Nov. 8, 1955 J. A. SIMPSON 2,722,777

PUPPET PLATFORM

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Fig. 1

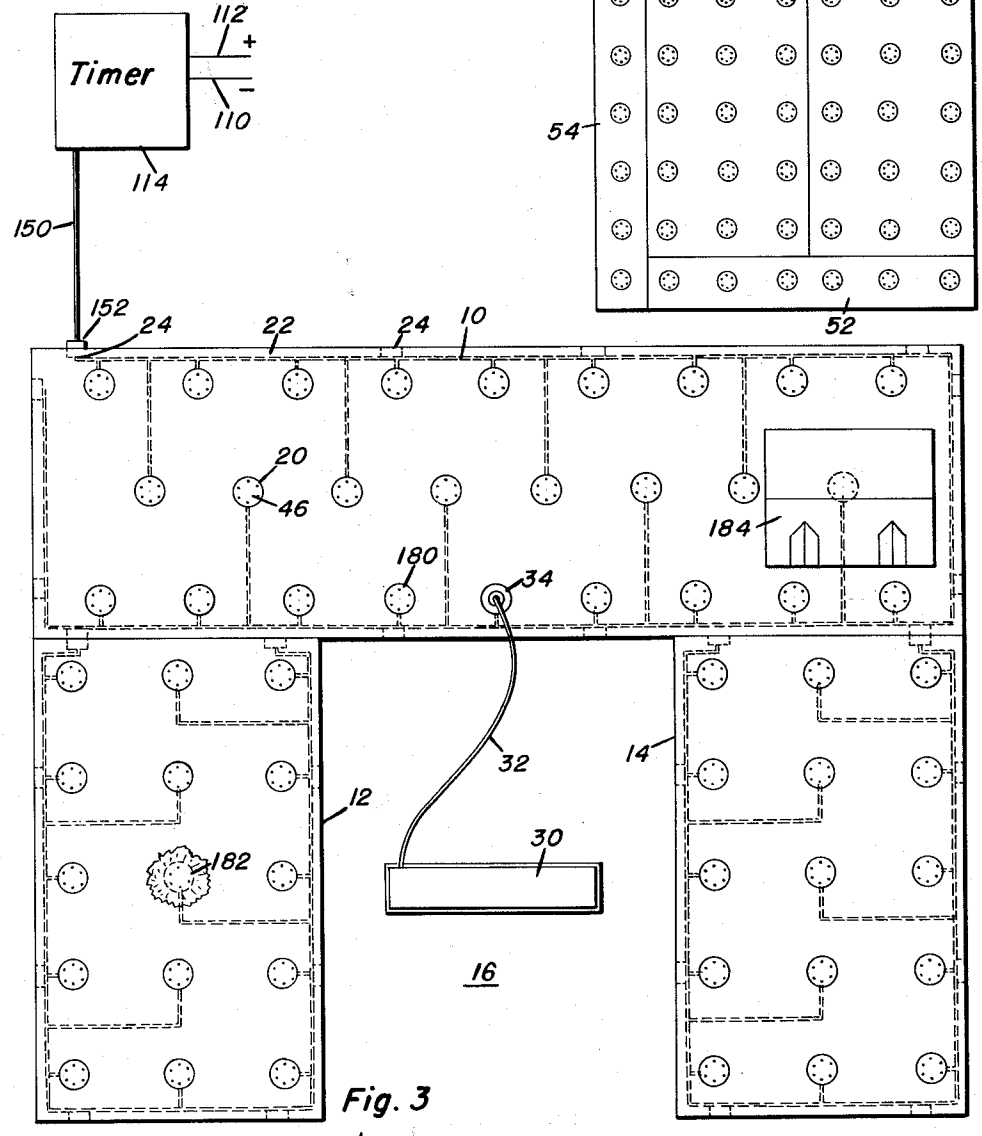
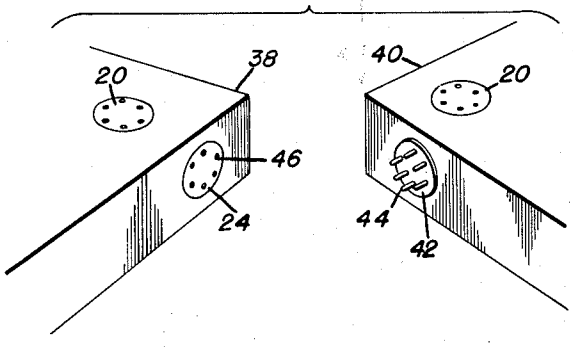


