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EDUCATIONAL ARTICLE

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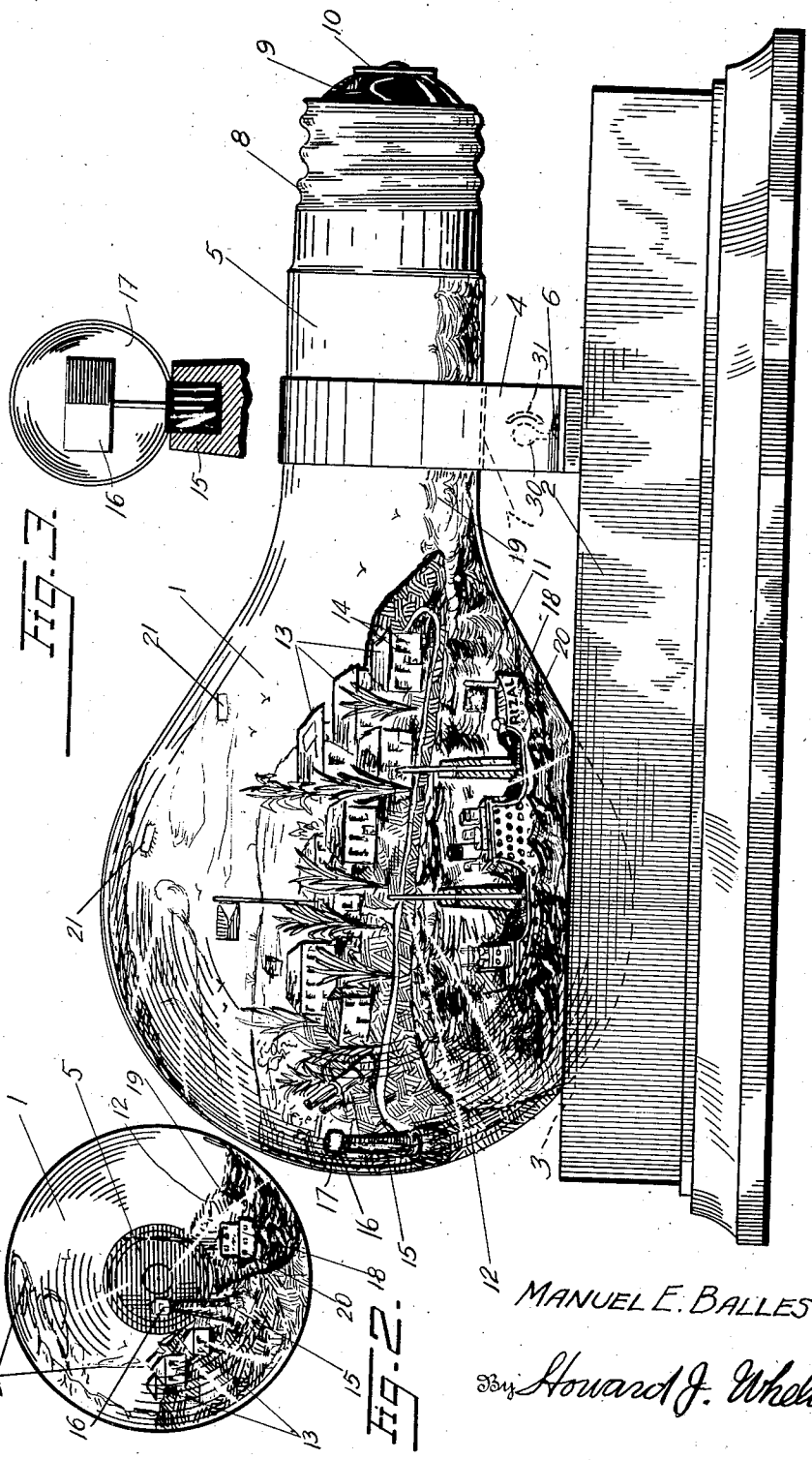


Fig. 3.

Fig. 1.

Fig. 2.

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2 Claims. (Cl. 41—10)

This invention refers to ornaments and decorations and the like, and the methods for producing them. It belongs to those classes of manufactured articles that are known technically as educational articles or as ornaments without utility, and which are constructed under difficult and intricate conditions and situations. It has among its objects to produce an ornament or decoration that will afford an intriguing interest to the observer by reason of the delicacy of the materials and the apparent impossibility or extreme difficulty in constructing the assembly and its parts in the form shown, yet visibly evident that the difficulties have been overcome, and mystifying as to the method of how it was done, to the uninitiated. Another object is to make the device educational in an intensive manner, by reason of the manner in which physical principles are utilized and the interest the construction excites, by reason of its apparent diversity from known principles and facts met with in conventional affairs. The invention has another purpose in that it uses an item that is ordinarily discarded after its normal use and life, and makes it into a very valuable and attractive article.

