

March 14, 1950

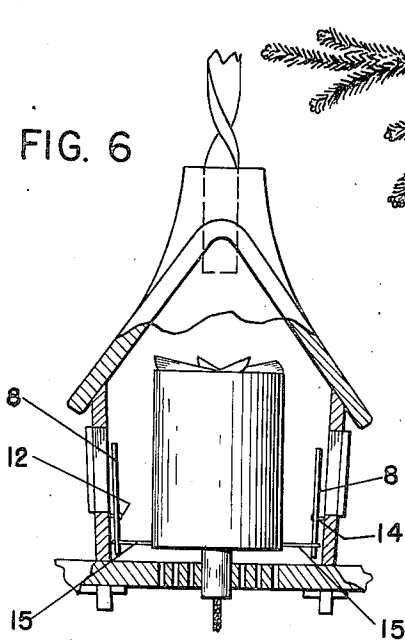
F. E. LEAHAN
ANIMATED DISPLAY DEVICE

2,500,899

Filed June 28, 1946

2 Sheets-Sheet 1

FIG. 6



2

FIG. 1

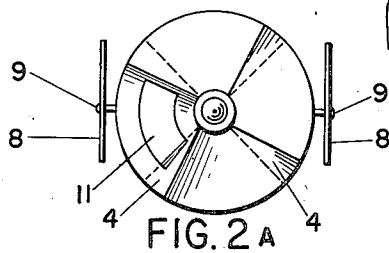
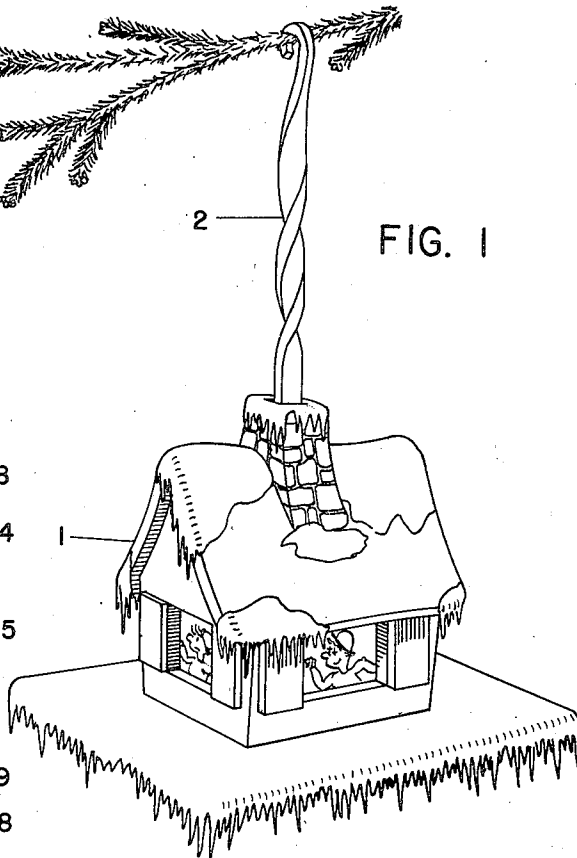


FIG. 2 A

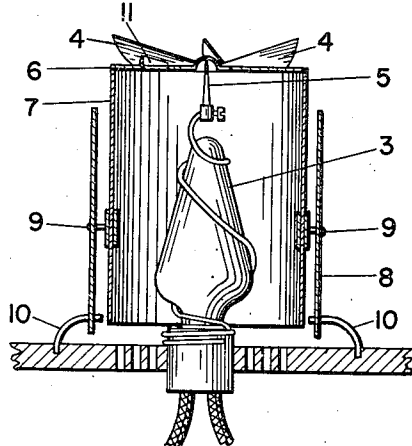
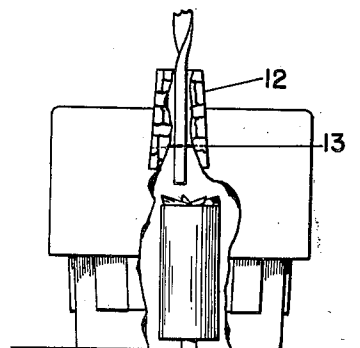


