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SEASONABLE HINTS—HOW TO KEEP COOL.

The intensely hot weather, succeeding weeks of chilling rains, comes with unusual severity. People drop stricken with death in the streets, they sink senseless as they sit at their desks or tables, and are found dead in their beds. A few suggestions for preserving life and health in such a season may not be amiss.

First, the external condition of the body. It should be kept scrupulously clean. Nightly bathing is almost a necessity. If a bath tub is not convenient, a sponge or bit of linen or cotton cloth, with a quart of tepid water, is sufficient. The water should not be cold spring, well, or aqueduct water just drawn, but that which has stood for twelve hours of daylight to absorb oxygen from the atmosphere. Better, perhaps, is a bath of warm water, as the reaction, after toweling, produces coolness and invigorates the body. Better take the bath after supper, before retiring, rather than in the morning before eating, as it will induce a pleasant sleep, and a bath when the stomach is empty is anything but healthful, empirics to the contrary notwithstanding.

Still air is perceptibly warmer than air in motion, although the thermometer may register the same degree of temperature in both cases. The reason is that the currents of air bear away the effects of perspiration, inducing a more rapid evaporation from the surface. For this reason the use of fans for producing an artificial breeze has common sense as well as custom to recommend it. A rapidly evaporating liquid applied to the exposed portions of the body induces a local and temporary coolness. Aqua ammonia (hartshorn) is excellent for this purpose. A little of this solution occasionally used on the hands and face will, from its rapid evaporation, carry off the perspiration and leave the skin cool. As sold at the druggists it is too strong; it should be diluted with four volumes of water. For clothing, wear some absorbent next the skin, thin or gauze flannel; eschew linen or bleached cotton; outside, these will do well enough. In the hat wear a wisp of green grass, cabbage leaf, or damp towel, when going out to brave the darts of fiery Sol. In the writer's experience as a campaigner in Virginia he found this to be an excellent preventive of *coup de soleil* when on the march, and compelled the practice by the men under his command.

Eating and drinking should be regulated in hot weather. In the winter one may eat and drink almost everything he pleases: he can digest almost anything. But when the system is enervated by excessive heat it is a necessity to attend carefully to the quality and quantity of food and drink. Fat meats, solid farinaceous food, as puddings and bread of indian meal or wheat flour should be shunned. Fish, lobsters, clams, and oysters are not desirable food. Fresh vegetables and fruits, salted fish, meats, and smoked hams are healthy. Pure ice water is excellent: not, however, in large quantities, but taken a swallow at a time. The stomach does not need a load of ice-cold water, only the mouth and throat need lubricating. Drink slowly of ice water. Cold coffee and tea are no better than cold water, and iced milk is dangerous, as it is in any form highly heating. After all, however, any radical change of habit in eating or drinking will prove to be worse than useless. A very good substitute for stimulants is a cool drink made of Brown's extract of ginger with iced water sweetened. It is both cooling and stimulating.

Keep your house cool by shutting out during the day the external atmosphere. Close the blinds and keep the doors shut. Open every aperture to your chimneys and the scuttle on the roof. Thus you will have ventilation and at the same time diminish the nuisance of flies. Sunlight is a great health invigorator, but we can do without it for the short heated period.

Above all, do not get excited, indulge in no controversies,

preserve a calm exterior and a quiet mind. Have a clear conscience and a courteous manner, and the "sun shall not smite thee by day, neither the moon by night."

HEATING AND VENTILATION.

A correspondent sends us a drawing and a description of a steam heating apparatus, with a request for our opinion as to its merits. In an article published in the first number of the current volume, we discussed the subject of the supply of cold air to furnaces employed for warming buildings. The request of our correspondent has suggested some general remarks upon the relative merits of steam and hot air for heating purposes, from which he may sufficiently infer our views of the apparatus submitted.

There is a radical difference in the principles of heating by steam and hot air which cannot be overlooked in forming a true estimate of this subject. The heat supplied by steam apparatus is for the most part radiated heat, and that supplied by hot air is conveyed by moving particles, and imparted to the surfaces of bodies by contact. Persons in a room heated by hot air solely are, to use the words of Prof. Silliman, "immersed in a hot air bath, and require, consequently, several degrees more heat by the thermometer, for comfort, than when radiant heat forms a part of the means of an artificial temperature."