Ordinarily, articles of the type referred to comprise those which are more or less substantial and strong, and are made in the general manner of manufactures, and produced as new articles. They can be constructed without too much difficulty, and by arrangements that permit stresses to be placed on the container and the parts that go within it. In this invention, the container is a conventional hollow electric incandescent lamp or bulb, with a screw or typical connection piece. The glass of the bulb is of minute thinness and can be broken readily with little difficulty. In fact, it must be manipulated with extraordinary care in handling, to prevent its breakage. In this lamp, which has clear glass, the parts for a scene of ordinary life are included, and made into a very picturesque setting, with so much detail, intricacy and size as to seem to require external constructing and then covering with the container after being made up. The insertion from the exterior into the finished lamp of the scene appears impossible. It is also apparent that the lamp was not made after or around the scene. The feasibility of making the particular scene inside the lamp through exterior manipulation looks doubtful, as there is no apparent possibility of any conventional means doing this. The fact is, however, that the scene is not only constructed through the use of special arrangements of ingenious character, not contemplated by the ordinary observer, through exterior handling, but is activated and enlivened by arrangements that are described in the following specification.

In the drawing, which illustrates a form of this invention,

Figure 1 is a side view in elevation of an electric lamp bulb containing an internal scene visible from the exterior through its glass, and embodying this invention,

Figure 2 is an end view of the bulb,

Figure 3 is a detail of the lighthouse device used in the scene described.

Similar reference characters refer to similar parts throughout the drawing.

In the construction indicated, an electric incandescent lamp bulb 1 is mounted on a stand or base 2 which is recessed at 3 to allow the bulb to fit in it and support itself in a stationary manner. A band of metal 4 with a supporting metal piece 7 fastened under it serves to stiffen the shank 5 of the bulb, while the fastening screws 6 hold the band to the stand 2. The bottom of the bulb shank 5 is arranged with the typical type of brass screw base 8 with glass seal 9 and contact plate 10, as indicated.

Scenery inside of the bulb indicates a bay 11 with sea waves 12 breaking up and undulating, by the banks of a fort with its built-up model buildings 13, having windows 14, preferably of mirror glass, and a lighthouse 15. The lighthouse is provided with a light chamber in which there are revolving vanes 16, that turn as the light 30 with reflector 31 reflects upon them. These vanes are mounted in a glass bulb 17 suitably designed in which the selenium treated vanes 16 rotate in a frictionless manner. This gives the appearance of an active lighthouse to the observer and keeps his attention attracted to the scene. In the bay, a steamer 18 is shown pointed towards the sea 19, and has portholes 20 marked thereon with small mirrors, that give the appearance of lighted cabins from the reflected light in the room where the ornament is placed. Other mirrors 21 are located about the scene to emphasize the scene and make reflections appear on the waters and houses as the light of the room comes to the mirrors. Variations in the light of the room from any cause, such as due to the movement of the sun, the lighting or turning off of light; the shadows caused by passersby, etc., keep the ornament in a continual scene of activity. The light of the lighthouse, with its activity due to the selenium, makes it look as if it has a motor in it, for which no connection can be seen. The view in itself is at-

tractive, because its assembly inside of the bulb seems inexplicable, covering more space and being larger than the only apparent outlet through which the shank 5 of the bulb provides; and this being sealed in the regular manner by parts 8, 9 and 10, makes it harder to comprehend. The observer also knows that the thin glass of the bulb cannot be tampered with, and in fact offers considerable reason why it should not be handled with any degree of roughness.

The movement of the selenium vanes 16 under the influence of the light 30, also serves to reflect the light. This light, though minute and faint, is reflected in the mirrors 21, the glass walls, and also across the waves and terrain, within the bulb. To the observer this slight flickering and moving reflection, which becomes alternately visible, and disappearing serves to attract the attention of his eyes. It gives the structures and scenery the aspect of motion. The impression given by the motion is will-of-the-wisp-like and is that of "life," and relieves the monotony of the stationary scene. The eyes cannot appreciate the cause for some time, and then they do not lose interest, because the brain still retains the impression of movement. This makes the article continuously interesting. It is a unique way of introducing quasi-perpetual motion and life into a still-life picture that has no mechanical mechanism operated by customary power devices. In addition the process of opening-up the bulb and constructing the structures within it, it also unique.

