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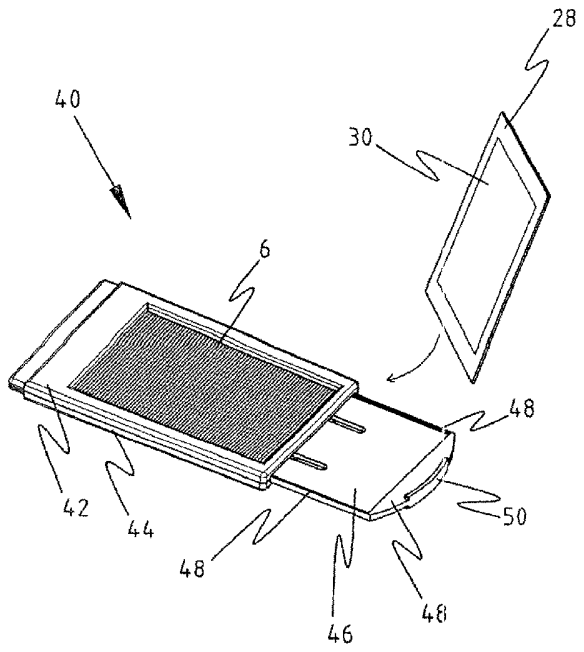
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(54) Title: METHOD AND APPARATUS FOR VISUALISING IMAGES



(57) Abstract: Apparatus for vizualizing images, comprising: (a) a housing; (b) a window of transparent material with multiple lens effect arranged in a wall of the housing for making visible an image to be placed therebehind; (c) moving means arranged in the housing for moving reciprocally a holder arranged behind the lenses of the window for holding a card-like medium with two or more images.

WO 03/092842 A2

METHOD AND APPARATUS FOR VISUALIZING IMAGES

The present invention relates to an apparatus for visualizing images, a card with two or more images thereon and a method for visualizing images.

Cards and coins having images thereon which appeal mainly to young people and children, such as images of Pokémon, Harry Potter and cartoon characters from the Fox Kids cartoons, are very popular. Not only are the cards and coins traded at many times the cost price thereof, the cards also have an important influence for advertising purposes and in promoting products. If such cards, with images of for instance Pokémon thereon, are packaged with the products, this can cause the market share of the manufacturer to increase by for instance 10%, as has been shown recently in practice.

An object of the present invention is to provide an improved card or coin for promotional and advertising purposes and an apparatus and a method therefor.

The present invention attempts to achieve the above stated objective and provides for this purpose an apparatus for visualizing images, comprising:

- a housing;
- a window of transparent material with multiple lens effect arranged in a wall of the housing for making visible an image to be placed therebehind;
- moving means arranged in the housing for moving reciprocally a holder arranged behind the lenses of the window for holding a card-like medium with two or more images.

Using such an apparatus images can be visualized on card-like media in a manner involving lower production costs.

According to a further preferred embodiment, the invention provides an apparatus according to claim 1,

wherein ribs of the window form cylindrical lenses with a predetermined focal length. A cost-saving is achieved by arranging the cylindrical lenses in such an apparatus separately from the card-like medium, whereby the apparatus is particularly suitable for advertising purposes.

According to a further preferred embodiment the invention provides an apparatus according to claim 2, wherein the focal length is in the order of 35 mm.

According to a further preferred embodiment the invention provides an apparatus according to any of the claims 1-3, wherein the moving means comprise:

- a motor;
- one or more toothed wheels and/or worms which are driven by the motor,

wherein one of the toothed wheels comprises an eccentric cam which engages on a hook of the holder in order to move the holder having thereon the medium with the images.

According to a further preferred embodiment of the invention, the moving means comprise spring means for reciprocally moving and pushing the slide into a desired position. Owing to the spring means the apparatus can also function without motor, thereby achieving a greater cost-saving.

