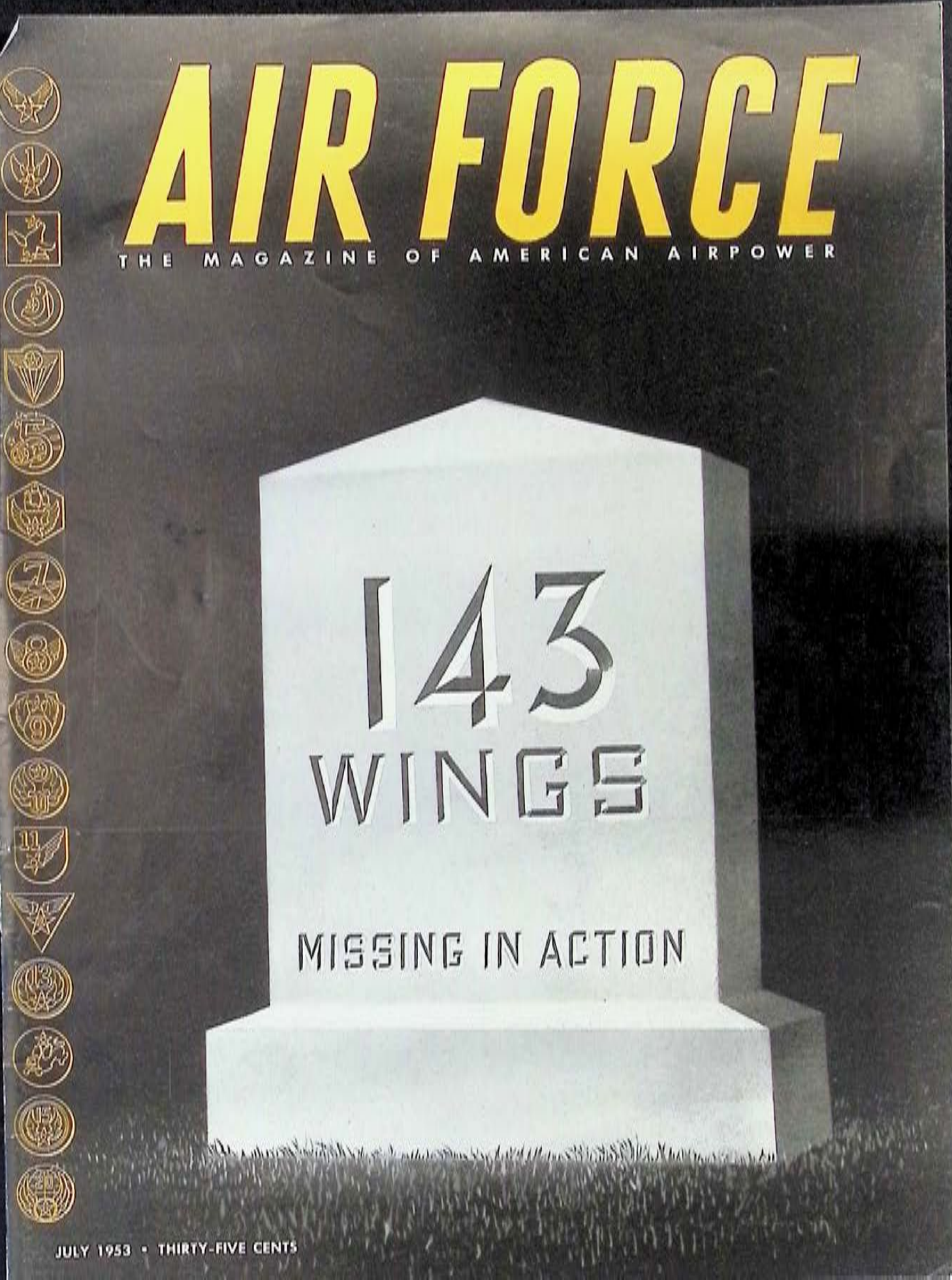
AIR FORCE

THE MAGAZINE OF AMERICAN AIRPOWER



JULY 1953 • THIRTY-FIVE CENTS

Missile with a "one track mind" ...Bomber Defense

Defensive guided missiles launched from supersonic aircraft will depend upon electronic marvels that come as close to simulating human intelligence as any mechanism ever devised. Important functions of these "weapons of the future" are typical of those entrusted to systems made by Arma Corporation.

Complex electronic and electro-mechanical controls from Arma are an integral part of many of America's most advanced weapons. In basic research, design, development and manufacture, Arma Corporation has worked in close cooperation with the Armed Forces since 1918—and more recently, the Atomic Energy Commission. *Arma Corporation, Brooklyn, N. Y.; Mineola, N. Y. Subsidiary of American Bosch Corporation.*

ARMA ADVANCED ELECTRONICS FOR CONTROL

ALL-ROUND ICE PROTECTION

Experience-proved for every aviation need

Iceguard—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

ELECTRO-THERMAL ICEGUARDS by Goodyear—embodying the principles developed by the NRC of Canada—provide anti-icing and de-icing heat in either of two basic ways: through a sheath of electrically conductive rubber, or through resistance wire elements embedded in rubber for positive separation.

This simplified and proved process of ice elimination can be tailored to protect any surface or shape—on every type of commercial, military or private aircraft; can be designed for either continuous or cycling heating action as best suits the requirements of the particular application.

For a thorough study of any icing problem, call upon the experience of the Aviation Products Division of The Goodyear Tire & Rubber Company, Inc., Akron 16, Ohio or Los Angeles 54, California.

AVIATION'S 50th ANNIVERSARY
GOODYEAR
ONE OF THE PIONEERS

GOODYEAR
AVIATION
PRODUCTS

The Iceguard is but one of many Goodyear Aviation Products which are serving aviation today. Goodyear has been contributing to aviation progress since 1909.

FIELD EXPEDIENT—It required only a few minutes for this big Army H-19 Sikorsky helicopter to lift and place a prefabricated control tower into position atop an airfield-operations building in Korea. The Sikorsky was called when a conventional crane tried and failed to do the job. Regular work of Army H-19s is transportation and supply.

AROUND THE WORLD WITH SIKORSKY HELICOPTERS

HIGH HAUL—In rugged British Columbia, a 50-mile power line is being built to serve an Aluminum Company of Canada plant at Kitimat. Work on this project has been enormously speeded by S-55s, flown by Okanagan Helicopters, Ltd., which can airlift almost everything needed to virtually inaccessible construction sites.

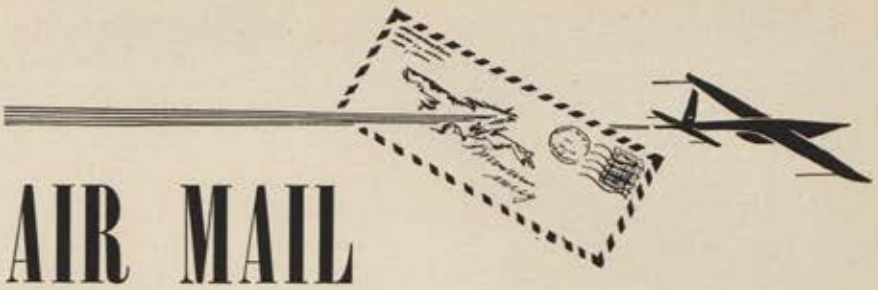
PROBLEM SOLVER—Operation of eight factories in eight Ohio and Pennsylvania cities presented unusual transportation problems for executives and staff members of Rockwell Manufacturing Company, Pittsburgh. Now a new Sikorsky S-55 helicopter is in operation, providing fast, practical transportation to and from the outlying plants.

RESEARCH TEAM-MATE—A new Sikorsky S-55 helicopter is the latest addition to Sperry Gyroscope Company's large flight research department at MacArthur Field, Long Island. This versatile aircraft will be used as a flying laboratory, helping Sperry engineers test and develop improved instruments and other equipment for navigation and flight control.

SIKORSKY AIRCRAFT

BRIDGEPORT, CONNECTICUT

One of the Four Divisions of United Aircraft Corporation



AIR MAIL

Casualties

Gentlemen: The article "The Air Force Takes Care of Its Own," written by John F. Loosbrock, is a splendid write-up and has been read with great interest by myself and my associates in the Air Force Casualty Branch.

We, of course, believe most sincerely that the job of notifying and assisting the next of kin of our Air Force personnel at a time of anxiety and grief is a challenge requiring our best efforts. It is our intention to continue to uphold the high standards of the Air Force in extending assistance to the next of kin.

Lt. Col. R. W. Springfield, USAF
Chief, Casualty Branch
Washington, D. C.

Our Air Defense

Gentlemen: In the article, "The Truth About Our Air Defense," you have done a constructive job in attempting to straighten out concepts concerning air defense systems. In the recent past, I believe that publicity given to this subject has often been unfair, incomplete, and inaccurate. On a subject of such great importance to our whole nation, I think that the facts must be presented to the public clearly and correctly, if indeed the public is to enter into the controversy.

I am sure you realize the many differences of opinion which exist, not only among scientists, but also within the Air Force and within all branches of our government which are concerned with this complex problem. I hope you will continue in your efforts to present to all concerned the most accurate picture of the facts which can be agreed upon, and I hope you will try to select, as you have in this article, the important issues which must be debated.

H. Guyford Stever
Mass. Institute of Technology
Cambridge, Mass.

Gentlemen: Your article, "The Truth About Our Air Defense," is, indeed, a very careful and thorough analysis of the problems we face in the national defense, particularly with reference to the Air Force and to our Ground Observer Corps in Civil Defense.

I was particularly happy to note that at several points in the article in referring to the Battle of Britain, and at other points, the article mentioned the value of the volunteer observers of the Civil Defense Ground Observer Corps, and the need for this activity.

We feel that at this very time we cannot do too much to focus the attention of the entire public on the vital necessity for air defense, and particularly for civilian cooperation therein.

Lt. Gen. C. R. Huebner, Director
N. Y. State
Civil Defense Commission
New York, N. Y.

Gentlemen: It is my earnest hope that the Air Force Association will continue, through its magazine, to present timely subjects which are of interest, not only to the Air Force and to veterans of that service, but to the general public as well. You are to be complimented on the excellent job you are doing in alerting the American people to the imperative need for strong defenses.

James R. Wilson, Director
Natl. Security Commission
The American Legion
Indianapolis, Ind.

Deceleration Tests

Gentlemen: Direct results of Colonel Stapp's experiments (AIR FORCE, May '53) are the improved seats and harnesses being developed to protect pilots and airmen in crashes, and the increased emphasis being placed on the program for installing aircraft seats in the backward-facing position for greater protection. An example of this is the USAF's Convair C-131A "Samaritan," an air evacuation transport now under development. This aircraft will have twenty backward-facing seats, in addition to

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sixteen litters and provisions for an iron lung and oxygen.

Col. Don Flickinger, USAF (MC)
Director of Human Factors, ARDC
Baltimore, Md.

NATO Medics

Gentlemen: I should like to congratulate you on your excellent article in the May issue entitled "Desert Sleigh Ride." It is an excellent presentation of Colonel Stapp's work in the field of deceleration, understandable to the non-medical man, yet not overly "popularized."

I feel that the members of our aeromedical panel, of which I am executive officer, would be greatly interested in the description of Colonel Stapp's experiments and his conclusions, as shown in your article. These panel members are flight surgeons and aeromedical scientists of the various NATO nations, who are pooling their aeromedical research problems and activities. I believe that we could do a great service to the NATO organization by distributing reprints of this article to these men.

Maj. George Zinnemann
USAF (MSC)
AGARD
Paris, France

Thanks to Mrs. Schenk

Gentlemen: I want to express my appreciation to you and to Mrs. Norma Schenk for the article, "Should My Husband Quit the Air Force?" published in your May issue.

The article is the most interesting and convincing one on the subject that I have seen. It should do much to raise the stature and attractiveness of a military career, in the view of both Air Force families and the civilian public. At the same time, it performs a real service in underscoring some of the shortcomings and misimpressions of military compensation.

Lt. Gen. Laurence S. Kuter, USAF
Maxwell AFB, Ala.

Gentlemen: I have just finished reading the article entitled "Should My Husband Quit the Air Force?" by Norma Schenk in your may issue. I enjoyed the article very much, and am in wholehearted concurrence with Mrs. Schenk.

Perhaps the reading of this article by some of the civilian populace of our country would help them better to understand how we of the United States Air Force feel about the treatment we are getting from the "Outsiders." Maybe this story will help to "knock some sense" into the heads of our fellow citizens.

S/Sgt. Terrance I. Easton
McChord AFB, Wash.

The Honor Is Yours

Gentlemen: Could I possibly have the honor of being the first to correct your error on page 13 of "Airpower" in the news" ("AF Dependents" section), June issue, stating Sewart AFB, N. Y., when we all know it's Stewart AFB in New York and Sewart AFB in Tennessee.

Warren D. Sarine
Denver, Colo.

LEADERSHIP DEMANDS CONSTANT ACHIEVEMENT

Starfire efficiency means Air Force economy

The United States Air Force is economy minded. Yet it must and does expect superlative performance from its aircraft.

Take a look at how the Air Force's new all-weather fighter-interceptor, the F-94C Starfire, fills the bill on both counts—performance *and* economy.

Recent operation under tactical conditions shows that the Starfire is a rugged, reliable plane that averages many working hours in the air between servicings.This cuts maintenance costs throughout the life of each plane—a sizable cumulative saving. Furthermore, Starfires are *easy* to service and are therefore quickly back on duty. Less frequent service plus quicker service means *more flying time per plane*, so that fewer total planes are needed by the Air Force—another sizable saving.

At the same time the U.S.A.F. Starfire gives top performance in any weather, night or day. No other fighter-interceptor can reach enemy bomber level faster from a cold start. No other has finer automatic equipment—Hughes Radar System, Westinghouse Automatic Pilot, Sperry Zero Reader, Lockheed Rocket Release. And the F-94C is easy to fly and rock-steady under instrument conditions.

In addition the Lockheed Starfire is a 2-place interceptor, thus utilizing the cooperative efficiency of a 2-man team to perform all the split-second operations of intercepting an enemy (possibly unseen) at 600-mph-plus speeds.

F-94C Starfire

Lockheed *Aircraft Corporation*

BURBANK, CALIFORNIA, AND MARIETTA, GEORGIA

LOOK TO LOCKHEED FOR LEADERSHIP

Lockheed

Starfire Scores First Night Kill on MIG-15

Burbank, Calif.—(Special)—The F-94 Starfire has scored the first night victory over a Russian MIG-15, according to U.S. Air Force dispatches from Korea.

The Air Force announcement was the first disclosure that Lockheed F-94 Starfires were on duty in Korea. Designed essentially for round-the-clock, round-the-calendar home defense, these almost-automatic radar interceptors are proving to be as versatile as other Lockheed jets, including the famous F-80 Shooting Star, America's first operational jet fighter.

Lockheed's jet fighter record in Korea began *when the F-80 Shooting Star became the first airplane ever to shoot down a Russian MIG*. Later, the Shooting Star was assigned a multitude of missions—napalm bombing, ground-support strafing, bombing with 500-pound bombs, aerial interception, photo reconnaissance, close interdiction and many others. In the first year **Lockheed Shooting Stars had flown more missions than all other allied aircraft combined.**

Now the Shooting Star's younger but more powerful brother, the F-94 Starfire, is proving equally versatile both in Korea and at home, where it is on alert to protect major cities from air attack.

Lockheed builds U. S. defense team

Lockheed F-94 Starfires are just one member of the "defense of America" team now in production at Lockheed:

Lockheed T-33 and TV-2 Jet Trainers, in which 9 out of 10 U.S.A.F. and Navy jet pilots are trained, are being turned out at the fastest rate in history following installation of a mechanized final assembly line at Lockheed's Van Nuys, Calif., factory.

Navy P2V Patrol Bombers, holders of the world's distance record, now have improved radar and armaments, expanding their versatility from anti-submarine patrol to long-range reconnaissance.

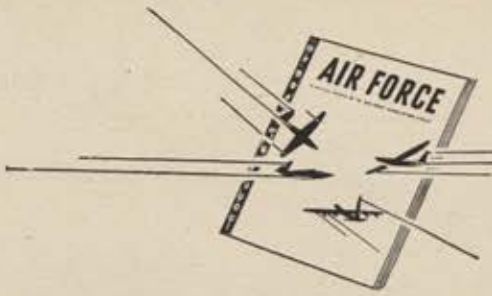
Super Constellation Transports designed for new turbo-prop power are now in production for special Navy assignments. Other Super Constellations with turbo-compound engines are being produced for Air Force troop transport, hospital planes and cargo.

WV-2 Super Constellations, early-warning aircraft for the Navy, apply an entirely new concept of national defense which expands radar's eyes and ears far beyond the horizon.

B-47 Jet Bombers, designed by Boeing, are being produced for the Air Force at Lockheed's big Marietta, Georgia, plant.

The C-130 Turbo-prop Cargo Transport is the first all-cargo plane designed from the ground up for high-speed turbo-prop power—now tooling for production at Marietta and Burbank.

Today's advanced production is only a part of Lockheed's present concern. For in the Lockheed laboratories at Burbank and Van Nuys, California, as well as Marietta, Georgia, scientists pry deeper into the mysteries of new types of power, new guidance systems, new and lighter and stronger alloys to answer the demands of tomorrow's science of flight.



RENDEZVOUS

Where the Gang gets together

S/SGT. GEORGE W. LAWLOR: Any information from 9th AF vets of WW II regarding S/Sgt. George W. Lawlor,

radio operator and gunner, would be of vital interest to his relatives. *Mrs. Harold L. Margeson, 64 Laurel St., Melrose 76, Mass.*

AERIAL & RAMP PHOTOS: Would like to have aerial or ramp view photos of Ellington Fld., Tex., 1941-42; Cochran Fld., Ga., 1942; Shaw Fld., S. C., 1943; Hendricks Fld., Fla., 1943; Keesler Fld., Miss., 1945; Hamilton Fld., Cal., 1947; Yokota AFB, Japan, 1948, and Wright-Patterson Fld. Will pay or trade for same. *Sterling E. Stanley, Box 455, Bedford, Ind.*

CATHOLIC CHAPLAINS SOUGHT: I would like to obtain the names and addresses of any Catholic Chaplains who served at Amarillo AFB, Tex., from June '45 to November '45. I would also like to get the name of the Catholic Chaplain who served at Kitzengen AB, Germany, from January '46 to about June '46. The only thing I know about him is that he was from the Archdiocese of Chicago. *Bro. Leo Merriman, OFM, Conv., Honorary Chaplain, New York State Wing, St. Anthony-on-Hudson, Rensselaer, N. Y.*

388TH REUNION: The 388th Bombardment Grp. (H) will hold its fourth annual reunion at the Bedford Springs Hotel, Bedford Springs, Pa., July 2-3-4. Informal get-together will be held the evening of July 2, and a commemorative banquet on July 4. All former members may obtain reservations and additional information by writing to *Lloyd Long, Secretary, 383 Adams St., Tonawanda, N. Y.*

376TH HEAVY BOMB GROUP VETS: The seventh annual reunion of the 376th Heavy Bomb Grp. Vets Assn. will be held at the Hotel Hollenden, Cleveland, Ohio, July 30 through August 2. For further information write *Wiley L. Golden, 371 Probasco Ave., Cincinnati 20, Ohio.*

RICH FIELD WW I VETS: Calling all Rich Field Aviation School, Waco, Tex., World War I vets to the seventh annual reunion, Salt Lake City, Utah, August 14-15. Contact *William E. Beigel, Pres., 321 Northcrest Dr., Kansas City 16, Mo.*

7TH BOMB GROUP (H) REUNION: Yellowstone National Park, Old Faithful camp ground area, will be the scene of the 7th Bomb Grp. (H) reunion the first week in August. For further details write *Max Hillman, 1553 W. 223d Street, Torrance, Calif.*

451ST BOMB GROUP: Has a history of the 451st Bomb Grp. ever been published? *Robert W. Sperry, 1111 Spruce St., Aurora, Ill.*

HISTORY PROJECT: An effort is being made to assemble a complete history of the Tactical Units assigned to the 91st Strategic Reconnaissance Wing. We'd like to obtain any information (pictures, brochures, squadron histories, references, etc.) from former personnel of the 322d, 323d and 324th Bomb Sqdn. (H). All data will be returned. *Capt. Joseph F. Falls, 324th Strat. Recon. Sqdn., Lockbourne AFB, Columbus 17, Ohio.*

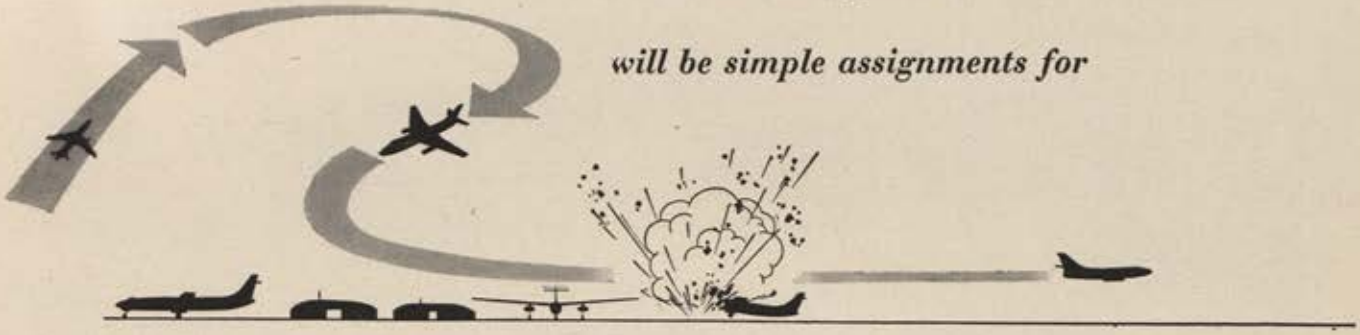
WILLIAM H. RAGSDALE: I am trying to find the whereabouts of William H. Ragsdale, who entered aviation cadet training in late 1948 or early 1949. Whether or not he completed his training, I do not know. *Richard C. Hatfield, c/o James Oil Company, Falls City, Nebr.*

To insure appearance in a given issue, Rendezvous items should be in this office approximately six weeks prior to publication. For example, copy for September issue should be in our hands by July 15.—The Editors

Bombs from eight miles up

or at treetop level

will be simple assignments for



–the new Douglas B-66B

Tested and approved by the U. S. Air Force, a versatile new plane now enters the nation's service. Production on the Douglas B-66B has begun.

Twin jets, slung outboard on the wing will put B-66B in the 600 to 700 mph class, while special design will permit wide selection of bomb combinations for varied missions. Even with full bomb load, B-66B's efficient power-to-weight ratio will give ample range to travel far over enemy territory, and return. In speed, range and capacity it will be built to meet tactical requirements for delivering the most potent weapons in the nation's defense arsenal.

The design of B-66B is another example of Douglas leadership. Planes that can be produced in quantity to fly *faster and farther with a bigger payload* are a basic concept at Douglas.

Enlist to fly in the U. S. Air Force

Depend on *DOUGLAS* First in Aviation

Shooting the Breeze

WE THOUGHT you'd like to know a little more about our two newest staffers – Richard "Dick" McGrath and Everett E. "Gene" Dodd. Dick lowered his gear here after a tour as special assignments editor with "American Aviation" magazine. Gene, after a tour with another aviation outfit–the USAF. He flew in B-29s from Japan during the Korean war.

Dick is not only a reporter-writer but a psychologist to boot. He has his masters degree in industrial psychology from Fordham University and has worked as vocational psychologist for Catholic University here in Washington. His first love though is aviation. He's worked for some of the nation's largest airlines in nearly all capacities, including managing municipal airports.

Gene's first love is writing and reporting. Some of his handiwork is on page 72 of this issue, and he wrote the story of MATS last month. A few years ago he was with United Press and was later assistant aviation editor of "Pathfinder" magazine before returning to active AF duty. He and Dick McGrath have introduced a new factor to operations in AFA headquarters after business hours–they're both avid chess fans.–END

CREDITS

Front cover and page 19–Arlo Greer; page 25 – United Press photo; pages 30 and 31–International News Photos; page 60 (Mr. Denny)–Newman-Schmidt Studios.

