

A. F. FORMAN.
 ADVERTISING DEVICE.
 APPLICATION FILED FEB. 28, 1921.

1,433,360.

Patented Oct. 24, 1922.
 2 SHEETS—SHEET 1.

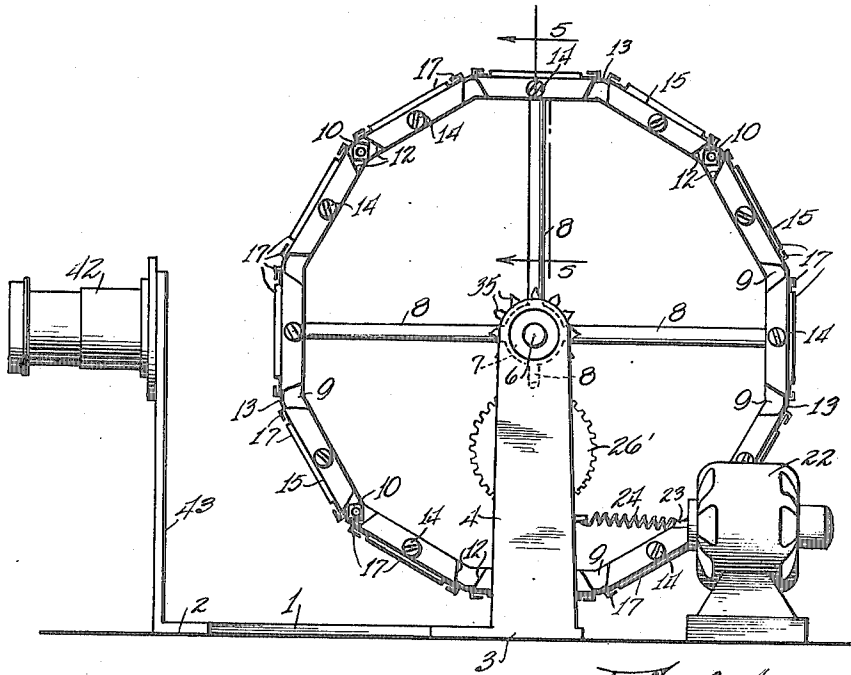


FIG. 1.

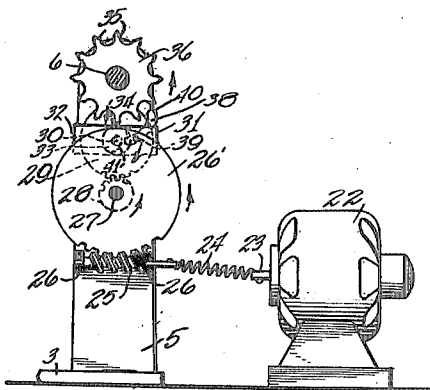


FIG. 3.

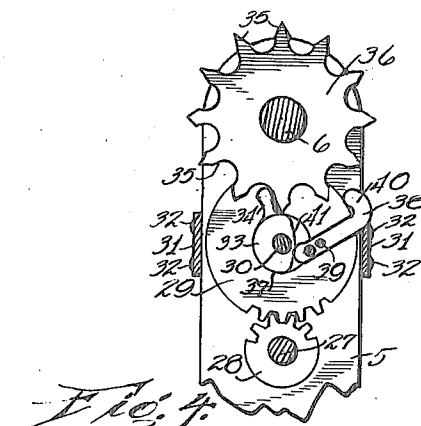
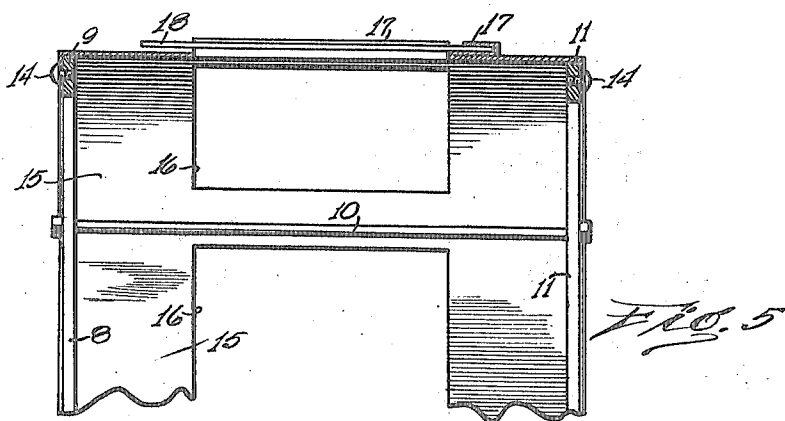


FIG. 4.

