

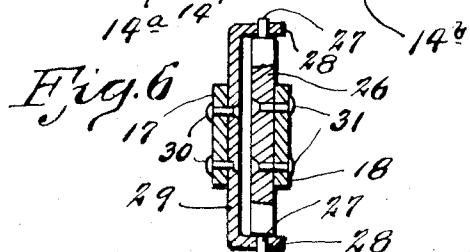
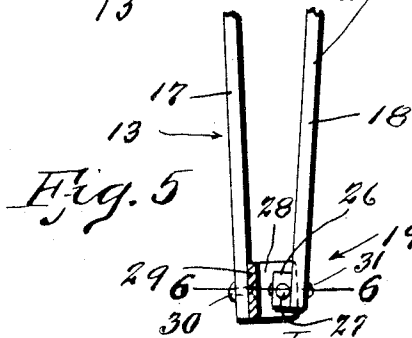
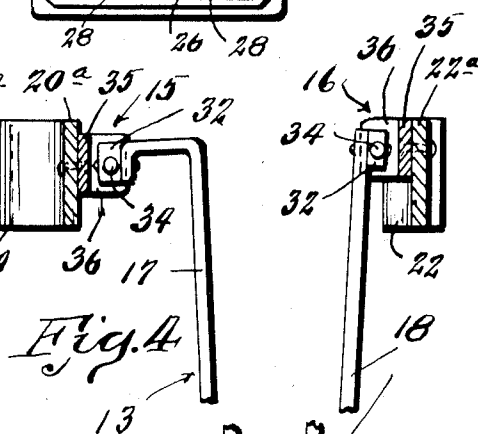
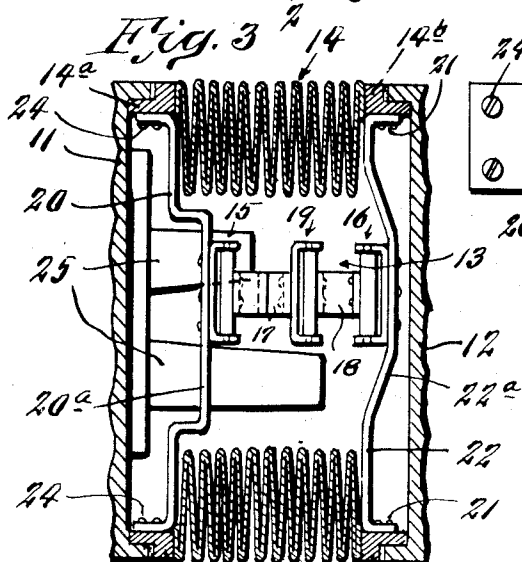
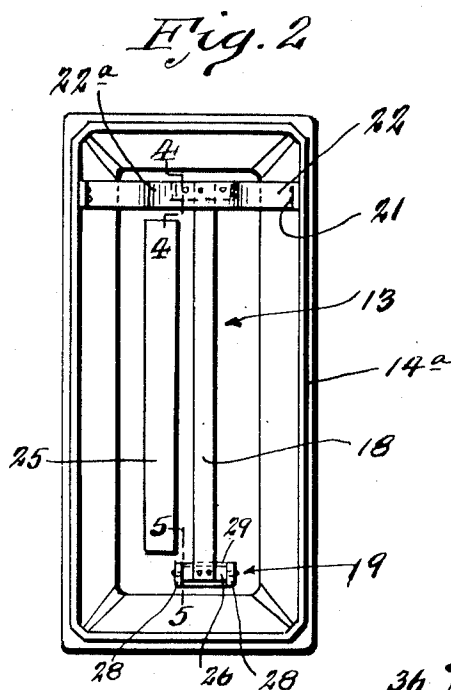
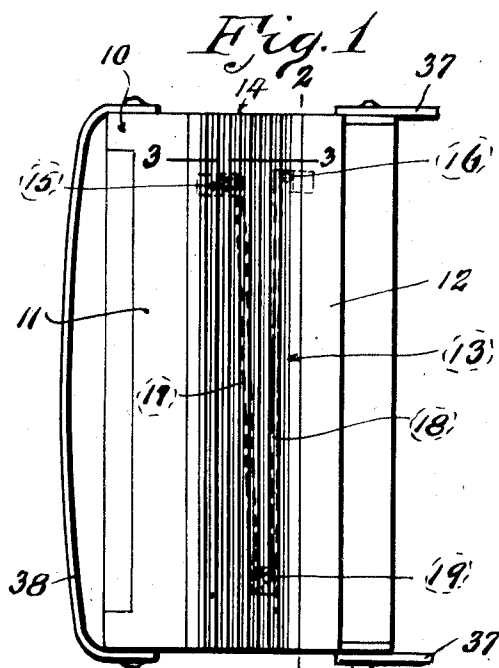
July 3, 1934.

