United States Patent [19]

Gerst

[11] **3,911,618**

[45] **Oct. 14, 1975**

[54] **FINGER PUPPET**

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[52] **U.S. Cl.** **46/154**

[51] **Int. Cl.**[2] **A63H 3/14**

[58] **Field of Search** ..... 46/135 R, 154

[56] **References Cited**

UNITED STATES PATENTS

2,762,163	9/1956	Stein	46/154
2,840,950	7/1958	Cotler	46/154
2,931,137	4/1960	Ellett	46/154
3,611,628	10/1971	Noble et al.	46/154
3,820,276	6/1974	Goldfarb et al.	46/154

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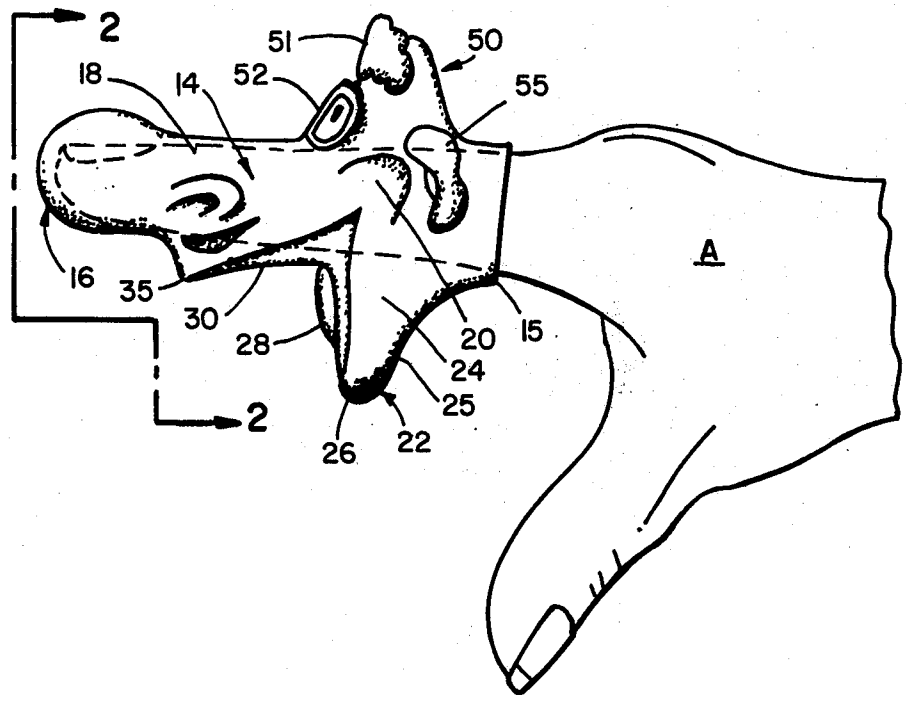
Assistant Examiner—Robert F. Cutting
Attorney, Agent, or Firm—Townsend and Townsend

[57] **ABSTRACT**

A finger puppet worn on a single digit having animated facial expression responsive to flexure of the digit at its joints is disclosed. The puppet, constructed of a hollow elastic diaphragm, preferably of latex rubber, defines interiorly thereof a main digit receiving concavity for receiving the length of the mounting digit at least past the first finger joint. Typically, the puppet has its mouth defined on the exterior of the diaphragm underneath the digit and in the direction of digit flexure. The eyes and forehead of the puppet are defined on the outside of the diaphragm on top of the digit away from the direction of finger flexure. At least the jaw of the puppet is defined by a protuberance, preferably hollow and enclosed, which extends away from the main digit receiving concavity at the point of joint flexure of the mounting digit. The jaw typically includes two angularly converging sidewalls and a flat tongue portion. The tongue portion is designed to confront the central concavity at a pallet portion upon digit flexure. When digit flexure occurs, animated movement of at least the jaw portion with respect to the pallet portion occurs through the changing of the angular and outside dimensions of the latex rubber diaphragm, the redistribution of air captured between the mounting digit and the hollow latex rubber diaphragm forming the puppet, and conformance of the flesh about the digit upon finger flexure to move the diaphragm.

