Aug. 4, 1959 E. H. LAND ET AL 2,898,208

PHOTOGRAPHIC PRODUCT INCLUDING MEANS CONTAINING A PROCESSING LIQUID

Filed May 12, 1954 2 Sheets-Sheet 1

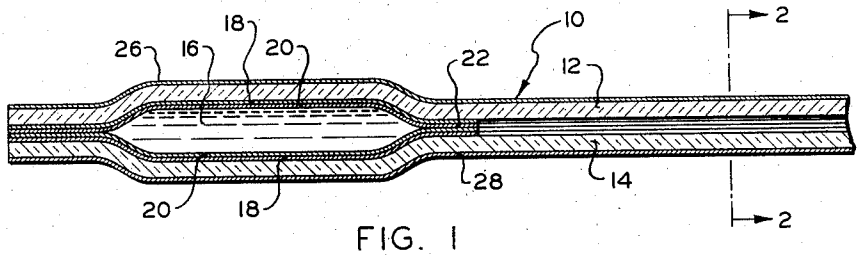


FIG. 1

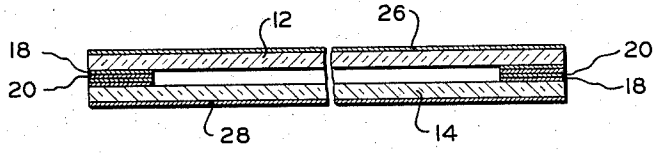


FIG. 2

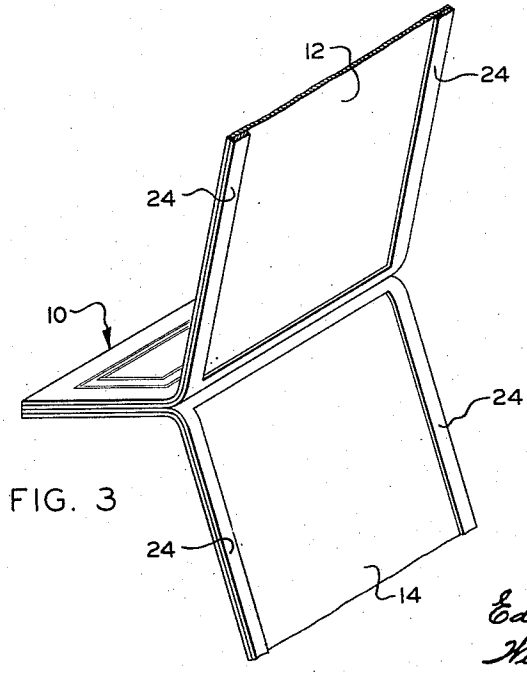


FIG. 3

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PHOTOGRAPHIC PRODUCT INCLUDING MEANS CONTAINING A PROCESSING LIQUID

Filed May 12, 1954 2 Sheets-Sheet 2

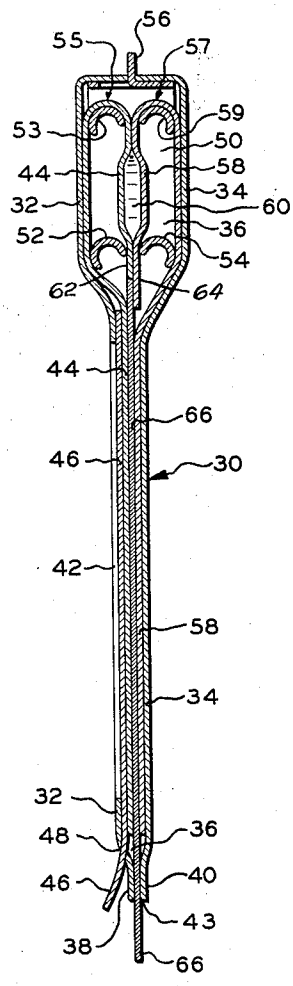


FIG. 4

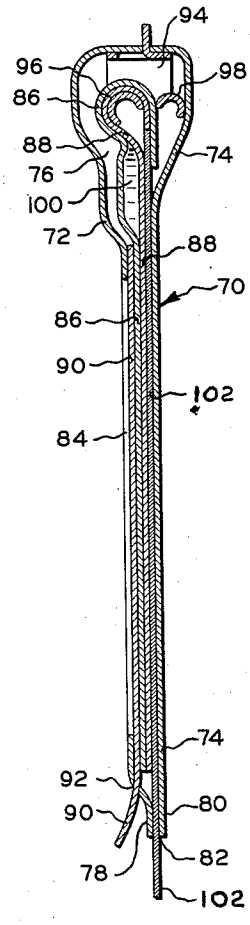


FIG. 5

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United States Patent Office 2,898,208 Patented Aug. 4, 1959