AIR FORCE

THE MAGAZINE OF AMERICAN AIRPOWER

Vol. 36, No. 7 • JULY 1953

FEATURES

DEPARTMENTS

THE COVER

Regardless of the outcome of the current budget fight on Capitol Hill, the Air Force's 143-wing program, a minimum survival force, is "missing in action"—presumed dead. We followed the budget hearings closely in order that we might properly assess them for our readers. But General Vandenberg put the case for 143 wings so cogently in his statement and ensuing testimony that we felt there was little we could add. If you read it, beginning on page 25, you can't escape the significance of our cover.

MEMBERSHIP IN AFA

AIR FORCE Magazine is mailed monthly to all members of the Air Force Association. There are several ways you can become a member. If you were in the Air Force or its predecessor services, you're eligible. The $5 yearly dues include the magazine. Or if now on active duty, you can be a Service Member. Those interested in airpower can become Associate Members for $5 per year. The cost for CAP and AF-ROTC cadets is $3 per year. Details of membership in AFA on page 80.

CUT OUT AND MAIL TODAY

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Washington 5, D. C.

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Sign me up as marked below. I enclose a check or money order for the amount indicated.

- ☐ Membership in AFA (includes year's subscription to AIR FORCE Magazine) $5
- ☐ Service Membership in AFA (includes magazine subscription) $5
- ☐ Associate Membership in AFA (includes magazine subscription) $5

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Avien Introduces its "Two-Unit" Fuel Gage

Avien's new "package" is a better value for the Airpower Dollar; it weighs 50% less and needs no field adjustments

Ever since Avien developed its capacitance-type fuel gage, our engineers have stuck to the task of reducing the system to its simplest form.

Now they've done it, with the Avien Two-Unit Fuel Gage.

Basically, it is the same sharply accurate system that Avien has designed and which has been installed on thousands of modern planes. The big news is in the "package"—for the necessary components have been reduced to a sensing unit and an indicating unit.

Avien has buried the "black box"

Up until now, most fuel gaging systems needed four units; a tank unit, an indicator, a bridge-amplifier, and a shock-mount to guard it against vibration.

No field calibration was required for the Avien tank unit or indicator. Avien held them to such close tolerances, the adjustments for individual installations were actually "built in."

The bridge-amplifier (the "black box") was a different story. This intermediate unit was supplied as a common part, for universal application. And that's where field calibration *had* to be made.

The rigid specs for the bridge-amplifier component have previously held back improvements in the system as to weight, size, cost, performance and flexibility. There was only one answer, as far as Avien was concerned. The "black box" had to go.

In the Avien Two-Unit system, the necessary components for the bridge and amplifier functions have been built into the indicator case. The "black box" is eliminated, and so are certain components which were necessary to make the "black box" universally applicable.

No more field adjustments

The Two-Unit Fuel Gage gets installation down to "plug-in, plug-out" simplicity.

The Avien tank unit and indicator are pre-calibrated for the aircraft they are designed for. Since the intermediate unit is not needed, neither is field calibration.

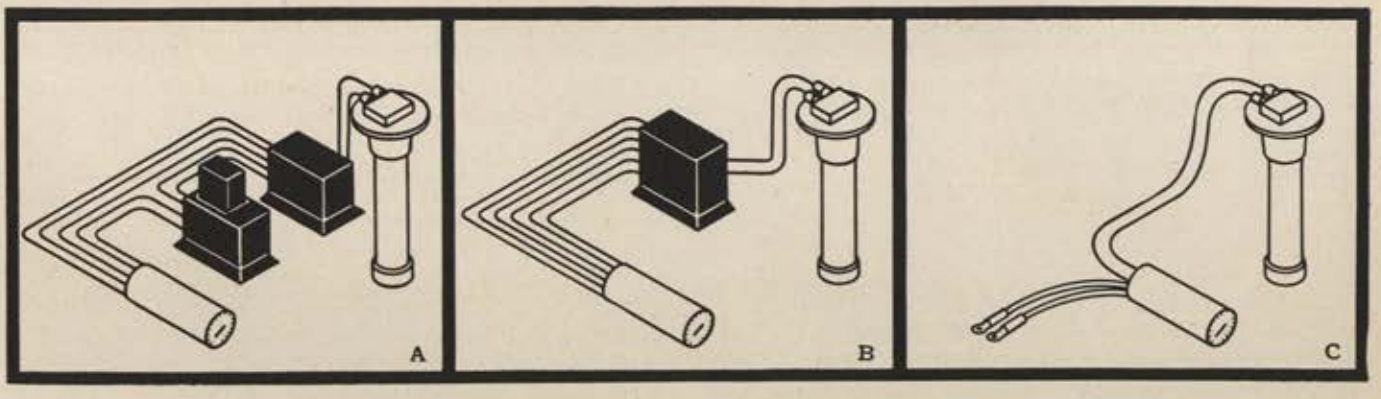
Since no calibration is required, all units designed for the same aircraft are interchangeable. Avien units are now all "shelf items."

The Two-Unit Gage eliminates three drawbacks of field calibration:

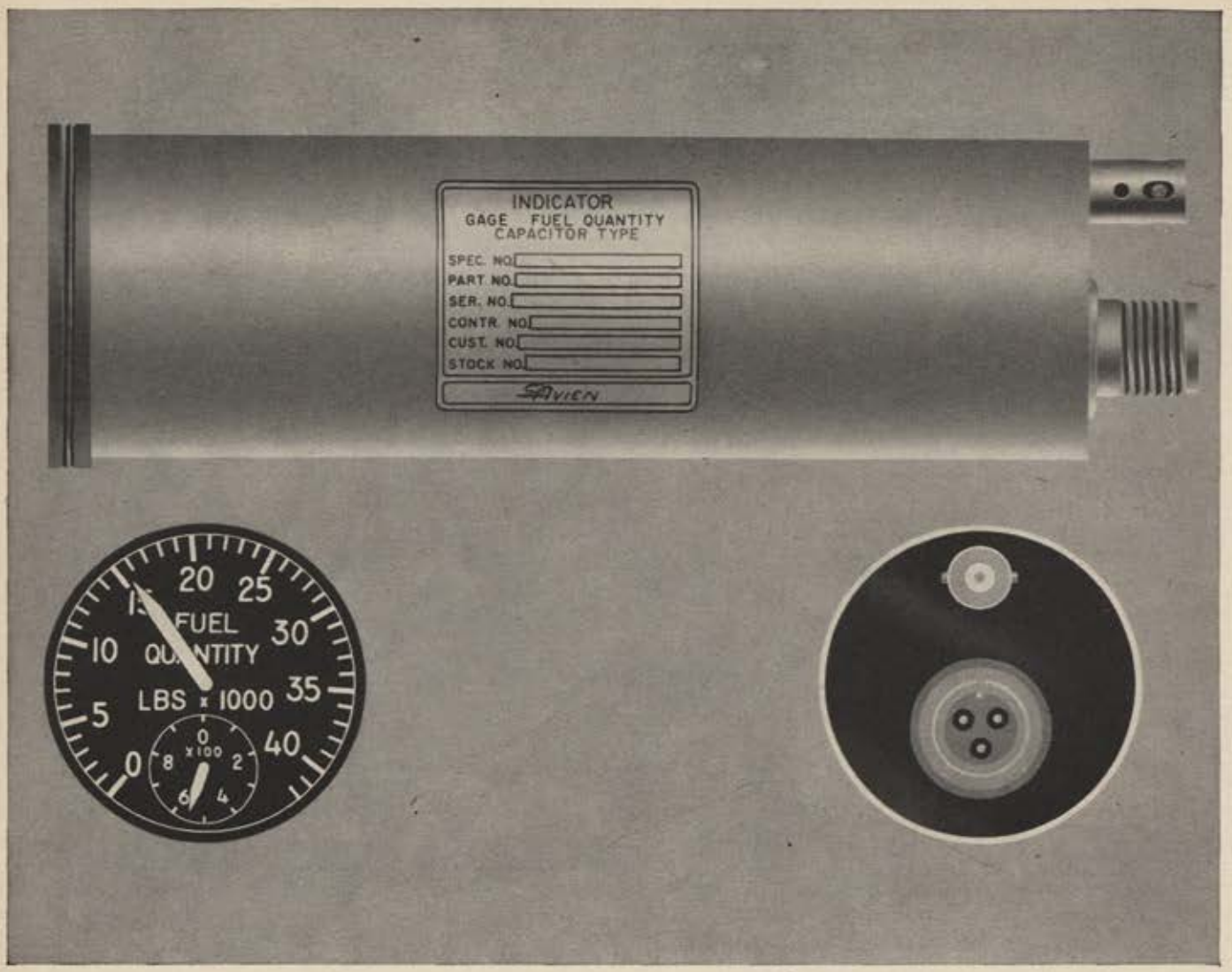
1. *No trained personnel needed.* To err is human, but human fallibility is built *out* of the Two-Unit Gage.

2. *No specialized test equipment needed.* No precision condensers, bridges or calibration boxes required.

3. *No calibration instruction or data needed.* Have you ever run this "paper chase"? By the time you've tracked the information down, it's often obsolete. No more of that!



Fuel gaging progress: Early gaging system (A) had four units. The 1952 system (B) incorporated bridge and amplifier into a single unit, reduced weight almost 15%. Avien's Two-Unit Fuel Gage, now being introduced (C) repackages the system with further miniaturization of components, this time reducing weight by 50%.



Full scale drawing of Avien's Two-Unit Fuel Gage: Front, side and back views of the small-size indicator-amplifier unit. "Plug-in, plug-out" simplicity is the keynote.

Savings all along the line

Simplification means less weight. In the Two-Unit Fuel Gage, the basic system is reduced in weight by 50%.

There are cost savings, too. Less time is spent in installing the Two-Unit Gage. Less wiring and connectors are needed. Less maintenance is required, because there are fewer components to maintain. Trouble-shooting becomes easier, because there are fewer units to cause trouble. And fewer parts must be stocked for replacement and repairs.

Fuel gaging AND fuel management

Avien's Two-Unit system retains an important feature of the former gage. Additional functions for fuel management can be integrated into the basic gage.

This means that simulators, level switches, balancing controls, totalizing equipment, etc., can be hooked up to the basic system — and with even less difficulty.

Another interesting aspect is that the Two-Unit Gage is designed to take advantage of recent improvements in mechanical and electronic design — the new lightweight coaxial cable, the new miniature A N connectors, and Avien's new lightweight tank units.

Now scheduled for production

The Avien Two-Unit Fuel Gage is now available to meet your procurement schedules.

The indicator is available in either large or small sizes, with all varieties of dial configurations.

Every month, Avien produces over ten thousand major instrument components for the aviation industry.

We believe that Avien's Two-Unit Gage will contribute to the obsolescence of many earlier systems, including our own.

For further information write or call us.

Avien

AVIATION ENGINEERING DIVISION

AVIEN-KNICKERBOCKER, INC.

58-15 NORTHERN BLVD., WOODSIDE, L. I., N.Y.

FOR
NORTH AMERICAN'S F-86D

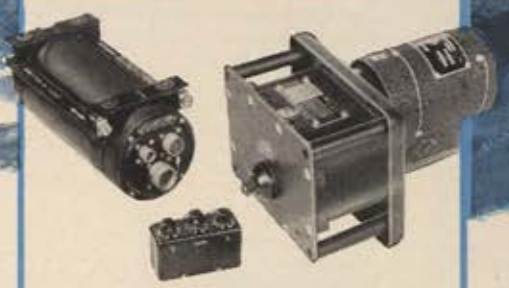
SMOOTH FLIGHTS

AT SUPERSONIC SPEEDS

A nine-ton bullet hurtling through space at 10 miles per minute takes some handling. That's why the North American F-86D uses Lear controls.

Smoothly and automatically the Lear designed F-5 Autopilot ... the lightest weight production Autopilot in use in jet fighters ... puts this fast jet plane through her paces. Lear Damping Controls augment the plane's natural stability and allow smoother flight over the plane's air-speed range. Lear Vertical Gyro Indicator Systems instantly and accurately present a true picture of the plane's attitude.

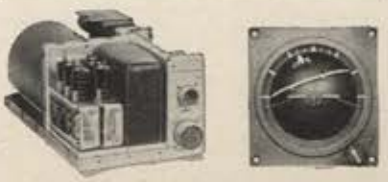
In jet fighters, bombers, transports and airliners Lear Control and Actuating Systems and Components are making flight smoother, faster, more economical —and safer.



LEAR DAMPING CONTROL SYSTEM

... anticipates and measures rate of deviation from established heading and applies corrective force to control system through Lear Servo-Actuator.

AUTOMATIC PILOTS



VERTICAL GYRO SYSTEMS

OTHER INSTRUMENT PRODUCTS:

AUTOMATIC APPROACH COUPLERS AND FLIGHT CONTROLS • CONTROL MECHANISM GYROS • REMOTE READING GYRO INSTRUMENTS • RATE GYROS MISSILE FLIGHT CONTROLS

Lear

Advancing the Frontiers of Flight

GRAND RAPIDS DIVISION

110 IONIA AVE., N.W., GRAND RAPIDS 2, MICHIGAN

LEAR-ROMEC DIVISION, ELYRIA, OHIO
LEARCAL DIVISION, LOS ANGELES, CALIFORNIA
LEAR, INCORPORATED, GRAND RAPIDS 2, MICHIGAN

AIRPOWER IN THE NEWS

BY JAKE CULPEPPER

TRANSITION — Base Theater at MacDill AFB, Fla. now has 3-D screen and modification equipment. . . . News and music will be piped into dining halls at Bergstrom AFB, Tex., in the future. . . . Air chaplains are now officially known as wing, base, or staff chaplains. . . . Practice of addressing letters to "commanding officer" and "commanding general" has been discontinued. They should go to "commander." . . . New quarters for bachelor NCOs have been opened at Scott AFB, Ill. . . . 306th Medium Bomb Wing, which was first operational unit to be equipped with B-47s, left MacDill AFB, Fla., last month for a ninety day period of training in UK.

TRIBUTE — Rapid City AFB, S. D., will be renamed in honor of Brig. Gen. Richard E. Ellsworth, killed in B-36 crash near St. Johns, Newfoundland, on March 18, 1953. . . . A Convair RB-36 was christened "Matthew H. Brady" at recent Carswell AFB, Tex., ceremonies honoring the Civil War photographer. . . . AF's Exceptional Service Award has been given posthumously to Donald F. Warner, GE engineer who, early in WW II, designed and developed America's first turbojet engine. . . . AF Dance Band was featured in recent tribute to Glenn Miller on the TV show, "You Asked For It."

HUMAN ELEMENT — Airmen no longer are able to reenlist overseas following ZI separation. . . . Total of 228 members of 1953 graduating class of Naval Academy have been appointed AF second lieutenants. . . . During FY '53, 673 military and thirty-two civilian personnel of AF attended the Manpower Management Course at George Washington University, Washington, D. C. Military consisted of thirteen generals, 350 colonels, and 310 lieutenant colonels. Civilians were GS-13 or higher. . . . Return to the one-year service requirement for a Good Conduct Medal has been announced by Army and AF. . . . General Jimmy Doolittle has accepted chairmanship of United Defense Fund which supports USO and five other member agencies set up to provide recreation for servicemen.

THE PLANES — All distance and endurance records for jet aircraft have been broken by a Boeing B-47 Stratojet bomber. New marks were established by a non-stop flight which covered slightly more than 12,000 miles in twenty-four hours through use of in-flight refueling. Flight, made lately by a test crew from Edwards AFB, Calif., was over the southern and western parts of US. . . . A D-7 Caterpillar tractor weighing almost fifteen tons has been flown from Westover AFB, Mass., to Thule AB, Greenland, aboard a Douglas C-124 Globemaster. C-124 also has landed a 16,000 pound bulldozer on runway of T-3, floating ice island near North Pole. . . . Transport crews of the 456th Troop Carrier Wing in recent tests at Miami International Airport set new altitude and endurance records for the Fairchild C-119. One plane climbed to 30,900 feet; another without auxiliary fuel cells landed with two hours' fuel supply after remaining aloft for twenty hours and five minutes.

THE BASES — The 3600th Air Demonstration Flight is now being formed at Luke AFB, Ariz. . . . Mather AFB, Calif., presented three one-act plays by Noel Coward during past few weeks. Proceeds will be used for the new Teenagers' Club. . . . Col. Robert B. Davenport is new commander of Goodfellow AFB, Tex. . . . Gary AFB, Tex., helicopters visited twenty-six civilian airports and military installations on Armed Forces Day.

(Continued on following page)

. . . The "Scottsmen," barbershop quartet from Scott AFB., Ill., are winners of 1952 Great Lakes Championship. . . . A new aerial port operations school, conducted at Donaldson AFB., S. C., has trained some 120 men since its start early this year.

CUTBACKS — Bases planned by AF that were victims of the budget ax include: Portsmouth-Newington Air Base, N. H.; Clinton-Sherman Air Base, Okla.; Drane Field, Fla.; Galveston Municipal Airport, Tex.; Godman AFB., Ky.; Raleigh-Durham Municipal Airport, N. C.; Seymour-Johnson Field, N. C.; Houma Naval Air Station, La.; Majors Field, Tex.; Palmdale-Los Angeles County Airport, S. C.; Selman Field, Monroe, La.; and Grenier AFB, N. H. (plans for MATS facilities dropped, but ADC elements will remain).

SAFETY FIRST — For the third straight year, USAF has received National Safety Council's highest award for outstanding performance in ground safety operations world-wide. The 1952 "Award of Honor" was recently presented to General Twining by N. H. Dearborn, president of the Council. . . . A safety program to conserve manpower and reduce costs coming from automobile accidents is underway in Tactical Air Command.

OFF THE PRESSES — Basic Doctrine of USAF is new AF Manual on employment of air forces. It is an unclassified, authoritative discussion of the role of the AF as an instrument of national policy. . . . Off We Go is a new cartoon-caption, humorous AF memory book on early stages of the making of an airman. . . . Using Community Assistance to Promote Individualized Personnel Development is an AF paper listing suggestions for bringing AF personnel and civilians more closely together.

STAFF — General officers scheduled to retire in near future are: Maj. Gen. Alden R. Crawford, Director of Materiel, J-4, US European Command; Brig. Gen. Robert C. Oliver, CG, 59th Air Depot Wing, USAFE; Brig. Gen. Ralph A. Snavely, Chief of MAAG, Denmark; Brig. Gen. Wilfred H. Hardy, CG, 80th Air Depot Wing, North Africa; and Brig. Gen. Clyde K. Rich, Deputy CG, 12th AF, USAFE. New assignments include: Maj. Gen. James W. Spry, Materiel Director of US European Command; Brig. Gen. Joseph H. Hopkins, Commander of MATS' Atlantic Division at Westover AFB, Mass.; Maj. Gen. Robert W. Burns, Assistant Vice Chief of Staff at USAF Hq.; Maj. Gen. John A. Samford, USAF Assistant DCS/Operations; Brig. Gen. Charles Y. Banfill, Sp. Asst. to Dir. of Intelligence; Brig. Gen. Richard H. Carmichael, Chief of FEAF's Bomber Command; Brig. Gen. William P. Fisher, SAC Inspector General; Brig. Gen. William H. Blanchard, Deputy Director of Operations, SAC; Brig. Gen. Ernest K. Warburton, Chief of Staff, TAC; Brig. Gen. Troup Miller, Commander of 59th Air Depot Wing, England; Brig. Gen. Daniel W. Jenkins, Chief of Staff, A-3, 12th AF, USAFE; Brig. Gen. Richard A. Grussendorf, CG, 10th AF, Selfridge AFB, Mich.; Brig. Gen. Edward J. Kendricks, Commander of School of Aviation Medicine, Randolph AFB, Tex.; Capt. H. W. Gordon, Jr., USN, Chief of National Organizations Branch, Dept. of Defense OPI; Col. August F. Taute, USAF, Chief of US Military Assistance Advisory Group, Lima, Peru.

GOODWILL — More than 3,000 men from Connally AFB, Tex., joined in the rescue operations in recent Waco tornado. . . . A check for $5,000 has been donated by military and civilian personnel of Robins AFB, Ga., to be used for emergency relief of those left homeless by tornado which struck their base recently.

ANNOUNCING

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An Editorial

Backdrop for Airpower Drama

A realistic assessment of the capabilities of our enemy and the nature of his weapons is the only sensible prelude to any defense problem

By Arthur F. Kelly, PRESIDENT, AIR FORCE ASSOCIATION

Not long ago, in the heart of the old West, I saw the fury of the unleashed atom. I felt a power greater than any the world has known since creation itself.

As in a fevered dream, I saw great cities swept away in death and devastation.

Then, in the wink of an eye, this nightmare became reality and my mind returned to Yucca Flat, Nevada, and the continental test program of the Atomic Energy Commission and the Department of Defense.

Standing with a tense knot of observers a little more than seven miles from ground zero, I had adjusted my dark glasses for the last time. The measured cadence of the loudspeaker had droned against my ears. "Five seconds . . . four seconds . . ."

Each second seemed an eternity—and the nightmare began. I thought of the Hiroshima and Nagasaki of yesterday—and of those that tomorrow may bring. I thought of the men who had created this weapon and were now enlarging its already fearful power in the prayerful hope that it would never again be needed.

I had seen the pictures and read accounts of the great fireball and the giant mushroom. But nothing had prepared me for the appalling flash that pierced my glasses with the light of a thousand suns, the heat which scorched my face, and the shock-wave that punched my chest so hard I staggered.

In a frenzied reflex action, our entire group threw up their hands to ward off the heat. I heard a dozen men murmur aloud, "My God!" And we were more than seven miles away from the blast.

Awesome as this explosion was, a carefully controlled desert test cannot be compared with what a more powerful bomb, exploded without warning, would do to a crowded city. For its initial deadly effects would then be compounded by panic, fire, and shortages of everything needed to succor the wounded and keep a city alive.

To assume that this can happen here is no longer a matter of academic, theoretical discussion. The latest confirmation I have seen on that score is a summary of a report made to the Secretary of Defense by a citizens' committee headed by Dr. Mervin J. Kelly, President of Bell Telephone Laboratories. Among other things, the report said,

". . . the Soviet Union is militarily capable today of a surprise attack on the United States which could cause large loss of life and major property damage and possibly temporarily lessen the capability of the US to support a major war effort."

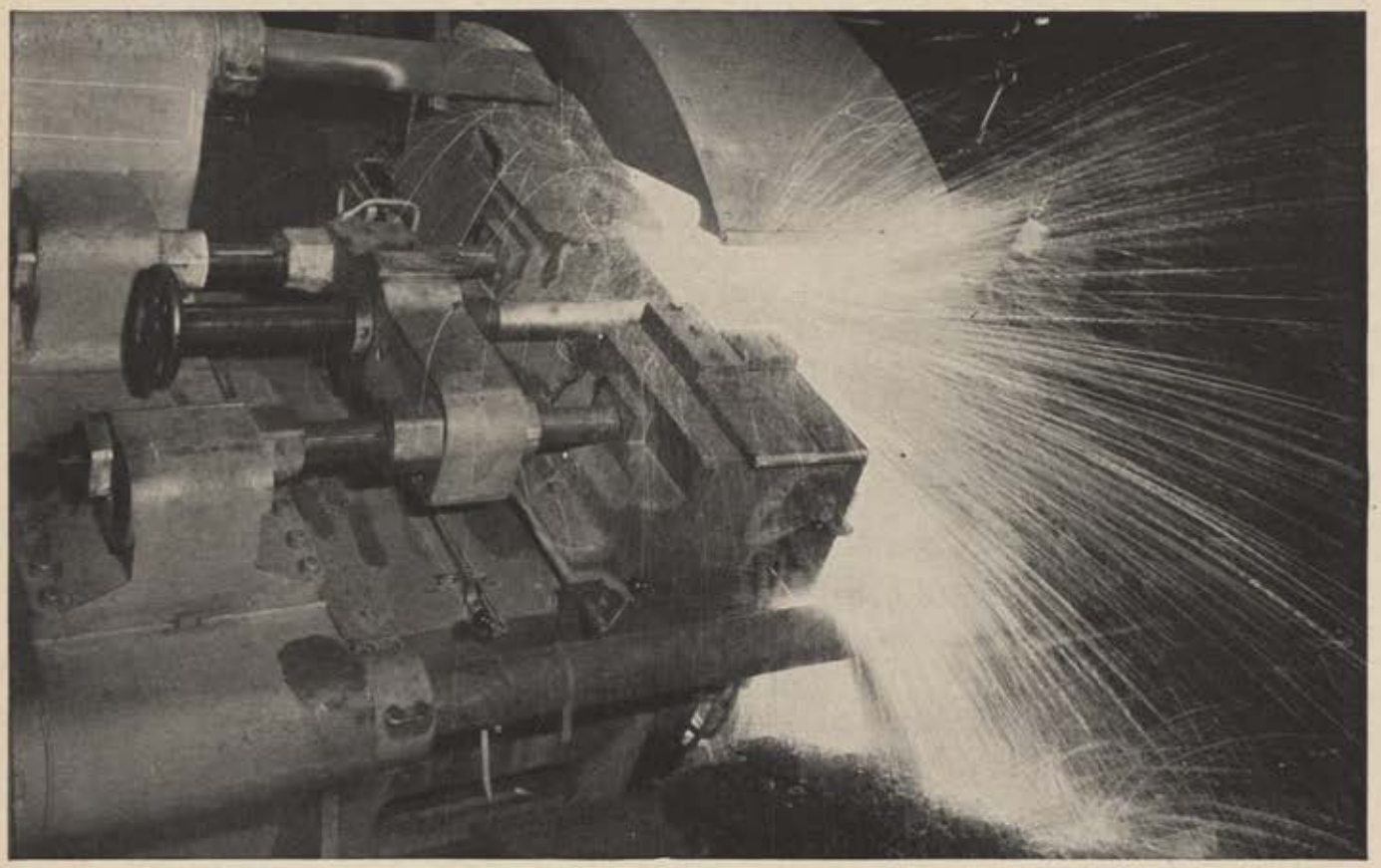
The key word in this excerpt is "today"—not tomorrow, not next year, not ten years from now, but "today."

