

of Philadelphia, states that if a thin solution of gum arabic is applied to the negative after fixing and before drying, the varnish will not affect the intensity. This is a very simple and useful remedy. Mr. Wenderoth also states that he has long practised the covering of photographic paper prints upon both sides with collodion varnish, and finds it a complete preservative of the picture. Nearly all photographs will fade away in a few years unless thus protected. This method has been claimed by Mr. Blanchard, of England, but we believe that Mr. Wenderoth is entitled to the priority.

#### To remove Nitrate of Silver Stains.

Nitrate of Silver Stains may be removed from the hands or clothing by the combination of iodine and a solution of hyposulphite of soda.

#### Chloro-Iodized Collodion.

A friend of ours is working entirely, both in the gallery and the field, with chloro-iodized collodion: the results are excellent; we are inclined to believe they are better than can be obtained with a bromo-iodized collodion. Our own experience with a similar collodion is equally satisfactory; we get more detail and better work in general with the chloro-iodized than with the bromo-iodized collodion.

*Formula.*—Alcohol, 4 ounces; ether, 4 ounces; pyroxyline, 48 grains (more or less); iodide of ammonium, 40 grains; chloride of ammonium or magnesium, 8 grains.

Chloride of magnesium is more easily soluble in alcohol and ether, and therefore preferable. Our friend has 24 grains of chloride of ammonium in this quantity of collodion, but we are certain so much will not dissolve.—*Humphrey's Journal.*

### Miscellaneous.

#### Galvanic Electricity upon the Muscular and Nervous System.

The effects of the galvanic current on the nerves and muscles of animals, is essentially the same as that produced by frictional electricity, modified, however, in some degree, by the continuous action of it. They are also characterized by the presence of some chemical influence, which excites the organs of taste and sight in a remarkable manner. Very small batteries are adequate to excite the organs of taste and sight, but a large apparatus is needed to produce any perceptible influence on the sense of touch, so as to cause the muscles of the human body to contract, when it forms part of the circuit. Galvani, in his fundamental experiment, touched the nerves of a dead frog's spine and the muscles of one of his thighs with two different metals, and then forming a circuit by a wire between them, the leg became violently contracted. When the nerves of vision are made to form part of the voltaic connection, peculiar luminous flashes will appear before the eyes. The excitement of the organ of hearing under similar circumstances is not less interesting, a roaring sound being heard

as long as the wires are kept in place. On closely observing the effect of galvanic electricity upon the muscular and nervous system, three distinct stages in the process are readily seen. First, when the circuit is completed, an electric shock is experienced; next, the continued action of the current causes a series of contractions rapidly succeeding each other; and lastly, when the connection is broken, a less violent shock than before is felt. The shock of the voltaic battery differs from that of common electricity, as the latter is felt far less deeply, affecting only the outer part of our organs, and being exhausted in a moment. The voltaic shock, on the contrary, penetrates further into the system, passing along the entire course of the nerves. The influence of the galvanic current on the nervous system, has been successfully applied to the restoration of persons in whom animation was suspended. By means of it Aldini set in motion the feet of a corpse, caused the eyes to open and shut, and distorted the mouth, cheeks, and the whole countenance. Ure, by completing the circuit through the body of a man recently hung caused the muscles of the face to acquire a frightful activity, so that rage, despair, and anguish with horrid smiles, were successively depicted on the countenance.—*Telegraphic Journal.*

#### Antiseptic Properties of the Sulphites.

At the recent Dundee meeting of the British Association, Dr. Polli communicated a paper bearing on this subject containing facts which he had obtained as the results of extended observations. Sulphurous acid was said to be the most active agent in preventing or arresting all organic fermentation. As the acid, however, was not sufficiently applicable in experiment, Dr. Polli had undertaken an investigation as to the action of the sulphites of lime, hyposulphite of magnesia, sulphate of magnesia, sulphide of soda and granulated sulphite. These substances were found to possess all the properties of sulphurous acid, with the advantage that their action was more uniform and certain and constant. In experimenting on animals and himself, he found that large doses could be taken without risk. On killing animals treated with sulphites, and others not so treated, he found that the former were most slow to decompose, and, indeed, remained quite fresh when the others were putrescent and offensive. Another series of experiments showed that in one class the administration of the sulphites, was sufficient to effect a more or less rapid cure in cases where blood poisoning was present, as in fevers, but this fact he did not attribute to any curative power in the sulphites, but to the fact that they arrested decomposition, and by so doing allowed the animal to recover by the recuperative power existing in its own constitution. The author thought his observations conclusive as to the excellent influence of the sulphites on the septic diseases, and remarked that it was for the purpose of thus benefitting others that he had brought his researches under the attention of the scientific world.

#### Ventilation of Vessels.

An English paper says:—"If the Abyssinian expedition produces no other satisfactory result,