

N. B. Jewett,
Tuning Musical Instruments,
No. 4,339, Patented Dec. 31, 1845.

Fig. 1.

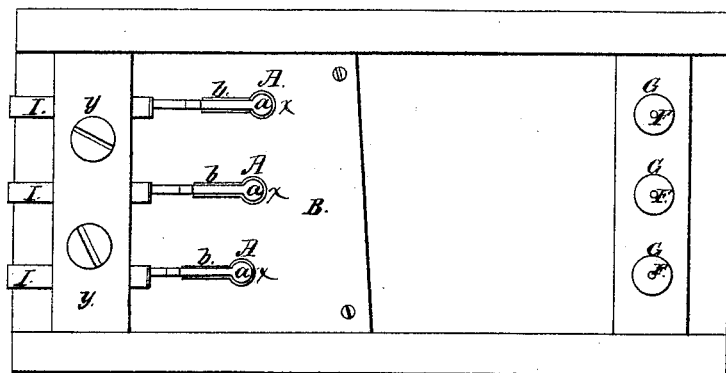


Fig. 2.

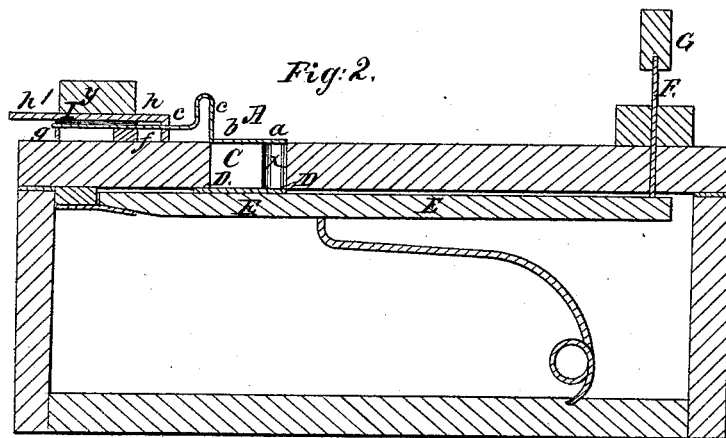
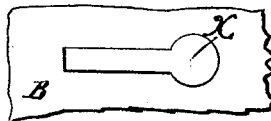


Fig. 3.



Fig. 4.



UNITED STATES PATENT OFFICE.

NATHAN B. JEWETT, OF WORCESTER, MASSACHUSETTS.

MUSICAL REED.

Specification of Letters Patent No. 4,339, dated December 31, 1845.

To all whom it may concern:

Be it known that I, NATHAN B. JEWETT, of Worcester, in the county of Worcester and State of Massachusetts, have made an invention of certain new and useful Improvements in Reed Musical Instruments; and I do hereby declare that the nature of the same and the manner in which they operate are fully described and represented in the following specification, accompanying drawings, letters, figures, and references thereof.

Figure 1 of the drawings aforementioned represents a top view of three of a series of reeds of a seraphine or aeolian attachment of a piano forte. Fig. 2 denotes a longitudinal section, taken through one of the reeds and exhibiting the action. Fig. 3 denotes an elevation of the front end of one of the tuning slides to be hereinafter described.

In the Figs. 1, 2 A A A denote the reeds, and B the reed plate. In Fig. 2 C exhibits the orifice below the reed A and made through the reed plate, for the passage of the air which sounds the said reed. D the valve by which the said orifice is closed or opened, to the passage of air. E is the lever of the said valve which is depressed by one of the keys of the instrument acting upon the head or button G, of a vertical wire E, and is elevated by a spring suitably disposed beneath it as seen in the drawing.

The first part of my invention (the object of which is to improve the tone and action of the reed) consists in enlarging the extreme or front end of each of the reeds or giving to it the shape of a small circular disk as seen at *a, a, a*, in Fig. 1, the said disk being made in its transverse diameter somewhat larger than the transverse breadth of the sounding lip (*b*) of the reed. The air passage C should be shaped, in horizontal section, so as to correspond with the shape of the reed, or should be enlarged at its front end as seen at (*x*) in Figs. 1, 2, and 4, the latter representing a portion of the reed plate and one of the air passages as it appears before the reed is applied to it. At the rear end of the orifice C the reed or stem thereof is bent upward a short distance above the reed plate, and at right angles to the lip (*b*) as seen at (*c*). It is next to be bent downward in the shape of an inverted letter U for about half the distance it was bent upward. Next it is bent

horizontally or in a plane parallel, or about parallel to that of the lip as seen in the drawing, the object of so bending the reed being hereinafter described.

I represents the tuning slide which consists of a strip of metal arranged with respect to the reed, as seen in the drawings, and having its front end bent down at right angles to the remainder of it, and a small opening *e*, just large enough to receive the stem of the reed, cut or formed in the front end as seen in Fig. 3. When the tuning slide is put in place or in its right position, with respect to the reed, its front end should rest upon the reed plate. The slide should be made in width about double that of the stem of the reed where the latter is placed in it. Each reed rests upon two small supports or abutments (*f g*) and has a small strip of metal or wedge (*h*) interposed between it, and the tuning slide as seen in Fig. 2. By moving the tuning slide toward or from the lip of the reed the operation of tuning the reed is effected. The reeds and tuning slides are kept in place by a bar (*y*) screwed down to the reed plate, or any other proper part of the instrument.

In the application of a tuning slide to a reed as the same has been heretofore effected—the bent or front end of the slide has been placed over the vibrating lip, and so as at the same time to rest upon the reed plate, and upper side of the said lip, the under side of the lip receiving no support from the end of the tuning slide. In consequence thereof when the reed vibrated it would do so against the end of the tuning slide, or would depart from and approach toward it, in such manner as often to create a very unpleasant sound, destructive in a great measure to the soft tones of the reed. By bending the stem of the reed and applying the tuning slide to it so as to support it on both sides in the manner as above described, the above difficulty is completely obviated. Besides, the above method of bending of the stem of the reed with respect to the vibrating lip very much improves its vibrating powers, while the addition of the disk (*a*) to the lip, and the corresponding change of shape of the air passage, through the reed plate, very materially improves the tone and action or sensibility of the reed.

I therefore claim—

1. The disk (*a*) upon the extremity of the lip of the reed, in combination with a cor-

responding enlargement (*x*) of the air passage of the reed plate as described.

2. Also bending the stem of the reed at an angle with the lip, and also so bending
5 the same and in the form of an inverted U the whole being substantially as above explained.

In testimony that the foregoing is a true

description of my invention and improvement I have hereto set my signature this 10 eighth day of September in the year eighteen hundred and forty five.

NATHAN B. JEWETT.

Witnesses:

WM. DICKERSON,
C. W. OLIVER.