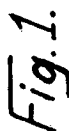


APPLICATION FILED JAN. 10, 1918.

Patented July 14, 1914.

2 SHEETS--SHEET 1.



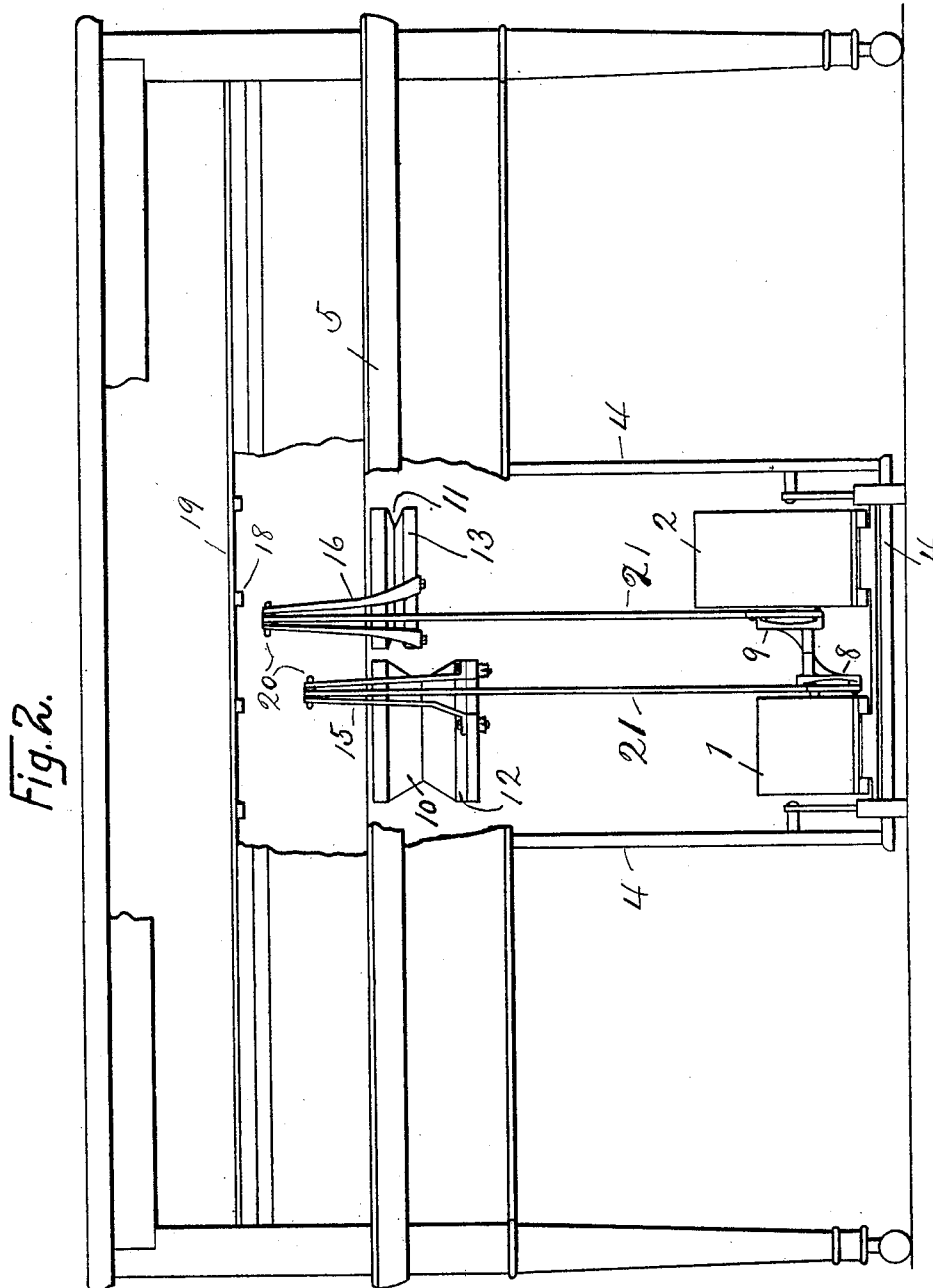
Witnesses:
Jacob A. Hollander
J. W. Macy.

Inventor:
Robt. A. Gally

R. A. GALLY.
MUSICAL INSTRUMENT PUMPER CONNECTION.
APPLICATION FILED JAN. 10, 1913.

1,103,872.

Patented July 14, 1914.
2 SHEETS-SHEET 2.



Witnesses:
Jacob A. Hollander
J. M. Macy.

Inventor:
Robt. A. Gally.

UNITED STATES PATENT OFFICE.

ROBERT A. GALLY, OF CINCINNATI, OHIO, ASSIGNOR TO THE BALDWIN COMPANY, OF CINCINNATI, OHIO.

MUSICAL-INSTRUMENT PUMPER CONNECTION.

1,103,872.

Specification of Letters Patent.

Patented July 14, 1914.

Application filed January 10, 1913. Serial No. 741,181.

To all whom it may concern:

Be it known that I, ROBERT A. GALLY, a citizen of the United States, residing at Cincinnati, in the county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Musical-Instrument Pumper Connections, of which the following is a specification.