It is against such a backdrop, then, that the drama of the Air Force budget, currently being enacted on Capitol Hill, should be played. Unfortunately, it isn't. As civilians and businessmen, we of Air Force Association hold no brief for waste and inefficiency. We know better than most how ill this country can afford them. Are we alarmists, then, when we realistically assess the capabilities of our enemy and the nature of the weapons he can wield against us? I think not.

Failure to understand fully the threat that dangles above us like the sword of Damocles is the road to complacency, inertia, weakness, and, almost inevitably, destruction.

It is against the backdrop of the fireball and the mushroom cloud, therefore, that I heartily recommend you read and ponder the courageous testimony of General Vandenberg, on page 25 of this issue.—End

ANOTHER REASON ALLISON LEADS IN THE AIR



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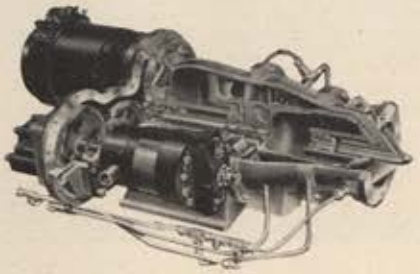

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° ° °

Forty-five million people flew the world's airlines in 1952 over distances totaling more than a billion miles.

° ° °

International airlines serving the US carried 1,300,000 passengers to and from US cities during 1952—approximately 300,000 more persons than were carried by steamship.

° ° °

At the Port of New York last year there were 28,600 overseas aircraft arrivals and departures.

° ° °

Great-grandmother Zaddie Bunker, who got her pilot's license

at 65, took four generations for a ride in California. Up with her went her daughter, granddaughter, and great-grandson.

° ° °

President Eisenhower has been a pilot for 14 years. He learned to fly in 1939, and was checked out in a PT-13.

° ° °

They're planting Christmas trees around the airport at Parkersburg, W. Va. Plans call for 100,000 Scotch pine and spruce seedlings that can later be sold to boost airport revenues.

° ° °

And now the lightplane is helping to forecast the amount of stream run off that can be expected when mountain snows begin to melt. Aerial pictures of snow markers in high mountainous areas provide a quick and inexpensive measurement of snow deposits.

° ° °

When a racing pigeon with wing trouble made a forced land-

ing at Norfolk Municipal Airport, Capital Airlines came to the rescue and flew it back to its home base in Newport News.

° ° °

The first official speed record for aircraft was made by a French aviator in 1906. He hung up a world mark of 25.6 miles per hour. Today the unofficial record is held by American test pilot Bill Bridgeman, who has flown at 1,238 mph.

° ° °

There are 18 times as many licensed civil pilots in the US as there were just before World War II.

By Wilfred Owen

PEOPLE

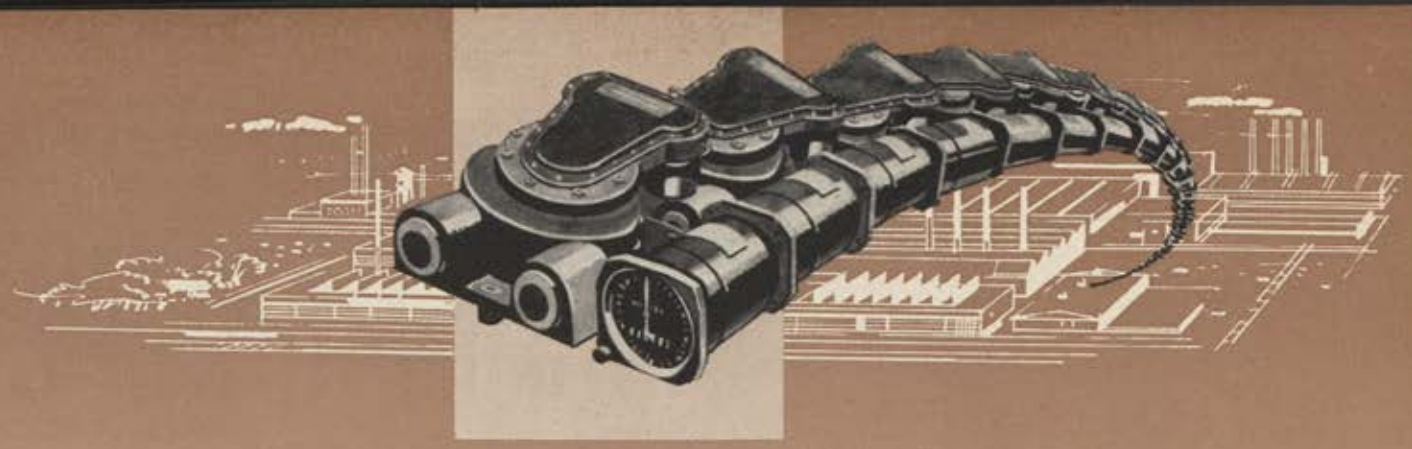
IN THE AIR NEWS

Lt. Col. George I. Ruddell, an F-86 pilot with the 51st Fighter-Interceptor Wing in Korea, who has become jet ace number 31. His score includes six MIG kills and one Red jet damaged. The Eugene, Ore., flyer made his latest kill during the record week in May when F-86 pilots got 55 MIGs while losing one '86 in air-to-air combat.

Jacqueline Cochran, America's only woman jet pilot and first woman to break the sound barrier, who recently set a mark of 670 mph over a 15-km straightaway near Muroc, Calif. She flew a Canadair-built F-86E. A few weeks earlier she'd set a new record of 652 mph around a 100-km closed course. Wartime head of the WASPs, she's on AFA's Membership Committee.

Maj. J. Slade Nash, who was recently awarded the annual Distinguished Membership of the Jet Pioneers Assn., made up of civilian and AF members of the group which developed and made America's first jet engine and aircraft. Last fall Nash set a world's speed record of 698.5 mph, flying an F-86D Sabre over Salton Sea, Calif.

Maj. Roy W. Hall, Brookline, Mass., who's believed to be the only American to fly combat in three wars. He piloted Spads and French-built bombers in WW I and took part in air evac from Okinawa in WW II. Now in Japan, he recently accompanied a B-29 crew on a Superfort strike on a troop and supply center in North Korea.



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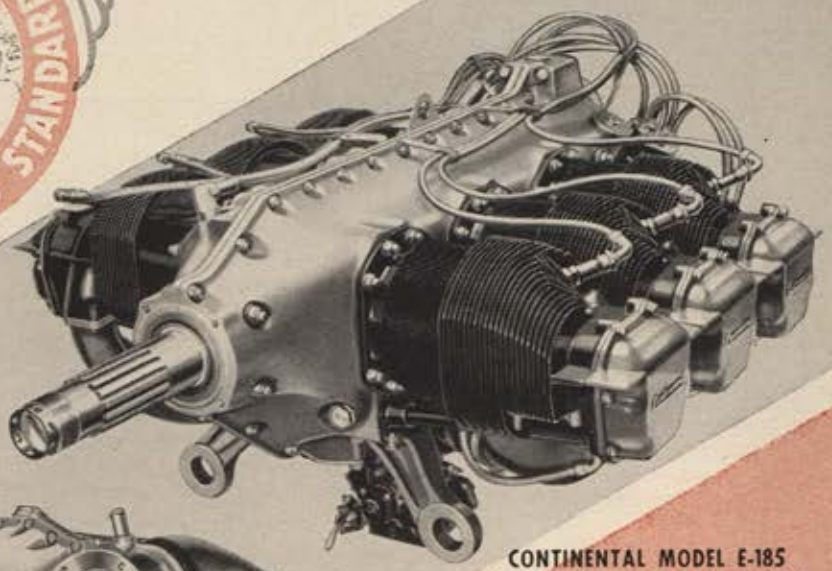

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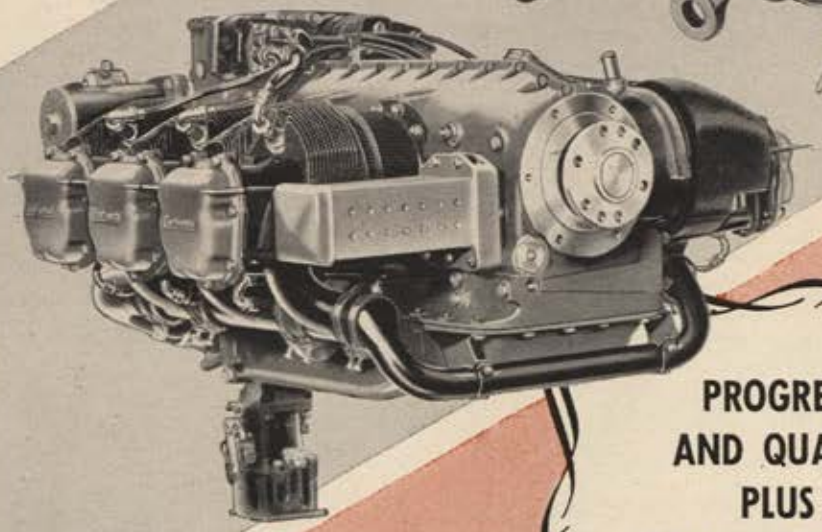

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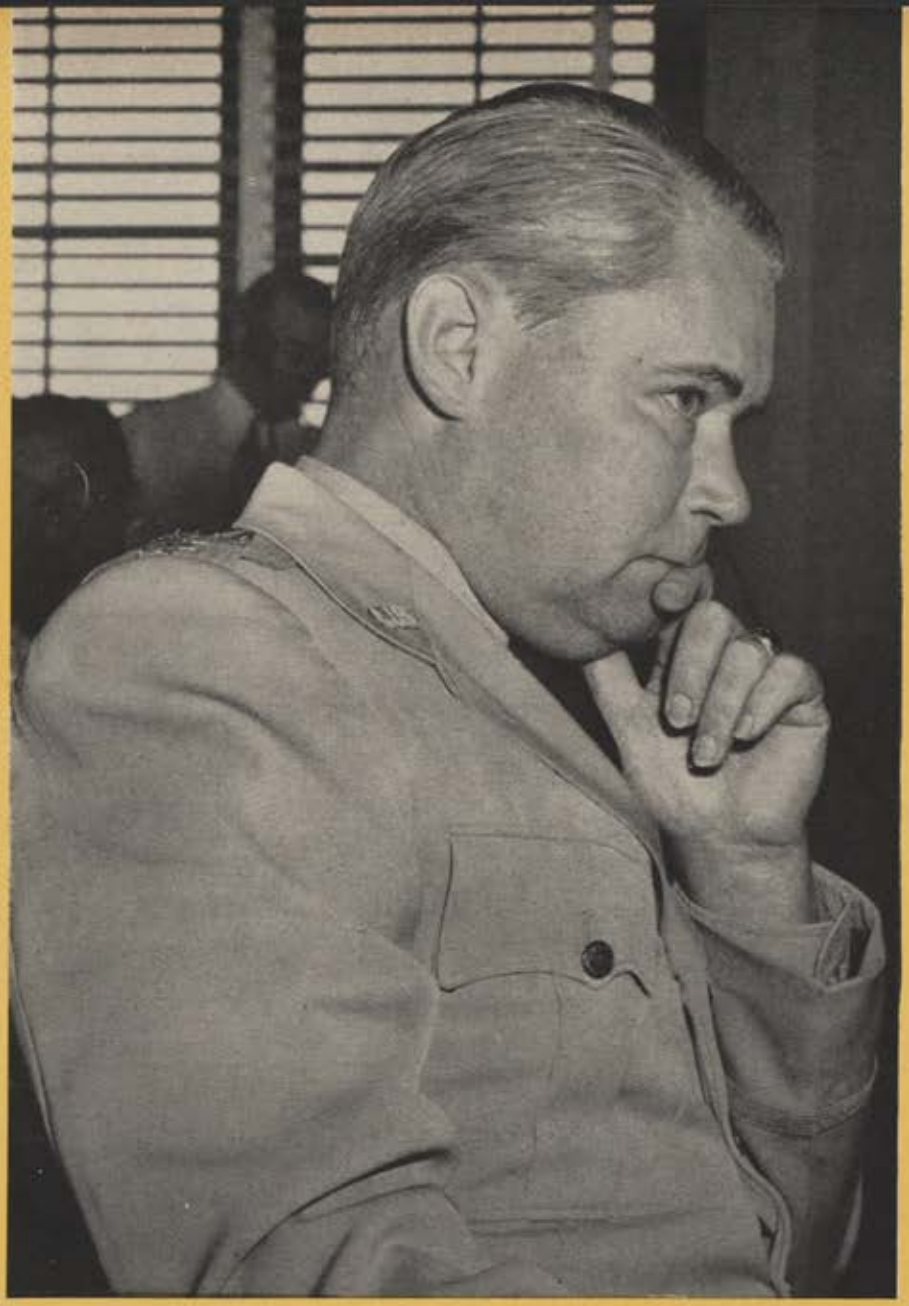


A pause for reflection during the three days of grueling questioning.

VALEDICTORY OF THE CHIEF

Testimony of the Chief of Staff of the United States Air Force before the Senate Appropriations Committee on the 1954 defense budget

By General Hoyt S. Vandenberg

ON MARCH 6, 1953, I appeared before the Armed Forces Subcommittee of the Appropriations Committee of the House of Representatives. The purpose of my appearance there was to introduce the Air Force budget for the Fiscal Year 1954. The budget introduced at that time was designed to continue the build-up toward the 143-wing Air Force goal which had been fixed by the Joint Chiefs of Staff, approved by the Department of Defense, and sanctioned by Congressional action.

The statement I made before the House Committee included a detailed review of enemy and friendly air strength. It provided a background of information which served to explain why an Air Force of at least 143 wings is an essential component of our world-wide resistance to Communist power. It stated that an Air Force of no less than 143 wings is the minimum force which can assure the ability of this Nation to resist successfully an all-out Communist attack. (See page 27—The Editors.)

In order to make my formal statement as brief as possible I have cast it in the form of answers to questions. I am aware that further elaboration may be necessary in some cases to clarify these issues. (In this presentation, the formal statement is followed, as indicated, by a few of the

(Continued on the following page)

questions raised by Senators and answered by General Vandenberg at the hearing—The Editors.)

Q. What is the origin of the 143-wing program for the Air Force? When and by whom was it established and approved?

A. Four principal events were instrumental in bringing about the formulation of the 143-wing Air Force:

- The first was the exploding of an atomic bomb by the Soviet Union in September 1949.
- The second was the Communist invasion of South Korea in June 1950, followed by the entrance of the Chinese Communist armies into Korea in November 1950—signifying the Communist intention to use armed might.
- Third was the commitment of United States forces to assist in the defense of Western Europe.
- Fourth, the calculation by the Joint Chiefs of Staff, based on our best available intelligence, that by the middle of 1954 the Soviet Union would be able to launch an all-out atomic attack against the United States.

The decision by the Joint Chiefs of Staff to recommend a 143-wing Air Force was not lightly made. Actually, the Air Force requested consideration of a 155-wing force consisting of 138 combat wings and seventeen airlift wings. Although the Air Force requested a force of 155 wings, the Joint Chiefs agreed to recommend only 143 wings.

In saying that the Joint Chiefs agreed, I am saying that the Chief of Staff of the Army, the Chief of Naval Operations, and I, as Chief of Staff of the Air Force, agreed to the 143-wing plan. All the arguments against, as well as for, an Air Force of this size were presented and considered by the Joint Chiefs of Staff before a decision was reached. I want to emphasize the fact that the 143-wing Air Force was agreed to by all the services as necessary to the security of the United States.

There was a detailed analysis of the tasks and missions charged to the Air Force and a careful evaluation of the forces which would oppose us in the event of a general war in 1954 or thereafter.

The year 1954, I repeat, was considered critical principally because of the estimate that the Soviet Union will, by that time, have a stockpile of atomic weapons sufficient to mount a devastating attack on United States military installations, industry, and population centers.

The size and composition of the proposed force was based on an examination of all factors such as the build-up of our own atomic stockpile, the improvements to be expected in our own weapons and in the enemy's weapons, and the expected size, nature, and disposition of Communist military forces. There have been no significant or unexpected changes in weapons development or in forces since the decision was made.

Q. Have there been changes in the strategic situation that indicate the desirability of reducing the 143-wing program or delaying the date by which it is achieved?

A. There has been very little change in the strategic situation. There are many indications, however, that Soviet military strength, and particularly Soviet air strength, has increased tremendously in recent years. The priority given by the Kremlin to the build-up of Communist air force has achieved results.

Q. Did the Air Force or its Chief of Staff approve the reduction of the Air Force to an interim goal of 120 wings?

A. The Air Force did not, and I did not.

Q. Have the Joint Chiefs of Staff approved a reduction of the Air Force program from 143 wings to 120 wings, either on an interim or any other basis?

A. They have not. As recently as March 1953 the Joint Chiefs of Staff stated to the Secretary of Defense that any reduction of the program of 143 wings to be attained as soon as practicable after FY 1954 would increase the risk to national security beyond the dictates of national prudence.

Q. Are there any strategic factors which either reduce the Soviet threat below what it was when the 143-wing program was established or which reduced the Air Force required to meet that threat?

A. There are no such factors known to me. I know of no change in the strategy which the 143-wing Air Force was designed to enable us to carry out. Nor do I know of any alternate strategy designed to protect the security of the United States and its people which would not require an equal or greater Air Force than the 143-wing force toward which we have been building for two years.

Q. Would it have been possible, in any case, for the Air Force to complete the 143-wing program by December 1955?

A. Six months ago our program of expansion and modernization was progressing in an orderly manner and there was no reason to doubt that we could attain 143 modern wings before December 1955. Base construction had already become a more serious bottleneck than aircraft procurement, but the solutions were in sight if we could have carried them out.

Q. Aside from the proposed $5.1 billion budget reduction, has anything happened during the past several months to delay the progress of the Air Force toward its goals?

A. Yes. Much of the confusion as to the effect of the budget reduction arises from the fact that a great many other limitations have also been imposed upon the Air Force. The effect of all these limitations must be considered in order to fully comprehend the impact of the administrative and fiscal actions of the past few months. Five principal types of restrictions have been imposed which have in one way or another weighed heavily upon Air Force progress.

First—limitations on base construction. Early in February a restriction was imposed by the Office of the Secretary of Defense which prohibited the letting of all new construction contracts pending another review and clearance by that office. This action caused a three months' deferment in contracts amounting to more than a half

(Continued on page 28)

A CLEAR AND PRESENT DANGER

Excerpts from General Vandenberg's testimony before the Armed Services Subcommittee of the House Appropriations Committee, March 6, 1953

EVER SINCE World War II it has been difficult to overcome skepticism about Communist industrial and military progress. The possibility of early success in atomic bomb manufacture by the USSR was recognized as early as 1947.

Nevertheless, news of the first explosion in Russia caused great surprise. During the years that followed World War II the Air Force and other agencies commented often on Soviet aircraft production and particularly on the high performance jet fighters they were building. Yet news of the MIG-15 in Korea seemed to cause more surprise.

I venture to say that most Americans would be surprised even now to learn that the Soviets have already produced many thousand MIG-15s. They are still producing these formidable fighters at a tremendous rate. Lately we of the Air Force have been concerned about the rising number of Soviet twin jet light bombers known as IL-28s. Several hundred of these fast bombers have been produced and they present a formidable threat to our overseas positions and to our overseas allies. These jet light bombers have already been introduced into the Chinese Air Force and the number is growing rapidly. . . .

In addition to the Chinese Air Force of more than 2,000 aircraft, the Russians have in the Far East a total of more than 5,000 tactical aircraft. At the other end of Russia there is a much larger number of Soviet tactical aircraft, most of which are near the NATO area. The significance of the large numbers of Soviet tactical aircraft facing Western Europe is apparent when we consider operating radii of many of these aircraft will permit them to cover most of that area. Communist MIGs, for instance, can reach Denmark and the low countries as well as northern Italy, Yugoslavia, Greece, and western Turkey. Their jet light bombers can cover England, France, Italy, Turkey, and most of the Mediterranean. The large numbers of these aircraft, together with high performance capabilities and the excellent base system already prepared for them, constitute as great a menace to the NATO nations as the Russian ground forces, and can be more rapidly applied.

The flying time of a jet bomber from inside the Iron Curtain across most of Western Europe and the Mediterranean is just a little more than one hour.

As a matter of passing interest, this is one of the reasons why the Air Force was so anxious to get strategic bases in North Africa, near the Atlantic and beyond the range of most of the Soviet Air Force.

Another important element of the Soviet Air Force is the medium bomber force. It has the capability of carrying atomic bombs for a distance of 2,000 miles and returning to its bases. It can also deliver the atomic bomb through staging bases already prepared in Siberia and northern Russia to any target in the United States on a one-way mission.

Whether the Soviets are yet completely prepared to commit this force in a full-scale attack against the United States we do not know. But we do know that these planes can reach us. Note that, while most of the Soviet strategic Air Force is located in Europe, many are in the far-eastern area, despite the fact they are not now using them in the Korean war. The number of strategic bombers they have in the Far East is greater than the number we have in that theater at the present time.

The numbers of Soviet aircraft now deployed east and west are further evidence of heavy Soviet aircraft production during recent years. You will recall from my briefing last year that the Soviets built up this great preponderance of aircraft strength, far in excess of our own, over the years of 1947-48-49. That was a period when aircraft production in this country was severely restricted by limitations on the Air Force budget. The Soviets, however, are not content to rest on the lead they established during the years. Their production continues to increase.

The Soviets are moving rapidly toward a jet-powered air force and they are neglecting none of their basic elements of combat airpower—air defense, long-range bombardment, and offensive tactical power. In the last—offensive tactical power—the Soviets, with their new twin-jet bombers, are achieving a performance which is as great an advance over the old piston types as the MIG-15 was an advance over their old piston fighters.

The MIG-15, despite warnings, was a great surprise to most Americans. But the MIG-15 was a defensive airplane and has never been used against us offensively. The jet light bomber, on the other hand, represents as great a technical advance as the MIG-15 and it is far more dangerous to us since it is designed for offensive use against our planes on the ground, our bases, our troops, our support, and supply systems.

The most significant fact concerning the Soviet buildup over the past year is simply that it has continued substantially as expected. . . .

In summary, the strategy which your Air Force can and must follow in any major war is first: to provide all possible protection for the people of the United States, for the military forces of the United States, and for those vital installations and industries which are the basis of our strength. Second: to provide all possible aid and protection for allied nations to whom our assistance is pledged and whose assistance will help to bring us victory in any world struggle. Third: through carefully coordinated attacks by well deployed forces of long-range bombers to deliver powerful weapons against those forces and installations within the country of the enemy that are most vital to his hope of success.

billion dollars and a consequent slippage of that portion of our base program.

