(No Model.)

H. HOESCHEN.

COIN CONTROLLED PHONOGRAPH.

No. 488,278. Patented Dec. 20, 1892.

Fig. 1.

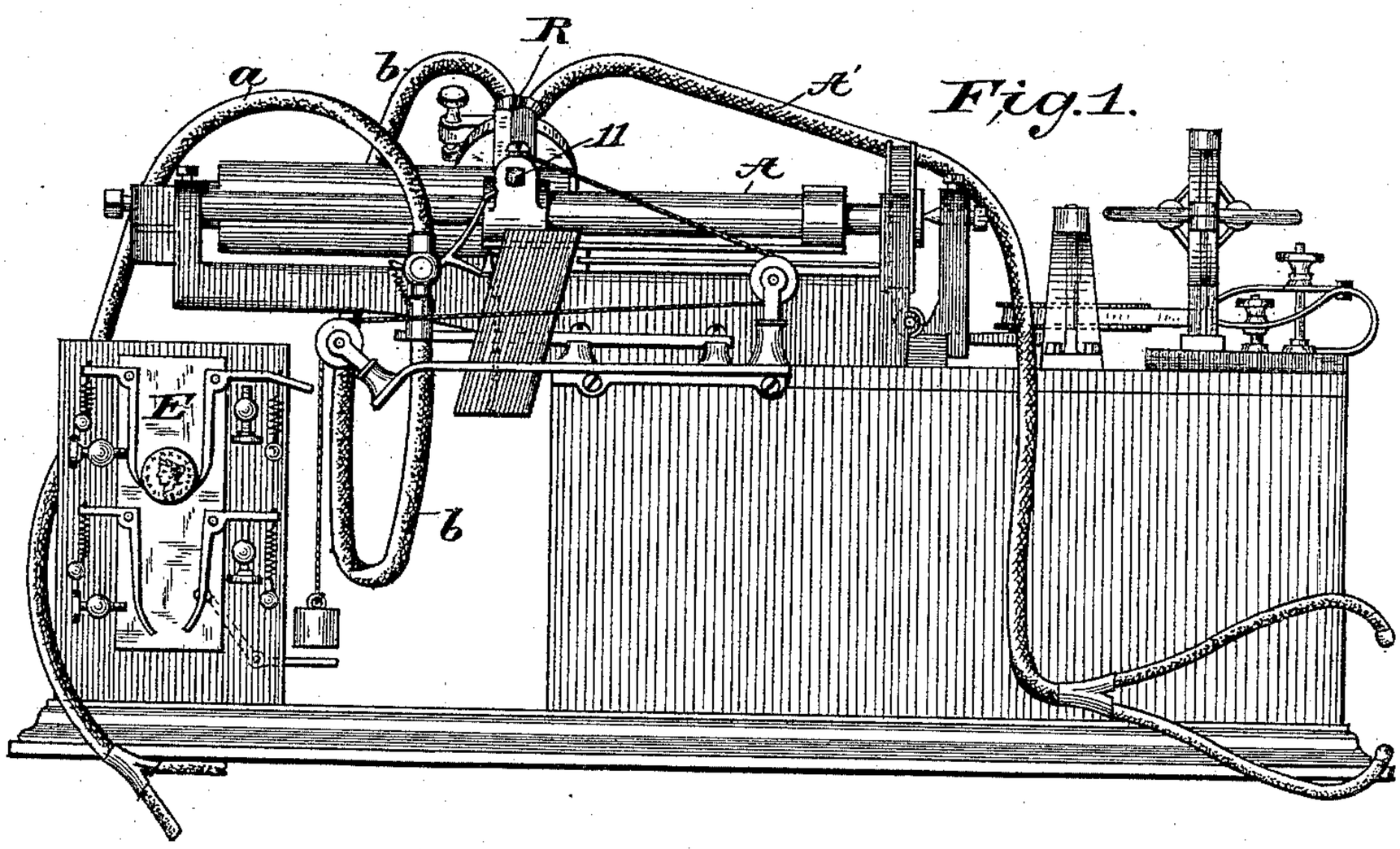


Fig. 2

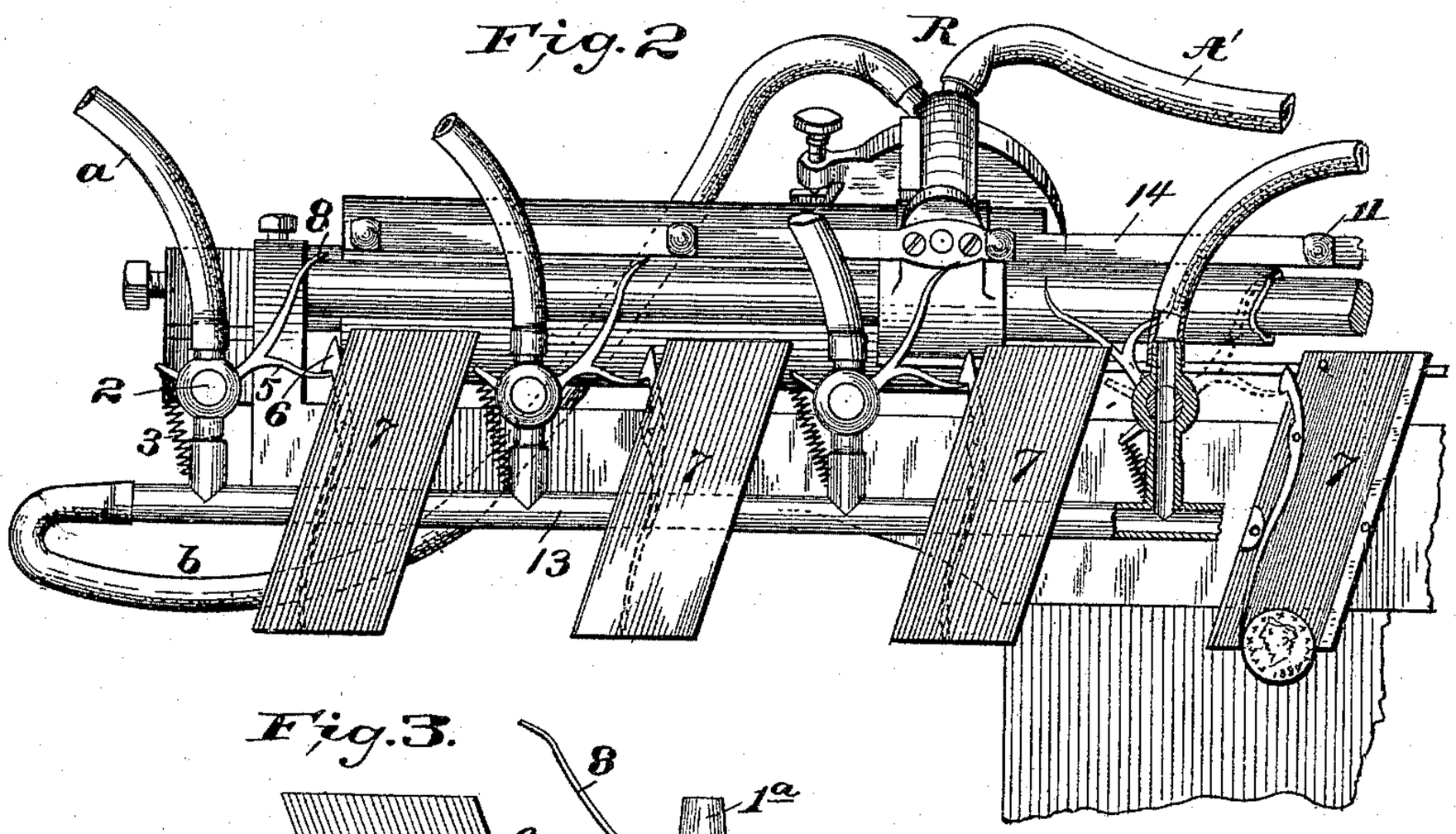
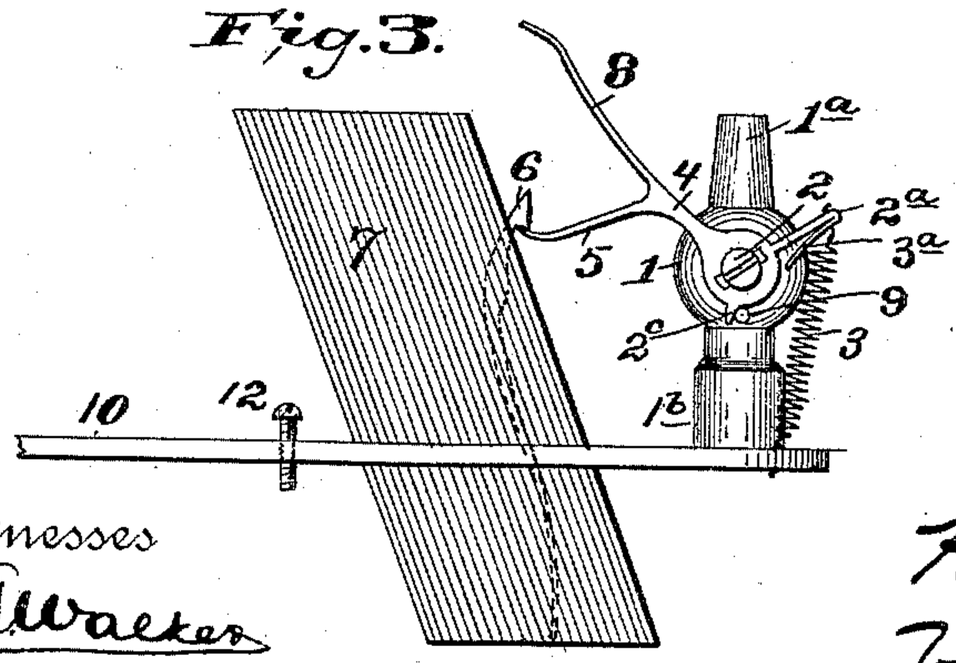


