



HERMAN HAS FAMILY—Herman, the feine Casanova of Alameda, Calif., is bussed by his wife, Hermine, new mother of four kittens. Now officially the head of a family, Herman was noted for litigation caused to his owners by his amorous prowlings and reckless advances to neighborhood cats. The neighbors hope that Herman's new status as the head of a family will make him forget his misspent youth. (UPI Telephoto)

Wonder-Working Neutron Groomed for Role as Detective

Washington—(UPI)—The wonder-working neutron is being groomed for a new role—that of master detective.

The neutron is one of the basic particles of matter. It already serves man as:

- The trigger of fission reactions in atomic weapons or nuclear power plants.
- An alchemical "philosopher's stone" capable of changing one elementary substance into another.
- An agent for making normally calm atoms radioactive.

Atomic energy commissioner Loren K. Olson said recently that the neutron is now involved in scientific efforts to create "a detective beam" that would disclose the presence of hidden explosives and identify the origin of illicit opium.

According to Dr. Paul C. Aebersold, director of the AEC's office of isotope development, it is the neutron's ability to induce radioactivity in otherwise inoffensive atoms that suggests its employment as detective.

Becomes Agitated

When a neutron hits the nucleus of an atom of boron metal, for example, the nucleus becomes agitated and starts throwing off gamma rays.

Suppose manufacturers were required to wrap or coat all explosives such as dynamite with boron. Then officials with portable neutron beam and radiation detection equipment could quickly spot hidden explosives by the tell-tale gamma rays.

This suggests a simple way of examining the mountains of luggage at airports. It also suggests a possible means of watching for smuggled atomic explosives such as plutonium.

Plutonium normally emits alpha particles. But these particles are non-penetrating and would be stopped by the wooden sides of an ordinary packing crate.

Neutrons, however, would pass almost unhindered through the wood, excite penetrating gamma radiation in the plutonium, and thus expose its presence.

Aebersold said the neutron detective beam technique could be used to compare seized packages of opium and determine whether they came from the same source.

Contains Trace Elements

All plant or animal tissue contains so-called trace elements—tiny amounts, say, of zinc, cobalt, manganese, or copper. These metals under neutron bombardment give off distinctive radiations.

Aebersold said amounts of trace elements no greater than one part in a billion can be spotted by neutron techniques. The detective beam might not be able to say whether a package of opium came from China or Malaya or somewhere else.

But it would disclose, Aebersold said, whether a bit of the drug found on a narcotic addict came from the same place as a supply seized from a suspected peddler.

The neutron detective beam similarly could identify bits of tobacco, or threads of nylon or dacron, as to source. Nylon from one plant contains trace elements in different proportions than a nylon from another factory, Aebersold said.

Many a criminal case, he said, has been solved with the help of just such clues as the neutron detective would be able to provide.

The Family Council

Editor's Note: The Family Council consists of a judge, a psychologist, three clergymen, three editors and a women's editor. Each article is a summary of an actual case history. The Council reports on problems that have been dealt with by responsible agencies and counselors. (Copyright 1961—General Features Corp.)

Lewis B.—My father makes so many rules, the other kids laugh at me.

Mr. W. B.—I don't want to raise a beak.

Lewis B.—I'm a 13 year-old and my father treats me like a dog. When I go to the movies with my friends, he doesn't just tell me to come straight home, but he tells Gus or whoever comes for me to make sure I don't go roaming around after the show.

The other kids get out after supper for a catch or a card game. They used to wait for me, but now they've given up. Dad won't let me down until he's checked my homework and, even then, he'll make me read an extra article for Current Events, or look up a few words in the dictionary. He's too strict and I want a show-down.

Woman Loses Appeal in Suit For Leg Injury

Salem—(UPI)—A woman who sought \$80,000 general damages from the Rose City Transit Co. in Portland for a tumble from a bus lost her appeal in the State Supreme Court Wednesday.

The court threw out the appeal of Harriet L. Baker and affirmed the Multnomah County Circuit Court ruling of Judge James W. Crawford.

The woman had also sought special damages to pay for medical bills incident to a cut on her leg.

The woman started to enter a bus in downtown Portland but upon learning that it was headed for the garage she stepped off backwards and slipped on what she claimed to be mud and debris on the bus step.

Insufficient Evidence

Justice Hall S. Lusk wrote that her testimony was "meager" and there was insufficient evidence to establish negligence on the part of the driver or the bus company.

Lusk said there was nothing in the case to suggest notice to the driver the likelihood of mud accumulating on the step and he could "scarcely be expected to anticipate the presence of leaves in the month of February."

Lusk added that the mud and leaves couldn't have been very conspicuous because the woman testified she didn't notice them when she first stepped on.

Lost First Case

This was the second case growing out of the same accident, and the same leg cut. She lost the first one on a contention that the step had a rough metal edge.

The court ruled against Mr. and Mrs. Oscar Bonnevier in favor of the Dairy Cooperative association in a Multnomah county breach of contract case.

The Bonneviers had sought \$10,000 damages which was set aside in Circuit Judge Frank J. Loneragan's court, and a new trial ordered. The high court added that a new trial is not warranted.

Portland State Graduate School Plan Endorsed

Portland—(UPI)—The State Board of Higher Education has endorsed a proposed graduate school of social work at Portland State College and approved sale of \$7.3 million in general obligation bonds for campus building projects.

The proposed graduate school was labeled "an important part" of the board's 1961-63 budget request before the legislature. The Ways and Means Committee in Salem Tuesday night approved \$187,000 for the school to start next year.

To Remedy Deficiency

The board said the proposed school would remedy "an outstanding deficiency in professional training."

