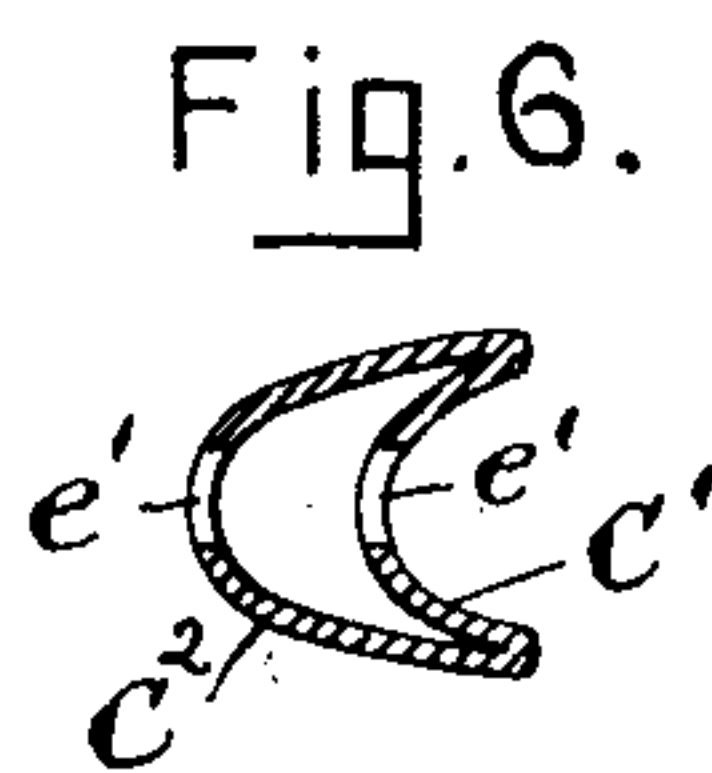
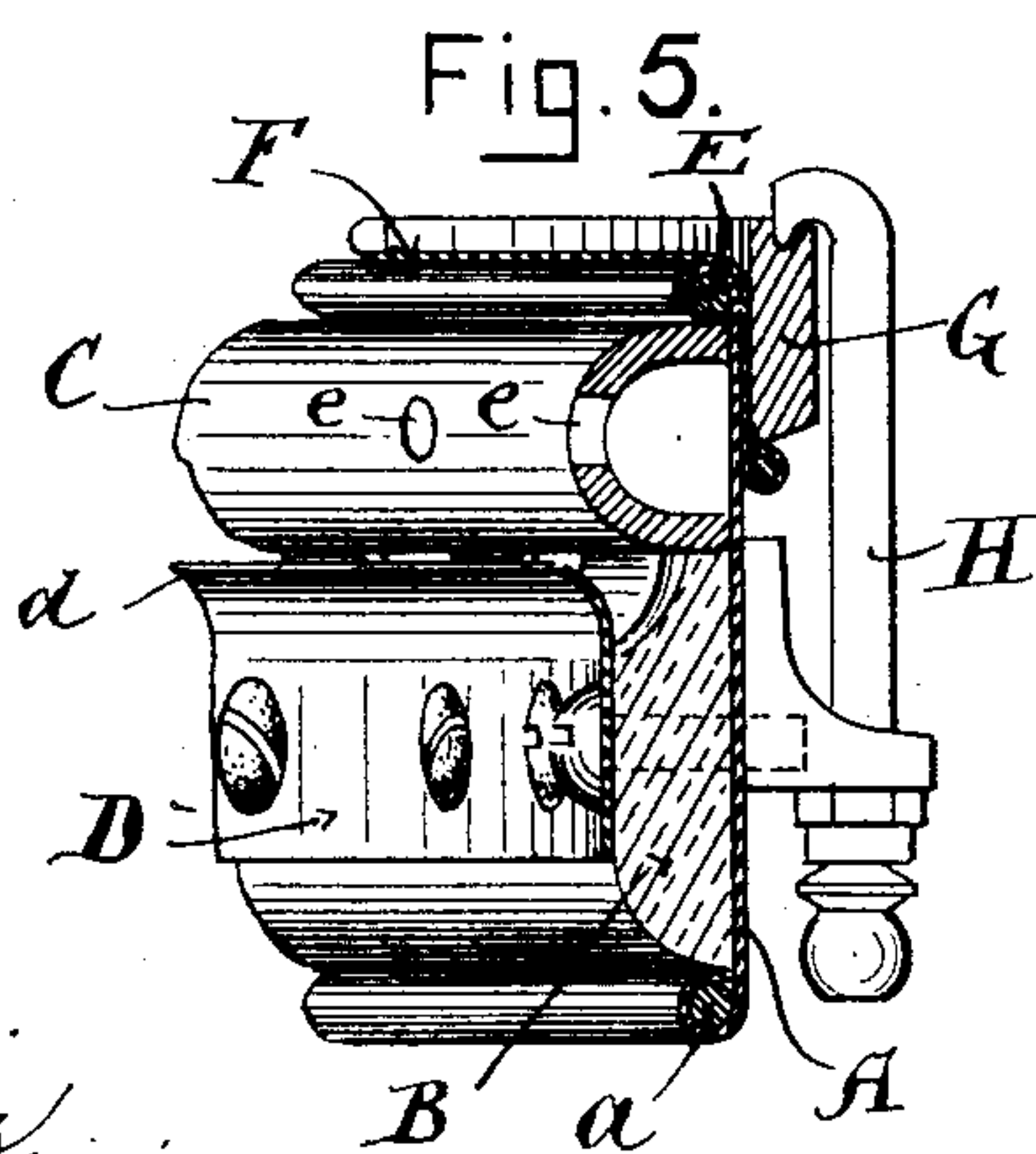
