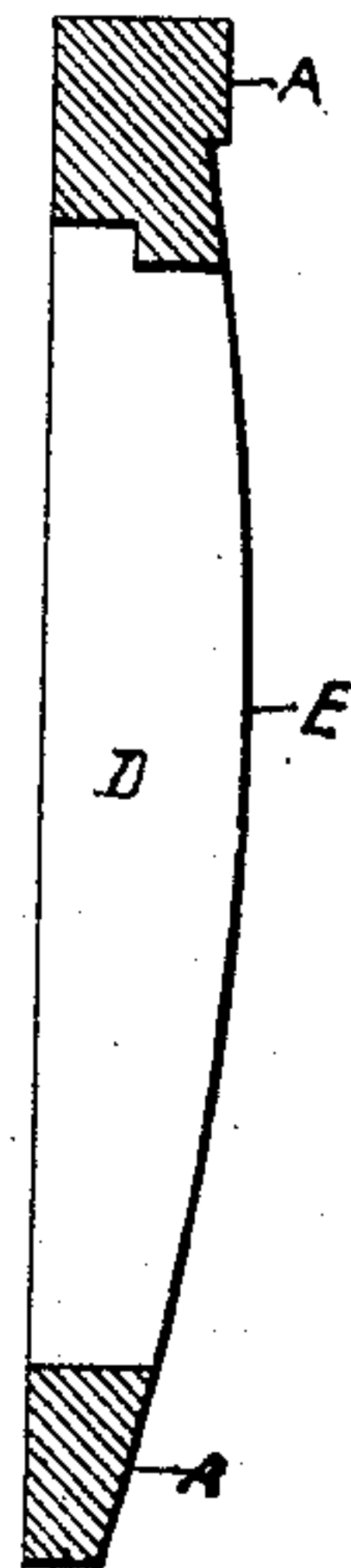
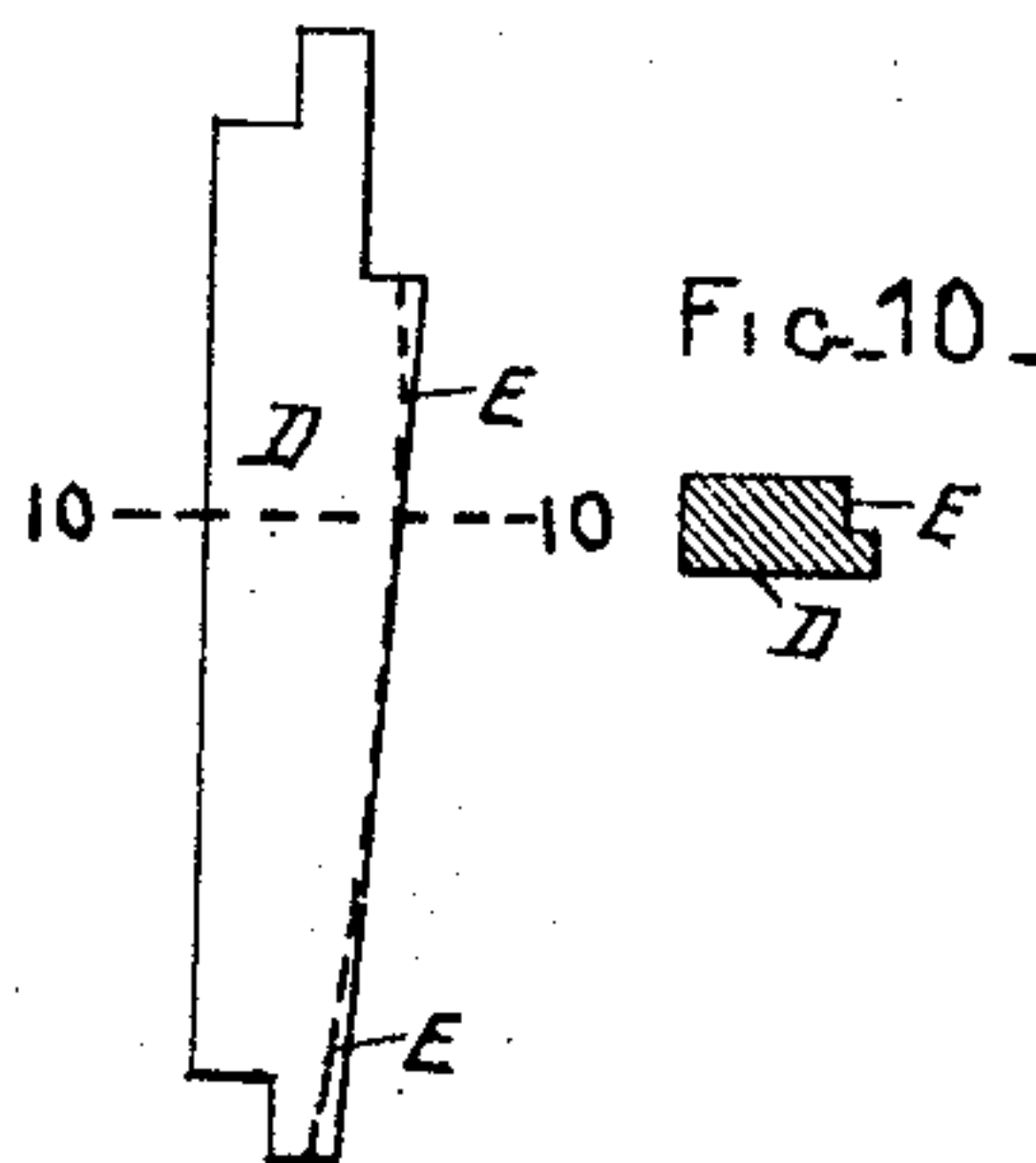
