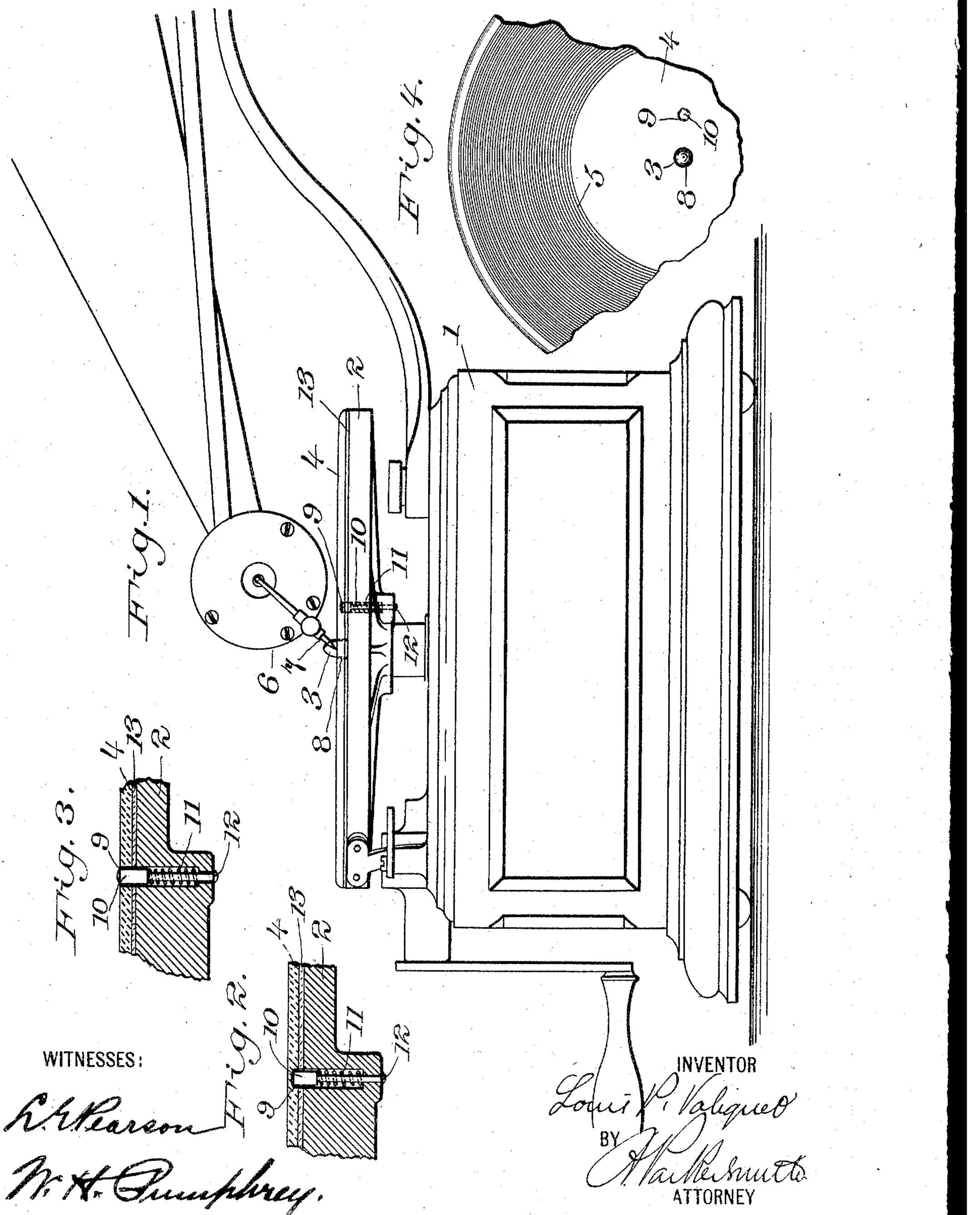
No. 780,246. PATENTED JAN. 17, 1905.

L. P. VALIQUET.

TURN TABLE FOR TALKING MACHINES.

APPLICATION FILED MAR. 27, 1902.



No. 780,246. Patented January 17, 1905.

UNITED STATES PATENT OFFICE.

LOUIS P. VALIQUET, OF NEW YORK, N. Y.

TURN-TABLE FOR TALKING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 780,246, dated January 17, 1905.

Application filed March 27, 1902. Serial No. 100,206.

To all whom it may concern:

Be it known that I, LOUIS P. VALIQUET, a citizen of the United States of America, and a resident of the city of New York, county of New York, State of New York, have invented certain new and useful Improvements in Turn-Tables for Talking-Machines, of which the following is a specification.

My invention relates to talking-machines, and is especially applicable to the class of talking-machines in which disk-shaped flat sound-records are employed. The sound-record groove in such case usually exists in the form of a spiral line sunk into one face of the disk. The reproducing-machine has a horizontal table rotating on a vertical axis and means, such as a spring-motor, for rotating said table. On this table is placed the sound-record. A reproducing-stylus, maintained in position above the record, rests in the sound-groove therein. It is necessary, of course, that the sound-record shall rotate with the table, so as to cause the inequalities in the sound-record groove to vibrate the stylus. In the first machines of this type put upon the market it was customary to secure this result by clamping the record to the table by means of a thumb-nut which screwed down on a central stud, projecting upward from the center of the table through an opening in the center of the record-disk. A disadvantage of this construction is the time consumed in unscrewing and screwing down again the thumb-nut every time a record is changed and the general awkwardness of the manipulation required. In my application Serial No. 699,429, filed December 16, 1898, I have shown an improved means for compelling the record to revolve with the table, which consists of a pin projecting upward from the table and at a short distance from the center thereof into a second opening in the record-disk. This pin being rigid and unyielding, however, prevents the record disk or tablet from lying flat on the table until the tablet has been turned, so that the recess comes opposite to the pin. This requires a certain amount of time and effort on the part of the user, and it is to obviate this that my present improvement is designed.

