

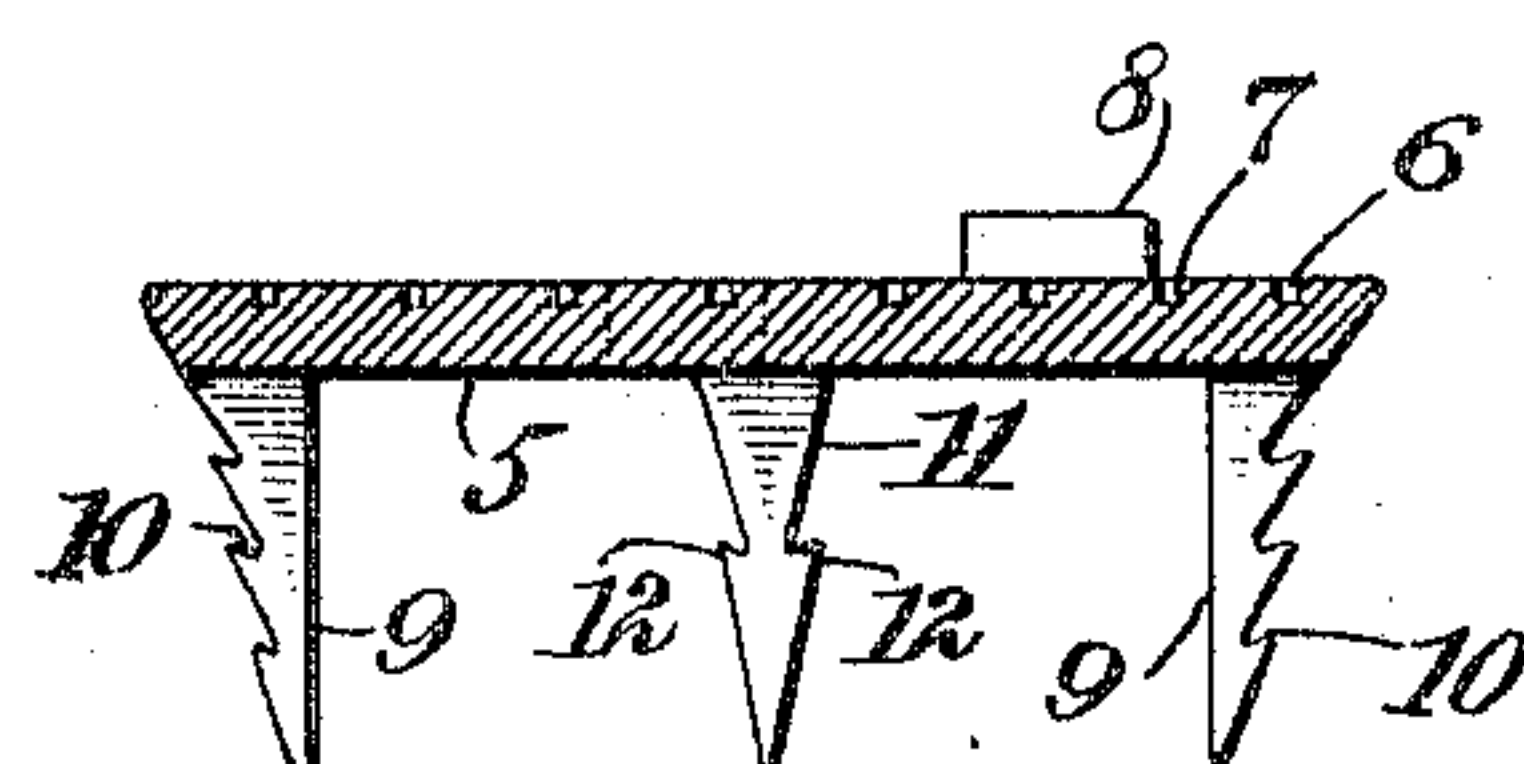