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1,965,349

ACCORDION

Filed Jan. 30, 1933



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UNITED STATES PATENT OFFICE

1,965,349

ACCORDION

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Application January 30, 1933, Serial No. 654,211

6 Claims. (Cl. 84—376)

This invention relates generally to accordions and more particularly to a stabilizer for the bellows thereof.

The bellows of an accordion is flexible so as to permit expansion and contraction thereof during the playing of the instrument. The bellows is operated by the pressure and pull applied to one end of the instrument while the other end is held substantially stationary. It is important that this pressure be so applied as to cause uniform contraction of the bellows so that the latter is contracted in a vertical plane and not distorted in a horizontal plane or caused to assume curved position. As the bellows is flexible, it can be easily distorted or flexed along a horizontally curved line if the pressure is not applied evenly to the ends of the instrument or the latter is not held properly. This distortion of the bellows on the compression stroke not only impairs the playing qualities but is liable to cause injury to said bellows.

It is one of the objects of the present invention to provide a stabilizer for accordions which prevents the curving or distortion of the bellows on a horizontal plane without interfering, however, with the normal operation of the bellows and without requiring extra pressure to operate the instrument.

Other objects of the invention are to provide a stabilizer comprising two pivotally interengaged bars which are disposed within the bellows and the ends of which are pivotally anchored adjacent to the respective keyboard sections of the accordion whereby said stabilizer is free to operate in a plane of the normal operating movements of the accordion but is held against lateral movement, thereby preventing displacement of the end sections relatively to each other and the consequent distortion of the bellows.

Additional objects of the invention are to provide a stabilizer for accordions which is of simple construction, light in weight and which is so constructed that it does not interfere with or impede the operating movement of the accordion but which prevents abnormal or lateral distortion thereof and which is inexpensive to manufacture and can be readily applied to accordions already in use.

With these and other objects in view, my invention consists in certain novel features of construction and arrangement of parts, hereinafter more fully described and claimed, and illustrated in the accompanying drawing, in which—

Figure 1 is a side elevational view of an ac-

cordion looking against the inner or player's side of the instrument.

Figure 2 is a vertical cross section taken on line 2—2 of Figure 1.

Figure 3 is an enlarged horizontal cross section taken on line 3—3 of Figure 1.

Figure 4 is an enlarged detail cross section taken on line 4—4 of Figure 2.

Figure 5 is an enlarged detail cross section taken on line 5—5 of Figure 2.

Figure 6 is an enlarged cross section taken on line 6—6 of Figure 5.

Referring by numerals to the accompanying drawing, 10 indicates an accordion comprising a bass keyboard section 11, a treble keyboard section 12, and a bellows 14, all of which may be of any standard construction.

The stabilizer 13 is located within said bellows and is secured at one end to keyboard section 11, as indicated at 15, and at the other end to keyboard section 12, as indicated at 16.

This stabilizer 13 consists of a pair of bars 17 and 18 arranged within the bellows 14 longitudinally thereof substantially in V-shape formation, the adjacent ends of said bars being pivotally interengaged as indicated at 19 and the other ends being pivotally attached, as indicated at 15 and 16.

Preferably pivot 15 of bar 17 is mounted on a cross bar 20 which extends transversely of said bars 17 and 18, and has its ends secured to the corresponding end frame 14a of bellows 14, as indicated at 24. The pivot 16 of bar 18 is pivotally mounted on a transverse bar 22 which is similarly arranged adjacent to the other end of said bellows and has its ends secured to the end frame 14b of said bellows, as indicated at 21. The transverse bars 20 and 22 are so arranged that proper clearance exists between them and the bellows and they at no time interfere with the operating movement of the latter.

The stabilizer bars 17 and 18 are comparatively narrow and are arranged in spaced relation with the keyboard mechanism 25 and with said bellows 14 so that there is no danger of interference therebetween. The location of transverse bars 20 and 22 and the length of stabilizer bars 17 and 18 are such that said bars 17 and 18 terminate short of the inner edges of the upper and lower sections of said bellows. Preferably the transverse bars 20 and 22 are offset to one side, as indicated, respectively, at 20a and 22a, in order to space bars 17 and 18 suitably from said keyboard mechanism 25.