Another directive later in February placed a freeze on advertising for bids on construction projects. Of construction funds appropriated by the Congress and again certified as necessary by the Air Force, over half a billion dollars has not been released.

Second—personnel limitations. Early in February further hiring to meet new civilian personnel requirements generated by the Air Force build-up was prohibited, and on March 9 the Office of the Secretary of Defense required the Air Force to reduce its personnel by about 10,000.

Limitations on civilian personnel still in effect cause us to be short 93,000 of the number now required for the build-up toward 143 wings. More recently a ceiling has been placed on military personnel which requires the Air Force to reduce its uniformed personnel to a level of 20,000 below present strength within two years, despite the fact that we will organize and man new wings during that period.

Third—limitations on requests for appropriations. Requests for new appropriations for Fiscal Year 1954 are to be limited to $11.7 billion. This is the figure which receives the greatest amount of attention because it is the most readily understood. However, statements have recently been made by the Department of Defense that the Air Force will, after all, buy the combat planes for a 143-wing force—but without the other elements of such a force. If a plan such as this is to be carried out, some further adjustment of the budget figure will be necessary.

This decision to purchase the combat aircraft for 143 wings in a program limited to 120 wings, plus the modernization of the Air National Guard and Air Reserve, leaves most of these airplanes without units, people or bases, and the only alternative is to store them.

Fourth—limitations on expenditures. Money to be paid out next year, mostly from appropriations of previous years, has been estimated by the Department of Defense not to exceed $15.1 billion. Now we believe that an expenditure limitation above $16 billion is more realistic.

Very recently, however, other statements from the Office of the Secretary of Defense have indicated that the expenditure figure was supposed to be elastic, and that it may be changed. Obviously, a change will be necessary if more combat airplanes than those required for a 120-wing force are to be purchased as has recently been indicated.

Fifth—limitations on force levels. The strength of an Air Force is generally expressed in terms of wings. We have been directed to plan and to program toward a so-called "interim" goal of 120 wings instead of the previously approved goal of 143 wings.

I must apologize if the picture I have presented appears somewhat confused. The numerous and sometimes contradictory administrative and fiscal actions of the past few months have caused the greatest amount of uncertainty and confusion in the Air Force and among allied activities that has existed since the demobilization after World War II.

Q. What has been the effect on the Air Force program of the administrative and fiscal actions of the past few months?

A. What disturbs me most about these actions is the fact that a modern Air Force, being composed of many interdependent parts, can be seriously weakened through tampering with any of those parts.

An Air Force consists of three principal elements—people, planes, and bases. The people include many kinds of specialists and most of these require extensive training. The planes are of many types and they all require extensive support in the form of spares, repairs, and auxiliary equipment. Bases also are of several types in a variety of locations, and most of them require a long time to build.

A shortage in any one of these many elements which go to make up a modern Air Force may render the remainder of that force ineffective. To keep everything in gear and to enable the entire program to move forward on schedule and with economy requires a consistent and orderly progression to established goals.

Great waste occurs when a set-back in one aspect of the program causes a delay in all the other aspects. Viewed in this light, it should be clear that any one major element of an Air Force program is just as important as any other and that so-called supporting elements cannot be sacrificed without crippling combat strength.

For example, it is possible to train mechanics after they are assigned to combat units instead of in schools where they ought to be trained. To do so will produce a paper "saving" of personnel at no loss in number to the combat unit. But it is an inefficient procedure and it actually lowers combat strength instead of increasing it, since it constitutes a drain on the combat capability of a unit which should be ready to go. Also, it is possible to complete the training of pilots after they have been assigned to combat units, but this again is wasteful and dangerously deceptive, because it means that the combat units are never quite ready for combat.

It is relatively easy to make adjustments of this character in an effort to save money but such adjustments can only cause waste and a further postponement of the goal.

At the present time the principal limitation is the latest manpower ceiling placed upon the Air Force which compels us to make reductions in supporting units that are just as vital to the combat elements as the roots of a tree are vital to its branches. Program schedules such as training rates and flying hours have been adjusted downward because of limitations in bases and manpower. For example, the pilot training rate will be held at 7,200 pilots per year instead of rising to 12,000.

Because of reductions in the manpower of supporting units and reductions in funds for maintenance and operations, the Air Force will fly fewer hours next year, with a greater number of wings, than it is flying this year. This inevitably means a reduction in maintenance standards and in standards of air crew skill and experience.

In addition, there will be a heavy reduction in the total airlift which was planned to be available to all the armed forces of the United States.

The 120-wing force, under the new program, will not be as well supported as the 143-wing force under the old program.

Q. What will be the effect of the recent budgetary and fiscal actions on the planned combat strength of the Air Force?

A. The strategic air forces will lose combat wings, the tactical air forces will lose combat wings, and there will be a reduction in those units which support the combat operations of the Army.

Q. When will the new restrictions have their greatest effect on the Air Force?

A. Some reductions—such as those in base construction, in civilian personnel for overhaul, repair, and supply activities, and in military recruiting—are already having their effects.

In general, however, the construction, fiscal, and manpower controls now being imposed will have their greatest effect in future years. In the discussion of the shorter lead times that can now be achieved as production advances, the necessary lead time for the production of trained people is too often overlooked.

For instance, if it should be decided next year that the Air Force will, after all, have 143 wings, it will then be impossible to recruit and train the personnel for such a force earlier than 1957.

The problem of providing trained personnel in sufficient numbers is particularly acute in the Air Force because next year we will begin losing large numbers of men, now skilled and experienced, who have joined us since the beginning of the Korean war.

When a force is reduced in size the quality becomes more important than ever, yet reductions in training facilities, units, equipment and personnel will damage the quality of our force as well as reduce its size.

There has even been a heavy reduction in funds that can be used for research, and for the development of planes and weapons of the future.

Q. Why does the Air Force need very large new appropriations when it already has $28.5 billion of unexpended funds?

A. If the Air Force could buy from the shelves of a store everything it needs it could spend its money as Congress provides it, year by year. But to have a jet bomber in 1956 we have to make a contract for it in 1953 or 1954.

Before we can make a contract for it we have to have an appropriation by Congress—which used to be called contractual authority and is now called obligating authority, terms which mean the same thing. The longer it takes to build an item of military equipment, the longer in advance it has to be ordered. For every year between the date when it is ordered, which is the year of appropriation, and the date on which it is delivered, which is the year of payment, the money for this piece of military equipment is contained in unexpended balances. Of the $28.5 billion carried over from previous years, $25.2 represents actual contracts we have made. $3.3 billion represents funds for the procurement of items already planned and programmed, for which no contracts have yet been let. None of this is new money which we can use again and no fiscal juggling can turn it into new money. It is money we have already earmarked for items that we will have to pay for when they are delivered.

Therefore, these unexpended funds are neither surprising nor especially significant, despite the attention that has been directed to them. They are a normal consequence of the manner in which funds are appropriated by the Congress for long lead time items.

Because of the long lead time involved in starting production on new model aircraft, the Air Force has not yet reached its planned force level.

The authorized programs of the Army and Navy have been substantially achieved. The Air Force program is two-thirds along the way. No sound military reason has been offered to explain why the Air Force build-up to the agreed force level is again to be delayed. Once again the growth of American airpower is threatened with start-and-stop planning, and at a time when we face an enemy who has more modern jet fighters than we have and enough long-range bombers to attack this country in a sudden all-out atomic effort. Rather than reduce our efforts to attain air superiority over the Communists we should now increase those efforts.

In closing, I want to emphasize that this country, if it is to have a chance for victory in any major war, must have an Air Force that is second to none.

Since 1948 I have served as a member of the Joint Chiefs of Staff. These views are respectfully presented to this Committee with that background of experience. To the best of my knowledge they are also the views of all those experienced in modern air warfare. [End of formal statement.—The Editors.]

Q. What difference does it make whether we have 143 wings in the Air Force alone or in the Air Force, the Reserves, and the National Guard?

A. The composition of the 143-wing Air Force was lower than what the Air Force desired in several categories. It was lower in the Strategic Air Command and it was lower in the Air Defense Command. Those two commands are principally responsible for the defense of the United States. In order to boost the air defense of the United States, we have always intended to utilize as defense fighters, as long as the threat appeared, those tactical airplanes and those tactical wings in the 143-wing program which were not deployed overseas. This means that defending pilots will actually have to be in the aircraft on airdromes throughout the United States ready to take off. . . . The man who is engaged in business twenty or thirty or even ten miles from the end of that runway will be of very little value in defending against attack at four o'clock in the morning.

Q. Are you doing that today?

A. Yes. At every air defense base in the United States there are at this moment men sitting in fighters at the end of the runway ready to take off.

Q. Has any new weapon changed the program?

A. There have been no new weapons which had not been foreseen when the 143-wing program was initiated. At that time we were familiar with the prototypes of these new weapons and they were developed approximately as we thought they would be. I would like to emphasize that the decision to purchase the combat aircraft for 143 wings in a program limited to 120 wings, plus the modernization of the Air National Guard or Air Reserve, will leave many of these airplanes without the units, people, or bases which would make them effective.

Q. Do you mean that the fact the President sent up a budget in which he proposed to reduce the Truman budget by $5.1 billion has affected adversely the security of America?

A. It is my opinion that the minimum risk we could take in the US requires a force of the size of 143 wings. Even that is a calculated risk. I believe the 155 wings originally proposed by the Air Force is more nearly the minimum force upon which we could risk our survival.

(Continued on page 44)

What It Means To Be A Red Jet Pilot

A Polish MIG pilot's story of life behind the Iron Curtain

By Franciszek Jarecki

Polish Lt. Franciszek Jarecki arrives in New York for US tour.

THE FIRST thing to remember when you are talking about the Polish Air Force is that it is Polish in name only. Its equipment is Russian, its training is Russian, and an increasing number of its staff officers are Russian. The Russians wear Polish uniforms and the Reds try to preserve the fiction of an independent Polish Air Force but many of these Russian officers cannot even speak Polish. And they have a virtual monopoly on high rank. It is almost impossible for a Pole to be promoted beyond captain; in fact there is, to my knowledge, only one Polish colonel in the entire Polish Air Force.

To the Russians the Air Force is the elite arm of the military forces. This attitude is reflected in many ways. For example, as an Air Force lieutenant and a jet pilot I received three times as much pay (about $300 a month) as I would if I had been a lieutenant in the army. In addition I got the equivalent of $10 a day subsistence. There was no flying pay as such, merely higher base pay and allowances. My military pay was tax-free. I had only to pay my dues in the Communist Party.

Lieutenant Jarecki is the Polish pilot who escaped to Denmark in a Russian-built MIG-15 last March. This story is as he told it to an AIR FORCE Magazine editor through an interpreter.—The Editors.

We pilots also got special food, clothing and housing which was of better quality than non-flying personnel were given and much, much better than what was available to civilians. All military personnel have

The USAF's top ace, Col. Francis Gabreski, and Jarecki talk shop during the Polish flyer's tour of US bases and plants. The AF-sponsored tour is "strictly for orientation."

special purchase privileges in military stores where things are sold that are unavailable to the civilian population—such as good shoes, clothing, linen, coffee, pepper, milk, cocoa, and other luxuries. Some things, like oranges and lemons, are just not available at all. I remember one time I began having trouble with my gums. They were bleeding and causing me much pain. The dentist told me I had scurvy, that I needed more vitamin C. He said I should eat citrus fruits, if I could find them. I went to my commanding officer with my problem. He laughed in my face and said, "Don't you know, comrade, that oranges and lemons are only capitalistic inventions?"

Another example of the importance the Russians place on the air arm is the fact that it gets special attention as far as political indoctrination is concerned. As in Russia, each squadron has its "political officer." His job is to conduct weekly lectures, rallies, and discussions on political subjects. He is also on the alert for any signs of subversive thinking or acting. Political officers as a rule get fast promotion. They are rarely flyers although they have the same privileges as a flyer.

Another sign of the special attention a pilot gets in the Red Air Force is the fact that at Polish air bases the officers eat in five separate messes. The lowest mess consists of ground officers—administrative people. The second is made up of technicians. The third is flying personnel who are not actually pilots. The fourth category is pilots and the fifth consists of jet pilots, the true elite. The exception in the Polish Air Force is that Russian officers, whether they are pilots or not, always eat in the pilots' mess.

Only persons with a "clean" political past are accepted as officers in the Polish Air Force. For example, I had to conceal the fact that my father had been an officer in the old Polish Army or I would not have been allowed to fly. I would have been "politically unreliable," as indeed I was, thank God.

All pilots and air-crew members are volunteers. Like the American Air Force, the Reds believe that you cannot force a man to fly. They have no trouble filling their quotas since the special privileges alone offer a great incentive.

I believe the $100,000 reward offered in Korea for delivery of a MIG to the UN forces is a good idea. I myself had no reward in mind when I escaped from Poland. I only wanted to get away. And no such reward has yet been offered in Europe. I believe that if the offer were made in Europe it would have a good psychological effect on satellite air forces. You might not get any more MIGs but the Russians would be on the defensive. They would begin special security measures, ground flyers who did not seem completely reliable, and a general atmosphere of confusion and suspicion would result. From my own experience, I know how the Red political officers would answer such a reward. They would say to the pilots, "You cannot trust the capitalistic warmongers. They only want to make a fool of you. In the first place, if you try to escape we will shoot you down. If you do get away the western nations will shoot you as a spy, or put you in jail. Rest assured they will cheat you of your so-called reward."

I think that many more Polish pilots would escape if they could. But it will be much harder to do so now that two of us have got away. I am certainly not an exception. But for one thing, they do not know just where to go nor what kind of reception they would get. And, as more young people come along, who do not remember what life was like before Communism, the better they will be indoctrinated. Now most of us Poles call ourselves "radishes." We are red on the outside but white inside. But as more youths are indoctrinated this will not be so true. Time is on the side of the Reds, in this respect.

The Polish Red Air Force is growing. Its organization is like this—a flight of two planes is a pair, four planes make up a *klucz* (no English equivalent—The Editors), three *klucz* equal a squadron, three squadrons make up a regiment, three regiments an air division and three air divisions constitute a corps. The first corps is just being established. It is eventually planned to have three corps in the Polish Air Force.

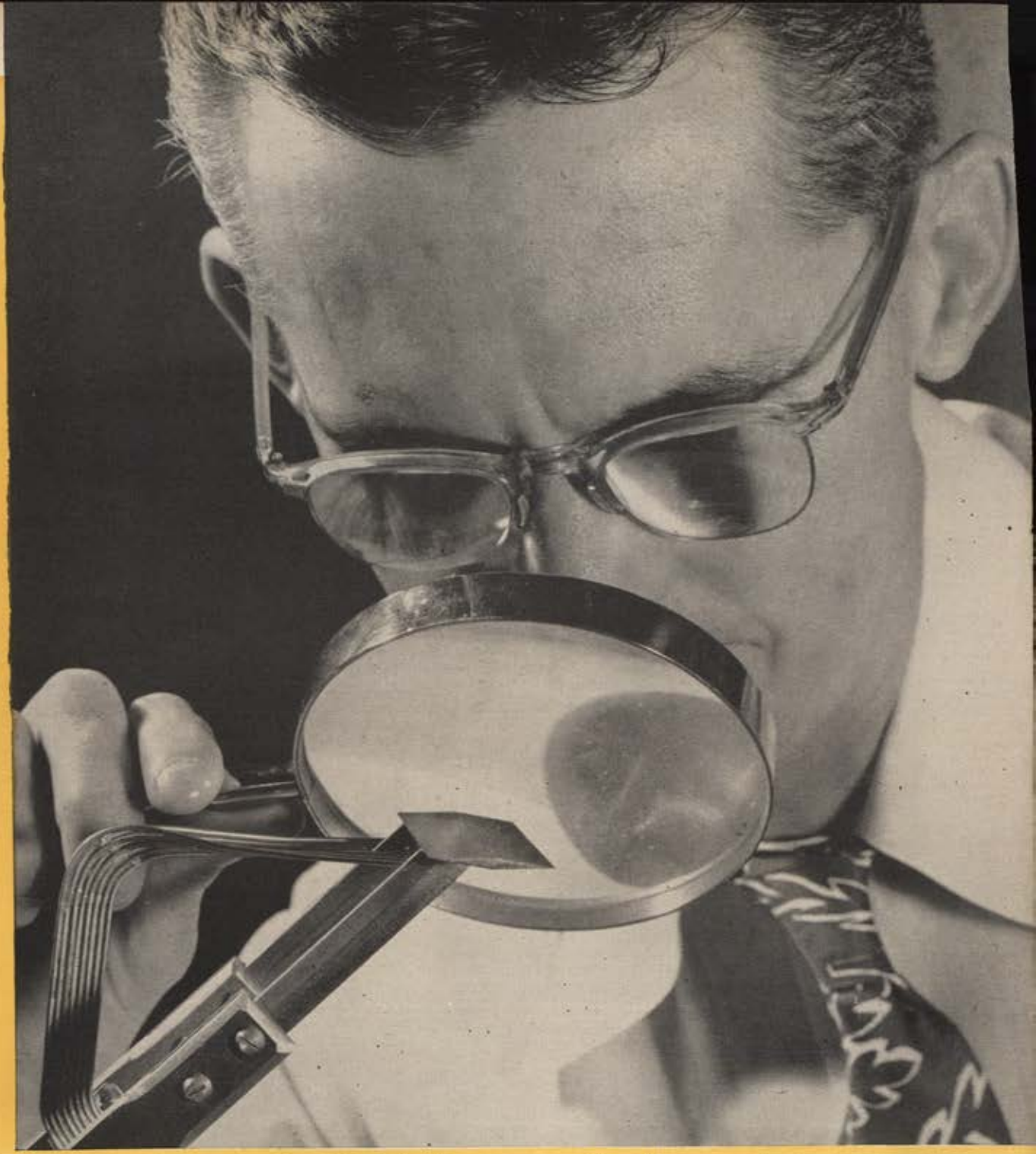
As far as I know, there are no Polish pilots flying for the Reds in Korea. But I was told that there were many Russian pilots there. In fact, I have heard Russian officers describe air battles in Korea to young Polish pilots. They talk mostly of how they shoot down B-29s. There is no talk of battles between MIGs and Sabres.

I do think there are two main reasons you are shooting down more MIGs in Korea than you are losing Sabres. One is your electronic gunsight. The mechanical gyro sight in the MIG is not good for deflection shooting. But the foremost reason is the training of your pilots.

I was a pilot in a MIG squadron, yet I have had less than 150 hours in the air. Of these, 100 were in conventional airplanes in a training unit. Then I was assigned to a tactical unit where I got five hours in a two-place jet trainer—a training version of the MIG used like your T-33. After that I had forty hours in a MIG before I escaped.

I think that most of the Red pilots flying in Korea probably had about the same kind of training. That is no match for American pilots.—END

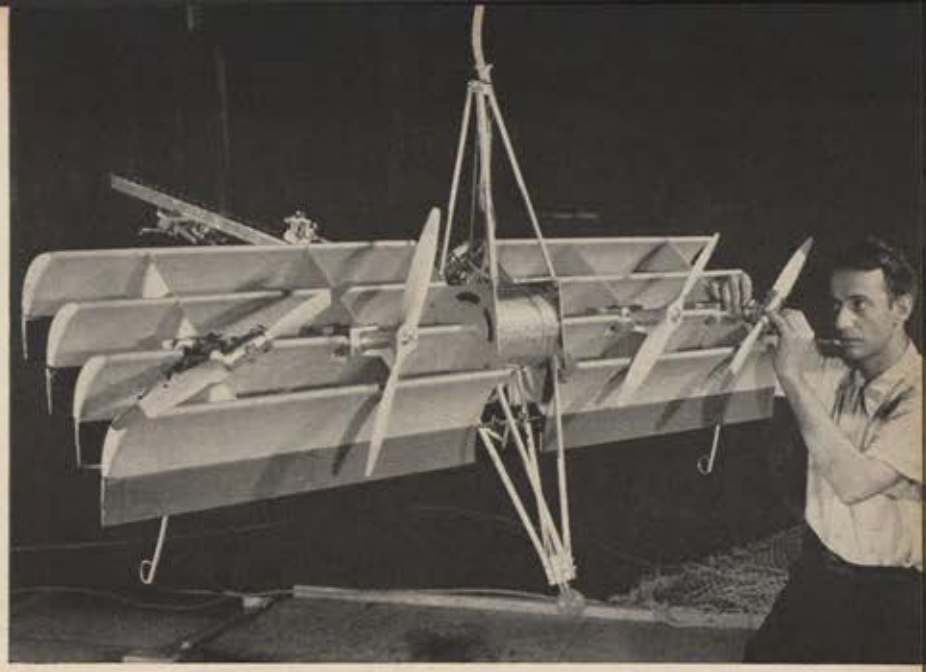
Speaker of the House, Joseph Martin (R-Mass.), shows Jarecki a copy of the House bill recently passed to permit the MIG pilot to live in the US. Quick passage of the measure was expected in the US Senate.



Researcher examines tiny airfoil. Each tube connects an orifice with a manometer to measure pressure.

NACA LOOKS AT TOMORROW

The challenge of aeronautical research is stronger today than ever before. The problems are growing both in number and in complexity. To fly faster and farther we must find the answers to questions yet unasked



This flying venetian blind is an NACA model designed to study stability and control problems in vertical-rising aircraft. The slat arrangement deflects the slipstream downward.

IN THE comparatively short span of half a century, man has mastered the secrets of flight and has learned to build airplanes that fly faster than the speed of sound. Since the first powered flight at Kitty Hawk on December 17, 1903, the rapid progress of aircraft design has been one of the wonders of modern science and engineering.

The progress hasn't come easily. The average high school boy of today is familiar with aeronautical principles that baffled early researchers and designers.

Today's aircraft are based on intensive research by individual scientists, teams of researchers, and entire large laboratories. But as one set of problems is solved, new and knottier ones take their place and whole new fields are open to the inquisitive eye of science.

Until a few years ago, the problems of flight were confined to the subsonic range. Now we are concerned as well with

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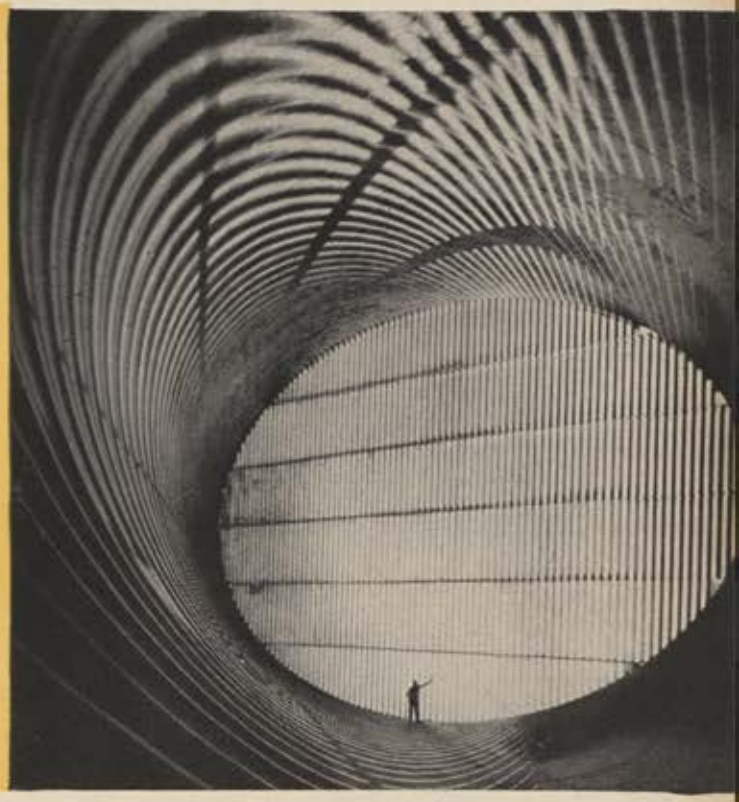
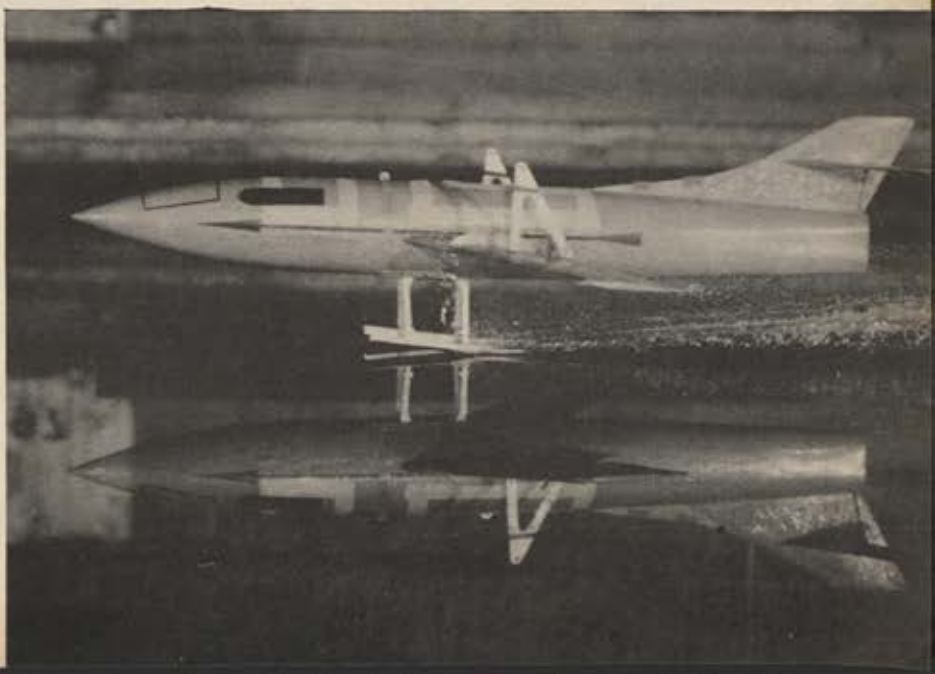


Guide vanes (right) in sixteen-foot transonic wind tunnel form intricate pattern of light and shadow. In NACA towing tank (below), hydro-ski model patterned after Douglas D-558-II Skyrocket aids research into high-speed waterbased planes.



