T. J. McHUGH AND D. C. MAFIT.

BANJO.

APPLICATION FILED MAY 2, 1921.

1,402,876.

Patented Jan. 10, 1922.

2 SHEETS—SHEET 1.

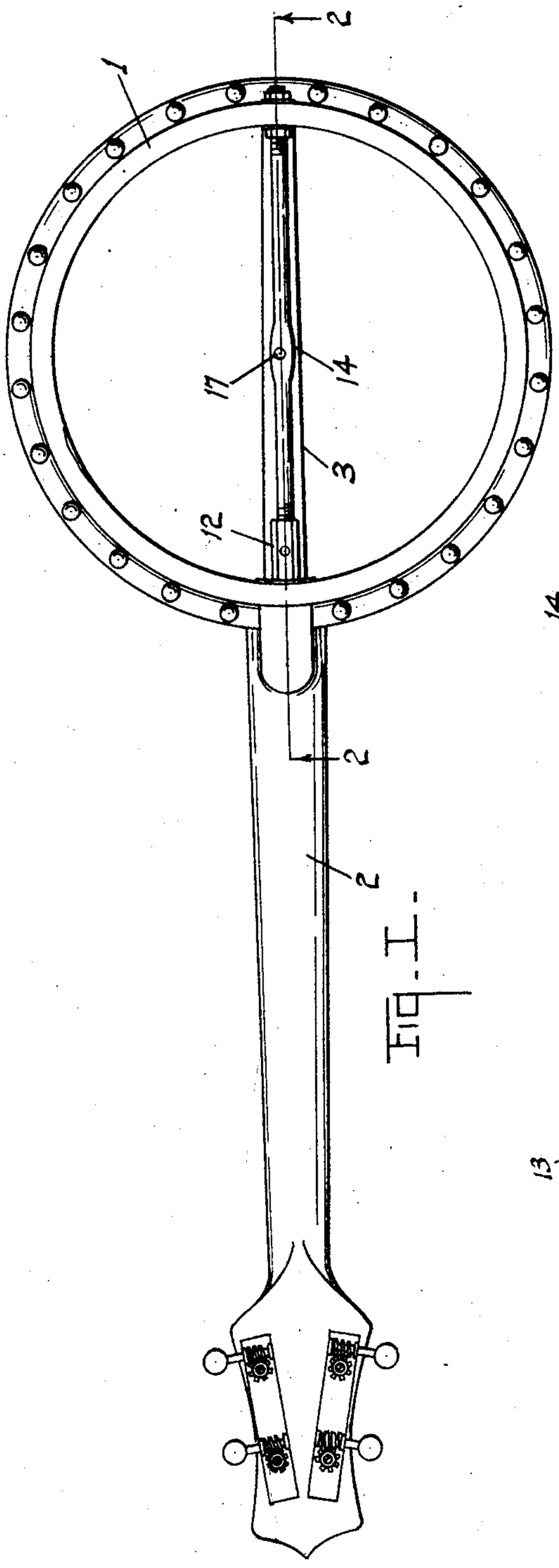

FIG. I.

