

[54] **ANIMATED DISPLAY**

[76] Inventor: **Ulysses Leonard**, 5914 N. 67th St., Milwaukee, Wis. 53218

[22] Filed: **Nov. 16, 1972**

[21] Appl. No.: **307,263**

[52] U.S. Cl. **40/106.3, 40/139, 46/139, 46/226, D29/1 B**

[51] Int. Cl. **G09f 19/08**

[58] Field of Search **40/106.3, 139, 106.52, 40/106.41, 106.31; 46/226, 118, 139, 245; D29/1 B**

[56] **References Cited**

UNITED STATES PATENTS

1,068,147	7/1913	Lovejoy	D29/1 B UX
1,596,921	8/1926	Childs	40/106.31 X
2,765,583	10/1956	Gamble	46/123
2,821,801	2/1958	Pruitt	40/139

2,843,949 7/1958 Donahoo 40/106.41 X

Primary Examiner—Jerome Schnall

Assistant Examiner—John F. Pitrelli

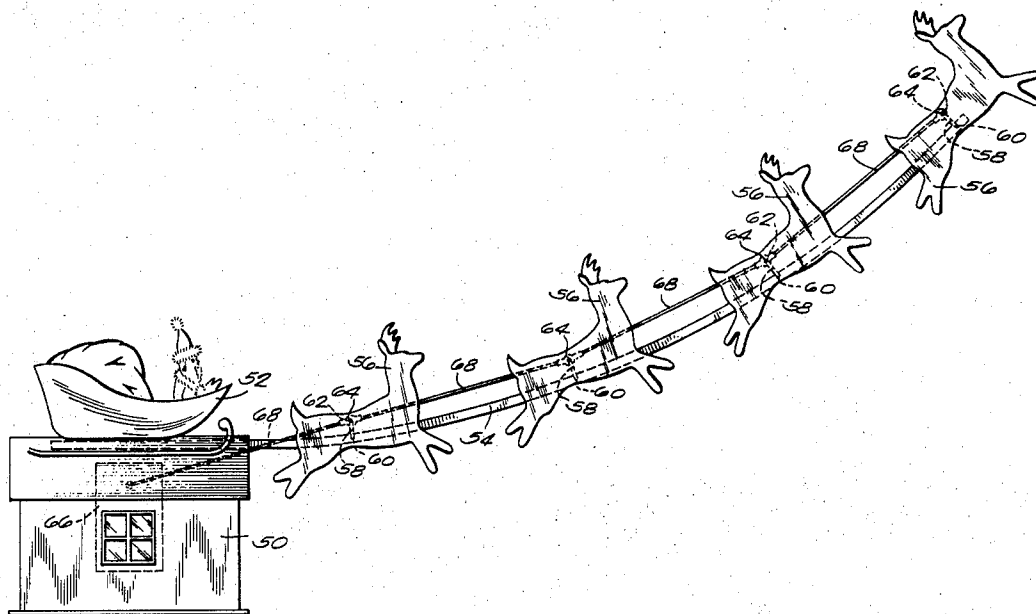
Attorney, Agent, or Firm—Wheeler, Morsell, House & Fuller

