

(No Model.)

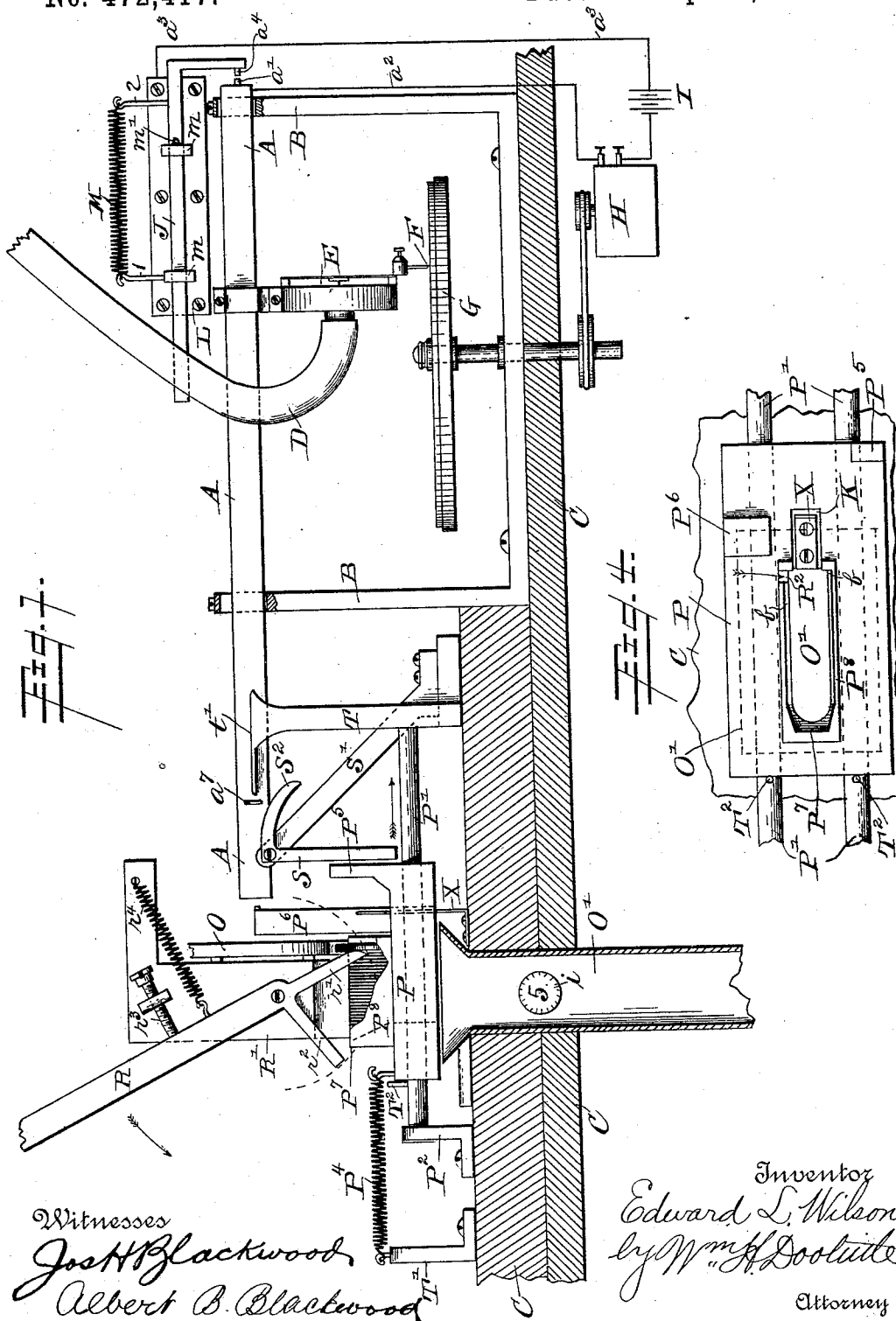
2 Sheets—Sheet 1.

E. L. WILSON.

COIN CONTROLLED APPARATUS FOR GRAMOPHONES.

No. 472,417.

Patented Apr. 5, 1892.



Witnesses
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Albert B. Blackwood

