March 17, 1931. E. S. WHEELER ET AL 1,796,903

ADVERTISING DEVICE

Filed Jan. 14, 1929 3 Sheets-Sheet 1

Fig. 1.

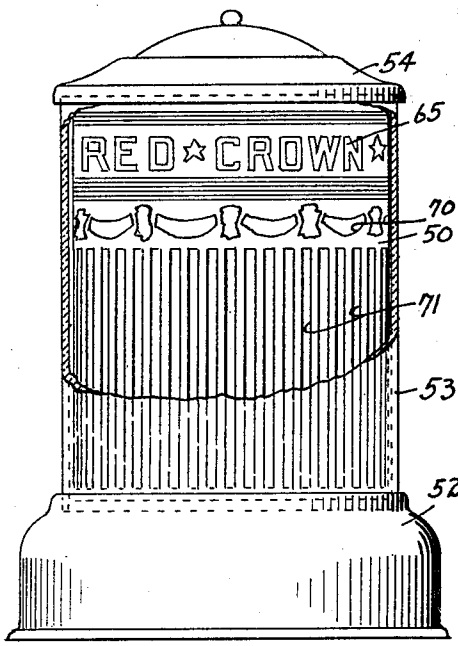



Fig. 2.

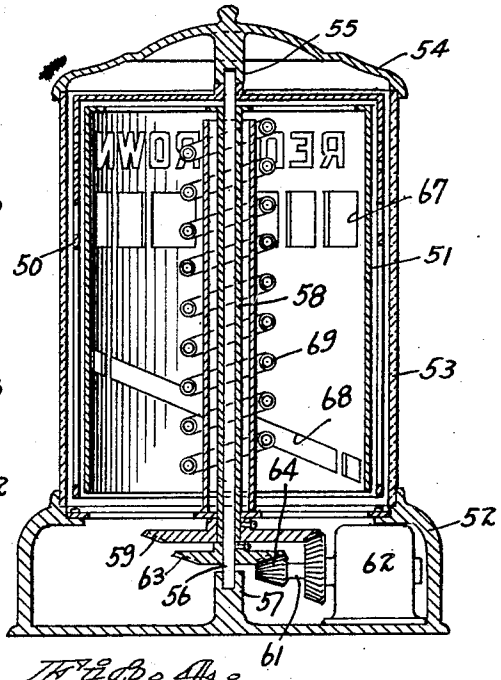



Fig. 3.

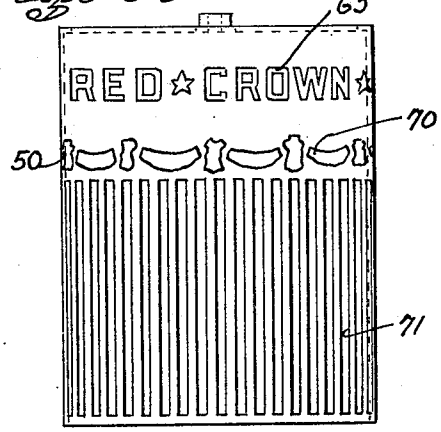



Fig. 4.

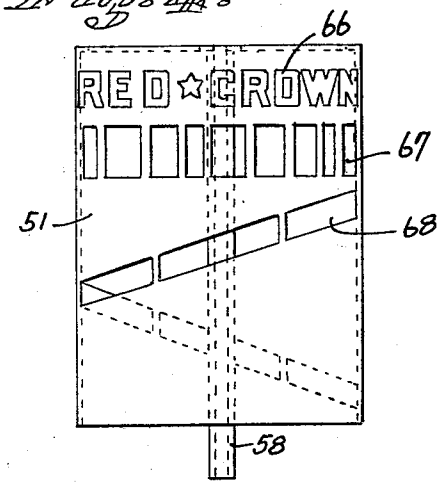
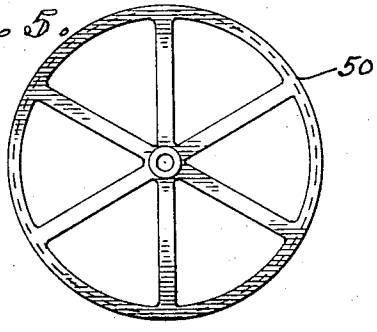



Fig. 5.




