No. 754,825. PATENTED MAR. 15, 1904.

G. W. SPENCER & A. LYNDE.

SPEAKING FIGURE.

APPLICATION FILED JUNE 4, 1903.

NO MODEL.

Fig. 1.

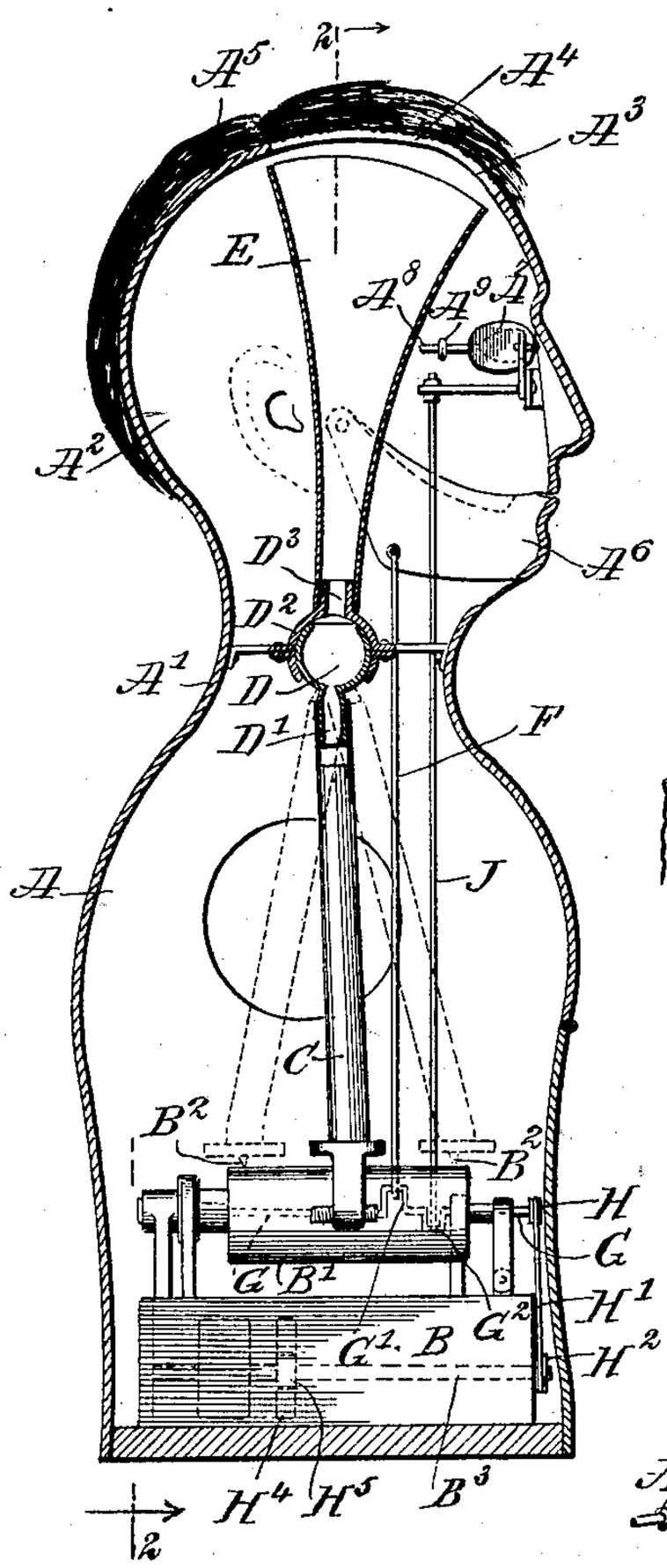
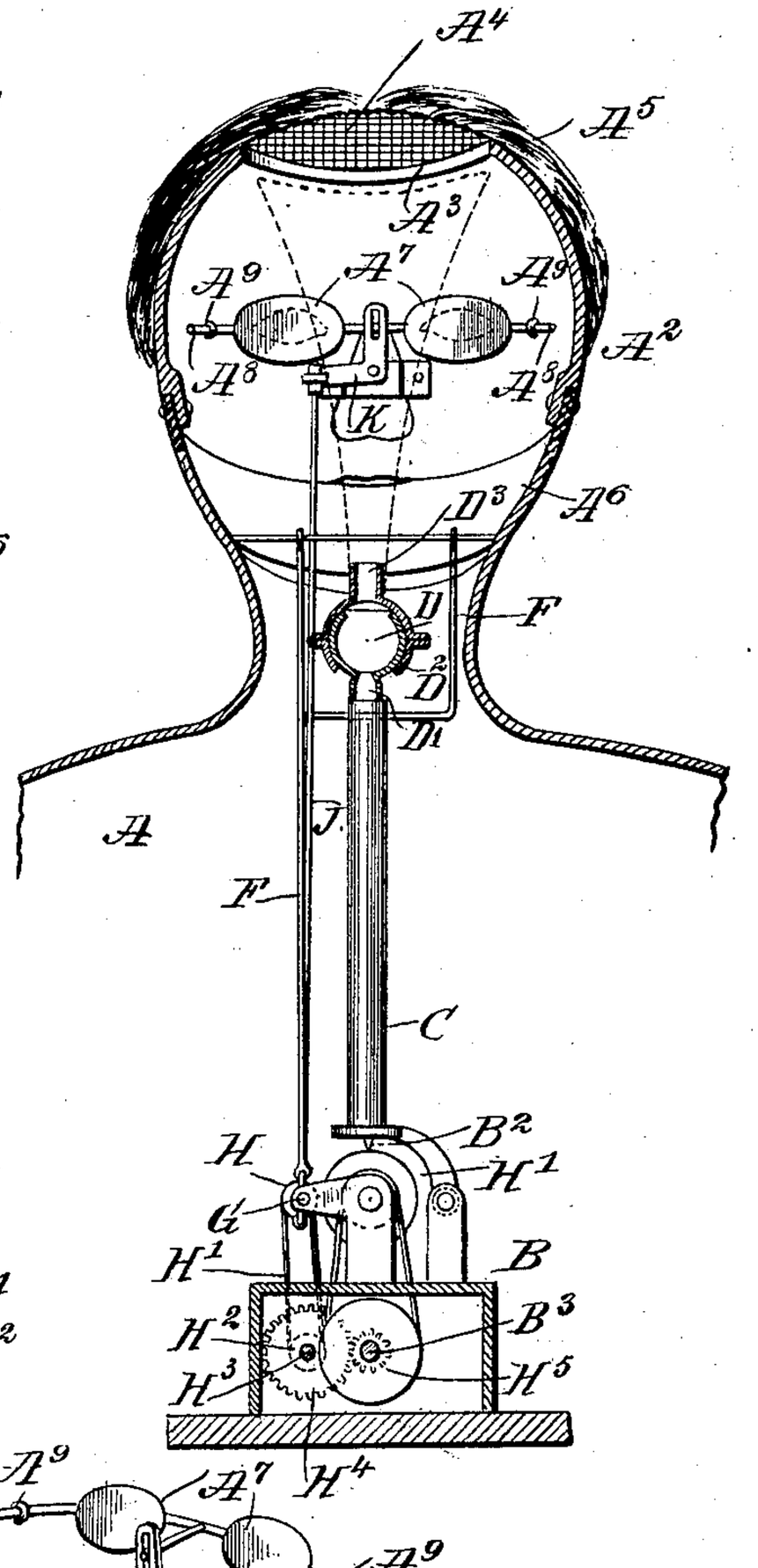


