

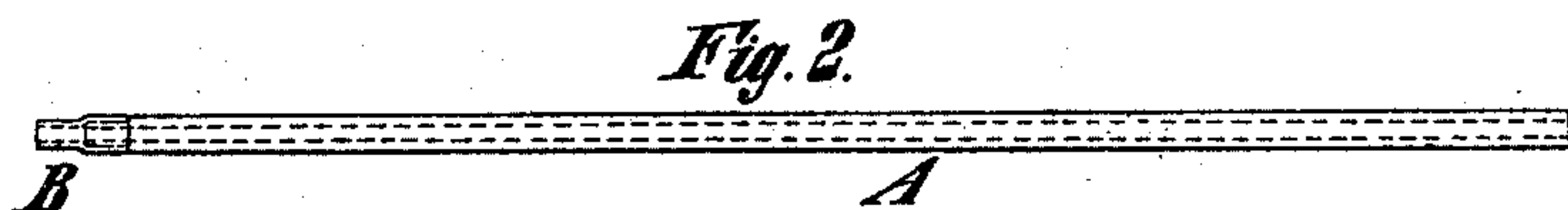
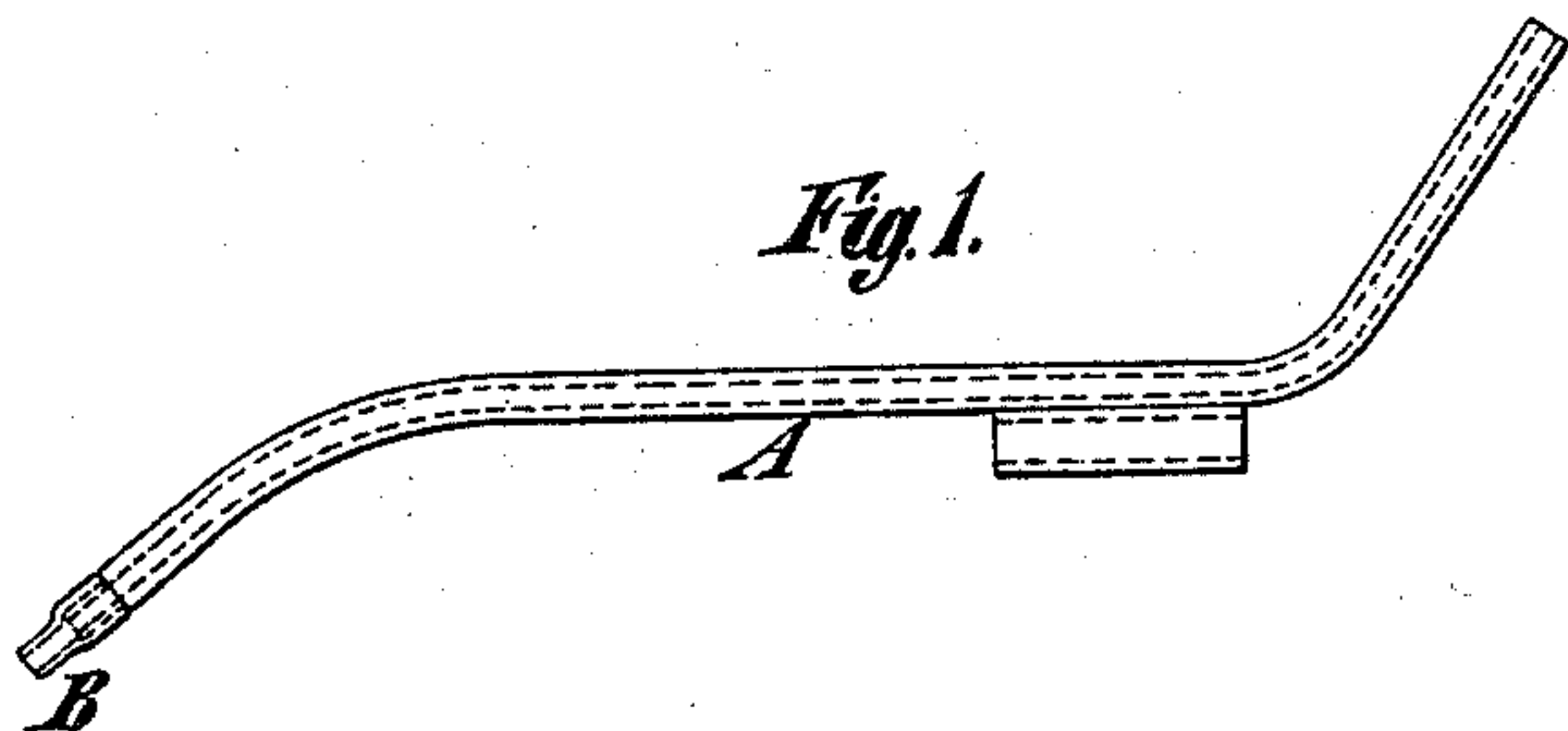
(No Model.)

