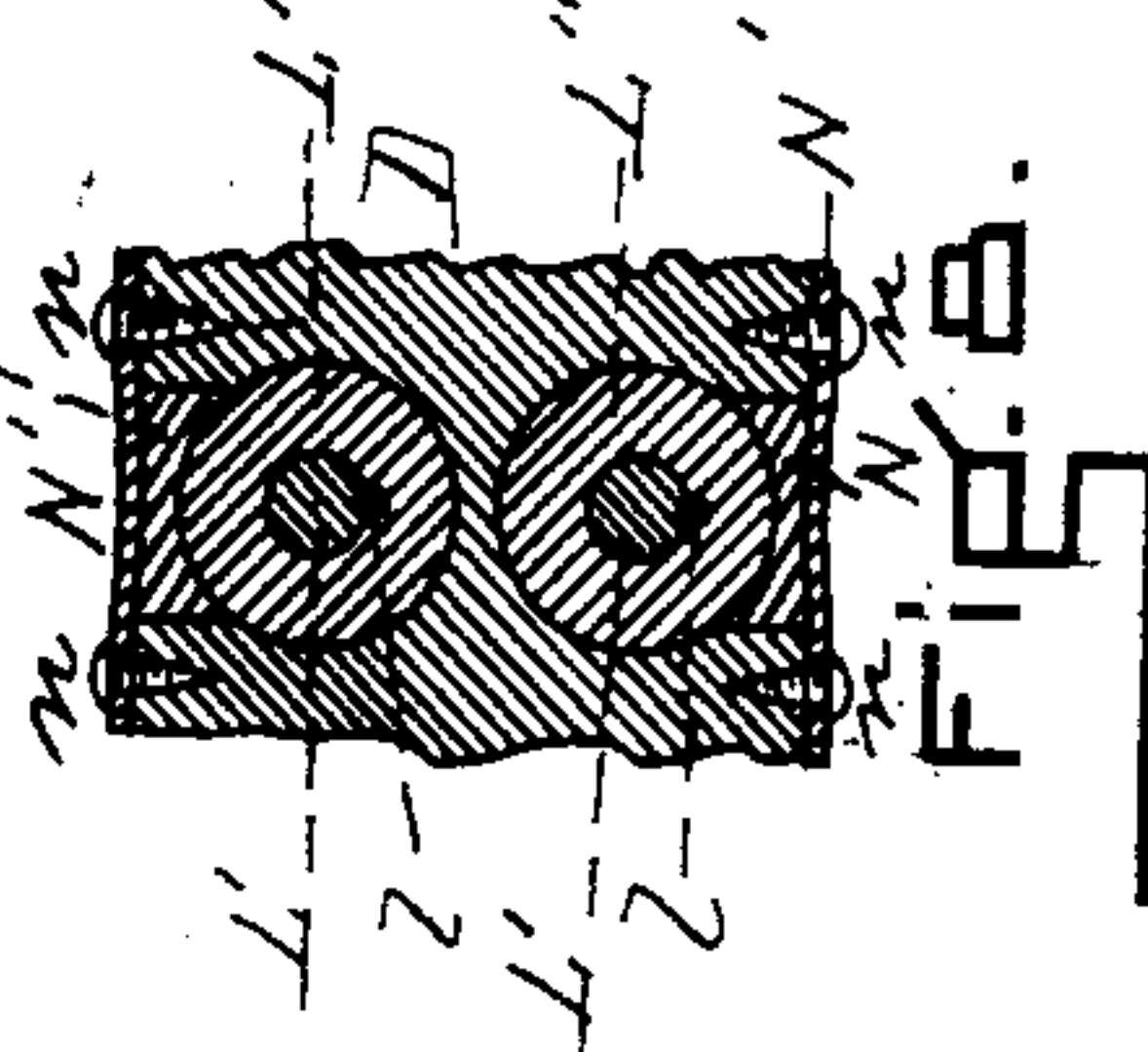
