No. 804,604. PATENTED NOV. 14, 1905.

J. ISAKSON.

PHONOGRAPHIC INSTRUMENT.

APPLICATION FILED AUG. 22, 1904.

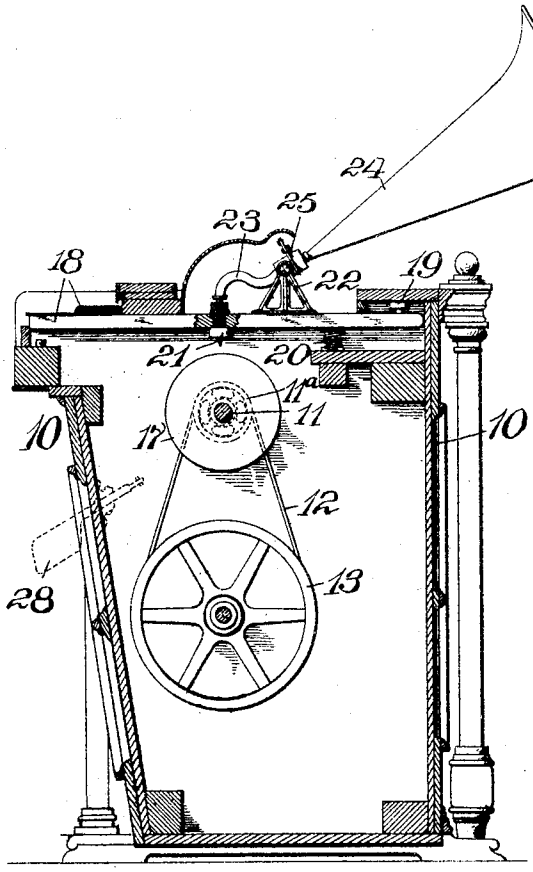


Fig. 1.

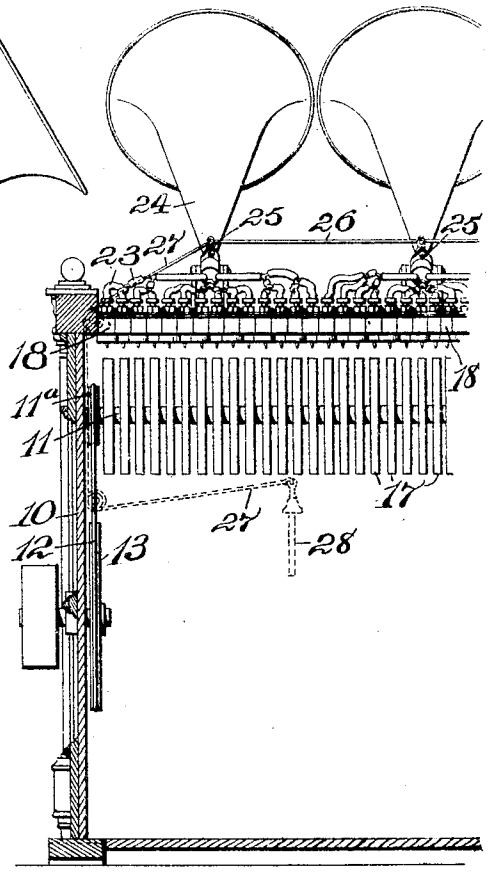


Fig. 2.

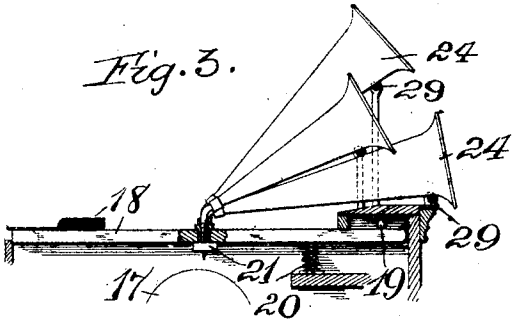


Fig. 3.

WITNESSES:

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PHONOGRAPHIC INSTRUMENT.

No. 804,604. Specification of Letters Patent. Patented Nov. 14, 1905.

Application filed August 22, 1904. Serial No. 221,808.

To all whom it may concern:

Be it known that I, JOHN ISAKSON, of Clinton, in the county of Missoula and State of Montana, have invented a new and Improved Phonographic Instrument, of which the following is a full, clear, and exact description.

This invention relates to an instrument that reproduces sounds in accordance with the desire or wish of the performer and in any combination that is desired.

The invention further provides a means for increasing or diminishing the volume of sound issuing from the instrument, in conjunction with a complete manual device for manipulating keys to give the desired tone effect.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a cross-section of the instrument. Fig. 2 is a view of a little more than half of the instrument with the back board removed, and Fig. 3 is a view of a modification of the arrangement of the horns.

In the drawings, 10 is a casing of a suitable configuration, and it has journaled therein a shaft 11, on which is a pulley 11^a, that can be driven by means of the belt 12 and the wheel 13. It will be understood that this method of communicating a rotary motion to the shaft 11 can be displaced by any well-known means of operation.

On the shaft 11 are arranged a series of disks or records 17, that are arranged to have on their periphery a reproducing-surface embodying one tone or note or sound. If desired, this series of disks can be dispensed with and one cylinder may be employed with the reproducing-grooves at equidistant points on its periphery, as will be understood. In line with each of the reproducing-grooves is arranged a key-lever 18, pivoted, as at 19, and having a spring 20 arranged to hold it normally in place. A reproducer 21 is secured to each key-lever, and it will thus be seen that by the pressure on the key its reproducer will be thrown into contact with the reproducing-groove on its respective record and emit that particular note or sound. A series of pipes 23 lead from the reproducers to the horns or trumpets 24, these horns being pivoted, preferably, in a structure, such as 22, to permit an adjustment, so that the sound can be directed. A valve 25 is preferably placed at the small end of each horn or trumpet, and each valve is connected with the other by a rod 26. A cord or connection 27 can lead to a lever or pedal 28. This pedal is conveniently placed, preferably, where it can be operated by the knee of the performer. It will be seen that by the operation of this pedal 28 the valve can be opened to any desired extent or allowed to close, and in that way the volume of sound is regulated.

In Fig. 3 I show a modification where a series of horns are employed connecting each individual reproducer with a horn. The horns or trumpets are staggered so that they can be fitted in and are pivoted at 29, rocking up and down as the key is released or depressed.

It will be evident that I have devised an instrument that can give musical reproductions if each of the records 17 is adapted to give the sound of a particular note in the scale. For instance, we would employ twelve records for each chromatic scale of one octave. The instrument might be made the full seven and one-third octave, and it will be obvious that in this way a performer on the instrument could reproduce anything in the musical line that he desired without having any former performance necessary to the reproduction. Each of the records might have a pair of grooves for the reception of a pair of styli, these grooves being adapted to reproduce tones an octave apart whereby the pressure on one key would produce two notes, one an octave above the other, and in this way the volume of sound would be increased.

The records could be taken off and replaced to bring in reproductions of other instruments, such as wind instruments or string instruments, or they might be placed on the shaft in combination, some reproducing one instrument and some another, and in this way furnish a more varied set of tones.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

A phonographic instrument comprising a series of records, means for revolving the records, a reproducer arranged in line with each record, manually-operated means connected with each reproducer to throw it in engagement with each record, sound-directing devices, flexible connections between each reproducer and the sound-directing means, a valve arranged in each sound-directing device, and means to simultaneously operate the valves.

JOHN ISAKSON.

Witnesses:

J. ALAN ANDREW,

IRMING EHIRT.