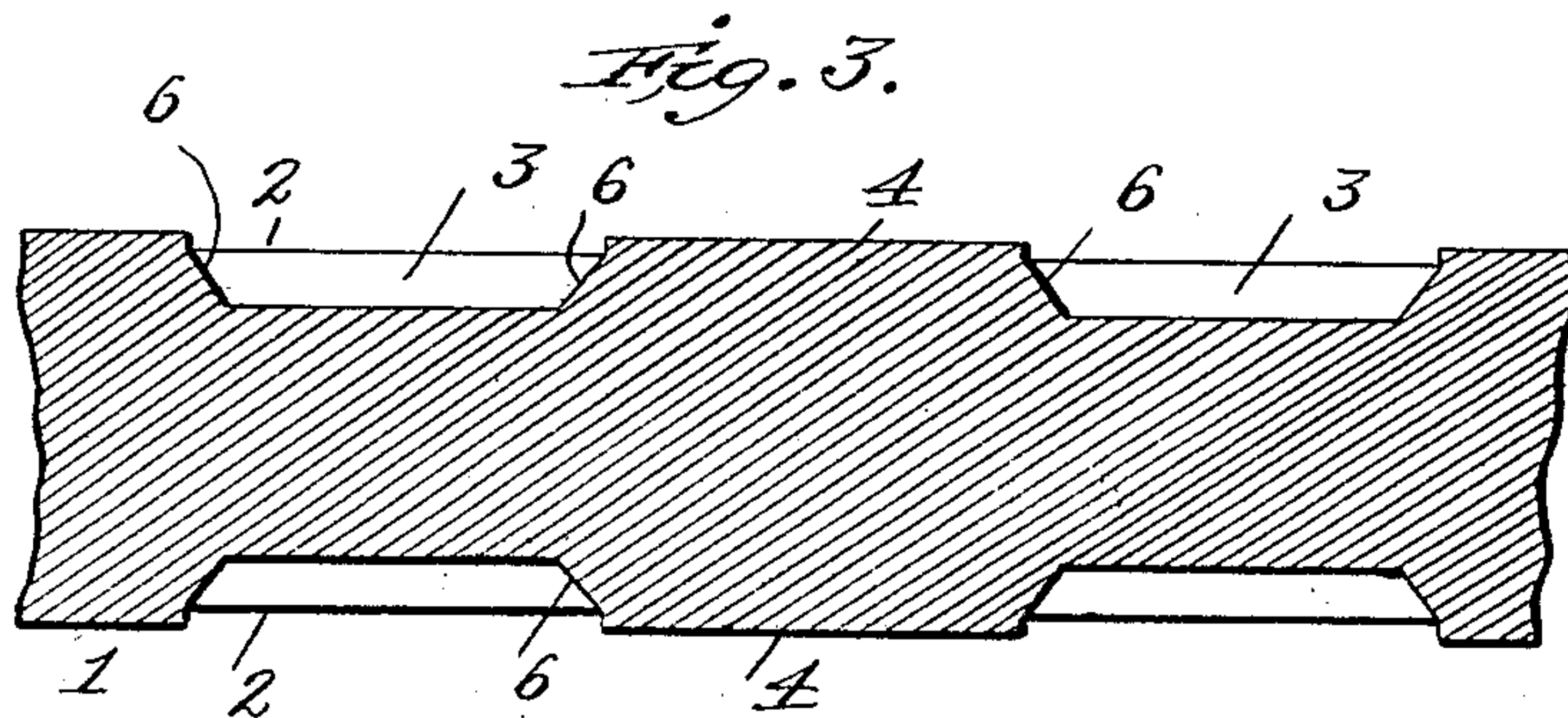