Fig. 3.



Witnesses
E. L. Walker
Edwin S. Clarkson

Inventor
Henry Hoeschen
by F. W. Ritter Jr
Attorney

UNITED STATES PATENT OFFICE.

HENRY HOESCHEN, OF OMAHA, NEBRASKA, ASSIGNOR TO ERASTUS A. BENSON, OF SAME PLACE.

COIN-CONTROLLED PHONOGRAPH.

SPECIFICATION forming part of Letters Patent No. 488,278, dated December 20, 1892.

Application filed October 6, 1890. Serial No. 367,248. (No model.)

To all whom it may concern:

Be it known that I, HENRY HOESCHEN, a citizen of the United States, residing at Omaha, in the county of Douglas, State of Nebraska, have invented certain new and useful Improvements in an Automatic Coin-Controlled Phonograph; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, wherein—

Figure 1 is a rear elevation of a phonograph having applied thereto devices embodying my invention; Fig. 2 is an enlarged detail view of a portion of a phonograph, with a series of the devices embodying my invention applied thereto. Fig. 3, is an enlarged detached view of devices embodying my invention.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of that class of coin controlled mechanism intended for purposes of trade, and while of general utility for various forms of vending apparatus—as for instance where gases or fluids are to be automatically dispensed—has been especially devised for phonograph service and as an adjunct to coin controlled power actuated apparatus intended for public use.

The main feature of my invention consists in the combination with a tube, of a power actuated valve arranged within the same, and a coin chute provided with a trip and detent arranged to hold the valve against its power mechanism and normally close the tube.

A subordinate feature of the invention embraces the combination of the aforesaid devices with a phonograph and mechanism for closing the valve said mechanism actuated by the carriage or spectacle frame of the phonograph.

There are other, minor, features of invention, all as will hereinafter more fully appear.

