E. M. HOLDER.

Piano-Pedal Attachment.

No. 197,370. Patented Nov. 20, 1877.

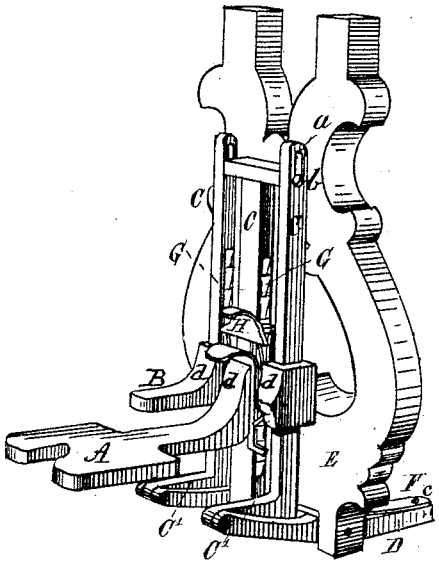

Fig. 1.

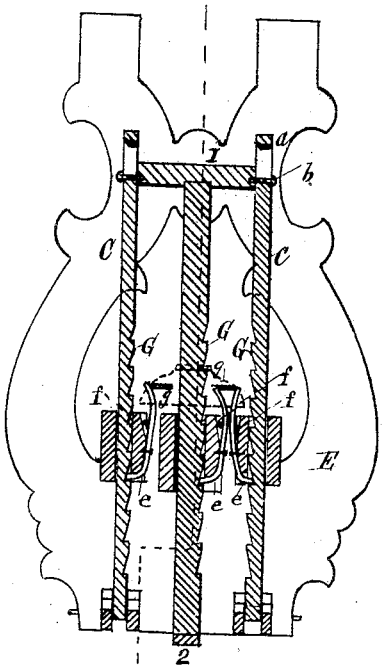

Fig. 2.

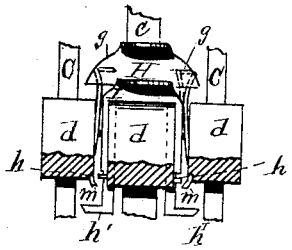

Fig. 4.

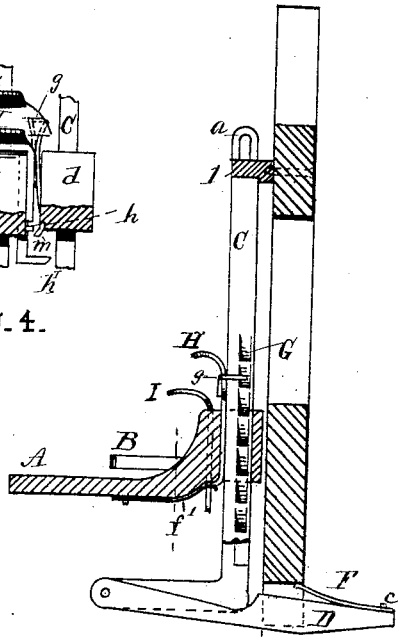

Fig. 3

WITNESSES

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ELLA M. HOLDER, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN PIANO PEDAL ATTACHMENTS.

Specification forming part of Letters Patent No. **197,370**, dated November 20, 1877; application filed May 17, 1877.

To all whom it may concern:

Be it known that I, Mrs. ELLA M. HOLDER, of Lynn, in the county of Essex and State of Massachusetts, have invented an Improvement in Pedal Attachments for Pianos and similar instruments, of which the following is a specification:

This invention has for its object the vertical adjustment of the pedals to varying height from the floor, for the convenience of the performer.

By reference to the drawings—which show the invention in perspective in Figure 1, in vertical section in Figs. 2 and 3, and a detail view in Fig. 4—it will be seen that it consists of a foot-rest, A, and pedals B, all adjustable, as hereinafter explained, upon the vertical bars C. The central one, upon which the foot-rest slides, is fixed, and the outer bars are each provided, at their lower ends, with the arms C′, which lay hold of the ends of lever D, and have a limited vertical movement to the extent of the length of slots *a* at their upper ends, the pins or screws *b* acting as stops.

