INFLUENCE OF GAS-LIGHT UPON THE EYES.

The verdict of a scientific deputation for medical purposes has been presented to the Prussian Minister of Education. *Lithographia* extracts the following, which refers to living and study rooms, but is equally applicable to printing offices, factories, etc.:

"According to the previous experience of occulists no injurious effects of gas-light upon the eyes of pupils has been observed, when it has been used properly, and especially where arrangements are present to protect the eyes from the direct influence of the bright flame. In general, shades and globes serve for this purpose. The dark, totally opaque in shades are, however, very injurious. All complaints against the use of gas-light are referable almost universally to these improper contrivances. With these, the eye stays in total darkness, but looks upon a brightly illuminated surface, so that a dazzling and over-irritation or super-excitement of the eye result, with all their attendant injurious results. Very suitable are the globes of milk glass, which diffuse the light more, and the eye is not injuriously affected. Experience shows that more heat is generated by gas-light, hence the gas flames must not be brought too near the head, because the radiant heat which it sends out might cause headache and congestion of the brain. Where several persons are using the same flame, the source of light has to be higher up, so that the unpleasant effect of the radiant heat disappears, especially if the so-called "plate" illumination is used, which consists of a large, funnel-shaped globe of milk glass, closed beneath by a plate, whereby the descending rays suffer a proper diffusion and loss of intensity, and at the same time the flickering of the flame by breaths of air is avoided, and a more steady and quiet source of light is secured. Under special circumstances where the eyes are particularly sensitive, chimneys of a blackish blue color may be employed. Under such precautions an injurious effect of gas-light upon the eyes is not to be feared in the least."

A PLEA FOR CLEAN AIR.

There is unmistakable evidence that too many of our school teachers know little more of hygiene than the pupils whom they essay to teach, for in the winter season especially, with closed doors, closed windows, and hot fires, they compel study in an atmosphere the effects of which are to benumb the brain, and develop in the system those contagious diseases that are the bane of childhood. It is thoughtless and cruel to place our little ones in such jeopardy, and this truth should be pressed on the attention of officials until some thorough and practical mode of ventilation shall be introduced into every school-house in the land. That the atmospheric condition of textile manufactories, is highly prejudicial to health is painfully evident from the pale faces of the operatives, who not only pass the day in a poisonous air, but at night crowd by the half-score into unventilated dormitories, from which they emerge at daybreak listless and enervated. In view of these facts, it is no marvel that they fall an easy prey to the more complicated diseases, and die prematurely, but rather miraculous that the brittle thread of life will bear so great a tension ere it snaps forever.

What is true of textile manufactories is in some degree true of all others, and as ignorant and crochety overseers often refuse the opening of windows, manufacturers should be neither too stupid nor too mercenary to supply some means of ventilation which shall be constant, and not subject to individual caprice, thus ameliorating the condition of a class who may not realize the extent of the injury they sustain, a class upon whose untiring industry our national prosperity largely depends.

There is no computing the injury sustained in our houses, even, by the inhalation of filthy air, and just here rests the responsibility of errors committed elsewhere; for if correct views concerning the requirements of health are impressed on the minds of childhood and youth, they will be manifest in the practices of matured years. A large number of our housewives who scorn the imputation of untidiness, are perfectly content in any atmosphere laden with filth, and through fear of faded carpets and disarranged curtains, the pure air of heaven never has free course through their lodging rooms, the prevailing odor of which is nauseating in the extreme. Away with carpets and curtains, if they are to be instrumental in imprisoning the seeds of scrotula and death; much to be preferred are bare floors, glaring sunlight and health, to luxury and invalidism. That thousands of women with their children, are enduring a species of self-imposed invalidism, by carefully guarding every avenue by which pure air might enter their dwellings, is true beyond peradventure.

