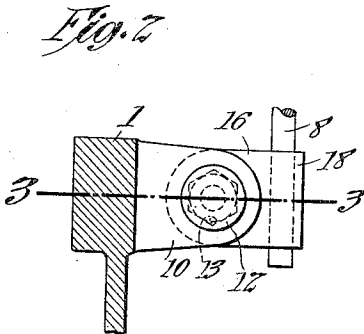
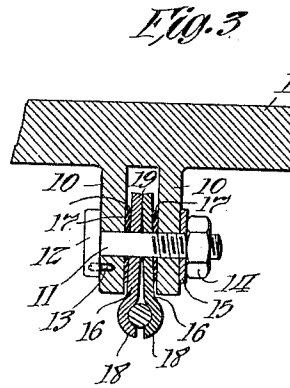
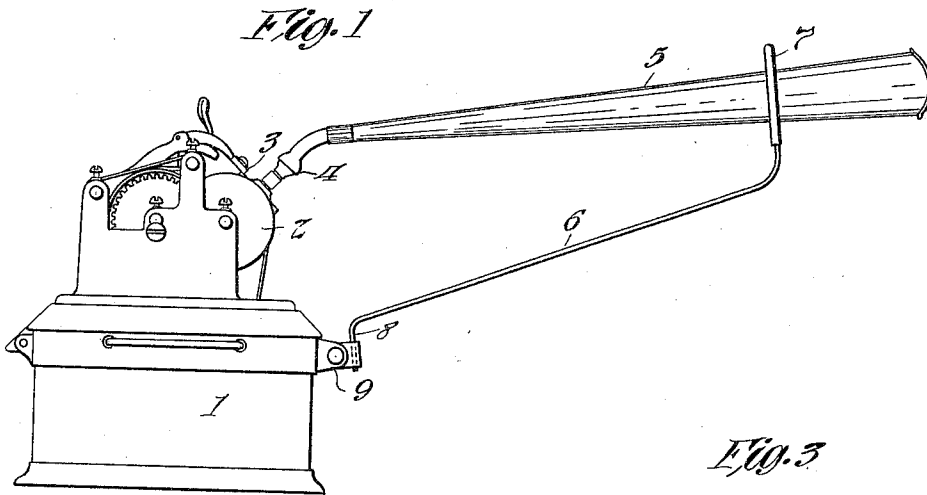


N. H. HOLLAND.
SUPPORTING DEVICE.
APPLICATION FILED AUG. 17, 1912.

1,051,408.

Patented Jan. 28, 1913.



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SUPPORTING DEVICE.

1,051,408.

Specification of Letters Patent.

Patented Jan. 28, 1913.

Application filed August 17, 1912. Serial No. 715,544.

To all whom it may concern:

Be it known that I, NEWMAN H. HOLLAND, a subject of the King of Great Britain, and a resident of West Orange, in the county of Essex and State of New Jersey, have made certain new and useful Improvements in Supporting Devices, of which the following is a description.

My invention relates to supporting devices and more particularly to an improved supporting device for sound conveyers of phonographs, telephone transmitters, and the like.

The principal objects of my invention reside in the provision of improved means for supporting a member, such as the sound conveyer of a phonograph, from a phonograph cabinet or other suitable support, which permits the member to be readily adjusted to any desired position with respect thereto, and which at the same time will frictionally hold the member in any position to which it has been adjusted; and in the provision of an improved bracket forming a part of the supporting device.

Further objects of the invention reside in the construction of parts and combinations of elements hereinafter more specifically described and set forth in the appended claims.

In order that my invention may be more clearly understood, attention is directed to the accompanying drawings forming a part of the specification in which the same reference characters are used to designate corresponding parts throughout and in which:

Figure 1 is an elevation of a phonograph showing one embodiment of my invention as applied thereto; Fig. 2 is a detail view of the improved crane bracket shown in Fig. 1, a portion of the phonograph cabinet being shown in section; and Fig. 3 is a sectional view, partly in elevation, taken on line 3—3 of Fig. 2.

