May 16, 1961 C. PEARSON, JR 2,984,042

BATTERY OPERATED TOY ADAPTED TO SIMULATE A TELEVISION RECEIVING SET

Filed May 19, 1959

3 Sheets-Sheet 1

Fig. 1.

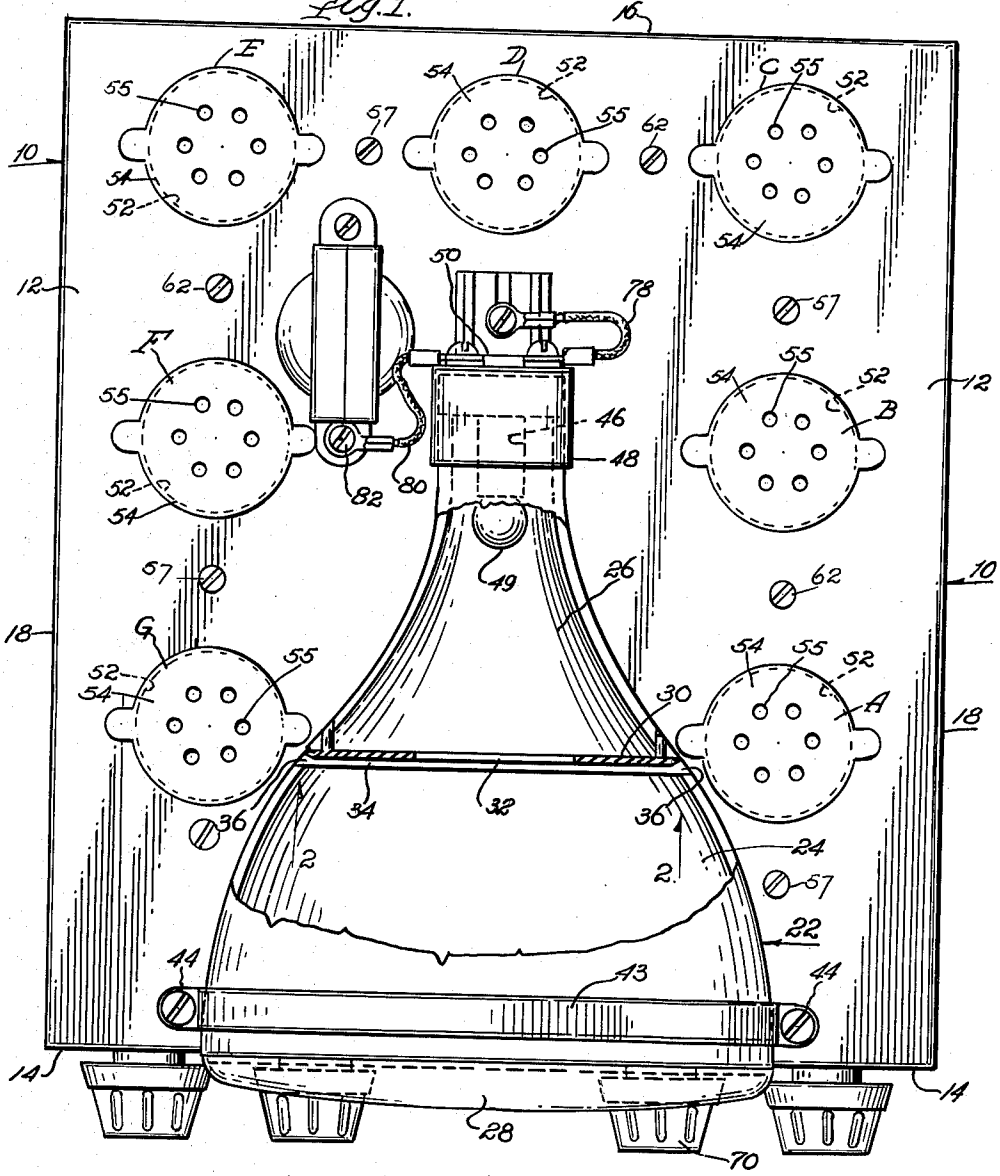
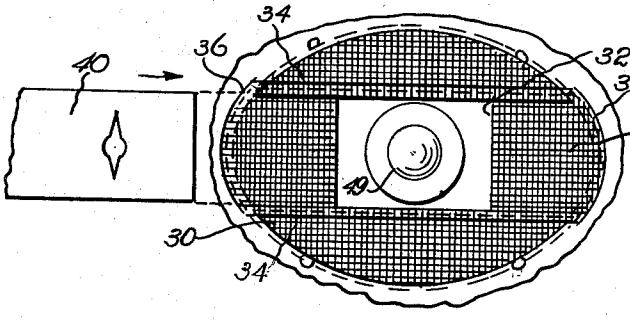