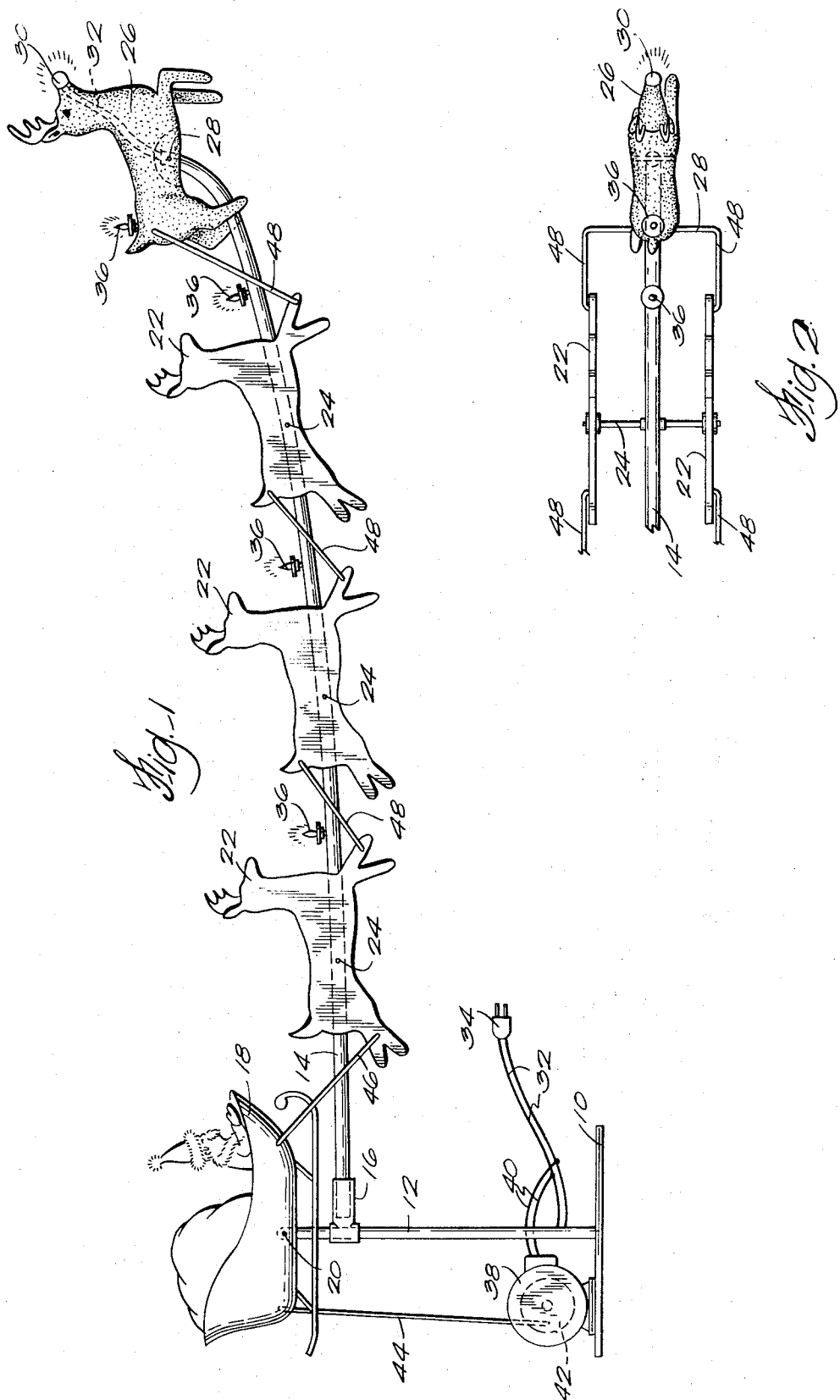
[57]

