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Photography

Second Lesson.

“How to make your own
Gaslight Prints.”

By Percy R. Salmon, F.R.P.S.

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How to make your own Gaslight Prints

By Percy R. Salmon, F.R.P.S.

TO expose a piece of sensitized paper against a negative in a printing frame to a light for a few seconds and then, by means of a chemical solution, produce a picture which proves to be a true record in black and white of a view or incident taken during holidays or other occasion is, without question, a most entertaining and fascinating way of spending an evening at home.

THE making of gaslight prints is most certainly Home Photography, for it can be done in any convenient room and with very little trouble, as no darkroom is required. As its name implies, Gaslight paper may be exposed and developed by gas or other artificial light, but care must be taken that the direct rays of the light do not fall on the paper until it is safely in the fixing bath.

IF the directions given in this booklet are carefully read and practised there is no reason why you should not produce excellent prints, the best that your negatives will give.

Where to do your Work ANY room that can be darkened and where the light can be controlled or turned down readily will serve, or if it is convenient a small attic with a bench, or a large cupboard with suitable shelf can be converted into a very useful darkroom.

Apparatus IT is necessary to have a printing frame, which should be complete with a piece of clear glass. Three dishes are required, one for the developer, one for the fixing bath and the other for plain water or, preferably a stop bath to be used between developing and fixing. It is also very helpful to have a darkroom lamp fitted with orange or deep-yellow glass.

Chemicals ALL that is required for the developing of Gaslight prints is a 3d. packet of JOHNSON'S METOL-QUINOL (M.Q.) Developer, and a tin of JOHNSON'S ACID-FIXING Powder and a 1 oz.

or 4 oz. bottle of POTASSIUM METABISULPHITE for making a stop bath.

Standardizing the Work AFTER one or two attempts have been made, a home photographer will quickly realise the advisability of standardizing exposure, and in order to correctly and easily do this it is of course necessary to always work with the same light, either Gas, Electric or Oil Lamp, and at a standard distance from the light; this distance should never vary, and a foot rule should always be used for the purpose of ensuring accuracy.

WHERE the ordinary light is hanging from the ceiling in the centre of the room and gives an even light underneath, it will be found very useful for printing purposes to arrange a table under the light and place on this a chair on which to put your printing frame. By this means you will always be exposing at the same distance from the light. Care must be taken to avoid placing the printing frame in any shadow that is being cast downwards by the light.

FURTHER, the photographer should grade his films according to their density, and for this purpose it is a good practice to arrange them in three groups, one consisting of "normal," another "thin," and the third group for "very dense" negatives. By this method only one test print for each of the grades need be made in order to ascertain the exposure required.

Grade of Paper GASLIGHT Paper may be obtained in Soft, Normal, and Vigorous varieties; with the latter good prints may be made from negatives that are thin, while the soft variety should be used for the very dense negatives. In general practice, however, it will be found that the Normal, or Medium Grade paper, will suit the average type of negative.

Preparing the Solutions ON the METOL-QUINOL (M-Q) Packets of Developer, clear and definite instructions will be found. Each Packet contains sufficient chemicals to make 4 ozs. of developer and care must

be taken to see that all the chemicals are dissolved. The 4 ozs. of solution is sufficient to develop in one evening approximately 3½ dozen prints 3¼ × 2¼; the last prints, however, will take much longer to develop. If only a few prints can be made and it is desired to retain the developer for another occasion, it should be kept in a securely corked or stoppered bottle so that it is not exposed to air. The solution loses some of its power through keeping.

FOR the fixing bath, for use after the prints have been developed, JOHNSON'S ACID-FIXING Powder is recommended because it has a clearing and hardening effect on the emulsion. It is obtainable in tins containing 4, 8 or 16 ozs. and 2 ozs. of the powder dissolved in 30 ozs. of water makes sufficient to fix 100 3¼ × 2¼ Gaslight prints. This powder is very easily dissolved if it is poured slowly into the water whilst stirring. The Stop Bath referred to previously is made by dissolving ¼ oz. of POTASSIUM METABISULPHITE in 5 ozs. of water; this forms a very efficient preventative of stains as it stops the action of the developer immediately.

