

## SIGHT AND READING.

M. Javel, in a recent lecture, tries to answer the question, "Why is reading a specially fatiguing exercise?" and also suggests some remedies for this fatigue. First, M. Javel says reading requires an absolutely permanent application of the eyesight, resulting in a permanent tension of the organ, which may be measured by the amount of fatigue or by the production of permanent myopia; secondly, books are printed in black on a white ground. The eye is thus in presence of the most absolute contrast which can be imagined. The third peculiarity lies in the arrangement of the characters in horizontal lines, over which run our eyes.

If we maintain, during reading, a perfect immobility of the book and the head, the printed lines are applied successively to the same parts of the retina, while the interspaces, more bright, also affect certain regions of the retina, always the same. There must result from this a fatigue analogous to that which we experience when we make experiments in "accidental images," and physicists will admit that there is nothing more disastrous for the sight than the prolonged contemplation of these images. Lastly, and most important of all, in M. Javel's estimation, is the continual variation of the distance of the eye from the point of fixation on the book. A simple calculation demonstrates that the accommodation of the eye to the page undergoes a distinct variation as the eye passes from the beginning to the end of each line, and that this variation is all the greater in proportion to the nearness of the book to the eye and the length of the line.

As to the rule which M. Javel inculcates in order that the injurious effects of reading may be avoided, with reference to the permanent application of the eyes, he counsels to avoid excess, to take notes in reading, to stop in order to reflect, or even roll a cigarette; but not to go on reading for hours without stopping. As to the contrast between the white of the paper and the black characters, various experiments have been made in the introduction of colored papers. M. Javel advises the adoption of a slightly-yellow tint. But the nature of the yellow to be used is not a matter of indifference; he would desire a yellow resulting from the absence of the blue rays, analogous to that of paper made from a wood paste, and which is often mistakenly corrected by the addition of an ultra-marine blue, which produces gray, and not white. M. Javel has been led to this conclusion both from practical observation and also theoretically from the relation which must exist between the two eyes and the colors of the spectrum.

His third advice is to give preference to small volumes which can be held in the hand, which obviates the necessity of the book being kept fixed in one place, and the fatigue resulting from accidental images. Lastly, M. Javel advises the avoidance of too long lines, and, therefore, he prefers small volumes, and for the same reason those journals which are printed in narrow columns. Of course every one knows that it is exceedingly injurious to read with insufficient light, or to read too small print, and other common rules.

M. Javel concludes by protesting against an invidious assertion which has recently been made "in a neighboring country" (Germany no doubt), according to which the degree of civilization of a people is proportional to the number of the short-sighted shown to exist by statistics; the extreme economy of light, the abuse of reading to the detriment of reflection and the observation of real facts, the employment of Gothic characters and of a too broad column for books and journals, are the conditions which M. Javel believes lead to myopia, especially if successive generations have been subjected to these injurious influences. — *London Times*.

## BREAKING UP SLAG WITH ROCK SALT.

EDITORS PRESS:—An item gathered in Carson we judge worthy of especial note for the benefit of all, gas makers in particular. In the furnaces of gas works there always gathers a very hard, solid slag, very difficult to remove even with iron bars. The attendant in the works at Carson told us that, by accident, he found that throwing on this hot slag, after the coke was drawn out, a handful or so of common rock salt rendered this slag, in a few minutes, easily drawn out like coarse, pebbly sand. If one handful should not loosen up the whole mass, another handful could be also thrown in, and the result was certain; the slag could all be drawn forward the same as ashes. This fact must be of thousands of dollars' value to the many gas manufacturers in the land, and it is free for their use. Experimenting will make evident the best manner of using the salt for the purpose.

Carson, Nev.

S. V. B.

## EPIDEMICS.

The limitation of epidemic pestilential disease, as the yellow fever, typhus and typhoid, diphtheria, etc., is at all times a question of intense interest to every thoughtful person. The July number of the New York *Sanitarian* contains interesting and valuable matter upon the subject of epidemics, which we unhesitatingly appropriate:

The cholera is a product of the jungles of India and Burmah, and the yellow fever is as surely of West Indian origin. That it is an exotic as relates to the United States is the opinion of the last national commission; and that it never originates *de novo*, except in its primal birth-place, whatever elsewhere may be the excess of heat moisture, filth, and vegetable and animal decomposition, is almost demonstrated, perhaps established. As to communicability, it is certainly conveyed from individual to individual, not precisely by what we understand to be direct contagion, but through various media, especially by bed and body clothing, by articles of furniture, by apartments, cars and steam and sailing vessels, by baggage and by cargoes; and these propagators, deriving from the sick the pestilential material (intentionally not called germ), hold it with wonderful tenacity, and convey it to mankind with intense effect. Both may be held at bay by quarantine and literally "fenced out." In 1851 cholera prevailed in Southern Europe and in Algeria, but not one case occurred that year in Spain by reason of vigorous quarantine. Two years later, when the embargo was not strictly maintained, it ravaged the Spanish peninsula. It always followed the lines of travel and was always carried by mankind. The infectious germ might be long in germinating, but it could always be traced to individuals. Quarantine, to be effectual, however, must have a very wide applicability. It will not suffice to limit it to vessels from foreign ports. It must extend to all conveyances for the transportation of passengers and merchandise—must have relations with municipal, State and national authority. It is estimated that the cost of the late yellow fever epidemic in loss amounted to \$200,000,000.

Typhoid fever is certainly communicated through a tainted water supply exposed to the taint of infected vaults. Poisoned springs have been traced to this infection, and in a celebrated English dairy case, where poisoned milk was claimed to have been sold, scientific examination disclosed the fact that the milk had been contaminated through the cows having lain upon ground manured from infected vaults. Another source is in the ice supply, often taken from shallow ponds in the neighborhood of large cities, freezing not destroying the germ as supposed. The air in localities becomes contaminated from sewage deposits; and Budd states, as early as 1859, that the germ of this disease never originates *de novo*, but proceeds from a special and specific poison, capable of great diffusion and preserving its noxious qualities for a long period, even if buried for many months. In England the preventability of typhoid fever is so thoroughly established that an innkeeper who has a guest ill with it, is held criminally responsible if any other case could be traced to the one under his roof. By this means infectious substances are destroyed and the spread of the disease prevented. Boiling water applied to the discharges is said to destroy the infection. But when the substance is allowed to escape as sewage it must be disinfected by prompt measures.

Diphtheria is much more prevalent and much worse in localities supplied with bad water. The microscope can detect a few of the germs of epidemic diseases either in the water or in the system, and the only sure method is to watch the slightest approaches of disease and investigate the sources of our water supply, whether in city or country. Chlorine gas, from recent experiments, seems to be a disinfectant as well as a deodorizer. This greenish-colored gas effectually seizes upon and destroys any hidden germs existing in dwellings, ships, etc. This gas has been used successfully at Bellevue hospital and other places. We must purify and quarantine. Mediums of communication have been made available to epidemics as well as to mankind in his business affairs.

EUCALYPTUS IN A COLD OF THE HEAD.—Prof. Strambio, in a note in an Italian medical journal, says that notwithstanding the failure of all remedies hitherto recommended for the immediate cure of a cold, he wishes to communicate to the profession the great success he has found attending a new one in his own person, and to ask them to test its efficacy. He found prolonged mastication and swallowing of a dried leaf or two of the *Eucalyptus globulus* almost immediately liberated him from all the effects of a severe cold.