

Preservation of Vision Through Spectacles

Suggested as a Subject for General Publicity

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MANY middle-aged persons postpone wearing glasses until it becomes almost impossible to read any longer without them.

This is a serious mistake, because such postponement of the use of glasses merely leads to premature exhaustion of visual vitality, an absolute loss of elasticity of the lenses within the eyes, when there is no longer any ability to adjust vision for the observation of near objects.

In order to explain this impairment, it should first be stated that lenses made of glass can only have fixed curvatures of surface and powers; whereas the normal lenses within the eyes, being soft and resilient, are capable of being given different curvatures and, consequently, different powers, through being acted upon by the focusing muscles, which are infinitely more sensitive than the hair-spring in a fine watch.

Thus nature has supplied lenses within the eyes that spontaneously adjust vision through "accommodation" to different and perpetually varying distances, and which adjustability can never be produced by artificial lenses of necessarily constant form.

Therefore persons whose eyes are afflicted with total loss of accommodative power are seriously handicapped, as they can then only be made to read with spectacles at a fixed distance which is exactly equal to the focal length of the spectacle lenses needed to obtain distinct vision. On the other hand, if the eyes are still possessed of some accommodative power, it will be possible to read at a nearer distance than the focal length of comparatively weaker spectacles, because the eyes will themselves still be able to comfortably add to the power of the spectacles that variable power which results from the increasable curvature of the elastic lenses within the eyes.

In other words, the variable power of the lenses, within the eyes and behind the spectacles, may still be sufficient to adapt vision to a nearer distance than the fixed focal length of the spectacle lenses, so that at least some of the range of adaptability is secured. Vision, under such circumstances, retains part of its natural variability, and which can only be preserved through the timely use of proper spectacles.

Hence, the longer some of the accommodative power can be retained the longer will it

be possible to enjoy a comfortable range of vision, even with weak glasses, and without the enforced limitation that would be unavoidably imposed through the use of stronger spectacles after the accommodation has been sacrificed. Consequently it must be emphasized that glasses should be worn just as soon as any difficulty is experienced in reading in order to conserve the eyes' delicate accommodative power.

Entire loss of this wonderfully subtle power is generally the result of thoughtless abuse or procrastination, and is associated with irremediable annoyance during subsequent years.

After the 40th year of age has been reached persons who have even perfectly normal distance vision will sooner or later experience that small print is insufficiently defined, so that in order to see it more distinctly the book or paper has to be held at a greater distance from the eyes, or must be exposed to a more intense light.

These are the first signs that the accommodative power of the eyes has begun to wane, and, if reading under such circumstances is persistently prolonged, will usually be associated with burning of the eyes, redness of the eyeballs, itching or stickiness of the eyelids, headache, pain over the brow, in the eyeballs or at the base of the skull, or other less pronounced symptoms of eye-strain that are only remediable by suitable glasses. The fact that glasses obviate these ills does not mean that they are medical agents. On the contrary, it proves that they are merely instruments that correct the purely physico-mechanical cause of them.

However, there are many persons who have had the forethought to seek proper glasses with the first intimation of their need, but who have been so grievously deceived by unskilled optical practitioners, among both medical eye specialists and opticians, that they have lost all confidence in the science of applied optics, and, therefore, often prefer to seek their own artificial aids to vision at the bargain counter.

Universal optical incompetence among the aforesaid practitioners has made the advocacy of optometry laws necessary, such laws having already been enacted in 26 States of the Union, and in several Canadian Provinces. For instance, optometry, as now

regulated by law through the Regents of the University of the State of New York, relates to the professional practice of measuring the optical functions of the eye, without the use of drugs, for the purpose of prescribing lenses to mathematically correct optical defects of vision.

Therefore, legalized practitioners upon the eye are now required to pass a State examination, similar to dentists, who are lawfully charged with the care of the teeth.

The practice of optometry, being based upon exact science, involves a knowledge of theoretic and practical optics, which are now incorporated subjects in the Regents' examinations, so that henceforth collegiately accredited practitioners will be the only eye specialists legalized to scientifically determine the choice of spectacles. This State recognition of specialism in optometry has been secured through the support given by

able men of the State to the just contention, that the practice of optometry shall be founded upon a thorough knowledge of optics, and which is now endorsed by the scientific faculty of Columbia University, through its two years' courses in optometry. Thus it is proposed to eventually supplant the optically incompetent medical eye specialists and opticians of to-day by collegiately qualified optical practitioners of the future.

However, it should be remembered that there are even now many able specialists known as optometrists, who, having graduated from excellent technical schools, have combined in the nationally organized altruistic effort to raise the standard of optical proficiency among eye practitioners for the benefit of the people. Intelligent persons commend this movement because it is in the interest of humanity and true scientific progress.