Fig. 2

Fig. 3



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Fig. 4

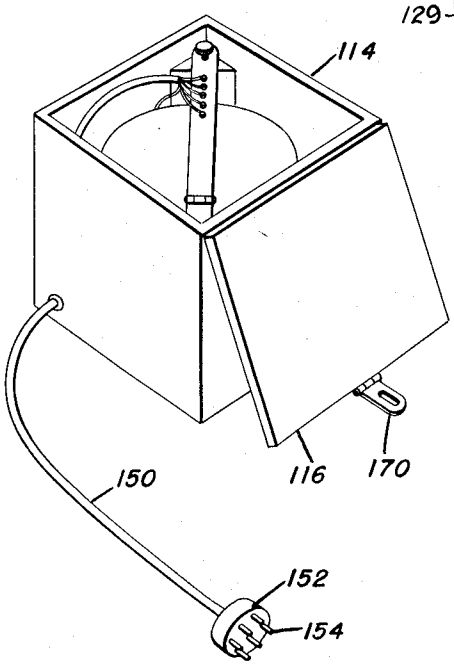


Fig. 5

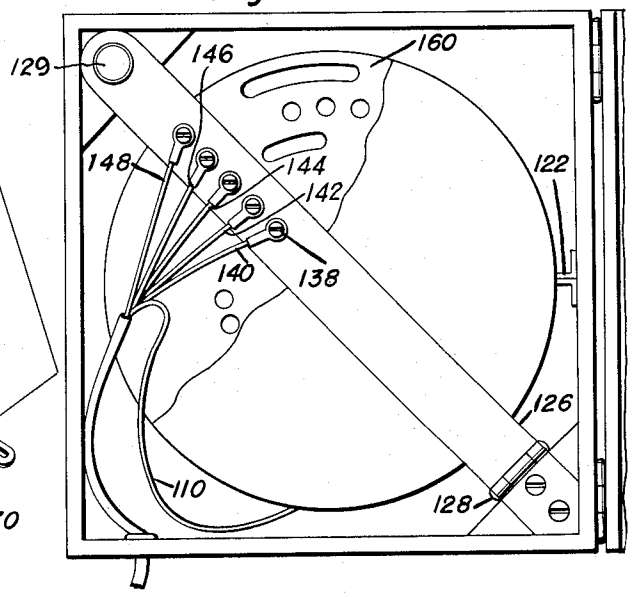


Fig. 6

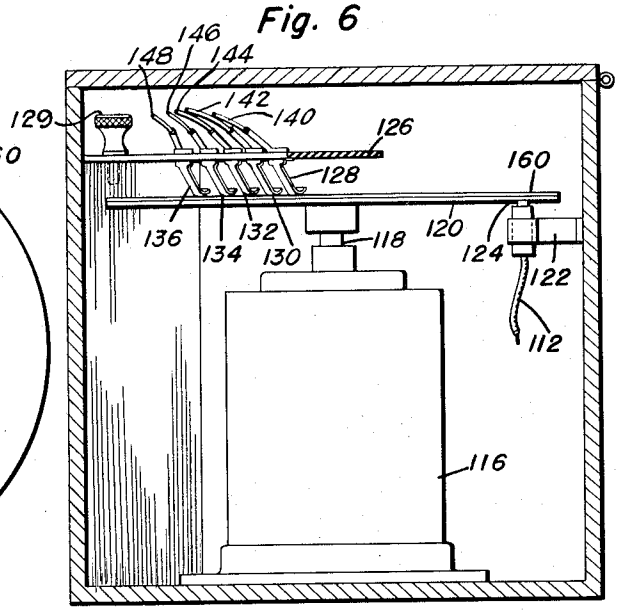


Fig. 7

