July 26, 1949. I. ASHERMAN 2,477,032

STILL PROJECTOR SIMULATING TELEVISION SETS

Filed Sept. 22, 1948

FIG. 1

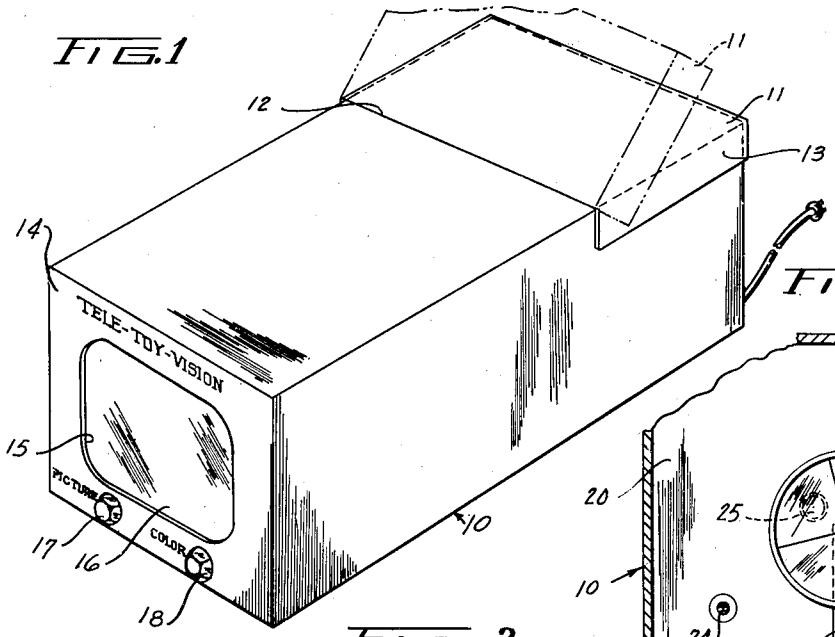


FIG. 2

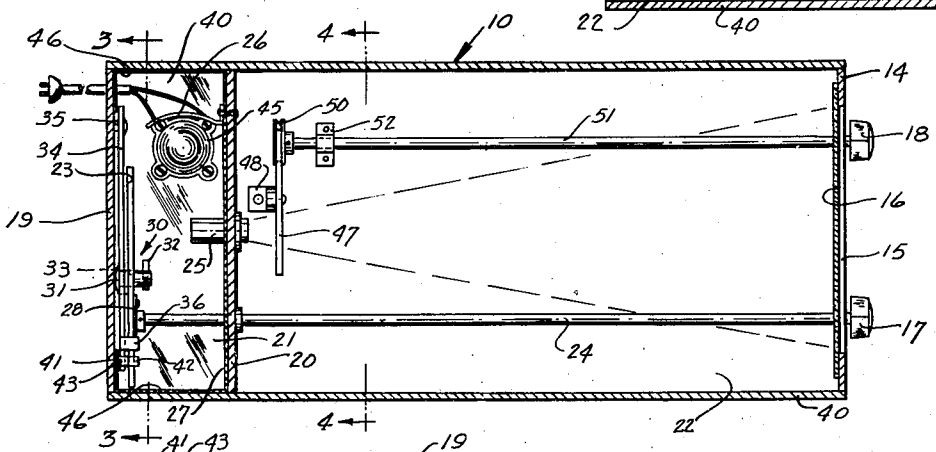


FIG. 3

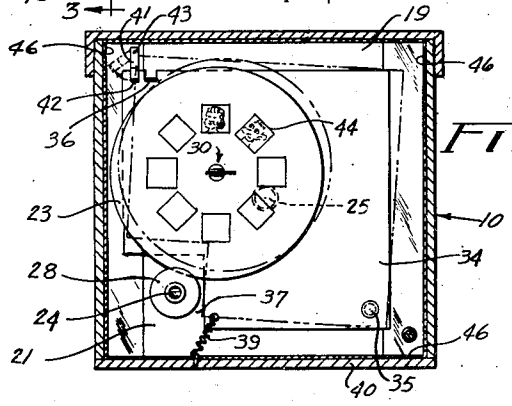
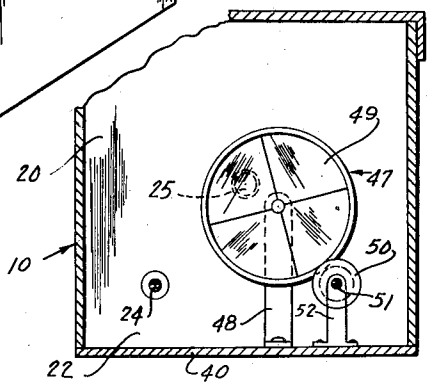


FIG. 4



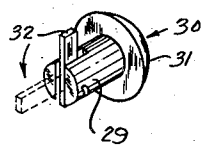


FIG. 5

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STILL PROJECTOR SIMULATING TELEVISION SETS

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5 Claims. (Cl. 88—27)

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This invention relates to toy television sets, and is particularly directed to apparatus simulating in appearance a television receiving unit with an image screen and control knobs.

