The present invention has for object improvements in the manufacture of photographic bleaching layers, said improvements being adapted to improve the quality of said layers and their preserving capacity.

It is known that bleaching layers, in particular those which are prepared with sensitisers the action of which is sufficiently high for them to be used practically, as for instance certain thio-carbamide derivatives, and more particularly sensitisers which are soluble in water, such as they are defined in the French patent in the name of the applicants filed on March 16, 1938, for: "Process for the preparation of photographic bleaching layers and suitable sensitisers," can only be kept for a short time before being exposed to light. At the end of a greater or less period of time, a coloured residue is formed in the layer which is no longer sensitive to light and does not become discoulored when exposed. On the other hand, a reversibility or bleaching after exposure, is noticed, particularly after wetting the prints with water or with other liquids (fixing liquids, etc.) or if the prints are allowed to stay in the air, or if they are exposed to heat. This recoloration takes place instantaneously when certain dye-stuffs for instance cyanines, are used.

These disadvantages are produced by reactions independent of light, and which probably take place between the active derivatives (sensitisers), the dye-stuffs and the support. Said reactions appear to be of a non-photographic nature, indicated for instance by a relatively high coefficient of temperature. Now, it has been found, according to the present invention, that particularly stable bleaching layers are obtained, which are of very good keeping qualities, do not form coloured residues, are non-reversible, in short, present only the required photo-chemical reactions, if, in the layers there are introduced, or if said layers are treated with, organic compounds answering to the general formulae:

As compounds suitable for the present process, there can be cited, by way of non limiting examples, acyl-amides, carbamides, sulphocar-bamides (except the known sensitisers) amides, guanidines, hydrazides, hydrazidines, acylhydrox-amines, imidoethers, various heterocyclic compounds, the formula of which corresponds to the general formulae indicated, etc., as well as their derivatives and their salts.

For the preparation of the aqueous layers, acid amides are especially suitable, in particular those which, by hygroscopicity, retain the dampness necessary for the satisfactory operation of the layer. Very good results have been obtained with acetamide. The layers thus formed presented, even in presence of sulphuric acid, a stability exceeding six months, sometimes more and did not present recolorations. In certain cases, the simultaneous use of hygroscopic agents (such for instance as glycerol) is recommended.

By way of non limiting examples, various formulae for the preparation of bleaching layers according to the invention will be given hereinafter.

**Example 1.**—The solution for the bleaching layer is prepared by dissolving 1 gram of basic dye-stuffs in 2 grams of hydrochloric acid and 100 grams of water containing 2% of gelatine. 15 grams of N-di-β-oxetyl-N′-allyl-sulpho-urea are added and finally 20 grams of acetamide.

**Example 2.**—In 100 grams of water are dissolved 8 grams of gelatine, ½ gram of Nile blue sulphate, and 5 grams of N-bis (-β, λ, dioxypro- pyl)-N′-allyl-sulpho-urea, 10 grams of sulpho-urea and 5 grams of glycerol are added.

**Example 3.**—A bleaching solution similar to that of Example 1 is prepared, and 15 grams of monochloracetamide and 10 grams of glycerol are added. It is applied on paper and exposed to an arc lamp.

**Example 4.**—In 200 grams of water are dissolved 10 grams of gelatine, 6 grams of Capri blue, 4 grams of sulphopyrone G sulphate, 6 grams of methoxyresorcin-benzene chloride, 500 grams of a 20% alcoholic solution of diethyl-allyl-sulpho-urea, 100 grams of N-di-β-oxetyl-N′ allylsulpho-urea and 50 grams of N-β-oxetyl-N′-allyl-sulpho-urea and finally 75 grams of oxamidc are gradually added. 20 grams of this solution is spread out on a square meter of baryta paper.

**Example 5.**—Ordinary photographic support paper is acidified with diluted sulphuric acid and it is coated with 20 grams of the following solution: 100 grams of water, 10 grams of gelatine and 5 and 10 grams of proponyl-hydrasule. Then a
bleaching solution, for instance that of Example 4 is applied.

Example 6.—A thin layer of ethylamidine hydrochloride, by means of its aqueous solution containing 2% of albumin, is applied on a sensitized paper for photographic bleaching.

Example 7.—30 grams of cellulose acetate are dissolved in 200 grams of acetone. To this solution are added, 50 grams of methyl alcohol containing 0.08 gram of brilliant cresyl blue, 0.05 gram of sulphorhodamine and 0.10 gram of thiofluoresceine, and then 10 grams of oxalic acid, 12 grams of diethylallyl-sulpho-urea and 10 grams of succinimide are added. Finally, the solution is run on a transparent film.

Example 8.—A bleaching solution is prepared with 5 grams of basic dye-stuffs and 300 grams of 2% sulphuric acid, 30 grams of thioslanmine and 50 grams of diethylallyl-sulpho-urea. Finally, 35 grams of imidazole chlorhydrate are added.

Example 9.—An aqueous solution of crystallized violet sensitised by thioslanmine is spread out on paper. A solution of diacetylmine is then applied.

We claim:

1. In a process for manufacturing photographic bleaching layers, the step consisting in introducing in the composition of these layers an organic compound the constitution of which can be set forth by one of the tautomer formulae:

   \[ R_1-O=O \]

   \[ R_2-N \]

and

   \[ R_1-O=O-N \]

   \[ R_3 \]

   in which \( X \) represents an element of the oxygen series selected from a group consisting of O, Se, Te, and R1, R2, R3 each represents a saturated monovalent element, radical or group with the exception of compounds having a sensitizing power, by choosing the organic compounds in question among the following classes: acyl amides, acyl imides, amidines, guanidines, hydrazides, hydrazidines, hydroxamic acids, imido-ethers and carbamides.

2. In a process for manufacturing photographic bleaching layers as defined in claim 1, the step consisting in introducing acetamide in the composition of these layers.

3. In a process for manufacturing photographic bleaching layers as defined in claim 1, the step consisting in introducing in the composition of these layers an organic imide.

4. In a process for manufacturing photographic bleaching layers as defined in claim 1, the step consisting in introducing in the composition of these layers an amidine.

5. In a process for manufacturing photographic bleaching layers as defined in claim 1, the step consisting in introducing in the composition of these layers a guanidine.

6. In the process of manufacturing photographic bleaching layers, as defined in claim 1 in which the organic compound introduced is an acylamide.

7. In the process of manufacturing photographic bleaching layers, as defined in claim 1 in which the organic compound introduced is an acylamide.