

it is perfectly satisfactory, while the advocates of gutta-percha, the cements, or any other material, claim equally good results. These statements can be harmonized in only three ways. 1st. One operator's opinion of success in root filling is not the same as another's. 2nd. Or it is not necessary to fill root canals at all, as is advocated by the mummification adherents. 3rd. Or any filling material is good enough. Without going into the discussion of these points any further, it may be safely said that the essayists and speakers at the Ontario meeting agreed that root canals ought to be filled.

If a root canal ought to be filled, there must be some reason for it. The best and only reason for filling a root canal is to keep something out of it that is not desirable. We are not considering those cases where root canals are filled to make a foundation for a filling in the crown of the tooth. That undesirable something is most likely moisture or granulation tissue, or both, with a probable pyogenetic infection. A consideration of the following experiments may assist in a measure in coming to some conclusion as to which of the ordinary root-filling materials in use will best keep undesirable substances out of a root canal.

It is fair to assume that a root filling material that will prevent the passage of moisture will prevent the passage of bacteria and granulation tissue. This being granted, the relative merits of cotton, raw cotton, gutta-percha, chloro-percha and gutta-percha, cotton and gutta-percha, and the cements, as barriers to the passage of moisture, and hence the passage of bacteria, can be seen from the following experiments. It is to be borne in mind that these experiments have nothing whatever to do with the solubility, destructibility, density, or irritating qualities of the materials used. They relate only to their power to act as barriers to the passage of moisture under the most favorable circumstances.

Glass rods about two inches long, with 3-16 inch bore, were drawn to a fine point at one end, while the other end remained its original size. In this way a cone was made about 3-4 inches long and resembling the root canal of a tooth. These cones were in every case open clear through. After these glass cones were filled with the root filling material, their small ends were immersed in a red-colored solution. This was accomplished by pressing the tubes through holes cut in a piece of cardboard, and the cardboard placed over a pan containing the solution. In this way the tubes were held in an upright position while their small ends were below the surface of the solution.