The front of the medal reads

PUBLIC WELFARE

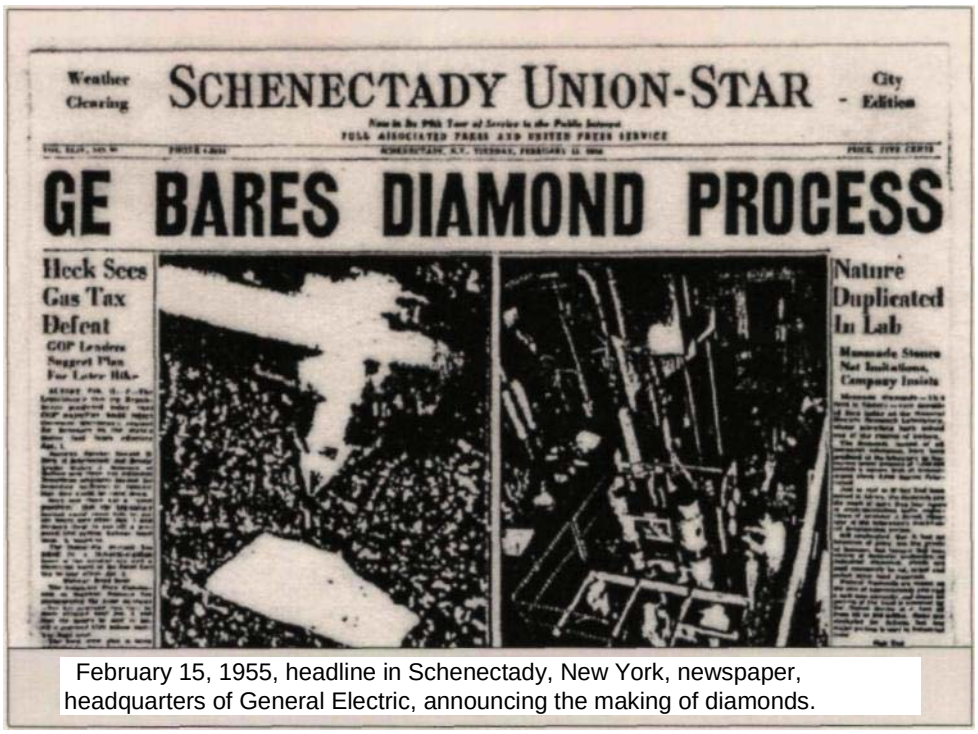
THROUGH CHEMISTRY

The back reads

THE AMERICAN CHEMICAL SOCIETY

IN
RECOGNITION
OF
OUTSTANDING CREATIVITY
AND OF INVENTION
FOR THE BENEFIT OF MAN
H. TRACY HALL

AWARD FOR CREATIVE INVENTION



Weather Clearing

SCHENECTADY UNION-STAR

City Edition

FULL ASSOCIATED PRESS AND UNITED PRESS SERVICE

GE BARES DIAMOND PROCESS

Heck Sees Gas Tax Defeat

GOP Leaders Suggest Plan For Later Hike

Nature Duplicated In Lab

Manmade Stones Not Imitations, Company Insists

February 15, 1955, headline in Schenectady, New York, newspaper, headquarters of General Electric, announcing the making of diamonds.

The Weather

UTAH—Clearing; snow flurries; high 28-38; low 20-30.

OGDEN—Partial clearing snow flurries; high 33; low 12.

Ogden Stand

84th Year • No. 36

OGDEN, UTAH, THURSDA

Britain W Overhaul

Pineau Forms Cabinet but 3 Withdraw

Utah House Gi OK to Divorce

By EARLE L. JESTER

SALT LAKE CITY (AP)—

proval today to a bill its sponso states high rate of divorce.

The Senate advanced to its of 21 to 9, the House-approved l counseling service.

