

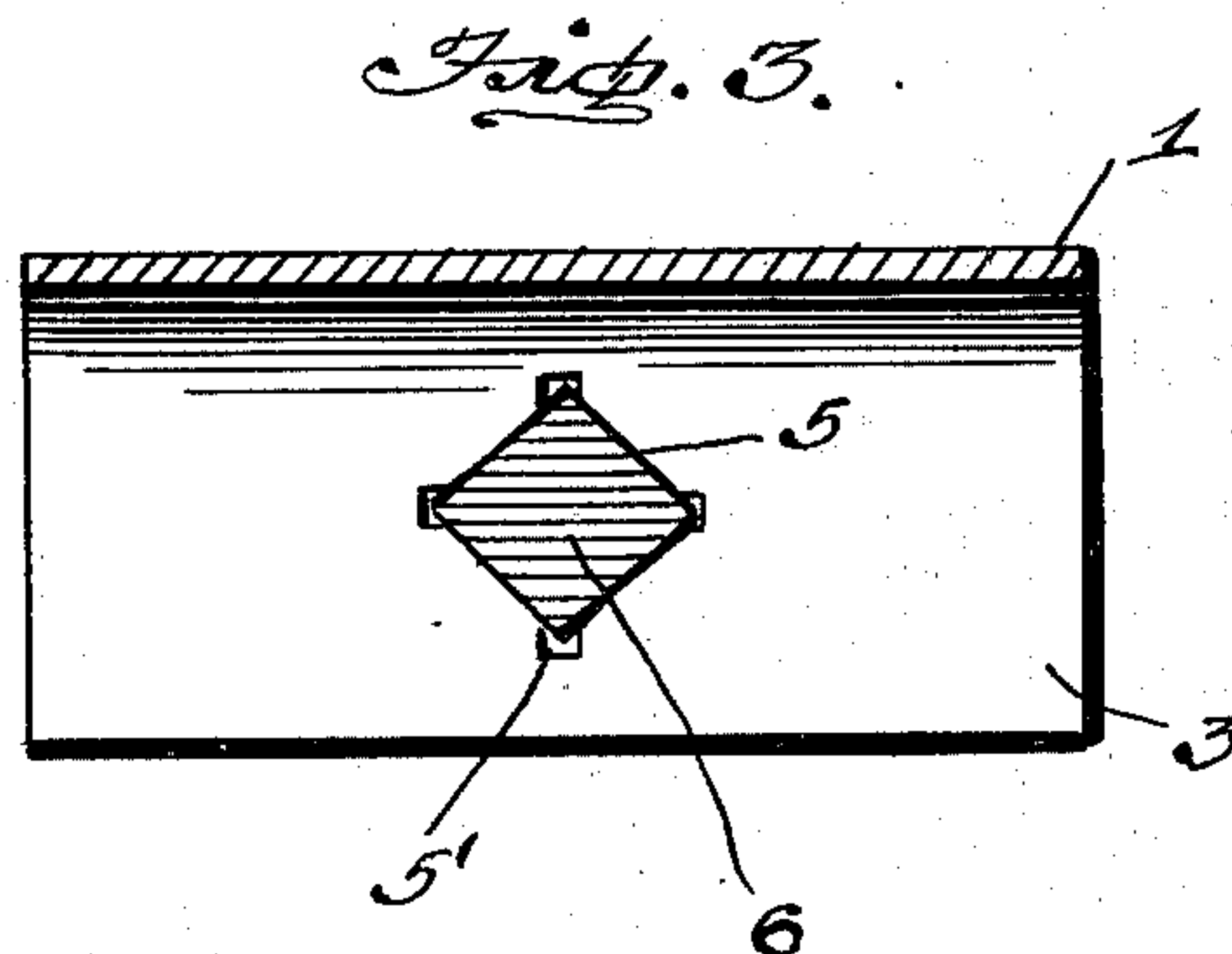
