

*H. N. Goodman,
Coupler for Melodeon.*

N^o 9816.

Patented June 28, 1853.

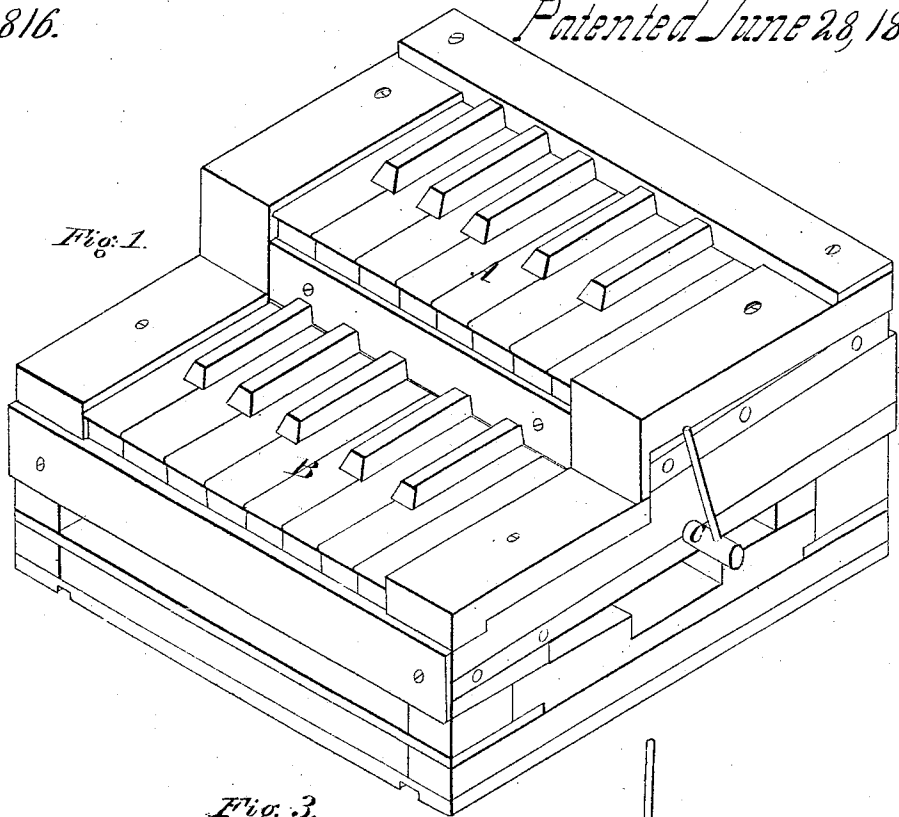


Fig: 1.

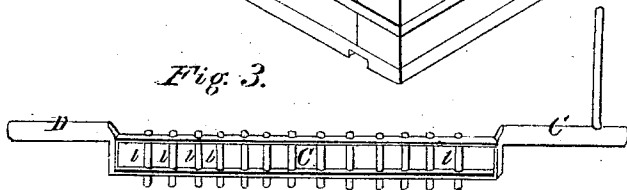


Fig. 3.

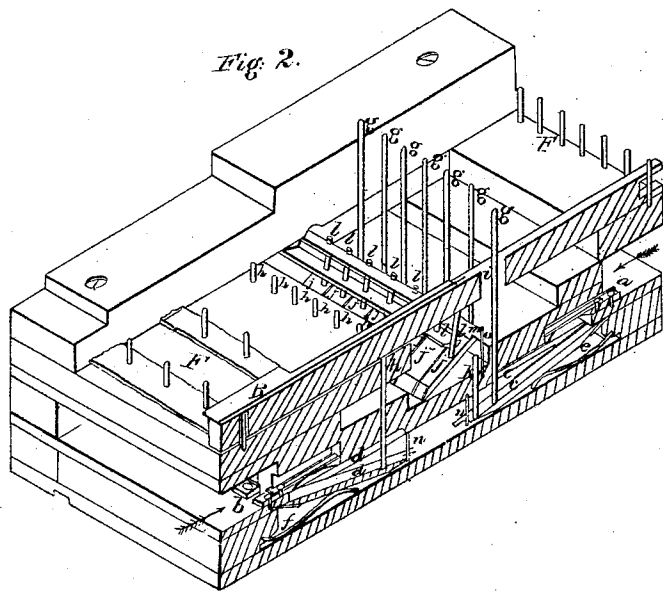


Fig. 2.

