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## INCREASING OR REDUCING INTENSITY OF VARNISHED NEGATIVES.

WHEN a negative is varnished, its defects, if it have any, are generally considered as past remedy. It frequently happens, however, especially to amateurs, that the real printing value of the negative is not certainly ascertained until after it has been varnished and proved; it may then turn out that the deposit, which looked so comparatively thin, is so non-actinic that it prints hard; or, that notwithstanding an apparently dense deposit on the high lights, either from this density being factitious and permeable, or from the presence of too much deposit on the shadows, the Prints are tame, flat, and wanting in contrast. It sometimes happens, moreover, that the negative, which really possesses a true relation of contrast in light and shadow before it is varnished, becomes, through some peculiarity in the film, so permeated and saturated with the varnish, that the opaque spots of high light become more than semi-transparent. All negatives are more or less reduced in intensity by the varnish, but in some instances the varnish appears to remain entirely on the surface, simply acting as a transparent Protective film, affecting the printing character of the negaden in a very minor degree; whilst in others, where the deposit is powdery and permeable, the intensity is considerable in ably reduced. Thus, from a variety of causes, especially in the hands of the inexperienced, a remedy for such defects, a means of altering the intensity of the varnished negative, becomes a valuable power.

Various modes have been tried to remedy defects of intensity in varnished negatives. If what are termed "crystal" or "amber" varnishes have been used, the solvents of which are chloroform or benzole, the varnish is comparatively easily removed by repeatedly flooding the varnished surface with one or the other, especially with the chloroform; but with spirit varnishes, which are most commonly used for negatives, the case is different. The varnish once set is not easily entirely dissolved again, and even after long digesting with strong alcohol, and repeated washings with the same, a white powdery deposit remains, which seems so incorporated with the collodion film, that it is impossible to remove it. The remedy we are about to describe especially refers to hegatives varnished in this manner, with any of the alcoholic or spirit varnishes in the market. Proceed as follows:

For a thin Negative. - Cover the varnished film with absolute or strong alcohol—methylated spirit will of course serve—so as to slightly soften and render permeable the varnish. Then take a weak solution of iodine, in alcohol, from four to six grains to the ounce, and pour over the plate. If the negative be thin and poor, giving prints lacking contrast, let this solution only remain on the film a few minutes, watching its operation carefully. An increased density is the result of the application, and a change of the colour of the deposit. The dense parts which in a weak negative are generally of a grey colour, become of a deep olive tint, which is very non-actinic. The film is then to be washed plan, which, for various causes, never came much into use.

quickly again with alcohol, and dried by gentle heat. It may be again varnished, but this it rarely needs, for in truth scarcely any trace of the varnish already there has been removed by the operation. We have produced by this means negatives giving brilliant prints, which before were so thin and flat as to be entirely worthless.

For an Over-Intense Negative.—Proceed in the manner just described; but instead of pouring off the iodine solution as soon as the non-actinic olive tint appears, continue its application, the colour of the deposit will become gradually a deep yellow, then of a primrose, and finally white. It may be stopped at any of these stages, just as the character of the negative and the density of the existing deposit may require. It is evident that whilst a dense deposit of a black or non-actinic colour may give very hard unsatisfactory prints, the same kind of a deposit when changed to a colour more permeable by light may give soft round good prints. The exact stage, then, to which the colour must be carried will depend on the amount of density present and the result desired; a little judgment must therefore be used. The film must then be washed with alcohol, as before described, dried before the fire, and in this instance varnished, as the prolonged treatment with a strong spirit will have removed a

The same method both for increasing or reducing intensity, may be followed, using an alcoholic solution of bichloride of mercury, instead of iodine. The first application in this instance increases the density of the deposit and makes it of a bluish-black colour, not so non-actinic, however, as the olive tint produced by iodine. The prolonged action of the bichloride is similar to that of iodine finally turning the dark deposit light coloured, and reducing its printing intensity. The use of the mercury has, however, some objections which the iodine is free from, and we recommend the latter.

considerable portion of the varnish at first on the film,\*

The method we have described especially refers to negatives produced by a deposit of silver only; but it is not less applicable to those which have been intensified by mercury and an iodide, or by other means; the principle of its operation being the same, some slight modification in the exact treatment being in some instances rendered desirable by the especial features of the case, which must be suggested by the judgment of the operator.

We may remark in conclusion, that, according to the old adage, they who are good at excuses are seldom good at anything else. In like manner they who are good at expedients are rarely skilful in dispensing with them, and whilst we furnish expedients for emergencies, we strongly counsel young photographers to avoid the necessity for them; to acquire as far as possible a certain and exact mode

<sup>\*</sup> In a paper read by Mr. Berry some nine years ago before the British Association, he suggests that when a film is so tender as not to permit intensifying with aqueous solutions without being disrupted, it may be varnished and then intensified with alcoholic solutions of chloride of gold and sulphide of ammonium applied in succession, but we cannot recommend the