For purposes of illustration I have chosen to show my invention attached to a phonograph A operated by a motor (not shown) controlled by coin chute mechanism E—such as is covered by Letters Patent No. 431,883, granted to L. F. Douglass, July 8, 1890; but as said devices form no part of the present invention—and have their equivalent in any coin controlled power operated phonograph—I shall not herein described the same, nor shall I describe any portions of the phonograph except such as combine with my devices—

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

In the drawings 1 indicates a tube provided with a valve 2, adapted to be moved in one direction by a spring 3, a weight or equivalent motor, and having one arm 5, which is adapted to engage with a pivoted dog or detent 6 to lock the valve and hold it against the power of the motor, said dog or detent forming part of, or being arranged in a coin chute 7, so as to be tripped by a coin deposited in said chute. The valve 2 has also a second arm 8 adapted to be operated from a moving part of the apparatus to overcome the power of the spring weight or valve motor, move the valve 2 in reverse direction to that given it by the motor and to cause the arm 5 to engage with the detent or dog 6 of the coin chute.

It will be evident to a skilled mechanic that the valve may be either a flap—a rotary—or a slide valve, and that the motor may, in its simplest form be either a spring or a weight—but it will be equally evident that the rotary valve and the spring are the preferable devices, therefore while not limiting my invention thereto, I prefer to employ devices constructed substantially as shown in the drawings—that is to say, the tube 1 is provided with a nipple 1^a to receive the end of the eduction tube—and, if a single or detached tube is used it may be enlarged as at 1^b (see Fig. 3) to receive the end of the induction tube which latter, if of flexible material will serve to pack the valve and prevent its vibration.

The valve 2, which should be accurately fitted, so as to move easily, yet without leaking, is preferably a rotary or plug valve provided with a short arm 2^a to which the power spring 3, that moves the valve in one direction, is attached at one end, the other end being secured to some fixed point. The rotary valve 2, is also provided with a second short arm 4, which is bifurcated to form the arm 5 that engages with detent 6 and the arm 8 by

which the valve is moved against the power of spring 3. In order to limit the movement of the rotary valve it is provided with a projection 2^c which engages a pin 9 in the tube or valve shell. In order that the valve may be set if desired by the direct action of a reciprocating object—such as the carriage of a phonograph—it is necessary that the arm 8 should be held in a yielding manner, so as to permit the passage of the object in one direction only—and to accomplish this, I provide a second small spring 3^a interposed between the arm 2^a and the stop 9, as shown in Fig. 3.

Where it is desired to apply to a phonograph but a single additional coin controlled valve of the character hereinbefore described, so as to accommodate a single additional auditor—I prefer to secure the tube 1 and the chute 7 to a base strip 10 (see Figs. 1 and 3.) and attach the same to the phonograph by means of the usual body holding screws, connecting the induction end 1^b of the tube 1 with the reproducer R by the flexible tube *b*, and securing the hearing tube *a* to the nipple 1^a. In order to close the valve from the carriage, a striker 11 is attached to the spectacle arm clamp screw, or at some other suitable point on the carriage. To adjust the relation of valve arm 8 to striker 11, the strip 10 is provided with an adjusting screw 12. Where it is desirable to employ a number of coin controlled valves, I prefer to interpose a main conducting tube 13 (see Fig. 2) the open end of which is connected with the reproducer R by the flexible tube *b*, said main conductor 13 having a series of branches, each provided with a power actuated valve, trip mechanism, and coin chute of substantially the character hereinbefore specified; and instead of a single striker 11, I attach to the spectacle arm clamp screw, or to any other suitable point on the carriage, a bar 14 having a series of strikers at intervals corresponding to the position of the several valves.

It is of course understood that the coin chutes and valve mechanism will be inclosed within a suitable case having coin-slots corresponding with the chutes—but as the construction of such a case is within the knowledge and skill of the ordinary mechanic I have not shown or described the same.

