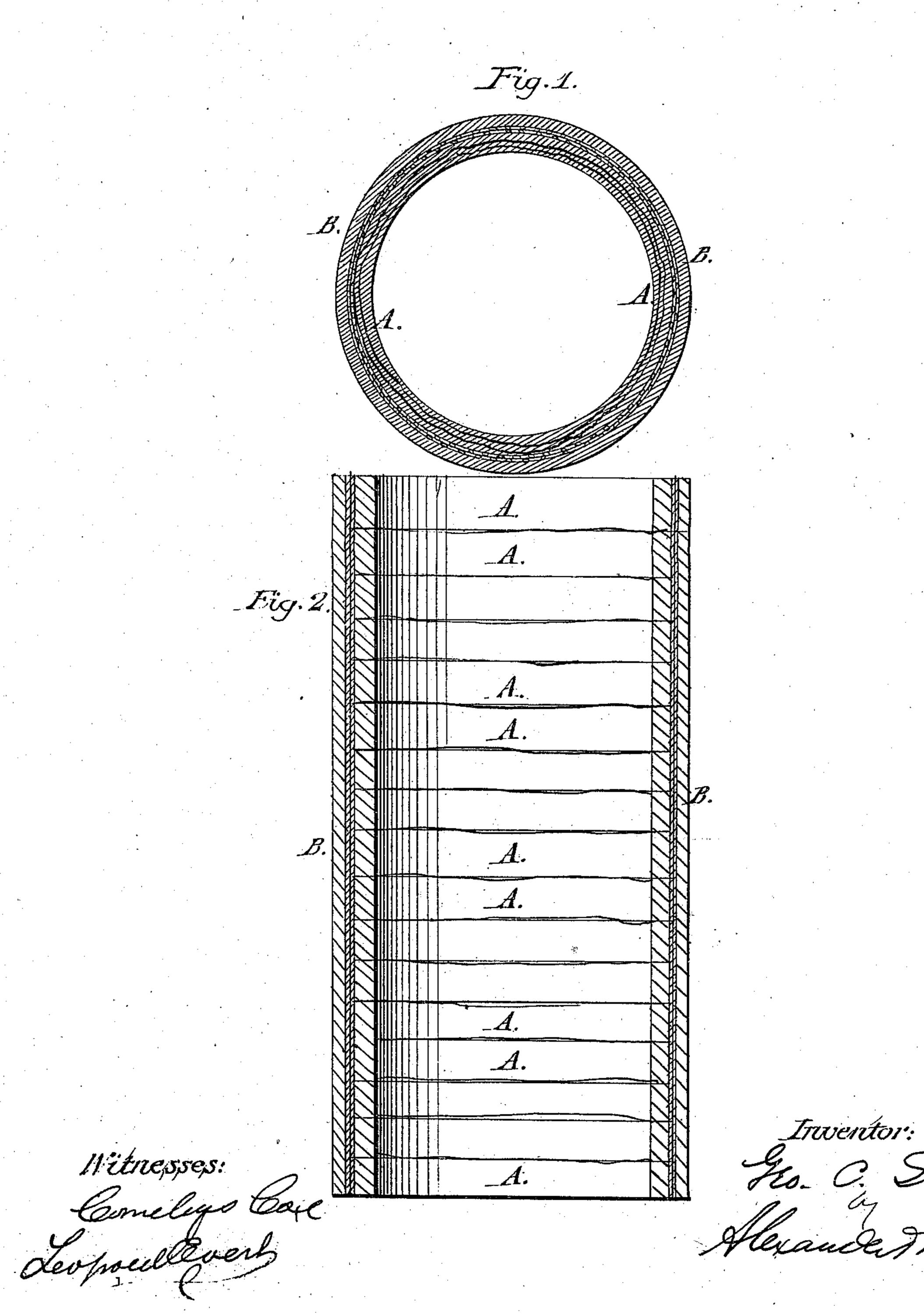
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Palestilet May 11, 1869.



N.PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.



GEORGE C. SMITH, OF MATTEAWAN, NEW YORK.

Letters Patent No. 90,031, dated May 11, 1869.

IMPROVED HOSE.

The Schedule referred to in these Letters Patent and making part of the same,

To all whom it may concern:

Be it known that I, GEORGE O. SMITH, of Matteawan, in the county of Dutchess, and in the State of New York, have invented certain new and useful Improvements in Manufacture of Suction-Hose; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in making suction-hose on hard rubber, or gutta-percha rings, instead of on metal, or wire rings, as heretofore made.

In order to enable others skilled in the art to which my invention appertains, to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a cross-section, and Figure 2 is a vertical section.

The usual mode of making suction-hose has been to have a series of metal, or wire rings, on which the hose has been formed; but, by this method, the inner surface could never be made perfectly smooth, but would always be more or less irregular.

To obviate this difficulty, I take a series of hard rubber, or gutta-percha rings, A A, which may be vulcanized, so as to form a perfectly smooth surface on the inside.

By thus vulcanizing the rings A A, they become perfectly solid, and the hose B is then put on the outside of said rings, in any of the known and usual ways.

Besides the advantage of having a smooth inner surface, this hose will cost considerably less than any others heretofore made.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

Constructing suction-hose around a series of hard rubber, or gutta-percha rings, when said rings form the inside lining of the hose, and are connected, substantially in the manner and for the purposes herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 1st day of February, 1869.

GEORGE C. SMITH.

Witnesses:

JAMES MACKIN, H. H. HUSTIS.