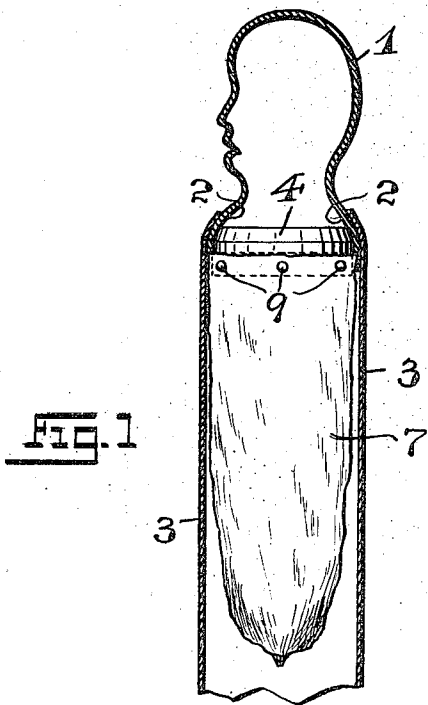
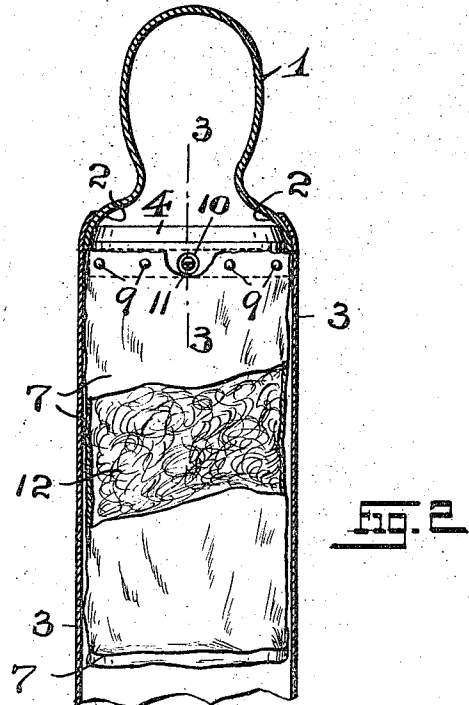
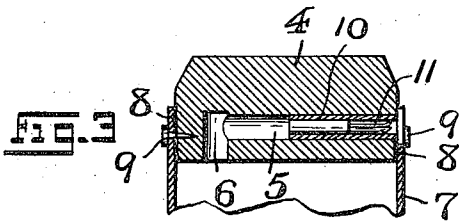
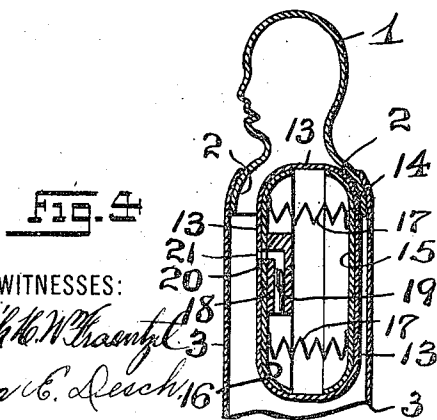
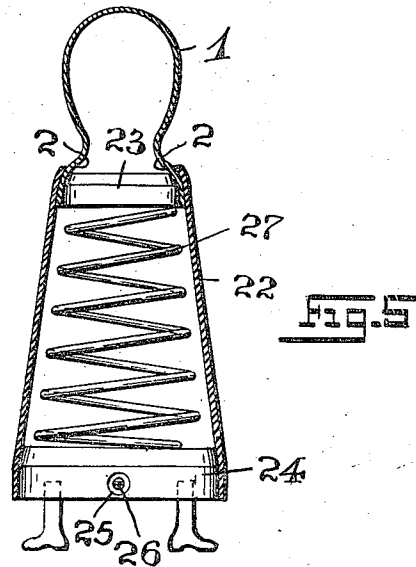


S. S. ADAMS.
SOUND EMITTING MEANS FOR TOYS.
APPLICATION FILED OCT. 23, 1916.

1,273,122

Patented July 23, 1918.



WITNESSES:

Frank W. Fraentzel
Ernest C. Deesch

INVENTOR:

Soren S. Adams,
BY
Fraentzel and Richards,
ATTORNEYS

UNITED STATES PATENT OFFICE.

SOREN S. ADAMS, OF PLAINFIELD, NEW JERSEY.