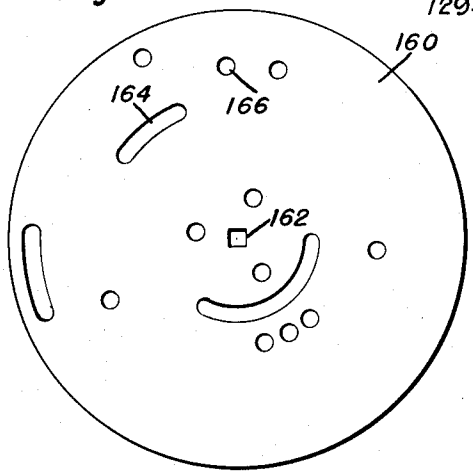
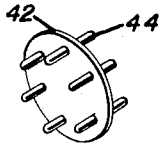


Fig. 11



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PUPPET PLATFORM

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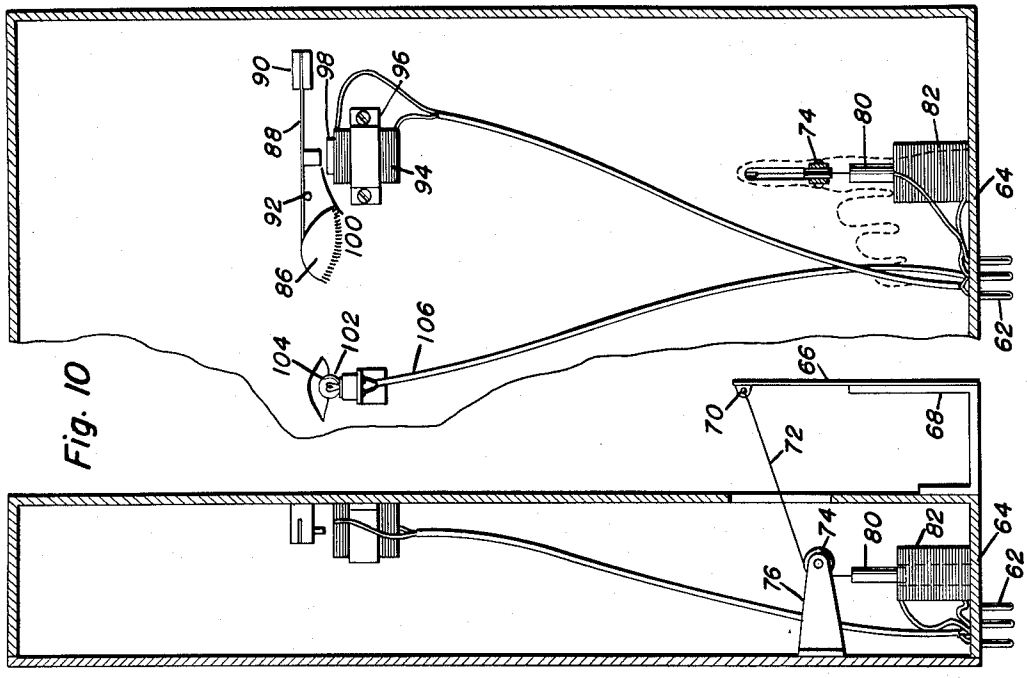