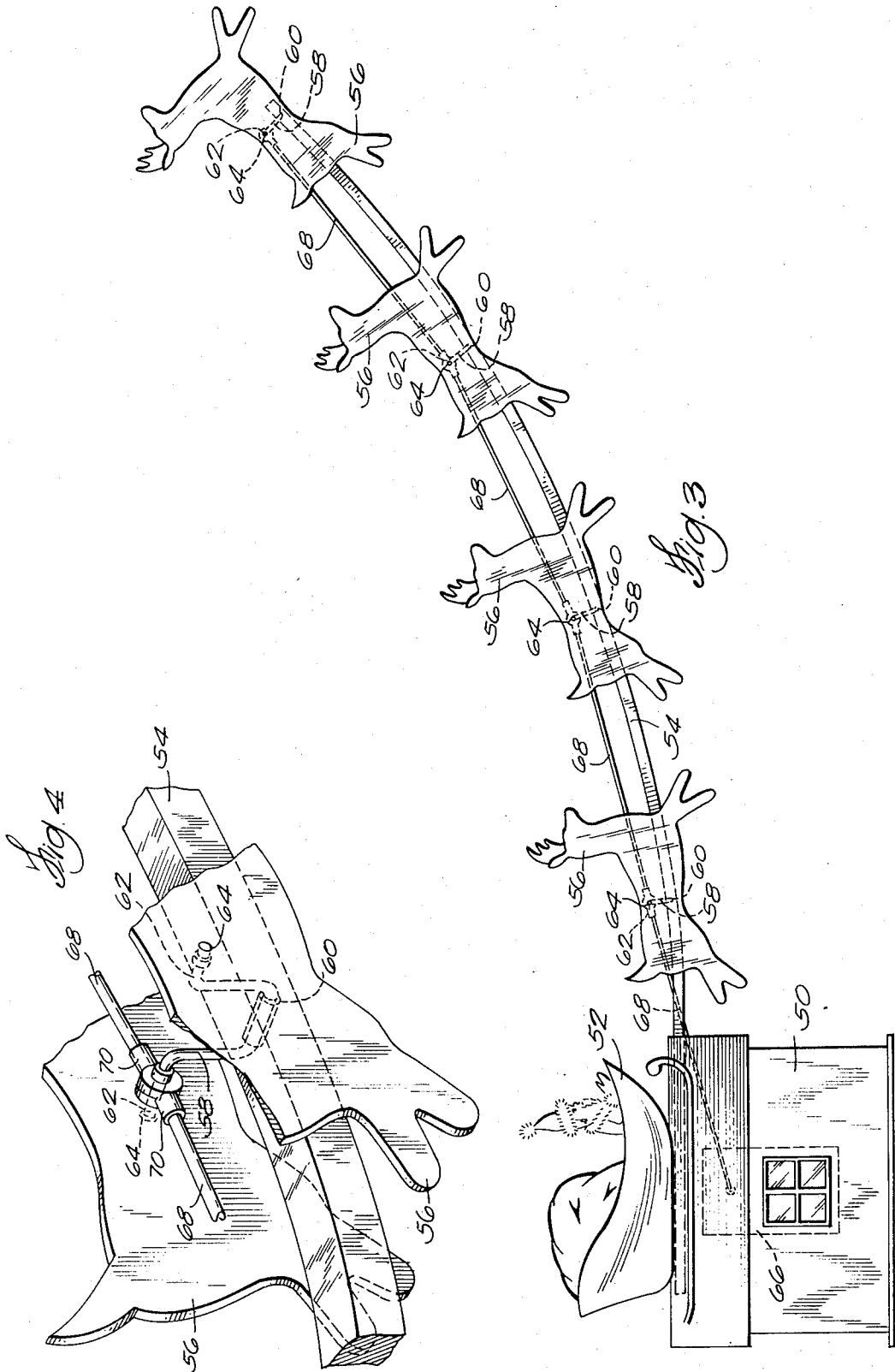
ABSTRACT

A figure representing Santa Claus in a sleigh is connected to a supporting structure and a line of figures representing Santa's reindeer are each pivotally connected to a generally horizontal arm which projects laterally from the supporting structure. An electric motor is mounted on the supporting structure and is pivotally linked to the nearest reindeer to rock it about its pivotal axis. Each reindeer is pivotally linked to the one behind it so that the rocking movement is transmitted along the line of reindeer to simulate galloping.

5 Claims, 4 Drawing Figures







ANIMATED DISPLAY

BACKGROUND OF THE INVENTION

Children delight in the Christmas season and eagerly await Santa's visit with toys and goodies on Christmas Eve. For older children and adults, Santa serves as a symbol for the spirit of Christmas and awakens fond memories of Christmases past. For these reasons, the figure of Santa Claus and his reindeer are important at Christmastime both in commercial displays and in the home.

This invention relates to displays in general and to animated displays in particular. Due to the dynamic image of Santa and his reindeer, it will be recognized that an animated display for these figures is much more effective than a static display. Animated displays of Santa and his reindeer have been constructed in the past, but they have tended to be relatively complex and expensive. In accordance with this invention, however, a novel animated display of Santa and his reindeer has been devised which is relatively simple, attractive and inexpensive. The invention also provides a relatively realistic representation of Santa's sleigh being drawn through the air by a group of animated reindeer which rock back and forth to simulate galloping.

SUMMARY OF THE INVENTION

A plurality of figures are each pivotally attached to an elongated substantially horizontal arm which is attached at one end to a support means and projects laterally therefrom. The figures are spaced in a line along the arm and pivotal linkages are connected between each figure and the figure behind it in the line of figures. Means is provided for rocking one end figure of the line of figures and thereby simultaneously rocking the entire line of figures because of the linkages thereinbetween.

In preferred embodiments of the invention, the figures are shaped to represent draft animals and a figure shaped to represent a vehicle is attached to the support means at the rear end of the line of draft animals. An electric motor is coupled via a linkage to the first draft animal for rocking the same back and forth and thereby imparting a simultaneous rocking movement to the line of draft animals.

