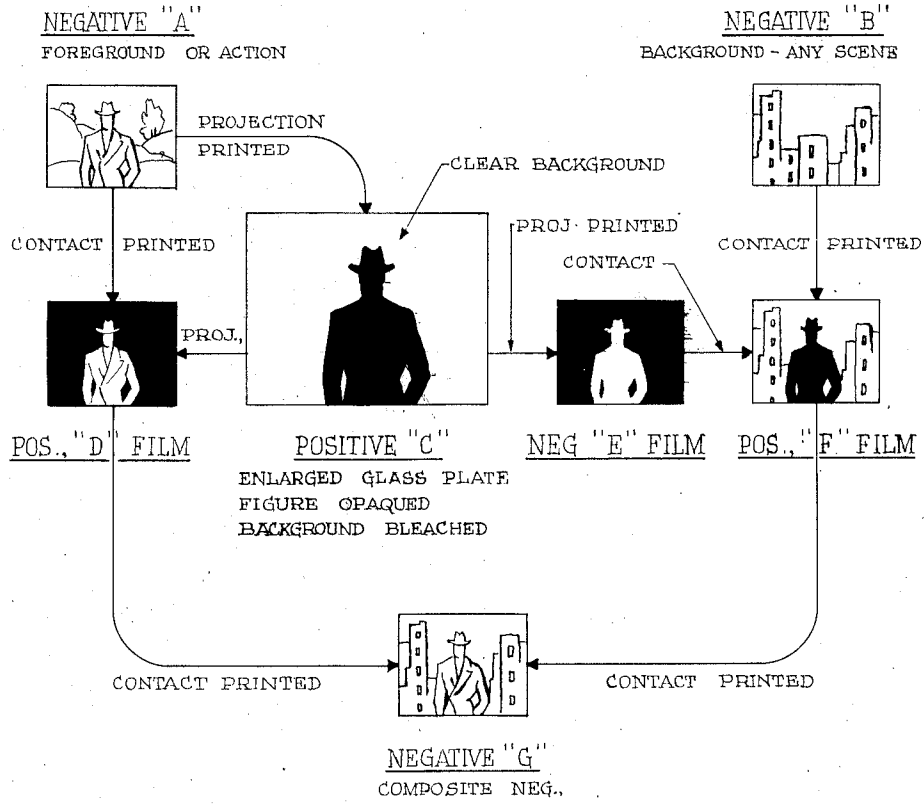
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METHOD FOR MAKING COMPOSITE MOTION PICTURES

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METHOD FOR MAKING COMPOSITE MOTION PICTURES

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This invention relates to the art of composite photography and embodies a method for making composite motion pictures.

Composite photography in the methods heretofore used may be accomplished in various ways, but in all the methods used several difficulties are encountered, one of which is the lack of registration, which introduces highly objectionable distracting effects in reproduction. Another objection arises from the use of traveling mattes in contact printing. To those versed in this art it is known that ordinary contact printing with conventional traveling mattes entails the use of at least three films. Under those conditions it is impossible to print with emulsion to emulsion on all films. Consequently, the record on one film must be printed through the base of another film. The result is an objectionable outline or halo surrounding the inserted subject matter. In my method of composition, I insert a foreground or action scene into a background of any description and avoid these objections. The method whereby I do this involves several novel steps. A noteworthy feature of my method is the fact that although I use a traveling matte, nevertheless I do not use more than two films at any time, either in contact printing or in any other step and, consequently, I am enabled to perform all my printing in the conventional manner with emulsions face to face. In addition, I introduce several new intermediate steps wherein the action, which may be shot against any background, is projection printed onto an enlarged plate, preferably glass, for the purpose of magnifying the figure or figures so that they may be properly and easily treated by hand or mechanical means to render them opaque. The plate may be either a positive or negative and is further treated to clear the background. The result is an enlarged opaque silhouette of the action in a clear field. This same plate is later used by projection printing in subsequent steps in the process. A further feature of the method resides in the steps and the films produced in the steps, wherein the different films in the different steps may be properly exposed and the print density controlled so that a proper balance of density may be obtained to show the desired contrast in the final composite film.

