

Hydrogen Bomb Scientist Warns on Danger of 'Runaway' Nuclear Reactor



URNS 'AMBASSADOR'—Bronx shoemaker Gino Prato, who has captured the nation's fancy on the TV show, "\$64,000 Question," signs a contract paying "more than \$10,000 a year" with the American Bilt Rite Co. to serve as the firm's goodwill ambassador to the nation's shoe industry. Looking on is Morris M. Borkan (right) company sales manager.

Atoms-for-Peace Conference Told Of Possibilities

Geneva — (U.P.)—The California scientist who unlocked the secret of the hydrogen bomb warned the world today of a new danger—the dread "runaway" nuclear reactor that could be as dangerous as the atom bomb itself.

The warning was delivered in a paper from Edward Teller of the University of California, known as the "Father of the hydrogen bomb" and was echoed in papers by British and Soviet scientists at the Atoms-for-Peace conference here.

Teller, working with Rogers McCullough of the Atomic Energy Commission, and Mark Wills of the University of California, drafted one of the most dramatic papers of the conference. It was read today by McCullough.

Split Second Disaster
He warned that runaway nuclear furnaces may force the evacuation of entire cities, poison entire watersheds and turn stretches of land into forbidden areas for years. It could be a split second disaster but an industrial disaster unknown before to the world.

The scientists said nuclear fission must be made as safe as gas or electricity for the era of atomic power is near at hand. They told of an unceasing search for devices to make nuclear fission safe in the laboratories of two continents.

No Fool-Proof System
The paper said that "with all the inherent safeguards that can be put into a reactor, there is still no fool-proof system . . . there are unfortunately certain dangerous characteristics . . . and this public hazard has been one of our main concerns."

It was symbolic of the aims of the conference that one of the major papers on saving lives in the new age, when nuclear reactors already are on the drawing boards, should come from the man responsible for the most lethal weapon of history.

"Perhaps," the Teller-McCullough-Wills paper said, "it is important to emphasize the degree of public hazard that might follow a reactor accident."

A Reassuring Note
"Assuming that good luck prevails and no one is killed, it may nevertheless be necessary to evacuate a large city, to abandon a major watershed and very probably it would be necessary to make the reactor site itself a forbidden area for years to come."

A reassuring note came from scientist J. D. Dietrich of the Argonne National Laboratories in the United States who read a paper incorporating the work of 32 other scientists on experiments in which 200 runaway reactor accidents were deliberately staged at Los Alamos and Oak Ridge.

High Degree of Safety
These small reactors of water-cooled types appear to have reached a "high degree of inherent safety," he said.

Britain's W. G. Marley and T. M. Frey of the Harwell laboratories said they did not think the safety program was "insuperable." But they urged that atomic plants be built away from heavily populated areas in such a way that only limited quantities of radio-activity would be released in event of an accident.

'Safeties on Safeties' on Atomic Reactors Make Possibility of Runaways Mighty Slim

Salt Lake City—(U.P.)—Thanks to the "safeties on safeties" built into them by their engineers, the chances of an American power-generating reactor "running away" and blowing up are mighty slim.

Every reactor built by the Atomic Energy Commission and shown in the Los Alamos, N.M., laboratories or tested at the sprawling proving grounds in Southeastern Idaho has scores of devices that cause it to "scram"—stop its chain reaction—should the fission process reach a dangerous level.

However, just to see what would happen if all the safeties should fail, the AEC's Argonne National Laboratory revealed today that it had deliberately sacrificed a small water-boiler type reactor that was destroyed in a split-second explosion. But the explosion had a potency of only "a few pounds of TNT," compared to the 20,000 tons equivalent of even the old Hiroshima-type A bombs.

Used for Tests
The reactor, called Borax I, was constructed on the Idaho desert between Idaho Falls and Arco some two years ago. It was originally used for 200 tests

under semi-run-away conditions. In these tests, the cadmium and boron control or "shim" rods that usually act as accelerators or brakes for atomic reactions were pulled out quickly.

When they are in place, these rods absorb enough flying neutrons that they keep the reactors from turning into atomic bombs by permitting the fission process to take place only at a safe rate.

When the shims were pulled or dropped out in Borax I, the nuclear reaction was so violent that water between the plates of uranium and aluminum that formed its heart began boiling violently.

However, the scientists, in a

Dairymen Request Milk Price Increase

Portland—(U.P.)—A group of 12 dairymen representing Grade A Milk Producers met with distributors yesterday and asked that a one-cent drop they took in milk prices after state milk control was voted out be restored.

Distributors indicated that something might be worked out and one large distributor said producers were entitled to a raise.

paper prepared for presentation at the Geneva atomic conference, reported that this boiling itself quickly reduced the reactor's power.

These early tests in Borax I were terminated within 1 to 20 seconds when the control rods were reinserted in the metal tank containing the fissionable material.

Finally, in July of last year, the Argonne Laboratory technicians, operating from a control trailer half a mile away, left the control rods out entirely.

