The solutions required are :—

1. Gold chloride.....15 grains.
   Distilled water.....7½ drams.

Neutralized with chalk, filtered and one drop of strong hydrochloric acid added.

2. Glycerine.
3. Sodium sulphite.....1 ounce.
   Water up to .....10 ounces.
   Metol.....50 grains.
4. Potassium carbonate.....1 ounce.
   Water up to.....10 ounces.

The following is the method of application :—

The platinotype print developed, cleared and dried in the usual way, is soaked for two or three minutes in water, then laid upon a flat surface, preferably a sheet of opal glass, and blotted to remove the excess of water. Next glycerine is gently spread over the whole surface of the print with a soft brush or the finger-tip. When evenly coated, a few minims of the gold solution are dropped on and rapidly mixed with the glycerine with a soft camel hair brush. Very soon the print will begin to gain in strength and assume the blue-black color. During the whole time the toning is proceeding the surface of the print should be brushed lightly and quickly in order to insure even action and to constantly bring fresh gold chloride into contact with the platinum image; also there seems to be less tendency for a deposit to be formed on the high lights if the solution is kept in motion. The high lights should be watched, and as long as they remain clear the action may be allowed to continue. When the desired effect is obtained or when any coloration is seen in the high lights, the prints should be quickly rinsed to remove the adhering glycerine and gold. After this a mixture of equal parts of metol and potash solutions is sponged over both front and back of the print. Washing for half an hour completes the operation.

Prints may be kept after development for some weeks or even months before toning, but very old prints will not readily tone. If the weather is cold, the water and dishes used will probably require to be slightly warmed or the action will be very slow. Prints are best toned in good daylight, as it is easier to see the gold is kept evenly distributed over the print, and daylight also assists the action and renders the process more rapid than when performed by gaslight. The general effect of the toning action is to slightly increase the contrasts in the print as proportionately more gold is deposited where there is a large quantity of platinum present than where there is a small quantity. The best results are obtained when the actual increase in intensity required is only small.

The method of treatment I have described will, I think, be found to have four distinct uses :—

1. To strengthen under-exposed prints.

2. To convert a rusty or brownish color in a print into a pure black.

3. To produce blue black in the place of black prints when this modification of color is considered desirable.

4. To enable brighter prints to be obtained from flat negatives than is usually possible by the ordinary method.

The treatment can be applied to most silver printing processes, but as a rule the improvement is not very marked.

In conclusion, you are aware that other workers have published methods of modifying platinotype prints, and I trust the few examples I have brought are sufficient to indicate that we shall find, by further experiment, the means of producing still more variations in the tone and character of our platinum prints.