Final passage still must be

PARIS (AP) — Christian Pin eau completed a proposed gov ernment lineup early today, but within a few hours three of his

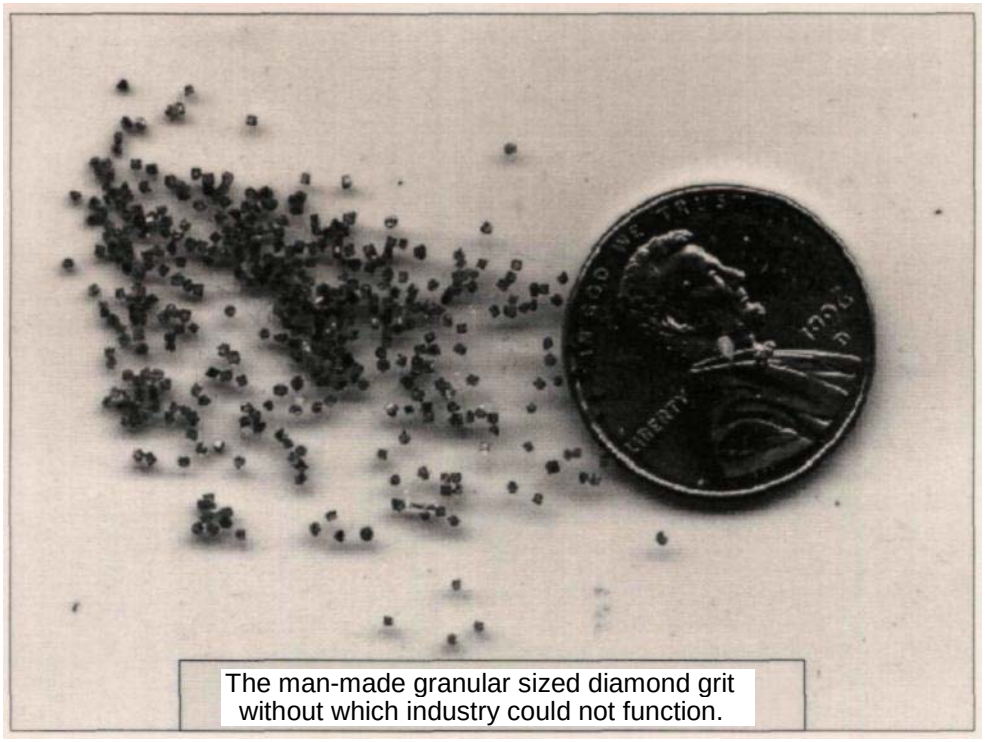
DUPLICATES NATURE'S DIAMONDS—Dr. H. Tracy Hall, physical chemist at the General Electric Research Laboratory in Schenectady, N. Y., looks at a small man-made diamond he had a major part in producing. Dr. Hall is a former Ogdenite.

He Liked to Invent

Diamond Maker Is Ogdenite

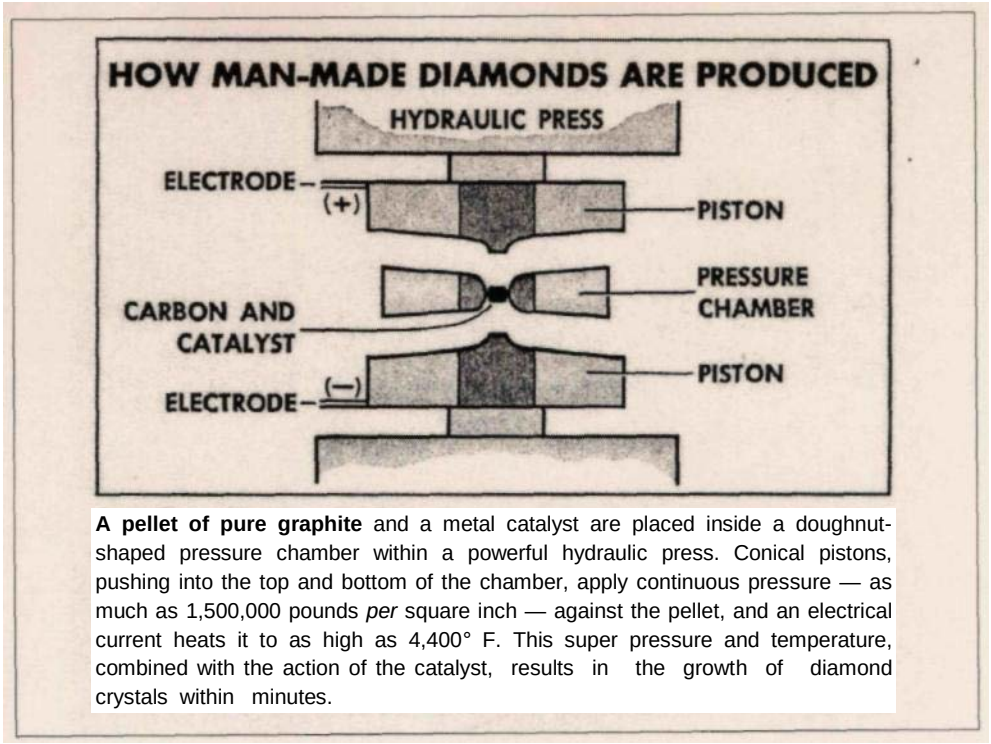
The General Electric scien dex High School and Weber College. He received a bache

