Feb. 4, 1964 F. S. REEVES 3,120,066

APPARATUS FOR FORMING COMPOSITE PICTURES

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FIG. 1

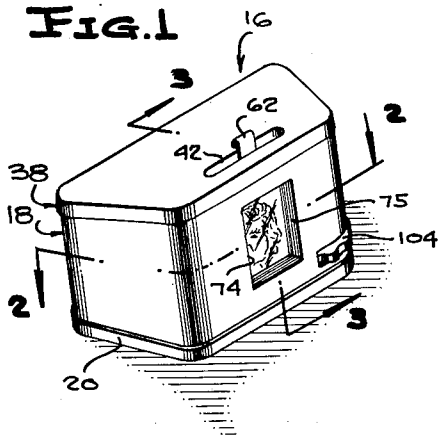


FIG. 2-A

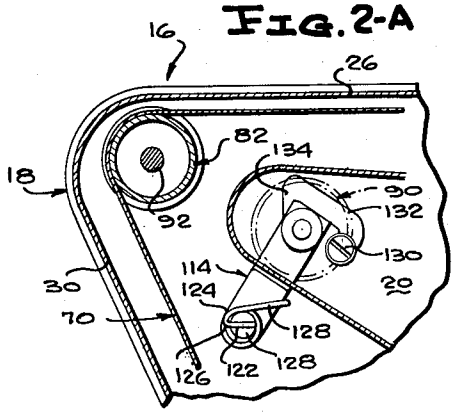


FIG. 2

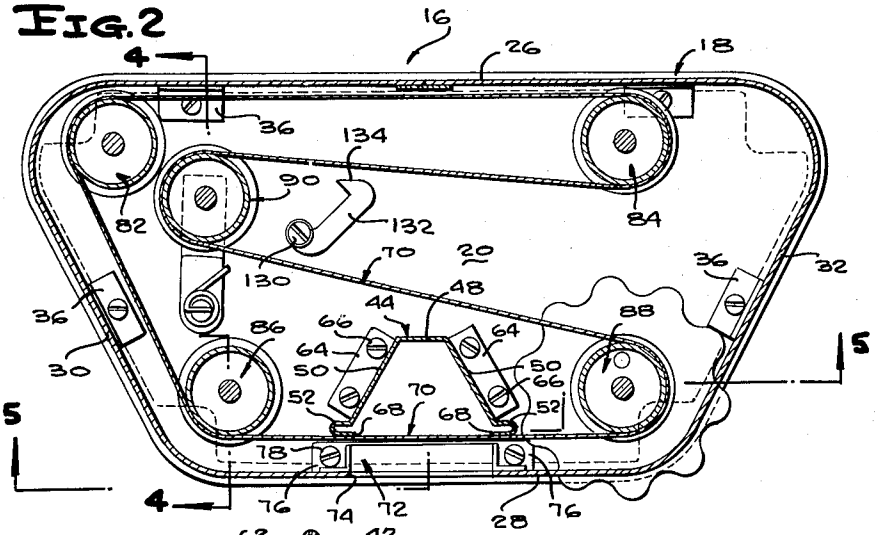
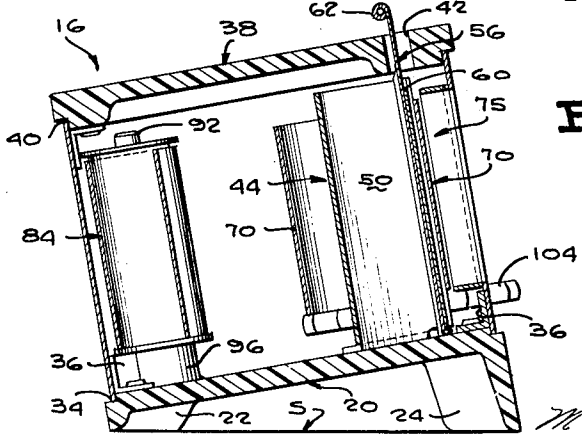