In one embodiment of the invention, the vehicle is Santa's sleigh and the draft animals are Santa's reindeer led by Rudolph the Red Nose Reindeer. An optional but desirable feature is a string of lights, terminating in Rudolph's red nose, strung along the rod and which flash as the display is animated.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side view of one illustrative embodiment of the invention;

FIG. 2 is a top view of the front portion of the embodiment shown in FIG. 1.

FIG. 3 is a side view of a second embodiment of the invention; and

FIG. 4 is an enlarged fragmentary detail view of the pivotal linkage for the reindeer shown in FIG. 3.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Although the disclosure hereof is detailed and exact to enable those skilled in the art to practice the inven-

tion, the physical embodiments herein disclosed merely exemplify the invention which may be embodied in other specific structure. The scope of the invention is defined in the claims appended hereto.

Referring to FIG. 1, which shows one embodiment of this invention, a base 10 has a vertical support post 12 attached thereto and extending upwardly therefrom. A substantially horizontal arm 14 is fastened in cantilevered relation to vertical post 12 by means of a T fitting 16. Horizontal arm 14 extends sideways from vertical post 12 and may have a relatively gentle upward curvature. Both post 12 and arm 14 are hollow to accommodate electrical conductors as will be explained later.

A first figure 18 which is shaped and painted to represent Santa in his sleigh is pivotally attached to the upper end of vertical post 12 by means of a pintle 20 which engages an opening in the post 12. A plurality of figures 22 which are shaped and painted to represent Santa's reindeer are pivotally attached to horizontal arm 14 by means of pintles 24 which engage bearing openings in arm 14. The figures 22 are arranged in a spaced line along horizontal arm 14 and are also arranged in pairs abreast of each other on both sides of arm 14 as shown in FIG. 2. A lead figure 26 which is shaped and painted to represent Rudolph the Red Nose Reindeer is pivotally attached to the end of horizontal arm 14 by means of pintle 28 which engages a bearing opening in arm 14.

Reindeer figure 26 preferably has a small red lightbulb 30 attached to the end of its nose to represent Rudolph's shiny red nose. The lightbulb 30 is energized by electrical conductors 32 which extend through the hollow interior of arm 14 and post 12 and terminate in an electric plug 34. Additional lightbulbs 36 are desirably attached to arm 14 between the reindeer figures 22 and are connected to conductors 32 to be energized thereby. A conventional flasher (not shown) is desirably included in the circuit to lamps 36, 30, to cause them to flash as the display is animated.

An electric motor 38 is mounted on base 10 and is connected to conductors 32 by means of branch conductors 40. Electric motor 38 turns a circular crank plate 42 to which a connecting rod 44 is eccentrically attached to one end. The other end of connecting rod 44 is pivotally attached to the rear of figure 18. As the crank plate 42 rotates, the connecting rod 44 moves up and down and causes the figure 18 to rock back and forth about the pivotal axis defined by pintle 20. This rocking movement is transmitted to the rear reindeer figure 22 by means of pivotal linkage rods 46 which are attached between the front of figure 18 and the rear legs of the reindeer figure 22. The rocking motion is transmitted down the line of reindeer figures 22 by means of pivotal linkages 48 which are connected between the tail of one reindeer figure 22 and the forelegs of reindeer figure 22 behind it. Accordingly, as the crank plate 42 is rotated, the entire line of figures is rocked in synchronism to simulate a galloping motion.

FIGS. 3 and 4 show a second embodiment of the invention in which the supporting structure comprises a house 50. A figure 52 which is shaped and painted to represent Santa in his sleigh is mounted on the roof of house 50 and a generally horizontal curved arm 54 is attached in cantilevered relation under the ridge of house 50 and projects laterally from the side of the house. A plurality of figures 56 which are shaped and

painted to represent reindeer are pivotally attached to the arm 54. The reindeer figures 56 are arranged in pairs abreast of each other, as shown in FIG. 4, and the pairs are mounted in a line to simulate a hitch of reindeer. The arm 54 is curved upwardly so that the reindeer 56 appear to be rising into the air.

Each pair of reindeer 56 is pivotally connected to arm 54 by means of a U-shaped mounting bracket 58 which extends through a hole 60 in arm 54. The hole 60 has a large enough diameter so that the bracket 58 will fit through with enough clearance to provide pivotability. The upper ends of bracket 58 are bent outwardly at right angles to form support arms 62 which extend through openings 64 in the sides of reindeer 56 and are rigidly attached to the reindeer by means of a suitable cement.

