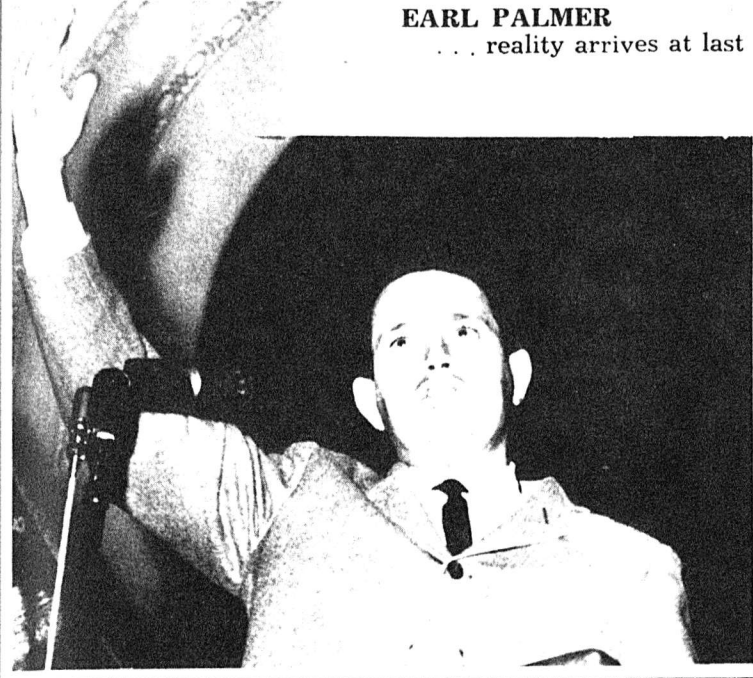


EARL PALMER

... reality arrives at last



Model Rocket Engine Installed For Engineers In Power House

By Bruce Ferrier

They're putting a rocket engine under the power house. But don't worry—the building will be there for a while yet. The rocket is just a part of the research and instruction program of the department of mechanical engineering, which after only four years of existence, has collected many interesting gadgets.

The rocket is a small demonstration model, designed for a maximum thrust of 22 pounds. It is fed on gasoline and compressed air, as opposed to the liquid oxygen and nitric acid fuels of more exotic models.

EXTREME TOLERANCES

The rocket is being made right in the power house, which contains a complete precision metal-working shop. The stainless steel casing must conform to standards calling for lengths accurate to one one-thousandth of an inch, and radial placement or holes to within one second of arc. An angle that measures one second of arc has the width of a pinhead—at a quarter of a mile from the vertex.

The rocket will be housed in an explosion-proof room fitted with an air lock and a two-storey chimney. The chimney is to vent the exhaust, and the airlock is to maintain a positive pressure in the room which assures that the exhaust will be directed towards the chimney rather than towards the experimenter.

Right now the room holds a ramjet, a simple form of jet engine. Ordinary jet require an intricate (and expensive) turbine system to draw in air and compress it for combustion. The ramjet does away with this, being merely a well-designed tube which forces air to compress itself. At a point in the tube, fuel is injected, ignited, and the resulting expansion of the air provides the push required to keep the engine moving.

SIMPLICITY COMPLICATED

The only drawback is that the en-

gine must be kept moving; the motion causes the necessary compression of air. The ramjet therefore cannot be used in aircraft, for every time the plane stopped on the runway, so would the motors.

This problem of motion is solved in the power house testing room by moving the air and not the motor. That is, a compressor shoves air bodily into the maw of the ramjet (hence, ramjet). The resulting whirlwind in the test room unfortunately necessitates taking readings from outside the room, through a double-paned window. It also involves starting the thing from outside the room; consequently the last step in the starting procedure is "Pray!"

Elsewhere in the building—gathering dust in a corridor, as a matter of fact—is a full-sized jet engine. The jet, all glamour six years ago and obsolete three years ago, was obtained from the War Asset Board for \$22. This is not the cost of the engine; it is the unloading charges.

SURPLUS STUFF CHEAP

Obtaining this and other engines has put no strain on department funds. A 3,000 horse power radial aircraft engine, manufactured for \$20,000 and cross-sectioned for instruction at a cost of \$5,000, was sold to the university for \$17.50.

Canadian Position

Ukrainian Liberation Move Started

By Marion Raycheba

How are Ukrainian-Canadians on the campus responding to the appeal of the Supreme Ukrainian Liberation Council?

The SULC, whose aim it is to achieve freedom for the Ukraine from Russia, recently sent an official representative to Edmonton.

