

PHOTOGRAPHIC NOTES.

Toning Bromide Prints with Platinum.—In a communication to the *Photographic News*, Leon Vidal refers to the advantage of changing the character of bromide prints by toning with bichloride of platinum, which, in his opinion, renders them more permanent. He says: After development with ferrous oxalate, and washing in water acidulated with acetic acid, the prints are immersed in the toning bath, composed as follows:

Bichloride of platinum.....	1 gramme.
Water.....	2 liters.
Pure hydrochloric acid.....	.30 grammes.

The prints are left in this bath sufficient time for them to be well covered with a good coating of platinum, this metal being gradually substituted for the silver. The image is weakened under the action of the toning bath. Therefore over-exposure is necessary, as is the case with impressions on albumenized paper. With a little practice, it is easy to know what the proportion of this over-exposure should be, and also the time necessary for the immersion in the platinum bath. To verify whether the toning action is produced, and to appreciate its intensity, have at hand in a small dish a solution of 12 per cent of bichloride of copper dissolved in water. Before toning, the image on a fragment of a print plunged into this bath will completely disappear, the reduced silver being transformed by the bichloride of copper into white chloride of silver; but as soon as the deposit of platinum has begun to take place, this metal not being attacked by the liquid in question, an image at first feeble is seen to remain, becoming more and more powerful in proportion to the time of immersion in the platinum bath. Images thus produced are indestructible; for admitting that that portion of the image which is of silver may completely disappear, there will always remain the platinum image, somewhat attenuated, it is true, but quite complete, however, if the duration of the exposure and development have given an intense proof. There will remain an image of sepia color; and we may assure ourselves, without waiting for it, of the effect of any alteration due to time, by plunging, after toning, the entire proof into the bath of bichloride of copper. All reduced silver which has not been replaced by platinum will be transformed into white chloride of silver; and what remains visible is an image formed solely of platinum. If it is desired to preserve it as such, there is nothing further to do than to place the image in hypsulphite of soda to dissolve all the chloride of silver, and an image will remain formed exclusively of platinum. It may be that in studying this question more deeply we may succeed in forming on the silver image a deposit of platinum of a black color. We are now engaged in experiments having this end in view. When a proof has been passed through the bath of bichloride of copper, in order to ascertain the amount of platinum that has been deposited, it may be easily restored to its primitive condition by immersing it, after washing it in three waters, in a bath of ferrous oxalate identical with that which has served to carry on the development. The image immediately regains its original vigor, and there is nothing to prevent its being afresh submitted to the action of the toning bath for a more complete platinization if required.

It will be noticed that when the image has been made to disappear in the bichloride of copper bath, it becomes more brilliant and of a bluer black tone when reconstituted in the ferrous oxalate bath. We may even, thanks to the use of this bath, succeed in reducing a too vigorous impression. This offers a very important advantage when enlarged proofs are in question. In such case we must over-expose, because we have the power of afterward very easily bringing back the image to the desired depth. From what has just been said, it naturally results that positive gelatinobromide of silver papers conduce to applications which are of very great interest, and which could not be realized with so many advantages by any other sensitive preparations.

We only insist that platinum toning allows us to obtain, at less cost than by any other means, images having platinum as a base, and under conditions, as to rapidity, of great value. We believe we render a service to our photographic brethren by pointing out a method destined to extend the field of their labors. No one has up to the present, so far as we know, published the means of assuring the permanence of impressions obtained upon gelatinobromide of silver papers, at the head of which we do not hesitate to place those of the firm of Eastman & Co.

Alabandine.

A solution of manganese acetate, even if slightly acidified with acetic acid, gives an abundant precipitate if treated in the cold with sulphureted hydrogen. There is formed the well-known rose-colored sulphide, which, if heated to 100° in a closed vessel, is transformed into the compact green variety. On prolonged standing, crystals are produced, even at common temperatures, and prove to be alabandine.—*H. Baubigny, Comptes Rendus, vol. civ., No. 20.*

Many Items of Interest.

