A Surgeon called upon to treat the most serious lacerations, cuts, or bruises, of the soft tissues, if the lesion does not necessitate the entire removal of the part, only requires to re-adjust the wounded tissues as nearly as possible to their normal relations, and guard against any undue inflammation—nature does the rest and restores the parts to a healthy condition. Not so, however, with the Dental surgeon in the accidents and diseases which he is required to treat. The work of restraining destructive action and restoring lost parts devolves wholly on the operator—nature in his case gives no assistance.

Upon his thorough understanding of the causes of caries, and the various influences which combine to produce and extend them, will very largely depend his success in the efforts to preserve decayed teeth. It is now, we presume, generally admitted that neither what is known as the "vital theory" nor what is termed the "chemical theory" of caries is of itself sufficient to account for all the phenomena which are manifested in decaying teeth. Scientific men are agreed that both chemical action and diminished vitality are in most cases necessary to the production of caries, and consequently hold as correct the "chemico-vital" theory.

For the purposes of this paper it will be sufficient to assume 1st, That in a mouth where the fluids are normal and the teeth perfectly formed, and in a hygenic condition decay *never* takes place—in other words that nature designed that the teeth should remain perfect during life.

2nd. That where decay occurs there is always present vitiated fluid acting chemically upon teeth naturally imperfect, or made so by accident, or in which from some cause the normal vitality has been lowered.

Decay occurring from natural defect in the calcification of the enamel, is found principally on the grinding surface of molars and bicuspids and on the lingual surface of the superior incisors and laterals. Decay predisposed by loss of vitality may occur on any portion of a tooth, but most commonly occurs on the proximate surfaces.

It is generally taught that teeth are more liable to decay on the proximate surfaces, from the fact that particles of food are there retained and decomposed.

A careful observation will, we think, show that there is another and perhaps equally potent cause for the decay so frequently met with. We find that, other things being equal, the more tightly teeth are wedged together, and consequently the less space for food to lodge and decom-