

sulphate of copper may be used in pure form, but it naturally causes serious discoloration of the tooth at the neck, and is also, I fear, too soluble to give permanent results, in pure form. More recently, I have directed my experiments toward the discovery of some substance which possesses the desired qualities without discoloring the tooth. Thus far I have obtained the best results from diaphtherin (oxychinaseptol), an antiseptic recently introduced by Emmerich. It may be applied in pure form. Among liquid antiseptics, the oil of cinnamon takes the first place, and I have much faith in its power to conserve the dead pulp. Like all the liquids, however, it is difficult to apply, and has, besides, the disagreeable quality of discoloring the tooth yellowish-brown. The combination which I have chiefly employed is that of sublimate and thymol. (I have not had opportunity to sufficiently test the others in practice, though I am now using, by way of experiment, the salicylate, and, to some extent, the cyanide of mercury.) It has been employed at the Dental Institute of the University of Berlin in over two hundred cases. Of these, only one failure has come to my knowledge.

Time is the only test for methods like those under consideration, and we can scarcely expect to arrive at a definite conclusion in less than five to ten years. Nor should we be hasty in the application of methods of this nature. One or two cases every month, at least for the first year or two, is all that a careful dentist ought to risk in private practice. Cases should be chosen which are very difficult to treat, and which are otherwise frequently treated by the forceps, such as distal cavities of second or third molars, buccal cavities of third molars, etc. It is not possible at present to form a reliable estimate as to the value of this method of treating teeth; it may also be that much better materials will be found for the purpose than those suggested above. There are, at least, reasons for believing that by a careful application of this method, many teeth may be saved which otherwise would be sacrificed to the forceps, or, what is much worse, be allowed to crumble away.

[The President exhibited two small bottles containing the preparations which Dr. Miller had recommended, and passed them around for inspection.]

#### DISCUSSION.

DR. FRANK ABBOTT (New York City).—I take entirely different views of this matter from the author of the paper and the gentlemen who have been quoted. The only one condition where I think of using any material for devitalizing the pulps of teeth, is where it is impossible to stop pain. I have, perhaps, in the last fifteen years used arsenic in teeth as many as three or four times, and no more. To detail to you how I avoid using arsenic and