Fig. 10

Fig. 9

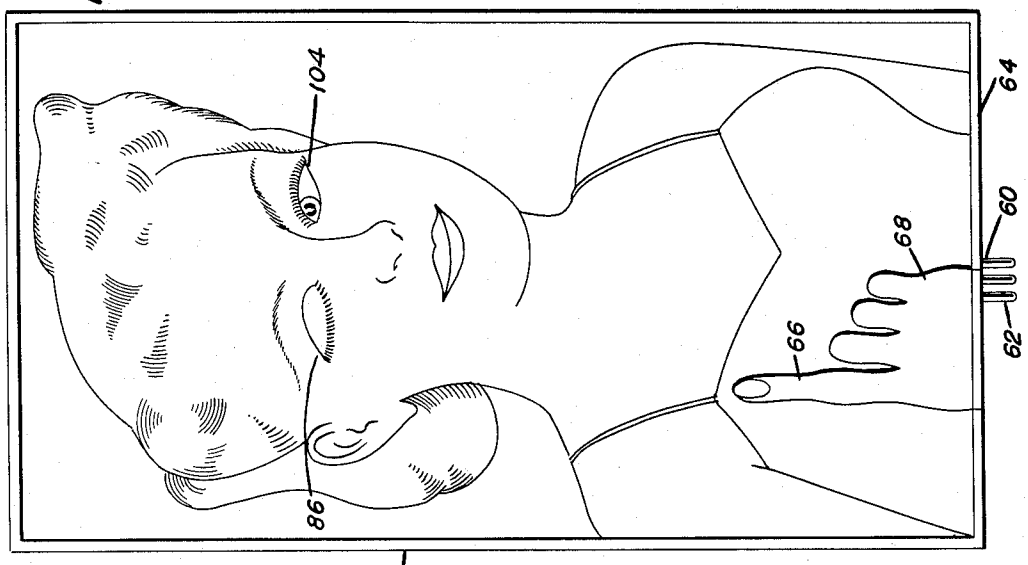


Fig. 8

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2,722,777

PUPPET PLATFORM

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Application July 1, 1952, Serial No. 296,597

2 Claims. (Cl. 46—247)

This invention relates to a puppet platform and particularly to a platform constructed of a plurality of sections housing an electrical distribution system and having a plurality of female outlets mounted thereon preferably flush with the surface thereof for receiving puppets or other animated devices.

In the construction and operation of animated displays such as displays having animated puppets or other animated objects a great part of the expense of such displays is the construction and tearing down of the display each time it is to be used or to adapt the display to various window or other display areas.

The present invention relates to an animated display platform particularly adapted to be constructed of a plurality of sections which can be put together in any desired shape to fit almost any size of window or other display area. Each of the sections of the platform is provided with an electrical distribution system having a plurality of conductors connected to female outlet plugs which are preferably set into and substantially flush with the surface of the platform. Connectors are arranged for connecting the electrical distribution systems of various sections together and to a single distribution network and one or more timing devices may be utilized for distributing power to the various conductors of the network from any local power supply circuit. The animations or puppets will be provided with male bases adapted to make electrical contact with the female outlet plugs so that the animations may be distributed almost as desired across the platform and connected to the electrical distribution circuit. The various animations will preferably carry thereon animating motion motors and such motor devices will be directly connected to the male plugs of the base so that they will be energized from the electrical networks disposed in the bases.

It is accordingly an object of this invention to provide an improved puppet platform.

It is a further object of the invention to provide a platform having a plurality of female outlet openings therein.

It is a further object of the invention to provide a means for connecting various platform sections together to provide a continuous electric distribution network.

It is another object of the invention to provide a timing device for intermittently supplying electric energy to the various conductors of the network.

It is another object to provide animations having male contact mounting pins.

It is a further object of the invention to provide a platform which may be assembled to fit any particular area and left in place while the animations may be moved from display to display as desired.

It is a further object of the invention to provide an animated display stage in which the animations may be changed at will.

It is a further object of the invention to provide a controller for controlling the animations or changing the control as desired.

Other objects and many of the attendant advantages

of this invention will be apparent from the following detailed description taken in conjunction with the accompanying drawings in which:

Figure 1 is a plan view of the puppet platform showing the arrangement of sections together with a timer and an off-stage animation;

Figure 2 is a modified platform arrangement according to the invention;

Figure 3 is an enlarged perspective showing the use of a connector to join platform distribution networks together;

Figure 4 is a perspective view of a circuit controller for the puppets;

Figure 5 is an enlarged top plan view of the controller;

Figure 6 is a vertical section through the controller;

Figure 7 is an interrupter disk for timing the application of power to the various circuits applied to the platform;

Figure 8 is a front elevation of an animated device having a male plug to cooperate with the female sockets of the platform;

Figure 9 is a vertical section through the animation of Figure 8 and shows the connection of the electromagnetic motors to the various portions of the device;

Figure 10 is a fragmentary rear view of the animation with the back removed to show various animation systems; and

Figure 11 is a connector for coupling the various sections of the platform together.

