(No Model.)

T. S. CLINE.

ORGAN VALVE.

No. 362,061. Patented May 3, 1887.

Fig. 1.

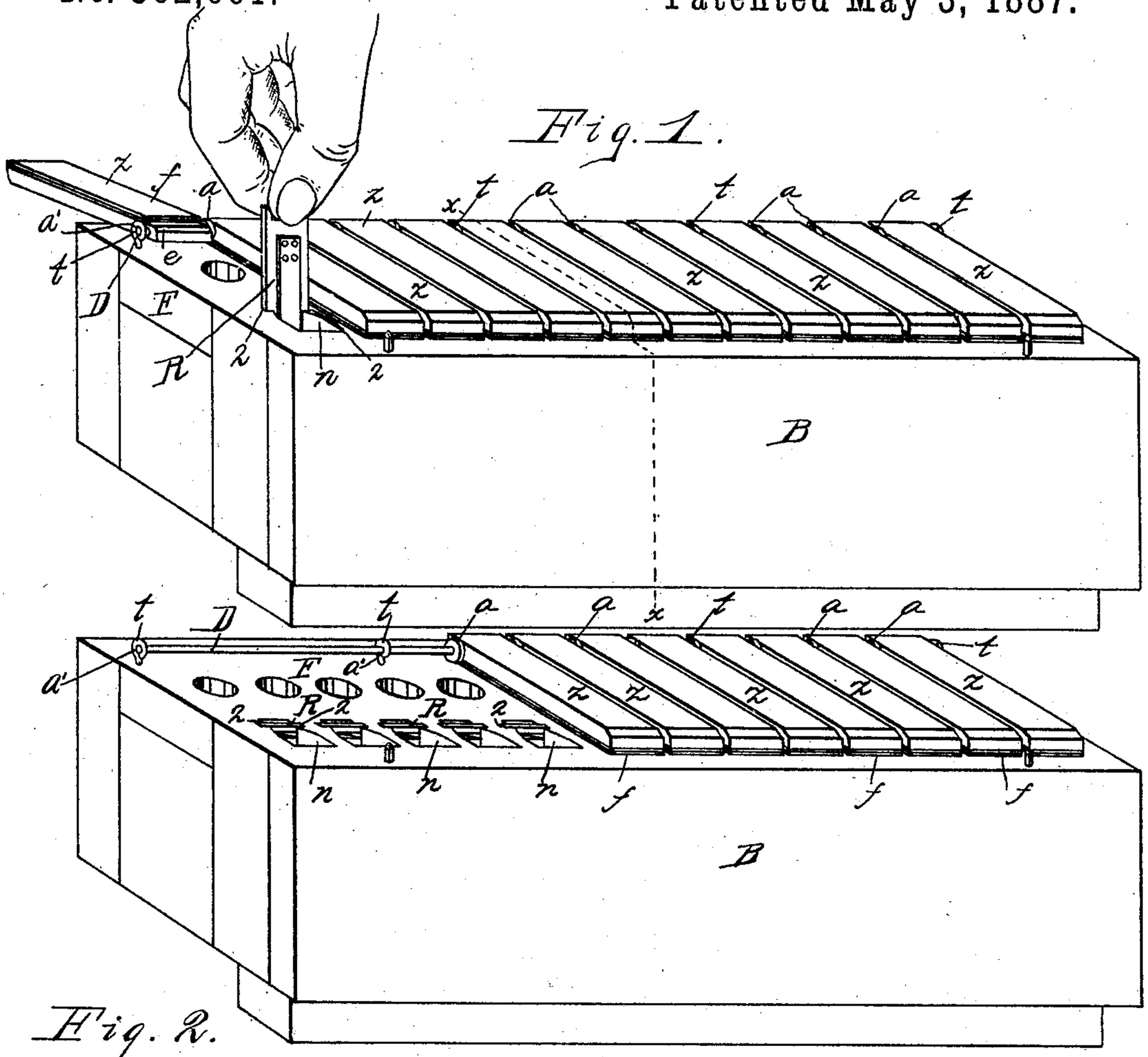


Fig. 2.

Fig. 3.

