

C. Horst,

Piano,

N^o 6,342.

Patented Apr. 17, 1849.

Fig. 3

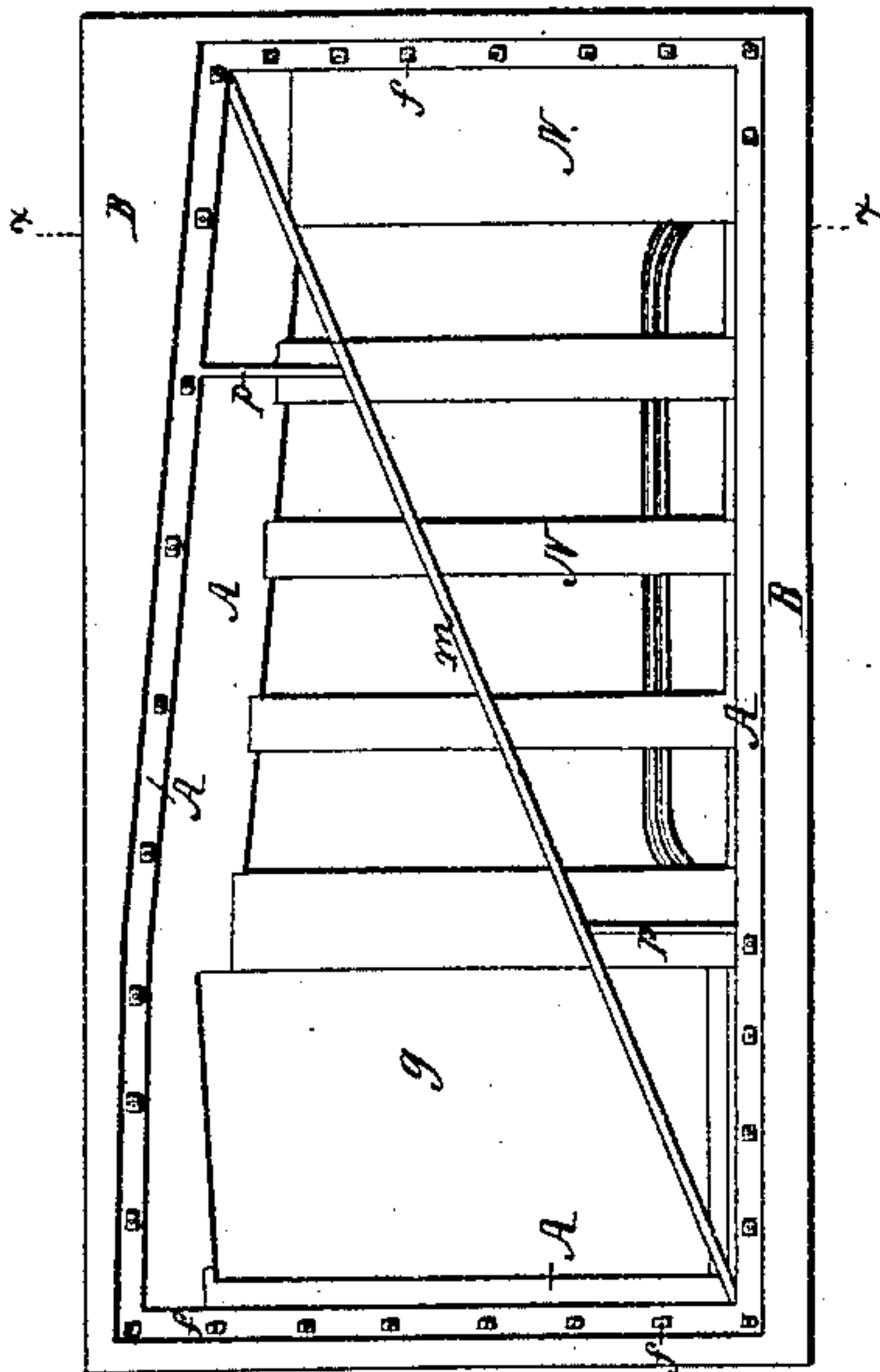


Fig. 2