2,898,208

PHOTOGRAPHIC PRODUCT INCLUDING MEANS CONTAINING A PROCESSING LIQUID

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Application May 12, 1954, Serial No. 429,185

8 Claims. (Cl. 96—76)

This invention relates to photography and, more particularly, to novel, composite photographic products.

It has heretofore been proposed to provide a photographic film unit comprising a light-sensitive sheet material, a second sheet material and a rupturable container carrying a processing liquid. The processing liquid is adapted to be spread from the container in a thin layer between the light-sensitive sheet and the second sheet, the latter functioning to isolate the layer of liquid from the spreading means and to assist in assuring a uniform layerwise distribution of a liquid over the surface of a light-sensitive sheet, and in addition, may preferably serve as a support for a print obtained by a diffusion-transfer reversal process. A container, for example, of the type disclosed in Patent No. 2,634,886, issued April 14, 1953, to Edwin H. Land for Collapsible Fluid Container, is of a podlike structure, is mounted between the light-sensitive and second sheets at one end thereof and has a discharge mouth directed toward the other end of the sheets. The liquid contents are discharged from the container and spread in a thin layer between the sheets by advancing the film unit, beginning at the container, between a pair of pressure-applying members, for example, a pair of pressure-applying rollers resiliently urged toward one another. While this approach is essentially satisfactory, it requires the use of pressure-applying members constructed in such a manner as to be capable of accommodating both the increased thickness of the film unit as the container is advanced between the members and then the reduced thickness of only the sheets, while spreading the processing liquid in a thin layer of uniform predetermined thickness between the sheets.

It is accordingly one object of the present invention to provide a novel photographic film unit including a light-sensitive element, another element and a collapsible container carrying a processing liquid, the total thickness of the container portion of the unit not differing from the total thickness of the image portion of the unit by more than the thickness of the layer of processing liquid spread between the elements comprising said image portion.

Another object of the present invention is to provide a novel photographic film unit comprising a light-sensitive element, another element and a liquid-carrying cavity defined by portions of said elements.

Still another object of the present invention is to provide a novel photographic film unit of the above type adapted to be advanced between a pair of fixed, predeterminedly spaced members for releasing a processing liquid from a cavity defined by portions of the photosensitive and other sheets and spreading said liquid in a thin layer of predetermined thickness between said sheets.

A further object of the present invention is to provide a novel photographic film unit of the above type which can be removed, for example, from a camera in which the light-sensitive sheet thereof has been exposed, without effecting further exposure of said sheet to actinic light.

Still further objects of the present invention are: to provide a novel photographic film unit of the above type including layers of a water-vapor impervious sheet material defining, in conjunction with the light-sensitive and other sheets, a liquid-carrying cavity from which a processing liquid may be spread between said light-sensitive and other sheets; to provide a novel photographic film unit of the above type wherein said layers of water-vapor impervious sheet material are effective to confine the processing liquid to a predetermined area between the light-sensitive and other sheets and to define the thickness of the layer of said processing liquid; and to provide an inexpensive, photographic assemblage including a film unit of the above type, means for exposing the photosensitive sheet, and means for spreading the processing liquid between the photosensitive and other sheets.

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

Figure 1 is an enlarged sectional view of a film unit embodying the present invention, the section being taken midway between its longitudinal edges;

Fig. 2 is a fragmentary sectional view taken substantially along the line 2—2 of Fig. 1;

Fig. 3 is a perspective view of the film unit of Fig. 1 with portions of two of the sheets thereof separated from one another;

Fig. 4 is an enlarged sectional view of a photographic assemblage embodying the film unit of Fig. 1, the section being taken midway between its longitudinal edges; and

Fig. 5 is another enlarged sectional view of a photographic assemblage embodying the film unit of Fig. 1, the section being taken midway between its longitudinal edges.