According to a further aspect the present invention provides a method for visualizing images, comprising the steps of:

- arranging a housing;
- arranging in a wall of the housing a window of a transparent material with multiple lens effect;
- arranging behind the window a holder for holding a card-like medium with two or more images;
- arranging moving means,

wherein the moving means engage on the holder for reciprocal moving thereof.

Such a method provides new possibilities for advertising and promotion, wherein a cost-saving is also achieved compared to known methods.

Further advantages and features of the present invention will be elucidated on the basis of the annexed figures, in which:

- Figure 1 shows a perspective view of a first preferred embodiment of the present invention;
- Figure 2 shows a perspective, exploded view of the first preferred embodiment of figure 1;
- Figure 3 is a perspective view of a second preferred embodiment of the present invention; and
- Figure 4 is a perspective, exploded view of the second preferred embodiment of figure 3.

An apparatus for visualizing images 1 consists of an upper part 2 and a lower part 4 of a housing. In the upper part 2 is arranged a window 6 of a transparent material, for instance a transparent plastic (fig. 1).

An exploded view of apparatus 1 (fig. 2) shows the upper part 2 of the housing having therein an elongate opening 10 in which the window 6 is arranged. Window 6 is flat on an underside thereof, while on the upper side it comprises the ribs 12 of semi-circular cross-section which provide a lens effect of the window. Ribs 12 have a focal length of about 35 mm and a width in the order of 0.5 mm. In the upper side 2 of the housing is arranged a round button 8 for operating a motor 14 accommodated in the housing.

In a practical embodiment the cards have dimensions of 8-10 cm long and 5-8 cm wide. The housing then has dimensions in the order of 10-12 cm long, 7-10 cm wide and 1-2 cm high. The lens has 12 ribs per cm (30 ribs

per inch) or, for an improved quality of image, 16 ribs per cm (40 ribs per inch).

In the underside of housing 4 is arranged an electric motor 14 and a battery 16 for driving the electric motor. By means of a worm 18 the motor 14 drives several toothed wheels in a continuous movement in order to transmit the movement and reduce the speed. Toothed wheel 20 has on one side (not shown) an eccentric cam which engages on a hook 22 of a slide 24. Due to the rotating movement of toothed wheel 20 the eccentric cam thereon will convert the rotating movement of about 30 rpm into a reciprocal movement of hook 22 and slide 24 in the longitudinal direction of the housing, with a speed varying between 0 and about 1.5 mm/s. Arranged on slide 24 are two clips 26, under which a card 28 can slide and be clamped fixedly. Card 28 is printed with a printing 30, wherein two or more images are divided into linear segments with a line width of about 0.3 mm, wherein the lines of different images are printed alternately on card 28. The result hereof is that the separate images can be seen mixed together and cannot therefore be viewed clearly in the normal situation without window. If card 28 with printing 30 thereon is clamped under the clips 26 of slide 24, it will co-displace with the slide and thus move reciprocally behind window 6. Owing to the lens effect of ribs 12, the images which are on alternate lines in the printing 30 hereby become individually visible, depending on the position of card 28 behind window 6. By now pressing button 8 the motor 14 will be set into operation, so that the different images become individually visible one after the other in a continuous movement. The images change at a speed of roughly 3 images per second.

A similar type of apparatus (fig. 3) once again comprises an upper part of a housing 42 and a lower part 44 thereof which are manufactured from plastic, wherein in an elongate opening in upper part 42 is arranged a lens 6 which is the same as the lens as described above in the first embodiment. A card 28 having thereon the printing 30 with two or more images, each printed on alternate lines, can now be placed on a slide 46. Slide 46 has standing edges 48 between which card 28 is arranged and held in place. Made on a round outer end is a thickened portion 50 with which a user can operate and press in the slide with the fingers, so that the card 28 with printing 30 thereon moves reciprocally behind window 6, wherein the images printed on alternate lines become individually visible owing to the lens effect of window 6. The fingers of the user herein provide the force to push the slide 46 into the housing. A spring 52 of for instance plastic or spring steel, which is arranged on the other end located opposite the thickened end 50, is herein compressed and produces an opposing force for the purpose of pushing the slide 46 out of the housing again. On the rear side of housing 44 are arranged two cams 54 which engage in slotted openings 56 in slide 46 in order to guide the slide.

