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ILLUMINATED MESSAGE CONTAINER

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2 Sheets-Sheet 2

FIG. 5.

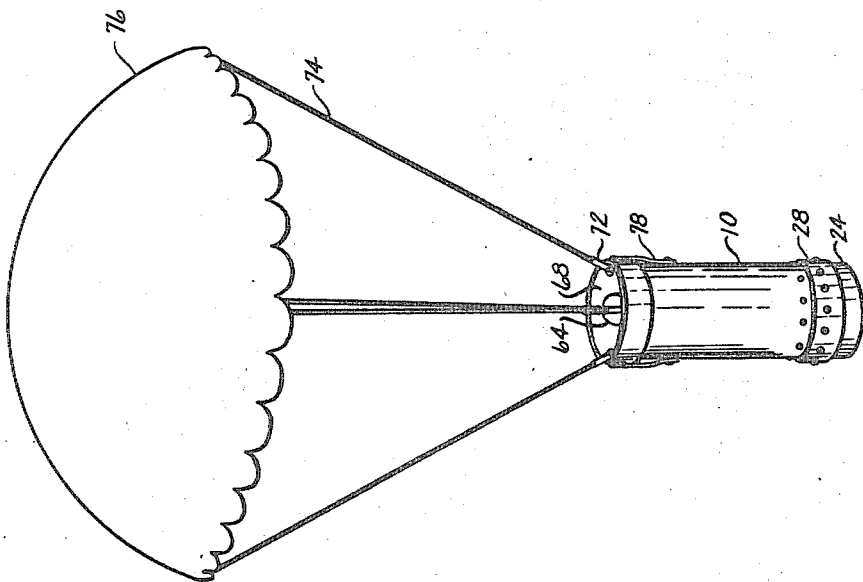
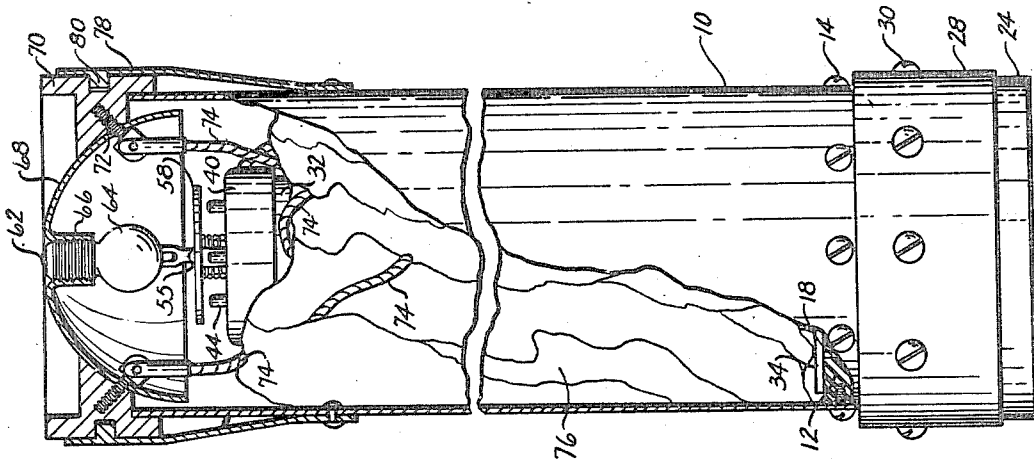


FIG. 4.



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ILLUMINATED MESSAGE CONTAINER

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11 Claims. (Cl. 244—138)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

This invention relates to a message container, giving especial reference to a device for safely transmitting messages from an airplane to an intended recipient on the ground.

An object of the invention is to provide, in contrivance of this character, means for illuminating the structure in its course of travel, the end that it may readily be traced and relieved when it lands.

Another object is to provide parachute means for retarding the fall of the device, in order that it will be more certain to land without leakage or damage to the device itself.

More specifically, it is an object to provide a device which includes a self-contained electric lighting means, with the light so directed as to provide maximum visibility with a minimum of current.

Still more specifically, it is an object to conserve space and weight and reduce the material cost by making the contrivance as small as possible but still have large message-carrying capacity, then storing the parachute in the message-carrying space when the device is not in use, instead of permanently allocating part of the available space for parachute storage as is the usual practice.

Still another specific object is to so arrange the electric circuits through the several light bulbs that connection therethrough will automatically be made for lighting the device when the parachute is withdrawn from the message-carrying compartment and fixed in its operative position.

