best condition to absorb any air that may have remained in the tubules. These are now set aside in the water for three days, when the sterilization is repeated in the same manner, after which they are again set aside for four days more. Then, if no signs of decomposition have appeared, they are ready for the first weighing. This has been made a condition to which every tooth coming to me partially dried has been subjected. Rigid experiment has proven that all of this is necessary."

One great aid in arriving at correct conclusions is the use of an hypothesis. Supposing some teeth are being examined and carious places are found, both enamel and dentine being destroyed, the effect is obvious. What is the cause? If the cause is not known, then for the sake of argument it may be assumed. Now, this assumed cause will be more or less valuable, as it more or less accounts for all the phenomena observed in the case of caries. If the hypothesis does not account for all the phenomena, it is not correct; but at the same time it may be valuable insomuch as it may suggest another hypothesis which will be nearer the truth; and so by earnest inquiry the correct cause may at last be attained. Each hypothesis, though not correct, will have performed a service. It will group or collect all the facts or phenomena connected with caries, and thus make them more evident. But before an hypothesis is assumed, care must be taken to see that it either admits of proof or disproof, or else it is useless.

The object of the inquirer is generally to discover the cause of certain phenomena; that is, to argue from the known to the unknown. If it is known that one circumstance always precedes another, and that they are related as cause and effect, then it may be assumed that if all the conditions remain the same, that is, if there are no counteracting influences, then the same cause will always be followed by the same result. As an example, if arsenic stops a toothache, then under the same conditions it will always stop a toothache. The danger here is in hurriedly concluding, without sufficient data, that because arsenic stops the toothache in one, two, three or more cases, it will always stop it. The only legitimate conclusion is, that under the same conditions it will act the same. But a certain result may be due to different causes. A circumstance may be noted which is known to be due to one cause; but that circumstance may also be the effect of other causes. For example, the proximal side of a bicuspid tooth has been filled, and the recurrence of caries is observed at the cervical margin of the filling. One predisposing cause is known to be the improper preparation of the cervical margin of the cavity. Must it, then, be concluded that all decay at the cervical margin of a proximal filling of a bicuspid tooth is due to the same cause? What is to be said of the case where contour has been neglected and the cleansing space lost?