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ALBERT F. FORMAN, OF MILWAUKEE, WISCONSIN.

ADVERTISING DEVICE.

Application filed February 28, 1921. Serial No. 443,516.

To all whom it may concern:

Be it known that I, ALBERT F. FORMAN, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Advertising Devices, of which the following is a full, clear, and exact description.

My invention relates to improvements in advertising devices, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of my invention is to provide an advertising device embodying a wheel adapted to carry on the periphery thereof a plurality of pictures or advertisements and having a mechanism for driving the wheel intermittently.

A further object of my invention is to provide a device of the type described that has means for projecting images of the several views on a distant screen or the like.

A further object of my invention is to provide a device of the type described that has means for controlling the operation of the wheel to occasion the exhibiting of the several views in sequence so that each view will be exhibited for a determined length of time.

A further object of my invention is to provide a device of the type described that has means for removably retaining the several views in adjusted positions on the wheel so that the views may be changed at will.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings, forming part of this application, in which—

Fig. 1 is a side elevation of the device,

Fig. 2 is an end view of a portion of the same,

Fig. 3 is an elevation of the driving mechanism embodied in the device,

Fig. 4 is a detail of a fragmentary portion of the mechanism shown in Fig. 3,

Fig. 5 is a section along the line 5—5 of Fig. 1.

In carrying out my invention, I provide a base plate 1 that has laterally extending parallel portions 2 and 3. Upstanding from the lateral extension 3 adjacent the end thereof are spaced apart vertical standards 4 and 5 in which is journaled a horizontal shaft 6. The shaft 6 projects through the standard 5 and rigidly mounted on the projecting portion thereof is the hub 7 of a spider wheel having radially extending arms 8. Secured to the outer ends of the arms 8 is a equilateral polygonal rim member 9 and maintained in spaced relation to the rim member 9 by transverse connecting bolts 10 is a similar rim member 11.

The rim members 9 and 11 support a slide holder which consists of a single metal strip 13 cut away along its edges at 12 and arranged to conformably cover the peripheral walls of the rim members 9 and 11 so that the marginal portions thereof lie flat against the side walls of the rim members 9 and 11 and are secured thereto in any suitable manner, as by means of screws 14. The arrangement of the slide holder relative to the rim members 9 and 11 provides a plurality of flat peripheral sides or faces 15, the number of which is determined by the number of sides of the rim members 9 and 11. Each of the peripheral faces 15 has a relatively large central aperture 16 and at the edges of three sides thereof are flanges 17 for retaining a slide 18 in adjusted position relative to the face 15.

Upstanding from the extension 3 of the base plate 1 adjacent its inner end is a vertical standard 19 having a bracket arm 20 arranged to extend laterally toward the hub 7 in substantially co-axial alinement with the shaft 6. The bracket arm 20 supports illuminating means, such as the incandescent lamp 21 that is positioned behind each of the slides 18 as the latter are moved into a determined position by the rotation of the slide holder 13 which rotation is occasioned by means that will now be described.

I prefer to occasion the driving of the slide holder 13 by means of a suitable motor 22 that is provided with a drive shaft 23 operatively connected by a flexible shaft 24 with a worm 25 that is journaled in lugs

