

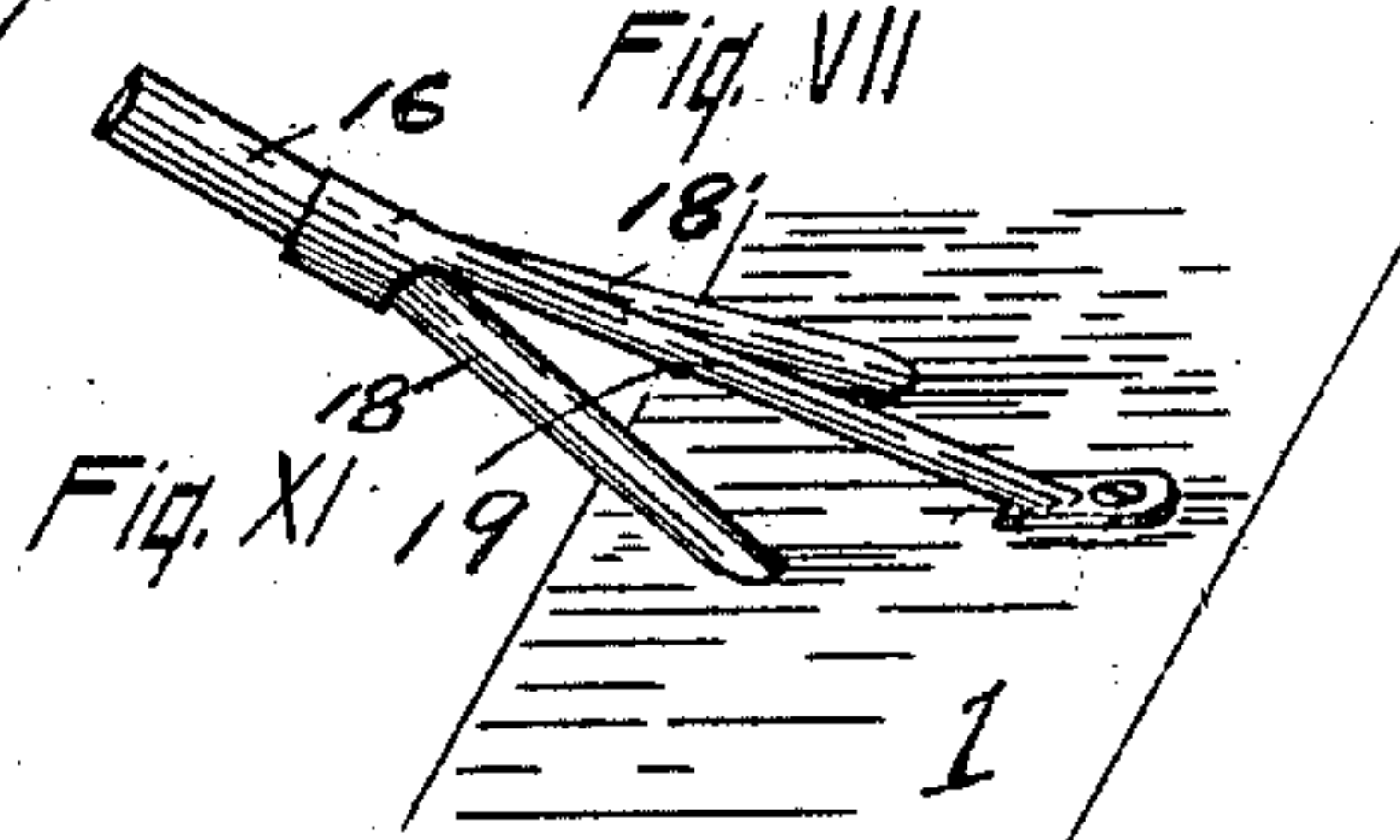
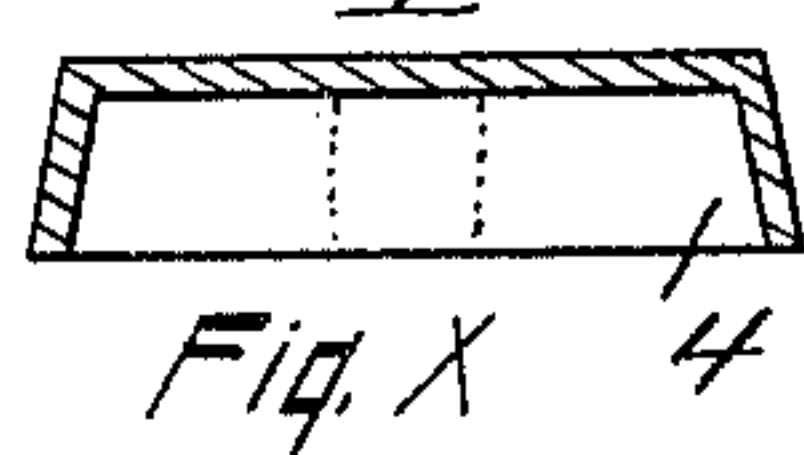