Preparing to Print

FIRST clean the glass of your printing frame and lay your film on this with the emulsion side uppermost, then if you have a darkroom lamp switch off all other and work with only the orange light showing; should you have no lamp then all other light must be turned down or subdued. If this is not convenient remove your working bench as far away as possible and, with your back to the light, work so that no direct rays can reach the paper.

TAKE a piece of the paper and lay it emulsion side downwards on to the film, then lock the back of the printing frame into position. With most papers it is quite easy to recognise which is the sensitized surface, but if you are in doubt place a piece on the palm of the hand and the side which has the emulsion will always curl slightly inwards.

Masking

IF it is your intention to use a mask for the purpose of making a white margin for the borders of the print place the mask on the film before laying the paper in position.

CAUTION: Having taken your piece of paper out of the packet, be sure to return the remainder to its original wrappers and envelope.

Exposure

No fixed rule for exposure can be given as this varies according to the density of the negative, the intensity of the light and the distance from the light at which the exposure is to be made; but the following will serve as a useful guide—for negatives of average density and at a standard distance of 12 inches from the light; 6 seconds for a forty-watt electric light and 6 seconds for incandescent gas and 30 seconds with duplex-paraffin.

Developing the Print

WHEREVER possible developing should be at some distance from the light and in a shady portion of the room; if this is not possible use a large piece of cardboard which has been made to stand upright so that it forms a screen between the light and the developing dish; but where a darkroom lamp is employed use this with the orange glass in position.

Now place the exposed paper face upwards in the developing dish and pour the developing solution carefully, but quickly, over it and rock the dish occasionally. Development is very rapid and goes on for ½ minute to 1½ minutes, according to the paper and exposure; at the end of this time all detail will have appeared and the print be fully developed if the paper has been correctly exposed.

IF the picture fails to appear in 15 to 30 seconds it shows that the paper has been under-exposed; and if, on the other hand, it appears very quickly indeed and goes very black, it indicates over-exposure. In the case of under-exposures it is useless to attempt to force development as more often than not this

causes brown stains, and it is far better to make a further exposure giving rather more time. Less time is, of course, required where it is a case of over-exposure.

WHEN development is complete remove the print from the developer and rinse thoroughly in the water or Stop Bath for a few seconds to stop the action of the developer, then immerse it in the fixing bath, taking care to see that it is completely immersed and is not floating on the surface, keep it moving for two or three seconds in this bath then turn it face downwards and leave it for not less than ten minutes after which it can be viewed in ordinary light.

**Final
Washing**

AFTER the prints have been fixed they should be left in running water for a half to one-hour, or given at least six changes of water. The prints should then be laid on some clean blotting paper, or a drying net made of thin white muslin stretched on a frame where they can dry.

**Test
Strips**

It is a very wise plan to make a trial exposure of each group of negatives by the "strip" method. Fill the frame as described and cover three-quarters of the negative with a card, switch on the light for about one half of what you would think is the correct exposure time, and then uncover a further quarter of the negative leaving the first portion also uncovered and expose for the same time as the first portion; repeat this with the third quarter and, finally, with the whole of the negative. By this means you will have given the negative four different exposures; develop for the time required and judge which section of your print is correct. It is, of course, necessary while doing this test to make a note of the time given to each strip.

Stains

If stains or fog should appear on the prints they are due to one or other of the following causes:

1. Development under too strong a light.
2. Under-exposure and forcing development.
3. Lack of proper rinsing, or the failure to use a Stop Bath between developing and fixing.

JOHNSON'S CHEMICALS

FOR

HOME PHOTOGRAPHY.

JOHNSON'S PACKETS.

DEVELOPERS :

Amidol	to make 4 to 10 ozs. Solution	....	4d. each
Chlorquinol	to make 10 " "	....	4d. "
Gaslight	" 6 " "	....	3d. "
Metol-Quinol	" 10 " "	....	3d. "
Pyro-Soda	" 8 " "	....	3d. "

TONINGS :

Toning and Fixing Packets			
	to make 4 " "	....	3d. "
Pactum Toners (Blue, Green, Red or Sepia)		....	6d. "

SCALOIDS—Photographic Reagents in Compressed Tablet form.