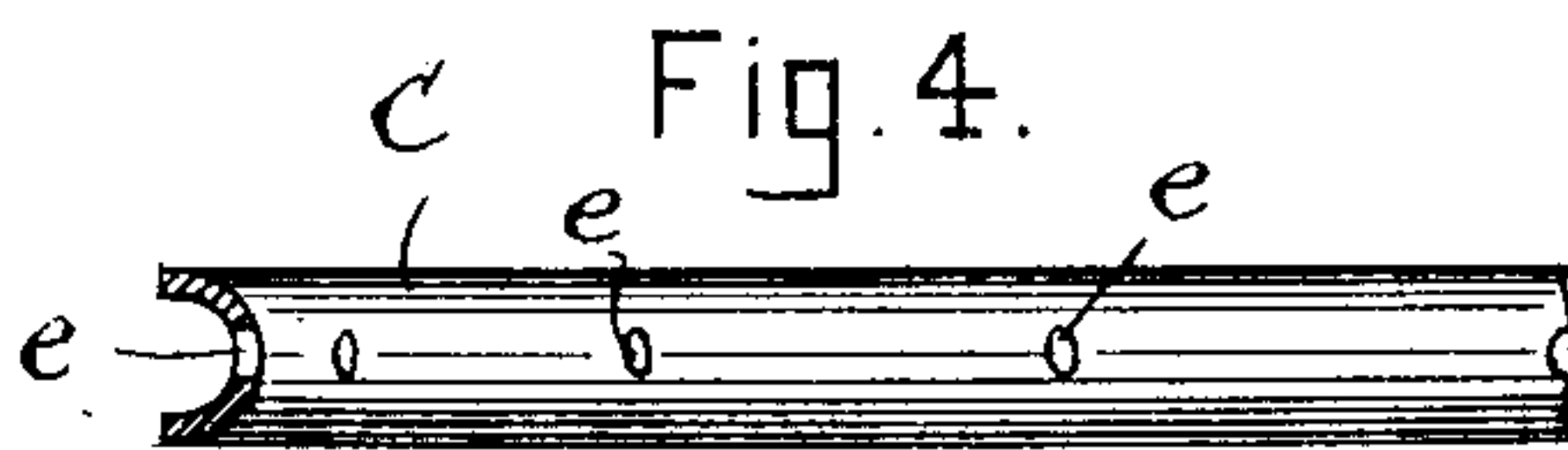
