

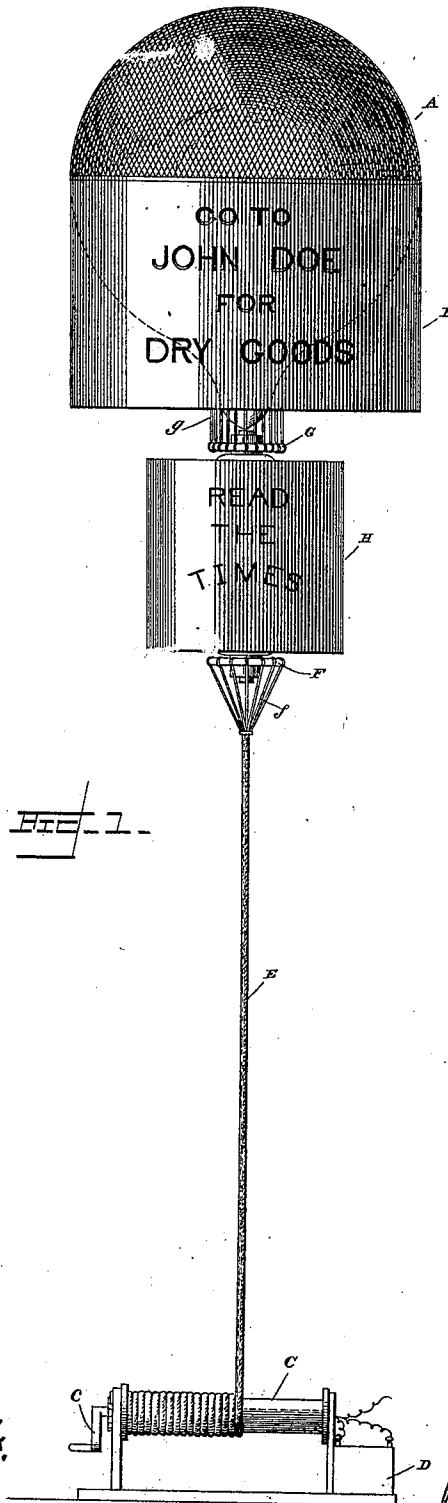
(No Model.)

2 Sheets—Sheet 1.

E. S. REED.
ADVERTISING BALLOON.

No. 507,165.

Patented Oct. 24, 1893.



Witnesses

Wm. S. Dwyer, Jr.
Wm. L. Boyden

Inventor

Eli S. Reed
per *Frederick W. Parker*
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(No Model.)

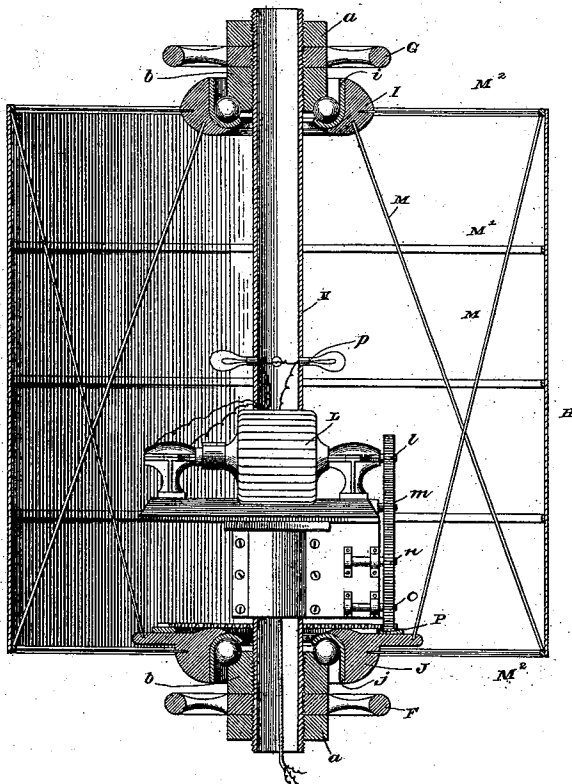
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Fig. 2.



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UNITED STATES PATENT OFFICE.

ELI S. REED, OF CHATTANOOGA, TENNESSEE, ASSIGNOR OF TWO-THIRDS TO
A. J. STOOPS AND H. E. STOOPS, OF SAME PLACE.

ADVERTISING-BALLOON.

SPECIFICATION forming part of Letters Patent No. 507,165, dated October 24, 1893.

Application filed November 12, 1892. Serial No. 451,802. (No model.)

To all whom it may concern:

Be it known that I, ELI S. REED, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Advertising-Balloons; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention has reference to an advertising device, comprising essentially a balloon advertiser or buoyant arrangement designed to be lifted high into the air in order that advertising matter or designs delineated thereon may be exhibited to view over an extensive section of country, the object of the invention being primarily to develop and provide superior means for presenting advertisements to view in a more conspicuous and prominent style than has heretofore been customary, by the simple and effective arrangement of mechanical parts which are grouped together so as to produce the best results consistent with cheapness and facility of operation, and the invention therefore consists essentially in the construction, arrangement and combination of parts, substantially as will be hereinafter described and claimed.

In the accompanying drawings illustrating my invention: Figure 1 is an elevational view of my improved balloon advertising device. Fig. 2 is an enlarged vertical section of the revolving drum showing the interior mechanism therein.

Similar letters of reference designate corresponding parts in the several figures of the drawings.

