

No. 881,762.

PATENTED MAR. 10, 1908.

E. L. ADREON, JR.  
REINFORCING BAR.

APPLICATION FILED JAN. 15, 1907.

FIG. 1.

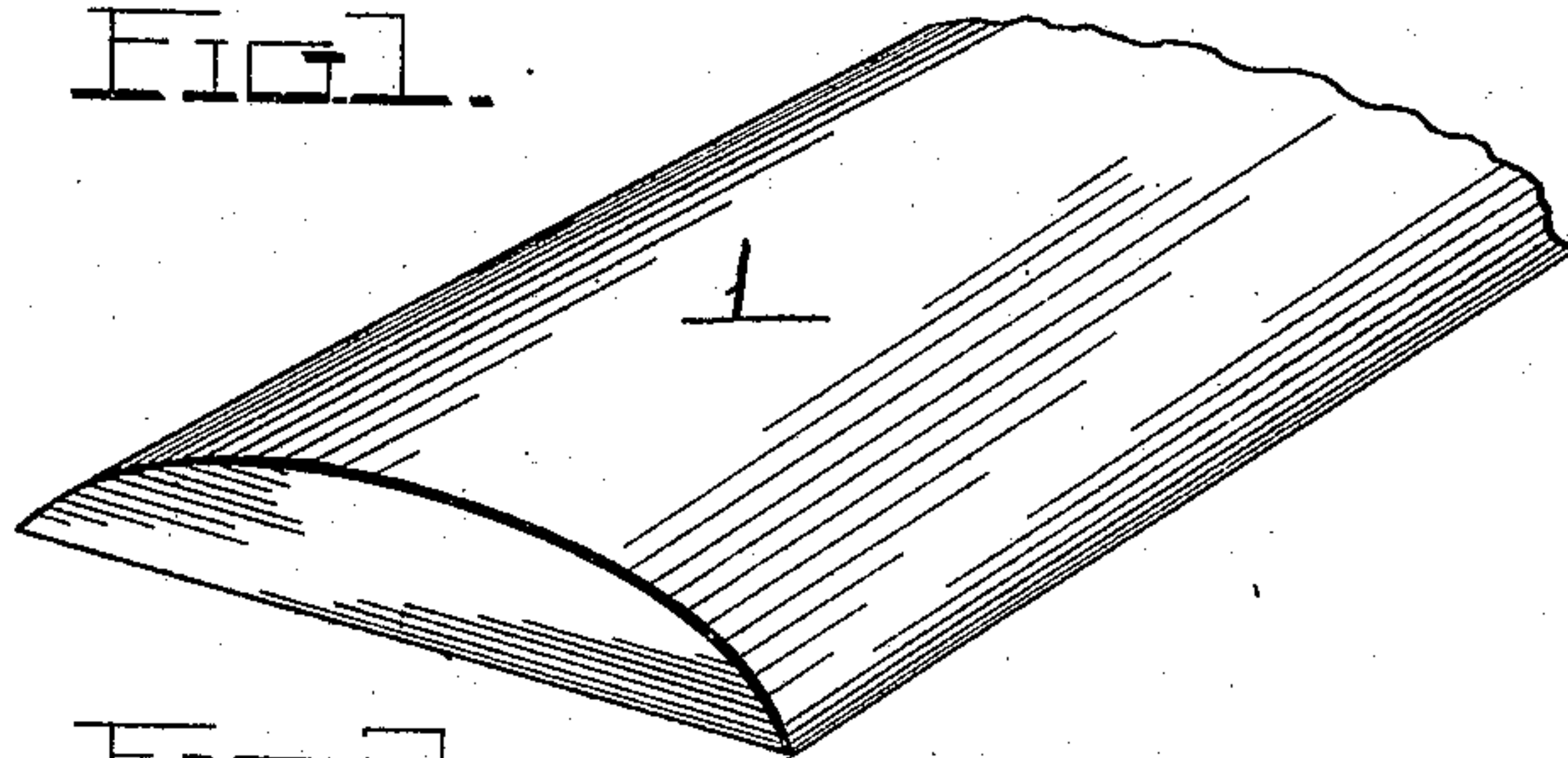


FIG. 2.

