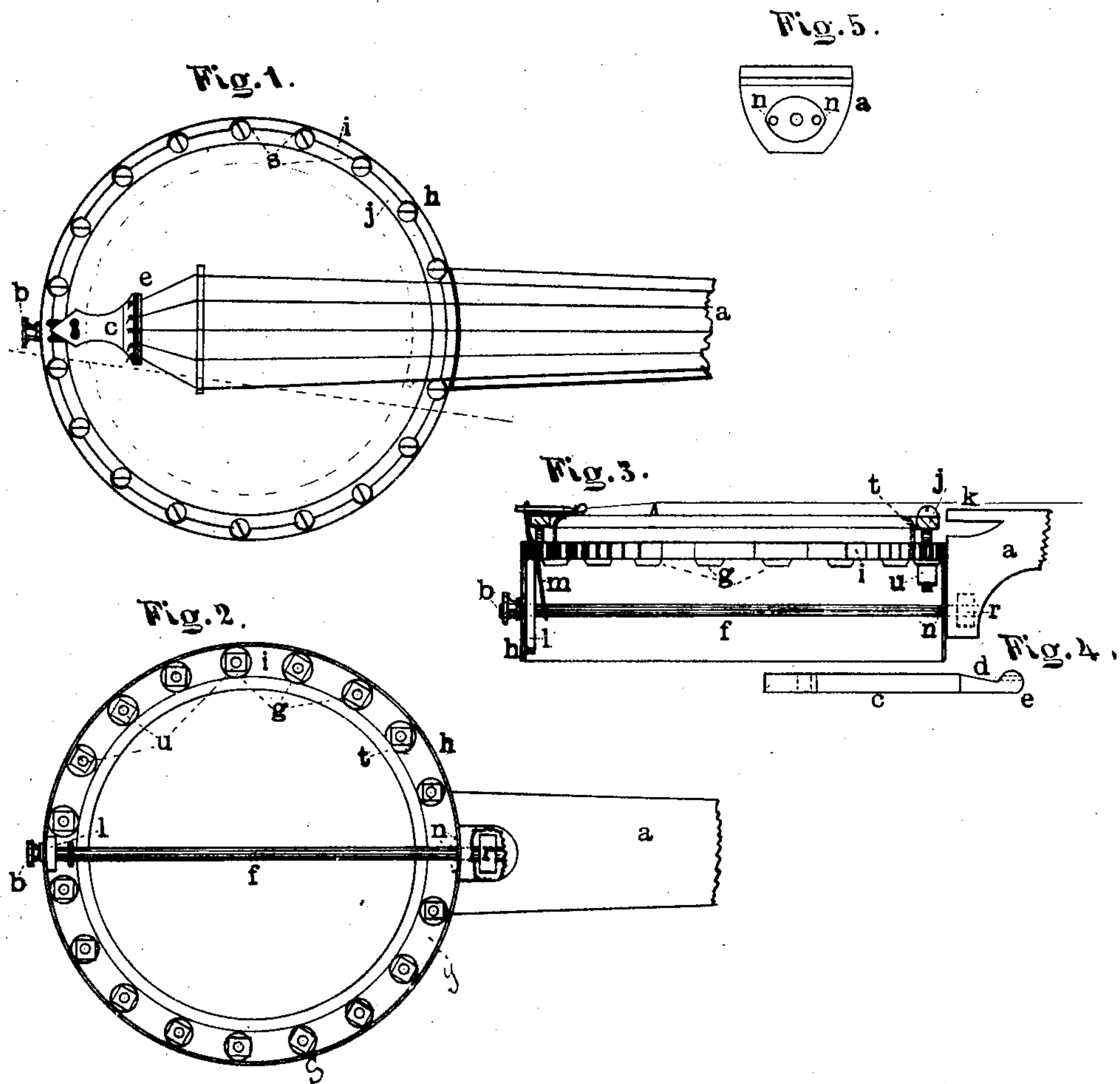


C. F. BURROWES.
Banjo.

No. 224,512.

Patented Feb. 17, 1880.



Witnesses;

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UNITED STATES PATENT OFFICE.

CHRISTOPHER F. BURROWES, OF SPRINGFIELD, MASSACHUSETTS.

BANJO.

SPECIFICATION forming part of Letters Patent No. 224,512, dated February 17, 1880.

Application filed September 29, 1879.

To all whom it may concern:

Be it known that I, CHRISTOPHER F. BURROWES, of Springfield, in the county of Hampden and State of Massachusetts, 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to the construction of a banjo, whereby the parchment is easily and quickly stretched, whereby it may be easily taken apart, and whereby the quantity of sound is increased and quality improved.

The objectionable features in the banjos now in use are principally as follows, to wit: The devices used for tightening the parchment have been a hoop, which is drawn down by a series of hooks, the shorter legs of which pass over the hoop, and the longer legs, passing through brackets on the side of the rim, are held in place with nuts. This is objectionable, because of the liability of the projecting pieces to catch in the clothing of the operator, and especially is this seen when a trick is being performed, as is customary with banjo-players. These projecting pieces also often scratch and hurt the player when performing, as above stated. It is found difficult to tighten the head, a wrench being necessary to grasp and turn the nuts. Again, when the parchment is stretched there is great liability of an unequal strain being placed upon some one of the brackets, causing them to give way. A wooden hoop is used, which is objectionable by reason of its being too elastic and easily bent, so that a uniform and perfectly equal strain cannot be given to all parts of the parchment.

The method of fastening the neck to the body is objectionable, as it does not hold the parts rigid, a wooden spindle being used; and it is found that when the strings are tightened the neck often springs upward, thus causing a discord. The wooden spindle is easily broken, and most liable to break at the place of joining the neck and body.

