(No Model.)

G. L. FOSTER.

ORGAN PEDAL.

No. 407,005. Patented July 16, 1889.

Fig. 1.

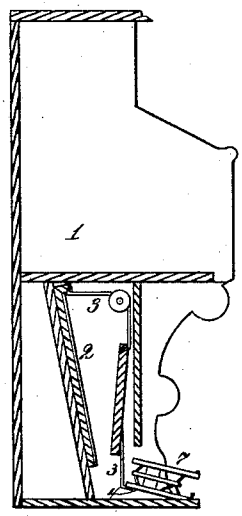


Fig. 2.

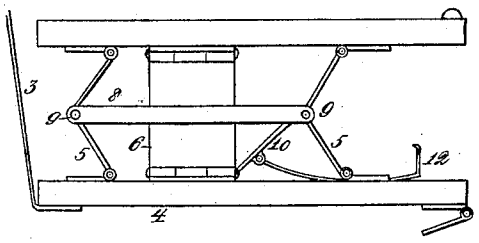


Fig. 3.

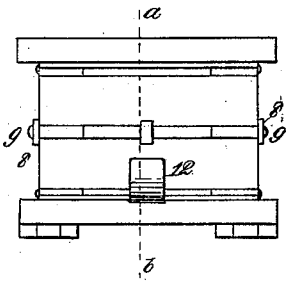


Fig. 4.

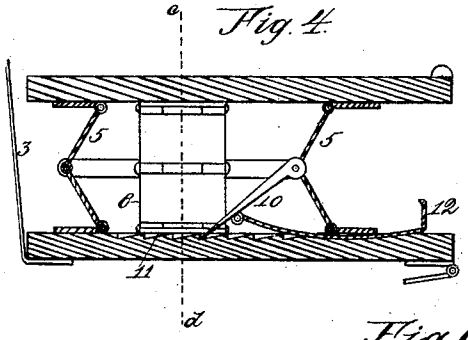


Fig. 5.

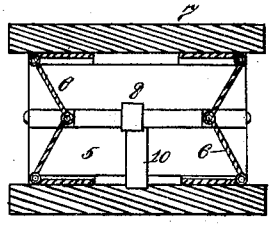
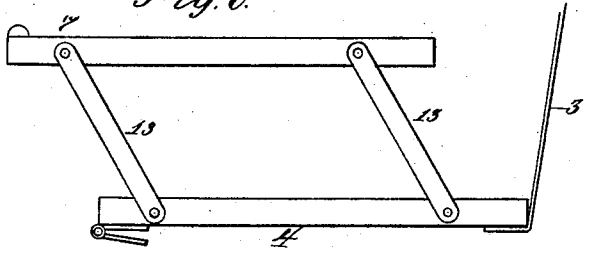


Fig. 6.



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UNITED STATES PATENT OFFICE.

GRACE L. FOSTER, OF MILFORD, IOWA.

ORGAN-PEDAL.

SPECIFICATION forming part of Letters Patent No. 407,005, dated July 16, 1889.

Application filed January 15, 1889. Serial No. 296,460. (No model.)

To all whom it may concern:

Be it known that I, GRACE L. FOSTER, a citizen of the United States, residing at Milford, in the county of Dickinson and State of Iowa, have invented certain new and useful Improvements in Organ-Pedals; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates more particularly to the pedals of organs, though it is capable of being applied to other instruments—as sewing-machines and the like—and the object of my invention is to make the pedal adjustable vertically, so as to be adapted to the size of the performer or operator.

The invention consists in the construction, combination, and arrangement of parts, as hereinafter fully set forth and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of a device embodying my invention as applied to an organ, the case of which is in vertical section, so as to show the arrangement of the parts. Fig. 2 is a side elevation of the pedal on a larger scale; Fig. 3 an elevation of the same as seen from the outer end; Fig. 4, a longitudinal section of the same in the line *a b* of Fig. 3; Fig. 5, a transverse section of the same in the line *c d* of Fig. 4, as seen from the left of said figure; and Fig. 6, an elevation of a modified form of frame for the pedal.

