E. T. TURNEY.

FOLDING TREADLE FOR PIANO PLAYING ATTACHMENTS.

APPLICATION FILED OCT. 3, 1908.

997,344.

Patented July 11, 1911.

2 SHEETS—SHEET 1.

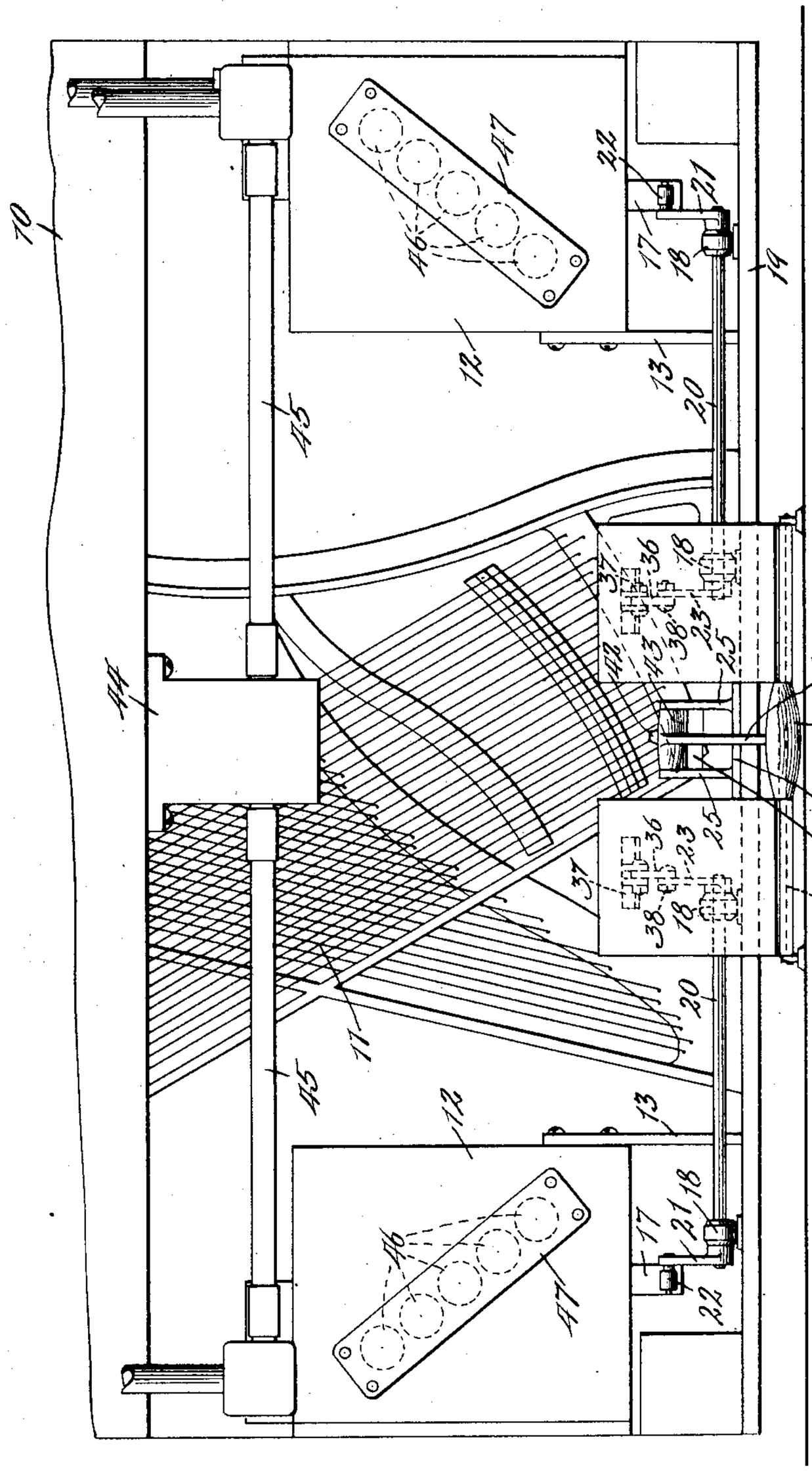

Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 4.