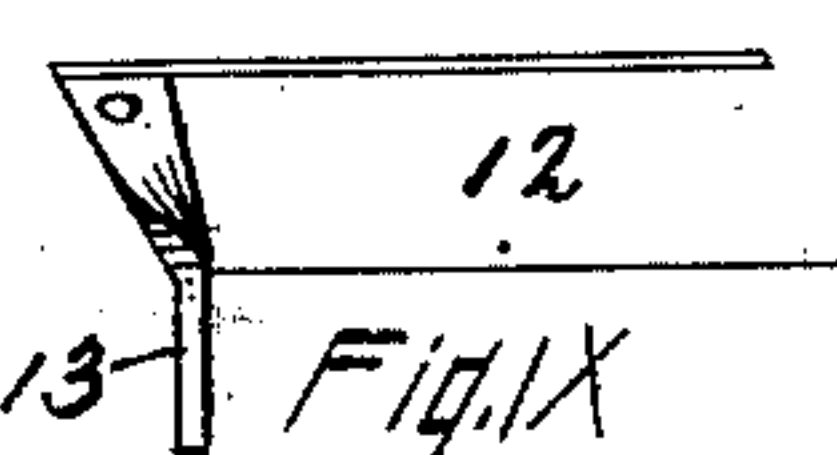