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ADVERTISING DEVICE

Filed Jan. 14, 1929 3 Sheets-Sheet 2

Fig. 6.

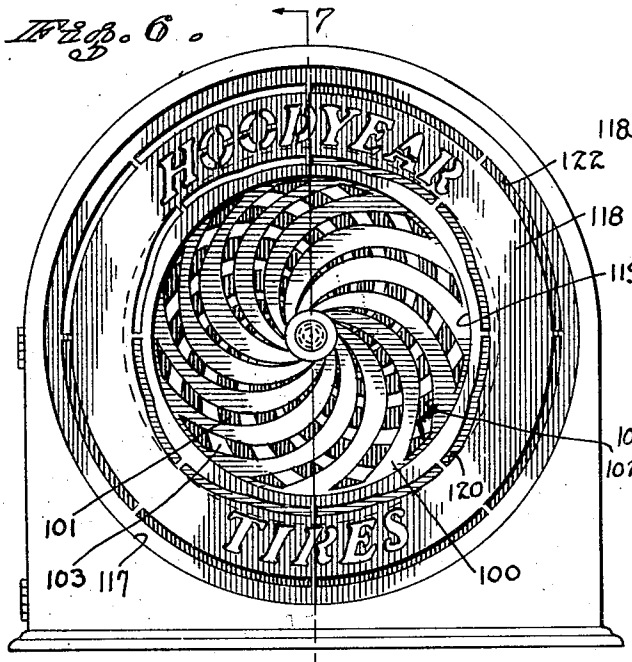



Fig. 7.

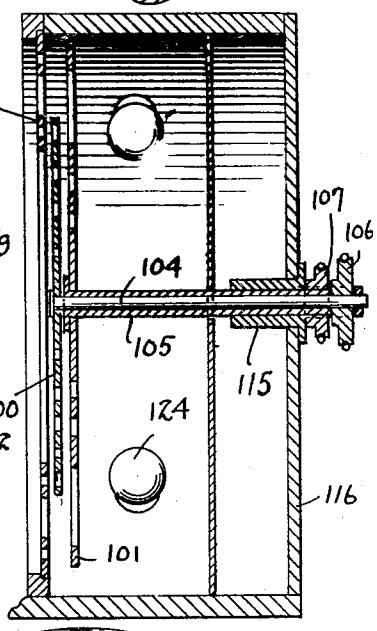



Fig. 8.

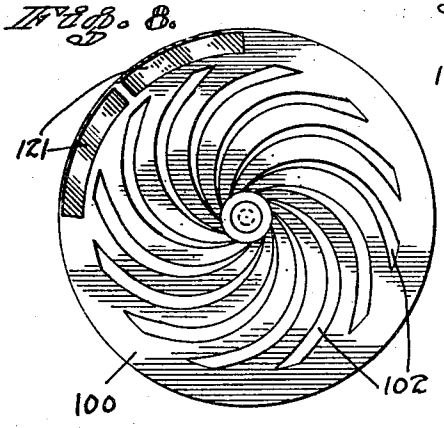
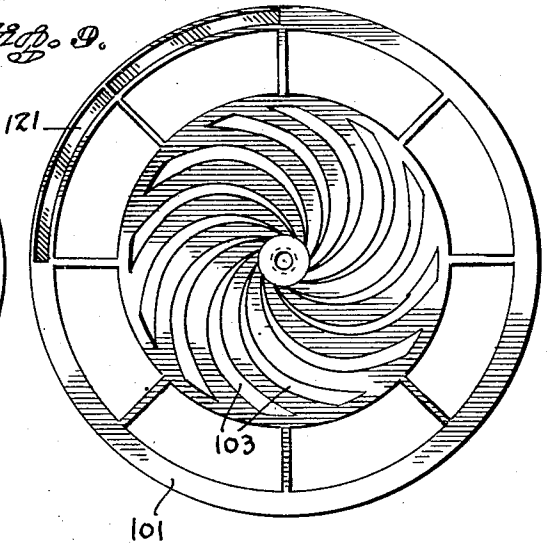



Fig. 9.