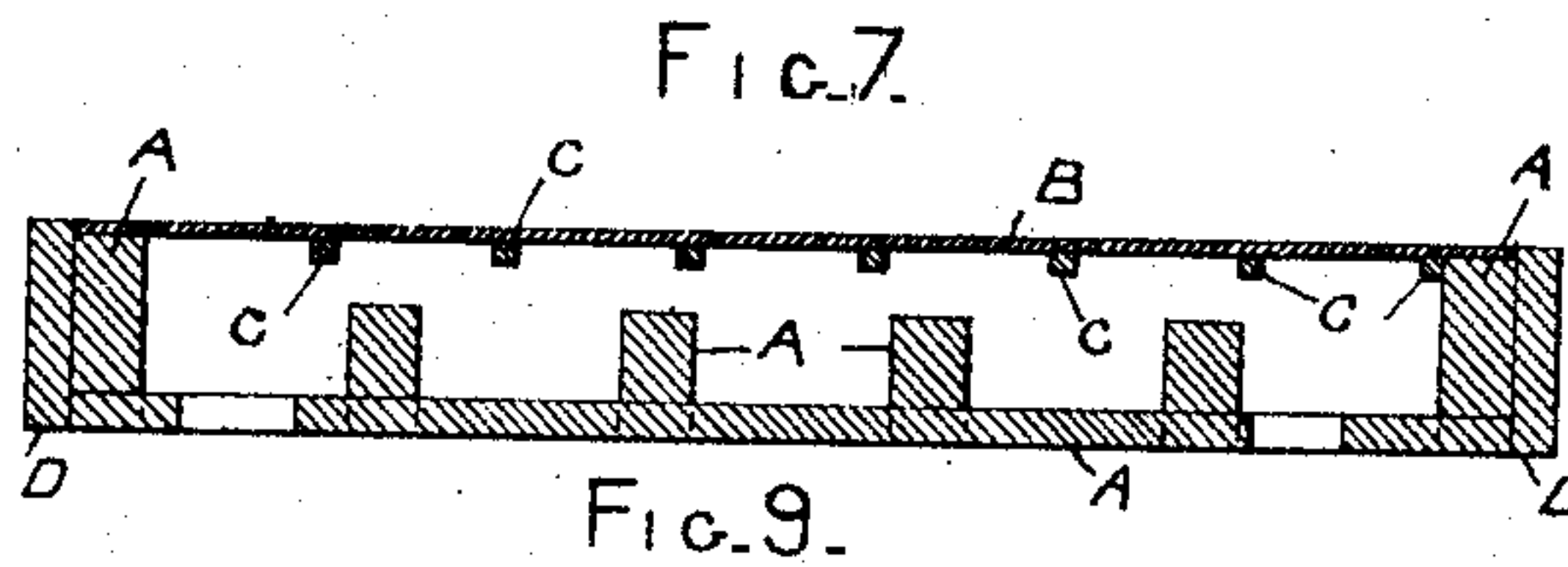
