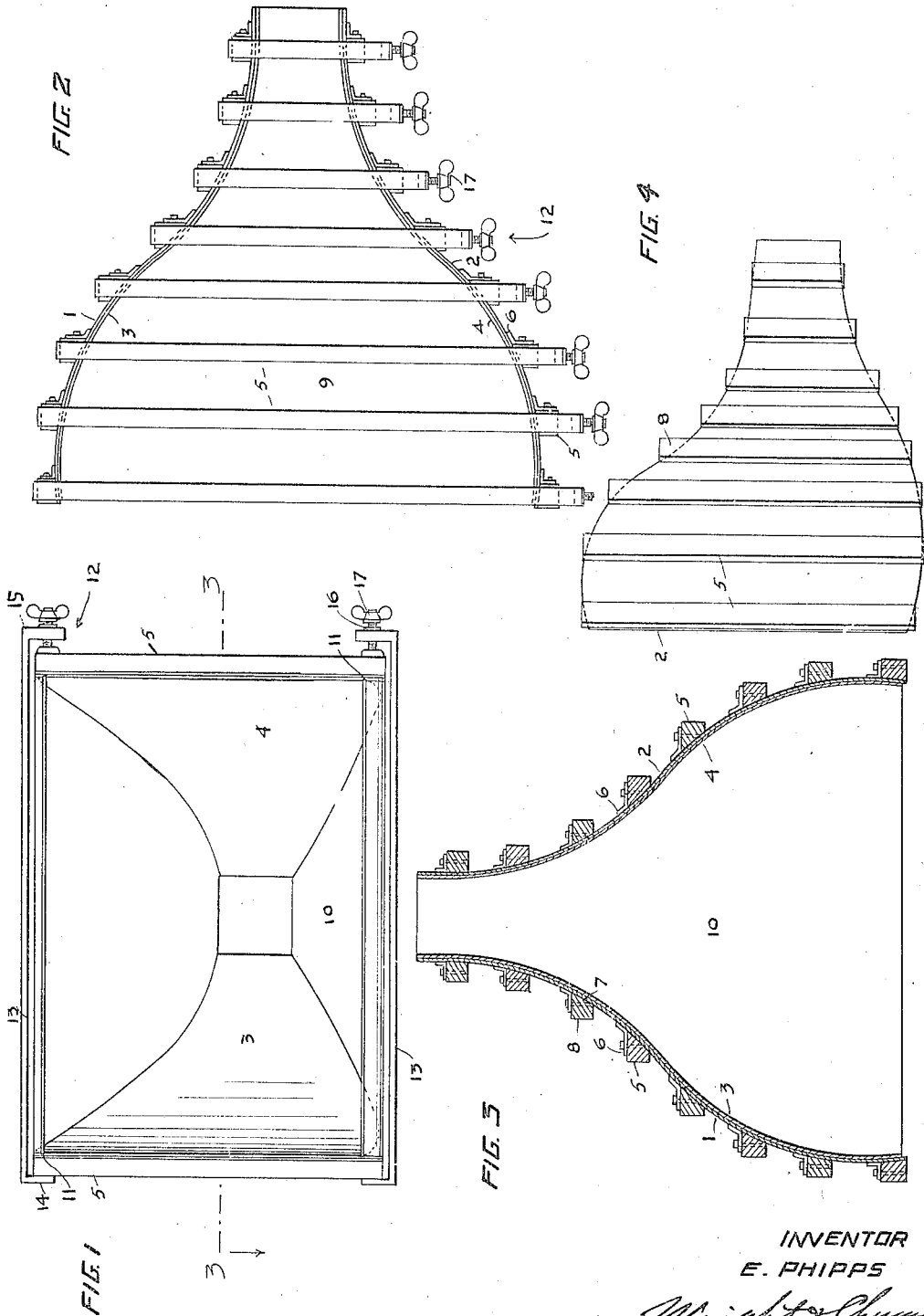


E. PHIPPS.
WORK CLAMPING DEVICE.
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1,363,433.

Patented Dec. 28, 1920.



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WORK-CLAMPING DEVICE.

1,363,433.

Specification of Letters Patent. Patented Dec. 28, 1920.

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To all whom it may concern:

Be it known that I, EDWARD PHIPPS, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Work-Clamping Devices, of which the following is a specification.

This invention relates to improvements in clamping devices and more particularly to a device for clamping and holding in place the parts of a phonograph sound box or sound amplifier of the type having curved or irregularly shaped parts which are glued together and are difficult to maintain assembled by hand while the glue is drying.