Referring now to the drawings, there is shown a composite photographic film unit embodying the present invention and indicated at 10. Generally, the film unit is of the type disclosed in Patent No. 2,609,296, issued to Edwin H. Land on September 2, 1952, for Composite Photographic Product Comprising a Photosensitive Element and a Container Carrying a Liquid for Processing Said Element, and comprises a photosensitive sheet, a second sheet which may be image receptive, and means containing a processing liquid adapted to be spread between the photosensitive and second sheets to produce a fixed positive image of subject matter to which the photosensitive sheet has been exposed. However, the herein disclosed film unit is distinguished by the provision of novel liquid-containing means comprising a liquid-filled cavity the walls of which are formed of the photosensitive and second sheets. Portions of the photosensitive and second sheets are adhered together in face-to-face relation to form a generally elongated rectangular cavity between said sheets filled with a processing liquid. In a preferred form at least the portions of the sheets comprising the walls of the cavity may be provided with an inner coating capable of rendering said sheets liquid-impervious and provide means for sealing portions of the sheets together to form the cavity. The material comprising this coating, however, is for all practical purposes, of a thickness insufficient to form, by itself, the walls of a container satisfactory for use in photographic film units, its thickness not exceeding the thickness of the layer of liquid to be spread between the exposed area of the photosensitive sheet and the second sheet. It is by virtue of this ar-

rangement that the container portion of the unit, exclusive of its liquid content, is no thicker than the image portion of the unit including the layer of processing liquid spread between the first and second sheets.

In a preferred form, the film unit **10** comprises a first sheet **12** including a layer of photosensitive material, preferably an emulsion of silver halide, in which a latent image may be obtained by differential exposure to actinic light, a second sheet **14** adapted to serve as an image-receptive sheet in which a visible print of a latent image in first sheet **10** may be produced, and a collapsible cavity **16** containing a processing liquid and having walls formed by portions of said first and second sheets. Second sheet **14** may include a layer containing silver precipitating nuclei and the processing liquid may include a developer, a silver halide solvent and an alkali. In the presence of this layer of processing composition, a latent image in the photosensitive sheet is reduced to a silver and a soluble silver complex from unreduced silver is formed, is transferred by imbibition to the second or image-receptive sheet and there is reduced to silver to produce a positive image. Photographic material generally useful in the foregoing processes are described in detail in Patent No. 2,543,181, issued to Edwin H. Land on February 27, 1951, for Photographic Product Comprising a Rupturable Container Carrying a Photographic Processing Liquid.

It is to be expressly understood that the processing composition need not effectuate a diffusion-transfer reversal process but may act merely to develop the latent image in first sheet **12**. In this case, the composition contains an alkaline aqueous solution of a silver halide developer and second sheet **14** acts merely to spread it upon sheet **12**, sheet **14** being only sufficiently nonabsorbent to effectively spread the composition upon first sheet **12**.

In another form of the film unit of Fig. 1, first sheet **12** includes a photosensitive ferric salt which, when photoexposed, is capable of being reduced to a ferrous salt. First sheet **12** here may be composed of a suitable paper, the surface of which is adapted to absorb a solution of a photosensitive ferric salt or may be coated with a suitable colloid material which is adapted to imbide such a solution. Suitable photosensitive ferric salts, for example, are ferric chloride and ferric salts of organic acids, such as ferric oxalate, ferric tartrate, and ferric citrate. The processing composition here preferably includes a coupler which differentiates between ferric and ferrous salts to form a visibly distinguishable reduction product with one or the other. Examples of such a coupler are potassium ferricyanide, potassium ferrocyanide, the tannins, β-naphthoquinone sulfonic acid, and salts of silver, platinum and palladium.

In the modification of this form of the film unit of Fig. 1, the photosensitive composition contained in first sheet **12** includes a coupler as well as a photosensitive ferric salt. In such a case, the processing composition includes as a developer merely an alkali or an acid capable of providing the chemical environment necessary for the combination of the coupler and either the ferrous or ferric salt.