FIG. 3



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FIG. 4

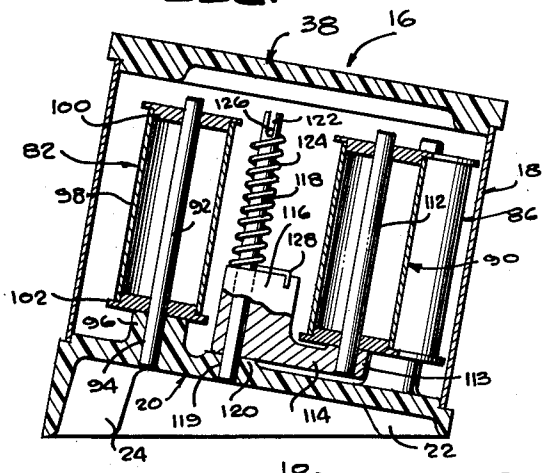


FIG. 6

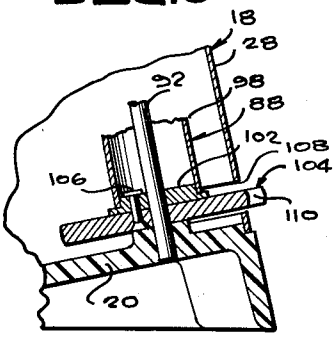


FIG. 5

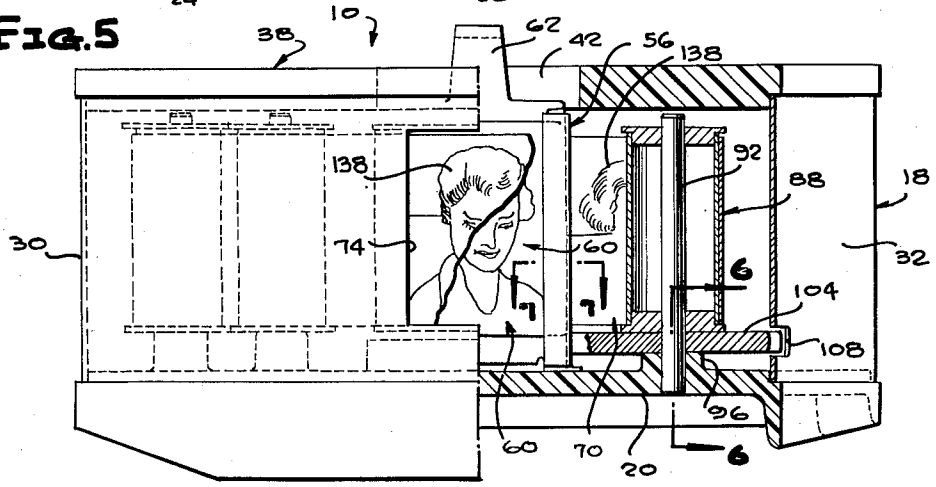


FIG. 8

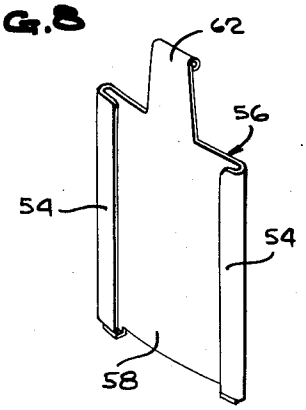
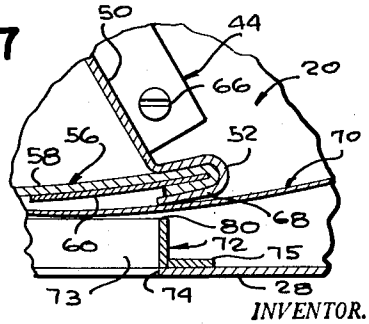