Article in the Ogden Standard Examiner, Feb. 17, 1955, indicating diamond maker to be a native of Ogden.

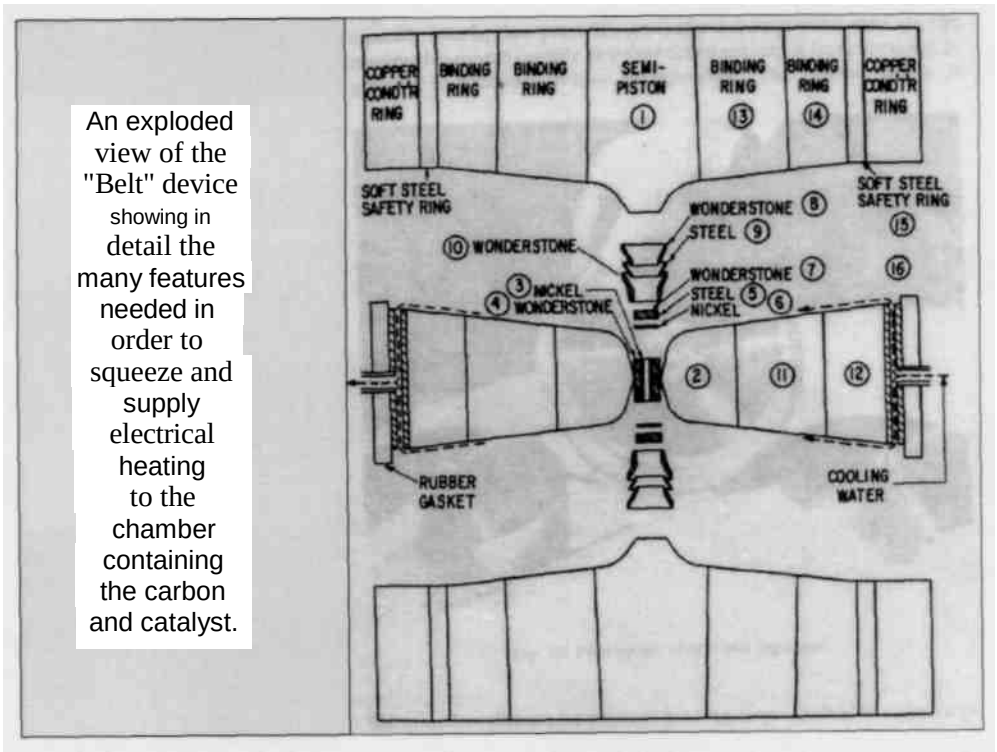


The man-made granular sized diamond grit without which industry could not function.