In a further form of the film unit of Fig. 1, sheet **12** carries a photosensitive diazonium compound which decomposes when photoexposed and the processing composition includes, as a developer, a coupler capable of combining with an exposed or unexposed diazonium compound to form a dye. The processing composition further includes either an alkali or an acid capable of providing the chemical environment necessary for the combination of the exposed or unexposed diazonium compound and the coupler. First sheet **12** here may be composed of a suitable paper, the surface of which is adapted to absorb a solution of the photosensitive diazonium compound or may be coated with a suitable colloid material adapted to imbide such a solution. Suitable photosensitive diazonium compounds, for example, are prepared by treating aromatic amines with nitrous acid at low temperature. As suitable couplers which the processing composition may here contain, mention may be made of phenols, naphthols and amino compounds which are adapted to combine with an exposed or unexposed diazo compound to form a visibly distinguishable azo dye.

This form of the film unit may be modified so that the photosensitive composition includes a coupler as well as a photosensitive diazonium compound. In such a case, the processing composition includes, as a developer, merely an alkali or an acid capable of providing the chemical environment necessary for the combination of the coupler and either the exposed or unexposed diazonium compound.

In still another form of the film unit of Fig. 1, photosensitive sheet **12** carries a material capable of becoming differentially insolubilized or tanned when photoexposed. The various regions of such a differentially insoluble coating are capable of forming a visible print by differentially absorbing a suitable coloring material. A differentially insolubilized material includes, for example, a hydrophilic colloid such as gelatin, glue, or gum arabic treated with a dichromate solution such as an aqueous solution of chrome alum, potassium dichromate or an ammonium dichromate. Here, the processing composition includes a coloring material such as a water-soluble dye.

The novel containing means or cavity **16** for the liquid processing reagent is located at one end of the film unit **10** adjacent the area of photosensitive sheet **12** adapted to be exposed in a camera. Cavity **16** is generally elongated, extending transversely of sheets **12** and **14** substantially from side to side thereof. In order to render cavity **16** substantially air- and water vapor-impervious, there is applied to the inner surface of sheets **12** and **14**, a thin film or sheet of a relatively vapor-impervious material such as a metal foil **18**, and there is coated on the surface of said foil **18** a further layer **20** of a suitable plastic material which can be adhered to itself by the application of heat and/or pressure. Layer **20** is preferably liquid impervious in order to provide a protective coating for the metal foil **18**, thereby preventing the contents of the cavity from reaching the foil to corrode or otherwise deteriorate the same. Layers **18** and **20** are relatively thin, being of either a predetermined thickness or only sufficiently thick to be continuous. Layer **18** may be preferably of silver, aluminum or lead foil and layer **20** may be of a thermoplastic material such as a polyvinyl acetal, for example, polyvinyl butyral, polyvinyl acetal or polyvinyl formal.

Layers **18** and **20** extend continuously from side to side of sheets **12** and **14** over the portions of said sheets adapted to define the walls of cavity **16**. To form cavity **16**, the inner faces of the marginal portions of sheets **12** and **14** are secured together by the application of heat and/or pressure which serves to bond layers **20** with themselves. A discharge passage **22** for cavity **16** is formed, and directed toward the area of sheet **12** adapted to be exposed, by transversely bonding layers **20** together along a line adjacent the aforementioned area. To assure rupture of the transverse seal at **22** when compressive pressure is applied by suitable means to liquid-carrying cavity **16**, the transverse seal or bond may be so formed as to be weaker than the bonds along the marginal edges of the sheets. This difference in strength may be achieved by crimping the sheets along their marginal edges or by using differential pressures and temperatures in bonding the edges together.

