

A. T. YOUNG.
 PLAYER FOR PIANOS.
 APPLICATION FILED SEPT. 23, 1909.

971,956.

Patented Oct. 4, 1910.

3 SHEETS—SHEET 1.

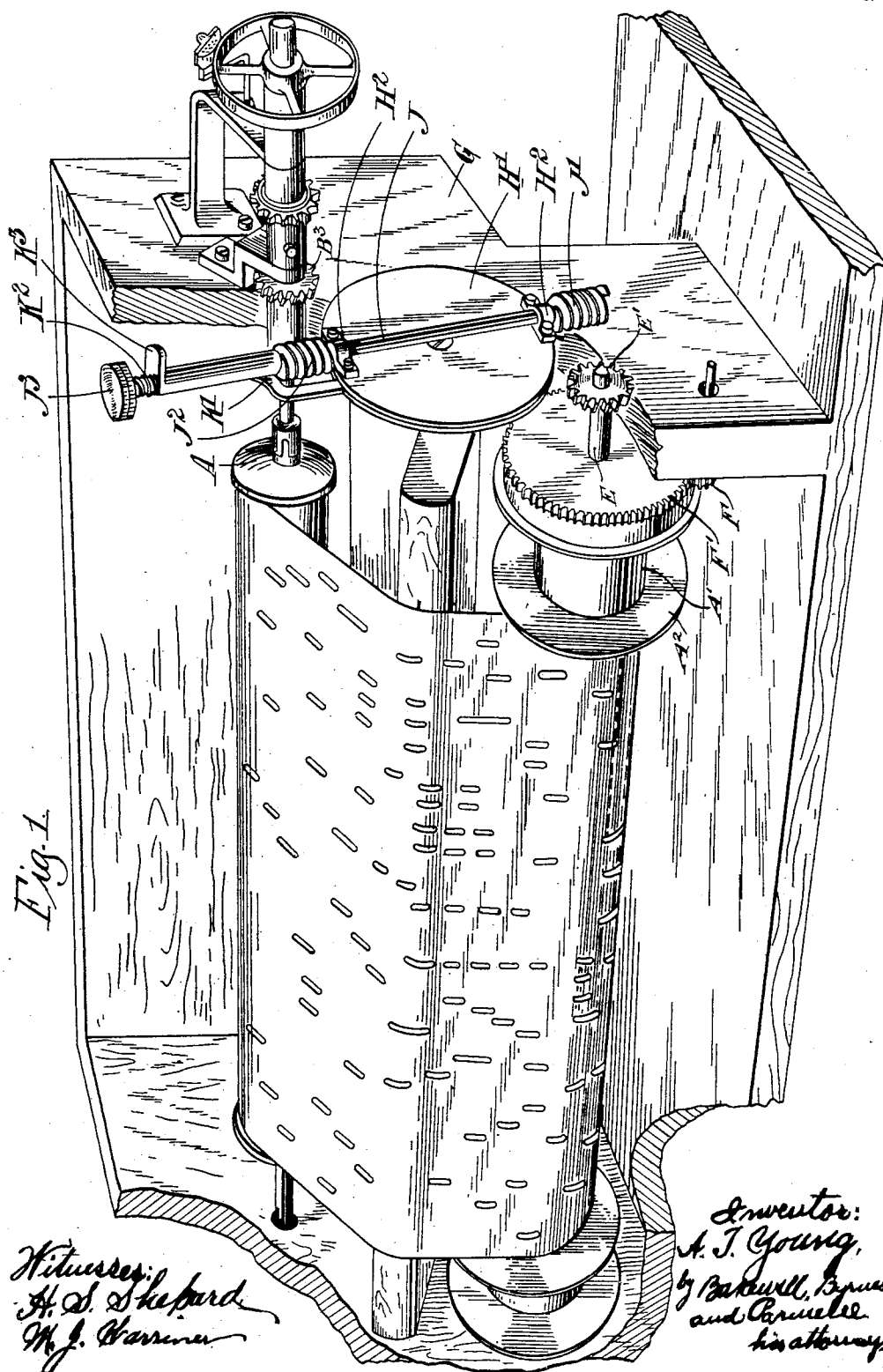


Fig. 1.

