Sept. 30, 1952 E. H. LAND 2,612,449

IMAGE-RECEIVING PHOTOGRAPHIC ELEMENT COMBINED WITH A PROCESSING CONTAINER

Filed Feb. 2, 1950 2 SHEETS—SHEET 1

FIG. 1

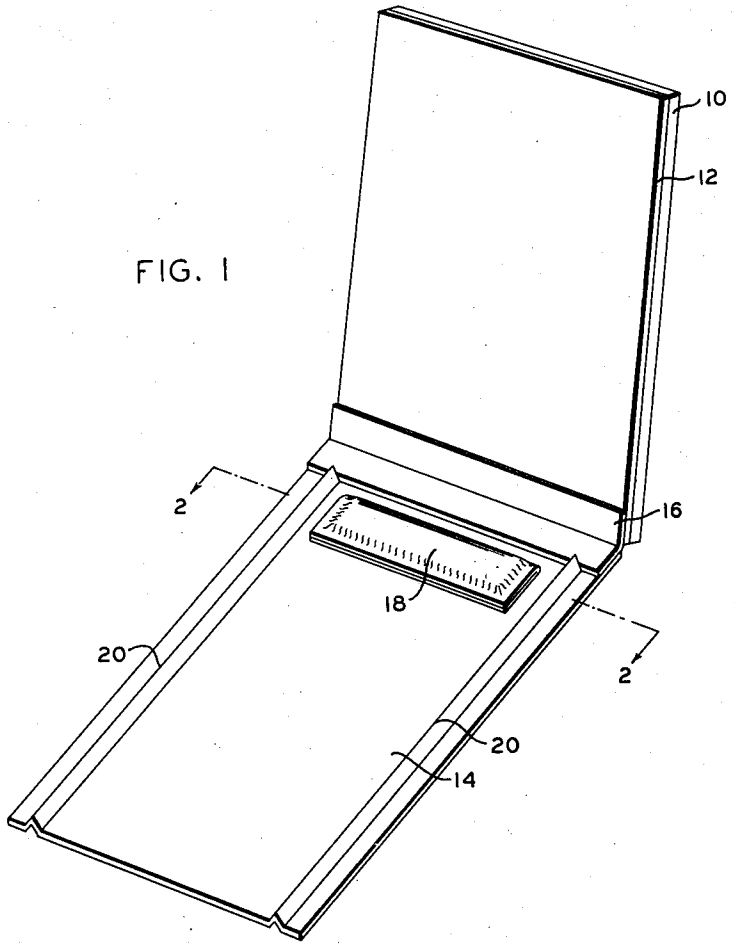
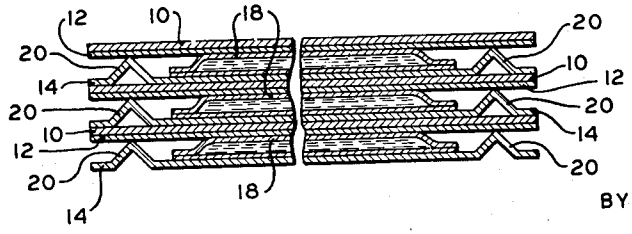


FIG. 2



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FIG. 4

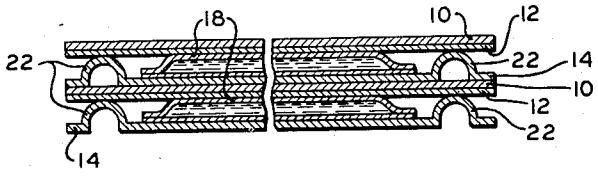
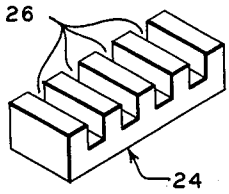