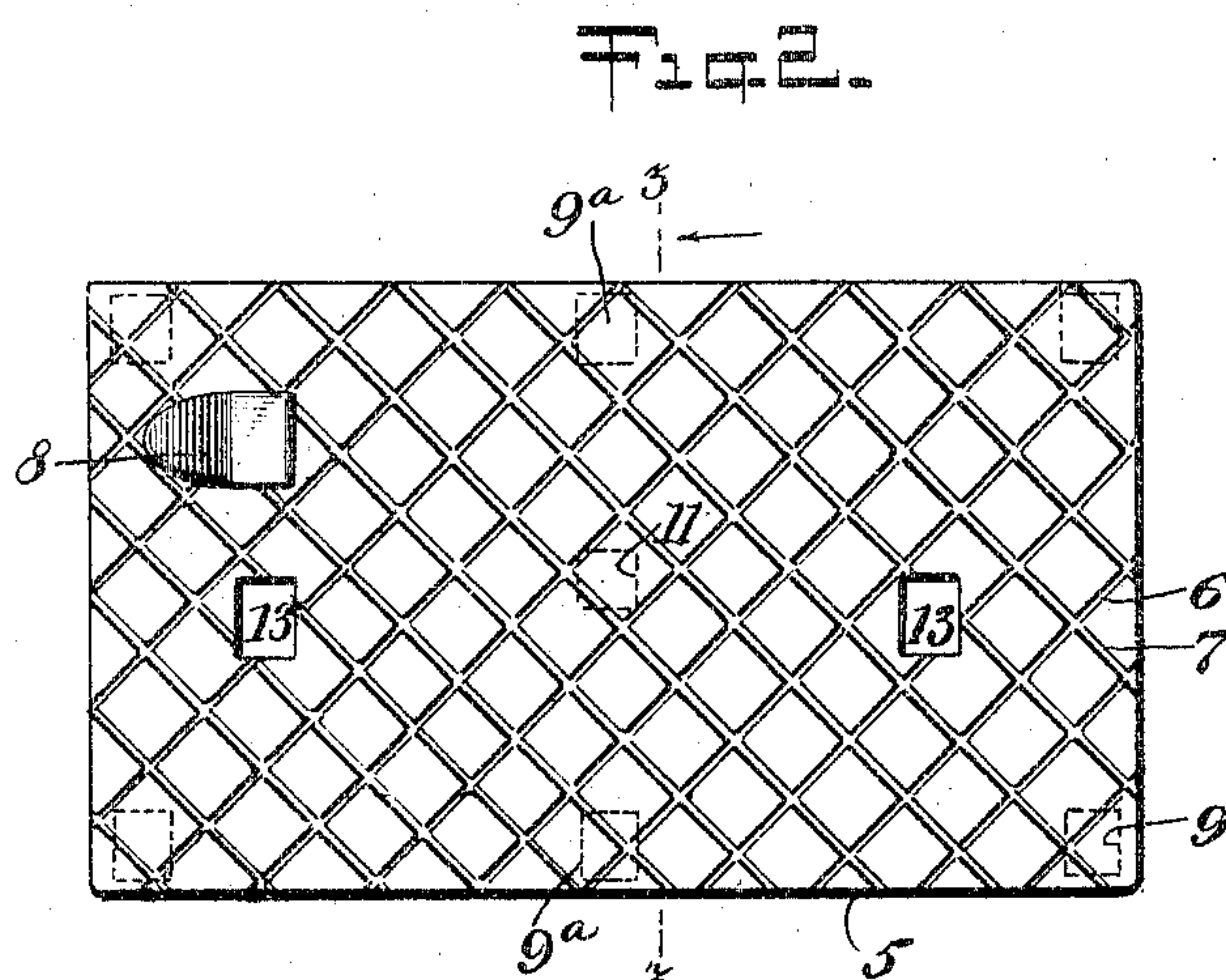