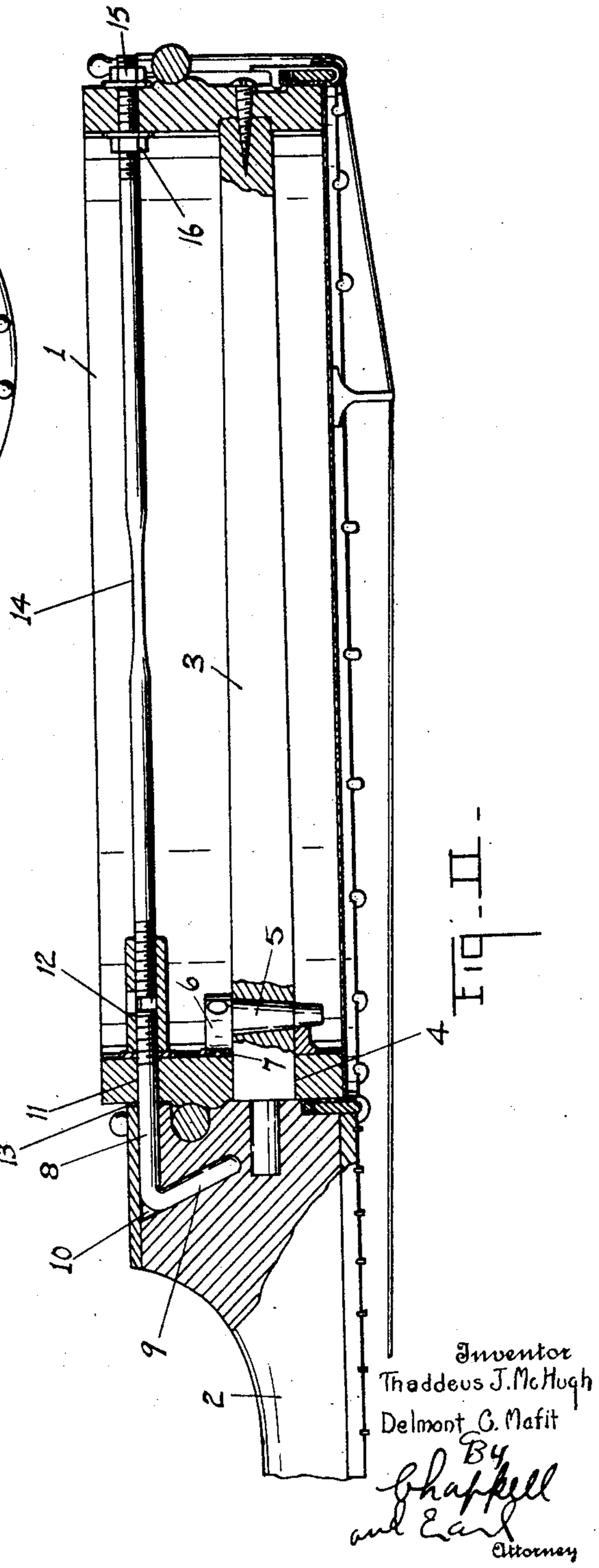

FIG. II.