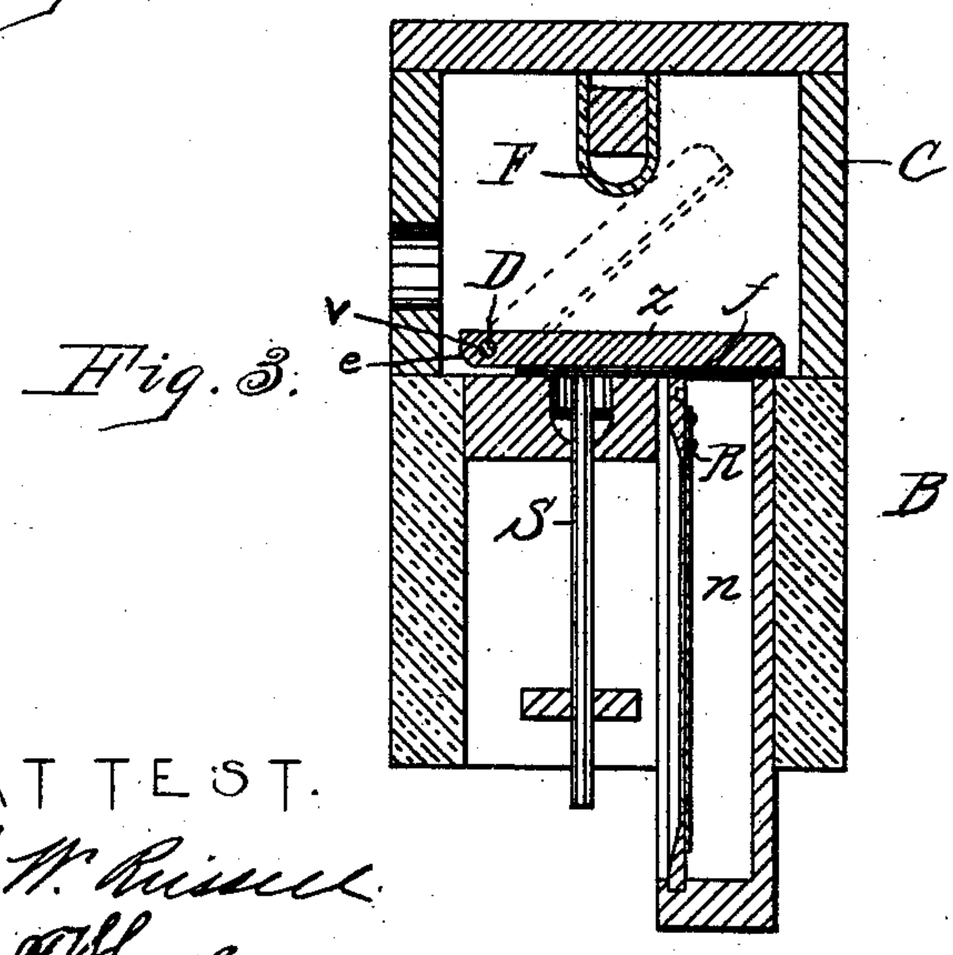
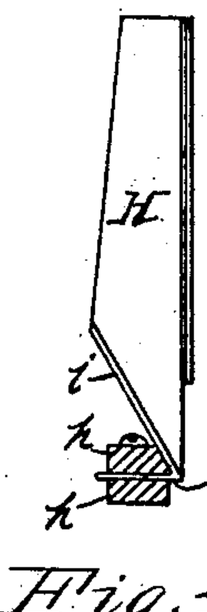


Fig. 4.



ATTEST.

C. W. Russell.

B. F. Thacher

INVENTOR.

T. S. Cline

By Roscoe B. Thacher atty

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

THEODORE S. CLINE, OF DETROIT, MICHIGAN.

ORGAN-VALVE.

SPECIFICATION forming part of Letters Patent No. 362,061, dated May 3, 1887.

Application filed March 12, 1887. Serial No. 230,695. (No model.)

To all whom it may concern:

Be it known that I, THEODORE S. CLINE, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Organ-Valves; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to the construction and manner of attaching the valves to the sub-base of a reed-organ.

The object of my invention is to so attach the valves over the reed-ports that when raised or allowed to drop each valve will be squarely or evenly raised without sliding or tilting, and when dropped will fall evenly over the reed-ports, whereby the tones will be given full and clear, the action of the valves being uniform; and by my present arrangement the removal of the upper section of the sub-base allows the valves to be swung upon their pivots sufficiently to bring the under face of each valve upward, to enable the ready repairing of the padded or flexible under face; also, to enable the ready insertion or removal of any of the reeds of the sub-base in case of repair or the building of an instrument, as will be hereinafter set forth.