FIG. 2

FIG. 7



INVENTOR.
FRANK E. LEAHAN
BY *Heard Smith & Tennant*

ATTORNEYS

March 14, 1950

F. E. LEAHAN
ANIMATED DISPLAY DEVICE

2,500,899

Filed June 28, 1946

2 Sheets-Sheet 2

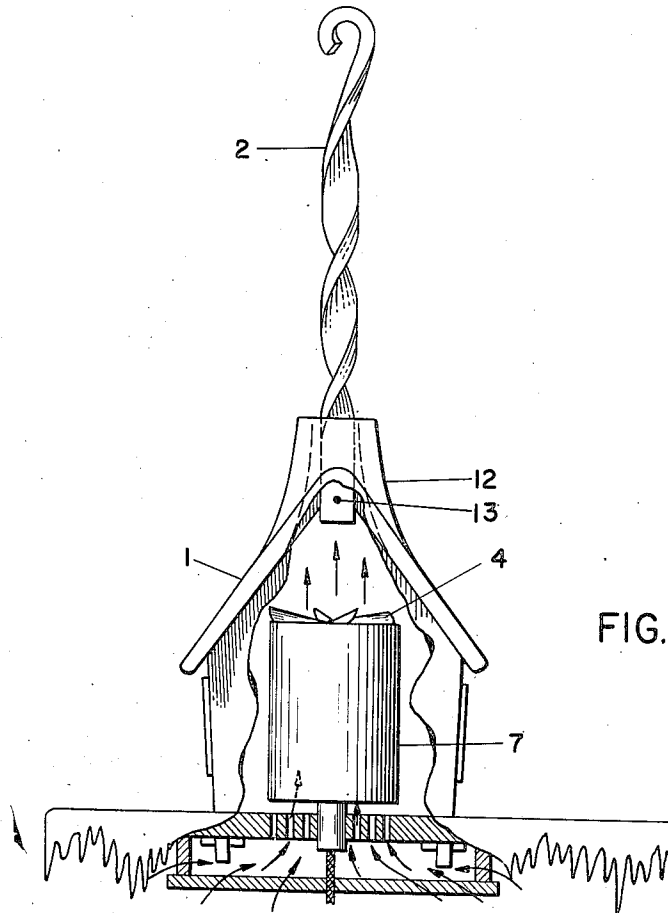


FIG. 3

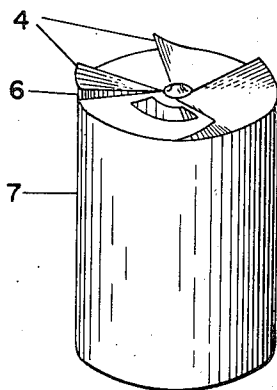


FIG. 5

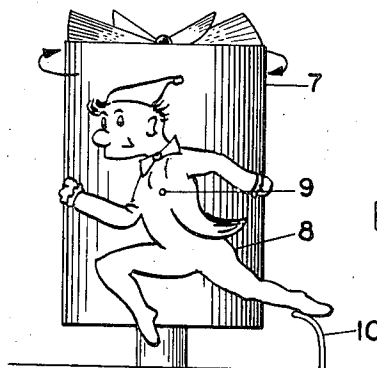


FIG. 4

INVENTOR.
FRANK E. LEAHAN
BY *Heard Smith & Pennington*

ATTORNEYS

UNITED STATES PATENT OFFICE

2,500,899

ANIMATED DISPLAY DEVICE

Frank E. Leahan, Jamaica Plain, Mass.

Application June 28, 1946, Serial No. 680,332

5 Claims. (Cl. 46—57)

1

This invention relates to an animated display device and the object of the invention is to provide an artistic device of an attractive character which may be employed, for example, as a Christmas tree ornament, an advertising medium to attract the attention of customers to an associated display of merchandise, an ornament to a room, or other purposes.

One of the objects of the invention is to provide an ornamental device having an electric lamp bulb surrounded by tubular light transmitting means and having means for suspending it from a suitable support comprising a vertical suspending member, of Lucite or other means, capable of transmitting light mainly lengthwise thereof, with movable means intermediate of the light and the lower end of the suspending member adapted to interrupt the rays of light passing through the suspending member to produce flashes of light and/or to simulate ascending puffs of smoke.

A further object of the invention is to provide a device of this character in which the tubular translucent member which surrounds the electric light is rotatable and provided with means operable during its rotation to interrupt the rays of light projected through the suspending means.

Another feature of the invention is to provide an ornamental device of the character described in which the tubular member is rotated by an ascending column of heated air produced by radiation from the electric light.

More specifically the object of the invention is to provide a Christmas tree ornament comprising a housing, preferably in the form of a house, having windows in its sides with a rotatable translucent tubular member surrounding the electric light and pivotally supported thereby and rotated by an ascending column of air heated by the electric light and having a suspending member preferably extending vertically from the chimney of the house formed of Lucite or other material capable of transmitting light mainly lengthwise thereof with means intermediate of the light and the lower end of the suspending member for intermittently interrupting the rays of light passing through the suspending member.