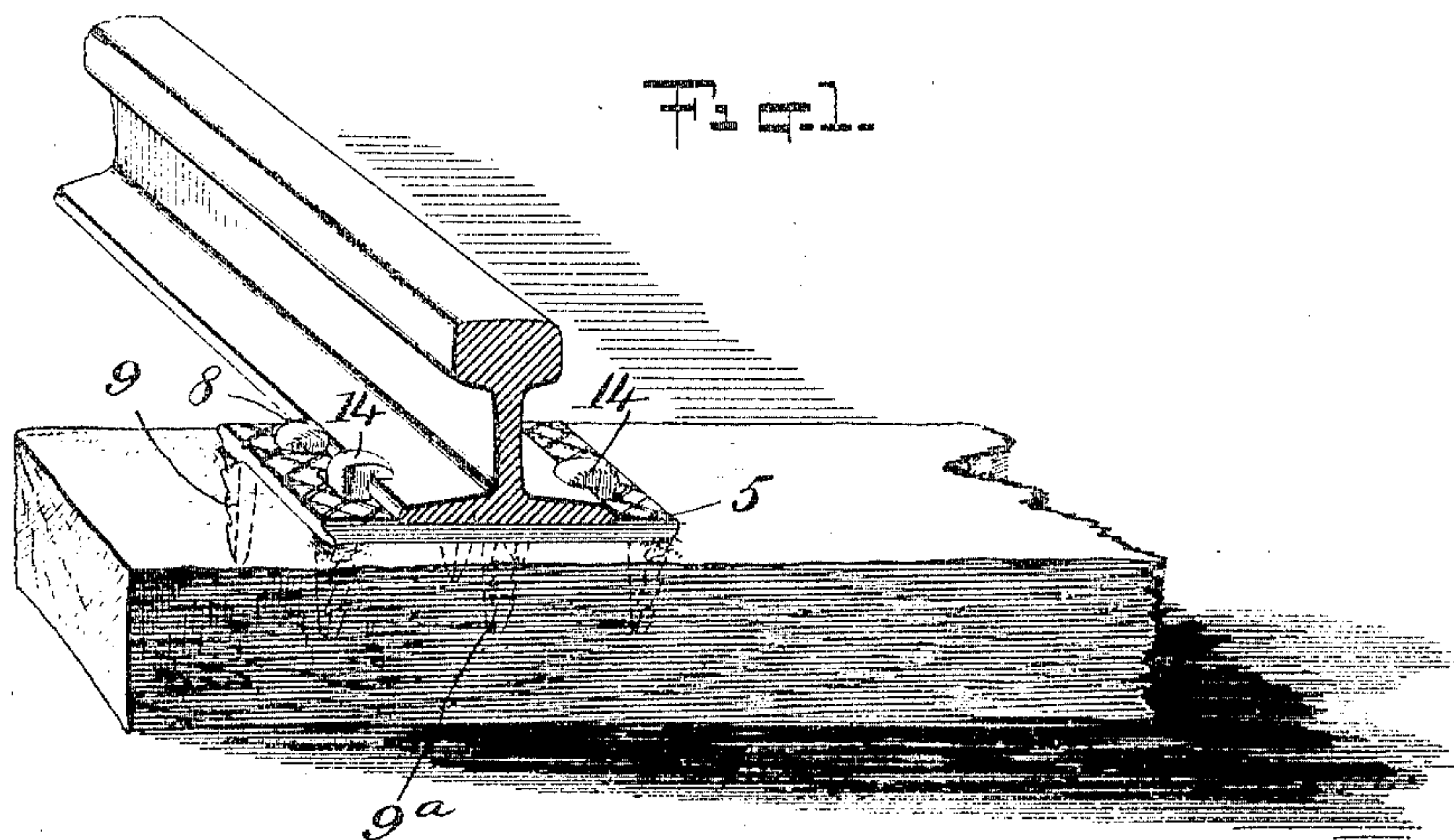
No. 776,442.