Other advantages will appear as the invention is described in greater detail, and with reference to the drawings, wherein:

Fig. 1 is a central longitudinal section through an embodiment of the invention showing the arrangement of the device when in operation;

Fig. 2 is an enlarged sectional view of the lighting circuit switch mechanism when the switch is closed.

Fig. 3 is a view similar to Fig. 2, but with the switch open;

Fig. 4 shows the device with parachute folded as when storing it away for future use;

Fig. 5 shows the complete device drawn to a reduced scale with parachute open as when in action.

In the drawings, a tubular housing 10 has its

lower end closed by the lower lamp head 12 which is held in place in the housing by the screws 14. A reflector 16 is held to the head 12 by rivets 18, a lamp socket 20 for lamp 22 being preferably formed as an integral part of the reflector, but may be made separately and attached thereto if proper electrical communication is had therebetween.

A buffer 24 of suitable resilient material protects the ends of the housing 10 and head 12. It also surrounds the housing at the end, as at 26, and is held thereon by a metal band 28 which is fastened to the head by the screws 30.

Secured to the upper surface of the lamp head 12 by the rivets 18 is a tubular battery casing 32 which is of a diameter and length capable of receiving the required number of dry cells 33 freely, the lower end of the casing being flanged outwardly as at 34 where it joins the head, the rivets 18 electrically connecting the reflector 16 to the flange 34.

By thus positioning the battery casing 32 centrally within the housing 10, a cylindrical casing 37 is left for a rolled message or film 35. A conductor 36 having a terminal 38 positioned for contact with the center of the base of the lamp 22 is held in electrical communication with the housing 10 by one of the screws 14.

The upper end of the battery casing 32 is externally threaded for the internally threaded cap 40, the closed end of which, or its under side, has an insulating member 42 fastened to it by the pins 44, which are riveted at their lower ends to hold the parts together. The insulating member 42 has a hub 46 which extends through an opening in the closed end of the cap.

A hollow rivet 48 passes through the hub 46 and also through a metal washer 50, the rivet being headed over so as to clamp the end turn of the coil spring 52 between the washer 50 and the insulating member 42. The end turn of the spring 52 is brought in to a reduced diameter at 53 in order that it will come within the diameter of the washer 50 and be clamped thereby.

A plunger 54 is slidable in the hollow rivet 48. A head 56 is provided to limit upward movement of the plunger and the upper end is shouldered to properly position the contact disc 58, the end of the plunger being then riveted over at 55 to hold the plunger and disc together. A light coil spring 60 is biased to separate the disc 58 from the pins 44, the center contact 62 of the lamp 64 being positioned to compel contact between the disc and pins when the lamp is placed in its socket 66.

The socket 66 is preferably formed as an integral part of the reflector 68, but may be separately made if proper electrical contact is provided between these two parts. The reflector 68 is supported by the upper lamp head 70, the head being made of electrically conductive material which is held in contact with the reflector by any suitable means, which may include the eye bolts 72.

The eye bolts 72 are primarily provided as anchors for the shroud lines 74, which extend upwardly to support the parachute 76 (see Fig. 5). Snap fasteners 78 are secured at one end to the housing 10 and their free ends are provided with lugs 80 which spring into suitable pockets in the head 70 to removably hold the head and housing assembled.

Figs. 1 and 2 show the contrivance as it is assembled and arranged when in actual operation, while Figs. 3 and 4 show it as folded and ready to put away for future use.

To arrange the device for storage as in Figs. 3 and 4, the fasteners 78 are first sprung outwardly to permit removal of the upper lamp head 70, and the head is then turned top side down with the parachute depending, and, after the parachute is properly folded and inserted in the message space 37, the head is returned and secured as in Fig. 4.

By tracing the circuits in Figs. 1 and 2, it will be seen that when the device is in this, its active condition, parallel circuits from the battery through the two lights exist, but that when the device is assembled in its inactive condition as in Figs. 3 and 4, both of the light circuits are open.

In Figs. 1 and 2, current for the lower lamp 22 passes successively from the upper terminal 82 of battery 33 through parts 52, 50, 48, 60, 58, 44, 40, 32, 18, 16, through lamp 22 and terminal 38 to the lower battery terminal 84; and current for the upper lamp 64 passes successively from the upper terminal 82 of battery 33 through parts 52, 50, 48, 60, 58, 55, 62, through lamp 64, and parts 66, 68, 70, 10, 14, 36, and 38 to the lower battery terminal 84. By reference to Figs. 3 and 4 it will be seen that both of these circuits are opened when the device is assembled in the inactive state.