In the manufacture of amplifiers of the class described particularly of the type embodied in my pending application for patent filed Feb. 25, 1920, Ser. No. 361,185, the amplifier is in box like form made up of thin spruce boards bent into irregular form, that of an ogee or double ogee curve, so as to place the wood under tension. These boards are mortised and glued together and much difficulty is experienced in holding the boards assembled until the glue has set. The present invention is therefore primarily designed to facilitate the manufacture of sound amplifiers of the form described and comprises a novel, simple, and inexpensive clamping device which may be quickly and easily operated to clamp the work firmly and evenly. The clamping device is also adapted for other irregular shaped work of a similar nature.

The invention possesses other advantages and features, some of which, with the foregoing will be set forth at length in the following description where I shall outline in full, that form of the invention which I have selected for illustration in the drawings accompanying and forming a part of the present specification. In said drawings I have shown one form of the construction of my invention but it is to be understood that I do not limit myself to such form, since the invention as expressed in the claims may be embodied in a plurality of forms.

Referring to the drawings

Figure 1 is a front elevation of my invention shown as it would appear when in use.

Fig. 2 is a top plan view.

Fig. 3 is a sectional view taken on line 3-3 of Fig. 1.

Fig. 4 is a perspective view of one of the clamping plates.

In carrying out my invention I provide thin preferably flexible sheet metal clamping plates 1 and 2 which are curved in cross section to conform to the shape of the side walls 3 of the amplifiers 4.

These plates are of the same shape throughout as the walls 3 and are adapted to closely engage and conform to the outside surfaces of said walls.

Mounted on the outside face of each plate are a plurality of equidistantly spaced upright and preferably wooden strips or blocks 5 each being secured to the plate by angular brackets 6 which blocks are suitably beveled as at 7 on these plates engaging faces so as to present outer flat faces 8 in planes parallel to the longitudinal axis of the plates 1 and 2 and amplifier 4. These strips preferably extend from the top to the bottom edge of the plates and thus strengthen said plates and cause them to retain their curves.

In the use of the clamping device in connection with the amplifier shown in the drawings the side walls 3 and top and bottom walls 9 and 10 are assembled by placing the longitudinal edges of the top and bottom walls in the grooves 11 of the side walls, and applying glue to the joints. The plates 1 and 2 are next plates 1 and 2 upon the outside of the walls 3 and closely conform thereto. Clamping devices 12 are next mounted upon and actuated to clamp the plates together and to hold the amplifiers assembled each of these clamping devices comprises a strap metal bar 13 having down turned ends serving as jaws 14 and 15. The jaw 14 is engaged with one of the strips 5 on the plate 1 as shown in Figs. 1 and 2. The other jaw has a screw threaded opening 16 therein in which opening is mounted a thumb screw 17. This screw has an enlarged inner end adapted to engage the corresponding strip 5 on the plate 2.

Two of these clamping devices are mounted upon each strip 5 one across the top and the other across the bottom of the plates 1 and 2 so as to engage upper and lower ends of the opposite strips 5 of the plates 1 and 2. By thus mounting the clamping devices and tightening the screws 17 the plates 1 and 2 will be forced together evenly and provide an equal pressure throughout the side walls 3 so as to firmly hold the amplifiers assembled.

Thus it will be seen I provide for an expeditious clamping of the component parts of the amplifier together and for the reliable holding of said parts in proper position by exerting an equal pressure on the plates 1 and 2 and walls 3. By the use of this invention the manufacture of sound amplifiers and other similar work or any work requiring that it be held and pressed together while being formed, will be greatly facilitated and expedited.

I claim:—

1. A work clamping device of the character described comprising two similar flexible clamping plates adapted to embrace irregularly shaped work to be clamped and having irregular cross sectional outline, and means for forcing said plates toward one another.

2. A work clamping device of the character described comprising clamping plates

adapted to engage opposite sides of work of irregular outline, said plates being shaped to conform to the contour of the surfaces of the work engaged thereby, and means for forcing the plates toward one another.

3. A work clamping device of the character described, comprising flexible clamping plates adapted to engage opposed sides of work of irregular outline, and to conform to surfaces of the work engaged, and means for forcing the plates toward one another to clamp the plates to the work.

4. A work clamping device of the character described comprising clamping plates shaped to conform to the surfaces of work of irregular outline, a plurality of strips mounted on the outer sides of plates, and clamping devices extending above and below said plates and engaging the ends of the strips.

EDWARD PHIPPS.