

RESTORATION OF CHROMOPHOTOGRAPH

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Abstract:

Chromophotography had been a comparatively wide-used process from the 1860-ies until the First World War. In essence, it is a monochrome positive picture treated with special colouring method. Each of these pictures unique piece. Its impairment beginning with the time first disfigures it, then causes lasting damage in it. Therefore, it is advisable to bring it back to its original state as soon as possible. The way of doing this identical with that of its production and so it can be deemed to harmless (primarily since it prevents trouble). Since the pictures produced by this technique are not recognized at the most places and neither is it identified that they already distorted and damaged, moreover specialized literature on their restoration is not available either, generally they are everywhere in a rather poor condition.

KEYWORDS: COLOURED PHOTOGRAPH, ABOUT 1860 - ABOUT 1915, RESTORATION FOR CONSERVATION, RESTORATION BY ORIGINAL MAKING METHOD, OLD PHOTOGRAPHIC PROCESSES

In his encyclopaedia edited 1990 by Louis Nadeau, he is enumerating more than 1500 old photographic processes. It is good, if an average expert could identify 20-30 kinds of final products. And it is not sure at all, that he were in possession of the necessary information of them, concerning their maintenance, conservation and restoration. Nevertheless, there are many cases, where photos made by less known method, are more valuable, because of their speciality - for the purpose of the collections. Moreover, the pictures made by the method we are negotiating at our present work, are individual pieces; there have been only a few of them, because they have a high claim of manual work, in the first years of using their price is high too; therefore only a small part of people could effort their preparation. But these people were mainly famous (or at least rich).

Colored photos have been made already before the invention of photography (there have been painted some essay-pictures of the inventor by Talbot's daughters) and, they are made continuously. It is not our task by now, to judge their aesthetical value. Our present group of methods concerns colouring and finishing. Using the method has been started about 1860; its

accessories were to be acceptable in trade still the First World War.

By the English, German and French people this method has been called photochromy; later there were different other names, like: chromo-photograph (1852-, Tardieu) or -chrysal, c(h)rystoleum(photo), crystalotype, kartaline, etc. The name "crystal" comes from crystal-glass; the name "oleum" comes from word oil (which serves for making it transparent). In German auction-catalogues: Koloriertes Hinterglasbild, in Hungary: kromotipia. In (north) America: hallotype (1857-, Hall), hellenotype. Etc.

It is a common characteristic of all varieties, that colours appear through a transparent paper, in order to increase the XVIIIth century, made by the mezzotinto proceeding. The other antecedents, named "Daguerreotype á l'huile", by Lalue since 1855. The albumen print has been painted over with oil paint, then it has been lacqued and a glass plate was stuck (with lacque) over the picture. Colours got brillancy from the high gloss surface. We can distinguish the main variants according the proceeding method, designations have been changed according epoches and places.

It is presumable, that at the most complicated variants, there has been made two prints with different degrees of intensity (on printing out paper in generally, they used in the most cases albumen and salt paper). One of them has been painted with covering paint (roughly, taking care only on the contours); then it has been mounted on a hard sheet (card, glass, metal, etc.). The other one were coloured on its back side with transparent paint and on its pictured-side the white, silver and golden parts were painted too with covering paint.

After this they made it transparent: similarly to the methods at calotype negatives (mainly white wax - melted or dissolved - and different additive materials, like ricinus, cetaceum, Canada balsam, etc.) - by the help of these materials they stuck the picture side on glass plate, which has been heated before. These two pictures have been placed one over the other (transparent-one had to be in front); the replacement had to be realized in such way, that the picture elements could cover each-other punctually; between the sheets had to be a distance of some mm (pieces of cart or glass plate were placed between them). At last it was fixed by sticking the ends round with sticking tape.

Of course, the method is changing almost in every atelier. They preferred to stick the albumen print by gelatine solution, gum or paste on curved glass plate; before waxing the paper layer has been made thinner with sandpaper. For making it transparent they used to apply fats and oils, by which they became yellow in a very early time. Sometimes, they used instead of wax a solution of alcoholic sandarak resin or dammar varnish, etc. For the back side colouring - instead of an other

photo - they applied outline drawing, a glass-plate, painted on its back side or, the strong painting of the first picture's back side (also after waxing). They worked also with coloured pencils. Pictures made in this way are soft, and because of the glass - their shining surface is kept-back, their coloured world possesses an extraordinary brilliancy. Contrasted with other methods of the same epoche, they are generally permanent. The reason of wich is probably the fact, that still their installation is intact, they are separated from air and from the light too (glass plate, painting layer, etc.). By this, even the albumen paper is relatively constant. The pictures are often in gilded frames. The glass can be squared, oval or octogonal, sometimes round and often is it convex.