With the invention according to the above described first and second embodiments thereof, cards and coins having thereon images printed on alternate lines can be visualized in a cost-effective manner. The cost price per card or coin is lower than according to the prior art, since the essential component, the window with lens effect, is included in a separate unit and not on the card. Owing to the lower cost price cards can be distributed per product in more cost-effective manner, so enhancing the specific application thereof, i.e.

giving the cards away to promote a product or for advertising purposes.

The present invention is not limited to the above described preferred embodiments thereof; the rights sought are defined by the following claims, within the scope of which many modifications can be envisaged.

CLAIMS

1. Apparatus for visualizing images, comprising:

- a housing;

- a window of transparent material with multiple lens effect arranged in a wall of the housing for making visible an image to be placed therebehind;

- moving means arranged in the housing for moving reciprocally a holder arranged behind the lenses of the window for holding a card-like medium with two or more images.

2. Apparatus as claimed in claim 1, wherein ribs of the window form cylindrical lenses with a predetermined focal length.

3. Apparatus as claimed in claim 2, wherein the focal length is in the order of 35 mm.

4. Apparatus as claimed in any of the claims 1-3, wherein the moving means comprise:

- a motor;

- one or more toothed wheels and/or worms which are driven by the motor,

wherein one of the toothed wheels comprises an eccentric cam which engages on a hook of the holder in order to move the holder having thereon the medium with the images.

5. Apparatus as claimed in any of the claims 1-3, wherein the moving means comprise spring means for reciprocally moving and pushing the slide into a desired position.

6. Method for visualizing images, comprising the steps of:

- arranging a housing;

- arranging in a wall of the housing a window of a transparent material with multiple lens effect;

- arranging behind the window a holder for holding a card-like medium with two or more images;

- arranging moving means in the housing,

wherein the moving means engage on the holder for reciprocal moving thereof.

7. Assembly of an apparatus substantially as claimed in any of the claims 1-5 and a card-like medium with two or more images.

8. Card-like medium suitable for the assembly and/or the apparatus as claimed in any of the claims 1-5.

9. Card-like medium as claimed in claim 8, comprising a card-like body of for instance cardboard, paper or plastic on which two or more images divided into linear segments are printed on alternate lines.