In the case of the apparatus shown, the circuit to the motor having been closed by dropping coin in the coin-chute E—the phonograph carriage will be set in motion, and a single auditor may use the usual hearing tube A′ of the apparatus which is attached directly to the reproducer R.

Any number of additional auditors, for which provision has been made, can at the same time hear the instrument by each one depositing a suitable coin in one of the chutes 7 to operate the valve interposed between the recorder R and the additional hearing tube chosen by the said auditor. The coin deposited in said chute 7 in its descent strikes the pivoted dog or detent 6 actuating the same to release the arm 5, whereupon the power spring 3 moves the valve 2 in one direction and opens communication between the reproducer R and the hearing tube *a* held by the additional auditor. On the reverse or return movement of the phonograph carriage the striker 11 corresponding to the given valve 2 strikes the arm 8 overcoming the power of spring 3 and reversing the movement of valve 2 until the tube 1 is closed thus cutting off communication with the reproducer R. When this is accomplished the detent or dog 6, engages arm 5 and holds the valve closed until a coin is again deposited in said chute.

The combined valve, trip mechanism or detent and setting mechanism, herein described is simple and effective, and may be applied to a variety of vending apparatus, other than that shown; and in the case of phonographs and like apparatus, any character of motor, controlled by any suitable mechanism may be employed, without departing from the spirit of my invention.

Having thus described my invention what I claim and desire to secure by Letters Patent is—

1. The combination with a tube, of a power actuated valve arranged therein, a coin chute, and a trip and detent arranged therein and in such relation to the valve of the tube as to hold the valve and normally close the tube; substantially as and for the purposes specified.

2. The combination with a phonograph and its reproducer, of a hearing tube, a power actuated valve arranged in the hearing tube, a coin chute, and a trip and detent arranged in the coin chute and with relation to the valve of the hearing tube to hold the valve and normally close the hearing tube; substantially as and for the purposes specified.

3. The combination with a phonograph, its carriage, and reproducer, of a hearing tube provided with a power actuated valve, a coin chute, a trip and detent arranged in the coin chute with relation to the valve to hold the valve and normally close the hearing tube, and means on the carriage for bringing the valve within the control of the detent and trip, substantially as and for the purposes specified.

4. The combination, with a phonograph and its reproducer, of a series of hearing tubes, a main conducting tube having a series of branches, each provided with a normally closed valve said main tube interposed between the reproducer and the hearing tubes, and power mechanism for opening the valves when released by the detents a series of independent coin-chutes having detents which control the respective valves of the main conducting tube; substantially as and for the purposes specified.

5. The combination, with a phonograph and its reproducer, of a series of hearing tubes, an interposed main conducting tube, having branches, each provided with a normally

closed valve a series of coin chutes having detents which control the respective valves of the main conducting tube, and means for actuating the several valves from the carriage of the phonograph to place the valves within the control of the respective detents; substantially as and for the purposes specified.

6. The combination with a tube of a power actuated rotary valve, a stop to limit the rotation of the valve by the power devices, an arm which projects from the valve, and a coin chute provided with a trip and detent arranged in the path of and adapted to engage the arm which projects from the valve—; substantially as and for the purposes specified.

7. The combination with a tube, of a power actuated valve having a bifurcated arm projecting therefrom, a coin chute having a trip and detent arranged with relation to the bifurcated arm of the valve to engage one fork thereof, and suitable means adapted and arranged to move in the path of said bifurcated arm, and engage the other fork of said arm; substantially as and for the purposes specified.

8. The combination with a tube, of a power actuated valve having a bifurcated arm projecting therefrom, a coin chute provided with a trip and detent arranged in the path of one fork of said arm, means adapted and arranged to move in the path of said bifurcated arm and engage the other fork of said arm, a stop for said valve, and a relief spring which permits the bifurcated arm to recede before the reverse movement of the device which moves the valve into engagement with the detent; substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 1st day of October, 1890.

HENRY HOESCHEN.

Witnesses:

ERASTUS A. BENSON,

J. B. CARMICHAEL.