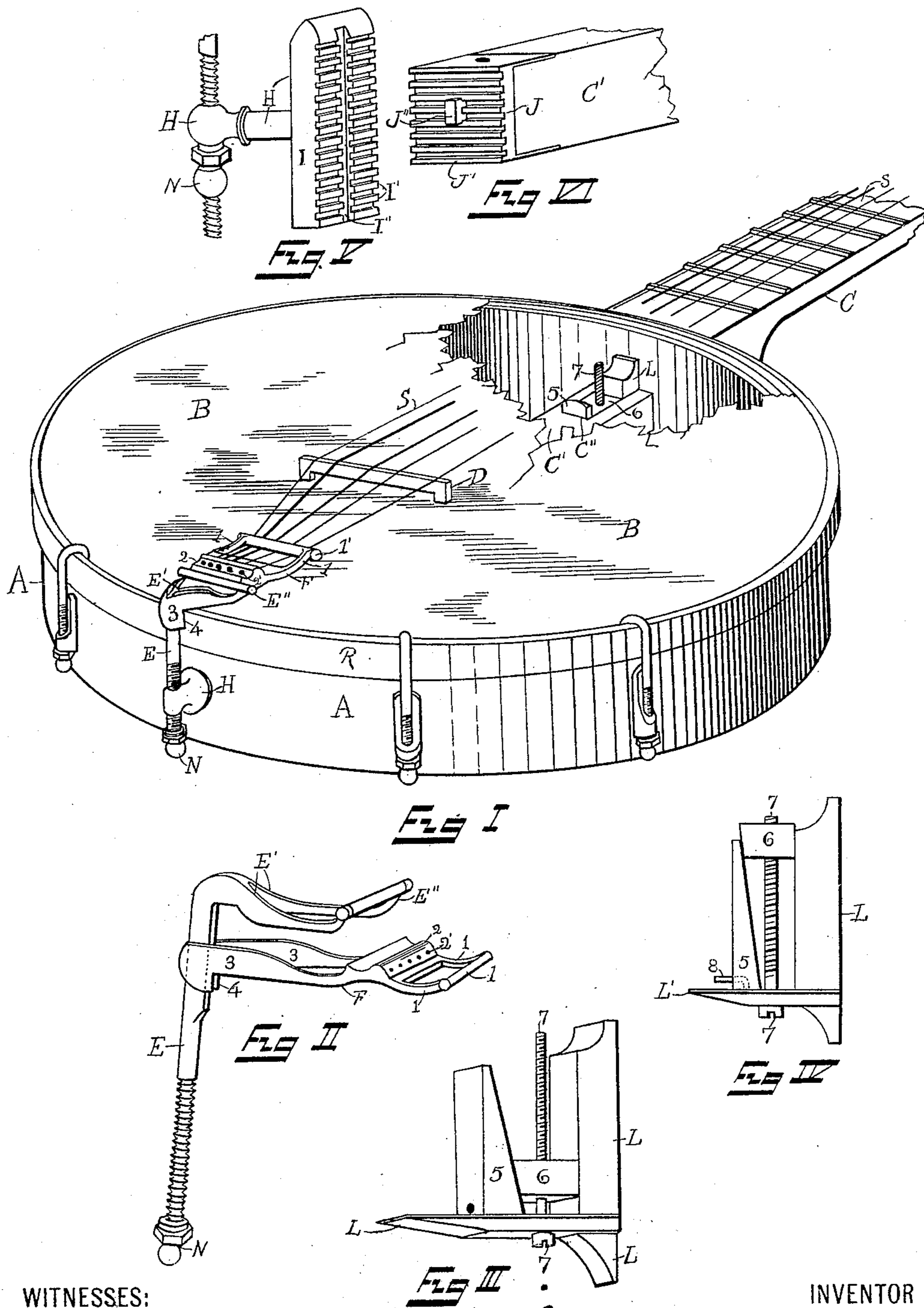


(No Model.)

J. F. BARROWS.
BANJO.

No. 517,913.

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To all whom it may concern:

Be it known that I, JOHN F. BARROWS, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Banjos; 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention is a banjo, and consists in the combination, arrangement and adjustability of the parts hereinafter shown, described and claimed.

Figure I, is a perspective of a banjo containing my invention. Fig. II, is a side perspective of the tail piece. Fig. III, is a side perspective of the neck tightening device. Fig. IV, is a side elevation of the same. Fig. V, is a perspective of the adjusting device for the stem of the neck. Fig. VI, is a perspective of the end of the stem.

A, is the banjo body, B, the drumhead or parchment, and D the bridge.