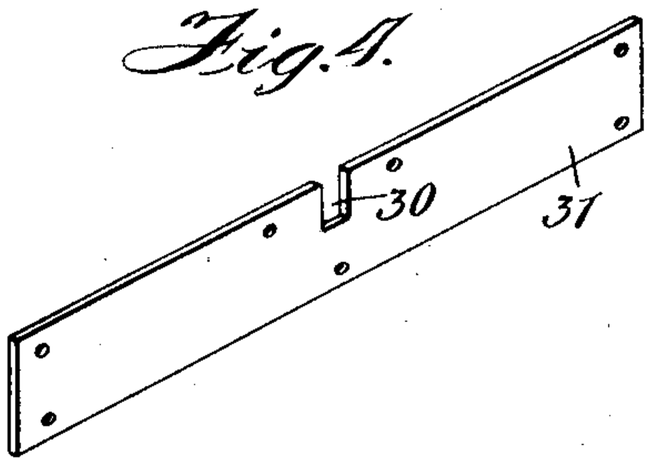
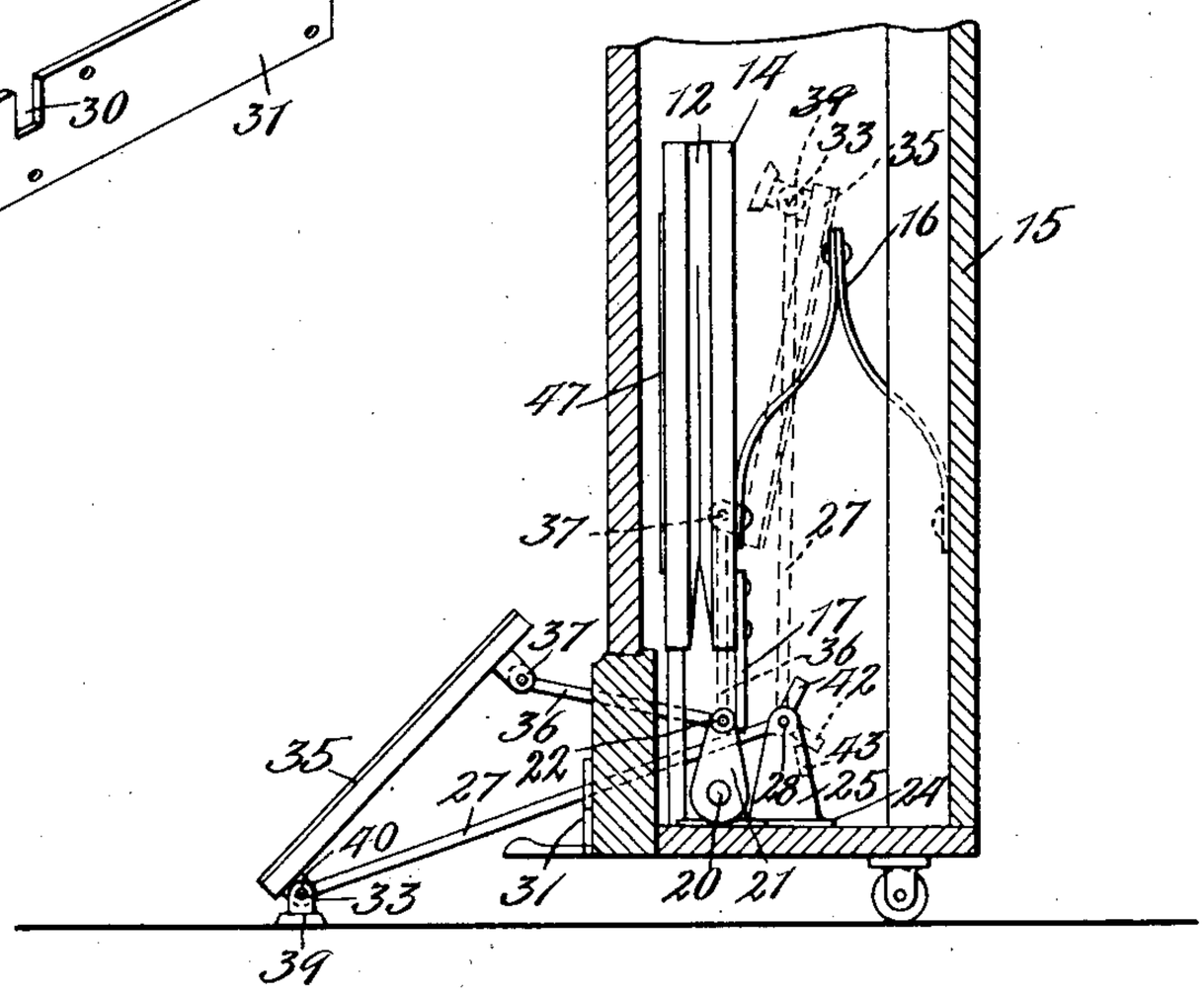


