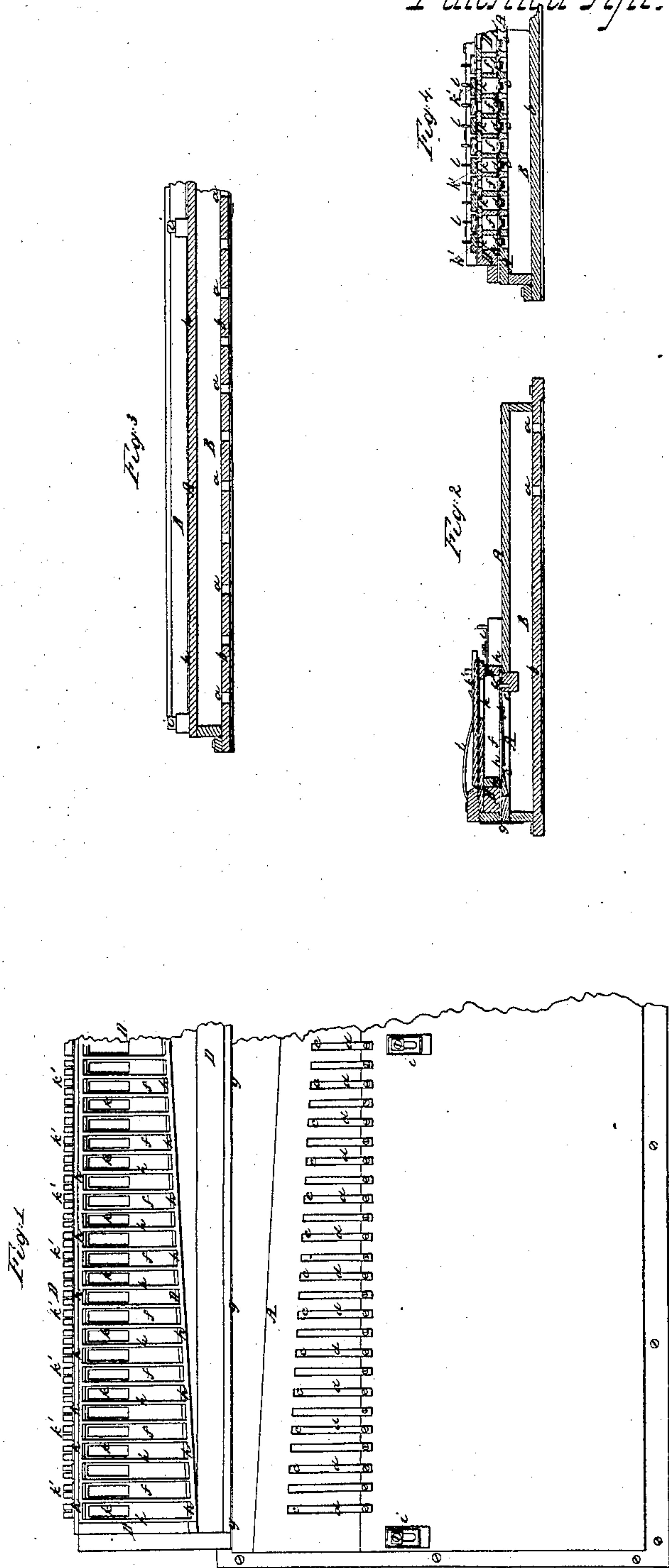


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*Patented Apr. 30, 1850.*



# UNITED STATES PATENT OFFICE.

CHARLES AUSTIN, OF CONCORD, NEW HAMPSHIRE.

## REED MUSICAL INSTRUMENT.

Specification of Letters Patent No. 7,317, dated April 30, 1850.