The preferred form of my invention is embodied in an apparatus shown in the accompanying sheet of drawings, in which—

Figure 1 is a side elevation of a talking-machine with my invention applied thereto. Fig. 2 is a detail sectional view thereof. Fig. 3 is a similar section showing a modification. Fig. 4 is a plan view of a segment of a sound-record made in conformity with my invention.

Throughout the drawings like reference-figures indicate like parts.

The casing 1 of the machine contains a spring-motor of any convenient form adapted to rotate the table 2. The pointed pin 3 projects upwardly from the center of the table and is concentric with the axis thereof. The disk or tablet 4 has the spiral sound-record groove 5 formed in its upper face (see Fig. 4) in the usual manner. The reproducer 6 is maintained in position over the record with its stylus 7 in engagement with the groove 5, all in the usual way. The record-disk has a central opening 8, with which the pin 3 engages to center the record on the table, and also has a recess 9 eccentric to the disk, but inside of the sound-record grooves 5, with which the spring-pin 10, set in a recess bored in the table 2, engages. This recess 9 may extend through the disk 4, as shown in Fig. 3; but preferably it only extends part way through the thickness of the disk, as shown in the remaining figures of drawings, thereby forming a socket in the under side of the record-tablet. The pin 10 is forced up into engagement with the recess 9 by a spring 11 or by any other apparatus producing a yielding pressure. The lower end of the pin 10 or of an extension from it has its head upset, as at 12, or some other equivalent device is employed to limit the upward motion of the pin and prevent the spring from forcing it entirely out of its socket.

The table 2 usually has the covering 13, of cloth or other sound-dampening material, having a rough surface, which under ordinary conditions presents sufficient frictional resistance to prevent the record-tablet from sliding on its surface. The pin 10 passes through a suitable opening in said covering 13.

The mode of operating my invention is the following: The reproducer 6 being swung to

one side the sound-record disk may be instantly removed and a different one put in place by slipping it over the central pin 3, the tapering point of which readily enters the hole 8. If the recess 9 drops down over the spring-pin 10, the disk is at once locked to the table and ready for reproduction. In nearly every case the recess 9 and pin 10 do not register at first. The weight of the disk is then sufficient, however, to compress spring 11, so that the record-disk comes to a bearing on the table. The stylus is then placed in the sound-groove and the machine started into action. In many cases the friction of the material 13 is sufficient to cause the record-tablet to rotate with the table 2. If the disk slips on the cloth 13, the pin 10 soon swings around under the recess 9, the spring 11 forces the pin up into engagement with the recess, and the record then becomes locked to the table, and the reproduction of sound proceeds. A further advantage of this use of the spring-pin resides in the fact that when a recess is provided in a talking-machine record which does not extend entirely through the record-disk these recesses are liable to be of different depths, and when the record is placed upon the turn-table the pin will adjust itself to the varying depths of the recesses and obviate the objection that if the depth of the recess should be shallower than the length of the projecting end of the pin the table would rock upon the pin and so cause the record to operate unevenly and cause the sounds to be produced by the sound-box to be irregular and unsatisfactory. Of course it is obvious that the strength of the spring which forces the pin upward should be less than the downward force exerted by the weight of a sound-record.

The advantages of my invention comprise simplicity, convenience in manipulation, economy in first cost, and saving of time to the operator, combined with certainty of action, the pin 10 engaging the sound-record disk in a manner that absolutely prevents slipping unless the parts are broken.

It is evident, of course, that various changes could be made in the details of construction illustrated without departing from the spirit and scope of my invention. Other forms of spring might be used. Different means for mounting the pin 10 in the table might be employed and other changes made while still employing the principle of my invention.

Having, therefore, described my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. In a turn-table for talking-machines, the combination of a fixed pin, a vertically-movable eccentric-pin carried by the turn-table, and a spring forcing said movable pin upward so that the latter projects a short distance above the surface of the table, and with a force slightly less than that of the weight of a record carried by said table.

2. In a turn-table for talking-machines, the combination of a fixed pin carried by said table, a vertically-movable eccentric-pin carried by said table, and a coiled spring surrounding said movable pin and adapted to force the latter upward with a force less than the weight of a record, and normally projecting above the turn-table so as to engage a sound-record carried thereon.

3. In a turn-table for talking-machines, the combination with a centering-pin for the sound-record, an eccentric vertically-movable pin carried by a recess in said turn-table, and a spring normally forcing said pin upward with a force slightly less than the weight of a sound-record so that a portion of said pin normally projects above the surface of the table for engagement with a sound-record.

4. In a turn-table for talking-machines, the combination of a fixed pin for locating a sound-record upon said turn-table, a vertically-movable pin carried by said table, means for forcing said pin upward with the yielding pressure slightly less than the force due to the weight of a sound-record, and means for limiting the upward movement of said pin so that a certain portion of the length of the pin normally projects above the surface of the table to engage with a sound-record carried thereon.

5. In a talking-machine, the combination of a turn-table therefor, a fixed pin carried by said turn-table, a vertically-movable pin eccentric to said first-named pin, means for forcing said vertically-movable pin upward with a yielding pressure slightly less than the weight of a sound-record, and a sound-record carried by said turn-table having recesses therein adapted to engage said fixed pin and said movable pin respectively.

Signed at New York city, New York, this 26th day of March, 1902.

LOUIS P. VALIQUET.

Witnesses:
W. H. PUMPHREY,
L. E. PEARSON.