

## Talk in the Studio.

**AMMONIA NITRATE FOR ALBUMENIZED PAPER.**—Mr. G. R. P. Frazer, of New Glasgow, Nova Scotia, sends us the following formula for ammonia-nitrate of silver, to be used with albumenized paper. Some fine-toned prints are enclosed as illustrations of the operation of the process:—Dissolve an ounce of pure nitrate of silver in eight ounces of water, pour off one-third of the solution into another bottle, and add aqua ammonia until the precipitate first caused is redissolved. Then add to this the remaining two-thirds, and add to the whole one drop of nitric acid to each ounce of solution. The paper should not be floated on this solution for more than a quarter of a minute. The tones are rich and brilliant, and the process considered by those who use it a decided improvement on the usual method.

**THE JURORS IN THE PHOTOGRAPHIC DEPARTMENT OF THE EXHIBITION.**—We learn from the *Photographic Journal* that Dr. Tyndal is acting as deputy chairman, and Dr. Diamond as secretary or reporter to the jury in the photographic department. The jury have been requested to take under their adjudication all photographic apparatus, and chemicals designed for photographic use, whether in their own or other classes. The jurors are proceeding actively in their labours, and are summoning, where it is deemed necessary, exhibitors to explain the details and claims of their contributions. The awards are to be made before the 15th of June. The following selections from the "Instructions to Jurors," explain the arrangements in regard to medals:—*Medals to be awarded without reference to Nationality:* The medals will be awarded for excellence only, without reference to countries, the Exhibition, so far as regards the juries, being considered as a whole, and not as consisting of a mere juxtaposition of separate displays by different nations. *Number of Medals:* The number of medals required by each class cannot be determined with precision before the examination of the objects. Guided by the experience of former exhibitions, Her Majesty's Commissioners have authorized the special commissioner to place a definite number of medals at the disposal of each jury, but have reserved the right of the council of chairmen to increase this number, if individual juries give reasons which are considered satisfactory by the council. *All Medals of one kind:* There are no gradations of medals, all being the same. The medals are to be awarded for merit, without any distinction of degree, and without reference to competition between producers. It is not the best manufacturer, in any particular branch of industry, who should alone be rewarded by a medal, but all producers who shall show by their exhibits, that their products are excellent in their kind. No exhibitor, however, can receive more than one medal from one jury. *General Instructions for the giving of Medals:* The council of chairmen do not deem it advisable to issue formal and positive instructions as to the conditions under which medals should be awarded, but think it expedient to offer the following suggestions to the juries, trusting in their ability to make rules for their separate guidance. The jury for Class XIII., Philosophical Instruments, will reward novelty of inventions, or novelty in the whole or part of the instruments exhibited, ingenuity of construction, new application of old principles, application of new principles, improvements in beauty of form, increased durability, extended applications, excellence and precision in workmanship, economy of production. The jury for Class XIV., Photography and Photographic Apparatus, will reward the instruments of photography on the same considerations as are attached to the class of philosophical instruments. In regard to photographic impressions, they will reward novelties in the mode of production, durability, excellence in the results obtained, and artistic merit. With reference to photographic materials, novelty or new applications, increased sensitiveness, or powers of retention, and facilities of operating should be favourably considered.

## To Correspondents.

- J. JEFFERSON.**—So far as we know the authorities of the South Kensington Museum still publish their photographs. Their catalogue can be obtained at the Museum at the cost of a few pence.
- J. R. P. FRAZER.**—We are obliged by your letter and enclosures. As regards an instantaneous collodion, we cannot advise you to do better than follow the formula of Mr. England, given in our pages.
- W. W. B.**—It is somewhat difficult to speak of the character of a lens from

the specimens of its work sent; as whether the lens be a good or a bad one, better results might have been obtained with it. The negative you state considerably under-exposed, and the model is not well lighted. The image is not perfectly sharp or well defined at any part. The lens may be a good one, and from the maker you name most probably is so; it has a curved field, which accounts for the middle of a standing figure being out of focus when the head and feet are in. If a lens cover perfectly, the falling off will, of course show at the edges, but as regards curvature of field, it entirely depends upon the focussing as to where the defect is most apparent. If you focus for the edges the centre will be out. Probably this may be an excellent lens for some purposes, but scarcely suited for card portraits with standing figures. A smaller aperture would reduce the evil.

