

(No Model.)

C. H. KELLERMANN.
ORGAN REED.

No. 463,745.

Patented Nov. 24, 1891.

Fig. 1.

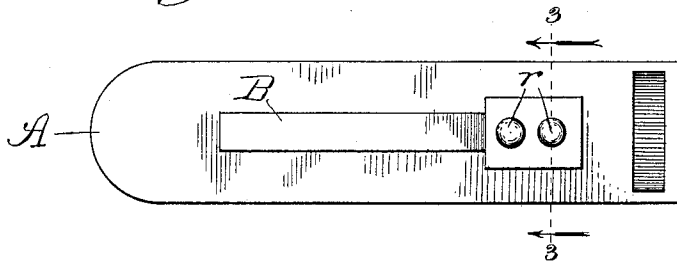


Fig. 2.

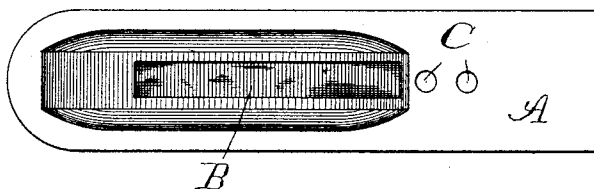


Fig. 3.

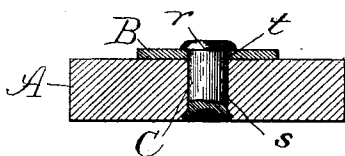


Fig. 4.

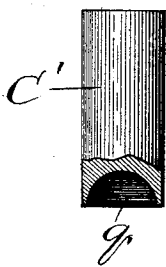
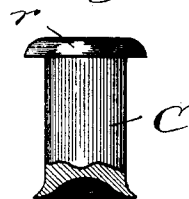


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

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ORGAN-REED.

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Application filed May 15, 1891. Serial No. 392,852. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. KELLERMANN, a citizen of the United States, residing at Kenosha, in the county of Kenosha and State of Wisconsin, have invented a new and useful Improvement in Organ-Reeds, of which the following is a specification.

My object is to provide an organ-reed in which all danger of the detachment of the reed-tongue from the reed-block in the ordinary use of the reed will be obviated. It is necessary that the reverse or under side of a reed-block shall present a smooth flat surface devoid of protuberances, and for this reason it has been found difficult to so rivet the tongue in place as to make the rivet connection withstand the strain exerted by the vibration of the tongue in use. It is common to secure the tongue to the reed-block by providing holes, each of equal size throughout its entire extent, in the tongue and block, into which the rivets are driven and then upset upon the tongue, the engagement thereof with the block being altogether frictional, and therefore liable to loosen under the strain of the tongue's vibrations. To prevent the rivets from becoming detached from the reed-block the rivet-holes through the latter have been made flaring in the direction of the reverse side and an initially-tapering rivet provided, or a rivet rendered tapering by being expanded into the flaring hole in the operation of upsetting. While the last-named construction may be effective in holding the rivet against loosening, it is expensive and for other reasons undesirable.

My invention consists in a peculiar manner of and means for riveting the block and tongue of an organ-reed together, as herein-after described, and pointed out in the claims.

In the drawings, Figure 1 is a plan view of an organ-reed, showing the side of the block upon which the tongue is riveted; Fig. 2, a similar view of the reverse side of the block; Fig. 3, an enlarged section taken on line 3 of Fig. 1 and viewed in the direction of the arrow; Fig. 4, an enlarged view, in elevation, partly sectional, of one form of the pin or rivet-blank; and Fig. 5 a similar view of the rivet after expansion.

A is the reed-block, and B the reed-tongue. The tongue is provided with rivet-holes *t* and the block with holes *s*, the holes registering with each other, as shown, when the tongue is in position. While rivets C, with their heads *r* already formed, may be employed, I prefer to secure the tongue to the block by pins or blanks C', which are upset to produce the head after they are inserted into the holes *t s*. The blank C' may be initially provided in one end with a recess *q*, and in placing it in position the blank is passed at its end *q* through the hole *t* in the tongue and part way through the coincident hole *s* in the block. A set-tool is placed against the end (in the recess *q*, if provided) and the power which is applied to upset the opposite end of the blank to produce the head *r*, which overlaps the tongue about the hole *t*, will cause the edge of the recess *q* to be expanded and flanged outward to indent itself into the metal of the block, as illustrated. By this means the rivet obtains a firm hold in the block and will resist a much greater force tending to loosen it than would be exerted by the vibrations of the tongue.

While I prefer to fasten the tongue in place with two rivets formed as described, one such rivet will answer to hold the parts together with desired security and the other rivet may be secured in any other desired manner. Instead of providing the blank initially with the recess *q*, the recess is preferably produced with a pointed set tool at the same time that the ends of the blank are upset.

The inserted end of the blank when upset must indent itself more or less into the adjacent surrounding stock of the rivet-hole in the block to obtain the desired hold.

What I claim as new, and desire to secure by Letters Patent, is—

1. The method of riveting together the block and tongue of an organ-reed, which consists in driving a rivet into place and securing it by recessing the end thereof in the block and expanding the material of the rivet surrounding said recess against and indenting it into the adjacent surrounding stock of the rivet-hole, substantially as described.

2. An organ-reed comprising in combination a reed-block and a reed-tongue riveted thereto, the rivet extending in the coincident rivet-holes and having its end nearest the reverse side of the block provided with an inter-circumferential recess and the material of the rivet about the recess expanded against

and indented into the adjacent surrounding stock of the rivet-hole, substantially as described.

CHARLES H. KELLERMANN.

In presence of—

FRANK J. TUTTLE,
CHAS. M. FROST.