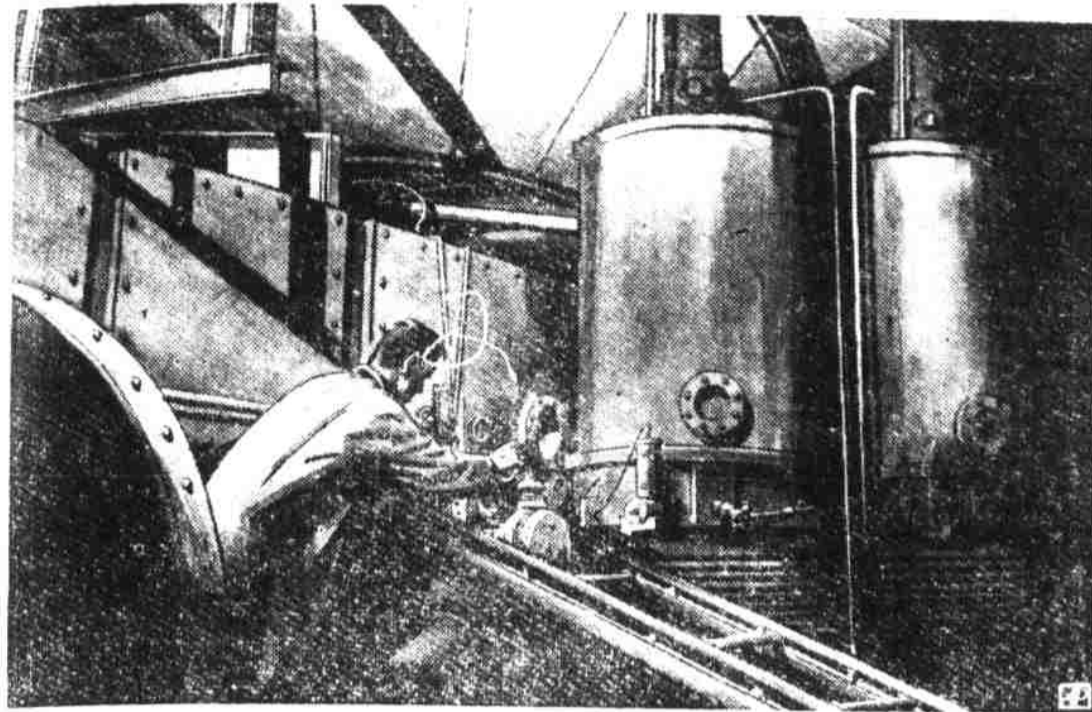


WEDDED MEN SPUR STUDY OF ATOM PERIL



Dr. Taylor is seen in the laboratory where he is studying the effects of atomic energy on the human body.

...of the neutron producing chamber for a few minutes at a time.

The adjuster, of course, does not get into the direct path of the neutron ray but comes within the range of stray neutrons flying out of the chamber. In the course of a year and a half I probably spent a total of not more than 10 hours in this way.

One of Dr. Smith's eyes now is almost sightless and the other is materially impaired. An operation can restore sight. A thick eye-glass lens will take over the focusing job.

The lens is a disc-shaped, normally clear piece of protein some what larger than the pupil or black center of the eye. It is just back of the pupil, considerably removed from the cornea or clear fore part of the eyeball. Surgical removal is a complicated operation.

A little badge containing about a square inch of undeveloped photographic film might have saved Dr. Smith from complications. Everyone who works around cyclotrons and atomic piles may wear such a badge. The films are developed periodically. From the degree of fogging, experts can calculate the amount of radiation.

If the film indicates a person has received more than one-tenth of a roentgen of radiation daily he is kept away from rays for a while, until the passing of time lowers

his average daily absorption. A roentgen is a unit of radiation. It is about one percent of the amount of radiation ordinarily used to make X-ray pictures of the teeth. Scientists of the atom bomb project arbitrarily adopted that amount as the safety limit. They leaned over backwards to make the figure plenty low.

Since Dr. Smith did not wear a film badge he does not know how much radiation he took in terms of roentgens. Science knows approximately how much X-ray exposure is needed to produce cataracts, but neutron rays may be more potent in that respect.

Neutrons, along with protons, make up the cores of atoms. A neutron has a weight about equal to that of a proton, but it is electrically neutral. It is not repelled or attracted by the positive or negative charges of the protons and electrons. It is particularly destructive to living tissue, says Dr. Hamilton, because it can penetrate through the body and enter the cells. In one case a neutron entering the body, near the eye, with a hydrogen atom in the outer part of a living cell. The result is a radioactive atom of heavy hydrogen which eventually breaks down and produces a 2-million volt X-ray particle.

