No. 619,428.

Patented Feb. 14, 1899.

W. E. MILLER.

SWITCH STAND.

(Application filed Aug. 5, 1898.)

(No Model.)

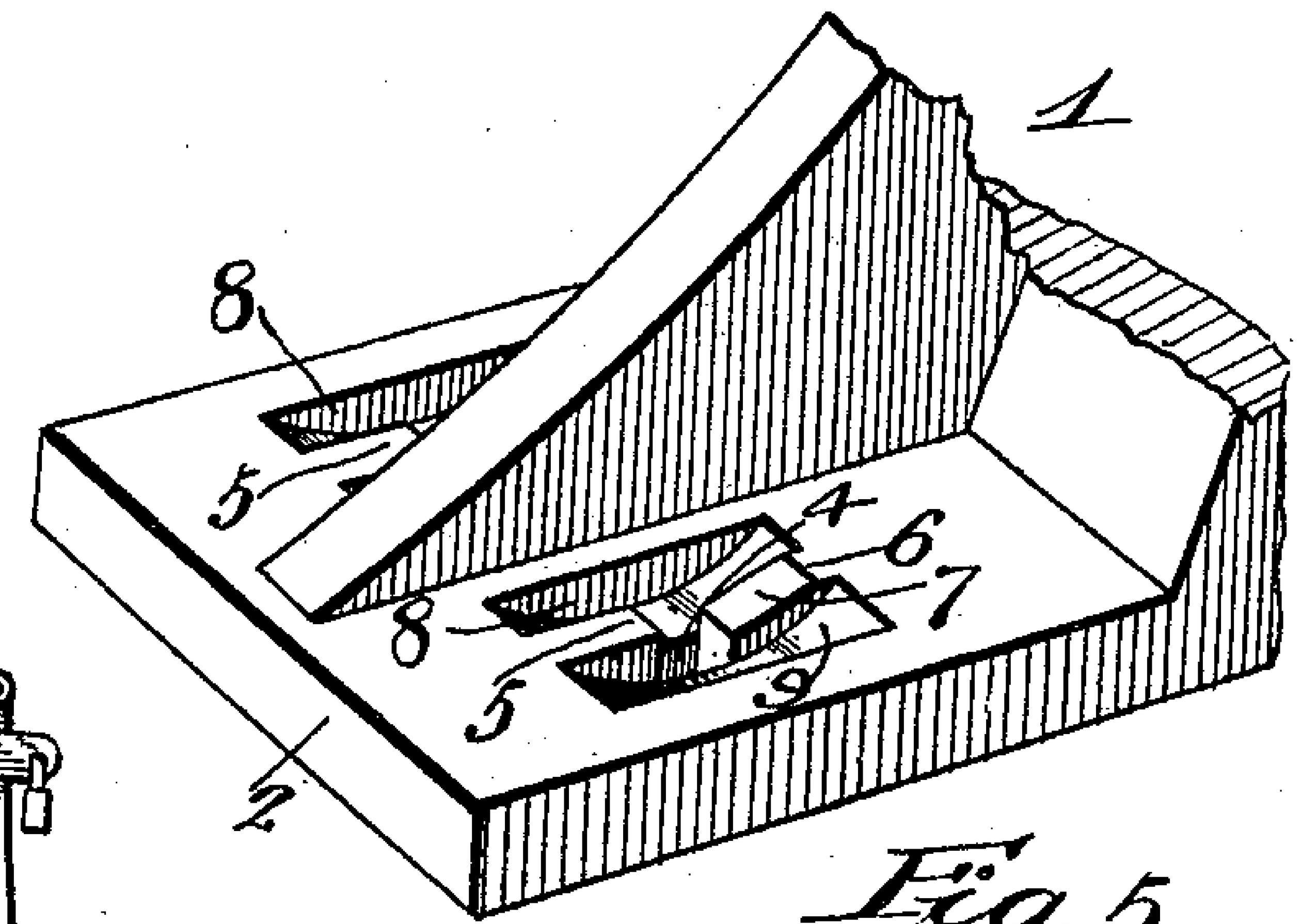


Fig. 5.

Fig. 1.

