

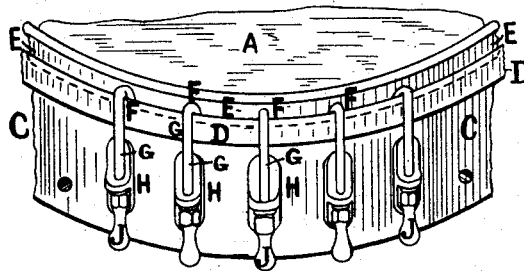
(No Model.)

A. C. FAIRBANKS.  
BANJO.

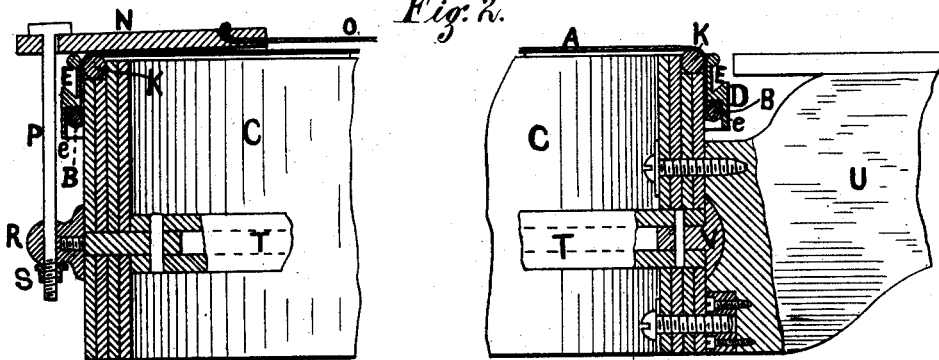
No. 423,231.

Patented Mar. 11, 1890.

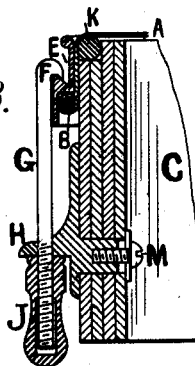
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses;*

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# UNITED STATES PATENT OFFICE.

ALBERT C. FAIRBANKS, OF BOSTON, MASSACHUSETTS.

## BANJO.

SPECIFICATION forming part of Letters Patent No. 423,231, dated March 11, 1890.

Application filed February 6, 1882. Serial No. 51,935. (No model.)

### *To all whom it may concern:*

Be it known that I, ALBERT C. FAIRBANKS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Banjos, of which the following is a specification.

The objects of my invention are to improve the musical qualities of the banjo, so as to render the tones softer and richer, or more nearly like those produced from a guitar, and yet retain the loud or heavy sonorous tones; and a further object is to render the hoop or rim of the banjo more rigid against the strain of the strings and head, tending to draw or force the same out of position, so as to require more frequent tuning; and it consists in the construction, combination, and arrangement of the several parts, as hereinafter more fully described, and set forth in the claims.

Figure 1 represents a perspective view of a portion of a banjo-head constructed according to my invention. Fig. 2 represents a vertical central section of the same, drawn to an enlarged scale. Fig. 3 represents a vertical section through the same, showing the attachment of bracket to the hoop and the adjusting devices for straining the head proper.

A represents the head proper, composed of sheep, calf, or other skin desired, as heretofore, and which is secured in position and strained by means of the usual wire hoop or ring B, inclosed within the outer edge portion of the said sheep or calf skin A and passed over the wood hoop or rim C, and is stretched or drawn tightly over the same by means of the metal adjustable hoop D, which is provided with a peripheral groove E, formed with an inward incline or dovetail-shaped bottom surface adapted to receive the hook ends F of the screw-threaded adjusting-rods G, as shown in Figs. 1 and 3, said adjusting bolts or rods passing through the brackets H and provided with screw-threaded capped nuts J, which inclose the screw-threaded portion of the hooked adjusting rods or bolts, as shown in Fig. 3, the extended shank and cap portion of said nuts being formed with an enlarged internal bore or hole, so as to permit the screw-threaded portion entering therein to be free from contact therewith, by which construction dirt or foreign substances lodging therein would not obstruct

the movement of the screw-threaded portion thereof when a properly-fitted wrench is applied to the square, hexagonal, or other external faced surface in the act of straining or suitably adjusting or tightening the said head A as it is drawn down or over the edge of the hoop or rim C by means of said nuts J. Now, in order to insure greater rigidity or permanency of the said rim C in withstanding the strain it is subjected to when the banjo is strung ready for use, without deteriorating the musical tones thereof, I have provided a peripheral notch or groove, so as to form a shoulder or bearing, upon which is fitted the round or suitably-shaped metal wire or ring K, which projects slightly above the edge or inner upward-projecting portion of the said rim or wood hoop C, which hoop or rim C is formed of two or more laminæ or thicknesses of wood glued together and bent upon a suitable mold or form, having the grain thereof all extending circumferentially and with the joints of each layer either "lapped" or "buted" together and arranged so as to be remote from the joints of the contiguous layers, which layers I prefer four in number, as shown in Figs. 2 and 3.

