

UNITED STATES PATENT OFFICE.

BERTHOLD WUTH, OF BASEL, SWITZERLAND, ASSIGNOR TO SOCIETY OF CHEMICAL INDUSTRY IN BASLE, OF BASEL, SWITZERLAND.

PROCESS OF PRODUCING DISCHARGE EFFECTS ON COLORED GROUNDS.

1,000,313.

Specification of Letters Patent.

Patented Aug. 8, 1911.

No Drawing.

Application filed April 13, 1910. Serial No. 555,188.

To all whom it may concern:

Be it known that I, BERTHOLD WUTH, doctor of philosophy, chemist, a subject of the King of Great Britain, and resident of Basel, Switzerland, have invented a new Process of Producing Discharge Effects on Colored Grounds, of which the following is a full, clear, and exact specification.

This invention makes use of the fact that organic ammonium compounds in presence of alkali have a decomposing action on the majority of organic dyestuffs. This is especially the case at higher temperatures and this behavior of the organic ammonium compounds can be applied in a suitable manner for white or variegated discharge effects on colored grounds. If dyed cotton be printed with a mixture of alkali and an organic ammonium compound, such as dimethylphenylbenzylammonium chlorid and afterward steamed, a white discharge effect is produced on the dyed goods. If the alkaline discharge be mixed with a dyestuff adapted to withstand the decomposing effect of the organic ammonium compound, variegated discharge effects can be obtained. By application of the invention pure white discharges can be produced on light and medium dyeings without any other addition and without subsequent treatment. For discharge effects on dark dyed grounds an addition of glucose is to be recommended.

The application of organic ammonium compounds in connection with discharges for colored grounds has been already proposed, but not their application alone; it has merely been suggested that they should be added to printing colors which contain formaldehyde sulfoxylate in order to increase the discharging action of the latter. (See Austrian patent specification No. 28437, dated March 15, 1906.) From this known method of discharging the invention differs in that the discharging effect is due solely to the ammonium compound in complete absence of other discharging substances (such as hydrosulfite preparations). Particularly good results are obtained by using dimethylphenylbenzylammonium chlorid, although other organic ammonium compounds may be used, such as trimethylphenylammonium chlorid, a tetra-alkylammonium chlorid or trimethylbenzylammonium chlorid, also such

ammonium compounds as are themselves dyestuffs, such as brilliant phosphin 5 G, methyl green and the like.

The method may be applied to very different colored ground, but it is especially applicable to white and variegated discharge effects on dyeings obtained with vat dye-stuffs.

The following examples illustrate the invention.

Example 1: For a white discharge, the fabric dyed with indigo, ciba violet, ciba gray, helindon, orange or thio-indigo red, is printed with the following mixture:

300	grams of	gum solution (1:1).	
100	" "	dimethylphenylbenzylammonium chlorid.	70
100	" "	caustic soda lye of 40° Bé. specific gravity.	

After printing and drying, the goods are steamed for 5 minutes in the Mather-Platt apparatus and then washed.

Example 2: For a red discharge, the fabric dyed with ciba blue 2 B or indigo M L B/6 B, is printed with the following discharge mixture:

650	grams of	gum solution (1:1).	
150	" "	printing chrome red.	
100	" "	dimethylphenylbenzylammonium chlorid.	85
100	" "	caustic soda lye of 40° Bé. specific gravity.	

After printing and drying the treatment is the same as described in Example 1.

Example 3: For a yellow discharge either of the following mixtures may be used:

(a)			
25	grams of	alizarin yellow 5 G.	95
165	" "	water.	
550	" "	gum solution (1:1).	
100	" "	dimethylphenylbenzylammonium chlorid.	
100	" "	caustic soda lye of 40° Bé. specific gravity.	100
60	" "	alkaline chrome mordant formed by a mixture of equal parts by weight of chrome acetate of 20° Bé. and of soda lye of 40° Bé.	105

- (b)
600 grams of gum solution (1:1).
100 " " dimethylphenylbenzylammo-
nium chlorid.
5 100 " " caustic soda lye of 40° Bé.
specific gravity.
200 " " cibanon yellow R of 10 per
cent. strength.
- 10 What I claim is:
A process of producing white and varie-
gated discharge effects on colored grounds,
consisting in applying to the fabric an alka-

line printing mixture containing a discharg-
ing agent consisting solely of an organic
ammonium compound, substantially as de- 15
scribed.

In witness whereof I have hereunto
signed my name this 14th day of March,
1910, in the presence of two subscribing wit-
nesses.

BERTHOLD WUTH.

Witnesses:

GEORGE GIFFORD,
AMAND RITTER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."