No. 778,305. PATENTED DEC. 27, 1904.

A. W. COLE.

COIN CONTROLLED CIRCUIT MAKING AND BREAKING APPARATUS FOR PHONOGRAPHS.

APPLICATION FILED APR. 26, 1904.

Fig. 1.

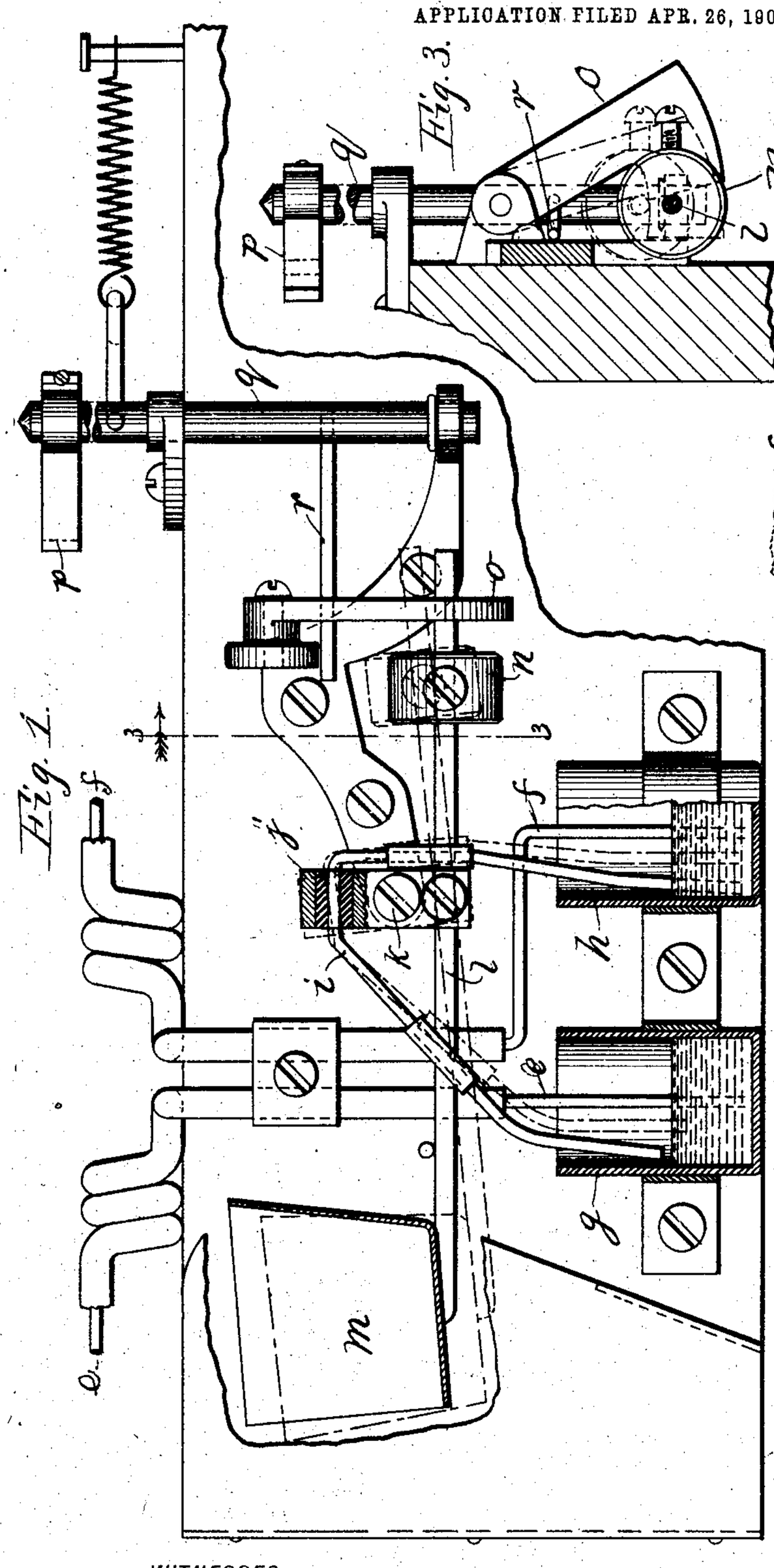
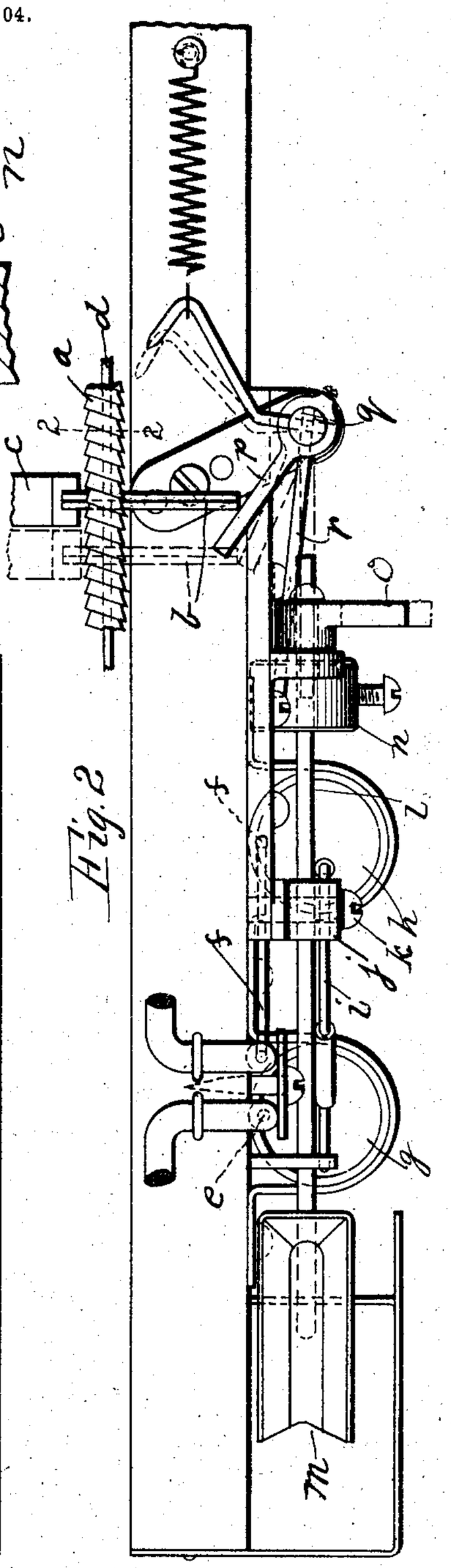