Within 1/10th of a second, the nuclear power increased to more than 10,000,000 kilowatts. A bright flash was seen. A dark grey column of water blew out of the reactor tank to a height of more than 80 feet.

The superstructure of the reactor was ruined. Fragments of the bent and twisted fuel elements were thrown into the air.

No Great Danger
But all fell back within 200 feet of the reactor, and scientists found that dangerous radioactive fallout was confined to a "few hundred feet."

Borax I had no power generator on it. It was for experimental use only. Had it been a larger reactor of the type being now

installed to produce electricity, the results of a "runaway" accident would have been comparable.

Such an accident would have meant that the power plant itself would probably be ruined by the heat and explosion. The area immediately around the reactor would be poisoned by radiation to such a degree that it could not be safely entered for a few days.

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Shoemaker Stops at \$32,000 in TV Quiz; Takes Daddy's Advice

New York — (U.P.)—"Ebasta costi!"

With those words, a little Italian cobbler from the Bronx, Gino Prato, rang down the curtain and retired \$32,000 richer today.

They mean: "That's enough." Prato, making his fourth appearance on CBS-TV's "The \$64,000 Question," had captured the fancy of much of the nation by wading through a series of questions in the category, "opera."

The gentle, graying, 55-year-old shoemaker had pyramided his winnings to \$32,000 by doing so. Last night, Prato had the opportunity of doubling his stake by tackling another question. He decided to bow out.

"My father in Italy sent me a wire," Prato explained. "It said: 'Fermati dove ti trovi. E basta costi.' That means: Stop wherever you are. That's enough."

"Because I take my daddy's advice when I was a small kid, I take it now."

Prato was presented with his check for \$32,000 and kissed it amidst heavy applause from the studio audience. He said he would use some of the money to visit his 92-year-old father who lives in Statale di Ne, Italy, a small village near Genoa. He said he had not seen his father since he left Italy, 33 years ago.

"I will also buy my father a good hearing aid," said the smiling Prato after the broadcast. "He is stone deaf."

For the first time in four weeks, Prato appeared visibly relaxed. He posed with a professional aplomb for photographers and answered questions with a happy grin.

"I didn't know right up to the broadcast what I was going to do," he said. "I could have taken another chance, but I gotta obey him, my father. He might take a shock if I go on."

"I want to see him," Prato added with a shrug.

Prato said he and his wife, Caroline, would take off for Italy by air sometime in early September.

Travel Bill Paid

Prato will not have to use any of his winnings for his air fare—a New York travel agency has agreed to foot the bill for

Prato and his wife. Prato also was presented with another gift during the program—two eighth row center season passes to the Metropolitan Opera.

When he returns from his trip abroad, Prato will begin to get in harness in a new job. A Chelsea, Mass., firm which manufactures heels and soles signed Prato to a one-year-contract this week, as its "goodwill ambassador" for a sum "in excess of \$10,000 a year."

Teachers Elected By School Board; Contracts Signed

Ten teachers for the Medford school system were elected at a meeting of the board of School District 49 last night. Two others resigned.

The resignations were from Miss Barbara Elken and Mrs. Nellie Stephens, both of whom had taught English at the Medford High school.

Elected to succeed them were Mr. and Mrs. John Kovenz. Other new teachers include Bernard Averill, physical education and health, junior high school; William Brew, fourth grade; Esther Crum, first grade; Josephine Culbertson, commercial, high school; Marian Forsythe, physical education, high school; John Johnson, third grade; Harold Mayer, special education and Erma White, music, art and penmanship.

The board also transacted routine business, including the signing of tuition and transportation contracts with the non-high school board, and giving final approval to tuition contracts with Districts 102 and 29, which send their pupils to the Medford district.

A progress report on the two new schools now nearing completion was heard by the board. Both will open Sept. 19.

Some minor revisions were made in the budgets of the two junior high schools.

Religious Revival Sweeping Chicago's Loop

Chicago — (U.P.)—Chicago's Loop is witnessing a religious revival.

In the past five years, St. Peter's Catholic church has been built at 110 West Madison, Lutherans have dedicated a new church center at 327 South LaSalle and Jews are raising funds for a new synagogue at 16 South Clark.

For years the Chicago Temple at 77 West Washington, which houses the First Methodist church was the only church-owned worship center in the loop.

Former Convict Held In Death of Parents

Columbus, Ohio — (U.P.)—Police held a 19-year-old ex-convict who confessed to the vicious hammer-knife slayings of his mother and stepfather, for further questioning today.

The ex-convict, Robert Jacob Miller, was arrested yesterday at Cambridge, O., where he had stopped at a service station for fuel and tire repairs. At the time of his arrest, he had four other youths with him whom officers identified as hitchhikers on their way back from the East coast.

Officers said Miller "went to pieces" during questioning and sobbed out the events that led to last week end's murder of his stepfather and mother, Mr. and Mrs. Gomer Thomas.

Miller told officers he became "violently angry" during an argument with his mother, Betty, 39, when she objected to one of his girl friends. He said he began striking her with his fists. When his stepfather intervened, Miller began hitting him, police reported.

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