Witnesses:
 H. S. Shepard
 W. J. Warner

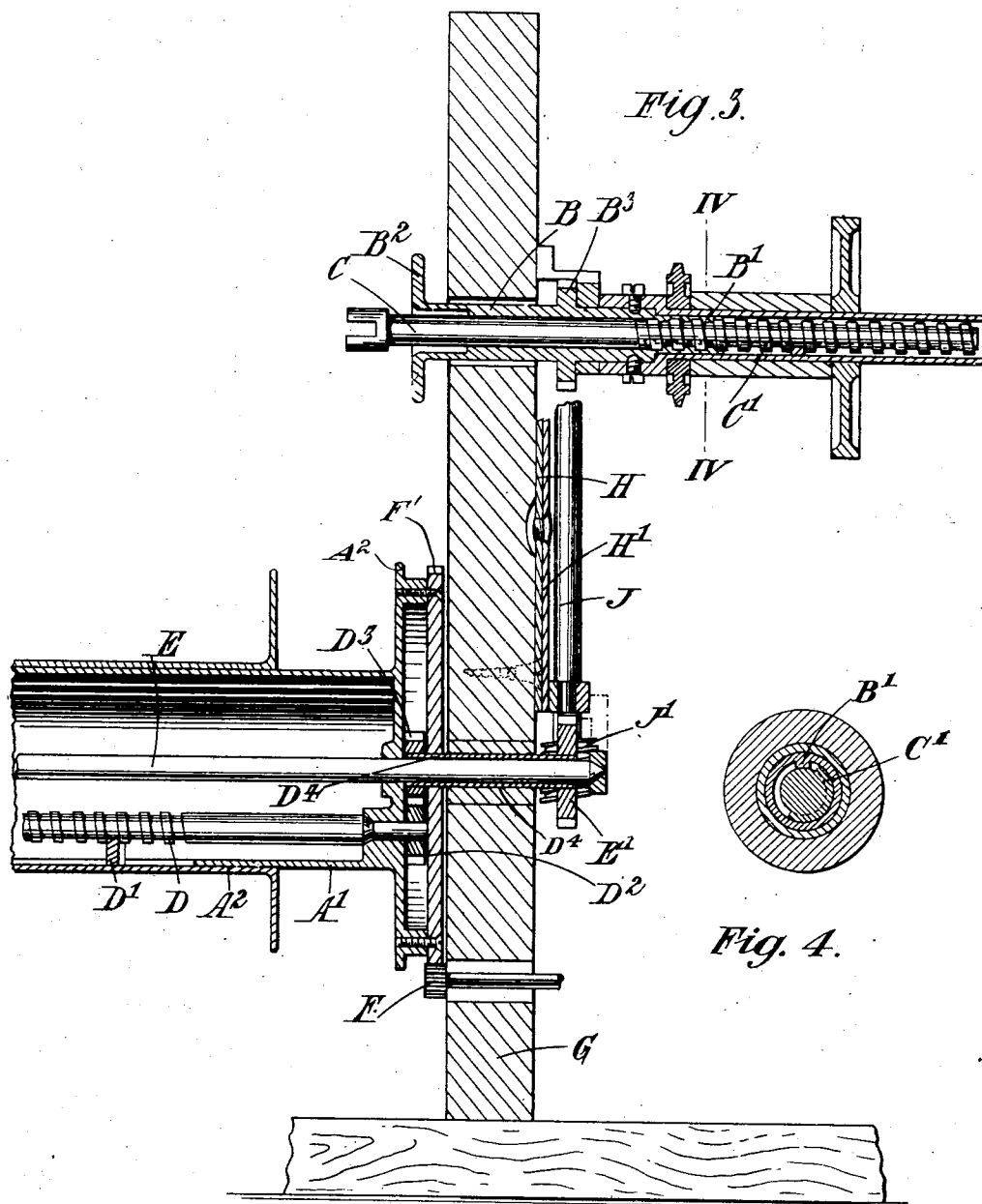
Inventor:
 A. T. Young,
 by Baker, Barnes
 and Charnell
 his attorneys.

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3 SHEETS—SHEET 3..



Witnesses:
A. S. Shepard
M. J. Harriman

Inventor,
A. T. Young
 by *Bakewell, Burns & Partridge*
 His attorney

UNITED STATES PATENT OFFICE.

ADAM TURQUAND YOUNG, OF LONDON, ENGLAND.

PLAYER FOR PIANOS.

971,956.

Specification of Letters Patent.

Patented Oct. 4, 1910.

Application filed September 23, 1909. Serial No. 519,122.

To all whom it may concern:

Be it known that I, ADAM TURQUAND YOUNG, a subject of the King of England, residing at London, England, have invented certain new and useful Improvements in Players for Pianos or the Like, of which the following is a specification.