Another feature of the invention is to provide a device of the character described with a flat suspending member loosely twisted longitudinally and preferably having frosted surfaces with means intermediate of the light on the lower end of the suspending member to interrupt the rays of light passing through the suspending member thereby to simulate puffs of smoke.

2

A further object of the invention is to provide a Christmas tree ornament of the character described having a rotatable tubular member surrounding the light and provided with movable figures actuated by the rotation of the tubular member to simulate natural movements of the figures.

These and other objects and features of the invention will more fully appear from the following description and the accompanying drawings and will be particularly pointed out in the claims.

Preferred embodiments of the invention are illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of a Christmas tree ornament in the form of a house suspended by a ribbon of Lucite or other material for transmitting light mainly longitudinally thereof suspended from a branch of a Christmas tree;

Fig. 2 is a detail view mainly in vertical section of an electric light mounted upon a suitable base and surrounded by a tubular preferably cylindrical member which is rotatably supported for axial revolution and provided with figures adapted to be animated during the rotation of the tubular member;

Fig. 2a is a plan view of the construction shown in Fig. 2;

Fig. 3 is an end view of the construction shown in Fig. 1, partly broken away and partly in section, to show the rotatable tubular member and the means for suspending the house;

Fig. 4 is a side elevation of the rotatable tubular member showing one of the figures pivotally mounted thereon adapted to be animated as the tubular member rotates;

Fig. 5 is a perspective illustration of the preferred form of tubular member as viewed from the side and above showing particularly the overlapping vanes in the upper end of the tubular member and an aperture through one of the vanes to permit rays of light intermittently to be projected through the suspending member;

Fig. 6 is an end view of the house shown in Fig. 1, partially in section, and illustrating the animated figures pivotally mounted upon the walls of the sides of the house, and means for operating said figures by the rotating tubular member surrounding the light; and

Fig. 7 is a side elevation of the house partially broken away illustrating the suspending member located eccentrically with respect to the axis of the rotatable tubular member and in vertical

3

alignment with the aperture in the vanes forming the top of the rotatable tubular member.

The preferred embodiment of the invention illustrated in the accompanying drawings comprises a housing 1, preferably in the form of a house, mounted upon a suitable base or floor and ornamented with means illustrative of accumulated snow upon the roof and icicles depending from the edge of the base. The house is provided with a chimney and is supported by a preferably twisted flat ribbon 2 of transparent material capable of transmitting light, mainly lengthwise thereof, such as Lucite, Plexiglas, amphenol, or the like. Desirably the suspending ribbon 2 has frosted outer surfaces which as intermittent rays of light are transmitted lengthwise through the ribbon will simulate puffs of ascending smoke.

A preferably small electric bulb 3 is mounted in the base or floor of the house with apertures through the floor located in proximity to the light bulb.

The light bulb is surrounded by a tubular preferably cylindrical member having its upper end provided with overlapping vanes 4 with a pivotal support 5 mounted upon a wire spirally encircling the light bulb 3 and engaging an upwardly cupped central portion of the top wall 6 which is fixedly secured to the translucent wall 7 of the tubular member.

By reason of this construction the heat radiated from the lighted electric light bulb 3 will produce an ascending current of air which impinging upon the vanes 4 will cause a rapid rotation of the tubular member.

One of the features of the invention is to provide animated figures adapted to be actuated by the rotation of the tubular member and observed through the windows of the house. Any suitable figures may be employed such as those representing elves, fairies, flying horses, ships, birds, planes, etc., and may be observed directly, or made to cast moving shadows upon the walls of the house. In the construction illustrated in Figs. 2, 2a, and 4, one or more of such figures 8 are mounted upon pivots 9 suitably secured to the wall or walls of the rotatable translucent member, and means, such as abutments 10, mounted upon the base or floor of the device and extending into the path of rotation of the lower end of the figures serve during the rotation of the tubular member to cause a suitable pivotal movement of the figures 8 around their respective axes 9 to simulate a normal movement of the figure. In order to produce a further animated appearance means are provided operable by the rotation of the translucent tubular member to produce ascending flashes of light or puffs of smoke to a suspending member of the character above described. This is accomplished in the present invention by providing one or more of the overlapping vanes 4 with an aperture 11 of suitable length and width concentric with the axis of rotation of the tubular member and preferably positioning the supporting member in axial alignment with the aperture 11 which is suitably offset from the vertical axis of rotation, as illustrated in Fig. 7, in which the lower end portion of the suspending member extends downwardly into the chimney 12 and is fixedly secured therein by a pin 13 anchored in the chimney and passing through the lower end portion of the suspending member 2.