FIG. 5



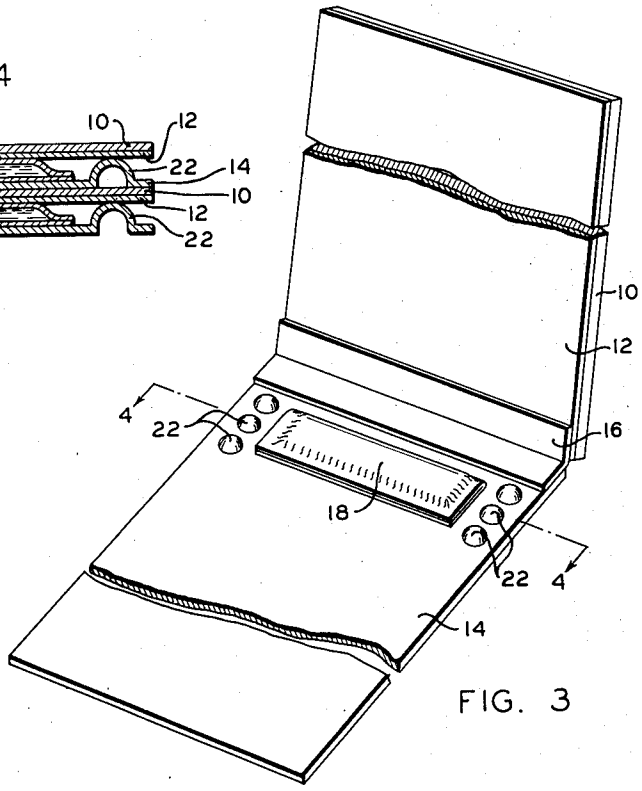
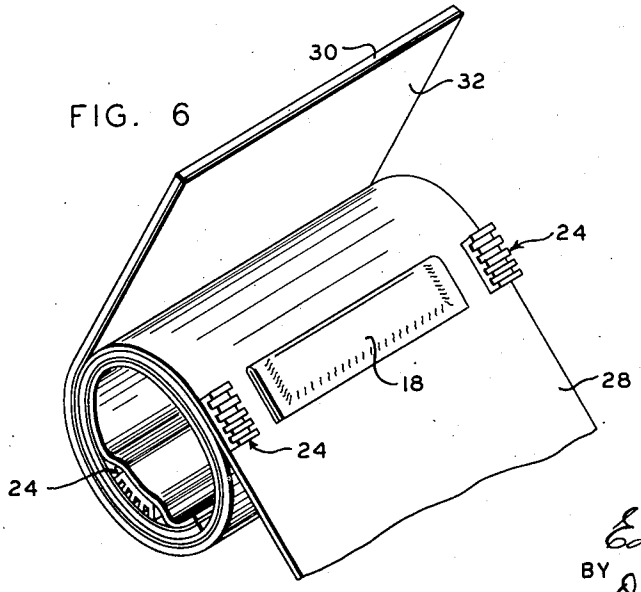


FIG. 3

FIG. 6



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UNITED STATES PATENT OFFICE

2,612,449

IMAGE-RECEIVING PHOTOGRAPHIC ELEMENT COMBINED WITH A PROCESSING CONTAINER

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Application February 2, 1950, Serial No. 141,905

17 Claims. (Cl. 95—8)

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This invention relates to photography and more particularly to novel composite photographic films and/or image-carrying layers having incorporated therewith a liquid-carrying container.

This application is a continuation-in-part of my copending application Serial No. 709,054, filed November 9, 1946, for "Light-Sensitive Photographic Element Combined with Processing Container," now abandoned.

One object of the present invention is to provide a novel photographic unit having a layer of material adapted to receive a photographic image and a liquid-carrying container attached to said layer and adapted to predeterminedly release its contained liquid to participate in an image-forming reaction, wherein means are associated with said layer to prevent said container from being prematurely ruptured.

A further object of the present invention is to provide a novel photographic unit as described above wherein the layer of material comprises a photosensitive layer.

A further object of the present invention is to provide a novel photographic unit as described above wherein the layer of material comprises a nonphotosensitive image-carrying layer.