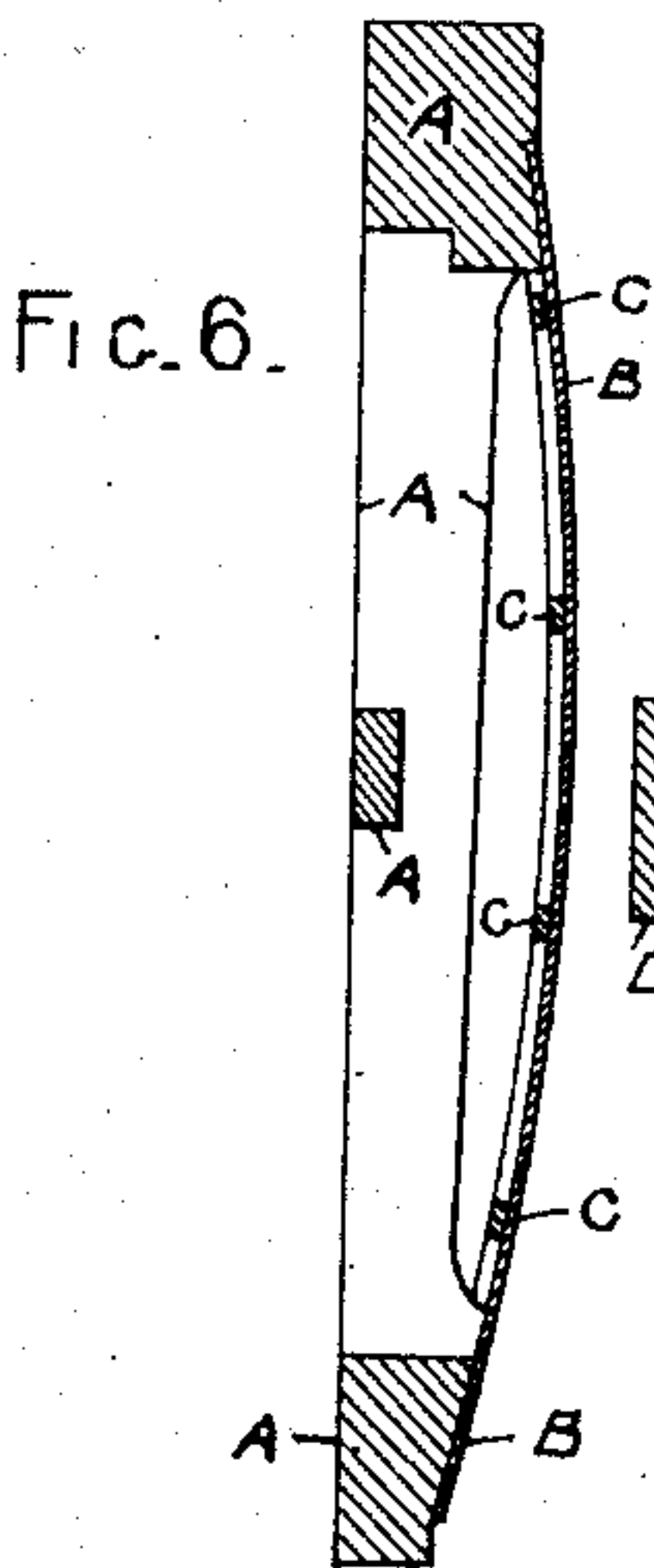
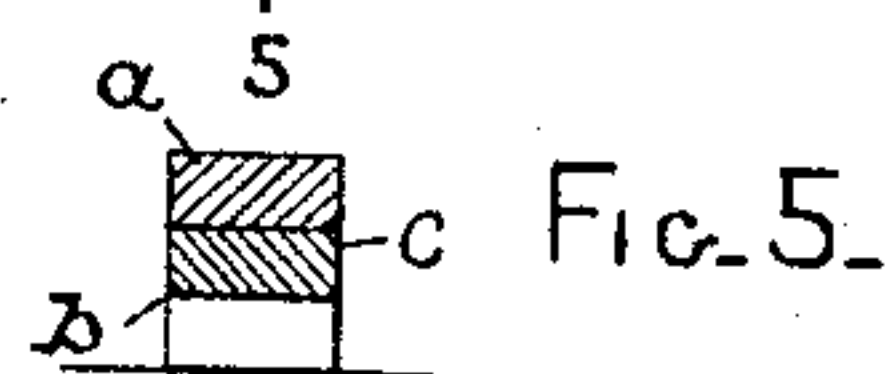
