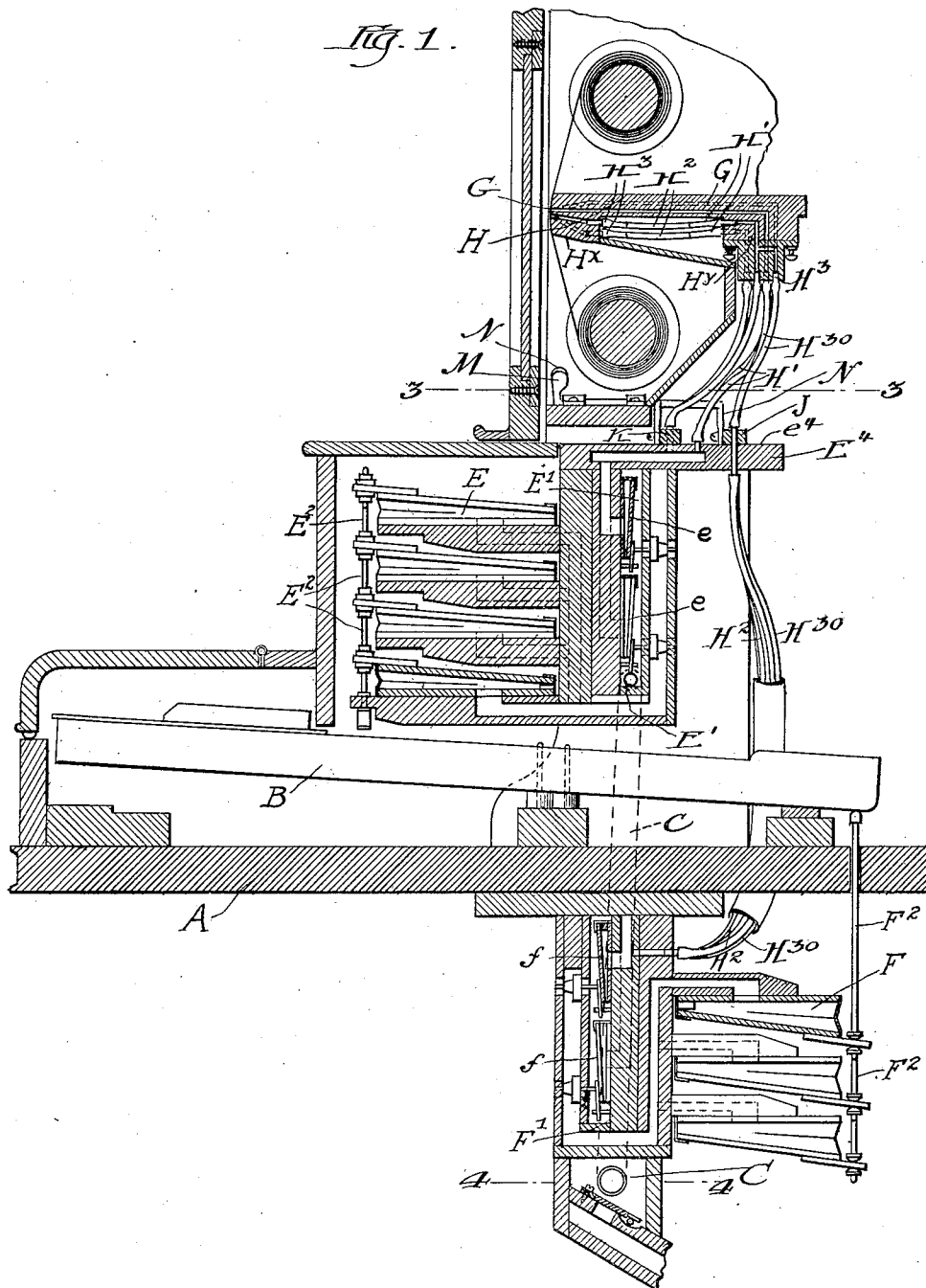


1,014,810.

M. CLARK.
INTERIOR PLAYER PIANO.
APPLICATION FILED APR. 13, 1909.

Patented Jan. 16, 1912.