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ADVERTISING DEVICE

Filed Jan. 14, 1929 3 Sheets-Sheet 3

Fig. 10.

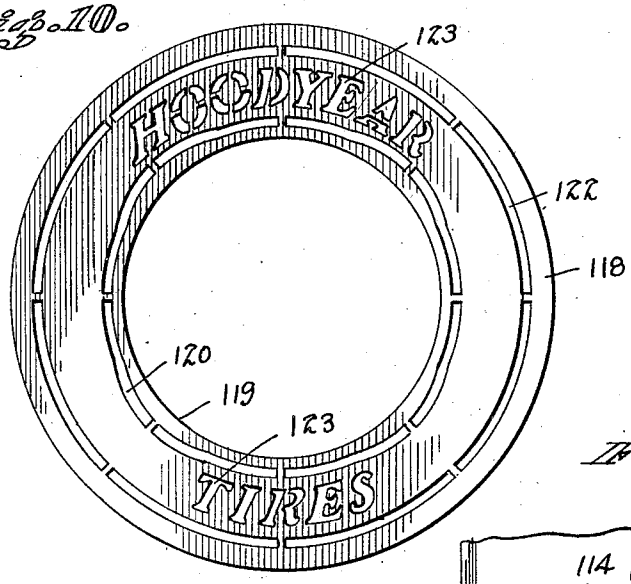



Fig. 12.

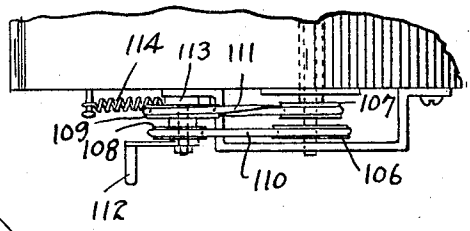
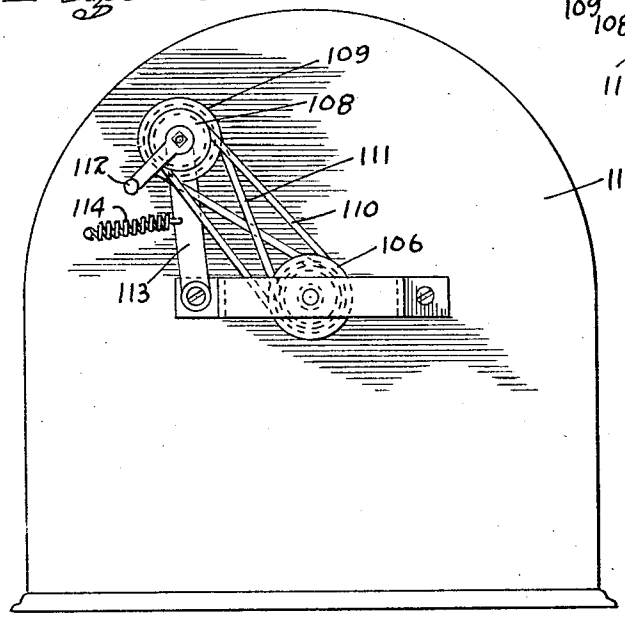



Fig. 11.




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# UNITED STATES PATENT OFFICE

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## ADVERTISING DEVICE

Application filed January 14, 1929. Serial No. 332,371.

Our invention relates to improvements in advertising devices, and it consists in the combination, constructions and arrangements hereinafter described and claimed.

An object of our invention is to provide an advertising device which makes use of two moving members having pre-arranged openings therein, these members being rotated for causing the openings to form moving designs. In back of the members we dispose illuminating means so that rays of light will project through the aligned openings and attract passersby.

A further object of our invention is to provide an advertising device which utilizes the principle of having at least two members with pre-designed openings therein, these members being rotated at different speeds so that the openings will register with each other for a short interval for forming a design, word, or the like, and then passing out of registration again; this operation keeping up so long as the device functions. Colored lights may be projected through the registering openings, and when the openings are not in registration but have portions in one member aligned with portions of the other member, the light rays will pass on through the aligned portions of the openings to attract the attention, and then when the complete registration of the openings takes place, the particular wording or design will be readable.