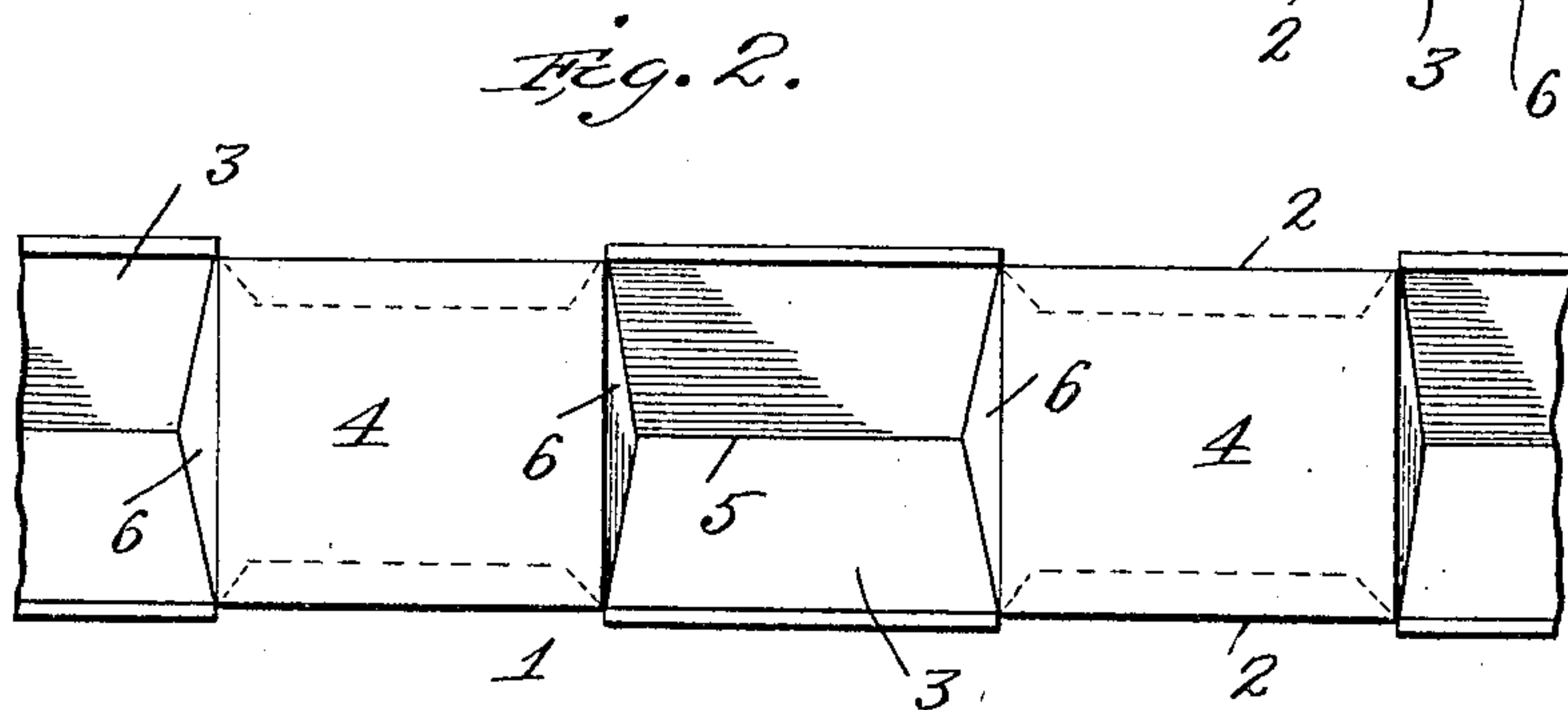