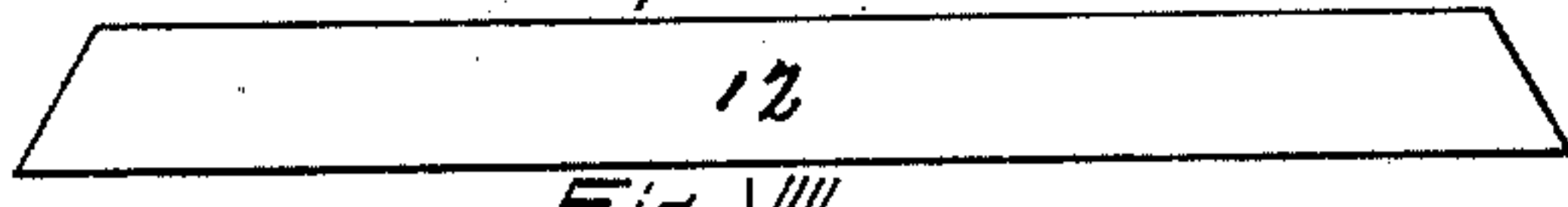
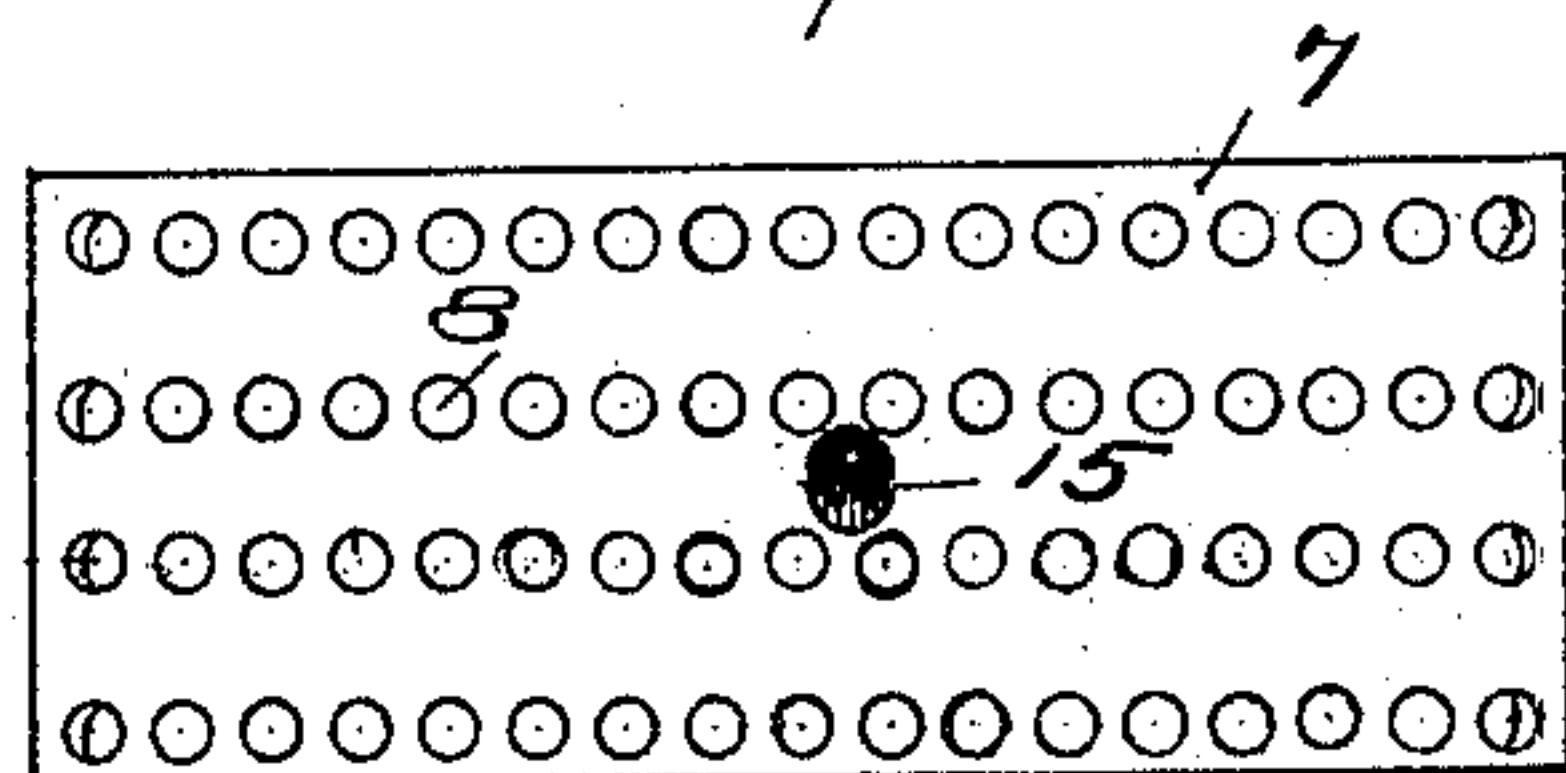
