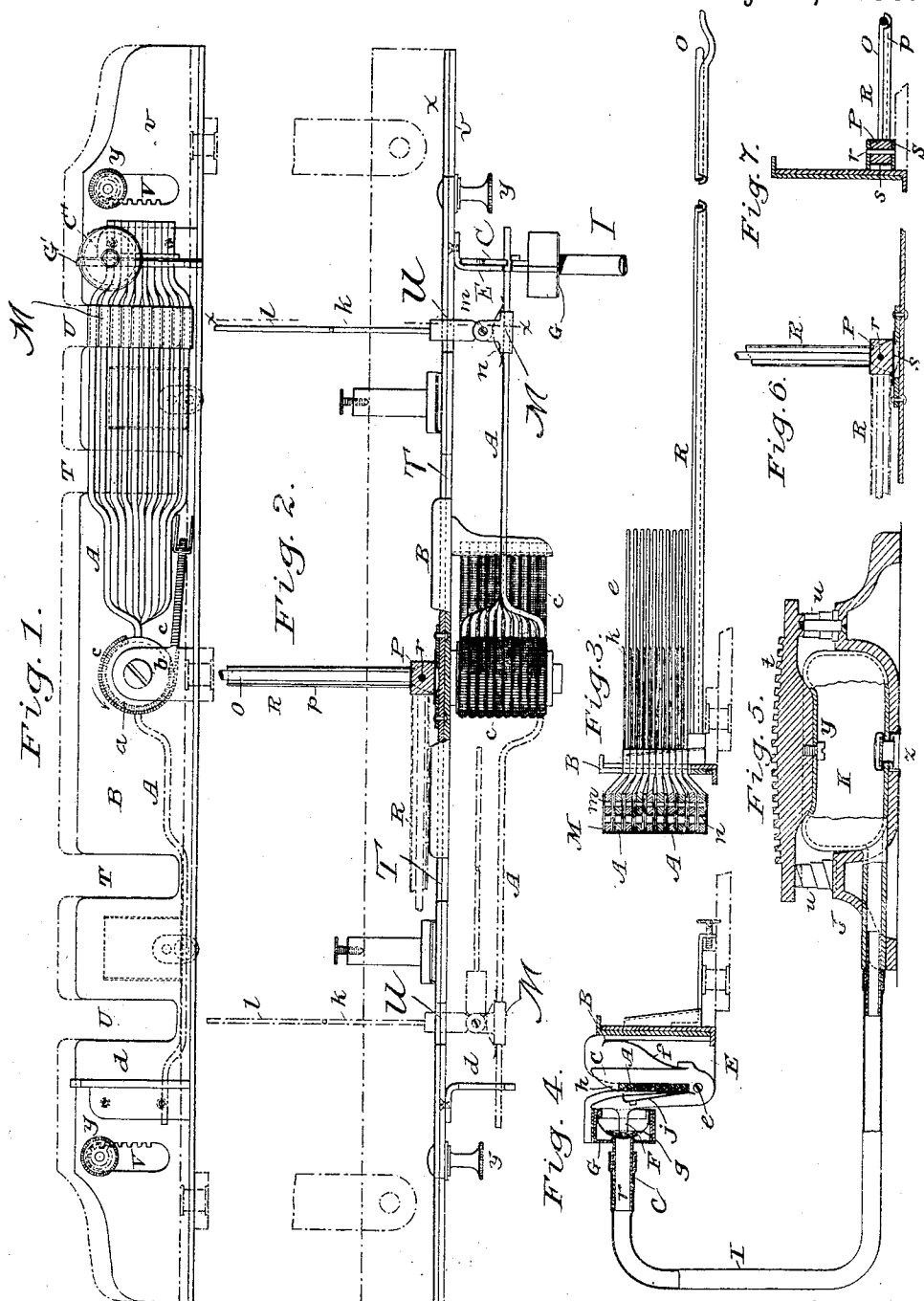


(No Model.)

F. MOREL.
APPARATUS FOR TURNING MUSIC SHEETS.

No. 501,212.

Patented July 11, 1893.



Witnesses:
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By

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UNITED STATES PATENT OFFICE.

FERDINAND MOREL, OF PARIS, FRANCE.

APPARATUS FOR TURNING MUSIC-SHEETS.

SPECIFICATION forming part of Letters Patent No. 501,212, dated July 11, 1893.

Application filed May 12, 1892. Serial No. 432,818. (No model.) Patented in France September 4, 1890, No. 208,043, and in Germany October 7, 1892, No. 64,665.

To all whom it may concern:

Be it known that I, FERDINAND MOREL, a citizen of France, residing at Paris, France, have invented certain new and useful Improvements in Apparatus for Turning Music-Sheets, of which the following is a full, clear, and exact description.

The invention has been patented in France, No. 208,043, dated September 4, 1890, and patent of addition November 28, 1891, and in Germany, No. 64,665, dated October 7, 1892.