FIG. 7



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FIG. 11

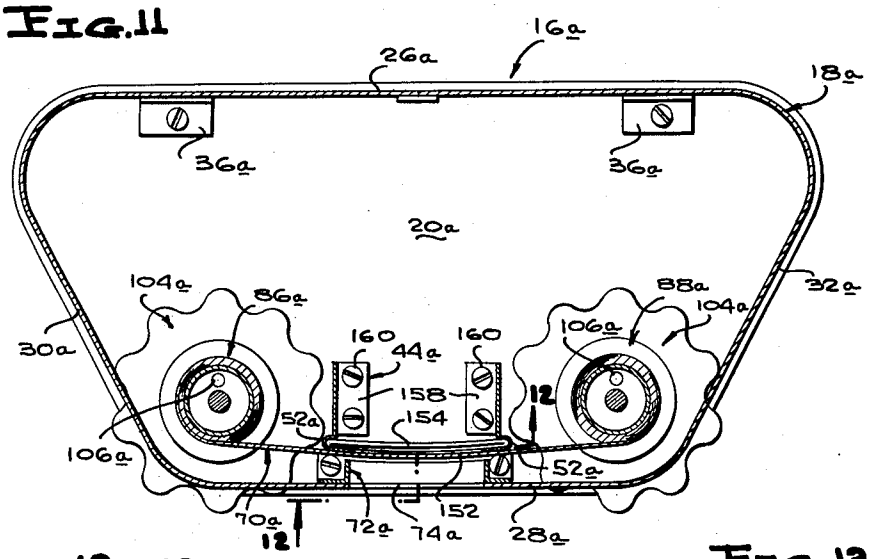


FIG. 12

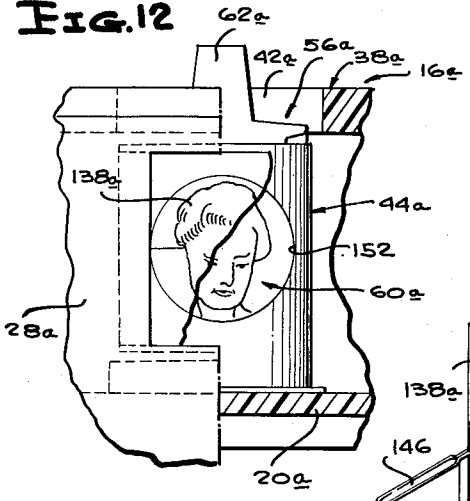
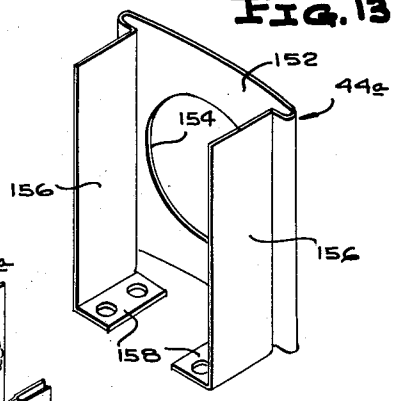


FIG. 13



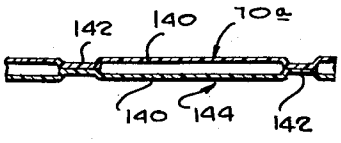
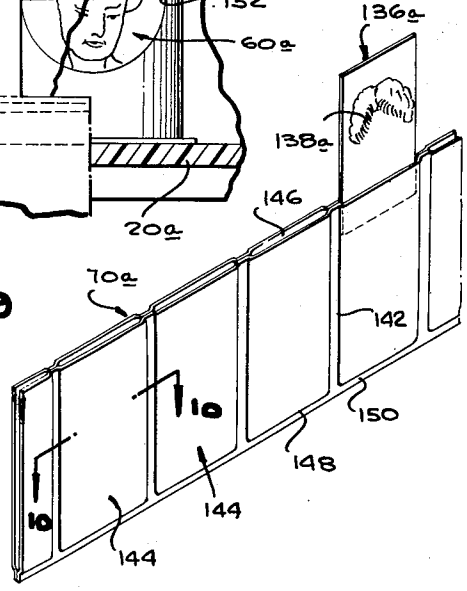


FIG. 10

FIG. 9



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3,120,066

APPARATUS FOR FORMING COMPOSITE PICTURES

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Substituted for abandoned application Ser. No. 28,888, May 13, 1960. This application June 8, 1962, Ser. No. 201,029

2 Claims. (Cl. 35—59)

This invention relates to improvements in apparatus for visually obtaining design concepts by selecting and imposing transparencies of different secondary design components upon a basic design component.

The primary object of the invention is the provision of apparatus of the character indicated which are more practical, accurate, and efficient, and are easier to operate, so as to be successfully usable by unskilled persons, in a variety of fields of endeavor, such as selection of hats, coiffures, and plastic surgery alterations of persons, and selections of such as automobile bodies relative to chassis.

Another object of the invention is to provide apparatus of the character indicated above which involves the use therein of either endless belts or strips, wound on spools, the belts or strips having longitudinally-spaced "frames" which are pockets for the changeable reception of different secondary design component transparencies to be compared, when superimposed on a photograph or other basic design component, the latter being removably mounted in a stationary holder.