PATENTED NOV. 29, 1904.

B. S. WASSON.
TIE PLATE.

APPLICATION FILED DEC. 30, 1903.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

BUREN S. WASSON, OF CHICAGO, ILLINOIS.

TIE-PLATE.

SPECIFICATION forming part of Letters Patent No. 776,442, dated November 29, 1904.

Application filed December 30, 1903. Serial No. 187,205. (No model.)

To all whom it may concern:

Be it known that I, BUREN S. WASSON, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Tie-Plate, of which the following is a full, clear, and exact description.

This invention relates to improvements in railway tie-plates, the object being to provide a tie-plate so constructed that when secured on a tie it will not buckle or work loose, also providing protection for the tie from cutting or wear from the rail-base and furnishing a novel means for rigidly securing the plate to a tie without danger of splitting the tie.

Other objects of the invention will appear in the general description.

I will describe a tie-plate embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a tie-plate embodying my invention. Fig. 2 is a plan view thereof, and Fig. 3 is a section on the line 3 3 of Fig. 2.

Referring to the drawings, 5 designates a metal tie-plate designed to be placed underneath a rail and secured to the tie, as indicated in Fig. 1. On its upper surface the plate is provided with outwardly-opening crossed channels 6 7, extending to the margins of the plate, and on the top of the plate is a lug 8, which is designed to engage against the base of the rail to prevent the spike from shearing. On the under side of the plate at the corners are spikes 9, and at the sides are spikes 9^a, which are to be driven into the wooden tie. These spikes are wedge-shaped and have ratchet-teeth 10 on one edge, which will prevent the plates from working loose, the wood fibers overlapping the iron fastenings. At the center of the plate is a spike 11, which has teeth or shoulders 12 at its opposite edges. It will be noted that the spikes are of uniform size, and the greatest width of the spikes is in the direction of the length of the plate

or in the direction of the length or grain of the tie, and thus the spikes may be readily driven into the tie without danger of splitting the wood. The plate is provided with openings 13 for the rail-securing spikes 14.

A tie-plate constructed as above described is especially designed for use upon railway-ties in which the grain is not perfectly straight and into which for this reason tie-plates provided with longitudinal flanges upon their under surfaces could not be successfully secured. By placing the spikes at the corners of the improved tie-plate and at the sides intermediate of the corners a perfect securing means for the tie-plate is provided; but all danger of splitting an ordinary tie when the tie-plate is applied thereto is obviated. The spikes provided on the under side of the improved tie-plate are provided at one edge with ratchet-teeth to prevent the spikes from working loose in the tie, and in order to secure a maximum holding effect the ratchet-teeth are formed upon the outer edges of the spikes, while the general construction of the spikes enables them to be inserted with a minimum of labor.

The provision of the crossed channels upon the upper surface of the plate extending to the margins of the plate is made to insure the removal from the upper surface of the plate of all dirt, sand, or grit which tends to accumulate upon plates not provided with such channels and by working under the rail-base to cause a considerable amount of wear of the tie-plate. To effect the removal of accumulations of sand and grit from the tie-plate without materially diminishing the supporting-surface upon which the rail rests, I make use of a relatively large number of small grooves or channels, as shown, the channels being ordinarily spaced about three-eighths of an inch apart. The same result has been sought, as I am aware, previous to my invention by the formation of large channels upon the upper surface of the tie-plate; but these are decidedly objectionable because they diminish the area of support for the rail-base and impart to the tie-plate a tendency to buckle and also provide an inferior support for the

rail. The arrangement of the grooves or channels in the manner shown insures drainage from the tie-plate in all directions, thus adapting each plate for use upon ties whose top surfaces are inclined in any of the directions which may be necessitated by the curvature of the track or the grade thereof.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

10 1. A metal tie-plate having a plurality of tapering spikes formed on its under side, the said spikes being of substantially rectangular cross-section and provided with ratchet-teeth.

15 2. A metal tie-plate having spikes extended from its under side, the said spikes being wedge-shaped of uniform size and having teeth on one edge.

20 3. A metal tie-plate having spikes on its underside, the said spikes each having ratchet-teeth upon its outer edge and having their greatest width extended lengthwise of the plate or in the direction of the grain in a rail-way-tie.

25 4. A metal tie-plate having toothed wedge-shaped spikes formed on its under side at the

corners and sides, and a toothed spike at the center.

5. A metal tie-plate having fastening-spikes formed on its under side and having openings for rail-fastening spikes, and a brace-lug 30 formed on the upper side of the plate and so placed as to receive strain only after the rail-fastening spike becomes ineffective.

6. A metal tie-plate having crossed channels in its upper side which extend to the margins 35 of the plate, wedge-shaped toothed spikes formed on the under side of the plate, and a brace-lug formed on the upper side of the plate.

7. A metal tie-plate, provided upon its upper surface with crossed channels disposed at oblique angles to the margins of the plate and extending to said margins. 40

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 45

BUREN S. WASSON.

Witnesses:

ELIZABETH H. CLAUSEN,
ANNA WIEHLE.