

W. F. BAYER.
 AUTOMATIC MUSICAL INSTRUMENT.
 APPLICATION FILED FEB. 15, 1908.

994,052.

Patented May 30, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

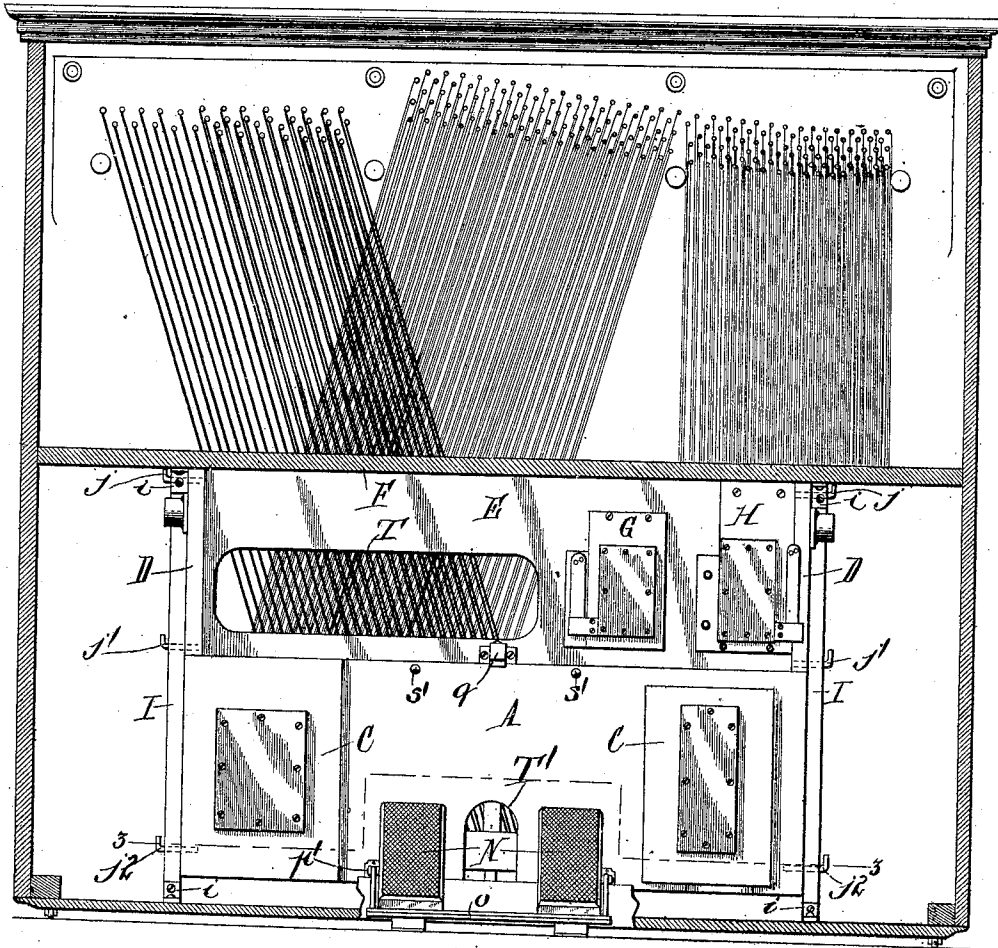
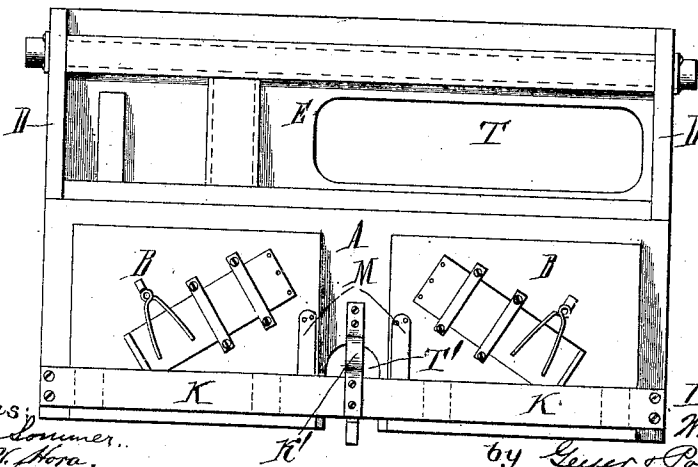


Fig. 2.



Witnesses:
 Richard Sommer.
 Gustav H. Hora.