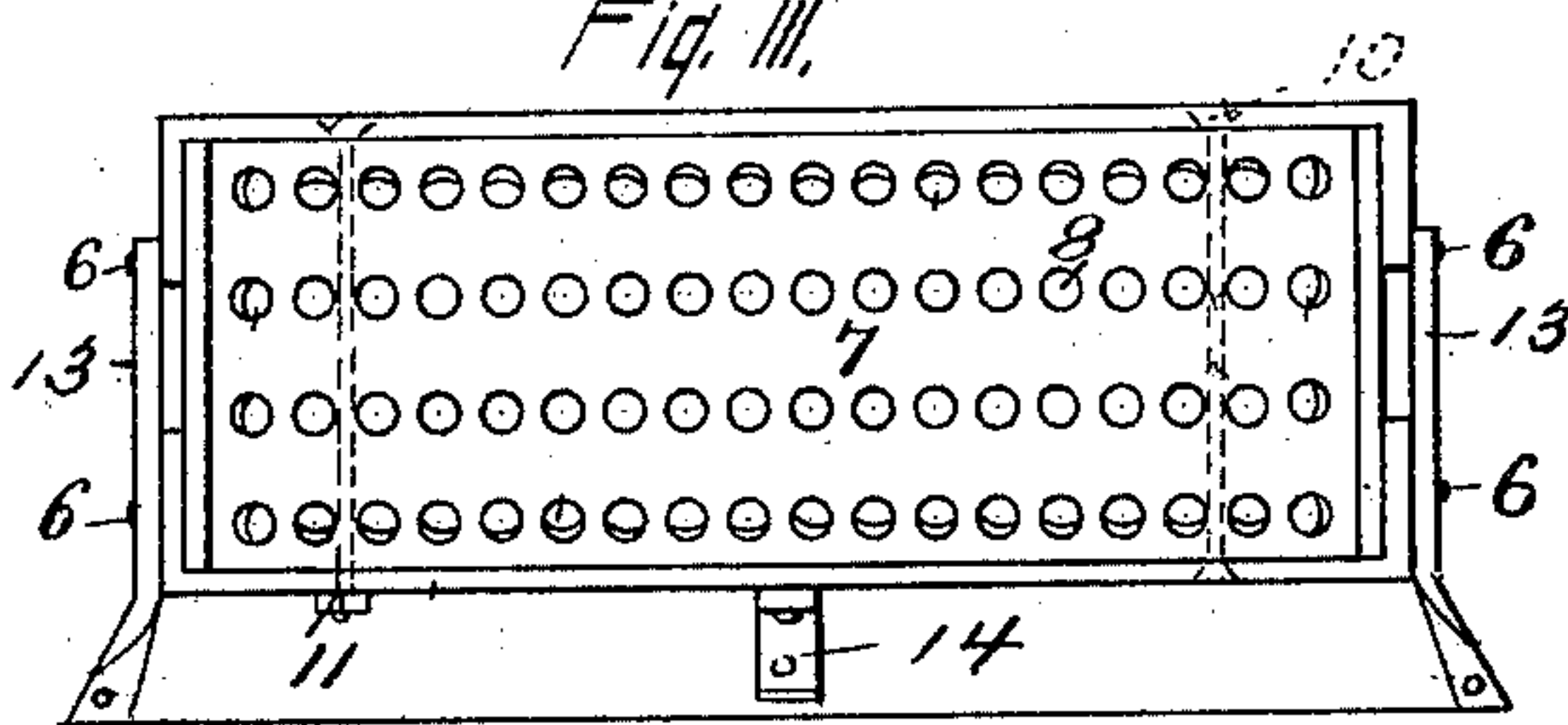
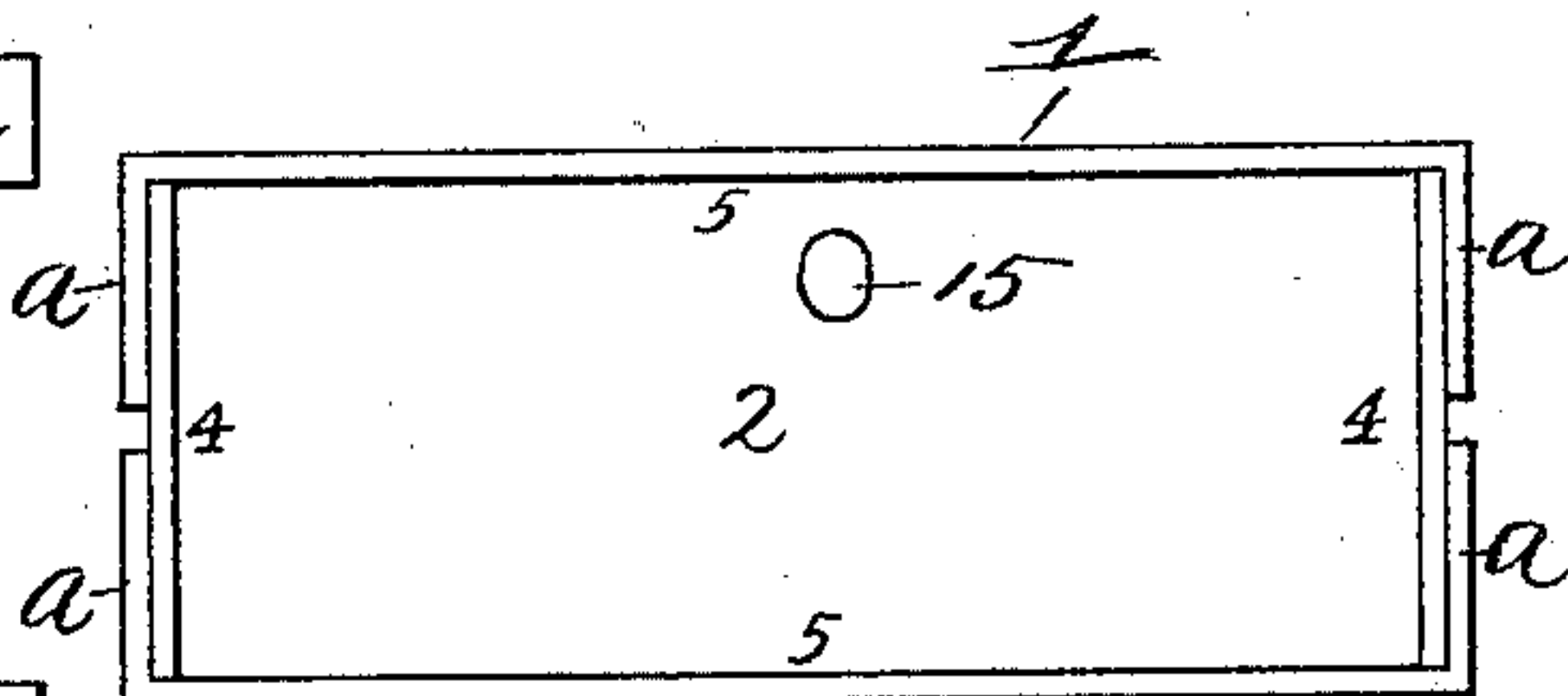