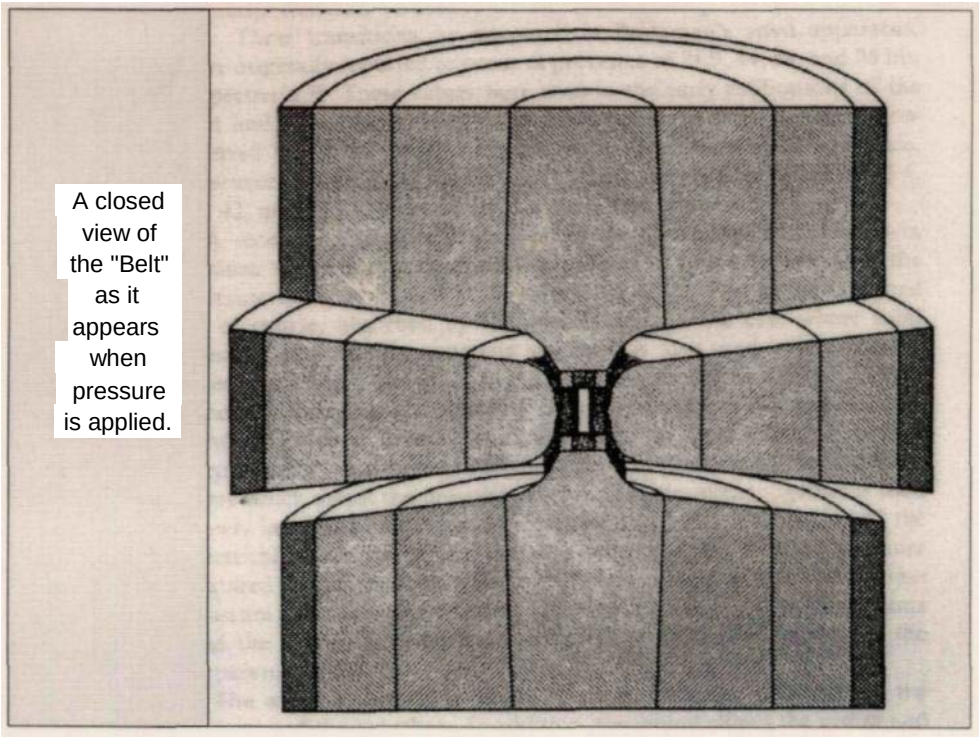
Tracy examines under a microscope the sparkling fire of the diamonds he has created.



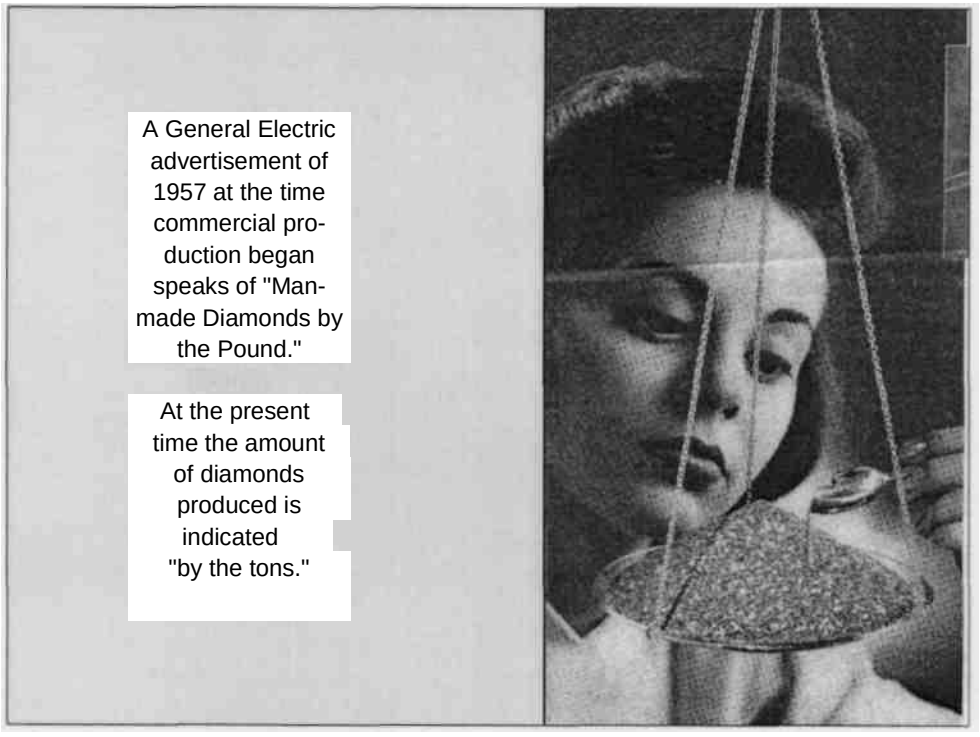
A pellet of pure graphite and a metal catalyst are placed inside a doughnut-shaped pressure chamber within a powerful hydraulic press. Conical pistons, pushing into the top and bottom of the chamber, apply continuous pressure — as much as 1,500,000 pounds *per* square inch — against the pellet, and an electrical current heats it to as high as 4,400° F. This super pressure and temperature, combined with the action of the catalyst, results in the growth of diamond crystals within minutes.