C, is the neck having a stem C' extending through an orifice in the body A, into and across the body, and engaging an end adjusting device I, secured to the inside of the body. Upon the end of the stem C', I secure a corrugated end plate J, having integral therewith a central lug J''. The adjusting device I, heretofore mentioned, consists of a piece of metal secured to the body perpendicular to its plane, and having its exposed surface corrugated, I', and adapted to engage and mesh into the corrugations J' on the plate J when placed in contact. This piece I, has a longitudinal groove I'' transversely to the corrugations I'. The lug J'' passes into this groove I'', when the pieces I and J are in engagement, and travels up and down in it as the end piece J is moved, and prevents any lateral movement of the stem C'. The stem C' is also provided with a perpendicular slot C'', rectangular in form, located at the head of the stem at the point where it passes through the body A, the greater part of the slot being within the body, and large enough to receive

the fastening device shown in Figs. III, and IV. This fastening device is one of the special features of my invention. Heretofore it has been common to use a wedge, or a plate secured by screws to the body and stem, both being unsatisfactory;—the wedge because of the liability to become loose in use and by the operation of the temperature upon the material; the plate, because it is impossible to satisfactorily tighten or secure the body to the neck with that degree of tension required. This device consists of the plate L adapted to pass through the slot and extend from each side thereof, and has a right angle arm L', upon one end thereof.

5, is a piece of metal movably secured and depending from the arm L' and at the proper distance from the plate L. The outer surface of the piece 5, is straight and engages the straight end of the slot C'', the inner surface is beveled, being larger at the base than at the end.

6, is a piece of metal held between the plate L, and the piece 5, by the screw rod 7, passing through a hole in the arm L'. This piece 6, has a straight surface engaging the straight surface of the plate L, and a beveled surface engaging the beveled surface of the piece 5. The screw rod 7, screws into a screw-threaded hole in the part 6, and as the screw is turned to the right the part 6 is drawn between the plate L and the piece 5, which operation will, it is obvious, move the piece 5 farther from the plate L.

8, is a hook depending from the arm L', engaging the piece 5, and along this hook the piece 5 travels as it is forced away from the plate L by the part 6. It will therefore be seen that if this device is placed within the rectangular slot C'' with the plate L resting against the inside of the body A, and the piece 5 against the end of the slot, turning the screw 7 in the proper direction will draw the part 6 between them and thereby tighten and firmly secure the body A, upon the neck C. Other means of forming and securing the movable piece 5 may be devised, as will be obvious, without departing from the principle of the tightening device I have described. I have also shown a new and peculiarly adaptable, and adjustable, tail piece. This tail piece I form in two parts, E, and F. The

part F, answers the purpose of the old form of tail piece. The strings S, are secured to it by tying them through the holes 2' in the ridge 2. It may then be caught upon the rim R, by the shoulders 4, of its head 3. Tightening the strings would now show the old style of tail piece. In front of the ridge 2 and at each end thereof extend arms 1, for the proper distance, and carry the rod 1' under which I pass the strings. The purpose of this will hereinafter appear.

Banjo players observe that lowering or raising the strings S, to or from the drum head back of the bridge materially changes the tone of the instrument. My tail piece is designed to furnish means for this adjustment, and the part F, described, I have formed with that purpose in view, and for that reason I catch it over the rim in the old style instead of securing it in the way now common, viz: by having a shank passing down the body A, and through an eye or lug, and held by a nut. The other part, E, of the tail piece consists of a hook shaped piece E, and E', E', being the hook artistically designed, with a shank or stem E. This piece E, and E' fits within the part F, the stem E passing through the head 3, without engaging it, down the side of frame A, but free from it, through an eye in the nut H, that screws upon the shank H' of the plate I. E is screw threaded to receive a nut, N, which screws upon it up to the eye in H, thereby tightening it.

As previously stated, the part E' fits within the parts of F, except a rod E'' carried upon the end of E' which engages and rests upon F, just back of the ridge 2. This is the only support the piece E, has, and it is obvious that as the nut N, is turned upon the shank E, it will draw upon the part F at the point where the rod E'' engages it; and F being fulcrumed at its head 3, on the rim R, its front end 1' will be drawn down toward the drum head B, thus lowering the string S. It is obvious that the head F will be held firmly to the rim R, by the part E' engaging F, as described. The strain of the tension of the strings being taken from the adjustment, it is obvious that the adjustment can be made much easier and quicker than otherwise.

I do not wish to confine myself to any particular form of the mechanism shown, and therefore any change may be made that ordinary mechanical skill would suggest without departing from the principle of my invention.

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

1. In a banjo, the combination with the banjo body, the neck provided with a stem extending through the body to the opposite side from the neck, and a corrugated end piece on the end of the stem, of a plate secured to the body and having transverse corrugations to engage

the corrugated end piece, substantially as specified.

2. In a banjo, the combination with the banjo body, a neck provided with a stem extending through the body to the opposite side from the neck, a transversely corrugated end piece on the end of the stem and having a central lug, of a plate secured on the inside of the body and provided with corrugations to engage the corrugations of the end plate, and having a central vertical slot to receive the central lug of the end plate, substantially as specified.

3. In a banjo, the combination with a banjo body, of a neck provided with a stem passing into the banjo body, the stem provided with a rectangular vertical slot at the point where it passes within the body, and a fastening device within the slot consisting of a plate passing through the slot and extending on both sides of the stem and against the banjo body, and having a right angle arm supporting a right angle triangular piece longitudinally movable along said arm, the straight side of said piece engaging the end of the slot, a screw rod passing through said arm and screwing into a nut between the said pieces, one side of the nut being beveled to engage the beveled side of the triangular piece, whereby when the screw is turned it will draw the nut up between the parts, substantially as specified.