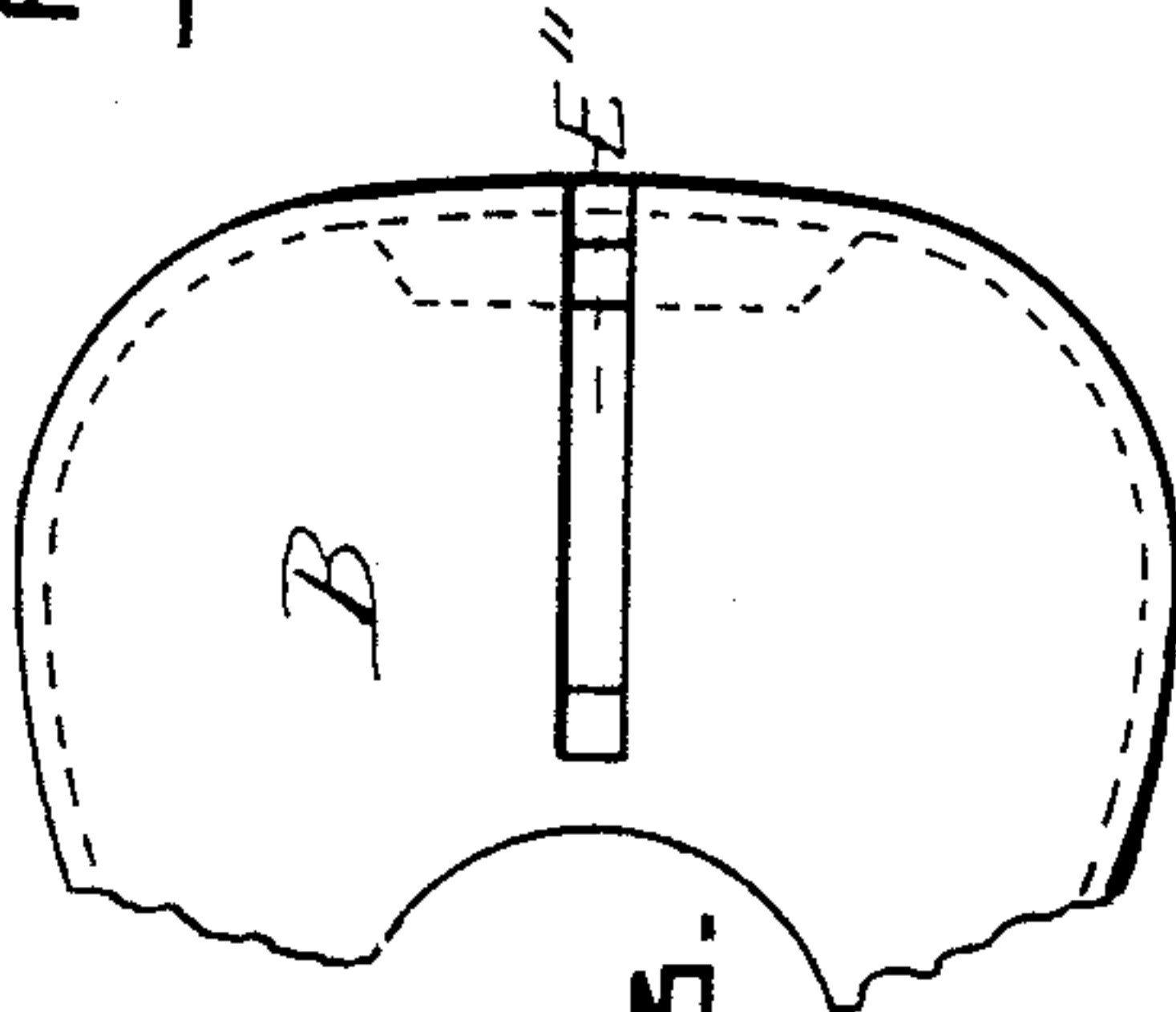
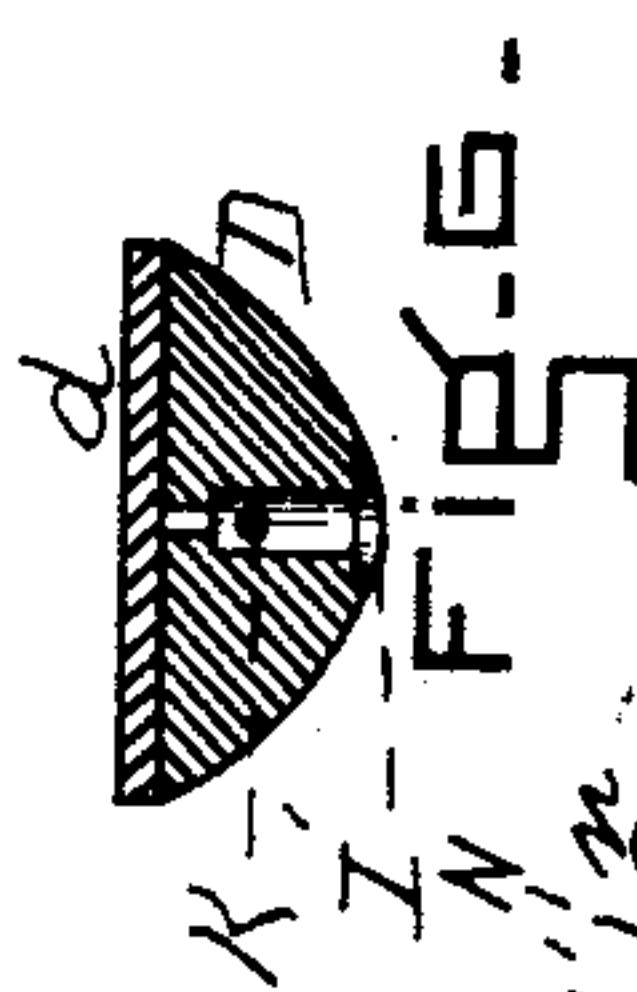
