

Dec. 13, 1932.

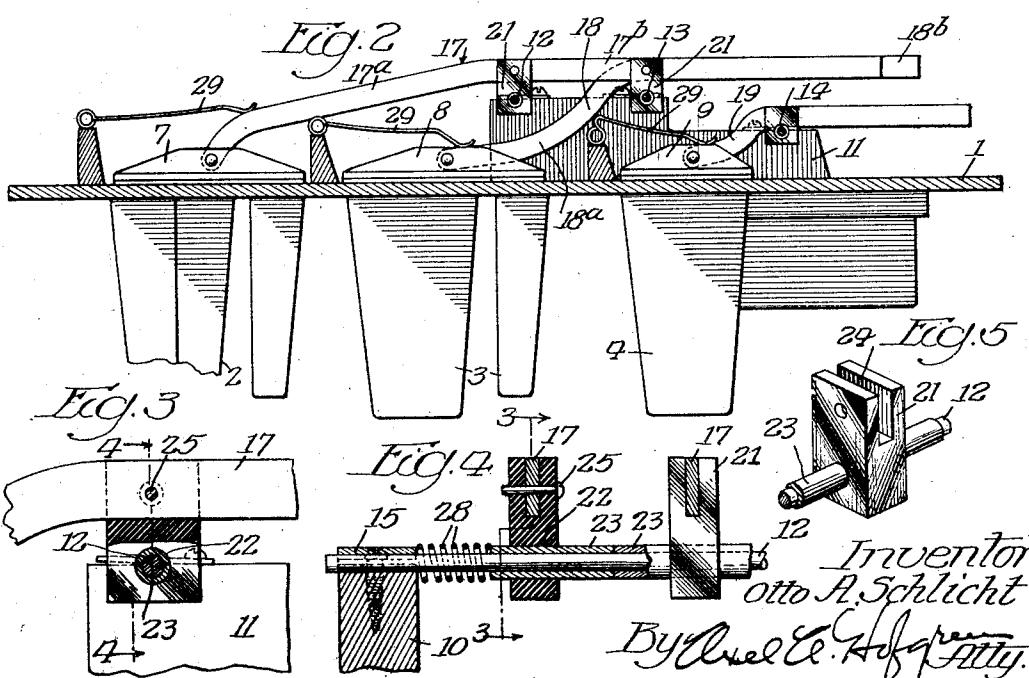
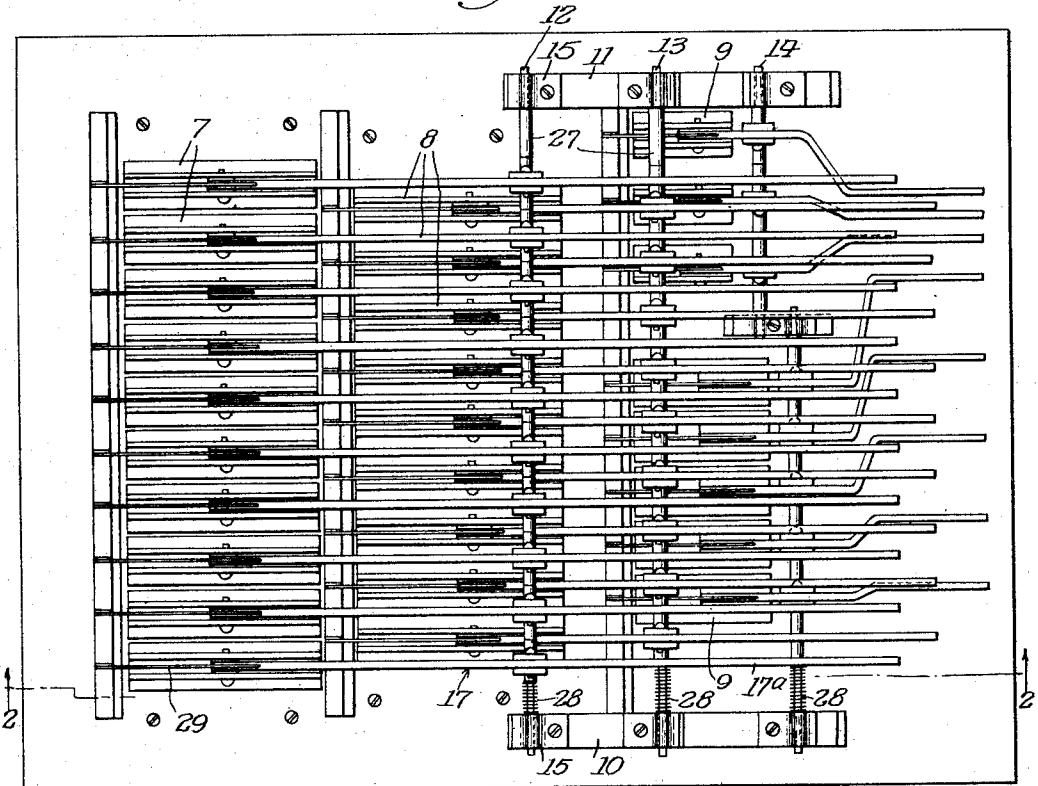
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1,890,830