My invention consists in the devices and arrangements thereof particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1, is a bottom plan view of music leaf turner embodying my improvements. Fig. 2, is a front elevation of the same. Fig. 3, is a detail transverse sectional elevation taken on the line *x x*, Fig. 2. Fig. 4, is a detail view of the escapement device and its operating parts, portions being shown in section to more clearly illustrate the construction and operation of the same. Fig. 5 is a detail sectional view of the pedal mechanism for operating the escapement device, and Figs. 6 and 7 are detail sectional views illustrating the temporary binder.

My improved music leaf turner is shown as being used in connection with a piano stand. As shown in Figs. 1 and 2, the rods *A* are fastened at their inner ends to a series of disks *a*, mounted and turning on the vertical shaft *b*, mounted on the base portion *B* of the apparatus. A spring *c* partly embraces, and has one end secured to one of the disks *a*, the other end of said spring being attached to the base so as to normally exert a tension on the rods *A* and spring to throw them in the direction indicated by the arrow in Fig. 1. Each rod *A* which is horizontal, carries a slide *M*, to which is pivotally attached a pair of vertical needles *k l*, the latter being of greater length, and both being adjustably maintained in their position by means of the spring *n*, bearing on their inner ends within the slide *M*.

It will be noted that the base portion *B* is provided with notches *T U*, through one of which the needles *k l* extend. By having the slide *M* as set forth, the said needles may be adjusted to extend through either of said

notches, and thus provide for books of greater or less width. The base portion *B* is shown as being formed of two plates *x v*, relatively movable by means of rack teeth *V V*, formed in the plate *v*, and engaged by pinions carried by the second plate and operated by thumb knobs *y y*, as shown in Figs. 1 and 2. This arrangement admits the enlarging of the base portion to provide for music books of greater or less thickness.

The escapement device *C* before referred to, is represented in Fig. 4, and is preferably suspended from the bracket *E*, carried by the base portion *B*, Fig. 4, said escapement device being normally retained by the pivot *e* and spring *f* in a definite position as shown in Fig. 4. In the position referred to, the point *F* of the pivoted portion presses on the diaphragm *g*, pressing it against the bottom of the cap *G*; the hook portion *h* confining all the rods *A*, while the portion *j* is normally free of said rods. The cap *G* is provided with a tubular portion *c*, with which is connected a rubber tube *I*, the other end of which communicates with the pedal mechanism *J*. This latter (Fig. 5) comprises a foot piece *t*, which is normally held in an elevated position by spring *u*, resting on a suitable base. The rubber sack *K*, is connected with said foot piece *t*, and has a lower valve *z*, so that the vibration of the foot piece will force air through the tube *I* to operate the diaphragm and escapement device, the hook process *h* of the lock releasing the foremost rod *A*, the portion *j* locking the rest of the rods against release. The release of the pressure on the foot piece *t*, causes air to again enter the sack *K*, and permits a relaxation of pressure on the diaphragm *g*, so that the spring *f* can restore the escapement device to the position shown. It will be understood that when the first rod is released, the second rod is caught and held by the portion *j*, and when the pressure of the foot on the foot piece *t* is released, and the escapement swings to the left of Fig. 4, the second bar *A* will be released from the portion *j*, but will be immediately caught and held by the hook *h*, the said second bar, of course, rising slightly from its first position under the action of its spring to occupy the former position of the first bar.

Stop brackets *d* and *G'*, form abutments against which the rods *A* rest in either position and serve to sustain the same at their outer ends so as to distribute the weight of the same.

To provide for using the apparatus in connection with loose sheets or leaves of music, I employ a temporary binder *R*, comprising a cylindrical shank *O*, and acting as a spring to force the leaves against a concave member *p*, the said shank and member being secured to a block *P* pivotally secured by a pin *r* to a bracket *S*, mounted on the base portion *B*. A spring *s* maintains the temporary binder in either a vertical or horizontal position, and enables the same to be folded parallel with the base portion, and out of the way when not in use.

It will be noticed from Figs. 1 and 2, that the bars *A* are peculiarly bent so that while their pivoted ends lie one above the other along the vertical pivot shaft, their free ends lie side by side in a horizontal plane and form a series extending from front to back of the stand and consequently in position to have their fingers engage a series of leaves without bending the fingers or the leaves. This arrangement is rendered possible also by forming the base with the slots or notches *U*, *T*, to receive the fingers.

I claim—

1. In a music leaf turning apparatus the combination of the plates *x*, *v*, one of which is slotted and provided with racks and the other with pinions and thumb knobs for turning the same and the leaf turning rods carried by the base made up of said plates, substantially as described.

2. In combination the base, the series of arms, the escapement device engaging the said arms, the pneumatic device for operating the escapement, comprising the diaphragm, the air sack *K*, the inclosing casing therefor, the foot piece *t* resting on the sack and the springs *u* between the said foot piece and the sack casing, substantially as described.

3. In combination the base, the pivoted arms under spring tension, the holder for loose sheets comprising the concave part *p*, and the rod *X O* adapted thereto, both of the said parts being carried rigidly by a block *P* and the bracket *S* and pivot *r* for said block, substantially as described.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

FERDINAND MOREL.

Witnesses:

BOUCHERT,
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