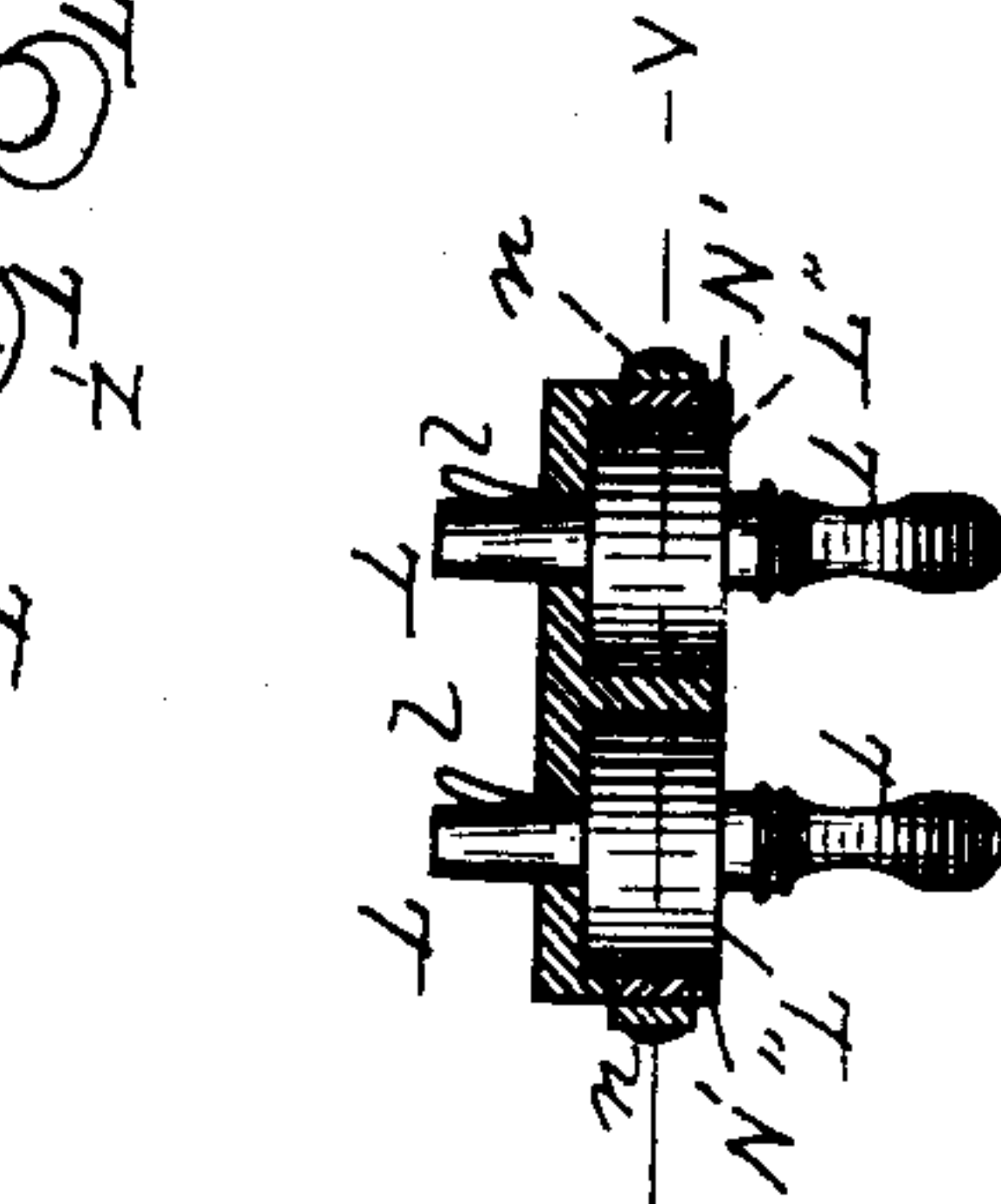
