(No Model.)

C. BOZZA.

MUSICAL INSTRUMENT.

No. 480,315. Patented Aug. 9, 1892.

Fig. 1.

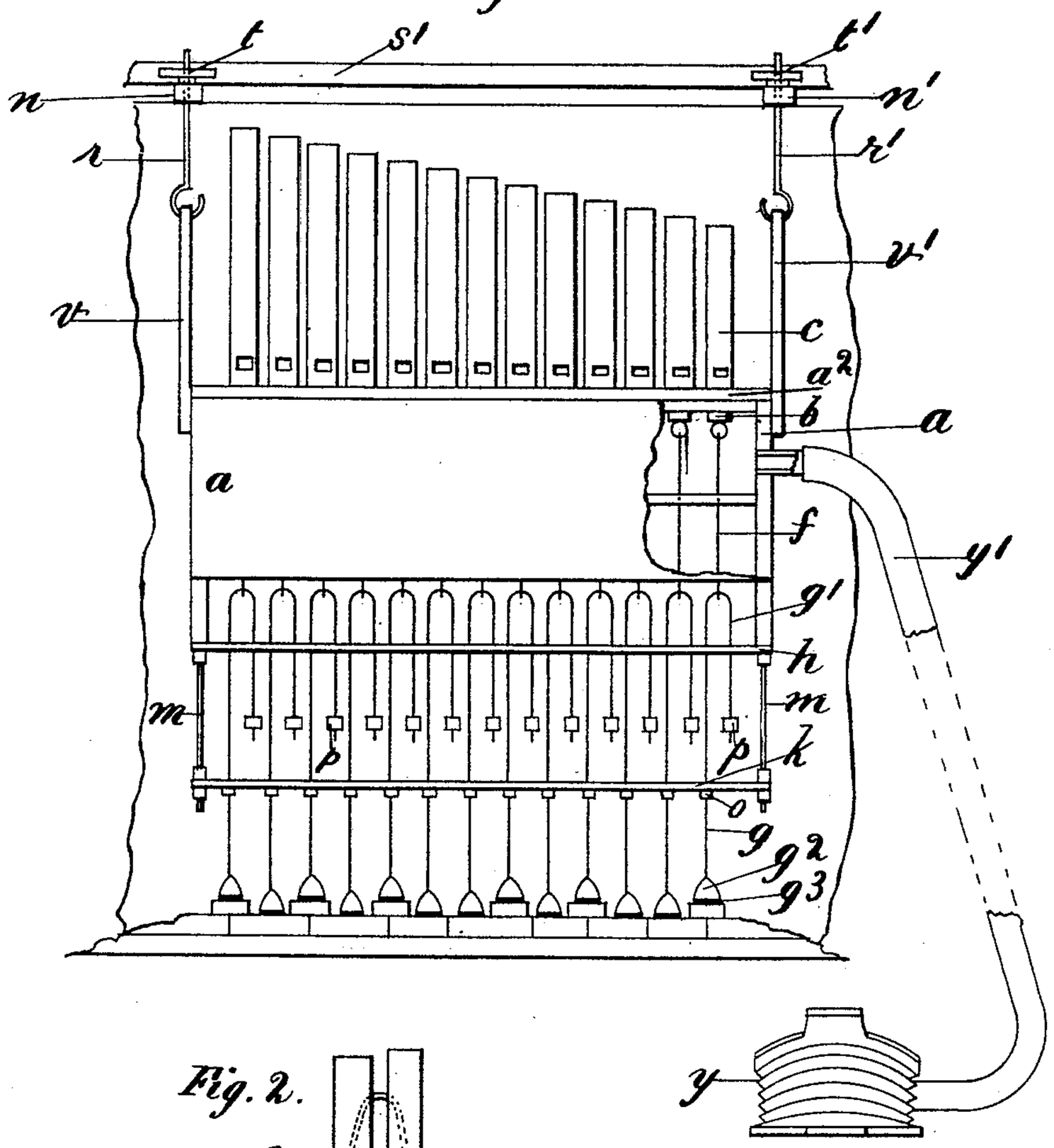
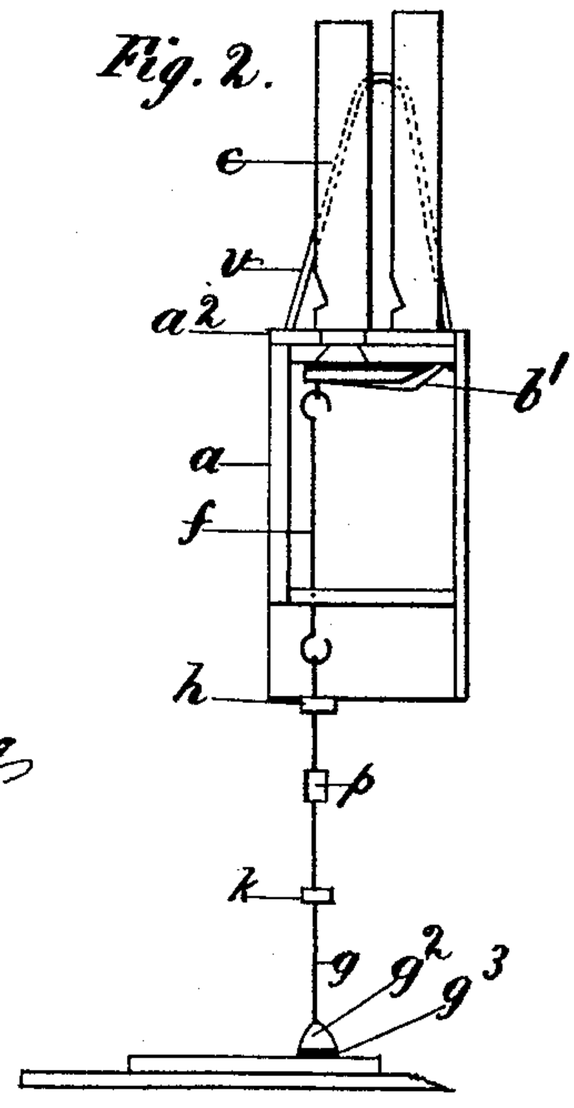