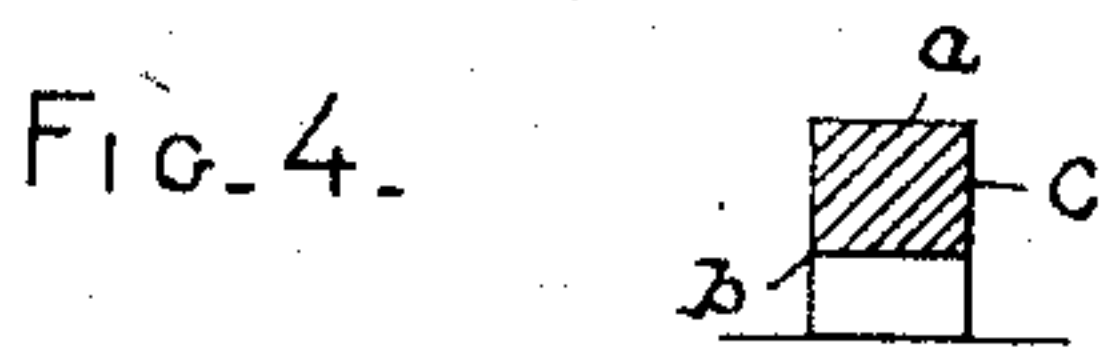