Fig. 2



WITNESSES:

L. Almquist

C. Sedgwick

Fig. 4.

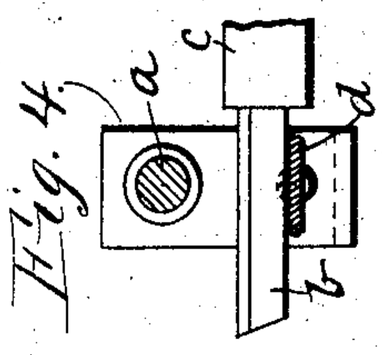
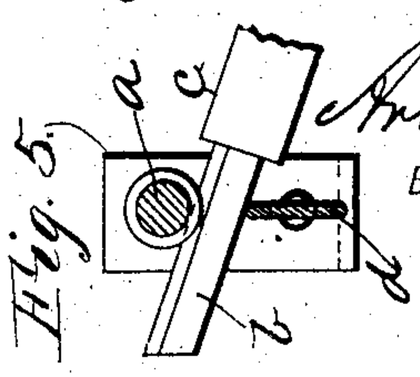


Fig. 5.



INVENTOR

Arthur W. Cole

BY

A. D. Thayer

ATTORNEY

No. 778,305. Patented December 27, 1904.

UNITED STATES PATENT OFFICE.

ARTHUR W. COLE, OF WEST HOBOKEN, NEW JERSEY.

