

It is incredible that we let that long a lag develop in this area. We have pumps that pump more water at a faster rate per minute, more cubic feet per minute. We have filters that will filter faster and perhaps a little better but basically it would be as though you have a refined kerosene light or refined gasoline motor. We are already working on thermonuclear powered motors as you well know, using water and steam like the old Stanley Steamer. It is more efficient and smoother than the internal combustion engine. Let me give an example of what I mean, not only a need for concentrated effort, but new concepts of the situation. You have to have brains working to develop new ideas. In the field of iron and mining—and I mention it because I see my friend from Michigan, Mr. Vivian, here who knows the problem in the Upper Peninsula of his State—we had the exhaustion of ores over the years and they run out of natural ores. That sort of broke up the monopoly that our part of the country had in the world, but we went to work a few years ago in tagonite. It is one of the hardest rocks that exists, harder than granite. As long as man has drilled holes into rock or made beads, he had to use the principle of a harder substance wearing down a relatively softer substance, and over the years we developed what is called the diamond drill. It is the hardest drill known, and that was a great achievement, but here we use mining the diamond drill for 50 years and we got a hold of this tagonite and it will take a whole day to drill a 2-foot hole. Obviously we are stuck. Technology, the best available engineering technology up to that time, 10 years ago had us right against the wall. We had this unlimited amount, billions of tons of tagonite, and we couldn't drill holes to blast it.

Suddenly people in the Midwest who have been working with oxygen trying to sell more oxygen and then they developed a kerosene burner, simple cheap fuel, utilizing oxygen with three flames, similar to the old stip water sprinkler. You remember the old—we do, the older members, the three prong water sprinkler that we had that would sprinkle the lawn. They rotate this and it melts the rock at the rate of 20 feet 1 hour. It didn't have to grind it. It melts it just as smooth and efficiently and cheaply as anything that has ever been done. And, more than that, they found out that the rock being very hot, the core being hot, the rock would fracture by itself, and steam pressure blew it out and cleaned the hole out. That's a little example of what has happened to literally put the processing or manufacturing of iron ore over the threshold of economic feasibility as well as the technical feasibility. So, that's the type of thing we ought to be doing in water pollution, research in so many many areas. To give you an idea of the level of research just in the pollution control agency, I know there was research done by other agencies of the Government, about 16 or 22 of them. I think 5 years ago our committee authorized \$5 million a year for—Mr. Waggonner was one of the early supporters in our program for research in different aspects of pollution abatement, but the appropriations came about first a million and then two and three and gradually last year it reached approximately \$5 million which is far too low. We are now aiming in the current legislation around \$50 million, and that in itself would not be enough, but if we utilize the knowledge that has been developed by the other agencies,