(No Model.)

E. A. CALAHAN.

BULLETIN OR ADVERTISING APPARATUS.

No. 422,716. Patented Mar. 4, 1890.

Fig. 1.

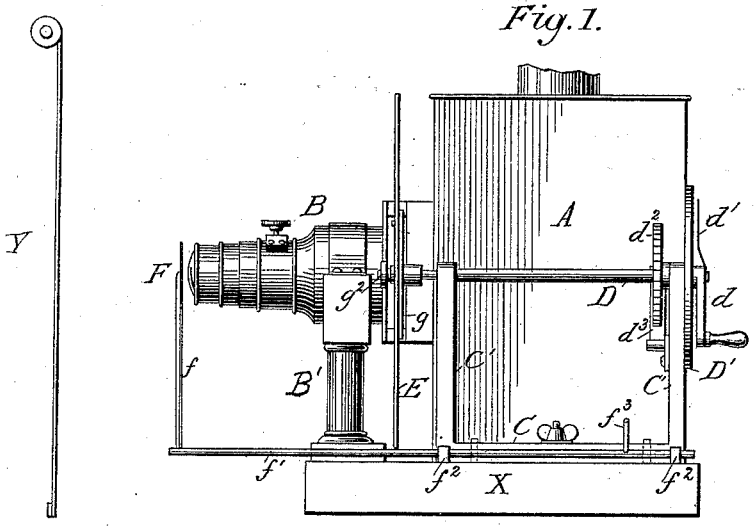


Fig. 1ª.

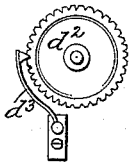


Fig. 2.

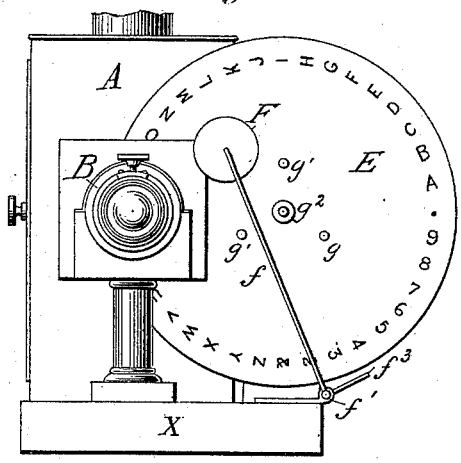


Fig. 3.

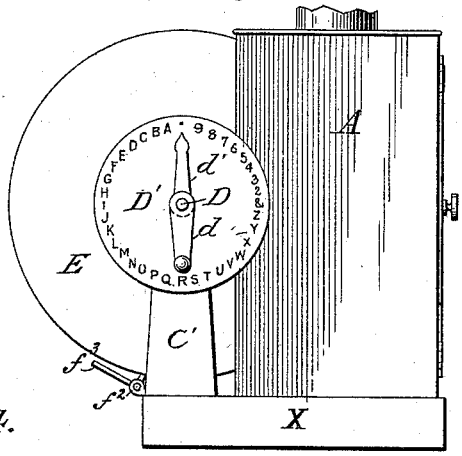
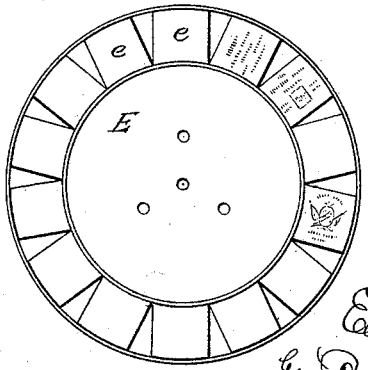


Fig. 4.



WITNESSES.

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UNITED STATES PATENT OFFICE.

EDWARD A. CALAHAN, OF BROOKLYN, NEW YORK.

BULLETIN OR ADVERTISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 422,716, dated March 4, 1890.

Application filed February 11, 1889. Serial No. 299,429. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. CALAHAN, of Brooklyn, county of Kings, State of New York, have invented certain new and useful Improvements in Bulletins or Avertising Apparatus, of which the following is a specification.

The object of the invention is to provide an apparatus with which news, information, or advertising of any character may be communicated at night from the interior of a building to persons upon the outside.

In carrying out my invention I provide an apparatus by which the letters or characters may in any desired order be projected in negative or reverse position upon a transparent or translucent screen, so that they may be readily read or understood from the opposite side of the screen.

With my improved apparatus news of any character may be graphically displayed, so as to be read from a distance by those outside of the building.

In the accompanying drawings, Figure 1 is a side elevation of one form of my improved apparatus; Fig. 1ª, a detail of the notched steadying or anchor wheel and its spring-catch for insuring accuracy and certainty of motion; Fig. 2, a front end view; Fig. 3, a rear end view, and Fig. 4 a detail view of a disk or wheel carrying advertising matter.

