

(No Model.)

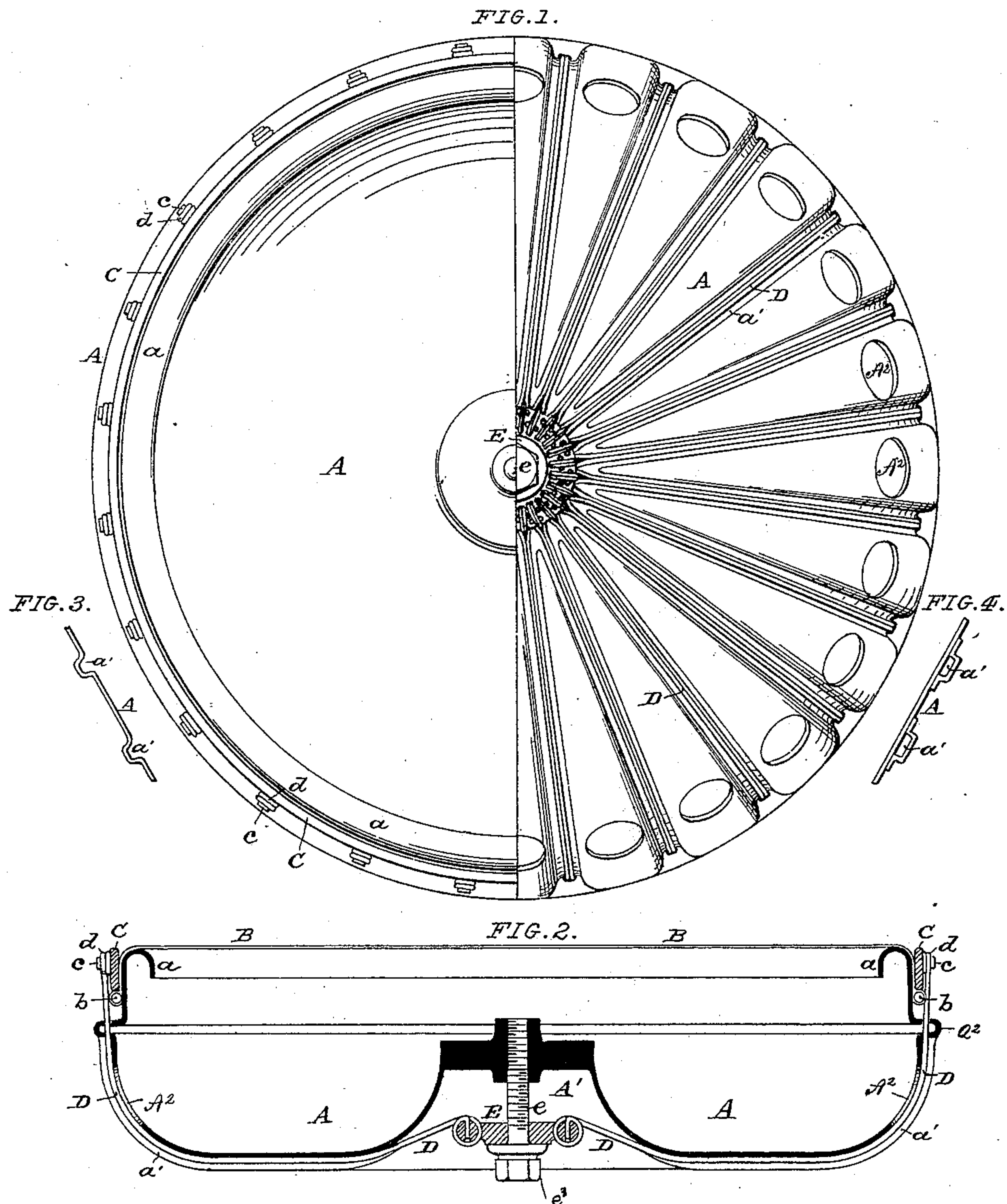
2 Sheets—Sheet 1.

H. McCORD.

BANJO.