A further object of the invention is to provide a novel photographic unit having a photosensitive layer and an image-carrying layer between which is interposed a liquid-carrying container adapted to predeterminedly release the contents thereof and means to prevent said container from prematurely releasing said contents.

A further object of the invention is to provide a novel photographic unit having a photosensitive layer and an image-carrying layer between which is interposed a liquid-carrying container capable of releasing the contents thereof on application of mechanical stress thereto and means to prevent said container from being prematurely ruptured but which will not interfere with the predetermined release of said contents to spread the contained liquid between said layers to participate in an image-forming reaction.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the product possessing the features, properties and relation of components which are exemplified in the following detailed disclosure, and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had

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to the following detailed description taken in connection with the accompanying drawings wherein:

Figure 1 is a perspective view of a photographic unit embodying one form of the invention;

Fig. 2 is a sectional view of a stack of photographic units disclosed in Fig. 1 and taken along line 2—2 of Fig. 1;

Fig. 3 is a perspective view of a photographic unit embodying a second form of the invention;

Fig. 4 is a sectional view of a stack of photographic units disclosed in Fig. 3 and taken along line 4—4 of Fig. 3;

Fig. 5 is a perspective view of a modification for use with roll film; and

Fig. 6 is a perspective view showing the modification of Fig. 5 applied to roll film.

The present invention relates generally to a novel photographic product in the form of a sheetlike assemblage comprising as parts thereof a layer of material and means releasably containing a liquid, said liquid-containing means being preferably so constructed that the contents thereof can be spread over a predetermined area of said layer. Both said layer and said liquid are adapted to participate in an image-forming reaction whereby a desired visible image is obtained in said assemblage, said layer cooperating with said liquid at least to the extent of spreading the same uniformly over the image area.

In its preferred form, the means for carrying and releasing the liquid composition comprises an elongated container of podlike construction containing the liquid composition and mounted on said layer adjacent one edge of the area over which it is desired to spread said liquid composition and adapted on application of a mechanical stress thereto, such as a compressive force, to release and to spread its contents over said area. This spreading is preferably accomplished while said layer is in substantially face-to-face contact with another layer of material. In one form of the present invention the composite structure may comprise both of said layers and the liquid-carrying means, and the liquid-carrying means may be attached to either of said layers. One of said layers may be a photosensitive layer and the liquid in the liquid-carrying means is adapted to at least develop a latent image in said photosensitive layer.

According to the present invention, the layer on which said container is mounted is preferably so constructed with respect to said container that a plurality of the sheetlike assemblages may be stacked in superimposed relation and a pressure

up to a predetermined pressure in excess of that normally necessary to release the liquid from the container may be applied to said superimposed layers, tending to press the same together without actually transmitting sufficient pressure to said liquid-carrying means to effect the release of the liquid therefrom.

Referring now to Figs. 1 and 2 of the drawings, there is shown a novel composite photographic film unit of the type comprising a base layer 10 carrying on one surface thereof a photosensitive layer 12. Another layer 14 is also provided which, in a preferred form of the invention, is an image-carrying layer. The photosensitive layer assembly, i. e., the base layer 10 and the photosensitive layer 12, is connected to the image-carrying layer 14 by means of a hinge 16. Between the photosensitive layer 12 and the image-carrying layer 14 there is provided a liquid-carrying container 18 capable of releasing the contents thereof. In the drawings the liquid-carrying container 18 is shown as attached to the image-carrying layer 14 but it may be attached to the photosensitive layer. Container 18 is so constructed that upon application of a compressive force thereto the liquid content thereof is released between layers 12 and 14 and the liquid content thereof is preferably of such character as to develop a latent image formed in layer 12 and to provide layer 14 with a reversed image of said latent image.