DEVELOPERS :

Amidol	to make 20 to 40 ozs. Solution	....	1/6 per box
Gaslight	to make 30 " "	....	1/6 " "
Glycin	" 20 " "	....	1/6 " "
Metol-Quinol	" 44 " "	....	1/6 " "
Pyro-Soda	" 40 " "	....	1/6 " "
Vedol	" 100 " "	....	1/6 " "

TONINGS :

Gold Toning	" 40 " "	....	2/- per box
Gold Toning & Fixing ..	" 20 " "	....	2/- " "
Blue, Green or Red Toning			
	to make 24 " "	....	2/- " "
Sepia Toning	" 48 " "	....	2/- " "

SUNDRIES :

Hypo Eliminator ..	" 15 " "	....	1/- per box
Intensifier (redevelop) ..	" 18 " "	....	2/- "
Reducer (Persulphate) ..	" 15 " "	....	1/- "
Reducer (Ferricyanide) ..	" 10 " "	....	1/- "

DEVELOPERS (Solutions).

AZOL :

3 oz. bottle	to make 75 ozs. Solution	....	2/- each
8 oz. "	" 200 " "	....	4/- "
16 oz. "	" 400 " "	....	7/- "

ONE-SOLUTION :

4 oz. bottle	" 28 " "	....	1/- "
8 oz. "	" 56 " "	....	1/9 "

GASLIGHT SOLUTION :

4 oz. bottle to make 12 to 20	" "	....	10d. "
8 oz. " " 24 to 40	" "	....	1/3 "

SUNDRY SOLUTIONS.

Desensitiser	4 oz. bottle to make 20 ozs. Solution	....	2/-	each
Glazing Solution	4 oz. " " 40 " "	....	1/-	"
	8 oz. " " 80 " "	....	1/9	"
Hypo Killer	6 oz. " " 24 pints "	....	1/-	"
	16 oz. " " 64 " "	....	2/-	"
Ilford Tropical Hardener	3 oz. bottle to make 24 ozs. Solution	....	2/-	"
Redevelop Intensifier Solution.	4 oz. bottles	....	2/-	"
Uranium Intensifier	.... 3 oz. bottles	....	1/-	"
	6 oz. "	....	2/-	"
Acid Fixing	.... ½lb. tins	....	7d.	"
	To make 30 ozs. for Plates and Films and 60 ozs. for Papers.			
Acid Fixing	.... ½lb. tins	....	1rod.	"
" "	.... 1lb. "	....	1/6	"
Johnson's Soda Hypo	.... 1lb. cartons	....	4½d.	"

SUNDRIES.

Fine Grain Developer.—For Leica and all miniature films	Tins to make 20 ozs.	....	1/-	"
Mountant.—The original Photographic Mountant which has stood the test for over 30 years	In tubes	....	6d.	"
	or bottles at 1/- and	1/9	"	"
Photo Tints—Complete sets consisting of nine of the finest tints in concentration form	....	2/6	per box	
Larger sets including Brushes, Saucers, etc.	....	5/-		
Pastels.—Consisting of 15 selected Pastels, stumps, rubber and surface powder	....	2/6	"	
White Ink	....	1/-	bottle	
Flashpowder	....	1/- and	1/9	boxes
	1 oz. bottles	....	3/-	each
	2 oz. "	....	4/6	"
Flashboxes	....	6d.	"	

DEVELOPERS.—These developing reagents are for those who prefer to make their own solutions, and are obtainable everywhere.

Amidol-Johnson's	.... 1 oz. bottles	....	2/-	each
Acid Pyrogallic Cryst.	.... 1 oz. "	....	1/10	"
Chlorquinol	.... 1 oz. "	....	2/6	"
Glycin	.... 1 oz. "	....	2/3	"
Hydroquinone	.... 1 oz. "	....	1/3	"
Metol-Johnson's	.... 1 oz. "	....	2/3	"