No. 283,352.

Patented Aug. 14, 1883.



ATTEST:

A. U. Hoig.
W. R. Burns

INVENTOR:

Hercules McCord.
per Robt Burns
Attorney.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 5.

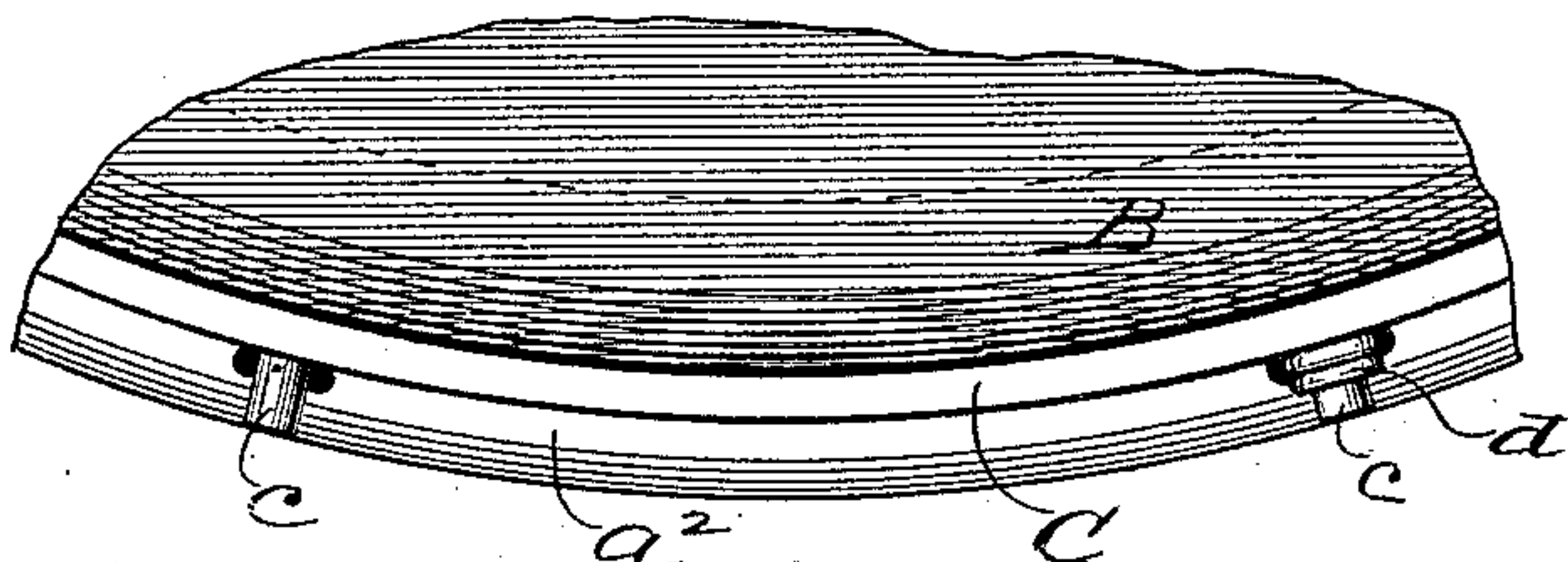


Fig. 6.