The base layer 10 is preferably made of a suitable material adapted to hold a photosensitive emulsion on its surface. It can be paper or a cellulosic film base such as cellulose acetate, cellulose nitrate or cellulose acetate butyrate, and preferably contains a dye to make it opaque. It also preferably has an antihalation coating thereon. The photosensitive layer 12 preferably comprises an emulsion of a silver halide or of a mixture of silver halides or of a mixed silver halide. The liquid composition in the container 18 preferably comprises a developer such as hydroquinone, a film-forming substance such as sodium carboxymethyl cellulose and a substance adapted to form, from a latent photosensitive image, positive image-forming components. This latter substance preferably forms soluble complexes with the unexposed silver halide and in a preferred form of the invention is sodium thiosulfate. There may also be included in this liquid composition other substances, such as a preservative and an alkali, and water to carry all of the above-named substances in solution. The container 18 is preferably formed of an oxygen and water-vapor impervious material such, for example, as a sheet of wax-impregnated metal-coated paper, or wax-coated metal foil, or a metal foil coated with a resin, such as polyvinyl butyral, which is inert to alkalies.

Inasmuch as it is advantageous to load several of the composite photographic films in the form of a film pack into a camera at one time, means are provided to protect the container 18 and prevent its being prematurely ruptured. In the embodiment disclosed in Figs. 1 and 2 these protecting means take the form of folds or embossed portions 20 extending along the marginal portions of the image-carrying layer 14 adjacent the ends of container 18 and of sufficient height so that their tops are substantially level with or slightly higher than the top of the container 18. Thus, when a plurality of the composite photographic films are stacked, as illustrated in Fig. 2, the tops of the folds or embossed portions 20 bear against the surface of the photosensitive layer and prevent the transmission of crushing forces which would prematurely rupture the container 18.

The image-carrying layer 14 is preferably made of relatively stiff material so that the folds or embossed portions 20 will have sufficient resistance to normal crushing forces. This image-carrying layer can be formed of a relatively thick and stiff sheet of baryta paper.

The means employed to apply a compressive force to the individual assemblages to release the liquid composition carried by container 18 and spread the contained liquid between the photosensitive layer 12 and the image-carrying layer 14 will preferably be a wringer, the rolls of which will preferably be of a width to pass between the folds or embossed portions 20. However, it will appreciated that the image-carrying layer 14 may be made of material having sufficient strength to resist normal crushing when the composite films are in stacked relation but which is not sufficiently strong to resist crushing when one unit is passed through the aforementioned wringer to process the film so that the rolls of the wringer can span the whole film unit.

Turning now to Figs. 3 and 4 there is disclosed a composite photographic film which is similar to that disclosed in Figs. 1 and 2 except except for the means to resist premature release of the liquid composition carried by container 18.

In the modification of the invention disclosed in Figs. 3 and 4 a plurality of dome-shaped protuberances 22 are formed in the marginal portions of the image-carrying layer adjacent to the ends of container 18. The height of the dome-shaped proturberances 22 is such that their tops are substantially in a plane with or slightly above the top of container 18.

Turning now to Fig. 5, there is disclosed a third means for preventing premature release of the liquid carried by the container and which is particularly adapted for use with composite photographic films which are wound on spools to take the form of roll film, but which may be employed in flat composite films of the type disclosed in Figs. 1 through 4, if desired. The means to prevent crushing of the liquid-carrying container which is disclosed in Fig. 5 is preferably made of a flexible material as, for example, rubber, cardboard, or a flexible plastic.

The crush-resistant element 24 disclosed in Fig. 5 consists of an elongated body portion of substantially the same height as container 18 and having formed therein by molding, stamping, or cutting, a plurality of transverse grooves or notches 26 which extend down through a substantial proportion of the body portion. The grooves or notches 26 function to permit the element to bend readily to conform to the curvature of a roll of film and to return to a flat position when the composite film is unrolled to pass through a camera for exposure and processing.

Fig. 6 illustrates a composite photographic roll film having the crush-resisting elements of Fig. 5 incorporated therein. The composite photographic roll film comprises an elongated image-carrying layer 28 of sufficient length to receive a plurality of positive picture images, and a base layer 30 which carries a photosensitive layer 32 of sufficient length to receive a plurality of latent picture images. The layers 28, 30, and 32 are preferably formed from the same materials as layers 10, 12, and 14 of Figs. 1 and 3. There is interposed between the photosensitive layer 32 and the image-carrying layer 28, and attached

to the image-carrying layer by means of a suitable adhesive, a plurality of the liquid-carrying containers 18, each of which is located between two of the crush-resistant elements 24 which are attached by means of a suitable adhesive to the marginal portions of the image-carrying layer 28.