This particle can strike and change the nature of an atom of carbon, oxygen, nitrogen or other chemical component of the cell

and bring about a change in the cell itself. In the case of the eye cell it may cause a normally clear cell to become cloudy.

Another destructive sequence occurs when the neutron strikes a nitrogen atom in the cell's protein. The atom becomes radioactive. It turns into a 14 atom of boron and a heavy nuclear fragment called an alpha particle, which also can attack the structure of the cell.

The third process occurs when a single neutron strikes several hydrogen atoms, one after another, turning each of them into an atom of tritium which can damage cell material. After doing that, the neutrons can smash into a nitrogen atom and produce another cell-destroying alpha particle as it did in the second process.

Atomic piles or reactors produce tens of thousands of times as many neutrons as do cyclotrons. However, piles are much safer in that respect than cyclotrons, says Dr. Hamilton because the neutrons are called up more completely. At the piles, do not have to be entered for making adjustments.

Neutrons are momentarily present in an atom bomb blast. Stray neutrons also occur in cosmic rays, but apparently in insignificant number. Ordinarily they are not produced by radioactive chemicals used in medicine and other experimental centers.

Republican Blight Hits Family Tree Of Vice President

CHARLOTTE, N. C. (U.P.)—Vice president Alben W. Barkley's family tree is full of black sheep. Republican sheep, that is, dozens of them.

This verrisome state of affairs is the revelation of E. Lester Barkley, president of the Barkley clan in North Carolina, to which the Democratic vice president is directly related.

Lester, a 75-year-old retired oil-well driller, says at least half, "and probably a lot more," of the North Carolina Barkleys are antipathetic to the Democratic cause of cousin Alben. Even worse, he says, they voted that way in the recent election, for siding the family tie to support the GOP vice-presidential nominee.

Have Common Ancestor

The Barkleys are concentrated in two farm portions of North Carolina where the Republican front is weaker. They are descended from Alben's great great-grandfather, Robert Barkley.

Robert was a veteran of the Revolutionary War, taking a cannon to the battle of the Clouds, and later to the battle of King's Mountain near here, and elsewhere. Since Robert is also the great-grandfather of Lester, the vice president, a blood cousin of the dean of Tar Heel Barkleys.

For that reason, Lester said, he is reading his personal politics.

"We're all related to him, even if the politics is all messed up," Lester said.

The blarney of it all, he said, is the vice president's grand-grandfather. That relative left North Carolina before the Civil War on the long trek over the mountains to Kentucky. He turned out to be a Republican.

At Reunion Once

Each year the North Carolina Barkley's assemble on the last Sunday of July. Cousin Alben, then mayor of Lexington, attended the 1924 session along with 150 other members of the clan.

Cousin Lester would like to have the vice president look here this summer, but he fears Washington duties will keep him away.

However, Sen. Barkley did find time to put in an appearance at

In Jail Again



FORMER paratrooper Edward J. Lada, 28, who broke through the Berlin blockade to see his wife, is shown back in the stockade from which he had escaped. Lada said he would renounce U. S. citizenship to stay with his fiancée and their child. A notice of Newark, N. J., Lada is awaiting a military court decision. He faces a possible 15-year sentence. (Herald-Examiner)

At the N. C. dining table, the pattern last fall. In his speech, he proudly pointed to the large number of his 5th Div. buddies.

But he didn't say they were Republicans.

Lada, who had been in the stockade for a long time, said he was still awaiting a military court decision. He faces a possible 15-year sentence.

Colleges Are Attempting To Revise Education Standards To Fit Present Atomic Age

By Claude Beach

WASHINGTON, D. C. (U.P.)—Enough is being done to make atomic bombs. You also have to learn how to live with them.

The U. S. Office of Education is studying the problem of how to fit the atomic age into the present educational standards.

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new non-technical courses on atomic energy for the benefit of students with little scientific background.

The teaching of all the social sciences in many of the schools is being revised. Students are being told about the probable social implications of atomic energy and of the social effects of new atomic inventions that are likely to come.

Economic aspects of the new power are studied. And in political science there is increasing emphasis on the problem of control of atomic weapons.

In some teachers' colleges future professors are being prepared to guide the next generation through the theory new atomic frontiers.