There is a prevalent notion that air parts with a portion of its oxygen in passing over the heated plates of iron in furnaces. The surfaces of these plates, however, absorb very little oxygen, after they have become in a measure protected by the coating of oxide which always forms upon them. This objection, therefore, only has force in regard to new furnaces. The air is, however, vitiated by the products of combustion, not only of the organic particles which are always floating in it, but also of the fuel, the gases of which are generally imperfectly retained within their proper channels.

A prevalent error in regard to the use of steam pipes, etc., for heating, may be also noticed. It is thought by some that—to use a common phrase—"the heat is not so dry" as that obtained from furnaces. The phrase, properly speaking is a scientific absurdity. Heat is not a thing like a sponge to soak up moisture. But if it is construed to mean that the air is more moist when heated to the same degree by steam than when heated by hot air furnaces, an error is committed, unless as in some cases special provision is made for keeping the air saturated with moisture by small steam jets or their equivalent.

The capacity of air for moisture increases with its temperature, and if the amount necessary to completely saturate it, is not artificially supplied, it will seize upon and appropriate moisture from all objects with which it comes in contact. The skin and the lungs are called upon to pay tribute, and chapped hands and faces, bronchial irritation, and increased sensibility of these organs must inevitably follow. A higher degree of heat is generally imparted to the air passing through the flues of furnaces than is effected by most kinds of steam apparatus. From this cause, and also from the fact that the organic particles are not burned by them, the air is more wholesome in rooms heated by steam than in rooms heated by hot air.

An entirely different plan for ventilation ought to be adopted when the fresh air admitted to rooms is cold, than when it is heated, as is the case with furnaces. In the latter case the pure air being heated, rises at once to the top of an apartment, and the air containing impurities settles to the bottom. An open grate with a fire reheats it and passes it through the chimney to the outside of the building without creating dangerous drafts of air, and is the best means of ventilating apartments. When cold air is admitted the impure air must be drawn off at the top of the room, but unless it is passed through heated flues the ventilation will be very imperfect. The admission of cold air is liable to create injurious drafts, and is therefore not to be recommended.

The plan of heating rooms by steam, and ventilating by means of grates and flues with an apparatus for supplying fresh pure and warm air to take the place of the air drawn off, and jets to keep it properly saturated with moisture, is probably open to fewer objections than any other.

EMPLOYER AND EMPLOYED.

Much of the disaffection between the employer and employed which leads often to acrimonious and unpleasant disputes, might be avoided by a more generous interpretation of the terms of the contract specified or implied between them. In many cases the employer makes his concern a disciplinary school the pupils of which are to be drilled to become as mere machines as the insensate mechanism they oversee or attend. A certain set of iron-bound rules, immutable and unchangeable as those of the Medes and Persians, is made to govern and control the help, with no opportunity for variation or adaptation to circumstance or person. The honest, conscientious workman finds himself, under this system, ranked with the careless, unjust, and selfish man who would feel a pride in "getting ahead" of his boss.

All this is wrong. Certain rules must, of course, be made and observed in order to insure a uniformity of work and a proper division of duties; but the rule that is necessary for him who, having no standard of right in himself, bows only to the law of force, is not the rule for the conscientious workman anxious mainly to protect and insure the interests of his employers. In the contriving of rules for the governing of mechanical establishments, the character of the men employed should be considered. No man should have his sense of manliness crushed or injured by being subjected to rules fitted only for the inmates of a penal institution. It not only

injures him morally, but it deprives his employer of his best efforts, as he cannot and will not work *con amore* when he knows he is under espionage or suspicion. Let employers treat their men as men and they will find it to be to their pecuniary advantage. Circumstances alone generally give them an advantage over their fellows.

OBITUARY—DEATH OF AN INVENTOR.