It will be apparent that when the crush-resistant element 24 is employed in a composite photographic film the rolls of the processing wringer must be narrow enough to pass between the two elements 24 to insure that a compressive force will be applied to container 18 and that all of the contained liquid will be spread evenly between the image-carrying layer and the photosensitive layer.

In all of the modifications of the invention discussed above, the liquid-carrying container 18 and the means to resist crushing have been shown as attached to or formed from the image-carrying layer of the composite film. It will be appreciated that the liquid-carrying container and the means to resist crushing can be attached to the photosensitive layer, or that the means to resist crushing can be attached to or formed from one layer and the container attached to the other layer.

It will also be appreciated that stacks or rolls can be made up which comprise only, for example, the image-carrying layers having attached thereto or formed therein liquid-carrying containers and the means to resist crushing, or the stack or roll may comprise only the base layer and photosensitive layer plus the containers and crush-resistant means. Such a roll or stack would be used in a camera in which the missing layer would be supplied from a second stack or roll after an exposure has been made and before the film passes through the wringer to be processed.

In the products hereinabove described there is provided in container 18 a liquid capable of processing photosensitive layer 12. In the preferred form of the products, photosensitive layer 12 is a silver halide emulsion or the like and the liquid released from container 18 cooperates with the emulsion and with the image-receiving layer 14 to carry out a transfer process. This transfer process in one preferred form involves the development of a latent image in the emulsion and the removal from that emulsion of part at least of undeveloped silver halide as a soluble complex, which soluble complex is transported from the photosensitive layer to form the positive print. However, it will now be apparent that by so forming the products as to omit therefrom the substance for forming the soluble complex it becomes possible to only develop the silver halide emulsion. It is believed to be also evident now that developable photosensitive materials other than silver halides may constitute the photosensitive layer 12 which is processed and that the product may carry suitable developing agents and such other liquid as is necessary to render said agents operative to effect the development of the photosensitive layer.

Certain diazonium compounds are destroyed by light and photographic processes involving such compounds as their photographic materials have been used commercially. There are several known ways in which a diazonium salt layer may be exposed and developed to produce a relatively stable image. In each of these processes the treatment of the photosensitive diazonium layer may be accomplished by applying thereto a liquid containing certain developing reagents. (L. P. Clerc, "Photography Theory and Practice," second edition, published 1937 by Pitman Publishing Company, page 444, paragraph 693.)

The products of the present invention may be used in conjunction with or may comprise as elements thereof diazonium photosensitive layers. For example, in the product of Fig. 1 the photosensitive layer 12 may have as its photosensitive substance a diazonium compound such as that sold by the Boston Blue Print Company under the name "Blackline #202," and the liquid reagent in the container 18 then preferably comprises a mixture of sodium carboxymethyl cellulose, water and "Blackline" developer #203½ (sold by Boston Blue Print Company and manufactured by Frederick Post Company, Chicago). In the alternative, the photosensitive layer 12 may be obtained by applying to one side of a suitable sheet material a sensitizing solution which consists of 20 grams of chlorostannate of para-diazo-di-H-butyl-aniline, 0.4 gram of Pontacyl Brilliant Blue 2R, and 1 liter of water. The liquid-developing reagent in the container 18 then preferably comprises, by weight, 4 parts of medium viscosity sodium carboxymethyl cellulose, 100 parts of water, 5.8 parts of sodium carbonate (monohydrate) and 2.3 parts of phloroglucinol.