3 SHEETS—SHEET 1.



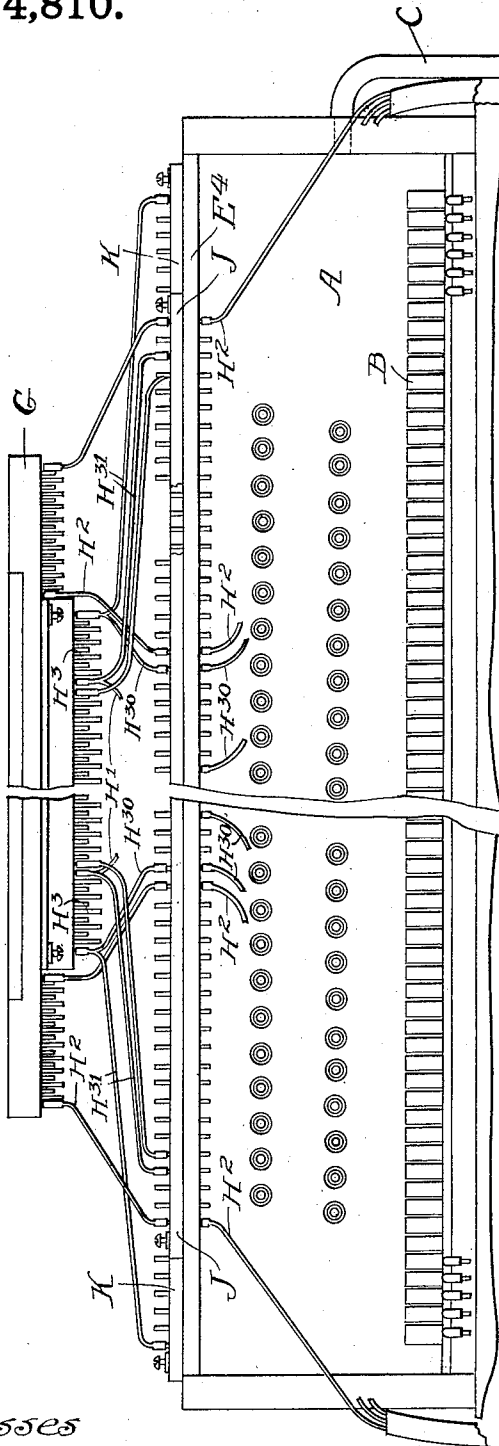
Witnesses:
Frank S. Blanchard
M. E. Bunell

Inventor:
Melville Clark
By Burton H. Burton
attorneys

1,014,810.

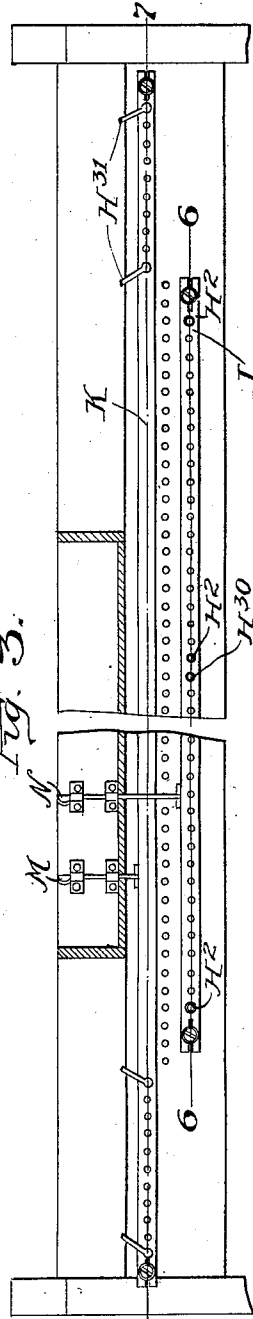
Patented Jan. 16, 1912.
 3 SHEETS—SHEET 2.

Fig. 2.



Witnesses
 E. C. Brown
 M. Bertrande Ady

Fig. 3.