In an appeal for support, the SULC stated that the USSR has adopted a "Russification" policy to mold a Russia of a single language, culture, and people. However, Ukrainians wish to retain their separate identity and, if they could achieve complete independence from the USSR, they would strive to establish a democratic, if not capitalistic, system of government.

The SULC saw hope for realization of this objective in the current Sino-Soviet dispute which led to the replacement of Khrushchev and independence for the Ukraine.

POLICY STRESSED

Although the term "Russification" is not actually used, according to Professor B. R. Bociurkiw of the political science department, the Russians are definitely stressing this policy under a variety of pretexts and using a variety of methods.

It is difficult for Ukrainians to obtain newspapers printed in their own language, and the language of instruction in schools and universities is always Russian even though the area may be predominantly populated by another ethnic group.

Professor Bociurkiw feels this situation is a reflection of the weakness of the ideological cohesiveness of the USSR. He noted that this policy is achieving the greatest success with those who lived under the worst period of the Stalinist regime.

KHRUSHCHEV OVERTHROWN?

That the Sino-Soviet dispute might lead to Khrushchev's replacement and subsequently to independence for the Ukraine is an overstatement in Professor Bociurkiw's view. The rift might lead to a number of things, one of which could be the overthrow of Khrushchev. However, it is most likely that another succession crisis would develop rather than disintegration of the USSR.

If, however, the Ukraine should be emancipated, the government would have to proceed from the existing situation, Professor Bociurkiw continued.

Large scale industry would have to remain in the hands of the state to function properly but the system of collectivized agriculture which has failed miserably certainly would be changed.

Professor Bociurkiw concluded that there is a distant possibility of an evolutionary process of change rather than a sudden nationalist armed revolution.

STUDENTS' VIEWS

University students of Ukrainian origin expressed their views in various ways.

Complete "Russification" of the USSR is impossible because of the great diversity of ethnic groups, according to Dale Warawa, sci 2.

"Ethnic identity and heritage is a measure of personal dignity which should not be destroyed," said Peter Opryshko, ed 4. The problem of ethnic diversity in the USSR was compared by Ken Rusnak, law 2, to that in Canada with the added difficulty of more limited ethnic communications.

"If independent, the Ukraine would definitely strive for a democracy," said Dennis Melyk, comm 4. He pointed out that the Ukraine, at present, has a government-in-exile

which was elected and has subsequently been operating under democratic procedures.

However Rusnak and Opryshko felt democracy would be impossible because education and political conditioning has trained Ukrainians for dictatorship. Immediate democracy would result in chaos.

MacQuarrie

(Continued From Page One)

little affinity toward what he termed the "virtuous, virginal outlook" of men such as NDP leader T. C. Douglas, whose rejection of nuclear warheads he said seem to indicate a peace-at-any-price outlook.

"Sometimes," he added "the people who sound most moral complain the loudest about Canada's not selling enough radium."

Mr. MacQuarrie, Member of Parliament for Queens, P.E.I., is chairman of the Progressive Conservative Committee on Youth.

Angus Discusses Implications On Kennedy Assassination

By Larry Krywaniuk

Would Lee Harvey Oswald, accused assassin of the late J. F. Kennedy, have received a fair trial if he had lived?

"Maybe," says law professor W. H. Angus.

He said, "Oswald would have received all the procedures of a fair trial—counselling, evidence produced by the prosecutor, and a chance to defend himself.

The only question is, in the light of the press coverage of the president's assassination, whether an impartial jury could have been chosen."

CONVICTION FOR RUBY?

Jack Rubenstein (Ruby), alleged assassin of Oswald and Dallas nightclub owner, will be given a trial under Texas law, but "there is some question whether a jury can or will convict him." The reason for this would be the uncertainty of freedom from a biased jury.

Professor Angus then added that the plea of insanity (which Ruby is using) has narrow grounds in law—not as broad as accepted by the public, and they may be difficult to prove.

When asked about the legal implications, he commented: "This only

thing I can foresee is that Congress will pass a bill—if it is constitution—that the FBI would move in to investigate the assassinations of presidents or high ranking government officials." Murder is completely under state jurisdiction.

ACT WAS NOT TREASON

"This is not treason because there was no attempt to overthrow the government and the inference is that he wanted to kill the president and not Connelly."

When asked if this will help to unite the Western world he added that there probably will be no positive direct or indirect results and that the situation will remain unchanged except for the loss of the potential of a very gifted and able man.

J. F. Kennedy brought new initiative and enthusiasm to the Western world but his untimely demise came too early for his objectives to be achieved. It is difficult to assess them at present although many people have already compared him with Lincoln.

The death of Kennedy may strengthen the Republican position for the next election, because Kennedy was "undefeatable" while Johnson is not, Professor Angus concluded.

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