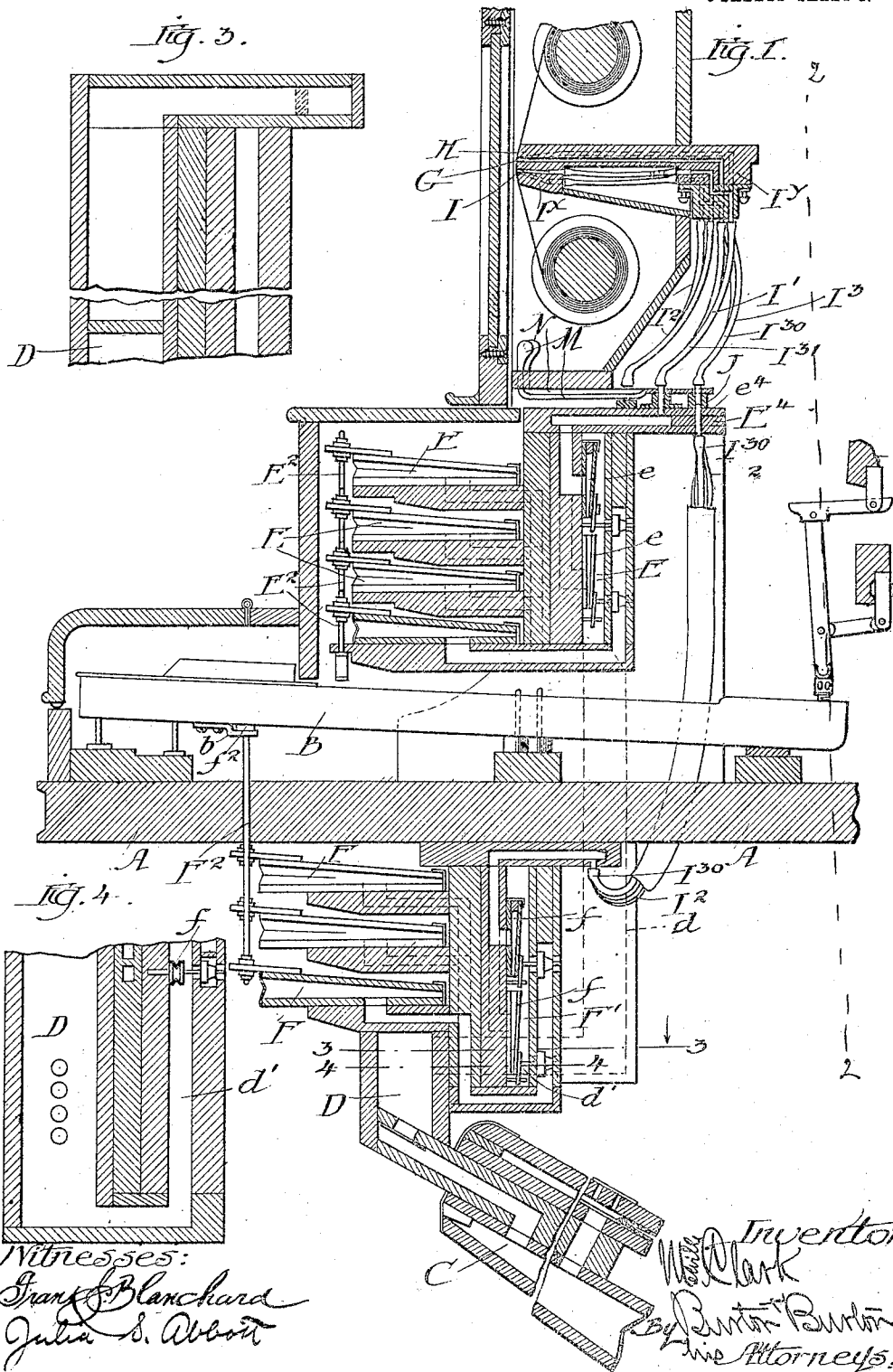


M. CLARK.
 INTERIOR PLAYER PIANO.
 APPLICATION FILED APR. 12, 1909.

1.014,809.