Fig. 2.



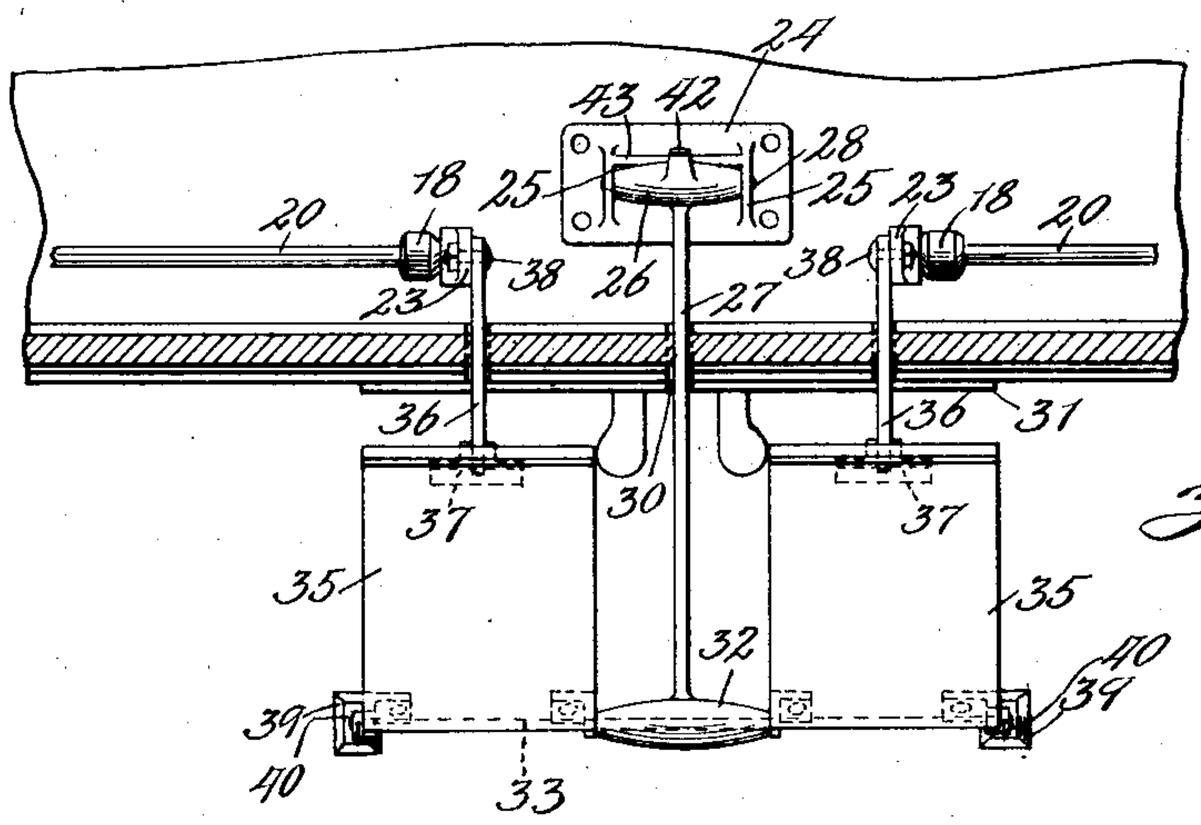


Fig. 3.

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UNITED STATES PATENT OFFICE.

EUGENE T. TURNEY, OF ROCK ISLAND, ILLINOIS, ASSIGNOR TO THE ARTISTA PIANO PLAYER COMPANY, OF MILAN, ILLINOIS, A CORPORATION OF ILLINOIS.

FOLDING TREADLE FOR PIANO-PLAYING ATTACHMENTS.

997,344. Specification of Letters Patent. **Patented July 11, 1911.**

Application filed October 3, 1908. Serial No. 455,980.

To all whom it may concern:

Be it known that I, EUGENE T. TURNEY, a citizen of the United States, residing at Rock Island, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Folding Treadles for Piano-Playing Attachments, of which the following is a specification.

This invention relates to improvements in folding treadles for piano playing attachments and the primary object of the same is to provide improved treadles which are adapted to be folded within the casing of the instrument through an opening therein when not in use.

A further object is to provide improved treadles for operating the wind inducing bellows and improved means for supporting the treadles whereby the wind inducing bellows may be located to the side of and at points remote from the treadles, thereby permitting the ends of the strings of the instrument which are located in the base thereof to be freely exposed to permit ready access thereto without dismantling the treadle mechanism.

A further object is to provide improved mechanism of this character which will be simple, durable and cheap in construction and effective and efficient in operation.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawings, illustrating an embodiment of the invention and in which—

Figure 1 is a detail elevation of the base of a musical instrument having a treadle attachment applied thereto constructed in accordance with the principles of this invention. Fig. 2 is a detail end elevation, with the end of the casing removed, of this improved attachment showing the same in full lines in an operative position and in dotted lines showing the treadles folded within the casing. Fig. 3 is a detail top plan view of the treadles and the support therefor showing the treadles in position for use. Fig. 4 is a detail perspective view of the plate for holding the treadle support against lateral displacement.

