

(No Model.)

A. SPADONE.
RUBBER COVERED HOSE.

No. 338,312.

Patented Mar. 23, 1886.

Fig. 1.

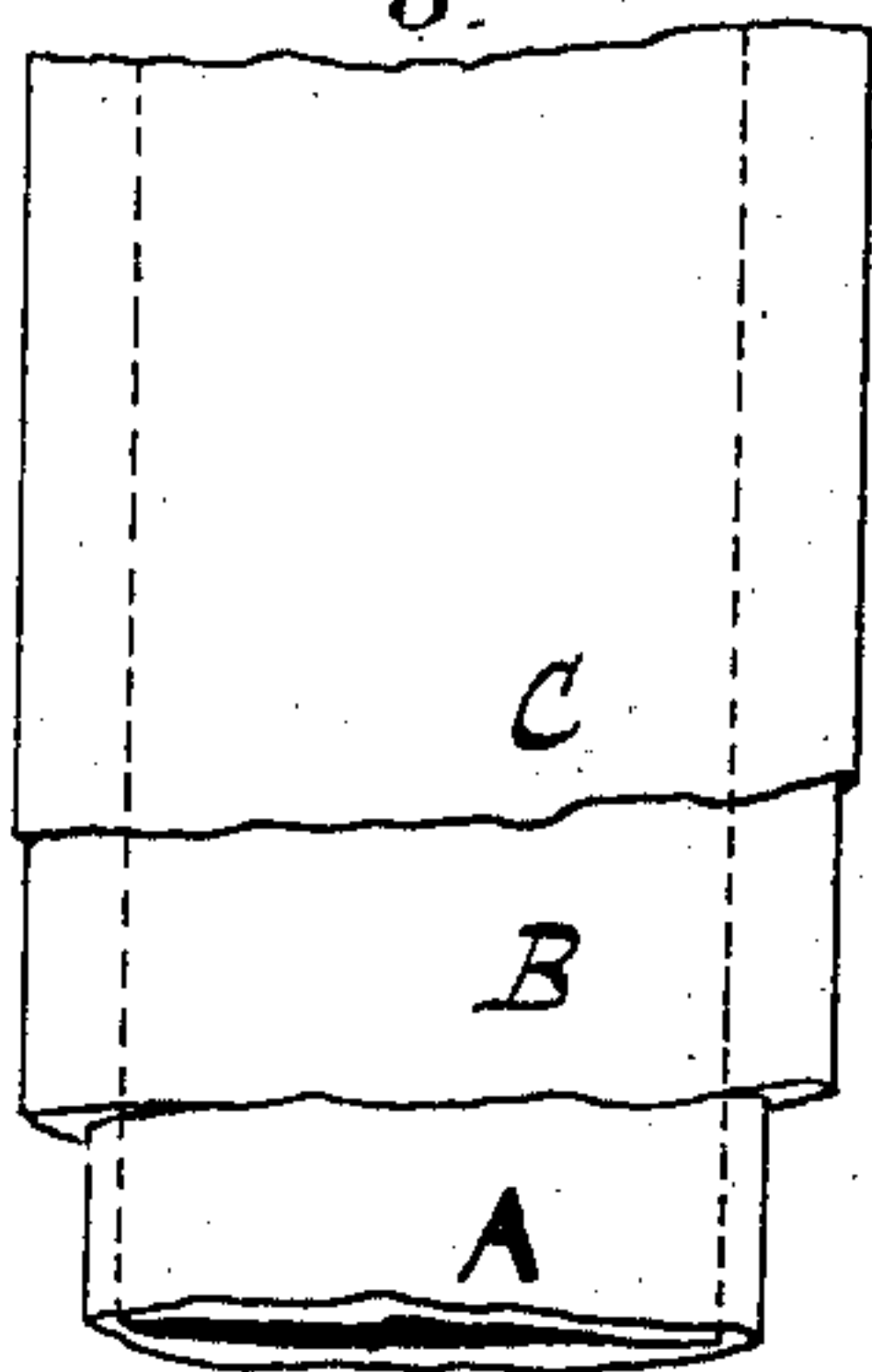


Fig. 3.

