PHOTOGRAPHIC NOTES.

Enlarging for Newspapers.—Since the introduction of cuts in daily newspapers has become so regular, different methods have been pursued to quickly reproduce by means of photography any important daily incidents.

Reporters frequently carry small cameras, such as the vest camera and others, with them, and often capture on the sensitive plate accurate views of the subjects they are interested in. The method now pursued in one of the largest offices is to employ a special photographer, who develops immediately the sensitive plate as soon as it arrives; then in a wet state places it in a magic lantern, and projects the negative image downward upon a large sheet of paper placed on a table at which is seated an artist who quickly sketches over all the light portions with his pencil; these portions fortunately are those which need to be reproduced in black lines. From the enlarged sketch, after it is inked and embellished, reduced electrotypes are produced by the usual process of photo-engraving rapidly.

Directions for Stripping Films from Paper.—A special combined film laid on paper, and styled the "American stripping film," has been prepared by the Eastman Dry Plate and Film Co., by means of which, with a little trouble, negatives equal to glass are readily produced, and at the same time the necessity for carrying around a lot of the latter material is avoided. It is specially advised that this particular paper be developed with the ferrous oxalate developer, since the toning qualities of the pyro developer (most generally preferred) are apt to interfere with the successful separation of the film from the paper.

The editor of the *Photographic News* having experimented in this direction, advises the use of the pyro and soda or potash developer.

Electric Light Wire Legislation Needed.

Mr. I. N. Miller, of Cincinnati, writing to the *Electrician*, says: The electric light companies are stringing over housetops and on poles, throughout almost every city of 10,000 inhabitants in the United States, what is called "underwriters' approved wire." The name is supposed to be a first-class recommendation for the wire, and serves as a cloak to cover a multitude of evils. The board of underwriters probably approved the use of this wire throughout buildings, but they certainly never recommended or approved its use outdoors, where it would be subject to moisture.

Careful experiments made by immersing 12 inches of this wire in a 6×8 glass jar filled with water, the ends of the wire extending above the jar so that the water would come in contact with the covering only, shows the following insulating properties:

After 1 minute's time	resistance, 115,000 ohms.
After 3 minutes' time	resistance, 4,170 ohms.
After 5 minutes' time	resistance, 1,770 ohms.
After 1 hour's time	resistance, 280 ohms.

One hundred cells of battery were used in making the tests, one pole of the battery being connected with the water in the jar, the other pole with the copper conductor.

Experience has proved beyond the possibility of a doubt that it is just as fatal to life to come in contact with the covering of the wire when it is wet as it would be to come in contact with the naked copper wire. Two men have recently lost their lives in this city by accidentally touching the covering of an electric light wire when it was damp. The Western Union Telegraph office and the jewelry store of Duhme & Co., in this city, were set on fire at about five o'clock in the evening during a light rain by some one throwing a short piece of wire from a building in such a manner as to make a contact between an electric light wire and a telegraph wire. The electric light company has compromised with the widows of the two men who lost their lives, and the probabilities are that they paid out a sum sufficient to replace all their present wires with well insulated ones. It has not taken them long to see the folly of using uninsulated wires, and they are now renewing the plant with insulated wire. Notwithstanding the fact that the use of uninsulated or "underwriters' wire" has within the past two years caused the death of at least 100 persons, and destroyed property to the amount of over one-half million dollars in the United States, yet we see the new companies all over the country following in the footsteps of the older ones, and subjecting themselves to heavy damages that may result from loss of life and property.

To make matters worse, they attempt to construct their lines parallel with and on the same side of streets with telegraph and telephone wires, and thus bring about litigation that costs them, to commence with, fourfold more than it would have cost to string well insulated wire.

It is apparent to any one that where two sets of wires are strung parallel, one above or below the other, they will come in contact with each other during storms or fires; in fact, it is impossible to prevent frequent contacts. Whenever there is a contact, it means a fired telegraph office or telephone exchange, possibly death to some employe. Every residence or business block that has a wire of any kind connected with it is liable to be set on fire at any moment by a contact between the various wires which form such a network throughout every city. Telephone employes inform us that it is a very common thing now to find telephones that have been set on fire at night and burned up, the charred remains having fallen to the floor.

It does seem that enough lives have been sacrificed, enough property destroyed, and money lost to bring the stockholders of electric light companies to their senses; but still the ruinous policy is followed, and there will probably be no relief or change until the various States take up the subject and enact suitable legislation, and not only enact it, but enforce it.

Arrangement and Protection of Water Pipes.

How shall the water pipes in a house be run and arranged?

This is, so far as subsequent annoyance owing to the constant necessity of repairs is concerned, one of the most important matters connected with the water supply of a house, and far too little attention is in the majority of cases paid to it by architects and builders. In the first place, it is important that all lead, and also tin lined and block tin, pipes be well fastened to boards or narrow strips of wood nailed to walls or ceilings. Vertical lead pipes should be supported by soldered hard metal tacks to the lead pipes, and fastening them with screws to the board. All sagging is thus effectively prevented, provided the supports are not placed too far apart. Horizontal or graded lead pipes should be firmly supported wherever possible throughout their entire course by strips of wood on which they rest, and must be kept in place by brass bands or clamps. Sometimes it is necessary to fasten horizontal lead pipes to boards nailed to the underside of ceilings. In such a case, the supports must be placed very close together—say every two feet. If insufficiently fastened, lead pipes are soon dragged down by their own weight, besides being affected by changes of temperature, for when hot water passes through the pipe it causes the pipe to lengthen, and hence to sag, while lead does not return to its original shape on cooling. Once out of line, pipes become air-bound, or freeze in winter, and leak.