Inventor
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

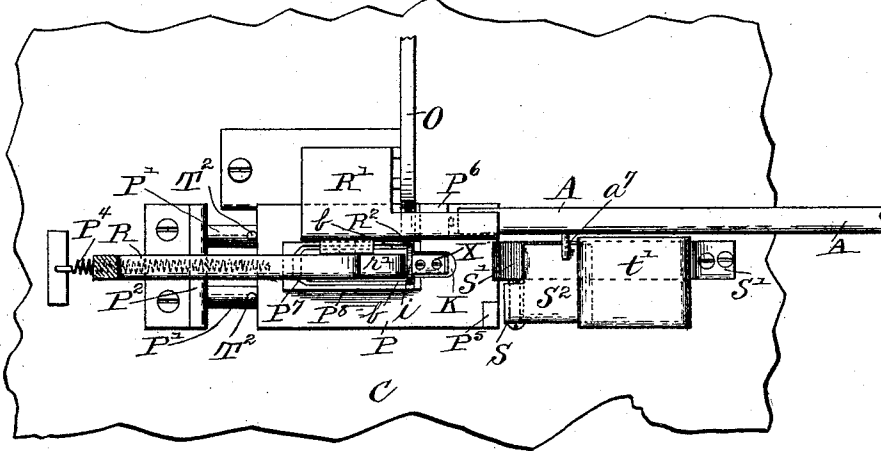
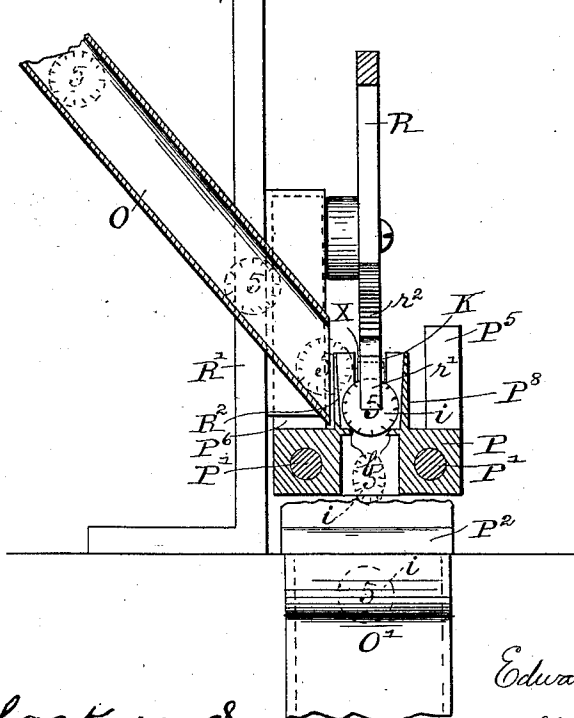


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD L. WILSON, OF NEW YORK, N. Y.

COIN-CONTROLLED APPARATUS FOR GRAMOPHONES.

SPECIFICATION forming part of Letters Patent No. 472,417, dated April 5, 1892.

Application filed December 3, 1891. Serial No. 413,871. (No model.)

To all whom it may concern:

Be it known that I, EDWARD L. WILSON, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Coin-Controlled Apparatus for Gramophones; 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.

My invention relates to a coin-controlled apparatus for gramophones.

In a machine called the "gramophone" the voice is first traced in curvilinear lines on the face of a rotating metal plate covered with a very delicate layer of fatty etching-ground by a recording-stylus, which is made to travel across the face of the rotating disk. From this etched record the voice can then immediately be reproduced by an apparatus having a reproducing-stylus. This is effected by giving the stylus a vibratory movement by and in accordance with the sinuosities of the record-groove, and these vibratory movements are transmitted to a diaphragm through a tube to the listener.

The object of my invention is to operate such a reproducing apparatus by a lever aided by a dropping of a coin of some specified denomination in a slot or chute, thereby setting in motion a system of levers and mechanism, which in turn will actuate the reproducer.

My invention is illustrated in one form in the accompanying drawings, in which—

Figure 1 is a side view in elevation, partly in section; Fig. 2, a plan of a carriage with its operating mechanism; Fig. 3, a detail end view, partly in section, of a coin-chute, a carriage, and operating-lever and coin-receiver; and Fig. 4, an enlarged plan view of the carriage.

Referring to the drawings, A is a bar or rod supported on standards B, rising from a suitable base C. The bar A is so supported as to have a free longitudinal and up-and-down movement on the standards B. On the bar A is carried a gramophone-reproducer consisting of a diaphragm E and a stylus F.

G is the circular record-disk of the gramophone, and D is a tubular transmitter of sounds from the diaphragm E. The stylus F is normally at the end of the inscribed record, which is at a point near the center of the disk G. The disk G is rotated by a suitable electric motor H and battery connection I. The bar A of the gramophone is provided with a contact-point a' , connecting with a line a^2 to the battery or other source of electricity.

J is a spring-controlled sliding bar sliding in supports $m m$ on a fixed plate L, to which plate is connected the opposite line a^3 of the electric circuit. The bar J has a contact a^4 to connect with contact a' on bar A. A spiral spring M is employed to return the bar J to its normal position with the circuit broken, after the apparatus finishes its operation, as hereinafter described. One end of spring M is connected by a hook 1 to the plate L, and the other end of the spring is connected by a hook 2 to the bar J.

O is a chute supported on an upright R' to guide a coin i of predetermined weight and denomination into the apparatus and to a slot R² in the side wall of a carriage P, and O' is a suitable receptacle at the bottom of the apparatus which finally receives such coin. Over the coin-receiver is placed the carriage P, mounted and sliding on rods P', which are secured to brackets P² and T, rising from the base of the machine.

