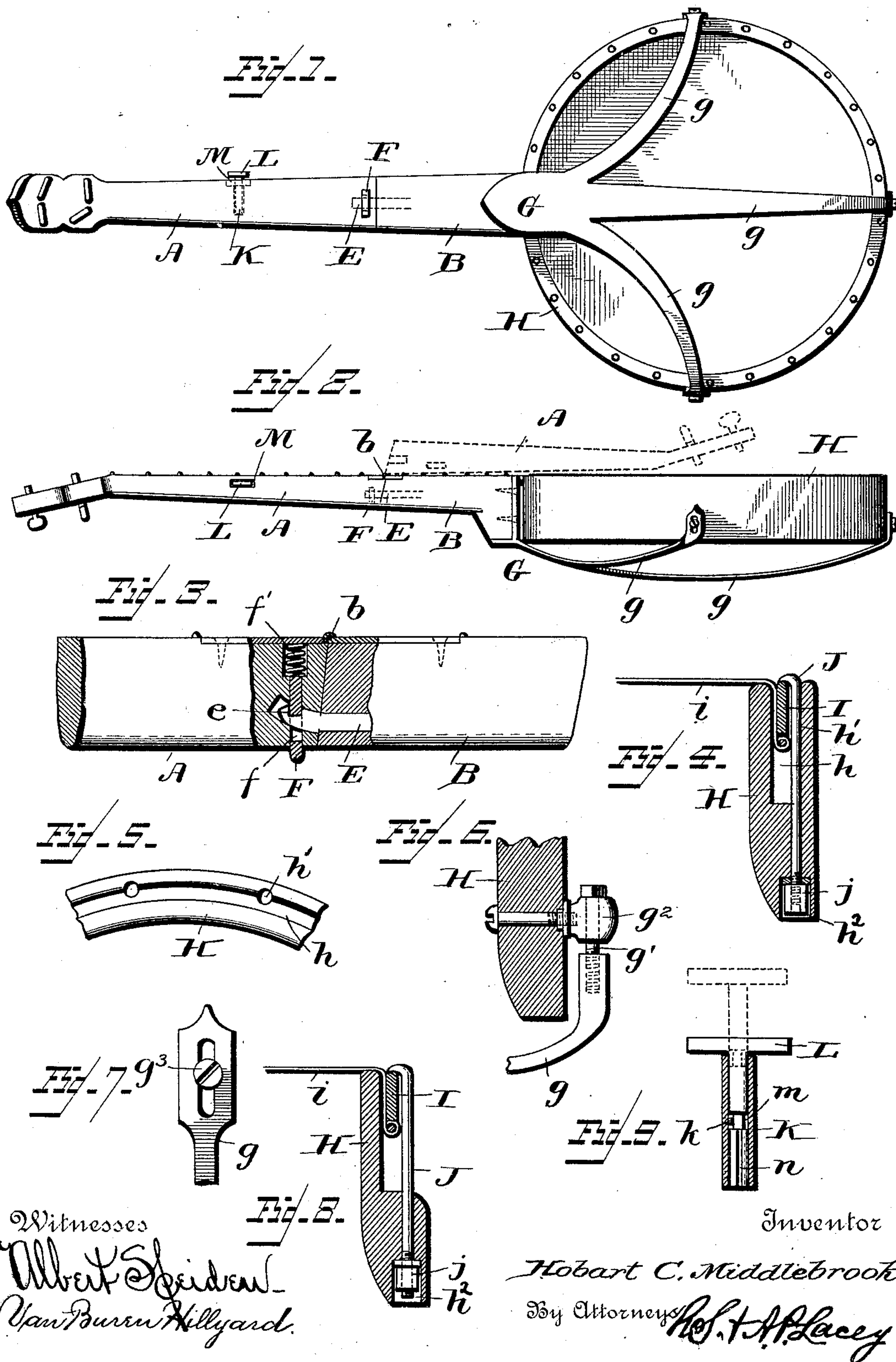


(No Model.)

H. C. MIDDLEBROOKE.
BANJO.

No. 519,409.

Patented May 8, 1894.



UNITED STATES PATENT OFFICE.

HOBART C. MIDDLEBROOKE, OF ROCK RAPIDS, IOWA.

BANJO.

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To all whom it may concern:

Be it known that I, HOBART C. MIDDLEBROOKE, a citizen of the United States, residing at Rock Rapids, in the county of Lyons, State of Iowa, have invented certain new and useful Improvements in Banjos; and I do hereby 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.

The present invention relates to improvement in banjos and similar musical instruments having neck pieces.

The essential feature of the invention is the provision of a folding neck whereby the length of the instrument may be reduced for purposes of convenience in storing and handling when not in use, and having the said neck rigidly attached to the hoop.

A further purpose of the invention is to conceal or have the fifth or thumb string key out of the way to facilitate the playing when passing from the low to the high positions and vice versa.

A still further purpose of the invention is to secure a rigid and permanent connection between the hoop and the neck other than the ordinary single connection between the neck and the hoop, whereby the hoop will be practically under even tension and not have the strain at any one point.

The improvement consists of the novel features and the peculiar construction and combination of the parts which will be hereinafter more fully described and claimed and which are shown in the annexed drawings, in which—

Figure 1 is a bottom plan view of a banjo embodying my invention. Fig. 2 is a side elevation of the invention, showing the neck folded by dotted lines. Fig. 3 is a detail view showing the means for securing the parts of the folded neck in an operative position when it is designed to play upon the instrument. Fig. 4 is a detail cross section of the hoop showing the details and relative disposition of the parts whereby the head or vellum is tightened. Fig. 5 is a detail view of a portion of the hoop or rim showing the groove to receive the strainer hoop and the opening to receive the straining hooks. Fig. 6 shows

a detail view of one form of construction for securing an arm of the metal connection to the hoop or rim. Fig. 7 is a detail view of another form of construction for securing an arm of the metal connection with the rim. Fig. 8 is a modified form of the rim or hoop, the upper edge being cut away or reduced instead of being provided with a groove or channel. Fig. 9 is a detail view of the key and cylinder, the key being shown drawn out by dotted lines.