The *Electrical Review* thinks many will be surprised by the statement that more than 3,500,000 passengers are carried annually in this country on street cars moved by electric motors. In Montgomery, Ala., electricity is used on eleven miles of road, and the cost is reported by the general manager to be only one-half the cost of horse power. Roads on which electricity takes the place of horses are found in Baltimore, Los Angeles, Port Huron, Detroit, Scranton, Appleton, Wis., and Denver. Electric railways are either in course of construction or under contract in twelve other cities, and in thirty-seven, companies have been formed or other steps taken for the building of such roads. Upon none of the roads now in operation in this country, however, is force supplied by storage batteries attached to the cars. In most cases, power is communicated by an overhead conductor.

The pests known as Buffalo moths prevail in many localities along the Hudson River, and in the aggregate the loss they have entailed is large. All sorts of devices, including benzine, tobacco, cedar shavings, and various other agents, have been used by busy housewives for the extermination of the pests, but without avail. They infest bureau drawers, and riddle holes in linen and in all kinds of drygoods. They are found in closets and wardrobes, in trunks and under carpets. In some places these little furry-coated moths pursue their way so industriously that housewives do not fasten down their carpets, as they have to be lifted regularly every day to kill the moths.

For a kitchen floor, especially one that is rough and uneven, some one in the *New York Tribune* recommends the following glue paint: To three pounds of spruce yellow add one pound, or two pounds if desired, of dry white lead, and mix well together. Dissolve two ounces of glue in one quart of water, stirring often until smooth and nearly boiling. Thicken the glue water after the manner of mush, until it will spread smoothly upon the floor. Use a common paint brush, and apply hot. This will fill all crevices of a rough floor. It will dry soon, and when dry apply boiled linseed oil with a clean brush. In a few hours it will be found dry enough to use by laying papers or mats to step on for a few days. When it needs cleaning, use hot suds.

The Hartford Steam Boiler Inspection and Insurance Company have favored us with a bound volume of the *Locomotive* for 1886. It is a book of nearly 200 pages, full of matter of interest to steam users and those having charge of boilers. This matter relates to current practice, and gives the latest experience and observations on steam boilers. The price is one dollar, and it may be had at the office of the company, Hartford, Conn.

The way in which glass may best be cut with scissors is told in the *Pottery Gazette*, London: Glass may be cut under water with great ease, to almost any shape, with a pair of shears or strong scissors. Two things are necessary for success. First, the glass must be kept quite level in the water while the scissors are applied; and secondly, to avoid risk, it is better to perform the cutting by taking off small pieces at the corners and along the edges, and to reduce the shape gradually to that required. The softer glasses cut the best, and the scissors need not be very sharp.

A singular fire occurred in this city on the 13th inst. in the following manner: By the crossing of two telegraph wires, sparks were produced which set fire to a telegraph pole in John St., opposite the Western Union building. There were about 150 wires hung on the pole. An alarm of fire was sounded, and soon engines arrived and the pole was saved. The flames were near the top, and it was with some difficulty that water could be raised to such a height; but at last the effort was successful and the flames were overcome, amid the shouts from the 2,000 or 3,000 persons who had assembled on Broadway.

Some new quick-firing guns of heavy caliber, intended for the British navy, have just been successfully tried upon the proof ground of Sir William Armstrong, Mitchell & Co., near Silloth. The first weapon tried was a 36 pounder improved rapid-fire breech-loading gun of caliber 4.724 in. This was fired with 7½ lb. of powder. The weapon is made entirely of steel, its length being 14 ft. 2½ in., length of barrel 35 calibers, and weight 34 cwt. Ten rounds can be fired in 47 seconds, giving a rate of fire six times faster than the present service of guns of the same caliber. The next gun tried was a 70 pounder, which was discharged about half a dozen times, both with 25 lb. and 30 lb. charges, at a speed of from eight to ten rounds per minute. According to the *Naval and Military Gazette*, London, the results were considered satisfactory.

Copies of photographs of flashes of lightning are desired by the Council of the Royal Meteorological So-

ciety, London, who hope that many photographers may be found willing to take up the matter. It is pointed out that there is no special difficulty in photographing lightning, as, if a rapid plate and an ordinary rapid doublet with full aperture be left uncovered at night during a thunderstorm for a short time, flashes of lightning will, after development, be found in some cases to have impressed themselves upon the plate. There is, however, uncertainty whether any particular flash will happen to have been in the field of view.