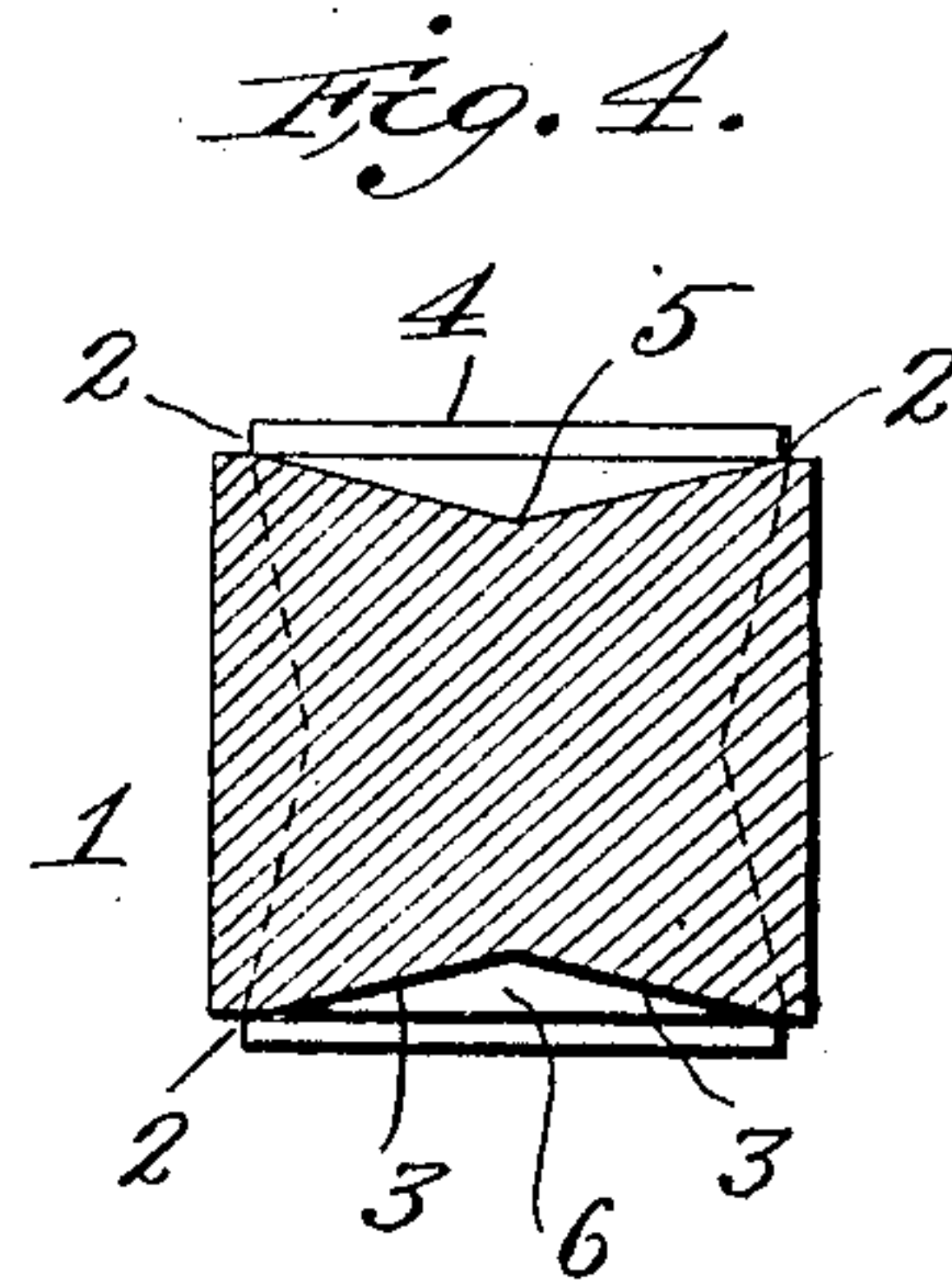