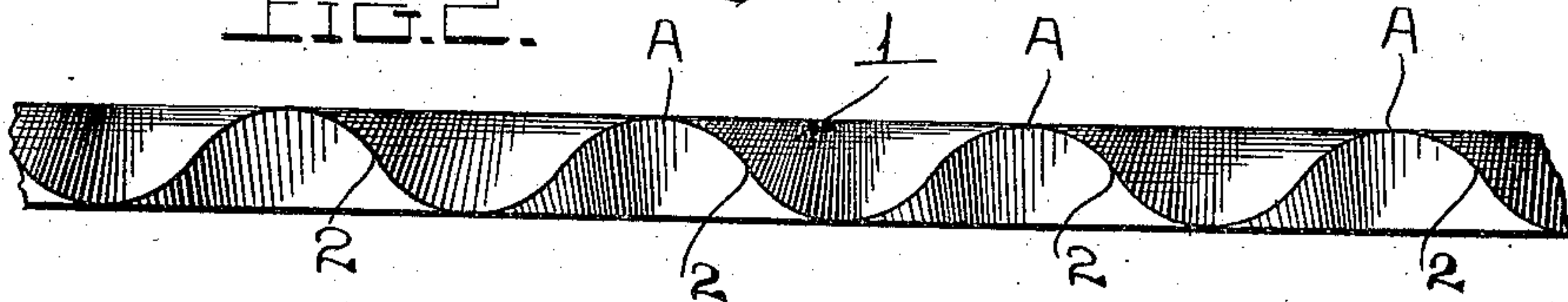


FIG. 3.

