No. 638,082. Patented Nov 28, 1899.

J. A. WESER.

MUSICAL INSTRUMENT.

(Application filed Jan. 10, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

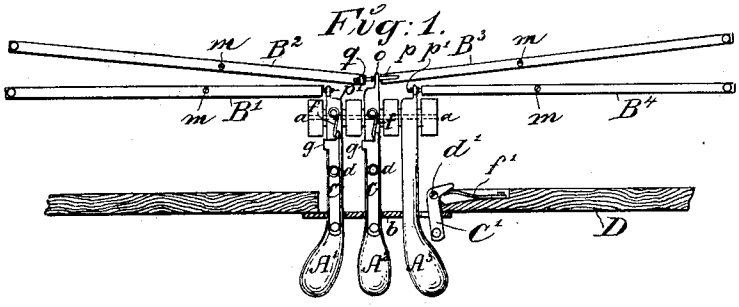

Fig. 2.

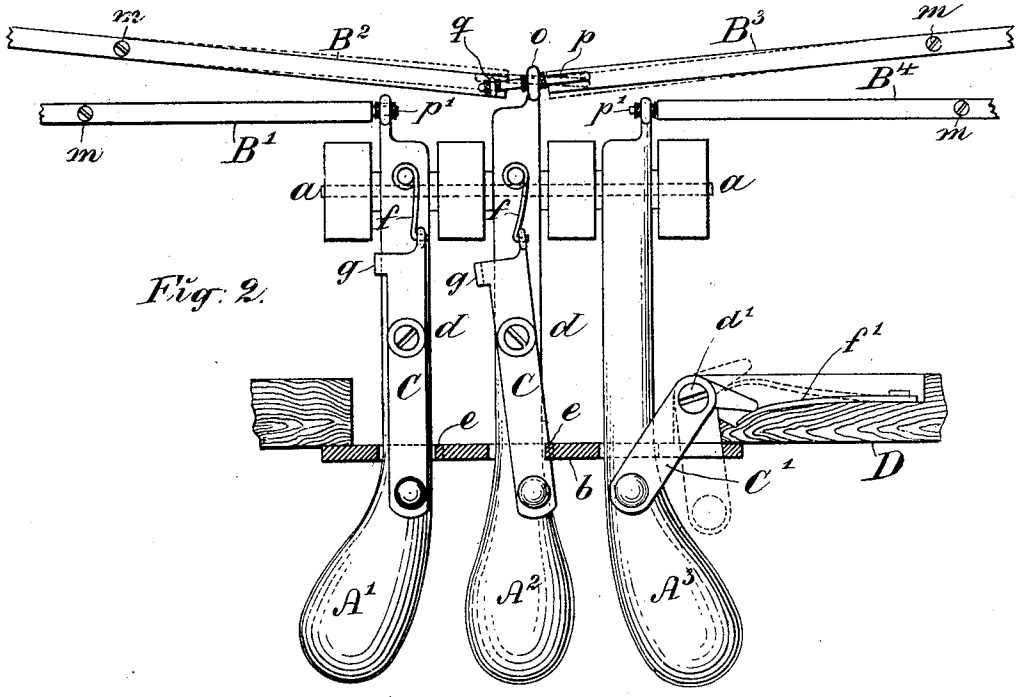

Fig. 3.

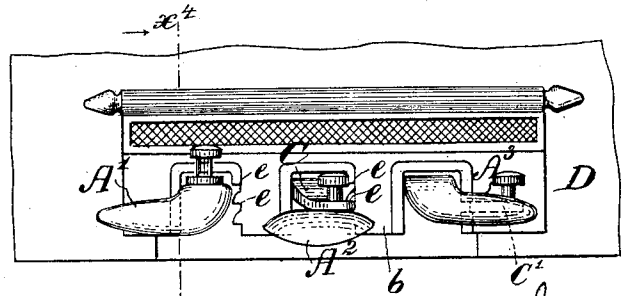

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Fig. 4.

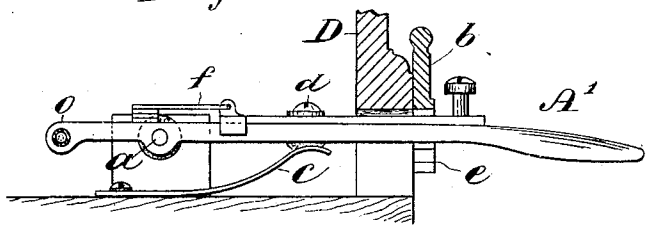


Fig. 5.