Fig. 2.



Witnesses.
J. Fleming
E. Ealon

Inventor
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per.
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His attorney.

UNITED STATES PATENT OFFICE.

CARLO BOZZA, OF LONDON, ENGLAND.

MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 480,315, dated August 9, 1892.

Application filed November 30, 1891. Serial No. 413,499. (No model.) Patented in England April 10, 1890, No. 5,468.

To all whom it may concern:

Be it known that I, CARLO BOZZA, a subject of the Queen of Great Britain, and a resident of Bayswater, London, in the county of Middlesex, England, have invented certain new and useful Improvements in Musical Instruments, (for which I have obtained a patent in Great Britain, No. 5,468, dated April 10, 1890,) of which the following is a full, clear, and exact specification.

The object of this invention is to connect one or more instruments with the piano, and by the operation of the keys of the piano the instrument so connected is played simultaneously by the depression of the keys of the piano at the option of the player.

Referring to the annexed drawings, Figure 1 shows the front elevation, partly in section, of a wind-instrument connected to the keyboard of a piano; Fig. 2, a vertical section through same.

a is the wind-chest of the instrument, the size of which depends on the number of octaves it is to have. It is made of wood lined with leather or cloth or some other suitable material. On the top of *a* there is a row of openings, which are closed by air-tight pallets controlled by spring *b'*. All the openings and pallets are of equal distance from each other, corresponding with the breadth of the keys of the piano to which the instrument is to be fixed. Over the openings of the pallets *b* are the pipes *c*, which may be placed in one or two or more rows. The pipes *c* may be placed immediately upon the top of the wind-chest *a;* but they are preferably placed on a cover a^2, which may be removed, which has the advantage that it may easily be replaced by another and furnished with another set of pipes. In this way wood pipes may be replaced by metal pipes or reeds for a change. The pallets *b* close the corresponding openings of the wind-chest *a*, on the lowest part of which is the link *g*, which rests on the corresponding key of the piano. The links *g* are kept in position by the strips *h* and *k*, secured to the wind-chest *a* by the rod *m*. The links *g* consist of pieces of wire bent to a U-like form in two unequal parts, of which the longer one *g* reaches down to the key of the piano, while the shorter one *g'* is weighted at *p*, whereby the link *g* falls when the key on which it rests is depressed. The link *g* carries a rest of wood g^2, which is provided with a piece of felt g^3, resting on the keyboard. The links *g* are regulated by screw-nuts *o*. Regulation may also be made by raising or lowering the strip *k*, through which the links *g* pass. When the links go down, they act on the wires *f* and open the pallets and keep them open as long as the links remain down, which takes place when the keys of the piano are played upon, and the wind-instrument gives corresponding tones to the piano.

To apply the wind-instrument to the piano, the links *g* have to be brought into connection with the corresponding keys of the piano. It may be fastened on the wooden arms *n n'* and the wires *v v'* at both sides of the wind-chest *a*. The arms *n n'* are to be connected to the lid of the piano *s'* by hooks *r r'* and the thumb-screws *t t'*. The wind-instrument may be placed higher or lower, according to the lengths of the links *g*. The wind is produced by the player by operating the bellows *y* by the foot of the player, the wind passing through the pipe *y'* to the wind-chest *a*. When the wind-instrument is thus fixed to a piano, the player opens the pallets of the wind-instrument by the keys of the piano. By blowing the bellows at the same time while he plays on the piano the corresponding tones of the wind-instrument sound as well. If he ceases blowing, he produces the tones of the piano alone.

With this description of my invention, what I claim, and desire to secure by Letters Patent, is—

In an instrument adapted to be attached to and operated by the keys of a piano or such like instrument, the links *g*, having weights, one end terminating in a rest g^2 and supported upon the keyboard of the piano, the other end of said links connected to the pallets controlled by a spring *b'*, which closes the communication to the pipes *c*, supplied with wind from the bellows *y* through pipe *y'* to the wind-chamber *a*.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of September, 1891.

CARLO BOZZA.

Witnesses:
JAMES FLEMING,
W. I. WEEKS.