Physicians, who know too well the disastrous effects of impure air, should not only advise, but insist on thorough ventilation in the sick-room, and see that it is administered in a manner which shall be productive of the very best results. No doubt hundreds die unnecessarily, who might recover, did not some careful Martha sedulously bar out that life-sustaining element without which all medical skill is unavailing. Few people seem to realize how rapidly air becomes vitiated in our modern houses, with their plastered walls, close fitting sashes, etc., or that each individual contaminates three hundred cubic feet of air per minute. Could impurities floating in the air of unventilated rooms be perceived by sight, those who manifest so much contempt at the bare mention of ventilation would grow pale with alarm.

If the mothers of to-day desire to raise stalwart sons and blooming daughters, they must discard the hot-house system, which is so universal, and supply their children clean air without stint. When they begin to appreciate pure air as one of God's best gifts to man, and shape their habits accordingly, half the disease—the legitimate result of an impure respiratory medium—will be wiped out, and instead of sickly, puny offspring, which is now the rule, we shall see what the Creator intended, bright, fresh and rosy children. Look to this, mothers, and while you gratify your asthetic nature, making home lovely, let it never be at the expense of health, for not only the welfare of your immediate family, but a nation's weal, depends on your behest.—*The Household.*

DANGERS IN NEW HOUSES.

We have before us a statement, that to build a medium-sized three-story brick house 20,000 gallons of water are required to prepare the mortar alone. Think of the immense quantity of moisture that must fill the walls and pervade every part of the buiding! How many weeks, with furnace fires burning constantly, it must require before snch a structure can become dry and thoroughly ventilated, so that it can be a safe abode. All the bricks as well as the mortar are full of moisture, aside from the sap which is often retained in the timbers.

But there are other dangers to be guarded against in new houses, and therefore it is of the greatest importance that those who are preparing to build should, before anything is begun, take great pains to be well informed about the work, and especially such parts of it as can have any possible effect on the health. Every step that belongs to the sewage, the tanks, waste pipes, gas pipes, etc., should be thoroughly supervised.

Vermin of all kinds are very willing to move in with the first occupants of a new house; and rats and mice begin to build their homes without asking leave. Carbolic powder or red pepper, or both, put in with the first coat of mortar, will do much toward keeping these nuisances at a respectful distance. Cloths or paper rolled in powdered red pepper, and some filled with potash, will give a warmer salutation than they will find agreeable. If used plentifully in any spot where these agents can be employed, and if, after a mistress is established in the house, a suitable degree of watchfulness is maintained, we do not think there is danger of molestation from these disagreeable intruders. But the carpenters, bricklayers and plumbers must be responsible for the first and most important step—namely, combining these safeguards with the mortar and plaster. —*Mrs. Beecher, in Christian Union.*

PROPER CLOTHING.

