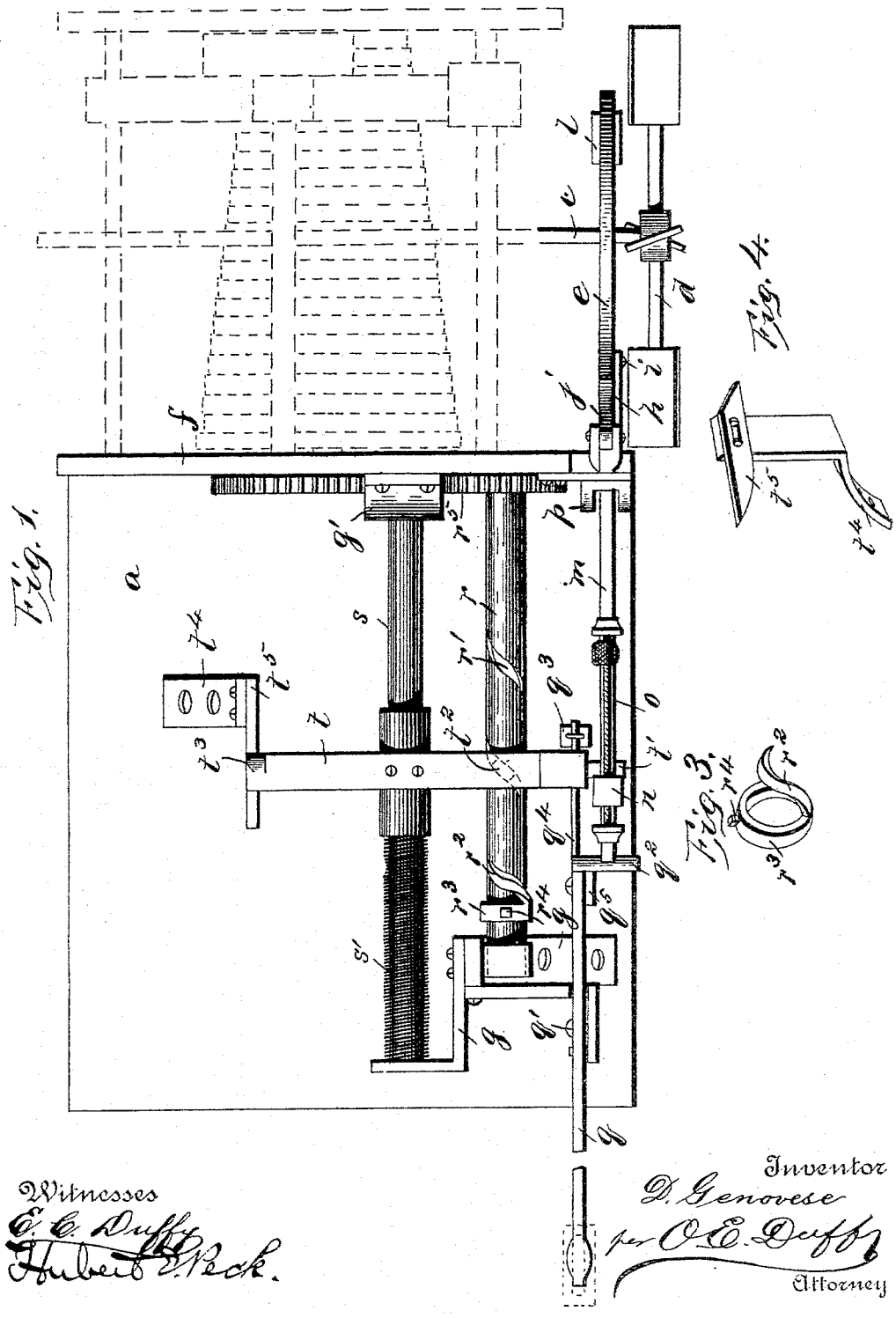
(No Model.) 2 Sheets—Sheet 1.

# D. GENOVESE.

## COIN CONTROLLED MUSICAL APPARATUS.

No. 531,922. Patented Jan. 1, 1895.