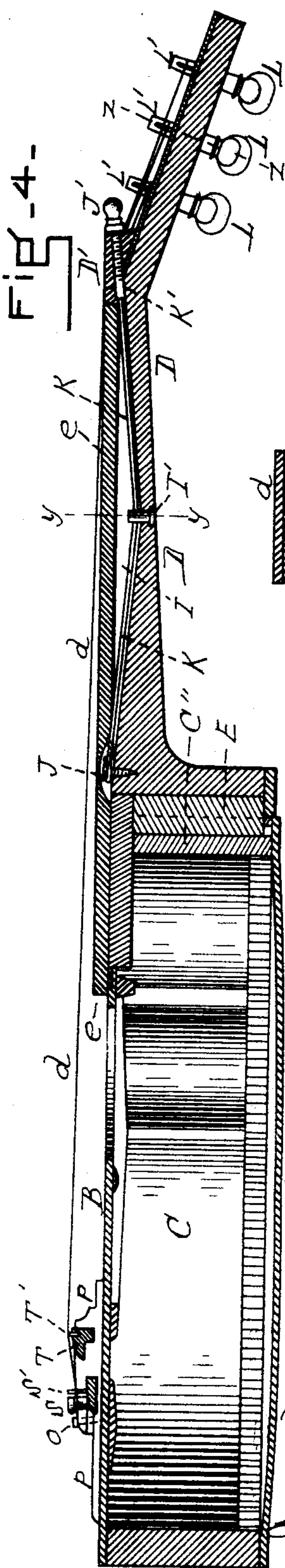