There is scarcely any reader of the *Bazar* who will admit that she is not properly clothed and in her right mind, though she may be found in zero weather with no thicker appareling than she wore during the cool days of fall and summer; and at the same time she will perhaps boast that she has never given in to wearing flannel under-clothing, and that cotton stockings answer her purpose year in and year out. She may, however, wear the finest of laces and the costliest silks, and yet, without her outfit of under-flannels for the winter, the early fall, and the changeable spring of our climate, we shall deny that she has proper clothing. We are aware that our women dress more warmly than their ancestors of fifty years ago, and that there has been a marked improvement in this respect, yet the reform has not perfected itself. We are told that our grandmothers lived to a riper old age and enjoyed more robust health than the present generation, though they did not swathe themselves with layers of wool, like a mummy, and were unacquainted with certain garments that we consider indispensable. But perhaps if our progenitors had adopted the custom of wearing more and warmer clothing, their posterity would have inherited as tough constitutions and as firm health. In this day no one is excusable who allows herself to go insufficiently clad while she has the means to provide raiment, even though she should be obliged to curtail her luxuries for the purpose, to forego certain fallals and superfluities. She is not only wronging herself and shortening her days by a scanty supply of clothing, but in weakening her own system by her folly she injures her child no less. There are certain foolish folks who object to additional underwear because it increases the size; who prefer to pass the season in a semi-congealed state, alternating with the fever of influenza, hugging the stove, and making a bugaboo of fresh air; who ignore the fact that a genial temperature of the surface of the body preserves an equal circulation, that keeping the extremities warm prevents the blood rushing to the head and discoloring the face, disturbing the natural shading of the rose-leaf cheek, and giving the nose a rubicund hue—that, in brief, to be warmly clad insures a longer lease of youth and beauty. Many of us who really believe in the regimen of proper clothing hesitate to make a change till the cold weather has fairly set in, when it is the early frosts which give the greatest shock to the system, following so soon after the summer's heat; and how few of us pay attention to the alternations of the summer weather enough to regulate our toilettes to correspond! We fancy that it is scarcely worth while to vary our attire on account of a sea-turn, when to-morrow will make amends for to-day's chill. We think we are growing tough, when we are in reality catching cold. There are few things in which people imagine they can economize so well as in under-clothing; every one must have her best suit, her Sunday bonnet, and her much-buttoned gloves—society demands it of her; but who will know whether her under-wear is wool or cotton, of the poorest or of the best? And she is often foolish enough to postpone proper clothing till a more convenient season rather than resign a button from her gloves or a flower from her bonnet.—*Harper's Bazar.*

THE DANGERS OF ETHER.

FROM THE "LONDON DOCTOR."

It has always seemed to us the height of folly to declare that there could be no danger in any anæsthetic. The lesson taught by the late death from nitrous oxide has, it is to be hoped, been well learned, and we shall in future hear less of the absolute safety of any agent capable of depriving a person of all sensation. Some cases in which ether has been followed by alarming symptoms have lately been recorded. They have been termed syncope, but the word is not appropriate, as the heart continued to beat after respiration ceased. This is what should have been anticipated. When death is produced by ether the animal's heart continues to beat long after the arrest of respiration. The pulse is quickened by ether and maintains its force through a long stage of anæthesia. In these facts lies the safety of ether. But it should never be forgotten that there is danger at a certain stage, and the danger is from the side of the respiration, which at length ceases. Sterterous breathing proceeds from paresis of the muscles of the palate, and should lead to the ether being suspended. So respiration growing more and more shallow and less frequent is a warning, and should not be overlooked. It is very rare that the heart fails—perhaps never. Pallor is rare, too, and should excite attention if it occur. But, we repeat, the danger of ether is from the side of respiration, that of chloroform from the heart; and this fact goes far to explain their relative safety. In chloroform narcosis the danger is much more sudden. Ether gives warning.

Vertical Jets at Niagara.—While Mr. W. H. Barlow, F. R. S., was in this country as one of the English judges at the Centennial Exhibition, he visited Niagara and noticed the vertical jets or puffs of water and mist which rise from the base of the fall at Niagara, and sometimes lift themselves as high as the edge of the fall itself. He noticed also that the windows of his hotel (the Clifton House) shook, and not with a steady tremor, but with impulses that varied in time and degree. These impulses were evidently atmospheric, for they were not perceptible in the ground. He refers all these phenomena to one cause. As the water passes the crest of the fall it carries down large quantities of air, and it is inevitable that masses of air should sometime be so enclosed by heavy sheets of water that upon reaching the bottom of air would act like a stationary piston with a movable cylinder pressing down upon it. It would be strongly compresssed, until finally, by the work stored up in it, the steadily weakening sheet of water would be broken through. An explosion would occur which would in all respects resemble the explosion of any fulminate under water. Water itself would be carried up, a jet being formed that would rise to a height proportioned to the force used. Mr. Barlow observed them to be of a "pine-tree" shape—that is, pointed at the top and widening downward—and says they "were not formed of a compact mass of water, but had that appearance which is seen in large fountains, of being composed of lumps of water of various sizes, decreasing in the lower part, until they were lost in the general mist which surrounded the lower part of the falls." These observations are no doubt applicable to all voluminous waterfalls.—*Galaxy.*