The contents of the container are, preferably, of a viscous nature and in this viscous condition better cooperate with the structure of the cavity and sealed passage to insure the uniform and complete peeling apart of the walls of said sealed passage upon the application

of compressive pressure to the walls of said cavity, thereby assuring a spread directly from the cavity over an area substantially as wide as the length of the liquid-containing cavity. The desired viscosity may be attained in the liquid content of the cavity by dissolving, in the liquid, a suitable high molecular weight polymer which will not decompose or otherwise lose its thickening properties due to reaction with the liquid or other reagents therein. For example, where the liquid composition in the container has water as a solvent, suitable plastics for increasing the viscosity of the liquid composition are the water-soluble cellulosic plastics such as hydroxyethyl cellulose and sodium carboxymethyl cellulose. A container or cavity of the foregoing structure in its liquid-filled and sealed condition is relatively deformable and it is possible to loop or bend the film unit including the cavity around a relatively small radius without rupturing the cavity.

Layers **18** and **20** may extend continuously along the marginal portions of sheets **12** and **14** so as to frame the area of sheet **12** adapted to be exposed. These marginal portions of layers **18** and **20** are indicated at **24** and serve to confine the liquid content of cavity **16** spread in a layer between sheets **12** and **14** to the exposed area of sheet **12**. The marginal layers **24** provide for a film unit **10** of uniform thickness throughout its length at least over the area including cavity **16** and the portion of photosensitive sheet **12** adapted to be exposed. By virtue of the foregoing arrangement, the liquid contents of cavity **16** may be spread between sheets **12** and **14** by advancing the liquid-containing portion of the unit between a pair of suitable pressure-applying members spaced a predetermined fixed distance apart. The novel liquid-containing means permits the use of spreaders of this type which do not have to accommodate a film unit which varies in thickness throughout its length and are simple and inexpensive yet capable of effecting the spreading of the liquid in a uniform layer of predetermined thickness. The width of the gap between the pressure-applying members may be equal to or slightly less than the combined thicknesses of the photosensitive sheet **12**, second sheet **14** and layers **18** and **20** while the thickness of the layer of processing liquid spread between the photosensitive and second sheets will be approximately equal to the combined thicknesses of layers **18** and **20** which separate said sheets from one another and define the margins of the area over which the liquid is spread. In a film unit where it is desired, for example, to spread the liquid processing reagent to a thickness in the order of .003 inch, each layer **18** of foil may be approximately .0007 inch thick and each layer **20** of plastic material .0008 inch thick.

In the preferred form of the invention shown in Figs. 1 and 2, photosensitive sheet **12** and second sheet **14** are provided, respectively, with outer layers **26** and **28** of preferably a metallic foil or another suitable opaque sheet material, for example, black paper. While the layers **26** and **28** of foil are illustrated as extending to the edges of said sheets **12** and **14**, respectively, they may continue around the edges of said sheets forming the inner layers **18**. Layers **26** and **28** serve to prevent exposure of photosensitive sheet **12** prior to exposure in a camera and to prevent further exposure of sheet **12** after withdrawal from a camera in which it has been exposed.

In another form of film unit, layers **18** may be omitted and outer layers **26** and **28** are formed of metal foil which serves as a satisfactory air- and water vapor-impervious barrier on occasions when the film unit is not to be stored for long periods of time prior to use.

In a further form of the film unit, sheet **28** may be of a suitable opaque sheet material such as black paper hingedly secured to either photosensitive sheet **12** or second sheet **14** at the end of said sheets adjacent cavity **16**, and inner layer **18** of foil is less securely affixed to sheet **14** than is the inner layer **18** secured to sheet **12**. By virtue of this arrangement, sheet **14**, in which a positive print has been formed during processing, may be stripped from photosensitive sheet **12** and the layers **18** and **20**, previously adhering to sheet **14**, adhering to the corresponding layers **18** and **20** secured to sheet **12**. Sheet **14** may be provided with suitable perforations adjacent cavity **16** so that the portion of said sheet carrying the positive transfer image may be stripped from sheet **12** and separated along the perforations from the remaining end portion of sheet **14** comprising a wall of cavity **16**.

The herein disclosed film unit is particularly adapted for use in roentgenography by providing outer layers **26** and **28** formed of a material which is opaque to light but transparent to X-radiation. The film unit may also be adapted for use as a dosimeter for detecting gamma radiation by providing outer layers **26** and **28** of a material which is opaque to actinic light but transmits gamma radiation. The photosensitive sheet may be exposed through either of the outer layers and, if desired, an intensifying screen of conventional design may be associated with the photosensitive sheet. Such film units, following exposure to actinic radiation, may be immediately processed in the presence of light by drawing them between a pair of suitable pressure-applying members, for example a pair of rollers or blades predeterminedly spaced apart.

