

A. F. Allen,

Hose.

No. 100244.

Patented Mar. 1. 1870.

Fig. 1.

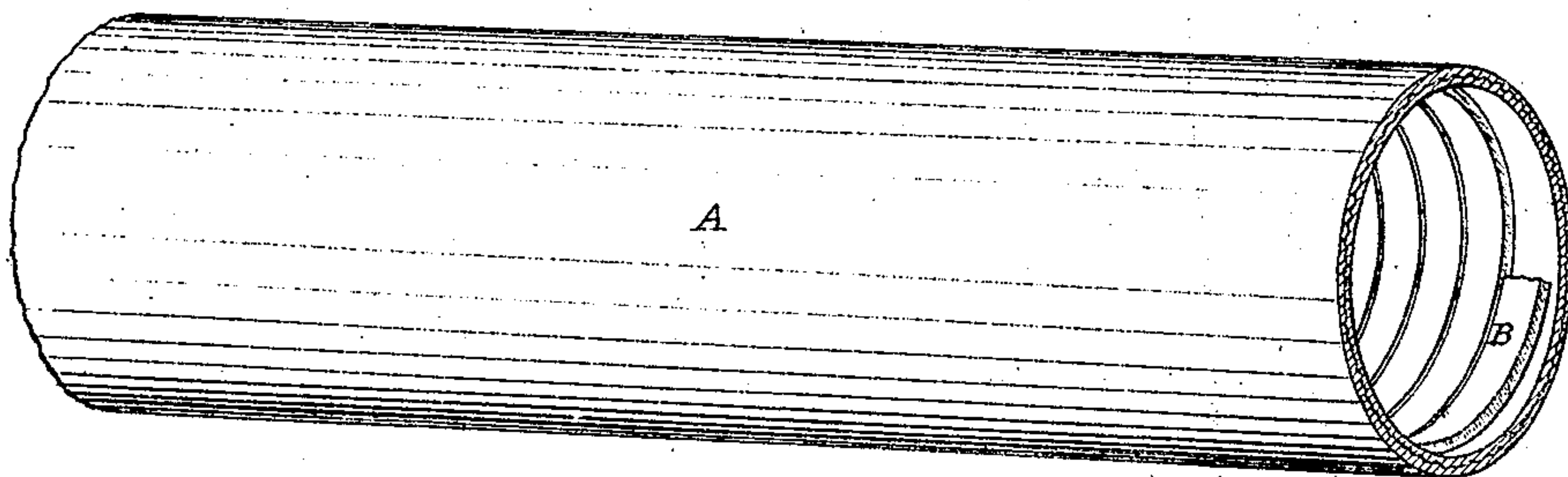
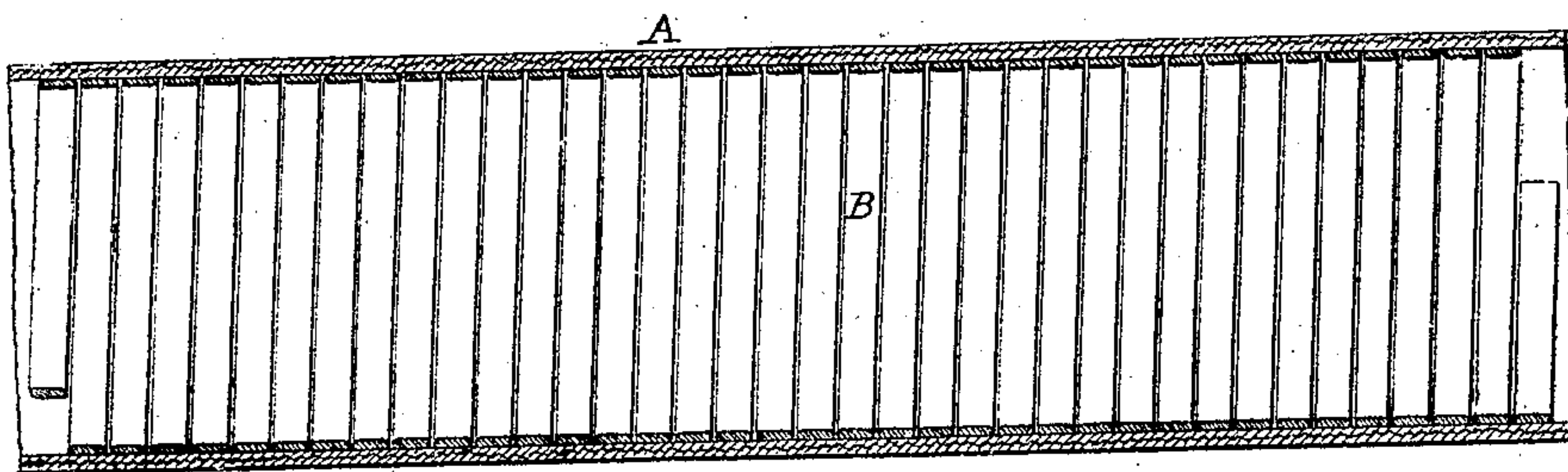