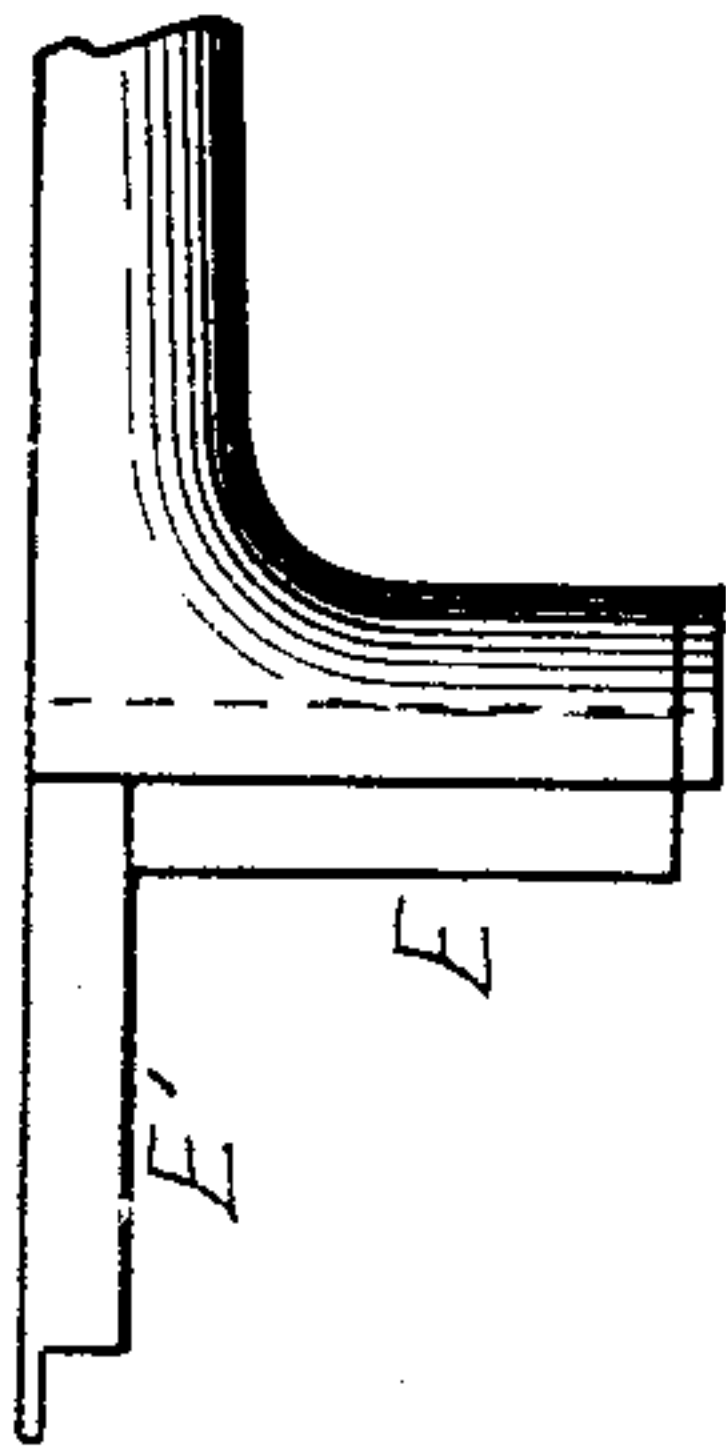
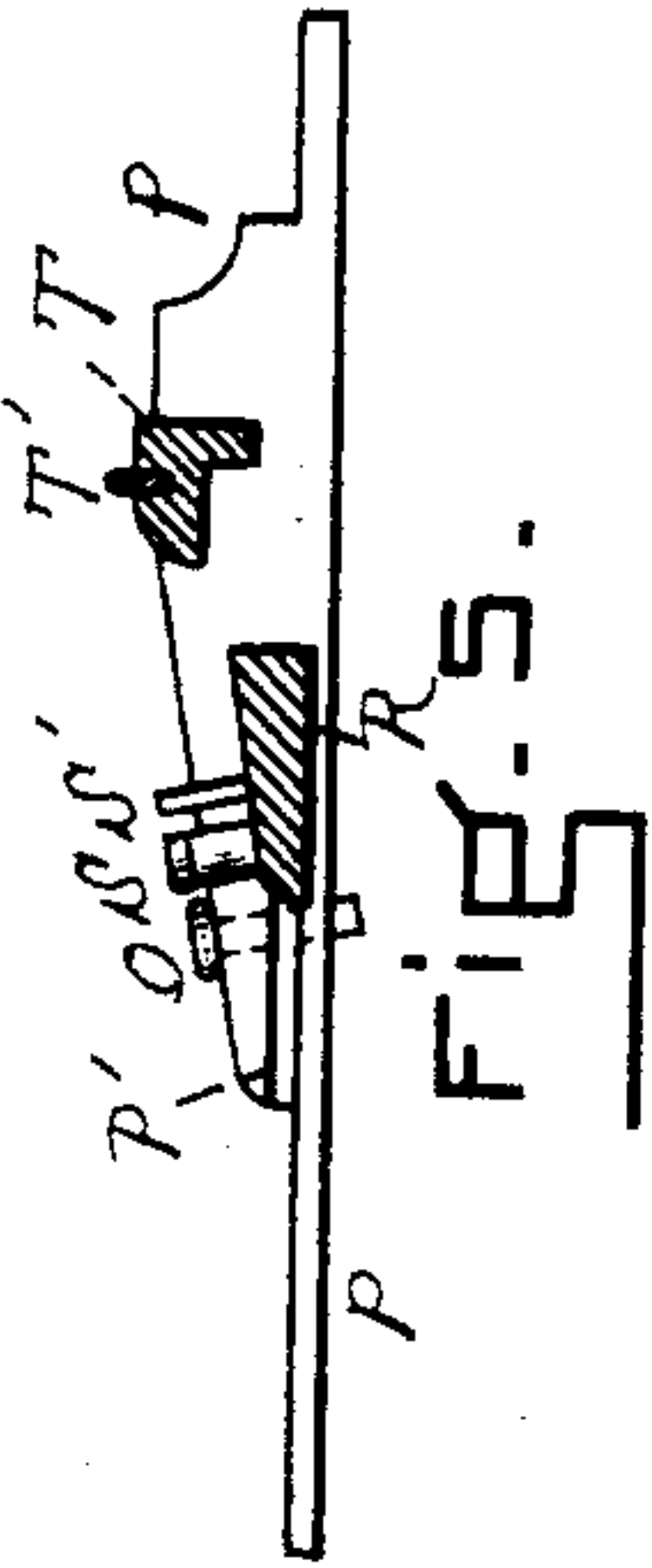
