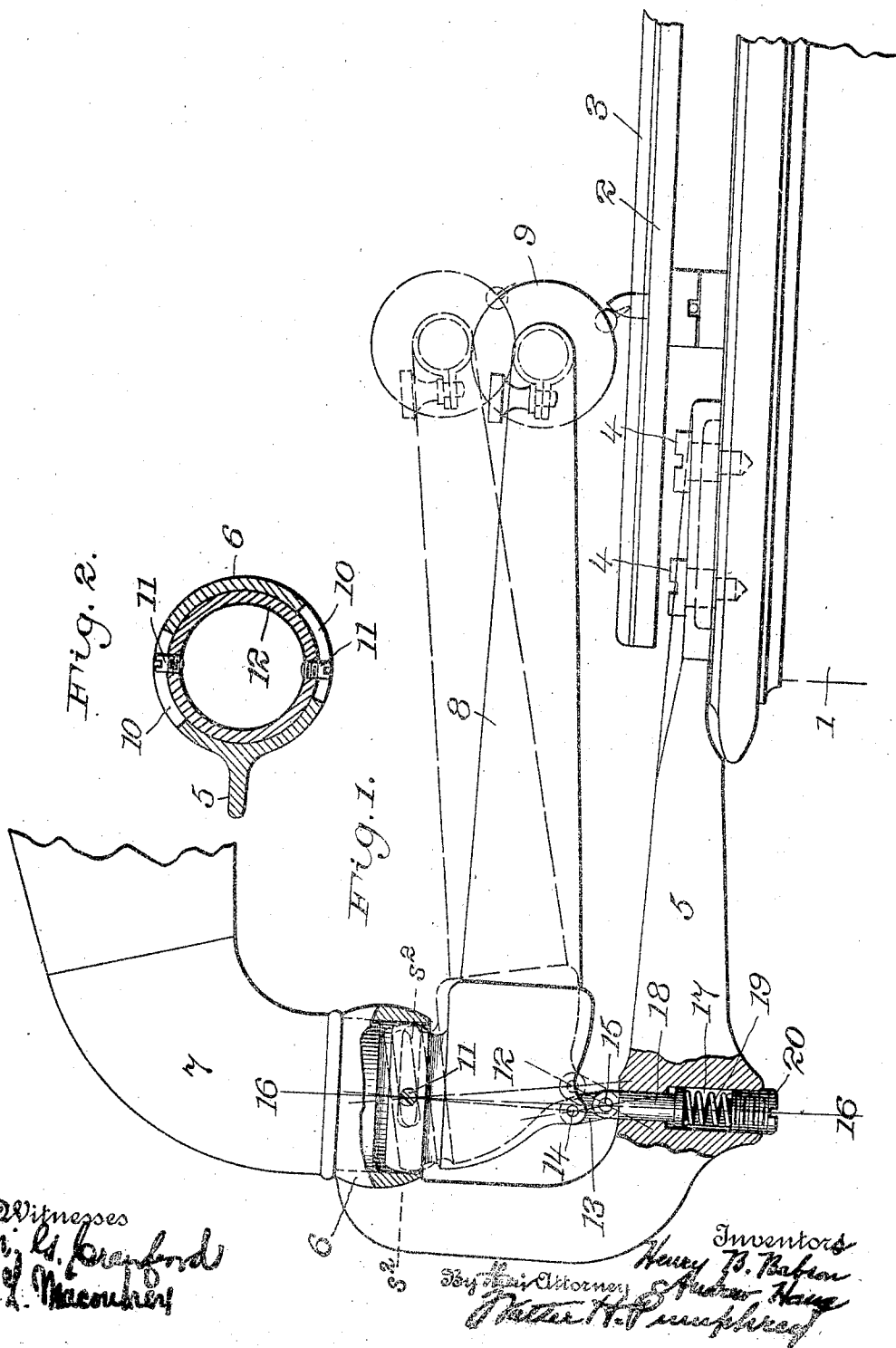


H. B. BABSON & A. HAUG.
TALKING MACHINE.

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1,005,765.

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UNITED STATES PATENT OFFICE.

HENRY B. BABSON AND ANDREW HAUG, OF NEW YORK, N. Y., ASSIGNORS, BY MESNE ASSIGNMENTS, TO VICTOR TALKING MACHINE COMPANY, A CORPORATION OF NEW JERSEY.

TALKING-MACHINE.

1,005,765.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, HENRY B. BABSON and ANDREW HAUG, citizens of the United States, both residing at New York, county and State of New York, have invented certain new and useful Improvements in Talking-Machines, of which the following is a specification.

Our invention relates generally to talking machines and particularly to means for yieldingly supporting the reproducer above and clear of the record when the machine is not in use or while one record is being substituted for another, this application being a division of our application Serial No. 248,872.

A device suitable for carrying our invention into effect is illustrated in the accompanying drawings. We wish it understood, however, that we do not limit ourselves to either the exact construction or arrangement of parts shown, as various changes may be made therein without departing from the spirit and scope of our invention.

In the drawings—Figure 1 is a view in side elevation, partly in section, illustrating the application of our invention to a well known disk type of talking machine, and Fig. 2 is a sectional view taken on the line s^2, s^2 of Fig. 1.