Former attempts to provide pumper pedals for actuating bellows pumpers at some distance from such pedals have not been as compact, simple and direct acting as the improved structure now shown.

In the drawings Figure 1 is a side view at the right of a musical instrument embodying the present invention, and Fig. 2 a front view of the same partly cut away to show the parts adjacent line A, B, of Fig. 1.

Pumper pedals 1 and 2 are positioned on a bearing frame 3 carried by a casing or support 4 attached to the keybed or table 5, underneath said keybed 5, and intermediate the front and rear dimensions of said keybed. At the rear of keybed 5 and above and to the rear of the pedals 1 and 2 and their links 6 and 7 and cranks 8 and 9, are a pair of substantially horizontal pumper bellows 10 and 11, having their moving boards 12 and 13 under side of said pumpers 10 and 11, preferably with the hinges 14 at the rear of said pumpers. At the front of each said moving board 12 and 13 is an arm or extension 15 or 16, rigidly attached to and rising above its moving board 12 or 13, and usually extending above the entire pumper 10 or 11 and well up above the keybed and the lower line of the case braces 17, but clearing under the ribs 18 of sound board 19.

From the bearings 20 at the top of pumper arms 15 and 16 are connecting rods or pitmen 21 connecting downwardly and forwardly on a slant to the ends 22 of cranks 8 and 9. These rods or pitmen 21 are given reciprocating longitudinal action from the motion of the pedals 1 and 2, thus operating the pumper bellows 10 and 11. The arms 15 and 16 have their upper ends and bearings 20 so much above the level of the pumper hinges 14 that the motion of these bearings 20 is much more in line with that of the motion of pitmen 21 than if the bearings 20 were at the level of the moving boards 12 and 13.

The use of bell cranks combined with pumper pedals, and connections from said

cranks to pumper bellows above them, is not claimed herein, such devices being included in applicant's prior pending application #702,726, filed June 10th, 1912; nor is the present invention limited to the use of bell cranks in its combination, but,

What I claim as my invention is:

1. A pumper bellows in substantially horizontal position and having a moving board on its under side, and an arm having two vertical parts with a space between them and joined at their upper ends, and having the lower ends of said two parts rigidly attached to said moving board, said two part arm extended above said pumper, and moving with said moving board; and a pumper pedal action lower than said pumper bellows, with a longitudinally reciprocating pitman connected from said pedal action to the extended part of said arm between its two vertical parts and there attached to said arm at the upper part of said arm.

2. A musical instrument having a keybed, a pumper bellows in substantially horizontal position rearward of said keybed and approximately in the same plane and having a moving board on its under side and an arm rigidly attached to said moving board, extended above said pumper and keybed, and moving with said moving board; and a pumper pedal action beneath said keybed and forward of said pumper bellows, with an inclined position longitudinally reciprocating unitary pitman connected from said pedal action to the extended part of said arm.

3. A pumper bellows in substantially horizontal position and having a moving board on its under side, and an arm rigidly attached to said moving board, extended above said pumper, and moving with said moving board; and a pumper pedal action lower than said pumper bellows, with a longitudinally reciprocating pitman connected from said pedal action to the extended part of said arm, said pedal action including a bellcrank and pedal, and a link from the pedal to the bellcrank, the bellcrank and pitman being connected together, said bell-crank being entirely below the uppermost part of said pedal.

4. A musical instrument having a keybed, a pumper bellows in substantially horizontal position rearward of said keybed and approximately in the same plane and having a moving board on its under side and an arm

rigidly attached to said moving board, extended above said pumper and keybed, and moving with said moving board; and a pumper pedal action beneath said keybed and forward of said pumper bellows, with an inclined position longitudinally reciprocating pitman connected from said pedal action to the extended part of said arm; said pedal action including a bellcrank and pedal, and a link from the pedal to the bellcrank, the bellcrank and pitman being connected together, said bell-crank being entirely below the uppermost part of said pedal.

5. A musical instrument having a keybed, a pumper bellows rearward of said keybed and having a moving member of said pumper to the rear of said keybed, and a pumper pedal action beneath said keybed and forward of said pumper bellows, and an inclined position longitudinally reciprocating inflexible and unitary pitman connected from said pedal action to said moving member of said pumper.

6. A musical instrument having a keybed,

a horizontal pumper bellows rearward of said keybed and having a moving member of said pumper to the rear of said keybed, and a pumper pedal action beneath said keybed and forward of said pumper bellows, and an inclined position longitudinally reciprocating inflexible and unitary pitman connected from said pedal action to said moving member of said pumper.

7. A musical instrument having a keybed, a horizontal pumper bellows rearward of said keybed and in substantially the same plane and having a moving member of said pumper to the rear of said keybed, and a pumper pedal action beneath said keybed and forward of said pumper bellows, with an inclined position longitudinally reciprocating inflexible and unitary pitman connected from said pedal action to said moving member of said pumper.

ROBT. A. GALLY.

Witnesses:

S. M. WAMACKS,

J. W. MACY.