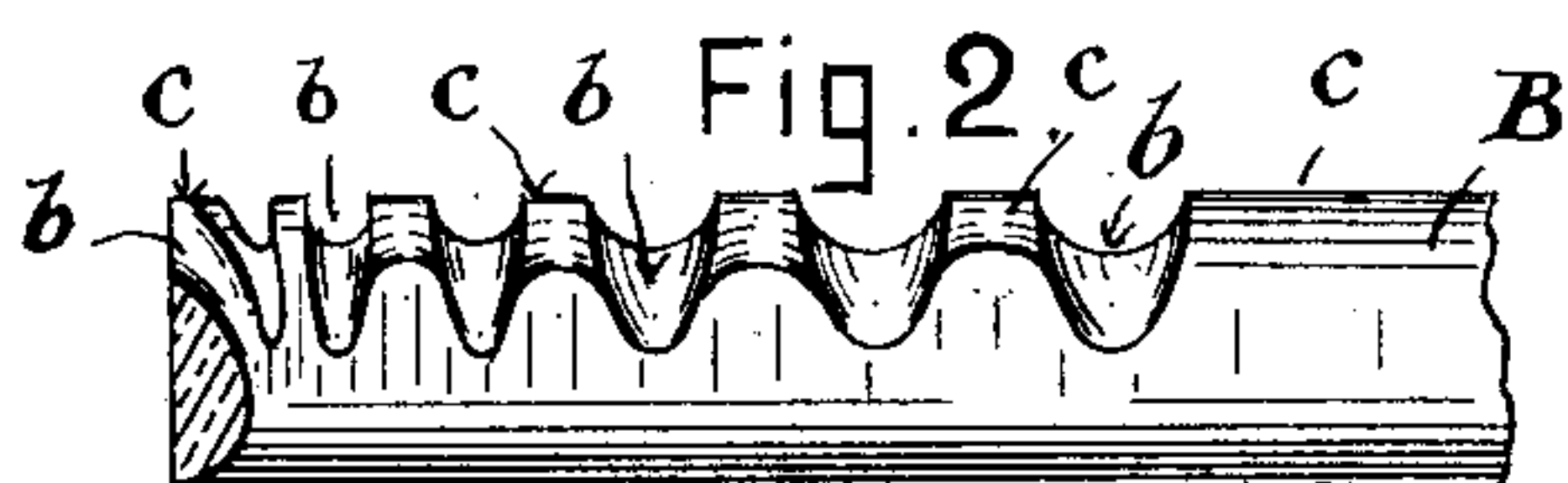
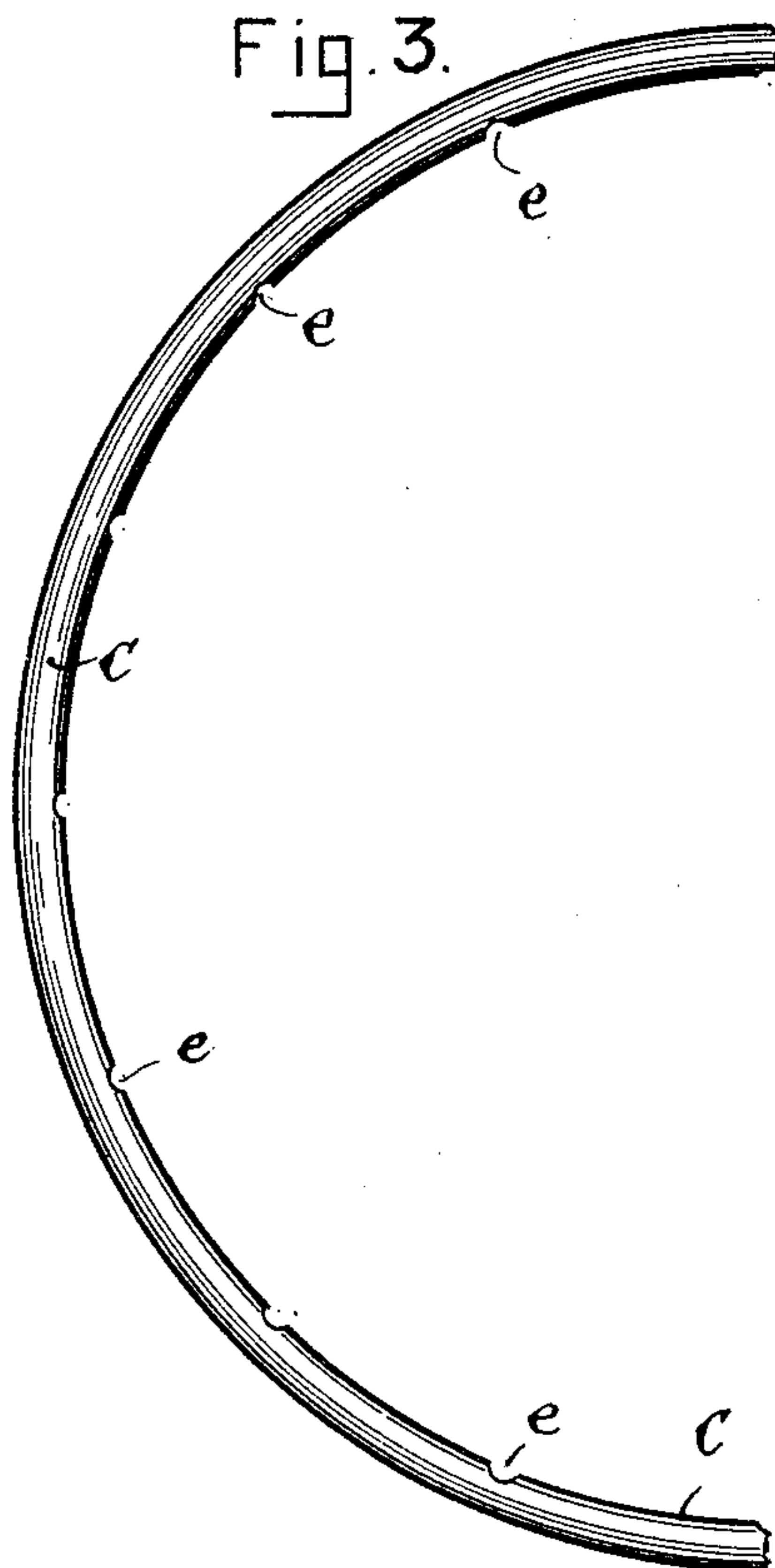