Fig. 2.



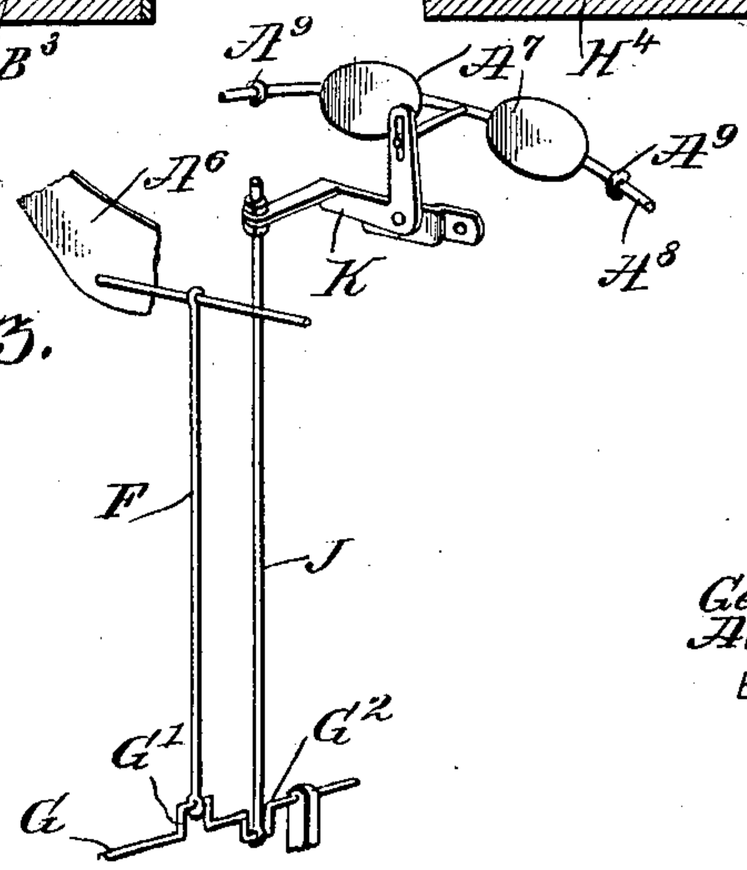


Fig. 3.

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No. 754,825. Patented March 15, 1904.

UNITED STATES PATENT OFFICE.

GEORGE WILBUR SPENCER AND ALVAH LYNDE, OF ATLANTIC CITY, NEW JERSEY.

SPEAKING FIGURE.

SPECIFICATION forming part of Letters Patent No. 754,825, dated March 15, 1904.

Application filed June 4, 1903. Serial No. 160,059. (No model.)

To all whom it may concern:

Be it known that we, GEORGE WILBUR SPENCER and ALVAH LYNDE, citizens of the United States, and residents of Atlantic City, in the county of Atlantic and State of New Jersey, have invented a new and Improved Speaking Figure, of which the following is a full, clear, and exact description.

The invention relates to acoustics; and its object is to provide a new and improved speaking figure arranged to emit articulate speech, songs, and the like and move the eyes and lips to closely imitate a human being.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a transverse section of the improvement. Fig. 2 is a sectional rear elevation of the same on the line 2 2 of Fig. 1, and Fig. 3 is a perspective view of the mechanism for actuating the eyes and the lip.

The hollow body or image A is preferably made to closely resemble the upper portion of a human being, as shown in the drawings, and within the said body A, at the bottom thereof, is arranged a motor-driven phonograph B, of any approved construction and having a record-cylinder B′, over which travels in the direction of the length of the cylinder a stylus or tracer B^2, held on the diaphragm, (not shown,) from which extends a sound-emitting tube C, preferably made of rubber or other material and connected at its upper end with the shank D′ of a hollow ball D, mounted to turn in a socket D^2, fixed in the neck A′ of the body A. The ball D and socket D^2 form a swivel or ball-and-socket joint connection to allow the sound-emitting tube C to readily swing from the ball-and-socket joint as the center, according to the travel of the tracer or stylus B^2.

The fixed socket D^2 is provided on its top with a tubular extension D^3 for engagement by the apex end of a funnel E, extending in the head A^2 of the body A and terminating a short distance from an opening A^3, arranged in the top of the head A^2. The said opening A^3 is covered by a netting or screen A^4, located under the hair A^5 of the head A^2, so that the sounds pass from the funnel E through the said screened opening A^3 and the hair A^5 into the room in which the speaking figure is located.

The head A^2 of the body A is provided with a lower movable lip A^6, pivoted at the sides of the head A^2, and the said head is also provided with movable eyes A^7, secured on a bar A^8, mounted to slide sidewise in suitable bearings A^9, attached to the inside of the head A^2. The eyes A^7 appear through eye-openings in the head A^2, and when a sidewise-sliding motion is given to the eyes A^7 then it appears to the observer that the figure is moving the eyes sidewise in imitation of such movement by human beings.

In order to impart movement to the lower lip A^6 and the eyes A^7, the following devices are provided: The lip A^6 is pivotally connected by a pitman F with the crank-arm G′ of a shaft G, journaled in suitable bearings on the framework of the phonograph B, and on the said shaft G is secured a pulley H, connected by a belt H′ with a pulley H^2, attached to a shaft H^3, connected by a gear-wheel H^4 with a pinion H^5 on the shaft B^3 of the phonograph. A second crank-arm G^2 is formed on the shaft G and is connected by a pitman J with a bell-crank lever K, having a pivotal connection with the bar A^8, so that when the shaft G is driven from the shaft B^3 at the time the phonograph is running then the crank-arm G′ and pitman F impart an up-and-down swinging motion to the lip A^6, and the crank-arm G^2, pitman J, and bell-crank lever K impart a sidewise-sliding motion to the bar A^8 and the eyes A^7 carried thereby.