It is also well known that certain ferric salts of organic acids, for example the oxalates, tartrates, and citrates, are reduced to ferrous salts when exposed to light. (L. P. Clerc, "Photography Theory and Practice," second edition, published 1937 by Pitman Publishing Company, page 402, paragraph 621 et seq.; Crowley Patents Nos. 2,093,421, 2,113,423, 2,130,070, 2,130,071, 2,137,015.) A considerable number of photographic processes depend for their functioning on these photochemical phenomena. It is known in connection with these iron salts that any reagent that will differentiate between ferric and ferrous salts can be used to develop the barely visible image formed by the photochemical reduction of the ferric salt into an image which is very easily visible. Examples of such developing reagents are potassium ferricyanide, potassium ferrocyanide, tannins, gallic acid, B-naphthoquinone-sulphonic acid, silver salts, platinum and palladium salts. It is believed to be now apparent to one skilled in the art that the photoresponsive ferrous salts may constitute the photosensitive material of the photosensitive layer 12, and the liquid in the container 18 may include or dissolve in its travel to the photosensitive layer any one of the aforementioned developing reagents for distinguishing between the ferric and ferrous salts and producing the easily visible image from the very light image that is originally obtained by the photoexposure of the iron salts.

Broadly, the products of the present invention may comprise, or may be used with, any photographic, photosensitive material for the purpose of developing the same. It is to be understood that the invention is not limited to materials sensitive to visible radiation but includes photographic, photosensitive materials sensitive to such other radiation as X-ray, ultraviolet or infrared. For example, the photosensitive unit of Fig. 6 may have layers 30 and 28 thereof opaque to visible and near-visible radiation actinic to layer 32 so that the same may be handled in the daylight without having the photosensitive layer thereof photoexposed. Exposure of the photosensitive layer may be suitably accomplished by means of X-ray or gamma radiation. The resulting product is thus particularly suitable for use in the taking of X-ray pictures and may also

be used for detecting and for giving, when processed, a visible indication of the extent of the presence of nuclear radiation, i. e., of radiation such as is associated with X-rays, radium, uranium and other natural or artificial radioactive materials, and particularly gamma radiation, beta radiation and neutron radiation. Photosensitive units of the latter type, suitable for detecting the presence of nuclear radiation, are disclosed in my copending application Serial No. 118,596, filed September 29, 1949, for "Radiation Detection Devices." The novel structures herein described may be suitably adapted for use in similar units.

The term "photographic developing reagent" as used herein is intended to include any reagent which acts to render a visible image more visible, as in the case of the ferric salts, or an invisible image visible, as in the case of the silver halide emulsions. The term "development" is intended to cover the treatment of any photographic, photosensitive material for the purpose of rendering an image formed therein by photoexposure visible or more visible. The photoexposure may, of course, be the result of exposure to any type of radiation actinic to the photosensitive material.

Since certain changes may be made in the above products without departing from the scope of the invention herein involved, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A composite photographic unit comprising a photosensitive layer and an image-carrying layer, a liquid-carrying container capable of releasing the contents thereof on application of mechanical stress thereto between said layers, and means between said layers and adjacent said container to resist crushing of said photographic unit and prevent said container from prematurely releasing said contents, said means comprising projections formed from the material of one of said layers and being of sufficient height to contact the other layer.

2. A composite photographic unit comprising a photosensitive layer and an image-carrying layer, a liquid-carrying container capable of releasing the contents thereof on application of mechanical stress thereto between said layers, and means between said layers and adjacent said container to resist crushing of said photographic unit and prevent said container from prematurely releasing said contents, said means comprising ridges formed in one of said layers and being of sufficient height to contact the other layer.

3. A composite photographic unit comprising a photosensitive layer and an image-carrying layer, a liquid-carrying container capable of releasing the contents thereof on application of mechanical stress thereto between said layers, and means between said layers and adjacent said container to resist crushing of said photographic unit and prevent said container from prematurely releasing said contents, said means comprising dome-shaped protuberances formed from the material of one of said layers and being of sufficient height to contact the other layer.