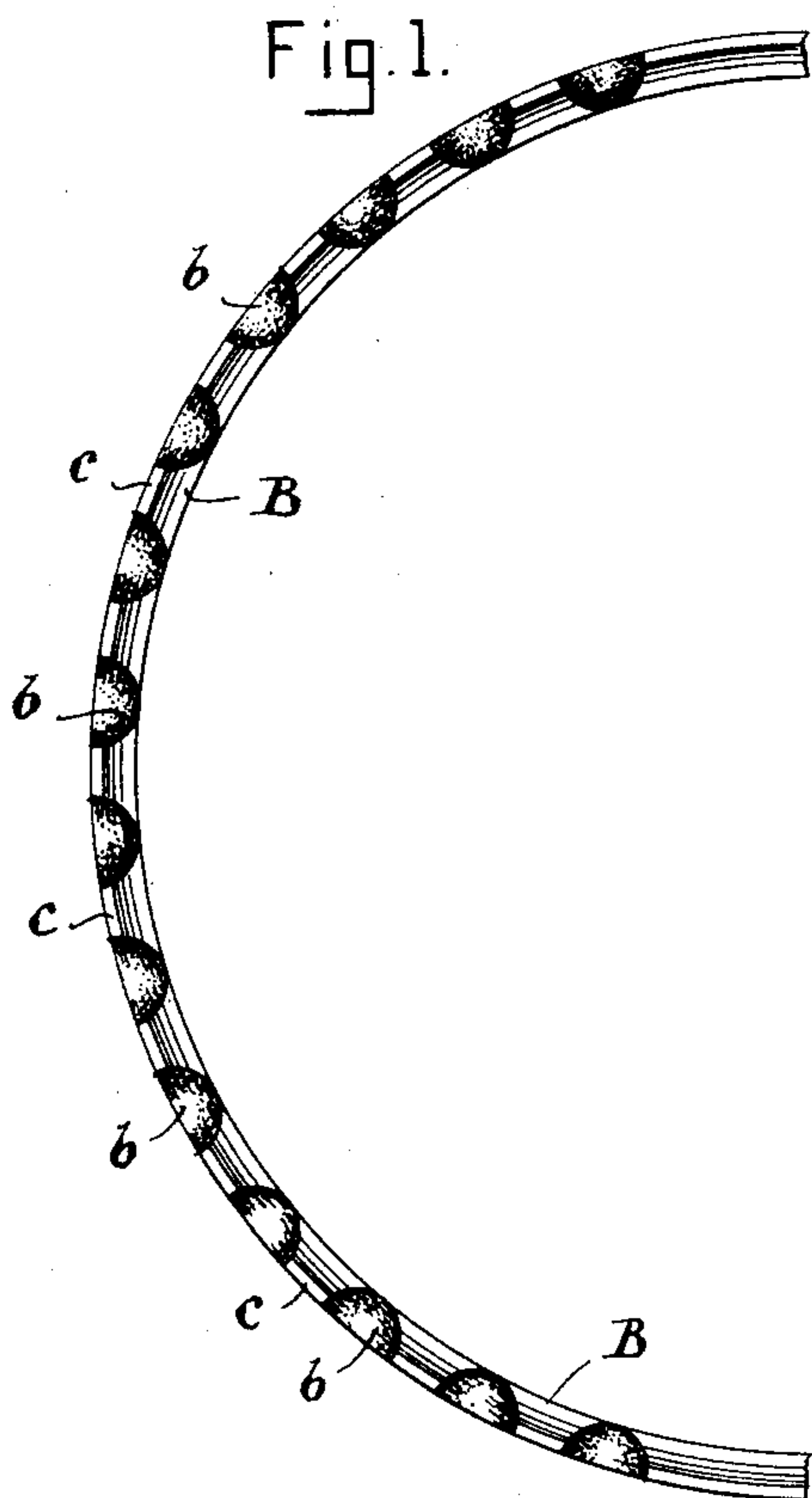