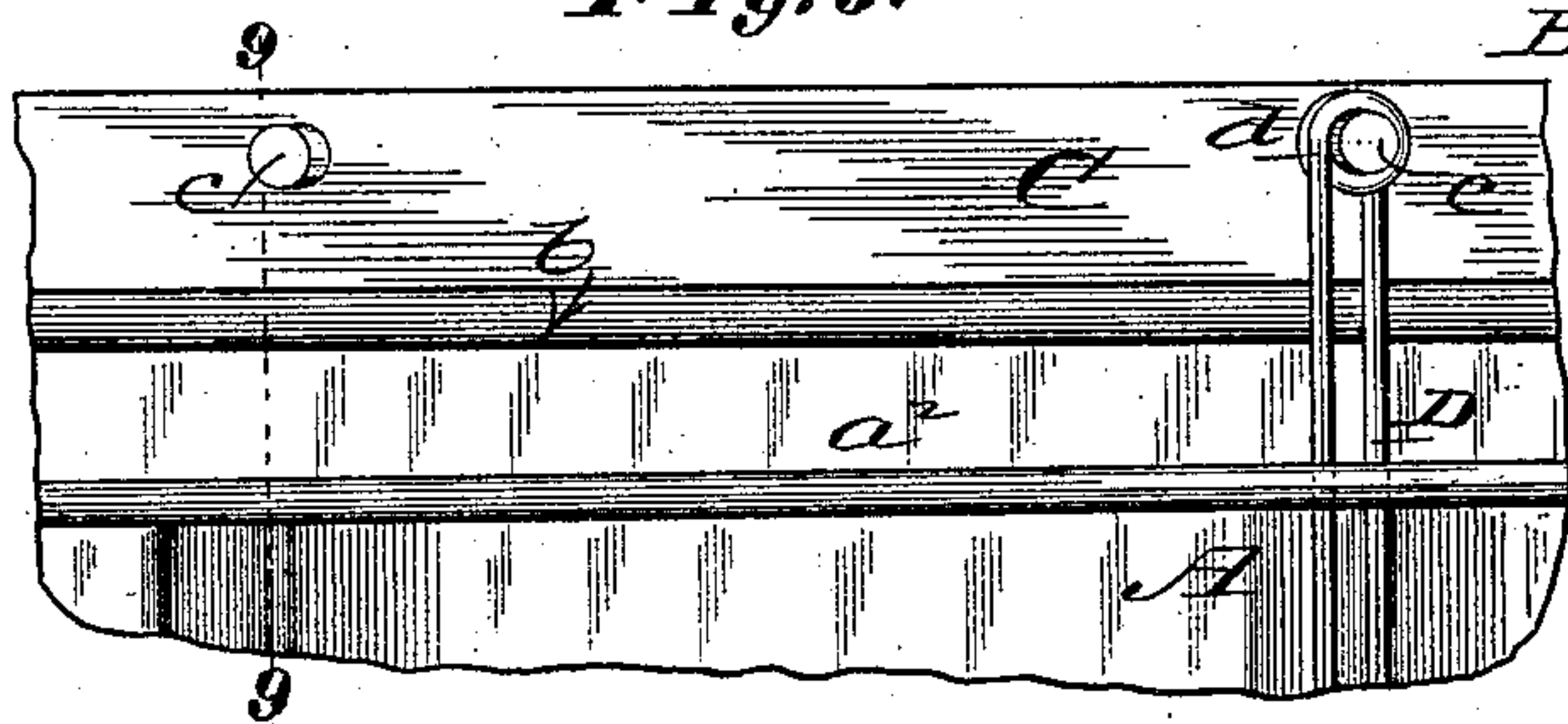


Fig. 9.