4. A composite photographic unit comprising a photosensitive layer and an image-carrying layer, a liquid-carrying container capable of releasing the contents thereof on application of mechanical stress thereto between said layers, and means between said layers and adjacent said container to resist crushing of said photographic unit and prevent said container from prematurely releasing said contents, said means comprising an element having a plurality of transverse grooves therein attached to one of said layers and being of sufficient height to contact the other layer.

5. A product containing a photographic processing agent and capable of processing a photographic, photosensitive element, said product comprising a sheet support, an elongated container holding a liquid dispersion of a film-forming colloid, said container being mounted on one surface of said sheet support, longitudinally extending portions of said container being uniformly more rupturable than other portions of the container and providing upon rupture a liquid-dispensing passage extending along a substantial length of the container, that portion of said container farthest from said surface being a predetermined distance therefrom, the container walls being at least in part deformable and flexible for transmitting to the container contents externally applied pressure of sufficient magnitude to rupture said more rupturable portions, said sheet support providing a spreading area extending substantially perpendicularly from the long dimension of said container and at least as wide as the length of said rupturable liquid-dispensing portion of the container onto which area said container contents are spreadable from said liquid-dispensing portion, said liquid dispersion providing said area with a film of said colloid, the spreading of the container contents placing said processing agent in condition for processing a corresponding area of a photosensitive element, and means positioned adjacent the ends of said liquid-dispensing passage and adapted to prevent said container from prematurely releasing said liquid dispersion, said means being exterior of said container and positioned so as not to interfere with release of said liquid dispersion from said passage, said means comprising at least one element of predetermined compressibility, said element being secured to said surface of said sheet support and providing a surface spaced from said surface of said sheet support by a distance substantially as great as said predetermined distance.

6. A photographic product comprising a plurality of rupturable containers, each container holding a liquid having dispersed therein a thickening agent, each container being rupturable upon application of a predetermined pressure thereto, a sheet support upon which said containers are mounted, said containers being spaced lengthwise of said support, the surface of said sheet support, upon which said containers are mounted, having a plurality of liquid-receiving areas, one of said areas being adjacent each of said containers and being greater in area than the area covered by said container, that portion of each container farthest from said surface of said sheet support being a predetermined distance from said surface, the liquid in each container being sufficient in amount to cover the liquid-receiving area adjacent thereto and to provide thereon a continuous film of said liquid, said product containing a photographic image-transforming reagent, and a plurality of means exterior of said containers and associated with said sheet support, one said means being adjacent each container and adapted to prevent said container from prematurely releasing said liquid, each con-

tainer and the portion of said sheet support within the receiving area associated therewith containing said reagent in an amount sufficient to transform an image in an area of a photosensitive, photographic element equivalent to said liquid-receiving area, the container contents, when spread on said liquid-receiving area, placing said reagent in condition to effect an image transformation, each said means being resistant to crushing forces greater than said predetermined pressure, each said means comprising at least an element of predetermined compressibility associated with said surface, the last-named element having opposed surfaces that are spaced apart by a distance at least as great substantially as said predetermined distance, said sheet support being in the form of a roll, said opposed surfaces of said last-named element being in contact with successive layers of said roll.

7. The product of claim 6 wherein each said means comprises projections formed from the material of said sheet support.

8. The product of claim 6 wherein each said means comprises dome-shaped protuberances formed from the material of said sheet support.

9. The product of claim 6 wherein each said means comprises an element having a plurality of grooves therein, said grooves extending transversely of said sheet support, said element being attached to said sheet support.

10. A composite photographic unit comprising a first layer and a second layer, said layers being adapted to be juxtaposed so that a surface of said first layer and a surface of said second layer are in superposition, one of said surfaces being photosensitive, a container associated with said surface of said first layer, said container carrying a liquid for processing said photosensitive surface and being capable of releasing said liquid upon application of mechanical stress thereto, that portion of said container farthest from said surface of said first layer being substantially a predetermined distance from said surface of said first layer, and means normally preventing application of mechanical stress to said container, said means comprising at least an element of predetermined compressibility associated with one of said layers, said element providing a portion that is adapted to abut against the other of said layers, the last-named portion being spaced from said one layer by a distance at least substantially as great as said predetermined distance.

