

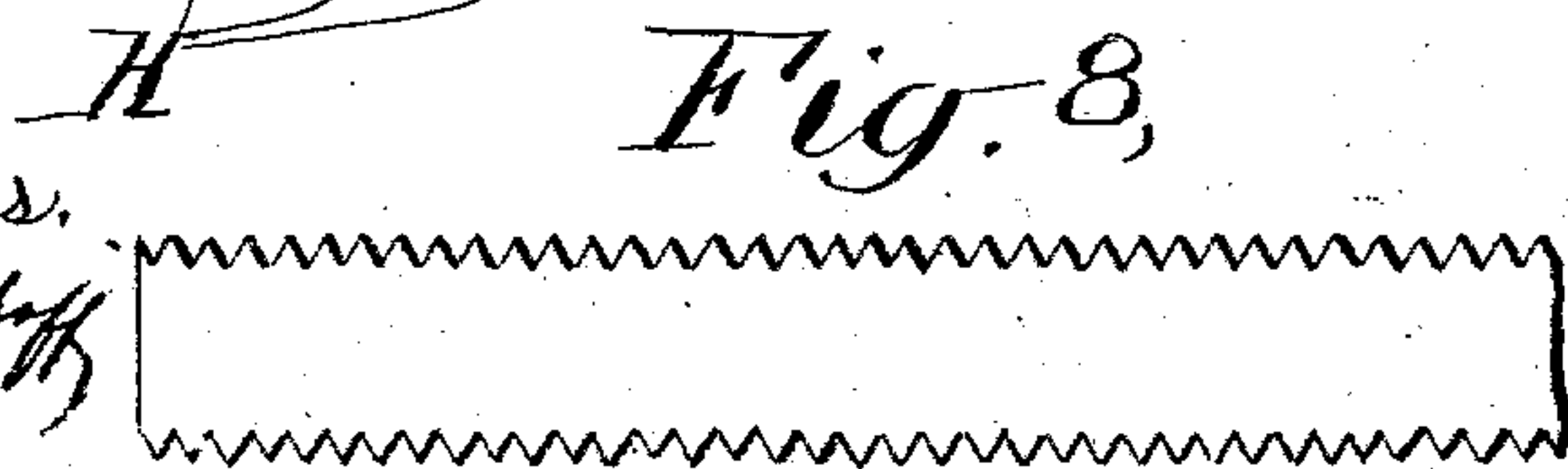
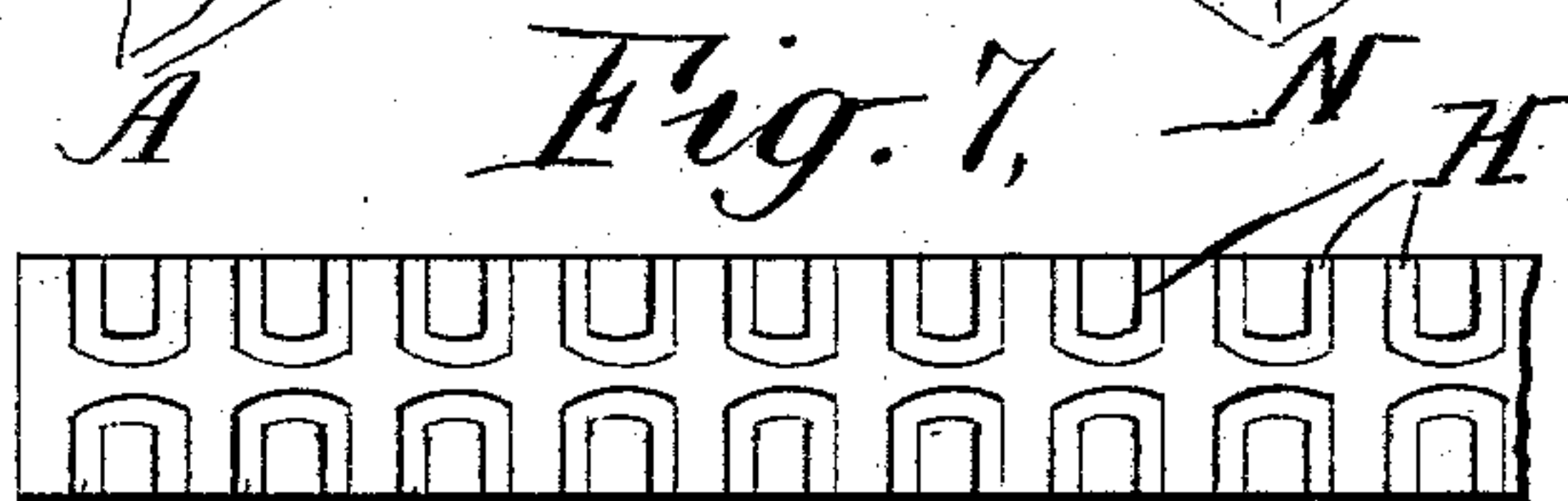