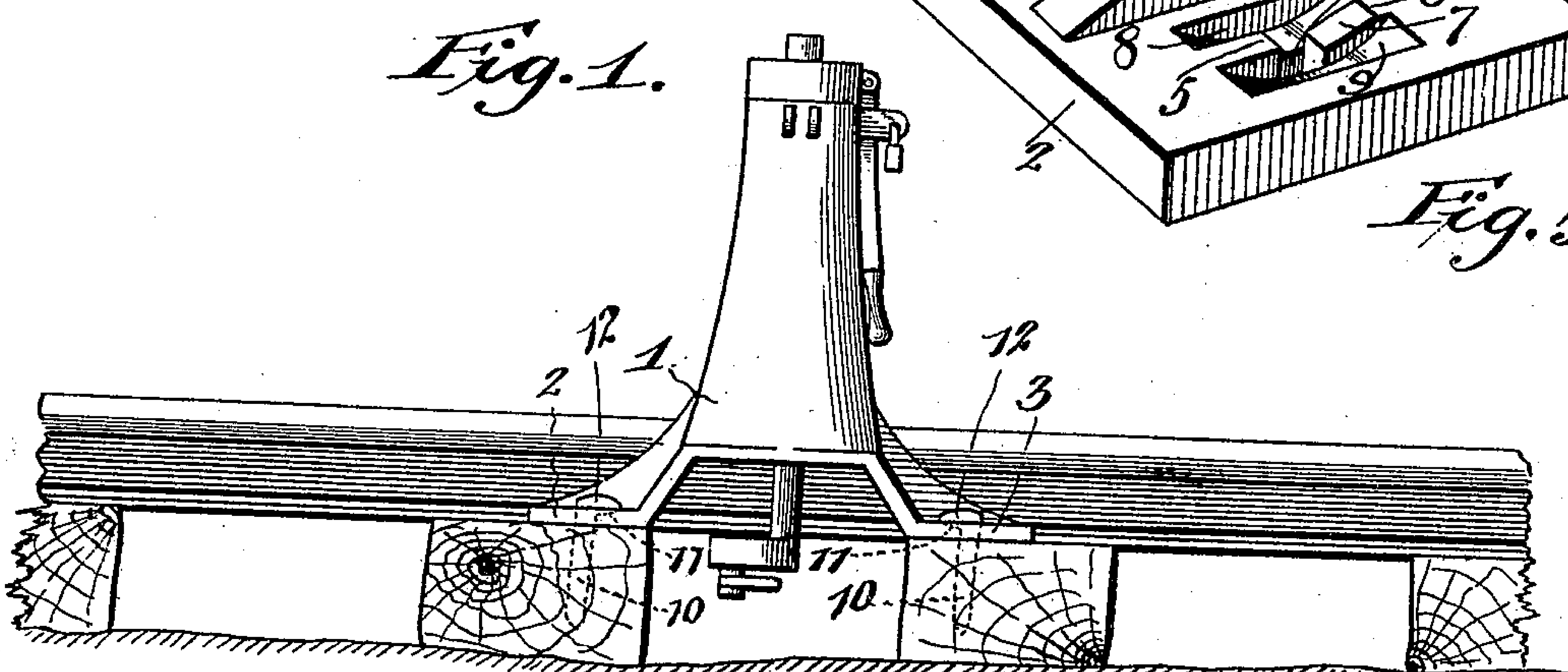


Fig. 2.