Referring more particularly to the drawings and in the present exemplification of the invention, the numeral 10 designates a portion of the instrument to which this improved attachment is applied, and the casing is provided with an open front adjacent the bottom. Within the casing and adjacent each side thereof and remote from the extremity 11 of the strings, which extend into the base and so as not to form an obstruction in front of the strings, are located two pumpers or suction creating devices 12 in the form of pneumatics or bellows. Each of these bellows 12 is secured in position in any suitable manner, preferably by means of a support 13 to which one of the members of the bellows is secured, preferably the front member and the bellows 12 are arranged so that the movable member thereof will be disposed toward the rear of the instrument and in a position to swing in an upright plane.

Disposed between the movable member 14 of the bellows 12 and any suitable support, such as the rear of the casing 15, is an elastic member 16, preferably in the form of a spring, which tends normally to collapse the bellows. Secured to the movable member 14 and extending beyond the edge thereof is a projection 17, preferably in the form of a plate, and journaled in suitable bearings 18, secured to the base 19 of the casing, are shafts 20, one of which is provided for each of the bellows or pumpers 12 and these shafts 20 are spaced longitudinally from each other; and secured to one extremity of each of the shafts is a crank arm 21 journaled to which is a suitable anti-friction roller 22. This crank 21 is of such a length that the anti-friction roller 22 thereon will engage the plate or extension 17 and the elastic member 16 tends normally to hold the plate 17 in engagement with the respective anti-friction roller. Secured to the other extremity of each of the shafts is a similar crank arm 23 which is preferably of the same length as the crank arm 21 and is parallel therewith and co-axially mounted.