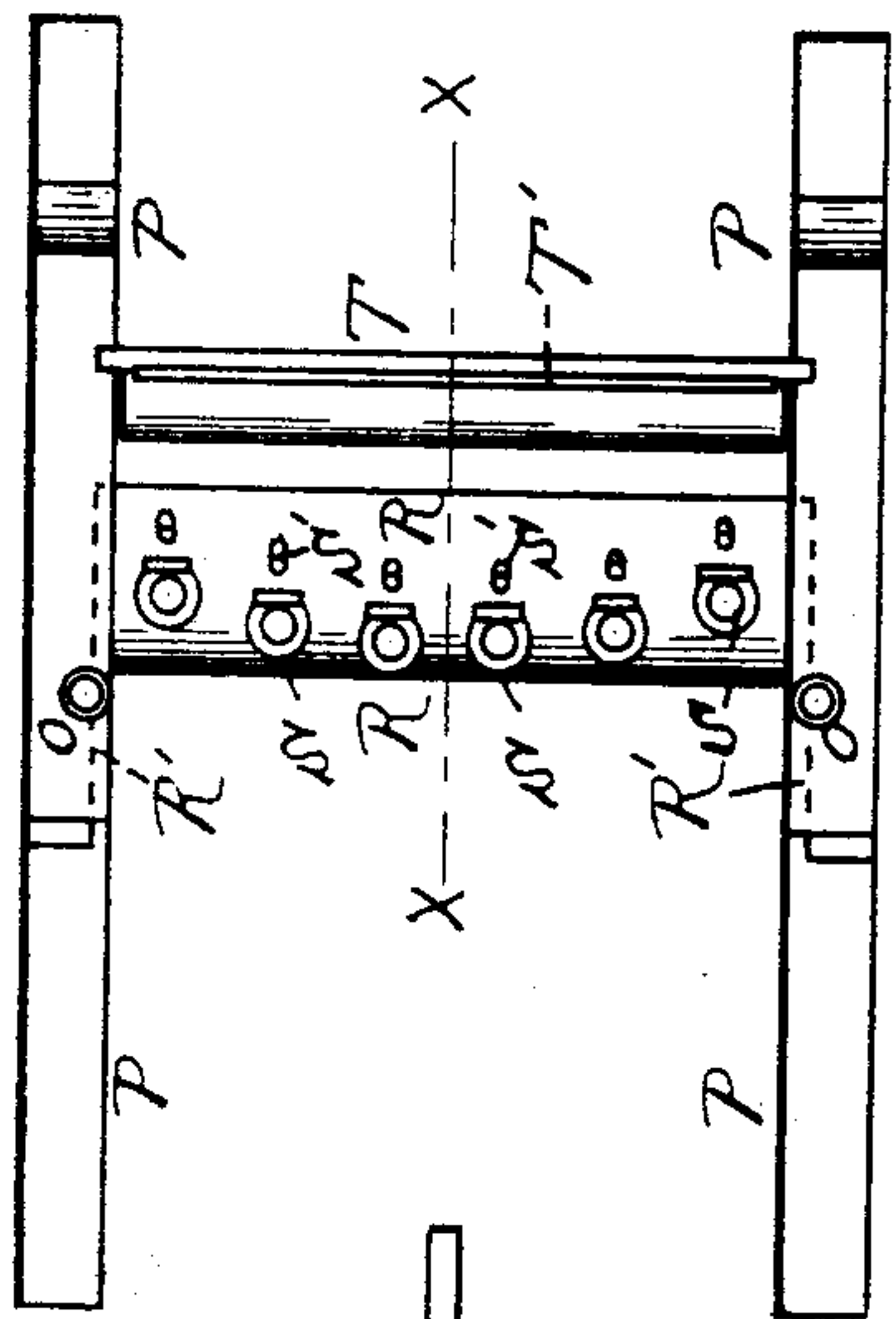


