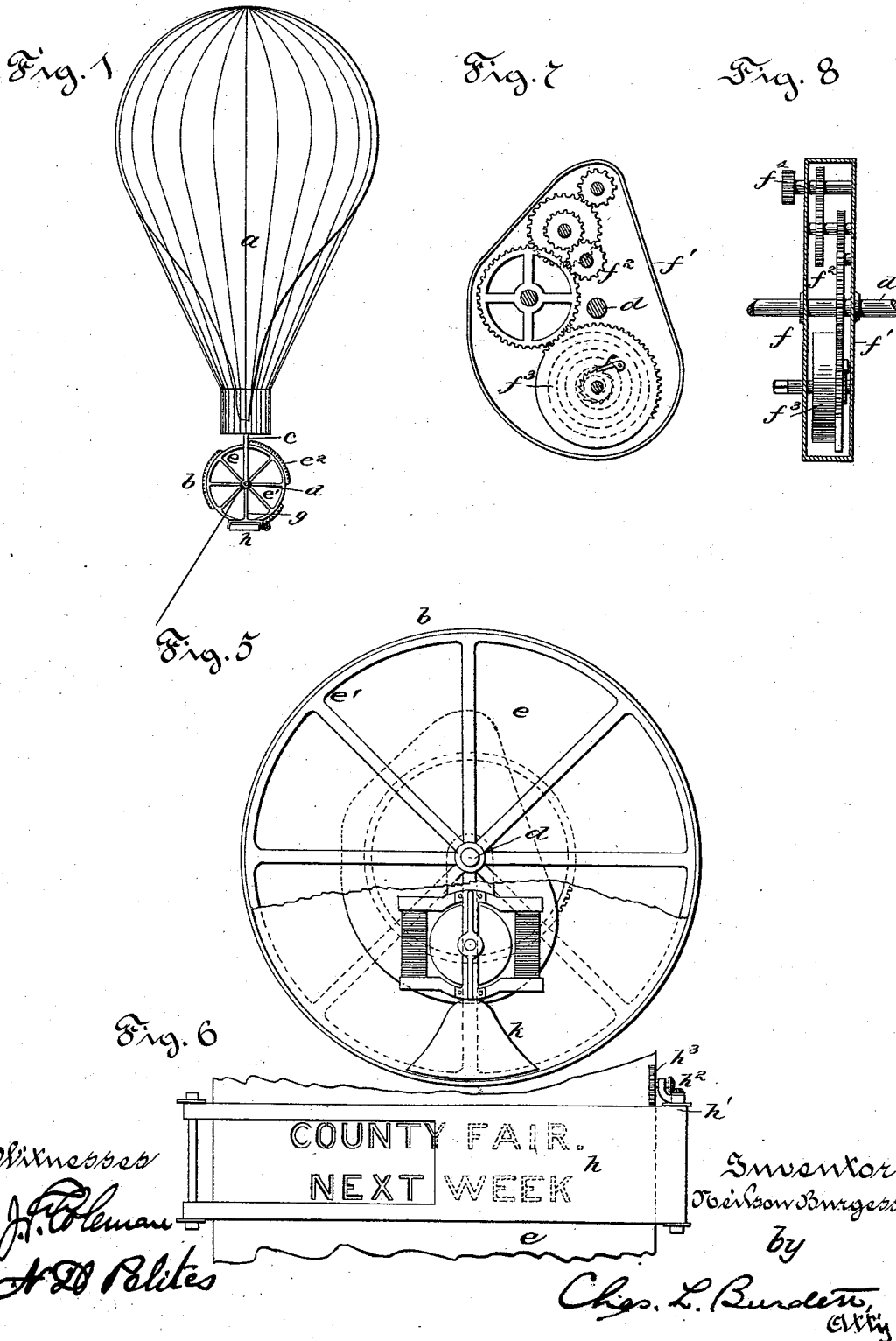


N. BURGESS.
AEROSTATIC ADVERTISING DEVICE.

No. 522,505.

Patented July 3, 1894.



(No Model.)

