It is not expected that the lower classes will appreciate dentistry for more than the relief it gives to present suffering. Hence it is not uncommon to find persons who will not have a tooth treated and saved if it will cost more than to have it extracted. The paying patronage of dentists comes from the higher and more intelligent classes; not because of their wealth or their better learning, but their general intelligence and mental culture enables them to understand better, when explained to them, the true value of anything, and their better financial condition enables them to obtain what they most value. Upon this class it pays to bestow thought and time in giving intelligent instruction.

The point to be made is the value of dental operations in promoting personal comfort, health and longevity, the preservation of the form of the features, personal identity, and the pleasures of social intercourse without embarrassment, as well as presenting old age freed from its most unwelcome deformity.

The rule should be "line upon line, precept upon precept, here a little and there a little" of intelligent instruction touching the deeper and more important results of dental operations than those immediately experienced—results pertaining to the long future of their own lives and the well-being of their posterity, whose lives may be made miserable or pleasurable by inheritance.

A dentist's patrons must be made to feel that he is truly honest in his dental operations—that he is not working simply to get a living—that he does not talk dentistry for the mere dollar's sake, but that in his dental skill and knowledge he holds a high trust for the benefit of his fellow men. All kinds of trickery, deceit, and covering up of conditions or results, should be as foreign to him as to sun-light. All that he says and does should have the openness of christian day-light. This perfect frankness and honesty creates in the mind of a patron confidence and trust, which is the only foundation upon which can be built a successful practice.

## GELATINE FORMING MICRO-ORGANISMS.

BY G. V. BLACK, M. D., D. D. S., JACKSONVILLE, ILL.

I have succeeded in isolating several species of gelatine forming oral cocci, which are very much alike, however, except as to rapidity of growth. The one in which I have been most interested is a wonderfully fickle plant, so much so that I have had great difficulty to maintain continuous growth of it. It is often impossible to replant or transfer it after the lapse of twenty-four hours. It seems necessary to do this twice or three times daily to keep it going. A tube planted with a colony picked out of a gelatine plate becomes almost as white as milk within three hours, and within fifteen to twenty-four hours the entire contents of the tube (pentonized broth with 2% of sugar.) is gelatinized so perfectly that upon inverting it there will. at most, only a drop of clear fluid appear. This gelatine is for the most part built up from the bottom, or from the sides of the tube. There is nothing like a film on the top, at any time. It seems to grow best at a temperature above 100° F, and my observations thus far go to show that it is essentially the organism of sordes in fevers. The tubes have a faint vellowish cast, and in case all the fluid is not solidified, that which remains is as clear as crystal, and markedly acid in reaction. In gelatine tubes it grows in the form of vesicles, the contents of which are lighter in color and more transparent than the gelatine about them, and on gelatine plates its colony looks more like the pits left in the skin by smallpox, than anything else with which I can compare it. They appear sunken, very transparent, and a shade lighter than the surrounding portions. They do not grow large enough to be seen by the naked eve, and if not taken off early refuse to grow in any of the media that I have tried. In most persons whom I have examined, this coccus is found far back on the dorsum of the tongue, and occasionally I find it scattered generally through the mouth. It is a Streptococcus in form of growth, but rarely forms chains of more than five or six cocci. It does not grow in pairs, or even numbers. as the other streptococci, odd numbers being seen in the chain about as often as even numbers. Yet very many diplococcus forms appear from the division of single cells.

Another form grows very slowly, requiring a week to develop. The tubes have a decided bluish cast, and the amount of gelatine found is small. In this the chains of cocci are generally longer and more regularly formed.

This A. M. I made a plant which I have held at 103° F. Now, at 4 p. M., I have four generations from it, each plant being taken after the tubes were decidedly milky. The original tube is now half full

of gelatine. This will give some idea of what this coccus may do in gumming up the teeth, tongue, etc., when fever occurs, which with its high temperature perfects the conditions for its growth. It also gives a reason for the non-appearance of sordes in some cases of fever. The coccus is not present in every mouth. I should say that gelatine is not quite the proper word to use in this connection. The substance does not melt or soften at high temperatures, and in many respects differs from what we know as gelatine, but it is more like that, as it appears in the tubes, than anything else with which I am acquainted.

## TEETH WITH EXPOSED PULPS.

BY GARRETT NEWKIRK, M. D., CHICAGO, ILL.

The article on the above named subject, published in the July number of this journal, contains certain statements and conclusions upon which it may be profitable to make a few remarks.

First, as to the supposed typical case calling for the application of arsenic and morphia, described on page 351, I quote:

"Enter an individual in distress, either desiring extraction or relief from pain by 'killing the nerve.' \* I find an exposed pulp. The patient gives a history of continuous pain for a considerable period, and as I pass a spoon excavator over the exposure, slightly enlarging it, I discover an oozing of pus. The indication to me is to devitalize immediately," etc.

The indication to most of us would be that devitalization had already taken place in the body of the pulp. Do tissues decompose before they die? If death be not already complete to the end of the root or roots in such a case, is it not a fact that it is only a question of a few hours or days of time when a line of demarkation and practical separation will exist between such root filaments and the dental nerve?

Why does the pus ooze forth? Because it is under pressure.

Why was the patient "in distress" when he entered? Because the pressure was then being exerted upon sensitive tissue at the point of least resistance, viz., the apical foramen.

Why is it relief is experienced by the "individual in distress?" Because a point of *no* resistance has been made by the excavator.