The bonds will finance dormitories and other campus projects that pay for themselves.

The board authorized contract awards for a \$1.6 million dormitory for the University of Oregon, a \$1 million dormitory at Oregon State, a \$840,000 residence hall at Oregon College of Education and a \$440,000 dormitory addition at Eastern Oregon college.

Rous sarcoma, a virus-caused poultry cancer, has been proved contagious by physical contact among chickens. Contagiousness, however, may depend on the strength of the virus and the susceptibility of the host.

by Alice Brooks

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Tactical Air Command Pilots Practice Nuclear Weapon Maneuvers for 3 Months

By RALPH VILLERS

United Press International
Nellis Air Force Base, Nev.

—The needle-nosed F100F fighter shot straight up into the sky, and the altimeter swept quickly around the dial—1,000 feet, 2,000 feet.

Air swelled the girdle-like belt around my stomach and legs. The dial on the instrument panel read 4.5 Gs.

The twin-seat fighter, Maj. E. E. Ritter at the front-seat controls, had just swept in over the barren desert floor north of Las Vegas at something over 500 miles an hour.

Ritter took it in toward the barely visible target at just about 200 feet off the ground—just as he would in combat to avoid enemy radar detection.

Up, up the fighter climbed—9,000, 10,000—and the instrument came to life.

"The drop is—now!"

And at 12,000 feet Ritter flipped the plane over on its back. Looking in the direction that should be "down" was the blue, almost cloudless sky. The brownish desert was where "up" should have been.

At the instant Ritter spoke and began maneuvering the plane out of its 12,000 foot vertical ascent, a nuclear weapon—if one had been aboard—would have separated from the fighter. The weapon would have climbed straight up along the original line of flight for thousands of feet, then would have lost momentum and fallen in a straight line back to earth.

Protects Pilot

The maneuver protects the pilot. It would have put Ritter far from the target area before the blast went off.

The pull of the G-forces—4.5 times the pull of gravity—during the simulated drop was routine to Ritter, but startling, for me. Without the pressure of the automatically inflating G-suit strapped tightly to me, I probably would have blacked out.

Ritter, married, the father of two and nicknamed Tex despite the face he comes from Emmett, Idaho, wasn't showing off. He was demonstrating the training which student combat pilots undergo in the 4521st Combat Crew Training Squadron, which he commands at this Tactical Air Command base outside Las Vegas.

In three months' time, at ground school, in briefings and during 33 actual sorties, Ritter and other officer-instructors like him at Nellis teach the already pilot-qualified students to use their supersonic fighters as a weapon.

How to drop a nuclear weapon—only "shapes," not actual weapons, are used—is just one phase in training a tactical fighter pilot. The students learn to refuel their fighters from a tanker aloft, how to fire air-to-air and air-to-ground rockets and how to give ground troops close aerial support.

Ritter crammed several types of missions the students go through into the hour and 20 minutes we flew in his plane, "The Texan," over Nellis' gunnery and bombing range—a desert range bigger than the state of Connecticut.

Weighted down in a flying suit, with parachute, survival kit, helmet and oxygen mask, I strained in looking out of the bubble canopy to see the targets Ritter pointed out that the students had to locate and attack with bombs, rockets or guns.

Even when they were point-

ed out—a small shack, a pole in the ground, a target cut into the desert—they were hard to locate cruising at several hundred miles an hour between 12,000 and 18,000 feet off the ground.

The students never get to see the targets before their

flying a course they plot themselves that takes up to two hours to complete, the students are expected to arrive over and strike their target on time. Arriving three minutes late or early is failing. A pilot who hits within 10 seconds is rated exceptional, and many get that rating.

Reroofing Costs Can Be Postponed

Costly reroofing jobs can be postponed from five to eight years by using the new aluminum roof coatings and paints recently introduced by the paint industry which can be applied to any surface except wood shingles.

Available in a choice of pastel colors, these paints are of two general types: asphalt combined with aluminum flakes and alkyd-based aluminum paints. The alkyds usually contain asbestos fibers for greater strength, body and insulation. The asphalt coatings are made with and without asbestos.

In addition to waterproofing and sealing the roof, these paints can also reduce under roof temperatures by as much as 10 to 15 degrees because they reflect a large portion of the sun heat. During the winter, this same reflective shield will also tend to turn heat from inside the house back down, thus reducing heat loss through the roof.

Breaking the sound barrier, an easy thing in the F100F, is less a physical sensation than the simulated nuclear weapon drop or sweeping in close to the deck over the gunnery target the students fly, and then quickly pulling out at the end of the run.

At 18,000 feet, Ritter called over the intercom.

"This looks like a good place. Watch the instrument panel."

The only physical sensation was the slight "kick in the pants" as Ritter cut in the jet's afterburner to build up the speed. The air speed indicator climbed to Mach 1 (the speed of sound at a given altitude), hovered for a few seconds and then jumped over the line.

We were flying over 700 miles an hour—faster than our own jet's sound.

The altimeter spun crazily downward—although the plane was flying level. Then,

just as quickly, it righted itself.

The air speed indicator read near Mach 1.2 (about 850 miles an hour).

Dropping below Mach 1 was the first physical sensation since the after-burner's kick. Ritter put on the spoilers (speed brakes) and the drop in speed made it feel as if the aircraft were going to drop straight to earth. It wasn't, and didn't.

For a novice it meant that back on the ground a "Mach Buster's" certificate was waiting. For Ritter, a veteran of World War II in Europe, plus service in Japan and Korea, and the other tactical fighter pilots at Nellis, it was just another routine day.

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