Patented Jan. 16, 1912.

3 SHEETS-SHEET 1.



Witnesses:
 Frank Blanchard
 Julia S. Abbott

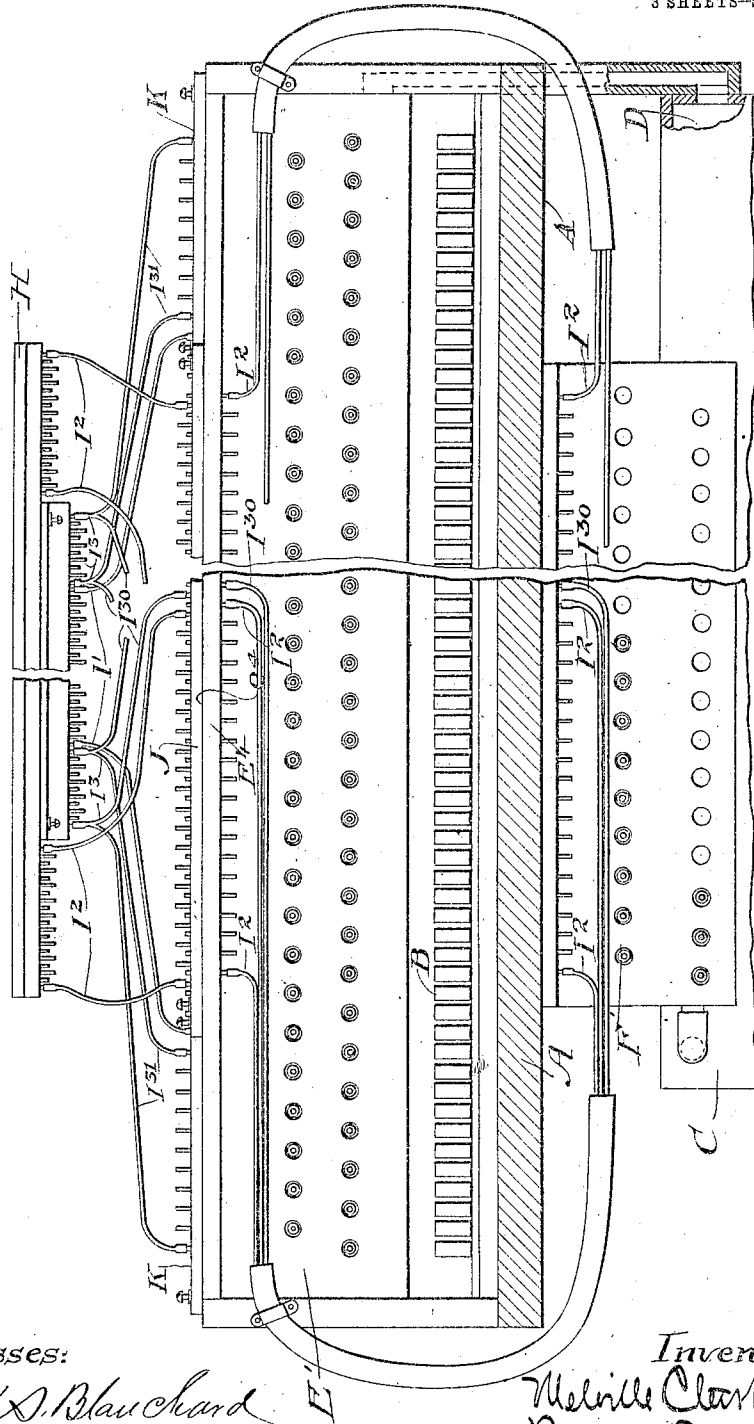
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1,014,809.

Patented Jan. 16, 1912.

3 SHEETS-SHEET 2.

Fig. 2



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1,014,809.

3 SHEETS--SHEET 3.



Inventor:
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UNITED STATES PATENT OFFICE.

MELVILLE CLARK, OF CHICAGO, ILLINOIS.