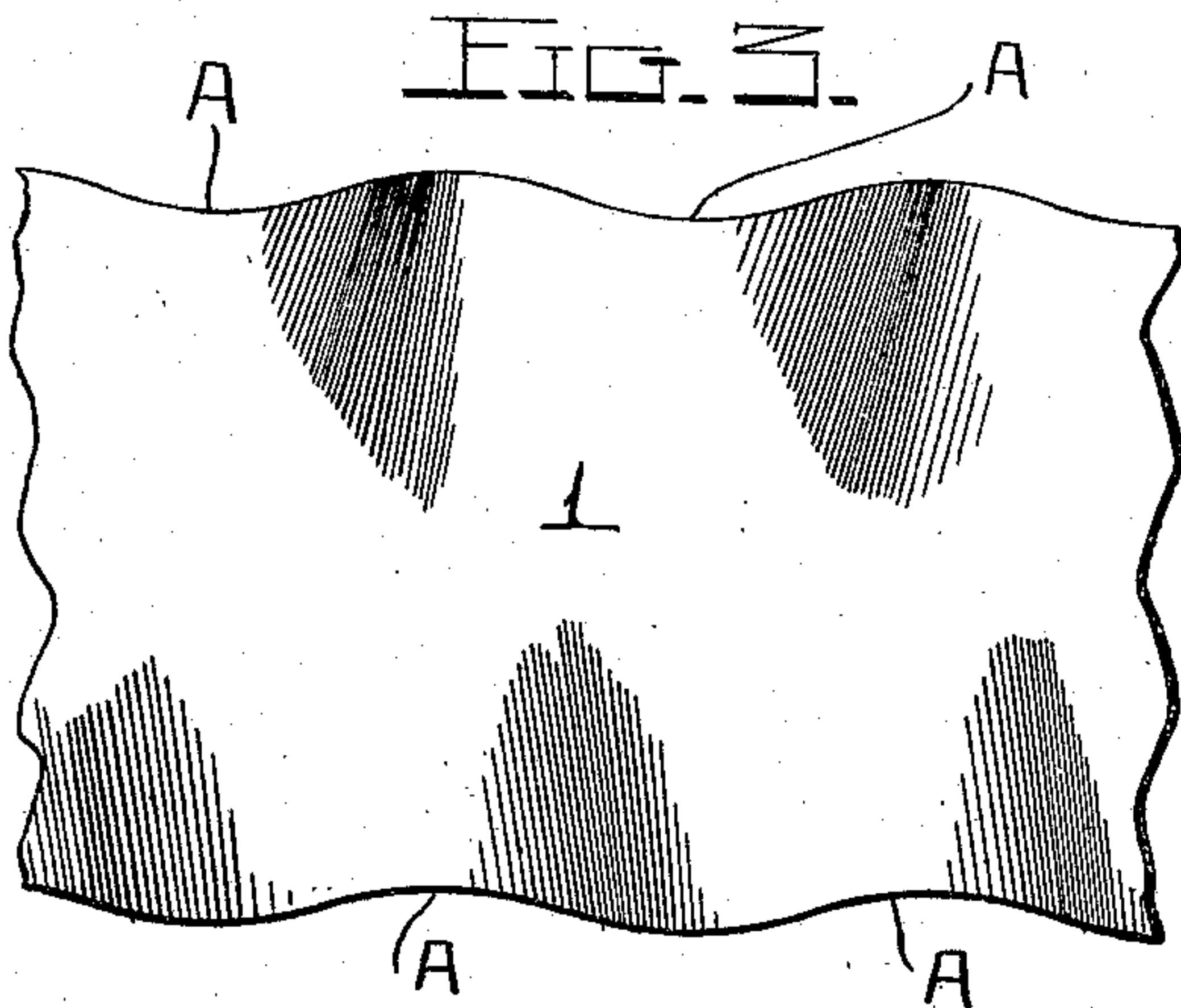


FIG. 4.