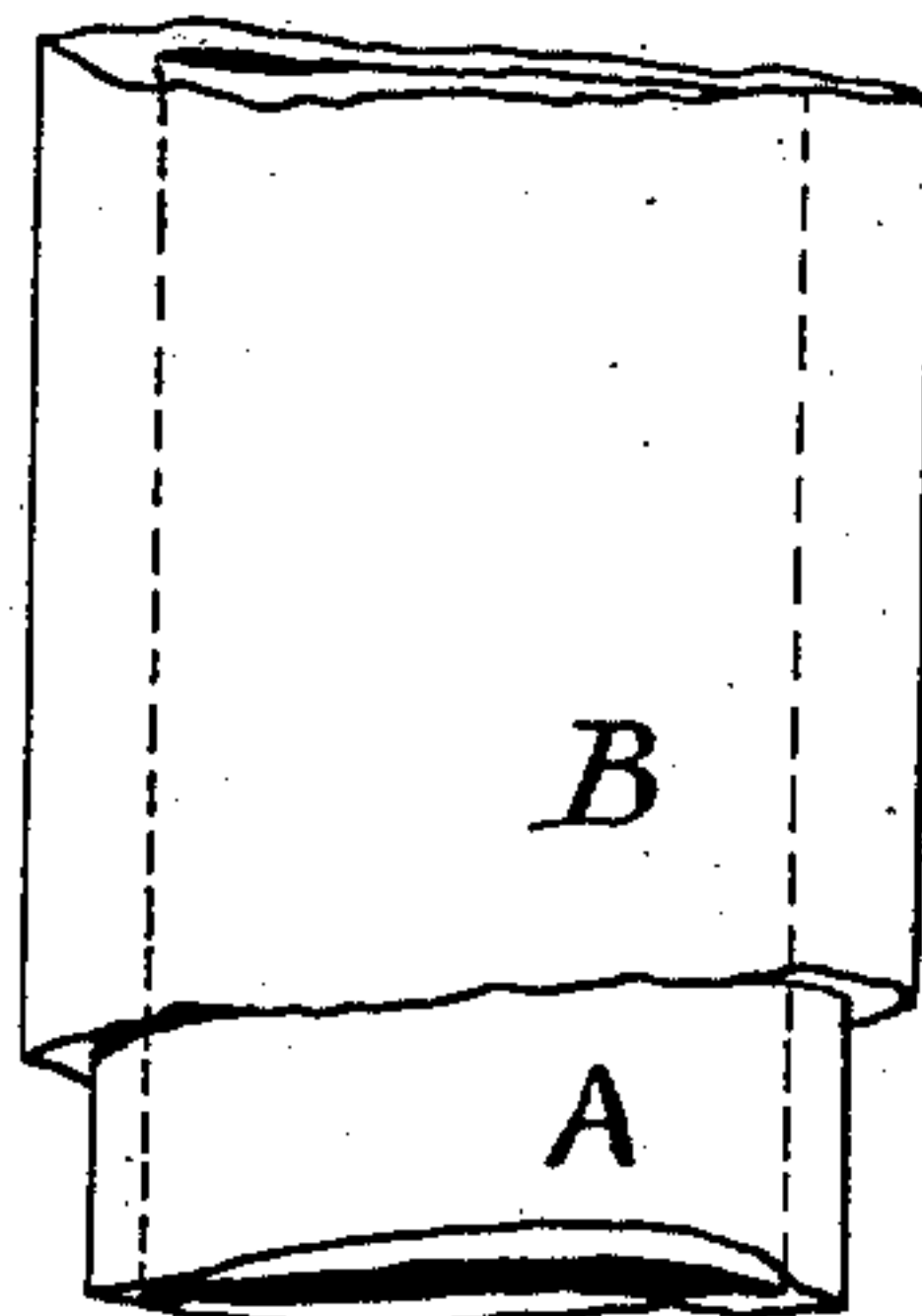


Fig. 2.