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(No Model.) 2 Sheets—Sheet 2.

# D. GENOVESE.

## COIN CONTROLLED MUSICAL APPARATUS.

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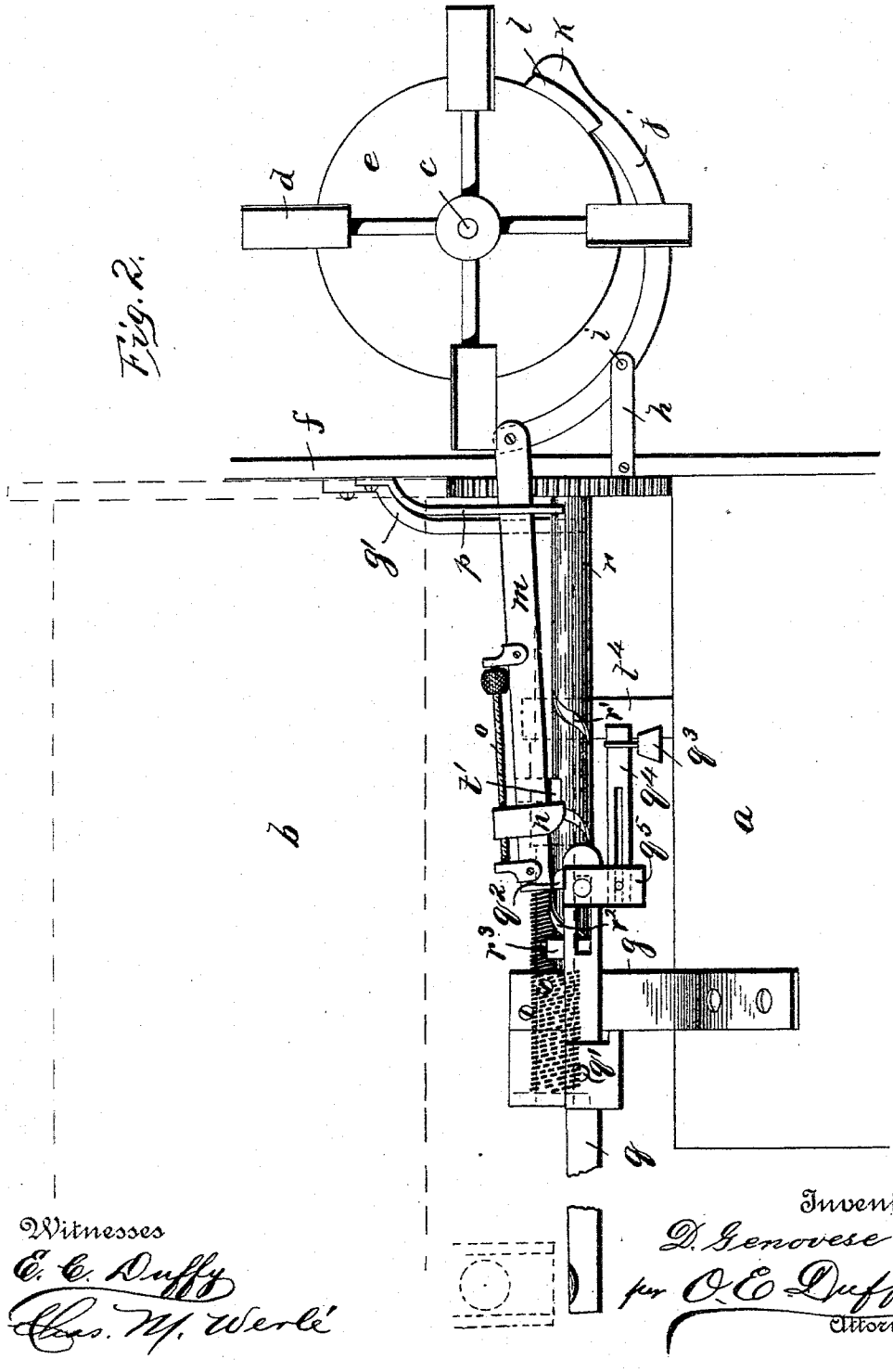
Fig. 2.