Thus it will be seen that the act of preparing the device for active use—that is, by removing the parachute from the message space and inserting the message instead and replacing the upper lamp head right side up—automatically completes parallel circuits through the two lamps. Conversely, by assembling the device in its inactive state—that is, with the parachute stored in the message space—the two light circuits are automatically broken.

Conditions may arise when it becomes desirable to rapidly interrupt the lamp circuits to more certainly attract attention, and in such cases one of the cells of the battery 33 may be removed and replaced with a flasher of the same dimensions, such flashers being commercially available in a size appropriate for this device.

Having described an embodiment of the invention in which the objects set forth are attained, modifications within the scope of the invention are embraced in the following claims.

I claim:

1. In an illuminated message conveyor, a tubular housing, a coaxial tubular battery casing positioned centrally within said housing, leaving a message space as long as said casing between

the inside wall of the housing and the outside wall of the casing, an electric cell within said casing, and an electric light electrically connected to said cell.

2. In an illuminated message conveyor, a tubular metal housing, a coaxial tubular metal battery casing positioned centrally within said housing leaving a message space as long as said casing between the inside wall of the housing and the outside wall of the casing, an electric cell within said casing, and electric lights electrically connected to said cell through the metal of said housing and casing.

3. In an illuminated message conveyor, a tubular metal housing, a coaxial tubular metal battery casing positioned centrally within said housing, leaving a cylindrical message space of the length of the casing between the inside wall of the housing and the outside wall of the casing, an electric cell within said casing, a lamp head on each end of said housing, an electric lamp in each head, conductive means including said housing electrically connecting one of said lamps to said cell, and conductive means including said casing electrically connecting the other said lamp to said cell.

4. A message conveyor comprising a housing having a message space within, a head for closing the end of the housing, a parachute attached to the upper side of said head, said head being adapted to be turned top side downward with said parachute within said message space when the conveyor is not in service, and means to secure said head to said housing in either the normal or the inverted position.

5. An electrically illuminated message conveyor comprising a housing having a message space within, an electric battery within said housing, an electric lamp adapted to be electrically connected to said battery, a head adapted to be affixed to the housing for closing the message space, a parachute having its shroud lines attached to the upper side of said head, said head being adapted to be turned and affixed to said housing top side downward with the parachute within said message space when the device is not in use, and normally closed electric switch means connecting said battery to said lamp, but adapted to be opened to disconnect said battery and lamp by the turning of said head top side downward.

6. An electrically illuminated message conveyor comprising a housing having message space within it, a battery within said housing, an electric lamp, a switch closable for connecting said electric lamp to said battery, a head for said housing for closing the said message space, a parachute attached to one side of said head, switch-closing means on the other side of said head, and head-attaching means for attaching said head either side upward, whereby when said head is attached with parachute upward, said switch-closing means holds said switch closed, and when said head is attached with parachute downward and within said message space, said switch is open.

7. The combination, in an electrically lighted message conveyor of a tubular housing, a tubular battery casing located centrally within said housing leaving a message space between said housing and said casing, an electric battery within said casing, a lamp head on each end of said housing, an electric lamp on each head, an electric switch near the upper end of said casing, a parachute attached to the upper side of said up-

per head, switch-closing means on the underside of said upper head, and means to hold said upper head on said housing whereby said switch-closing means bears on said switch to close said switch.

8. The structure of claim 7 wherein the housing and the casing are both constructed of electrically conductive material and each serves to convey current from the battery to one of the lamps.

9. The structure of claim 7 wherein the upper head is adapted to be turned top side downward with the parachute within the said message space and the switch-closing means removed from the switch, whereby the lighting circuits are broken.

10. The combination, in an electrically lighted message conveyor, of a tubular metal housing, an insulation head closing the lower end of said housing, a tubular metal battery casing supported centrally of said housing on said insulation head, thereby leaving a cylindrical message space between said housing and casing, a battery

within said casing, a battery switch at the upper end of said casing, a metal upper head for closing the upper end of said housing, a parachute attached to the top side of said upper head, a switch-closing means carried on the underside of said upper head, adapted to keep said switch closed when said head is in place, an electric lamp supported on each head, and electrically conductive means including said housing for conveying current from said battery to one said lamp, and said casing for conveying current from said battery to the other said lamp, both said conductive means being operative to convey current only when said switch is closed.

11. The structure of claim 10 wherein the upper head is adapted to be turned top side downward with the parachute within the said message space and the switch-closing means removed from the switch whereby the switch is open and the lighting circuits broken.

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