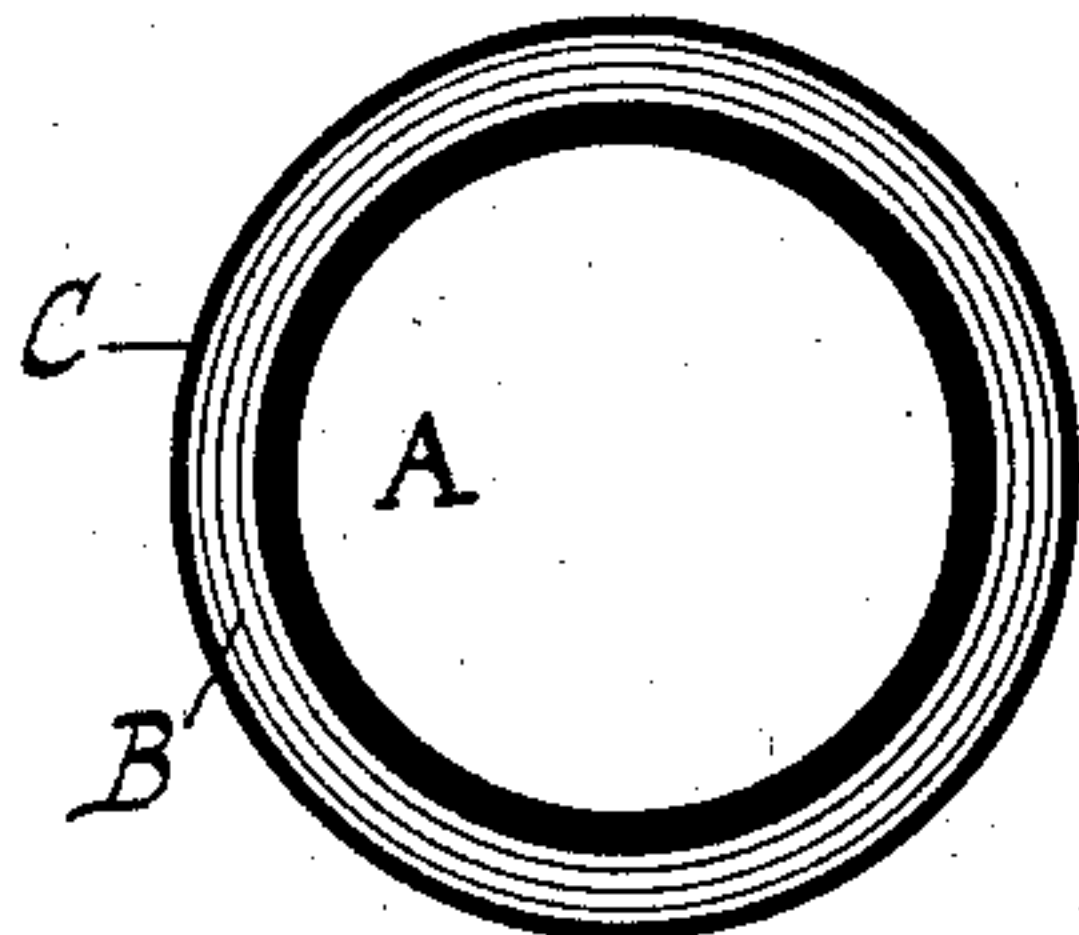
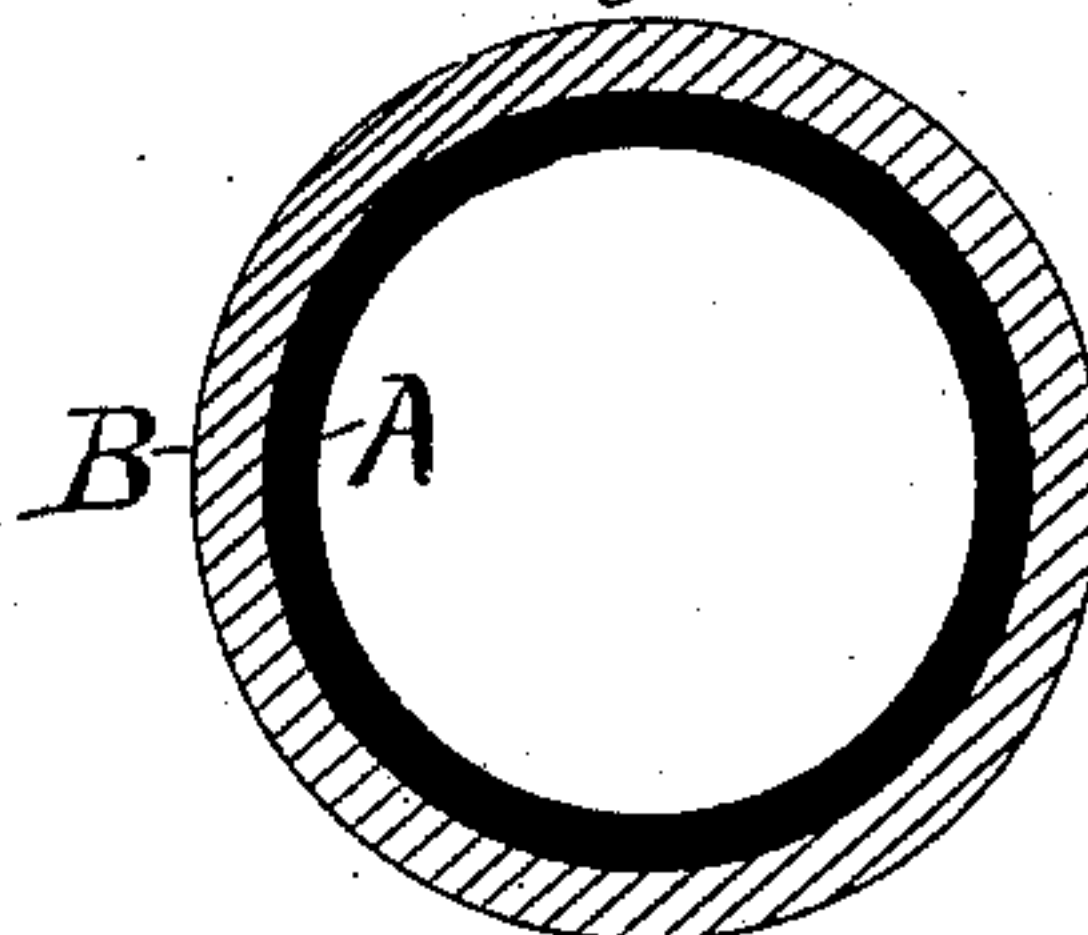


Fig. 4.