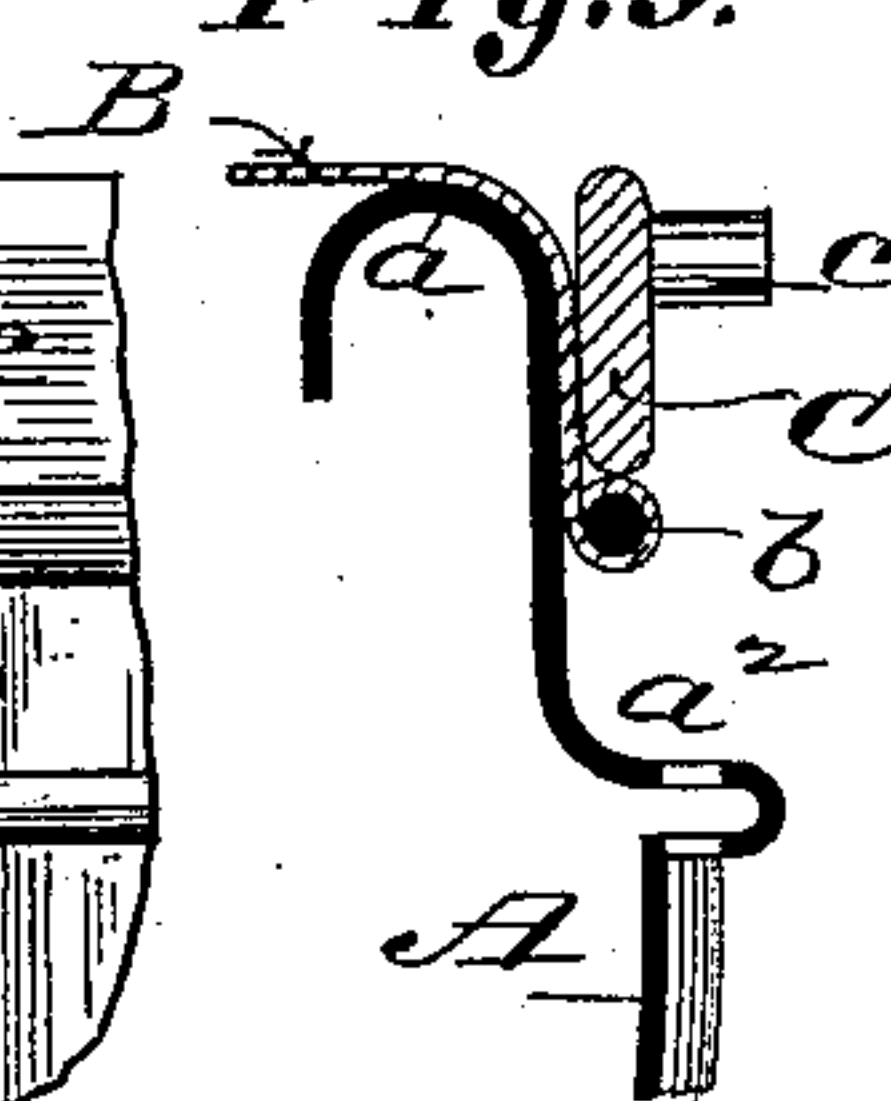


Fig. 7.

