which it is desired to obtain and the nature of the dissolvents used. The fatty inks which have formed the reserves are then removed either by heating the plates or by dissolvents of the fatty matters. In this state the iron is submitted either to ordinary tinning or to galvanizing, or to any kind of galvanic deposit, according to the use for which it is intended. The electro-chemical deposits may be applied as reserves, this application being based upon the property possessed by certain metals of not being attackable by acid, whereas the same acids act upon iron. The same lithographic composition will then give an object or impression the reverse of that obtained by the previously described process.—*Mining Journal Sup.*

DYEING.—A new process, by which novel effects may be produced upon textile materials, has been introduced by MM. Gillett & Son, Lyons. The thread or textile fabrics are first dyed black by any known process, and are then treated with gelatine or albumen, and allowed to dry. After this, the materials are placed in a bath (more or less dense) of color obtained by the distillation of coal, and vaporization is then effected either in a wet or dry condition, according to he effect which it is desired to produce; after these operations the materials are washed. The threads or fabrics thus dyed are then ready to be submitted to the operations of drawing, lustering, calendering, pegging, and other manipulations intended to increase their brilliancy. The treatment of the threads or fabrics with gelatine or albumen may be dispensed with, but without them the coloring matters will not be so well fixed, although they may be brighter. Good results and different effects may be obtained by placing the materials to be treated alternately in baths of logwood and of acetate of copper. The same colors obtained by the distillation of coal may also be employed, not only for materials which have first been dyed black, but for those which have been first dyed with colors more or less dark. For instance, a fine effect may be obtained by the application of aniline violet on French blue; or quite a different effect may be produced by the application of such colors on chestnut or other shades of brown.

THE SIGNIFICANCE OF SALT IN WELL-WATER.—In Prof. Lattimore's report on the analysis of well-water, which was proved to be the cause of a serious epidemic of typhoid fever in Rochester, he lays special stress on the significance of the presence of common salt in well-water in general. No single indication, he holds, is of so great sanitary importance in judging of the purity or impurity, and consequently of the safety or danger, of any water. He proceeds then to show that, though from the universal diffusion of this substance in the air and in the soil, we should expect to find it in all waters, whether from rain, springs or wells, because of its extreme solubility, nevertheless, he argues, the quantity of salt that should be found normally from the causes named in well-water is extremely small, and therefore, whenever "it rises above a very few grains per gallon, it becomes certain that it comes from some other source than the soil;" and he concludes with the logical inference that, as nearly all the salt used for domestic purposes escapes by the way of two channels, the water-closet and the house-drain, we should therefore expect, "what is always found on examination to be true, that, whatever sewage may or may not contain, it always contains salt."

PRESENCE OF MIND.—Professor Wilder gives these short rules for action in case of accident: For dust in the eyes, avoid rubbing, dash water into them. Remove cinders, etc., with the round point of a lead pencil. Remove insects from the ear by tepid water; never put a hard instrument into the ear. If an artery is cut, compress above the wound; if a vein is cut, compress below. If choked, get upon all fours and cough. For light burns dip the part in cold water; if the skin is destroyed, cover with varnish. Smother a fire with carpets, etc.; water will often spread burning oil and increase the danger. Before passing through smoke take a full breath, and then stoop low, but if carbon is suspected, walk erect. Suck poison wounds, unless your mouth is sore; enlarge the wound, or, better, cut out the part without delay. Hold the wounded part as long as can be borne to a hot coal, or end of a cigar. In case of poisoning excite vomiting by tickling the throat, or by water or mustard. For acid poisons give acids; in case of opium poison give strong coffee and keep moving. If in water float on the back, with the nose and mouth projecting. For apoplexy raise the head and body; for fainting, lay the person flat.