10 Claims, 6 Drawing Figures



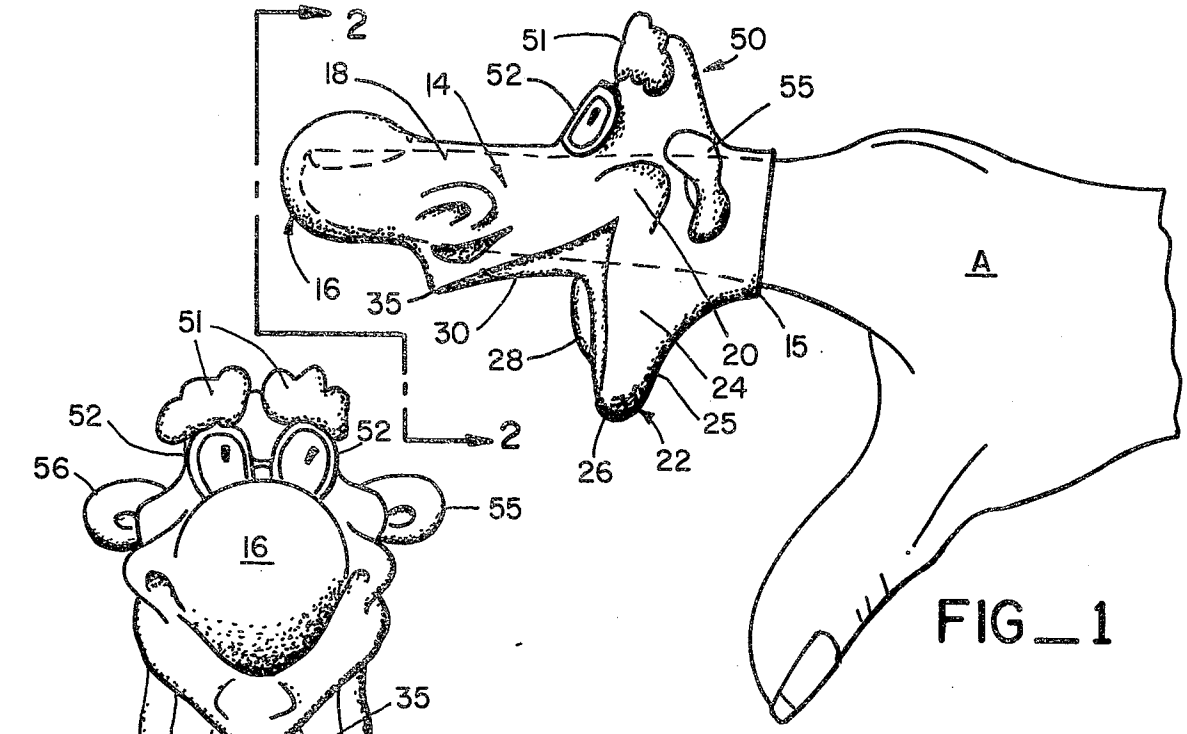


FIG_1

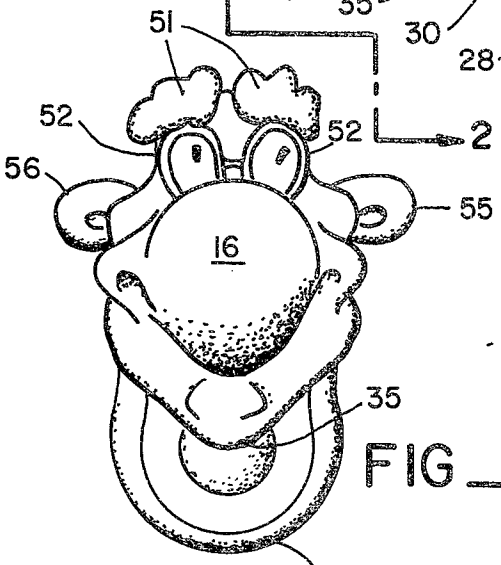


FIG_2

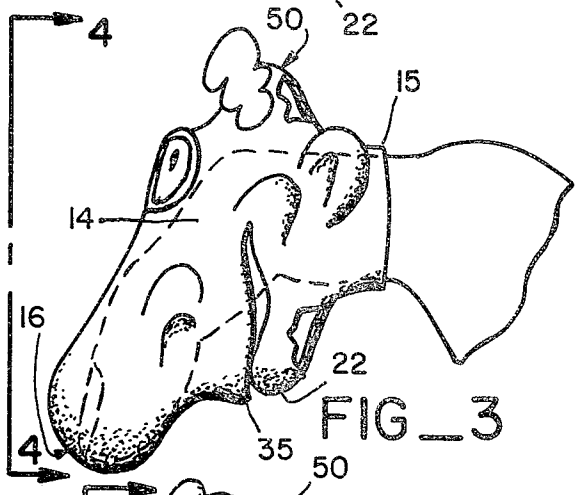


FIG_3

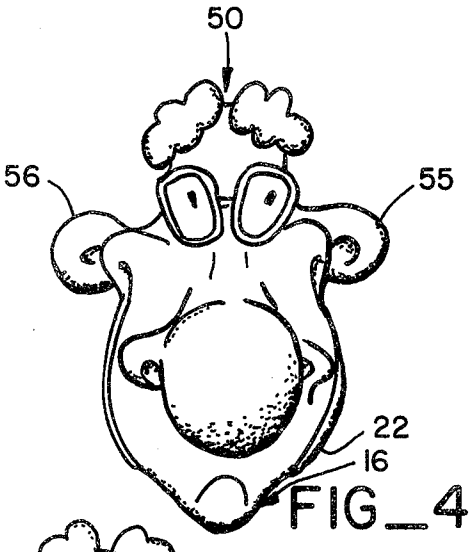


FIG_4

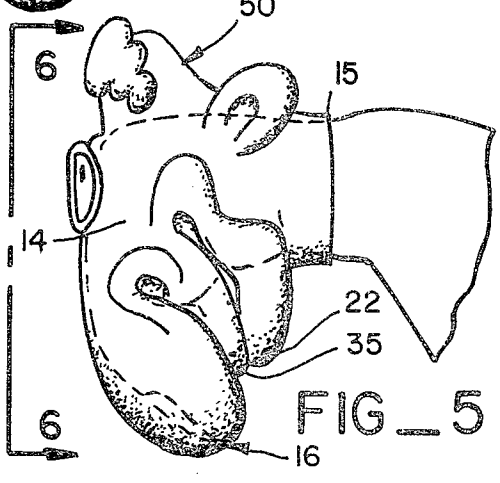


FIG_5

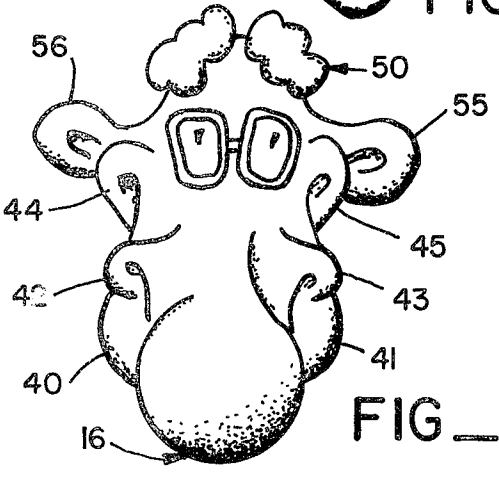


FIG_6

FINGER PUPPET

This invention relates to puppets. Specifically, a finger puppet worn on a single digit having animated facial expressions responsive to flexure of the single digit at its joints alone is disclosed.

SUMMARY OF THE PRIOR ART

Puppets mounted on a single digit make no provision for facial animation. Typically, such puppets comprise nothing more than a glove finger which includes a painted caricature thereupon. Although movement of the mounting digit affords corresponding puppet movement, no change of facial expression or other animated movement is provided. An example of such a puppet is shown in F. J. Stone U.S. Pat. No. 2,187,407.

