

in Oxygen, the blood be charged with Carbonic acid, biliary matter, uric, or other products of the disintegration of the body, the functional power of the nervous and muscular systems must undergo a marked diminution, in consequence of the deleterious influence which such matters exert upon their tissues.

Now it may be accepted as an indubitable fact in Organic Chemistry, that there is not the slightest relation of composition between Alcohol and Muscular tissue; and all our present knowledge of the subject tends to prove, that the albuminous* matters of the blood, which constitute the *pabulum* of that tissue, cannot be generated within the body of man, or of any other animal, but are derived immediately from the food. We cannot regard Alcoholic liquors, then, as contributing to the nutrition of Muscular tissue; except in so far as they may contain albuminous matters in addition to the Alcohol, which is especially the case with "malt liquors." But these matters would have the same nutrient power, if they were taken in the form of solid food.

We cannot speak with the same confidence in regard to the impossibility of any assistance being afforded by Alcohol to the nutrition of the Nervous system; since Nervous matter is essentially composed of fatty substances, which, though peculiar as containing a large quantity of phosphorus, do not seem to contain nitrogen; and since Alcohol is regarded by the Chemist as approximating the oleaginous class of substances in its chemical relations.—But there are two circumstances which render it highly improbable that Alcohol can ever be converted into nervous matter. In the first place, we have no other example of an organic compound being found applicable to the nutrition of the animal tissues, which is the product of incipient decay or decomposition; yet this may be affirmed to be the case with Alcohol, since the Alcoholic fermentation is the first of a series of degrading changes, which, if allowed to continue unchecked, terminates in the putrefactive process; and we can scarcely imagine, therefore, that it can be an appropriate material for the formation of the most active and important part of the whole animal mechanism. Again, we have no other example of the application of an organic compound to the nutrition of the animal tissues, which exerts upon any of them such a decidedly *poisonous* influence in large doses, as we have seen to be exerted by alcohol. The materials which constitute the *pabulum* for the several tissues, are perfectly innocuous whilst they retain their normal constitution; and their presence in the blood, in larger amount than usual, though it may in various modes be a source of functional derangement, never exercises any special deleterious influence upon the vital properties of the nervous, muscular, or any other tissue. On these grounds, then, it may be almost positively affirmed, that notwithstanding the chemical relation which Alcohol bears to Nervous matter, it cannot serve, either in its original condition, or on any other guise, as a *pabulum* for the generation of nervous tissue.

We seem justified by the laws of physiology, therefore, in assuming that alcoholic liquors cannot supply the first of the requisites already enumerated for the development of the physical power of the nervous and muscular apparatus; and

we have next to consider what is its capacity in regard to the second. It may be safely affirmed that the introduction of Alcohol into the blood cannot stand in the place of Oxygen which is essential to the functional activity of the nervous and muscular systems; on the contrary, its presence in the blood would rather tend to impede the oxidation of their organic components, both by the more cogent demand for Oxygen which it will itself set up, and also by the preventive influence which it is well known to exercise over the oxidation of other organic substances. In both these modes, it will not only interfere with that action of the Oxygen of the blood upon the Nervous and Muscular substances, which is essential to their functional activity; but it will also tend to check the removal by oxygenation, of those products of decomposition, whose continuance in the blood is attended with most serious injury to the system. In so far, in fact, as the presence of alcohol in the circulating current tends to give to arterial blood a venous character, it must thereby impair its power of serving as the exciting fluid (for so we may term it) of the nervous and muscular battery. And this it does in the first instance, by obstructing the elimination of Carbonic Acid, as will be shown hereafter; but more remotely, by that interference with the proper functional activity of the liver and kidneys, which we have seen to be among the most ordinary consequences of the free and habitual use of alcoholic liquors.—*Bristol Temperance Herald.*

SUNDAY POST-OFFICE AND SUNDAY MALTING.

(From the National Temperance Chronicle.)

The gentleman to whom the following important letter was addressed has forwarded it to us for insertion in our pages. We feel assured that it will be read with interest by many of our friends:—

London, March 25, 1850.

MY DEAR SIR,—I have much pleasure in furnishing you with a few particulars on a subject in which I know you feel deeply interested.

It is a very gratifying fact to every lover of the holy Sabbath, that the Christian public is manifesting such a lively concern in reference to Sabbath labor in connexion with the Post-Office. But is it not somewhat strange, that whilst so much sympathy is generously and justly evinced on behalf of Post-Office clerks, another numerous and equally respectable and responsible class of government servants is altogether overlooked? I refer to Excise (or Inland Revenue) officers! This, especially with reference to the public advocates for the better observance of the Lord's Day, has been to me, for some years past, a matter of surprise. How is it to be accounted for? Is it because this class of persons have less reverence and love for, and less need of the Christian Sabbath, than their fellow-servants of the Post-Office? I have no hesitation in saying, decidedly not. On the contrary, they would greatly rejoice at being freed from obligation to Sabbath labor, which is felt, by very many of them, to be an oppressive and galling burden upon the conscience, and necessarily pernicious to the moral and religious feelings.

This apparent inconsistency, on the part of the Christian public is, perhaps, partly attributable to their want of information upon the subject. They are probably unacquainted with the fact, that there are about three thousand Excise (or Inland Revenue) officers scattered over the United Kingdom, every one of whom is obliged to visit and survey every malt-house in his residence and under his survey, once at least every Sabbath, when any malt is being manufactured therein; and frequently twice or more, according to the stage of operation then in process. Many officers are under the necessity of frequently travelling considerable distances on the Sabbath, to visit and survey malt-houses situated out of

* This term is here used to designate what are commonly known as the *protein* compounds, late researches having tended to show the incorrectness of the basis on which that appellation was founded.

† It is usually stated on the authority of Fremy that the fatty acids of the nervous substance contain nitrogen; this, however, is probably an error; arising from the substance of the brain or nerves being submitted to analysis *en masse*; for this substance consists not merely of the fatty contents of the cells and tubes, but of the albuminous walls, and thus, regarded chemically, it is a mixture of oleaginous, with a small quantity of albuminous matter, which last, when included in the analysis, would give to the former ingredient the appearance of containing azote.—(See Valentin's *Lehrbuch der Physiologie*, Band, p. 175.)