There is illustrated in Fig. 4 an inexpensive, photographic exposing and developing assemblage embodying the present invention. The assemblage comprises an envelope generally designated at **30** including a front face portion **32** and a rear face portion **34** joined together by longitudinal edge portions (not shown) to define a chamber **36**. Front and rear face portions **32** and **34** are joined at one end to close chamber **36** while their other transverse end sections **38** and **40**, respectively, cooperate to define a light-tight passage **43** communicating with chamber **36**. Front face portion **32** is provided with an opening or passage **42** through which actinic light may be transmitted for exposing a photosensitive sheet **44** positioned within chamber **36**. Associated with opening **42** is a dark slide **46** which, when in a closed position (as shown), renders chamber **36** light tight and which may be removed from chamber **36** through a passage **48** to permit transmission of actinic radiation through opening **42**. In a preferred form of the assemblage, envelope **30** and dark slide **46** are composed of a stiff cardboard or plastic material that is opaque to actinic light.

Mounted within chamber **36** adjacent the closed end is a pressure-applying unit **50** in the form of a yoke-shaped resilient sheet metal stamping from which are shaped a pair of elongated, pressure-applying arcuate elements **52** and **54** predeterminedly spaced apart and a lug **56** extending through envelope **30** in order to facilitate the operator in holding pressure-applying unit **50** as well as the assemblage as a whole. Pressure-applying unit **50**, because of its inexpensive construction, may, if desired, be disposed with the remainder of the envelope after the assemblage has been used.

Photosensitive sheet **44** extends from adjacent passage **43** across opening **42** between pressure element **52** and front face portion **32** to the closed end of envelope **30** where it is folded or looped back upon itself at **55** and is joined by a second sheet **58** to form a cavity **60** substantially as hereinbefore described and filled with a processing liquid. Second sheet **58** is similarly looped back upon itself at **57** and extends between pressure element **54** and rear face portion **34** in superposed relation with the latter to a point adjacent passage **43**. As a means for maintaining loops **55** and **57** in position adjacent the extremity of chamber **36** as sheets **44** and **58** are advanced between pressure elements **52** and **54**, a second pair of arcuate members **53** and **59** are provided for guiding the sheets around loops **55** and **57**. Sheets

44 and 58 include end portions 62 and 64 adjacent cavity 60 which extend between pressure elements 52 and 54 and are secured to an elongated leader 66. Leader 66 extends between sheets 44 and 58 in superposed relation therewith and through passage 43 exterior of envelope 30.

In operation of the assemblage of Fig. 4, once photosensitive sheet 44 has been exposed through opening 42, sheets 44 and 58 are advanced by an operator grasping leader 66 between pressure elements 52 and 54 in order to rupture cavity 60 and spread its contents between sheets 44 and 58. The resulting sandwich, while being formed, advances into the region previously occupied by leader 66 and once formed may be permitted to remain in this region for a predetermined period during which the photosensitive sheet is processed. At the end of this period, the sandwich is advanced through passage 43 from the envelope and thereafter sheets 44 and 58 are stripped apart for observation. When the assemblage includes the film unit of Fig. 1 having opaque outer layers, the sandwich formed of sheets 44 and 58 with a layer of processing liquid therebetween may be withdrawn immediately from the chamber 36 prior to completion of the processing period.