Known finger puppets having animated movement commonly must be mounted to more than one digit. Such devices include Goldfarb et al. U.S. Pat. No. 3,820,276; J. Cotler U.S. Pat. No. 2,840,950; H. D. Plummer U.S. Pat. No. 2,751,708; and E. Stein U.S. Pat. No. 2,762,163.

SUMMARY OF THE INVENTION

A finger puppet worn on a single digit having animated facial expression responsive to flexure of the digit at its joints is disclosed. The puppet, constructed of a hollow elastic diaphragm, preferably of latex rubber, defines interiorly thereof a main digit receiving concavity for receiving the length of the mounting digit at least past the first finger joint. Typically, the puppet has its mouth defined on the exterior of the diaphragm underneath the digit and in the direction of digit flexure. The eyes and forehead of the puppet are defined on the outside of the diaphragm on top of the digit away from the direction of finger flexure. At least the jaw of the puppet is defined by a protuberance, preferably hollow and enclosed, which extends away from the main digit receiving concavity at the point of joint flexure of the mounting digit. The jaw typically includes two angularly converging sidewalls and a flat tongue portion. The tongue portion is designed to confront the central concavity at a pallet portion upon digit flexure. When digit flexure occurs, animated movement of at least the jaw portion with respect to the pallet portion occurs through the changing of the angular and outside dimensions of the latex rubber diaphragm, the redistribution of air captured between the mounting digit and the hollow latex rubber diaphragm forming the puppet, and conformance of the flesh about the digit upon finger flexure to move the diaphgragm.

OBJECTS AND ADVANTAGES OF THE INVENTION

A further object of this invention is to provide animation of a front upper lip of a finger puppet upon finger flexure. According to this aspect of the invention, the upper lip comprises a protuberance mounted over the first joint of a finger while the jaw of the puppet comprises a protuberance mounted over the second joint of a finger. When flexure of a digit at one or both joints occurs, animated movement of the nose, nostrils and upper lip in combination with jaw movement occurs giving an amusing effect.

An advantage of this aspect is that by differential movement of the finger joints, correspondingly different facial expressions can be generated to the puppet of this invention.

A further object of this invention is to permit comic animated movement of eyes, ears and forehead of the puppet. According to this aspect of the invention, the forehead and eyes are mounted at a protuberance overlying a finger joint on the side of the finger away from the direction of digit flexure. Typically, ears are mounted at the finger joint sides of the latex diaphragm where conforming movement of the latex concavity occurs upon finger flexure. When such flexure occurs, comic facial animation peculiar to the puppet disclosed occurs.

Other objects, features and advantages of this invention will become more apparent after referring to the following specification and accompanying drawings in which:

FIG. **1** is a perspective of a human hand showing a mounting digit (here shown as the first finger illustrated in broken lines) having the finger puppet of this invention mounted thereto;

FIG. **2** is a front elevational view of the finger puppet with the hand omitted along lines **2—2** of FIG. **1**;

FIG. **3** is a side elevational view of the puppet of this invention showing partial flexure of the mounting digit (again shown in broken lines);

FIG. **4** is a front elevational view of the puppet along lines **4—4** of FIG. **3**;

FIG. **5** is a side elevational view of the puppet shown upon substantially complete finger flexure (again shown in broken lines); and,

FIG. **6** is a front view along lines **6—6** of FIG. **5** showing the puppet's facial expression on total flexure.

Referring to FIG. **1**, hand A with first digit **14** (shown interior of the puppet in broken lines) is shown. The puppet typically comprises a latex rubber membrane preferably less than ¼ inch in thickness. This latex rubber membrane comprises a relatively tight overall fit about the finger. Preferably, it snugly grips the digit at neck portion **15.** The rubber diaphragm extends to the end of the digit at nose portion **16.**

The mounting finger **14** has a first joint **18** and a second joint **20.** It is in the vicinity of these joints that the animated features of the puppet are mounted so that the puppet changes appearance upon finger flexure.