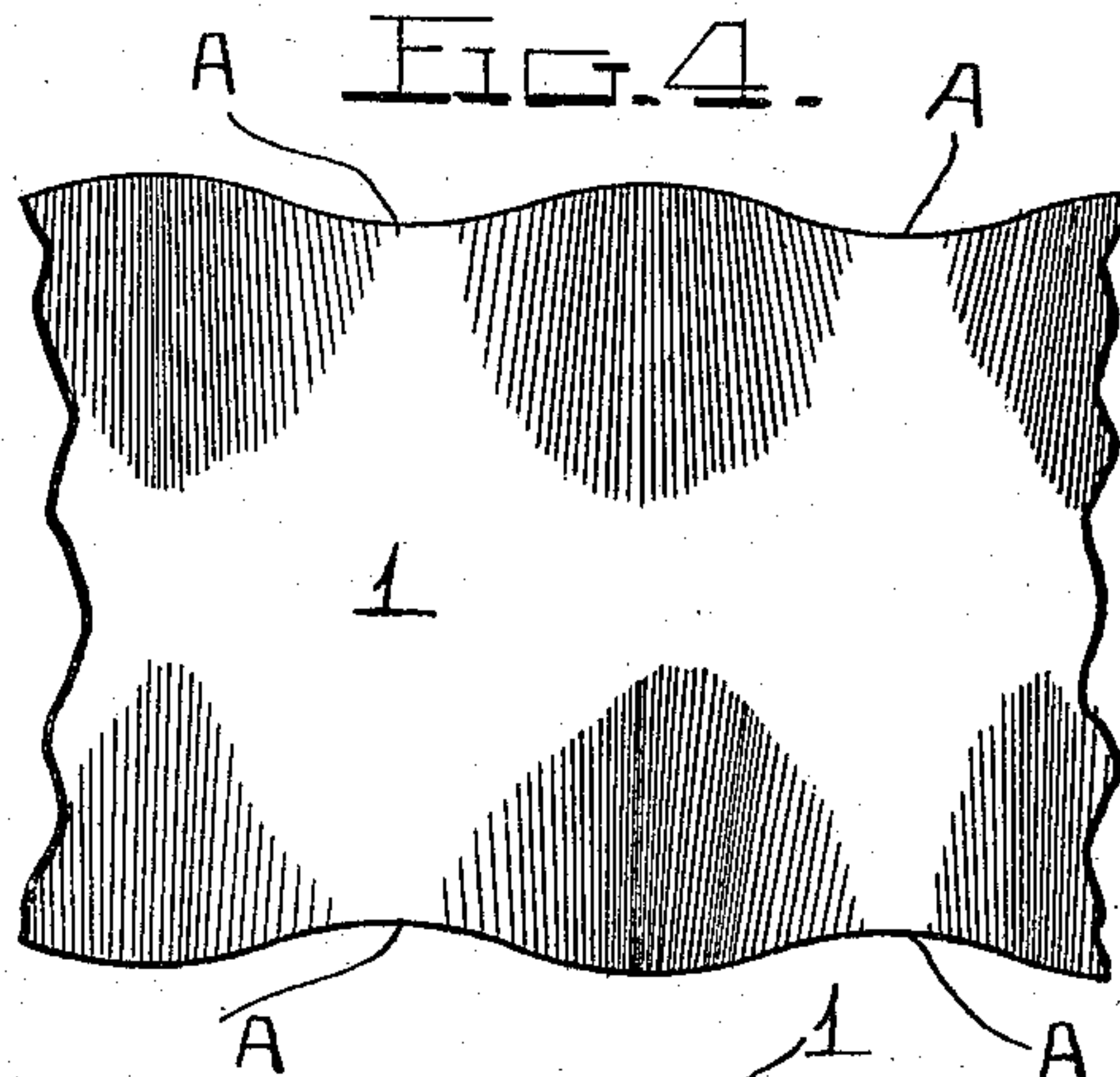


FIG. 5.

