

PHOTOGRAPHIC MARKING INK.

BY H. NEALE.

THE following method of marking or producing designs on linen, &c., which I have long been going to send you, and although, perhaps, known to some of your readers, I cannot remember having seen published, may be of service to many. Proceed thus:—Make a 20-grain solution of ammonia nitrate of silver by the usual method, adding sufficient gum mucilage to make it flow better from the pen. Damp slightly the linen or other fabric with a solution of pyrogallic and citric acids (the ordinary redeveloping solution); let dry; then, with a quill pen and the silver solution, trace the design on the linen. The effect seems magical, as the instant the design is formed—in fact, as fast as the pen goes—the design appears of a rich black colour, and is perfectly permanent, requiring no fixing, and will bear any amount of washing.

The above idea might probably be utilized in block printing on linen, &c., as designs could be produced as quickly as by the ordinary printing press.

A VISIT TO THE PHOTOGRAPHIC STUDIO OF THE IMPERIAL MILITARY GEOGRAPHICAL INSTITUTE IN VIENNA.

BY ALOIS NIGG.*

HAVING recently occasion to pay a business visit to my friend M. Frank Fink, the Assistant-Director of the above-named establishment, during the ordinary working hours of the department, it was my good fortune to obtain permission to witness the mode of operating pursued at this deservedly-celebrated photographic studio. This favour I appreciated the more fully from the knowledge that an indulgence of the kind is rarely granted to strangers, on account of the hindrance to work which such a proceeding generally involves.

The establishment is under the careful direction of Lieut.-Colonel Johann Schopf, and the excellent work which has been produced therein has acquired for it such a reputation that no laudable commendation is necessary on my part; at the same time, notwithstanding the high character of the studio, I believe that there are some among my colleagues who do not at all envy me the opportunity I have enjoyed; more especially, I would mention, those gentlemen who are not accustomed to the manipulation of large plates, and those, likewise, who, with the most anxious care, tenaciously hold fast to the methods of operating with which they first become familiar; for in this establishment those orthodox rules and regulations which are generally considered indispensable to proper manipulation, and an infringement of which would, to many minds, inevitably bring about the most disastrous consequences, are simply regarded as null and void; and it would seem almost as if even the chemical reagents had been placed under military discipline to obey in all things, and in no way to disregard, the commands or wishes of the operator.

As regards the situation and construction of the different work-rooms, they have all been arranged and built according to the necessary requirements; such, in fact, as could only be the case with a government institute. In an exposed and isolated position upon the roof of the building is constructed the studio, lighted from all four points of the compass. Here the negatives are taken from the original maps and drawings, which are screwed in an upright position to movable frames, placeable against any of the walls of the studio. The top and side-light windows are removable, so that work may be performed, if necessary, in the open daylight, or even sunlight, which streams uninterrupted upon the object to be reproduced; white reflecting screens may likewise be used on the two opposite sides from those whence the light enters, to prevent the casting of any shadow by the roughness and texture of the paper, an

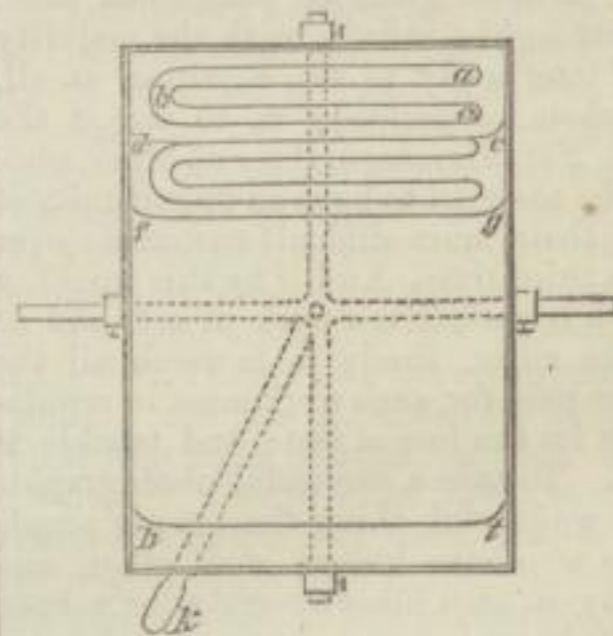
* Photographische Correspondenz.

effect which often occurs when the surface of the object is strongly lighted.

The giant camera stands upon a table capable of being lengthened out or shortened, and provided with iron rollers running upon rails; by this means a picture of any size may be sharply focussed in an incredibly short space of time by a couple of assistants who have had some experience in working together. I am a great stickler at military discipline and working by word of command, but if such satisfactory results were always produced by its means as those shown at this establishment, it is, I think, to be regretted that a certain amount of soldierlike character cannot be infused into every photographic studio. I had the pleasure of personally witnessing the process of copying a map of the same size as the original, which was a drawing composed of four sheets of paper, and the whole operation conducted in such an efficient and original manner that I cannot refrain from giving a detailed description of the same.

A sheet of plate-glass measuring from twenty-five to thirty inches, and roughened all round the margin to the extent of a quarter of an inch by means of a flintstone, was placed upon a frame in the form of a cross, which was supported on a movable socket exactly in the centre. At all four extremities of the cross are clamps, which, being packed together, fasten the plate down, and, at the same time, keep it in the centre of the stand in perfectly horizontal position. By means of an arm fitted underneath the cross, the same may be depressed or elevated at will, so that the glass plate may be turned or tilted in any way without being touched. This description of cross has been used by many photographers for the manipulation of small plates, and I do not allude to it, therefore, as any special novelty: the manner, however, of applying the collodion is, I believe, a perfectly new one.

M. Fink seated himself comfortably to perform this bold operation, pulling sideways towards him the horizontally-swinging plate, and pouring the collodion thereon from a half-pound measure in a thin stream, in the manner indicated by the



lines *a, b, c* in the accompanying sketch. He commenced at the furthest edge of the plate, and allowed the stream of liquid to fall in a parallel line to the same, about two inches distant, tracing a horse-shoe figure backwards and forwards with the collodion. As soon as the latter, by means of a little skilful handling, had been made to spread itself over the plate to the extent of a hand's-breadth, as shown by *d e*, the operation was repeated in the same manner at a more advanced part of the plate at *e, d, g*, and the collodion so manipulated that it extended to and combined with that previously poured on; in this way the plate was coated until there remained but a margin of about three inches uncovered, as shown at *i h*. Under those corners of the plate which were still dry, vessels were placed for the reception of the superfluous collodion, and the cross-stand was next very slowly and carefully tilted by means of the handle in such a manner that the material flowed evenly over that part of the plate which was yet uncovered. From the commencement of the operation of collodionizing the plate until this moment a period of not less than six minutes had elapsed, and until the material had set sufficiently to allow of the plate being placed in a perfectly upright position at least ten minutes had gone.

The coated plate is now placed in a horizontal sensitizing bath, the collodionized surface uppermost, and allowed to remain therein quietly for a quarter of an hour. It is stated that the plate should never remain immersed in the bath for