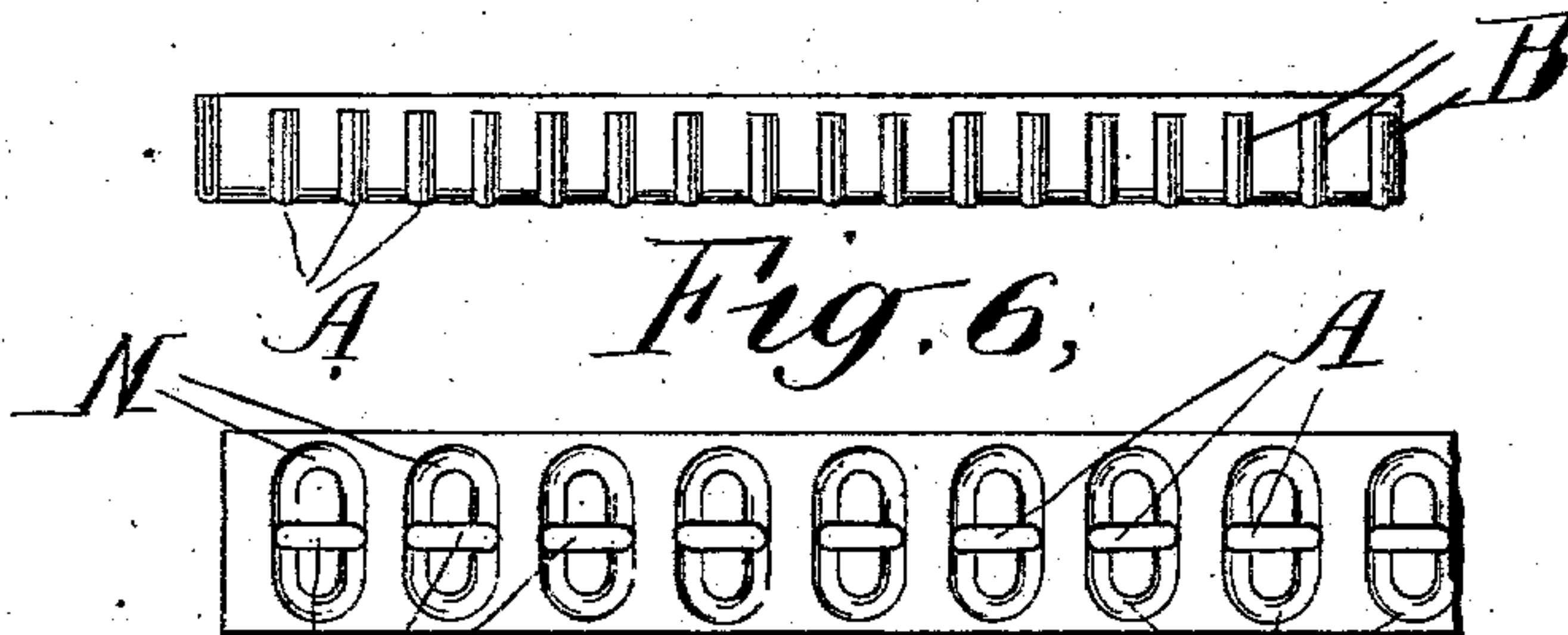