In pianos and like players it is known to effect transposing by moving the music sheet transversely over the tracker board commonly employed and for this purpose some suitable device is provided for shifting the music roll of the sheet axially and a separate device to similarly shift the receiving roller axially. With such arrangement difficulty is found in rightly alining the music roll and the receiving roller and a permanent connection between the two adjusting devices is not desirable.

According to the present invention there is combined with the transposer devices that are allotted one to each music-sheet roller, an operating member that can be moved to engage the two devices for the purpose of adjusting both rollers simultaneously. Preferably the operating member takes the form of a spindle whose opposite ends carry the means for engaging the transposer devices and that rocks about a horizontally disposed pivot situated between its ends.

According to one method of carrying out this invention, each transposer device has a worm-wheel which, when rotated, operates to displace the roller in an end-wise direction. The controlling member is carried on a revolving plate and has at its opposite ends, which project from opposite edges of the plate, worms that engage the worm-wheels when the plate is turned to bring the spindle into the operative position.

In the accompanying drawings:—Figure 1 is a perspective view of the apparatus constructed according to this invention; Fig. 2 is a side elevation of the mechanism shown in Fig. 1 with the parts in a different position, and Fig. 3 is a section through the apparatus on the line 3—3 of Fig. 2. Fig. 4 is a detail sectional view on the line IV—IV of Fig. 3.

Like letters indicate like parts throughout the drawings.

The transposer device for the music roll comprises a sleeve B having a tooth B' that engages the threaded end C' of a driving spindle C, the sleeve B also carries a milled

head B² whereby it can be separately rotated by hand and a worm wheel B³ whereby it may be rotated by a worm as hereinafter described. The lower or receiving-roller A' has on it a flanged sleeve A² as described in my earlier specification, and this sleeve can be moved along the roller A' by a screw-threaded spindle D that engages a tooth D' on the sleeve. This spindle instead of being rotated by hand carries a toothed wheel D² that meshes with a second toothed wheel D³ fast on a sleeve D⁴ that is mounted free on the end of a spindle E. The spindle E carries the roller A' which is free upon it, being driven by a pinion F. This pinion, as is common practice in these machines gears with a toothed disk F' that is secured to a flange A² on the roller A'. That end of the spindle E that carries the sleeve D⁴ extends through the end wall G of the inclosing casing and sleeve also extends through the wall. Beyond the wall and fast on the sleeve is a worm wheel E'. On the outer face of the end wall G a plate H is secured by screws, and pivoted on this plate is a second plate or disk H'. At opposite points on the plate are bearings H² which carry a rotatable spindle J. The ends of the spindle project beyond the opposite edges of the plate H' and carry worms J' J². On the upper end of the spindle J and beyond the worm J² is a sleeve K that carries a detent K'. At the top of the spindle is a thumb-piece J³ and between this thumb-piece and the end of the sleeve K is a spring K² that always tends to depress the sleeve. The upper end of the sleeve has on it a lug K³. In the plate H are two notches situated at the points marked 1 and 2 respectively on Fig. 2 and the detent is shaped to enter these notches.

The operation of this mechanism is as follows:—In Fig. 1 the parts are shown in the normal or inoperative position. When it is desired to effect a change of key, the operator raises the sleeve K by means of the lug K³, so that the detent K' which was resting in the notch 1 is lifted out of the notch. The spindle J is then rocked over to the position shown in Fig. 2 and the detent is dropped into the notch marked 2, thereby locking the spindle in the new position. In this position the worms J' J² engage the wheels E' B³ respectively so that by rotating the milled head J³ and thereby the spindle J, both rollers may be simultaneously displaced

in an endwise direction either to the right or left of the machine according to the direction in which the spindle J is rotated.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In transposing mechanism for a piano player the combination of a music roll for the music sheet, a receiving roller to receive the music sheet from the music roll, a device for adjusting the music roll axially, a device for adjusting the receiving roller axially, means for operating the adjusting devices for both rolls normally out of engagement therewith, and means to shift the operating means into engagement with both adjusting devices for the purpose of operating them simultaneously; substantially as described.

2. In transposing mechanism for a piano player the combination of a music roll for the music sheet, a receiving roller to receive the music sheet from the feed roller, a device for adjusting the music roll axially, a device for adjusting the receiving roller axially, an operating member whose opposite ends carry means for operating the adjusting devices and arranged to actuate said devices simultaneously, and means for moving the ends of the actuating member into and out of engagement with the adjusting devices; substantially as described.

