

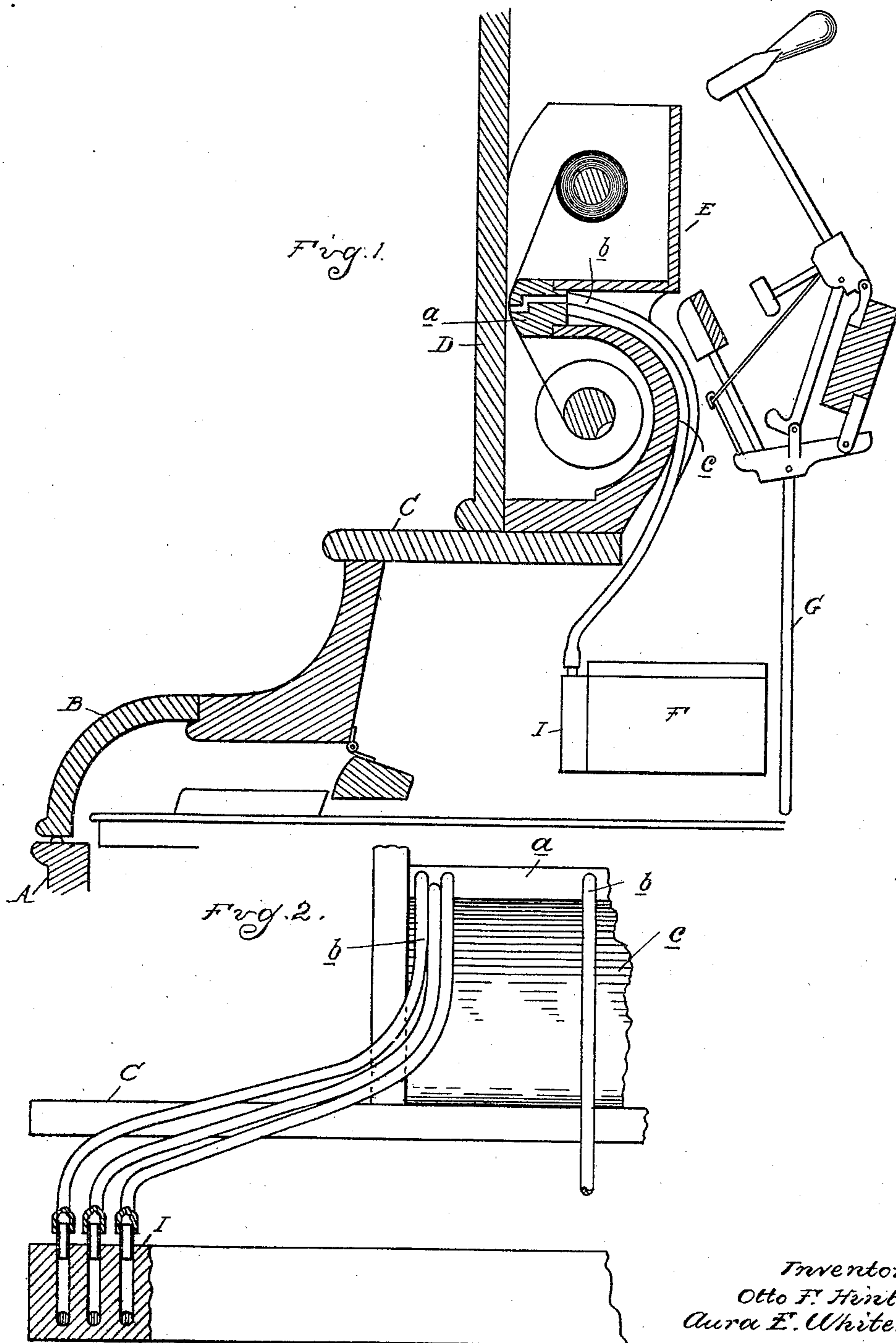
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A. E. WHITEHEAD & O. F. HINTZ.

TRACKER AND CONNECTION FOR AUTOMATIC MUSICAL INSTRUMENTS.

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Witnesses
Jas. P. Barry

Inventors
Otto F. Hintz
Anna E. Whitehead

By James C. Williams
att'y.

UNITED STATES PATENT OFFICE.

AURA E. WHITEHEAD AND OTTO F. HINTZ, OF DETROIT, MICHIGAN, ASSIGNORS TO FARRAND ORGAN COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

TRACKER AND CONNECTION FOR AUTOMATIC MUSICAL INSTRUMENTS.