Fig. 2.



Witnesses.

Phil. G. Larner,
Frank O. Jackson.

Inventor

A. F. Allen
Per. Wm. C. Wood
his atty.

United States Patent Office.

ALBERT F. ALLEN, OF PROVIDENCE, RHODE ISLAND.

Letters Patent No. 100,244, dated March 1, 1870.

IMPROVED SUCTION-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, ALBERT F. ALLEN, of the city and county of Providence, and State of Rhode Island, have invented a new and improved Article of Suction-Hose; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part of the same, is a true, clear, and exact description thereof.

My invention consists in the novel combination of seamless hose, treated with a suitable water-proof compound, with a metallic wire lining laid spirally.

Reference being had to the drawings—

Figure 1 represents a piece of my improved suction in perspective.

A represents the outer covering.

B represents the metallic wire.

Figure 2 represents the same in longitudinal vertical section.

The use of wire between inner and outer coatings of leather or other materials has been long known in connection with the manufacture of suction-hose.

Its object has been merely to secure a proper resistance in the walls of the hose to the vacuum-force of a suction-pump.

The use of plate-metal rings within suction-hose has also been common, in which case the ends were made alternately large and small, so as to fit one into the other and still admit of the desirable flexibility.

In the use of the former article it was found to be expensive, heavy, and cumbersome. As to the latter, it answered the ordinary purpose of suction-hose, but when attached to a hydrant for the purpose of conducting water under pressure to a fire-engine or pump, the expansion of the coating or body of the hose would release the rings, and they would all be driven

in the direction of the flow, and so wedge up as to render the suction-hose rigid and unfit for the ordinary uses to which such is usually applied.

As lightness in suction-hose, combined with great strength of resistance to inward as well as from outward (or vacuum) pressure, is a great desideratum, I have sought to meet it, and have practically succeeded in the combination of seamless woven hose with the wire lining described.

Woven suction-hose, as heretofore constructed, was composed of biased cut pieces of suitable fabric, treated with water-proof compounds and wound spirally one over the other until the requisite strength and thickness was attained.

By the use of the seamless hose, in combination with wire arranged within and laid in accordance with my invention, I secure a greater degree of strength, lighter weight, and a more desirable flexibility than has heretofore been accomplished.

The cost of my suction-hose is less by an important difference than that constructed with an outer and inner coating with wire intervening, or than the hose supported and strengthened by the metal rings before referred to.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent of the United States—

The improved suction-hose herein described, consisting of the seamless hose of textile fabric treated with a suitable water-proof compound, and the spirally-laid wire lining, substantially as described.

ALBERT F. ALLEN.

Witnesses:

CHARLES BEAN,
EDWIN METCALF.