UNITED STATES PATENT OFFICE.

HORATIO N. GOODMAN, OF NEW HAVEN, CONNECTICUT.

MELODEON.

Specification of Letters Patent No. 9,816, dated June 28, 1853.

To all whom it may concern:

Be it known that I, HORATIO N. GOODMAN, of the city and county of New Haven, in the State of Connecticut, have invented a new and useful Improvement in Melodeons; and I do hereby declare that the following is a full, clear, and exact description of the construction, character, and operation of the same, reference being had to the accompanying drawings, which make a part of this specification, in which—

Figure 1, is a perspective view of one octave of a melodeon, showing the two sets of keys, and the end of the coupler, or apparatus for connecting the back set of valves with the lower set of keys. Fig. 2, is a perspective view of a cross section of the melodeon, (or, a section cut in the direction of the length of the keys,) showing the two sets of valves, the pitmen which work them, and the coupler, or apparatus which connects the back set of valves with the lower set of keys, and also the positions of both sets of reeds. Fig. 3, is a plan view of the coupler, or apparatus by means of which the parts may be so connected that both set of valves may be worked by the lower set of keys, alone, while the upper set of keys can only operate the back set of valves at any time.

My improvement consists in constructing the melodeon with two sets of reeds, and two sets of valves, in such a manner as to be played by two sets of keys, (arranged one above the other, in the usual way,) and so that both sets of reeds may be played by the lower set of keys, while the back set of reeds only, (in unison or above or below,) may be played by the upper set of keys, without, at all effecting the front set of reeds;—(or the lower set of keys may be played by both hands producing the effect of using two stops in other instruments;)—thus giving greater force, compass, and variety, to the melodeon.

I make the melodeon in the usual way, with two sets of reeds, as represented at *a* and *b*, Fig. 2, and two sets of keys, or two key-boards, as represented at A, and B, Fig. 1. For each set of reeds I make a separate set of valves, as represented, in section, at *c*, *c'*, and *d*, *d'*. Fig. 2. (The valves *c*, and *d*, being represented as open, and *c'*, and *d'*, as shut.) These valves I make of wood, or any other suitable material, and face them with leather, in the usual way; (or in any other way;) and I close these valves by

springs pressing up against them, in the usual way, as represented, at *e* and *f*, Fig. 2.

The valves *c*, *c'*, &c., are forced open by the action of the upper set of keys, (A, Fig. 1,) bearing on the upper ends of the pitmen *g*, *g*, &c., the lower ends of which rest on the back set of valves, as represented in section at *c*, Fig. 2, so that the back set of reeds, (represented in section at *a*, Fig. 2,) will be played alone by the upper set of keys, (A, Fig. 1,) while the other set remain silent.

The valves *d*, *d'*, &c., are forced open by the action of the lower set of keys, (B, Fig. 1,) bearing on the upper ends of the pitmen *h*, *h*, &c., the lower ends of which rest on the front set of valves, as represented in section at *d*, Fig. 2, so that the front set of reeds, (represented in section at *b*, Fig. 2,) may be played alone, by the lower set of keys, (B, Fig. 1,) while the back set remain silent; or, both sets of reeds may be played at the same time, in unison, or otherwise, by playing the lower set of keys with one hand, and the upper set with the other hand;—or, two performers may each use one key board, if desired.

I make the keys of the lower set, (B, Fig. 1), twice the length of those of the upper set, (A, Fig. 1,) so that the lower keys extend back under the upper keys throughout their whole length, as shown in section, in B, Fig. 2, which is one of the lower set of keys cut through its longitudinal center, and shows how the pitmen *g*, *g*, &c., pass through the long keys, at the space shown at *i*, Fig. 2.