An exploded view of the "Belt" device showing in detail the many features needed in order to squeeze and supply electrical heating to the chamber containing the carbon and catalyst.

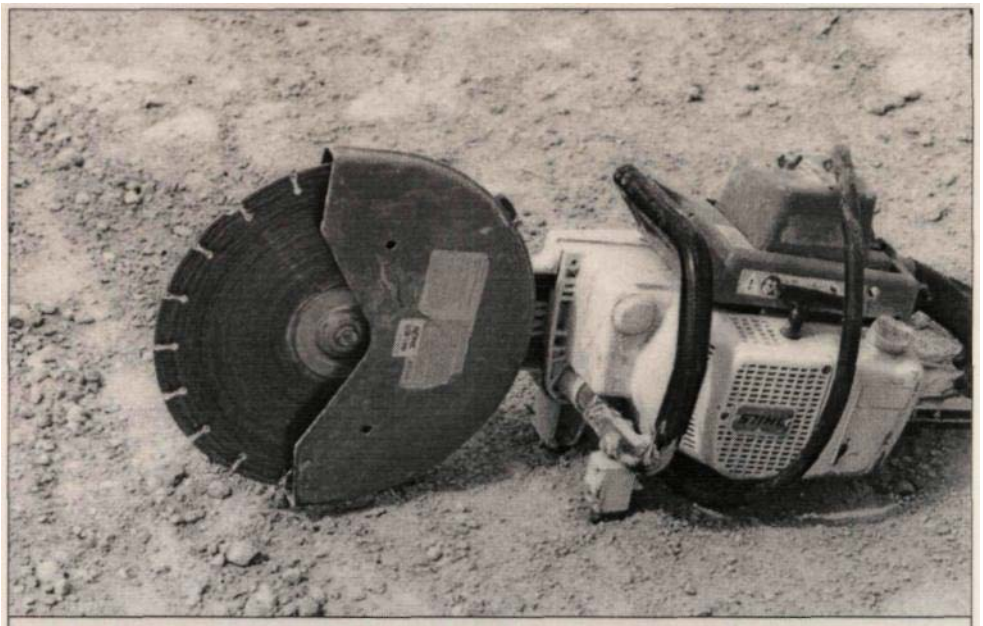


A closed view of the "Belt" as it appears when pressure is applied.



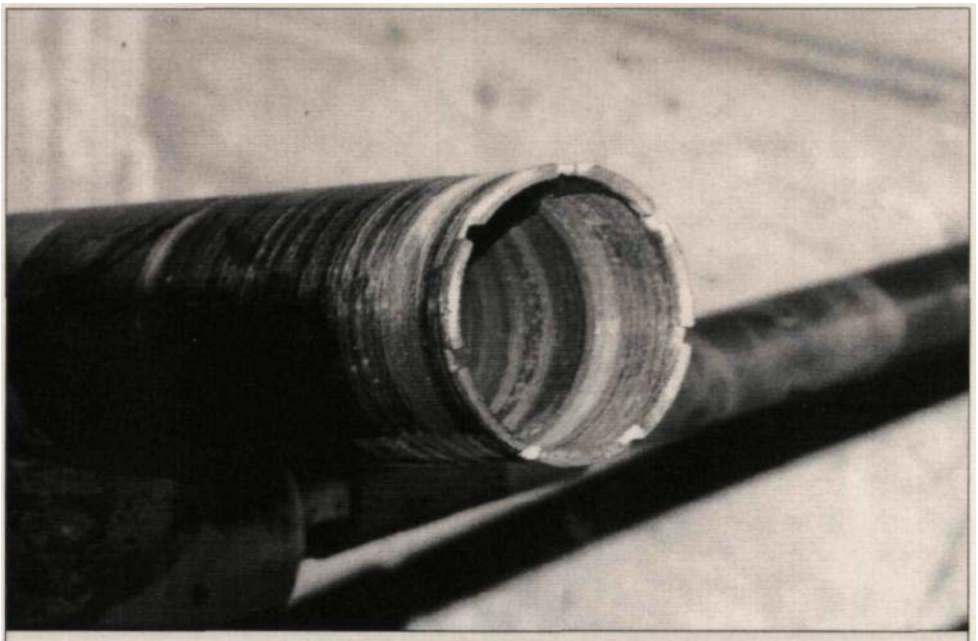
A General Electric advertisement of 1957 at the time commercial production began speaks of "Man-made Diamonds by the Pound."