Referring to second joint **20,** a protuberance **22** is formed. This protuberance includes left jaw wall **24,** right jaw wall (not shown) and jaw ridge **25** there between. The two walls and the ridge join at chin point **26.**

The interior of the jaw protuberance includes a tongue portion **28.** Tongue portion **28** confronts upon finger flexure to a pallet portion **30** under nose **16.**

It should be understood that the jaw protuberance **22** is preferably enclosed. Thus, the neck portion **15** as stretched about the mounting digit **14** captures air in the spatial interval between the mounting digit and the protuberances on the puppet.

Another distinguishing feature of the jaw portion will be noted. Specifically, it is mounted in the direction of flexure of the finger at joint **20.** Thus, when the finger flexes at joint **20,** pallet portion **30** will move towards tongue portion **28** causing mouth movement upon finger flexure.

It should also be noted that in the vicinity of the first finger joint **18** towards the direction of finger flexure, there is mounted a lip portion **35.** Lip portion **35** is con-

structed similar to jaw portion **22** and comprises a protuberance having two angularly converging walls away from the mounting digit **14.**

It is convenient to stop at this point and refer to FIGS. **2–6** so that the utility of this invention in providing facial animation of the jaw and lip respectively can be understood.

Referring to FIG. **3,** partial flexure of the digit with the finger puppet mounted thereto is shown. It will be noted that jaw portion **22** closes and moves towards lip portion **35** so as to come into contact. Given the front elevation view of the puppet shown in FIG. **4,** it will be seen that the movement of nose **14** and lip **35** over the jaw **22** presents an entirely different facial expression from that shown in FIG. **2.**

Moving on to the view shown in FIG. **5,** complete flexure of the mounting digit **14** is shown. The nose portion **16** compresses the lip portion **35** and moves the jaw protuberance **22** backwardly and towards the direction of finger flexure.

Viewing FIGS. **4** and **6,** three effects can be seen to be present. First of all, the jaw portions at their respective sides **40, 41** move outwardly. Secondly, the nostril portions **42, 43** of the puppet likewise move outwardly. Finally the jaw bone portions of the puppet **44, 45** similarly move outwardly. As is illustrated from the cartoon sequence of the invention during finger flexure, a comic animated change of facial expression occurs just responsive to finger flexure of the single mounting digit alone.

Returning to FIG. **1,** it will be seen that a forehead protuberance **50** is defined immediately overlying the second finger joint **20.** This forehead protuberance includes hairpieces **51** and eyes **52.** Paired ears **55, 56** are shown on either side of the puppet mounted in the vicinity of second finger joint **20.**

Returning to the sequence of FIGS. **3–6,** the animation of these features upon puppet movement can be seen. Specifically, and upon finger flexure, the forehead protuberance **50** flattens with increasing flexure. Likewise, ears **55, 56** move further animating the facial expression of the puppet.

It should be clearly understood that the animation provided to the puppet facial expression results from at least three phenomena, any one of which can result in the animated facial movements of this invention. First, as the latex rubber covered portion of the finger conforms on its exterior to finger movement, rumples in the latex rubber membrane about the finger produce the changing and amusing animated contours to the puppet herein illustrated.

Secondly, it should be understood that neck portion **15** captures air within the puppet between the mounting digit **14** and the latex membrane forming the puppet. This being the case, the conformance of air to the reshaped latex rubber membrane upon finger flexure produces for differing fingers, differing facial expressions.

Finally, the size and shape of the finger itself and the movement of the flesh of the finger additionally adds to the movement of the latex diaphragm and the facial animation of the puppet herein disclosed.

It will be realized that the number of facial expressions obtainable with the use of this invention is literally without limit. By conforming the jaw protuberance **22,** lip protuberance **35,** forehead protuberance **50,** and ears **55, 56** to a number of different comic models, facial expressions in a variety of puppets can be achieved all responsive only to the flexure of a single mounting digit. It will be further appreciated that by draping the puppet with garments and providing hands as shown, for example, in Kilpatrick U.S. Pat. No. 683,857 or the like, puppets with hand and garment movement can easily be constructed. Moreover, it will be appreciated that mounting to any of the digits of the human hand will suffice for the practice of this invention.