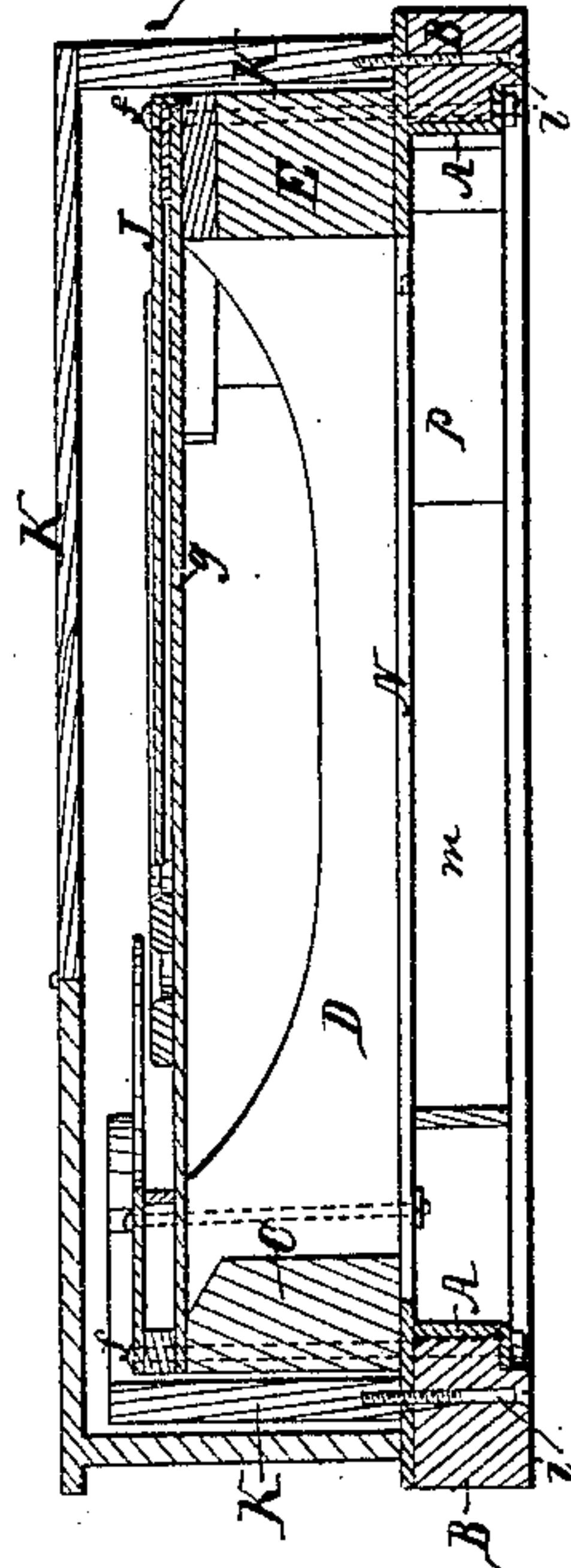
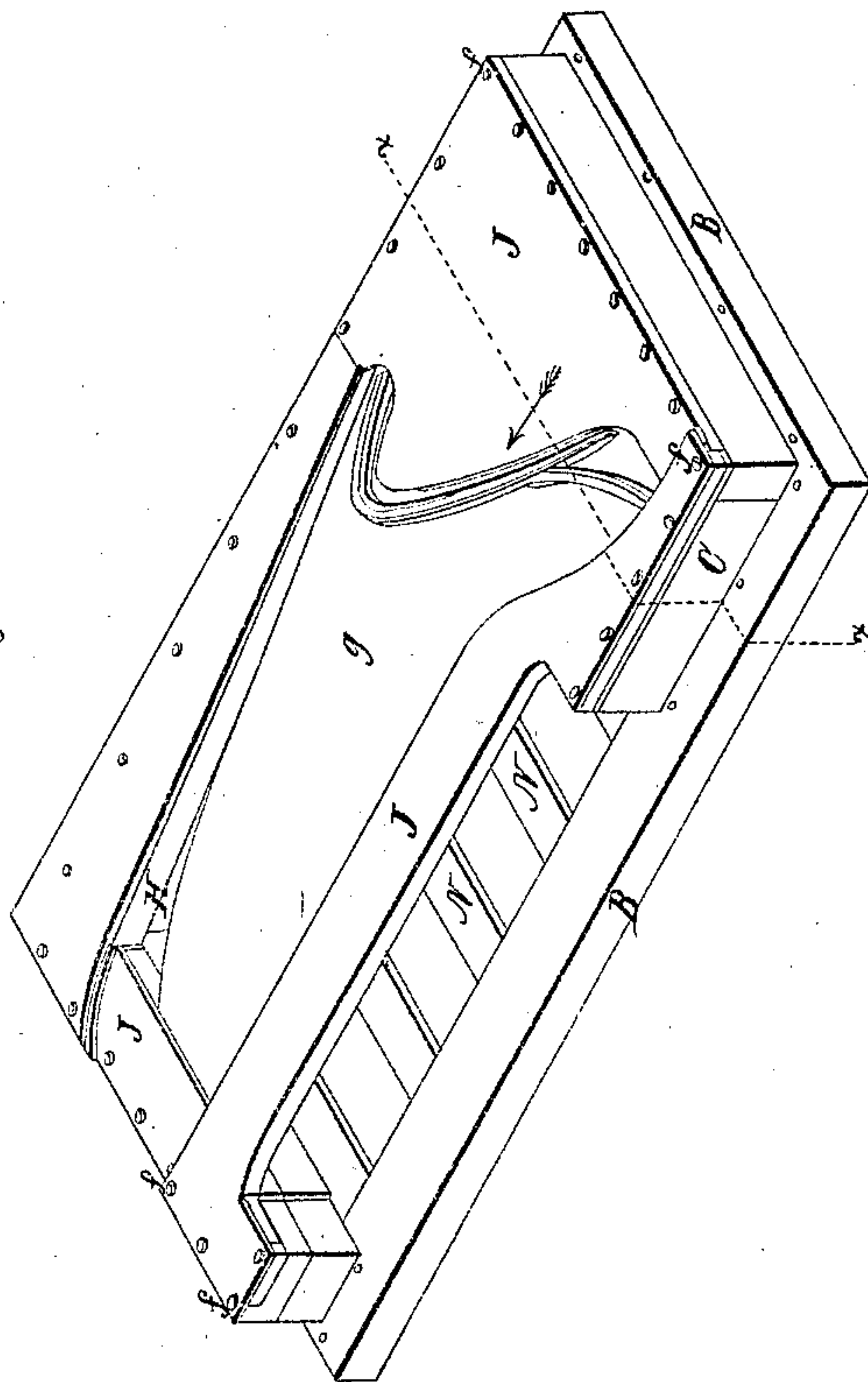


