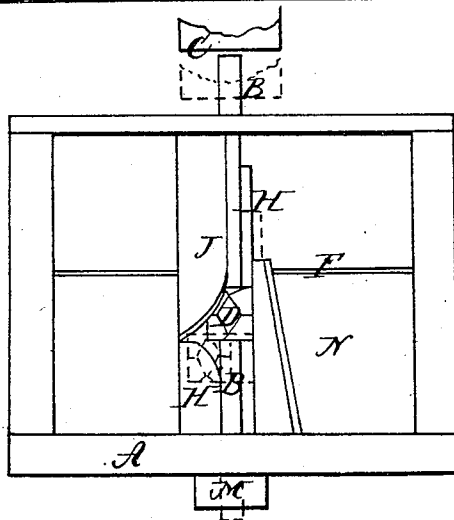
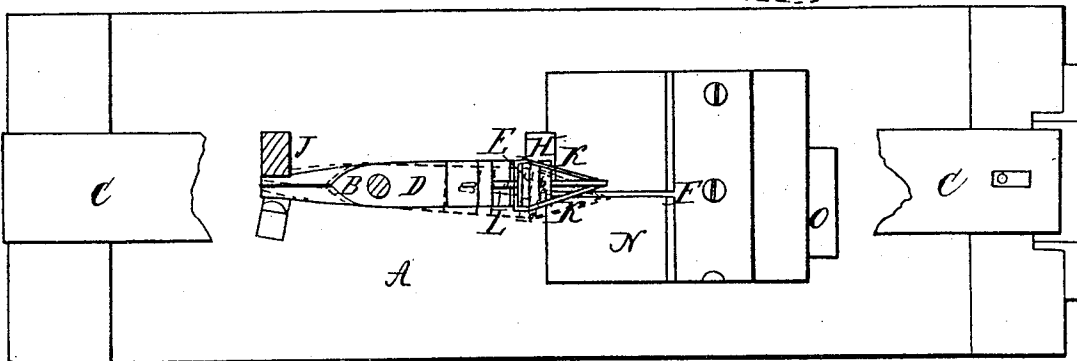
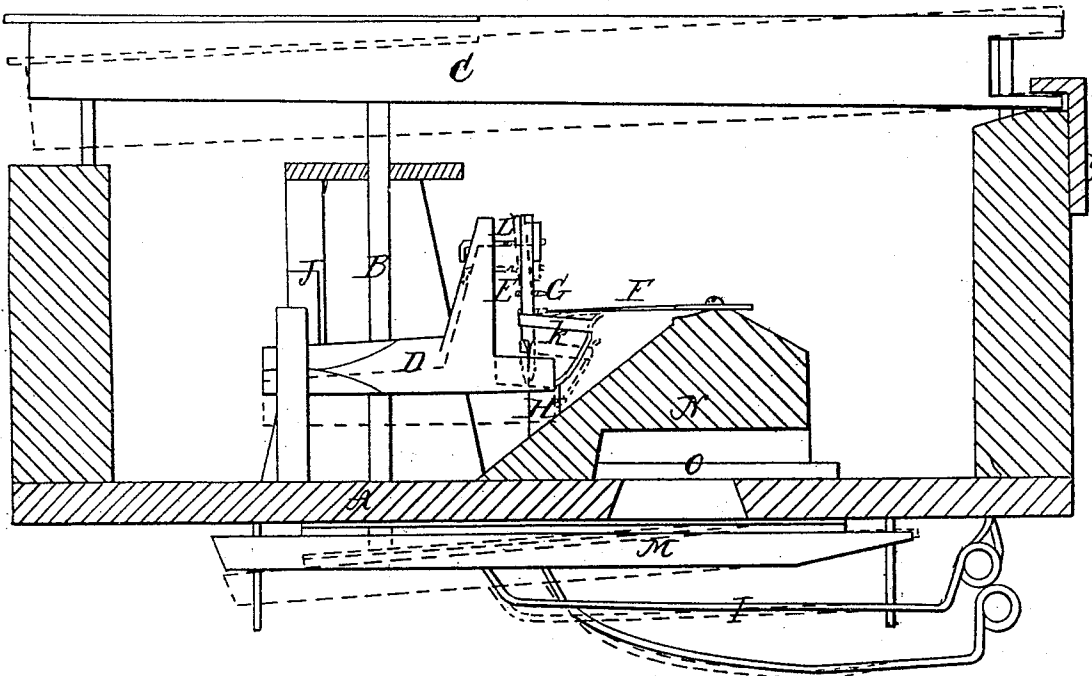


R. W. Carpenter.

Organ Attachment.

