

UC Engineer Experiments Indicate New Fuel Power

BERKELEY (UPI) — A University of California engineer's experiments with chemical compounds known as nitroparaffins indicate that the fuel of the future may have twice as much power as conventional fuels of today.

Hot-rodgers have been increasing their power for years by adding such components to gasoline, but Ernest S. Starkman, associate professor of aeronautical engineering, has been the first to undertake a scientific investigation of nitroparaffins' possibilities as fuels.

The Commercial Solvents Corporation is underwriting much of Starkman's research.

He explains that the nitroparaffins offer an improvement over conventional fuels mainly because of their ability to carry part of the oxygen from their own structure into the process of combustion. This factor increases the energy of the fuel-air mixture, since it allows more fuel per unit of air to reach the engine.

An additional improvement, according to Starkman, is that the amount of combustion products in relation to the amount of air taken into the engine is considerably greater for nitroparaffins.

Both of these factors work to increase cylinder pressure within the engine cycle, which produces a greater output of power. Nitromethane promises to be the best of these compounds in terms of power production. This compound, Starkman predicts, is capable of doubling the net output of the engine in comparison with today's nitrocarbon fuels.

This would mean that an engine using nitromethane could be less than half the weight and size of one using conventional fuels without the loss of power.

Nitromethane does, however, present one problem in application to a spark ignition type of engine such as the automobile engine. This is the problem of pre-ignition which occurs when the fuel ignites too early in the engine cycle and can damage the engine if it occurs frequently.

But Starkman believes that the conventional engine could be modified to handle the fuel effectively or else that nitromethane can be developed as a secondary fuel, which could be substituted for gasoline when high power is needed.

Nikita Plans Crackdown On Drunkenness In Russia

LONDON (AP)—Soviet Premier Nikita Khrushchev, himself noted for his tipping at diplomatic receptions, has warned Russians the government is planning a crackdown on drunks and moonshiners. "We must proclaim the sternest struggle against drunkenness and put an end to this evil," he told a group of farmers at the village of Malinovka near Kursk last Friday. Moscow radio broadcast the speech today.

"Drunkenness is antisocial and profoundly alien to our order and times," he said. "One cannot shut one's eyes to the fact that in our

society there still are drunkards, thieves and swindlers.

"Drunkenness saps man's health. The drunkard disfigures family life and damages society."

Khrushchev said the Soviet government is working out a bill to provide sterner action against drunkards and "those who contribute to drunkenness." One law will limit restaurant customers to one glass of vodka or other spirits. "If there are people who like their five tots, they will have to go to five restaurants," Khrushchev told the farmers. "They will sober up as they go from one to the other."

Psychological sciences offer six approaches to a "positive" definition of mental health, but for various reasons not one is the universal definition which can be

Mental Health Definition Unknown, Concludes MD

By DELOS SMITH

UPI Science Editor
NEW YORK (UPI)—A scientist who studied the ideas of the experts has decided that no one knows precisely what mental health is. Dr. Maria Jahoda was seeking a definition which could be applied to anyone—and found none.

Such a definition would be extremely useful. With it, any person could tell if his mental health was slipping and take steps. For that reason Dr. Jahoda was employed by the government-sponsored Joint Commission on Mental Illness and Health to work out a definition.

She ran into all kinds of problems, many of them unanticipated. One problem was, are you mentally healthy if you're "normal"? If you're normal, she figured, you think, feel and act like the majority. But "the majority does many things that one would hesitate to call healthy."

So she rejected the "normality" definition. Then she took up the idea that "happiness," "contentment," "satisfaction" and/or a bounding sense of "ill-being" stand for mental health. You may feel those things when what you want from life agrees with what life offers.

But, she continued, the individual may not be able to control life's offerings, despite his very best efforts.

"To say that he must feel well, happy, content or satisfied under all conditions of misfortune or deprivation assumes a naive belief in the moral justice of whatever happens to him," she said. An individual's happiness about whatever happens to him can hardly be judged to be a good measure of his mental health. In many situations, it is healthier to be unhappy.