NACA's shops turn out accurately scaled, highly instrumented models to gather aerodynamic information on plane and missile configurations. At left, a dynamic flutter model is instrumented. Plastic cones of varying shapes (right) are for high-speed airflow studies.

NACA—CONTINUED

transonics, supersonics, hypersonics, plus thermodynamics.

From the ungainly triplanes and biplanes of aviation's infancy we have gone on to the sleek thin-winged monoplanes of today, with revolutionary new shapes in prospect.

Aircraft structural problems used to be matters of wood, wire, and fabric. Today they concern metals, plastics, ceramics, even glass. Tomorrow's problems will involve man-made materials not yet invented.

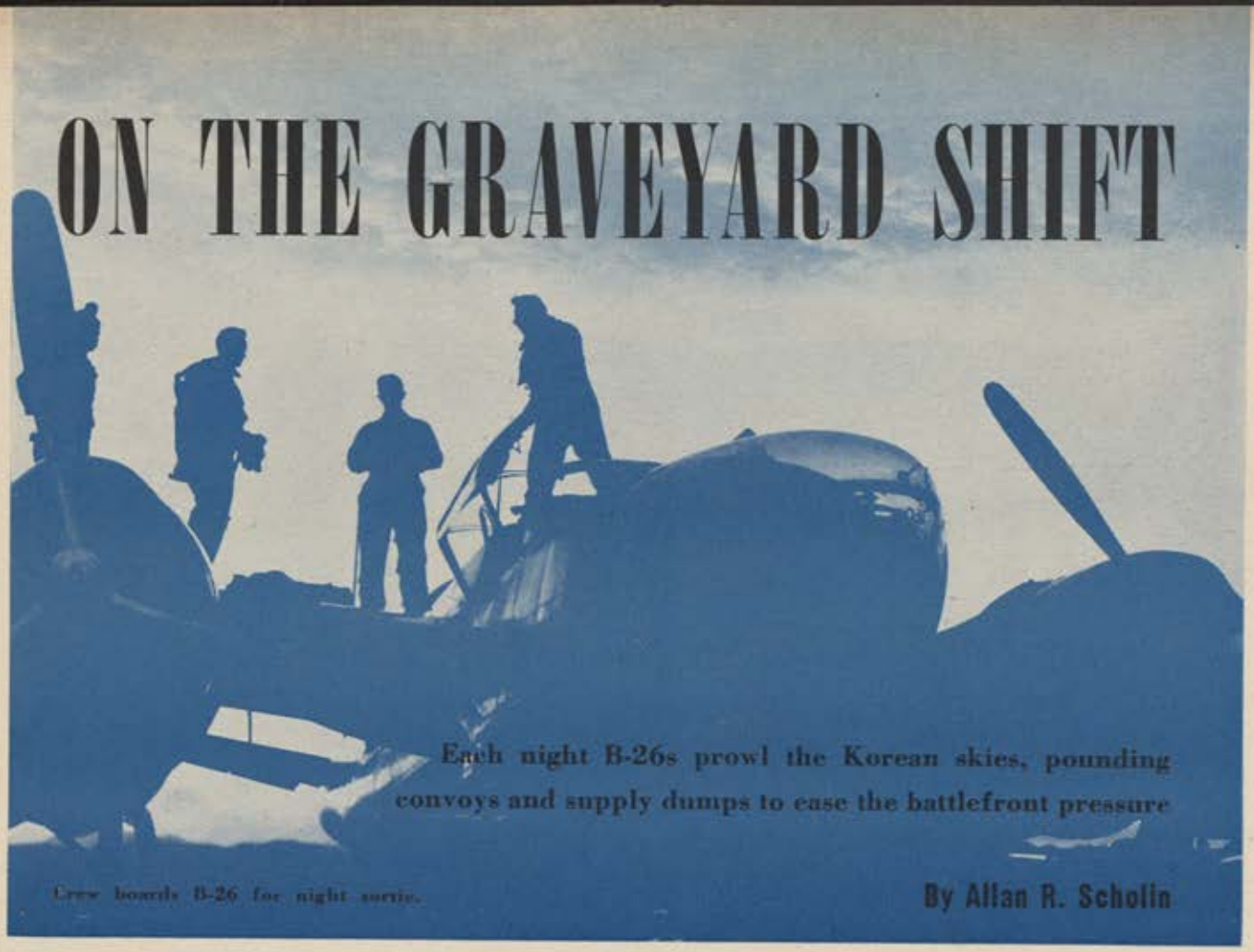
Propulsion problems are no longer confined to the conventional reciprocating engine or even the turbojet. Today we are talking in terms of ramjets and rockets. Tomorrow—who knows?

The challenge of aeronautical research today is stronger than ever, the problems are many and complicated, the unanswered, and even unasked, questions are intriguing. We are only just beginning to find out how much we do not know.

Basic aeronautical research is the job of the National Advisory Committee for Aeronautics, an independent government agency with laboratories at Langley AFB, Va., Moffet AFB, Calif., and Cleveland, Ohio. The photos on these pages show some of the work currently carried on at the Langley Laboratory, which specializes in aerodynamics, structures, load, and hydrodynamics.—END

Above, one of a series of models flown at Wallops Island, Va., to determine best shape, size, and location for fuel tanks on a swept-wing fighter. Left, a similar model, spun from magnesium sheet less than a tenth of an inch thick, is assembled. Right, nose section for a supersonic model is hot-spun from magnesium on a lathe.

ON THE GRAVEYARD SHIFT



Each night B-26s prowl the Korean skies, pounding convoys and supply dumps to ease the battlefront pressure

Crew boards B-26 for night sortie.

By Allan R. Scholin

THIS IS THE story of the Intruder crews, the men and planes behind that one brief sentence in the communiqués: "B-26s were out again in force last night."

They head into enemy territory at dusk as the last fighter-bombers waggle a greeting and head for home. All night long they dovetail missions to keep every supply route under continuous attack.

The Commies have planted enough anti-aircraft to make it unprofitable for B-26s to venture very far by day, but the twin-engined Douglas is proving equal to the cat-and-mouse tactics of night warfare.

Since October 1950, FEAF's two B-26 wings have flown more than 53,000 sorties—more than four-fifths of them at night. They are credited with destruction of 38,500 vehicles, 3,700 railroad cars, 406 locomotives, 168 bridges, and seven enemy aircraft. They have dropped almost 100,000 tons of bombs, including about 3,000 tons of napalm.

There's plenty of room for ingenuity and few fixed rules. Each crew is on its own from the time it leaves the base; probably no two crews operate just alike. The trick is to avoid the traps a cunning enemy and the rugged Korean terrain are always ready to spring on the unwary.

To new crews on their first mission it looks like duck soup. From the Yalu to the combat lines, trucks with headlights aglow are picking their way along the pocked roads. Traffic looks as heavy as a Sunday on the New Jersey Turnpike. But just as the B-26 dips into its bomb run the lights below disappear, and in the pitch darkness the plane has to pull up.

In mountainous country the Commies work a deadly variation on this trick. After a B-26 breaks off a run the string of lights will suddenly reappear. Lining up on them, the crew may discover too late that these lights are strung on the side of a cliff.

Contact with enemy fighters has been rare in recent months, though a few crews have reported being jumped apparently by YAK-9s, similar to the F-51 Mustang. However, B-26 losses to Commie fighters in night missions are virtually unknown.

One of the more disagreeable morale factors in B-26 operations is that, though losses are light, planes which go down usually disappear without a trace. A disabled plane has rarely had time to radio its plight, and cases of crew members walking home from a combat mission are even rarer.

Another factor with an adverse effect on morale is flak, often heavy and sometimes too accurate. It's bad enough by day. It becomes disconcerting to even an experienced crew at night when muzzle fire, tracers in every fifth shell, and bright shell bursts combine to make a terrifying display.

The Commies have also been known to string cable from peak to peak across narrow valleys. It's hard to tell how many B-26 losses may have resulted from this device, but several planes have limped home with torn rudders and at least one landed with cable wrapped around a propeller.

But for most of these tricks, B-26 crews have an answer. Crews are assigned the same area on mission after mission so that they soon know their route as well as they know the road into town back home. They may vary their technique from night to night, bombing from altitude tonight and from the tree-tops tomorrow. They may throttle back and glide down to bomb a convoy before it gets the signal from mountaintop lookouts to shut off its headlights.

Intruders carry flares to light up a target area but they're not often used. The flare tends to blind the crew long enough for a convoy to pull off under the trees that line most Korean roads. Too, the light of the flare may make

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Nightly, B-26s range North Korean skies and plaster red trucks and trains with their loads of high explosive bombs.

ON THE GRAVEYARD SHIFT — CONTINUED

the plane a target for anti-aircraft. Nor is moonlight a help. Most Korean roads are white gravel. In moonlight, Commie drivers merely shut off their lights and barrel down the road.

Trains, especially locomotives, are a prize target. One of the best locomotive hunters among B-26 pilots is Capt. Charles F. Wolfe of Chula Vista, Calif., who recently returned to the US after sixty-two missions with the 3d Bomb Wing.

"You'll never believe," he said, "that they ran their trains pretty much on schedule. We'd mosey up toward the Yalu, spot a train's headlight while it was still on the Manchurian side, and get out of sight until it had time to cross into Korea. Then we'd drop a fire bomb behind it. It didn't matter if we hit the track or not, just so we were close. The train crew would think we had hit the track and they couldn't go back. It isn't too easy to hit a fast-moving train so we'd range on ahead and drop another fire bomb at the mouth of a tunnel. The engineer would slow up while he tried to assess the damage. We'd swing around behind him, come up the track at minimum altitude, spot him by his smoke and drop an egg."

Using this technique, Wolfe and his crew were credited with twelve locomotives destroyed, plus three others unconfirmed.

Wolfe added, though, that trains weren't stopped for long. "We'd bust up a train and maybe cut the road in a couple of places, too. The next night they'd be running again as usual."

Hunting is better than ever now, Wolfe reports, as Commies are pouring more trains into their supply lines in attempts to offset the constant beating from Intruders and fighter-bombers. "I saw four times as many trains coming out of Manchuria when I left Korea as when I started my tour," he said.

Capt. Bob McDowell of Middletown, Pa., is an observer with the 3d and a relative newcomer to Korea, though he did a full stint in B-24s in India during World War II. He describes a typical truck-hunting mission.

"Your crew is scheduled for take-off at 0020," he writes, "so you get to group by 2300. After briefing you have a cup of coffee and cake, then to squadron ops for chute, life vests, dinghy, and radio.

"At the plane you check the bombsight, pull the pins, and sign for the bombs. The pilot runs through the escape ritual and now it's midnight and time to board.

"In a few minutes you're lined up on the runway. Sixty seconds later you're roaring along, the speed hits 120 and the bird lifts off. Wheels come up, runway lights fall away, and it's black. You've flown into an inkwell.

"Five minutes later you turn north, up the corridor. A plane passes overhead. His work is finished for tonight. You navigate over check points, cross the bomb line, and before long you see truck lights.

"You peer into the night, make a few course corrections. Things look good. Bomb bay open, crammed with weapons. Frags for personnel, 500-pounders for heavy damage, fire bombs, flares to find targets and check results.

"Then, just before you're ready the doggone Reds turn off their lights. You call off the run, and head left in a circle until they turn them on again. You can see the front lines thirty miles south. You also see lights on a road to the right, but that's someone else's route. You see the flak bursts and count the rate of fire by the tracers. Now lights are back on below and you try again. This time they're too late turning them off and you drop. One small fire. A truck? You hope.

"Gunner calls 'fire balls break right,' but you're looking at the road. Maybe you got one, maybe not. You make about nine runs and suddenly gunner calls: 'Bomb bays empty,' and pilot wants the heading home.

"Hell, where did the time go? It's 0230 and the next ship is due to hit your route. You switch to command and call Al, its navigator. You played bridge with him earlier that night. Now you tell him about the traffic and bombing conditions, and wish him luck.

"Back at base you debrief and trade jokes over the usual after-mission stimulant. Then to the mess hall for eggs, bacon, toast. Dawn is breaking as you relax for that last cigarette before hitting the sack. No more until tomorrow night."

Scheduling of crews varies, but most are on tap two or three consecutive nights, then lay off for about the same period.

Close timing is necessary to maintain route patrols, for half a dozen crews may be assigned to the same route on a staggered schedule through the night. They fly a stipulated corridor at specified altitudes to and from the target and are required to radio in on arrival and departure from the route area. A crew chasing a juicy target sometimes runs over its time limit and gives base ops some anxious moments until it gets a report.

One night a B-26 breaking away late felt a slight jar. With no apparent damage the pilot figured he had hit a bird and continued on to base. Next morning the crew chief found a damaged wing bomb shackle smudged with the same color paint used on wing tips of another squadron. Checking with that squadron, he found a wing with a matching dent. Both planes had worked the same area the night before.

B-26s have been in the Korean war since the first combat on June 26, 1950. First into action was a squadron stationed at Iwakuni, Japan. It was joined by another squadron based elsewhere in FEAF, and eventually a third squadron was assembled to make up the 3d Bomb Wing.

The B-26 proved well suited for its role, so USAF ordered a reserve B-26 wing, the 452d from California, to active duty on August 1, 1950. Just seventy-four days later —after sixty days of intensive training at George AFB, Calif., and thirteen days of island-hopping to Japan—it flew its first combat mission.

These two wings still run the B-26 business in Korea, splitting the peninsula between them. (In what amounted to little more than a paper transfer, the 452d became the 17th Wing on May 1, 1952. After twenty-one months on active duty, the 452d was returned to reserve status in California, but its equipment and the greater part of its personnel remained.)

The two wings carry on a running feud and profess bitter enmity except when in the presence of B-29 jockeys or the glamorous fighter types. The worst that one B-26 crew can call another is "pussy cat," while "tiger" is the rarest of compliments. Tigers are supposed to relish getting down on the deck and snarling into the barrels of ack ack guns as they shoot up locomotives and mule trains. Pussy cats prefer bombing from "safe" altitudes—5,000 feet and above.

While both wings have their share of tigers and pussy cats, the two do tend to operate differently, governed by

(Continued on following page)

Here's the one-two punch packed by B-26 intruders of the 3d and 17th Bomb Wings of the Fifth Air Force in Korea. At left is the machine-gun-studded snout with its eight .50 calibers. At right, below, an Intruder awaits its load of fragmentation bombs. Another version in which some B-26 crews fly their missions has a plexiglass nose.

"Tigers relish getting down on the deck." This low-level shot of napalm-bombed Korean train is the work of a Tiger.

ON THE GRAVEYARD SHIFT — CONTINUED

the area they work in. The 3d, based in southeast Korea, sweeps across the western plains in the lower strata of airspace known to newspaper readers as MIG Alley. The 17th, working out of the Pusan area, patrols the mountainous area of eastern Korea, where targets are harder to come by and a low-level run between the peaks may lead into a dead-end valley.

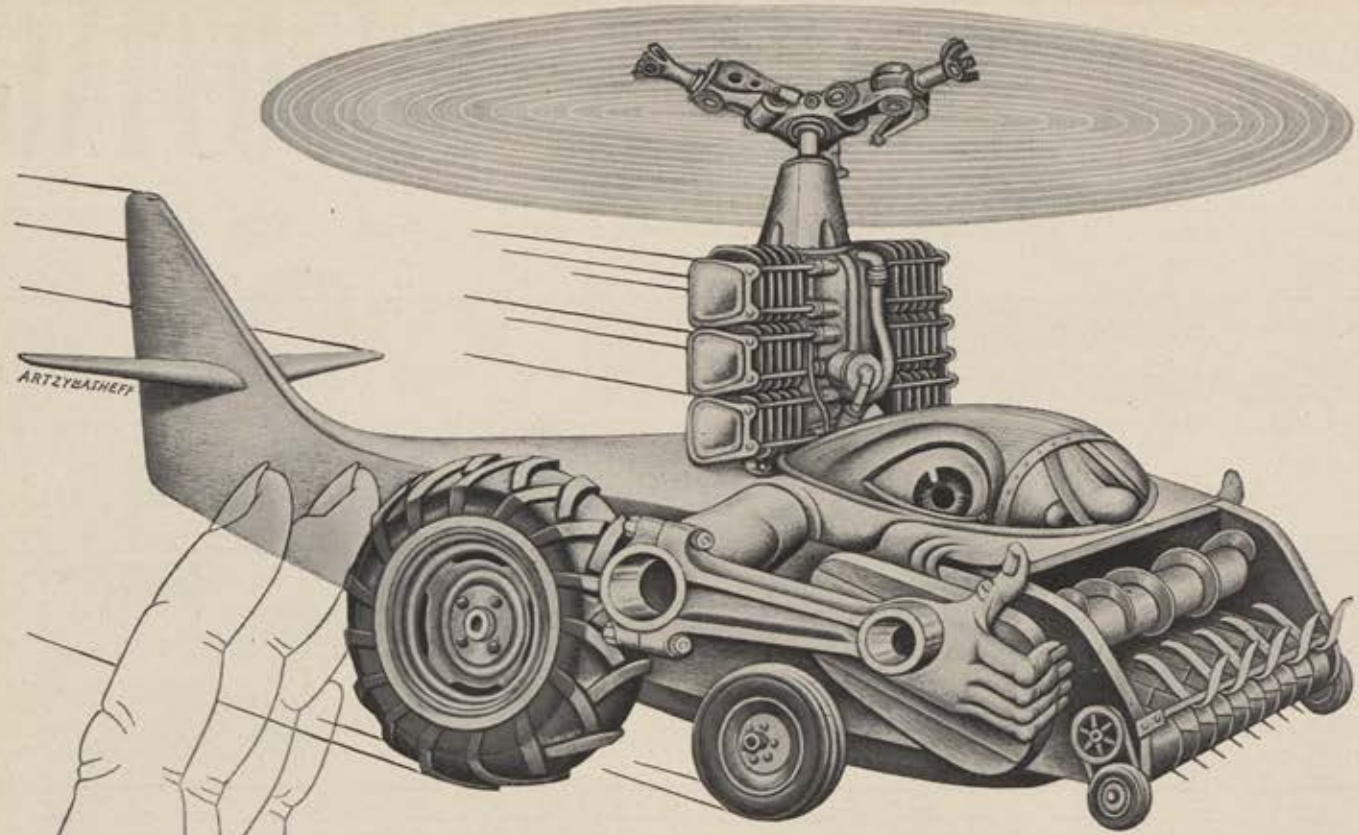
There is also a squadron of RB-26s in Korea assigned to a tactical reconnaissance wing. It, too, usually works at night, leaving daytime photo work to jets. A recce flight is usually assigned to work with the Intruders, so that a crew which believes it has hit a valuable target—perhaps has boxed in a convoy—may call for an immediate photo. If it looks good, the Joint Operations Center may divert other B-26s to push the attack or set up a fighter-bomber mission to work over the area at daybreak.

The standard combat tour runs fifty-five missions, but it takes quite a bit of preparation before a man winds up in Korea in a combat crew. After the usual preliminaries in the Air Training Command, crew members assemble at Langley AFB, Va., for combat training. Pilots come from Vance AFB, Okla., observers from Mather AFB, Calif., gunners from Lowry AFB, Colo., and flight engineers—now standard equipment—from Sheppard AFB, Tex.

Langley's course is conducted almost 100 percent by veterans of Korea under Col. J. W. Ruebel of Alameda, Calif. It runs nine weeks, including ground school and twenty missions in the B-26, eleven at night. From Langley crews go to Stead AFB, Nev., for three weeks of survival training. A brief stop at Stoneman for the usual departure formalities, and then off by a B-26 to Korea.

The first leg of the overwater flight to Hawaii puts a premium on cruise control. In fact, take-offs are allowed only when a fifteen-mile tail wind seems assured over the distance. After Hawaii the steps are a little shorter.

(Continued on page 43)



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SHOOTING

Teetering nervously, flaps down and jets screaming, F-86s stand poised for take-off. The ground crew's work is over till the mission's end.

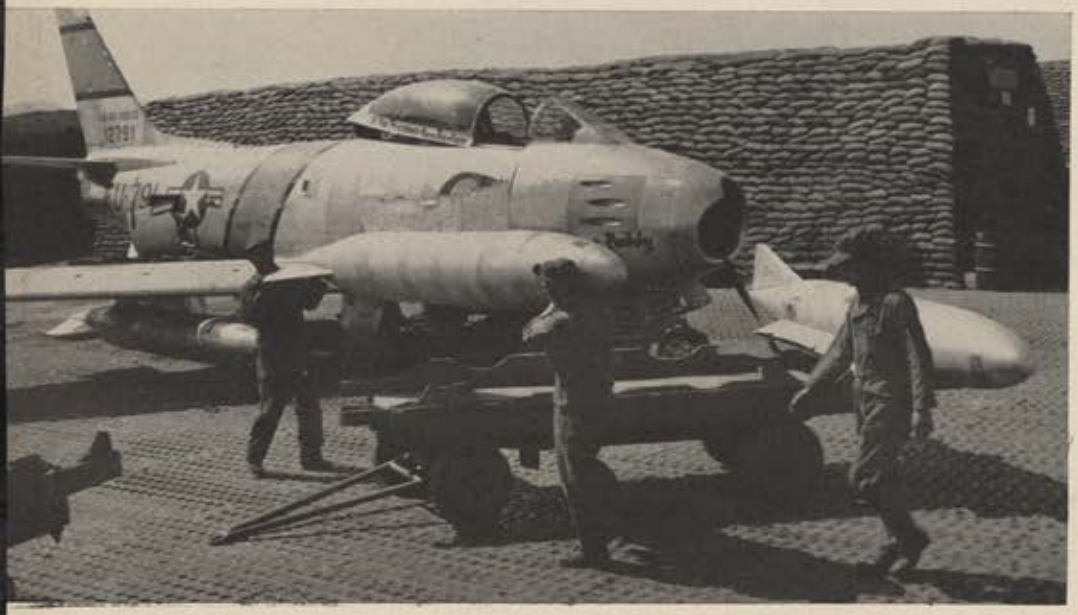
Clearing skies herald better weather, and F-86s (above) are readied for combat again. The exploits of the thirty-one jet aces Korea has produced reflect the many tedious hours put in by the seventeen men below who represent what it takes to keep Sabres flying. From crew chief to firefighters, their work begins when the pilot's work ends. Hours—take-off to take-off.