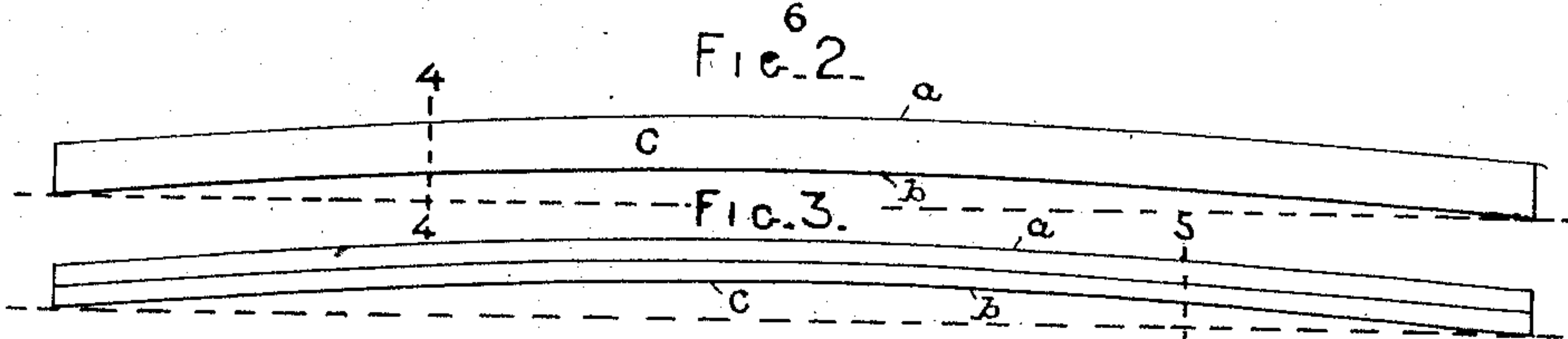
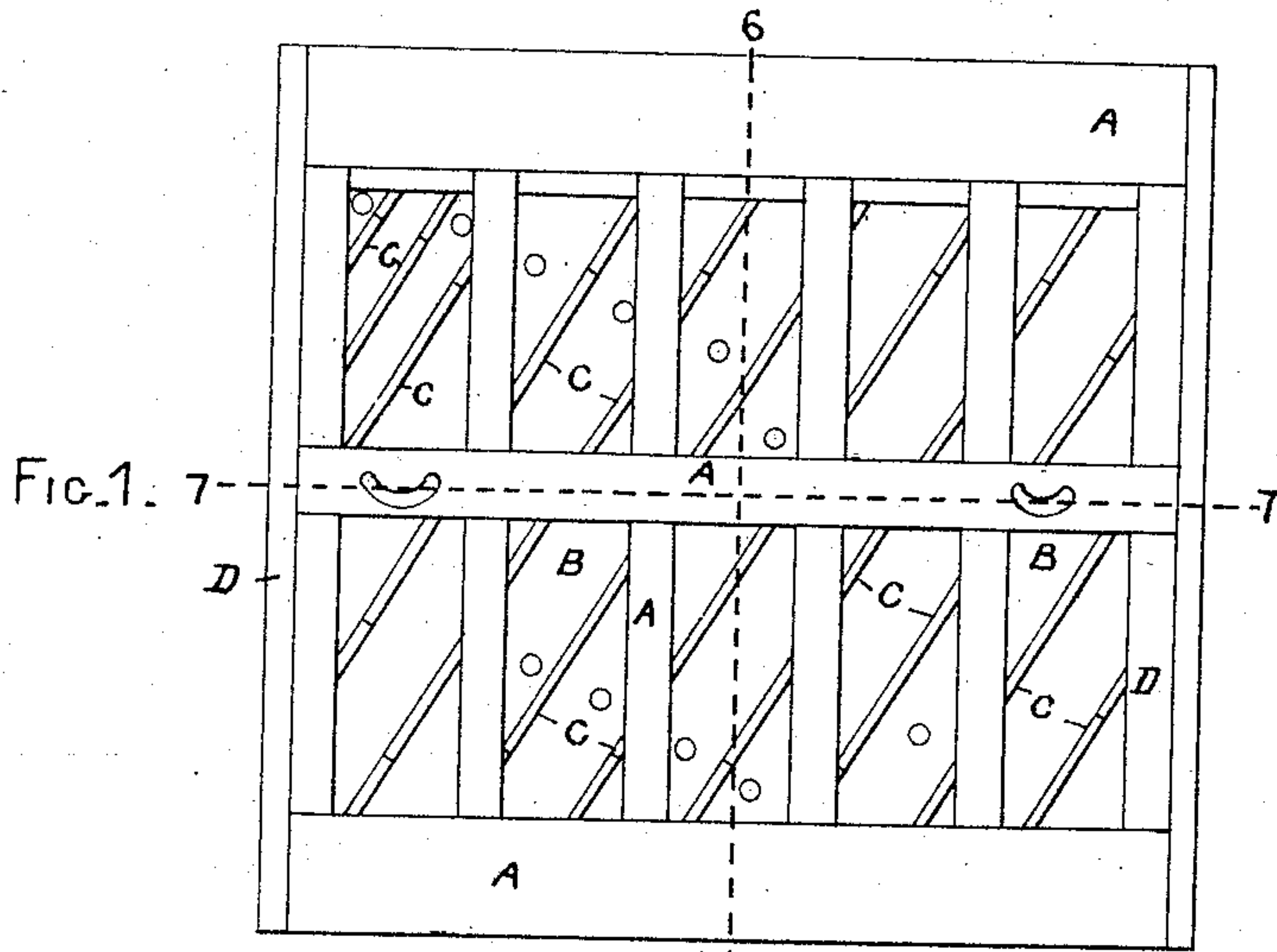


