

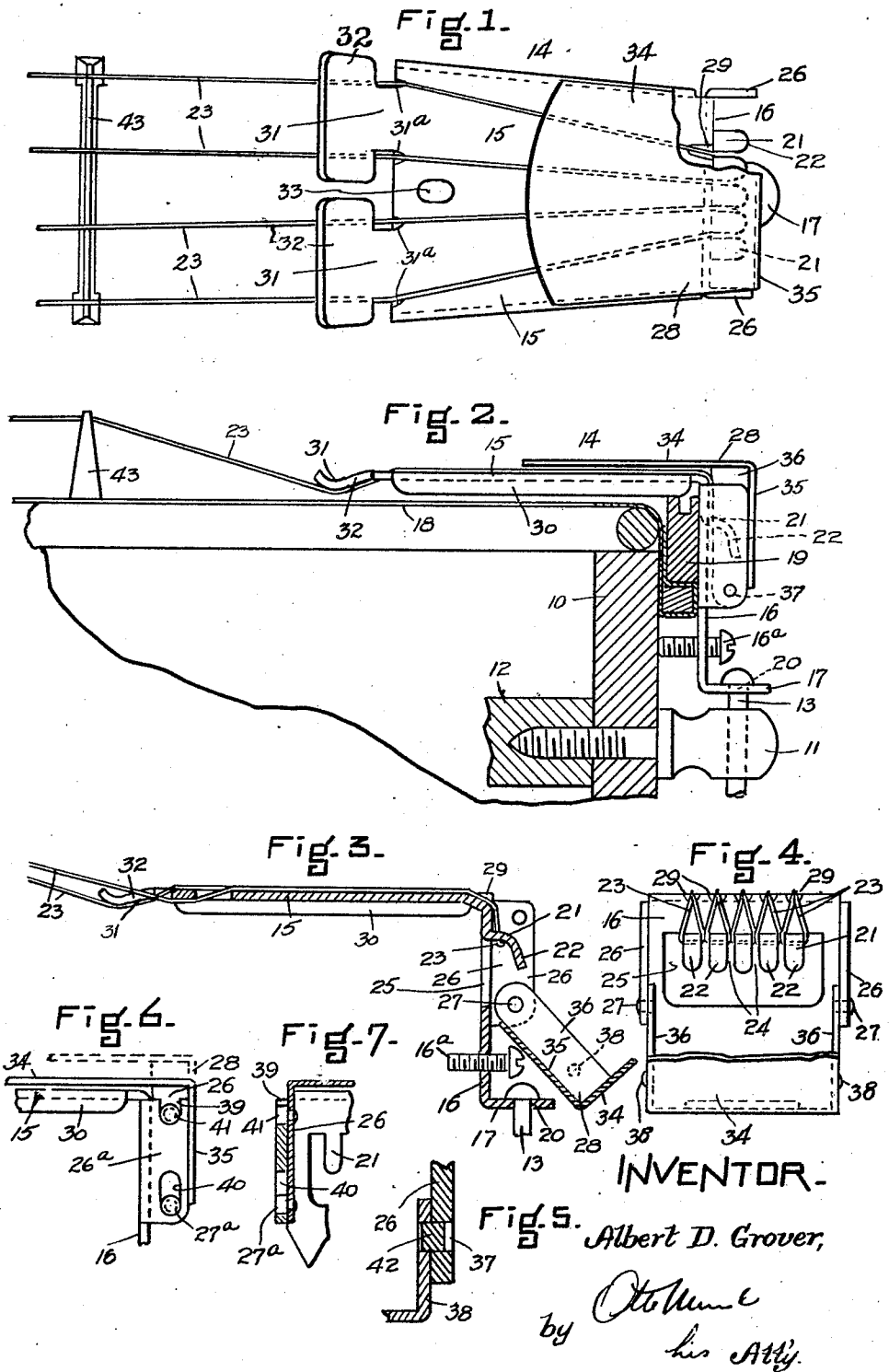
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TAILPIECE FOR STRINGED MUSICAL INSTRUMENTS

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UNITED STATES PATENT OFFICE.

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TAILPIECE FOR STRINGED MUSICAL INSTRUMENTS.