Fig. 2.



INVENTOR.
Charles Pearson, Jr.
BY May R. Krauss
Attorney.

May 16, 1961 C. PEARSON, JR 2,984,042

BATTERY OPERATED TOY ADAPTED TO SIMULATE A TELEVISION RECEIVING SET

Filed May 19, 1959

3 Sheets-Sheet 2

Fig. 7.

Fig. 3.

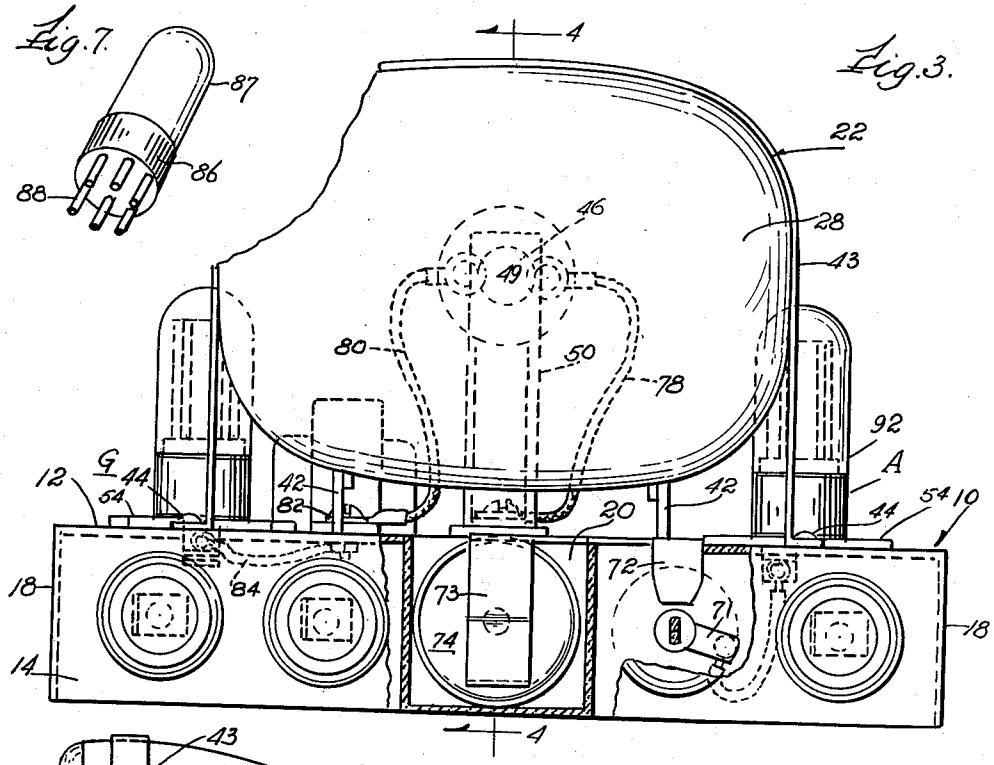
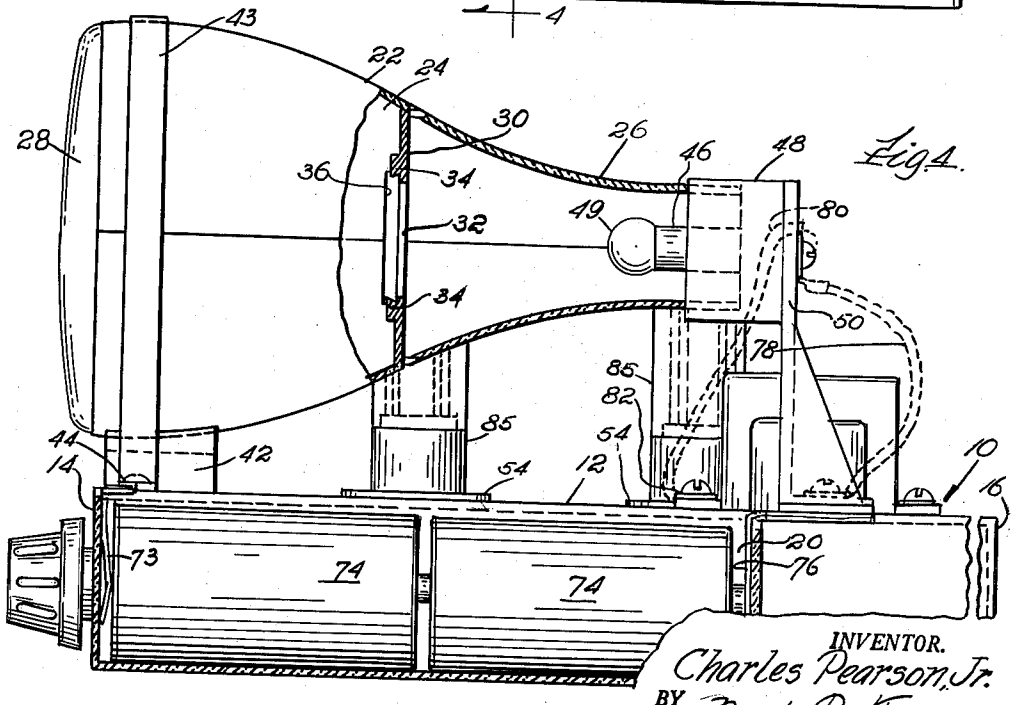