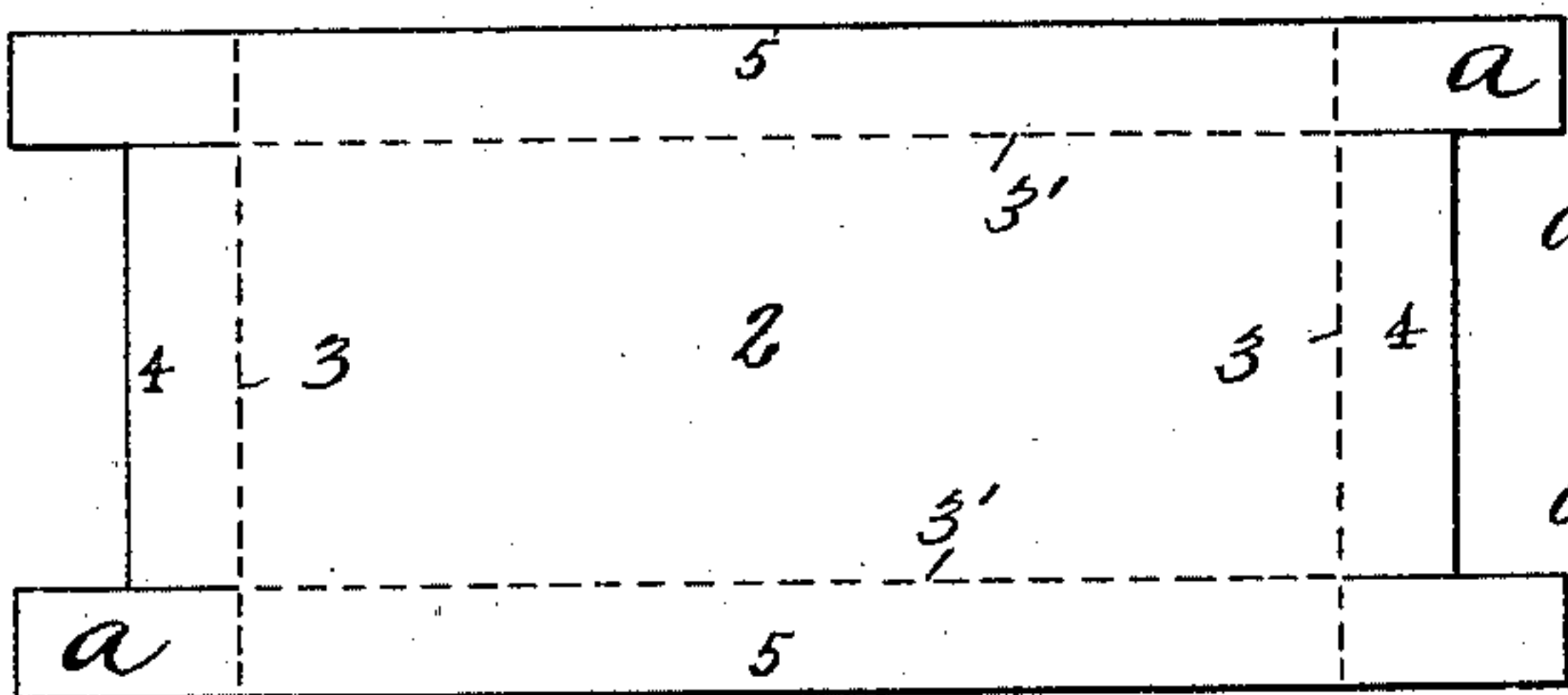
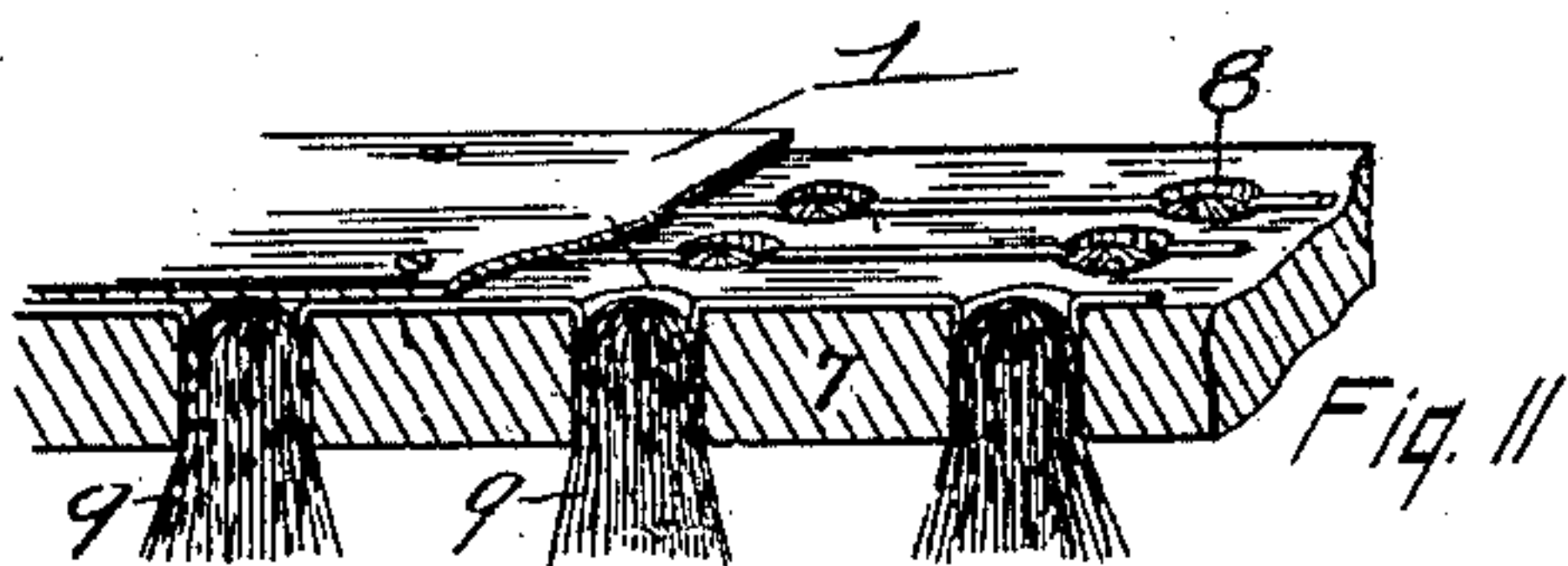