Briefly stated, the objects of the invention are: to provide a method for making composite motion pictures wherein a traveling matte is used which consists of a consecutively arranged series of enlarged photographic plates corresponding to the desired sequence of scenes in the original film, said plates being treated to render a portion or portions thereof opaque and the remainder transparent; to provide a method for making composite motion pictures wherein said series of enlarged plates is used as a traveling matte to form other film traveling mattes by projection printing; to provide a method for making composite motion pictures wherein film traveling mattes are used and wherein contact printing is done with only two films at any time and at no time is printing done through any film base; to provide a method for making composite motion pictures wherein the steps of the method are so arranged that throughout the method, wherever composite exposure occurs, the records follow in order to yield the proper reversal of densities; and, finally, to provide a method of the character described that meets the stringent requirements of motion picture producers with respect to registration and the elimination of figure outline. Other objects and advantages will become apparent as the description proceeds in conjunction with the drawing.

The drawing is a schematic diagram showing the steps, the relation of the steps and the intermediate films produced by each step.

The method of making composite motion pictures embodied in this invention comprises the following steps:

Step 1.—Step one is ordinarily the first step in the process and consists in making a standard negative of the action desired. The action may be shot in a conventional motion picture camera against any background, the only requirement being that there is sufficient contrast between the background and the action figure, or figures, to enable an artisan to separate the two visually after development. The negative in this step is developed and produces negative A, which may be called the foreground or action component.

Step 2.—This step may be performed prior to or subsequent to step one and consists in shooting any background scene in a standard camera on a standard film into which it is desired to later incorporate the action figure. For this purpose any scene may be used, such as a set or a stock shot. The result of this step is negative B, which is developed and may be termed hereinafter the background negative.

Step 3.—Step three consists in projection printing negative A onto a glass plate, which is developed and designated positive C. The purpose of this step is to obtain a positive of the negative A in an enlarged form so that it may be properly treated either by hand or mechanical

means to render the same useful for later steps. In some cases, an enlarged negative of the action might be better for treating, in which event the plate C would be projection printed from a positive of the action and the following steps would remain the same. The method of treating the glass plate C consists in first opaquing by black waterproof opaque paint, or any other suitable equivalent, that part of the picture which shows the required action and, if the background is not transparent enough, then bleaching the rest of the picture so that the background becomes a clear transparency. The result is an opaque silhouette in a clear field and is later used in forming the positive D and the negative E.

Step 4.—This step consists in forming a contact positive print of negative A in the usual manner and produces a positive film D, which has a positive picture of the action figure, and also carries the background against which the action was originally shot. Positive D is left undeveloped at this stage.

Step 5.—This is the step whereby the field of positive D is exposed while the figure is preserved. In this step the positive C is projection printed upon the positive D. The clear background of the positive C will transmit light to the field surrounding the figure in positive D while the opaque silhouette of C will protect the figure of D. Positive D is developed at this stage and will have a positive picture of the action surrounded by a black field. This positive is now in condition to be later used to print the action in the final composite negative designated G in the drawing.

Step 6.—In Step six the enlarged glass plate C is again used to form a film negative E by projection printing. The negative E is developed at this stage and will have a transparent figure space surrounded by a black field and is later used in forming the positive F.

Step 7.—Step seven is a conventional step in which the negative B is contact printed onto the positive F which gives an ordinary positive of the background. The positive F is left undeveloped at this stage.

Step 8.—Step eight consists in contact exposing negative E upon positive F. This results in burning into the positive F a black silhouette of the figure while the background remains unexposed. The positive F is then developed and is ready for use to expose the background in the final negative G.

Step 9.—This is the step wherein the positive F, having the black silhouette of the figure, is contact printed onto the negative G. This step produces on the negative G an exposure of the background having an unexposed portion or portions blocked out for the foreground. The negative G is left undeveloped at this stage.

Step 10.—Step ten is the final step and consists in again exposing negative G, this time in contact with positive D. In this step the foreground is printed into the unexposed portions of negative G, while the background remains unexposed. The result is a final composite negative containing both the foreground and the background. The negative G is then developed and is ready for use.

The foregoing is a brief outline of the method and the steps in the method. The final composite negative G may be used in the conventional manner to produce release prints.