*To all whom it may concern:*

Be it known that I, CHARLES AUSTIN, of Concord, in the county of Merrimack and State of New Hampshire, have invented a  
5 new and useful improvement in reed musical instruments such as melodeons, seraphins, or others of like character, in which a sounding-board is employed; and I do hereby declare that the same is fully de-  
10 scribed and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1 denotes a top view of my improved sounding board  
15 and box, having the reeds applied directly to it, the said figure representing the series of valve chambers and valves, which are hinged to the rear edge of the upper surface of the sounding board, as turned back, for  
20 the purpose of uncovering and exhibiting the reeds. Fig. 2 is a transverse section of the above, the valve chamber in this figure being represented as turned down upon, and over the sounding board, and as covering  
25 the reed or reeds. Fig. 3 is a vertical and longitudinal section of the sounding box. Fig. 4 is a cross section of a few of the valve chambers, their reeds and the part of the sounding board to which the reeds are di-  
30 rectly applied.

The most important feature in my improved melodeon or reed instrument, consists in entirely dispensing with any metallic frame for supporting the reed, and the  
35 opening or passage within which it vibrates; the reed opening, by my improvement, being made directly through the wooden sounding board, and not in a frame or plate of brass or metal fastened thereto,  
40 in the usual manner. The reed is fastened or screwed directly to the wooden sounding board, and extends within and over the opening. By dispensing with the metal frame, heretofore arranged for sustaining  
45 the reed and its air passage, I am not only able to very much cheapen the cost of manufacturing an instrument, but I effect a very remarkable and highly important improvement in its tone; for I have discovered that  
50 when any metallic article is placed on a sounding board, the tone will be materially and injuriously affected by it; the probable cause of such injurious action being owing either to the difficulty of conducting sound

through the metal, or from an influence 55 which it exerts on the sounding board to prevent its proper vibration.

Another very material improvement or addition to the reed consists in providing it with a sounding board and box, the latter 60 producing on the sound emanating from the reed an effect very like that which is exerted on the strings of a violin or violoncello by the box over which they may be strained. The upper part of this box in the reed in- 65 strument, is its sounding board, the bottom of the box being a thin board made like the sounding board; the air which is blown upon the reed being condensed in the box, and suffered to flow between the sounding 70 board and the bottom of the box, its pressure of condensed state contributing, very materially, toward an improvement of the tone.

In Figs. 1 and 2, A represents the sound- 75 ing board, or top board of a close box or chamber B, the air from the bellows being admitted into the box, through a series of openings *a, a, a, &c.* formed through the front part of its bottom board *b*. 80

The reed openings *c, c, c, &c.* are rectangular apertures cut directly through the sounding board, the reeds *d, d, d, &c.* being respectively applied to such openings, and confined to the sounding board by screws 85 *e, e, e, &c.*

A rectangular frame D, or series of valve chambers *f, f, f &c.*, is hinged to the rear edge of the sounding board by a tight hinge or piece of leather, or other suitable sub- 90 stance *g*, the lower part of this frame, or that part of it, which rests directly on the sounding board, and between and around each of the reeds, being cushioned with leather, as seen at *h, h, h*, in order to pre- 95 vent a circulation of air from one valve chamber to the other. The frame D when turned down upon the sounding board, may be confined closely thereto, by means of small sliding bolts *i, i, i*, or other proper 100 contrivances.

Each valve chamber is provided with a valve opening *k*, made through its top, directly over, and on which, the valve *k'*, is placed; it being held down on, or against its 105 seat, by a spring *l*, and lifted by the key lever connected with it, in any proper manner.



What I claim as my invention or improvement in reed instruments, made with a sounding board, is,

To make the reed opening *c*, directly  
5 through the wooden sounding board, in  
combination with the applying of the reed  
directly to the same, and fastening it to the  
sounding board; instead of using any metal-  
lic frame for the opening and reed, as has  
10 been the customary method of making and  
constructing such instruments; my said in-

vention, by dispensing with the said metal  
frame, not only producing a remarkable im-  
provement in the tone, but a great saving in  
the cost of construction of an instrument. 15

In testimony whereof I have hereto set  
my signature, this twelfth day of February,  
A. D. 1850.

CHARLES AUSTIN.

Witnesses:

R. H. EDDY,  
CALEB EDDY.