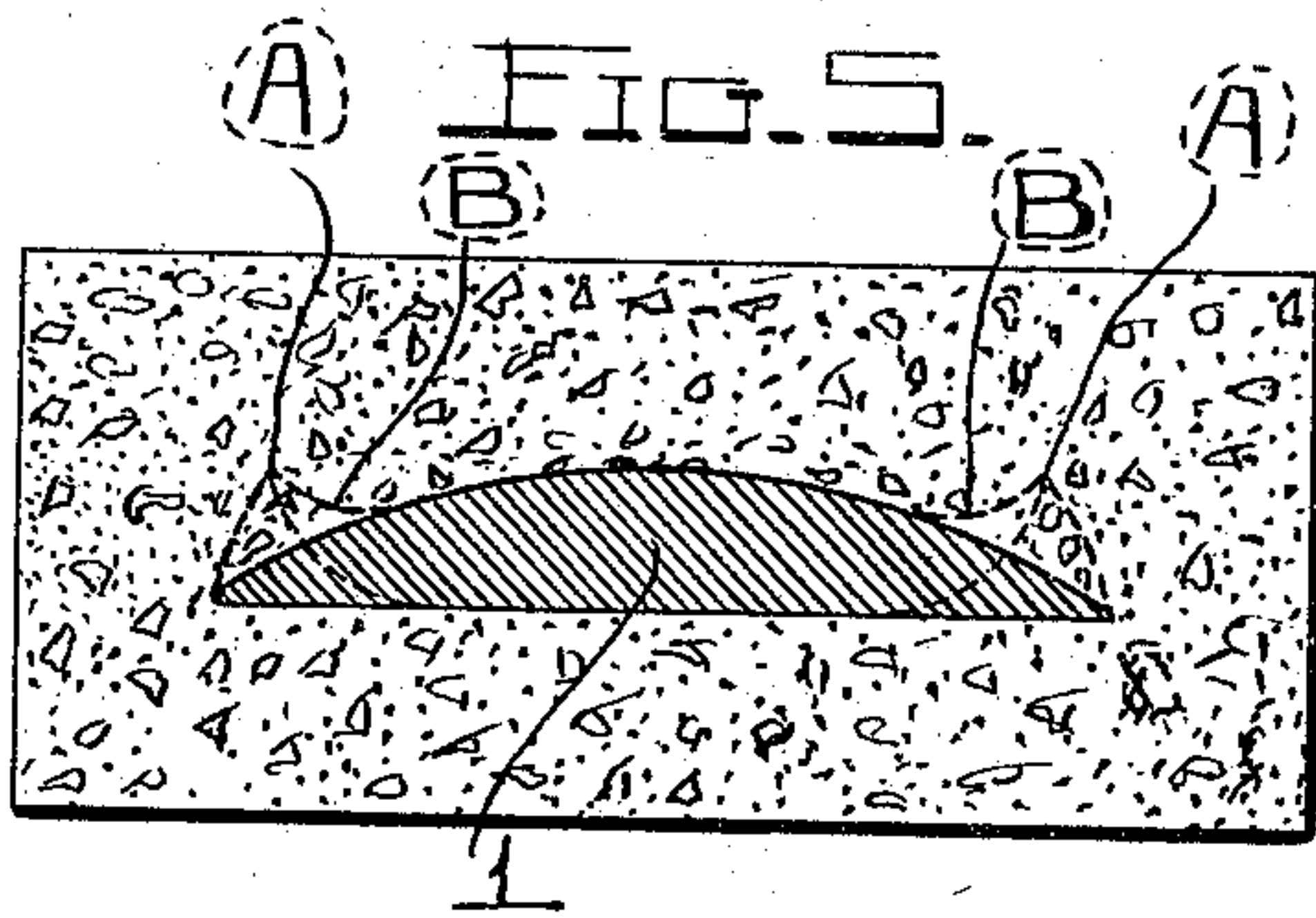


FIG. 6.

