

The following are some personal reminiscences of H. Tracy Hall and the first making of diamonds at the General Electric Research Laboratory in the period 1953-1955.

In July of 1953 I moved to Schenectady, NY, and began work at the General Electric Research Laboratory. Soon after my arrival in Schenectady I became acquainted with H. Tracy Hall and his family. Although Tracy worked in the Chemistry Department and I in the Physics Department, we saw each other frequently, often having lunch together. During these "brown bag" lunches, I met the other members of the diamond project.

Several months after I arrived, Tracy asked me if I knew what he was working on. I had to reply in the negative. I guess I was too busy learning my own new field of research in semiconductors to think of even asking. He then informed me of the diamond project and how it was the most hushed up project at the lab. He explained that the principal reason for the secrecy was that it was considered a chance shot and management did not want it be said that General Electric had tried and failed. Thus, unlike, many "secret" projects where only the results are company proprietary, the diamond project was simply not talked about at all. This was unique at the time since open research was in vogue and publication was emphasized.

The physicists on the diamond team were involved in setting up a new, very large press. Tracy was a chemist; he had the use of an old, smaller press that would constantly leak and break down. It was sometimes helpful to wear rubber overshoes as the floor was often very wet.

About this time, Tracy conceived and built the high pressure "belt" design in an effort to extend his own chemical experiments using this smaller press. He intuitively realized the significance of the belt geometry. I was always amazed at his mechanical insights and wondered what his career would have been like if he had chosen mechanical engineering. The tetrahedral press that he later developed after he left General Electric is a case in point.

A patent disclosure letter was submitted for the belt apparatus and a patent application was made on this design in his name. After diamonds had been made, General Electric