Referring now to the drawings, 1 represents the casing of the machine, 2 the rotating table thereof which serves as a support for the record 3. Secured to the casing by screws 4, there is a bracket arm 5, provided with a sleeve like off-set 6, in which the small end of the horn 7 and the shaped end of the taper arm 8 are fitted in the usual manner. At the outer free end of the taper arm, the sound-box or reproducer 9 is secured. The bracket sleeve 6 is slotted at diametrically opposite points, as indicated at 10, to receive studs, pins, screws or the like 11, which serve to support the taper arm in suspended relation in the sleeve, in a manner to permit free vertical and horizontal movement thereof.

When the machine is not in use or during the time required to substitute one record for another, it is customary to swing the reproducer upward, as indicated in dotted lines and in order to yieldingly maintain it in such position, we employ a suitable locking device, which is arranged to co-

operate with the taper arm, as shown in Fig. 1. The locking device, as herein embodied, operates on the well known principle of a pair of toggle levers, one of which is formed by the elbow 12 of the taper arm and turns about the center 11 and the other, by the link 13, pivoted to the elbow at 14 and turning about the center 15. As arranged, it will be seen that when the reproducer is in contact with the record, as represented in full lines, the pivot pin 14 will be shifted to the left of the line of centers indicated at 16 and when swung upward, the pivot pin will be carried across, to the opposite side thereof, as represented in dotted lines.

The bracket arm is bored out as indicated at 17, to receive a headed pin 18, to the upper projecting end of which the link 13 is pivoted. A spring 19, interposed between the lower end of the pin and a tension screw 20, acts through the pin to maintain the pivot 14 either to the right or left of the line of centers, depending upon the position of the reproducer and at the same time, yields as required, to permit the pivot 14 to swing across the line, as the reproducer is raised or lowered.

From the foregoing it will be seen, that when the reproducer is swung upward, the spring coacting with the toggle locking device, will yieldingly support it in such elevated position and on lowering the reproducer, the action of the spring will be reversed and it will then tend to maintain the reproducer in engagement with the record, under more or less pressure, which may be varied as desired by turning the tension screw either to the right or left.

The particular form, arrangement, position, etc., of the locking device is unimportant and may be changed in any manner desired, it being essential only that it shall operate on the toggle principle, as above described.

Having, therefore, described our invention, we claim:

1. In a talking machine, the combination of a rotating record, a cooperating reproducer, a spring opposing movement of the reproducer away from the record, and means for reversing the action of the spring when the reproducer is swung clear of the record.

2. In a talking machine, the combination of a rotating record, a cooperating reproducer, a spring opposing movement of the reproducer away from the record, means for reversing the action of the spring when the reproducer is swung clear of the record, and means for varying the tension of the spring.

3. In a talking machine, the combination of a rotating record, a cooperating reproducer, a spring opposing movement of the reproducer away from the record, and means for utilizing the spring as a yielding support for the reproducer when swung clear of the record.

4. In a talking machine, the combination of a rotating record, a cooperating reproducer, and a spring acting to yieldingly maintain the reproducer in both operative and inoperative positions relative to the record.

5. In a talking machine, the combination of a rotating record, a cooperating reproducer, a spring acting to yieldingly maintain the reproducer in contact with the record, and means for reversing the action of the spring when the reproducer is swung clear of the record.

6. In a talking machine, the combination of a rotating record, a cooperating reproducer, a pin about which the reproducer turns as a center, and a spring acting through the pin upon the reproducer to yieldingly maintain it in both operative and inoperative positions.

7. In a talking machine, the combination of a rotating record, a cooperating reproducer, a spring pin about which the reproducer turns as an axis, and means forming a toggle connection between the pin and the reproducer.

8. In a talking machine, the combination of a rotating record, a cooperating reproducer, a spring, and a toggle connection through which the spring acts upon the reproducer.

9. In a talking machine, the combination

of a rotating record, a cooperating reproducer, a member movable with the reproducer, a spring opposing movement of said member, and a toggle joint connecting the member and the reproducer.

10. In a talking machine, the combination of a rotating record, a cooperating reproducer mounted to swing about a vertical axis, and toggle levers operatively connected with the reproducer in the line of its axis.

11. In a talking machine, the combination of a rotating record, a cooperating reproducer mounted to turn upon a vertical support, and toggle members forming part of said support.

12. In a talking machine, the combination of a rotating record, a cooperating reproducer mounted free to swing in planes parallel and at right angles to the surface of the record, and means interposed to form a toggle joint between a fixed point and one of the turning axes of the reproducer.

13. In a talking machine, the combination of a rotating record, a cooperating reproducer mounted free to swing in planes parallel and at right angles to the surface of the record, a spring, and interposed means forming a toggle joint between the spring and one of the turning axes of the reproducer.

14. In a talking machine, the combination of a rotating record, a cooperating reproducer mounted free to swing in planes parallel and at right angles to the surface of the record, a yielding member, and means interposed in the line of one turning axis of the reproducer to form a toggle joint between the other turning axis thereof and said yielding member.

In testimony whereof, we affix our signatures, in the presence of two witnesses.

HENRY B. BABSON.
ANDREW HAUG.

Witnesses:

S. L. MACOUBREY,
M. G. CRAWFORD.