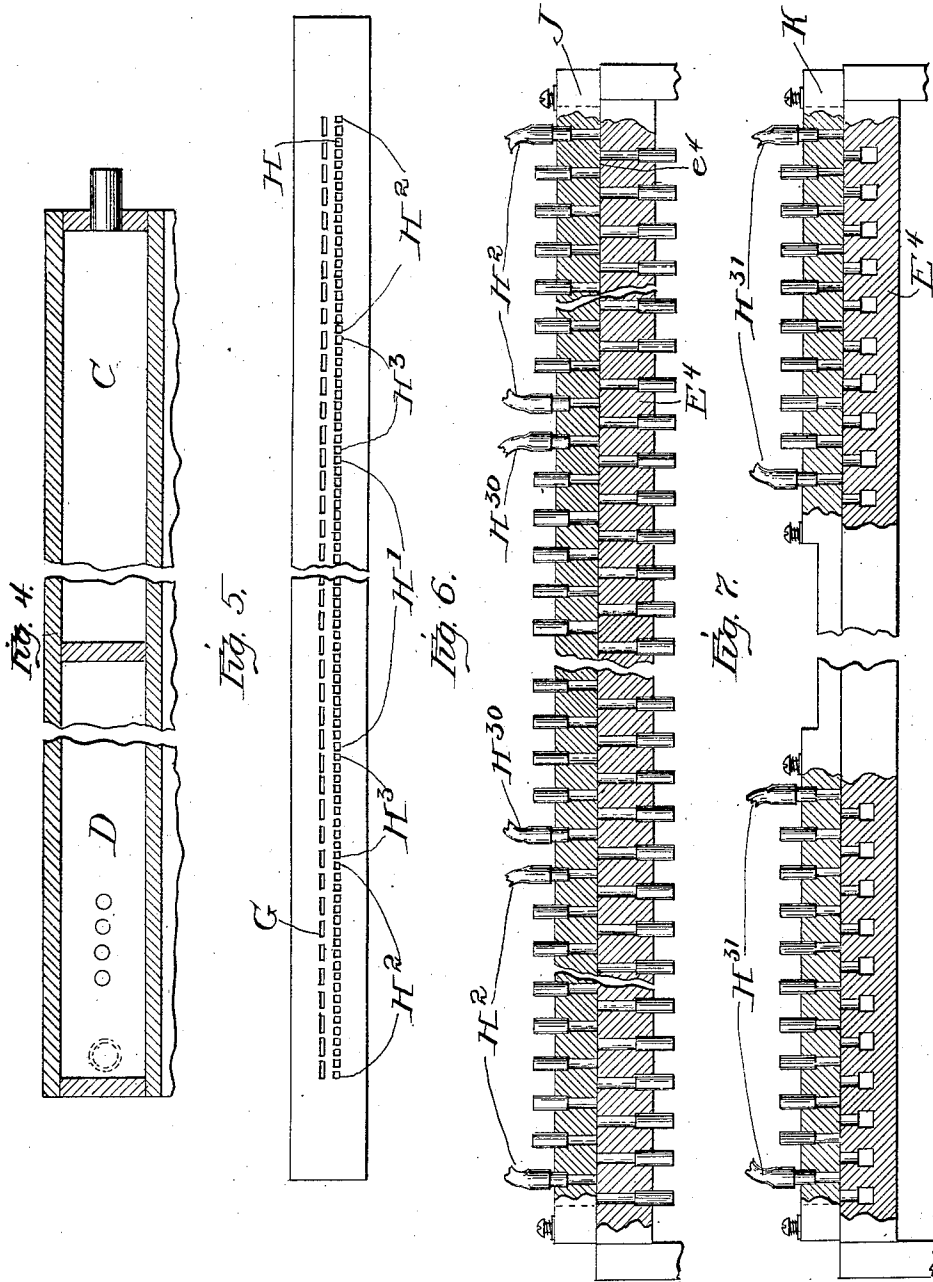


Inventor:
 Melville Clark
 By Burton Barker
 his Attorney.

1,014,810.

Patented Jan. 16, 1912.

3 SHEETS—SHEET 3.



Witnesses:
 Minnie M. Lindenau.
 J. S. Abbott

Inventor:
 Melville Clark
 By Burton Burton
 Attorneys.

UNITED STATES PATENT OFFICE.

MELVILLE CLARK, OF CHICAGO, ILLINOIS.

INTERIOR-PLAYER PIANO.

1,014,810.

Specification of Letters Patent.

Patented Jan. 16, 1912.

Application filed April 13, 1909. Serial No. 489,624.

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 accompanying 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.

In the drawings:—Figure 1 is a fore-and-aft 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. Fig. 3 is a partly sectional plan view at the line 3—3 on Fig. 1. Fig. 4 is a detail section at the line 4—4 on Fig. 1. Fig. 5 is an edge elevation of the tracker board. Fig. 6 is a section at the line 6—6 on Fig. 3 showing the slide at closed position. Fig. 7 is a section at the line 7—7 on Fig. 3 showing the slide at closed position.

In the drawings, the customary parts of a piano of ordinary construction are shown in customary form, comprising the foundation board or base, A, manual keys, B, mounted thereabove having customary devices for engaging the piano action, a portion of which is conventionally represented to indicate the position of the remaining parts relatively thereto.

The customary pumping devices for producing proper exhaust tension for operating pneumatic actions 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 tension 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, are trunks, *d* and *c*, leading 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 a primary pneumatic chamber, E¹, containing 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, 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 the pitmen, E², forward of the fulcrums of the keys. Below the foundation board and under the portion of the manual keys rearward of their fulcrums, there is located a supplemental action comprising motor pneumatics, F, mounted upon the rear side of the primary pneumatic chamber, F¹, containing primary pneumatics, *f*, the motor pneumatics being mounted with their moving walls downward for collapse upward, and positioned for acting upwardly by means of the upwardly thrust pitmen, F², upon the rear ends of the manual keys, B.