It will be understood that the puppet of this invention is manufactured by pouring uncured latex rubber interior of a female bifurcated plaster of paris mold. The latex rubber cures to form a thin membrane and the excess latex rubber is removed from the mold. Finally, the mold is broken open, and the flexible diaphragm is removed. When removed, the diaphragm is typically painted to provide facial expressions.

I claim:

1. A finger puppet for mounting on a single digit having animated facial expression responsive to flexure of said single digit comprising: a hollow elastic diaphragm defining interiorly thereof a main digit receiving concavity for receiving the mounting digit for said puppet at least past the first digit joint; a nose portion defined on the outside of said diaphragm adjacent the end of said digit; a mouth defined on the exterior of said diaphragm underneath the digit and in the direction of digit flexure; eyes and forehead defined on the outside of said diaphragm on top of the digit and away from the direction of digit flexure; at least a jaw protuberance defined by a protuberance extending away from the main digit receiving concavity at the point of flexure of the mounting digit; and, a pallet portion on the exterior of said diaphragm adjacent said jaw protuberance for movement towards said pallet portion upon digit flexure.

2. The invention of claim **1** and wherein said jaw protuberance is hollow and enclosed.

3. The invention of claim **1** and wherein said diaphragm conforms in substantial air-tight relation to said mounting digit at the open end of said elastic diaphragm.

4. The invention of claim **1** and wherein said jaw protuberance is formed at the second joint of said digit.

5. A finger puppet for mounting on a single digit having animated facial expressions responsive to the flexure of said single digit comprising: a hollow elastic diaphragm defining interiorly thereof a main digit receiving concavity for receiving the mounting digit for said puppet, said hollow elastic diaphragm extending over said digit past said first digit joint and past said second digit joint; said elastic diaphragm gripping the mounting digit in substantially air-tight relationship at the open end of said diaphragm adjacent the neck portion of said puppet; a mouth defined on the exterior of said diaphragm underneath the digit and in the direction of digit flexure; eyes and forehead defined on the outside of said diaphragm on the top of said digit and away from the direction of digit flexure; at least a jaw protuberance extending away from the main digit receiving concavity at the point of flexure of said mounting digit at said second digit joint; a pallet portion on the exterior of said diaphragm adjacent said jaw protuberance for movement toward said pallet portion upon digit flexure at said second digit joint; a lip protuberance extending away from said main digit receiving concavity

at the point of flexure of said mounting digit at said first digit joint in the direction of digit flexure; and, the end of said hollow elastic diaphragm forming the nose portion of said puppet for compression of said lip protuberance and said jaw protuberance to change the facial feature of said puppet upon digit flexure.

6. The invention of claim **5** and wherein said hollow elastic diaphragm is comprised of latex rubber of less than ¼ inch thickness.

7. The invention of claim **5** and wherein said finger puppet includes ears mounted to the exterior of said hollow elastic diaphragm, said ears being in the vicinity of one of said joints of said mounting digit.

8. A finger puppet for mounting on a single digit having animated facial expression responsive to flexure of said single digit comprising: a hollow elastic diaphragm defining interiorly thereof a main digit receiving concavity for receiving the mounting digit for said puppet at least past the first digit joint; a mouth defined on the exterior of said diaphragm underneath the digit and in the direction of digit flexure; a jaw protuberance defined by a protuberance extending away from the main digit receiving concavity at the point of flexure of said mounting digit; and, a pallet portion on the exterior of said diaphragm adjacent said jaw protuberance for movement toward said pallet portion upon digit flexure of said hollow elastic diaphragm as mounted to said mounting digit.

9. The invention of claim **8** and wherein a nose portion is defined on the outside of said diaphragm adjacent the end of said digit.

10. The invention of claim **8** and wherein said diaphragm conforms in substantial air-tight relation to said mounting digit at the open end of said elastic diaphragm adjacent the neck portion of said puppet.

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