Psychological sciences offer six approaches to a "positive" definition of mental health, but for various reasons not one is the universal definition which can be

applied to everyone, she said. The six approaches are:

- (1) Self-perception — seeing yourself as you really are;
- (2) Self actualization — living up to your capabilities;
- (3) Integration — having an emotional balance which permits you to take setbacks and bounce back;
- (4) Autonomy — to be able to reject some things while accepting others; to be yourself while being part of something bigger than yourself;
- (5) Perception of reality — seeing the things outside yourself as they really are;
- (6) Environmental mastery, which is the ability to master any situation as it arises.

She rejected all "negative" definitions of mental health, of course, since she was seeking a "positive" one. The common negative definitions are "absence of mental illness" or "a person who is not under treatment by a psychiatrist."

Her study was described in a book "current concepts of mental health" published Thursday under the joint commission's sponsorship by Basic Books, Inc., New York. She is a former professor of social psychology and director of the research center for human relations at New York University, and now is working in London.

The book contained a dissent by Dr. Walter E. Barton, Boston, a psychiatrist and member of the commission. He argued that "absence of mental illness" was a workable definition of mental health. After there are positive ways of preventing and treating mental illnesses, large and small, the mental health movement can take up "the issue of superlative mental health or the degrees of goodness in good mental health," he said.

Father Of Automobile Fin Defends Against Critics

By DOUGLAS LARSEN
NEA Staff Correspondent

DETROIT (NEA) — Russian propaganda is trying to make the high U.S. auto tail fin the symbol of plush decadence of current American life.

And, not implying any connection, the American eggheaded intellectual tends to be a sharp critic of the tail fin as ostentatious.

Grating both of these contentions, Virgil M. Exner, the recognized father of the fin and director of styling for the Chrysler Corp., couldn't care less.

He proudly confesses to committing only one crime as far as his fin goes. In his opinion he has been tried by a blue ribbon jury

of his peers for it and found guilty of creating the most envied competitive commercial symbol known to the American buying public. He explains: "Competitors are the toughest jurors there are in this game. And when they come up with versions of your basic idea, which they have done this year, you can be pretty sure your idea or design concept is good."

It's obvious that Exner's fin influenced the '58 Ford and General Motors models. And on the '59 models there is strong evidence of trying to out-tin Exner's basic idea in one form or another.

Chevrolet, Buick, Oldsmobile, Mercury and Lincoln all are up this year with dramatic rear-end configurations as customer bait. And Chrysler's new line, especially Plymouth, features even higher, more startling fins than the year

before, plus the chrome and design frosting that goes with the fin-look of luxury and great size. Bucking this trend, in its fight for survival, is Studebaker with a new, small economy car which will sell for less than \$2,000.

American Motors will stick with its basic Rambler and Metropolitan, which had great success in '58. The Ford car for '59 is more conservatively styled than the '58. GM and Ford spokesmen deny any Exner influence on their fancy '59 models. But Chrysler's high '59 fins do symbolize a continuation of the trend toward more plushness, which recently has been criticized.

It's the continuation of this trend by the auto industry this year that is causing some skeptics to predict an even worse year for '59 than has been experienced in '58.

Accepting the role of spokesman on this question the handsome, quiet Exner argues:

"It's true that increased sales of foreign and small cars, plus the poor showing of the bigger American cars in '58 showed serious conservatism by U.S. buyers. But the prime cause of it was the recession. Recessions always make

people cautious and conservative in what they buy.

"With the recession ended, however, Americans are going right back to buying the same dramatically-styled, attractive cars they have always demanded."

Numerous public opinion polls differ with this argument. But Exner says:

"If we relied solely upon public opinion surveys to dictate automobile design, we might still have essentially the same product we had 20 years ago. For, one of the things surveys can't take into account is the impact of new ideas—the progress that is made by innovation. It is essential, therefore, that an automobile stylist be a creative artist who molds and influences public tastes to a considerable degree."

One charge does jar Exner's coolness. That's the claim that the fin is sheer ostentation, serving no utilitarian purpose.

"Listen," he says, jabbing you gently on the chest with a long, thin, artistic finger, "it happens to be a fact that wind tunnel tests confirm that our rear fins contribute measurably to the stability of the cars in severe crosswinds at normal highway driving speeds."