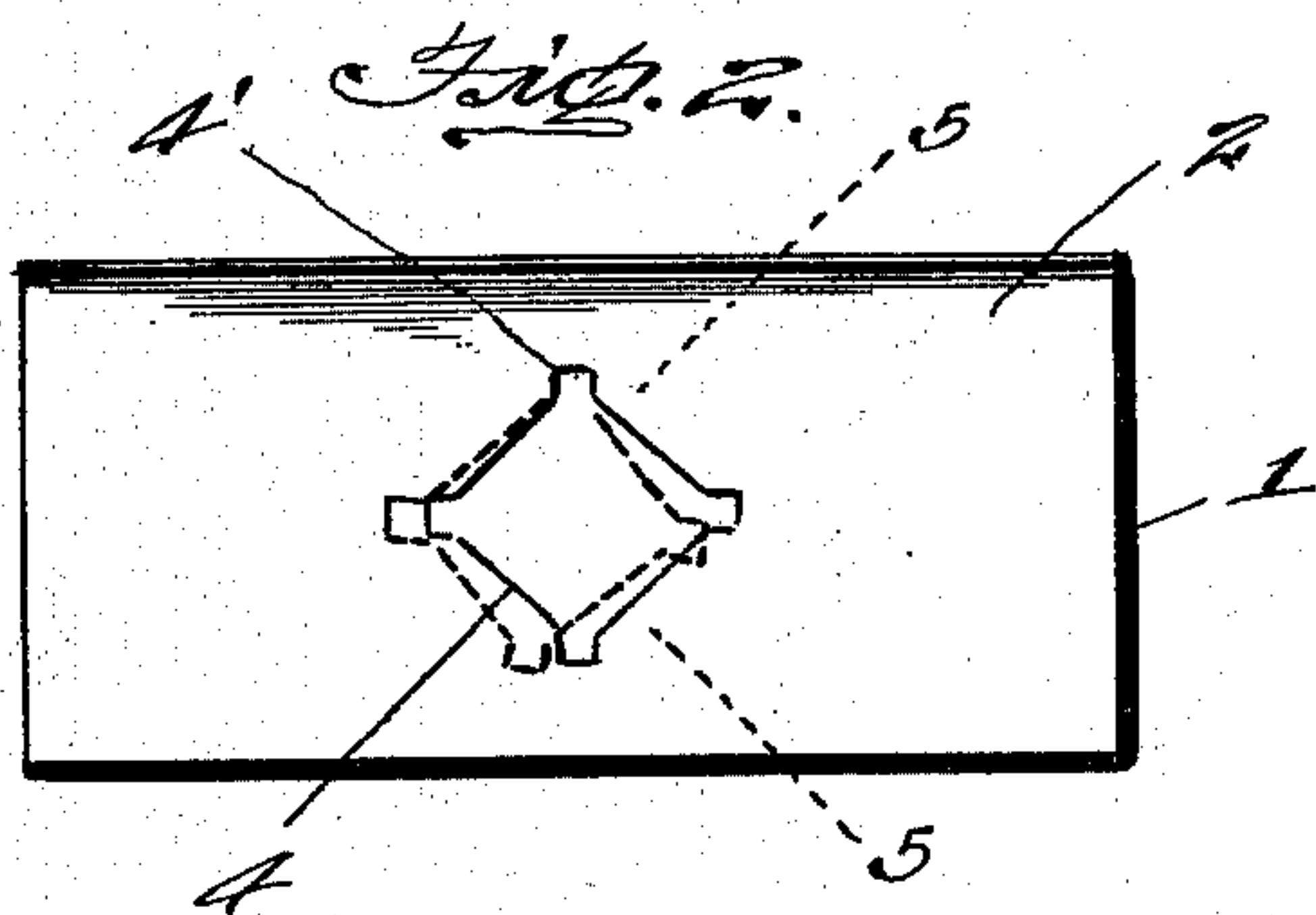