Secured within the casing and preferably to the base 19 between the adjacent extremities of the shafts 20 is a support 24 comprising spaced uprights 25 between which an enlargement 26 on one extremity of an arm or support 27 is pivotally mount-

ed in any suitable manner, preferably by means of a pin 28 which passes through the uprights 25 and the enlargement 26 and the pin 28 may be secured against displacement with respect to the enlargement 26 in any suitable manner, not necessary to illustrate. The arm or support 27 may be of any desired or suitable length and is adapted to be projected through the opening in the front of the casing so that its body portion will enter a suitable notch or recess 30 in a plate 31 secured to the front of the casing and when the arm or support is located within the notch or recess, the former will be held against lateral displacement. The free extremity of the arm or support is preferably provided with an enlargement 32 extending transversely thereof and projecting beyond the sides of the arm, and passing through said enlargement and transversely with respect to the arm 27 is a bar or rod 33 which extends for any desired distance beyond the extremities of the enlargement and may be held against accidental displacement with respect thereto in any suitable manner.

A treadle 35 is pivotally supported by one extremity to the portion of the bar 33 extending beyond the enlargement 32 and on each side of said enlargement, and a link 36 is pivotally connected by one extremity as at 37 to each of the treadles 35 and by the other extremity to the respective crank 23 as at 38 on the end of the shafts 20, which latter pivot is in the same horizontal plane with the pivot of the arm 27.

The extremities of the bar 33 preferably project beyond the outer edges of the treadles 35, and supports 39 are provided with projections 40 in the form of collars, into which the respective extremities of the bar project and these collars may be secured to said extremities in any suitable manner. These supports 39 may be of any suitable height for supporting the free extremity of the arm 27 and are adapted to rest upon the floor in front of the instrument so as to hold the treadles 35 in an inclined position for use.

When the treadles are in the position shown in Figs. 2 and 3, and the treadles 35 are rocked about the bar 33, the links 36 will rock the shafts 20 and cause the crank 21 to move the movable member 14 of the bellows 12 away from the fixed member and against the tension of the elastic member 16. When pressure upon the treadles is released, the elastic member 16 will tend to collapse the bellows and through the medium of the projection 17, crank 21 and shaft 20 will move the respective treadle back to its original position.

With this improved construction, it will be apparent that no obstruction will be placed in front of the strings 11 of the instrument so that ready access may be had to the strings and also so that there will be no obstruction to the sound.

When not in use, the treadles are adapted to be folded into the casing through the opening in the front thereof and into the position shown in dotted lines in Fig. 2. If desired, and in order to prevent the treadles from striking the strings when folded, there may be provided a suitable projection 42 which preferably extends from the arm 27 and at an angle thereto and a stop 43 which may be secured between the uprights 25. When the treadles are in position for use, and as shown more clearly in Fig. 2, the angular projecting portion 42 of the arm 27 will assume a position out of contact with the stop 43, but when the treadles 35 and the arm 27 are raised to a folding position and as shown in dotted lines in Fig. 2, the projection 42 will be moved into engagement with the stop 43 to hold the treadles in their elevated position and out of contact with the strings.

The pumpers or bellows 12 may be connected to the air trunk of the instrument in any suitable manner, preferably through the medium of a chamber 44, which is connected to the respective bellows by means of a suitable tubular connection 45 and this chamber 44 may have connection wtih the wind trunk in any suitable manner not necessary to illustrate and which forms no part of the present invention.

Each of the bellows 12 may be provided with suitable inlet openings 46 which are preferably located in the fixed member of the bellows and a covering 47 may be provided for the inlet openings.