3. In transposing mechanism for a piano player, a music roll for the music sheet, a receiving roller to receive the music sheet from the music roll, means to adjust the music roll axially, means to adjust the receiving roll axially, means for operating the adjusting devices for both rolls, means to move the operating means into and out of engagement with the music roll adjusting devices, and means to lock the operating means in either of its adjusted positions; substantially as described.

4. In transposing mechanism for a piano player the combination of a music roll for the music sheet, a receiving roller to receive the music sheet from the music roll, a device for adjusting the music roll axially, a device for adjusting the receiving roller axially, a spindle whose opposite ends carry means for operating the adjusting devices, a bearing for the spindle that permits the latter to be rotated, and a support for the bearing that is free to swing about an axis that is transverse to the axis of the spindle and is situated approximately midway between the operating means carried at the ends of the spindle, the arrangement being such that the spindle which is normally in such position that its operative ends do not engage the adjusting devices may be swung around to engage both of said devices and then rotate in its bearing to operate them simultaneously; substantially as described.

5. In transposing mechanism for a piano player the combination of a music roll for

the music sheet, a receiving roller to receive the music sheet from the music roll, a device for adjusting the music roll axially, a spindle whose opposite ends carry means for operating the adjusting devices, a bearing for the spindle that permits the latter to be rotated, a support for the bearing that is free to swing about an axis that is transverse to the axis of the spindle and is situated approximately mid-way between the operating means carried at the ends of the spindle, the arrangement being such that the spindle which is normally in such position that its operative ends do not engage the adjusting devices may be swung around to engage both these devices and then rotate in its bearing to operate them simultaneously, and an extension to the spindle whereby it may be rotated in its bearing and also swung from one position to the other; substantially as set forth.

6. In transposing mechanism for a piano player the combination of a music roll for the music sheet, a receiving roller to receive the music sheet from the music roll, a device for adjusting the music roll axially, a device for adjusting the receiving roll axially, a spindle whose opposite ends carry means for operating the adjusting device, a bearing for the spindle that permits the latter to be rotated, a support for the bearing that is free to swing about an axis that is transverse to the axis of the spindle and is situated between the operating means carried at the ends of the spindle, the arrangement being such that the spindle which is normally in such position that its operative ends do not engage the adjusting devices and may be swung around to engage both of these devices and then rotated in its bearing to operate them simultaneously, an extension to the spindle whereby it may be rotated in its bearing and also swung from one position to the other, and a detent carried by the spindle and arranged to lock it in either position; substantially as described.

7. In transposing mechanism for a piano player the combination of a music roll for the music sheet, a receiving roller to receive the music sheet from the music roll, a device for adjusting the music roll axially, a device for adjusting the receiving roller axially, a spindle whose opposite ends carry means for operating the adjusting devices, a bearing for the spindle that permits the latter to be rotated, a support for the bearing that is free to swing about an axis that is transverse to the axis of the spindle and is situated between the operating means carried at the ends of the spindle, the arrangement being such that the spindle which is normally in such position that its operative ends do not engage the adjusting devices may be swung around to engage both of these devices and then rotated in its bearing to

operate them simultaneously, an extension
to the spindle whereby it may be rotated in
its bearing and also swung from one position
to the other, a sleeve on the extension, a
5 spring engaging the sleeve and the spindle
to keep the sleeve normally at the limit of
its movement in one direction, and a detent
on the sleeve adapted to engage recesses in
a fixed member; substantially as described.
10 8. In transposing mechanism for a piano
player the combination of a music roll for
the music sheet, a receiving roller to receive
the music sheet from the music roll, a device
comprising a worm wheel for adjusting the
15 music roll axially, a device comprising a
worm wheel for adjusting the receiving
roller axially, a spindle having at each end
a worm to engage the aforesaid worm wheels,

a bearing for the spindle that permits the
latter to be rotated, a support for the bearing 20
that is free to swing about an axis that is
transverse to the axis of the spindle and is
situated between the worms thereon, the
parts being so alined that the spindle can
be swung around on the supporting pivot to 25
bring the worms into engagement with the
worm wheels and then rotated in its bearing
to simultaneously operate both adjusting de-
vices for the purpose set forth.

In testimony whereof I have signed my 30
name to this specification in the presence of
two subscribing witnesses.

ADAM TURQUAND YOUNG.

Witnesses:

R. YOUNG,

HENRY WILLIAM ANDREW.