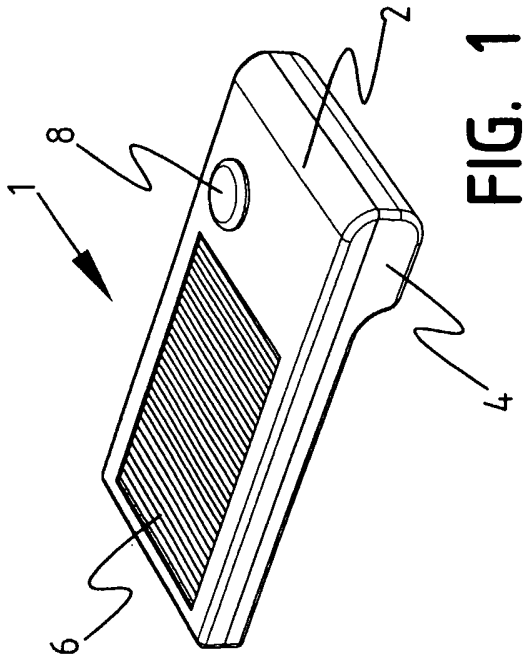


FIG. 1

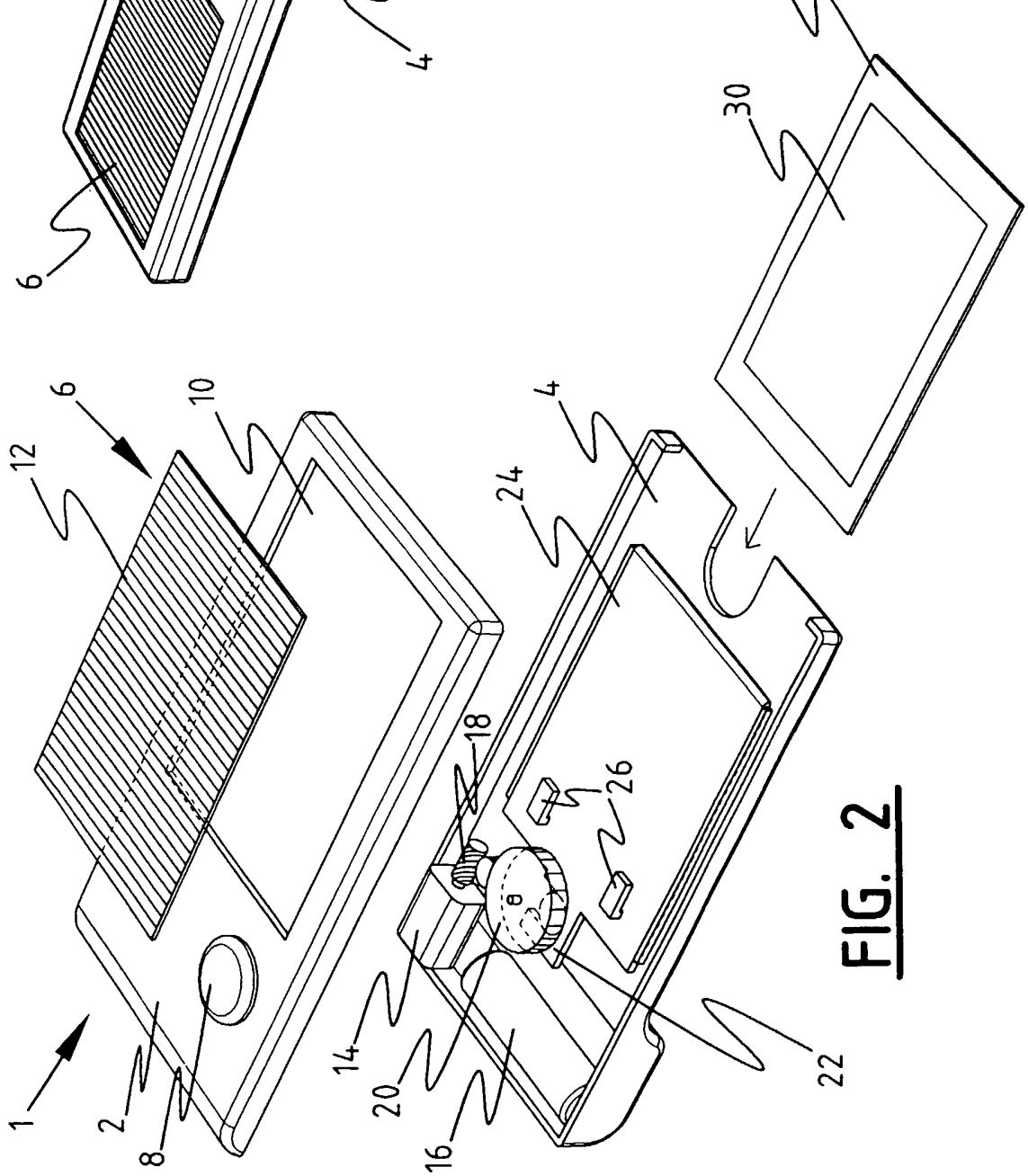