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To all whom it may concern:

Be it known that I, ALBERT D. GROVER, citizen of the United States of America, residing at Long Island City, Long Island, New York, have invented new and useful Improvements in Tailpieces for Stringed Musical Instruments, of which the following is a specification.

My invention relates generally to improvements in tail pieces for stringed musical instruments.

The principal objects of the invention are to provide a form of tail piece by means of which the strings, under tension, will be held securely at their ends about a series of projecting tongues, and to further provide the tail piece with means whereby the said strings will be held properly spaced from one another and so arranged as to relieve the strain on the said attached ends of the strings.

Another feature of my invention is a hinged cover which serves as a hood for the strings at their attached ends, and which is provided with an improved locking arrangement by means of which the cover is raised as it is swung to its closed position and then adjusted downwardly to secure its position with respect to the tail piece.

The ordinary tail piece for a musical stringed instrument is so constructed that it is rather difficult to replace a broken string or even for the manufacturer to attach the original strings when the instrument is being assembled. This is due to the time required to thread the strings through the various openings in the device and the placing of a separate cover member in position. It is the purpose of the present invention to provide a cover member which is hinged to the tail piece and which may be swung backwardly to expose the string receiving prongs and to further provide the tail piece with T shaped forward members under which the strings may be slid and then received by the usual tuning peg. The time required for this operation is only a matter of a few seconds while in the previous arrangement two or more minutes are required to change a string.

The foregoing and other features and advantages of my invention will become apparent from the following description, reference being made to the accompanying drawings, in which, Figure 1 is a top plan view of my improved tail piece, the cover

of the latter being broken away to show otherwise hidden parts; Figure 2 is a side elevational view of a tail piece attached to the rim of a banjo instrument; Figure 3 is a substantially cross sectional view taken on the line 3—3 of Figure 1 showing the cover piece swung away from the tail piece; Figure 4 is a rear view of my improved tail piece with the cover in lowered position to disclose the manner in which the looped strings are attached to the tail piece; Figure 5 is a detail sectional view taken through the hinge for the cover piece; Figure 6 is a side elevational view of a cover piece and adjacent portion of the tail piece showing a slightly modified construction of mounting the cover and Figure 7 is a sectional view taken through the hinge connection shown in Figure 6.

Referring to the drawings, 10 designates the rim of a stringed musical instrument having the usual screw 11 which passes into the end of the stick 12 of the instrument. The head of the screw 11 carries an upright bolt 13 to which my new tail piece is connected, as illustrated particularly in Figure 2.

The tail piece proper is designated generally 14 and consists of a head plate section 15, an integral downwardly turned rim section 16 and a rearwardly projecting bolt section 17. The head plate section 15 is adapted to lie over and closely adjacent the head 18 of the instrument, as illustrated in Figure 2. The downwardly turned section 16 is disposed substantially at right angles to the section 15 and lies against the tension hoop 19 of the instrument. The lower end of the section 16 is tapered inwardly and the integral projection 17 extending rearwardly at right angles thereto is provided with an opening 20 through which projects the head of the bolt 13. In order that the tail piece may be adjusted and held in true central position, I provide the section 16 with a screw 16^a which passes through the said turned down section 16 and bears against the outside wall of the instrument rim.

The downwardly turned section 16 is provided with string receiving members 21, which may be in the form of curved prongs, the turned down portion 22 thereof being adapted to receive the loop of a string or to receive the knotted end of the latter in the space or slot 24 between adjacent prongs

22. The members 21 are bent outwardly from the upper wall of an opening 25 in the section 16, as shown in Figure 3. The edges of the section 16 are provided with turned portions or ears 26, bent at right angles to 16 and having openings adjacent their lower ends to receive the pivot pins 27 for supporting the cover piece 28. At the angle of the two sections 15 and 16 the material is provided with a series of inclined grooves 29 spaced evenly from one another and in position directly above the teeth of the comb like arrangement.

In the present invention my improved tail piece receives looped strings and knotted strings equally well, a condition which enables the tail piece to be used on either 4 or 5 string type of instruments, wherein the wire strings are looped and the gut-strings and silk strings are knotted.