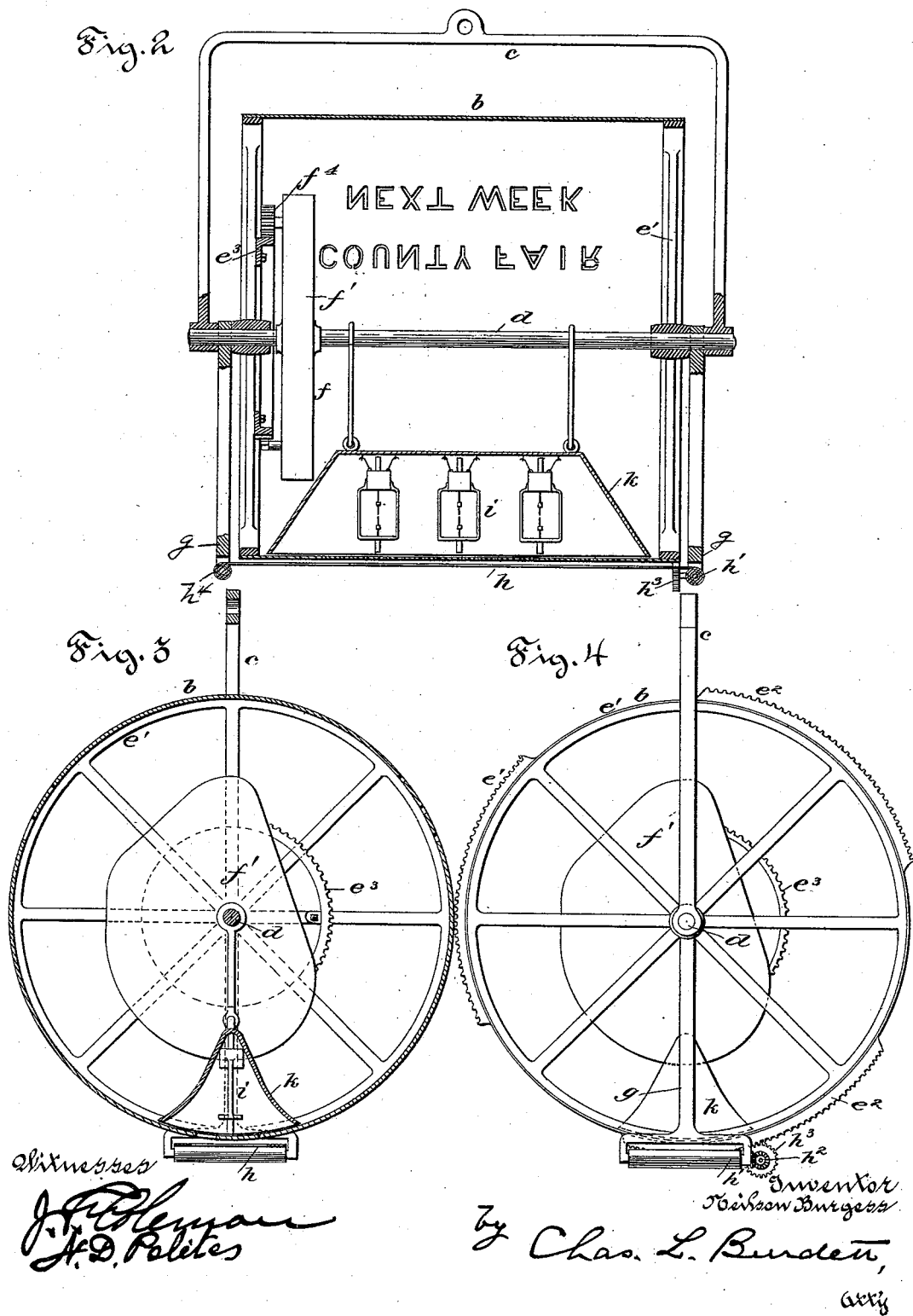
2 Sheets—Sheet 2..

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UNITED STATES PATENT OFFICE.

NEILSON BURGESS, OF HIGHLANDS, NEW JERSEY.

AEROSTATIC ADVERTISING DEVICE.

SPECIFICATION forming part of Letters Patent No. 522,505, dated July 3, 1894.

Application filed March 3, 1894. Serial No. 502,298. (No model.)

To all whom it may concern:

Be it known that I, NEILSON BURGESS, a citizen of the United States, and a resident of Highlands, in the county of Monmouth and State of New Jersey, have invented certain new and useful Improvements in Aerostatic Advertising Apparatus, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

The object of my invention is to provide an apparatus by means of which a sign, picture or the like, may be displayed at a considerable elevation above the surface of the ground in such manner as to attract the attention of persons on the surface.

To this end my invention consists in the details of the several parts making up the apparatus as a whole, and in the combination of such parts as more particularly hereinafter described and recited in the claims.

Referring to the drawings:—Figure 1, is a view in elevation of a balloon provided with my advertising drum. Fig. 2 is a view in central vertical section of the display frame. Fig. 3 is a view in vertical section of the frame. Fig. 4 is an end view of the frame showing the shutter drawing mechanism. Fig. 5 is a view in end elevation of the frame with parts broken away to show construction. Fig. 6 is a detail bottom view of part of the display frame showing the sign. Fig. 7 is a detail plan view of the mechanism for rotating the drum. Fig. 8 is a detail edge view of the mechanism for rotating the drum.