Some theological schools have added new courses on religion and science. Courses in philosophy stress the moral aspects of the development of atomic energy. One professor of religion wrote:

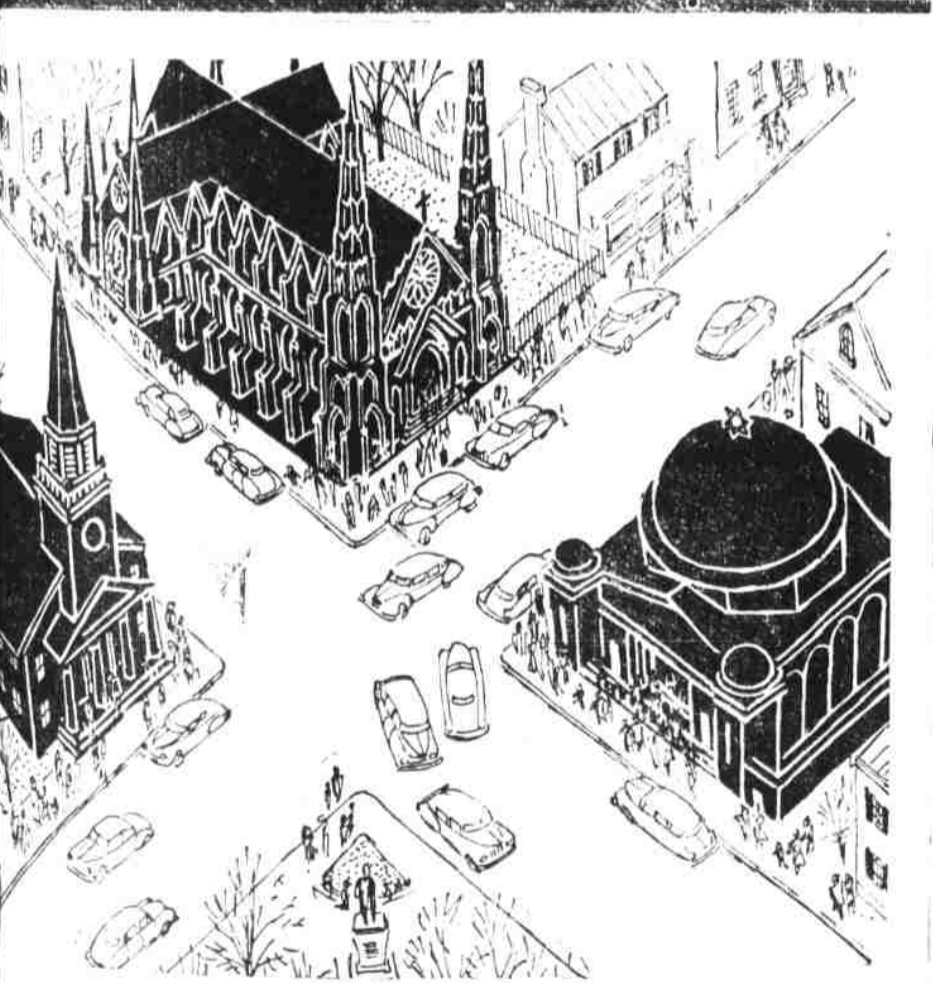
"A renewed emphasis on the need for human brotherhood and the breakdown of segregations of minority groups has come into our teaching with the arrival of the atomic bomb."

"Virtually every institution reporting a change due to recent atomic energy developments," Dr. Hawley related, "indicated that the content of existing courses had been altered to include some discussion of the new phenomena."

"As one respondent said: 'I doubt that we can name one course that has been added. I doubt that we can name one course that is not affected.'"

WELCOME OUTWORN

SEATTLE (U.P.)—A local tourist is wondering when he will receive a fourth visit from a customer. "I would just as soon lose" the "outworn" made his first visit last December 1 and walked off with \$100. Two weeks later he called again and fled with about \$225 and five cartons of cigarettes. He returned the third time and took \$25



THIS IS AMERICA

Freedom—many religions, many ways of living in harmony together. For America is more than a way of life. It is a way of spirit—and our richest asset. Under freedom of religion, American attend more churches than any other nation. Under freedom of speech, we have more newspapers, more radio stations than any country in the world. Under freedom of opportunity, our children attend more schools, have more chances to succeed in life. We are only 3% of the world's people, yet we own 66% of the world's land. Yet in America have the highest standard of living the world has ever known. Under freedom of enterprise—you may call it Democracy, or Capitalism—we make just about one-third of the world's goods, mostly for our own use. We drive three-fourths of the world's autos, use about half the world's electricity. Our homes are unrivaled for comfort and labor-saving devices. We eat more meat, buy more clothes, see more shows, own more insurance. We even save more money. Yes, freedom pays—in the coin of tolerance and understanding, and in the coin of progress and prosperity.

