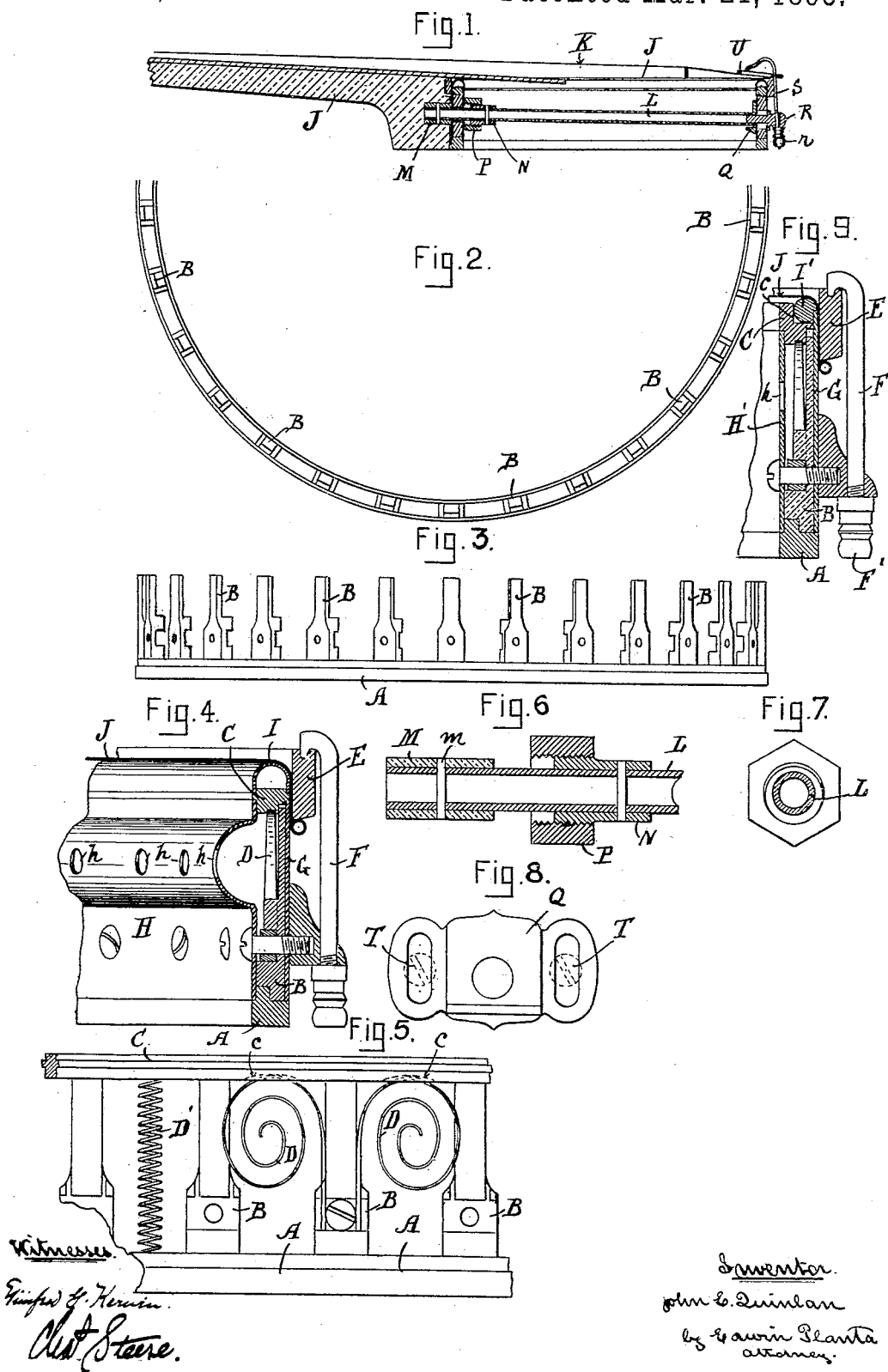


J. E. QUINLAN.
BANJO.

Patented Mar. 21, 1893.



UNITED STATES PATENT OFFICE.

JOHN E. QUINLAN, OF BOSTON, MASSACHUSETTS.

BANJO.

SPECIFICATION forming part of Letters Patent No. 493,875, dated March 21, 1893.

Application filed April 6, 1892. Serial No. 428,078. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. QUINLAN, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Banjos, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to certain improvements in banjos, and consists in certain details of construction of the various parts as hereinafter fully described and pointed out in the claims.