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# UNITED STATES PATENT OFFICE.

DOMINICK GENOVESE, OF PHILADELPHIA, PENNSYLVANIA.

## COIN-CONTROLLED MUSICAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 531,922, dated January 1, 1895.

Application filed April 30, 1894. Serial No. 509,547. (No model.)

*To all whom it may concern:*

Be it known that I, DOMINICK GENOVESE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Coin-Controlled Musical Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in coin controlled apparatus.

The object of the invention is to provide an improved coin controlled apparatus, exceedingly simple, durable and economical in construction, and at the same time so constructed as to be accurate and reliable, and yet so as to prevent the parts being properly set in motion except by the coin the machine is adjusted to receive, and by which it is adapted to be set in operation.

A further object of the invention is to provide an accurate and reliable coin controlled apparatus particularly adapted for controlling the operation of musical instruments.

The invention consists in certain novel features of construction and in combinations of parts more fully and particularly described hereinafter and pointed out in the claims.

Referring to the accompanying drawings:—Figure 1, is a plan view of a portion of the piano operated by the rotary cylinder, showing the coin controlling apparatus and also the regulating fan of the motor. Fig. 2, is a side elevation of the construction shown in Fig. 1, the cylinder of the piano being shown in dotted lines. Figs. 3 and 4, are detail views.

This invention is particularly intended to control the operation of that class of pianos wherein a suitable motor, such as a spring motor, drives a rotary cylinder having pins suitably arranged thereon to control the various strikers for the wires. The motor is controlled by a suitable governor or regulator such as the fan shown.

The coin controlled apparatus comprises a brake acting on the motor regulator, and a balanced lever arranged to be swung by the weight of the coin to release the brake, and also a suitable traveling device arranged to control the length of time the machine will play after the insertion of the coin at each operation.

In the drawings *a*, is a suitable support here shown as a cylinder or casing of the spring motor.

*b*, is the cylinder of the piano here shown in dotted lines.

*c*, is the governor or regulator shaft of the motor shown detached and without its operating connections and bearings. This shaft is provided with a regulator fan *d*, or any other suitable device for the same purpose, and with the disk *e*.

A suitable balanced brake, beam or lever is provided fulcrumed between its ends at *i*, and composed of a curved portion *j*, extending beneath the disk *e*, and at its free end provided with a brake shoe *l*, to engage, the periphery of the disk *e*, and at its opposite end pivoted at *i*, to the support *h*, extending out from the wall *f*; and a straight portion *m*, rigid with the opposite end of the curved portion *j*, and extending over the casing *a*. A suitable guide, such as *p*, can be provided for the brake lever. The free end of the lever is provided with the weight *n*, to so counter balance the lever that it will move easily and respond quickly. This weight *n*, is mounted on the screw threaded rod *o*, journaled in suitable bearings on the lever *m*, and passing through a threaded opening in the weight so that the weight can be adjusted longitudinally of the lever. The inner end of the swinging brake lever can be weighted at *k*, if desired.

*q*, is the coin lever fulcrumed between its ends at *q'*, in a suitable supporting frame *g*, and at its outer end formed to receive the coin which falls down through a suitable guiding tube from the exterior of the case on to the free end of the lever, thereby depressing said end until the coin drops therefrom. The inner end of this lever is provided with suitable counter weight mechanisms comprising a block $q^5$, adjustable longitudinally of the end of the lever *q*, by means of a slot and clamping screw, and a rod $q^4$, carrying a weight, $q^3$, adjustable longitudinally on the block $q^5$, by means of a slot and clamping screw. By this means the coin lever can be

nicely balanced to be operated only by the coin of the proper weight. The block $q^5$, at the end of the coin lever is provided with the lateral arm $q^2$, extending beneath and resting against the under side of the free end of the balanced brake lever.