My invention consists in the organization of parts, as hereinafter specified, and pointed out particularly in the claims.

In the drawings forming a part of the specification, Figure 1 is an isometrical perspective of a sub-base containing my invention, the upper section of the sub-base being removed. Fig. 2 is a like view having several of the valves removed. Fig. 3 is a cross-section having the upper section of the sub-base in position, the section being on dotted line *x x* of Fig. 1. Fig. 4 shows the common way of attaching the valves to the instrument.

B in the drawings represents the lower case of the sub-base, and C the upper case. *n* are the reed-ports, R the reeds, S the stem for operating or raising each valve, and F the padded buffer for arresting the valves in their upward action. All of said parts are old and in common use, therefore they need no special mention.

The valves Z are provided on the under face with the usual padding or leather covering, *f*, and through the rear end of each valve is a hole, V, the rear under corner of each valve being cut away at *e*.

t represents a series of metal screw-eyes. Their screw-threaded ends are anchored in the upper face, F, of the section B, along the rear edge. (See Figs. 1 and 2.)

D is a wooden stem or rod, which is about the same length as the case B, and is made sufficiently small to pass freely through the holes V of the valves and to fill snugly the eyes *a'* of the screw-eyes.

a represents a series of flexible or felt washers, through which the rod also passes.

To attach the valves Z to the case B, the rod D is passed through one of the end screw-eyes. Then a valve is placed on a rod, then a washer *a*, then another valve, and so on until the next screw-eye is reached. Then the rod is passed through said screw-eye, then valves and washers are placed on the rod alternately until the full set of valves is in position, the ends of the rod being supported by screw-eyes, as shown in Figs. 1 and 2. The intermediate screw-eyes prevent the rod D from sagging, and, like the washers, act as spacers between the valves, whereby the valves are prevented from striking or coming against each other as they are raised and lowered. The screw-eyes *t* should be inserted sufficiently to allow the rod D to pass through the eyes *a'* and through the holes V of the valves, and allow said valves to lie perfectly flat over the reed-ports *n*, to snugly close said ports; and the rod D should be sufficiently high to allow the rear end of each valve to swing under it and not bind on the face F of the case B when turning a valve over for repairs or to insert or remove a reed, as shown in Fig. 1.

In Fig. 4 I show the common valve H, which is hinged to the strips *h h* by means of fabric *i*, glued onto the end and lower face of the valve and then passed between the strips *h h*. Said strips are then tacked to the upper face of the case B. The fabric forms a hinge on which the valve swings. The fabric is liable to stretch unevenly, thereby causing the valve to swing to one side, and the manner of attach-

ing will not permit of the turning of the valve back of a vertical position, as shown in Fig. 4; and as the reeds R are placed in the rear side of the reed-ports, by inserting the edges of the reeds into vertical slots 2 2 the insertion and removal of the reeds is more easily accomplished by my invention, as the valves turn back out of the way while making such adjustments, as clearly shown in Fig. 1, the reeds being removed and inserted by the thumb and fingers.

The rod D, upon which the valves Z turn, is made of wood. By using wood the valves rise and fall without producing any unnatural sounds.

A wire or metal rod may be employed; but in such a case I find it will be necessary to cover the wire or the holes V of the valves with felting or like non-conducting material, as the dropping of the valves produces a ringing of the wire.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an organ, the series of valves pivotally mounted on a rod common to all and having the interposed washers or bearings, said rod being elevated in suitable supports, substantially as and for the purposes specified.

2. In an organ, the combination of the case B, the screw-eyes anchored therein, the series of valves having holes V, the wooden rod D, passing through said screw-eyes and valves, and the series of reed-ports and reeds, as and for the purposes set forth.

3. In an organ, the combination of the case B, having the reeds and reed-ports, the case C, the series of valves having holes at the rear end, the rod D, common to said valves, the interposed washers *a*, and series of supports *t*, as and for the purposes specified.

In testimony whereof I affix my signature in presence of two witnesses.

THEODORE S. CLINE.

Witnesses:

R. B. WHEELER,

B. F. WHEELER.