At the present time the amount of diamonds produced is indicated "by the tons."



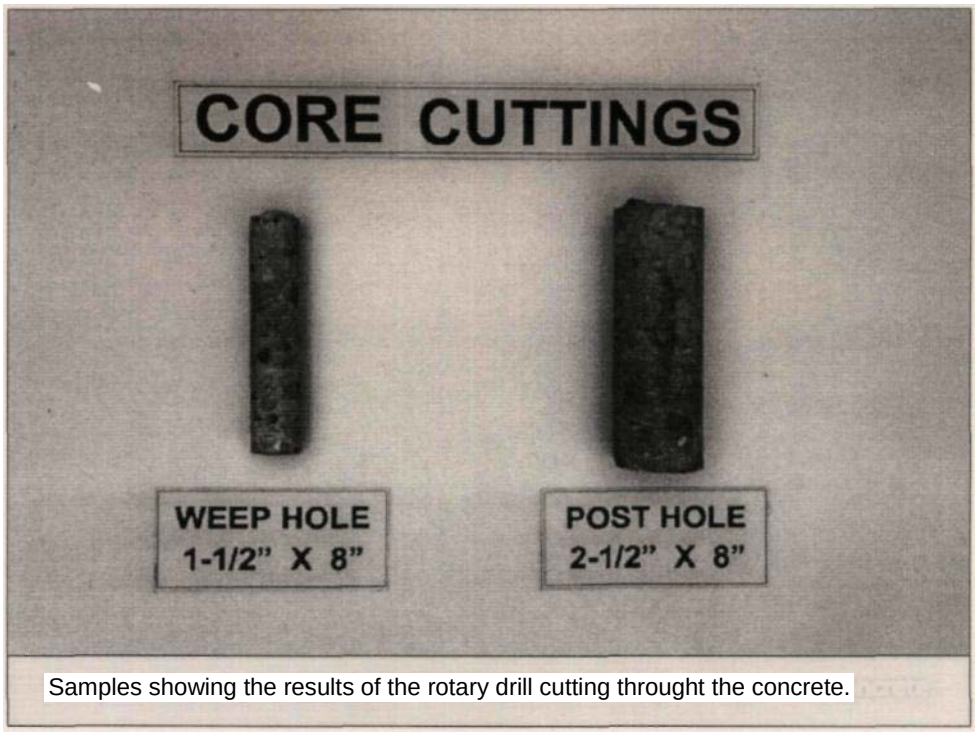
A visit to any construction site will show man-made diamonds at work. This circular saw blade, embedded with diamonds, is notched to help dissipate the heat generated when cutting through hard materials.

The saw is cutting through a 2 foot diameter concrete drainage pipe.



This diamond embedded rotary drill is a commonly used tool.

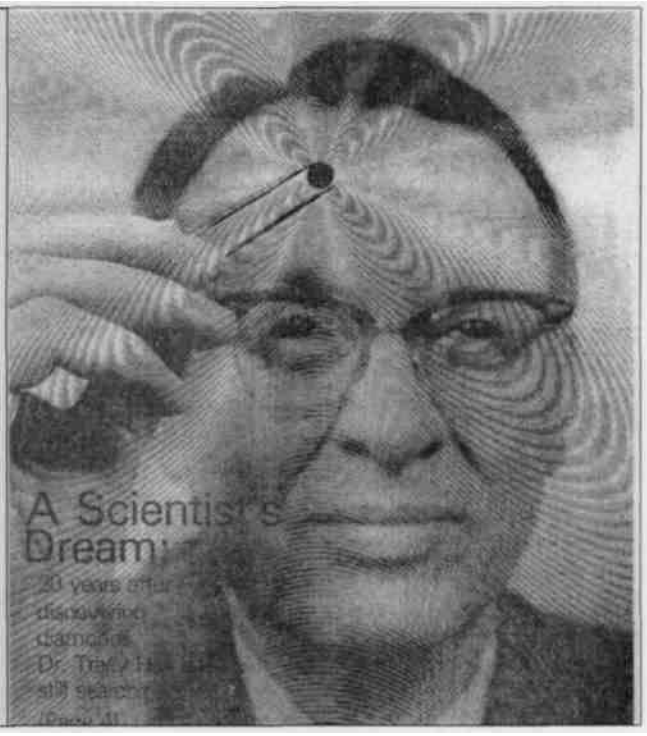
The drill is shown here cutting a "weep" hole through a concrete wall. The hole is necessary to relieve water pressure against the wall which could eventually push it over.