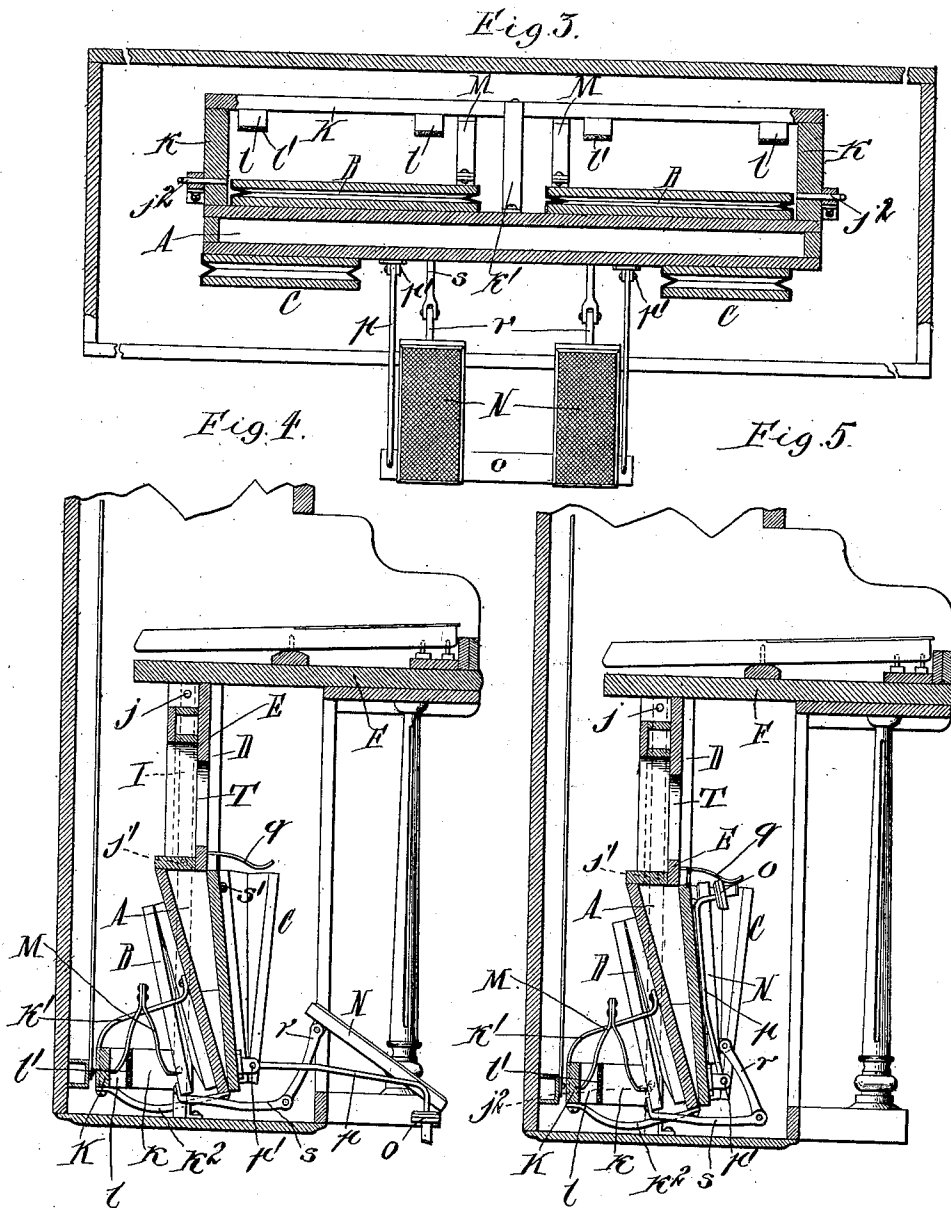
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Richard Sommer.
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UNITED STATES PATENT OFFICE.

WILLIAM F. BAYER, OF BUFFALO, NEW YORK, ASSIGNOR TO THE CHASE & BAKER COMPANY, OF BUFFALO, NEW YORK, A CORPORATION OF NEW YORK.

AUTOMATIC MUSICAL INSTRUMENT.

994,052.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed February 15, 1908. Serial No. 416,009.

To all whom it may concern:

Be it known that I, WILLIAM F. BAYER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Automatic Musical Instruments, of which the following is a specification.

This invention relates to the main bellows or pumps and the bellows-actuating pedals of pneumatic pianos and piano-players.

One of the objects of the invention is to so construct the main bellows that it can be readily removed from the instrument without disturbing other parts, to facilitate repairing it and afford easy access to the strings for renewing them.

A further object is to improve the main bellows in other respects with a view of permitting convenient access to the pump or feeder-springs for renewing the same and providing a strong stop for the movable boards of the feeders.