In May, Sabres scored their second largest bag of MIGs of the war—fifty-five destroyed with one F-86 lost air-to-air. No one would minimize the accomplishments of Capt. Joseph McConnell, top jet ace with 16 MIGs, or of his fellow pilots, but few add words of praise for those who stay behind, on the ground, to "sweat 'em out."

WAR IN KOREA

It's not a case of too many plaudits for the jet ace, but of not enough credit for his ground crewmen who keep him flying

Another full-time job is that of the men in the rescue units. Jet ace McConnell knows too well how this pilot feels. He was pulled from the drink the same way, by an ARS H-19 'copter within minutes after he'd bailed out of his damaged Sabrejet last April.



No short rations for an F-86! Ground crewmen see that the Sabre, parked in its sandbag revetment at a forward base, has plenty of fuel for the trip to MIG Alley and back. Tanks are jettisoned when Sabre meets MIG.

The Sabres return. They're serviced, refueled, rearmed, and will soon be ready to streak northward again. Like the pilots, who perform their tasks out of sight and miles up, the ground crews perform their tasks out of sight of public attention—the behind-the-scenes war.

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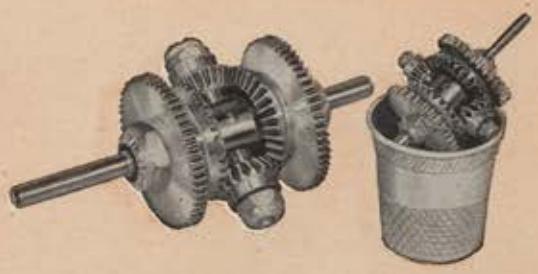

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COLLEGE POINT NEW YORK

In Korea crews start training all over again with ground school at Pusan U. where they're zeroed in on the combat situation, Commie techniques, and other orientation topics. Then the crews are broken up to take their "dollar" rides as fillers with experienced crews. After three or four break-in missions each crew member is evaluated. If he stacks up he rejoins his crew, and the crew then takes its place in the lineup.

In earlier Korean days some crews managed to complete tours in three months or less, but it takes a good deal longer now. For one thing, there are more crews. For another, all rated officers assigned to desk jobs in the wing—from the commander on down—are booked for at least one mission a week. Today regular crews average about two missions a week and, with one or two rest and recreation leaves in Japan sandwiched in, take from eight to nine months to complete a normal tour.

There are still enough occupational hazards that crews needn't blush when collecting flight pay, but constant refinement of operational technique has cut losses to less than one plane a week. Since in a normal week the two wings will fly hundreds of sorties, the loss rate is substantially lower than any comparable combat operation in World War II.

Both wings employ three modifications of B-26s. One is a hard-nosed model which packs eight extra .50 caliber guns in the nose, used for armed reconnaissance and close support missions. The other two are plexiglass-nosed, and of these one carries special radar equipment.

Crews used to fly all three types. Now a crew not only sticks to one type but, as much as possible, to the same plane on each of its missions.

Mission instructions come down from the theater Joint Operations Center. If the combat situation warrants, the JOC may direct daylight close support missions. When reports of troop or supply concentrations come in, B-26s may go out in train behind radar-equipped pathfinders to bomb on targets outlined with fire bombs by the pathfinders. Radar is also used extensively on bridges and other pinpoint targets, especially in bad weather. But the large majority of missions are armed recon and interdiction over specific route areas.

Maintenance has been a bright spot throughout. Ground crews relish working days and sleeping nights. In recent months planes have averaged more than seventy-five hours a month, and aborts are virtually unknown. Only organizational maintenance is done in Korea. Elements of each wing's maintenance and supply group are stationed in Japan to accomplish the 100-hour inspections and do the heavy maintenance.

"The enemy holds just enough territory in Korea to give him real transport problems," says Langley's Colonel Ruebel. "If the lines were closer to the Yalu, Intruders wouldn't have as much room to work in. If the front were farther south we'd need more B-26s to provide the coverage. Right now we're able to keep it just a little crowded over target areas."

In summary, B-26s take pressure off the ground troops in three ways. They hack away at trains and vehicles carrying supplies and replacements. They take a second crack at what does get through by hitting supply dumps and replacement pools. Finally they join with fighter-bombers in close support missions to cut down the force of enemy attacks.

Teamed with the planes that work over Communist-held Korea in daylight, Intruders keep up the incessant pounding by night, to carry out with a vengeance the old proverb that "there's no rest for the wicked."—END

AIR DEFENSE REPORT

Kelly Committee recommends program

IN MAY we published a staff study entitled "The Truth About American Air Defense." As we were going to press with this issue, Secretary of Defense Wilson's office released a summary of a five-month study of the nation's air defense, made by a Citizens' Advisory Committee headed by Mervin J. Kelly, President of Bell Telephone Laboratories. Following are excerpts from each.—The Editors.

"The total cost of our defense program must be kept within bounds, particularly through objective application of scientific methods of analysis."—AIR FORCE

"Nearly perfect protection . . . is unattainable and in any case completely impractical economically. . . . An adequate air defense can be answered in the long term only by the application of advancing technology."—Kelly Committee

"Furthermore . . . we cannot buy an eighty-five to ninety-five percent kill-potential for even many times the quoted bargain price of $20 billion."—AIR FORCE

"In the light of stern facts . . . there can be no safety in the atomic age. . . . The question whether a goal could now be set for a particular desired level of defense against air attack in the usual term of costs cannot be set down at this time."—Kelly Committee

"We must protect our strategic striking bases. . . . At the same time our strategic bombing force must be able to destroy the enemy's aggressive military strength and paralyze his economic backbone."—AIR FORCE

"All military measures must be assayed . . . the importance of continued development of a powerful US atomic offensive capability, reasonably invulnerable to initial attack, as a vital, major part of the over-all defense system."—Kelly Committee

"Early warning radar is being extended, not only northward toward integration with the Canadian radar network but also over the sea approaches."—AIR FORCE

"The Committee emphasized the mutuality of the defense problem as it affects Canada and the US . . . particularly as the early warning network expands."—Kelly Committee

"Progressive improvements in our air defense capability must be made as Soviet offensive strength grows."—AIR FORCE

"The Committee urged the creation also of a continental air defense system much better than that which is assured . . . in the face of expected advances in potentially hostile offensive capabilities."—Kelly Committee

"Radar is being vastly improved but . . . the low-altitude gap in our detection system must be filled by the volunteer observers of the Ground Observer Corps for several years to come."—AIR FORCE

"The Committee gave particular attention to a program for improving present means of early warning of the approach of hostile aircraft."—Kelly Committee

"His military leaders have told him [Mr. Citizen] that our present air defense system cannot stop a determined enemy attack."—AIR FORCE

"The Committee noted that the Soviet Union is militarily capable today of a surprise attack on the United States which could cause large loss of life."—Kelly Committee—END

Q. You would not expect, if a war should break out, that every one of your wings would be going into action immediately. Would you not have a reserve?

A. No. This is a one-shot Air Force, even under the 143-wing program. We are going to have to use it all, if war breaks out.

Q. Do you subscribe to the philosophy of not placing a target date—as has been done in the past—that the war, in effect, would come in 1950 and again in 1952, and then in 1954, or are you of the same feeling as the President, that this is a matter that can continue on for years and we must be prepared now and continue to be prepared? What is your idea on that?

A. No target has ever been set by estimating when war would come. It is very important that there be no misunderstanding or confusion on this point. The years 1954 and 1955 represent the inception of a particularly dangerous period because by then the USSR should have a substantial stockpile of atomic weapons. By this same period their ability to deliver atomic weapons will have been greatly enhanced. No one has estimated 1954 as the year war would come. It could. But 1954 does represent the time when the USSR is capable of launching a devastating attack against the United States. Nothing known to the Joint Chiefs of Staff has changed this estimate. We must be prepared now and continue to be prepared. But to prepare now we must have the minimum force. That minimum force, I believe, is 143 wings.

Q. Does the reduction from 143 to 120 wings reduce the combatworthiness of the Air Force?

A. Yes.

Q. Will the budget now planned, the Eisenhower budget, provide an Air Force which will sustain combat as long as the force previously planned?

A. No.

Q. Is the ability to keep up fighting day after day an important element in air operations?

A. Yes.

Q. Was this element, as far as you know, considered in reducing the budget request?

A. I cannot answer that. I do not know.

Q. Could we meet the full NATO commitment under the 120-wing program?

A. To give an exact answer on that is very difficult. You can reduce our combat forces in Korea and denude the US, and you can meet that sort of commitment. But if you adhere to the war plan in making the distribution of air units, then you can say that the 120-wing program falls far short of meeting the NATO commitments.

Q. What you are saying is that you would not have sufficient planes and personnel under the 120 wings to meet your commitments under the NATO agreements and at the same time adequately meet what might be threats or danger in other parts of the world.

A. That is correct.

Q. Is this reduction in the Air Force based on any change in military need?

A. None that I know of.

Q. Is it true that the Soviet Air Force is simply a defensive air force?

A. No. It is both defensive and offensive.

Q. Is the nature of the Soviet Air Force, although it is offensive and defensive, such that we can consider it no serious threat to ourselves or our allies?

A. No. I have testified that I think it does present a serious threat to the safety of the United States.

Q. There has been a good deal of testimony about the fact that sufficient money will be available so that it will not be necessary to eliminate any combat planes from previous production schedules established by the Air Force. What does that do so far as reestablishing the 143-wing program is concerned?

A. Airplanes alone do not make an Air Force. It requires all of the supporting units, the people, the bases, the supplies, flying hours, maintenance operations, etc.

Q. Now, restrictions during the past few months have delayed progress toward 143 wings, in your opinion, how long?

A. Six months, right at the present time.

Q. Was the budgetary device of cutting down the lead time on planes used to reduce the amount of appropriations?

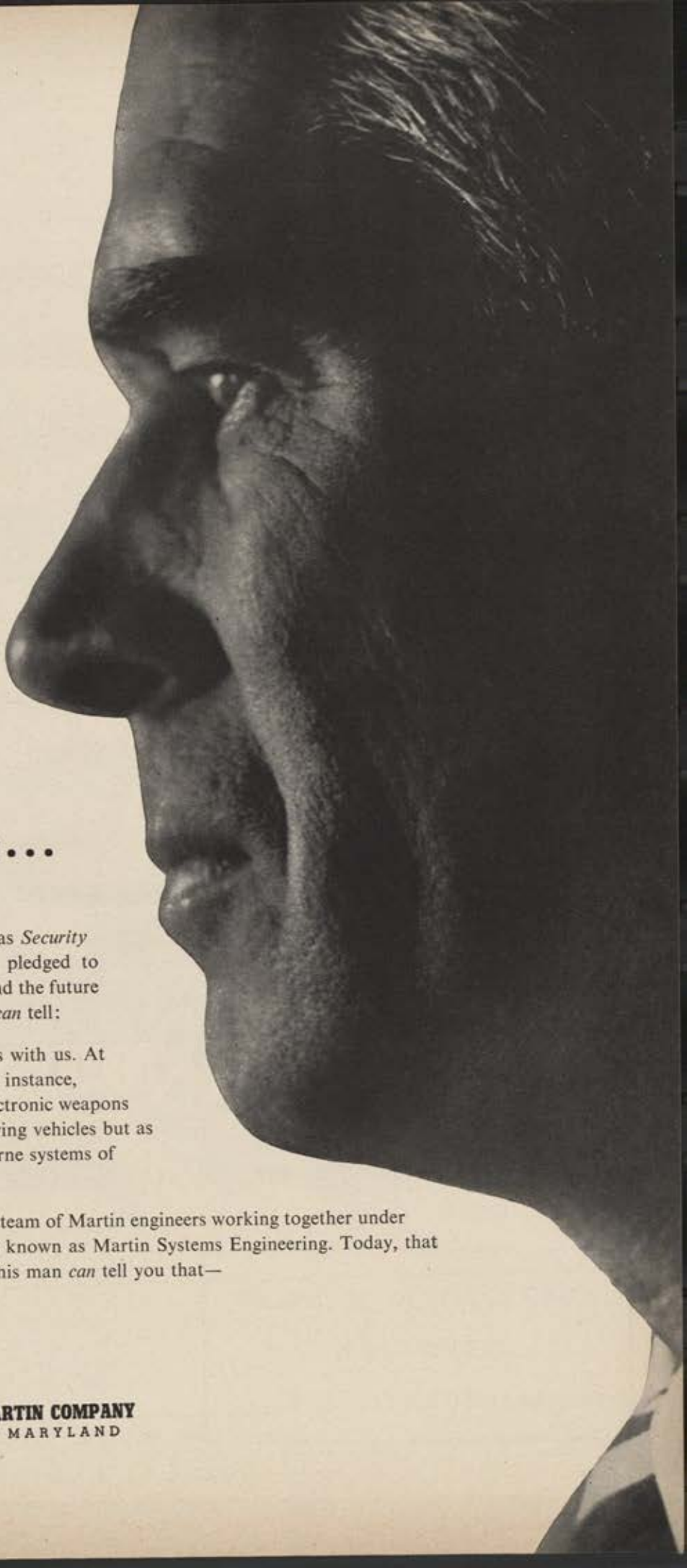
A. Shorter lead time will allow a decrease in current fiscal appropriations, that is the fiscal year we are talking about, 1954.

Q. Then the effect of that, really, is just to throw the cost from one year to the succeeding year?

A. That is as we see it.

Q. In other words, it does not cut down the total cost to the Treasury or the taxpayer?

A. Not eventually, no. It is also, I think, a one-year operation. It is only possible to do it once.—END



If this man were free to speak...

Much of his thinking is classified as *Security Information.* Much of his mind is pledged to silence, for the love of his country and the future of our world . . . But this much he *can* tell:

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JET BLASTS

ABILITY—NOT TIME-IN-GRADE

Has the Air Force been wasting brilliant young executive ability because of the time-in-grade stumbling block?

After reading numerous articles on the subject of officer promotion, I've begun to wonder if our military and governmental agencies haven't lost complete sight of the basic fundamentals that have made our United States a thriving, industrial empire. From ocean to ocean and border to border our country has become the leader in world commerce because it has offered men incentive to work for a reward. In the business world nobody has set a barrier in front of man to forestall him from gaining the just reward for his efforts. A man beginning his career in the business world is offered two choices. Either he chooses to be a worker, or an executive. True, he does not begin at the top in either case, but eventually he can reach the top in either category if he has the initiative, imagination, and ability. It's left entirely up to the individual, with no stumbling blocks such as time-in-grade to deter him from reaching the top in the executive field.

In the Air Force, as in business, a man has the opportunity of choosing to be either a worker or an executive. The men with mechanical aptitudes and clerical knowledge choose the enlisted ranks, while men desiring executive positions select the commissioned branch.

The first consideration in the selection of an officer for promotion is the time-in-grade factor. Regardless of his ability, or the length of time he has spent as an officer, he cannot be promoted unless he has the required time-in-grade. He may be the finest executive potential in the entire Air Force, yet due to his lack of time-in-grade he is forced to occupy a position in the Air Force structure that barely requires a scant bit of his ability.

More than once a man of proven ability has occupied a position which he has gained through his own initiative, and when it came time to be promoted he did not have sufficient time-in-grade, consequently officers serving under him with the required time-in-grade received the promotion and assumed his position. And Air Force officials wonder why they can't compete with American industry in the procurement of executives. It is the greatest fallacy in the entire promotion structure of the USAF and its civilian components. Ability should be and must be the primary consideration in the selection of the executives of the USAF if it is going to procure executive talent.

At any Air Force level the selection of an officer to fill an executive position purely on a basis of seniority is a gross example of mismanagement. Many times it is done merely because a commander allows his personal feelings to enter into the selection. Instead of picking the most qualified officer, he refuses to allow himself to be thought of as a bad fellow and relies upon the ossified system of seniority for his selection. At times selection by seniority is necessary, but not too often. A new commander of a unit or organization is forced to use the seniority system, because he has not had the opportunity to learn which officers have ability and which do not. After thirty days a squadron commander, a wing commander, a division commander, or an Air Force commander should be able to differentiate between the weak and the strong officers directly subordinate to him. If he cannot recognize ability, then he is no commander. The lack of ability to make an objective decision is the worst trait of an indecisive commander. It's just as easy for a commander to surround himself with his most capable officers as it is to encircle himself with officers of less capabilities. It requires only personal fortitude and a belief in the accepted principles of business management.

Having recently completed a twenty-one months' tour of active duty with the USAF, I had an opportunity to view the system at work. In more cases than a few I saw brilliant, young, regular Air Force officers stymied by the stumbling block of time-in-grade. Their initiative, imagination, ability, and devotion to duty was something the Air Force can proclaim to the world. On the other hand, I saw some of the grossest examples of officers who lacked the business ability to operate the smallest of civilian enterprises. How they attained their rank, or their position in the Air Force, is beyond the scope of human comprehension. As individuals they are affable people, no different than your next-door neighbor or your golfing partner. I liked them for their personal traits, but insofar as their ability as executives was concerned, they didn't have it. Perhaps their attainment of rank was a result of fast promotions during World War II, but their acquirement of a position of responsibility was due solely to one of their friends, who knew a friend. Friendship is a great thing, but when the efficacy of the Air Force is at stake it's dereliction of duty and pure, unadulterated treason.

In my endeavor to have the promotion policies changed to meet the current situation obviated by the Korean conflict, I've had the opportunity of talking to some of the officers in the personnel branch of our Air Force civilian components. The negative approach assumed by one officer left me completely cold and made me wonder if we were both in the same Air Force, or whether he was still forwarding the management concepts of the old Army Air Force. In telling one of my business friends about the negative approach he answered, "Mac, you can't fight it . . . it's the old Army game." Perhaps I'm carrying my aggressive fighter pilot training too far . . . but, no, I am going to fight it with every means at my disposal, except through legislative pressure. The Air Force and its civilian components are new. We aren't steeped in traditions unacceptable to the logical thinking of American businessmen. We're new in structure, youthful in our physical embodiments, and with proper leadership we can become modernized in our methods of business management. The abolishment of the present time-in-grade criteria must be altered and subordinated to the prime requisite for the efficient operation of the Air Force and its civilian components . . . ABILITY!

Maj. David F. McCallister
Delaware ANG
Folsom, Pa.

LET'S HAVE YOUR JET BLAST

In "Jet Blasts" you can sound off on any subject you want. Each month we'll pick the letter or letters we feel will interest our readers most and pay $10 for each one printed. Please keep letters under 500 words.—The Editors.

Stay Off the Ground!

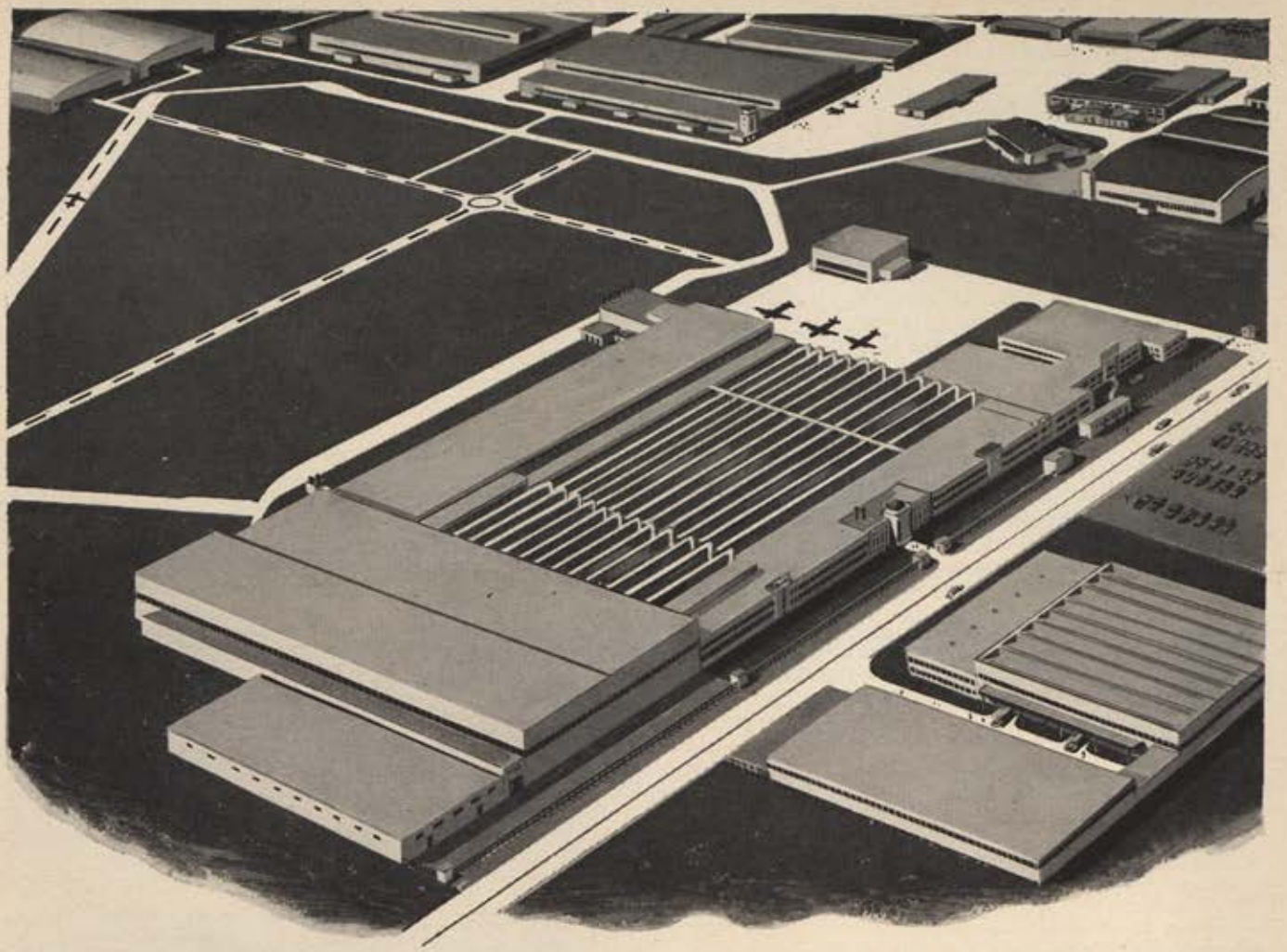
If the next war is fought on land the USSR will win it, for they accept the theory that warfare, like history, may be interpreted as a struggle between land power and sea power. Their acceptance of this theory has compelled them to do everything possible to make their landlocked fortress a self-sufficient region, isolated from the rest of the world.

The Soviet Union has rimmed itself with buffer states in order to ward off the first blows of the enemy. And if that enemy isn't halted at the frontier, Russia will withdraw into her continental shell, letting nature and distance wage her battle. This policy defeated Hitler and Napoleon, and no army abandons a tactic that has proven itself in combat time and time again.

But the Soviet Union has failed to realize that airpower has upset the age-old sea power-land power theory of warfare. Today the vast distances of the Soviet Union are measured in minutes, not miles, by the modern jet pilot. Such distances can hinder the USSR, rather than help, when aerial warfare is waged on a large scale. There is no retreat from the long-range jet bomber.

The further the Russians pull back into Central Asia the weaker their economy becomes. Interior Russia has a miserably poor rail network, and highways are almost non-existent. Telecommuni-

(Continued on page 49)



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JET BLASTS——CONTINUED

cations are poor and factories are exposed. Because the Nazis lacked the heavy long-range bombers to go after these strategic targets they were forced to fight on the ground. And there, on the ground, they found a climate far from ideal, with bitter winters and barren wasteland. And on the ground they lost the war.

We must never make the mistake Germany did. We must, at all cost, *stay off the ground!*

And we must also stay off the water, for a navy can do little in an offensive against the USSR. There are no sea approaches worth considering. The Arctic Ocean is a barrier, not a means of access. The Baltic and Black Seas are virtual Soviet lakes and it would be naval suicide to enter either of them. Only Russia's Pacific Coast is exposed to the Navy's guns—and there is little of strategic value there. The industrial regions of Lake Baikal and the Kuznetsk Basin are over 1,500 miles from the nearest ocean suitable for carrier operations.

Only Europe and west coast Russia are vulnerable to carrier aviation. In Europe naval aircraft could only bomb targets we wish to protect. They couldn't reach one key Soviet industrial plant! The destruction of Vladivostok, on the Pacific Coast, would only serve to satisfy our ego, as it has no real industrial significance.