A denotes a balloon of any ordinary or preferred construction and of any desired size, style and shape. This balloon A is provided with a loosely hung cylindrical curtain B, made of any suitable textile or other fabric or material and secured at its upper edge to the balloon, as shown so that it may depend vertically therefrom, surrounding as it does thereby the lower portion of the balloon and on this advertising curtain is delineated any desired advertising matter, which is inter-

woven therewith or placed thereon by any suitable marking means or in any other desired manner. Thus it will be seen that the balloon is provided with a depending curtain, carrying advertising matter upon its outer surface, which will be displayed to view prominently and effectively when the balloon has been allowed to soar or lift itself into a high position in the air as shown in Fig. 1.

E denotes the cord, rope or cable which holds the balloon A. The lower end of this cable E is wound upon the drum C of a windlass, fixed on the ground, which drum C is provided with a crank handle *c* by means of which it is rotated for the purpose of lowering the balloon or relaxing the cable E in order that the balloon may lift itself. The upper end of the cable E is fastened by means of cords *f* to a horizontal wheel F which is screwed upon the lower screw-threaded end of a tube K. On the upper screw-threaded end of this same tube K is a wheel G similar to the wheel F, and to the wheel G are secured several cords *g* which are likewise fastened to the balloon A. Thus it will be seen that by means of the cord *g*, wheel G, tube K, wheel F, cord *f* and cable E, a connection is made between the balloon and the ground and that by the operation of the cable E through the use of the windlass shown in the drawings, the balloon may be stationed at any desired height in the air, accordingly as may be most desirable for the purposes of effective advertising.

On the tube K, which tube may be of any suitable length, diameter and kind, is a ball bearing nut *b*, located below the upper wheel G, and likewise screwed upon the upper screw-threaded end of tube K, while above the wheel G on tube K is a jam nut *a*, which is screwed down tightly upon the wheel G, so that in this manner the wheel G is held firmly between the ball bearing nut *b* and the jam nut *a*. A similar arrangement of parts is provided at the lower end of the tube K, there being at this end of the tube a jam nut *a*, beneath the wheel F and screwed tightly against it, while above the wheel F is a ball bearing nut *b* likewise screwed upon the lower end of the tube K, between which ball bearing nut and the jam nut *a*, the wheel F is held. Thus

it will be observed that the tube K is normally located in a vertical position and that it is non-revoluble.

Surrounding the tube K is a revolving drum H, of greater or less diameter, as may be preferred and made of any suitable material. On the exterior surface of this drum any kind of advertising matter may be displayed in any usual or preferred way. This revolving drum H may if desired be made transparent. It will often be found preferable to make it in this manner in order that lights located inside of it may illuminate the drum and cause it to do effective work at night in displaying advertising matter upon its surface. This drum is preferably provided with the horizontal rods or ribs M', which brace and support it, said ribs at top and bottom being designated by the reference letter M², and then there are numerous diagonal cross braces M M, for the purpose of bracing and holding firm and solid the several parts of the drum. This drum H surrounds the tube K, of which we have just spoken, said tube being located centrally within the drum. The drum is provided at its top with a central perforated casting I, carrying a ball bearing case *i*, between which and the ball bearing nut *b*, is placed a circular series of balls, as shown in Fig. 2, the tube K thus lying within the casting I, so that the balloon is by this combination of parts provided with a revolving drum at the upper end of the non-revolving tube K. A similar bearing is provided for the revolving drum H at the lower end of the tube K, there being at this end a centrally located perforated casting J, similar in shape to the casting I, said casting J containing a ball-bearing case *j*, between which and the ball bearing nut *b*, a circular series of balls is placed, so that the casting J may revolve loosely and easily upon the ball bearing nut *b* which remains stationary. Thus the drum is so located upon the tube K that it will be capable of being revolved thereon by any desired motive power which may be supplied for the purpose.

Inside of the drum H and secured by means of a suitable frame upon the stationary pipe K, I supply an electro motor L of any desirable kind. This electro motor receives its power from a storage battery D located on the ground near the windlass, from which storage battery wires run up through the cable E and the electro motor L. This electro motor communicates power through a train of gears *l*, *m*, *n* and *o*, as shown in Fig. 2, to a

circular horizontal rack bar or gear wheel P secured on the lower casting J. Thus it will be seen that the actuation of the electro motor, will, through the aforesaid gearing, revolve in a horizontal plane, the casting J and the result of this revolution will be to revolve the drum H. In order that this revolving drum may be illuminated in the night time, it becomes very necessary to provide lighting means therefor and this I do by placing incandescent lights through wires as shown, connected with the electro motor L, deriving their power in common with said electro motor from the storage battery D.

Many obvious changes in the precise construction, arrangement and location of the several parts may be made without departing from the essential lines of the present invention and without transcending the scope of the ensuing claims, and I reserve the liberty of making such minor changes as experience may suggest as desirable. It will be observed that the use of the electro motor may be varied in many ways so far as its location, operation and function, are concerned. The revolving drum may be rotated by other mechanisms than those here shown and it also may be lighted in a different way from that herein contemplated. The essential point in connection with this drum is that it shall be revolved, carrying advertising matter upon its exterior surface and held supported at a high point in the air by means of a buoyant object and also that in the night time it shall afford an illuminated transparency whereby advertising matter can be strikingly shown from a wide area of surface.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In combination with a balloon, a cable for regulating the position thereof, a revolving drum H, a non-revolving tube K arranged in connection with the balloon cable, ball bearing at top and bottom of the revolving drum in order that it may rotate easily upon the aforesaid tube K, an electro motor within the drum, electric lights likewise within the drum and electric connections between them and the storage battery substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ELI S. REED.

Witnesses:

JAS. B. ANDERSON,
J. A. HOLTZCLAW.