$r$, is a rotary shaft journaled in suitable bearings and preferably, although not necessarily parallel with the outer end of the balanced brake lever. This shaft is driven by gearing $r^5$, from the motor so as to rotate in unison with the cylinder of the piano. This shaft $r$, is provided with a spiral thread $r'$, of a suitable pitch and length.

$s$, is a rod stationarily mounted in suitable supports parallel with the threaded shaft $r$. The shaft $r$, and the rod $s$, are preferably parallel with the free end of the brake lever.

$t$, is a traveler having a tube sliding on the rod $s$.

$s'$, is an expansible spring, coiled on the rod $s$, between the tube of the traveler and the outer end of the rod. The traveler extends over the threaded shaft $r$, and has an extension $t'$, beneath the free end $m$, of the balanced brake lever. The traveler is provided with a projection $t^2$, extending into the thread of the shaft $r$, so that the said traveler will be moved longitudinally of and toward the outer end of the shaft $r$, when said projection $t^2$, is in the thread and the shaft revolves.

The weight $n$, is extended outwardly beneath the free end of the balanced brake lever so as to engage and extend into the path of movement of the end $t'$, of the traveler. The outer edge of this outwardly projecting portion of the weight $n$, is preferably, beveled as shown in Fig. 2.

At the outer end of the thread of the rotary shaft $r$, suitable means are provided, to automatically disengage projection $t^2$, from said thread and thereby permit the traveler to move back to the inner end of the threaded shaft independently of the rotation of the shaft. This means can consist of an adjustable collar $r^3$, having clamping means $r^4$, and a curved cam or finger $r^2$, so shaped as to extend down into a groove $r'$, and lift the traveler and the projection $t^2$, clear of the shaft $r$, so that the spring $s'$, will force the traveler to the inner ends of the shaft and rod $s'$. The opposite end to the traveler is extended beyond the slide rod $s$, and a suitable guide is provided therefor to hold the traveler in engagement with the thread of the shaft $r$, before the traveler reaches the automatic releasing cam $r^2$. This guide can consist of a support $t^4$, having the adjustable block $t^5$, along the upper edge of which the rear end of the traveler slides when moving forward and along the under side of which it moves when flying back under the impulse of spring $s'$. This block is so beveled as to properly guide the rear end of the traveler, in connection with beveled edge $t^3$, to the proper edge of the block. The object of this guide $t^5$, is to prevent the traveler being disengaged from the threaded shaft intermediate of its full stroke, as more fully described hereinafter.

The normal position of the parts when the machine is locked is shown in Figs. 1 and 2, with the end $t'$, of the traveler bearing against the inner vertical edge of the projection or weight $n$, at the free end of the brake lever, thereby drawing the inner end of the brake lever with its shoe tightly against the disk $e$, and holding the machine against operation, it being understood that a comparatively slight pressure will hold or stop the motor when applied to the regulator shaft. When the brake lever and traveler are in this position the outer end of the brake lever bears down on the inner end of the coin lever.

When a coin of the proper weight and size enters the machine it strikes the outer end of the coin lever thereby depressing said outer end and throwing up the inner end thereof, so that the projection $q^2$, throws up the free end of the balanced brake lever and throws down the opposite end thereof. The governor is hence released and the motor at once begins to operate thereby rotating the shaft $r$, and moving the traveler to the left beyond the weight $n$, before the brake lever drops to its normal position. The traveler thus moves outwardly, continually compressing the spring $s'$, until the projection $t^2$, strikes the cam $r^2$, which cam releases the traveler from the thread. The spring $s$, then forces the traveler to the opposite ends of the rod $s$, and shaft $r$, the projection $t'$, striking the beveled edge of the projection $n$, thereby raising the free end of the brake lever to permit the backward passage of the traveler. The traveler then starts at the inner end of shaft $r$, toward the outer end thereof, and moves therein until it strikes the projection $n$, which draws the brake lever outwardly and forces the shoe against the governor and thereby stops the machine. The very slight continued outward movement of the traveler firmly locks the parts.

