

pass out in single file and view specimens. After all had viewed them,)

The PRESIDENT—Dr. Black will now address the meeting.

Dr. BLACK (who was received with applause), said :

*Mr. President and Gentlemen,*—After seeing the exhibits I think you will be better able to understand what I mean when I speak of shrinkages of amalgam. The arrangements were not such that you could well see the results of expansion, but certainly you could understand from the observations you made through the microscopes that an amalgam that will shrink until you can see between the amalgam and the margin of the cavity, which in this case is a steel tube, is not a suitable material for filling teeth. There have been thirty-five fillings made, nearly all of alloys you are using in your practice. Twenty-five of these have the margins open so that they are readily seen by microscopic observation. There are eight fillings that are sufficiently good so that the opening cannot readily be seen by the microscope. There are two fillings, the margins of which are badly broken by expansion. This leaves but eight fillings out of the thirty-five which we could regard as reasonably good if they had been put in teeth. Now, gentlemen, this may seem to you to be a very bad report of amalgam as a filling material. I have made such an exhibition as this in the Illinois State Dental Society, in the New York State Dental Society, and Dr. Noyes has very recently made a similar exhibit in the Odontographic Society of Chicago. I will say to you that this is just about as good a showing as has been made in any of these, so that the showing here is not worse, nor is it particularly better, than the showings that have been made elsewhere.

Now, a word or two as to the manner of making these measurements. You understand that it is with the binocular microscope that we get the best views of shrinkage and expansions; indeed, with expansions, we can do almost nothing with the monocular microscope, but shrinkages we can see moderately well with the monocular microscope, that is, we can see the parting of the amalgam from the edge of the cavity or tube, but we cannot see the sinking of the amalgam below the surface as we can with the binocular microscope, in which we are able to get a stereopticon view, if I may so speak, that is, we are able to see depth as well as lateral shrinkage, and follow the sinking of the amalgam into the tube. This is the instrument (micrometer) with which the measurements are made. It works readily to a ten-thousandth of an inch and even to a forty-thousandth of an inch if we wish to be careful and work in the fourths of a point, that is, one-fourth of one ten-thousandth of an inch. The markings on the dial are one ten-thousandth of an inch. We readily divide them into fourths and