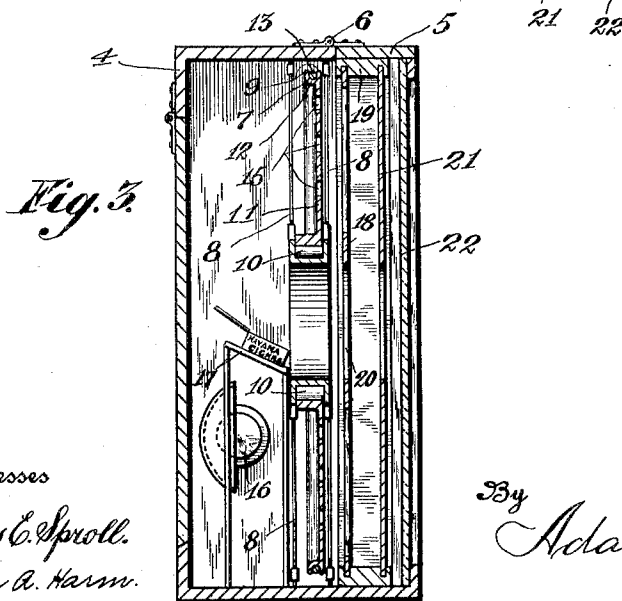
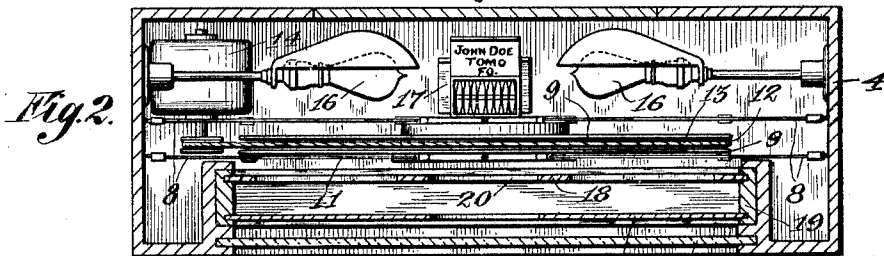
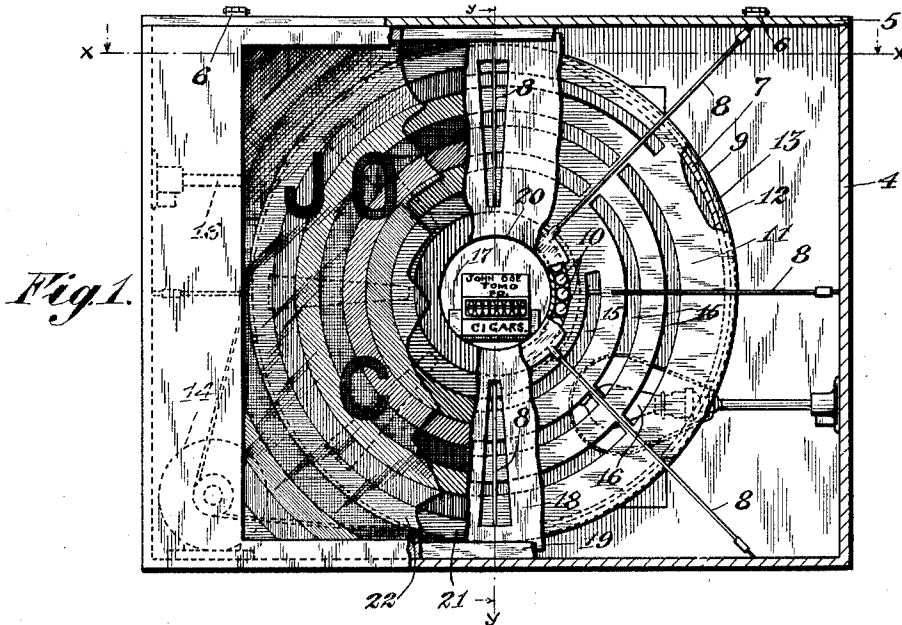


S. HATA.
 DISPLAY APPARATUS.
 APPLICATION FILED SEPT. 5, 1911.

1,009,839.

Patented Nov. 28, 1911.



Witnesses

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UNITED STATES PATENT OFFICE.

SHINKICHI HATA, OF SEATTLE, WASHINGTON.

DISPLAY APPARATUS.

1,009,839.

Specification of Letters Patent.

Patented Nov. 28, 1911.

Application filed September 5, 1911. Serial No. 647,778.

To all whom it may concern:

Be it known that I, SHINKICHI HATA, a subject of the Emperor of Japan, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Display Apparatus, of which the following is a specification.

My invention relates to improvements in illuminated display signs adapted for show-windows of business houses and stores.