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. 488625 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 foundation board as described. The 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 said rows of mouths and ducts indicated by the letter, G, may be understood to be the wider spaced, but the present invention is not concerned with this set, and it is illustrated only to indicate that the construction here shown is not inconsistent.

ent with the presence and use of such set. In the further description, however, it may be understood that the parts are adjusted for cutting this set out of service and that the description relates to the devices as thus adjusted. The other set of tracker mouths and ducts, indicated generally by the letter, H, at the portion of the ducts which is contained between the front rib, H^x, and the rear rib, H^y, projecting downwardly from the front and rear edges, respectively, of the tracker board, comprises three groups,—a middle group, H¹, appropriated to playing the accompaniment or principal parts, the group or groups, H², part at each end, appropriated to playing the melody or secondary part, and a third group or groups, H³, located in two parts intermediate the middle unitary group, H¹, and the extreme parted group or groups, H² respectively, said third group being designed for double connections so that they 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, H¹, lead to the principal action, being connected with the primary pneumatic ducts thereof at the top of said action as seen in Fig. 1. For convenience of assembling the parts, the top board, E⁴, of this action is extended rearwardly. Upon the upper side of this rearward extension e⁴, there is mounted a slide or valve bar, J, having ports to which are connected at the upper side flexible tubes of the group, H², and branches, H³⁰, of the group, H³, 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, H² and H³⁰, which are parted in two masses or trunks and carried around the ends of the manual and foundation board for connection below the foundation board with the proper primary ducts of the supplemental action, as indicated in respect to one of the tubes, H², and one of the tubes, H³⁰, in Fig. 1. Upon the board, E⁴, there is mounted another slide or valve bar, K, having ports to which are connected at the upper side of the valve bar the branches, H³¹, of the group of tubes, H³, 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 the said tubes, H³⁰. Both of 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 mounted operating levers, M and N, being provided for this purpose connected with the valve bars respectively, and fulcrumed at any con-

venient point, as upon the upper end of the principal action, and extending from their fulcrums to any convenient point for manipulation by the operator.

I claim:—

1. In an interior player piano, in combination with the foundation board and manual keys, a tracker device mounted above the manual keys; a pneumatic action mounted between the tracker device and the manual keys, and a second pneumatic action mounted below the foundation board; ducts from the tracker device comprising a group for connection with the first mentioned action, a group for connection with the second-mentioned action, and a branched group for connection with both of said actions, the upper action having at its upper end a duct board extending rearward and overhanging the manual provided with ports extending through it at its overhanging part, and also with the primary ducts of said action leading to ports in the upper surface of the board; a slide or valve bar mounted upon said overhanging portion having ports for registration with the first-mentioned ports of said duct board and adapted for movement for non-registration therewith; flexible tubes from said ports of said duct board leading to the lower action, said valve bar having connected to its ports the ducts of the second group and one set of branches of the third group; a second valve bar mounted on said duct board having ports for registration with the duct ports and adapted for movement for non-registration therewith, said valve bar having connected to it the second set of branches of the third group of ducts, and means for moving said valve bars for registration and non-registration of their ports with those of the duct board.

2. In an interior player piano, in combination with the case, foundation board, manual keys and tracker device, two pneumatic actions, one of which is mounted above the manual keys and the other below the foundation board, the tracker device having ducts for connection with both said actions, the upper action having at its upper end a duct board extending rearward and overhanging the rear portion of the manual keys; a valve bar mounted on said duct board; flexible tubes from such valve bar to the tracker device and from the overhanging portion of the duct board to the lower pneumatic action, and means for operating the valve bar.

3. In an interior player piano, in combination with the case and tracker device, an upper and a lower pneumatic action, the tracker device having ducts for connection with both of said actions, the upper action having at its upper end a duct board pro-

jecting rearward; a valve bar mounted on
said duct board; flexible tubes from said
valve bar to the tracker device and from
the rearwardly extending portion of the
5 duct board to the lower pneumatic action,
and means for operating the valve bar.

In testimony whereof, I have hereunto set

my hand, in the presence of two witnesses,
at Chicago, Illinois, this 25th day of March,
A. D. 1909.

MELVILLE CLARK.

In the presence of—

MINNIE M. LINDENAU,

JULIA S. ABBOTT.

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