Dr. Wm. Thomas Green Morton, a native of Massachusetts, whose investigations in regard to the anæsthetic effects of ether upon the human system, and whose perseverance in its introduction against opposition and persecution has resulted in incalculable benefit to mankind, died suddenly in this city on July 15th in the forty-ninth year of his age. His name will stand inscribed upon the records of those whom the world never forgets, and it is to be greatly regretted that during a life devoted to the amelioration of suffering humanity he did not reap any substantial pecuniary benefit from his discovery. On the contrary, the injustice and personal abuse, which he suffered from those who desired not only to rob him of the honor to which he was entitled, but also of the pecuniary rewards of his discovery, were perhaps never exceeded, although they have too often been exemplified in the history of others to whose memory the world now pays willing homage.

A few months after his discovery he obtained a patent for it, which immediately called forth the denunciations of the medical profession, as being contrary to professional usage. The patent was also generally and persistently infringed, and notwithstanding the astonishing perseverance, and undaunted resolution with which he met his persecutors, he died without seeing his cause righted, although he had the satisfaction of knowing that his claims were recognized by most scientific men throughout the world.

He sacrificed a promising and lucrative business to his zeal in bringing his discovery before the public; and failing to secure any solid benefit from his patent, he applied in 1846 to Congress for relief. In 1849 he renewed his application, and although the Government had infringed his right without stint, and a committee composed exclusively of physicians reported strongly in his favor; no further action was taken at that time. In 1852 a bill was reported appropriating \$100,000 to him on condition that he should surrender his patent, which was defeated. In 1853, another bill for his relief met with the same fate, and still another in the following year failed to pass. Undeterred by failures, Dr. Morton applied himself to other measures for establishing the validity of his patent, and securing to himself his just rights, but in 1860 his patent expired and he failed to obtain a renewal. Such are the rewards which an ungrateful country pays to genius. His subsequent efforts during the war, when the merits of his discovery were daily and hourly demonstrated in thousands of cases on the field and in the hospital, failed in securing any appropriation for his benefit, and he died unrequited, save in the consciousness of the great good he had bestowed upon his fellow men.

SWINDLING PATENT AGENTS.

In a recent number we called attention to the fact that an obscure Patent Agency firm, in Washington, were using the frank of the Hon. John A. Logan, to circulate, free of postage, their business pamphlets. Since that date we have had other complaints of this abuse of a privilege that ought to be sacred, but which is perverted in many instances, thus defrauding the Post Office Department of its just revenues. We cannot believe that the Hon. Mr. Logan is knowingly a party to this fraud. We are more inclined to the opinion, judging from the pamphlet before us, that the Patent Agency in question is a swindling concern that has either forged the signature of Mr. Logan, or by surreptitious means has obtained possession of envelopes bearing his frank. Under any circumstances it is a fraud, and we trust that Mr. Logan, whose name is thus compromised, will look sharp after the parties who are using it to defraud the Post Office Department of its revenues. There is a class of professed Patent Agents hovering about the Patent Office, with empty hands and empty pockets, who are ready to extend to inventors advice and assistance for the merest pittance. Destitute alike of professional skill and honesty, they are Micawbers, always "waiting for something to turn up," but woe to him who chances to fall into their hands.

Inventors and patentees who receive business cards and circulars under the frank of a Member of Congress, may safely conclude that there is some cheating in the game.

BUSINESS AND SCIENTIFIC MEN.

Business men are apt to feel something like contempt for men of letters and science. It is not to be denied that they are often visionary, impracticable, and unskilled in business details. On the contrary, men devoted to science are apt to entertain a similar feeling toward business men, and to look upon them as sordid in their motives and superficial in their views. In some cases there may be grounds for such an opinion. There are many things in the very nature of successful business which are incongruous to a man whose life is among books. Accustomed to deliberate upon all subjects, he fails appreciate the rapidity with which a man of business considers practical questions, and the sharp, decisive answers, and the blunt, out-and-out way in which he expresses opinions, seem therefore, inconsiderate and hasty. Nothing could be further from the truth. A good business man's opinions are always well considered, and his answers are short because he has not time for words. Decisive they must be, for vacillation is fatal to success in any business. Neither is it true, that, because a