The object of my invention is to provide attractive means for calling attention of people to the display of objects on sale. I attain this object by a device wherein the object for sale may be placed in full view and at the same time be surrounded by constantly varying designs of illuminated colors.

I have illustrated such device in the accompanying drawing in which—

Figure 1 is a view in front elevation of the structure with portions of some parts broken away. Fig. 2 is a plan view of same on broken line $x-x$ of Fig. 1, while Fig. 3 is a view of principal parts of same in cross-section on broken line $y-y$ of Fig. 1.

Like reference numbers indicate like parts throughout the drawing.

A suitable inclosing case 4, whose top or cover 5 is hinged to open by swinging upwardly on hinges 6, as shown in Fig. 3, is adapted to contain the essential parts of my invention as hereinafter described.

An annular ring 7 is suitably disposed within case 4 where it is supported in a fixed position by wire stay-rods 8. The ring 7 is provided with radially projecting side flanges 9 adapted to confine a plurality of rollers 10 which are disposed around the periphery of ring 7 and which are adapted to form a roller bearing for a rotatable disk 11. The disk 11 (which is mounted to rotate on the rollers 10) is provided with a grooved rim 12 within which groove may run a belt 13 by means of which rotary motion may be communicated to disk 11 from a suitable source of power, as by an electric motor 14 suitably disposed on the floor of case 4 as shown by broken lines in Fig. 1 and by Fig. 2.

The disk 11 is provided with volute or scroll formed slots or openings 15 through which may project the light-rays from a suitable artificial light which artificial light

I have shown as consisting of two electric lamps 16 disposed as may be seen in Fig. 2.

Articles to be displayed may be deposited on a bracket or stand 17 in the rear of annular ring 7 in a position to be seen from the front of case 4 through the opening in case 7 as most clearly seen in Fig. 3. I have shown one of such articles as consisting of a box of cigars.

Adjacent to and in front of disk 11 is removably disposed an opaque screen 18 adapted to slide into grooves cut in pieces 19 attached to the inside of case 4 as shown in Fig. 2 and in Fig. 3.

The screen 18 is provided with an opening of circular shape and of suitable size so disposed that a displayed object on stand 17 may be seen therethrough and said screen 18 is further provided with a plurality of radial openings 20 through which rays of light may pass as they may be permitted to do by the scroll shaped openings of disk 11.

In front of the opaque screen 18 removably disposed in grooves in the pieces 19 is a pane of glass 21 whose central portion immediately in front of the circular opening of the screen 18 is transparently clear to permit the displayed object to be seen, while the other portion of it is colored or stained by any desired variety of colors in the form of annular or scroll shaped stripes as indicated by the different styles of line marks in Fig. 1 or of any form to please one's fancy.

The inclosing case 4 has a pane of glass 22 in front through which may be seen the displayed object and the colored glass 21.

Obviously any form of lamp may be employed in place of the lamps 16 illustrated in the drawing and disk 11 may be revolved by other means than those shown; and also the radial openings in screen 18 may be of any desired fanciful form without departing from the spirit of my invention.

To operate my invention the lamps are lighted and the motive power is caused to communicate rotary motion to the disk 11 whereupon, if the disk rotates in a clockwise direction, the rays of light which find their way through the scroll shaped opening of said disk 11, and thence through the radial openings 20 in screen 18 and thence through the glass of various colors, will give the effect of making it appear that varying colored spots in constant succession, at points coincident with radial openings 20

on screen 18, are moving toward the central opening through which the displayed object can be seen. If disk 11 be rotated in the opposite direction, then the spots will appear to move outwardly from such central opening.

The front pane of glass in case 4 may have any desired inscription lettered upon it for advertising purposes.

10 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is:—

1. In a display sign of the class described, 15 and inclosing case, means for producing artificial light within said case, a rotatable opaque disk disposed within said case and in front of the light therein, said disk being provided with scroll formed openings 20 through which rays of light may pass and further provided with a round opening in its central portion through which an object may be seen, means for supporting and rotating said disk, an opaque screen disposed 25 in front of said disk in said case, said screen being provided with an opening in its central portion through which an object may be

seen and further provided with other openings of desired shape, a pane of colored glass disposed in front of said opaque screen 30 in said case, said glass being transparent in its central portion to permit objects to be seen through it, in combination with a suitable support within said case on which may be deposited an object for display in a position to be seen through the said opening in 35 central portion of said disk.

2. In a display sign of the class described, an inclosing case, a stand adapted to support an object for display within said case, 40 a pane of glass within said case, the central portion of which glass is clear to permit a displayed object to be seen through it, while its other portion is colored, in combination with means for causing different portions of 45 said colored portion of said pane of glass to be successively illuminated.

Signed at Seattle, Wash., this 21 day of August 1911.

SHINKICHI HATA.

Witnesses:

ARLITA ADAMS,
A. A. BOOTH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."