Fig. 4.



INVENTOR.
Charles Pearson, Jr.
BY Mary R. Kraus

Attorney.

May 16, 1961

C. PEARSON, JR

2,984,042

BATTERY OPERATED TOY ADAPTED TO SIMULATE A TELEVISION RECEIVING SET

Filed May 19, 1959

3 Sheets-Sheet 3

Fig. 5.

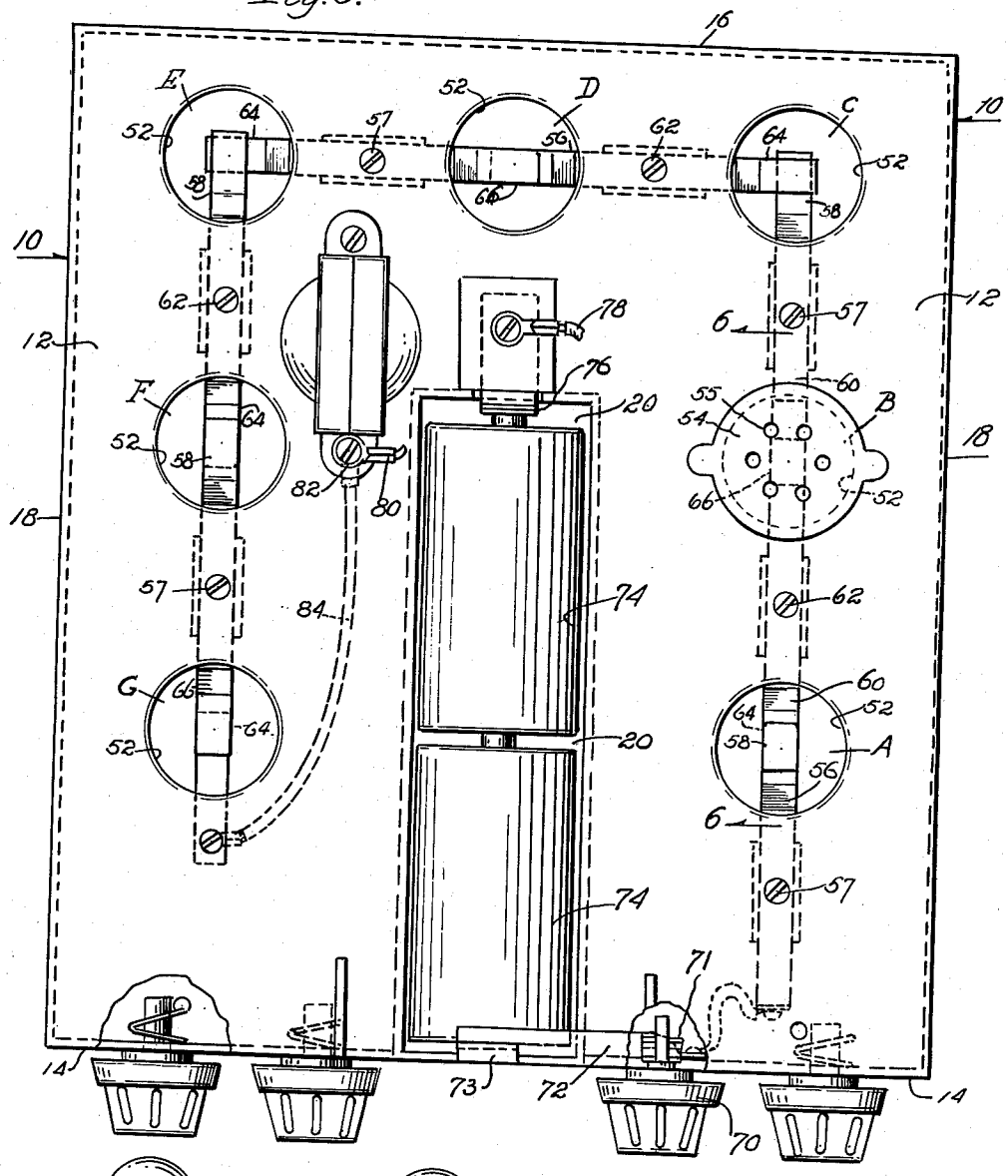
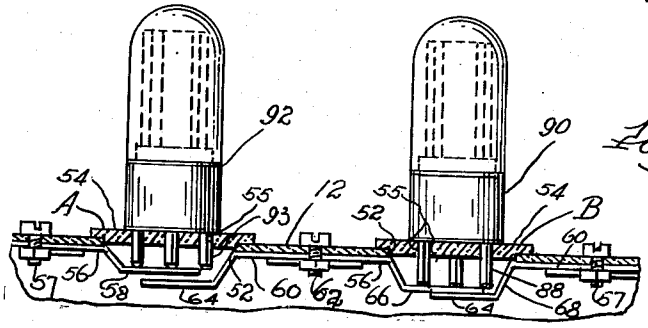


Fig. 6.



INVENTOR.

BY Charles Pearson, Jr.

Mary R. Evans

Attorney.

United States Patent Office 2,984,042 Patented May 16, 1961

2,984,042

BATTERY OPERATED TOY ADAPTED TO SIMULATE A TELEVISION RECEIVING SET

Charles Pearson, Jr., 396 Huntington Lane, Elmhurst, Ill.

Filed May 19, 1959, Ser. No. 814,259

6 Claims. (Cl. 46—13)

This invention relates to a battery operated toy adapted to simulate a television receiving set.

One of the objects of this invention is to provide a battery operated toy which simulates a television receiving set having simulated television tubes so constructed and arranged that the set will operate only when all of the simulated good tubes are inserted in their sockets.