PECULIAR ACTION OF GELATINE ON GUM.—Gelatine, it is said, has a peculiar action on gum; if gum be added to gelatine, and the mixture sensitized with ammoniacal potassium bichromate the behaviour of the latter substance is very little altered by the addition of the former. Its solubility in hot water is somewhat increased, and to obtain the same degree of insolubility for the image as with pure gelatine the exposure must be longer. But if the mixture be acidulated with acetic acid, the film after exposure and desiccation is less soluble than one consisting of chromated gelatine only with acetic acid. Gum, therefore, renders an acid solution of gelatine less soluble, and the reason for this is believed to be that glutin and arabic acid form a compound solid only with difficulty. Borax thickens a gelatine solution, and the alkaline reaction of the same substance tends to render the chromated gelatine more insoluble. Calcium nitrate gives to gum an enormous power of adhesiveness.

BLACKBERRY ROOT GOOD FOR SUMMER COMPLAINT.—We *have great faith in a decoction of fresh blackberry root for looseness* of the bowels. Last summer it completely cured a severe case of chronic diarrhœa, after the other remedies of the best physicians had proved unavailing, and it invariably cured in many other cases where it was afterward recommended. Dig the green roots, rejecting those that are large and woody. Wash thoroughly clean, and steep in water at the rate of a quart to half a pound of the root, boil down one-half and then strain or pour off. Put the liquid in a bottle with about one-eighth of its bulk of brandy, whisky, or alcohol, to keep it from souring, and cork tight. A tablespoonful of this, rather less for a child, is to be taken three or four times a day, say before each meal time. We would not go from home, especially southward, without taking this preparation along. The blackberry brandies or cordials made from the berries are of little account as remedies for the diarrhœa. The virtue lies in the roots, not in the berries.—*Agriculturist.*

A WORD TO INSURANCE OFFICERS.—The *Plumber and Sanitary Engineer* suggests to life insurance companies, that instead of merely hammering at a man's chest to find if he has a tendency to any disease, would it not be well for the medical examiners of life insurance companies to inquire if he has not got a cesspool leaking into his well, or untrapped pipes beneath his basins and closets?

More persons die of zymotic diseases in New York than from almost any other malady, yet a man living in the midst of contagious influences, and hence daily liable to take diphtheria or typhoid fever, would yet find little trouble in getting a heavy policy on his life.

If insurance officers would give this subject their attention they might save many losses to their companies, and also benefit the public generally; for if men found that their homes were rated as "hazardous," they would soon begin to think of finding a remedy for the difficulty.

TESTS FOR BUTTER BY LIGHT.—A writer in the *Hannoversche Monatsschrift* is even more sanguine than Mylius, who first proposed the examination of butter by polarized light, of the value of his method of testing the purity of butter. Under such light the peculiar crystals come out very distinctly. He has discovered that different fats, like the minerals, produce characteristic marks whereby they can be determined in the polarization colors, and he intends soon to publish plates showing the peculiar forms and colors of each fat, whether raw or melted, or crystallized from glycerine. Mutton tallow gives a blue tone; ox fat, green and white; hog's lard, red and blue, with other colors not so intense; cacao butter, a play of color from the deepest red to the brightest green. Besides being useful as tests of the genuine nature of butter, these optical reactions are said to be available for the detection of foreign fats that may be fraudulently added to chocolate or cocoa.

TO ATTAIN LONG LIFE.—He who strives after a long and pleasurable term of life must seek to attain continual equanimity, and carefully to avoid everything which too violently taxes his feelings. Nothing more quickly consumes the vigor of life than the violence of the emotions of the mind. We know that anxiety and care can destroy the healthiest body; we know that fright and fear, yes, excess of joy, become deadly. They who are naturally cool and of a quiet turn of mind, upon whom nothing can make too powerful an impression, who are not wont to be excited either by great sorrow or great joy, have the best chance of living long and happy after their manner. Preserve, therefore, under all circumstances, counsels *The Sanitarian*, a composure of mind which no happiness, no misfortune, can too much disturb. Love nothing too violently; hate nothing too passionately; fear nothing too strongly.