California has a well deserved reputation of doing everything on a grander scale than any other State in the Union, and this peculiar phase of her development is soon to be manifested by the erection of a huge tomb in the Mountain View Cemetery, Oakland, Cal. This mortuary monument is being erected by the millionaire physician, Dr. H. D. Cogswell, to his own memory and from designs made by himself. Dr. Cogswell has already achieved notoriety, not perhaps always properly appreciated, by his presentation of drinking fountains to various cities, from designs of which he himself is the originator. The monument, which is his latest achievement, and with which he proposes to keep his memory ever green, and which he intends shall stand as an everlasting memorial of his wealth and genius, will be over 70 ft. high, and will be placed in the center of his large circular lot. The granite plinth contains 23 square feet, and is in four pieces. The first base stone is over 12 ft. square. There are three enormous stones placed one above the other over the base stone, and each slightly smaller than the one below it. The die is 5 ft. square, with raised polished moulded tablets on each side, and upon this will be raised the obelisk. There are polished columns at the four corners of the die, and upon the columns at the base of the obelisk are placed four female marble figures, 7 ft. high, representing Faith, Hope, Charity, and Temperance. The obelisk is 4 ft. square and 36 ft. high, and weighs 29 tons, and carries at the top a dome covered with bronze work, with a single glass star, measuring 7 ft. from point to point. There will be elaborate stone work about the monument, and the whole will cost, it is estimated, over \$75,000. The granite work is being conducted by Mr. Alexander McDonald, of Cambridge, Mass., the stone being supplied from Mr. McDonald's quarry at Mason, N. H., and is now in course of transportation across the continent.

"Are you aware of the extent of the toothpick business in Maine?" Mr. J. C. Bridgman, who represents the National Toothpick Association, asked a representative of the *Portland (Maine) Press* the other day. "That seems to be a pretty big name for small business, I suppose you think," he continued. "But you will be surprised when I tell you that our association have contracted for enough toothpicks to be made in Maine the coming year to load a train of fifty cars with nothing but toothpicks. We shall take out of Maine before next June five thousand million toothpicks. A pretty fair sized wood lot, you see, will be slit up to go into the mouths and vest pockets of millions of Americans. Maine furnishes the larger portion of all the toothpicks used in the country. Our association controls the trade. It is something like the Standard Oil Trust, the Cotton Seed Oil Trust, and the lately formed Rubber Trust. It regulates the price and output of toothpicks as the big trusts regulate the prices and output of oil or rubber goods. We have not adopted the name Toothpick Trust yet, however. We have a mill at Belmont, N. Y.; Harbor Springs, Mich.; and Fond du Lac, Wis. Besides these, all our mills are in Maine; one at Strong, one at Farmington, one at Canton, and two at Dixfield. There is a small mill at Mechanic Falls, also, but it has not joined our association. In Massachusetts, also, there is one small mill not in the association. So you see Maine is the great center of the industry of toothpick making."

A Gigantic Oak.

One of the sights at Havre Maritime Exhibition is the trunk of a gigantic oak placed in an iron boat especially constructed for its reception. This trunk was found accidentally in the bed of the Rhone, at La Balme, as long ago as 1874, when, during a period of low water, a branch was observed projecting above the surface. On a closer examination, this was found to belong to a huge trunk embedded in the mud of the river. It was not till ten years later (1883) that the level of the water was low enough to enable the tree to be taken out. It took five months to remove it from the bed of the river, some 30 feet of sand and gravel having to be removed in order to liberate it. At length, on March 25, 1884, it was brought to the shore, where the dimensions of the trunk were found to be as follows: Length, 101.6 feet; circumference at the origin of the roots, 29.5 feet; circumference at the level of the soil, 19.6 feet. The actual weight of the tree is 121,000 pounds, and its age is estimated to be from 400 to 450 years.

The boat, called the Dryophore ("oak bearer"), is intended to transport the tree from river to river, for exhibition.