SOUND-EMITTING MEANS FOR TOYS.

1,273,122.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, SOREN S. ADAMS, a citizen of the United States, residing at Plainfield in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Sound-Emitting Means for Toys; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

This invention relates, generally, to improvements in sound-producing or sound-emitting devices adapted for use more especially with toys; and, the present invention has reference, more particularly, to a novel sound-emitting device which may be used within the bodies of toys of the various kinds, but which is especially adapted to that class of toys, commonly known in the art as talking or crying dolls.

The present invention, therefore, has for its principal object to provide a novel and simply constructed, as well as an efficiently operating, sound-producing or sound-emitting device for dolls, the device being adapted to be variously controlled, so that a talking sound in imitation of the word "ma-ma" may be produced, or at the will of the operator, various sounds in imitation of crying may be variously produced, or such sounds may be readily varied in intensity and tone, or made of short or long duration, as may be desired.

With the various purposes in view, the sound-producing or sound-emitting device comprises a main member provided with a "speaker", and a flexible reservoir adapted to be compressed for the removal of the air therefrom through the speaker, without the production of a sound, the flexible reservoir of its own accord expanding and by suction taking in a fresh supply of air through the said speaker, and causing the said speaker during the suction of the air therethrough to produce a sound or sounds, which may be made to imitate the word "ma-ma", or variously imitate different degrees of crying, according to differently and intermittently compressing the flexible reservoir and taking the pressure therefrom.

Other objects of this invention not at this time more particularly enumerated will be clearly evident from the following detailed description of the present invention.

The present invention consists, primarily, in the novel sound-producing or sound-emitting, as well as sound-controlling means hereinafter set forth; and, the invention consists, furthermore, in the novel arrangements and combinations of the various devices and parts, as well as in the details of the construction of the said parts, all of which will be more fully described in the following specification, and then finally embodied in the clauses of the claim which are appended to and which form an essential part of the said specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a longitudinal vertical section, from front to rear of the doll, provided with a sound-producing or sound-emitting means made according to and embodying the principles of the present invention, said sound-producing or emitting means being represented in side elevation; and Fig. 2 is a transverse vertical section of the doll, showing the sound-producing or sound-emitting means in front elevation, with a portion of the air-reservoir shown in section, and illustrating in connection therewith one means for producing expansion of the said reservoir after the same has been wholly or partially compressed.

Fig. 3 is a detail vertical section of the "neck-plate" and the "speaker" connected therewith, as well as the portion of the flexible reservoir where the latter is attached to said plate, said section being represented as taken in a plane on line 3—3 in said Fig. 2.

Figs. 4 and 5 are vertical sectional representations of dolls and sound-producing or sound-emitting devices employed with said dolls, illustrating two modifications of the sound-producing or sound-emitting means.

Similar characters of reference are employed in the said above described views, to indicate corresponding parts.

Referring now more particularly to Figs. 1, 2 and 3 of the drawings, the reference character 1 indicates a suitable head of a doll, or other toy, to the neck-portion 2 of which is attached, in any suitable and usual manner, the usual under garment, as 3, with which dolls are generally provided, and over

which is suitably mounted any usual and well-known outer garment, which, however is not shown in the accompanying drawings.

Conforming to and suitably secured within the inner part of the said neck-portion 2, by being glued or cemented fast therein, or by being otherwise suitably secured within said neck-portion, is a body or plate-like element or member 4, to be hereinafter known as the neck-plate, and which is usually made of wood, but which, as will be evident, may be made of any other material suitable for the purposes of the present invention. This neck-plate, as will be seen from an inspection of Fig. 3 of the drawings, is suitably channeled, as at 5 and 6, or in any other suitable manner, the duct or channeled portion 5 providing what may be termed a suction channel, and the duct or channeled portion 6 forming a means of egress or ingress of the air from or into a suitable flexible reservoir or bag, as 7, which may be made of any suitable material, and which has its mouth-portion stretched over a portion of the said neck-plate, and is secured thereto, so as to provide an air tight connection, by means of glue 8, or the like, and an arrangement of tacks or pins 9, substantially as shown. It will be understood, however, that any other suitable securing means may be provided for properly securing or uniting the parts, so as to produce an operative device.