Long-range jet bombers are the answer. They can cover the USSR from border to border, by operating from bases in Canada, Alaska, Greenland, Japan, Great Britain, North Africa, and India. If bases only in continental America were available our bombers of the Strategic Air Command could still make the journey and return.

A war with continental Russia would be not unlike our past experience with maritime Japan. Japan was strangled to death by the Navy. The strangle hold can be applied to the Soviet Union by the Air Force.

Our productive effort should be directed toward building a super-fleet of long-range jet bombers. Fighters are relatively unimportant since jet bombers can fly as fast as jet fighters, and the fighter of the future will undoubtedly be relegated to defensive combat.

Soviet plans for future warfare are based on past experience—experience that taught them that land power means victory. Soviet air strength is primarily for defense. The lack of bombers in Korea tends to confirm this. The Chinese and North Korean Reds are waging Russian-type warfare—on the ground. There is no navy, and planes are called on only for behind-the-lines defense.

Although the USSR has learned from history that no land or naval force can subdue her, the Soviets have failed to realize that tomorrow will soon be yesterday and future history will vividly point out how airpower achieved that victory, where sea and land power had always failed.

Bob Fuson
Washington, D. C.

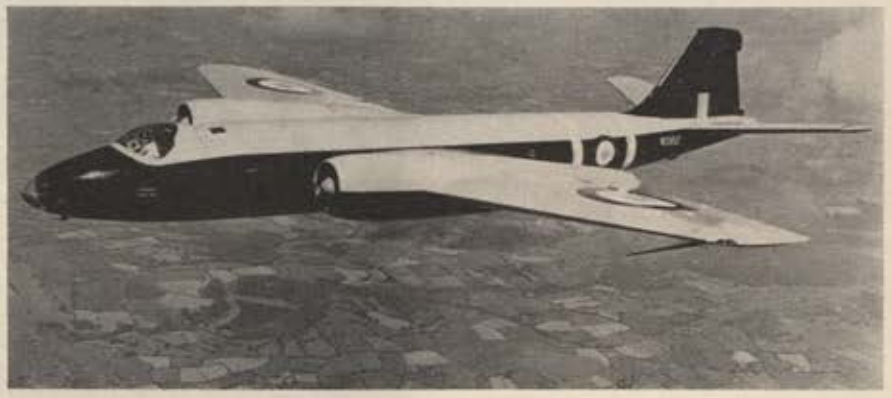
TECHNIQUE

Safer Landings

An instrument recently designed by Safe Flight Instrument Corp., eliminates needing to know plane's take-off and landing weight-load. It's a Landing Speed Indicator (LSI). When needle is centered, as shown above, it indicates correct landing, take-off speeds. If plane's speed is too slow, needle moves left to red portion of indicator; too fast, right to green. In case of loss of an engine on take-off, centering needle at juncture of green and white (center) segments indicates maintenance of correct air speed. Unlike airspeed indicators which lag while recording changes, LSI acts instantaneously.

KB-29 Refuels Three Meteors at Once

With wing-tip-mounted refueling units, a KB-29—world's only three-point tanker—recently demonstrated its ability to fuel three RAF Meteor jet fighters at one time, using the probe-and-drogue method. The tests, conducted in England by Flight Refuelling, Ltd., indicated that four tankers could refuel a squadron of 12 Meteors in three minutes at altitudes up to 25,000 feet.

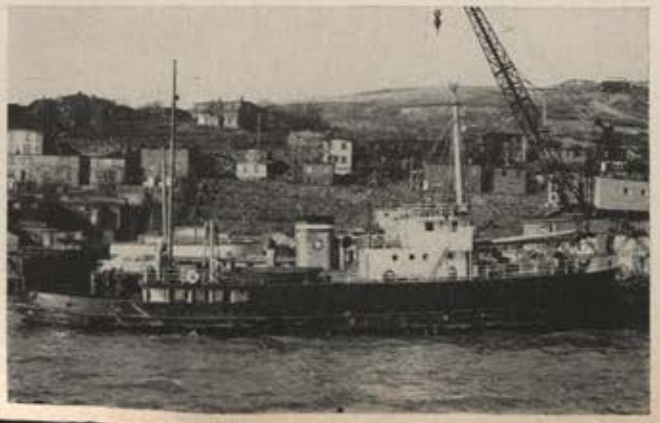


Altitude Mark Falls to British Canberra

Powered by two Bristol Olympus turbojet engines, a British Canberra bomber (above) piloted by Wing Commander W. F. Gibb (left) has set a new unofficial world's altitude record of 63,668 feet—more than 12 miles high. The Olympus develops close to 10,000-lb. static thrust at sea level. With two independent compressors mounted in series, each powered by separate turbines, it's shoved "suffocation altitude" upward—altitudes at which air intake isn't sufficient to sustain jet operation. The Olympus is licensed as the J-67 to Curtiss-Wright in the US, while Martin makes a version of the Canberra for the AF.

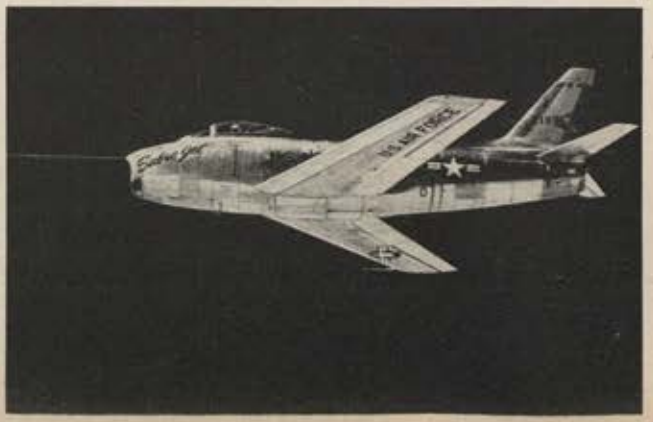
Private Navy of the USAF

Shown tied up at a St. John's, Newfoundland, dockside is the transport FS-103—the USAF's "Navy." The 453-ton craft plies waters of the AF's Northeast Air Command, helping solve supply problems in the Far North. It's manned by Newfoundlanders.



Latest Sabrejet Makes Debut

Fifth and latest of North American's F-86 series, the F-86H fighter-bomber, is tested at Edwards AFB. It has sturdier landing gear and new, clam-shell type canopy. Powered by a GE J-73 engine, its service ceiling is more than 45,000 feet.



The Gilfillan Group Announces The New

GILFILLAN RADAR TRAINER

Creates "Real" Aircraft on Any Radar Scope
Compact, Sub-Miniaturized

NOW—SIMPLIFIED EQUIPMENT ACCOMPLISHES ON-THE-JOB TRAINING OF RADAR OPERATORS ON OPERATING RADAR IN THE FIELD

THE NEW GILFILLAN RADAR TRAINER places aircraft targets on *any* radar scope. These look, behave and maneuver exactly like real aircraft.

LOCAL TERRAIN, obstacles and real aircraft are retained on the scopes; the operator practices under exact local conditions.

CONSTANT OPERATOR EXPERIENCE with any type of emergency landing safeguards actual landings involving real aircraft and personnel. Interception problems can be simulated. Complex traffic situations can be solved.

LEARNING TO OPERATE the Gilfillan Radar Trainer takes only a few minutes. Can be operated by an instructor; by trainees; by pairs of experienced radar operators to maintain top proficiency.

OCCUPIES ONLY 5 SQUARE-FEET; costs less than $15,000. Effects great economies by assuring round-the-clock training in any weather without expenditure of gasoline, aircraft or flying time.

A DEVELOPMENT OF THE GILFILLAN GROUP, noted for research, development and precision production for 40 years.

FOR COMPLETE DETAILS write Gilfillan, 1815 Venice Blvd., Los Angeles 6, California.

In GCA and Radar Research, Design and Production,

the FIRST name is *Gilfillan*

Los Angeles

GCA ((RADAR))((RADAR))((RADAR))((RADAR))((RADAR))((RADAR))((RADAR))((RADAR))

The BENDIX IGNITION ANALYZER
The World's Most Widely Used Analyzer

Result: PROVEN ADAPTABILITY

IN USE BY INDUSTRY, THE MILITARY, and COMMERCIAL AIR LINES

The universal acceptance of the Bendix Ignition Analyzer is perhaps the most conclusive evidence of its ability to reveal the performance of ignition systems wherever they are in use.

Airborne or used for ground overhaul, operated in arctic or tropical temperature, on long flights or short hops, the Bendix Ignition Analyzer unfailingly predicts the remaining life of individual spark plugs and checks in advance the efficiency of all ignition units.

Such proven adaptability means that air line operators can keep a constant accurate check on the efficiency of their ignition systems. It means further maintained schedules and overhaul expenses materially reduced.

It is hardly an exaggeration to state that no other single piece of equipment pays such big dividends in engine operating efficiency and maximum safety as does the Bendix Ignition Analyzer.

Detailed literature on request.

Costs Less—Does More

The Bendix Ignition Analyzer is available for either airborne or portable-airborne installations. It can be used with either high or low tension magneto or battery ignition. It is the ignition analyzer that can predict spark plug failure before it occurs . . . make an efficient check of more than one spark plug at a time and do so on a large, easy to read screen . . . yet it costs less than comparable analyzers.

Bendix

SCINTILLA MAGNETO DIVISION OF
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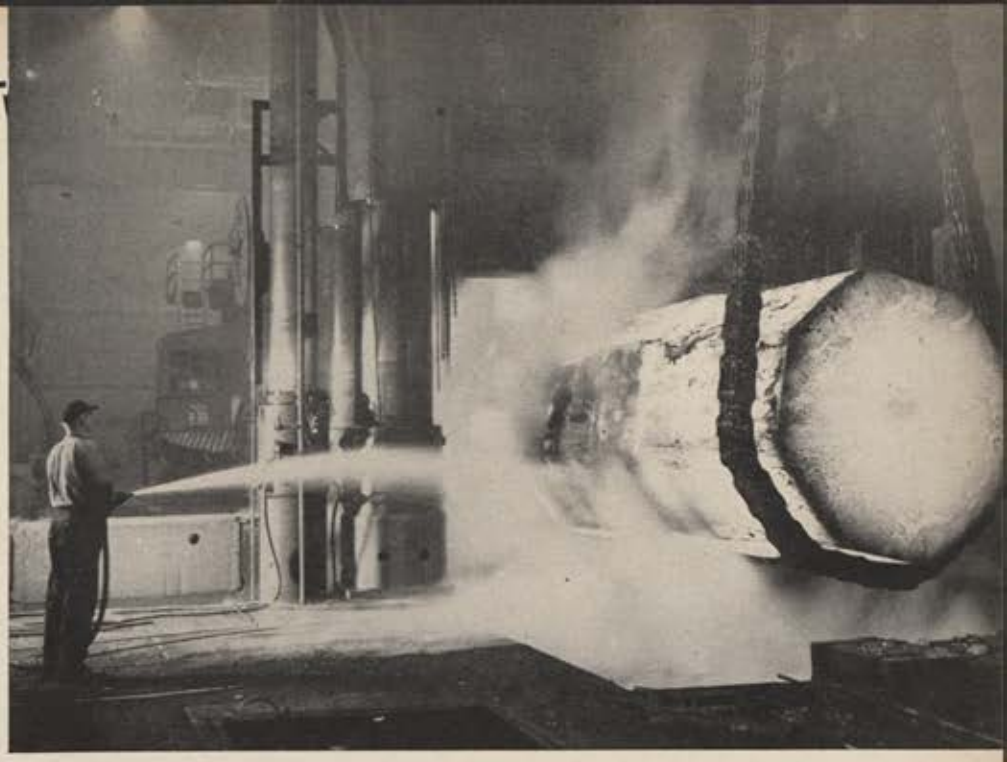
Brouwer Building, 176 W. Wisconsin Avenue, Milwaukee, Wisconsin • 582 Market Street, San Francisco 4, California

Double Hydro-Skis

A Grumman Goose equipped with double hydro-ski configuration developed by the Edo Corporation takes off during studies of lift characteristics of hydro-foils. Skis, mounted on shock absorbing struts, create enough lift to permit short planing run and rough water operation.



Extrusion Press Tie-Rod Shapes Up

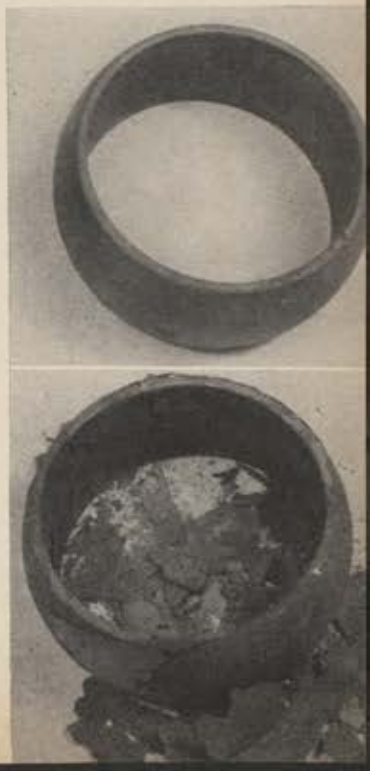
A 500,000-pound ingot being forged at a plant of US Steel for use in the AF's Heavy Press program is tempered with cold water. It'll be reduced two-thirds in diameter, lengthened to 63 feet, and finally whittled down to 195,000 pounds before becoming one of the tie-rods for a 20,000-ton extrusion press able to "squeeze" out large, one-piece aircraft components. The AF wants nine such presses, with capacities from 8,000 to 25,000 tons. Savings in time, money, and labor are indicated by comparing a bombing system beam produced under present methods (25 parts, 40 bolts, 186 rivets, and costing $444) with the same item produced on a heavy press (a single piece, which costs only $298).

First Flight of DC-7

The Douglas DC-7, eight feet longer than the 6 and described as the world's fastest piston airliner, has made its first flight. Each of the four Wright R-3350 turbo-compound engines delivers 3,250 take-off hp, giving 365-mph cruising speed and 410-mph top speed. Fifty-eight DC-7s have been ordered by four airlines.

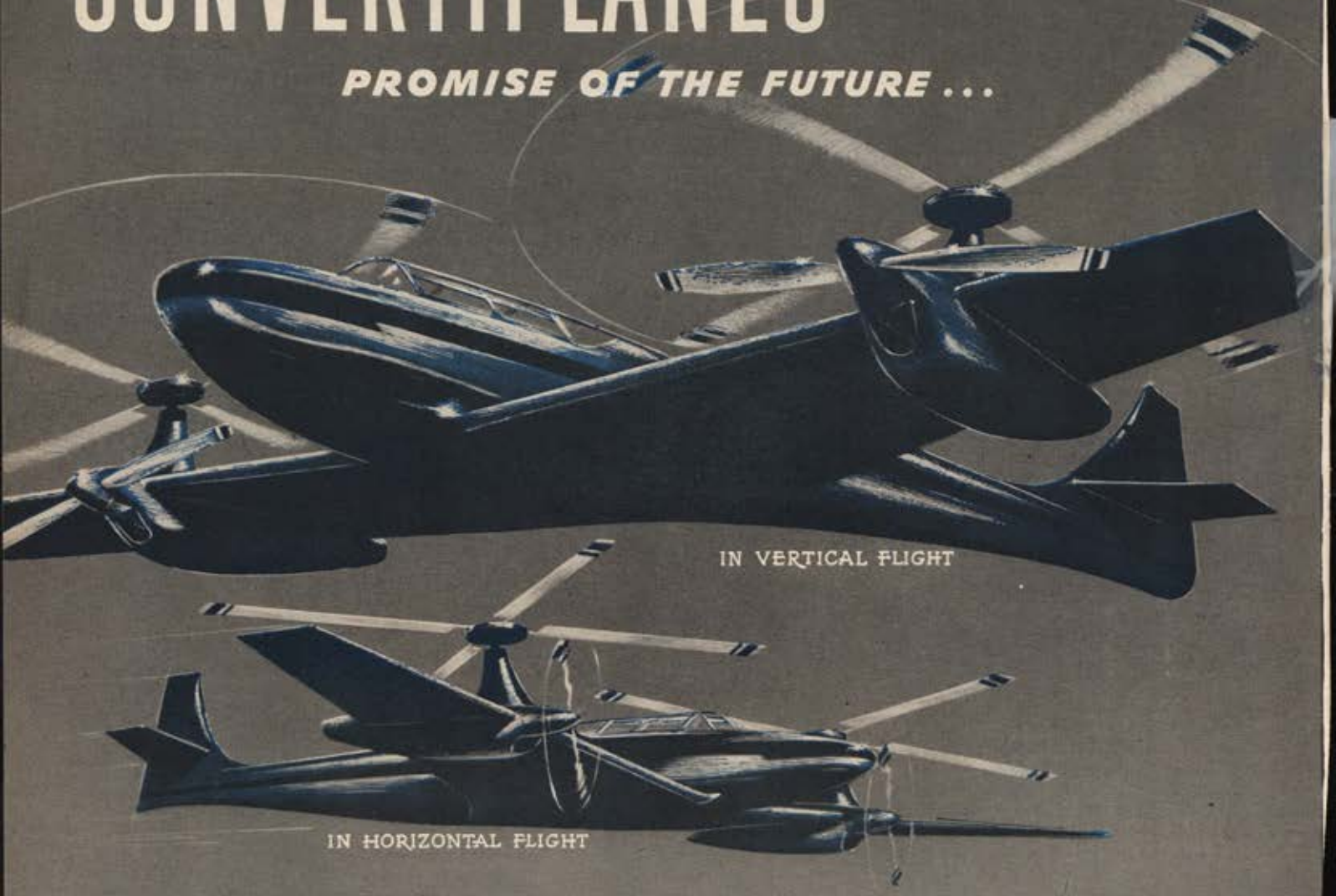
New Alloy for Service at up to 1800° F

Ryan Aeronautical Co. has developed a new heat- and corrosion-resistant cast alloy for service with ball-and-socket joints in aircraft exhaust systems where temperatures get up to 1,800° F. Below, a Ryan metallurgist takes a crucible of the molten metal from a 2,300° electric furnace during research, while below, right, the alloy's qualities are shown. The Ryan alloy (top) and a competitive alloy (bottom) were both exposed to 1,650° for 100 hours. The new alloy solves the problem of higher operating temperatures on C-124 exhaust gear.



CONVERTIPLANES

PROMISE OF THE FUTURE . . .

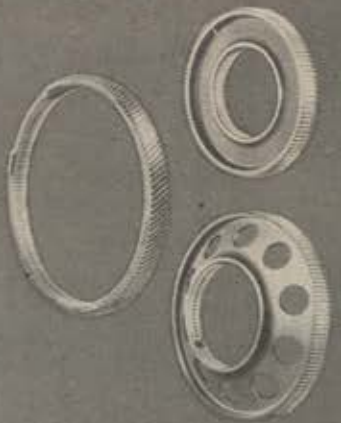


IN VERTICAL FLIGHT

IN HORIZONTAL FLIGHT

ACTUATORS AND MECHANISMS FOR AIRCRAFT AND AIRCRAFT ENGINES

Rotors raise the airplane vertically and, when airborne, conventional propellers take over to provide forward speed—this is one of the many developments now off the drawing board and into the prototype phase. Foote Bros. are today producing vital parts for convertiplanes that promise new advances in the future of aeronautics.



PRECISION GEARS FOR LEADING AIRCRAFT AND AIRCRAFT ENGINES

FOOTE BROS.

Better Power Transmission Through Better Gears

FOOTE BROS. GEAR AND MACHINE CORPORATION · 4545 SOUTH WESTERN BOULEVARD · CHICAGO 9, ILLINOIS

TECH TALK

By Richard Skinner

The Scandinavian Airlines DC-6B "Hjalmar Viking" that pioneered the Great Circle route over the Arctic from Oslo to Tokyo in late May whacked about twenty hours off the time the flight would have taken over the southern route across Europe and South Asia. With stopovers at Thule, Anchorage, and Shemya, total flying time was 34 hours and 53 minutes for the 6,683-mile trip. Passengers and crew numbered fifty-one, including forty replacements for the Norwegian Field Hospital in Korea. The return trip was slated to be via Bangkok, Karachi, Cairo, Rome, Geneva, and Frankfurt, making this the first commercial plane ever to circle the globe via the Greenland route.

A "time microscope" has been developed by the Naval Research Lab which permits photography of voltage changes as great as three million million volts a second. This, naval researchers say, is faster than the free-space speed of light.

TEMCO Aircraft Corp., which a couple of years ago transformed a fleet of C-54s into flying hospitals (the C-54M), has an AF order to modify another cargo transport—the Boeing C-97 Stratofreighter—for air evac. Thirty two-man G-1 seats will take care of up to sixty persons, or maximum litter arrangements provide for fifty-four, using a double row of four-tiered litters in the center and a single row on one side. Modification also includes putting a galley just aft the crew compartment, installing four-inch-thick fiberglass insulation to noise-proof the main compartment, and covering the walls with white fiberglass laminate sheets that are easily cleaned. TEMCO's no stranger to C-97 modification: three have been converted to mobile staff headquarters for SAC.

Now scientists are conjuring up supersonic shock waves in test tubes. General Electric engineers have devised "shock tubes" in which miniature waves travel faster than sound down the length of the tube. The shock front is photographed and studied to determine effects on combustion processes in jet engines. The tube is composed of two chambers, each with glass windows for high-speed photography. Pressure builds up in one chamber and is decreased in the other. When the thin diaphragm separating the two is punctured, the difference in pressure sends the shock wave into the second chamber.

Watch for other airlines to follow North American Airlines' lead in installing rearward-facing seats on commercial carriers. On the first such flight—a DC-4 from Burbank, Calif., to New York—passengers and crew alike approved the change. In addition to increased safety (see AIR FORCE, May '53, "Desert Sleigh Ride"), a spokesman for the airline said one out of three passengers was less inclined toward air sickness while the others noticed no difference. The reversed seats gave passengers better support during landings and a better view. The pilot said he approved the change because the passengers didn't come up to the front of the plane whenever the door opened. The airline has announced it plans to equip the rest of its four-engine fleet with rearward-facing seats.

MOBILIZATION NEWS

BY JAKE CULPEPPER

RUMPLED RECORDS — The recent twister that ripped through Robins AFB, Ga., tangled with the two buildings that housed personnel files of 14th AF Reservists. Many records, especially those of airmen, were damaged, and it will take some time to regroup them, according to Maj. Gen. C. E. Thomas, 14th AF Commander. Two days after the blow, a Georgia schoolgirl found part of an airman's file in her front yard at Tomsboro, thirty-five miles from Robins.

USAF ECI — New courses offered by USAF Extension Course Institute, Gunter AFB, Ala., are Basic Munitions, 4611, (airmen), and Military Affairs, 1602, (for persons holding degrees in law who are also members of either a state or federal bar association). In addition, five new volumes of ECI general courses and three volumes of special education courses recently became available to students.

CIVILIAN EMPLOYMENT — Recruitment for civilian vacancies at AF installations has dropped off somewhat because of budget limitations and manpower ceilings. Greatest current needs are for engineers and aircraft maintenance and repairmen.

CAP — Late strength figures released by Civil Air Patrol are: Senior members —29,196 (male, 25,578—female, 3,618); cadets—48,276 (male, 38,549—female, 9,727); units—1,984 (52 wings, 210 groups, 1,722 squadrons); aircraft—7,676; pilots—16,782 (15 glider); observers—2,590; and radio stations 10,987 (fixed, 1,845—mobile, 9,142). . . . AF hands out airman third class ratings to enlistees possessing CAP certificates.

THE DOLLAR — Reserve officers authorized the old $500 annual flying bonus are now eligible for mustering-out pay under last year's Korean vet law. . . . ConAC will award points to Reservists who participated in Armed Forces Day activities. . . . Base sales stores expect some AF clothing items to be marked down when new price tags go on this month. . . . On recent pay day at Kinross AFB, Mich., finance officers paid off in two dollar bills to impress upon local businessmen the amount of money spent in their city by AF personnel. . . . Indiana has started paying a bonus to its WW II vets. . . . Congress has authorized reimbursement of $250 to an AF captain who had to shell out this amount back in 1945 to get his crippled B-17 out of Poland.

