

a fine nerve broach, thereby enlarging, and at the same time disinfecting them, a great advancement in the mode of treating root canals. But, if in the pursuance of this treatment, we do not use soda bicarb. for the neutralization of the sulph. acid, as Dr. Callahan directs, but use, as I have done for some time, peroxide of sodium ($\text{Na}_2 \text{O}_2$) by which according to the formula $\text{H}_2 \text{SO}_4 + \text{Na}_2 \text{O}_2 = \text{Na}_2 \text{SO}_4 + \text{H}_2 \text{O}_2$, a violent development ensues, which in its nascent state in the canals, brings about an astonishingly rapid sterilization, and we have a method which, after a great deal of experience, I wish to point out as an ideal one.

After the sulph. acid has been placed into the cavity, it will be found that canals into which the broach could not at first be entered, can now be introduced freely, and with several applications can be enlarged with pulp canal cleaners to the very apex. Thus the work of enlarging canals can be accomplished in a few minutes, whereas it would take a very much longer time with the nerve canal drill, if it can be accomplished at all. Nerve canal drills have done more harm than good, and with the Callahan method have received their death-sentence.

Peroxide of sodium, a strong caustic alkali, is a yellowish powder, and should be kept in a well-stoppered dark bottle. Its application is very simple: A Donaldson broach is moistened with water, and dipped into the powder, a few grains will adhere to the point of the broach, and this is worked into the canals containing the 50 per cent. sulph. acid; a bubbling up will immediately follow producing the well-known antiseptic $\text{H}_2 \text{O}_2$. If the canal has not been sufficiently enlarged by means of sulph. acid, this will accomplish it, as it saponifies the contents of the canals and the bubbling throws the debris into the cavity from which it is easily removed.

After the cavity and pulp chamber have been cleaned, and the canals treated with the 50 per cent. sulph. acid and peroxide of sodium, which is repeated until no more bubbling follows, the cavity pulp chamber and canals are flooded with whatever antiseptic one gives the preference. I would recommend oil of cinnamon on account of its penetrating powers.* The cavity and canals are now dried with cotton and air syringe, the canals filled with chlora percha, and the cavity filled permanently with whatever filling material one desires. Formerly I used to fill the cavity with a temporary filling, and after eight to fourteen days remove this and fill permanently, but I do not consider this necessary and now always finish at the same sitting. In cases where the entrance to the canal cannot be found, Dr. Callahan recommends the placing of a trace of the 50 per cent. sulph. acid into the cavity and sealing it with cement. After twenty-four hours remove the cement, and the

* I prefer oil of eucalyptus. C. E. K.