A further object of the invention is to provide apparatus of the character indicated above which has a more efficient arrangement of spools, more efficient and reliably operative means for tensioning strips or belts on the spools and relative to the stationary basic design component, and more efficient means for operating a drive spool for quicker, easier, and more accurate registration of selected transparencies with the basic design component.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings, wherein, for purposes of illustration only, a specific form of the invention is set forth in detail:

FIGURE 1 is a perspective view of the apparatus of the present invention;

FIGURE 2 is an enlarged horizontal section taken on the line 2—2 of FIGURE 1, showing the belt tightened;

FIGURE 2*a* is a fragmentary horizontal section, like FIGURE 2, showing the belt loosened.

FIGURE 3 is a central vertical transverse section, on the scale of FIGURE 2, taken on the line 3—3 of FIGURE 1;

FIGURE 4 is a vertical transverse section taken on the line 4—4 of FIGURE 2;

FIGURE 5 is a partial vertical longitudinal section taken on the line 5—5 of FIGURE 2;

FIGURE 6 is a fragmentary vertical transverse section taken on the line 6—6 of FIGURE 5;

FIGURE 7 is a further enlarged fragmentary horizontal section taken on the line 7—7 of FIGURE 5;

FIGURE 8 is a perspective view of a photograph mount;

FIGURE 9 is a fragmentary perspective view of a pocket-equipped transparency belt or strip;

FIGURE 10 is an enlarged fragmentary section taken on the line 10—10 of FIGURE 9;

FIGURE 11 is a horizontal section taken through another form of apparatus of the invention, utilizing a transparency strip;

FIGURE 12 is a fragmentary vertical longitudinal section taken on the line 12—12 of FIGURE 1; and

FIGURE 13 is an enlarged perspective view of the photograph holder of FIGURE 11.

Referring in detail to the drawings, wherein like and related numerals designate like and related parts throughout the several views, and first to FIGURES 1 to 10 thereof, the apparatus or device therein shown, and generally designated 16, comprises a longitudinally and horizontally-elongated trapezoidal cabinet or casing 18, comprising a trapezoidal base 20 which has short rear feet 22 and longer front feet 24, which, when engaged with a supporting surface S, as shown in FIGURES 3 and 4, hold the casing in a rearwardly-tilted viewing angle, and facilitate visual inspection and use of the device. The cabinet or casing 18 further comprises a continuous upstanding wall which is composed of a long straight back wall 26, a shorter straight wall 28, and similar straight forwardly-converging end walls 30 and 32, respectively. The walls seat at their lower edges in a peripheral groove 34, extending around the base 20, and are removably secured to the base by means of upstanding L-shaped brackets 36. A top panel or cover 38, generally similar to the base, but lacking feet, has a peripheral groove 40 receiving the upper edges of the walls, and is removably secured thereon. The top panel or cover 38 has therein a longitudinal slot 42 which is centered between and spaced from the end walls 30 and 32.

A bracket 44, for such as a picture, photograph or other basic design card, is located centrally of and spaced behind the casing front wall 28, and comprises a V-shaped rigid sheet material body 48 having forwardly-diverging side walls 50 which are formed, at their forward edges, with vertical, laterally outwardly-extending, inwardly-opening slide channels 52 for slidably receiving the securing folds along the side edges of a photograph mount 56. As shown in detail in FIGURE 8, the mount 56 comprises a plate 58 of approximately the size and dimensions of a photograph 60, whose side edges are secured within the turned-over folds 54. The plate 58 has an upstanding ear or pull handle 62, centered on its upper edge, which facilitates insertion and vertical adjustment in and removal of the mount from the support bracket 44, through the cover slot 42. Lateral flanges 64 on the lower edges of the support bracket side walls 50 are secured, as indicated at 66, upon the base 20. As seen in FIGURE 2, the forward arms 68 of the slide channels 52 serve also as positioners for a flight of a transparency belt 70, relative to a stationary viewing frame 72.