WITNESSES:-

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per

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att'y

UNITED STATES PATENT OFFICE.

AMADEE SPADONE, OF NEW YORK, N. Y.

RUBBER-COVERED HOSE.

SPECIFICATION forming part of Letters Patent No. 338,312, dated March 23, 1886.

Application filed November 25, 1885. Serial No. 183,973. (No model.)

To all whom it may concern:

Be it known that I, AMADEE SPADONE, a citizen of the United States, residing in the city, county, and State of New York, have
5 invented certain new and useful Improvements in the Manufacture of Rubber Hose, of which the following is a specification.

My invention relates to that class of hose which is made partly of rubber and partly of
10 textile fabrics or materials laid in consecutive circular layers about a central inner surface or tube.

Up to the present time cotton duck, linen, or cotton in woven, braided, or webbed fab-
15 rics has been used to make up such layers. In order to render the cotton or linen material of the hose durable, it is necessary to infuse into, saturate, or impregnate it with antiseptics, to insure its security against rot or decay.

20 The object of my invention is to combine with the india-rubber, in the manufacture of hose, a material or fabric of such character that will do away with the necessity for antiseptics, and develop a hose of greater dura-
25 bility than any on the market.

Another object of my invention is to intro-
duce such a combination of materials as will safely meet present pumping and pressure
30 practice, as illustrated in the demands of fire-hose and railroad-brake practice.

To such ends my improvements are based upon the special and well-known capacity of silk and the animal hairs and wools, more
35 especially camel's hair, to withstand rot or decay.

Certain of my improvements consist in the combination of silk, of animal hair or wool, or fabric made from any one or more of them
40 with india-rubber in the manufacture of hose.

Certain other improvements consist in the consequent reduction in weight, bulk, or stiff-
ness of the hose construction, making the same less cumbersome and by far more easily han-
45 dled, bent, or reeled in active service or in packing. In consequence of the increased tensile capacity of silk and the animal hairs and wools, more especially camel's hair and the fabrics made therefrom, I develop a cor-
50 respondingly-increased improvement in the strength of hose both longitudinally and radially, varying with the methods of plaiting, weaving, fabrication, or wrapping of the layers to be constituted as part of the hose con-
struction.

55 In the drawings, Figures 1 and 2 represent

a hose construction embodying my improve-
ments, and consisting of one or more layers,
B, of rubber-coated silk, animal hair or wool
material wrapped about a central tube of rub-
ber, A, and covered with an outer layer of 60
rubber, C. Figs. 3 and 4 represent a second sample of hose embodying my improvements, and consisting of an inner tubing of rubber,
A, and an outer layer or coating, B, of tubu-
lar fabric, woven of silk or of animal hair or 65
wool, or any two or three of the materials combined.

The detail method of manufacture of the hose is of course the same as that in which
cotton, linen, and like materials are now used, 70
and is so well known to persons skilled in the art that it is not necessary to describe the same in this specification. By such well-known
constructions, and by the use of silk or the
animal hairs or wools, I am enabled to pro- 75
duce a hose which, by actual test and trial, can withstand far greater pressures, much
harder usage and strain, and at the same time be much lighter in weight and less bulky to
handle than any now in use. Where demand is 80
made for a protective casing of other material—such as canvas, duck, leather—for heavy
street usage, it may of course be attached in the usual manner; but I am of the opinion that
no such protection is or will be necessary, and 85
will only tend to defeat the object aimed at—that of incorporating in the hose construction
all the lightening, strengthening, and enduring features for which silk or the animal hairs
or wools or their fabrications are introduced. 90
An outer coating of rubber is sufficient for ordinary purposes.

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

1. As an improved article of manufacture, 95
a hose consisting of an inner tubing of rubber and an outer tubing of braided, woven, or
wrapped silk or its equivalent, substantially as and for the purposes specified.

2. As an improved article of manufacture, 100
a hose consisting of an inner tubing of rubber, a middle tubing of woven, braided, or
wrapped silk or its equivalent, and an outer or protective tubing of rubber, substantially
as and for the purposes specified.

AMADEE SPADONE.

Witnesses:

WM. H. WEIGHTMAN,
MATTHEW HAWK.