

O. M. Coleman,

Piano Attachment,

N^o 3548

Patented Apr. 17, 1844.

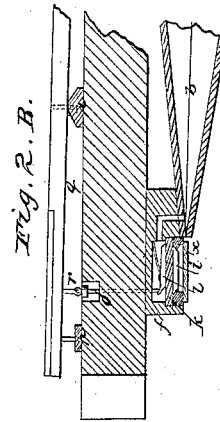
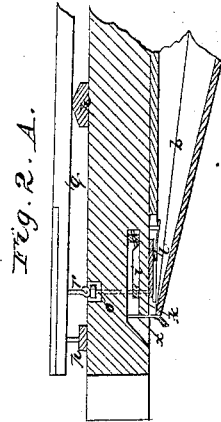
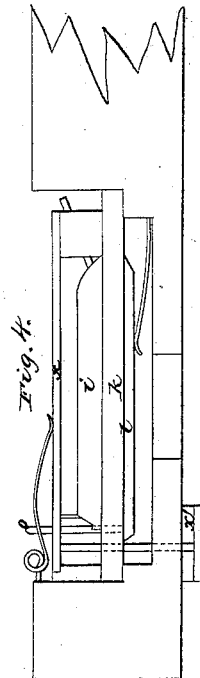
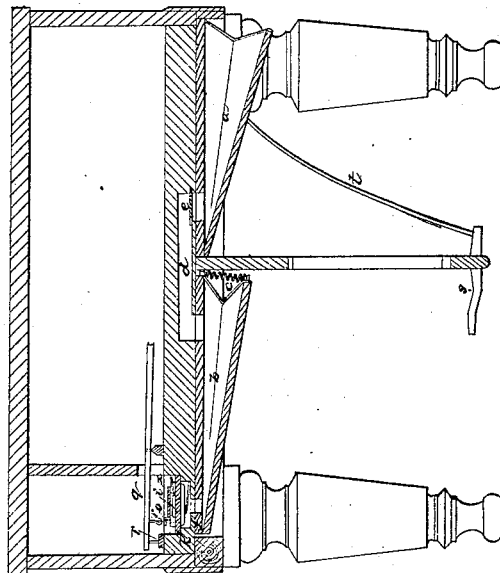


Fig. 1.



UNITED STATES PATENT OFFICE.

O. M. COLEMAN, OF PHILADELPHIA, PENNSYLVANIA.

PIANOFORTE.

Specification of Letters Patent No. 3,548, dated April 17, 1844.

To all whom it may concern:

Be it known that I, OBED M. COLEMAN, of the city and county of Philadelphia, Pennsylvania, have invented a new and improved instrument by combining metallic reeds with strings, which I denominate an "aelolian attachment" for pianofortes and other similar instruments; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification, in which—

Figure 1, is a vertical section; Fig. 2 variations of arrangement of reeds; Fig. 3 reed separated from the instrument.

The nature of my invention consists in combining with the piano, as ordinarily constructed, a series of reeds, in such a way, as that each key shall act upon a reed, by opening a wind passage thereto, at the same time the hammer strikes the strings and also, in the manner in which said reeds are combined therewith.

The construction is as follows: Underneath the bottom of the piano and covering nearly the whole of the rear half thereof, I place the "feeder" half (*a*) of the bellows, which is constructed similar to that of the organ, but the "rise" (*b*) instead of being placed over the feeder, is situated in front of it, and is kept closed by spiral springs (*c*); these two halves of the bellows are connected by wind trunks (*d*), the riser opening in the same direction as the feeder, the valve between them being placed in the trunk over the feeder at (*e*). The wind chest (*f*) is a long narrow box, situated under the key board, forward of the fulcrum of the keys, and above it the reeds are placed (lettered *i*); one is shown separately in Fig. 3 on the pallet board (*h*), which covers the wind chest, a communication with each reed being formed from the wind chest through the said board (*h*) which is stopped on the underside with a pallet (*l*) that is kept closed by a light spring; on the end of the pallet opposite the hinge, a stick down or wire (*o*) rests, that extends up through the pallet board (*h*) and bottom of the piano, to the level of the bottom of the rail (*p*) of the keys, where it ends in a button, the top of which is covered with cloth; from each of the keys (*q*) a wire (*r*) projects downward to meet the button above

named, the end being bent into an eye which rests thereon, so that when the key is pressed down, it shall carry with it the wire (*o*) and thus open the pallet to its corresponding reed; by this construction the keys can be removed without difficulty and the wire (*r*) serves to regulate the opening of the pallet by screwing into the key.

It will be obvious that the reeds may be placed in various positions, relatively to the other parts of the instrument. In Fig. 2^A the front half of the bellows is used for the wind chest, the pallet board being fastened directly onto the bellows, and a space being cut out of the bottom of the piano underneath to receive it; or it can be connected without cutting the bottom at all, holes being made through the bottom under the keys for the wires (*o*). If the reeds (*i*) are turned downward as Fig. 2^B the wire (*o*) rests on the tail of the pallet (*l*) and causes it to open upward. These are some of the modifications in applying my improvement to pianofortes all of which I deem substantially the same, and may be varied indefinitely to suit the instrument to which it is to be applied.

The feeder of the bellows is worked by a pedal (*s*) connected therewith by a rod (*t*). The feeder and riser can be placed one above the other, but in that case they disfigure the instrument by projecting below the bottom of it, and cannot be packed with the same facility for transportation. It will be obvious that any other form of bellows could be used to supply the wind, but for compactness I believe the form I have adopted to be the best. I have used two feeders each with a treadle, without any riser to be worked alternately, thus keeping up a steady blast and producing the swell with the foot, but I ordinarily produce the swell by putting a thin board over the reeds and forming a box which can be raised by means of a pedal. (This is shown at (*x'*) Fig. 4.) When the reeds are underneath I can use a sliding swell as at *x* Fig. 2^A.

What I claim as my invention and desire to secure by Letters Patent is—

1. The combination of the metallic reeds, with the pianoforte, or other similar stringed instrument, for the purposes herein described.

2. I claim the method of combining the

bellows with the pianoforte by placing the feeder and riser side by side so as to lie compactly under the bottom of the pianoforte without disfiguring its exterior.

5 3. I claim combining the action of the pianoforte with the pallets (*l*), of the reeds, by connecting them by means of the "stick downs" (*o*) and regulating wires (*r*) con-

structed and arranged substantially in the manner and for the purpose herein set forth.

OBED M. COLEMAN.

Witnesses:

J. J. GREENOUGH,
LAFAYETTE CALDWELL.