In the exemplary embodiment of the invention a platform section **10** is coupled to a platform section **12** and a platform section **14** to provide a substantially U-shaped stage having a clear space **16** therein. Each of the sections **10**, **12** and **14** is provided with a plurality of female outlet sockets **20** which are preferably set into and substantially flush with the surface of the base. While the female sockets **20** may of course have any desired number of outlet terminals therein for simplicity they have herein been shown as having six outlet terminals so that five various animating motors or other animating devices may be placed on each of the puppets mounted on the device with the sixth terminal being the common return connection. Each of the platforms is provided with a distribution network **22** which will have a plurality of conductors preferably corresponding in number to the number of outlet terminals of the sockets **20** and preferably all of the sockets of a section will be wired on this given pattern so that an animation may be moved from socket to socket without disturbing the connections therein. Female outlet sockets **24** are provided in the lateral sides of the sections as well as the sockets **20** in the top surface thereof for a purpose presently to be described.

In addition to mounting puppets directly on the outlets **20** the puppets themselves may be mounted off stage with a flexible cable having a male terminal connected to one of the outlet sockets **20**. For example, an animation **30** may be placed in the open space **16** and have a cable **32** connected to a male plug **34** which is coupled into one of the female outlet sockets **20**.

In order to connect two sections of platform together the female outlet plugs **24** are mounted on the side of the base sections such as the sections **38** and **40** and a connector device may be utilized to connect the two sections together, for example, a connector having an insulator body portion **42** is provided with a plurality of male pins **44** which are rigidly connected to the body and maintained in insulated relation from each other with the pins extending through the body so that they extend in opposite directions from the opposite faces of the body **42** so that the pins **44** may simultaneously engage the openings **46** of two oppositely disposed female sockets **24**. The connector pins **44** will then connect together the

electrical wiring systems 22 of contiguous platform sections so that the entire wiring system is connected into a single network.

Obviously sections may be made of various sizes and dimensions so that any suitable space may be worked in together by utilizing various sections of the platform. As shown in Figure 2 three different shaped sections are connected together to make a substantially rectangular platform which is substantially solid in dimension so that puppets may be distributed at will over the surface thereof. This rectangular platform is constructed of a pair of sections 48 and 50 which are identical in size and construction while a facing section 52 is of a narrow formation and of twice the length of the width of the sections 48 and 50. Likewise the section 54 is of a narrow width but of a length exceeding the lengths of the section 48 and 50 by the width of the section 52 so that when assembled it forms a rectangular base. It will be readily apparent that the sections may be of any size and shape as may be desired so that any size and shape of platform may be constructed with the electrical distribution system of the entire platform connected together into a unitary distribution system. The animations to be mounted on the platform may be of many and various devices such as figures of people, animals, trees, buildings or other devices which may be readily animated. For purpose of illustration a simplified manikin is shown comprising a male base 60 having male contact terminals or pins 62 for cooperation with the female terminals 46 of the outlets 20. For simplicity of operation the outlets 20 and the male plug 60 are shown as of the simple unkeyed variety so that the terminals 62 may engage any of the terminals 46. However, it will be apparent that for many purposes it will be desired to use a keyed system so that the male plug 60 can be inserted in the bases 20 only in a single position.

A support platform 64 is rigidly connected to the male plug 60 so that the pins 62 extend rigidly therefrom and an animated character having movable parts is fixed or simulated on the base 64. For simplicity of illustration, the puppet is illustrated as a frame 65 simulating a window frame with a caricature disclosed therein indicating a female figure. Portions of the figure such as the finger and the eye lid are indicated as being movable and have motive power for moving the same. The motive devices are herein indicated as of the electromagnetic variety, however, it will be apparent that any type of motor device may be utilized. The female figure is indicated as having a beckoning finger 66 which is preferably constructed of resilient spring-like material mounted on a bracket 68 which as is shown in Figure 8 may be simulated as a hand of the female figure. An attaching bracket 70 is secured adjacent the outer end of the simulated digit 66 and has an actuating cable 72 connected thereto and entrained over a sheave 74 mounted in a bracket 76 in the enclosure of the frame 65. The actuating cable 72 is then connected to a movable core 80 which is associated with an electrical solenoid 82. The terminals of the solenoid 82 are connected to a pair of the male pins 62 for insertion in a socket 20 connected to a control as will be presently described.