The viewing frame 72 is rectangular and has an opening 73 substantially corresponding to the shape and size of the photograph 60, and is registered therewith, and with an opening 74 forward in the casing front wall 28. As shown in FIGURES 2 and 3, the frame 72 has lateral side flanges 75 bearing against the backside of the front wall 28, and has lateral bottom flanges 76 which rest upon the base 20, and are secured thereto, as indicated at 78. A space is provided between the rear edge 80 of the viewing frame 72, and the forward arms 68 of the slide channels 52, only wide enough to provide for free transit of a transparency belt therebetween.

Five upstanding vertical axis spools are mounted on the base 20 within the casing 18, and these include left-hand and right-hand rear idler spools 82 and 84, located at the rear corners of the casing, a left-hand front idler spool 86 located at the left-hand end of the casing front wall 28, a manually-operated drive spool 88 located at the right-hand end of the front wall 28, and a belt-tightener spool 90. The belt-tightener spool 90 is located between the left-hand front idler spool 86 and the left-hand rear idler

spool 82, and is near to and spaced longitudinally inwardly from the rear spool 82.

The spools, except the tightener spool 90, are similarly mounted on the base 20, each having a perpendicular shaft 92 having its lower end socketed, as indicated at 94, in an upstanding boss 96, a hollow core 98 surrounding the shaft and having upper and lower flanged heads 100 and 102 journaled on the shaft 92, the latter head bearing upon the boss 96. In the case of the driver spool 88, an enlarged diameter disc 104 is journaled on the shaft 92, between the boss 96 and the lower core head 102, and is secured to the lower head 102, by means of a rivet 106. The disc 104, as shown in FIGURES 2, 3, and 6, has a forward edge which extends to the exterior of the casing 18, at the juncture of the right-hand end of the front wall 28 and the adjacent casing end wall 32, through a horizontal slot 108 formed therein. The periphery of the disc 104 is formed with spaced finger notches 110, which facilitate accurate and assured rotation of the disc 104, in either direction.

The belt-tightener spool 90, as shown in FIGURES 2 and 4, is journaled on a vertical shaft 112 which is mounted on and projects upwardly from the free end 113 of a horizontal rock arm 114 which projects radially outwardly from a taller body 116 which is journaled on a vertical shaft 118, which is socketed, at its lower end, at 119, in a short boss 120 on the base 20. The shaft 118 is fixed, by suitable means, against rotation, and has a slot 122 in its upper end. A helical torsion spring 124, circumposed on the shaft 118 above the body 116, has a finger 126 on its upper end engaged through the slot 122, and a tangent arm 128, on its lower end, which is engaged with the right-hand side of the rock arm body 116, as shown in FIGURE 2, whereby the rock arm 114, and hence the tightener spool 90, are biased toward the left, for tightening a transparency belt trained therearound. Pivotally secured, as indicated at 130, on the base 20, at a point spaced longitudinally inwardly from the tightener spool 90, is a latch 132 having a leftwards-extending hook 134, on its free end, to be engaged around the free end 113 of the rock arm 114, so as to hold the tightener spool 90 in a right-hand belt-loosening position, as shown in FIGURE 2*a*, against the resistance of the spring 124, for facilitating the changing of belts, while the casing cover is removed.

The endless transparency belt, shown in FIGURES 1 to 8, and generally designated 70, is an endless strip of such as finished photographic film having thereon transparency frames therealong, each of which is a different secondary design component 138, such as a coiffure, devoid of a face, and positioned within the frames so that the secondary design components 138, when registered horizontally and vertically with the basic design component or photograph 60, in the mount 56 engaged in the bracket 44, provides a composite design concept, as shown in FIGURE 5, which shows how the coiffure would look, relative to the head and face of a person depicted on the photograph, the belt 70 being movable by means of the disc 104, to register different ones of the belt frames 136 with the photograph 60, so as to enable making selection of one or more judicious and becoming coiffures for the person of the photograph.

As shown in FIGURE 2, the belt 70 is trained around the front sides of the front spools, including the drive spool 88, around the tightener spool 90, and between the drive spool 88 and the right-hand rear idler spool 84, and around the left-hand rear idler spool 82, and the latch 132 is then disengaged from the free end 113 of the rock arm 114, so that the spring 24 rotates the rock arm 114 and tightens the belt 70 around the spools. The belt 70 is loosened on the spools by pushing the tightener spool 90 toward the right and then engaging the latch 132 with the lever 114, whereupon the belt 70 can be freely lifted off the spools, and be as easily replaced with the same or another belt.