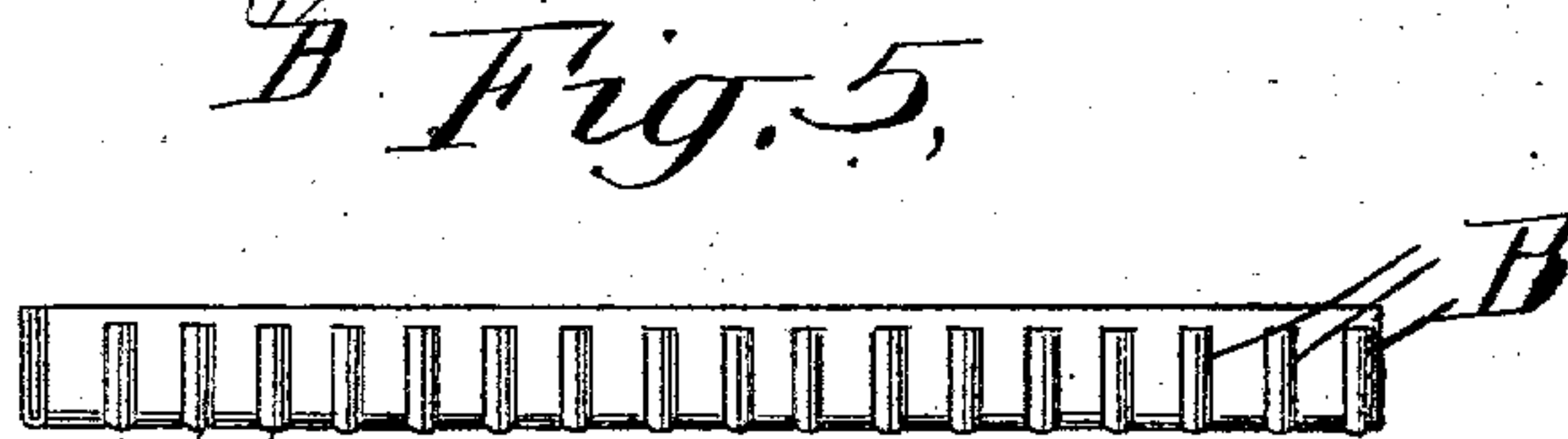
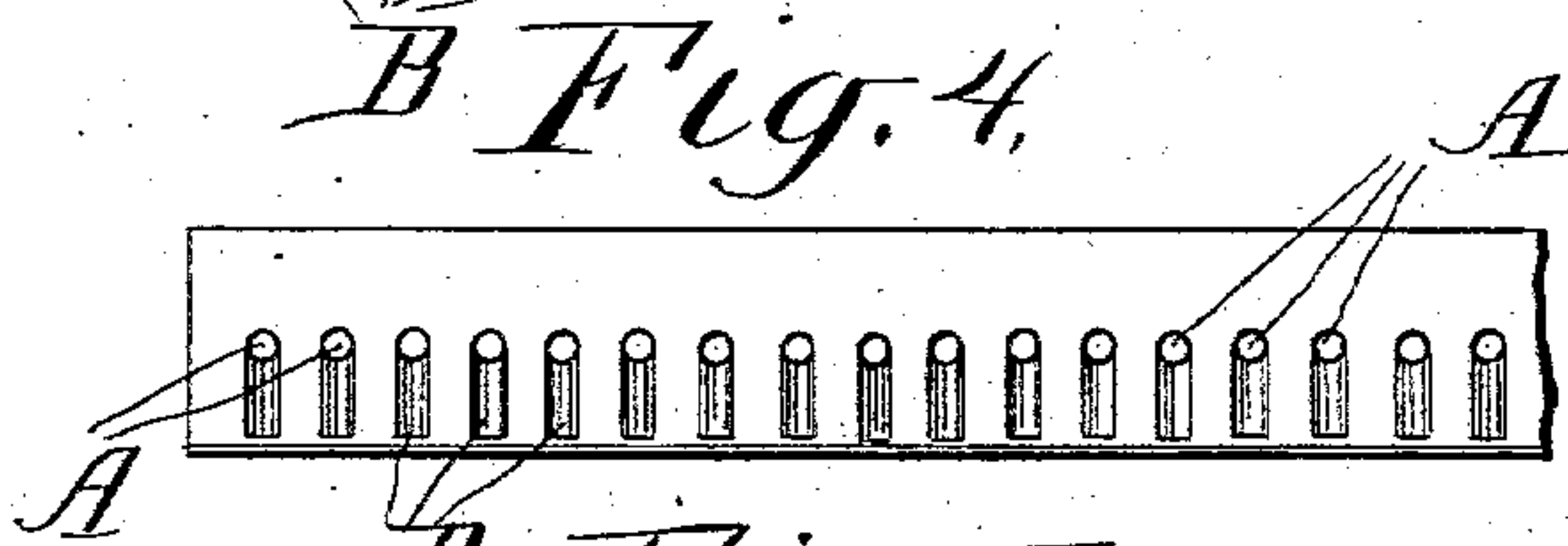