(No Model.)

J. E. QUINLAN.  
BANJO.

No. 477,451.

Patented June 21, 1892.



Witnesses.  
Winifred G. Keirin,  
Oscar A. Willard

Inventor.  
John E. Quinlan  
by Edwin Blanta.  
attorney.

# UNITED STATES PATENT OFFICE.

JOHN E. QUINLAN, OF BOSTON, MASSACHUSETTS.

## BANJO.

SPECIFICATION forming part of Letters Patent No. 477,451, dated June 21, 1892.

Application filed December 24, 1891. Serial No. 416,064. (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.

The object of my invention is to produce  
10 a banjo that will give forth more distinct, clearer, fuller, and longer sounds than banjos of ordinary construction.

The invention consists in forming the ring of the body of the banjo of wood cut out or  
15 scalloped around its upper edge, so as to form a series of resting-points, upon which is placed a resonant ring that is semicircular in cross-section, a thin metal ring flaring at its upper edge being secured to the inside of  
20 the wooden ring, thus forming the cut-out portions into air-chambers, an outer thin metal ring inclosing same, and a wire ring placed upon the top of the resonant ring, over which the thin metal ring is spun and over  
25 which the head is stretched in the ordinary manner.

Referring to the accompanying drawings, Figure 1 represents a plan or top view of a portion of the wooden ring for the body of  
30 a banjo embodying my invention. Fig. 2 is a vertical section through the same. Fig. 3 is a plan or top view of a portion of a resonant ring that rests upon the wooden body. Fig. 4 is a vertical section through the same. Fig.  
35 5 is a vertical section of a banjo embodying my invention. Fig. 6 shows a modified form of a resonant ring.

A represents a thin metal ring turned over a wire *a* at its lower edge; B, the wooden ring  
40 or body, cut out or scalloped around its upper edge so as to form a series of spaces *b* and resting-points *c* for the resonant ring C. To the inner side of the wooden ring B is secured a thin metal ring D, that is flared out  
45 at its upper end *d*, thus forming the spaces *b* into air-chambers. The resonant ring C is of semicircular or horseshoe shape in cross-section and is formed with a series of small holes *e*, through which the sound or air vibra-  
50 tions escape.

E is a small wire ring placed on the top of the resonant ring C and over which the thin metal ring A is spun.

The head F is stretched in the ordinary manner by means of a tightening-ring G and  
55 tightening-screws H, which are of ordinary construction.

In Fig. 6 I have shown a modification of the resonant ring, which is formed of two  
60 rings—an inner one C' and an outer one C<sup>2</sup>—each provided with a small hole *e'*. By this construction a double vibration is obtained.

By means of the wooden body cut away or scalloped on its upper edge and formed into  
65 air-spaces by the flaring metal ring and the perforated semicircular or horseshoe-shaped resonant ring I am enabled to produce louder, finer, and more distinct, brilliant, and reso-  
70 nant tones than with banjos of ordinary construction.

What I claim is—

1. In a banjo, a wooden body cut away or scalloped on its upper edge, in combination  
75 with a resonant ring semicircular or horseshoe-shaped in cross-section, the open portion being on its outer periphery and its inner periphery being formed with a series of small holes, a thin outer ring covering the  
80 wooden body and resonant ring, a wire ring arranged on the top of the resonant ring, a head-tightening ring, and screws for stretching the head, substantially as set forth.

2. In a banjo, a wooden body B, cut away or scalloped around its upper edge, in combination with a thin outer metal ring A and a  
85 perforated resonant ring C of horseshoe shape, the open portion being on its outer periphery and closed by the said ring A, thus forming a closed chamber with perforations on its inner periphery, substantially as set  
90 forth.

3. In a banjo, a wooden body B, cut away or scalloped around its upper edge, in combination with a thin metal ring D, flared at its  
95 upper edge *d*, a resonant ring C, and an outer thin metal ring A, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 12th day of December, A. D. 1891.

JOHN E. QUINLAN.

Witnesses:

CHAS. STEERE,  
EDWIN PLANTA.