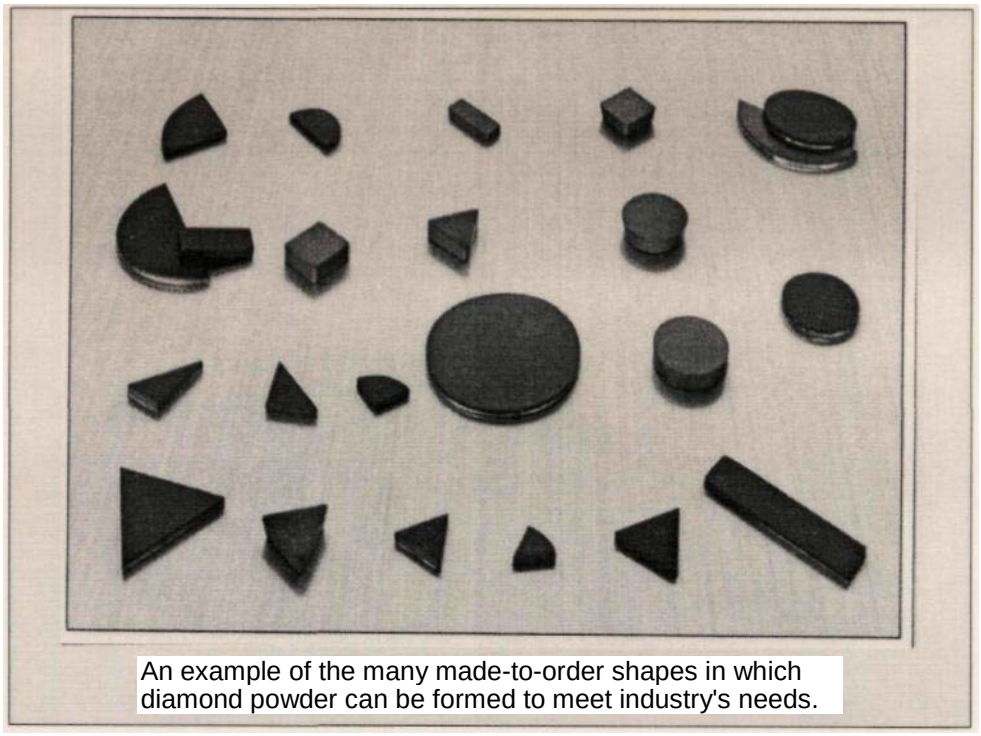


Samples showing the results of the rotary drill cutting throught the concrete.

Tracy doesn't need a microscope to examine another "scientific dream" come true.

This time he is holding up a sample of the polycrystalline diamond he was able to produce in 1968 using diamond powder to form this and other shapes extremely helpful in industry.

