become shaky, but in viewing the two with the microscope you will find them twin sisters. The shrinkage in the two is just about as near alike as you could possibly make it. The next filling was made of the fresh cut alloy without annealing. The result was a contraction of ½ point and an expansion of ½ point, practically a perfect filling. Now, I know these to be all from the same alloy and no manner of change in the process of packing will make any considerable difference in the result. Notice now that time has made the same change in the alloy as the annealing.

It is hardly worth while to go over these alloys. I will give you some idea of them perhaps just by reporting a few. There is the Eureka alloy; one filling shows an expansion of 1½ points, and one of 1¾ points. There are some few incongruities creeping out. Here is one—Silver, 48; tin, 48; gold, 2½; platinum, 1½. Dr. Price made a filling expansion, 1½ point. That was remarkable. The alloy being reported to have been annealed, and well knowing that such a formula could not produce this result, Dr. Noyes reannealed the alloy by placing it in a flask, and put it in boiling water for fifteen minutes, and then made a filling, and it had an expansion of 1 point. It had been annealed before, but there is a mistake in that formula, and anyone who undertakes to follow that will find that it will deceive him. I have experimented with these formulæ right through this line, and they have never given this result. Mistakes are common among men who are making alloys. It does not pertain to one, but it pertains to many who are making alloys. Then here is another alloy, supposed to be the same formula, and made by the same man: Five fillings—shrinkage, 4¾, 7, 2½, 4¾, 1½ points. I will say, however, that the report of the last filling cannot be regarded as correct, for the reason that the amalgam has a strong dual movement. The filling was made and measured late at night, and it was not re-measured again until ten o'clock the next day, and the second movement had begun. The microscope shows the shrinkage of this last one to have been considerably more.

This, perhaps, will be enough. We have every grade of shrinkage, from a little expansion to a very considerable shrinkage, so that it is not necessary that we run over these. You have seen them in the microscope; but if I can get you to understand why it is, or the conditions under which these alloys shrink, and the necessity for other means of preparing alloys for our use, I will have accomplished what I came here to do. I make these reports simply to show you that the alloys we are using are totally unreliable; and, so far as the present showing is concerned, that is what I expected.

The question is, Why do alloys change, and how can we remedy this defect? Why do they change? Suppose we find a formula