The method in which the scene is built in and inserted in the bulb is in the following manner. A standard hollow electric incandescent bulb is obtained and its brass base is soaked in hot water (about 180 degrees F.) in which some ordinary laundry soap has been dissolved, the edge of the base being pried out a little from the glass walls of the bulb with a thin knife blade. The hot water will seep in and soak the adhesive used and soften it. After about an hour, the base may be worked off slowly and removed without damage. After the removal of the base, and the lead in wires severed, the process of detaching the inside wires with the internal glass holding piece is done. A stiff strong wire is plunged into passage within the shank of the bulb and through the glass holding piece, causing the latter to break open and let air into the inside in place of the vacuum. The shank of the bulb is then cut off near the end so as to remove the portion with the connections and holding pieces. This is done by using a length of thread that has been soaked in turpentine, and wrapping same around the shank at the line where the cut is to be made. The thread is lit and allowed to burn for about fifteen seconds, at which time, the shank is steeped in ice cold water, causing the glass of the shank to break off neatly along the line, of burning. The glass end portion then falls together with the holding piece and lamp connections attached thereto, and is discarded. The bulb simply consists, now, of the glass shell with the shank open. Suitable putty or mastic is colored and then inserted by hand, on the end of an L-shaped wire tool to form the foundation for the scenery and the basis for the ground and water sections thereof. The coloring is so arranged that the movement of the tool brings it out in high and low lights, artistically referred to. When the putty or mastic is set sufficiently but not hardened and is properly attached to the interior surface of the bulb, which occurs after a period of known hours, days or weeks, depending on which material is used, the operator proceeds to insert the various items one by one, through the shank opening with tweezers and places them in their proper positions. They are forced into and set in the putty of mastic, which is of the proper consistency to permit it, and allowed to mould tightly in place. The items shown consist of small models of houses as indicated, a lighthouse, cannons, trees, flags, and flagpoles, and a ship already made up with the masts down. The masts are hinged and may be raised after insertion through the use of a thread, and with glue on the end portions of the masts to set and hold them locked permanently upright afterwards. The lighthouse is made with a small glass bulb in which a selenium vane fan 16 is mounted.

This fan is rotated by the energy in the light waves that strike it, and gives the appearance of a flashing light operated by a motor. The portholes in the ship and the windows in the buildings are arranged with colored mirrors, which on such a small scale, lose their appearance as mirrors and appear as lit windows, when rays of light strike them and are reflected. At the same time various mirrors are stuck and artistically arranged in the mastic to provide reflecting mirrors that will throw beams of light about the scenery, cause reflections in the water, and induce flashings of lights about the scene. The scene is provided with trees of various kinds stuck properly in the mastic. Roads are depressed into the mastic and outlined with paint or sand applied from a wire tool inserted through the opening in the shank to take on a natural appearance. The waves are manipulated into form with a special tool, the operator looking in through the side of the bulb to get the proper shape and action in same. Everything is positioned carefully and effectively, and when necessary brush and paints are used to accentuate the features. The clouds are arranged above and raked over to form the desired shape and are then brushed over and general ingenuity used to bring many features that are characteristic of natural and actual conditions, to interest the onlooker and add to his educational store of information.

The lights, as they appear from the reflected mirrors are too small and withstand investigation in a superficial manner, they shine up under the slightest illumination from the exterior, through the glass of the bulb. The actual movement of the vanes in the lighthouse create the impression derived from the actual and unmistakable motion that convinces the observer that actual lights exist and that the models are real and fully resemble what they appear to represent.

The trees, being colored and made to resemble trees, move under any vibration and add the impression of wind or stirring air. The auxiliary light 30 mounted at the band hanger 4 is concealed from general view, on being lit, serves to shine through the side walls of the bulb, under the inducement of its reflector 31, and give a special effect to the scenery which is additionally mystifying and attractive.

While but one form of the invention is shown in the drawing, it is not desired to limit this application for patent to this particular outline, otherwise than limited by the prior art, as it is appreciated that other forms might be used that would employ the same principles and come within the scope of the appended claims.

Having thus described the invention, what is claimed is:

1. An ornamental and educational device of the

class described, comprising in combination, a hollow globular glass bulb of conventional incandescent light form with a restricted open neck portion tapering therefrom, a conventional screw base element arranged for attachment to the said open neck portion, a plurality of stationary plastic model objects of ornamental significance internally arranged within the bulb and occupying a space therein substantially greater than the opening in said neck without visual indication as to how same were placed therethrough and supported therein, a lighthouse structure among the models and predeterminedly located therein, light-propelled rotating vanes supported in the lighthouse arranged so as to be externally visible, a plurality of mirrors disposed adjacent to the said objects, an external light and reflector attached externally to the bulb so the light rays therefrom will be directed towards the vanes so as to energize and rotate same and reflect beams of light therefrom and induce intermittent reflections on the mirrors, glass of the bulb and objects within the bulb.

2. An ornamental and educational device of the class described, comprising in combination, a hollow globular glass bulb of conventional incandescent light form with a restricted open neck portion tapering therefrom a conventional screw base element arranged for attachment to and closing of the said open neck portion, a plurality of stationary plastic model objects of ornamental scenic significance internally arranged within the bulb and occupying a space therein substantially greater than the opening in said neck without visual indications as to how same were placed therethrough and supported therein, a lighthouse structure among the models and predeterminedly located therein, light-propelled rotating vanes supported in the lighthouse arranged so as to be externally visible, a plurality of mirrors disposed adjacent to the said objects, an external light and reflector attached externally to the bulb so the light rays therefrom will be directed towards the vanes so as to energize and rotate same and reflect beams of light therefrom and induce intermittent reflections on the mirrors, glass of the bulb and objects within the bulb, a base having a recess formed therein to receive a relatively small portion of the bulb adjacent to the location of the objects and hold the same from rolling, a strap clamp mounted on the base arranged to support and hold the neck portion of the bulb and element raised above the base and in cooperation with the said recess, and to contain the said external light and reflector and keep same out of sight in lateral directions but allowing same to illuminate and rotate the vanes, and induce reflections on the objects, mirrors and walls of the bulb.

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