

most big industries just couldn't do it, so this is not a factor in our consideration.

Mr. VIVIAN. How about rebuilding old mills? Many a steel mill is quite old. There is a tremendous capital investment involved. I can remember several that I have been through that have been unchanged for 50 years. What do you do with these mills? Do you bring these up to date by applying new standards for replacement of the old mill?

Dr. BISHOP. In most instances we have been able to replace old facilities with new facilities in a given area. In cases where like open hearths that even though they may be 30 years old, we intend to use them another 20 years and we put cleaning equipment on those. If the open hearths are very old, we may replace the whole shop with a new basic oxygen steelmaking shop, so each case must be figured on its merits.

Mr. VIVIAN. Your comments about Spring Creek were very pertinent. To simply raise the question is very useful in itself.

Dr. BISHOP. Fine. Thank you, I thought it was a most interesting piece of research, which broadens the 1925 work of Streeter. Life is becoming more complicated now and the old work is still good, but new ideas have to be added to it.

Mr. VIVIAN. Mr. Chairman, I would like to ask Mr. Bueche a question regarding the storage battery situation. There are some now used in space vehicles. Can they be used in conventional automobiles?

Dr. BUECHE. I think electric power will certainly be used in the future for some vehicles, but not all. The difficulties with the batteries we have today are matters of cost, size, weight, and cycle life. They just don't last long enough for the day-to-day use that you would like to put them to. So the answer to your direct question is no, we won't use the ones we are now using in space vehicles for vehicular transportation in the near future.

On the other hand, there are many opportunities for improving the performance of batteries using different systems—for getting lower cost, lighter weight, and longer cycle life. I am personally very excited by this.

Mr. VIVIAN. If we were to raise the gasoline tax in order to reduce the amount of pollution, would this increase the use of batteries?

Dr. BUECHE. I think it would in commercial vehicles—milk delivery trucks and things of this sort. I doubt that it would have very much effect on private transportation, but you are a better judge of that than I am.

Mr. VIVIAN. You mentioned new electrostatic air conditioners. Are there significant new changes being made to clean up the air coming into the home?

Do you see a massive change in the utilization of these devices so that it will affect the whole pollution pattern?

Dr. BUECHE. Perhaps I should say "no" on the scale that your statement implies. But we hope that there will be considerable market for these devices.