It is recognized that a child likes to simulate the actions of grownups and this invention aims to permit a child to emulate the actions of a television repair man in repairing an inoperative television receiving set by eliminating defective tubes and by using only those tubes which are representative of effective tubes. Therefore, an object of this invention is to provide a simulated television receiving set having a plurality of tube receiving sockets and a plurality of simulated television tubes greater in number than said sockets for insertion in said sockets, with certain of said tubes representing defective tubes and others effective tubes, but not so indicated so that the child will try to make the set operate by selecting and inserting the effective tubes in the sockets. The insertion of even a single defective tube in the set will cause the set to remain inoperative.

More specifically, I have provided a battery operated toy which simulates a television receiving set with tube receiving sockets and simulated television tubes having pin prongs for insertion in said sockets. Certain of said tubes have pin prongs of a certain length and others of a slightly greater length. When all of the tube sockets are filled with the tubes having pin prongs of the greater length the toy will operate to illuminate the simulated picture tube so that a picture may be presented thereon. If, however, any of the tube sockets are filled with tubes having the pin prongs of the shorter length then the circuit will remain open and the set will not operate. All of the tubes are the same in general appearance except for the differences in the length of pin prongs which would not be noticeable to the average eye.

Another object of this invention is to provide a toy which will afford great play value, which will stimulate the child's interest in scientific toys and will tend to develop the child's perception.

While this toy is illustrated in assembled condition, it is recommended that for the purpose of stimulating interest the parts of the set may be sold disassembled so that the child will do the assembling.

Other objects will become apparent as this description progresses.

In the drawings:

Figure 1 is a top plan view partly in section.

Figure 2 is a face view taken on lines 2—2 of Figure 1.

Figure 3 is a front elevational view with parts broken away.

Figure 4 is a detail broken sectional view taken on lines 4—4 of Figure 3.

Figure 5 is a top plan view without the picture tube showing the electrical connections and the circuit.

Figure 6 is a view partly in section showing two tube sockets; in one socket the longer pin prongs of the tube close the contact members and in the other the contact members remain open due to the shorter pin prongs, and

Figure 7 is a perspective view of the simulated television tube used with this toy.

The toy has a base generally indicated at **10** formed preferably of plastic material. The base has a generally flat top portion **12**, front and back walls **14** and **16**, and side walls **18** closed by a bottom wall. A rectangular shaped battery receiving well generally indicated at **20** is provided in the base for receiving the dry cell batteries. The battery well is positioned under the simulated picture tube formed of plastic material and generally indicated at **22**. The simulated picture tube **22** in shape generally follows that of a conventional television picture tube except for the size. As shown, the picture tube member comprises a hollow front portion generally indicated by the numeral **24**, which continues rearwardly with a reduced hollow tapering neck generally indicated at **26**. The front of the picture tube is closed by a translucent wall **28**.

A transverse wall **30** formed of opaque material extends across the interior of picture tube **22** adjacent the front of the neck **26**. Said wall has a rectangular shaped cutout **32** for passage of light from the light-up bulb, to be described. The wall **30** is provided with upper and lower channeled members **34** providing a track for receiving a strip of film or the like that may be moved across the opening **32**. Slots **36** are provided in the sides of tube **22** which communicate with the track **34** to permit the insertion and removal of a film strip **40** (Figure 2) or the like for the purpose of projecting same on the front wall **28** of the picture tube. The strip **40** may have cutouts so that same will be projected on the screen as silhouettes.

The simulated picture tube **22** is supported on a pair of spaced uprights **42** extending upwardly of the base **10** and said picture tube is secured in position by a metal strap **43** anchored at its opposite ends to the base as at **44**.

A light bulb socket **46** is centrally supported in a cup-shaped end closure member **48** which is removably positioned on the rear end of the neck of the picture tube. A light bulb **49** is secured in socket **46**. An upright support **50** extends upwardly of the base and rearwardly of the picture tube and has secured to it the closure member **48** for supporting the rear of the picture tube **22**.