How to Make Homes Healthy.—Most cases of infectious diseases have, in addition to the common epidemic influence, a direct exciting cause. This will be found, when contagion is excluded, to be poisonous emanations of some kind in the house, or on the premises, or in the drinking water; in cities generally sewer gas. Dr. Chapman, of Brooklyn, has settled on the following plan as a sure relief from sewer gas; The soil pipe running from the cellar passes through the house and opens into the kitchen flue at the top story. The pipe should be four inches in diameter. It will be freely ventilated by the draft of the flue. Into this soil pipe or ventilator, the waterclosets and basins on the different floors empty through traps. The water from the upper closet, running past the opening of the lower closet, would be apt to suck its trap dry, and to prevent this a separate ventilating pipe is run from the traps of the lower closet to a point in the ventilator above the upper closet. In this manner all foul gases at once pass upwards and empty at the top of the house. In several houses where malarial disease had been frequent, since the introduction of this plan the residents have been free from all disease due to blood-poisoning.—*Scientific American.*

No Bones in The Ocean.—Mr. Jeffery has established the fact that bones disappear in ocean. By dredging, it is common to bring up teeth, but rarely ever a bone of any kind; these, however compact, dissolve if exposed to the action of the water but a little time. On the contrary, teeth—which are not bones any more than whales are fish—resist the destroying action of sea-water indefinitely. It is, therefore, a powerful solvent. Still, the popular opinion is that it is a brine. If such were the case, the bottom of all seas would, long ago have been shallowed by immense accumulation of carcasses and products of the vegetable kingdom, constantly floating into them. Dentine, the peculiar material of which teeth are formed, and the enamel covering them, offer extraordinary resistance to these chemical agencies, which resolve other animal remains into nothingness. Mounds in the West, tumuli in Europe and Asia, which are believed to antedate sacred history for thousands of years, yield up perfectly sound teeth, on which time appears to have made no impression whatever.—*Harper's Magazine.*

Telephones in Mines.—The scientific editor of the *Galaxy* says of these instruments:—It has been proposed to introduce them into mines, which, singularly enough, considering the great age of mining as an industry, remain to this day without the means of direct communication with the surface. All demands of the men below are communicated to the top by means of bells, of which a very limited series of signals are in use. But the projected introduction of the telephone is not very promising. Electrical signals have never been found safe, and only two or three months ago a man was killed because an electrical bell sounded of its own accord the signal to hoist. The engineer obeyed, and a man who stood in the way of the car was crushed to death. Electrical signals are not in favor with mining men, and they have constantly proved themselves untrustworthy. The telephone may be a convenient adjunct to ordinary mining signals, but it should not be allowed a post of confidence.

Nature's Pharmacy.—It is said to be quite common among French physicians to administer their doses to fanciful or refractory patients by first giving them to a cow and then feeding the cow's milk to the patient. Experiments were lately made upon a goat. Half a gramme, or about seven grains, of iodide of potassium was mixed with her food daily for eight days, and butter prepared from her milk was found to contain a good deal of iodine. Even its progeny was thoroughly iodized.

— Dr. Richardson, lecturing at Shereditch Town-hall on life and health, said that some persons imagined life might be extended to 120 years, but he thought that it might fairly extend to 90 years. All diseases arose from external causes acting on the body, which were reducible to seven great classes. The rates of mortality were different in different classes and occupations, and from the tables compiled by the Registrar-General it appeared that barristers live longer than any other class, and after them come clergymen, and next to them Dissenting ministers, and that amongst those lowest on the list are drapers, Roman Catholic clergy, doctors, hatters, hairdressers; and that lowest of all are coachmen (not domestic) and cabmen.