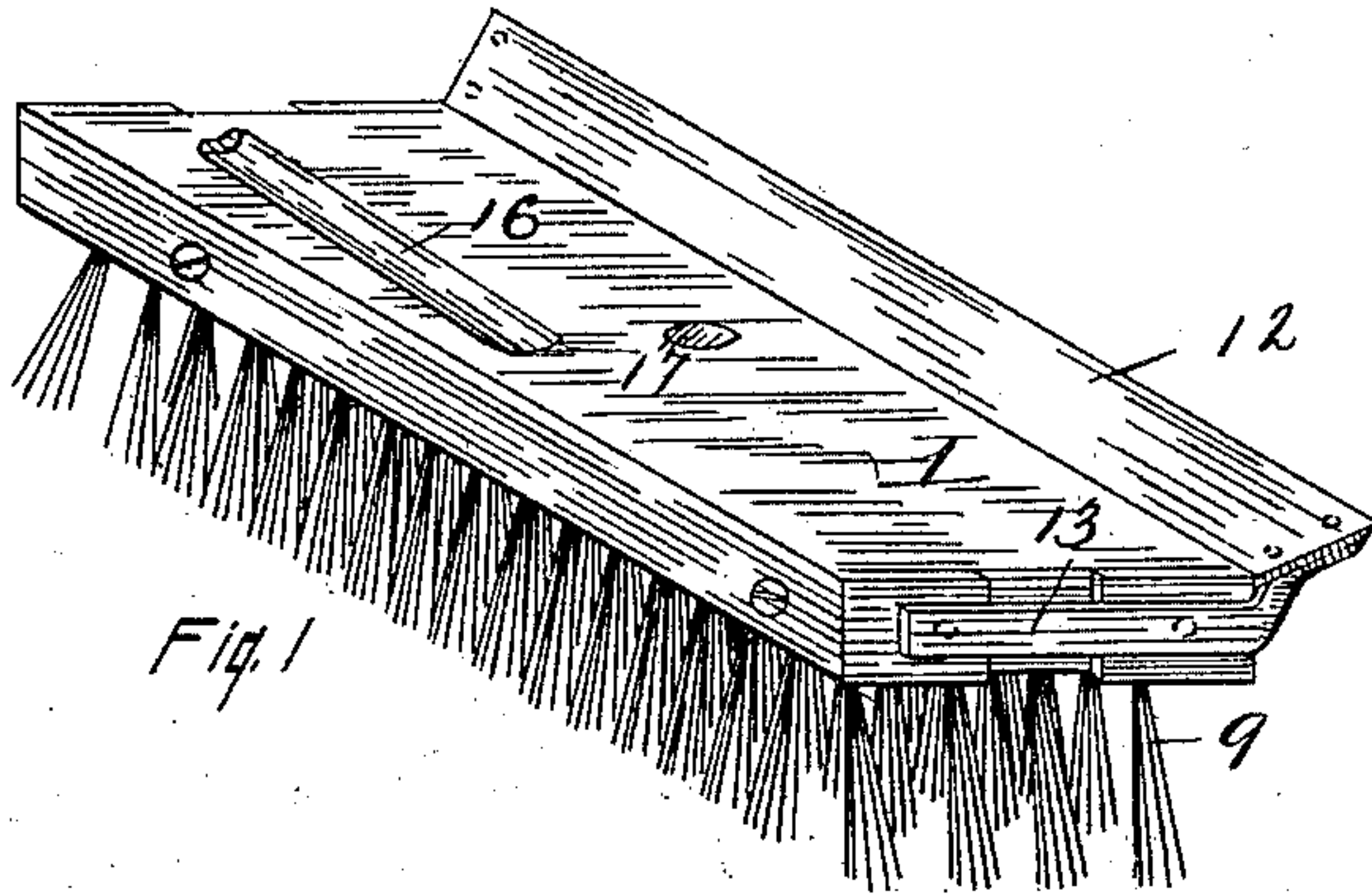
No. 684,549.