26. The latter are secured to the standard 4. The driving force is imparted from the worm 25 to a pinion 26' that is keyed on an intermediate shaft 27. The latter is journaled in the standards 4 and 5 and has rigidly mounted thereon a small gear 28 that engages a gear 29. The latter is rigidly mounted on a stub shaft 30 that is journaled in the standard 5 and a substantially U-shaped bracket member 31. The bracket member 31 has its arms secured to the standard 5 by screws 32. Keyed to the shaft 30 to rotate therewith is a cam wheel 33 having a single tooth 34 adapted to engage the teeth 35 of a sprocket 36 that is mounted on the shaft 6 and secured rigidly thereto. The cam wheel 33 is formed to provide a cam surface 37 engaging with a locking pawl 38 that is pivoted adjacent its inner end at 39 to the bracket member 31 and is formed with a lateral extension 40 adapted to engage the teeth of the sprocket 36 when actuated by the cam surface 37. It is to be observed that the inner end constantly contacts with the cam wheel 33 in position to be engaged by the cam surface 37.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. The device may be provided with any predetermined number of the slides 15, each of which is designed to support a slide which may bear a picture, advertising matter, or the like. The gear train for imparting a driving force to the shaft 6 to occasion the rotation of the slide holder 13 consists of gears varying in size and relatively arranged to reduce the driving speed so that a complete revolution of the cam wheel 33 carrying the single tooth 34 is accomplished in a given time. Consequently, the sprocket 36 will be rotated so long as the single teeth 34 engages one of the teeth 35 and will remain at rest during the remainder of the time required for the wheel 33 to make a complete revolution. I prefer to arrange the slide holder 13 with 12 sides, each adapted to hold a slide and to provide gears in the gear train previously described to effect a complete revolution of the cam wheel 33 in ten seconds so that the slide holder 13 will remain stationary for nine seconds and will then be moved for one second to bring the next slide into the proper position to be displayed. As soon as the tooth 34 disengages the teeth 35, the cam surface 37 acts upon the locking pawl 38 to move the extension 40 thereof into engagement with the teeth 35 and to thereupon lock the sprocket 36 in adjusted position. As the cam wheel 33 revolves the inner end of the locking pawl 38 is permitted to move toward the axis of the cam wheel 33 on account of a portion of the peripheral surface of the wheel 33 being cut away at 41 so that the

extension 40 disengages the teeth 35. As each of the slides 18 is moved into position to be displayed, the image thereof may be projected upon a distant screen (not shown). To this end, a projector 42 that is ordinary in construction is mounted on a vertical support 43 that is secured to the laterally extending portion 2 of the base plate 1 or may be formed integral therewith. The projector 42 is arranged relative to the illuminating means 21 so that the light therefrom passing through one of the slides 18 is focused to project on the screen the image of the picture or advertisement borne by the slides. Each picture or advertisement is displayed in its turn for a given length of time and the showing of the series is repeated so long as the device is being operated.

The device is designed for use wherever advertising matter may be displayed to advantage and is particularly adapted for installation in hotel lobbies, depot waiting rooms, theatre lobbies, banks, real estate offices, and merchants' display windows; it can likewise be installed in connection with suitable bill boards. The picture or advertisement may be displayed through frosted glass or projected on a screen by the method described, or in any other suitable manner.

I claim:

1. A device of the character described comprising a cylindrical slide holder, a spider wheel keyed to a horizontally disposed shaft, means for supporting the shaft for rotation, a sprocket wheel keyed to said shaft, a rotatable shaft arranged parallel to said first named shaft, a cam wheel rigidly mounted on said second named shaft and having a cam member intermittently engaging the teeth of said sprocket, said cam member being formed with a second cam surface, means engaging with said second named cam surface and operated intermittently to engage the teeth of the sprocket when the latter are disengaged by said first named cam member, to lock said sprocket against movement, said means comprising a lock lever pivotally mounted adjacent one end thereof and having said adjacent end in operative engagement with said second named cam and its opposite end fashioned to conform with the periphery of said sprocket between the teeth thereof, and means for driving the cam wheel to intermittently rotate the cylindrical slide holder.

2. A device of the character described comprising a rotatably mounted shaft, a sprocket wheel keyed to said shaft, a second rotatably mounted shaft arranged in parallel relation to said first named shaft, a cam wheel rigidly mounted on said second named shaft and having a cam member intermittently engaging the teeth of said sprocket, said cam member being formed with a second cam

surface, a locking lever pivotally mounted adjacent one end thereof and having the said adjacent end in operative engagement with said second named cam surface and its
5 opposite end fashioned to conform with the periphery of said sprocket between the teeth thereof, said locking lever being arranged to intermittently engage and lock the sprocket when the latter is disengaged from said first named cam member, and means for
10 driving said second named shaft to intermittently rotate said first-named shaft.

ALBERT F. FORMAN.