Fig. 5 illustrates another photographic assemblage, generally similar to that of Fig. 4, embodying the herein disclosed film unit. The assemblage comprises an envelope 70 having front and rear light-opaque face portions 72 and 74 joined at one end and which define a chamber 76, a pair of longitudinal edge portions (not shown), and a pair of transverse edge portions 78 and 80 which define a light-tight passage 82 communicating with the chamber. Front face portion 72 includes an opening 84 through which actinic light may be transmitted to a photosensitive sheet 86, and associated with opening 84 is a dark slide 90 removable from chamber 76 through a passage 92 to permit exposure of photosensitive sheet 86 through opening 84, and which renders said opening light tight when in closed position. Within chamber 76 is a pressure-applying unit 94 including a pair of pressure-applying arcuate elements 96 and 98. Photosensitive sheet 86 and a second sheet 88 extend in superposed relation from a point adjacent passage 82, across exposure opening 84 and dark slide 90, into chamber 76 where they form the walls of a cavity 100 containing a processing liquid. Sheets 86 and 88 are looped around pressure element 96 between elements 96 and 98 and are joined with a leader 102 extending through passage 82 and adapted to be grasped by the operator for drawing the sheets between the pressure elements to rupture the liquid-filled cavity and spread its contents between the sheets. Photosensitive sheet 86 is preferably transparent, having its emulsion surface superposed with second sheet 88.

The assemblages of Figs. 4 and 5 may be adapted for use in roentgenography or as dosimeters by providing them with elements sensitive to X-radiation or gamma radiation. In such assemblages, the exposure opening and dark slide are omitted and the photosensitive element may be exposed to penetrating radiation through either the front or rear face portions. If desired, an intensifying screen of conventional construction may be associated with the photosensitive element, for example interposed between the front face portion and the photosensitive element in place of the dark slide.

By virtue of its novel construction, film unit 10 includes a container portion, the total thickness of which, exclusive of processing liquid, does not exceed the thickness of the image portion including the layer of processing liquid spread between the photosensitive and second sheets comprising that portion. The advantage offered by this novel construction resides in the adaptability of the unit to processing by advancement between a pair of predeterminedly spaced fixed members adapted to spread the processing liquid from the cavity between the image portion of a photosensitive sheet and the second sheet. It is apparent that such spreading members which do not have to accommodate a unit which varies in thickness throughout its length may be of a simple and inexpensive construction and still be capable of spreading the processing liquid in a uniform layer of accurately predetermined thickness.

Since certain changes may be made in the above product 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 photographic product comprising a layer of photosensitive material and containing a fluid in sufficient quantity to effect the formation of an image in said product when spread in a layer of predetermined thickness so as to permeate said layer of photosensitive material, said product comprising, in combination, a photosensitive sheet including a layer of said photosensitive material selected from the class consisting of the heavy metal salts capable of having a developable image formed therein by exposure and capable of development to produce a visible image comprising the metal of said salt, ferric salts, diazonium compounds and bichromate sensitized colloids, said layer of photosensitive material being located adjacent one surface of said sheet so as to be permeated by an aqueous processing fluid spread on said surface and comprising a first area of said sheet, and a layer of a water-impervious material coated onto a second area of said surface located adjacent said first area, extending from side to side of said first area and being substantially smaller than said first area; and a second sheet having a first area of a surface of said second sheet which is at least coextensive with said first area of said photosensitive sheet for confining said fluid during spreading between said sheets, and a layer of water-impervious material coated on a second area of said surface of said second sheet, said second area of said second sheet being substantially coextensive with said second area of said photosensitive sheet; said layers of said water-impervious material being sealed to one another completely around their margins to provide a sealed cavity between said layers of said water-impervious material; said sheets being disposed relative to one another with said first areas of said sheets located for superposition with one another; and a quantity of an aqueous fluid capable of effecting image formation following exposure of said photosensitive material, contained in said cavity, said fluid being provided in a quantity sufficient to form a layer of predetermined thickness coextensive with and between said first areas of said sheets, the combined thickness of said layers of water-impervious material not exceeding the predetermined thickness of said layer of fluid when spread between said sheets whereby said sheets can be moved relative to and between a pair of juxtaposed members located a fixed maximum distance apart for ejecting said fluid from said cavity between said sheets and spreading said fluid in a layer between said first areas of said sheets.

2. The photographic product of claim 1 wherein said coating of water-impervious material is provided on said surface of each of said sheets along the lateral margins of said first area thereof.