11. A composite photographic unit comprising a first layer and a second layer, said layers being adapted to be juxtaposed so that a surface of said first layer and a surface of said second layer are in superposition, said layers comprising at least a photosensitive area, a container secured to said surface of said first layer, said container carrying a liquid for processing said photosensitive area and being capable of releasing said liquid upon application of mechanical stress thereto, that portion of said container farthest from said surface of said first layer being substantially a predetermined distance from said surface of said first layer, and means normally preventing application of mechanical stress to said container, said means comprising at least two elements of predetermined compressibility, each of said elements being secured to one of said surfaces and providing a portion that is in abutment with the other of said surfaces, said elements being closely adjacent to said container on opposite sides thereof, the last-named portion being spaced from said one surface by a distance substantially as great as said predetermined distance.

12. A composite photographic unit comprising a layer provided with a first surface having a predetermined area thereof adapted to receive a photographic image, a container attached to said first surface adjacent said area, said container carrying a liquid, said container being adapted to confine said liquid notwithstanding application of a predetermined mechanical stress thereto and being adapted to release said liquid for spreading across said area upon application of more than said predetermined mechanical stress thereto, that portion of said container farthest from said first surface, when said predetermined mechanical stress is being applied to said container, being a predetermined distance from said first surface, and means normally preventing application of pressure to said container, said means comprising at least an element of predetermined compressibility associated with said first surface, said element providing a second surface contacting said layer and a third surface spaced from said first surface by a distance at least substantially as great as said predetermined distance.

13. A composite photographic unit comprising a layer provided with a first surface having a predetermined area thereof composed of a photosensitive silver halide, a container associated with said first surface adjacent said area, said container carrying a liquid reagent including a developer for silver halide, said container being adapted to confine said liquid reagent notwithstanding application of a predetermined mechanical stress thereto and being adapted to release said liquid reagent for spreading across said area upon the application of more than said predetermined mechanical stress thereto, that portion of said container farthest from said first surface, when said predetermined mechanical stress is applied to said container, being a predetermined distance from said first surface, and means normally preventing application of pressure to said container, said means comprising at least an element of predetermined compressibility associated with said first surface, said element providing a second surface contacting said layer and a third surface spaced from said second surface by a distance substantially equal to said predetermined distance.

14. A composite photographic unit comprising a first layer and a second layer, said layers being adapted to be juxtaposed so that a surface of said first layer and a surface of said second layer are in superposition, said layers comprising at least a photosensitive area, a container secured to said surface of said first layer, said container carrying a liquid for processing said photosensitive area and being capable of releasing said liquid upon application of mechanical stress thereto, that portion of said container farthest from said surface of said first layer being substantially a predetermined distance from said surface of said first layer, and means normally preventing application of mechanical stress to said container, said means comprising at least one element of predetermined compressibility, said element being secured to one of said surfaces and providing a portion that is adapted to abut against the other of said surfaces, said element being closely spaced from said container, the last-named portion being spaced from said one surface by a distance that is substantially as great as said predetermined distance.

15. The photographic unit of claim 14 wherein

the photosensitive area includes silver halide as its photosensitive material and wherein there is contained a developer for said photosensitive material which is rendered effective to develop the photosensitive area upon release of the contents of the liquid-carrying container between the adjacent surfaces of said layers.

16. The photographic unit of claim 14 wherein the photosensitive area includes a ferric salt of an organic acid as its photosensitive material and wherein there is contained a developer for said photosensitive material which is rendered effective to develop the photosensitive area upon release of the contents of the liquid-carrying container between the adjacent surfaces of said layers.

17. The photographic unit of claim 14 wherein the photosensitive area includes a diazonium compound as its photosensitive material and wherein there is contained a developer for said photosensitive material which is rendered effective to develop the photosensitive area upon release of the contents of the liquid-carrying container between the adjacent surfaces of said layers.

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