

(No Model.)

G. R. NEWMAN.

REED ORGAN.

No. 264,097.

Patented Sept. 12, 1882.

Fig. 1.

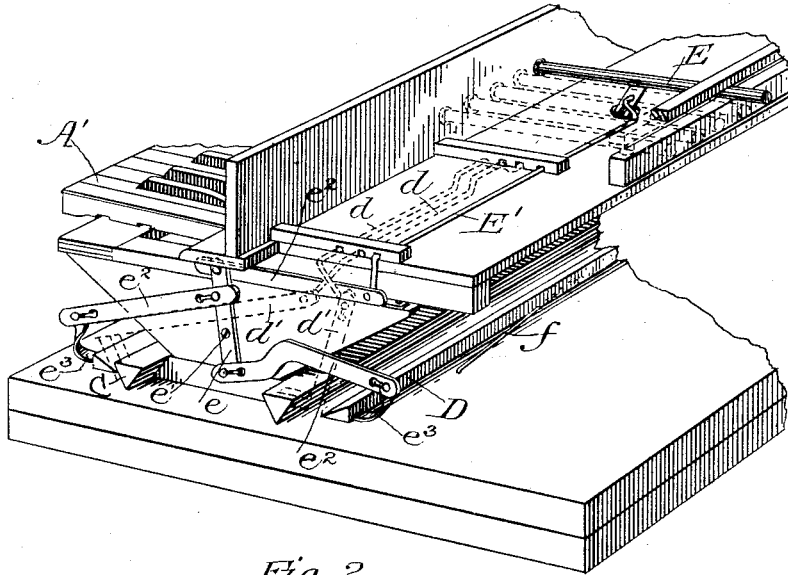
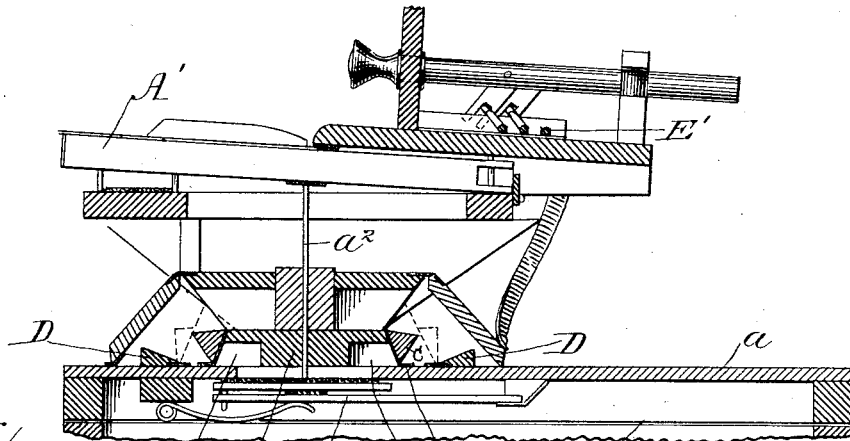


Fig. 2.



Witnesses: b B a' b c A

Frank S. Blanchard.
J. Loom.

Inventor:
Gustav R. Newman.
By *Frederick Fisher*
His Attorneys.

UNITED STATES PATENT OFFICE.

GUSTAV R. NEWMAN, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO JOHN A. NEWMAN AND CHARLES W. NEWMAN, OF SAME PLACE.

REED-ORGAN.

SPECIFICATION forming part of Letters Patent No. 264,097, dated September 12, 1882.

Application filed July 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV R. NEWMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Reed-Organs; and I do hereby declare the following to be a full, clear, and exact description, sufficient to enable others skilled in the art to which said invention appertains to practice the same, reference being had to the accompanying drawings, wherein—

Figure 1 shows in perspective the improvement as applied to the ordinary type of "two-set" parlor-organ, and Fig. 2 shows in transverse section said improvement or addition and its relation to the other parts of the organ with which it co-operates.

My invention relates to reed-organs, melodeons, or like musical instruments, and has for its object to so far modify or soften the tone emitted by the vibrating tongue of an organ-reed as that said tone shall in characteristic quality or "timbre" more nearly approximate to and resemble the like tone of a pipe-organ.

Heretofore the manufacturer of the reed-organ wherein the reeds were provided with vibrating tongues of metal has experienced much difficulty in reducing the harsh metallic sound inherent in the material of which said tongues are composed, and to overcome this in a measure has been compelled to spend much time and care in bending and scraping the tongues of the reeds, so that the sound emitted shall be less "rank."

By the present invention, whether the "twang" of the reed-tones has been diminished by scraping and bending of the tongues or not, it is possible to impart a purity to the tone which shall make it resemble that of the pipe-organ and to be in closer imitation thereof than can be attained without the use of the improvement.