(No Model.)

P. A. ANDERBERG.
GUITAR.

No. 516,717.

Patented Mar. 20, 1894.



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GUITAR.

SPECIFICATION forming part of Letters Patent No. 516,717, dated March 20, 1894.

Application filed July 26, 1893. Serial No. 481,485. (No model.)

To all whom it may concern:

Be it known that I, PEHR A. ANDERBERG, a citizen of the United States, residing at Chelsea, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Guitars and Analogous Stringed Musical Instruments, of which the following is a specification.

This invention relates to guitars and analogous instruments, and it consists in the novel construction and arrangement of parts hereinafter fully described, whereby the tone of the instrument is improved, its rigidity and strength increased, and its general excellence enhanced.

In the accompanying drawings, in which similar letters of reference indicate corresponding parts,—Figure 1 is a central longitudinal vertical section of my improved guitar. Fig. 2 is a side elevation of the lower end of the neck detached. Fig. 3 is a plan view of a portion of the upper end of the body. Fig. 4 is an enlarged plan view of the bridge and tail-piece removed. Fig. 5 is a section of the same on line *x*, Fig. 4. Fig. 6 is a cross section of the neck taken on line *y*, Fig. 1. Fig. 7 is an enlarged longitudinal vertical section on line *z*, Fig. 1, illustrating the construction of the pegs. Fig. 8 is a section taken on line *v*, Fig. 7.

A represents the bottom of the guitar, B the top, C the side walls, and D the neck.

The neck D is secured to the body of the instrument by means of the vertical tenon E extending horizontally from the neck into a corresponding mortise in the wall C and strengthening block C' inside the wall; and by the long projection or key E' extending from the neck into a corresponding slot E'' in the top B. The tendency of the strain of the strings *d* is to curve the neck into a somewhat concave shape. To overcome this, I provide a longitudinal groove I in the upper surface of the neck, said groove deepening toward its center as shown in Fig. 1. This groove is hidden by the key board *e* which lies on the surface of the neck. A horizontally perforated block I' is secured in the lowest portion of the groove, viz., at its longitudinal center, see Figs. 1 and 6. A stiffening wire K lies in this groove and extends through the perforation in the block or bolt