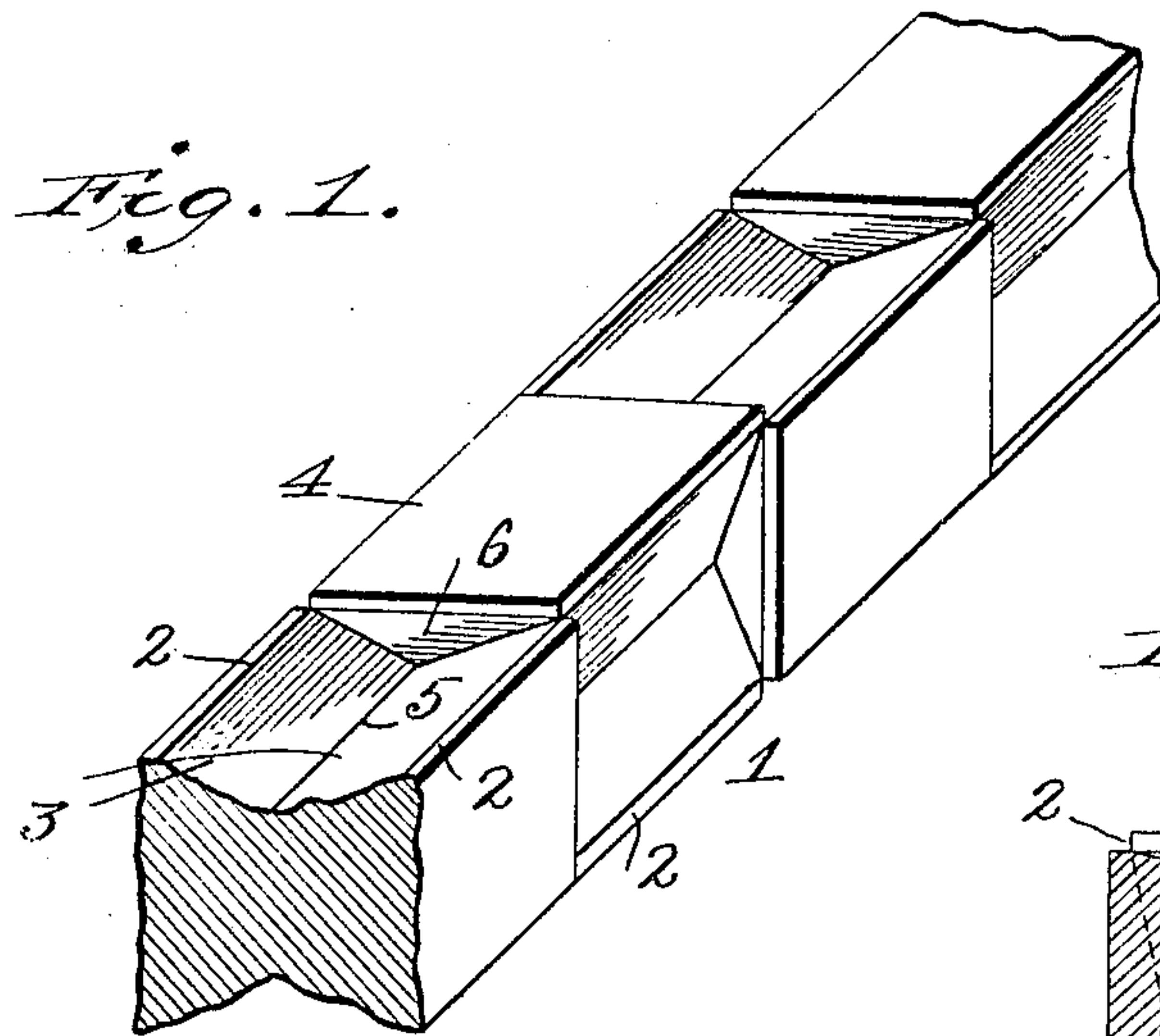