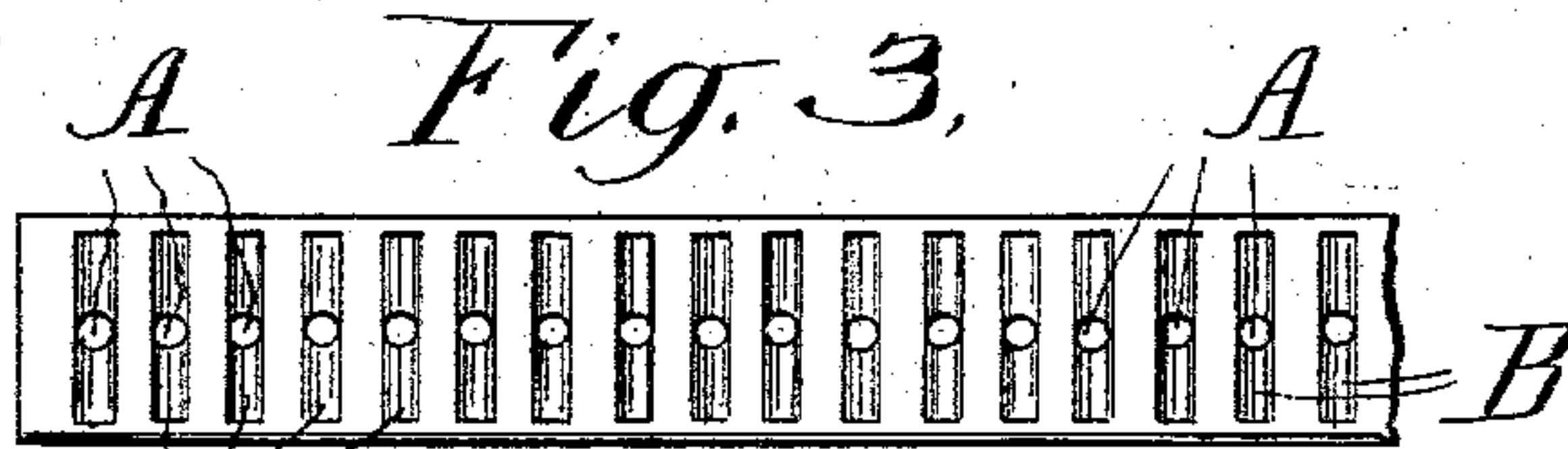
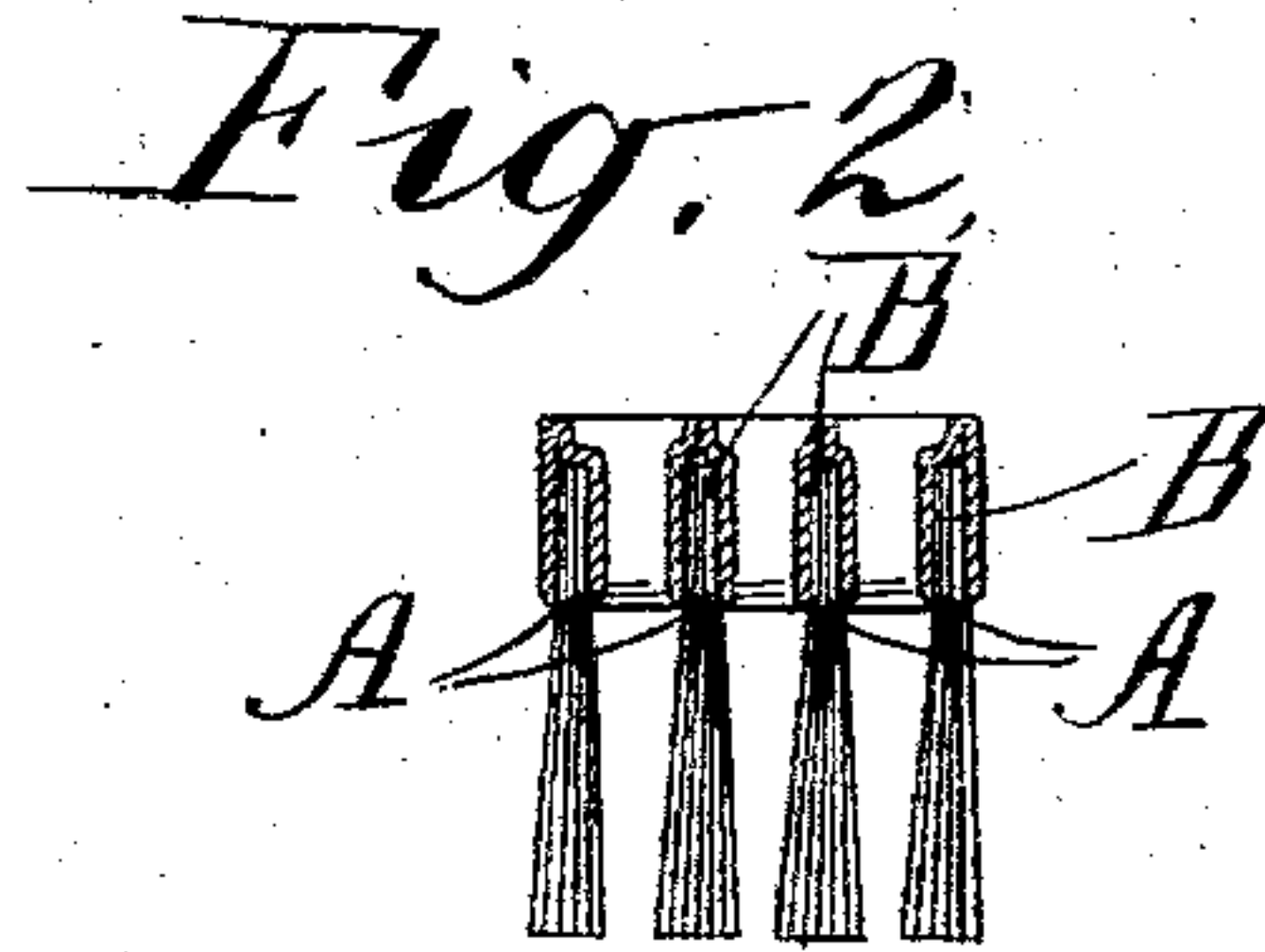