No. 796,270

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, AURA E. WHITEHEAD and OTTO F. HINTZ, citizens of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Trackers and Connections for Automatic Musical Instruments, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to self-playing musical instruments, and more particularly to automatic pianos. With such instruments it is desirable to arrange an automatic mechanism in such relation to the piano-action as to avoid increasing the width of the case to any greater extent than is absolutely necessary. It is also usual to arrange a tracker and a winding mechanism for the music-sheet in rear of the music-rack.

It is the object of the present invention to obtain a construction of tracker which may be conveniently arranged in such a location and in which the necessary width is reduced to the minimum.

It is a further object to provide means by which the tracker may be quickly removed at any time, so as to have access to the piano-action, this being accomplished without detaching the individual pneumatic connections extending from said tracker to the primary valve-box.

With these objects in view the invention consists in the construction as hereinafter set forth.

In the drawings, Figure 1 is a vertical cross-section through the tracker and its connections. Fig. 2 is a rear elevation of the tracker and the pneumatic connections therefor, illustrating the manner by which said tracker may be detached from the instrument.

A is the case of the instrument, which is provided with the usual fall-board B for covering the keys, above which is the shelf C, forming the base of the music-rack.

E is the tracker-box, which is mounted upon the shelf C and which is of the following construction: *a* is a ported bar which forms the tracker proper and which extends horizontally across the tracker-box. The rear of this bar is provided with a staggered series of ports, with which individual conduits *b* are connected and lead to the primary valve-box. This valve-box

F is preferably arranged beneath the tracker-box and shelf C in a position slightly above the keys and near the rear ends thereof. In rear of this box are the usual vertical rods G of the piano-action, and at the upper end of these rods and in rear of the tracker-box are the hammers and other associated parts common to piano-actions.

In order to economize space and at the same time to form a direct and easy wind-passage from the tracker to the valve-box, the conduits *b* are arranged to pass over a curved bearing *c*, which constitutes a portion of the tracker-box and forms a pocket, in which a winding-roll H for the music-sheet is located. Thus the conduits *b* are given an easy bend around the member *c*, which changes their position from the horizontal to the vertical, and at the same time said conduits are permitted to extend outward upon opposite sides of the tracker-box to connect with the corresponding ports in the valve-box, which latter is of considerably greater length than the tracker-box. The ports leading into this valve-box are formed in a detachable strip I, and the tubes *b* are connected with these ports, so that when said strip is in position a pneumatic connection is established between the ports of the tracker and the corresponding primary pneumatics in the box F. When, however, it is desired to remove the tracker, by merely detaching the strip I the tracker and the shelf C on which it is mounted may be detached without disturbing any of the individual connections *b*.

As illustrated in the drawings, this construction of tracker permits of extending the lower portion of the tracker-box inward, so as to underlap the portion of the piano-action, thereby considerably reducing the width of the space necessary for the tracker-box. The construction is also an inexpensive one to manufacture, for the reason that there are no angling connections and the conduits *b* being formed of flexible material will readily accommodate themselves to the curved guide upon which they are supported.

What we claim as our invention is—

1. The combination with a tracker-box, of a tracker-bar therefor, having its ports extending in a substantial horizontal plane, a valve-box beneath said tracker-box, individual flexible conduits extending from the ports of

said tracker to the corresponding ports of said valve-box, and a curved guide on said tracker-box around which said conduits are passed from a horizontal to a vertical plane.

2. The combination with a tracker-box and a tracker-bar therefor, having its ports extending substantially horizontal a winding-roll beneath said tracker-bar, a curved wall extending from said tracker-bar around said winding-roll and forming a pocket in which the latter is located, a valve-box beneath said tracker and individual flexible connections extending from the ports of said tracker to the corresponding ports of said valve-box and bent around said curved wall in changing from the horizontal to the vertical plane.

3. The combination with a casing and a tracker-box detachably mounted thereon, of a valve-box permanently arranged within said casing beneath said tracker-box, individual flexible connections extending from said tracker to said valve-box and a detachable ported strip constituting a portion of said valve-box with which said conduits are con-

nected, whereby said tracker-box may be moved without disconnecting the individual conduits.

4. The combination with a casing, of a detachable horizontal shelf thereon, a tracker-box mounted upon said shelf, a tracker in said box having its ports extending substantially horizontally, a valve-box beneath said tracker, permanently located within said casing, flexible individual conduits extending from the ports of said tracker-bar to said valve-chest, a detachable ported bar with which said conduits are connected, constituting a portion of said valve-box, and a curved guide around which said conduits are led in changing from the horizontal to the vertical plane.

In testimony whereof we affix our signatures in presence of two witnesses.

AURA E. WHITEHEAD.
OTTO F. HINTZ.

Witnesses:

H. C. SMITH,
JAS. P. BARRY.