In order that the invention might be understood, the details of the foregoing embodiment thereof have been thus described, but

What I claim as new is—

1. The combination of a casing, a supporting arm pivoted at its inner end to a fixed support within the casing, and adapted to be projected through the casing, a pair of treadles pivoted at their forward ends to the supporting arm and on each side thereof, rock shafts, links respectively pivoted by one end to the inner end of the treadles and having pivotal connections at their other ends to the respective shafts, bellows disposed one on each side of the treadles, said bellows each including a movable member, and a crank on each of the shafts adapted to engage the movable member of the respective bellows to operate the same, said supporting arm, treadles and links being foldable into the casing.

2. The combination of a casing, a supporting arm pivoted at its inner end to a fixed support within the casing and adapted to be projected through the casing, a pair of treadles pivoted at their forward ends to

the supporting arm and on each side thereof, rock shafts, links respectively pivoted by one end to the inner end of the treadles, and having pivotal connections at their other ends to the respective shafts, bellows disposed one on each side of the treadles, said bellows each including a movable member, a crank on each of the shafts adapted to engage the movable member of the respective bellows to operate the same, and means for preventing lateral movement of the arm, said arm, treadles and links being foldable into the casing.

3. The combination of a casing, a supporting arm pivoted at its inner end to a fixed support within the casing and adapted to be projected through the casing, a pair of treadles pivoted at their forward ends to the supporting arm and on each side thereof, rock shafts, links respectively pivoted by one end to the inner end of the treadles and having pivotal connections at their other ends to the respective shafts, bellows disposed one on each side of the treadles, said bellows each including a movable member, means operatively related to the shafts for respectively engaging and moving said movable member of the bellows, and a member located beyond the pivot of the arm and provided with an open slot for receiving the arm to hold the same against lateral movement, said arm, treadles and links being foldable into the casing.

4. The combination of a casing, a supporting arm pivoted at its inner end to a fixed support, said arm being adapted to be projected beyond the front of the casing, spaced supporting feet secured to the free end of the arm, a pair of treadles pivoted at their forward ends to the arm and on opposite sides thereof, rock shafts, links respectively pivoted by one end to the inner end of the treadles and having pivotal connections at their other ends to the respective shafts, a bellows disposed one on each side of the treadles, and means operatively related to the respective shafts for operating the bellows, said arm, treadles and links being foldable into the casing.

5. The combination of a casing, a supporting arm pivoted at one end to a fixed support and adapted to be projected beyond the casing, a transverse support secured to the free end of the arm and extending on opposite sides thereof, a treadle pivoted by its outer end to the said transverse support on each side of the arm, rock shafts, links connecting the inner ends of the treadles to the respective shafts, bellows disposed one on each side of the arm and beyond the treadles, and means operatively related to the respective shafts for operating the bellows, said arm, transverse support, treadles and links being foldable into the casing.

6. The combination of a casing, a supporting arm pivoted at one end to a fixed support and adapted to be projected beyond the casing, a transverse support secured to the free end of the arm and extending on opposite sides thereof, supports for the extremities of the said transverse supports and adapted to rest upon the floor, a treadle pivoted by its outer end to the said transverse support on each side of the arm, rock shafts, links connecting the inner ends of the treadles to the respective shafts, bellows disposed one on each side of the arm and beyond the treadles, and means operatively related to the respective shafts for operating the bellows, said arm, transverse support, treadles and links being foldable into the casing.

7. The combination of a casing, a single support having a fixed pivoted end, the free end being adapted to be projected beyond the casing, treadles pivoted by one end to the said support and on each side thereof, rock shafts spaced longitudinally from each other, cranks on the adjacent ends of the shafts, links connecting the inner ends of the treadles with the respective cranks, bellows disposed one on each side of the said support and each having a movable member, and a crank on each of the shafts respectively spaced from the first said cranks and adapted to engage and move the respective movable member of the bellows, the cranks on the respective shafts being parallel and co-axially mounted, said support, treadles and links being foldable into the casing.