A indicates the box or case of an ordinary magic lantern, and B the lens-tube thereof. The lens-tube is mounted on a standard B′ on a forwardly-projecting end of the base X. At one side of the casing is arranged a frame consisting of a base-plate C and two uprights C′. A horizontal shaft D is mounted in the uprights and carries upon one end a disk E, having the characters to be projected upon the screen delineated thereon. The opposite end of the shaft is shown in this instance as provided with a crank d and a pointer d', which latter, as the shaft is turned by the crank, indicates upon an index D′ what letter or character is properly in position with reference to the lens and light to be projected upon the screen. In order to insure steadiness and certainty of operation, I provide upon the shaft a notched wheel d^2, with which a spring-detent d^3 engages and insures an exactitude of position of the letter or character to which the index-finger is brought by the rotation of the shaft. Y at the left-hand side of Fig. 1 indicates the transparent or translucent screen.

By the manipulation of this apparatus the letters of the alphabet, which are shown upon the disk E in Fig. 2, may be brought in any order desired in line with the lens and projected upon the screen, thereby communicating to those upon the outside any desired information. In order that the letters may appear distinctly and without movement upon the screen, I provide a shield F, carried by an arm f on a neck-shaft f', mounted in eyes f^2 upon the side of the base-plate C. By means of a pin f^3 on the rock-shaft within convenient reach of the operator the shield may be thrown in front of the lens during the time that the index-finger is being transferred from one letter to another. The base-plate C is mounted upon the base X of the instrument by means of three pins which pass through the base-plate C and upon the central one of which a thumb-nut is shown. By unscrewing this nut the entire attachment may be removed from the lantern, which is then ready for use with slides in the ordinary way.

The letters on the disk E may be formed by cutting out, as in a stencil, or may be transparent letters surrounded by an opaque ground, or the letters themselves may be opaque and the surrounding ground transparent, as is well understood.

In my improved apparatus I use some kind of an index or indicating mechanism by means of which the desired letters or characters may readily be brought into proper position, and the apparatus for this purpose illustrated in the drawings is merely shown as indicating one form of apparatus of simple construction suitable for the purpose.

In Fig. 4 I have shown a disk E provided with advertising matter arranged near the outer edge of the disk, as the letters are in Fig. 2. The advertising cards or spaces e are by the rotation of the disk successively brought in line with the lens and projected upon the screen. The disk E may be removably mounted upon the shaft in the following manner: Rigidly secured upon the end of the shaft is a small disk g, from which pro-

ject three pins g', arranged equidistant around the end of the shaft. The disks are provided with apertures through which these pins pass, also with a central aperture through which the reduced end of the shaft passes, and upon the end of the latter is a small nut g^2. By this means the disks may be readily changed.

When the apparatus is used for advertising with a disk, such as that shown in Fig. 4, the use of the shield F is not essential, and therefore the disk may be rotated by intermittent movements for any length of time, so as to bring the different advertisements successively into position to be thrown upon the screen. Of course for this purpose it is immaterial what power is employed to rotate the disk step by step. It may be done by hand or by clock-work in well-known ways.

I claim as my invention—

1. The combination, substantially as hereinbefore set forth, of the base, the magic lantern mounted thereon, the lens-tube mounted on a standard secured to a forwardly-projecting end of the base, the rotating disk carrying characters or matter to be exhibited by the lantern, the shaft on which the disk is mounted, the standards secured to the base at one side of the lantern and in which the disk-shaft has its bearings, and means for operating the shaft to rotate the disk.

2. The combination, substantially as hereinbefore set forth, of the magic lantern, the rotating disk carrying characters or matter to be exhibited by the lantern, a horizontal shaft projecting to the rear of the lantern and controlling the movement of the disk, and an operating-handle at the rear end of the shaft, whereby the operator may at will readily bring into position the character desired.

3. The combination, substantially as hereinbefore set forth, of the magic lantern, the rotating disk carrying characters or matter to be exhibited by the lantern, and the indicator moved correspondingly therewith to aid the operator in adjusting the disk.

4. The combination, substantially as hereinbefore set forth, of the magic lantern, the rotating disk carrying characters or matter to be exhibited by the lantern, the shaft on one end of which the disk is mounted, an index or pointer secured to the opposite end of the shaft, the index D′, over which the pointer moves, and a handle secured to the shaft for moving it to rotate the disk and the pointer.

5. The combination, substantially as hereinbefore set forth, of the magic lantern, the shield F, the rock-shaft on which it is mounted, and the handle for operating the rock-shaft.

In testimony whereof I have hereunto subscribed my name.

EDWARD A. CALAHAN.

Witnesses:
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