To connect the two sets so that the reeds, as shown at *a*, and *b*, Fig. 2, may both be sounded by the action of the lower set of keys, I fit in pieces of the form of, and which are operated like, the valves, as shown at *j*, *j*, &c., Fig. 2, which bear on the upper ends of the pitmen (one of which is shown at *k*, Fig. 2) while the lower ends of these pitmen rest on the valves *c*, *c'*, &c., as represented, in section in Fig. 2.

To work the pieces *j*, *j*, &c., I insert a coupler, or connecting apparatus, shown in plan in Fig. 3, and in section, at C, Fig. 2, and one end at C, Fig. 1, in which the pitmen *l*, *l*, &c., have a free motion up and down. This coupler (C,) is suspended in the frame work of the melodeon by the parts D, and E, which serve as journals, resting in bearings, as indicated at C, Fig. 1, the other bearing being concealed. When the

coupler (C,) is turned into the position shown in section in Fig. 2, the lower ends of the pitmen *l, l*, &c., will rest obliquely on the pieces *j, j*, &c., as seen in Fig. 2, which will
 5 allow them to fall so low that the lower set of keys (B, Fig. 1,) will not press upon the upper ends of them, and therefore the pieces *j, j*, &c., will not be pressed down, but when the coupler (C,) is turned so as to hang ver-
 10 tically from its journals, the lower ends of the pitmen, *l, l*, &c. will rest on the pieces *j, j*, &c. in the position indicated by dotted lines at *m*, Fig. 2, so that when the keys (B,) of the lower set are pressed down to the position shown in section in Fig. 2, the
 15 pitmen *l, l*, &c. will be forced down, and by them the pieces *j, j*, &c. which pieces will force down the pitmen *k*, &c., and open the valves *c, c'*, &c. as seen in Fig. 2, by which
 20 means the lower set of keys, (B,) will serve to play both sets of reeds. Thus when the coupler, C, is in its vertical position, one hand may play both stops, or sets of reeds with the lower set of keys, (B,) while the
 25 other hand plays only the back set of reeds with the upper set of keys, (A,) and the hands may be changed at pleasure to give force and variety to the several parts as desired. The coupler, C, may be operated in
 30 the same manner as stops in organs, or otherwise, as may be found most convenient. And any kind of bellows may be used, which may be considered most suitable in any case. The wind may pass to the reeds
 35 from the front and rear, as indicated by the darts in Fig. 2, or any other suitable way.

To steady, and guide the valves I use pins, as seen at *n*— for the pieces *j, j*, &c. as seen at *o*,—and, for the keys, as seen at
 40 F, F, Fig. 2, in the usual way.

The advantages of my improvement consist in using two sets of keys with two sets of reeds, and two sets of valves, in such a manner that each set of reeds may be
 45 sounded, or played, by its own set of keys,

independently of the other set;—or, both sets of reeds may be sounded, or played, by using the lower set of keys only; (by the aid of the coupler,)—or both sets of reeds being sounded by the lower set of keys, and
 50 at the same time another part, (or parts,) may be played on the back set of reeds only, by using the upper set of keys:—thus giving much greater force, compass, and variety to the melodeon than it has heretofore
 55 possessed, while from the simplicity of the connections of the parts, (by the use of the coupler,) the price is but slightly increased, in proportion to its value.

I am aware that two sets of keys have long
 60 been used in organs;—and that two sets of reeds have been used in reed-instruments;—I therefore do not claim either of these, as such, as my invention; but

What I claim as my invention, and de- 65
 sire to secure by Letters Patent, is—

1. The combination of the two sets of reeds with the two sets of keys, when these are combined with the two sets of valves, and so arranged that each set of keys may
 70 play their own set of reeds independently;—or, so that the lower set of keys may play both sets of reeds, (in the ordinary way of two stops,) while the upper set of keys may
 75 play its own set of reeds, only, in any other part of the key-board, at the pleasure of the performer, when constructed, and combined, substantially, as herein described.

2. I also claim the within described method of coupling, or connecting, the lower set
 80 of keys with the back set of valves, so that both sets of reeds may be played by the lower set of keys, when the several parts are constructed, arranged, and used, in the manner, and for the purposes, substantially, as
 85 herein described.

H. N. GOODMAN.

Witnesses:

HARVEY BALDWIN,
 R. FITZGERALD.