The head-plate section 15, is tapered slightly outwardly from the angular edge and the side edges of the section are provided with downwardly bent portions 30 which are adapted to reinforce the main portion 15 of the tail piece. In order to quickly attach the strings I provide the free end of the head-plate 15 with a suitable number (usually two) of T-shaped projections 31, each of which consists of a cross head portion 32 and a slightly downwardly curved stem connecting the portion 32 with the body of the base plate 15. The cross head portions 32 are slightly rounded or turned upwardly, as indicated clearly in Figure 2. In addition to the T-shaped projections 31 the head-plate 15 is provided with a central opening 33 through which the center string of the instrument is threaded. In order to insure correct positioning of the strings with respect to the stem portions of the T-shaped members 31, I provide slightly curved depressions or grooves 31^a in which the strings are disposed and guided to lie closely to the edges of the said stems. These depressions also serve to keep the string from breaking at this point.

Referring to the cover piece 28, the latter consists of a body portion 34, adapted to lie over and close to the head-plate 15, and a downwardly bent portion 35 having side walls 36 provided with openings 37 at their lower ends to receive the pivot pins 27. The side walls 36 have small outer projections 38 disposed adjacent their upper ends so as to cause the cover 28 to bind against the ears 26 of the tail piece 14 when in closed position.

In the embodiment of the invention shown in Figures 6 and 7, the ear pieces 26^a are provided with open ended slots 39 at their upper ends and aligned slots 40 adjacent their lower ends, the latter being adapted to loosely embrace the pivot members 27^a, while the upper slots receive locking pins 41 fixed

to the bent portions 34 of the cover piece 28.

Figure 5 shows the means by which the cover may be pivoted to the tail piece proper without the use of pivot pins such as those disclosed in the foregoing description, such means consisting of an offset portion 42 being stamped out from the cover material to form cylindrical surfaces to be received by the openings in the portions 26 of the turned down section 22.

To adjust the tail piece to the instrument the projection 17 is supported on the bolt 13 and the loops of the strings are placed over the prongs 21. The strings are then directed upwardly and over the corner angle through the guideways or grooves 29 and thereafter are disposed over the face of the head-plate section 15. Each string is then threaded beneath a cross-head 32 of a projection 31 and at one side of the stem portions thereof, so as to cause the curved surfaces of the heads 32 to bear downwardly upon the strings; as shown in Figure 2. The strings then pass to a bridge member 43 in the usual manner. Having fully adjusted the strings to their desired preliminary tension the cover piece 28 is swung upwardly about its pivots to lie over the attached ends of the strings. In the case of the cover members shown in Figures 6 and 7, the cover is merely swung upwardly about its pivots while the latter are disposed over the slots 39, so as to enable the pins 41 to enter the upper slots 39, whereupon the entire cover is permitted to drop to position, i. e. the pins 41 and pivots 27^a will engage the lower ends of their respective slots in the ears 26^a of the tail piece.

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

1. A tail piece for stringed musical instruments having a rim section and a head plate section, the latter being provided with T-shaped projections whose cross-head portions are of downwardly curved shape suitable to maintain only gradual curvatures in stretched instrument strings passing under said portions and up onto the upper surface of said head plate.

2. In a tail piece for stringed musical instruments, a head plate having T-shaped projections whose cross-head portions are concavely depressed below the level of the body of the head plate, whereby two stretched instrument strings will pass with only gradual curvatures under each of said portions and up onto the upper surface of the body of said head plate.

3. A tail piece for stringed musical instruments comprising a rim plate having integral string receiving members and lateral parallel flanges each of which has an opening at its lower end, a cover piece having laterally disposed pivots which fit into said openings,

and means at the upper ends of said flanges to hold the cover piece in normally closed position.

4. A tail piece for stringed musical instruments comprising a rim plate having integral string receiving members and lateral parallel flanges each of which has a lower slot and an open-ended upper slot, a cover piece having laterally disposed pivots which
10 fit into said lower slots, and having also lat-

erally disposed projections to slip into said upper slots and hold the cover piece in normally closed position when said projections and upper slots have been brought into register by upward and arcuate movement of
15 said cover piece.

In testimony whereof I affixed my signature.

ALBERT D. GROVER.