Education All Along the Line

Pittsburgh, Pa., Jan. 8, 1912.

Editor OPTICAL JOURNAL AND REVIEW:

"LIGHT, more light," was the dying request of a noted man and should be the daily outcry of every optometrist.

Because we work upon nature as God made it, and man keeps it, not an artificial condition produced by poison, we are under obligation to know the plan of the Maker in the organization and functioning of our special study, the eye.

The same obligation compels us to learn all that science has to teach of the "ways and means" of correcting its many defects.

Education is a prime need all along the line. Excuses abound with many for the stagnation in which they live. "No time," "no teacher," "no money," "no opportunity," etc. The truth is, deficient in mental equilibrium. The man who claims a vocation and does not place its claims first in his list of duties and give them precedence over all other demands might be called a "scatter brain," or, to put it my way, lacks mental poise.

"No time?" I knew a boy who went to work at 6 o'clock in the morning and returned home at 9 p. m. every night in the week who "got off" at 7.30 two nights a week to recite Latin to a high school student who was kind enough to help him.

I knew a busy storekeeper who lived four town squares from his store who wrote an out-

line lesson in Greek on the back of a card each morning and learned it during the four trips to and from his place during the day. Deficient in higher mathematics, he employed a school teacher to come to his office at the closing hour and drill an hour in those fascinating studies.

The fact is that the *real man* is impelled by the divine within to seek to know the unknown, and excuses are our confession that we are resisting this spirit of progress, and thereby failing in our possible attainments in life.

The healthy mind asks for more, and then something more, of knowledge, just as the healthy body experiences the recurrent demand for food.

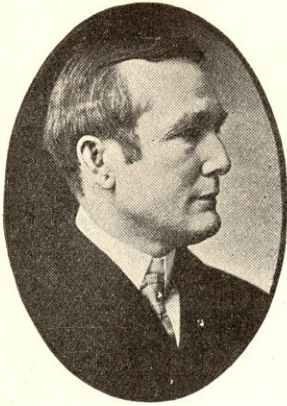
The mind that is satisfied at any time with its attainments is defective, or of a low order, as one writer humorously puts it "is like that ass that knows his master's crib and that's all he wants to know, and is satisfied with his diet solely because he is an ass."

Concentration and study promote efficiency; efficiency promotes success; success promotes pleasure and profit.

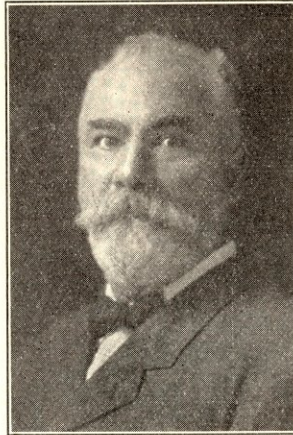
Again I quote my favorite philosopher, Walt Mason—

"To learn one trade and learn it fully,
To master every small detail,
That is the plan that makes life bully,
And brings in fifty kinds of kale."

W. T. McCONNELL.



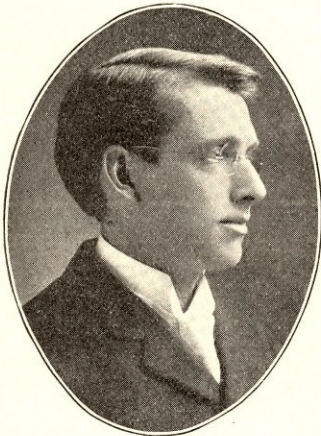
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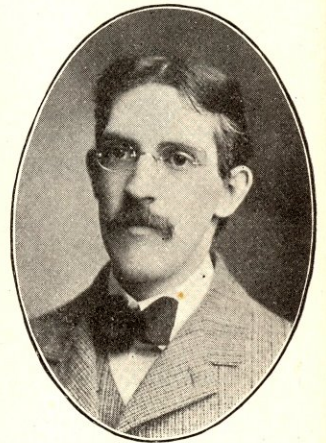
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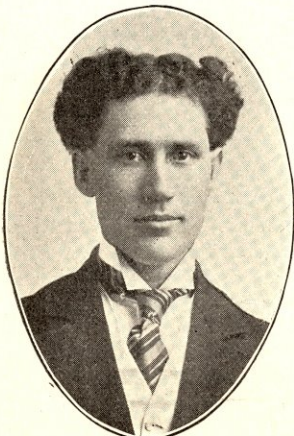
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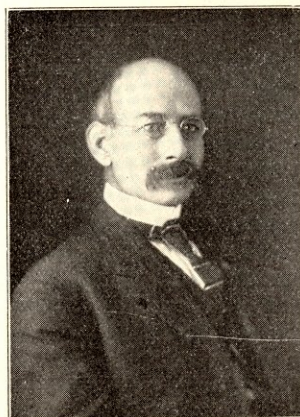
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