X-15 Test Range Completion Set

SANTA ANA (UPI) — Completion of a 400-mile test range for use in tracking North American Aviation's rocket-powered X-15 space ship is expected by Jan. 1, 1959.

Officials of the Electronic Engineering Co. said the three million dollar facility will be equipped with special radar, telemetering and communications units to trace the needle-like manned vehicle during its flight and to safely guide it back to earth.

The range stretches from Edwards Air Force Base to Ely, Nev.

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Man Soon Able To Produce Life Says Smithsonian Institution

WASHINGTON (AP) — Science may be getting close to producing rudimentary life in a test tube, the Smithsonian Institution said recently.

"The way seems open, following recent revolutionary chemical developments, to the actual laboratory synthesis of a structure having most of the properties of a living agent," said the institution.

It did so in summarizing an article by Dr. Wendell M. Stanley, director of the virus laboratory of

the University of California, in the Smithsonian's annual report.

Stanley has described remarkable recent progress in breaking down the barriers between non-living molecules and living organisms, the Smithsonian Digest said.

"The remaining essential step," he says, "seems to be synthesis of one of the chemically highly complicated nucleic acids which forms an essential component of viruses and of genes, the units of heredity. This may be close at hand," the

article said.

The government research agency said Stanley pictures a kind of "ladder of life" as being constituted as follows:

- (1) nucleic acids; (2) viruses, which incorporated nucleic acids; (3) single-celled living things, such as bacteria and protozoa; and finally (4) multicelled organisms comprising all higher forms of life.

"The barriers between these have broken down one after another in the last few years," said the Smithsonian, adding:

"This progress seems to have culminated very recently. Dr. Stanley says, in a demonstration by Dr. H. Fraenkel-Conrat at the University of California that one of the nucleic acids may have all the essential properties of a gene or of a group of genes. Already proteins, building stones of life, have been produced from amino acids."

This finding, said the Smithsonian Digest, "nearly completes the connection" between nonliving material and that which is undoubtedly living.

"The remaining step," it said, "seems to be the synthesis of this nucleic acid out of its constituent parts... just as proteins have been synthesized from amino acids."

"It would be one of the outstanding events in all history."

Woman Dies From Wounds In Fight With Neighbor

ONTARIO, Ore. (AP) — Two middle-aged housewives fought viciously with knife and ax in a front yard here Friday and one of them died from a stab in the chest.

Mrs. Dorothy Hylland, 42, mother of two children, died moments after being knifed just above the heart, said Police Chief Walter Walker.

Walker said Mrs. Bertha Baldwin, 43, Mrs. Hylland's next-door neighbor, signed a statement admitting the stabbing. She was held in this small eastern Oregon town today without formal charge.

The chief said Mrs. Baldwin told him she acted in self defense after being hit on an arm by the ax. "So far as we can determine, she's not hurt," Walker said.

Walker gave this account of the fatal fight: "Mrs. Baldwin had been drinking and she went next door to get her children, who were watching television at the Hylland house."

language, and Mrs. Hylland told her 'You've got your kids, now go home.'

"Mrs. Baldwin said 'I'm coming back to you' and ran out of the house. She evidently ran home and got the knife and the other woman saw her coming back."

"She grabbed an ax in the back of her house and went out to meet her. When they got close enough, the Baldwin woman stabbed her," Chief Walker said.

Walker said the heavy set woman wrestled for a few moments on the lawn. Then an unidentified man parted them. Mrs. Hylland was being helped to a car when she collapsed and died, the knife still in her chest.

Both women, the chief said, are the wives of laborers. "They live in a pretty good neighborhood," he said.

Did the children watch the death struggle? "I just can't say if they did or not," Walker said. "I don't know."



Fred H. Heilbronner
for
County Commissioner

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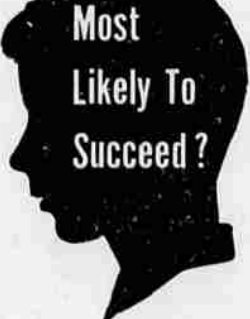
I was a member of the O.T.I. State Advisory Committee for 10 years—I believe in Oregon Tech and will support it in every way.

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