E. CANNES.
 CONCRETE REINFORCING BAR.
 APPLICATION FILED NOV. 13, 1908.

925,750.

Patented June 22, 1909.



Inventor

Witnesses

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UNITED STATES PATENT OFFICE.

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CONCRETE-REINFORCING BAR.

No. 925,750.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed November 13, 1908. Serial No. 462,490.

To all whom it may concern:

Be it known that I, ELIE CANNES, a citizen of the United States, residing at New York, in the borough of Manhattan, State of New York, have invented new and useful Improvements in Concrete-Reinforcing Bars, of which the following is a specification.

My invention relates to metallic bars for reinforcing concrete, and has for its object to provide an improved metal bar to be embedded in the concrete, which shall have a series of depressions therein to engage with the surrounding concrete, and which shall be uniform in cross area at all points in its length.

In the accompanying drawing: Figure 1 is a perspective view of a portion of my improved bar. Fig. 2 is an elevation of the same. Fig. 3 is a central longitudinal sectional view of the same. Fig. 4 is a transverse sectional view of the same.

Similar numerals of reference denote corresponding parts in the several views.

In the said drawing the reference numeral 1 denotes my improved bar, which is substantially rectangular in cross area, and which may be of any desired length and of any cross area. The mean cross area of said bar lies in planes extending between the lines 2. The surface of said bar, however, is regularly interrupted by alternate depressions 3 and projections 4, said depressions 3 having the form of a triangular prism, while said projections 4 are rectangular, as shown. It will be observed that the entire surface of the bar is provided with these depressions and projections, and that the depressions and projections alternate on the sides of the bar at right angles to each other, so that a cross section taken at any point will strike oppositely disposed depressions and oppositely disposed projections. I form the depressions 3 of a depth at their centers double the height of the projections 4 from the planes of the lines 2, the result being that the areas of each of said depressions 3 is exactly equal to that of one of the projections 4, so that as a cross section taken at any point will pass through two depressions 3 and two projections 4, the cross area of the bar at all points in its length will be the same. Thus, if the distance between the lines 2 was one inch, the cross area of the bar would be one square inch, the amount lost at any point by the depressions 3 being

exactly compensated for by the projections 4, the only object of said projections being to compensate for this loss, as the depressions alone are to make the bond between the concrete and the bar.

As shown, I prefer to incline the transverse walls 6 of the depressions 3, in order that there may be a better connection between the depressed and projected parts.

It is well known that under the repeated and prolonged action of loads a reinforced concrete bar has a tendency to work loose therein, owing to the destruction of the natural adhesion. By forming the depressions 3 of the form of a triangular prism, whereby their depth is increased, this tendency of the bar to work loose in the concrete is more effectually prevented.

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

1. An angular concrete reinforcing bar, having its surfaces formed with depressions having the form of a triangular prism and with rectangular projections, said depressions and projections being arranged alternately throughout the bar and being of equal area in cross section.

2. An angular concrete reinforcing bar, having its surfaces formed with depressions having the form of a triangular prism and with rectangular projections, said depressions and projections being arranged alternately throughout the bar, and the depth of the depressions at their deepest point being twice the depth of the projections, whereby the areas of said depressions and projections shall be equal.

3. An angular concrete reinforcing bar, having its surfaces formed with depressions having the form of a triangular prism and with rectangular projections, said depressions and projections being arranged alternately throughout the bar, the depth of the depressions at their deepest point being twice the depth of the projections, whereby the cross areas of said depressions and projections shall be equal.

4. A concrete reinforcing bar, substantially rectangular, and formed of a plurality of units oblong in cross area, each of said units embodying in its oppositely disposed longer sides depressions having the form of a triangular prism and extending from end to end of said unit, the shorter sides of said

unit being flat, said units being united end to end with said depressions alternately disposed.

- 5 A concrete reinforcing bar, substantially rectangular, and formed of a plurality of units, each of said units embodying in oppositely disposed sides depressions having the form of a triangular prism and extending from end to end of said unit, said de-
10 pressions terminating crosswise on each side a distance from the edges of the sides equal

to one half the depth of said depressions, the other sides of said unit being flat, and said units being united end to end with said depressions alternately disposed.

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

ELIE CANNES.

Witnesses:

B. H. DAVIS,

C. O. HOPPER.