The second movable part is indicated as an eye lid 86 mounted on a spring arm 88 which is rigidly secured in a block 90. A stop 92 is provided for limiting the downward motion of the spring arm 88. Motion is imparted to the spring arm 88 by means of an electromagnet 94 secured to the framework by means of a bracket 96 and having a fixed core 98 for cooperation with a movable armature 100. One of the electrical conductors for the coil 94 is led to one of the male terminals 62 and another is connected to a common return from both solenoids which is connected to another male terminal 62 as will be understood. Animation effects may be obtained by other means than by motion and for example a light 102 may be mounted behind the non-winking eye and the light 102 periodically energized to cause an animated glow from the eye 104. The conductors 106 will likewise be connected to one of the terminals 62 and to the common return terminal in the plug 60. For simplicity of illustration only simple animations have been shown but obviously many others could be utilized. A slightly more complicated connection would allow the lips to be moved in a simulated smile while still others would allow shoulders or other portions of the torso to be shrugged or otherwise moved. Motions of the various portions of the device could obviously be secured by means of rotary motors driving cam devices but for simplicity and sureness of operation the electromagnetic motive devices are preferred. Obviously, either solenoids with movable cores or electromagnets with fixed cores and movable armatures may be utilized as befits the particular motion desired. In order to coordinate the various motions of the animations a timer distributor is provided having a supply circuit preferably in the form of direct current conductors 110 and 112. The timer is preferably constructed as a frame 114 of box-like formation having a closure 116 so that the timer distributor may be securely closed and shipped as a portion of the device. The timer distributor is utilized to provide a common return circuit for the networks of the platform and the plurality of conductors corresponding to the various conductors or circuit means of the platform connected to the various sockets 20. Many means of providing the necessary interrupted current flow to the various conductors can obviously be provided, however, a preferred form of distributor comprises a motor 116 fixed in the frame 114 and having a shaft 118 driven thereby. A conducting disk 120 is rigidly connected on the end of the shaft 118 to rotate therewith and is constructed of suitable conducting material such as metal. The brush bracket 122 is mounted on the frame 114 and carries a brush 124 which connects one side of the supply line such as 112 to the conducting disk 120. An arm 126 preferably constructed of insulating material is hingedly connected to the frame at one corner thereof such as by the hinge 128. The arm is maintained in latched fixed position by means of a screw fastener 129 so that the arm 126 is maintained in spaced parallel relation to the surface of the disk 120. Since we have shown the female plugs 20 as having six outlet terminals 46 it will be desirable to have five distributing points and for this purpose arm 126 has been provided with five contact fingers 128, 130, 132, 134 and 136. These fingers are preferably secured to the arm 126 by means of screw fasteners 138 to which are connected distributing conductors 140, 142, 144, 146 and 148 which together with the common return lead 110 are connected into a common cable 150 having a male plug 152 carrying six male contact pins 154 for engaging the female terminals 46 of the female sockets 20 or 24.

Spring fingers 128 to 136 would normally make contact with the surface of the disk 120 and would operate or ride in a circular path thereon, the various paths being concentric with each other. In order to provide a controller device, an insulating disk 160 is mounted on the plate 120 and has a non-circular opening 162 engaging some portion of the disk 120 so that the disks 120 and 160 rotate together. The insulating disk 160 therefore maintains the fingers 128 to 136 out of electrical contact with the disk 120. Apertures such as 164 and 166 are provided in the insulating disk 160 in the various paths of contact of the fingers 128 to 136 and the length and frequency of the application of the current to the various distributing conductors 140 to 148 are controlled by the length and position of the openings 164 and 166. Obviously, all sorts of combinations of contact times and intervals can be arranged by providing various lengths and arrangements of the apertures 164 and 166 so that the portions of the animations can be made to move substantially at will. For

a particular animation set-up a particular disk arrangement can be arranged and the disk itself may be shipped with the animations so that when the animations arrive at the platform they may be set in place and the disk set on the controller so that the animations may be set up to a predetermined pattern in a very short time. The lid **116** may be provided with a clasp **170** so that after the disk and set up have been arranged the entire distributor may be locked up to prevent unauthorized tampering therewith.