INTERIOR-PLAYER PIANO.

1,014,809.

Specification of Letters Patent.

Patented Jan. 16, 1912.

Application filed April 12, 1909. Serial No. 489,473.

To all whom it may concern:

Be it known that I, MELVILLE CLARK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Interior-Player Pianos, of which the following is a specification, reference being had to the drawings forming a part thereof.

The purpose of this invention is to provide an improved construction for interior player pianos adapted for playing melody and accompaniment for giving prominence to any particular part of the music above the remainder.

It consists of the features of construction and their combinations shown and described as indicated in the claims.

Figure 1 is a vertical section of a portion of a piano equipped with devices constituting this invention. Fig. 2 is a partly sectional rear elevation of the devices shown in Fig. 1, section being made at the line 2—2 on Fig. 1. Figs. 3 and 4 are detail sections at the lines 3—3 and 4—4 on Fig. 1 through opposite end portions of the exhaust air chamber and adjacent parts. Fig. 5 is a section at the line 5—5 on Fig. 1. Fig. 6 is a section at the line 6—6 on Fig. 5. Fig. 7 is a section at the line 7—7 on Fig. 5.

In the drawings the customary parts of a piano of ordinary construction are shown in their usual form, comprising the foundation board or base, A, manual keys, B, mounted thereabove, having the customary devices for engaging the piano action, a portion of which is conventionally represented to indicate the relative position of the several parts. The customary pumping devices for producing the proper exhaust tension for operating the pneumatic action may be understood as embodied in the construction and as comprising a high tension and low tension chamber, indicated by rudimentary portions thereof at C and D respectively. The devices for producing the different tensions of the two chambers are not shown, but may be of any well-known form and structure. From these low tension and high tension chambers respectively trunks, *d* and *c*, lead to the principal and supplemental actions respectively. Above the

manual keys, within the piano case, there is located a principal pneumatic action comprising motor pneumatics, E, mounted upon the primary pneumatic chamber, E¹, containing the primary pneumatics, *e*, all of said elements being of usual construction and relation to each other, the motor pneumatics being projected forward from the primary pneumatic chamber and having their moving walls upward for collapse downward. The operating ends of said moving walls overhang the manual keys for action downward thereon by means of pitmen, E², forward of the fulcrums of the keys.

Below the foundation board there is located a supplemental action comprising motor pneumatics, F, mounted upon the forward side of the primary pneumatic chamber, F¹, containing the primary pneumatics, *f*, the motor pneumatics being mounted with their moving walls upward for collapse downward and positioned for acting downwardly by means of the connecting rods, F², extending up from the moving members of the pneumatics respectively through the foundation board for engaging the under side of the manual keys which is effected by means of the heads, *f*², of the pitmen interlocking with suitable hooks or eyes, *b*, on the under side of the keys respectively.

The tracker device for use with the two actions described is illustrated in the form in which it is fully shown and claimed in my application Serial No. 488,625, filed April 8, 1909, and the same will be further described in detail here only sufficiently to show the relation of its parts to the two pneumatic actions when the latter are separated by the manual keys and the foundation board as described. This tracker device comprises the tracker board, H, which has two rows of tracker mouths and corresponding sets of tracker ducts, which it may be understood are differently spaced to accommodate perforated sheets cut to different scales. The upper of such rows of ducts and mouths, indicated by the letter, G, may be understood to be the wider spaced. The present invention is not concerned with this set, and it is illustrated only for the purpose of indicating that the construction herein

shown is not inconsistent with the presence and use of such additional set of ducts. In the further description, however, it may be understood that the parts are adjusted for cutting this set, G, out of service, and that the description relates to devices as thus adjusted. The other set of tracker mouths and ducts indicated generally by the letter, I, at the portion of the ducts which is contained between the front rib, I^x, and rear rib, I^y, which project downward from the front and rear edges of the tracker board, comprises three groups,—a middle group, I¹, appropriated to playing the accompaniment or principal part, the group or groups, I², part at each end, appropriated to playing the melody or secondary part, and the third group, I³, located intermediate the two groups, I¹ and the extreme groups, I², respectively, said third group being designed for double connections, so that its ducts may be appropriated either for playing in conjunction with the middle group, or in conjunction with the end groups.