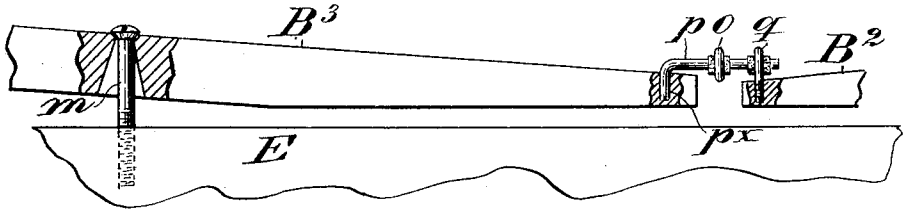
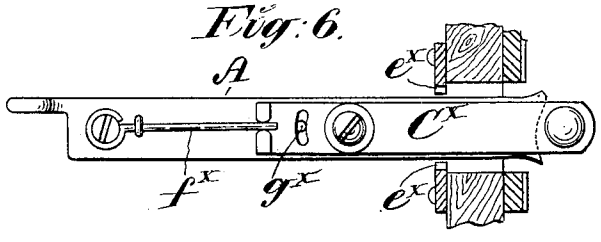


Fig. 6.



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JOHN A. WESER, OF NEW YORK, N. Y.

MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 638,082, dated November 28, 1899.

Application filed January 10, 1899. Serial No. 701,714. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. WESER, a citizen of the United States, residing in the borough of Manhattan and city, county, and State of New York, have invented certain new and useful Improvements in Musical Instruments, of which the following is a specification.

This invention relates to the class of musical instruments employing pedals—such as pianofortes, for example; and it comprises improvements in the pedal mechanism of the instrument.

The object of the invention is in part to provide the pedal with a simple locking and releasing device, which may be applied at a moderate cost to the ordinary pedals of any piano, and in part to the mounting and connections of the pedal-levers, whereby they may be conveniently adjusted, both at the fulcrum and at the coupling points, and whereby lateral play or looseness of the pedals is measurably avoided.

In the accompanying drawings, which illustrate an embodiment of the invention, Figure 1 is a plan view of the pedal mechanism of a pianoforte embodying the invention. Fig. 2 is a plan view of the pedals, on a larger scale than Fig. 1, illustrating the locking and releasing device and the coupling to the levers. Fig. 3 is a front elevation of the same; and Fig. 4 is a section at line x^4 in Fig. 3, showing the locking and releasing device in side elevation. Fig. 5 is an enlarged detail rear view illustrating the coupling of the pedal to the pedal-levers and the fulcrum of the lever. Fig. 6 is a plan view of a construction of the pedal-lock adapted for locking at either side.

Referring primarily to Figs. 1 to 4, A′, A^2, and A^3 represent three pedals of a pianoforte, and these are coupled to the pedal-levers B′, B^2, B^3, and B^4, as will be fully hereinafter described. The three pedals shown are or may be of the usual construction in general, each being fulcrumed at *a* in the ordinary way and adapted to play in recesses in the pedal-guard *b* and foot-rail D, being upheld normally in the usual way. Ordinarily in a piano the pedals are upheld by the weight of parts in the action or by springs connected with these parts or with the pedal-levers; but as the action is not herein shown pedal-supporting springs *c* are shown in Fig. 4 merely for illustration. In practice these will not be required.

The preferred form of locking and releasing device is shown applied to the pedals A′ and A^2 and a slightly-modified form thereof applied to the pedal A^3. The device, as shown applied to the pedals A′ and A^2, comprises a locking-lever C, fulcrumed on the top of the pedal at *d*, its front arm projecting out beyond the pedal-guard *b*. The locking-lever turns about its fulcrum *d*, and when the pedal is depressed with the foot it may be held depressed by moving the projecting front arm of the locking-lever laterally, so that it takes under some fixed part, usually a shoulder on the pedal-guard, or on some part or attachment to the foot-rail D. In Fig. 3 the pedal-guard is shown provided with several shoulders *e*, and the lever C may be made to take under any one of them or under the lower edge of the guard itself. It is desirable in some cases in order to get different pedal effects to depress the pedal to a greater or less extent, and where this is the case there will be a series of shoulders *e*, one above another, as shown; but where such is not the case and the pedal is to be depressed to its full operative extent at all times one shoulder *e* will suffice. For illustration, the pedal A′ is shown elevated or in its normal position and the pedal A^2 is shown depressed. The locking-lever holds the pedal depressed until the player desires to release it, and to effect this it is only necessary to press on the pedal slightly with his foot, when the locking-lever C will be instantly disengaged from the shoulder *e* and returned to its normal position by a suitable spring *f*, mounted on the pedal and engaging the rear or inner arm of the locking-lever. A detent or stop *g* on the locking-lever comes to a bearing on the pedal, and thus the locking-lever is held in its normal position or out of engagement. It will be noted that when the lever C is under the shoulder *e*, and the light spring *f* is consequently under tension, the force of the spring *f*, tending to disengage the locking-lever, is overcome by the friction between said lever and the shoulder *e* caused by the stronger upward pressure which upholds the pedal; but the moment this pressure is relieved by

the player touching the pedal with his foot the friction is removed and the locking-lever is instantly disengaged by its spring and returned to its normal position (seen in Fig. 2) on the pedal A′. If no sping *f* be employed, the locking-lever may be disengaged with the foot.