Patented Oct. 15, 1901.

J. McDERMOTT.
BRUSH.

(Application filed Jan. 16, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JAMES McDERMOTT, OF NEW YORK, N. Y.

BRUSH.

SPECIFICATION forming part of Letters Patent No. 684,549, dated October 15, 1901.

Application filed January 16, 1901. Serial No. 43,529. (No model.)

To all whom it may concern:

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

My invention relates to new and useful improvements in brushes used in street-cleaning and similar purposes, and has for its object a brush especially adapted for the work to be performed in the qualities of strength, durability, and reliability in use.

A further object is to provide a brush in which the parts subject to the most severe wear may be readily renewed.

Brushes used for street and stable cleaning and for similar purposes must of necessity be coarse and subject to rough usage. The striking of the ends of the stiff bristles has a tendency to drive them through the brush-back, and to prevent this the holes in the block are bored entirely through the block, and thus the block supports the bristles throughout its entire thickness and renders the wiring of the bristles easy of accomplishment. To protect and conceal the wiring, I provide a metallic casing so formed as to be conveniently secured to the brush-block, and one which will prevent the brush-block from warping or splitting from moisture or severe use.

In the drawings illustrating my invention, Figure 1 is a perspective of a brush constructed in accordance with my invention. Fig. 2 is a detail sectional perspective view of a portion of the brush-back and casing, showing clearly the manner in which the block is bored and the bristles wired. Fig. 3 is a plan view of a metallic blank from which the casing may be formed. Fig. 4 is a similar view of the casing thus formed. Fig. 5 is a plan view of the bottom of the casing with the brush-block therein and the scraper thereon. Fig. 6 is a plan view of the block. Fig. 7 is a longitudinal section of same. Fig. 8 is a plan of scraper. Fig. 9 is a detail view of scraper with securing-bracket attached. Fig. 10 is a section of a slightly-modified form in which the casing may be made; and Fig. 11 is a detail perspective view of a modi-

fication, showing manner in which the handle may be attached to the casing.