N^o 87,394.

Patented Mar. 2, 1869.



*Witnesses,
R. S. Turner
J. S. Brown.*

*Inventor,
Riley W. Carpenter
By his atty
R. D. Smith*

UNITED STATES PATENT OFFICE.

RILEY W. CARPENTER, OF CHICAGO, ILLINOIS.

ATTACHMENT TO REED-ORGANS.

Specification forming part of Letters Patent No. **87,394**, dated March 2, 1869.

To all whom it may concern:

Be it known that I, RILEY W. CARPENTER, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Attachment to Reed-Organs; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, showing one key and attachments, with my invention in position. Fig. 2 is a plan view of the same, the finger-key being removed. Fig. 3 is an elevation of the end of my attachment, to show its sidewise operation.

My invention consists in operating, with the key of a keyed musical instrument, like an organ, a jack, which, when so operated, strikes a steel free reed, and produces therefrom a piano-tone, which, blending with the tone of the wind reed or pipe, produces a beautiful and harmonious effect and increased quickness of response.

That others may fully understand the construction and operation of my invention, I will particularly describe it.

In this description I shall merely refer to those parts of a reed-organ which may be associated with this invention when used in connection with such an instrument; but it is quite apparent that my invention is not limited in its capacity to a connection with a reed-organ, as it may, with equal advantage, be employed in connection with a pipe-organ, or as a "dumb piano," for professional or amateur practice, or for the use of learners.

A is the foundation-board; B, the tracker-pin; and C is the key.

The carrier D is attached to the tracker-pin B, and moves up and down therewith. This carrier holds the jack or tripper E, which sounds the reed F when the key C is depressed.

The reeds F are made of steel, and resemble the teeth of a music-box comb, the only difference being that each tooth or reed F is made separate from the rest.

If this invention is employed in connection with a wind reed or pipe, each of the reeds F is tuned either in unison or accord with its respective principal; and, if desired, several of the reeds F, tuned as above, may be attached together, and simultaneously struck by the same key.

The jack E is provided with a small stud or pin, G, which engages with and depresses the free end of the reed F when the key C is depressed; and as said reed is depressed by the stud it becomes curved, as shown in Fig. 1, and the jack yields a little, sufficient to permit the pin G to slip off and liberate the end of the reed, the consequent vibration of which immediately causes it to emit a musical sound.

As the tracker-pin descends, one end of the carrier D engages with the stationary cam H, and is thereby pushed aside to a position shown by red lines in Fig. 2.

When the finger is removed from the key C the spring I, or its equivalent, elevates the key, tracker-pin, and carrier again to their normal position; but the carrier D having been moved aside, as above stated, the pin G does not touch the reed F during said return movement.

Before reaching its proper elevation the carrier engages with a reverse stationary cam, J, and its end is again moved sidewise, so as to bring the pin G again in the plane of the reed, so that when the key is again depressed the reed will be sounded again.

By the above description and a reference to the drawings it will be seen that the tripper or pin G descends in one plane and ascends in another, parallel thereto, so that it only engages with the free reed during its movement in one direction.

The tripper or pin G is set in a flexible jack, E, which yields backward when the reed is being depressed, so that the latter may have a more sure and easy release as the key is depressed. A slight spring, K, returns the jack to its position when the reed has been released, and the adjuster L regulates the proper position of the jack in reference to the length of the pin G or reed F.

The friction of the ends of the tracker-pin against its supports is sufficient to prevent the carrier from changing its position, except in obedience to the cams H and J.

Supposing the drawings to represent the attachment of this invention to a reed-organ, then M represents the valve, and N the reed-board, and O is a reed in its cell.

Having described my invention, what I claim as new is—

1. A musical instrument constructed with

reeds F, suspended in free air, as described, and sounded by means of keys C, substantially as set forth.

2. The tracker-pin B, carrier D, provided with the tripper-pin G, or their equivalents, and reeds F, combined and arranged substantially as described, in connection with the wind reeds or pipes of a musical instrument, and operated simultaneously and by the same keys as said wind reeds or pipes.

3. The combination of the tracker-pin B

and carrier D, secured together as and for the purpose set forth, with the stationary cams H and J, for the purpose described.

4. The combination and arrangement of the jack E with the tripper-pin G, spring K, and adjuster L, as and for the purpose described.

R. W. CARPENTER.

Witnesses:

F. J. BURDITT,
H. O. HEDGE.