8. The combination of a casing, a single support having a fixed pivoted end, the free end being adapted to be projected beyond the casing, treadles pivoted by one end to the said support and on each side thereof, rock shafts, spaced longitudinally from each other, cranks on the adjacent ends of the shafts, links connecting the inner ends of the treadles with the respective cranks, bellows disposed one on each side of the said support and each having a member movable in an upright plane and a crank on each of the shafts respectively spaced from the first said cranks and adapted to engage and move the respective movable member of the bellows, the cranks on the respective shafts being parallel and co-axially mounted, said support, treadles and links being foldable into the casing.

9. The combination of a casing, a single support having a fixed pivoted end, the free end being adapted to be projected beyond the casing, treadles pivoted by one end to the support and on each side thereof and beyond the pivot, rock shafts, links connecting the free end of the treadles with the respective shafts, a pair of bellows within the casing one on each side of the strings of the instrument whereby the adjacent portion of the strings will be unobstructed, means for supporting the bellows, and means oper-

atively related to the respective shafts for operating the bellows, said support, treadles and links being foldable into the casing.

10. The combination of a casing, a single support having a fixed pivoted end, the free end being adapted to be projected beyond the casing, treadles pivoted by one end to the support and on each side thereof and beyond the pivot, rock shafts, links connecting the free end of the treadles with the respective shafts, a pair of bellows within the casing one on each side of the strings of the instrument whereby the adjacent portion of the strings will be unobstructed, means for supporting the bellows, means operatively related to the respective shafts for operating the bellows, said support, treadles and links being foldable into the casing, and means for preventing the foldable parts from engaging the strings when in a folded position.

11. The combination of a casing, a single support having a fixed pivoted end, the free end being adapted to be projected beyond the casing, treadles pivoted by one end to the support and on each side thereof and beyond the pivot, rock shafts, links connecting the free end of the treadles with the respective shafts, a pair of bellows within the casing one on each side of the strings of the instrument whereby the adjacent portion of the strings will be unobstructed, means for supporting the bellows, means operatively related to the respective shafts for operating the bellows, said support, treadles and links being foldable into the casing, and means for preventing the foldable parts from engaging the strings when in a folded position, said means including a stop for limiting the folding movement of the first said support.

12. The combination of a casing, a single support having a fixed pivoted end, the free end being adapted to be projected beyond the casing, treadles pivoted by one end to the support and on each side thereof and beyond the pivot, rock shafts, links connecting the free end of the treadles with the respective shafts, a pair of bellows within the casing one on each side of the strings of the instrument whereby the adjacent portion of the strings will be unobstructed, means for supporting the bellows, means operatively related to the respective shafts for operating the bellows, said support, treadles and links being foldable into the casing, and means for preventing the foldable parts from engaging the strings when in a folded position, said means including a projection on the support and a stop adapted to be engaged by the projection to limit the folding movement of said support.

13. The combination of a casing, a supporting arm pivoted at its inner end to a fixed support within the casing and adapted to be projected through the casing, a pair of treadles pivoted at their forward ends to the supporting arm and on each side thereof, rock shafts, links respectively pivoted by one end to the inner end of the treadles and having pivotal connections at their other ends to the respective shafts, bellows disposed one on each side of the treadles, and means whereby the operation of the shafts will actuate the respective bellows, said supporting arm, treadles and links being foldable into the casing.

14. The combination of a casing, a supporting arm pivoted at one end to a fixed support and adapted to be projected beyond the casing, a transverse support secured to the free end of the arm and extending on opposite sides thereof, a treadle pivoted to the said transverse support on each side of the arm, rock shafts, means connecting the treadles to the respective shafts, bellows disposed one on each side of the arm and beyond the treadles, and means whereby the operation of the shafts will actuate the bellows, said arms, transverse support, treadles and the last recited means being foldable into the casing.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 30″ day of September A. D. 1908.

EUGENE T. TURNEY.

Witnesses:
C. A. Liitt,
W. E. Thompson.