I'. One end of this wire is secured to an ordinary screw or post J in the lower portion of the neck, and the other end is thickened at K' and provided with a screw-thread whereby a tightening nut J' can play on it and bear against the bar D' next the upper edge of the key board *e*. By tightening the nut, the wire tends to pull up the center of the neck, i. e., the portion next the bolt I', and counteract or remedy any curvature or concavity produced by the pull of the strings. The pegs comprise each a thumb-piece L, shank L', and circular block or disk L'' surrounding the shank and rigidly secured to or integral with it. A metallic piece of wire *l* lies secured in a corresponding groove in the shank of each peg. The pegs lie in the neck next the edges in circular holes or recesses of size to fit over the disks L'', and a binding block N in each case lies loosely in a correspondingly shaped passage between the said recess and the edge of the neck, as shown in Fig. 8, said binding block being straight on its outer edge and concave on its inner edge to correspond with the curvature of the disks. Plates N' are screwed across and against the outer surfaces of the bearing blocks at *n*, holding them more or less tightly against the disks, the degree being regulated by the screws. These plates may be made slightly concave so as to bear more effectually against the blocks N. It will readily be seen that the disks L'', being of much greater diameter than the shank of an ordinary peg, possess greater frictional surface as well as greater leverage. Hence they will endure the strain of the strings much longer than ordinary pegs. The wires or spurs *l* are used to catch the string upon, instead of thrusting it through a hole in the peg, and provide a much more handy and quick adjustment.

P P are the bridge supports, glued or otherwise suitably secured to the top B, and set longitudinally therewith so as to not cross the grain and injure the tone. The inner edges of these supports are provided with horizontal grooves P' in which rest the ends R' of the bar R, which is thus held well up from and out of contact with the top B, thereby not interfering with the tone, and enabling the strings to be out of contact with the body of the instrument. See Figs. 1, 4 and 5. The

strings are secured to this bar by pins S and wires or spurs S', the latter being driven into the base next the former, and the strings being crowded between them.

5 T is the bridge sustained by the supports P in a raised position by means of vertical grooves or slots on the inner faces of the supports. The bridge is preferably made of the angle shape shown, and has a rest T' over
10 which the strings stretch. Pegs O prevent the bar R from slipping back. The strings stretch from the pins S on the bar R over the bridge T to the key board and pegs, and their adjustment is quick and secure.

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

1. In a guitar or analogous musical instrument, the combination of the neck D provided with the vertical tenon E and projection
20 or key E', and the body provided with the mortised wall C and the slot E'' in the top B, the said tenon and key being secured in the said wall and slot respectively, substantially
25 as described.

2. The neck D provided with a longitudinal groove I deeper near the center than at the ends, in combination with the wire or rod K secured to the neck at opposite ends and
30 secured in the groove at a point lower than at the ends, whereby the tightening of the wire draws up the neck next said fastening point in the groove, substantially as set forth.

3. In combination, the neck D provided
35 with the groove I made deeper in the middle than at the ends, the perforated bolt I' set in the lowest portion of the groove, the wire K secured at its lower end to the neck, and provided at its upper end with the screw thread-

ed thickened portion K'. and the nut J'. on 40 said portion K'. and bearing against a projection from the neck, substantially as described.

4. In a guitar or analogous instrument, a peg, as L L', provided with an enlarged circular wing or disk L'', and a wire or spur l
45 set in a longitudinal groove in the shank of the peg, substantially as described.

5. The combination of the peg provided with the enlarged circular wing or disk L'', the
50 neck provided with a corresponding hole and a passage connecting said hole with the edge, the block N. fitting in said passage and presenting a concave surface to the peg, and a bearing plate N'. pressing against said block
55 and secured to the neck, substantially as set forth.

6. In a guitar or analogous instrument, a bridge comprising supports P secured to the top longitudinally with the instrument and
60 with the grain of the wood, and the raised portion or bridge proper resting on said supports at a height sufficient to prevent either it or the strings from coming in contact with the top, substantially as described. 65

7. The bridge and tail-piece, comprising the longitudinally placed supports P provided with the horizontal grooves P'. on their inner sides, the cross bar R supporting the pins S to which the strings are secured, and the
70 bridge T set in the supports P, said bar and bridge being raised out of contact with the top of the instrument, substantially as set forth.

PEHR A. ANDERBERG.

Witnesses:

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