3. A photographic film unit adapted to be exposed and thereafter processed to provide a transfer image, said film unit comprising, in combination, a photosensitive sheet including a layer of photosensitive material selected from the class consisting of the heavy metal salts capable of having a developable latent image formed therein by exposure to actinic light and capable of development to produce a visible image comprising the metal of said salt, ferric salts, diazonium compounds and bichromate sensitized colloids, said layer of photosensitive material being located adjacent a surface of said sheet for permeation

by an aqueous fluid spread on said surface and covering a first area of said sheet, and a layer of water-impervious material coated onto a second area of said surface which is located adjacent said first area, is at least equal in length to the width of said first area and is substantially smaller than said first area; a second sheet having a layer of an image-receiving material adjacent one surface for receiving a transfer image, said layer of image-receiving material covering a first area substantially coextensive with said first area of said photosensitive sheet, and a layer of a water-impervious material coated onto a second area of said surface of said second sheet which is substantially coextensive with said second area of said first sheet, said sheets being secured together with said first areas located for superposition with one another and a quantity of a processing fluid capable, when spread between said photosensitive and image-receiving layers, of processing said photosensitive layer, following exposure thereof, to produce a transfer image in said image-receiving layer; said fluid being provided in a cavity between said layers of water-impervious material in sufficient quantity to form a layer of predetermined thickness between and coextensive with said first areas of said sheets, said water-impervious layers and said sheets in the regions of said water-impervious layers having a combined thickness not exceeding the combined thickness of said photosensitive layer, image-receiving layer, sheets in the region of said image-receiving and said photosensitive layers and said predetermined thickness of said layer of said fluid whereby said film unit can be moved relative to and between a pair of juxtaposed members disposed a fixed maximum distance apart for effecting the release of said fluid from said cavity and the spreading of said fluid between said areas.

4. The photographic film unit of claim 3 wherein each of said layers of water-impervious material is a thermoplastic capable of being bonded with itself and said layers of water-impervious material are bonded to one another around the entire margins of said layers.

5. A photographic film unit adapted to be exposed and processed to produce a transfer print and comprising, in combination, a photosensitive sheet including a layer of photosensitive silver halide located adjacent one surface for permeation by an aqueous processing fluid spread in a layer on said surface and covering a first area thereof and a layer of a water-impervious material coated on a second area of said surface which is located adjacent said first area, extends substantially from side to side of said first area and is substantially smaller than said first area; a second sheet having adjacent one surface thereof a layer of a print-receiving material covering a first area which is substantially coextensive with said first area of said photosensitive sheet and a layer of a water-impervious material coated on a second area of said surface of said second sheet which is substantially coextensive with said second area of said photosensitive sheet, said sheets being secured together with said surfaces in facing relation by sealing together the entire margins of said layers of water-impervious material, said layers of water-impervious material forming a sealed cavity therebetween, said sheets being disposed with said first areas of said surfaces located for superposition with one another; and a quantity of an aqueous processing fluid adapted to be spread in a layer between said sheets, said fluid including a silver halide developer and being capable of processing said silver halide following exposure thereof to produce a transfer print in said print-receiving layer, said fluid being provided in said cavity in sufficient quantity to form a layer of predetermined thickness between and coextensive with said first areas of said sheets, said water-impervious layers and said sheets in the regions of said water-impervious layers having a total combined thickness not exceeding the combined thickness of said photosensitive and print-receiving layers, said sheets in the regions of the last-mentioned layers and said predetermined thickness of said layer of fluid whereby said film unit can be processed by moving it relative to and between a pair of juxtaposed members disposed a fixed maximum distance apart for discharging said fluid from said cavity between said sheets and spreading said fluid in said layer of predetermined thickness between said photosensitive and print-receiving layers.

6. The photographic film unit of claim 5 wherein each of said layers of water-impervious material comprises a thermoplastic material capable of being bonded with itself and said layers of water-impervious material are bonded together at their margins.

7. The photographic film unit of claim 5 wherein each of said layers of water-impervious material includes a metallic stratum and a surface stratum of a thermoplastic material capable of being bonded with itself and coextensive with said metallic stratum, said layers of thermoplastic material being bonded together at their margins.

8. The photographic film unit of claim 5 wherein said coating of water-impervious material is provided on said surface of each of said sheets along the lateral margins of said first area of said sheet.

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