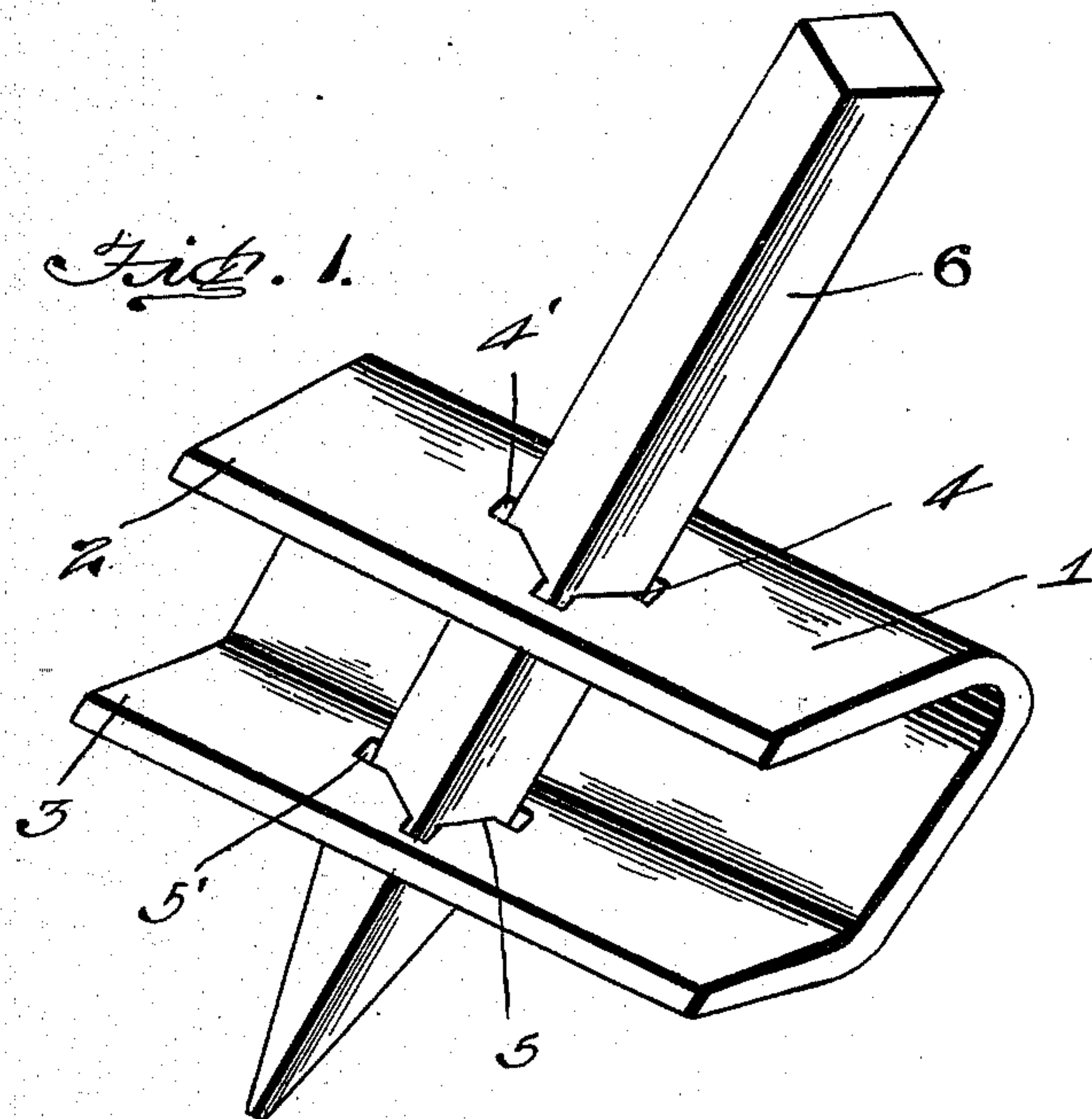
No. 714,661.