It is primarily within the contemplation of this invention to enable a series of pictures to be projected upon the screen, and to vary the color of the projected image by manipulating suitable knobs.

It is a further object of my invention to enable color changes to be effected independently of the control for actuating the pictures.

Another object is to provide means for readily removing and replacing picture-bearing members, without disturbing or otherwise affecting the other elements of the device.

A further object is to provide a single wall support for the picture-actuating shaft, the housing for the lens system, the reflecting shield for the source of illumination, and a reflecting surface in facing relation to the picture-bearing member.

And it is within the contemplation of this invention to provide a simple and inexpensively constructed device having the features aforesaid.

Other objects, features and advantages will appear from the drawings and the description hereinafter given.

Referring to the drawings,

Figure 1 is a perspective view of the device containing my invention, the dot-dash lines showing a partially opened position of the closure member providing access to the removable picture-bearing member.

Figure 2 is a sectional plan view of the device of Figure 1, the section being taken somewhat below the upper wall of the device.

Figure 3 is a section of Figure 2 taken substantially along line 3—3.

Figure 4 is a fragmentary section of Figure 2 taken substantially along line 4—4, and

Figure 5 is a perspective view showing the releasable support for the rotatable picture-bearing disc, the dot-dash line showing the support in its releasable position.

In the preferred form of my invention illustrated, the casing 10 is in the shape of a box having a rear top closure member 11 hingedly connected along hinge line 12 and containing overlapping rear and side walls 13 to keep the interior of the casing light-sealed when lid 11 is closed. The front wall 14 of the casing contains the aperture 15 over which is mounted the translucent screen 16 made of plastic, glass or other suitable material. Disposed along the outer surface of front wall 14 are the two knobs 17 and 18, the former being to control the picture-bearing member and the latter to control the color screen, as will more clearly hereinafter appear.

Disposed intermediate the front wall 14 and

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rear wall 19, but closer to the latter wall, is the partition wall and support 20 dividing the interior of the casing into a rear picture-loading compartment 21 and a front screen compartment 22—the former containing the picture-bearing disc 23, and the latter containing the color screen disc 47 and image-receiving screen 16. The said wall 20 preferably extends transversely and vertically across the entire width and height of the casing 10 so as to keep compartment 22 light-insulated from compartment 21.

Supported by the wall 20 are four important members of the apparatus—the shaft 24 carrying the said knob 17, the lens system housing 25, the reflecting shield 26 and the preferably silvered reflecting sheet or lining 27 in facing relation to the picture-bearing disc 23,

The said shaft 24 is rotatably supported by front wall 14 and said wall 20, and carries at the rear end thereof the peripherally recessed drive wheel 28 which is in frictional engagement with the periphery of the picture-bearing disc 23. The latter disc is rotatably mounted upon the shank 29 of the releasable support 30, the terminal portion of the shank opposite the head 31 being bifurcated and containing the pivotally mounted locking link 32 movable between its operative locking position transverse to the axis of the shank 29, to its releasing position parallel to the shank's axis (the dot-dash position shown in Figure 5). The arrangement is hence such that the disc 23, containing the central aperture 33, can be slidably mounted on shank 29 and maintained in operable position thereon by moving link 32 to its locking position—replacements of discs 23 being obviously readily made by this construction.

The disc support 30 is secured to the preferably flat disc-supporting wall 34, disposed to the rear of and parallel to the disc 23—the wall 34 being pivotally secured to rear wall 19 of the casing at 35, preferably near the bottom of the casing. The upper edge of the wall 34 has a forwardly extending lip 36 adapted to be engaged by the operator's finger for pivotally swinging wall 34 from its operative (full line position in Figure 3) to its retracted position (dot-dash position), where the disc 23 is out of engagement with the wheel 28—whereby the disc 23 can be readily removed and a new disc substituted therefor. It will be observed that the lower corner of wall 34 is recessed at 37, thereby removing any possible impediment to the free operative rotation of wheel 28. The spring 39, anchored to the floor 40 of the casing, is attached to the wall 34, and yieldably holds said wall in its operative position with the wheel 28 and disc 23 in frictional peripheral engagement. The latch 41, with finger extension 42, is pivotally mounted on the rear wall 19 at 43, and is engageable with the front face of disc 34, at the

corner diagonally opposite pivot 35, to prevent a forward displacement of the disc.