To this end the invention consists of certain improvements in the structure of a reed-organ or like instrument, all as hereinafter fully described, and distinctly defined by claims.

Upon the mortise-board *a* of the usual wind-chest, *A*, rests the tube-board *B*, in the cells of which are inserted the series of reeds *b*, the

vents or passages between the wind-chest *A* and each of the reed-cells being controlled by the valve *a'*, stem *a''*, and key *A'*, in manner well understood. Extending across the face or entrance of the reed-cell, and along the entire series of cells, is the mute or stop valve *C*, 55 hinged by leather strip or otherwise at its upper edge to the tube-board *B*, and bearing at its lower edge against a strip of felt or the like, *c*, in front of the reed-cells, which said strip is attached to the board *a*. The mute-valve *C* is held tightly to its seat, and with its edge against the strip *c*, by the usual torsion-spring, and in such position effectually excludes the air-currents from the reed-cells, 65 whether the finger-keys *A'* be operated to depress the valves *a'* or not, whence it follows that the set of reeds emits no sounds under such condition, or, in other words, remains mute. If, however, the valve *C* be elevated 70 from its seat, by working the necessary stop-draw, and through it the crank-wire *d* and lever-arm *d'*, which latter is attached to said valve *C*, then the reed-cells are of open or free vent throughout the scale of the instrument, 75 and any note may be sounded, as desired. The construction thus far described is that which is found in the ordinary two-set instrument, and is detailed to more clearly show the relation of the improvement or addition now to be set forth with respect to the mute-valve *C*.

Directly in front of the valve-strip *c* there is preferably hinged to the board *a* what for distinction may be termed the "pipe-valve" *D*, which said valve is entirely detached from the 85 mute-valve *C*, and consists of a narrow strip of wood or the like extending parallel to and of substantially the same length with the mute-valve *C* across the series of reed-cells. A lever, *e*, pivoted at *e'* to the end of the tube-board *B*, is operated by stop-draw *E* and crank-wire *E'*, of 90 usual construction, and in its vibration about pivot *e'* acts through arms *e''* and the lever-arms *e'''*, the latter being attached to the pipe-valves *D*, to lift said valves against the force of torsion-spring *f*, so that the face thereof shall stand 95 in close juxtaposition to the edge of mute-valve *C* when the said mute-valve is raised from its seat in position for the several reeds to be sounded. The best effects are obtained 100

when the lifted edge of mute-valve C rests snugly against the upturned face of pipe-valve D, for in such relation of the parts there is no vent for the air-currents save at the extreme ends of the two valves, and a close chamber is thus established, which in some way operates to modify the quality of the tone emitted by the vibrating tongue of the reed, and to impress it with characteristics in close imitation of the tone of a pipe-organ. Approximately good results, however, may be obtained even though the edge of mute-valve C be not in contact with the upturned face of valve D; but of course, in so far as there be space or vent allowed between them, the air waves or currents are not confined in passage to the ends of the closed chamber, and become less and less modified in timbre, according as the upturned face of valve D is removed farther and farther away from contact with the edge of valve C.

Instead of hinging valve D to the board *a*, as shown, it may be attached to some other convenient portion of the organ structure, and, indeed, instead of being hinged at all, it may be fixed rigidly in place, so that mute-valve C shall come in close proximity thereto when raised from off the series of reed-cells. In such event the instrument would have a permanent pipe-like tone to all of its reeds, but would not be so loud-sounding as when the valve D is hinged and capable of being closed down out of the way to operate the "swell-valve," or even when operating with no more than the mute-valve C open. It will be understood that the addition of the pipe-valve D does not in the least interfere with

the use of the various other modifying-stops as now found in the better class of reed-organs, and hence is not confined in value to any particular organ structure. While such of these as produce the "tremolo" or "vox-celeste" effects operate to change the pitch, so that oftentimes the front and back sets of reeds, or, in other words, the upper and lower register of the instrument, are several semi-tones at variance, there is no difference in pitch to be noted when the present invention is employed. The change is one in quality alone, imparting a clearness and purity to the tone which bring it into close resemblance with that of the usual pipe-organ.

The invention may be readily adapted to any instrument like the parlor-organ, wherein a series of vibrating reeds have a mute-valve to open and close upon the reed-cells.

Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the reed-cells, of a mute-valve and a detached strip, said valve and strip being arranged and adapted to operate in proximity to each other, substantially as described.

2. The combination, with the tube-board B, having the reed-cells therein, of the mute-valve C and the pipe-valve D, detached therefrom and hinged substantially as described.

In testimony whereof witness my hand this 6th day of July, A. D. 1882.

GUSTAV R. NEWMAN.

Witnesses:

JOHN A. NEWMAN,
JAMES H. PEIRCE.