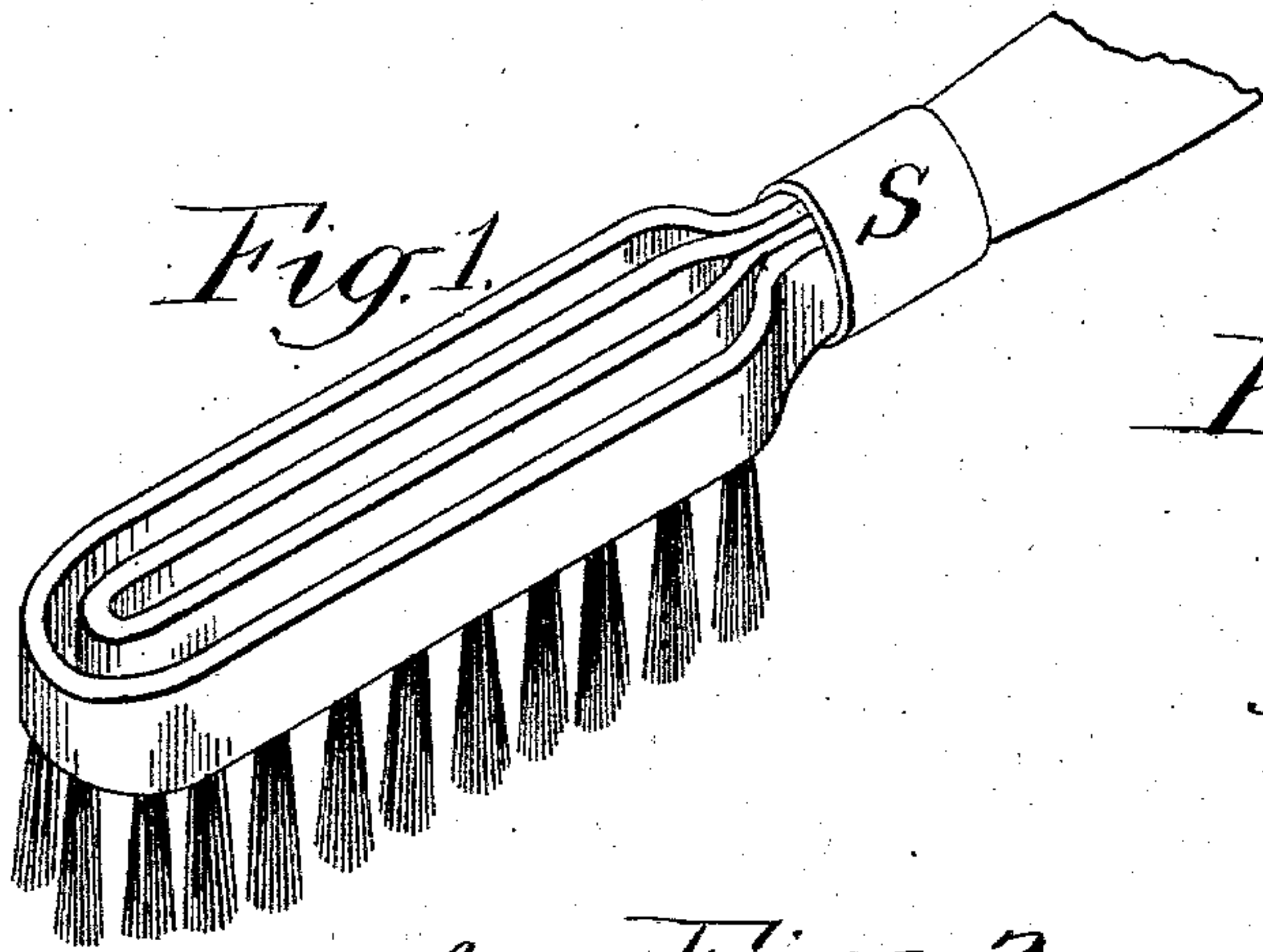
No. 730,497.

