J. B. D'HOMERGUE.

PIANO PLATE.

APPLICATION FILED MAY 8, 1908.

1,035,192. Patented Aug. 13, 1912.

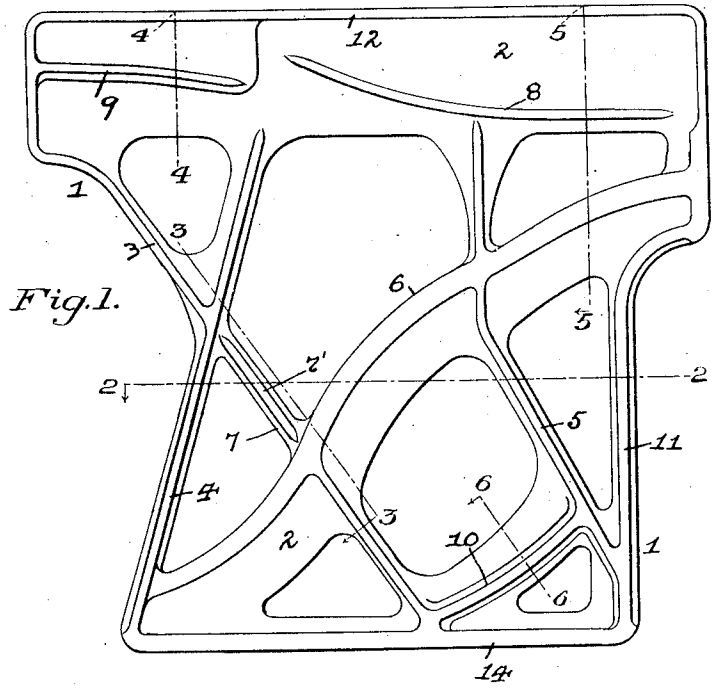


Fig.1.

Fig.2.

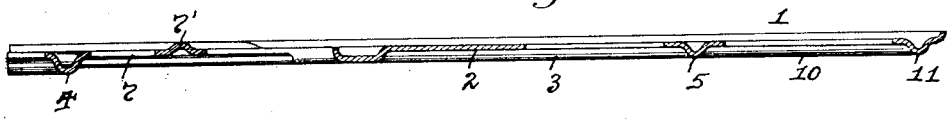


Fig.3.

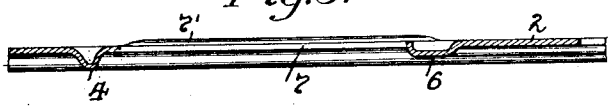


Fig.4.

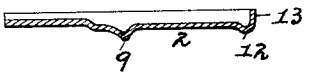


Fig.5.

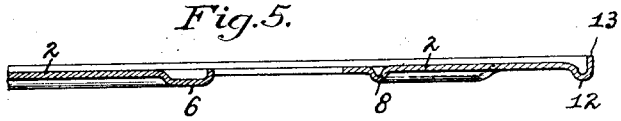
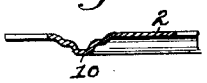


Fig.6.



WITNESSES

Walter Lamariss.

O. L. Thompson.

INVENTOR

John B. d'Homergue,

By J. N. Cooke,

attorney.

UNITED STATES PATENT OFFICE.

JOHN B. D'HOMERGUE, OF PITTSBURGH, PENNSYLVANIA.

PIANO-PLATE.

1,035,192. Specification of Letters Patent. Patented Aug. 13, 1912.

Application filed May 8, 1908. Serial No. 431,581.

To all whom it may concern:

Be it known that I, JOHN B. D'HOMERGUE, a resident of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Piano-Plates; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to piano plates and has special reference to such plates as are generally employed to support the strings in all styles of pianos.

Piano plates heretofore have generally been formed of a cast metal body and are provided with separate reinforced portions attached thereto. These separate portions are liable to break or some of the same are likely to become separated from the body, and the piano plate when thus constructed will be of great weight and require a great amount of labor and expense in producing and finishing the same, all of which is objectionable and is sought to be overcome.

The object of my invention is to overcome these objections and to produce a piano plate which shall be simple and efficient in its construction, will be easy and convenient to manufacture, and will be lighter and stronger than the ordinary plate, as well as one which will give greater strength through the parts of the same where the other plates are usually weak, will make it possible to produce a plate whose sound conducting qualities are greatly enhanced, and one which can be manufactured and finished cheaper and quicker than is possible in the ordinary forms of these plates.