The device is extremely simple in construction, and provides a novel window display for attracting the attention of the passerby.

Other objects and advantages will appear as the specification proceeds, and the novel features will be particularly pointed out in the appended claims.

Our invention is illustrated in the accompanying drawing forming a part of this application, in which

Figure 1 is a side elevation of the device, a portion of the glass being broken away for clarity;

Figure 2 is a vertical section through Figure 1;

Figures 3 and 4 are side elevations of the two moving members;

Figure 5 is a top plan view of Figure 3;

Figure 6 is a front elevation of a modified form of the device;

Figure 7 is a section along the line 7—7 of Figure 6;

Figures 8 and 9 are plan views of discs;

Figure 10 is a plan view of the front stationary disc;

Figure 11 is a rear elevation of Figure 6; and

Figure 12 is a top plan view of a portion of the device.

In Figures 1 to 5 inclusive we show cylinders 50 and 51.

In Figure 2 a base 52 is shown, and upon this base a glass cylinder 53 is mounted, and the latter is capped by a cover 54. The cover carries one bearing 55 and a shaft 56. The lower end of the shaft rides in a bearing 57 carried by the base 52.

The cylinder 51 has a tubular portion 58 that is slidably mounted upon the shaft 56. A large bevel gear 59 is mounted upon the tubular portion, and this gear meshes with a gear 60 that is mounted upon the motor shaft 61 that projects from a motor 62.

The cylinder 50 telescopes over the cylinder 51 and is rigidly secured to the shaft 56. A gear 63, smaller than the gear 59, is secured to the shaft 56 and meshes with a gear 64 that is carried by the shaft 61. It will be seen from the construction thus far described that the cylinders 50 and 51 are rotated at different speeds.

Each cylinder has the words "Red crown" cut therein, the letters 65 in the cylinder 50 being smaller than the letters 66 in the cylinder 51. These words register at certain time intervals in the same manner as that disclosed in the preferred form of the device.

The cylinder 51 has openings 67 therein and a spiral 68 formed by another line of openings. The opening 67 may have colored windows therein if desired. These openings permit light rays to pass from a neon tube 69 (see Figure 2) through openings 70 in the cylinder 50.

The cylinder 50 also has vertical slots 71 which permit the spiral 68 to be seen. The rotating spiral and the moving opening 67 attract attention to the device, which causes

the passerby to look at the device long enough to permit the registration of the words "Red crown" in the two cylinders. The device attracts attention from all sides because of its cylindrical shape.

Figures 6 to 12 inclusive show another modified form of the device in which the rotating discs 100 and 101 are provided with spiral openings 102 and 103, these extending in opposite directions to give the effect of a combined design as that shown in Figure 6. The disc 100 is mounted upon a shaft 104 (see Figure 7) and the disc 101 is mounted upon a hollow shaft 105 that in turn is mounted upon the shaft 104. Both shafts are provided with pulleys 106 and 107, and these are connected to pulleys 108 and 109 (see Figure 12) by belts 110 and 111. Figure 16 shows the belt 111 as being crossed, which causes the discs to rotate in opposite directions.

The pulleys 108 and 109 are manually rotated by a crank 112, although a motor may be utilized if desired. Figure 6 further shows the pulleys 108 and 109 as being mounted upon a rocking arm 113, the latter being urged to the left by a spring 114. In this way the belts 110 and 111 are kept taut.

The shafts 104 and 105 are mounted in a bearing 115 (see Figure 7), and the latter is carried by a casing 116. The front of the casing has an opening 117 for receiving a stationary disc 118 of the shape shown in Figure 10.

The disc 118 has an opening 119 large enough to permit the entire spirals 102 and 103 to be viewed. A line of slots 120 forming an irregular circle is provided in the disc 118, and the disc 100 shown in Figure 8 has two colored transparent windows 121 that register with the slots 120. A rotation of the disc 100 counterclockwise will cause the windows 121 to permit light to pass through the portions of the slots 120 registering with the windows. The result is that a line of colored light will appear to trace itself counterclockwise along the slots 120.

