

that the aged and annealed filings gave the same results within one forty-thousandth of an inch.

That annealing is permanent in its effect is shown by the last filling in the table which was made by Dr. Black from filings cut and annealed a year and a half ago. The filling made from the filings immediately after annealing gave the same result as the one reported here.

Thus far we have been showing what can be expected of an alloy for a dental amalgam. How do the alloys on the market show in the table? Look at all the alloys manufactured by the regular dealers: Pearl, Fox & Gerheart, S. S. White's Alba, Chicago Dental Manufacturing Co., etc., etc. They all shrink, the shrinkage increasing as they are kept until the limit of shrinkage for that alloy is reached. The only alloys that do not show a shrinkage are: first, the few that are annealed and tested before they are put on the market, namely, "The Fellowship," Dr. Kester's "Frost White" and his "Specially Tempered," and Dr. W. E. Harper's; second, the alloys which contain aluminum or zinc; these expand, but the movement is too long continued and is liable to be accompanied on the second or third day by a pause in the expansion and a slight contraction which opens the margins.

Shrinkage or expansion is a property of the alloy and cannot be controlled by any method of manipulation, it may be modified more or less (usually less) by manipulation but it cannot be prevented.

As evidence on this point, please note the fillings which are marked with a star in the table. Tubes D and AL of Goldsmith Bro.'s alloy were filled by Dr. H. Alfred Gunther (tube AL) and myself (tube D), using very different manipulation, mine being made by the method adopted uniformly for all the test fillings, he using a special method with the idea of controlling the shrinkage. You will notice that their extreme movement was within 1 point of the same. His shrinking 7 points and coming back 2; mine shrinking 8 points with no return movement. Again, tubes AA and B, of Fletcher's alloy. Tube AA was packed by Dr. J. D. Patterson, using the Fletcher method, tube B in the regular way. You will notice that their movement is within one forty-thousandth of an inch of the same.

These are the points from that investigation. I think there is nothing more I can say either about that or about this. (Applause.)

The PRESIDENT—I will now call upon Dr. Harold Clark to open the discussion on this question.

Dr. CLARK :

*Mr. President and Gentlemen*,—I regret that our programme-maker had not selected someone of more years of experience in