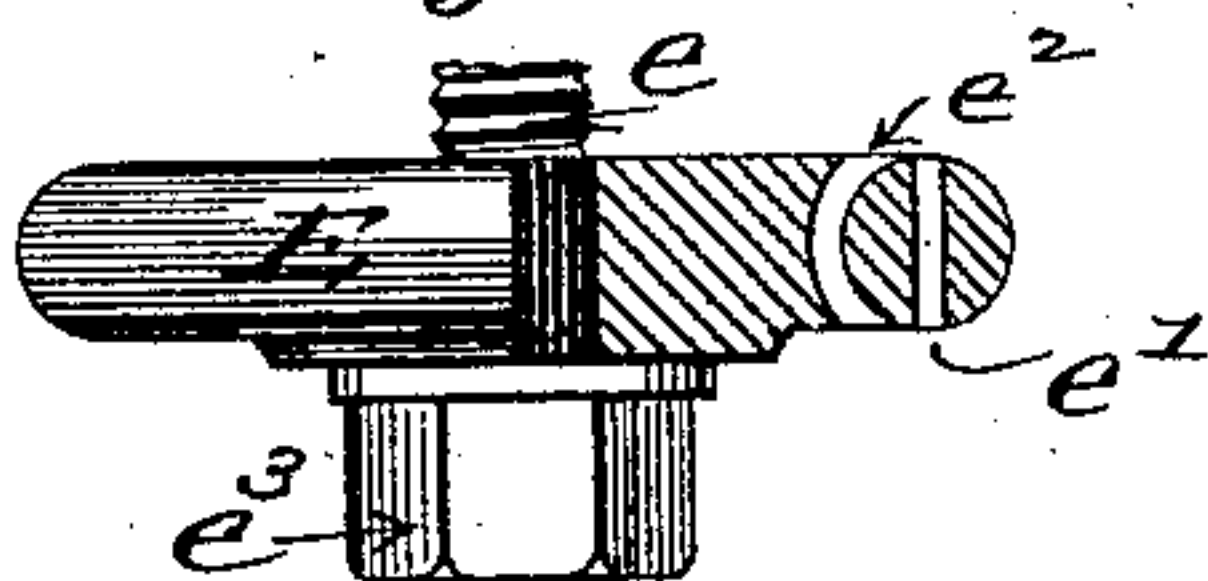
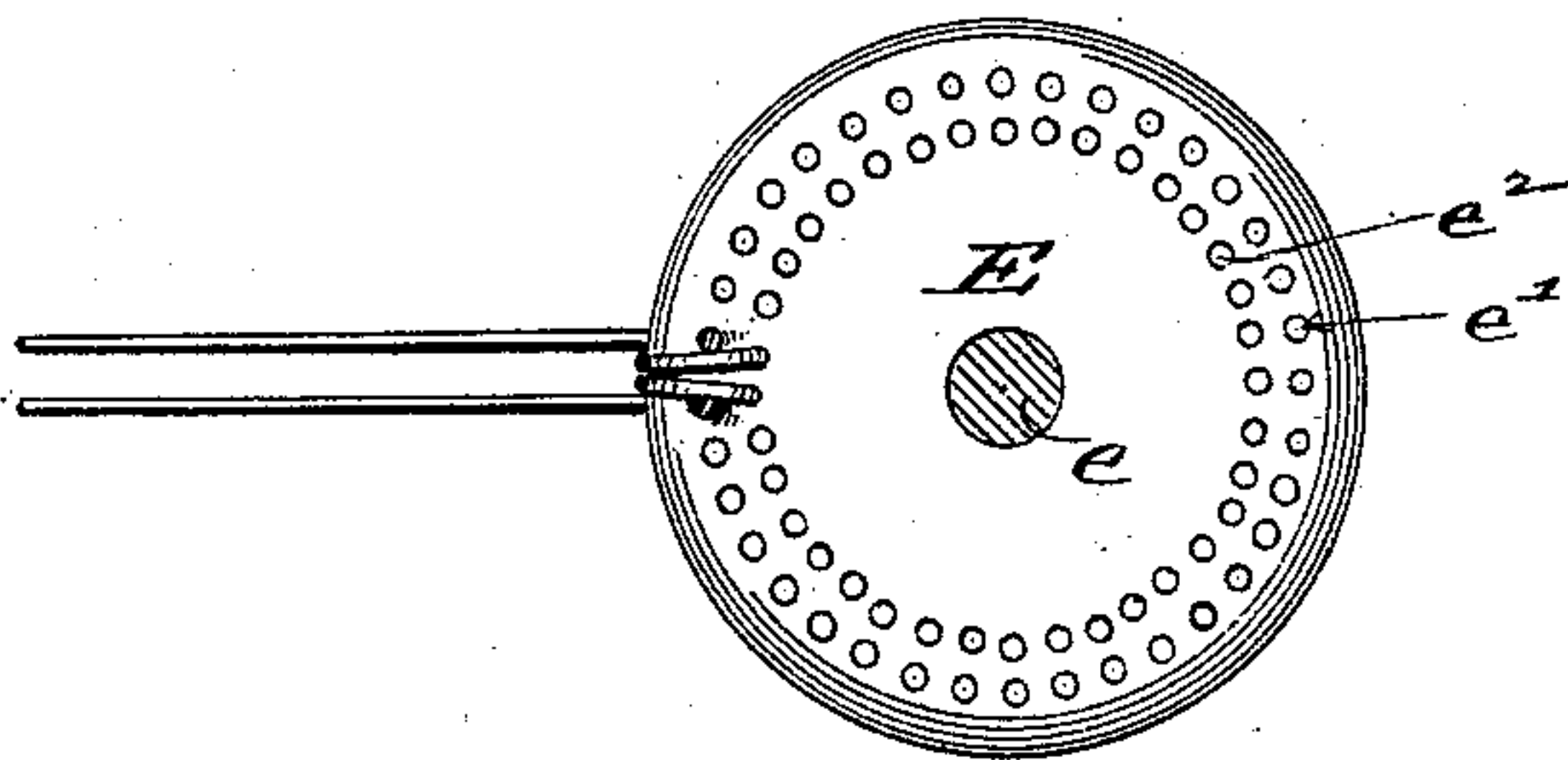


Fig. 8.



