

L. S. LOCKWOOD.
 ORGAN SWELL BOX.
 APPLICATION FILED JUNE 30, 1915.

1,225,666.

Patented May 8, 1917.

Fig. 1.

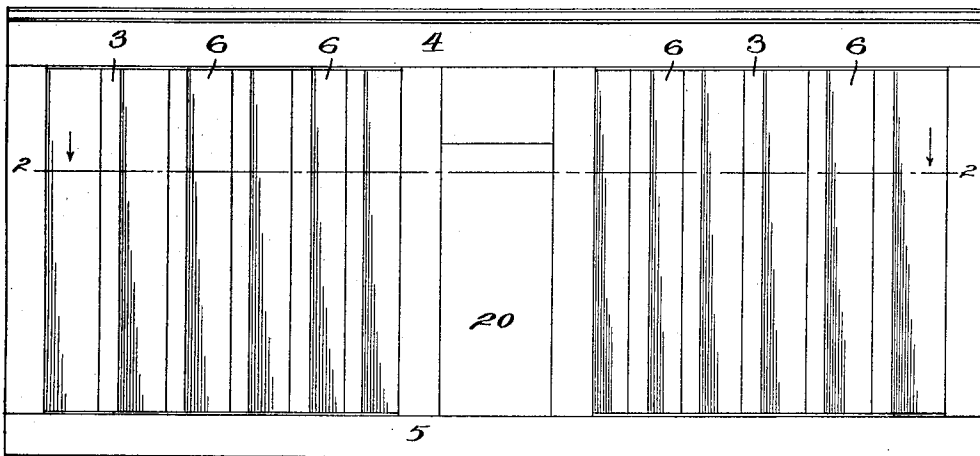
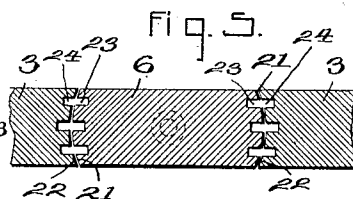
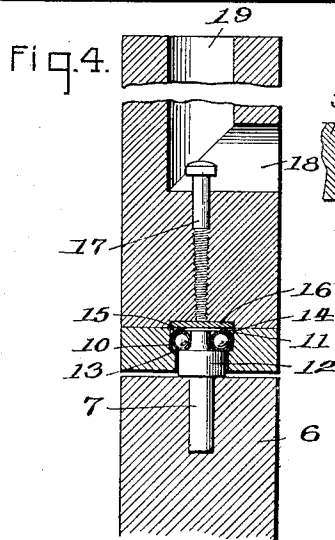
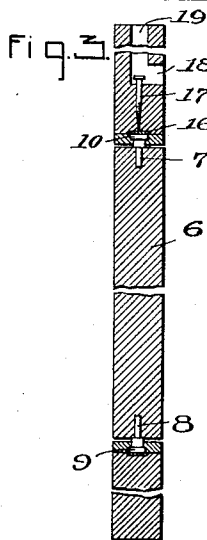
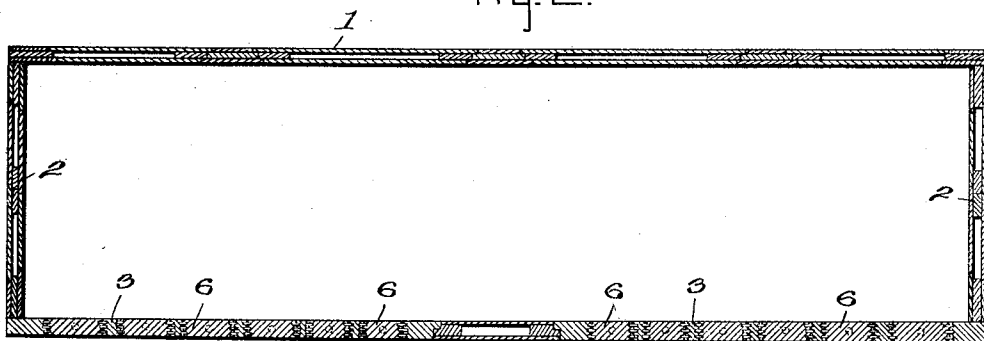


Fig. 2.



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UNITED STATES PATENT OFFICE.