In FIGURES 9 and 10, another form of belt or strip, generally designated 70*a* is shown, which is formed of two plies 140 of flexible transparent material, which are secured together at intervals along the plies, as indicated at 142, so as to define individual pockets 144, having open upper ends 146, and having closed lower ends 148, obtained by securing together the bottom edges of the plies, as indicated at 150. Individual secondary design component transparencies or frames 136*a* can then be changeably inserted in the pockets 144, in order to obtain the effect of changing a belt or strip on which the frames are integral, without having to change the belt or strip off the spools.

In FIGURES 11 to 13, another device of the invention, generally designated 16*a* is shown, which can take particular advantage of the transparency strip 70*a*, shown in FIGURES 9 and 10, since only two front spools 86*a* and 88*a* are employed, both of which are driver spools, and the ends of the strip 70*a* are individually wound around the spools 86*a* and 88*a*, and strip "changes" can be effected merely by changing transparency frames 136*a*, in the pockets 144.

The device 16*a* of FIGURES 11 to 13, is otherwise similar in construction to the device of FIGURES 1 to 8, except for the holder 44*a*, which comprises, as shown in FIGURE 13, a flat vertical front plate 152 having a centered circular viewing opening 154 therein, and vertical channels 52*a* on the side edges of the plate 152 are on its rear side, and terminate in vertical parallel spaced flanges 156 which have inturned lateral flanges 158 on their lower ends, which are secured, as indicated at 160, upon the base 20*a*.

This application is a substitute of application Serial No. 28,888, filed May 13, 1960, now abandoned.

What is claimed is:

1. A viewing apparatus for making composite pictures, comprising:

(*a*) a cabinet unit having a front panel with a viewing opening therein;

(*b*) a top panel on said cabinet having a slot therethrough positioned behind and in direct alignment with said viewing opening;

(*c*) a picture disposed within said cabinet directly behind said viewing opening and in alignment therewith;

(*d*) a generally flat picture mount disposed within said cabinet directly behind said viewing opening and immediately below said slot, said picture mount having retaining channels into which the edges of said picture are fitted;

(*e*) a picture mount support bracket within said cabinet for holding said picture mount in line with said viewing opening and said slot, said picture mount support bracket having holding means which receives said picture mount in sliding relation along a vertical line, permitting vertical positioning adjustment of said picture mount;

(*f*) a pull handle on the top of said picture mount of sufficient length to extend upwardly through said slot to facilitate removal and insertion of said picture mount, and also allow ready adjustment of the vertical position of the picture mount with respect to said viewing opening;

(*g*) a horizontally movable transparency belt disposed in said cabinet which passes between said picture and said viewing opening, and has different horizontally spaced vertically aligned design configurations of the same type thereon, spaced so that only one design configuration at a time shows through said viewing opening, each of said design configurations being dimentioned so that it may be superimposed over a part of said picture to produce a composite pictorial representation showing the design configuration as a part of said picture, said design being a specific part of said overall pictorial representation and being

fitted on said picture at a particular location, said design forming a peripheral portion of said composite pictorial representation;

(*h*) a vertical driving spool disposed within the cabinet at one side of said picture and having a central rotatable cylindrical portion supporting said transparency belt, and being positioned so that said transparency belt leaves the said cylindrical portion and passes between said picture and the said viewing opening;

(*i*) a vertically disposed front idler spool within said cabinet on the other side of said picture mount and having a central cylindrical section supporting said transparency belt;

(*j*) tensioning means in said cabinet having a spring member so that a continuous pull is transmitted to said transparency belt to keep it taut so that the belt is held in correct aligned position with respect to the picture and is readily driven by rotation of said driving spool;

(*k*) a driving knob connected to said driving spool to produce a rotational movement thereof, so that successive design configurations may be moved horizontally into position across the face of said picture;

(*l*) manipulation of said driving knob and said pull handle permitting adjustment of the composite pictorial representation, movement of the driving knob effecting horizontal adjustment of a given design configuration with respect to said picture, while vertical movement of the pull handle vertically adjusts the picture with respect to the design configuration on said transparency belt, to locate the picture within said peripheral portion.

2. The viewing apparatus for making composite pictures as set forth in claim 1 wherein the design components on the transparency belt are coiffures, and the picture has a person's face thereon.

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