Patented Dec. 2, 1902.

G. E. BLAINE.
HARROW TOOTH FASTENING.

(Application filed Aug. 28, 1902.)

(No Model.)



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UNITED STATES PATENT OFFICE.

GEORGE E. BLAINE, OF DECATUR, ILLINOIS.

HARROW-TOOTH FASTENING.

SPECIFICATION forming part of Letters Patent No. 714,661, dated December 2, 1902.

Application filed August 28, 1902. Serial No. 121,344. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. BLAINE, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Harrow-Tooth Fastenings; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in harrow-tooth fastenings.

The object of the invention is to provide a simple and effective construction of connection between the tooth and its support, whereby the tooth is fitted in and firmly secured to the support without the use of auxiliary or extraneous fastenings.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of a harrow-tooth and its supporting-bar constructed in accordance with my invention. Fig. 2 is a top plan view of the bar, showing the upper and lower tooth-receiving openings in full and broken lines. Fig. 3 is a horizontal section through the tooth and bar looking down upon the lower flange of the bar.

Referring now more particularly to the drawings, the numeral 1 represents a harrow-tooth support consisting, preferably, of a channeled or U-shaped bar, the upper and lower flanges 2 and 3 of which are formed with openings 4 and 5 to receive the harrow-tooth 6.

The harrow-tooth 6 is of angular form in cross-section, preferably being made rectangular, and is adapted to be passed down through the openings 4 and 5, which are correspondingly shaped. The upper opening 4 is formed in the top flange 2 of the bar, with its sides arranged substantially at an angle of forty-five degrees to the longitudinal axis of the bar, while the opening 5 in the lower flange 3 is disposed so that its sides are ar-

ranged at an angle of about forty-three degrees to the longitudinal axis of the bar, so that the two openings are out of vertical co-axial alinement. By this construction the corner portions of the two openings are set at a slight angle to each other, so that when a harrow-tooth is forced down thereinto from above the angular disposition of the lower opening relative to the upper opening will cause the tooth to be turned or twisted, thus bringing its corners at an angle to the side walls of the upper opening 4, thus locking it firmly in position against casual displacement, while permitting it to be forced out of the openings under the blow of a hammer upon its pointed end to permit of the said pointed end of the tooth being conveniently sharpened whenever required. In order to facilitate the turning or twisting action of the tooth when inserted in the openings and at the same time to form a more secure locking connection between the tooth and the supporting-bar, I provide the openings with notches or enlargements 4' and 5' at their corners, which notches or enlargements are adapted to receive the corner angles of the tooth, so that the adjacent walls of the sides of the openings will form abutting shoulders or stops to prevent the tooth from having any rotary or turning movement, thereby preventing the tooth from casually turning back to the position occupied when it was inserted in the openings and becoming loosened or displaced. It will thus be seen that by disposing the two openings at an angle to each other the turning or twisting action of the tooth produced when it is inserted therein causes the tooth to be locked firmly to the two flanges, so as to prevent its displacement under all ordinary conditions of use.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of the invention will be readily understood without requiring an extended explanation.

Various changes in the form, proportion, and details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

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

1. A harrow-tooth support having upper
5 and lower tooth-supporting members, provided with rectangular openings, set at an angle to each other and adapted to receive a rectangular tooth, substantially as set forth.
2. A harrow-tooth support having upper
10 and lower supporting members provided with rectangular openings adapted to receive a correspondingly-shaped tooth, said openings being arranged at an angle to each other and provided at their corners with notches, sub-
15 stantially as set forth.
3. A harrow-tooth support comprising a channeled bar, the upper and lower flanges of which are provided with rectangular openings arranged at an angle to each other and
20 adapted to effect a turning action of the tooth when it is inserted therein, substantially as set forth.
4. A harrow-tooth support comprising a
25 channeled bar, the upper and lower flanges of which are provided with rectangular open-

ings to receive a correspondingly - shaped tooth, said openings being disposed at an angle to each other and provided at their corners with notches, substantially as set forth.

5. A harrow-tooth support having upper
30 and lower tooth-supporting members provided with openings set at an angle to each other and adapted to receive an angular tooth, substantially as and for the purpose set forth.

6. The combination with a harrow-tooth
35 support having upper and lower tooth-supporting members provided with rectangular openings, of a rectangular tooth extending through said apertures and twisted at that portion of its length lying between the upper
40 and lower tooth-supporting members, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE E. BLAINE.

Witnesses:

BEN. L. HOWENSTINE,
W. C. DIMOCK.