The pivot 19 of the interengaged ends of said

bars 17 and 18 comprises a horizontally disposed member 26 having its ends formed with pins or pivots 27 which have bearings in ears or lugs 28 formed integral with member 29. Member 29 is disposed parallel with member 26 and ears 28 are bent laterally to receive pins 27. The lower end of bar 17 is secured to member 29, as indicated at 30, and the lower end of bar 18 is secured to member 26, as indicated at 31. Members 26 and 29 which are horizontally disposed transversely of bars 17 and 18 are of substantial lengths so as to dispose the pivotal points of members 27 and 28 a considerable distance from the central axis of bars 17 and 18 and prevent play or loose movement of said bars laterally.

The pivots 15 and 16 are of similar construction, each comprising a movable member 32 having longitudinally projecting pins 34 and fixed members 35 having lateral bearings or lugs 36 in which said pins 34 are journaled.

Members 32 are secured to the upper ends of respective equalizer bars 17 and 18, and members 35 are secured to the corresponding transverse bars 20 and 22. Members 35 being fixed to bars 17 and 18 are stationary and support members 32 which are pivotally mounted therein and form pivotal supports for equalizer bars 17 and 18.

The instrument is supported in the usual manner by means of strap 37, the ends of which are shown in Figure 1. A strap 38 is attached to the opposite section and the player inserts his left hand through said strap and operates the instrument.

The stabilizer does not offer any resistance to the movement of the instrument in its normal operating plane, which is vertically disposed. However, any attempt, whether accidental or otherwise, to operate the instrument so that the bellows is twisted or distorted in a horizontal plane will be successfully resisted by said stabilizing means. Thus the bellows is protected against improper operation and distortion and consequent injury, or breakage, of the bellows.

As the stabilizer is concealed within the bellows, it does not detract from the appearance of the accordion.

The stabilizer parts are preferably made of duralumin, or other alloy which is light in weight and is of the desired strength. There is very little friction in the stabilizer, and consequently the power required to operate an accordion equipped with my stabilizing means is not greater than that necessary to operate the present accordion.

The stabilizer can be economically manufactured and can be easily applied to existing accordions.

I claim:

1. An accordion comprising in combination a bellows, keyboard sections fixed to the ends thereof, and a pair of arms arranged in said bellows

and pivotally interengaged at one of their ends, the outer end of each arm being pivotally anchored on said bellows adjacent to the respective keyboard sections, the pivotal connections of said arms being disposed horizontally and at right angle to the line of movement of said accordion to permit movement of said accordion in one plane only.

2. An accordion comprising in combination a bellows, a keyboard section secured to each end thereof, and a stabilizing mechanism in said bellows, said mechanism comprising a pair of arms pivotally connected together at one of their ends and having their outer ends pivotally anchored to the respective ends of said bellows.

3. An accordion comprising in combination a bellows, a frame fixed to each end thereof, a keyboard section secured to each end thereof, and a pair of bars arranged in said bellows, said bars being pivotally connected together at one of their ends and having their opposite ends pivotally anchored to the respective frames, the pivotal connections of said bars being so arranged in said bellows as to permit operation of the accordion in the normal playing plane but hold said accordion against movement out of said plane.

4. In an accordion, the combination of a bellows, a rigid end frame secured to each end thereof, a pair of bars disposed in said bellows in V-shape relationship to each other and having their adjacent ends pivotally interengaged, and means for pivotally anchoring the opposite end of each bar to the respective end frame, all of said pivotal connections being disposed in the plane of normal playing movement of said accordion, whereby said bars are free to move in parallelism with said plane but are held against lateral displacement.

5. A stabilizing mechanism for accordions comprising a pair of bars disposed obliquely to each other and pivotally connected together at their adjacent ends, and a pivotal mounting for the opposite end of each bar, each of said pivotal mountings being adapted to have fixed relationship with the respective end of said bellows.

6. A stabilizing mechanism for accordions comprising in combination, a bellows, an end frame fixed to each end thereof, a pair of bars in said bellows and obliquely disposed relatively to each other, pivotal connections for pivotally interengaging the adjacent ends of said bars, and a pivot mounting for the opposite end of each bar, said pivot mounting being attached to the corresponding end frame of said bellows, said pivotal mountings being disposed at right angles to the line of movement of said accordion to permit normal operating movement of said bellows and prevent movement thereof out of parallelism with said normal operating movement.

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