The construction of the tail-piece now in use

is faulty, because the strings pass through from the upper side and are fastened on the under side, making it very difficult to replace one broken string while the others are taut, it often being necessary to detach the other strings from the pegs. The strings, being drawn over a sharp corner, are liable to cut or break; and the method of fastening the tail-piece in place is faulty, for if wire be used it is liable to injure the operator, and gut is easily broken.

Another very objectionable feature in the banjos now in use is, that a sufficient volume of sound cannot be gotten.

The object of my invention is to make a banjo which, while being superior in tone and volume, will do away with the above-mentioned objectionable features—one which may be easily taken apart, and one in which the various parts may be adjusted with perfect ease.

The invention consists in the arrangement of a metallic rod with other parts; in the construction of the hoop or inner circle having a projection or brace; in the construction of the hoop for stretching the parchment, whereby brackets are done away with, and the arrangement therewith of screws and nuts; in the construction of the tail-piece and method of fastening the same in place; in the arrangement of the pins, rod, and nut with the body and neck, whereby a stiff and rigid connection is made; and it finally consists in the general construction and arrangement of the several parts, whereby a better and louder-sounding instrument is made—one which may be easily taken apart, and in which adjustments may be made with perfect ease without danger of breaking.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a top view of my device. Fig. 2 is a view of the under side of the same. Fig. 3 is a side view, showing parts in section. Fig. 4 is a side view of the tail-piece, and Fig. 5 is a view of the end of the stem where it joins the body.

In the construction I make the ring *i*, which gives to the body the stiffness so much needed, of about one-eighth of an inch in thickness, and the distance from the outer and inner cir-

cumference about three-fourths of an inch for an ordinary eleven-inch banjo. On the outer circumference of this circle or ring, and on its under side, I cast the projecting piece or brace
 5 *l*, which should come nearly to the lower edge of the band *h*. The band *h*, which is made of the same material commonly used, is soldered to the outer circumference of the ring *i*, and to the inner circumference is soldered the circular rim or piece *t*. (Shown in section in
 10 Fig. 3.) This is turned inward, as shown, for the purpose of rounding the edge, thus making a resting-place for the parchment.

On the lower side of the ring *i*, I cast the
 15 bosses *g*, to provide a bearing for the nuts, though this, it will be seen, may be done away with. I do away with all brackets and wooden hoops, making the hoop *y*, which holds the parchment in place, of metal, and providing
 20 it with lugs *s*, through which screws pass, passing down through holes in the ring *i*, and fastening in the nuts *u*.

It will be seen that with this arrangement the parchment will be tightened whenever the
 25 screws or nuts are turned in the right direction. A screw-driver will be found most convenient; but if sufficient strain cannot be gotten in that way, then a wrench may be used on the nuts.

The rod *f* is used for two purposes: First, I
 30 find that by using a tempered rod and connecting with it the tail-piece, as shown, the volume of sound is greatly increased; second, by using a metallic rod to connect the body and neck a much stronger connection is made.
 35 The arrangement is as follows: In the heel of the stem I place the nut *r*. (Shown in dotted lines in Fig. 3, and in Fig. 2 part of the stem is broken away, showing the nut in place.) A
 40 thread is cut on both ends of the rod *f*, one end of which enters the nut *r* and the other end the thumb nut or button *b*. In the heel of the stem I fix the pins *n n*, (see Fig. 5,) making holes in the body to correspond.

45 When the banjo is taken apart the strings are loosened, the button *b* turned, and the rod *t* removed. The pins *n* serve to prevent the neck from turning.

It will be seen that the whole instrument
 50 may be taken apart in an instant, and may be packed in a space no longer than the stem nor wider than the body.

I make the tail-piece substantially as shown in the drawings; and instead of running the holes for the strings from top to bottom, as is
 55 usually done, I run them in from the end and cut the stock away, as at *d*, Fig. 4, to provide a resting-place for the knot; or an ordinary countersink may be made in place of cutting
 60 away all the stock, thus making it easy to replace a broken string without in any way interfering with the others.

Instead of connecting the tail-piece with the spindle on the outside of the body, as is usual,
 I run the wire *m* through holes in the ring *i*
 65 and connect it with the wire rod or spindle on the inside, thus taking it entirely out of the way of the operator.

Having thus described my invention, what I claim, and desire to secure by Letters Pat-
 70 ent, is—

1. The combination of a straining-hoop with screws passing through the ring *i* and nuts, whereby the head may be tightened from
 75 either side, substantially as set forth.

2. The combination of the ring *i* with a band, *h*, of thin metal, and the metallic ring *t*, secured to the ring *i*, substantially as shown.

3. In a banjo, the ring *i*, having piece or brace *l*, in combination with the band *h*, ring
 80 *t*, rod *f*, and neck, substantially as set forth.

4. The rod *f*, arranged to hold the neck and body together, and to be detached from both, substantially as shown and stated.

5. The tempered rod *f*, in combination with
 85 the body, neck, and tail-piece, having wire *m*, substantially as shown.

6. The arrangement of the pins *n n* with the neck and body, to prevent turning, substan-
 90 tially as shown.

7. A tail-piece having string-holes running from the end backward, and the concave recess *d*, as a resting-place for the knot, substantially as shown.

In testimony that I claim the foregoing I
 95 have hereunto set my hand this 25th day of September, 1879.

CHRISTOPHER F. BURROWES.

Witnesses:

GEO. O. KINGSBURY,
 THOMAS H. BURROWES.