Attest:
Charles Pickles
Albert G. Fish

Inventor:
Hercules McCord.
by C. P. Moody.
atty.

UNITED STATES PATENT OFFICE.

HERCULES McCORD, OF ST. LOUIS, MISSOURI.

BANJO.

SPECIFICATION forming part of Letters Patent No. 283,352, dated August 14, 1883.

Application filed February 13, 1882. Renewed June 30, 1883. (No model.)

To all whom it may concern:

Be it known that I, HERCULES McCORD, of St. Louis, Missouri, have made a new and useful Improvement in Banjos, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is view one-half in plan and one-half in bottom view; Fig. 2, an axial section; Fig. 3, a detail, being a section taken through the shell of the banjo-body; Fig. 4, a detail, being a section similar to that of Fig. 3, but illustrating a modification of the channels for the straining-wires; Figs. 5 and 6, details, being respectively a plan and a side elevation, showing the connection of the straining-wires with the straining-hoop; Fig. 7, an edge elevation, half in section, of the disk to which the straining-wires are attached; Fig. 8, a plan of the disk, and Fig. 9 a section taken on the line *g g* of Fig. 6.

The same letters denote the same parts.

The present invention relates partly to the improved means for tightening the head of the banjo, and partly to the improved mode of strengthening the body of the banjo.

Referring to the drawings, A represents the body of the banjo. The body consists of a shell of metal, or other suitable material, and of the shape substantially as shown—that is, at the top where the head B is attached the body is furnished with an inturned rounded flange, *a*. At *a*² there is an outwardly-extending offset. At the center of the bottom there is a recess, A', and from the offset *a*² inward toward the recess A' the shell is rounded, and the shell is also rounded in forming the entrance to the recess A'. The shell or back may be close, or it may be perforated, as shown at A². The head B is stretched over the rounded bearing *a*, the head for this purpose being attached to the ring *b*, which encircles the body A above the offset *a*², and the usual straining-hoop, C, being fitted to the construction and to bear down upon the ring *b*.

D D represent wires, cords, or bands used in straining the head B. At their upper ends the wires D D are connected with the hoop C. At their lower ends the wires are connected with the disk E, and between the hoop C and

the disk E the wires pass over the shell of the body A. The wires are connected with the hoop, preferably by means of the loops *d d*, which are passed over studs *c c* on the hoop C, as seen in Figs. 1, 2, 5, 6.

The mode of connecting the wires and the disk E is preferably as shown, the ends of the wires being first inserted in the perforations *e*¹ in the disk, thence passed around the outer edge of the disk, thence through the perforations *e*² in the disk, and thence to the hoop C. Between the disk and the hoop the bearing over which the wires are passed should be rounded, so that in drawing the wires no obstacle shall be presented to their movement, and the wires kept from breaking. The wires may be drawn directly upon the outer surface of the body A; or the wires may be drawn in or through depressions or channels *a'*, formed in, upon, through, or underneath the shell of the body A, as shown in Figs. 1, 2, 3, 4. It is better to draw the wires through channels underneath the shell, as through the channels *a'*, Fig. 4; or they may lie in depressions—such as shown at *a'*, Figs. 1, 2, 3—as in either of these positions the wires are out of the way, and also the shell of the body, in forming the channels or depressions in question, is strengthened.

The disk E is arranged at the center of the bottom of the body A, and it is connected with the body A, so that it can be moved toward and from the head B. The recess A' is a convenient receptacle for the disk E, so that when the instrument is being used the disk E shall not project outwardly beyond the general level of the bottom of the body A, and so that space is furnished into which the disk may be moved in straining the wires and head B.