C. G. SPENGLER,

PEN.

No. 299,283.

Patented May 27, 1884.



Witnesses:

A. L. Brown.

Olundgren

Inventor:

Christian G. Spengler,
by his attorney,
Edwin H. Brown.

UNITED STATES PATENT OFFICE.

CHRISTIAN G. SPENGLER, OF HOBOKEN, NEW JERSEY, ASSIGNOR TO JAMES DICKIE, OF BROOKLYN, NEW YORK.

PEN.

SPECIFICATION forming part of Letters Patent No. 299,283, dated May 27, 1884.

Application filed August 16, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN G. SPENGLER, of Hoboken, in the county of Hudson and State of New Jersey, have invented a certain new and useful Improvement in Pens, of which the following is a specification.

The principal object of my improvement is to produce a pen suitable for continued use in instruments wherein telegraphic messages are delineated with an ink or a liquid that is a non-conductor of electricity upon a roller made of material which is a conductor of electricity, so that the roller may be subsequently transferred to a machine, and there rotated rapidly for the purpose of transmitting the messages to a distant point; but my invention is also applicable to pens for painting or marking on glass and certain other materials.

The improvement consists in the combination, in a pen, of a tube of rigid material and a tubular point-section made of india-rubber, slightly smaller internally than the exterior of the end portion of the rigid tube and slipped over the same, and having an elliptical or ellipsoidal lower end.

In the accompanying drawings, Figure 1 is a side view of a pen embodying my improvement and adapted for use in an instrument such as I have described. Fig. 2 is a side view of a pen embodying my improvement, and especially adapted for marking on glass; and Fig. 3 is a view illustrating the end of each pen.

Similar letters of reference designate corresponding parts in all the figures.

In each example of my improvement, A designates a tube, which may be made of metal or other rigid and suitable material. Brass is preferred for its construction. This tube may be round or of any other desirable shape, and is to be sufficiently large internally to permit ink of a sirupy consistency, or paint, to flow through it. This tube is generally to be connected by a flexible pipe made of india-rubber or other suitable material, with a reservoir whence the ink or paint will be supplied to it.

The tube A, in each example of my improvement, has a point-section consisting of a short tube, B, of india-rubber, made elliptical or ellipsoidal at the lower end. This

point-section may be first made round, and then molded into elliptical or ellipsoidal form by the aid of heat and pressure; or it may be made elliptical or ellipsoidal in the course of manufacture in any suitable way. The point-section is made slightly smaller internally than the exterior of the end portion of the tube and is slipped over the latter.

The lower end of the tube A will preferably be reduced externally, so that the point-section may be slipped over it, and when slipped over it will be retained there by inherent elasticity, causing the same to hug tightly.

The making of the point-section B elliptical or ellipsoidal is advantageous for many reasons. Being of rounded form in cross section, it forms a continuous spring around its entire circumference, and is very flexible at all points, there being no corners which offer an increased resistance to flexure. It is not liable to become clogged, because it has no corners in which sediment can lodge, and because its flexure at all points in its circumference will tend to work out any sediment which might clog it; hence the pen is particularly suitable for a thick non-conducting ink in instruments of the kind before described. The elliptical or ellipsoidal point-section is also advantageous, because it can be moved with equal facility over the paper or other writing-surface without catching, whether the major axis of the section be parallel with the surface or not, and the point-section, when in any position, will have a sufficiently broad bearing on the writing-surface to work properly. The elliptical or ellipsoidal point-section will accommodate itself readily to any irregularities or inequalities in the writing-surface.

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

In a pen, the combination of a tube of rigid material and a tubular point-section made of india-rubber, slightly smaller internally than the exterior of the end portion of the rigid tube and slipped over the same, and having an elliptical or ellipsoidal lower end, substantially as herein described.

CHRISTIAN G. SPENGLER.

Witnesses:

T. J. KEANE,

JAMES R. BOWEN.