## ACTION FOR A CONCERTINA

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Fig. 1



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# UNITED STATES PATENT OFFICE

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## ACTION FOR A CONCERTINA

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The invention relates to improvements in the action for an instrument of the concertina type, it being an object of the invention to provide a new and improved action for such 5 an instrument which is simple in construction and quiet and fast in operation.

Another object is to provide such an action in which the valve actuating bars are pivotally mounted by means which serve as noise insulators between the parts.

A further object is to provide an improved action in which the actuating bars are effectively mounted in proper alinement and in which two sets of levers, mounted on adjacent 15 pivot rods positioned equidistantly from the key-board, are supported so as to permit the use of levers of simple form with straight key operated arms which may be manufactured and assembled at a low cost.

20 Another object is to provide an action in which a fibre or other non-metallic member is provided intermediate the bars and their pivot bushings so as to prevent any metallic ring being transmitted therethrough, and for 25 the purpose of displacing the bar away from the bushing to provide clearance for a set of long bars having substantially straight key operated arms.

Other objects will become readily apparent 30 from the following detailed description taken in connection with the accompanying drawing, in which:

Fig. 1 is a plan view of an action for a concertina embodying a preferred form of the 35 invention.

Fig. 2 is a section along the line 2—2 of Fig. 1.

Fig. 3 is an enlarged fragmentary section along the line 3—3 of Fig. 4.

40 Fig. 4 is an enlarged fragmentary section along the line 4—4 of Fig. 3.

Fig. 5 is a perspective view of a pivoted mounting member for a bar.

For purposes of disclosure I have illustrated in the drawing and shall hereinafter describe in detail a preferred embodiment of the invention as incorporated in an action for a concertina, with the understanding that I do not intend to limit the invention to the particular instrument or construction shown, it

being contemplated that various changes and adaptations may be made by those skilled in the art without departing from the spirit and scope of the appended claims.

Referring to the drawing, 1 represents an 55 action supporting plate or key-board which forms one wall of the reed chamber of a concertina. This key-board carries a plurality of reed boxes 2, 3 and 4 on its inner side and has a plurality of apertures therein which 60 are positioned in parallel rows and are arranged to be controlled by rows of valves 7, 8 and 9. A pair of laterally spaced brackets 10 and 11 are secured to the key-board and extend longitudinally thereof, and support a 65 plurality of pivot rods 12, 13 and 14 which extend therebetween. These rods are suitably secured to the brackets by means of holding devices 15, the rods 12 and 13 being preferably spaced an equal distance from the key-board. 70

In the preferred form of the invention sets of key operated bars 17, 18 and 19 are provided respectively, for supporting and operating the valves 7, 8 and 9. As illustrated most clearly in Fig. 2 these bars are pivotally mounted on the rods 12, 13 and 14, long bars 17 on the rod 12 and the short bars 18 on the rod 13. Preferably the bars are mounted on the pivot rods by means of fibre or other non-metallic connecting members or blocks 21 so as to space the bars from the rods and to prevent noise being transmitted therethrough. As illustrated herein these members are provided with bores 22 into which relatively long sleeve bushings 23 are inserted with a pressed fit, the bushings being mounted on the pivot rods. In their free ends each member 21 is provided with a recess 24 in which an operating bar is positioned, the bar being secured to the block by means of a suitable pin 25.

As will be readily apparent from Figs. 3 to 5, the bars may thus be secured rigidly to the free ends of the members 21 and are effectively held in proper alinement by means of the relatively long bushings 23 which form snug fitting, yet readily rotatable, bearing supports. Preferably the bushings are of sufficient length so that adjacent bushings abut each other as shown in Fig. 1, a spacing sleeve 100

27 being provided at one end of the pivot rod and a coil spring 28 at the other end so as to maintain the bars in their proper positions.