The flat top portion **12** of the base **10** is provided with seven equally spaced annular cutouts generally indicated by the numeral **52**, best shown in Figures 1, 5 and 6. Secured in each cutout is an annular plastic disc **54** having a flanged portion for seating the disc. The disc is fixedly secured by any suitable means to the top wall **12**. Each disc **54** is provided with six equally spaced openings **55** to accommodate the pin prongs on the simulated tubes, to be subsequently described. Each of said discs forms in effect a tube socket and will be so referred to hereinafter. The seven tube sockets will be identified by the letters A to G inclusive, more particularly in connection with the circuit diagram.

Under each socket A to G inclusive, are a pair of spaced metal contact strips, best shown in Figure 6, which are normally spaced from each other so that the circuit to the light bulb **49** is normally open. Only when the contacts under all of the sockets A to G inclusive are closed, such as when the porper tubes are in the sockets, will the light bulb **49** be illuminated. The metal contact strips under all of the sockets are of the same construction, therefore, only the contacts in connection with sockets A and B, best shown in Figure 6, will be described in detail.

A metal strip **56** is suitably anchored as at **57** to the

underside of the plastic top portion 12 of the base. Said strip is bent or stepped downwardly as at 58 under the socket so that it is under some of the openings 55 of the socket A. Another metal strip 60, suitably anchored as at 62 to the base, has its opposite ends 64 and 66 bent in step-down form. The forwardly extending step-down portion 64 is under step-down portion 58 but is spaced from same. The rearwardly extending step-down portion 66 extends under socket B. Likewise, another metal strip 68, similar to metal strip 60 has its front end under socket B and its opposite end under socket C. The same procedure is followed for each of the remaining sockets. There are two spaced contacts under each socket. All of the contacts are arranged in series, as will be presently described in connection with the circuit.

Mounted on the front panel 14 of the base is a rotatable knob 70 which serves as the manually operated switch. The knob carries a metal contact strip 71 which rotates with the knob and which is adapted to make or break contact with one end of the metal strip 72 connected to the base. The opposite end 73 of the strip 72 is positioned inside the battery well 20 for contact with the negative pole of one of the dry cell batteries 74. At the opposite end of the battery receiving well 20 there is secured a metal strip 76 which is connected by conducting wire 78 to the light bulb socket 46. Another conducting wire 80 connects the light bulb socket 46 to a metal post 82 which through conducting wire 84 completes the circuit to one of the metal strips under socket G.

The simulated television tubes to be used in connection with this toy are all of the same construction except for the slight difference in the length of the pin prongs, which is imperceptible to the eye. The tube is shown in perspective in Figure 7. The two types of tubes are best shown in Figure 6.

The simulated tube generally indicated at 85 is formed of an annular plastic base 86 to which is secured a hollow shell 87. A simulated structure is supported inside said shell so that the tube resembles the conventional tube in a television receiving set. Either secured within the base 86 of the tube or integrally formed therewith and extending downwardly therefrom are six equally spaced pin prongs 88. The tube, indicated by the numeral 90 has the slightly longer pin prongs 88 and in the use of the toy is intended to be a "good" tube and the tube indicated by the numeral 92 has the slightly shorter pin prongs 93 and is intended to be a defective tube. In supplying tubes with the toy, at least seven tubes 90 of the type having the longer pins 88 will have to be supplied, one for each of the seven tube sockets so that the contacts under each of the sockets may be closed. Any number of tubes of the type having the shorter pins will also be supplied for the purpose of providing the play value.

Inserting a tube 92 with the short pin prongs 93 will not close the contacts under the tube sockets A to G, consequently if any one of the tube socket contacts is open the light bulb 49 will not be illuminated. It is therefore necessary that the child select from the batch of tubes at least seven tubes like tube 90 with the longer pin prongs and insert same in the tube sockets. It can be readily appreciated that the child will be afforded considerable play value in performing this task.

When the simulated television tube 90 having the longer pin prongs 88 is inserted in the socket openings 55, at least one of said pin prongs 88 which extends below the bottom of the socket will engage one of the metal contacts of each pair (for example, 66 in socket B—Figure 6) and depress same so that it engages the other contact 68 to close the circuit for said socket. The contact will remain closed as long as the tube remains in the socket. The insertion of a tube like 92 with the shorter pin prongs 93 (see tube in socket A—Figure 6) will not depress the contacts and hence with any one of the contacts open in any one of the sockets the light bulb 49 will not be illuminated, since the contacts are arranged in series.