In the operation of the system according to the invention a plurality of sections will be connected together to form a puppet platform of any desired configuration and shape to fit any particular display space and the various sections electrically connected together to provide an electrical network so that the female outlets may be utilized to set animations as desired. The animations having the male contact pins are then set into the outlet plugs so that the animation motors therein will be energized through the network and the pins connected to the terminals **46** of the outlet plugs. The timer distributor will then be provided with a desired timing interval so that various motions of the various puppets may be performed. Obviously, some of the puppets may have only a single motive device therein while others may have the maximum that can be used therein. Obviously, some of the animations may be provided with effects other than motion to secure the desired result.

For example of the possibilities of the device, assuming the platforms be set up in U-shape as shown in Figure 1 of the drawing the space **16** may be a mirror or other ice simulating device and the animation **30** may be for example a skater or other animated figure thereon. One type of animation as secured to outlet socket **180** may represent a camp fire which periodically glows from bright to dim. Likewise animation **182** may well be a simulated tree which bows and moves as if blown by a wind. Animation **184** may simulate a house in which the lights may go on and off and the doors may open and close or such other motions as may be desired. Obviously, there is no end to the type of puppets which can be placed on the platform and they may simulate people, animals or any other desired configuration.

In utilizing the device the animations for a particular set-up will be provided together with a timer disk therefor and the animations will be shipped from display to display while the stands themselves once assembled to fit the display space will usually be undisturbed for a long period of time. Clearly, the puppets and the disks will be moved from place to place to utilize the displays at different locations or to change the overall effect of the display by moving the animations themselves from part to part on the platform. Usually the supplier of the animations will have the details of the various platforms available and will provide a diagram on the proper set up of the puppets to the particular platform when they are to be used.

It will be seen that the present invention provides a platform which may be set in place and retained in a single place with a timer device therefor and that the animation characters will be shipped from place to place together with the timer disk for properly utilizing the same.

For purposes of exemplification, a particular embodiment of the invention has been shown and described according to the best present understanding thereof. It will be apparent to those skilled in the art that many changes and modifications can be made therein without departing from the true spirit of the invention.

Having described the invention, what is claimed as new is:

1. A puppet platform comprising a structure including a top surface and lateral surfaces with the lateral surfaces extending perpendicular to the top surface, a plurality of female socket outlets mounted in said top and lateral surfaces of said structure, electrical conductors connecting said outlets in parallel, a source of electric current, a control device including circuit interrupters, a cable connected to said circuit interrupters, a male plug-in socket on said cable, said socket being adapted for connection to any one of said female outlets to energize the electric conductors of said structure, puppet devices including male plug-in sockets for mounting in said female outlets, movable portions on said devices and electric motive devices connected to said plug-in sockets for actuating said movable portions.

2. In a puppet display device, a distributor comprising a frame, a motor fixed in said frame, a shaft driven by said motor to rotate on its axis, a conducting disk secured on said shaft, a brush arm, a fastener securing said arm in overlying relation to said disk, a plurality of resilient conducting fingers mounted on said arm, said fingers extending into yielding contact with said disk, said fingers contacting said disk in concentric paths, an insulating disk interposed between said conducting disk and said fingers, said insulating disk having apertures in alignment with each of said paths, said apertures controlling the contact between said fingers and said disk, an electric supply circuit, brush means connecting one side of said circuit to said conducting disk, distributing conductors connected to said fingers, a puppet supporting base, an electrical distributing network in said base, a connector connecting said conductors to said network, said puppet supporting base including a plurality of base sections, a plurality of female outlets embedded in each of said sections, said outlets being electrically connected to said network, a female outlet in each base section being adapted for opposition to a female outlet in an adjacent section, a connector interconnecting adjacent sections, said connector including an insulating body, male contact pins extending in the opposite directions through said body for simultaneously engaging opposed female outlets.

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