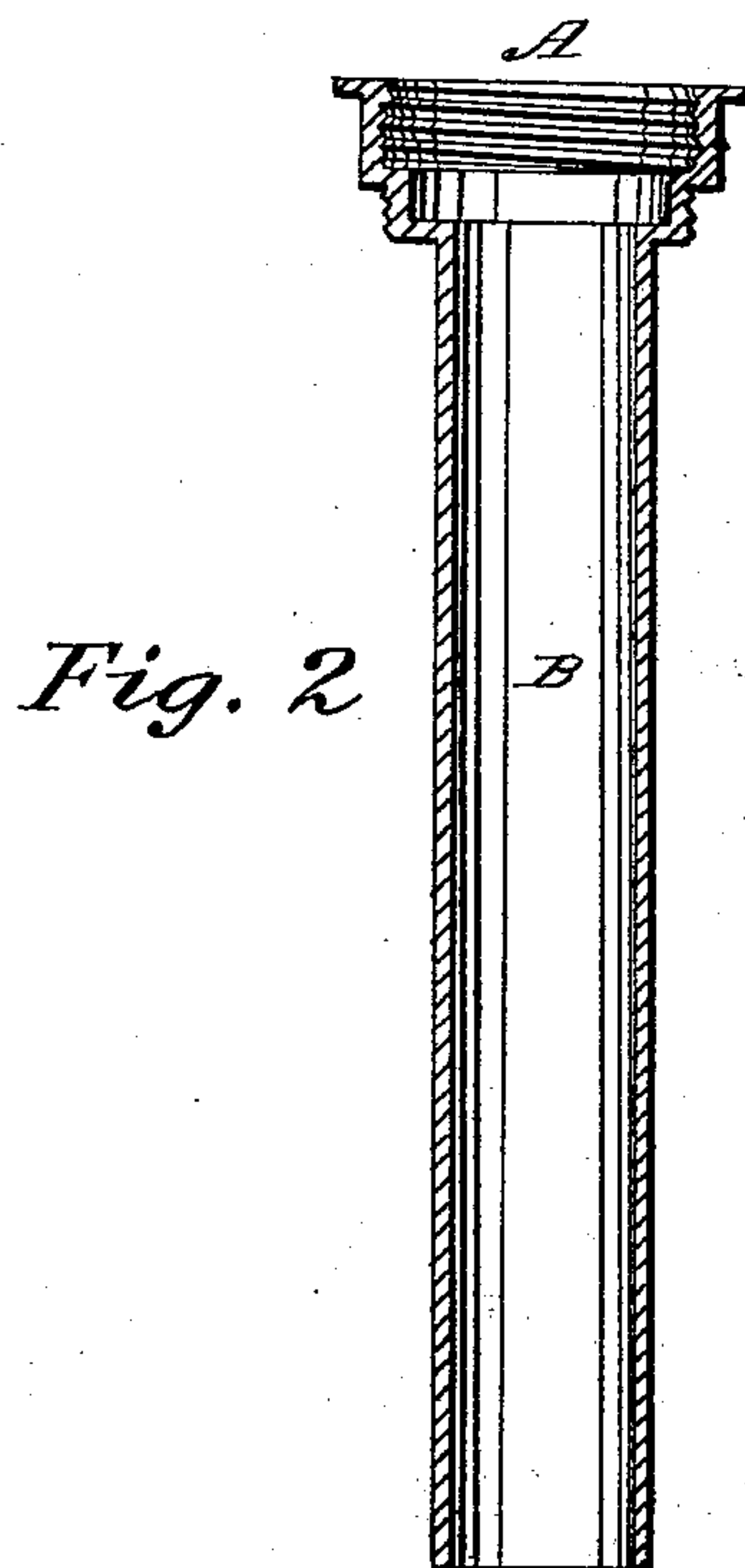
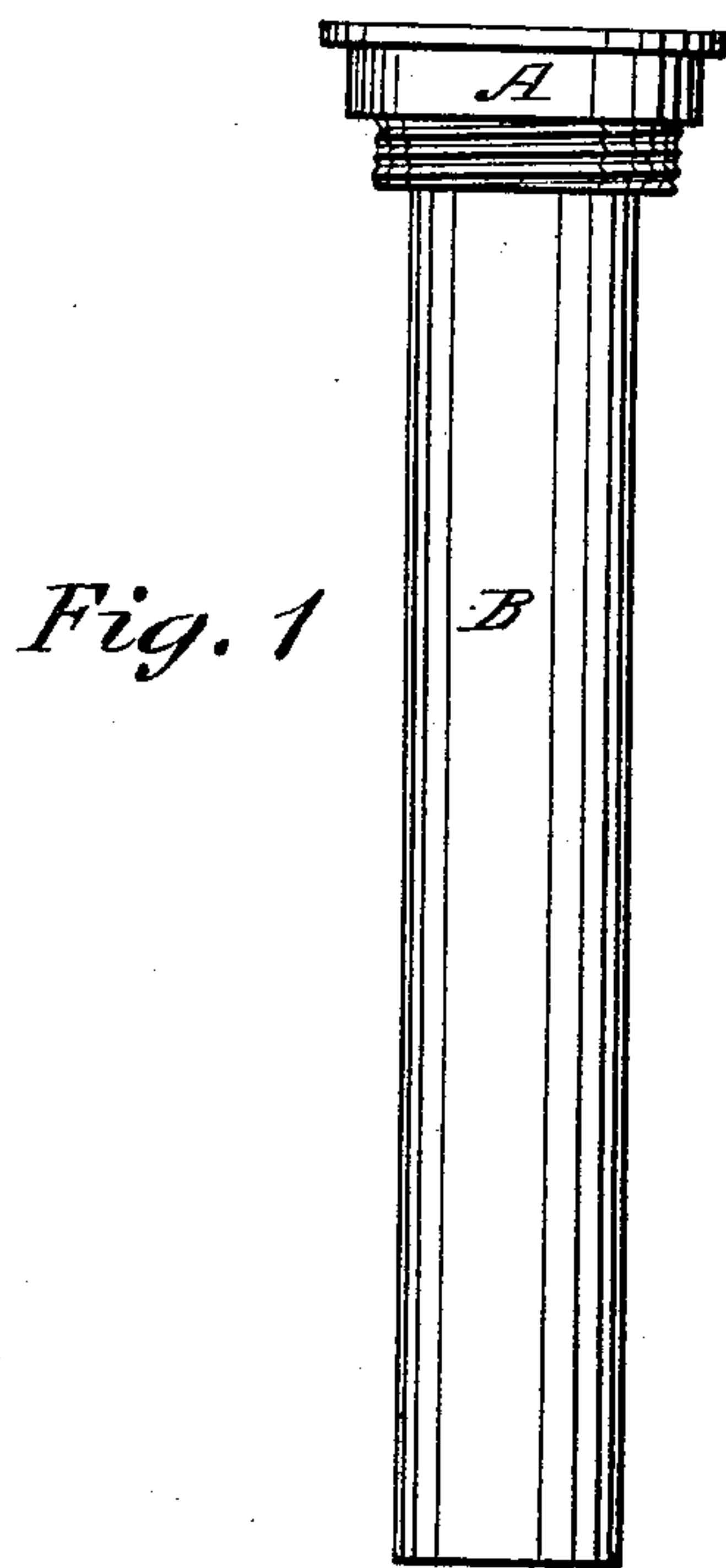