The levers D, which correspond to the pedals in common use, are pivoted to the foot or base of the harp or standard E, and the springs F, fastened to the opposite ends of the levers from those attached to the arms C′, bear upon the base of the harp or standard above the fulcrum of the levers, and serve to keep the pedals B constantly elevated above this foot-rest when they are not in use. The ends of the lever laid hold of by arm C′ are forked from or near their fulcrums to provide room for the vertical movement of the arm C′.

The connecting-rods used to operate the lever shifting the keys of a piano, or opening or closing the pipes of an organ, are fastened to the ends of the lever D at *c*.

The three bars C are provided with racks G, each of the outer bars having it upon its inner face, and that upon the central bar facing either of the racks upon the outer bars.

The ends *d* of the foot-rest and pedals are in the form of blocks, each surrounding its respective bar, upon which they are adjustable. These blocks are each provided with the pawls or detents *e*, pivoted to the blocks, to engage with the teeth of the racks under the pressure of the springs *f*, which bear upon the arms of the detents above their fulcrum. The upper ends of the detent-arms are curved, as represented in Fig. 2.

A curved latch, H, held in position above the foot-rest by the extension of its shank downward between the foot-rest and the central bar C and the spring *f′*, has projections upon each side of the central bar, which carry the pins that act to trip the pawls by contact with their curved arms.

Another latch, I, is arranged between the foot-rest and the latch H, and is provided with arms, which slide in ways upon the sides of the foot-rest block. These arms are held in place by the lugs *h*, and project below the foot-rest, as shown, having their ends *h′* bent or projecting outward into contact with the projection *m* on the pedal-blocks when the latch I is lifted.

To adjust the foot-rest and pedals, the latches H I are brought together, thereby tripping the pawls by the contact of their curved arms with the pin *g*, and the foot-rest and pedals are lifted by the projecting ends of the latch I coming in contact with the lugs *h* and projections *m;* or they are lowered by tripping the pawl, as described, and falling by gravity. Upon the release of the latches the upper one is forced upward by the spring *f′*, clearing the pawls which engage with the rack-teeth, and the lower one falls by its own weight.

The foot-rest is a broad flat plate, sufficiently large to act as a support for the foot, and placed relatively to the pedals, so that its upper surface is somewhat lower than the upper surface of the pedals when the same are in position to be used.

As many pedals may be used as desired, and be provided with the same means for adjustment as described.

It will be observed that this device is so constructed that by means of the cross-pieces 1 and 2 it may be attached to pianos now in use, and by a slight modification it may be used for operating a bellows, or for any purpose to which pedals are put.

I claim and desire to secure by Letters Patent of the United States—

1. In a pedal attachment for pianos, &c., the combination of the foot-rest A, provided with means for automatic adjustment on the fixed

central bar C, with the pedals B, provided with means for automatic adjustment on the movable outer bars C, substantially as shown and described.

2. The combination of the pedals B, provided with means for adjustment on the bars C, with the bars C arranged to lay hold of the ends of levers D, stops *b*, levers D, and springs F, all arranged to operate as described.

3. The combination of the latch H, provided with means for tripping the pawls *e*, with the latch I, arranged to lay hold of the foot-rest and pedal-blocks in lifting them, substantially as and for the purpose described.

4. The combination of a fixed central rack, C, two outer movable racks, a foot-rest provided with means for adjustment upon the stationary rack, the pedals, each of which is adjustable on the outer rack, the lever D, and springs F, all forming a pedal attachment adapted to be attached to the harp or standard carrying the pedals in common use, as described.

5. The combination of the pedal and foot-rest, blocks *d*, each provided with a pawl, *e*, adapted to engage with the racks G, with the latch H, provided with tripping-pins *g* and spring *f*, the latch I, provided with means for lifting the foot-rest and pedals, all arranged to operate as described.

ELLA M. HOLDER.

Witnesses:

THOS. WM. CLARKE,

H. A. HENDERSON.