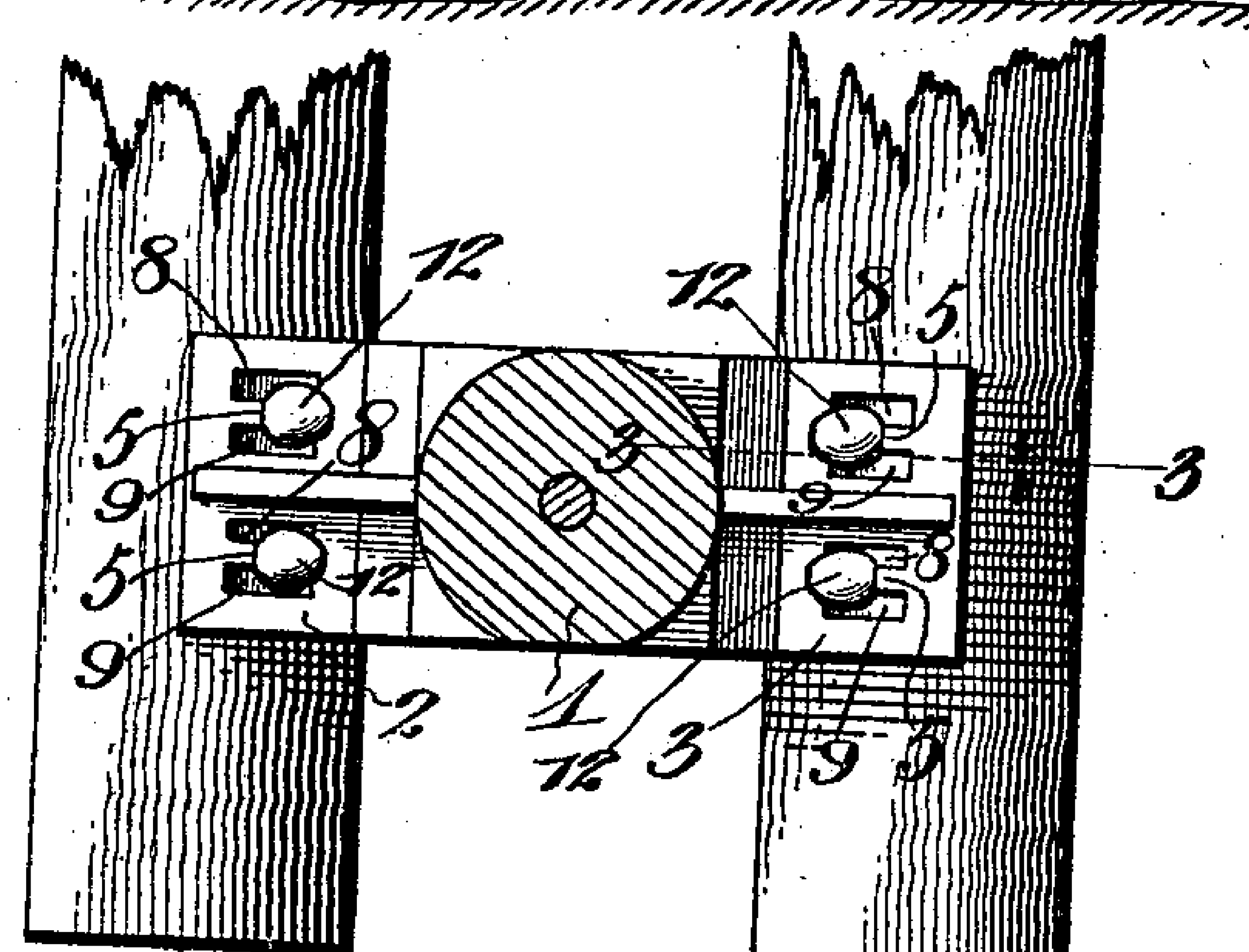


Fig. 3.