By reason of the construction above described the tubular transparent member is automat-

4

ically rotated by the ascending current of air, the figures animated during the rotation of the tubular member, and intermittent flashes of light or puffs of smoke produced in the ascending member which will simulate intermittent flames or puffs of smoke.

Such a device is particularly attractive when suspended from a branch of a Christmas tree as it displays animated figures occupying the house and enjoying the warmth of a fireplace which is suggested by the intermittent flashes or puffs of smoke ascending through the supporting member.

A modified embodiment of the invention is illustrated in Fig. 6 in which the animated figures 8 are pivotally mounted upon pins 14 which are anchored in the walls of the house beneath the windows therein and are actuated by rods 15 projecting radially from the lower portion of the translucent tubular member. During the rotation of the tubular member the rods 15 engage the lower portions of the figure 8 and cause them intermittently to swing about their pivots.

Obviously the invention may be embodied in other forms of display device which are not suspended, but in which the member 2 is rigidly anchored in the housing and projects upwardly from the housing containing the mechanism above described, thereby providing an animated device which may be employed as a night lamp adapted to be placed on a table or used in a nursery or as an advertising device to induce the attention of prospective customers to a display of articles of merchandise associated therewith, or may be employed for various other uses for which the invention is adapted.

It will be understood that the particular construction described herein is of an illustrative character and that various modifications may be made within the spirit and scope of the following claims.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is:

1. An animated display device comprising a housing simulating a house having a centrally apertured base, walls provided with windows, an electric light bulb mounted vertically on said base above the apertures therein, a rotatable translucent tubular member surrounding said bulb having an opaque upper head provided with overlapping vanes one of which is provided with an opening therethrough and the others effectively preventing upward projection of rays of light from said bulb, means pivotally supporting said tubular member in axial alignment with said light, whereby a current of air heated by and rising from said light bulb and impinging upon said vanes will rotate said tubular member, a flat vertical longitudinally twisted transparent suspending member connected to said house above said light in vertical alignment with the opening in said vane end of a material capable of transmitting light mainly lengthwise thereof, whereby intermittent rays of light, caused by registration of said opening with the lower end of said suspending member, will pass lengthwise through said suspending member simulating spiral ascending puffs of smoke.

2. An animated display device as defined in claim 1 including movable figures of living objects intermediate of said translucent member and the walls of said housing, and means operable by the rotation of said tubular member to cause intermittent movements of said figures which when viewed through said windows will simulate antics

5

of said moving living objects within the housing.

3. An animated display device as in claim 2 in which the movable figures are pivotally mounted upon said translucent tubular member and stationary means mounted on said base to engage depending portions of said figures during the rotation of said tubular members intermittently to actuate them.

4. An animated display device as in claim 2 in which the movable figures are pivotally mounted on the walls of the housing within the windows thereof, and means extending from the tubular member positioned to engage portions of said figures upon rotation of the tubular member to actuate the respective figures.

5. A Christmas tree ornament comprising a housing simulating a house having a centrally apertured base, walls provided with windows, a roof and a chimney extending upwardly centrally thereof, an electric light bulb mounted in said base above the aperture therein, a tubular transparent member surrounding said bulb having an upper end provided with similarly inclined overlapping vanes one of which has an opening there-through and the others of which effectively prevent upward projection of rays of light from said bulb, means mounted on said bulb having a needle point centrally engaging the upper head of said tubular member, figures pivotally mounted at spaced intervals upon said tubular member, means on said base positioned to engage the lower portions of said tubular members during the rotation of said tubular member thereby to ac-

6

tuate the respective figures, a vertical flat longitudinally twisted suspending member having a frosted surface of a material capable of transmitting light mainly lengthwise thereof extending into said chimney and connected thereto in vertical alinement with the path of the aperture in said vane and having a hooked upper end adapted to engage a branch of the Christmas tree, whereby upon rotation of said tubular member by an ascending current of heated air acting upon said vanes will, as the aperture in said vane passes beneath the lower end of said suspending member, cause intermittent projections of rays of light lengthwise through said suspending member to simulate spiral puffs of smoke ascending from said chimney.

FRANK E. LEAHAN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,971,150	Anderlick	Aug. 21, 1934
1,972,687	McCoy	Sept. 4, 1934
1,980,665	Corbman et al.	Nov. 13, 1934
2,125,906	Frei	Aug. 9, 1938
2,358,867	Madan	Sept. 26, 1944

FOREIGN PATENTS

Number	Country	Date
37,585	Austria	June 11, 1909