It is easy, therefore, to understand how it is that pathological changes so frequently follow the wearing of artificial substitutes for the natural dental organs. Perfect adaptation of the case to the mouth is rarely or never attained, and the local mechanical irritation is in all cases probably far greater than is generally supposed. No mouth is of uniform density, yielding alike to pressure in all its parts, so that in the act of mastication the unequal pressure of the denture upon the muccus surfaces is in itself sufficient oftentimes to cause trouble, and is not infrequently the underlying difficulty in attaining the success our efforts should seemingly merit.

Until quite recently many of the pathological conditions due to the presence of artificial dentures in the mouth have been attributed to the vermilion or coloring matter in the materials of which some of the plates are constructed. Dr. Edw. C. Kirk, writing for the *American System of Dentistry*, upon this point says: "Many cases in practice tend to a confirmation of this idea, yet a careful analysis of them, as well as the absence of conclusive evidence based upon systematic scientific investigation, fails as yet to establish the truth of such a theory."

Vermilion being a salt of mercury, men have erroneously contended that its action must necessarily be poisonous; but that such is not the case is evident from the fact that it is wholly inert medicinally, and is one of the most insoluble of the mercurial salts. Sodium sulphide in strong solution is the only menstruum that will dissolve it, when it becomes a mercuric sulphide solution and is decomposable only by heat or the strong mineral acids. It has also been claimed by some writers, that in the process of vulcanization, decomposition of the vermilion takes place, resulting in the liberation upon the surface and through the texture of the plate, of metallic mercury, which being acted upon by the oral secretions, produces local mercurial poisoning. Theoretically such a result cannot follow, for the temperature to which the vermilion is subjected during vulcanization is far below that necessary to effect its decomposition, and should the proper heat be reached accidentally, the pressure of the sulphur which is incorporated in the rubber to produce hardening, would immediately reconvert into mercuric sulphide any mercury which had been set free; so that while it may be possible that individual samples here and there have shown free metallic mercury, yet a careful study of the subject must preclude the possibility of such general occurrence as to account for the frequency of rubber-sore mouths. In making this statement I am not unaware of the advantages sometimes urged, and the benefit frequently derived from the substitution of black rubber for the red variety, and am prepared to admit its superiority though not on the grounds that have been urged against the vermilion,