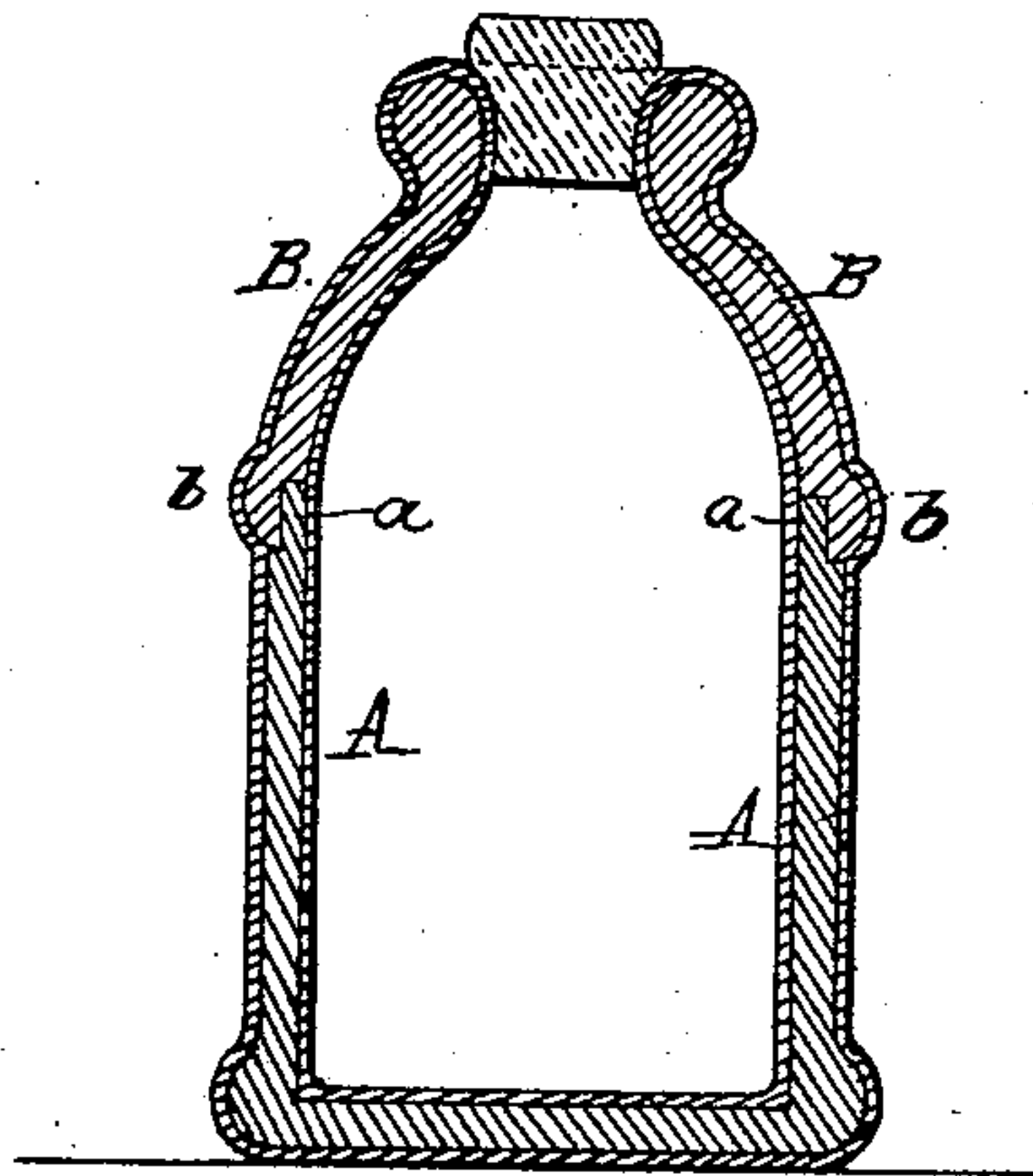


D. P. WEBSTER.

Bottle for Holding Hydrofluoric Acid.

No. 76,678.