Damages which appear very often: picture's coming off from the glass; that means: it becomes dead and spotted. Moving of the layers between each-other, it becomes double contours. Further damages: the (failure or) breaking of glass layer; it means: the photo stucked at it, can be damaged. Highlight have been coloured often with "white lead" (cerussa); but, by becoming black - the original total image has been deformed. Very often the damaged chromophotograph remains broken only (for instance: only one of the two layers). If the package has been originally airproof enough, it becomes permeable and, this decreases its durability.

Repairing works have often incalculable consequences; therefore I dont' mean to apply them, only in definite cases. These are: if the expected risk of intervention is lower than a non intervention. Seeing the fact, that in the case mentioned above we have to count with the spontan decomposition of object's condition - we can speak of such a case. Restoration is taking place in a similar way as one of the original preparing methods; therefore the way isnt' unknown to us. We are using the following method since more than three years; during this period we didn't meet with no-desirable changes on the objects.

Before starting with work, it is suitable to examine properly the picture, in order establish the original status because, our claim is always for restoring it as good as possible.

First, the chromophotograph has to be dissolved into this layers. If its glass-part has to be restored, the photo has to be puttred away entirely from the glass plate. That must be realized careful - maybe heating it a bit - beacuse the photo-paper is stiff and breaks very easily. After that, we are cleaning very careful a new glass plate, which is a bit greater than the original; the glass plate has to be heated until the melting point of white-wax (cca. 70° C). Then, we are pouring on the middle of the glass white wax, which has been melted before. Attention! Nowadays the wax made white by aggressive chemicals (e.g.: acid and potassium bichromate). These chemicals can damage the picture, therefore white-wax has to be prepared by the old process. Beeswax must be sprin-

kled with water on strong sunshine; it becomes slowly white. It is also possible to cook it with hydrogenperoxid; that is a bit faster and resolving into water and oxygen, it is not dangerous. The wax must not be totally white, it is enough if - in the necessary thickness of the layer - it has not a visible colour.

By holding the picture on the two ends, first its middle has to tuch the waxed glass surface ; there will to be seen under it the formation of the wax-film. Laying on the glass has to be realized slowly and attentively, in order the bubbles dont' rest under it; if necessary, more wax can be poured out under it. The superfluous wax has to be removed with a convenient utensil, by smoothing the wax from the middle outwards. That is not all easy, because in every case - too much or too little wax - there will be a spot. From the back-side and from the ends, the superfluous wax has to be removed by blotting paper. Smaller unevenesses can be corrected by local traitment. Cooling must be realized relatively fast. After the total stiffing of the wax, the glass has to be cutted into the necessary measure and, at last it has puttred together in the originalsucesssion. At last, we fix it by sticking it around (as airproof as possible).

By reasons of safeness - before using this method (which claims some practise) on the original objects - it is good to make some similar chromophotographes and, if we have already the necessary practise, then we can work with object d'art. Status of the restored picture must be controlled during some years from time to time.

LITERATURE:

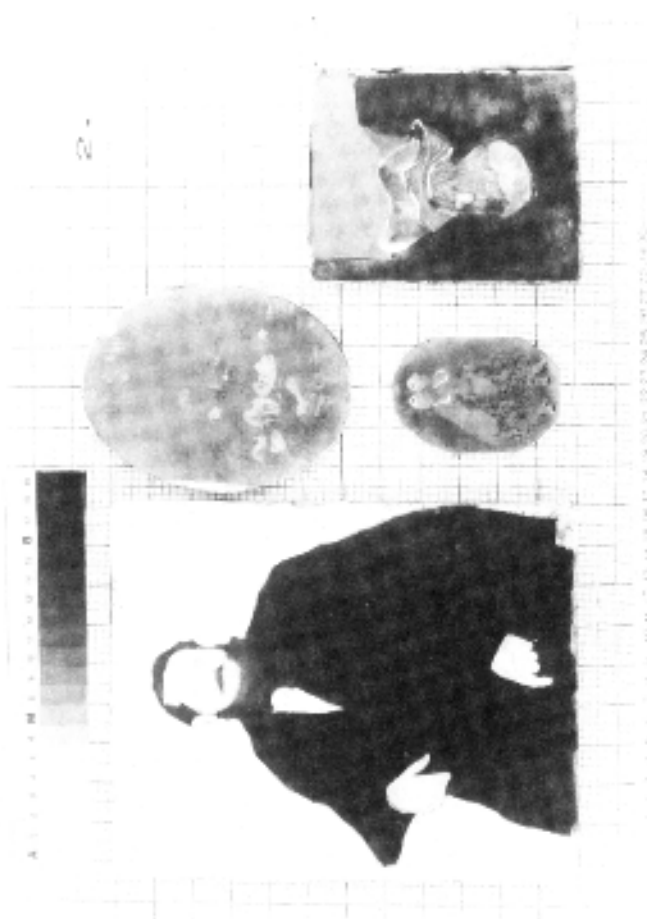
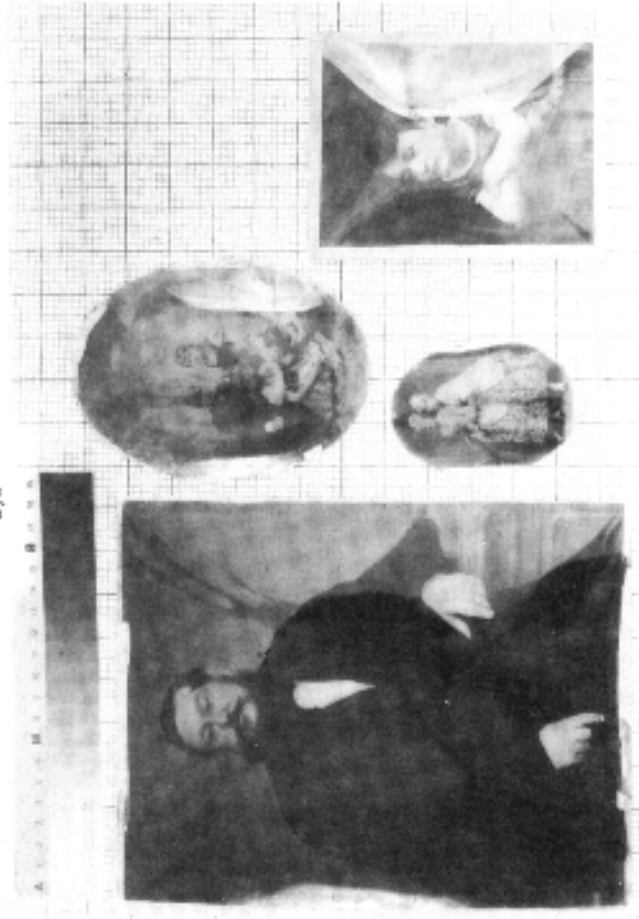
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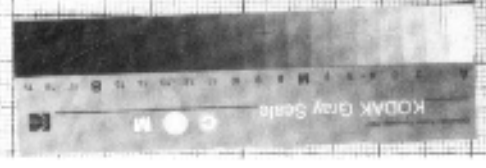
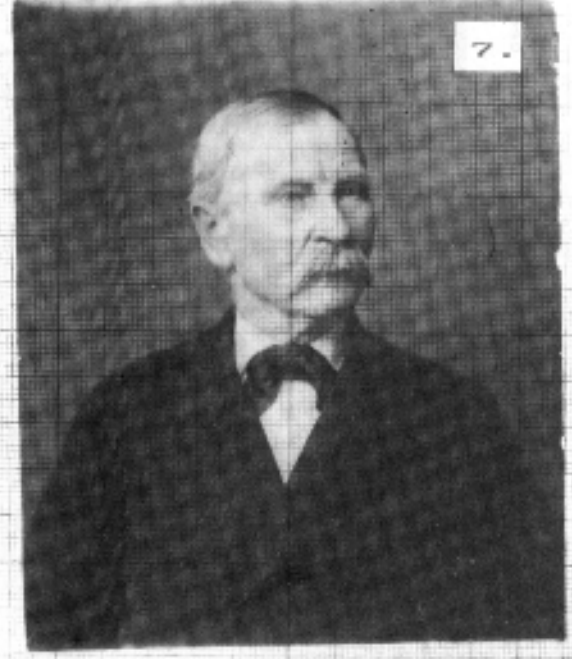
LIST OF PHOTOGRAPHS:

1. "Crystoleum"-s it was a cheap version. On curved glass plate (sticked with gelatine).
2. The back side of christoleum. It has one layer.
3. A two layer chromophotograph, stucked with wax. (56x45 cm). The glass brokeed. Picture coming off near the damage.
4. An another piece, picture leaved glass. Size: 56x 43 cm.
5. A restoration story. Two photo from a couple. Without glass and the installation is damaged.
6. The two layers of a chromophotograph: a background and (on the edges the distance-maker cart strips) a transparent one.

7. The transparent layer on a new glass plate. (Made with "home made" white wax, by heating equipment.)
8. The two chromophoto but the left (the man) restored.

The owners of originals: Hungarian Museum of Photography and two private collectors.





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