In the accompanying drawings consisting of 2 sheets: Figure 1 is a sectional front elevation of an auto-piano embodying the invention. Fig. 2 is a rear view of the main bellows removed from the case. Fig. 3 is a horizontal section in line 3-3, Fig. 1. Figs. 4 and 5 are transverse vertical sections of the lower portions of the instrument showing different positions of the folding pedals.

Similar letters of reference indicate corresponding parts throughout the several views.

A indicates the stationary air chamber or reservoir of the bellows-structure, B the customary pumps, bellows or feeders connected therewith and preferably attached to the rear side thereof, and C the usual pressure equalizers or bellows attached to the front side of said reservoir.

D indicates upright end pieces secured to and extending upwardly from the top of the air reservoir A, and E indicates a board or panel secured at its ends to the inner sides of said end-pieces and preferably extending from the top of said reservoir to the underside of the key-table F, but disconnected from the latter.

G indicates a motor-governor and H an expression governor, which parts are preferably mounted on the front side of the panel E. These governors form no part of my

present invention and may be differently supported and arranged, if desired.

The reservoir A and the panel E are removably fitted between a pair of fixed uprights or standards I secured by angle-irons *i* or other suitable fastenings to the bottom of the piano-case and the underside of the key table, as shown. In the preferred construction shown, said reservoir and panel are secured to these posts by removable pins *j*, *j*¹ passing through the latter and entering holes in the reservoir and the end-pieces D.

K indicates a stop-rail for the movable boards of the feeders B, arranged horizontally on the rear side of the reservoir A and preferably supported at its ends by arms or brackets *k* projecting rearwardly from the reservoir A and at or near its center by upper and lower brackets or braces *k*¹, *k*², secured to the reservoir. This stop-rail extends from end to end of the reservoir and carries stop-blocks *l*, preferably two for each feeder as best shown in Fig. 3, these blocks having a facing *l*¹ of felt or other suitable material.

M indicates the usual closing springs of the feeders, the branches of which are secured respectively to the front side of the stop-rail K and the movable boards of the feeders. This rail forms a strong stop for the feeders and a rigid support for their closing-springs.

In addition to the upper removable pins *j*, *j*¹, similar lower pins *j*² are preferably employed, the latter passing through holes in the uprights I into the rail-brackets *k*, as best shown in Fig. 3.

N indicates the feeder pedals which are hinged at their lower front ends to a base or cross bar *o*. This bar is rigidly secured at its ends to the free front ends of a pair of vertically-swinging arms *p* pivoted at their rear ends to the air reservoir A by horizontal pins *p*¹, so that these arms together with the cross bar and pedals can be lowered to the normal position shown in Figs. 3 and 4, or raised and folded out of the way to the position shown in Fig. 5. The parts may be held in this folded position by a spring *q* attached to a stationary part of the bellows-structure and interlocking with the cross bar *o*. The rear ends of the pedals are connected by links *r* with the front ends of arms *s* rigidly secured at their rear ends to the movable boards of the

feeders B and extending forwardly under the air reservoir A. By this construction, upon folding the hinged pedal-carrying frame composed of the arms *p* and cross bar *o*, the pedals are inverted and folded to the position shown in Fig. 5, their rear ends clearing the front wall of the air reservoir during this movement and preventing mar-
 5 rring of the reservoir which is usually polished on its front side. In their folded position, the pedals and the arms *p* stand substantially parallel with and adjacent to the reservoir which latter is preferably provided with rubber-stops *s*¹.
 10 By constructing the main bellows as herein shown and described, the same together with the attached pedal frame and pedals can be bodily removed from the piano-case after withdrawing the pins *j*, *j*¹, *j*², enabling
 15 the bellows and attached parts to be conveniently repaired and also giving free access to the strings for renewing them. The bellows-structure is as readily replaced and quickly secured in position by simply re-
 20 placing said pins.
 25 In order to permit access to some of the

strings without the necessity of removing the bellows, the panel E is preferably provided with a comparatively long hand hole T; and to render the feeder-springs M easily accessible without disturbing other parts, the air reservoir is provided between the pedals with a hand hole T¹.

I claim as my invention:—

In an instrument of the character de-
 35 scribed, the combination of an air reservoir having a hand-hole in its lower portion, feeders arranged on the rear side of said reservoir, a stop-rail carried by the reser-
 40 voir and extending across the movable boards of said feeders, springs interposed between said rail and said movable boards and arranged adjacent to said hand-hole,
 45 and a brace connecting said rail with the reservoir and arranged between said springs.

Witness my hand this 11th day of February, 1908.

WILLIAM F. BAYER.

Witnesses:

C. F. GEYER,
 E. M. GRAHAM.