Referring to the drawings, the numeral 1 indicates the metallic casing, the same being preferably made from a blank 2, cut so as to be bent upon dotted lines 3, making the ends 4, and, bending upon the lines 3', forms the sides 5 of the casing. Finally, the ends *a* are bent around upon the ends 4, and rivets 6, through the parts *a* and 4, complete the casing. The casing thus formed is adapted to receive the block 7, in which I provide holes 8, bored, preferably, the same diameter entirely through the block. The holes in the ends of the block are bored at an angle, so as to protect the points of the end bristles, and this same inclination is given the holes adjacent to the sides of the block. In a block thus bored the bristles 9 are inserted as shown in Fig. 2, and are wired in the usual manner, the bristles having the advantage of the support of the entire thickness of the block and the wiring being greatly facilitated by the large size of the holes. The block is made to fit snugly the casing and is secured therein, preferably, by screws 10, or it may be done by means of bolts passing through the block, as at 11.

The casing forms a substantial foundation for the attachment of a scraper 12, a foundation that takes the strain of use of the scraper entirely from the brush-block. The scraper 12, Fig. 9, is of the usual form of blade, except the flanges integral with the blade by which it is fastened to the brush-block are omitted. Brackets 13, that may be of bar metal and twisted into shape or of malleable or steel castings, are riveted to the ends of the casing, as shown, and the scraper is riveted to these brackets, as in Fig. 5, and a central bracket 14 may be added to stiffen the scraper. The ends of the scraper are often employed to dig and clean out corners and crevices and must be of sufficient strength for this purpose.

Holes 15 are provided in both the casing and brush-block to receive the handle 16. As it is sometimes desirable to reverse the handle, so that the scraper may be used in the manner of a hoe, an additional hole 17, Fig. 1, may be provided.

It may be desirable in some cases to form the casing so that the brush-block may be

pressed into it, thus making a more secure fastening, and in such cases the casing would be given more or less flaring sides, as illustrated in Fig. 10.

5 The strain of the handle upon a wooden brush-block is considerable, and to distribute this strain a bifurcated handle may be employed in the manner shown in Fig. 11, the handle 16 terminating in prongs 18 18'. The
10 addition to the handle of a brace 19 further distributes the strain and divides it between the brush-block and the casing.

Just the position the bristles will be held in in the holes in the brush-block by the wires
15 and the top plate of the casing will be seen in Fig. 2.

The brush made in accordance with my invention and illustrated in Fig. 1 embodying the improvements herein set forth in their
20 combination make a brush not only efficient, stronger, and durable, but introduce the economical feature of the renewals of the brush-plate and effect a reduction of the cost of the brush in any service in which it may be re-
25 quired.

Having thus fully described my invention, what I claim is—

1. In a brush the combination with a brush-block having bristle-holes made entirely
30 through the block, said holes having straight side walls so that the bristles are supported for the entire thickness of the block, of a metallic casing or backing having side and end flanges fitting over the sides and ends of the
35 brush-block and having projections bent around the corners of said brush-block, substantially as specified.

2. In a brush, the combination with a brush-block, of a metallic casing or backing having flanged sides and ends adapted to incase the
40 sides and ends of the brush-block, said casing or backing being provided with projections *a*, adapted to be bent around the corners of said brush-block, and a bifurcated handle provided with a central brace. 45

3. As a new article of manufacture, a brush having a metallic casing or backing, the casing being provided with side and end flanges fitting over the sides and ends of the brush-
50 block, and having projecting end pieces bent around the corners of said brush-block, and end brackets secured to the projections *a* and the ends of the casing, and a scraper-blade secured thereto.

4. As an article of manufacture, a brush-
55 block having bristle-holes made entirely there-through, said holes having straight side walls so that the bristles are supported for the entire thickness of the block, a metallic backing or casing having side and end flanges fit-
60 ting over the sides and ends of the brush-block and having projections bent around the corners of said brush-block, and brackets secured to said projections and ends of the casing and having a scraper-blade secured
65 thereto.

Signed at New York, in the county of New York and State of New York, this 8th day of January, A. D. 1901.

JAMES McDERMOTT.

Witnesses:

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