HOPKINS & STRAIGHT.

Lamp.

No. 109,735.

Patented Nov. 29, 1870.



Witnesses:

William Sanforth
H. C. Hayes

Inventors:

Geo M Hopkins
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United States Patent Office.

GEORGE M. HOPKINS AND JOHN A. STRAIGHT, OF ALBION, NEW YORK.

Letters Patent No. 109,735, dated November 29, 1870.

IMPROVEMENT IN SAFETY-TUBES FOR LAMPS.

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

We, GEORGE M. HOPKINS and JOHN A. STRAIGHT, of Albion, in the county of Orleans and State of New York, have invented certain Improvements in Safety-Tubes for Lamps, of which the following is a specification.

Nature and Object of the Invention.

Our invention consists in a tube made of non-conducting fibrous material and suspended within the reservoir of a lamp, for a purpose hereafter described.

Description of the Accompanying Drawing.

Figure 1 is a view of the thimble, with the tube attached.

Figure 2 is a longitudinal section of fig. 1.

General Description.

A is a thimble, which, in the present case, is threaded on the outside to screw into the lamp, and also on the inside to receive the burner.

B is a safety-tube, attached to the thimble A or to the lamp-burner, which is made of some non-conductor of heat, as hereinafter described, of sufficient length to reach nearly to the bottom of the lamp.

We make said tube of some fibrous material, and saturate it with a size or varnish which is not dissolved or softened by the fluid contained in the lamp.

For lamps intended for burning kerosene or rock oil we prefer to make the tube by coiling up paper around a suitable mandrel, and fastening the coils or layers, one upon the other, with glue or sizing, and saturating the tube with shellac or other varnish which will resist the action of the oil. This tube is then fastened to the thimble A or burner in any suitable manner.

The tube is to be suspended within the reservoir, either from the thimble, collar, burner, or otherwise. Its object is to prevent heat from the burner reaching the oil in the reservoir and generating gases therein, as also to prevent the return to the reservoir of those gases which are generated in the burner.

Claim.

We are aware that tubes reaching to the bottom of the lamp are not new; but

What we do claim is—

The tube B, made of non-conducting fibrous material, and suspended within the reservoir of a lamp, in the manner and for the purpose described.

GEO. M. HOPKINS.
JOHN A. STRAIGHT.

Witnesses:

WILLIAM DANFORTH,
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