To these ends my invention consists, generally stated, in the novel arrangement, construction and combination of parts, as hereinafter more specifically set forth and described and particularly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use my improved piano plate, I will describe the same more fully, referring to the accompanying drawing, in which:—

Figure 1 is a front elevation of the ordinary form of a piano plate constructed in accordance with my invention. Fig. 2 is an enlarged cross-section of the same on the line 2—2 Fig. 1 and looking in the direction of the arrow. Fig. 3 is an enlarged detail cross-section on the line 3—3 Fig. 1 and looking in the direction of the arrow. Fig. 4 is an enlarged vertical cross-section on the line 4—4 Fig. 1. Fig. 5 is a like view on the line 5—5 Fig. 1, and looking in the direction of the arrow. Fig. 6 is an enlarged detail cross-section on the line 6—6 Fig. 1 and looking in the direction of the arrow.

Like symbols of reference herein indicate like parts in each of the figures of the drawing.

As illustrated in the drawing, 1 represents my improved piano plate which is formed in one piece from a single blank of wrought sheet or plate metal, such as steel, and such blank is cut to the shape and size required in any suitable manner for forming said plate, as hereinafter described, and with the usual cut-away portions within the same to permit the sounds to pass therethrough. After the blank has been so formed it is heated to the required degree and placed within suitable dies or formers while in its heated state and pressed or stamped to shape, having the main or body portion 2 provided with the usual parts or portions integral therewith and which are formed in the following manner.

3, 4 and 5 indicate the grooved braces which are extended or bent outward from the face of the plate and are adapted to tie the upper and lower portions of the plate, as well as stiffen, brace and strengthen the plate throughout. A hitch-pin section 6 is extended or bent out from the face of the plate and is formed of a grooved-shape in cross-section. Extending between and connected to said section 6 and the brace 4 is the loop portion 7 which has a grooved bracing portion 7′ bent outward therefrom and on the rear face of the same, so that it will accommodate the under line of strings (not shown) which extend from the lower end of the section 6 up over the upper bridge-bearing shoulder 8 and are attached to tuning-pins (not shown) and placed in the upper portion of the plate. The bridge-bearing shoulder 8 is formed in grooved or recessed shape, that is, it is pressed inward so as to extend out from the face of the plate and serves as a bearing over which the strings are drawn and tightened by the tuning-pins which are located above said bridge-bearing.

9 indicates the bass-bridge and 10 the hitch-pin shoulder, which are bent out from the face of the plate, the bridge being formed of a sharp grooved portion and the

shoulder being in the form of a wider grooved portion. This bridge 9 and shoulder 10 each support a row of pins (not shown) and to the rib the bass-strings (not shown) are connected and are drawn over the bridge to the tuning-pins.

11 indicates a bracing strip for the outer edge and it is formed of grooved shape and is bent out from the face of the plate.

12 indicates the grooved upper border strip which is bent out from the face of the plate and has a rearwardly extending flange 13 on its outer edge.

14 indicates the lower border strip which is located at the bottom edge of the plate, and is of a grooved shape in cross-section with an inwardly extending flange at its outer edge similar to the border strip 12, and it is bent out from the face of the plate, as in the case of said border 12. If desired, a back-rib bearing can be formed in the body portion 2 and at the upper end of and on the rear or back of the plate in the same manner and shape as the bracing portion 7'. The particular design and number of the braces, strips and other parts of the plate may be varied to obtain the best results and to produce plates of different designs, while various other modifications and changes in the design and construction of the plate may be resorted to and parts formed with or added thereto, without departing from the spirt of the invention, or sacrificing any of its advantages.

It will thus be seen that my improved piano plate can be formed of less thickness than the ordinary forms of these plates, and may be constructed of any particular design to meet the fancy or requirements of the numerous makers, while the numerous holes required in such plates for the screws, tuning-pins, etc., may also be punched therein at one operation, thereby saving a great amount of labor and expense over the present drilling process. The plate so formed will improve the tone of the piano and will do away with the possible breaking usually found in cast plates, which generally require reinforcing around their edges and through the webs of the cut-away portion to properly brace the plate against the enormous strain applied to the tightening of the wire strings which are attached to the pins in the respective bridges. The best of metals are usually employed in the manufacture of the cast plates, yet they not infrequently break after the strings are attached and in view of the strain resulting therefrom.

What I claim as my invention, and desire to secure by Letters Patent, is:—

1. A piano plate pressed or stamped from a blank of sheet or plate metal and comprising a body portion having integral pressed hollow shoulders thereon providing bridge bearings on said plate.

2. A piano plate pressed or stamped from a blank of sheet or plate metal and comprising a body portion having integral pressed hollow shoulders thereon providing hitch-pin sections on said plate.

In testimony whereof, I, the said JOHN B. D'HOMERGUE, have hereunto set my hand.

JOHN B. D'HOMERGUE.

Witnesses:
J. N. COOKE,
JAMES L. WEHN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."