Hot and cold water pipes should be kept at least one-half inch, and better one inch, apart to prevent loss of heat from one to the other; and where they run in the same direction, must be fastened truly parallel to each other. Faucets, and in particular ground key and self-closing bibs, should not be placed at the end of a line of supply pipe, where this can be avoided, but should be taken from the side of the pipe, and the pipe suitably continued so as to form a small air chamber.

In arranging a system of service pipes in a dwelling, the cardinal rule should always be observed that all lines of supply pipes be so graded that they may be readily and completely emptied at some stop and waste cock or draw-off faucet when the water is shut off from the house. This is very important in the case of severe cold weather to prevent the freezing of pipes, and is an absolutely necessary condition in the case of all houses left empty during the winter months, such as summer and seaside residences, etc. In this connection it may be well to state that no check valves should, as a rule, be used in lines of supply pipes. Where used, their number and location should be remembered and noted by the house owners, for such check valves interfere with the complete emptying of pipe lines.—*William Paul Gerhard, in Good Housekeeping.*

The Proper Construction of Stone Houses.

There is no more prolific source of trouble, both to builders and owners of stone houses, than that caused by water penetrating the walls and getting in over the windows after a heavy rain.

The causes producing this trouble being well known, it would seem an easy matter to overcome them, and all sorts of suggestions to that end have been made, but so far with no effect.

The present time, therefore, would seem an opportune one in which to offer a practical solution of this trouble, and that is the purpose of this article. The underlying cause of all this trouble is haste to finish the building; hence, the first thing to be done, and without which all else is practically useless, is to "make haste slowly." Time should be given the mortar to harden, the building to settle, and the cracks to show before the pointing is done. No stone house should be pointed the same year it is built, for two reasons: First, the cement used in pointing forms a barrier to the evaporation of the moisture in the mortar in which the stone is laid, and prevents it from drying. The pointing, while keeping the moisture from coming out, will not prevent the frost from going in and freezing the mortar; this will produce an expansion, which causes the pointing to lose its grip on the mortar, and creates innumerable crevices through which the water easily finds its way. Secondly, all stone buildings, even when built in the most careful manner, have a tendency to settle. This settlement cracks the pointing. In many cases these cracks are so fine as to be scarcely visible, especially if some distance from the ground. But no cracks are too small for water to penetrate, driven by the force given it by the wind from an open sweep of miles, as it has in many parts of this country. It is absolutely essential, therefore, that the mortar should have time to evaporate all its moisture and become thoroughly dry, and the building time to settle, before pointing.

Houses built with stone, and having all the windows arched solidly through the entire thickness of the wall with brick, seldom have water dropping from the soffit of the frame; for if any water should beat through the stonework or cracks in the same, the bricks, having power to absorb so much of the water, hold it while the rain lasts, and after it is over evaporate it to the outer air.

When impracticable to use brick over the windows, from architectural or other reasons, a piece of sheet lead, going through the entire thickness of the wall, and extending about one foot each side of the window, and turned up two inches on the inside, will hold the water until it evaporates.

A style of architecture much in use at this time necessitates exposed gables. These gables are usually finished so late in the season that the mortar has not time to dry before the frost sets in, and in consequence the mortar freezes. Mortar once frozen loses its adhesiveness, and therefore has no life in it. The proper and only safe plan is to use Portland cement and sand (no lime) in all gables. This will set in one-tenth the time of lime mortar, and will be hard and dry before frost comes.

All stone gables that rise above the roof, and are only protected by stone coping, should have a sheet of lead to cover the entire wall put on under the coping. This lead should project over the inside of the wall, and be turned down over the flashing of the roof. By this means, all water that gets through the joints of the coping will be carried off. In conclusion, with care and a proper observance of the natural laws governing the materials used in its construction, a stone building can be built in the present day just as tight as years ago, when people did not expect to excavate the cellar in the spring and move into the finished house in the fall.—*The Builder.*

Orthochromatic Photo Plates.

According to the *Photographische Mitarbeiter*, the following is the recipe for orthochromatic gelatine plates as given by Dr. Mallmann and Ch. Scolik. The plates are first dusted with a soft camel's hair brush, and placed in a bath containing:

Water	200 c. cm.
Ammonia	2 "

in which they are allowed to remain for two minutes. They are then taken out, and after draining are immersed in the following solution:

Erythrosin solution (1 to 1,000)	25 c. cm.
Ammonia	4 "
Water	175 "

for 1 to 1¼ minutes, the dish to be kept covered and in motion. Both baths can be used for a dozen plates, but after the seventh or eighth 1 c. cm. ammonia should be added to both solutions. The plates are then taken out, and allowed to dry in a perfectly dark room. This is accomplished in about three hours. Care should be taken against overheating. With these plates the alkaline pyrogallic developer should be used. If the oxalate of iron developer be employed, veiling is the result.

Moses Albert Slaven.

On Tuesday, September 14, 1886, this well known engineer and contractor died at his home in this city. He was a native of Canada, and was forty years old. He went to California, and did much work in San Francisco as a master builder. Coming to this city, he, with his brother and others, founded the American Contracting and Dredging Company, that is now working its contract with the Panama Canal Company for the removal of 30,000,000 cubic meters of soil, about one-fourth of the entire excavation. The progress of this work and the dredging machinery have been described in these columns.

Milk as an Odor Absorbent.

Those dairymen who do not believe in the power of milk to rapidly absorb and become contaminated by surrounding noxious smells will do well to try the following simple test, the results of which will, doubtless, immediately convince the most skeptical: Take a wide bowl or soup plate to the cow stable when you go to milk; pour into it a pint of fresh milk, set it on the floor or at the height of a milk stool, so as to expose it fully to the air of the stable, behind and close to the cows. If the day is close and heavy and the milk is cold, and the stable not cleaned out and aired, the result will be surprising. Take it to the house or anywhere away from the stable, and try to drink it.