PATENTED JUNE 9, 1903.

W. WALLACH.
TOILET BRUSH.

APPLICATION FILED FEB. 11, 1902.

NO MODEL.



WITNESSES:

Harry Goss,
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UNITED STATES PATENT OFFICE.

WILLY WALLACH, OF NEW YORK, N. Y.

TOILET-BRUSH.

SPECIFICATION forming part of Letters Patent No. 730,497, dated June 9, 1903.

Application filed February 11, 1902. Serial No. 93,485. (No model.)

To all whom it may concern:

Be it known that I, WILLY WALLACH, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Toilet-Brushes, of which the following is a specification.

The object of my invention is to provide simple, inexpensive, and effective means for constructing toilet and other brushes with solid backs or open sanitary backs of any desired size or form and methods for securing therein bristles or other material used therefor.

Tooth and other toilet brushes are commonly made by inserting the bristles into perforated solid backs. Thus made it is quite impossible to keep them clean and free from microbes or noxious and offensive matter. I accomplish these much-desired objects in the following manner, reference being had to the accompanying drawings, which form a part of this specification, in which like letters refer to like parts.

Figure 1 shows a tooth-brush complete attached to section of handle; Fig. 2, cross-sections of Fig. 1; Fig. 3, a flat strip of metal indented crosswise and perforated in center of each indentation; Fig. 4, a flat strip of metal perforated in center of strip and indented on one side only; Fig. 5, a flat strip of metal indented and perforated and then bent into and showing a U shape; Fig. 6, a flat strip of metal having arched indentations, the free ends of which terminate from either side at elongated perforations; Fig. 7, a flat strip of metal having a double row of arched indentations the open ends of which terminate at the edge of the strip; and Fig. 8, a flat strip of metal having serrated edges.

First. My invention consists of strips of metal or other suitable material, preferably flat, of required thickness and width, perforated and indented, as shown in Fig. 3. A represents perforations; B, indentations. These strips are then formed by folding lengthwise into U shape. (See Fig. 5.) They may be of indefinite or of exact lengths. Into these shapes through the holes the bunched or tufted bristles are drawn, or set with the assistance of a wire or cord, and there fastened by closing together the sides of the shape, thus producing a tufted lineal brush, which may be divided into desired lengths and bent

to assemble the tufts to form a brush of plain or fanciful shape. (See Fig. 1, and cross-section, Fig. 2). In Fig. 1 a tooth-brush is shown, the outside bars, which give configuration, being smooth, the indentations or bristle-receptacles being on the inside, while the inner bars have the receptacles on either side. The ends of the bars are confined by soldering or cementing them into the flattened end of a socket, the free end of the socket being open to receive the handle, as shown.