The folding neck is composed of the parts A and B which are hinged together so that the part A will fold upon the part B about in the manner shown by the dotted lines in Fig. 2. The butt *b* of the hinge forms a fret.

A suitable catch is provided to hold the parts A and B in alignment when it is desired to use or play upon the instrument. As shown, this catch consists of a bolt E secured to one of the parts of the neck and projecting beyond the end thereof to enter an opening in the end of the other part, and a lock F to engage with the free end of the bolt E and lock the parts in the proper position. The lock is formed by means of a plate F which is adapted to slide across the opening to receive the free end of the bolt and is apertured at *f* to receive the bolt. A spring *f'* is provided to press the lock F outward and in position to be engaged by the bolt E. The end of the bolt E is tapered to press the lock F inward against the spring *f'* so that when the notch *e* in the bolt E comes opposite the plate F the latter will move outward by means of the spring *f'* and automatically engage with the notch *e* and lock the bolt. The end of the lock F projects through the rear side of the neck so as to be pressed upon when it is desired to release the bolt E. The metallic connection G between the hoop or rim H and the neck comprises a series of arms *g* which extend in different directions so as to engage with the hoop or rim H at different points in the periphery thereof. The connection G is attached to the inner end of the neck in any convenient and suitable manner, and the arms *g* curve downward between their ends and are attached to the hoop or rim H in any preferred manner. As shown in Fig. 6 the free end of the arms is provided with a threaded socket which receives a screw *g'* passing through a

bracket g^2 attached to the hoop or rim. In Fig. 7 the end of the arms is slotted and a binding screw g^3 passes through the slot and serves to secure the arms to the hoop or rim.

5 By either form of connection the hoop or rim can be adjustably connected with the arms so that the proper pitch may be readily obtained. The hoop or rim H is provided in its top edge with a groove or channel h which receives

10 the strainer hoop I to which the head or vellum i is attached, and with openings or holes h' to receive the hooks J by means of which the strainer hoop is forced into the groove or channel h so as to tighten the head or vellum

15 i . The lower end of the hooks J is threaded to receive the nut j by means of which the hook is operated to strain or tighten the head. The nuts j are located in openings h^2 formed in the lower edge of the hoop or rim H so as

20 to be out of the way. The upper portions of the openings h' extend into the groove or channel h so that the hook can move vertically in said groove h when tightening the head.

25 The key for tightening the fifth or thumb string is composed of a cylindrical portion K having a pin k on its inner side and a key proper L which is adapted to move in the cylindrical portion K. An annular groove m is

30 provided in the key to receive the pin k and permit the key to turn freely in the cylindrical portion. A groove n formed in that portion of the key located between the groove m and the end of the said key receives the pin

35 k and forms a lock between the key and the cylinder to cause the two to turn together when the key L is drawn out. A recess M is formed in the side of the neck to receive the head of the key when the latter is pushed in.

40 By reason of the groove m the key can be turned to cause the head thereof to register with the recess M when the key is pushed in so that the inner side thereof touches the inner side of the neck. When the head of the

45 key is in the recess M its outer side is flush with the neck and does not interfere with the movements of the hand when moving to high positions.

In the modified form, shown in Fig. 8, the

50 upper portion of the rim is reduced to receive the strainer hoop to permit the tension hooks and the said strainer hoop to come within the plane of the said hoop or rim. This form of hoop or rim admits of the instrument being

55 lighter than if a groove or channel were formed in the upper edge of the hoop.

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

60 1. In a banjo or similar musical instrument,

a neck rigidly attached to the body of the instrument and composed of two parts which are hinged together, the outer part adapted to fold on the inner part of the said neck and on the body of the instrument, substantially as described.

2. A banjo or similar musical instrument having a folding neck, the parts being connected by a hinge the butt of which forms a fret, substantially as set forth.

3. A banjo or similar musical instrument having a neck rigidly attached to the body of the instrument, composed of two parts which are hinged together, and a bolt to project across the joint between the hinged parts to brace, strengthen and lock the said hinged joint, substantially as set forth.

4. A banjo or similar musical instrument having a neck rigidly attached thereto and composed of two parts which are hinged together, a bolt attached to one of the parts and having its projecting end notched, a plate adapted to work across an opening in the other part to engage with the notched end of the bolt and adapted to be actuated from the under side of the neck, and a spring for actuating the said plate, substantially as described for the purpose specified.

5. In a banjo having a recess in the side of its neck to receive the head of the fifth or thumb string key, the combination of a key composed of a cylindrical portion having a pin projected from the inner side, and a key proper having a groove to receive the pin and form a lock, and having an annular groove to permit said key to turn freely when in register with said pin so that the head of said key may be seated in the said recess, substantially as set forth.

6. In a banjo a metallic connection for securing the rim or hoop to the neck having a series of arms which are attached to the hoop at different points, substantially as set forth.

7. In a banjo, a metallic connection for securing the rim or hoop to the neck having a series of arms and means for adjustably connecting the hoop or rim to the said arm, substantially as set forth.

8. In a banjo, a metallic connection for securing the hoop or rim to the neck having a series of arms which curve downward between their ends, and which are attached at their free ends at different points in the periphery of the hoop, substantially as set forth.

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

HOBART C. MIDDLEBROOKE.

Witnesses:

THEODORE B. GOULD,
W. H. RICHMOND.