It will thus be seen that the machine plays a certain time at each operation, as governed by the position of the releasing device $r^2$. The releasing device can be adjusted longitudinally of the threaded shaft to vary the period the machine plays at each operation. The projection $n$, and guide $t^5$, are also adjustable so that the parts will properly cooperate.

The guide $t^5$ plays an important part in this machine as it forms a guard against tampering with the machine for the purpose of causing it to play a longer period than intended. This device so holds the traveler to the screw shaft that no jarring or shaking of the machine can throw the lug $t^2$, from the thread $r'$, but the disengagement can only be effected by the cam $r^2$.

It is evident that various changes might be made in the forms, arrangements and constructions of the parts described without departing from the spirit and scope of my in-

vention. Hence I do not wish to limit myself to the exact construction herein set forth, but consider myself entitled to all such changes as fall within the spirit and scope of my invention.

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

1. A coin controlled apparatus comprising a swinging balanced brake lever for controlling a motor, and a swinging balanced coin lever arranged to engage the brake lever and move the same to permit the motor to move, substantially as described.

2. A coin controlled apparatus comprising, a brake lever for the motor, a traveler operated by the motor and arranged to engage said lever to apply the brake and to be held by said lever, and a coin lever arranged to move said brake lever to release the brake and traveler, substantially as described.

3. A coin controlled apparatus comprising motor controlling means, a traveler operated by the motor and arranged to operate said means to stop the motor, and a swinging coin lever arranged to operate said means to start the motor and release the traveler, substantially as described.

4. A coin controlled apparatus comprising a traveler operated by a motor, means, substantially as described, for stopping and starting the motor arranged to be operated by said traveler to stop the machine, and a coin controlled means arranged to operate the motor stopping and starting mechanism to start the motor and release the traveler, substantially as described.

5. In combination, a swinging brake lever controlling a motor, automatic intermediate means operated by the motor and determining the time that the motor shall work at each operation, means arranged to operate said lever to apply the brake, and a coin controlled lever arranged to operate said brake lever to release the motor and said intermediate means, substantially as described.

6. A coin controlled apparatus comprising means controlling the stopping and starting of a motor, a reciprocating traveler operated by the motor and arranged to operate said means to apply the brake, a coin controlled lever arranged to operate said means to start the motor and release the traveler, and means, substantially as described to hold said traveler so that it cannot be released and thrown back intermediate of its stroke by shakes or jars.

7. The combination, of a brake lever, and a balanced coin lever for releasing the brake lever, having a longitudinally adjustable block carrying a counter-weight, and a projection to engage the brake lever, substantially as described.

8. In a coin controlled apparatus, a balanced brake lever fulcrumed between its ends and having a brake shoe at one end to engage the movable portion of a motor and a longitudinally movable counter weight at its opposite portion, a traveler to operate the lever to apply the brake, and a coin controlled lever to operate the brake lever to release the brake.

9. A coin controlled apparatus comprising a reciprocating traveler, a rotary threaded shaft driven by the motor and arranged to reciprocate the traveler in one direction, a spring to return the traveler, means to release the traveler from the shaft at one end of its stroke, a guide to hold the traveler, intermediate of its stroke, to the shaft, a brake for the motor controlled by the traveler, and means to release the brake and traveler, substantially as described.

10. In combination, a traveler, a rotary threaded shaft actuated by the motor, the traveler having a projection entering the thread of said shaft, a cam to eject the projection from the shaft, a spring to return the traveler when released by said cam, a brake lever having a projection in the path of the traveler, for the purpose set forth, and a coin controlled lever arranged to lift the brake lever to release the brakes and move the projection from the path of the traveler, substantially as described.

11. In a machine such as set forth, the traveler mounted on a slide and arranged to enter the thread of a rotary screw, and having an extended end and an adjustable guide block over the edge on which said end slides to hold the traveler to the screw intermediate of the stroke of the traveler.

12. A screw having the releasing adjustable cam to throw a traveler out of the screw thread in combination with the traveler arranged to enter said thread, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

DOMINICK GENOVESE.

Witnesses:
HUBERT E. PECK,
C. M. WERLÉ.