The pedal locking and releasing mechanism above described is inexpensive and may be readily applied to the pedal or pedals of any pianoforte or similar instrument using pedals. In such a case if the pedal-guard does not provide a suitable shoulder *e* a plate, with one or more suitable shoulders, may be screwed to the inner face of the foot-rail. Such a plate *b′* is shown.

The construction of the locking device shown applied to the pedal A^3 differs from that shown applied to the pedals A′ and A^2 in that the locking-lever C′ is fulcrumed at *d′* on a fixed part, as the foot-rail, for example, and may be moved laterally out over the pedal to lock it, the upward pressure of the pedal thereon serving to overcome the lever-spring *f′*, which tends to move the locking-lever laterally out of engagement.

In the construction shown in Fig. 2 the locking-lever C is adapted to engage a locking-shoulder *e* at one side only; but it may be constructed to engage a shoulder at either side, as shown in Fig. 6. In this view the stop $g^\times$ is a pin playing in a slot in the locking-lever $C^\times$, so that the latter may swing to either side to a limited extent, and the spring $f^\times$ is adapted to bring the lever back to the position seen in the figure. Locking-shoulders $e^\times$ are provided at both sides of the aperture in the foot-board and pedal-guard, and the locking may be effected by moving the lever laterally in either direction.

The pedal-levers B′, B^2, B^3, and B^4 have vertically-adjustable fulcrums, one of which is clearly illustrated in Fig. 5. The pedal-lever B^3, for example, is slotted to receive a fulcrum-screw *m*, which is driven down into the bottom board E, the lever bearing upward against the head of the screw and being upheld at both sides of the fulcrum by springs. The slot *n* is flared downward a little longitudinally of the lever in order to allow the latter to rock on its fulcrum. If in the adjustment of the parts the outer end of the lever should need to be raised or lowered, this may be done conveniently by driving in or withdrawing the screw *m* more or less, according to the requirement. The elongation or flare of the slot *n* is only longitudinal. Laterally the body of the screw will fit snugly in the slot.

The two levers B^2 and B^3 are coupled together and to the pedal A^2 by means shown clearly in Figs. 2 and 5. On the end of the pedal is an eye *o*, through which is passed a coupling and connecting bar *p*, which may have an L shape, the shorter branch $p^\times$ of which is set in one of the levers B^3, while the other branch passes through a screw-eye *q* in the lever B^2. When coupled in this manner, the levers have each two attachments or attaching-points, one at the fulcrum and the other where it is coupled to the pedal, so that while free to rock on its fulcrum it is held firmly against lateral movement. Yet as the lever is free to turn laterally about its fulcrum when uncoupled from the pedal the coupling-bar *p* permits the levers to be shifted and adjusted about their fulcrums to a limited extent to suit the exigencies of the construction, as indicated by dotted lines in Fig. 2. In this view the lever B′ is also shown as coupled to the pedal by a coupling-bar *p′*, similar to the bar *p*. The bar *p* need not of course be made of an L shape, as it may be secured to the lever B^3, for example, by other means. The construction shown is simple and convenient.

It will be understood that in fitting up the pedal mechanism of the instrument with my invention all of the pedals of the set may be fitted up alike. I have shown different constructions of the locking device in one set of pedals merely for convenience of illustration.

An important advantage of my pedal-lock is that the pedal can be used in the ordinary way—that is, depressed and held down by the foot, if desired, or the lock may be brought into play, as the player prefers. The unlocking and not the locking is effected automatically, and these functions are all within the sphere of operation of the single pedal—that is, no other pedal is relied upon to effect either the locking or unlocking. The pedal being under the control of the foot when unlocked, it cannot fly up and produce a disagreeable noise, as it will do in constructions where the release is effected by pressure on another pedal.

I do not limit myself to the precise construction herein shown, as this may be varied without departing from the spirit of my invention.