From the tracker board flexible tubes of the group, I¹, lead to the principal action, being connected with the primary ducts thereof at the top, said connection being shown in Fig. 1. For convenience of assembling the parts, the top board, E⁴, of this action is extended rearwardly, and upon the upper side of said rearward extension, e⁴, there is mounted a slide valve bar, J, having ports to which are connected at the upper side, flexible tubes of the group, I², and branches, I³⁰, of the group, I³, the ports of said valve bar being adapted to register with ports extending through the board, E⁴, and having at the lower end nipples to which are connected extensions of said tubes, I² and I³⁰, which are operated in two masses or trunks and carried around the ends of the manual and foundation board for connection below the latter with the proper primary pneumatics of the supplemental action, as indicated with respect to one of the tubes, I² and I³⁰, in Fig. 1. Upon the board, E⁴, there is mounted another slide or valve bar, K, having ports which are connected at the upper side of the valve bar with branches, I³¹, of the group of tubes, I³, the valve bar ports at the lower side being adapted to register with ports in the board, E⁴, leading to primary pneumatics of the principal action corresponding to said tubes, I³⁰.

Both the valve bars, J and K, are adapted for movement for registration and non-registration of their ports with those of the board, E⁴, on which there are fulcrumed operating levers, M and N, provided for the purpose of adjusting the valve bars, and connected with them respectively and extending to any convenient point for manipulation by the operator.

I claim:—

1. An interior player piano, comprising, in combination with a manual, a principal pneumatic action and a supplemental pneumatic action positioned for operating independently of each other upon the manual keys; a tracker board and tubes leading therefrom, a portion of said tubes being connected directly with the principal pneumatic action; a valve slide mounted on said principal action having ports to which a second portion of said tubes are connected and ducts with which said ports register leading to the primaries of said action; a second valve slide mounted on the same support as the first slide having ports to which a third group of said tubes are connected, said support having ports with which the ports of said second slide are adapted to register, and tubes leading from said last-mentioned ports to the supplemental action.

2. An interior player piano comprising, in combination with a manual, a principal pneumatic action and a supplemental pneumatic action, and connections from the motor pneumatics of said actions respectively for operating on the manual keys at different points in their length; a tracker board and tubes leading therefrom, a portion of said tubes being connected directly to the principal action; a valve slide mounted on said principal action having ports to which a second portion of said tubes are connected and ducts with which said ports register leading to the primaries of said action; a second valve slide mounted on the same support as the first slide having ports to which a third group of said tubes are connected, said supports having ports with which the ports of the second slide are adapted to register, and tubes leading from said last-mentioned ports to the supplemental action.

3. In an interior player piano, comprising the combination of a manual, a principal pneumatic action and a supplemental pneumatic action, the former being located above the manual keys, and positioned for acting downward upon said keys forward of their fulcrums, the other being located below the portion of the manual keys forward of their fulcrums, connections from the motor pneumatics of the latter action, for engaging the manual keys for depressing them at their forward ends, a tracker board and tubes leading therefrom, a portion of said tubes being connected directly to the principal pneumatic action, a valve slide mounted on said principal action having ports to which a second portion of said tubes are connected and ducts with which said ports register, leading to the primaries of said action, a second valve slide mounted on the same support as the first slide, having ports to which a third group of said tubes are connected, said support having ports with which the

ports of said second slide are adapted to register; tubes leading from said last mentioned ports to the supplemental action, said tubes being grouped for extending down
5 past the manual keys at the opposite ends of the instrument to reach their connections with the supplemental action.

In testimony whereof, I have hereunto set my hand, in the presence of two witnesses, at Chicago, Illinois, March 25, 1908.

MELVILLE CLARK.

In the presence of—

M. GERTRUDE ADY,
JULIA S. ABBOTT.