

I. T. PACKARD.
Reed-Organ Stop-Actions.

No. 140,381.

Patented July 1, 1873.

Fig. 1.

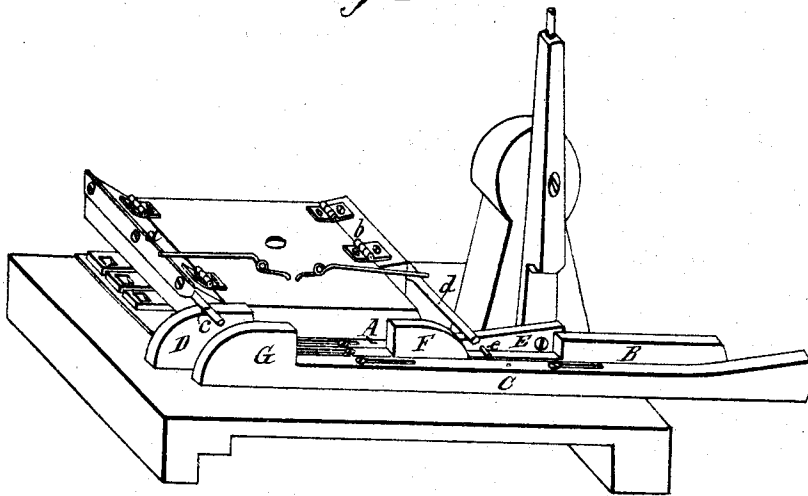
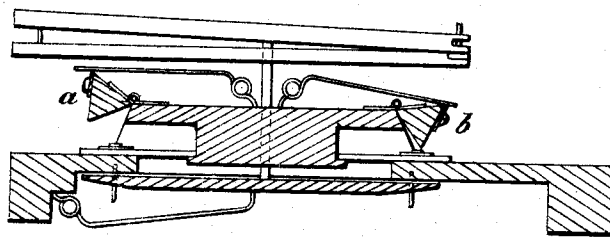


Fig. 2.



Witnesses

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IMPROVEMENT IN REED-ORGAN STOP-ACTIONS.

Specification forming part of Letters Patent No. **140,381**, dated July 1, 1873; application filed March 31, 1873.

To all whom it may concern:

Be it known that I, ISAAC T. PACKARD, of the city of Fort Wayne, in the county of Allen and State of Indiana, have invented an Improvement in Reed-Organs, of which the following is a specification:

My invention consists of an arrangement of stops to produce new and pleasing effects in an organ containing two or more sets of reeds, the leading feature of which is a rapid vibration and undulating quality of the tones much admired for solo and some other kinds of executions.

The accompanying drawings in connection with this specification illustrate my invention.

Figure I is a perspective view of a portion of a reed-board for two sets of reeds as usually made, with the addition of the sliding bar A with its cams D and E, which are the subject of this invention. Fig. II is a vertical transverse section of a similar board, wherein the stop-valves *a* and *b* are shown open to about the position they should be to produce the combination of tone I desire to obtain.

In order to give a clear understanding of the utility of this invention, I will describe my method of tuning, which, however, I do not claim as a part of my invention.

The organ may be of a compass or scale of five octaves, and, as usual, from F to F. The back set of reeds may be what are termed diapason or unison. The front set from the middle upward should be the same scale and size as the diapason, while the lower part of the scale from the middle downward may be an octave above the diapason. The valve-stops must be divided in the middle also, and each may be operated and connected to the draw-stops at the key-board by any of the usual arrangements of levers in common use among organ-makers. The diapason should be nicely voiced and tuned with the stop-valve *b*, open about four-tenths of an inch. The front set should have the stop-valve *a* open the same distance, and the reeds tuned a little above the diapason, but not enough to disturb the practiced ear when a full harmony is drawn from the organ. The exact degree of difference required can be readily found by the cultivated ear of the experienced

tuner, and, when attained, if the instrument is carefully voiced, the union of this set with the diapason will be very rich, sweet, and captivating. I prefer to adopt the name given this union of tone by some of the French organ-makers, viz: "Voix Celeste."

With the organ thus tuned, I will now show the operation and effect of my sliding bar A, and its cams D and E. This is placed at the end and at a right angle with the stop-valves. From the end of each of the stop-valves a pin extends, *c* and *d*; and the sliding bar and cams are so placed that, by a short movement from back to front, each of the cams passes under the pins, raising the stop-valves.

It will be seen that the cam D is larger than the cam E, and while the cam D opens the stop-valve *a* the given distance, which should be about four-tenths of an inch, the cam E opens the stop-valve *b* only a trifle, which should be about one-tenth of an inch. This causes the pitch of the diapason to be lowered and the tone to be softened, while the front set of reeds retains its pitch and quality. The effect of the two sets of reeds now thus united is a rapid vibration of the tones, full of richness, and well adapted and much admired for solo purposes, and may be accompanied by the diapason in the base.

From the side of the sliding-bar A will be seen the pin *e*. This is to press back the cam F, which is a part of the sliding bar B, and acts upon the stop-valve *b* independently of E. Should the valve *b* be opened by F, it will be necessary that it be closed before the effect produced by D and E can be realized. This is done by the pin *e*, whenever necessary. The bar C with its cam G is designed to act independently upon the stop-valve *a*. All of these bars are to be connected with the draw-stops at the key-board, as before stated, by any of the usual arrangements common with organ-makers.

The advantages gained by this invention consist in the production of the favorite "vox humana" quality of tone, and, to the taste of many, much improved, and without the usual fan-wheel to agitate the air, and without using the air of the bellows or any kind of motor to propel the fan-wheel, and, also, without any additional reeds especially tuned for the pur-

pose. The diapason can be used alone, or the other set united with it for full effects. A much more durable and satisfactory instrument can be made, as it is well known that the mechanism of the fan-wheel is often liable to derangement, and to become useless. An important saving in cost of the organ is also effected by the use of my invention, and its durability, when properly made, is beyond question.

Having now fully described my invention

and its application, I will now state what, and only what, I claim, which is as follows:

In combination with the stop-valves *a* and *b*, the sliding bar *A* provided with the cams *D* and *E* and the pin *e*, constructed and arranged substantially as and for the purpose described.

ISAAC T. PACKARD.

Witnesses:

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