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D. E. HARTNETT.
HAND SUPPORT FOR MUSICAL INSTRUMENTS.

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Fig. 1.

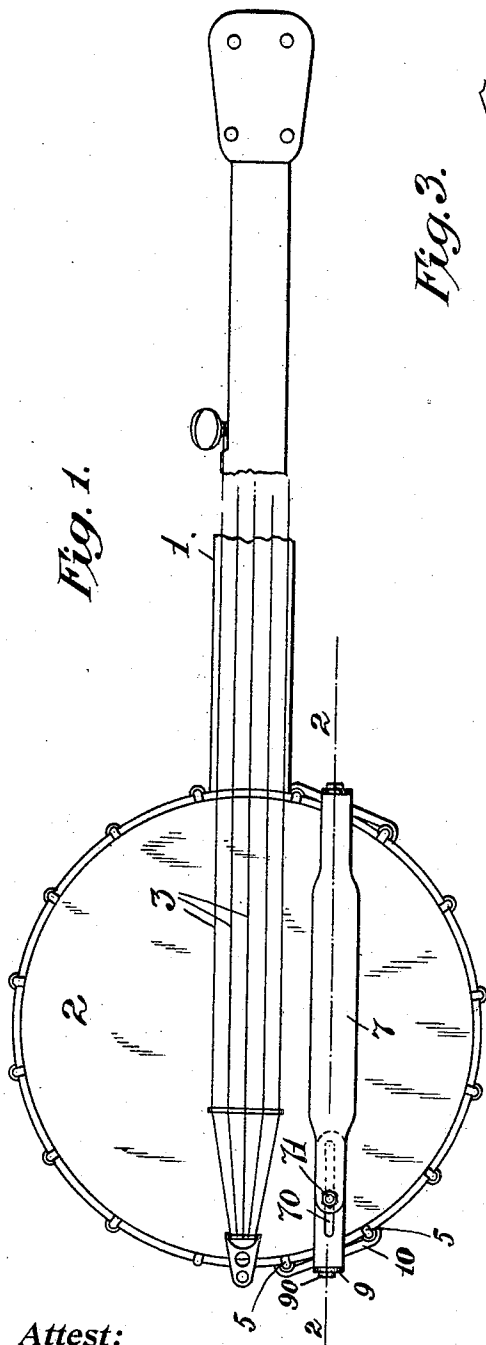


Fig. 3.

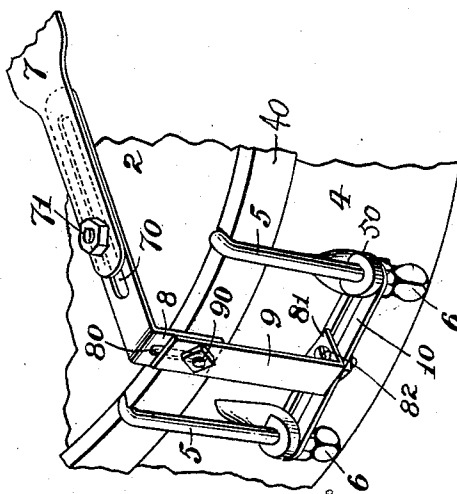
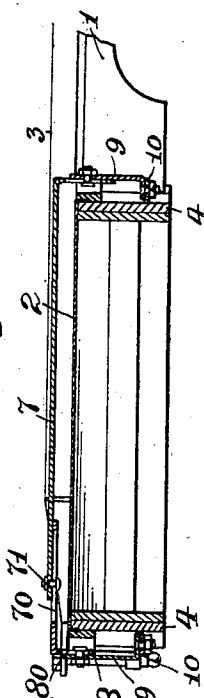


Fig. 2.



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UNITED STATES PATENT OFFICE.

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HAND-SUPPORT FOR MUSICAL INSTRUMENTS.

No. 896,826.

Specification of Letters Patent.

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Application filed March 11, 1908. Serial No. 420,303.

To all whom it may concern:

Be it known that I, DENNIS E. HARTNETT, a citizen of the United States, residing in the borough of Manhattan, in the county of New York and State of New York, have invented certain new and useful Improvements in Hand-Supports for Musical Instruments, of which the following is a specification.

My invention relates to musical instruments and more particularly to that class of instruments provided with strings and a diaphragm, and adapted to be played by hand, such as the banjo, and has for its object the supplying of such an instrument with a support for the hand arranged adjacent to the diaphragm and the strings, so that the player may conveniently manipulate the instrument, without bringing the hand into contact with the diaphragm to interfere with the vibration. Instruments of this class, of which the banjo is the best example, comprise a resonant body provided with a vibratory diaphragm, usually made of stretched sheepskin, and crossed by strings, the manipulation of which gives rise to the musical tones in playing.

In using the banjo the player usually rests his little finger on the diaphragm in the vicinity of the strings and touches the latter with his fingers. When the hand of the player is in contact with the diaphragm of the instrument, either constantly or occasionally, the vibrations are not so clear as they otherwise would be. Such contact also tends to soil the diaphragm, so much so in fact that it has to be replaced because it cannot be cleansed without ruining it.

Much fatigue is usually induced in playing because the little finger being shorter than the other fingers of the hand the latter are bent and become cramped when the instrument is used for a long time. The variation in length of the fingers also causes the novice to "hook" the strings or vibrate them from beneath when he ought to vibrate them by movement in a plane substantially at right angles to the plane in which they lie. Also a high bridge produces the best tone, but a high bridge cannot be used because it induces too much fatigue. When a new diaphragm is placed in the instrument it is beneath the level of the upper edge of the frame which is gradually drawn downwardly to place an increasingly greater tension on the skin. The instrument cannot usually be used for some time while the diaphragm is being thus treat-

ed because with the usual bridge the strings are not raised high enough above the edge of the frame (called the drawing hoop) to avoid contact therewith. A high bridge, if it could be employed, would enable the strings to clear the frame so that the instrument could be played, but as I have explained the use of a high bridge raises the strings so far above the diaphragm as to cause hooking and induce fatigue.