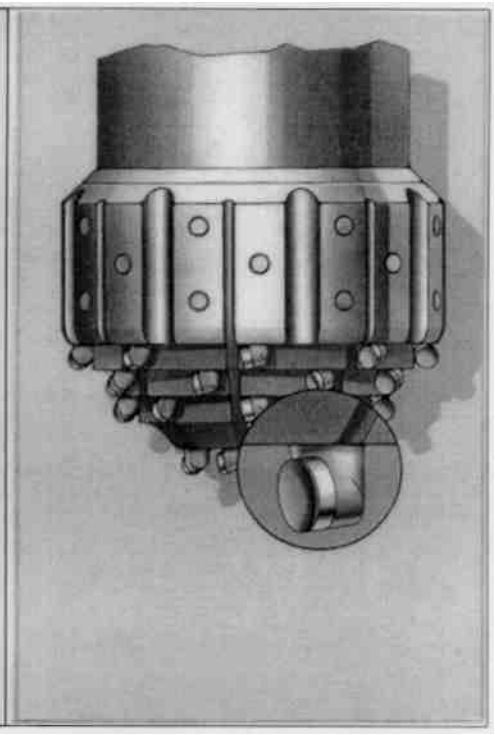


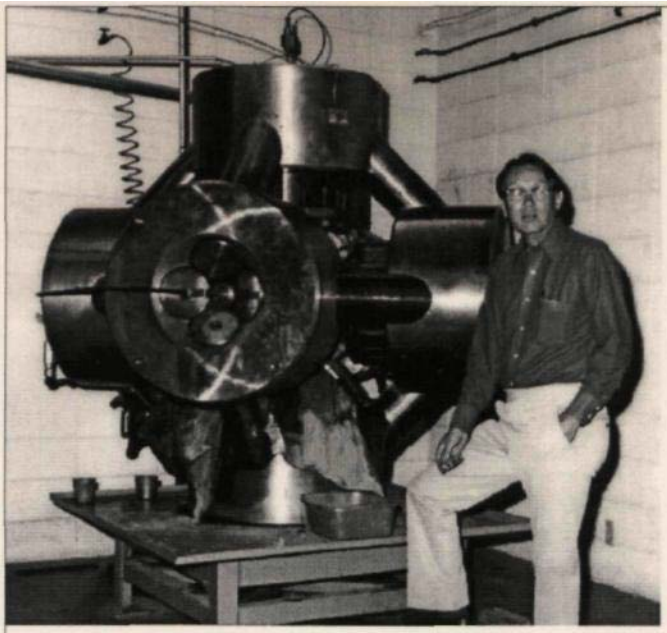


An example of the many made-to-order shapes in which diamond powder can be formed to meet industry's needs.

An example of these made-to-order polycrystalline diamonds is illustrated on this oil drilling bit.

These diamonds are so superior to those larger natural diamonds previously used in such bits that they can no longer compete.

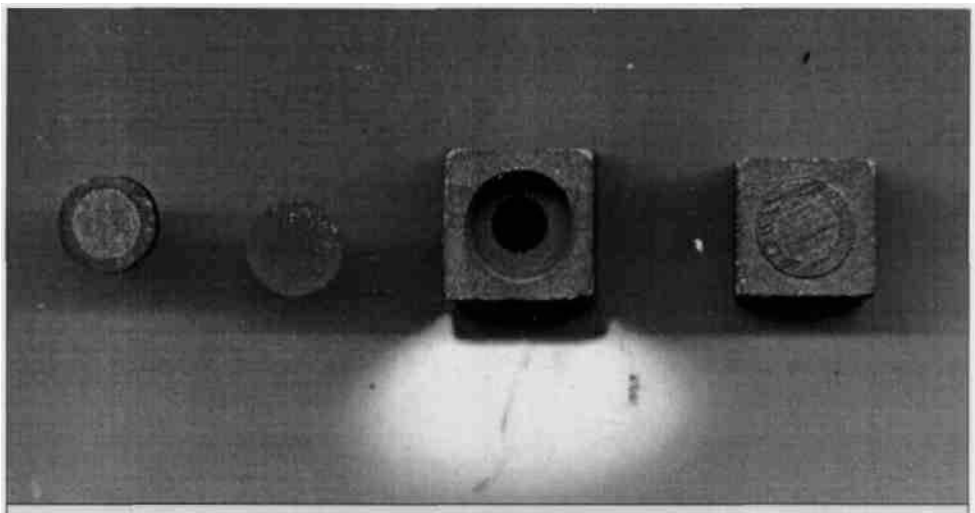




Tracy stands beside the "cubic press," he developed after he could no longer use the "belt" apparatus.

He that invents a machine augments the power of a man and the wellbeing of mankind.

—Henry Ward Beecher



The hydraulic press squeezes from six directions on this 2" cube that is loaded with the ingredients that can make either diamond grit, or the larger sized polycrystalline diamond.