It is to be understood that changes in the sequence of steps as outlined may be practiced by those versed in the art without in any way destroying the novelty of the invention or altering the results produced. For instance, it is obviously immaterial whether the positive D is formed before or after the positive F and the same is true as to whether the positive F is printed on to the negative G prior to or subsequently to the printing of the positive D. Other changes not pointed out herein may become evident to an artisan skilled in the photographic art. In practice, the use of the method has been found to lend itself readily to proper treatment of the enlarged plate C, whereby close definition of the action may be obtained in opaquing and also whereby the proper control of the densities in each film may be had in order to obtain the desired balance of densities and the necessary contrast of densities that is required in the final composite negative. The method has been found in actual practice to yield results heretofore unobtainable in any of the black and white photographic methods previously known, and is equally useful in color photography.

The result of practicing my method produces composite pictures wherein registration is perfect and wherein there is no halo or outline surrounding the inserted subject matter, due to the fact that in using my traveling matte I perform all contact printing operations with only two films and am therefore enabled to print with emulsions face to face. Moreover, by enlarging the subject to be inserted, I am enabled to obtain a more perfect outlining and opaquing which again tends to produce faultless registration and entire lack of figure outline.

I claim:

1. A method for making composite motion pictures comprising the steps of photographing a foreground scene having portions therein which are to appear on a final composite film and other portions which are not to appear thereon, forming an enlarged photographic print of said scene, manually treating said enlarged print to render opaque those portions which are to appear on the said final composite film, rendering transparent those portions of said enlarged print which are not to appear on the said final composite film, projecting said enlarged treated print to re-expose and undeveloped film exposure of said foreground scene in registration therewith, developing said re-exposed foreground film and exposing said final composite film therethrough.

2. A method for making composite motion pictures comprising the steps of photographing a foreground scene having portions therein which are to appear on a final composite film and other portions which are not to appear thereon, photographing a background scene, forming an enlarged photographic print of said foreground scene, manually treating said enlarged print to render opaque those portions which are to appear on said final composite film, rendering transparent those portions of said enlarged print which are not to appear on said final composite film, projecting said enlarged print to form a developed film print thereof, re-exposing an undeveloped film exposure of said background scene through said developed film print, developing said re-exposed background scene and exposing said final composite film therethrough.

3. A method for making composite motion pictures consisting of photographing a foreground scene having certain portions therein which are to appear in a final composite film and other portions which are not to appear in said final com-

posite film, separately photographing a background scene into which said certain portions of said foreground scene are to be incorporated, forming an undeveloped film exposure of each of said foreground and background scenes, forming an enlarged print of said foreground scene, manually treating said enlarged print to render said certain portions thereof opaque, bleaching said other portions of said enlarged print to render them transparent, projecting said enlarged print and forming a developed film print thereof, projecting said enlarged print to re-expose said undeveloped film exposure of said foreground scene in registration therewith, re-exposing said undeveloped film exposure of said background through said film print of said enlarged print, developing said last mentioned re-exposed foreground and background films and utilizing the same to successively expose said final composite film.

4. For use in making composite motion pictures, a method for photographically combining selected portions of a foreground scene and a background scene comprising the steps of forming an enlarged photographic print of said foreground scene, manually treating said enlarged print to render opaque those selected portions which are to appear on a final composite film, rendering transparent those portions of said enlarged print which are not to appear on said final composite film, projecting said enlarged print and forming a developed film print thereof, re-exposing an undeveloped film exposure of said background scene through said film print and in registration therewith, developing said re-exposed background film and exposing said final composite film therethrough.

5. For use in making composite motion pictures, a method for photographically combining selected portions of a foreground scene and a background scene comprising the steps of forming an enlarged photographic print of said foreground scene, manually treating said enlarged print to render opaque those selected portions which are to appear on a final composite film, rendering transparent those portions of said enlarged print which are not to appear on said final composite film, projecting said enlarged print to re-expose an undeveloped film exposure of said foreground scene in registration therewith, developing said re-exposed foreground film and exposing said final composite film therethrough.

6. For use in motion pictures, a method for photographically combining certain portions of a foreground scene having an undesired background with a desired background scene consisting of forming an enlarged photographic print of said entire foreground scene, manually treating said enlarged print to render said certain portions thereof opaque, rendering said undesired background of said enlarged print transparent, projecting said enlarged print and forming a developed film print thereof, utilizing said enlarged print and said film print to re-expose undeveloped film exposures of said foreground scene and said background scene respectively, developing said last mentioned re-exposed foreground and background films and utilizing the same successively to form a composite image on a single film.

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