

PROTECTION FROM SUNSTROKE.

WASHINGTON COLLEGE, Lexington, Va., July 28, 1898.

Desirous of mitigating the dreadful effects of sunstroke, I was led to search for a remedy, and now rejoice in being able to present what is believed to be an efficient protector.

It is known by experiment that man can exist in a temperature sufficiently high to roast a piece of beef or to cook an egg. Why, then, does the heat of our cities, which is much inferior, prove fatal? Because, in the first instance, the whole body is subjected to diffused heat; in the latter case the heat is most exposed to the direct rays of solar heat, which, with few exceptions, are absorbed by all bodies.

Taking this view it occurred to me that any substance which could be interposed to deflect the hot rays would prove a valuable protection. But what is the substance, and how shall it be applied? We will see:

Extract from a lecture on heat before the Royal Institution of Great Britain, by John Tyndall, Esq., L.L.D., F.R.S.—

It is wonderful what a slight and trivial thing will be sufficient to prevent the absorption of radiant heat. I have here an exceedingly instructive substance. It is a piece of paint of a portion of which is coated with gold leaf, and though the gold leaf is infinitesimally thin, it has been competent to protect the surface of the paint from the action of radiant heat to which the whole thing has been exposed, while the other part of the surface, which was not covered with gold leaf, has become blistered. Where the gold leaf was present it prevented the rapid absorption of the heat.

"I have here a sheet of paper covered on one side with lode of mercury, a substance which has its color discharged by heat. On the other side of the paper there are certain figures represented by a thin coating of metal. I place the lode of mercury side downwards, and over the other side I will hold a hot spatula which will radiate heat to the surface of the paper. Where the thin coating of the metal is the heat will be rejected, but where the paper is not coated the heat will be absorbed and then it will reach the lode of mercury on the other side and destroy its color." (The experiment was performed successfully.)

If, then, a thin coating of metal prevents the passage of heat rays to destroy color, it must of course prevent the passage of heat rays to destroy human life. To apply this coating of metal to some substance which may be worn in the hat without inconvenience in weight, liability to tear and stopping the aqueous evaporation from the head, was difficult; but I have found, after some experiment, that gold-leaf applied to bobinet and protected by silk illusion, or another fold of the same material, seems to answer best.

Very respectfully,
Your obedient servant,
J. B. WALKER,
Assistant in applied Chemistry.
—Baltimore Sun.

THE ORANGE TREE.

The orange tree, when full grown, attains the height of about twenty five feet, and is graceful in all its parts. The trunk and older branches are of a delicate ash color; the twigs so soft and green that they appear almost transparent; the leaves are moderately large, beautifully shaped, of a fine, healthy green, and hanging on the upper side, while the under one has a slight appearance of down. The flowers, which are in little bunches, and very graceful in their form, are, in the sweet oranges, of a delicate white; and in the more acid varieties of the family lightly marked with pink.

Some plants have a more powerful odor than others, and are, for the moment, more rich; but there is a freshness in the aroma of an orange grove that never offends or cloy, and the tree is at one and the same time in all the stages of its bearing—in the tender bud and full-blown blossom mingling in loveliness with the dear old brown leaves, with the embryo fruit, just peeping out from beneath the foliage, and the rich, round, golden fruit nodding a welcome to the hand to gather it, and the palate to partake of its refreshing juice.

It is this peculiar character of the taste that renders it the appropriate symbol of marriage—showing at once both the promise and the fulfillment of womanhood, and of those rewards of married love which give at once the charm of domestic, the endearing bond of well-pledged hearts, and the provision for the future, of another and succeeding race to take their places.

It is one of those beauties of nature that scarcely knows a superior, even in the perfume of Arabia, and the aromatic groves on the north of the Mediterranean, where the Provencian rose and tube-rose, and blend their sweets with that of the orange.

One peculiarity of the orange is, that man may have it fresh in every region of the world, and at almost every season of the year. The aromatic oil and the rind preserve it from the effects of both heat and cold, and the acidity of the former renders it proof against the attacks of insects.

It is true they rot like other fruits, but not for a long time, if the rind is preserved from injury and they are kept from moisture, and so ventilated as to prevent fermentation.

THE SECRET OF ELOQUENCE.—I owe my success in life to one single fact, viz.: That at the age of twenty-seven I commenced, and continued for years, the practice of reading and speaking upon the contents of some historical and scientific book. These off-hand efforts made sometimes in a cornfield, at others in a forest, and not unfrequently in some distant barn, with the horse and ox for my auditors. It is to this early practice, in the great art of all arts, that I am indebted for the primary and leading impulses that stimulated me forward and shaped and modeled my entire subsequent destiny. Improve, then, young gentlemen, the superior advantages you enjoy. Let not a day pass without exercising your powers of oratory. Caesar controlled men by captivating their affections and swaying their passions. The influence of the one perished with its author, the other continues to-day.—Henry Clay.

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