Similar figures of reference indicate corresponding parts.

A common difficulty experienced in the operation of instruments or machines in which a pedal or treadle is used arises from the fact that the height of the pedal or treadle is adjusted to the height of an adult person, and cannot be either raised or depressed. This difficulty is more especially apparent in the case of an organ, which is operated by people of all ages. The relative height of the pedal and the key-board being in all cases practically the same, a double disadvantage arises when a child performs on the instrument. The seat must be depressed to bring the feet within reach of the pedal, and this brings the arms and hands of the performer far too low for easy and natural execution. This invention is designed to obviate this difficulty by providing for an adjustment of the pedal to the relative height of the performer.

Referring to the drawings, 1 is the case of an organ of a conventional style, which need not be particularly described. 2 is the bellows, connecting by a strap 3 with the lower part of the pedal 4, which corresponds essentially with the pedal in common use, and is suitably hinged to the lower part of the organ-case. To this lower portion of the pedal is connected by a system of toggle-joints 5 and 6 a supplemental piece 7, of practically the same shape and size as the lower one, and this serves as the bearing for the foot of the performer. In practice the toggle-joints are made like two common hinges, with an extra interlocking hinge-joint connecting the leaf of one of the hinges to the corresponding leaf of the other, thus making a three-jointed hinge, which is suitably screwed to the upper and lower boards of the pedal. Two of the hinges 5 are set transverse to the pedal, and two 6 longitudinal thereto, the effect of this arrangement being to brace the parts of the pedal in both directions, while at the same time admitting free vertical movement of the same.

The longitudinal hinges are preferably made to fold inwardly, as shown in Fig. 5, and need not be connected. The transverse hinges, on the other hand, should both fold in the same direction, and be connected by one or more straps or rods 8 to keep them in the same relative position. In practice two of these are preferred, one at each side, connected with the middle joint of the toggle by the pin 9, which passes through the hinge. In Fig. 5 a single connecting-rod is shown mounted near the middle of the hinges. In the middle of one of the hinges is pivotally mounted a pawl 10, which engages with notches 11, formed on the upper side of the lower portion of the pedal 4. This pawl is controlled by a finger-piece 12 of thin metal, connecting pivotally with the under side of said pawl and passing under the adjacent hinge. Thus constructed the pedal is adapted to be expanded or contracted, and thereby elevated or depressed to any desired extent, according to the needs of the operator.

By a suitable reduction in the size of the

parts the pedal may be applied to pianos as well as organs, and the same is equally applicable to the treadles of sewing-machines, foot-lathes, and other small foot-power machinery.

The construction already described is such as to cause the parts to expand or contract perpendicularly to the plane of the pedal, and this form is in practice preferred; but the construction may be modified without departing from the general idea of the invention, and one of these modifications is shown in Fig. 6. In this case parallel arms 13 are employed instead of the toggle-joints above described, it being understood that the parts are held in position by a pawl in the same manner as above described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A pedal composed of upper and lower portions 4 and 7, pivotal arms connecting said parts, a pivotal pawl adapted to engage with notches in one of said parts, and means, substantially as described, for engaging and disengaging said pawl, whereby the pedal may be expanded or contracted to regulate its height to the requirements of the operator, substantially as set forth.

2. In a pedal, the combination of the parts 4 and 7, forming the bottom and top thereof, respectively, toggle-jointed arms connecting said parts, notches formed on one of said parts, a pawl pivotally connected with said toggle-arms, and a finger-piece connected with said pawl and adapted to engage and disengage the same, all substantially as and for the purpose set forth.

3. In a pedal, the combination of the parts 4 and 7, forming the top and bottom of the same, toggle-jointed arms 5 and 6, connecting the parts 4 and 7 transversely and longitudinally, connecting rod or rods 8, connecting with the arms 5, which fold in the same direction, a pawl 10, engaging with notches 11, and means, substantially as described, for engaging and disengaging the same.

In testimony whereof I affix my signature in presence of two witnesses.

GRACE L. FOSTER.

Witnesses:
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E. E. HALL.