An oscillating electric motor 66 is mounted within house 50 and has a connecting rod 68 extending therefrom. The motor 66 is preferably battery operated and imparts a reciprocating movement to connecting rod 68 by well known prior art principles. Any suitable oscillating motor can be used in connection with this invention and can be attached to connecting rod 68 in any suitable manner.

The end of connecting rod 68 is pivotally attached to one arm 62 of the nearest mounting bracket 58 by means of a lug 70 which has a sleeve which is clamped to the end of connecting rod 68 and an eye which is rigidly attached to the sleeve. The opening in the eye of lug 70 is preferably large enough to provide a loose fit over the supporting arm 62 so that it can rotate easily within the eye. A similar connecting rod 68 having lugs 70 at both ends thereof extends between each adjacent pair of reindeer to pivotally link all of the U-shaped brackets 58 together. Therefore, the connecting rod 68 which is reciprocated by oscillating motor 66 causes the entire line of brackets 58 to oscillate in synchronism, thereby rocking all of the reindeer 56 and simulating a galloping motion. By reason of the offset of crank shaft 62 from bearings 60, actuation of the links 68 will cause the figures 56 to pivot about the axes of bearings 60, and to swing or rock fore and aft along the rod 54 by an amount related to said offset and the arc of oscillation of the brackets 58. This geometry imparts a realistic galloping motion to the figures. Support rod 54 may be provided with a series of flashing bulbs, as at 36 in FIG. 1.

The arrangement of FIGS. 3 and 4 has the following advantages:

1. The motor 66 is concealed within the house 50, for a neater and more realistic appearance.
2. The battery operated motor is more flexible in use than one requiring house current.
3. The sleigh 52 will not oscillate, but will be stationary.
4. The reindeer are not subject to turning torque from the motor. All turning torque is imposed on the cranks 58. Hence, relatively fragile reindeer cutouts will not be subject to the wear and tear of being part of the power and load transmission train. The links 68 transmit power directly from the motor to each reindeer,

without transmission through preceding reindeer.

5. There are two lead reindeer, for a balanced load at the end of rod 54.

6. The crank bracket 58 imparts a more realistic galloping motion to the figures.

7. The links 68 extending between the reindeer are positioned to simulate reins. Although this invention has been described with reference to two illustrative embodiments thereof, it should be understood that the invention is not limited to the disclosed embodiments since modifications can be made in the disclosed structure without changing its fundamental principles. For example, instead of representing Santa's sleigh and reindeer, the figures could be shaped and painted to represent a horse drawn wagon or the like. This and other modifications of the invention will be apparent to those skilled in the art, and this invention includes all modifications falling within the scope of the following claims.

1. An animated display comprising support means including an elongated arm, a first figure attached to said support means, said first figure being shaped to represent a vehicle, a plurality of animal figures each pivotally attached to said arm, said animal figures being spaced in a line along said arm, each of said animal figures being shaped to represent a draft animal, linkage means interconnecting said animal figures together, and means for actuating said linkage means and thereby simultaneously rocking the entire line of animal figures about their pivotal attachment to the arm to simulate a galloping motion of said animal figures, said animal figures being pivotally attached to said arm in pairs abreast by means of U-shaped brackets which pass through openings in said arm, the upper ends of each U-shaped bracket being bent over to form support arms for a pair of said animal figures, there being a pair of animal figures attached to each pair of said bent over support arms, and the openings in said arm for said U-shaped brackets being spaced along said arm to form a line of said pairs of animal figures.

2. An animated display as defined in claim 1 in which said means for pivotally linking the adjacent animal figures together comprises a plurality of pivotal linkage rods each pivotally connected between the bent over support arms of adjacent U-shaped brackets.

3. An animated display as defined in claim 2 in which each of said pivotal linkage arms comprises a rod having a transverse opening at each end thereof for pivotally engaging one of said bent over support arms.

4. An animated display as defined in claim 1 in which the support arms for the U-shaped bracket are offset from said openings to give the figures a fore and aft component of motion as well as a pivotal motion with respect to said rod.

5. An animated display as defined in claim 1 in which said support means comprises a simulated house, said means for actuating the linkage means comprising a motor concealed within said house.

* * * * *