Suitably arranged within the said suction-channel 5 is a tubular member or reed-pipe 10, within which is placed a suitable reed, as 11, the reed being disposed within said member 10 in such a manner, so that any compression of the flexible reservoir or of the bag 7, will allow the air from within said reservoir or bag to pass into and through the reed-pipe 10 to be expelled without affecting the reed 11, but upon an expansion of the reservoir or bag, the air being taken in by suction, and thereby bringing the reed into action and consequently producing a sound.

The compression of the flexible reservoir or bag and its expansion may be variously permitted and produced by any suitable means adapted for such purposes, the means represented in Fig. 2 of the drawings being a proper arrangement and a stuffing within said reservoir or bag of a material 12, such as excelsior, hair, sea weed, or the like.

In the modification represented in Fig. 4 of the drawings, the sound-producing or sound-emitting device is made somewhat in the form of a bellows, and the same consists, essentially, of a bag-like structure, as 13, which is suitably secured within the neck-portion 2, or other part of the doll, by means of glue or cement, as at 14, or it may be otherwise suitably secured in its

operative position, as will be clearly evident. Within the said bag-like structure 13 is an arrangement of oppositely placed cup-like members or shells 15 and 16, made of any suitable material, between which is operatively disposed an arrangement of coiled or other suitable springs 17 which permit the structure 13 to be suitably compressed, and serve to expand said structure, after removal of the force of compression, as will be clearly understood from an inspection of said Fig. 4 of the drawings.

Within the said structure 13, and suitably secured to one of said cup-like members or shells, as 16, is a reed-pipe-block 18 carrying a reed 19, the reed-pipe properly communicating with registering holes or perforations, 20 and 21, as shown, for the purpose of expelling the air from the structure 13, when under compression, or for sucking in air and rendering the reed active, when the spring or springs within the structure 13 expand the latter.

The operation and action of the several parts will be clearly understood from an inspection of said Fig. 4, and is substantially the same as the action and operation of the various parts represented in said Figs. 1, 2 and 3 of the drawings.

In the modification shown in Fig. 5 of the drawings, the neck-portion 2 of the doll has suitably affixed thereto a bag-like member, as 22, to provide an air-tight connection, and suitably secured within said neck-portion is a block 23, made of wood or any other suitable material. Suitably mounted within the lower portion of said bag-like member 22, in an air-tight manner, is a reed-pipe containing block or member, as 24, in which is arranged a reed-pipe 25 and a reed 26, in substantially the manner as represented in Fig. 3 of the drawings. In this manner, it will be clearly seen that the members 22, 23 and 24, provide an air-containing reservoir, the air being expelled or drawn into the said reservoir, through the reed-pipe and its reed, in the manner previously described.

In order that the reservoir will always assume its expanded relation, after compression, a coiled spring, as 27, or other suitable expanding means, may be located between the two blocks 23 and 24, in the manner shown, and the operation of which will be understood from an inspection of said Fig. 5.

The kinds of sound to be emitted, such as an imitation of the word "ma-ma", or a succession of intermittent or constant sounds in imitation of crying, are readily produced by variously applying and removing the pressure from the flexible reservoir or bag-like structure, as will be understood.

I am aware that changes may be made in the general arrangements and combinations of the various devices and parts, as well as

in the details of the construction of the said parts, without departing from the scope of the present invention as set forth in the foregoing specification and as defined in the clauses of the claim which are appended to the said specification. Hence, I do not limit my present invention to the exact arrangements and combinations of the said devices and parts as described in the said specification, nor do I confine myself to the exact details of the construction of the said parts, as illustrated in the accompanying drawings.

I claim:—

1. A doll comprising a head formed with a neck, a bag-like member open at the top and a block mounted in the open end of said member, said block and the surrounding portion of said bag-like member being mounted within the neck so that the said neck-portion serves as a support for said bag-like member and its block, combined with a sounding element cooperating with said bag-like element and adapted to cause

a sound as air is drawn into the bag upon expansion of said bag-like member after the same has been compressed.

2. A doll comprising a head formed with a neck, a bag-like member open at the top and a channeled block mounted in the open end of said member, said block and the surrounding portion of said bag-like member being mounted within the neck so that the said neck-portion serves as a support for said bag-like member and its block, said channeled block carrying a sounding element in the channeled portion thereof and adapted to cause a sound as air is drawn into the body upon expansion of said bag-like member after the same has been compressed.

In testimony that I claim the invention set forth above I have hereunto set my hand this 20th day of October, 1916.

SOREN S. ADAMS.

Witnesses:

FREDK. C. FRAENTZEL,
FREDK. H. W. FRAENTZEL.