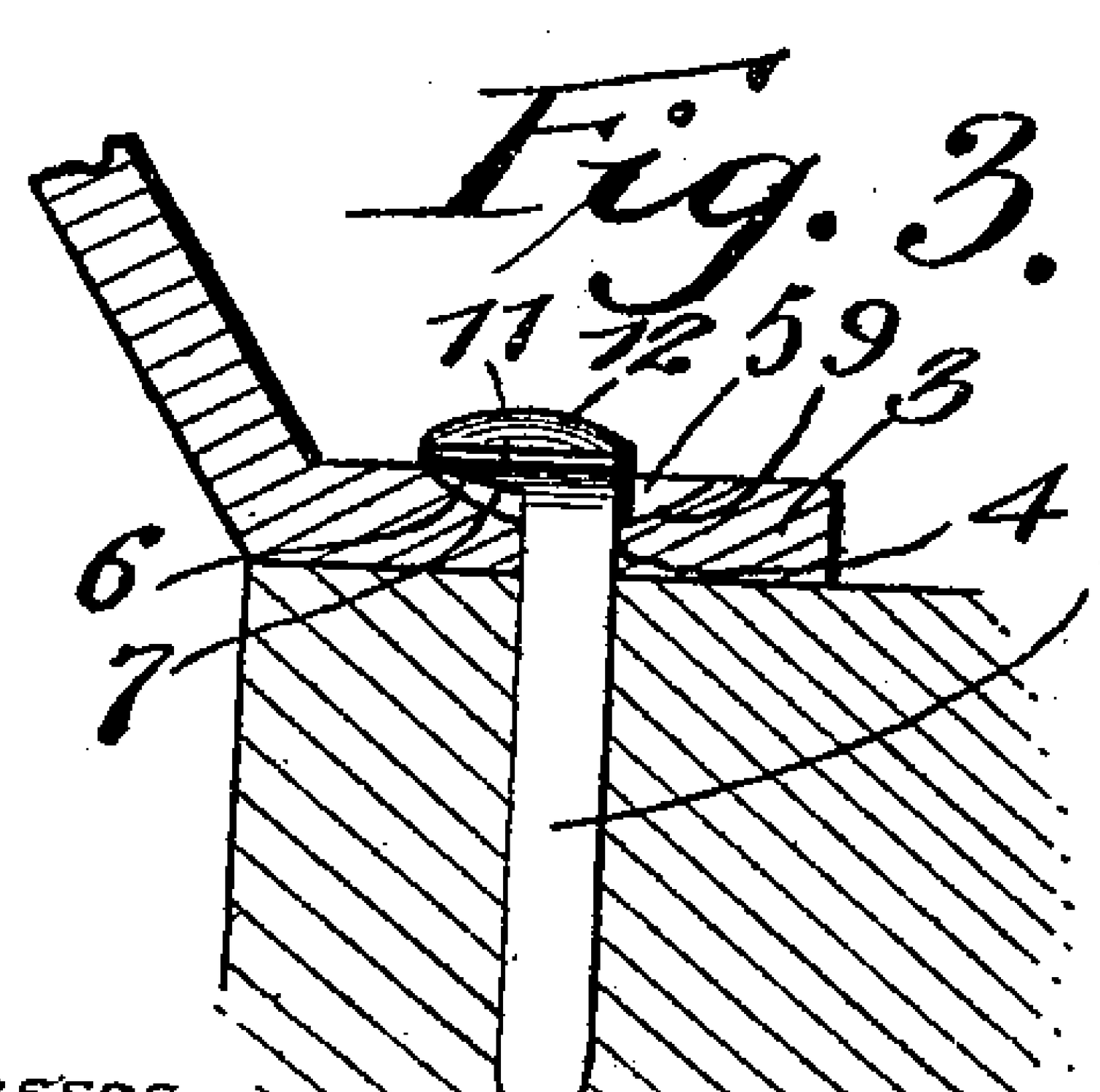
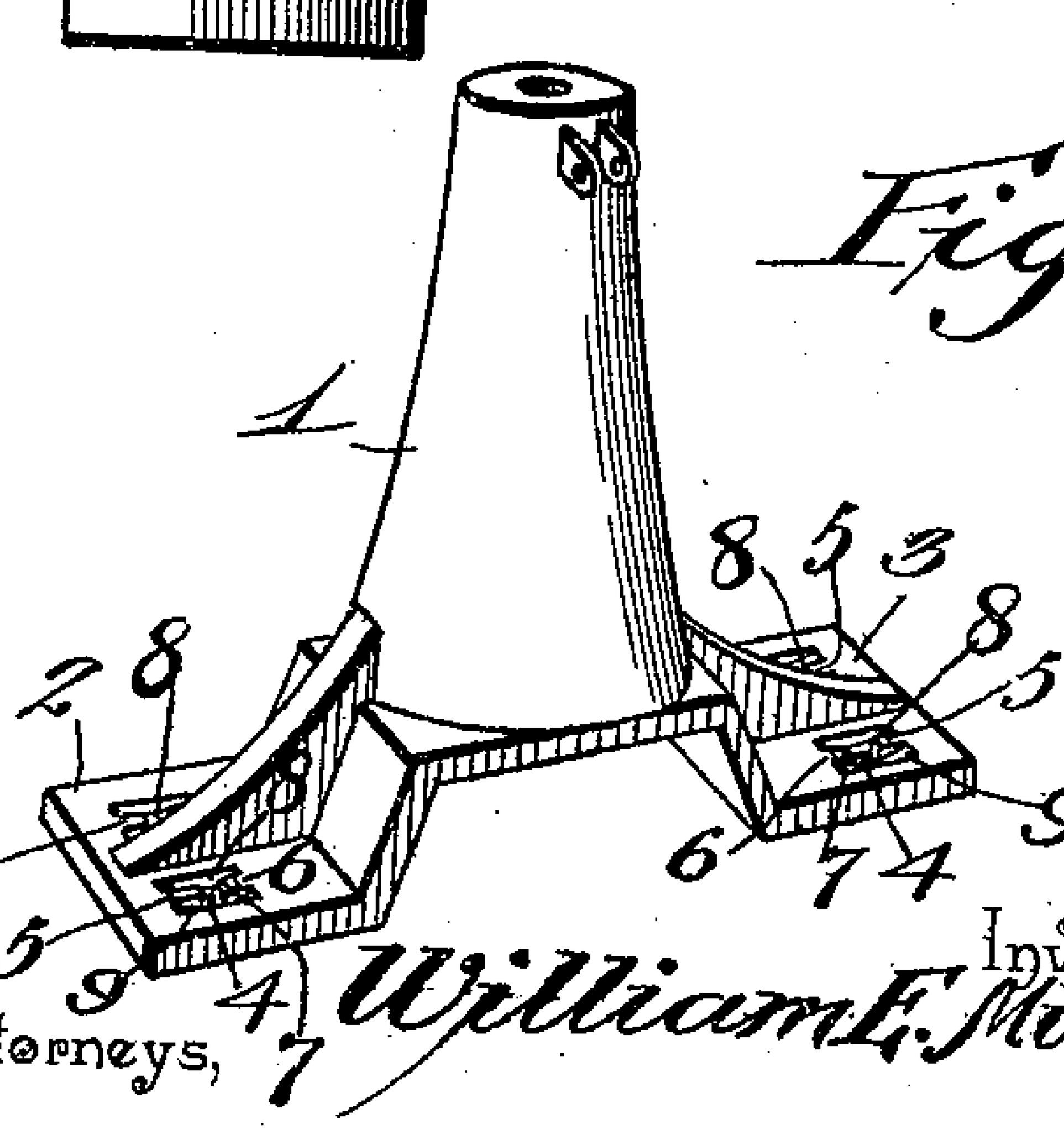