Ready access is had to the phonograph for exchanging the record-cylinders by a suitable door in the front or rear of the body A, as indicated in the drawings.

Now it will be seen that when the phonograph is in motion the sounds pass into the

head A^2 by way of the tube C, ball-and-socket joint D D^2, and the funnel E, and a portion of the sounds pass through the screened opening A^3 and the hair A^5, and some of the sounds can also readily pass through the mouth at the time the lower lip A^6 swings downward and opens the mouth.

It is further understood that the movable parts in the head—that is, the eyes A^7 and the lip A^6—are actuated from the phonograph so that the said parts move at the time the sounds are emitted to give as much as possible a close imitation of a human being.

It is understood that the record-cylinders B' are provided with suitable subject-matter for speeches, songs, and the like.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A speaking figure comprising a hollow body, in imitation of a human being, and provided with movable parts for covering and uncovering openings in the body, a phonograph arranged in the said body and having a sound-emitting tube discharging its sounds into the head of the body, and means driven by the said phonograph and connected with the said movable parts, to actuate the latter, as set forth.

2. A speaking figure comprising a hollow body, having a head forming a resonating-chamber and having sound-discharging openings, and a phonograph in the lower portion of the body, provided with a sound-emitting tube discharging into the head of said hollow body, as set forth.

3. A speaking figure comprising a hollow body, having a head forming a resonating-chamber and having sound-discharging openings, a phonograph in the lower portion of the body, provided with a sound-emitting tube discharging into the head of said hollow body, and a ball-and-socket joint in the sound-emitting tube, said ball and socket being arranged in the neck of the said body, as set forth.

4. A speaking figure comprising a hollow body, having a head forming a resonating-chamber and having sound-discharging openings, a phonograph in the lower portion of the body, provided with a sound-emitting tube, a ball-and-socket joint in the neck of the said body and in which the discharge end of the said sound-emitting tube is secured, and a funnel extending in the head of the body and discharging into the same, said funnel being held at its apex end on the fixed member of the ball-and-socket joint, as set forth.

5. In a speaking figure, the combination with a hollow body in imitation of a human being, provided with movable parts and in its head with a screen-covered opening, of a phonograph in the lower portion of the said body, provided with a sound-emitting tube leading into the head, and having a ball-and-socket-joint connection with the said head at the neck of the body, and means for actuating the said movable parts from the phonograph, as set forth.

6. In a speaking figure, the combination with a hollow body having a hinged lip and slidable eyes, of a phonograph in the said body, and means, actuated from the phonograph and connected with the said lip and the said eyes, to swing the lip up and down and to slide the eyes sidewise, as set forth.

7. In a speaking figure, the combination with a hollow body having a hinged lip and slidable eyes, of a phonograph in the said body, and means, actuated from the phonograph and connected with the said lip and the said eyes, to swing the lip up and down and to slide the eyes sidewise, the said means comprising a bell-crank lever connected with the slidable eyes, a pitman connecting the bell-crank lever with a crank-arm on the phonograph-shaft, and a pitman connecting a crank-arm on the phonograph-shaft with the said pivoted lip, as set forth.

8. In a speaking figure, the combination with a hollow body having eye-openings in its head, and a phonograph in said body, of a bar mounted to slide endwise in the head, eyes secured directly on said bar in rear of the openings of the head, and means for operating the said bar from the phonograph, as set forth.

9. In a speaking figure, the combination with a hollow body having eye-openings in its head, and a phonograph in said body, of a bar mounted to slide endwise in the head, eyes on the bar in rear of the openings of the head, a bell-crank lever connected with said bar, and means for operating said bell-crank lever from the phonograph, as set forth.

10. A speaking figure, comprising a hollow body in imitation of a human being, the head of the body forming a resonating-chamber, and provided with a movable lip and movable eyes in rear of openings therein, a phonograph in the lower portion of the body, a sound-emitting tube discharging its sounds into the head of the body, and means for operating the lip and eyes from the phonograph, as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

GEORGE WILBUR SPENCER.
ALVAH LYNDE.

Witnesses:
LOUIS GERNER,
CHARLES H. ROGERS.