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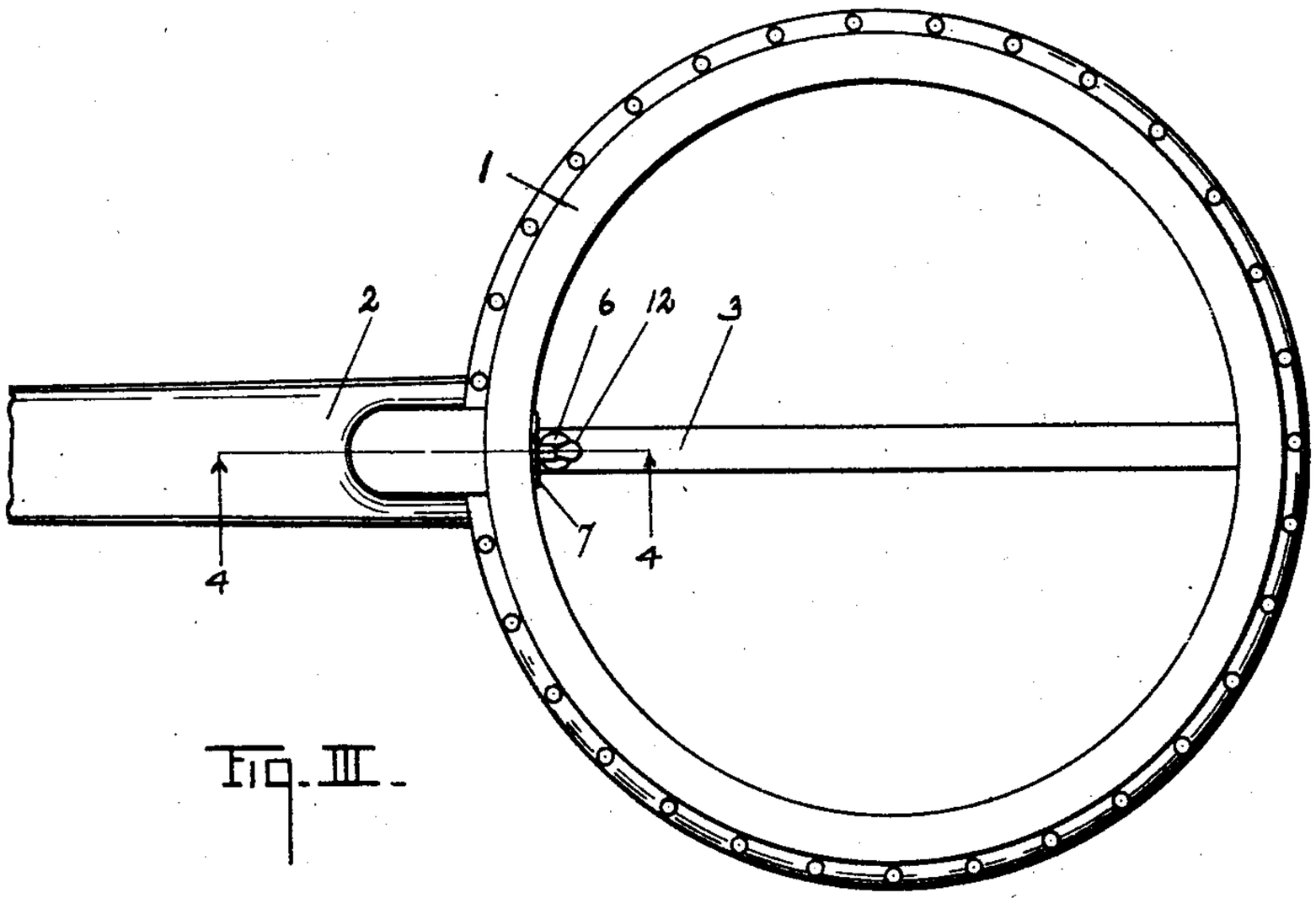

