J. PIM.

ORGAN-REEDS.

No. 195,394. Patented Sept. 18, 1877.

Fig 1.

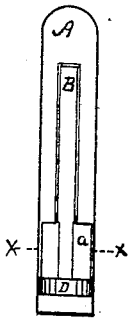

Fig 2.

Fig 3.

WITNESSES

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JOHN PIM, OF ERIE, PENNSYLVANIA.

IMPROVEMENT IN ORGAN-REEDS.

Specification forming part of Letters Patent No. **195,394**, dated September 18, 1877; application filed May 11, 1877.

To all whom it may concern:

Be it known that I, JOHN PIM, of Erie, in the county of Erie and State of Pennsylvania, have invented a new and useful Improvement in Reeds for Musical Instruments; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to the construction of reeds for that class of wind-instruments wherein the said reeds are placed in connection with a reed-board, and wherein no pipes, tubes, or horns are used in connection with said reeds. The leading kinds of instruments in this class to which I refer are cabinet-organs, melodeons, accordions, or harmonicans, and also mouth-organs.

In most of these instruments each reed-tongue has a separate body, to which it is fastened, and which two parts are commonly called a "reed." In others of these instruments all the reed-tongues are attached to one body, which is provided with as many throats as there are tongues, and this many-tongued body is so placed over the reed-board that each tongue has its own cell in the board. In those instruments where the reeds are separate they usually attach to the reed-board by sliding into grooves in the walls of the cell.

My invention in no way relates to such reeds as are used in connection with pipes, as in the reed-pipes of church pipe-organs, nor to such reeds as are used in horns of various kinds.

My invention consists, first, in forming the body of a reed to be used in the class of instruments I have above indicated, by casting the same of molten metal in a mold; and, second, in casting the said body upon the tongue in such a manner as to firmly attach said tongue to said body.

Heretofore reeds of the kind to which my invention relates have been made as follows: The body is cut from sheet metal, and the opening for the tongue punched out by a punching-machine. The tongue is cut from sheet metal, and either riveted or otherwise rigidly attached to the body. This mode of construction involved several distinct operations, besides the use of costly machinery. For example, in making a reed-body by the old method, the blank is first struck out and punched from a piece of sheet metal, usually brass. It is then planed up in another machine; then the throat in which the tongue vibrates is planed out and properly formed by another machine. After the body is completed and the tongue prepared, they are joined together by another and distinct operation in another machine.

The object and purpose of my invention are to avoid the various operations and processes above named, and to form the reed-body, with or without the tongue attached thereto, at one operation, by casting the same in a mold.

In the drawing hereto attached, Figure 1 shows the lower side of a reed; Fig. 2, the upper side. Fig. 3 is an enlarged sectional view on the line *x x*, Fig. 2.

A is the body of the reed; B, the tongue; C, the throat. *a* is a lug on the upper side of the body A, and in it the tongue is rooted or embedded. D is the notch in which the hook sets for drawing the reed from the board.

In reeds of my construction the body portion or frame A (with throat C, lug *a*, and cavity D) is cast in a mold, and comes from said mold complete and ready for use.

The tongue B may be placed in the mold and have the metal cast upon it, and thus secured to the body; or, if desired, the tongue may be soldered or riveted, or in any way attached to the body afterward.

The operation of casting the reed with the tongue in the mold is as follows: The tongue is first prepared of the proper material and of the proper size, and then placed in proper position in the mold, having, however, been first dipped at the proper end in any proper soldering solution—*i. e.*, a solution which will cause it to solder to the metal when poured into the mold.

The manner of casting my reeds will be similar to that of casting type. The molds will be of steel or other strong material, and will clasp firmly together, and the metal will be forced in by pressure.

I do not intend to limit myself to any mode of casting; but the one I have used is similar to the mode of casting type, as just stated, and as this is a well-known art it needs no further description by me.

The metal I expect to use for the body of

the reed is type-metal, or some similar alloy; but any metal which will serve the best may be used. The cheaper the alloy the better, of course, if it serves the purpose properly.

By my process of making reeds a body may be made with any number of throats and any number of tongues, if desired. This may be advisable in small instruments, like harmonicans, &c.

I am aware that the bodies of such reeds as are used in reed-pipes of church-organs, and also in horns and pipes of various kinds, have been made of cast metal; but my invention in no way relates to that class of reeds, and reeds of that class could not be made to serve in connection with the reed-boards of cabinet-organs, melodeons, &c., and therefore have no relation to my invention.

What I claim as my invention is—

1. As a new article of manufacture, a reed for the reed-board of a cabinet-organ or similar reed instrument, the body portion or frame of which is made of cast metal, and is provided with a throat or opening for the reed, substantially as described, and for the purposes set forth.

2. As a new article of manufacture, a reed for a musical instrument, the body portion or frame of which is cast upon the tongue, substantially as herein set forth.

In testimony whereof I, the said JOHN PIM, have hereunto set my hand.

JOHN PIM.

Witnesses:

JNO. K. HALLOCK,

E. A. HALLOCK.