5 The provision of non-metallic members and long sleeve bushings for mounting the bars serves to eliminate noise during the operation of the action by reducing wear and looseness and avoiding direct metallic contact between the bars and rods. The long sleeve bushings are also effective to maintain the alinement of the bars. Furthermore by inserting the members 21 so as to position the intermediate portions of the bars above the pivot rods, the bars may be made of a simple shape because of the clearance thereby afforded between the long bars 17 and the pivot rod 13. Thus, as illustrated in Fig. 2, the left hand ends 17<sup>a</sup> of the bars 17 are curved downwardly from the pivot rod 12 and are pivotally secured to the valves 7, the valves being normally held in their closed positions by means of springs 29. The right hand or key operated ends 17<sup>b</sup> of the bars are straight and pass an appreciable distance above the rod 13, ample clearance being provided between the bars 17 and rod 13 to permit of the proper operation of the action. The left hand ends 18<sup>a</sup> of the bars 18 are also curved downwardly and are pivotally secured to the valves 8, the key operated ends 18<sup>a</sup> thereof also being straight and on a level with the bars 17. The bars are preferably made of a light material such as aluminum with the result that an extremely fast and noiseless operation of the action is secured.

I claim as my invention:

1. An action for musical instruments of the concertina type having, in combination, a key-board carrying two parallel rows of reed boxes, two parallel rows of valves for controlling the apertures to said reed boxes, a pair of parallel pivot rods supported at substantially the same distance from the key-board, sets of long and short valve supporting and actuating bars, non-metallic members extending downwardly from said bars and carrying sleeve bushings mounted on said rods, the set of short bars being mounted on the rod nearer the key operated ends of the bars, and the longer bars having substantially straight key operated ends passing above the pivot rod for the shorter bars and spaced therefrom by said members.
- 40 2. An action for musical instruments of the concertina type having, in combination, a key-board carrying two parallel rows of reed boxes, two parallel rows of valves for controlling the apertures to said reed boxes, a pair of parallel pivot rods supported at substantially the same distance from the key-board, two sets of long and short valve supporting and actuating bars, recessed fibre members secured to said bars, metal bushings 60 extending through bores in said members and

70 mounted on said rods, the set of short bars being mounted on the rod nearer the key operated ends of the bars, and the longer bars having substantially straight key operated ends passing above the pivot rod for the shorter bars and spaced therefrom by said members.

3. In an action for musical instruments of the concertina type, in combination with a pivot rod, a plurality of valve supporting and operating bars, fibre connecting members secured to said bars and having recesses in which the bars fit, sleeve bushings pressed through bores in said members out of contact with said bars and mounted on said rods so as to pivotally support the bars, the bushings of adjacent connecting members abutting each other to space the bars longitudinally of the rod, and resilient means for maintaining said bushings in abutment with each other during operation.

4. In an action for musical instruments of the concertina type, in combination with a pivot rod, a plurality of valve supporting and operating bars, non-metallic blocks secured rigidly to said bars, and sleeve bushings pressed through bores in said members out of contact with said bars and mounted on said rods so as to pivotally support the bars.

5. An action for instruments of the concertina type having, in combination with a pivot rod, a plurality of valve supporting and operating mechanisms comprising parallel bars extending across and spaced from the rod, and means including fibre members connecting the bars pivotally to the rod.

6. An action for instruments of the concertina type having, in combination, a pivot rod, and a plurality of valve supporting and operating mechanisms comprising parallel bars extending across and spaced from the rod, non-metallic members secured to the bars, and bearing sleeves extending through bores in said members and pivotally mounted on the rod.

7. In an action for a concertina, the combination with a pivot rod, of a valve actuating bar of aluminum, a fibre block having a recess into which the bar fits, secured to the bar, and a bearing bushing extending through said fibre block and supporting the bar on said rod.

8. An action for instruments of the concertina type having, in combination, a key-board, a pair of pivot rods supported equidistantly from said board, sets of valve actuating bars having substantially straight key operated ends, and non-metallic members pivotally mounted on said rods and connected to said bars to space the bars from the rods.

In testimony whereof I have hereunto affixed my signature.

OTTO A. SCHLICHT.