No. 873,949.

PATENTED DEC. 17, 1907.

W. H. KNIGHT.
PIANO SOUNDING BOARD.
APPLICATION FILED APR. 16, 1907.



WITNESSES.
Marion E. Brown
Charles F. R. and

INVENTOR.
WILLIAM H. KNIGHT
BY
Albert W. Brown
ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM H. KNIGHT, OF BOSTON, MASSACHUSETTS.

PIANO SOUNDING-BOARD.

No. 873,949.

Specification of Letters Patent.

Patented Dec. 17, 1907.

Application filed April 15, 1907. Serial No. 368,443.

To all whom it may concern:

Be it known that I, WILLIAM H. KNIGHT, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Piano Sounding-Boards, of which the following is a specification.

It is well known among piano makers that a crowning sounding board greatly improves the tone of the instruments. And this invention relates to the production of such boards and it consists in a combination with a piano sounding board of otherwise suitable construction, of bars or ribs attached thereto and of a frame to which the board is attached, all substantially as hereinafter described and pointed out in the claim.

In the accompanying drawings, forming part of this specification, Figure 1 is a rear elevation of an upright piano frame, showing generally the arrangement of the frame and the run of the sounding board and its bars or ribs relatively thereto and as to the board. Figs. 2 and 3 are similar views lengthwise of two of the bars or ribs, before being attached to the board; Fig. 2 showing a bar of one thickness of wood and Fig. 3 a bar of two thicknesses or layers glued together. Figs. 4 and 5 are cross sections on dotted lines 4—4 and 5—5, Figs. 2 and 3, respectively. Fig. 6 is a vertical section on dotted line 6—6, Fig. 1. Fig. 7 is a horizontal section on dotted line 7—7, Fig. 1. Figs. 8 and 9 are similar elevations of one of the end-posts or uprights of the piano-frame, Fig. 9 showing it in its most approved form for the purposes of this invention. Fig. 10 is a horizontal cross section on dotted line 10—10, Fig. 9.

In the drawings, A represents the frame of an upright piano, B is the sounding board, and C, C are the wooden bars or ribs attached to one side of the sounding board, all as well known except as to the features hereinafter particularly described and which constitute this invention.

Each bar C is convex at and along one edge *a* and concave at and along its other and opposite edge *b*, and, in each instance, from end to end of the bar. This convexity and

concavity of the bars substantially correspond with each other, and in each instance it is secured by steaming the bar and in that condition then bending it over a suitably shaped former, to which it is confined until it has become set to the shape thereof, all as well known in bending wood by the steaming process.

D, D are the opposite end-uprights of the piano frame, and each upright has a similar convex face E which extends the height of the upright and in each instance corresponds to the convexity of the bars C.

The several bars C of the sounding board A are relatively arranged as to each other and to the several edges of the sounding board as well known, but with their convex edges *a* resting on or in contact with the board and in this position they are severally glued or otherwise suitably attached to the board as ordinarily practiced for the attachment of bars or ribs of the usual form to sounding boards, or otherwise suitably, and as the ribs or bars at and along their attaching edges *a* are convex the board is thus brought to or given a crowning shape corresponding substantially to the crown or convexity of the several bars. The board A, prepared with its bars or ribs C all as described, is glued or otherwise suitably attached by the concave side of the board to the convex faces E of the end-uprights D of the frame A; and thus not only is the sounding board of itself crowned as desired, but its retention in such shape is insured because of its attachment as explained to substantially corresponding convex faces E of the frame-uprights D.

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

The combination with a piano sounding-board, of a series of wooden ribs or bars which severally, at and along one and the edge of each by which it is secured to the board, are convex from end to end and at and along the other and opposite and unattached edge of each are substantially correspondingly concave from end to end, and a piano frame having opposite end-uprights,

each of which has a convex face which extends in the direction of its height, and substantially corresponds to the convexity of said bars, and has the sounding-board attached thereto, all substantially as described
5 and for the purposes specified.

In witness whereof, I have hereunto set

my hand in the presence of two subscribing witnesses.

WILLIAM H. KNIGHT.

Witnesses:

ALBERT W. BROWN,
MARION E. BROWN.