

An interesting form of reed is the diaphone, lately introduced, which in its action is very similar to the movement of the lips when a brass or cup-mouthpieced instrument is being sounded. This principle might be usefully extended to represent more closely the horn, trumpet, and trombone tones in the modern organ.

It is impossible to record here the many improvements effected in organ-building and arrangement during the last three centuries.* In all large instruments the old tracker action has been superseded by tubular-pneumatic or electro-pneumatic connections; motors, not men, now supply the wind. Quite a large variety of tone-qualities have been obtained from the pipes employed, and the compass is only limited by the inability of the human ear to appreciate the vast range of sound which the organ could afford.

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* Subjoined are some of the more important improvements in organ-building which have been generally adopted since the year 1604:—

- c. 1661. 'Shifting' composition Pedals employed by DALLAM.
- c. 1675. Diagonal Wind Reservoir used in small organs.
- 1712. A 'Sliding Swell,' attached to the Echo Organ by ABRAHAM JORDAN.
- 1762. The Horizontal Wind Reservoir invented by CUMMINS.
- c. 1780. The 'Venetian Swell,' adapted from the Harpsichord, by GREEN.
- c. 1790. Organ pedals introduced into England.
- 1809. Composition Pedals improved by BISHOP.
- 1826. Bishop's 'Concussion' Bellows, to equalize pressure of wind.
- 1832. Barker's Pneumatic key action.
- 1847. The 'Tubular Pneumatic' action of MOITESSIER.
- 1852. Pneumatic composition pistons patented by FATHER WILLIS.
- 1856. Hydraulic Motor for blowing organs patented by DAVID JOY and WILLIAM HOLT.
Patent No. 2358.
- 1867-8. Electricity applied to key action by BARKER, PESCHARD, BRYCESON, and WILLIS.
- 1881. Electro-Pneumatic action of SCHMOLE and MOLS.

Other improvements include CASSON'S Automatic 'Pedal Help' and the new American sound-boards.