Having thus described my invention, I claim—

1. In a pedal mechanism, the combination with the depressible, normally-upheld pedal, of a substantially horizontal, pivotally-mounted locking-lever, adapted to take over some part of the pedal for positively locking the latter, said lever being controllable by the foot of the player, and held normally out of locking engagement with the pedal, whereby the locking and unlocking are both effected by the foot of the player, substantially as set forth.

2. In a pedal mechanism, the combination with the depressible, normally-upheld pedal, of a locking-lever for said pedal capable of lateral movement for locking and releasing the depressed pedal, and a spring adapted to return the locking-lever to its normal, inoperative position.

3. In a pedal mechanism, the combination with the depressible, normally-upheld pedal, of a locking-lever for said pedal capable of

lateral movement for locking and releasing the depressed pedal, a spring adapted to return the locking-lever to its inoperative position, and a locking-shoulder for engagement by the locking-lever, whereby the retaining friction on said lever may be relieved by a slight pressure on the depressed pedal.

4. In a pedal mechanism, the combination with a depressible, normally-upheld pedal, of a locking-lever mounted on said pedal and adapted to be moved laterally for locking the pedal depressed, said lever being held normally out of locking engagement and adapted to be moved into engagement by the foot on the pedal when the latter is depressed, whereby the pedal may be employed with or without the locking device.

5. In a pedal mechanism, the combination with a depressible, normally-upheld pedal, and a laterally-situated locking-shoulder adjacent to the pedal, of a locking-lever mounted on the top of the pedal its front arm projecting out beyond the pedal-guard and adapted to be moved under said locking-shoulder when the pedal is depressed, and a spring which disengages said locking-lever when the pedal is further depressed.

6. In a pedal mechanism, the combination with a depressible, normally-upheld pedal, and a locking-shoulder adjacent to the pedal, of a locking-lever mounted on the top of the pedal and adapted to swing laterally about its fulcrum into and out of engagement with said locking-shoulder, the front arm of said lever projecting out beyond the pedal-guard, and the said pedal-guard.

7. In a pedal mechanism, the combination with a normally-upheld, depressible pedal, and a locking-shoulder adjacent to the pedal, of a locking-lever C, mounted on the pedal and adapted to be moved laterally about its fulcrum and under said locking-shoulder, a spring adapted to hold said lever normally out of engagement with said shoulder, and a stop to limit the movement of the lever under the influence of its spring, said lever extending out over the pedal where it may be reached by the foot of the player.

8. In a pedal mechanism, the combination with a normally-upheld, depressible pedal, and a locking-shoulder adjacent to the pedal, of a locking-lever having a fulcrum on the pedal, and extending out in front beyond the pedal-guard, the spring on the pedal and bearing on the inner arm of the locking-lever, to hold the latter out of locking engagement, and the stop which limits the movement of the lever, whereby the locking-lever is held in locking engagement with the locking-shoulder by the upward pressure of the pedal.

9. In a pedal mechanism, a pedal having mounted on it a laterally-movable locking-lever to engage a laterally-situated locking-shoulder when the pedal is depressed, in combination with a series of two or more locking-shoulders at the side of the pedal and one above the other, as described, and a spring adapted to hold the said locking-lever normally out of locking engagement.

10. In a pedal mechanism for musical instruments, the combination with a pedal, of a pedal-lever coupled at one end directly to said pedal and having a vertically-adjustable fulcrum, whereby the outer end of the lever may be set higher or lower at will.

11. In a pedal mechanism for musical instruments, the combination with a pedal, of a pedal-lever, coupled directly to the pedal and fulcrumed on the bottom board of the instrument, said lever having in it a downwardly-flared slot or aperture n, at the fulcrum-point, and a screw m, which passes down through the aperture n and is set adjustably in said bottom board, as set forth, whereby said lever is adjustable in height at the fulcrum and capable of swinging radially about its fulcrum, for the purpose specified.

12. In a pedal mechanism for musical instruments, the combination with a pedal, having at its inner end a coupling-eye, of two pedal-levers, the coupling-bar p, secured to one of said levers and extending through an eye on the pedal and to and through an eye q on the other lever, and the said eye q, whereby the pedal and levers are firmly held against lateral play.

13. In a pedal mechanism for musical instruments, the combination with a pedal, having at its inner end a coupling-eye, of a pedal-lever fulcrumed on a screw m, whereby it may be moved radially thereabout for lateral adjustment, and a coupling-bar p, one branch of which is set in said lever and the other arm of which extends through the eye on the pedal, as set forth.

In witness whereof I have hereunto signed my name, this 4th day of January, 1899, in the presence of two subscribing witnesses.

JOHN A. WESER.

Witnesses:
MAX LEVIAN,
JOHN MURPHY.