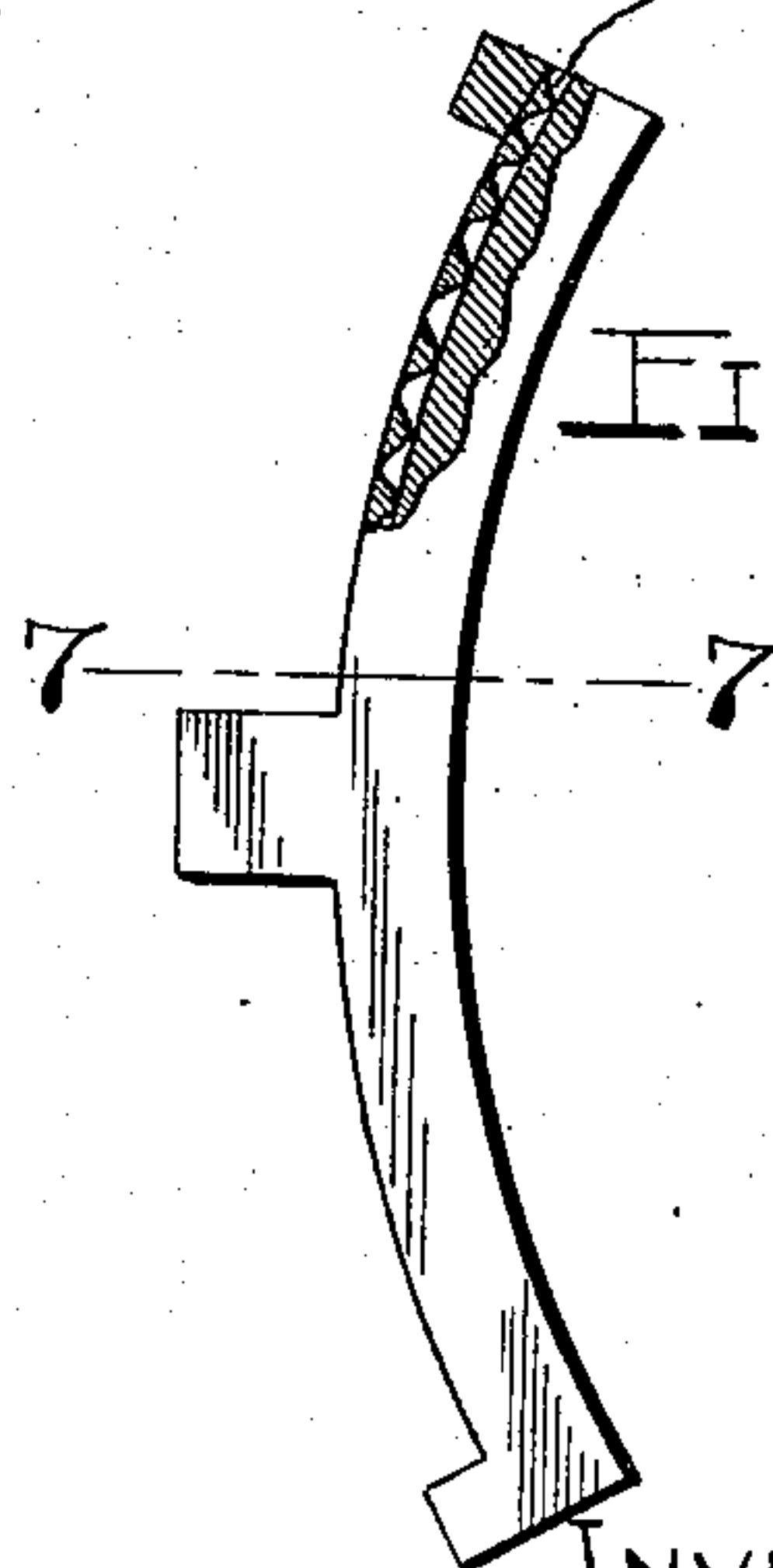
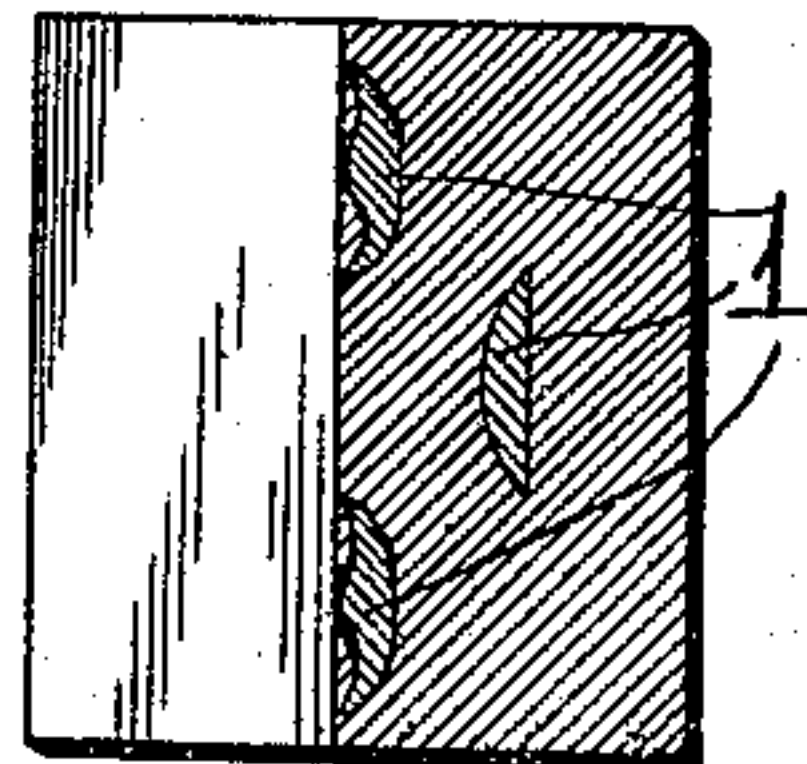


FIG. 7.



ATTEST.

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# UNITED STATES PATENT OFFICE.

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## REINFORCING-BAR.

No. 881,762.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed January 15, 1907. Serial No. 352,425.