The preferable mode of connecting the disk E with the body A is shown in Figs. 1 and 2. A bolt, *e*, having the head *e*³, and threaded at its inner end, passes through the disk E and engages with a nut formed in, upon, or connected with the shell of the body A at the center of the body, and by screwing the bolt into the nut the disk is drawn toward the head B.

When the head is originally attached, the wire *b* in practice is an inch, or thereabout, above the offset *a*². This affords ample op-

portunity for stretching the head B as from time to time is needed. It will be observed that the bearing *a*, over which the head is stretched, is rounded, and thus the head can be tightened from time to time as it becomes loose or slack from the natural stretching of the skin, and the tone of the instrument thereby properly maintained. The tightening is effected by screwing the bolt *c* into the nut in the body A.

10 All of the wires D D being connected with the disk E, the entire head can be evenly tightened at a single operation. The life of the head is therefore materially prolonged, and the operation of tightening the head made practical and easy by means of the present construction.

In a banjo constructed as has been above described it will be observed that the flange *a*, in connection with the rounded back, acts as a stiffener, and this construction enables the usual extension of the banjo-neck to be omitted. The flange *a* also serves another purpose. A banjo, at the top or at or near the plane of the head and in the direction of the banjo-strings, has to withstand a collapsing-strain, caused by the pulling of the strings when tightened, while at the bottom of the banjo-body a tensive strain must be provided for. To this end it has been customary heretofore to extend the banjo-neck through the body of the banjo for the purpose thereby of supplying the banjo-body with a stiffening-frame. Such a construction, however, is objectionable, in that it injuriously affects the tone of the instrument by interfering with the vibration. The difficulty mentioned is overcome, and the banjo-body at the same time sufficiently strengthened, by means of the flange *a*. The offset *a'* also serves to supplement the flange *a*. The shape of the bottom of the body A is also favorable for withstanding the strain incident to that part of the construction.

I am aware that heads of kettle-drums, which devices are usually supported in an upright position, have sometimes been tightened circumferentially by a single mechanism centrally placed; also, that an inwardly-curved flange has been before used.

I claim—

50 1. In a banjo or similar musical instrument, an entire tightening device arranged centrally

in a recess in the body and common to the different straining-wires, substantially as set forth.

2. In a banjo, the combination, with the body having depressions or channels formed therein, of a tightening device common to all the straining-wires, substantially as described. 55

3. In a banjo or similar musical instrument, the combination of the straining-hoop C, the studs *c c*, the wires D D, having the loops *d d*, the disk E, and the bolt *c*, substantially as described. 60

4. The combination of the body A, the head B, the hoop C, the wires D D, the disk E, and the bolt *c*, said bolt and disk being situated centrally within a recess in the body, substantially as described. 65

5. The combination, in a banjo, of the head B, the body A, and the tightening-wires D D, said wires at their upper ends being attached to the tightening-hoop C, and the lower ends of the wire being attached to the disk E, located within a recess in the body of the device, substantially as and for the purpose set forth. 75

6. In a banjo or similar musical instrument, a tightening device arranged centrally in a recess in the body, substantially as set forth.

7. In a banjo or similar musical instrument, a series of tightening-wires, the lower ends of which wires are attached to a common central tightening device, whereby they are drawn, in tightening the head of the instrument toward the said head. 80

8. In a banjo or similar device, in combination with a body having a rounded or arched back, as shown and described, the curved flange *a*, constructed substantially as set forth. 85

9. A banjo or similar musical instrument, the body A of which has an offset, *a'*, constructed substantially as and for the purpose described. 90

10. A banjo or similar musical instrument, the body A of which has a rounded bottom having the recess A', substantially as described. 95

In testimony of said invention witness my hand, at St. Louis, Missouri, this 3d day of February, 1882.

HERCULES McCORD.

In presence of—

ROBERT BURNS,
H. R. BURNS.