4. In a banjo, the combination with a banjo body, a neck having a stem integral therewith passing through the body to the opposite side from the neck, a transversely corrugated end piece having a central lug on the end of the stem, a plate corrugated to mesh into the corrugations of the end piece and having a central vertical slot to secure the central lug of the end piece, and means for securing the plate to the body, of adjustable means for fastening the neck and stem to the body, substantially as specified.

5. In a banjo, the combination with a banjo body, the neck and the stem integral with the neck, of adjustable means for tilting the neck and for securing the end of the stem to the body combined, and a tightening device consisting of a nut, having a beveled side, on a screw rod and adapted to be drawn by the screw rod between two surfaces, one straight, the other beveled to engage the bevel of the nut, one fixed, the other movable, all placed within a slot in the stem and adapted to bear against the banjo body on one side, and the end of the slot on the other, substantially as described.

6. In a banjo, the combination with a banjo body, a neck having a stem integral therewith passing through the banjo body to a point opposite the neck, an end piece on the end of the stem having horizontal corrugations, and a central lug, a plate secured to the body to engage the end piece and having corrugations to mesh into the same on the end piece, and

having a vertical central groove to receive the lug on the end piece, whereby the neck may be tilted independently of the body, of a fastening device for holding the neck and body rigidly together, consisting of a nut having one side beveled, a screw rod carrying said nut, two surfaces engaging the nut, one straight and engaging the straight side of the nut, one beveled and engaging the bevel of the nut, one resting against the body of the banjo, the other movable when the nut is drawn between them and pressing against the end of the rectangular slot in the stem, receiving the device, when the nut is drawn between them, substantially as described.

7. In a banjo, the fastening device described, consisting of a nut having a straight and a beveled side, two engaging surfaces, one straight, and the other beveled to engage the bevel of the nut, one rigid and supporting upon an arm a screw rod carrying the nut, the other movable as the nut is drawn between them by screwing down the rod, substantially as described.

8. In a banjo, the neck tilting device described, consisting of an end plate on the stem of the neck having its exposed surface transversely corrugated, and a lug extending therefrom, and an engaging plate adapted to be secured to the inside of the banjo body and having its exposed surface horizontally corrugated to receive the corrugations of the end piece, and having a vertical groove to receive the lug of the end piece, the plate being vertically longer than the end plate, whereby the end plate may be moved from one corrugation to another, substantially as described.

9. In a banjo, the combination with a banjo body, the neck, the drum head, the bridge and the strings, of an adjustable tail piece in two parts, one the tail piece proper having a head with shoulders engaging the rim of the banjo, and extending forward having eyelets for receiving the strings, and having a forwardly extending bracket adapted to press upon the strings at the proper distance in front of where tied to the tail piece, the other part consisting of a hook shaped device having a shank passing through the head of the tail piece proper, but not in engagement with it, and extending down the body of the banjo, but free from it, and passing through an eye in a lug extending from the body and being screw threaded and carrying a nut below the eye whereby it may be drawn down upon the tail piece proper, when the hooked part will press upon the tail piece at a point just back of the string engagement, whereby the bracket on the end of the tail piece will press upon the strings, substantially as described.

10. In a banjo, the combination with a banjo

body, the neck, the stem integral with the neck, and having a rectangular slot where it passes within the body, the end adjustment on the end of the stem, the means within the rectangular slot for rigidly securing the neck to the body, the drum head, the bridge, and the strings, of a tail piece engaging the rim of the banjo body only, and having a frontwardly extending bracket whose end bears on the strings in front of the tail piece, a hooked device having a screw threaded shank passing within the tail piece at the side of the body but not in engagement with the tail piece or body, and passing through an eye in a lug on the body, and having a nut on its end below the lug whereby by turning up the nut the hooked device on the top of the shank will be drawn down, the end of the hook engaging the tail piece at a point just back of the eyelets for the string engagement, thus drawing the bracket on the end of the tail piece down and lowering the strings, substantially as described.

11. In a banjo, the adjustable tail piece described, consisting of the tail piece proper having its shoulders engaging the rim of the body, and having eyes for securing the strings, and having in front of the string engagement a bracket bearing upon the strings between their engagement and the bridge, and the adjusting device consisting of a screw threaded shank passing through the tail piece proper, but not in engagement with it, and extending down the side of the body, but free from it, and passing through an eye in a lug on the body and having a nut below the lug, a frontwardly extending hook upon the upper end of the shank adapted to engage and bear upon the tail piece back of the string eyelets when the nut is screwed upon the shank, whereby the front of the tail piece will bear upon the strings and draw them toward the drum head, substantially as described.

12. In a banjo, the combination with a tail piece having an extension in front of the string holder adapted to bear upon the strings between their fastening and the bridge, and a hooked device having its shank screw threaded and adjustably secured to the body with the hook adapted to engage the tail piece just back of the string fastening and press it downward, thereby drawing the strings toward the drum head, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN F. BARROWS.

Witnesses:

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A. H. SWARTHOUT.