Referring to the accompanying drawings: Figure 1—represents a longitudinal section of a banjo embodying my invention. Fig. 2—is a plan or top view of a portion of the skeleton frame or rim. Fig. 3—is a side view of the same. Fig. 4—is a vertical section of a banjo rim embodying my invention. Fig. 5—is a view of a portion of the rim looking from the inside, the inner plate being removed. Fig. 6—is a sectional view of the dowel where it is attached to the arm. Fig. 7—is a front view of the same. Fig. 8—is a view of the plate attachment for regulating the inclination of the dowel. Fig. 9—is a vertical section of a modified form of banjo rim.

The rim or body I make of skeleton form, that is to say of a ring A, of wood to which are secured a series of posts or standards B, wide at the base where they are attached to the ring A, and narrow at their upper portion as shown. Upon the upper portion of these standards B, is placed a ring C, formed with a series of curved recesses *c* as shown in dotted lines in Fig. 5. To every alternate standard B, are secured spiral springs D, the upper surface of which takes into the recesses *c* in the ring C, so that when the ring C is drawn tightly down by the tightening ring E, and screws F, the said spiral springs will be depressed so that should the head become slack through the moisture of the atmosphere or by the screws loosening, the ring C will be pressed upward by the spiral spring and the head be kept tight, while at the same time the said springs will take up the vibrations imparted to the ring C, and will vibrate in unison therewith, thus very materially improving the tone of the banjo; in addition to

or in place of the spiral springs D, spiral springs of the form shown at D', in Fig. 5, may be employed for keeping the head tight, and although I prefer to employ both forms of spiral springs D, D', one spring D', between each pair of springs D, it is obvious that the springs D or D', might be dispensed with and yet the head kept tight.

The outer portion of the banjo rim is formed of a thin metal ring G, and on the inner side is a thin ring H, preferably bulged out in the center as shown in Fig. 4, or it might be flat as shown in Fig. 14. This ring is formed with a series of holes *h h*, whereby the sound waves caused by the vibrations are free to escape. Upon the top of the upper ring C, is placed a horse shoe resonant ring I, as shown in Fig. 4, or a solid ring I', as shown in Fig. 14 might be employed over which the head J is stretched in the ordinary manner by means of the tightening ring E, and tightening screws F, which are of the ordinary construction.

To adjust the inclination of the arm J, to bring the strings K nearer to or farther from the head as may be desired I employ the devices shown in Figs. 1, 6, 7 and 8 in which L, is a dowel formed of hollow metal tube, its inner end being inserted into a wooden tube M, which is secured thereon by a pin *m*, the wooden tube being inserted and glued into a hole formed in the arm J, so that its inner end fits against the outer ring G. To the dowel L, on the inner side of the rim is secured a screw threaded sleeve N, upon which a nut P, is mounted. The outer end of the dowel L is carried by a sliding piece Q, which can be raised or lowered in a slot in the rim and clamped in position by means of the screw R, through which the tail piece hook S passes, and set screws T, shown in dotted lines in Fig. 8, so that when it is desired to adjust the inclination of the arm J, to bring the strings K, nearer to or farther from the head, the screws R, T, are slackened and also the nut P, the outer end of the dowel is then raised or lowered the inner portion of the dowel forming a fulcrum, after the arm has been adjusted the screws R, T, and nut P, are again tightened up to hold the arm in place.

In Fig. 9, I have shown a section of a modi-

fication, in this case the upper ring C is formed with a peripheral groove c, in which is placed a metal ring I', having a groove cut on its outer periphery to form a shoulder for the
5 outer thin metal ring G, the other parts are of the construction before described with the exception of the inner ring H', which is shown flat.

What I claim is—

- 10 1. In a banjo, a body consisting of a bottom ring, a series of post or standards secured thereto, and a loose upper ring substantially as set forth.
- 15 2. In a banjo, a body consisting of a skeleton frame and a loose upper ring, and spiral springs secured in said frame, substantially as and for the purposes set forth.
- 20 3. In a banjo, a body consisting of the ring A, posts or standards B, loose ring C, ring I, an outer thin metal ring G, and an inner perforated thin metal ring H, substantially as set forth.
4. In a banjo, a body consisting of a skeleton frame, springs arranged therein, a loose

upper ring having a metal ring secured there- 25 on, a thin outer ring and a thin inner perforated ring covering the skeleton frame and springs, a tightening ring and screws for stretching the head, substantially as set forth.

5. In a banjo, a tubular metal dowel, a 30 wooden tube secured thereon by a pin, said tube being glued into the arm, a screw threaded sleeve secured to the dowel on the inner side of the rim, and a nut upon said sleeve in combination with a sliding piece 35 into which the other end of the dowel fits, said sliding piece being adjusted and held in place by screws substantially as and for the purpose set forth.

In testimony whereof I have signed my 40 name to this specification, in the presence of two subscribing witnesses, on this 19th day of March, A. D. 1892.

JOHN E. QUINLAN.

Witnesses:

L. W. HOWES,
EDWIN PLANTA.