**A. B.**—Prints may be placed in the acetate of soda bath previous to being direct from the printing frame.

**CANTUAR.**—We have never tried the addition of bromide to the collodion name. It is possible that for some purposes, and with iron development it might improve it. It is not certain that it does not already contain bromide. The best mode of adding bromide would be to make a solution of bromide of ammonia in alcohol, say 8 grains to the ounce, and then add the drachm of the solution to an ounce of collodion, which would be the rate of half a grain of bromide to the ounce of collodion. 2. The varnish in which you attempted to dissolve wax failed, was probably a benzine varnish. Wax is very sparingly soluble in alcohol. You should use benzine varnish, commonly sold as a "crystal varnish." Wax is not soluble in benzine or in essential oils. Spirit varnish without wax is cold, so as to chill, may sometimes be used instead of ground glass transparencies. A thin solution of starch may also be used. Less than unaltered iodide of silver would not answer well, as it would be too slow and would probably eventually darken somewhat.

**M. A. O.**—We have not answered your letter until we had opportunity making some enquiry. From what we learn, the prints which were offered to be ineligible for exchange were not the same as those of which we spoke favourably. You will readily perceive that the referees can have no influence in the decisions at which they arrive, but a wish to do justice to the art and to elevate the art as much as possible; and you must remember that in order to make their unremunerated labours tolerable, or even supportable, the rules arrange that their decisions shall be final, and not subject to question. We would recommend you, when one lot of prints is refused to resolve to improve and send some better next time. We feel sure that the referees, whether we are present at their deliberations or not, will gladly give a favorable consideration to all contributions, and that if they would rather err on the side of lenient judgment than otherwise.

**TROUBLESOME.**—The alkaline gold toning bath with acetate of soda is well and successfully used. It is well, if the chloride of gold contain iron, to add just sufficient carbonate of soda to neutralize it. 2. Filter the cyanide of silver precipitated in the silver bath, to which the cyanide was added by mistake. If there be any quantity, add more silver to the bath to restore its strength. The bath will not be injured if the cyanide is pure, except so far as its strength is reduced by the loss of silver. 3. You have not found acetic acid cause pinholes in the negative. 4. You probably given your tannin plates too little exposure. You say that honey and tannin you got a picture, but it required five minutes exposure. It entirely depends on the state of the light, and the focus and aperture of your lens, whether that was a long or short exposure. It might be a very short one.

**R. C. H.**—Your lens would probably answer very well for enlarging. The size of the stop to be used will somewhat depend on the amount of distance given, the state of the light, &c. Probably about  $\frac{3}{16}$ ths of an inch aperture would be found to answer. 2. It is desirable in enlarging to reverse the position of the lens. We are glad your glass house proves satisfactory.

**J. G. B., Huddersfield.**—All the accounts we hear confirm the correctness of that honey is a decided advantage in the tannin process. We have used gelatine with plates so prepared; but we see no reason to suppose that a two-grain solution would retard at all. Probably with honey will not need the gelatine coating. The experiments we described with collodion made by ourselves; but we apprehend that any good iodized sample would answer. In cases where you wish to follow the formula, without the trouble of making collodion, you will find it a convenient plan to buy a good plain collodion, and then add such iodides or bromides as may be necessary. This is a better plan, and involves less trouble, than purchasing pyroxyline. The negative from which the enclosed print was taken appears to be very good; but three quarters of an hour is a frightfully long exposure for an open-air picture.

**J. W. R.**—We cannot tell in what point you have failed, but the process described in the work to which you refer is successfully practised by the manufacturers in gelatinizing the covers of fancy boxes, &c. Remember that it is necessary that the glass should be prepared with ox gall, or a tannin oil or grease, so that the gelatine shall not adhere firmly. A little care, and carefully observing all the instructions, will probably insure success.

**J. G. L.**—The "black stuff" enclosed, which had been scraped out of the corners of ebonite dishes, appears to be simply some kind of India-rubber varnish. You will rarely find articles of this kind sent out by the manufacturers chemically clean; photographers should always take the precaution to thoroughly cleanse new vessels. 2. The formula for a bromo-iodized solution would depend somewhat on the character of the pyroxyline for the purpose for which the collodion is to be used. You can add more bromide, using either the bromide of cadmium or of ammonium, or bromo-iodized collodion, if it tends to over-intensity or hardness. You may procure plain collodion, and iodize it yourself with iodide of cadmium, 4 grains, and bromide of cadmium, from half a grain to a grain and a half, according to the quality of the pyroxyline and use of the collodion, with iodide of ammonium or potassium, 2 grains; iodide of cadmium, 2 grains; and bromide of cadmium in the same proportion as above. We think you will find the tannin and honey preferable to the iodine alone.

**B. ALBURY.**—We are obliged by your letter. We will make use of your suggestions shortly.

**B.**—The exposure necessary for the interior of a church will vary very much with circumstances, such as the number, size, and aspect of the windows, and whether they are of plain or coloured glass, &c. Your own judgment and experience must guide you. The interiors of St. Etienne, in Paris, were photographed by Mr. England, received exposures of five or six minutes. Use a bromo-iodized collodion and iron development.

Several correspondents in our next.