Timber Sale Nets \$181,000 In Pisgah

The Pisgah National Forest in North Carolina reported a total cut of 22,909,000 board feet of timber in 1948. The timber was valued at \$181,000. This is a record for volume in the 1947 cut but is greater in value. During 1948, 25,000,000 board feet, valued at \$196,000 were sold.

The Mt. Mitchell Ranger District continues to be the leader in timber cut, since nearly 11 million feet were cut on this district. The Pisgah district was second. The average value of timber sold was 81 cents on the dollar, which all time has not averaged \$10.69 per thousand feet on the stump. The 1948 average was \$7.90 per thousand.

Chestnut is still the most important single species, accounting for about one-fourth of the total cut. However, its relative importance is decreasing rapidly, and it is expected to pass out of the picture in two or three years. Timbers in young hardwood stands will take its place to a considerable extent as a source of pulp at the mill, a product from the forest, and of course as a source of employment for local people.

Receipts from the sale of timber go into the Federal Treasury. However, as in the case of other forest receipts, 25% is returned to the counties in which the forest lies, and an additional 10% is returned to the forest for use on roads and trails.

NOAH NUMSKULL
NOW LOOK! YOU WENT AND BENT IT!!

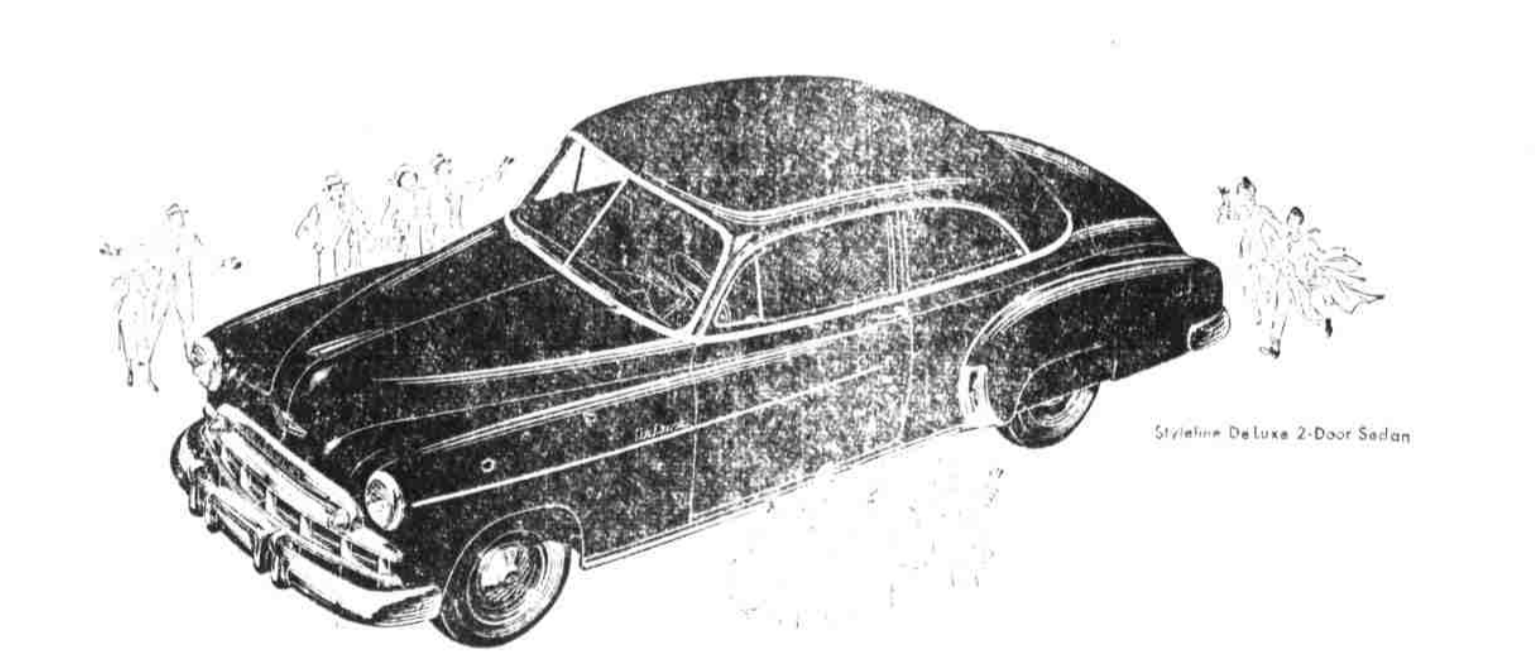
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