Second. My invention further consists of strips of metal or other suitable material of required thickness and width perforated with elongated holes A (see Fig. 6) and indented at right angles with the elongated openings N, which form a receptacle for the bristles. These strips are then folded into U shape, as before described. Into the elongated holes the bristles are to be forced or drawn in a manner to form the tuft into a staple shape, the breadth of the staple being equal to the length of the hole, and to closely fit into the indentations which form a receptacle for them. The shape is then to be tightly closed within the prongs and curve of the staple, thus firmly holding the bristles and making it impossible for them to loosen or by any means be drawn out.

Third. My invention further consists of a strip of metal or other suitable material having indentations extending inward only a definite distance from either edge of the strip, so as to leave a blank space in the middle of the entire length of the strip between the opposing ends of the indentations. (See H in Fig. 7.) Thus prepared the strips are to be folded into U shape. Into the shapes the tufts of bristles in staple form are forced, with a suitable tool, through the open side. Then tightly close the strip between the prongs of the staple to the edge of the shape. By this method the bristles are positively fastened into the strip. The closed edge of the strip which is formed by the blank space will be smooth, the bristles extending out from the open side or face edge of the strip.

Lastly. My invention consists in fastening the free ends of the bars or strips, after the brush or a frame for an open-back brush has been formed, by inserting them and then soldering or cementing them in one end of a tu-

bular form, the other end to serve as a socket to receive the handle. (See S in Fig. 1.)

It may be noticed that the novelty of my invention and the principal features therein 5 described embody the use of flat strips of metal or other suitable material indented and wrought into shapes, as described and shown, for receiving and retaining bristles and other material for the construction of many grades 10 and shapes of brushes and cleaners, and that the use of such strips, when constructed substantially as described and shown, the bristles or other material can never escape from their confinement, and that the lineal 15 brushes constructed as described are especially adapted for the construction of open-back or sanitary brushes which will be extremely light and admit of being thoroughly cleansed by briskly agitating them in a body 20 of water or other cleansing fluid, and that, without departing from the object and merits of my invention, the frame of the brush may first be constructed of the U-shaped strips and then the bristles or other material inserted therein. (See Fig. 1.) 25

Brushes made of flat strips of material as I have described are especially adapted to be used with water or other liquids by which the bristles or other material can never be 30 loosened.

I deem it unnecessary to describe any special method or devices for forming the strip, as very ordinary mechanical skill will readily 35 devise and adapt simple tools for that purpose and for setting bristles or other material therein.

The details necessary to finish and ornament the brush I leave entirely with those skilled in the art.

40 Having described and shown my invention and its many adaptations, I do not broadly claim an open-back brush, as such of many designs are well known. I am also aware that flat strips of metal in tubular form have 45 been used in the construction of hair brushes; but

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

1. In the construction of toilet-brushes, flat 50 strips of metal provided with means for holding brush material and folded into U shapes, said shapes to be firmly closed to secure the brush material inserted therein, substantially as shown and described. 55

2. In the construction of toilet-brushes, flat strips of metal provided with indentations for receiving brush material, and folded into U shapes, said shapes to be firmly closed to secure brush material inserted therein, substantially as shown and described. 60

3. In the construction of toilet-brushes, flat strips of metal provided with indentations arranged adjacent and transversely to the edge of the strips, said strips folded into U shape, 65 the indentations forming recesses for brush material to be permanently secured therein by closing the shape, substantially as described and shown.

4. In the construction of toilet-brushes, flat 70 strips of metal provided with loop-shaped indentations B and folded into U shape, thus forming loop-shaped recesses to receive the brush material to be permanently secured therein by closing said shapes, substantially as shown and described. 75

5. In the construction of toilet-brushes, flat strips of metal provided with loop-shaped indentations B, slots A, and folded together, thereby forming recesses for the reception of 80 brush material inserted through the slots, said material to be secured therein by closing said strips, substantially as described and shown.

Signed at New York, in the county of New 85 York and State of New York, this 8th day of February, A. D. 1902.

WILLY WALLACH.

Witnesses:

W. J. ARMSTRONG,
JNO. D. GLANGE.