In the accompanying drawings the letter *a* denotes a balloon or like aerostat from which is suspended a display frame *b*. This frame includes a yoke *c* of a light and sufficiently strong material as aluminum, a shaft *d* held in sockets in the side parts of the yoke, a rotary drum *e* mounted on the shaft, the drum turning mechanism *f* secured to the shaft and connected to the drum, the support *g* and screen *h* and the light *i* with the reflectors *k*, the latter being suspended from the shaft.

The lights *i* are preferably electric lamps and the anchor rope of the balloon may consist of or support an electric wire or cable as a conductor for the electricity furnished from any suitable station.

The lights *i* and the reflector are located

within the drum, the cover of which is preferably opaque, except as to those parts where it is intended that a sign may be displayed, and the latter parts are either made translucent so that the light may be thrown through the cover, or openings are made in the shape of letters or any other device or design. The surface of the drum is provided at intervals with such signs, and the within described apparatus is arranged for three such signs. The mechanism for turning the drum is arranged so that when the sign underlies the lights and reflector, the sign will be held for a certain length of time in position to be easily seen by any one located below the level of the balloon, as on the surface of the ground. The ends of the drum are preferably formed by light disks or wheels *e'* one of which has on its periphery segmental gears *e''*, arranged at regular intervals in the form of drum turning mechanism described herein. The shaft *d* extends through bearings in the center of these ends, the drum turning freely on the shaft. Within the case *f'* the mechanism *f* which consists of a train of gears *f''* is arranged. The motive power is preferably a spring arranged in the going barrel *f'''*, a flange on which is provided with gear teeth. This gear on the going barrel meshes with one of the train of gear wheels, the last one of the train being on an arbor having a pinion *f''''*, which is arranged to mesh with a driving gear wheel *e'''* secured to an end disk of the drum. On the recoil of the spring the train of gears is set in motion and through the interengaging gears as described, a rotary motion on the shaft *d* is imparted to the drum.

In place of the spring impelled mechanism described, an electric motor as shown in Fig. 5 of the drawings may be used to turn the drum, and in such case the movement of the drum can be easily controlled by means of a switch in the circuit and in convenient position near the station from which the balloon is controlled.

The supports *g*, are suspended from the shaft *d* and the screen *h* of opaque material is adapted to be drawn across the face of the drum from end to end by the operation of mechanism driven by the rotary movement of the drum *e*.

The object of the screen *h* is illustrated in

Fig. 6 of the drawings, where a part of the sign is clearly shown, the screen being withdrawn from that part of the sign, the rest being the matter indicated in dotted outlines. By uncovering the letters in such manner they are caused to suddenly appear in outlines of light, and by arranging the screen so as to uncover first one line and then the next an attractive effect is produced. The screen h is mounted on a roller h' at one end of the drum, such roller being journaled in the support g at that end. The shaft of the roller is provided with a beveled gear in mesh with a gear h^2 borne on a short shaft which has another gear h^3 adapted to engage the gear teeth in a segment e^2 on the drum. The rotary movement of the drum drives the roller h' and causes it to wind up the screen h on the drum. At its opposite end the screen is supported on a spring roller h^4 , and when the end of the segment e^2 is reached the recoil of the spring unwinds the screen h from the roller h' and winds upon the spring roller h^4 . This provides for an intermittent display of the sign which will flash out into view, remain in sight for a short period of time and then disappear.

It is evident that various modifications of this plan may be arranged and changes made in the operating parts without departing from my invention, and I do not limit myself to the particular construction shown.

I claim as my invention—

1. In combination with a balloon, a rotary drum suspended therefrom on a horizontal axis, mechanism for rotating the drum, cover

on the drum comprising opaque and translucent sections, a light within the drum suspended from the shaft and a reflector arranged to throw the light downward through the translucent part of the cover of the drum, all substantially as described.

2. In combination with a balloon, a display frame suspended from the balloon, a rotary drum forming part of the frame and supported on a shaft, means for rotating the drum, an opaque cover on the drum having translucent sections, a light and reflector supported within the drum, an opaque screen adapted to be drawn across the surface of the drum, and mechanism for operating the screen, all substantially as described.

3. In combination with a balloon, a frame suspended therefrom, a rotary drum mounted on a shaft in the frame, the within described mechanism for rotating the drum, segmental gear borne on one end of the drum and adapted to engage with the screen operating mechanism, a screen adapted to be drawn across the face of the drum, and the screen operating mechanism having a gear wheel in engagement with the segmental gear on the drum, and a light and reflector supported within the drum, all substantially as described.

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

NEILSON BURGESS.

Witnesses:

FORD T. TOWERS,
MARY BURGESS.