*To all whom it may concern:*

Be it known that I, EDWARD L. ADREON, Jr., a citizen of the United States, and resident of St. Louis, Missouri, have invented certain new and useful Improvements in Reinforcing-Bars, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to a reinforcing bar, which is preferably adapted for concrete and analogous plastic construction, although it may be advantageously used in cast metal construction.

The object of my invention is to provide a reinforcing bar which, when embedded in a body of concrete or metal, will materially resist longitudinal strain, and which will particularly resist lateral strain, thus overcoming the tendency of the body of concrete or metal to fracture longitudinally.

Heretofore, where reinforcing bars are employed in concrete construction, and there is lateral strain upon the beam or member in which the bar is located, said beam or member tends to fracture longitudinally along the edges of the reinforcing bar; but, by my improved construction, this objection is overcome, and the tendency of longitudinal fracture is reduced to a minimum.

To the above purposes, my invention consists in certain novel features of construction and arrangement of parts, which will be hereinafter more fully set forth, pointed out in the claims, and illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of a portion of a reinforcing bar of my improved construction before the edges are crimped, as contemplated by my invention; Fig. 2 is a side elevation of the reinforcing bar after the edges thereof have been crimped; Fig. 3 is a plan view of a short section of one of the bars, and showing the crimps or bends in the opposite edges thereof staggered or offset; Fig. 4 is a view analogous to Fig. 3, and showing the crimps or bends in the opposite edges arranged directly opposite one another; Fig. 5 is a cross section of a concrete beam or member in which is embedded one of my reinforcing bars; Fig. 6 is a side elevation of a brake shoe, partly in section, and showing the reinforcing bar embedded therein; Fig. 7 is a cross section taken on the line 7—7 of Fig. 6.

In the construction of my improved rein-

forcing bar, I make use of a member 1, commercially known as a "half oval," the edges of which member are crimped or bent upwardly from the flat side to form two scalloped edges 2. When the sides of the bar are thus bent, the edges A of the upwardly bent portions are necessarily drawn inwardly so that they occupy positions inside the vertical planes occupied by the unbent edges of the bar, and thus when the member or bar 1 is seen in plan view, the edges appear scalloped, as clearly shown in Figs. 3 and 4. The bends or scallops in the edges of the member or bar 1 may be arranged at either regular or irregular distances apart, and the bends on one side may be staggered relative to the bends on the opposite side, as shown in Fig. 3, or they may be arranged directly opposite one another, as shown in Fig. 4.

The edges of my improved reinforcing bar, being scalloped both vertically and horizontally, correspondingly break the joint between the edges and the material of a body in which the reinforcing bar is embedded, and thus the tendency to longitudinal fracture of the beam at a point along the side edges of the reinforcing bar is reduced to a minimum, as what might be termed "an irregular joint" is formed between the side edges of the reinforcing bar and the material in which it is embedded.

When the edges of the reinforcing bar are bent upwardly, the extreme upper ends of the upwardly bent portions occupy planes higher than the points on the top surface of the bar where said bends start upwardly, and this arrangement forms shallow pockets, such as B, immediately behind the upwardly bent edges, and the material in which the bar is embedded filling these pockets will be very rigidly anchored therein, and will very effectually resist lateral strain, and a consequent tendency to separate or fracture along the side edges of the reinforcing bar.

In Figs. 6 and 7, I have shown the reinforcing bar applied to brake shoes, and it will be readily understood that said reinforcing bar can be applied to any cast metal construction wherever an extra strong strain resisting member is desired.

I claim:—

As a new article of manufacture, a reinforcing member for concrete and metal construction, comprising a bar which gradually decreases in thickness from its longitudinal

center to its side edges, said side edges being bent inward and upward at intervals so as to bring the edges of the bent portions into the horizontal plane occupied by the center  
5 of the bar, and there being shallow concave pockets formed on the top of the bar between the bent portion of the side edges and the center of said bar.

In testimony whereof, I have signed my name to this specification, in presence of 10 two subscribing witnesses.

EDWARD L. ADREON, JR.

Witnesses:

M. P. SMITH,  
E. L. WALLACE.