Patented April 14, 1868.



Sarah P. Webster by
A. Pollok
Att'y

WITNESSES

Wm. L. Dancy
Chas. Page jr

United States Patent Office.

DAVID P. WEBSTER, OF NEW YORK, N. Y.

Letters Patent No. 76,678, dated April 14, 1868.

IMPROVEMENT IN BOTTLES FOR HOLDING HYDROFLUORIC ACID.

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

TO WHOM IT MAY CONCERN:

Be it known that I, DAVID P. WEBSTER, of New York, in the county and State of New York, have invented certain new and useful Improvement in the Preparation of Bottles for Holding Hydrofluoric Acid; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing.

The bottles now used for holding hydrofluoric acid are either of lead or gutta percha. Both are expensive, the former from the quantity of metal required to impart the stiffness or firmness required, in order to transport or handle the bottles with safety; and the latter, in consequence of the high price it commands, chiefly for insulating telegraph-cable.

My object is to produce a bottle for this purpose, which, while possessing the resistant properties of the lead or gutta percha, shall be much less expensive than one made of either of the latter materials. To this end, I form a wooden bottle of well-seasoned wood, in an ordinary turning-lathe, and then coat the inside of such bottle with asphalt from coal-tar, and the outside with a compound of India rubber and gum-si

The shellac and India-rubber mixture is prepared by dissolving, in eight gallons of naphtha, two pounds of India rubber. This solution is added to double its weight of shellac, and the whole is then placed in an iron pot, over a gentle heat, and stirred constantly with a spatula. When the whole is well melted and mixed, the kettle is removed from the fire, and the mixture poured upon sheets of zinc, over which it flows; quickly cooling in sheets or plates, which are broken up for future use.

The wooden bottle, as shown in the accompanying drawing, which represents a vertical central section of said bottle, is formed of two sections A B, which join at about the base of the arch of the top of the bottle. They are united by means of two flanges *a b*, one formed upon each section, and the one, *a*, fitting within the other, *b*. These sections, before being put together, are first lined with the asphalt of coal-tar, by melting the asphalt and spreading it with a brush, or by pouring it into the sections. The nozzle of the bottle is then coated on the inside with the compound of shellac and India rubber, above referred to, which, for this purpose, has been previously melted. The coating may be put on with a brush or in any other suitable manner. Next, the flanges of the sections are coated with the same compound, and while the mixture is still hot and soft, the two sections are pressed together, the flange of the one fitting within the flange of the other, where it is tightly held on account of the adhesive character of the mixture. The outside of the bottle is then coated with the compound, by either dipping the whole bottle in the melted rubber and shellac, or by spreading the same upon it with a brush.

The asphalt may be employed for both sides of the bottle, and so may the compound of rubber and shellac, but I prefer the mode I have named above, because the asphalt is cheaper, while the shellac and rubber impart a better appearance to the bottle, and distinguish it as designed for hydrofluoric acid; whereas, if the outside coating were of asphalt, the jet-black bottle thus produced might be easily mistaken for a black glass bottle.

The shape of the bottle I prefer, is that usually given glass bottles, but it is evident that other forms may be employed, for instance, that of a small keg, and I do not of course desire to confine myself to a bottle of any special design or shape. It is evident, also, that instead of wood, papier-mache may be employed, and other pulpy compounds may be formed into the shape of bottles, and then coated in the manner above described.

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

1. The preparation of bottles for receiving hydrofluoric acid, by coating them internally and externally with asphalt of coal-tar, or the herein-described composition of gum-shellac and India rubber, as set forth.
2. As an article of manufacture, a bottle, made of wood, papier-mache, or like material, coated externally and internally with a composition or varnish not affected by hydrofluoric acid, substantially as herein shown and set forth.
3. Making the bottle for holding hydrofluoric acid of wood, and in two parts or sections, united substantially in the manner and for the purposes shown and described.

In testimony whereof, I have signed my name to this specification before two subscribing witnesses.

D. P. WEBSTER.

Witnesses:

M. BAILEY,
A. POLLOK.