The said picture-bearing disc 23 contains on the front face thereof a plurality of circumferentially disposed pictures 44—these being positioned so that each may successively be positioned, upon a rotation of disc 23, at the optical axis of lens system of housing 25—behind the rear terminal of the housing. The lens system is of conventional construction for projecting an image upon a screen, and it is not herein described as it is well known to any one skilled in the art. It is to be observed, however, that the axis of rotation of the disc 23 is not coincident with the optical axis of housing 25, since the pictures 44 must be positionable at said optical axis, as aforesaid.

Mounted preferably although not necessarily upon floor 40 of the casing is the lamp or light source 45 between disc 23 and the reflecting wall 20, and between the reflector 26 and lens system 25. The arrangement is hence such that optimum light conditions prevail for illuminating the pictures on the disc 23. The floor 40 and side and rear walls of compartment 21 are also provided with reflecting lining 46 to enhance the illuminating effect, so as to produce as bright an image as possible for a reflecting (as distinguished from a direct light-transmitting) device.

In compartment 22 is the color-screen disc 47, rotatably supported by bracket 48 mounted on the floor of the casing. Disc 47 contains a number of differently colored transparent sections 49, said sections being successively positionable, upon the operative rotation of disc 47, in front of the lens housing 25. In frictional engagement with the periphery of the disc 47 is the recessed periphery of the drive wheel 50. Wheel 50 is carried by the color-disc shaft 51, the opposite terminal containing the knob 18—shaft 51 being rotatably supported by front wall 14 and bracket 52 mounted on floor 40 of the casing.

It is thus apparent that by manipulating knob 17, a series of pictures can readily be produced on the screen 16—in simulation of a television set—the manipulation of knob 18 lending greater allure to the device by providing a selective coloring effect. And it is also evident that with this simply constructed device, a great variety of pictures can be projected, widening its use to include serials, comic strips, scenic and educational subjects—access to the compartment for the replaceable picture-bearing disc being readily had by lifting the closure member 11.

In the above description, the invention has been disclosed merely by way of example and in preferred manner; but obviously many variations and modifications may be made therein which will still be comprised within its spirit. It is to be understood, therefore, that the invention is not limited to any specific form or manner of practicing same, except insofar as such limitations are specified in the appended claims.

I claim:

1. In a toy device of the class described, a laterally enclosed casing with a front and a rear wall, a translucent screen on the front wall, a partition wall within the casing and extending transversely thereacross and disposed intermediate the said front and rear walls to form a front and a rear compartment, an optical projection system supported by said partition wall and disposed in projecting relation to said screen, a rotatably mounted picture-bearing disc in said rear compartment and in facing relation to said partition, said disc containing a plurality of pictures disposed circumferentially about the axis of rotation of the disc, the optical axis of said projection system being in intersecting relation to the circumferential picture-containing portion of the disc, a source of light in said rear compartment, a rotatably mounted transparent color screen in said front compartment and interposed between the said optical projection system and the said translucent screen, a color-control knob on said front wall operatively connected to said color screen, a picture-control knob on said front wall operatively connected to said picture-bearing disc, a releasable support for the picture-bearing disc, a closure member in the region of the rear compartment, whereby access may be had to said picture-bearing disc, and a movable wall within the rear compartment, parallel to the partition and pivotally mounted on the said rear wall, said releasable support being mounted on said movable wall.

2. In a toy device of the class described, a laterally enclosed casing with a front and a rear wall, a translucent screen on the front wall, an optical projection system in projecting relation to said screen, a movable supporting wall pivotally mounted on the rear wall of the casing, a picture-bearing disc rotatably mounted on said supporting wall, a drive wheel adapted for frictional rotatable engagement with said disc, a spring anchored to the casing and the movable supporting wall and positioned to yieldably urge the disc into pressing engagement with said wheel, said supporting wall being movable against the action of said spring, whereby the disc and wheel will be out of engagement, the disc having a picture-bearing portion which is in coactive optical relation to the said projection system and screen when said disc and wheel are in operative engagement, and means to rotate said wheel.

3. In a toy device of the class described, the combination according to claim 2, the movable supporting wall being recessed adjacent the said drive wheel.

4. In a toy device of the class described, the combination according to claim 2, the pivotal connection for the movable supporting wall being at the lower portion thereof.

5. In a toy device of the class described, the combination according to claim 4, further provided with a finger-engaging portion at the upper portion of the movable supporting wall.

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