Referring to the drawing, reference character 1 represents the cabinet of a phonograph, preferably an Edison business phonograph, provided with the usual record support or mandrel 2 and the recording and reproducing mechanism 3. Suitably secured to the recording and reproducing mechanism 3, as by a ball and socket joint 4, is a suitable sound conveyer 5, here shown as a speaking tube of the usual type. For different operators and under different condi-

tions of use, it is essential that the sound conveyer 5 may be adjusted from one position to another, and I have provided suitable means whereby this may readily be accomplished and the conveyer frictionally held in any desired position. In order to attain these results I provide a suitable support for the conveyer 5, such as a rigid arm or crane 6, preferably formed from a round steel rod and provided at one end with a stirrup or loop 7 for engaging the outer end of the conveyer 5, and at its opposite end with a cylindrical offset portion 8 mounted for universal pivotal movement on the phonograph cabinet by means of my improved bracket or joint 9. This bracket or joint 9 is preferably constructed as follows: A pair of spaced members 10 is formed integral with, or otherwise rigidly connected to, the phonograph cabinet, these members being formed of any suitable slightly resilient material, such as cast steel, whereby the outer ends thereof may be forced toward each other. Passing through the members 10 is a bolt 11, one end of which is provided with a head 12 seated against the outer side of one of the members 10, the head 12 carrying a pin 13 entering a suitable recess in the adjacent member 10 for preventing the rotation of bolt 11. The screw threaded end of the bolt is provided with a nut 14 between which and the adjacent member 10 may be placed a washer 15, although this is not necessary if the outer surface of this member 10 and the adjacent face of the nut be finished smooth. Pivottally mounted on the bolt 11 between members 10 is a pair of clamping members 16 which are suitably spaced from members 10, as by fiber washers 17. The portions of the clamping members between the members 10 are preferably flat while the outer portions thereof are preferably formed as curved offsets 18 whereby a split bearing or socket is formed for the reception of the cylindrical offset portion 8 of the arm or crane 6, the axis of this bearing being substantially at right angles to the axis of bolt 11, and its circumferential bearing surface being less in extent than that of the offset portion 8.

From an inspection of Fig. 3, it will be observed that the arrangement and construction of the parts of the bracket or joint 9 is such that, when the offset portion 8 of

the supporting arm or crane 6 is seated in the split bearing or socket, formed by the curved offsets 18 of the clamping members 16, the clamping members will be forced
 5 away from each other about their inner ends 19, the washers 17 preventing the separation of these inner ends. When the nut 14 is screwed up the outer portions of members 10 obviously will be forced toward
 10 each other and thereby force washers 17 tightly against the clamping members 16 and the offsets 18 of the clamping members tightly against the offset portion 8 of the arm or crane, whereby considerable frictional resistance will be offered both to any
 15 pivotal movement of members 16 about the bolt 11 and of the arm or crane 6 in the split bearing or socket. The amount of this frictional resistance in the bracket or joint 9 may be regulated at any time simply by
 20 screwing up or unscrewing the nut 14 to thereby adjust the relative positions of the outer portions of the resilient members 10. When the phonograph is in use, the amount
 25 of this frictional resistance is so regulated that the sound conveyer 5 will be held thereby, through the medium of arm or crane 6 and its stirrup 7, in any position to which it has been moved, against the action of
 30 gravity and slight pressures and vibrations to which it is ordinarily subjected, but so as to still not prevent easy manual adjustment of the sound conveyer to any desired position.

35 It is to be understood, of course, that my invention is capable of use for numerous other purposes than the one herein specifically described; and that various modifications may be made in the construction and
 40 arrangement of parts in the embodiment of my invention herein illustrated without departing from the spirit thereof.

Having now described my invention, what I claim and desire to protect by Letters
 45 Patent is:

1. In a device of the class described, the combination of a sound conveyer supporting arm or crane, one end of which is adapted to engage the conveyer, and the other
 50 end of which is formed with an offset portion, and means for securing the supporting arm or crane to a phonograph cabinet comprising a pair of clamping members formed with a bearing for the said offset portion, a
 55 pair of spaced resilient members fixed at one end, and means whereby the clamping members are pivotally mounted between the resilient members on an axis substantially at right angles to the axis of the bearing for
 60 the offset portion of the conveyer supporting arm or crane, substantially as described.

2. In a device of the class described, the combination of a sound conveyer supporting arm or crane, one end of which is formed
 65 into a stirrup or loop for engaging the con-

veyer, and the other end of which is provided with an offset portion, and means for connecting the arm or crane to a phonograph cabinet, comprising a pair of spaced resilient members fixed at one end, a member non-rotatably mounted in said resilient members,
 70 a pair of clamping members pivotally mounted on said non-rotatable member as an axis, the outer portions of said clamping members being provided with opposed offsets forming a split bearing for the offset
 75 portion of the sound conveyer supporting arm or crane, the axis of the split bearing being substantially at right angles to the pivotal axis of the clamping members, and means cooperating with the member non-rotatably mounted in the spaced resilient
 80 members for adjusting the relative position of the free ends of the resilient members, substantially as described.