COIN-CONTROLLED CIRCUIT MAKING AND BREAKING APPARATUS FOR PHONOGRAPHS.

SPECIFICATION forming part of Letters Patent No. 778,305, dated December 27, 1904.

Application filed April 26, 1904. Serial No. 204,935.

To all whom it may concern:

Be it known that I, ARTHUR W. COLE, a subject of the King of Great Britain, and a resident of West Hoboken, county of Hudson, and State of New Jersey, have invented certain new and useful Improvements in Coin-Controlled Circuit Making and Breaking Apparatus for Phonographs, of which the following is a specification.

The invention consists of novel means of closing the phonograph-operating circuit when the coin is dropped in the slot, maintaining the closure, and breaking it automatically when cessation of the operation of the machine is due, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is partly an elevation and partly a vertical section of the apparatus of my invention. Fig. 2 is a plan view. Fig. 3 is a detail in vertical section on the line 3 3 of Fig. 1 as seen looking in the direction of the arrow. Figs. 4 and 5 are details in section on line 2 2, Fig. 2, showing some of the parts attached to the phonograph for breaking the circuit when on the return of the diaphragm-carriage to the starting-point.

The apparatus herein shown is mainly the automatic circuit-closing devices for closing the circuit and setting the phonograph in motion by the effect of a coin dropped into the coin-receptacle. It is therefore unnecessary to show the phonograph any further than the reversing-screw of the diaphragm-carriage and the attachment falling into gear with said screw when the diaphragm-carriage is released from the feed-screw for reversing the carriage.

The diaphragm-carriage-reversing screw is represented at *a*, Figs. 2, 4, and 5. *b* represents a knife-shaped blade carried by a staff *c*, attached to the diaphragm-carriage, which by the turning of a flat blade *d* at the proper time is thrust up into engagement with screw *a* for reversely shifting the diaphragm-carriage, the normal positions of said blades *b* and *d* being shown in Fig. 4, in which the screw has no effect on blade *b*. The means for so turning blade *d* is well known in connection with phonographs and need not be shown or described.

The respective wires *e f* of the circuit have their terminals immersed in mercury-cups *g h*, respectively.

A yoke-shaped circuit closing and breaking wire *i* is carried on a rocking support *j*, pivoted at *k*, with its terminals in such relation to the mercury-cups that in one of the positions of the rocking block (the same that is shown in the drawings) one terminal will lack connection with the mercury and the circuit will be broken; but in the reverse position of said block both terminals will connect with the mercury-cups and the circuit will be closed.

The rocking block is also attached to the staff *l*, that carries at one end the coin-receptacle *m*, and is poised by a weight *n* near the other end, so that when no coin is in the receptacle *m* it will shift upward; but the coin dropped in will overbalance the said receptacle and elevate the other end of the staff *l*, at the same time escaping from the receptacle *m*.

A gravitating-hook *o* swings under the end of the staff that is thus elevated and holds it up, and while so held up maintains the circuit connection the requisite predetermined time.

When the knife *b*, engaged with the reversing-screw *a*, nearly reaches the end of its reverse movement, the end of said knife collides with an arm *p* on a vertical rock-shaft *q*, carrying a tripping-arm *r*, which bears against the gravitating hook *o* and trips it out of engagement with staff *l*, which falls to a level position ready for reception of another coin for another operation.

What I claim as my invention is—

The combination with the phonograph reversing-screw and its coacting blade, of the mercury-cups containing circuit-terminals re-

spectively, the rocking yoke-circuit making and breaking wire also having its terminals in said cups respectively, and mounted on the staff of the rocking coin-receptacle, said receptacle carried on said staff, gravitating hook for controlling the coin-receptacle, rock-shaft, lateral arm thereon coacting with the reversing-screw-controlling blade, and the tripping-arm on said rock-shaft controlling the gravitating hook.

Signed at New York this 22d day of April, 1904.

ARTHUR W. COLE.

Witnesses:

C. SEDGWICK,

J. M. HOWARD.