The circuit is very simple and should be understood from the foregoing but will be briefly described.

When the knob 70 is rotated to close the switch contacts 71 and 72 to 73 and the battery 74, the toy is in condition to be played with. By inserting the proper tubes 90 in each of the sockets A to G inclusive, the metal contacts under each of the sockets will be closed completing the circuit from the dry cell batteries 74 to metal contact strip 76 in the battery well, through conductor 78 to the lamp socket 46, through conductor 80, post 82, conductor 84 to the metal strips closed under each of the sockets A to G connected in series.

Other knobs and parts shown in the drawings and not indicated by numerals or heretofore described are merely dummy parts and serve no function except for simulating the appearance of a conventional television receiving set.

It will be understood that various changes and modifications may be made from the foregoing without departing from the spirit and scope of the appended claims.

I claim:

1. A battery operated toy adapted to simulate a television receiving set, comprising a base, a simulated picture tube supported on said base, a light bulb supported in said picture tube, a plurality of sockets secured to said base, electrical contacts associated with each said socket and in electrical circuit with said light bulb, a plurality of simulated television tubes greater in number than the plurality of sockets and interchangeably positioned in said sockets, certain of said simulated tubes having means for closing the electrical contacts of the socket in which it is inserted and other of said tubes so constructed as to permit the contacts of the socket in which it is inserted to remain open, the circuit to said simulated picture tube being closed only when all of the sockets are occupied with tubes having means for closing the electrical contacts thereby illuminating the light bulb.

2. A battery operated toy adapted to simulate a television receiving set, comprising a base, a simulated picture tube supported on said base, a light bulb supported in said picture tube, a plurality of sockets secured to said base, each said socket having a plurality of spaced openings, electrical contact members positioned under said spaced openings and in electrical circuit with said light bulb, a plurality of simulated television tubes greater in number than the plurality of sockets and interchangeably positioned in said sockets, each of said tubes having a plurality of pin prongs adapted to be inserted into said openings in said sockets, certain of said tubes having their pin prongs of such length that at least one of said pin prongs engages said electrical contacts to close the electrical contacts for the socket in which it is inserted, certain other of said simulated tubes having pin prongs of such length as to permit the contacts for the socket in which it is inserted to remain open, the circuit to said simulated picture tube being closed when all of the sockets are occuplied with tubes having prongs of such length to engage the electrical contacts thereby illuminating the light bulb.

3. A battery operated toy adapted to simulate a television receiving set, said toy having a base, a simulated picture tube supported in said base, a light bulb supported in said picture tube, a plurality of sockets secured to said base, a pair of spaced electrical contact members associated with each said socket and in electrical circuit with said light bulb, a plurality of simulated television tubes greater in number than the plurality of sockets and adapted to be interchangeably positioned in said sockets, each of said tubes having fingers, with certain of said

tubes having fingers of a length engaging at least one of said contact members to cause said contact members to engage each other and close the circuit to cause said light bulb to illuminate, and certain of said tubes having shorter fingers so that the contact members are maintained in position so that the circuit is open.

4. In a structure defined in claim 3 in which the picture tube is provided with means to receive a slide film so that when the light bulb is illuminated the picture on said film is projected on said simulated picture tube.

5. In a structure defined in claim 2 in which the picture tube is provided with means to receive a slide so that when the light bulb is illuminated the image on

the slide will be projected on said simulated picture tube.

6. In a structure defined in claim 1 in which the picture tube is provided with means to receive a strip having means thereon which are projected on the simulated picture tube when the light bulb is illuminated.

References Cited in the file of this patent

UNITED STATES PATENTS

2,110,380	Lohr	Mar. 8, 1938
2,605,351	Morris	July 29, 1952
2,664,665	Rozenoff	Jan. 5, 1954