3. In a device of the class described, the combination of a sound conveyer supporting arm or crane, one end of which is adapted to engage the conveyer, and means for connecting the other end of the arm or crane to
 90 a phonograph cabinet comprising a pair of spaced resilient members fixed at one end, means for adjusting the relative positions of the free ends of said members comprising a bolt horizontally mounted in the members, a
 95 pair of clamping members pivotally mounted on said bolt between the spaced resilient members, the clamping members having a pair of curved offsets forming a split bearing for the reception of the end of the sup-
 100 porting arm or crane, the axis of which is substantially at right angles to the bolt, and means for spacing each clamping member from the adjacent resilient member, the adjustment of the adjusting means serving to
 105 simultaneously regulate the frictional resistance to the pivotal movements of the clamping members and supporting arm or crane, substantially as described.

4. In a device of the class described, the combination of a sound conveyer supporting arm or crane, one end of which is adapted to engage the conveyer and the other end of which is cylindrical, and means for connecting the cylindrical end of the arm or
 110 crane to a phonograph cabinet comprising a pair of spaced resilient members fixed at one end, a bolt passing horizontally through the resilient members, means on one end of the bolt cooperating with one of the resilient
 115 members for preventing rotation of the bolt, a pair of clamping members pivotally mounted on the bolt between the resilient members and formed beyond the free ends of the resilient members with curved off-
 120 sets forming a split bearing for the cylindrical end of the arm or crane, the circumferential bearing surfaces of the offsets being less in extent than that of the cylindrical end of the arm or crane, whereby when the
 125 130

cylindrical end of the arm or crane is seated in its bearing, the corresponding ends of the clamping members are forced away from each other about their opposite ends, and means cooperating with the bolt for adjusting the relative positions of the free ends of the resilient members, whereby the frictional resistance to the pivotal movements of the clamping members and the crane or arm may be simultaneously adjusted, substantially as described.

5. A supporting device comprising a rigid member, and a bracket for connecting one end of said member to a support for universal angular movement with respect thereto, said bracket comprising a pair of spaced resilient members fixed at one end, a bolt connecting said resilient members, a pair of clamping members pivotally mounted on said bolt between the resilient members, said clamping members forming a bearing for the rigid member, the axis of which is at an angle to the pivotal axis of the clamping members, and means cooperating with the bolt for adjusting the relative positions of the free ends of the resilient members, whereby the frictional resistance to the pivotal movements of the clamping members about the bolt and the rigid member in its bearing may be simultaneously adjusted by a single operation, substantially as described.

6. A supporting device comprising a rigid member, and means for connecting said member to a support comprising a bracket having a pair of spaced resilient members fixed at one end, a pair of clamping members, forming a bearing for said rigid member, mounted between said resilient members and having a fixed pivotal connection therewith, the axes of the bearing for the rigid member and the fixed pivotal connection being substantially at right angles, and means cooperating with the fixed pivotal connection for adjusting the relative positions of the free ends of the resilient members, whereby the frictional resistance to the pivotal movements of the clamping members and the rigid member may be simultaneously adjusted by a single operation, substantially as described.

7. In a bracket, a pair of spaced resilient members fixed at one end, a member connecting the resilient members, a pair of clamping members pivotally mounted between said resilient members on said connecting member, each of the clamping members being formed with an offset to form a socket adapted to pivotally receive a supporting member, and means cooperating with said connecting member adapted to regulate the relative positions of the free ends of the resilient members and to thereby simultaneously regulate the relative positions of the offsets of the clamping members, substantially as described.

8. In a bracket, a pair of spaced resilient members fixed at one end, means, comprising a member connecting said resilient members, adapted to connect a device to said resilient members for pivotal movements with respect thereto in two directions substantially at right angles to each other, and means comprising a member cooperating with said connecting member for regulating the relative positions of the free ends of the resilient member and to thereby simultaneously adjust the frictional resistance to both pivotal movements, substantially as described.

9. In a bracket, a pair of spaced resilient members fixed at one end, a bolt connecting said resilient members, a pair of clamping members pivotally mounted on said bolt between said resilient members and provided with opposed portions forming a bearing or socket for the reception of a supporting member, the axis of the bearing or socket always being in a plane substantially at right angles to the bolt, and means comprising a member cooperating with said bolt for adjusting the relative positions of the free ends of the resilient members, and to thereby simultaneously adjust the relative positions of the clamping members, substantially as described.

This specification signed and witnessed this 16th day of August 1912.

NEWMAN H. HOLLAND.

Witnesses:

WILLIAM A. HARDY,
ANNA R. KLEHM.