LOUIS S. LOCKWOOD, OF NORTH TONAWANDA, NEW YORK, ASSIGNOR TO THE RUDOLPH WURLITZER MANUFACTURING COMPANY, OF NORTH TONAWANDA, NEW YORK, A CORPORATION OF NEW YORK.

ORGAN SWELL-BOX.

1,225,666.

Specification of Letters Patent.

Patented May 8, 1917.

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To all whom it may concern:

Be it known that I, LOUIS S. LOCKWOOD, a citizen of the United States, residing at North Tonawanda, in the county of Niagara and State of New York, have invented new and useful Improvements in Organ Swell-Boxes, of which the following is a specification.

Heretofore the shutters of such swell-boxes have been beveled at their edges and arranged to overlap when closed, but by this arrangement adjacent shutters strike against each other in closing, producing an objectionable noise.

One of the objects of my invention is to improve the construction of the shutters with a view of overcoming this objection and rendering them practically noiseless.

A further object is the provision of inexpensive means for absorbing or muffling the sounds from the pipes in the swell box when the shutters are closed.

In the accompanying drawings: Figure 1 is a front elevation of a shutter box embodying the invention. Fig. 2 is a horizontal section on line 2—2, Fig. 1. Fig. 3 is a transverse vertical section, on an enlarged scale, of the front wall of the box, taken centrally through one of the shutters. Fig. 4 is a similar view, on a further enlarged scale, of the upper rail of the swell box and the adjacent portion of a shutter. Fig. 5 is an enlarged horizontal section of one of the shutters and the adjacent stiles of the swell box.

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

1 indicates the rear wall and 2 the side walls of the swell box which may be of any suitable construction. The front wall of the box consists principally of a series of spaced stiles or uprights 3 secured at their ends to the upper and lower rails 4 and 5 of said wall, and rotary shutters 6 fitted in the openings between the stiles and provided at their upper and lower ends with central pivots 7 and 8 of any suitable construction. In the preferred construction shown, the lower pivot of each shutter rests upon a suitable ball bearing 9 carried by the lower

rail 5. The upper pivot 7 is seated in a similar ball bearing 10 arranged in a recess 11 in the base of the upper rail 4, said pivot having a collar 12 upon which the lower race-ring 13 of the bearing is seated. Resting upon the upper race-ring 14 of the bearing and inclosing both of said rings is a cap 15, and lying upon this cap is a disk plate 16. 17 is a vertical adjusting screw engaging a threaded opening in the lower portion of the top rail 4 and bearing upon said disk, whereby any looseness of the shutter due to shrinkage, warping or other causes may be conveniently taken up. Access is had to the head of this screw through a horizontal mortise 18 formed in the side of the top rail 4 or through a vertical mortise 19 extending downwardly from its upper edge, as shown in Figs. 3 and 4.

The front wall of the swell box preferably has a door 20 through which it may be entered to adjust the screws 17 or for other purposes.

As best shown in Fig. 5, the shutters are provided with convex edges 21 and the opposing stiles are provided with corresponding concave edges 22, said concave and convex edges being curved concentrically with the shutter pivots. By this construction, the shutters may be closely fitted between the stiles and yet closed without interfering with the stiles, avoiding the knocking noise incident to the impact of overlapping shutters and rendering them practically noiseless in action. This construction also affords a comparatively wide and extensive joint between the shutters and the stiles.

In order to prevent as far as possible the escape of sound from the swell-box when the shutters are closed, the stiles are provided in their edges with upright grooves or recesses 23 extending throughout their height, and the shutters are provided in their opposing edges with corresponding grooves 24 arranged to register with those of the stiles when the shutters are closed, as shown in Fig. 5. A plurality of such registering grooves are preferably employed, a series of three at each side of the shutter, as shown, having been found very satisfactory. These registering grooves form wind

traps in which the air or sound expands repeatedly in passing from the interior to the exterior of the shutter box, thus weakening or deadening the sound.

5 I claim as my invention:

An organ swell-box having spaced stiles provided with concave edges and longitudi-

nal grooves in said edges, and a rotary shutter fitted between said stiles and provided with convex edges and longitudinal grooves in said edges arranged to register with the grooves of the stiles in the closed position of the shutter. 19

LOUIS S. LOCKWOOD.

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