P⁴ is a spring, one end of which is connected to the carriage P and the opposite end to a stationary upright T', (a part of the framework,) and the function of this spring is to return the carriage to its normal position after having been moved forward in the manner and for the purpose to be described. The backward movement of the carriage P is limited by the stops T² on rods P'. The carriage P is provided with two posts P⁵ P⁶, one in advance of the other, the rear post P⁶ being higher than P⁵ and having its top opposite to the end of the bar A. On the carriage is carried a box P⁸. This box is provided with ledges $b b$, on which the coin is received after it comes from the chute, and the coin rests in front of a slot K, formed in the front end of said box.

R is a lever pivoted to a stationary upright R', rising from the base at one side of and extending

tending above the carriage P and provided with two arms r' r^2 . This lever is to be actuated by hand, and its range is limited by a set-screw r^3 on bracket R'. It is held normally in position against said screw by a spring r^4 on an arm on the upright R'.

S is a lever pivoted to an arm S', rising from the base of the machine, and provided with short arm S², the long arm of which lever is located in front of the post P⁵ on the sliding carriage. The bar A is provided with a lug a' , with which the arm S² of the lever S is adapted to come in contact. The bracket T, rising from the base of the machine, has a shelf-like top t' , extending parallel with the rod A and adjacent to the lug a' on the bar A.

The operation of my machine is as follows: When a coin is dropped into the chute O, it passes down and through slot R² in the box P⁸ and rests on ledges b in front of the arm r' of lever R. This lever R is then depressed by hand. This pressure is exerted against the force of the spring r^4 , to which the upper end of the lever R is attached. The lever-arm r' is then pressed against the coin and the carriage is forced forward. As said carriage is forced forward its front post P⁵ is carried against the long arm of lever S, which pressure serves to raise the short arm S² of said lever against the lug a' on the bar A of the gramophone. The raising of the bar lifts lug a' on a level with a shelf t' of post T and also lifts the gramophone diaphragm and stylus from off the record-disk. The continuing downward pressure of lever R carries the rear arm r^2 against the rear upright wall P⁷ of box P⁸, forcing the carriage still farther forward. This movement brings the rear post P⁶ against the end of the bar A. Bar A is then carried forward, the lug a' thereon riding on the shelf t' of the post T and for a distance sufficiently far to carry the reproducer-stylus to the side of the record-disk and at the beginning of said record. The lug a' then drops off the shelf t' and the stylus drops on the record-plate. At the same time the circuit connection is made with the motor through the contact-points of arm A and the bar J and the gramophone set in operation. In the meantime the coin has been carried forward in the box P⁸ until it meets a spring X, rising from the base in front of slot K in the box, and is then forced off its supports and falls into the receptacle O'. When the spring X meets the coin, the arm r' of lever R will have released it. The range of movements of lever-arms r' r^2 is indicated in dotted lines in Fig. 1. After connection is made with the motor the latter, connected by suitable bands to the shaft which carries the record-disk, rotates said disk, and the point of the stylus, resting in the sinuous groove on face of the disk, is carried along said groove toward the center of the disk and to the end of the groove, which is also the end of the

message or matter communicated to the ear through the diaphragm and ear-tube. The carriage P is drawn back by the force of the spring P⁴. The circuit-connecting bar J is carried back by spring M until stop m' thereon reaches a support m , and the apparatus is then ready for another operation.

Many of the parts of the apparatus may be changed without departing from my invention.

What I claim is—

1. A gramophone-reproducer, in combination with a sliding and lifting bar on which said reproducer is mounted, a lever to lift said bar, a spring-controlled longitudinal reciprocating carriage having arms to operate said lifting-lever, a coin attachment to hold a coin, and a spring-controlled lever to operate against the coin to move the said carriage forward, substantially as described.

2. In a coin-controlled apparatus for gramophones, a bar mounted on a suitable support and having a vertical and horizontal movement in said support, in combination with a gramophone-reproducer connected to said bar, a lever for giving said bar the vertical movement, a lever-operated slide for giving said bar a horizontal movement, and an upright support onto which said bar is lifted by said slide and moved thereby a certain distance horizontally after being lifted and then dropped by gravity to permit the stylus to fall upon the disk, substantially as described.

3. In a coin-controlled apparatus for gramophones, a coin-chute, in combination with a longitudinally-moving carriage beneath said chute to first receive the coin, a receptacle beneath the carriage to finally receive the coin, said carriage having supports for the coin, and a wall having a slot against which said coin rests, a spring-actuated lever to force said coin against the said end of the carriage and force the carriage along a certain distance, and a spring-bar to come in contact with the coin through the slot and throw it into the said receptacle, substantially as described.

4. The combination, with an electric motor and circuit, of a longitudinally-reciprocating bar carrying the gramophone-reproducer and provided with a contact-point, a spring-actuated reciprocating bar carrying the opposite contact-point and connecting with the motor, and a longitudinally-reciprocating carriage and lever for carrying forward the said reproducer-bar, the latter being carried back by said motor, and a spring for retracting said carriage, substantially as described.

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

EDWD. L. WILSON.

Witnesses:

WALTER CARROLL LOW,
PERCIVAL L. WATERS.