All of these disadvantages are overcome by the use of my invention which provides a convenient means whereby the player may have a support for his hand, above the diaphragm. While playing the instrument in the manner in which he has heretofore been accustomed, the hand will not be brought into direct contact with the diaphragm because he can rest it upon the support. The tones of the instrument will not be interfered with, the diaphragm will not be soiled and the fingers will not be tired, because the tips of the fingers will be substantially on a level with the strings without bending, and when playing anywhere between the bridge and the rim of the instrument the fingers will engage the strings at substantially the same angle, which is a great advantage. It also enables a high bridge to be employed and makes an instrument with a new diaphragm usable. The elastic character of the support enables the player to move his hand to and from the instrument slightly while resting thereon, thereby taking up and eliminating what is called the false vibration of the hand.

In the drawings, Figure 1 is a plan of a banjo provided with my improved hand support, the illustration being shortened to get it within the limits of the sheet; Fig. 2 is a side elevation and partial section on the plane of the line 2—2 in Fig. 1, and Fig. 3 is a perspective illustrating the manner of securing the support to the frame.

In the drawings, in which the same reference numerals refer to the same part in all of the figures, 1 is the neck of the instrument; 2 is the diaphragm; 3, 3, 3, are the strings stretched across the diaphragm in the usual manner, and 4 is the frame or rim of the instrument.

The diaphragm is secured at its outer edge, in the usual manner, to a hoop 40, which is engaged by the hook ends of bolts 5 passing through brackets 50, secured to the frame 4 and provided, below the brackets, with tightening nuts 6. The hand support is

made of any suitable size and material, preferably of about the relative size shown in the drawings and of light elastic metal as thin steel, and comprises a transverse member 7 which constitutes the support proper. It consists of two members joined together so as practically to form one piece which is substantially parallel with but above the plane of the diaphragm. In the form in which I prefer to make it, the members are adjustable longitudinally. This is accomplished by providing one member with a slot 70 and the other with a bolt and nut 71 engaging therewith. The support is placed across and above the diaphragm and is provided on each end with depending members 8, each slotted at 80 and adapted to be supported from side members 9 secured to the frame 4 in the following manner: A slotted bar 10 is placed so as to embrace two or more of the bolts 5 forming part of the instrument. The side member 9 is provided with a nut 90 to engage the slot 80 of the member 8 and it is also provided with an intumed flange 81 having a bolt 82 adapted to engage the slot of the bar 10. By this construction the support can be adjusted longitudinally so as to be used with instruments of different sizes and it can be adjusted toward and away from the diaphragm to suit fingers of different lengths.

The device is easy to make, is economical and serves a useful and much desired purpose.

What I claim as new is:—

1. The combination with a stringed musical instrument, provided with a diaphragm and adapted to be played by hand, of a support for the hand arranged near to the strings and the diaphragm, comprising a member arranged across the instrument, means for fastening it to the frame thereof, and means for varying its length.

2. The combination with a stringed musical instrument, provided with a diaphragm and adapted to be played by hand, of a support for the hand arranged near the strings and the diaphragm, comprising a member arranged across the instrument, means for fastening it to the frame thereof, and means for varying its length, comprising a slot and clamp.

3. The combination with a stringed instrument provided with a frame and a diaphragm and adapted to be played by hand, of a hand-support above the diaphragm, means for adjusting the length of said support, and means for adjusting its distance from the diaphragm.

4. The combination with a stringed in-

strument provided with a frame and a diaphragm and adapted to be played by hand, of a hand-support above the diaphragm having downwardly turned slotted end flanges, side members adjustably secured to said end flanges, and means for securing the side members to the frame of the instrument.

5. The combination with a stringed instrument provided with a frame and a diaphragm and adapted to be played by hand, of a hand-support above the diaphragm comprising two overlapping members having downwardly turned end flanges, one member slotted and the other having a bolt opening, a bolt passing through the slot and bolt opening, and means for adjustably securing the end flanges to the frame of the instrument.

6. The combination with a stringed instrument provided with a frame and a diaphragm and adapted to be played by hand, of a hand support above the diaphragm, means for securing the diaphragm to the frame, and connections whereby said connecting means also serve to secure the hand-support in place.

7. The combination with a stringed instrument provided with a frame and a diaphragm and adapted to be played by hand, of a rim to which the diaphragm is secured, a hand support above the diaphragm, means for adjustably securing the rim to the frame, and connections whereby said securing means also serve to secure the hand support in place.

8. The combination with a stringed instrument provided with a frame and a diaphragm and adapted to be played by hand, of brackets secured to the frame, bolts passing through the brackets and adjustably securing the diaphragm to the frame, a hand-support above the diaphragm, a bar connecting two adjacent bolts, and connections between said bar and the hand-support.

9. The combination with a stringed instrument provided with a frame and a diaphragm and adapted to be played by hand, of brackets on the frame, diaphragm securing bolts passing through said brackets, a slotted bar connecting adjacent bolts, a hand-support having downwardly turned end flanges, side members adjustably secured to said flanges, and bolts from the side members passing through the slot in the bar.

In testimony whereof I affix my signature in presence of two witnesses.

DENNIS E. HARTNETT.

Witnesses:

HERMAN MEYER,
MAY HUGHES.