FIG. 2

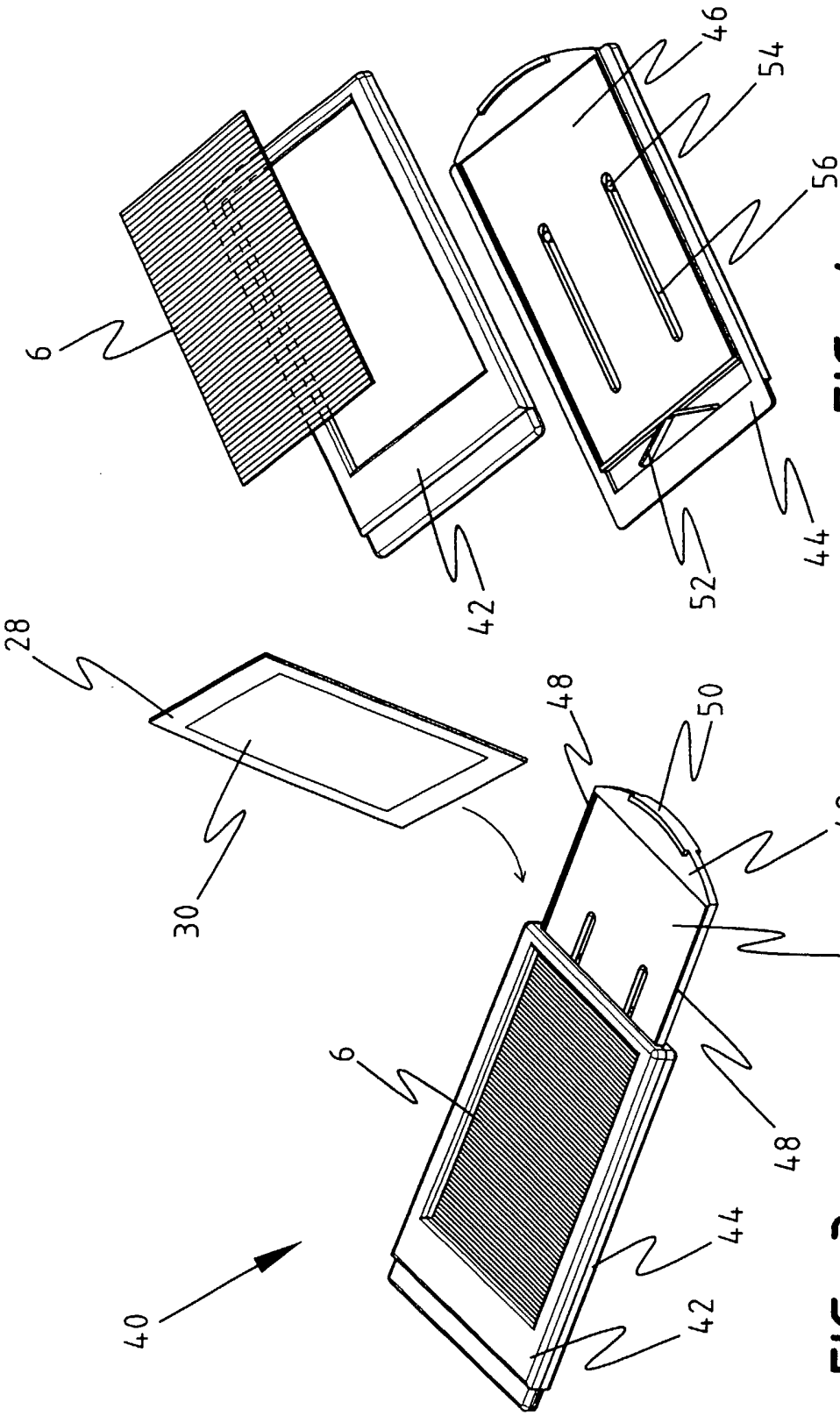


FIG. 3

FIG. 4