FIG. III.

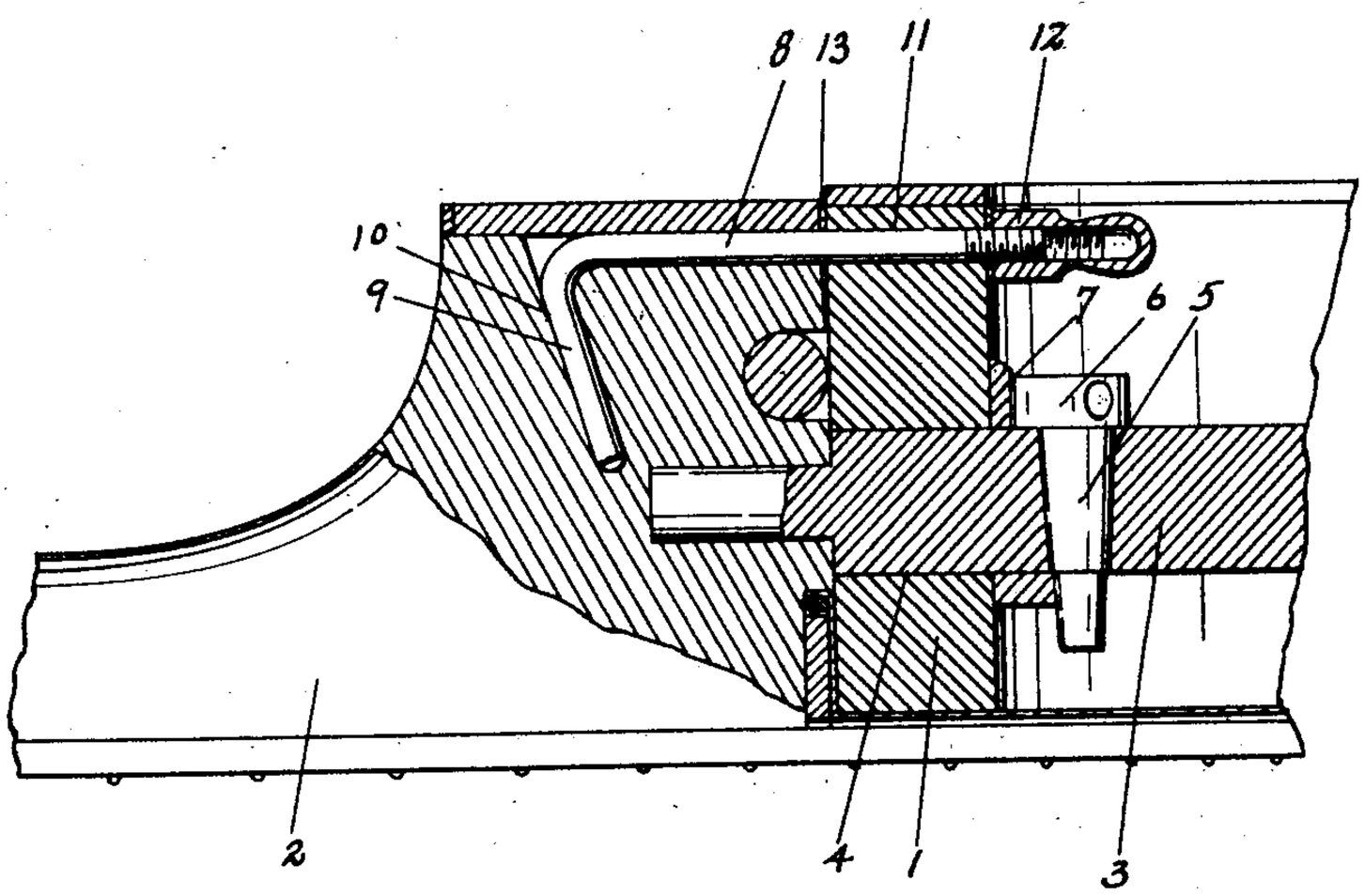

FIG. IV.

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UNITED STATES PATENT OFFICE.

THADDEUS J. McHUGH AND DELMONT C. MAFIT, OF KALAMAZOO, MICHIGAN, ASSIGNORS TO GIBSON MANDOLIN-GUITAR COMPANY, OF KALAMAZOO, MICHIGAN.

BANJO.

1,402,876. Specification of Letters Patent. Patented Jan. 10, 1922.

Application filed May 2, 1921. Serial No. 466,202.

To all whom it may concern:

Be it known that we, THADDEUS J. McHUGH and DELMONT C. MAFIT, citizens of the United States, residing at Kalamazoo, county of Kalamazoo, and State of Michigan, have invented certain new and useful Improvements in Banjos, of which the following is a specification.

This invention relates to improvements in banjos.

In stringed musical instrument, for instance, a banjo, the instrument illustrated, it is not uncommon for the neck to spring or the neck fastening to yield or the rim to spring or warp, under the strains to which it is subjected, to such an extent as to necessitate the returning of the instrument to the factory owing to the fact that such springing or yielding or warping will carry the strings away from the finger-board to such an extent as to greatly add to the labor of playing the same and sometimes to such an extent as to render it practically impossible to play the instrument.

It is the main object of our invention to provide an improved means for connecting the neck to the rim and brace the rim which will hold it very securely and also to provide means for compensating for the springing of the neck and the warping or springing of the rim, should that occur.

Further objects and objects relating to structural details, will definitely appear from the detailed description to follow.

We accomplish the objects of our invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of our invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Fig. I is a rear view of a stringed instrument embodying the features of our invention.

Fig. II is a detail view partially in vertical section on a line corresponding to line 2—2 of Fig. I.

Fig. III is a rear view of a modified form of our invention.

Fig. IV is a detail view of a modified form of our invention partially in section on a line corresponding to line 4—4 of Fig. III.

In the drawing similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, 1 represents the rim, 2 the neck of a stringed musical instrument, the instrument illustrated being a banjo. The neck is provided with the usual dowel-piece or "dowel stick" 3, which is rigidly secured to the neck and disposed through the hole 4 in the rim.

The clamping eccentric 5 is disposed transversely through the dowel piece and provided with a head portion 6 engaging a thrust member 7 on the rim. We provide a clamping member tie-rod 8 which is hooked at 9 to engage a hole 10 in the rear side of the neck. This tie-rod is arranged through a hole 11 in the rim and provided with a clamping nut 12. The tie-rod is thus positioned to sustain the pull of the strings on the neck, clamping the neck firmly to the rim so that it is not likely to yield under the severe stresses to which it is subjected in use. We preferably pla e shims 13 between the neck and the rim, pieces of paper being very satisfactory as shims, the same being shown conventionally in the drawings.