The same provision is made in the disc 101. Figure 9 shows windows 121 in the disc 101, which permit light to pass through slots 122 in the disc 118. This will cause a tracer to appear to move clockwise along the slots 122. This tracer may be of a different color from the tracer caused by the colored windows 121.

The disc 118 has the words 123 cut therein which provides stationary reading matter. The rotating spirals and the moving tracers attract the attention of the passerby to the reading matter.

The disc 118 forms the front cover of the casing 116 although a glass may be positioned in front of the disc if desired. Lights 124 are mounted in the casing and in back of the disc 101.

The operation of the device causes the spirals to permit flashes of light to pass through the opening 119, and these flashes of light will appear to move away from the center of the discs. If the spiral slots 102 and 103 are covered with a red transparent substance, the device will appear to give off red sparks, which are very realistic. At the same time the tracers are moving in opposite directions, and this, combined with the moving spirals, arrests the attention of the passerby and causes him to note the advertisement on the device. It is obvious that a multitude of different designs may be cut in the discs 100 and 101 without departing from the spirit and scope of our invention.

Although we have shown and described two embodiments of our invention, it is to be understood that the same is susceptible of various changes, and we reserve the right to employ such changes as may come within the scope of the invention as claimed.

We claim:

1. An advertising device comprising a pair of discs concentrically mounted, means for rotating said discs in opposite directions, each disc having a spiral cut therein, the spiral of one disc extending in an opposite direction to that of the other.

2. An advertising device comprising a stationary disc having slots therein formed into two concentric circles, a pair of movable discs disposed in back of said first-named disc, one movable disc having windows arranged to follow the path of one circle of slots and the other disc having windows arranged to follow the path of the other circle of slots, and means for rotating said discs in opposite directions.

3. An advertising device comprising a casing, a stationary disc mounted in the front of said casing and having characters cut therein, said disc having a large central opening and two lines of slots forming two concentric circles, a pair of rotatable discs disposed in back of the stationary disc and having spirals cut therein for registering with the large openings in the stationary disc, windows carried by said rotatable discs for registering with the circular lines of slots, means for rotating said discs in opposite directions, and a source of light disposed in back of said rotating discs.

4. An advertising device comprising a stationary disc having slots therein formed into two concentric circles, a pair of movable discs disposed in back of said first-named disc, one movable disc having windows arranged to follow the path of one circle of slots and the other disc having windows arranged to follow the path of the other circle of slots, and means for rotating said discs.

5. An advertising device comprising a

casing, a stationary disc mounted in the front of said casing and having characters cut therein, said disc having a large central opening and two lines of slots forming two concentric circles, a pair of rotatable discs disposed in back of the stationary disc and having spirals cut therein for registering with the large opening in the stationary disc, windows carried by said rotatable discs for registering with the circular lines of slots, and means for rotating said discs.

6. An advertising device comprising a member having a plurality of circular rows of openings, a disc having a window for progressively uncovering the openings in one row, a second disc having a window for progressively uncovering the openings in another row, and means for rotating the discs in opposite directions.

7. An advertising device comprising a stationary disc having slots therein, a pair of movable discs disposed in back of said first-named disc, one movable disc having windows arranged to follow the path of one line of slots and the other disc having windows arranged to follow the path of the other line of slots, and means for rotating said discs.

8. An advertising device comprising a casing, a stationary disc mounted in the front of said casing and having characters cut therein, said discs having a large central opening and two lines of slots, a pair of rotatable discs disposed in back of the stationary disc and having spirals cut therein for registering with the large opening in the stationary disc, windows carried by said rotatable discs for registering with the lines of slots, and means for rotating said discs.

9. An advertising device comprising a member having a plurality of rows of openings, a disc having a window for progressively uncovering the opening in one row, a second disc having a window for progressively uncovering the openings in another row, and means for rotating the discs in opposite directions.

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