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM E. MILLER, OF VICTOR, COLORADO.

SWITCH-STAND.

SPECIFICATION forming part of Letters Patent No. 619,428, dated February 14, 1899.

Application filed August 5, 1898. Serial No. 687,812. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. MILLER, a citizen of the United States, residing at Victor, in the county of El Paso and State of Colorado, have invented a new and useful Switch-Stand, of which the following is a specification.

My invention relates to means for fastening switch-stands to the cross-ties of a railway-track.

Difficulty has heretofore been experienced in removing switch-stands from the cross-ties to which they are fastened because the spike-heads are not accessible to an extracting implement by reason of the location of the head-blocks over the foot of the stand-base. I aim to overcome this objection by the provision of a novel construction of stand-base in which the spike-heads have firm bearing or engagement with the stand to securely fasten the latter to the ties, and the heads of said spikes are easily accessible to the claw of an extracting implement for the purpose of pulling the spikes from the ties preparatory to removing the stand.

With these ends in view the invention consists in the novel construction and arrangement of parts, which will be hereinafter fully described and claimed.

To enable others to understand the invention, I have illustrated the same in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a side elevation of a switch-stand constructed in accordance with my invention and showing it applied to the ties of the track. Fig. 2 is a sectional plan view of the switch-stand fastened to the ties as represented by Fig. 1. Fig. 3 is a vertical cross-sectional view on the plane indicated by the dotted line 3 3 of Fig. 2. Fig. 4 is a detail perspective view of a portion of the stand-base having its foot-flange constructed in accordance with this invention.

Like numerals of reference denote like and corresponding parts in each of the several figures of the drawings.