The clamping nut 12 is in the form of a sleeve, its outer end receiving the brace 14 which extends across the rim through the outer side thereof opposite the neck, the outer end of the brace being threaded to receive the nuts 15 and 16 which are disposed on opposite sides of the neck to clamp the rod thereto and provide for adjustment.

The rod is preferably provided with a hole 17 permitting its being turned in the nut 12 to extend or retract the same or the outer nut 15 may be loosed and the extension effected by turning the nut 16, or vice versa, to adjust the rim to compensate for any warping or bowing thereof and also to assist in the varying of the position of the neck relative to the rim. It will be understood that a very slight movement of the rim relative to the neck at the base makes a considerable change or variation at the outer end of the neck, thus rendering it possible to make considerable change in the position of the strings relative to the keyboard. The brace rod, when adjusted, also serves to prevent warping or changing the relative position of the neck to the rim.

We have illustrated and described our

improvements as applied to a banjo. It is believed that the disclosure made will enable those skilled in the art to embody or adapt the same to other instruments of this general class.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is:

1. The combination in a stringed instrument including a rim and a neck, of a dowel piece for said neck disposed through said rim, a clamping means for said dowel piece, a hooked coupling member disposed through said rim and engaged with said neck at the rear side thereof, a clamping nut for said coupling member disposed on the inside of said rim, a brace having threaded engagement with said nut and extending across said rim and through the outer side thereof opposite the neck, and adjusting and clamping nuts on said brace at the outer and inner sides of said rim.

2. The combination in a stringed instrument including a rim and a neck, of a dowel piece for said neck disposed through said rim, a clamping means for said dowel piece, a coupling member disposed through said rim and engaged with said neck at the rear side thereof, a clamping nut for said coupling member disposed on the inside of said rim, and a brace having threaded engagement with said nut and secured to the rim opposite the neck.

3. The combination in a stringed instrument including a rim and a neck, of a coupling member disposed through said rim and engaged with said neck at the rear side thereof, a clamping nut for said coupling member disposed on the inside of said rim, a brace adjustably associated with said coupling member extending across said rim and through the outer side thereof opposite the neck, and adjusting and clamping nuts on said brace at the outer and inner sides of said rim.

4. The combination in a stringed instrument including a rim and a neck, of a coupling member disposed through said rim and engaged with said neck at the rear side thereof, a clamping nut for said coupling member disposed on the inside of said rim, and a brace adjustably associated with said coupling member and secured to the rim opposite the neck.

5. The combination in a stringed instrument of a rim, a neck, a dowel piece for said neck disposed through said rim, a clamping means for said dowel piece, a coupling member engaged with the neck at the rear side thereof, a brace connected to said coupling and extending across said rim and secured thereto opposite the neck, and means whereby said brace may be extended or retracted, for the purpose specified.

6. The combination in a stringed instrument of a rim, a neck, a coupling member engaged with the neck at the rear side, means for adjusting said coupling member, a brace extending from the base of said neck across said rim to engage the same opposite the neck, and means for extending and retracting said brace, for the purpose specified.

7. The combination in a stringed instrument including a rim and a neck, of a dowel piece for said neck disposed through said rim, a clamping means for said dowel piece, a hooked coupling member disposed through said rim and engaged with said neck at the rear side thereof, and a clamping nut for said coupling member disposed on the inside of said rim.

8. The combination in a stringed instrument including a rim and a neck, of a dowel piece for said neck disposed through said rim, a coupling member disposed through said rim and engaged with said neck at the rear side thereof, and a clamping means for said coupling member disposed on the inside of said rim.

9. The combination in a stringed instrument including a rim and a neck, of a connection for said rim and neck comprising a member engaged with the neck at the rear side thereof, and means for adjusting said member, a brace extending across the rim from the base of the neck and secured to the rim opposite the neck, said brace being provided with means whereby it may be extended and retracted, all coacting as specified.

10. The combination in a stringed instrument of a rim, a neck, a brace extending across the rim from the base of the neck to the side opposite the same, said brace being provided with a means whereby it may be extended or retracted.

In witness whereof we have hereunto set our hands and seals in the presence of two witnesses.

THADDEUS J. McHUGH. [L. S.]
DELMONT C. MAFIT. [L. S.]

Witnesses:
LEWIS A. WILLIAMS,
ARTHUR C. STOUT.