

plied to the latter a copy of the words is obtained. All this is done in the dark; the action of light is completely excluded. We have thus, as stated by Mr. Lea, a *mechanical* cause as powerful as light in producing a latent image upon a plate.—*Paris Correspondent of the London Chemical News.*

White Enamelled Plates for Photography.

In a paper read before the Philadelphia Photographic Society by Mr. Wenderoth, he gives the following as the method by which he prepares white tablets for photographs. He coats the plate—a ferrotype or a glass plate—with a solution of albumen one ounce, water five ounces. He then adds to plain collodion so much fine precipitated chalk as will make a covering so thick as to prevent the plate from being seen through it. It should be poured on in the same manner as ordinary collodion, and care taken to prevent lines from being formed. Before coating, the collodion should be well shaken up, and then allowed to subside for a minute or two, to allow the heavy particles to fall to the bottom. When quite dry, coat with twelve parts of albumen and eight parts of water, adding two grains of chloride of ammonium to each ounce of the solution. Sensitize for one minute in a seventy-grain ammonia-nitrate of silver bath, then fume, print, and tone in the usual manner.

"Magic Photographs."

The familiar experiments of the laboratory have in the present day a great tendency to become the magic of the drawing room. Magic photographs are among the most recent of the scientific toys which take the public attention. These are of various kinds. The first and most common mode of producing them consists in placing an apparently common piece of blotting paper upon an apparently plain piece of white albumenized paper, moistening the two and producing at once a photographic picture. The explanation of this is simple, and is doubtless familiar to old photographic experimentalists; we practiced the same feat a dozen years ago. It consists in bleaching, until it is white and invisible, by means of bichloride of mercury, a silver print; then taking a piece of blotting paper which has been previously immersed in a solution of hyposulphite of soda, and placing it in contact with the immersed print; this, when moistened, at once darkens the bleached image, and a picture, consisting chiefly of sulphide of mercury, is produced. We have received some examples from Mr. Swan, and details will be found in Dr. Vogel's German letter in this number. We have just received from Mr. Hughes's establishment a still prettier application of parlor magic, in which, by placing an apparently blank piece of paper into a solution—the material for which is inclosed in the packet—a beautiful blue print is produced. This is doubtless the result of one of the applications of the Cyanotype process of Sir J. Herschell, which may be made to produce many beautiful transformations. — *Photographic News.*

Magic Photography.

Two sheets of paper are supplied to the purchaser, together with instructions. One of these

sheets is albumenized, the other is a sheet of blotting paper. There is no picture visible on the albumenized paper; but when, in accordance with the instructions given, the sheet of blotting paper is moistened by means of a few drops of water and pressed in contact with the face of the albumenized paper, a picture immediately springs into existence. The question now arises, How is this accomplished? Light has evidently nothing to do with it, seeing that the same phenomenon occurs both in sunshine and in comparative darkness.

The following is the method by which these "magic photographs" are produced:—Print a picture on albumenized paper in the usual way, taking care not to print so deeply as ordinarily. Fix the print (without toning) in plain hyposulphite of soda, wash thoroughly, and then immerse it in a saturated solution of bichloride of mercury till the image disappears. Again wash thoroughly and dry. The paper now appears like a piece of plain albumenized paper, without any appearance of a picture on it, and in this condition it may be kept for an indefinite time.

To cause the image to appear instantaneously and in more than its pristine vigor, dip the paper in a weak solution of hyposulphite of soda; or, preferably, dip a piece of white blotting paper in a solution of hyposulphite of soda and dry it. This prepared paper may be kept in contact with the latent picture so long as moisture is excluded. When it is required to develop the image, moisten the blotting paper with common water and press it against the albumenized surface of the print, when, presto! the "magic photograph" is produced, and is, when well washed, as permanent as many of the photographs of the present day. The image, by being again immersed in the bichloride of mercury solution, may be once more rendered invisible, and by the hyposulphite solution again restored as often as may be desired.

The amusement that can thus be introduced into the social circle by the "magic photographs" may be easily conceived.—*Brit. Journal of Photography.*

Miscellaneous.

The Component parts of Oil.

Oils and fats incline into each other, their difference in consistence being only a relation to temperature, and not necessarily a distinction in chemical constituents. The presence of acids in oil is the cause of the formation of soaps, or more properly speaking, salts, on coming in contact with alkalies. Oils are of the organic products of nature, not including the subterranean oil now undergoing exploration. Oils are defined as being either fixed or volatile. The first cannot be distilled without undergoing decomposition, such as olive oil; with the oil of turpentine as a good example of the latter. The ultimate analysis of Codliver, Neatsfoot, Cocoa and Olive oils, is as follows:—

	Carbon.	Hydrogen.	Nitrogen.	Oxygen.
Cod-liver.....	80.18	13.72	0.246	5.854
Neatsfoot	64.33	12.50	0.054	23.100
Cocoanut	60.62	12.49	0.060	17.830
Olive.....	69.38	13.47	0.058	0.093