The base 1 of the stand is a single casting, which is constructed to sustain the operating parts of the switch-signal. The signal and its operating devices may be of any character known to those skilled in the art or preferred by the constructor. The stand-base is constructed with the foot-flanges 2 3, which diverge outwardly and downwardly from the columnar portion of the base and are arranged to rest upon the end portions of two adjacent ties of a railway-track.

My improvement relates to a peculiar construction of the foot-flanges, which form an integral part of the stand-base, and according to my improvement each foot-flange 2 or 3 is constructed with two or more spike-openings 4. These spike-openings pierce the foot-flange at the median line thereof and near the respective ends of the same. A solid abutment 5 is formed on the foot-flange at the front of each spike-opening 4, and the inner face of this solid abutment is in the vertical plane of one of the boundary-walls for the spike-opening at the front thereof. Another abutment 6 is provided on the foot-flange at the rear side of the spike-opening 4 therein, and this rear abutment 6 has an inclined face 7, which extends from the upper horizontal face of the foot-flange in a downward and forward direction toward the rear wall of the spike-opening. The two abutments are thus located at the front and rear, respectively, of the spike-opening, and they lie in the same vertical plane transversely across the foot-flange.

Two channels 8 and 9 are produced in the upper horizontal face of the foot-flange on opposite sides of each spike-opening 4 and the abutments 5 6. These channels are parallel to each other and they vary in depth, so as to have their extremities open through the upper face of the flange 2 or 3 within the edges of the latter, while the deepest parts of the grooves or channels are adjacent to the spike-opening. The terminals of these grooves or channels merge into the upper face of the foot-flange at lines coincident with the juncture of the abutments with said foot-flange, thus making groove or channel equal in length to a line drawn between the points where the abutments merge into the foot-flange. The

channels are thus disposed on opposite sides of the abutments and the spike-openings, and they extend past and alongside of the abutments which are located at front and rear of the spike-opening.

In applying the base of the switch-stand in accordance with my invention to a railway-track the stand is arranged to span the space between two adjacent ties, and its foot-flanges 2 3 rest firmly upon said ties. The spikes 10 are driven through the openings 4 and into the ties, so as to have the front face of the spike bear against the vertical face of the front abutment 5, while the inclined face 11 of the spike-head 12 rests upon the inclined face 7 of the rear abutment 6. The spike thus has firm engagement with the abutments of the foot-flange to securely fasten the stand-base to the ties; but the spike-head is exposed at its lower edges because it occupies a position above the pair of curved channels or grooves 8 9. The claw of an extracting implement may readily be thrust into the channels or grooves 8 9 to fit beneath the exposed part of the spike-head, and by depressing the implement the spike may easily be withdrawn from the tie, thereby releasing the switch-stand base and permitting its ready removal.

I would have it understood that I do not confine myself to the particular form or shape of the spike-openings nor to the number of openings provided in each foot-flange of the stand-base. Slight changes in the form and proportion of the parts may therefore be made by the skilled constructor within the scope of this invention. It is also to be understood that the operating mechanism of the switch-stand may be varied within wide limits, as such operative mechanism forms no part of the present invention.

Having thus described the invention, what I claim is—

1. A switch-stand base having the spaced foot-flanges, the spike-openings in each foot-flange, the alined spike-abutments, 5, 6, disposed at the front and rear walls of each spike-opening and with the opposing vertical faces of the abutments in the same plane as the front and rear walls of the spike-opening to afford extended bearings for a spike, and the grooves disposed on opposite sides of each spike-opening and extending alongside of the two abutments to open through the foot-flange, substantially as described.

2. A switch-stand base having its foot-flanges provided with the spike-openings, an abutment at the front side of each spike-opening and with its vertical exposed face coincident with the front boundary-wall of said opening to furnish a solid bearing for one face of the spike, another abutment at the rear side of the spike-opening and having a beveled face to accommodate an inclined lower edge of the spike-head, and the channels or grooves located on opposite sides of the spike-opening to extend past both abutments and having their ends terminating within the edges of the foot-flange, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM E. MILLER.

Witnesses:
JOHN CARNAHAN,
JOHN C. TATMAN.