Fig. 1



UNITED STATES PATENT OFFICE.

CHARLES HORST, OF NEW ORLEANS, LOUISIANA.

PIANOFORTE.

Specification of Letters Patent No. 6,342, dated April 17, 1849.

To all whom it may concern:

Be it known that I, CHARLES HORST, of the city and parish of New Orleans and State of Louisiana, have invented sundry
5 new and useful Improvements in the Manner of Manufacturing Pianos; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings, making
10 a part of this specification.

During many years' residence in New Orleans, engaged in the music business, I have discovered that the high temperature of the atmosphere in that region, combined with
15 its extreme moisture, causes a piano to get out of tune, in the course of a week or ten days, and in a very few years the instrument is rendered valueless. The cause of this rapid deterioration of the piano from atmospheric influences, arises from the diminished adhesive power of the glue that unites the parts of which the bottom and body of the instrument is composed; thereby
20 destroying its solidity, and power to resist and counteract the strain of the strings; and in consequence, the instrument is soon drawn out of shape, and loses all that is melodious in its tone. To remedy the evils above referred to, and at the same time to make a
30 more perfect instrument of the piano, I have invented a new and improved method of constructing it which I will now proceed to describe. I denominate the piano constructed by my improved method, a double iron
35 frame piano; and in its construction, I do not depend upon the adhesive power of glue for uniting any of its parts, nor do I depend upon the stiffness or strength of wood for resisting and counteracting the strain of the
40 strings: the piano proper or sounding portion of the instrument, is constructed entirely independent of the exterior casing, and can be readily taken to pieces, when repairs are required; the exterior casing can
45 be readily detached from the body of the instrument, and as it serves merely for covering and protection, can be more or less expensive and ornamental in its design and finish. The bottom of my double iron frame
50 piano (which in other instruments is composed of boards or planks glued together) I construct of an iron frame A, surrounded by and united to a wooden frame B, which projects a sufficient distance to form the
55 plinth for sustaining the case: upon this

base I place the board N, which may be open and framed together, as represented in the drawings, or may be a solid board from one extremity to the other; and upon the
board N, I place the same number of blocks
60 and fillings that are located in other pianos, and of nearly the same proportions: the only difference being in the right-hand front block C, and the cross brace D, which unites the inner end of C, to the long block E:
65 These are made of greater thickness when used, for the purpose of allowing the bolts F, F, to pass through them without injury. The block C, is beveled off on its inner side so as to reduce its upper surface to its usual
70 thickness in other pianos. Upon the said blocks and fillings, I place the sounding board g, the rest board H, and the iron frame J, and unite the whole to each other and to the bottom frames A, B, by means of
75 the series of screw bolts F, F, as represented in the drawings. When this is accomplished, the bottom of the piano proper, is completed and ready for the reception of the strings and the action; which are placed therein in
80 the usual manner.

After ascertaining the quality of the tone of the instrument, the external case K, is decided upon: its style of finish, and the expense to be laid out upon it, to vary accord-
85 ing to the quality of the tone of the instrument or the taste of the purchaser. The case rests upon the plinth or projecting portion B, of the base, and is of such a size as to leave a suitable space between the sides and
90 top of the case, and the blocks and the top frame J. The case may be confined in its place by screws i, i, passing up through the frame B, into the sides of the case, or in any other suitable manner.
95

It is hardly necessary to inform anyone who is familiar with the process of manufacturing pianos, that they have invariably been constructed by first forming the bottom of the instrument of boards united by glue
100 into a solid mass, and then uniting the bottom to the blocks, fillings, and casing, by the adhesive power of glue; consequently it is impossible to separate the parts, should it be found necessary for repairing the instru-
105 ment. And, as it is always impossible to know beforehand what the quality of the tone of the piano will be when completed; a very expensive casing has frequently been put upon an instrument of inferior tone.
110

These objections to the old process, of manufacturing pianos, that have heretofore been deemed irremediable, it will be perceived have been completely overcome by my invention of the within described process of manufacturing, what I have termed, the double iron frame piano.

The bottom iron frame A, I generally stiffen with a diagonal brace *m*, as shown in Figure 3, and if necessary, stay it by lateral braces *p*, *p*.

I do not intend to confine myself to the use of iron for the frames A and J; any other appropriate metallic substance may be employed if preferred; nor do I intend to circumscribe myself to the identical mechanical arrangements, herein described and represented, but shall vary the same, and the proportions of the respective parts, as I may deem expedient, while I attain the same end by substantially the same means.

Having thus fully described my improved manner of constructing pianos, what I claim

as my invention and desire to secure by Letters Patent, is—

1. The formation of the bottom of a piano of a metallic frame combined with a wooden frame,—or with blocks of wood—(as a substitute for the ordinary piano bottom composed of united boards,) for the purpose herein set forth.

2. I claim the formation of the body, or sounding portion of a piano, independently of the outside casing, by the combination of the bottom, with the requisite blocks and fillings, the sounding board, the rest plank, and the top metallic frame, substantially in the manner and for the purpose herein described.

The above specification signed and witnessed this 1st day of Feb. 1849.

CHAS. HORST.

Witnesses:

Z. C. ROBBINS,
L. WILLIAMS.