H represents a series of brackets each secured to the wood hoop-rim C at intervals by means of a projection fitted within a suitable hole formed therein to receive it, said projection being provided with an internal screw-thread adapted to receive a screw M, the head of which is formed oval or round, its under side being flat and resting upon a metal washer bearing upon the inner surface of the said hoop-rim, whereby a very rigid, simple, and comparatively smooth finish is obtained.

N represents the "tail-piece" for holding the strings, and is so constructed as to permit of their insertion therein in a very convenient and expeditious manner through the holes formed therein, being constructed with a "countersink" or short shallow conical vertical cavity or hole, and joined at the bottom thereof by a smaller incline or right-angled horizontal hole extending longitudinally to the forward end of the said tail-piece N, as shown in the left-hand portion of Fig. 2. This tail-piece N is held and adjusted in the desired position to the head and hoop-rim by a

bolt P, passing through a hole in the rear end thereof (which projects over the hoop-rim) and downward through a corresponding hole formed through the "tail-pin" R, and provided with a screw-nut S, having a bearing against the under side of the said tail-pin, whereby the said tail-piece may be elevated more or less at its forward end by means of the said screw-nut S acting upon the thread of the bolt P when turned by a wrench.

To prevent the hoop-rim C from being spread outward or depressed inwardly in the direction of the line of the strings O, I have provided the same with an internal tubular support or brace T, having a bearing against the interior of the said hoop-rim C opposite the tail-pin R, and a screw-threaded projection passing through a hole in the hoop-rim and fitting within a corresponding screw-threaded hole formed in the inner end of the said tail-pin R, whereby the said tube-brace T is held firmly in position at that end. (Shown at the left hand of Fig. 2.) The opposite end of this tube-brace T is secured by passing it through a hole formed in the opposite side of the hoop-rim C, and provided previous to its insertion therein with a large oval-headed bolt V, which head has a bearing against the outside of the hoop-rim, and over and upon the oval head of the said bolt V is fitted and secured the usual "stock" U of the banjo by suitable screws passing through the said hoop-rim and entering the butt-end of the stock or handle, as shown in the right-hand portion of Fig. 2.

It will be seen in the several views that the metal adjusting-hoop D is provided with a downward-projecting flange e, operating outside of the straining hoop or ring B, whereby a better and more ornamental finish is produced. By means of the annular or peripheral groove E, formed in the metal adjustable hoop D, the hooks F, formed upon the upper ends of the adjusting rods or bolts G, may be moved circumferentially therein, so as to permit the screw-threaded lower ends to conform to the holes provided in the fixed brackets H without regard to the position of the said hoop D when being placed upon the banjo, the hooks being free to slide in either direction in said groove, thereby removing the liability of the hooks to injure the said head A, and also remove the objection to that class of straining-hooks which engage with the upper edge of the common hook used heretofore in straining the head. It will be

seen that when the said head A is adjusted it has a bearing upon the wire ring K, which projects sufficiently above the wood hoop-rim C to prevent its contact therewith, thus increasing the musical tones most desired by allowing a more free vibration of the said head A and its communication to the hoop-rim C, formed of laminae of wood, as hereinbefore described.

By constructing the holes in the tail-piece N as shown the strings may be inserted therein with the greatest ease and facility.

I am aware that capped nuts have heretofore been employed for a similar purpose. Therefore I do not broadly claim a capped nut, as it would not serve the purposes contemplated by this feature of my invention. The internal chamber surrounding the screw-thread on the straining-hook is adapted to allow any dirt or other foreign substance collected within the cap portion of the nut to be free from contact with the screw-thread therein.

It will be seen and understood by the above description of the construction of the wood hoop of veneers or laminae of wood that in order to have each veneer overlap the joined ends of the contiguous veneers it will be necessary to bend a single veneer around a circular form provided for the purpose, then glue the ends together and dry the same, then bend around and glue thereon the next veneer so as to overlap the ends or joint of the former veneer, then dry the same, and proceed as before until the desired number have thus been secured in position to form the hoop of suitable thickness, and which will remain a true circle when thus constructed and removed from such form and provided with a parchment head in the usual manner.

Having thus described my invention, what I claim is—

1. A banjo-hoop made of wood and having a peripheral groove in its outer edge and said groove provided with a metallic ring over which the head is stretched.

2. The metal straining-hoop D, provided with the peripheral groove E, adapted to receive the ends of the straining-hooks F, as described.

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