DISTAFF — The AF Nurse Procurement program is currently taking a twist towards AFB open houses, style shows, and tours of AF hospital installations for prospective nurses. . . . AFR WAF personnel not on active duty may be assigned to any job in paid or unpaid reserve training program, if qualified, with exception of assignments to tactical (combat) group headquarters, tactical (combat) squadrons of reserve combat wings, or to command positions in reserve units other than WAF units. . . . Nancy Shea is busy revising her book, "Air Force Wife." . . . A/3C Frances Hogan is only WAF at Goodfellow AFB, Tex.,who is an aircraft and engine mechanic. . . . S/Sgt. Mary T. Burgess is first WAF at Sampson AFB, N. Y., to be assigned as motor pool dispatcher. . . . S/Sgt. Evelyn M. Charrier of Bolling AFB, D. C., is one of six WAFs to hold the rating of illustrator-technician supervisor.

ACADEMIES — Total of twenty-four enlisted members of National Guard and Army and AF Reserve from eleven states and Puerto Rico will enter West Point

(Continued on page 59)

MILITARY NEWS from the world's largest light plane producer

TURBOPROP CESSNA WILL FLY ON SIX DIFFERENT FUELS

New Observation Plane Uses Almost No Oil, Eases Supply Problem In Combat Areas.

News that the world's first turbine-powered light airplane, Cessna Aircraft Company's XL-19B, can operate efficiently on all grades and ranges of fuel, was announced recently by spokesmen at the firm's Wichita plant.

The new development is of special significance to combat supply and maintenance personnel who face the difficult and dangerous problem of maintaining large inventories of vehicle and aircraft fuels near front-line areas.

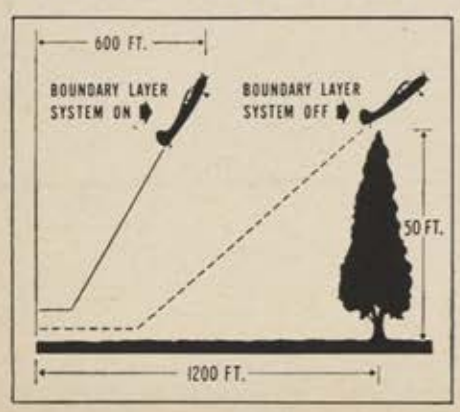
Other military advantages of the XL-19B turbine engine are low oil consumption, easy installation and maintenance, and almost complete elimination of in-flight cooling and vibration problems.

In addition to developing the turboprop light plane, Cessna engineers are currently experimenting on a new helicopter, producing L-19 observation planes for the Army, Marines and National Guard, building assemblies for jet fighter and bomber planes and conducting tests on Boundary Layer Control which shortens the landing and take-off runs of high-speed aircraft.

At company plants in Wichita, Hutchinson and Prospect, Kansas, military research and production continue as top priority Cessna assignments.

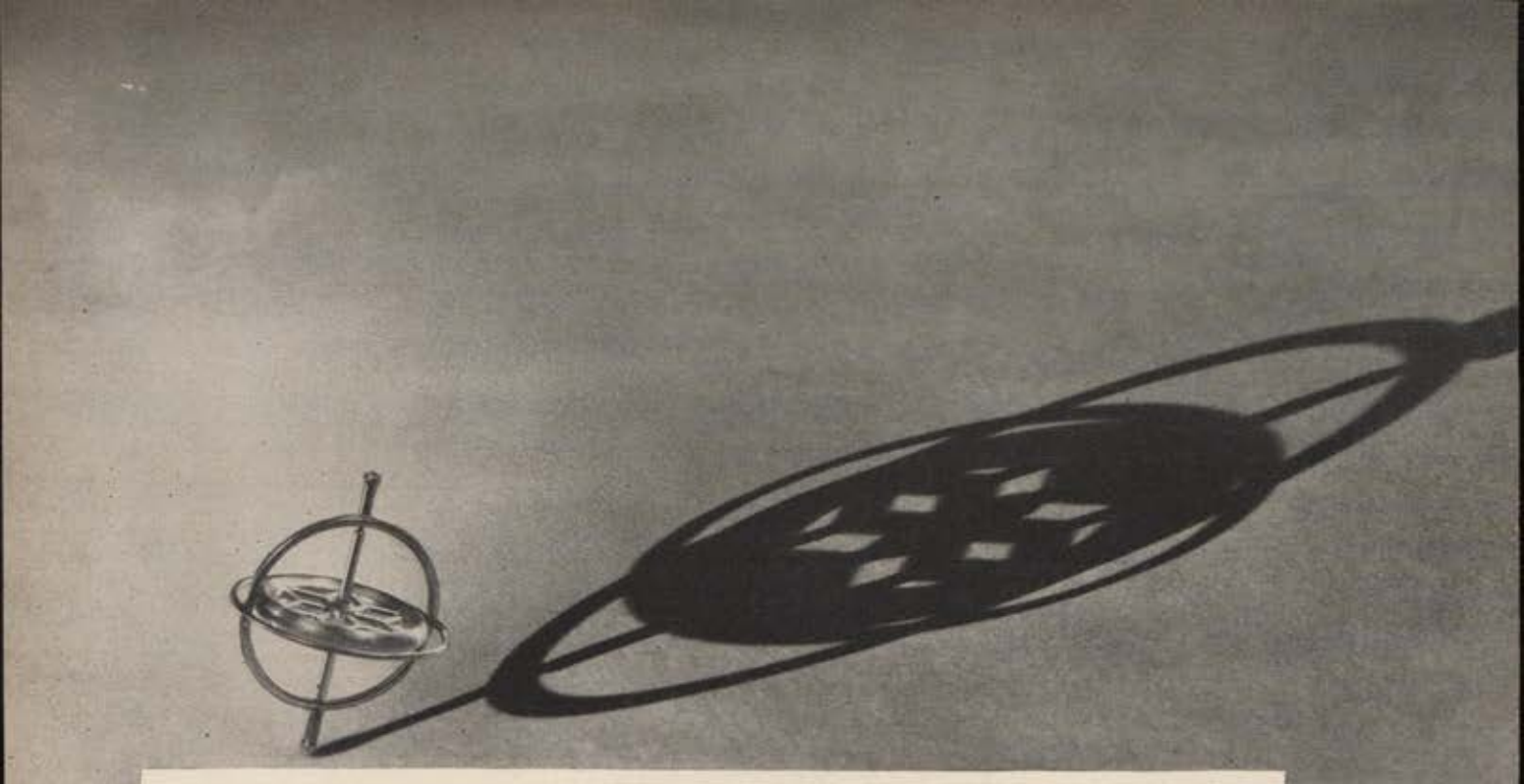
CESSNA AIRCRAFT COMPANY, WICHITA, KANSAS

IN BOUNDARY LAYER CONTROL AND ARMY OBSERVATION PLANES...



Cessna

SETS THE PACE



A simple device that casts a long shadow

The shadow you see above, cast by the simplest of gyros, is a symbol of potential.

As yet, man has filled in only a portion of the shadow—with devices used to control ships, planes and missiles.

Several years ago, realizing the great need for better gyroscopic controls for everything that flies, we entered the field.

Today we're specialists in gyros, have become one of the leaders in the industry.

Extensive research, high engineering and production standards, coupled with unsurpassed facilities, have made possible a complete Honeywell "family" of gyros of the highest quality.

Such Honeywell *mass-produced* devices as the Cageable Vertical Gyro, the Hermetic Integrating Gyro, the "Twin Spin" and many other rate and vertical gyros have gained a reputation as tough, precise, trouble-free devices.

This reputation has been gained through their use in Honeywell control systems, and as components in systems produced by other manufacturers, in flight controls for all types of aircraft—missiles and radar systems.

Our work with gyros continues to expand—as we seek to develop more of their potential. Because automatic control is so important to aviation progress. And *automatic control* is Honeywell's business.

MINNEAPOLIS
Honeywell

H Aeronautical Controls

2600 Ridgeway Rd., Minneapolis 13, Minn.

this month. . . . Three airmen are on the eligibility list for the class entering Coast Guard Academy on July 6.

AF-ROTC — AF has jettisoned its new program for accepting students for advanced ROTC training on priority basis (see Airpower in the News, June '53) after receiving protests from professors of air science and tactics who labeled the plan a "breach of contract" on part of AF to many cadets. Program had given top priority to those desiring flight training. . . . In order to absorb this year's 7,100 ROTC graduates in the active establishment, personnel officials say they may have to resort to a form of "forced separation" by giving officers the choice of signing up for indefinite terms or getting out.

RECALL — Recent AF Reg. 36-58 lists these changes in recall program: (1) Age-in-grade limits for non-flying officers—lieutenant 36, captain 42, major 48, lieutenant colonel 53, and colonel 55. Waivers are possible. (2) No chance of recall for officers once relieved from EAD, by their own request, by reason of serving in lower than permanent reserve grade. (3) Reserve officers serving as airmen, who are appointed warrant officers after having previously requested officer duty, must start a new application for such duty.

RELEASE — Immediate release from EAD is in store for many reserve officers still serving on EAD involuntarily and those airmen returning from overseas with less than six months service left in their current enlistments. The policy is effective only to August 1, 1953, and does not apply to officers of the medical services; chaplains; those serving under specified periods of time; ROTC officers serving under section 6(d) of UMTS; those with limited specialty; or those on duty in Research and Development specialty. Officers on orders for overseas duty and those actually overseas as of midnight, July 31, will not be released until twelve months foreign duty is completed. Those with dependents overseas must serve twelve months after arrival of dependents.

PERMANENT COMMISSIONS — Non-EAD and active duty Reserve officers whose AF appointments did not expire by last April 1 will get another chance to accept indefinite commissions.

RESERVE AIRMEN — Applicants to fill thousands of the enlisted slots in reserve training wings have failed to show. ConAC has a plan to fill these vacancies by enlisting 14,000 men without prior service with a guarantee that if the draft gets hot for them, enlistments in regular AF would be available.

DISTRICTS — The four new reserve districts, to be "detachments" of numbered air forces, have opened at Columbus, Ohio, Portland, Ore., Kansas City, Mo., and Shreveport, La.

IN THE WORKS — A joint reserve training center in New York State where Army, AF and Navy reservists would use the facilities jointly. . . . Plans for thirty more specialist training centers. . . . A $12 million Reserve facilities building project ready to takeoff. . . . USAF Air Ground Operations School's intensive indoctrination course for air Reservists. . . . June 30, 1953 set as completion date of nationwide reserve survey. . . . A House Armed Services subcommittee investigation of the Armed Services reserve training program. . . . Pentagon study of plan to cut in half reserve obligation of Korean veterans.

AF VET IN GOVERNMENT

Harmar D. Denny

SENATE confirmation of Harmar D. Denny as CAB member recently gave the Civil Aeronautics Board a unique distinction among independent Federal agencies by having a majority of its five members composed of former members of Congress. Mr. Denny, selected to fill the balance of a six-year term previously filled by Donald W. Nyrop, which expires at the end of this calendar year, was a member of the 82d Congress and served on the Interstate and Foreign Commerce Committee. He is a graduate of St. Paul's School, Concord, N. H., Yale University, and University of Pittsburgh Law School. He served as a pilot in the Army Air Corps, 1917-19; and in World War II was attached to the Eastern Flying Training Command of the US Army Air Forces. He left service as a lieutenant colonel. Active as an attorney in private life, and a member of the American, Pennsylvania State, and Allegheny Bar Associations, Mr. Denny, who is 67, has also served as Director of Department of Public Safety in the city of Pittsburgh, 1933-34, and is active in many national organizations, including the Executive Board, Boy Scouts of America, and Society of the Cincinnati—END

ANGuard ANGLES

Al Scholin

AN ALL-jet Air National Guard by the summer of 1954.

From the Guard point of view that's one bright spot in the clouded US Air Force expansion program.

There's been no official announcement, as this is being written, that all ANG fighter squadrons will be jet-equipped by the time 1954's summer training rolls around, but there's every reason to expect it.

Here's how some figure it:

1. Secretary of Defense Wilson who went before Congress to justify a budget for only 120 wings—instead of 143 wings provided for in the Truman budget—said:

"The Air National Guard . . . will have substantially increased quantities of first-class aircraft available for use which will make them more effective units than previously planned."

2. Our partners in NATO aren't able to build up military strength as fast as we had hoped. Consequently, they'll need fewer fighter planes than the schedule had reserved for them.

3. Aircraft production has been geared to the 143-wing build-up and NATO requirements. Before you can turn down the spigot, a lot of fighters already in various stages of production will come pouring out. The ANG, previously scheduled to begin receiving jets in the spring of 1954, will now get a share of jet fighter production almost immediately.

4. There's some sentiment in Congress and in non-AF Pentagon echelons that the more limited USAF build-up should concentrate on fighters rather than on our long-range bombing force. USAF's leaders disagree. As an alternative, though, USAF can fill part of the fighter demand with ANG squadrons at relatively low cost, thus reserving a proportionately bigger slice for its long-range bombers which must be manned by Regulars.

5. Soon after Secretary Wilson's testimony, a House appropriations group voted to give the ANG more than $140 million for fiscal year 1954—largest budget in ANG's short history and more than the ANG itself had asked for. Why did they up the figure? To cover the increased costs of jet operations.

To simplify the supply, maintenance, and operational problems, the ANG is to get F-86Fs, capable of both interception and ground support operations.

* * *

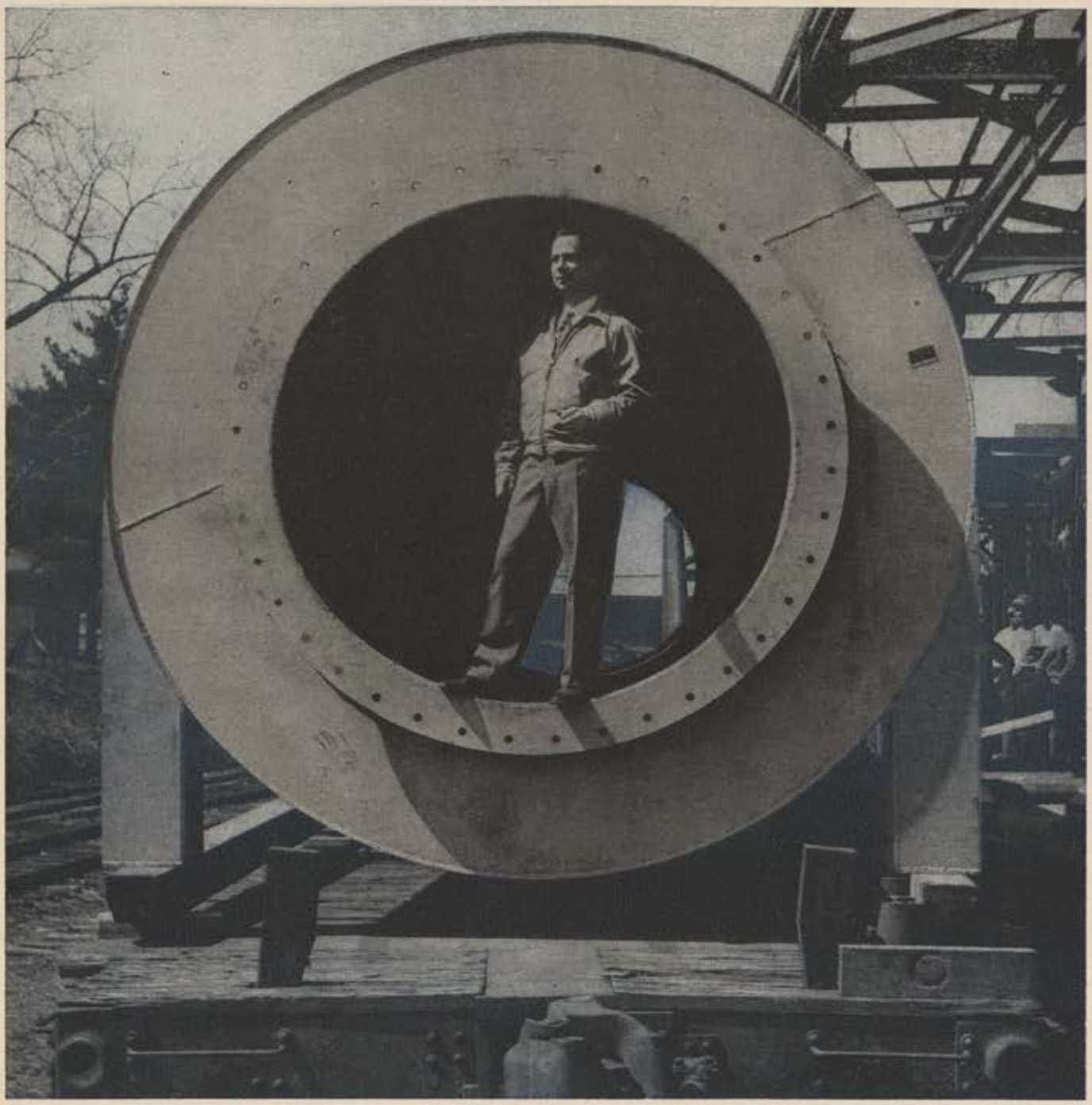
MIG Alley's shooting gallery has produced a fourth ANG jet ace. He is 32-year-old Maj. James P. Hagerstrom, formerly commanding officer of the ANG's 111th Fighter Squadron at Houston, Tex., who became USAF's 28th jet ace late in March.

A native of Cedar Falls, Iowa, Major Hagerstrom spent fifteen months of World War II compiling 170 missions with the 5th Air Force. He chalked up six Japs—four of them in one mission for which he was awarded the Distinguished Service Cross. He was in the investment security business in Houston when the 111th was recalled in 1950. The Hagerstroms—his wife was a wartime WASP ferry pilot—have five children.

* * *

TIPS FROM THE TURBINE BLADES . . . It's now up to President Eisenhower to pick a new chief for the National Guard Bureau. A special board convened by the Secretary of the Army recommended Maj. Gen. Leo M. Kreber, CG of the 37th National Guard Division and Ohio's AG; Col. Edgar Erickson of Massachusetts, now on duty in the NGB, and Maj. Gen. Earl Ricks of Arkansas, chief of NGB's Air Division and acting chief of the Bureau. General Kreber, a 1918 West Point graduate, is at present on active duty. Colonel Erickson is reputedly backed by Sen. Leverett Saltonstall, chairman of the Senate Armed Services Committee. General Ricks, first air officer to head the Bureau, is a former Arkansas AG and mayor of Hot Springs who has many friends in the Pentagon. . . . Chances are excellent that the ANG will soon be authorized fifteen more squadrons to be added to existing wings. . . . Watch for a picture story of a summer encampment in our next issue.

By Maj. Allan R. Scholin, ANGUS



48,000 POUNDS OF PREVENTIVE MEDICINE

The roar of an unsilenced jet can do peculiar things to anyone nearby . . . clothing can heat up . . . skin burns can result . . . digestive and nervous systems can be seriously disturbed . . . and, of course, hearing can be ruined. Medical authorities recognize these effects of the intense sound fields set up by jet engine exhaust. Proper silencing not only protects the health of those involved in this type of work, but is, in fact, an absolute necessity for efficiency in testing jet engines or planes in run-up tests. Silencing also makes the plant or field involved a more acceptable neighbor to those living or working nearby. Pictured above, ready for shipment, is one of the big Maxim Silencers used for jet engine testing. If you would like more information about this phase of silencing, write to:

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AFA NOMINEES for 1954

Nominating Committee names Gen. George Kenney to be President; Arthur Kelly, Board Chairman

GEN. GEORGE C. Kenney (USAF-ret.) wartime head of the Far East Air Forces and now President of the National Arthritis and Rheumatism Foundation, has been selected by AFA's Nominating Committee to head the Association in 1953-54. At the same meeting of the Committee, in Washington, D. C., May 16, incumbent President Arthur F. Kelly was nominated as Chairman of the Board of Directors.

General Kenney, whose home is now in Scarsdale, N. Y., was born in Nova Scotia and brought up in Massachusetts, where he attended MIT. As a pilot in World War I, he flew seventy-five missions, shot down two German planes, and was shot down once himself. From 1919 to 1939 he devoted himself to aeronautical development and its application to warfare, and in 1924, for example, fixed machine guns to the wings of a plane for the first time. In July 1942 when he took command of the Allied Air Forces in the Southwest Pacific, the Japanese were in complete control of the air, but little more than a year later General Kenney's forces had attained superiority. During the three years he conducted the war against the Japanese he became commanding general of the Far East Air Forces. After the war he commanded SAC and later the Air University. General Kenney became a Director of AFA in 1951, when he retired from the Air Force.

Arthur Kelly, nominee for Board chairmanship, also has an impressive aviation background, nearly twenty years in civil aviation. Now Vice President-Sales for Western Airlines, in World War II he was Deputy Chief of Staff of the European Division of ATC. He served AFA in Squadron, Wing, and National offices before being elected President of the Association last year.

Harold C. Stuart, present Board Chairman, will become a Permanent Director of AFA after this year's balloting.

Nominated for National office in AFA for the first time were J. Chesley Stewart, Missouri; James H. McDivitt, California; T. F. Walkowicz, New York; Stanley K. McWhinney, Michigan; Gen. Hoyt S. Vandenberg, retiring AF Chief of Staff; Ennis C. Whitehead, Kansas; Joseph J. Foss, South Dakota; and James W. Aston, Texas. A complete list of all nominees is on the following page. All nominations must be confirmed by delegates to AFA's 7th Annual Convention in Washington, D. C., August 20-23.

George C. Kenney

Arthur F. Kelly

AFA NOMINATING COMMITTEE'S SLATE FOR 1954

President

GEORGE C. KENNEY
Scarsdale, N. Y.

Director of AFA; former CG, FEAF, SAC, Air University; Foundation president.

Chairman of the Board

ARTHUR F. KELLY
Los Angeles, Calif.

Incumbent President; Past Sqdn. Wing, Regional officer; wartime Deputy C/S, ATC, Europe; airline executive.

Secretary

JULIAN B. ROSENTHAL
New York, N. Y.

Incumbent; wartime contract specialist with Air Materiel Command; attorney.

Treasurer

SAMUEL M. HECHT
Baltimore, Md.

AFA Director; wartime CBI ATC pilot; department store executive.

REGIONAL VICE PRESIDENTS

NEW ENGLAND REGION
(Me., N. H., Vt., Mass., Conn., R. I.)

EDWIN T. MORRELL
North Attleboro, Mass.

Incumbent; wartime aerial gunner and electronics specialist; industrial engineer.

NORTHEAST REGION
(N. Y., N. J., Pa.)

RANDALL LEOPOLD
Lewistown, Pa.

Incumbent; AFA Director, Wing Commander; wartime intelligence officer; automobile dealer.

CENTRAL EAST REGION
(Md., Del., D. C., Va., W. Va., Ky.)

GEORGE D. HARDY
Mt. Rainier, Md.

Incumbent; wartime 12th AF armorer, grocery wholesaler.

SOUTHEAST REGION
(N. C., S. C., Ga., Fla.)

JEROME A. WATERMAN
Tampa, Fla.

Incumbent; wartime administrative officer; department store executive.

GREAT LAKES REGION
(Ill., Ind., Mich., Ohio, Wis.)

GEORGE A. ANDERL
Oak Park, Ill.

Past Sqdn., Wing, National officer; wartime ATC sgt.; sales executive.

NORTH CENTRAL REGION
(Minn., N. D., S. D.)

MERLE S. ELSE
Minneapolis, Minn.

Incumbent; former Wing Commander; wartime 5th AF pilot; sales executive.

SOUTH CENTRAL REGION
(Tenn., Ark., Ala., La., Miss.)

FRANK T. McCOY, JR.
Nashville, Tenn.

Incumbent; wartime 5th AF pilot; seed company executive.

MIDWEST REGION
(Mo., Kan., Iowa, Neb.)

J. CHESLEY STEWART
St. Louis, Mo.

Squadron Commander; wartime ATC staff officer; airline executive.

FAR WEST REGION
(Calif., Ariz., Nev.)

JAMES H. McDIVITT
San Gabriel, Calif.

AFA Squadron, Wing Commander; wartime bombsight specialist; patternmaker.

ROCKY MOUNTAIN REGION
(Colo., Wyo., Utah)

WM. THAYER TUTT
Colorado Springs, Colo.

Incumbent; wartime AMC officer; hotel and corporation executive.

SOUTHWEST REGION
(Tex., N. M., Okla.)

THOMAS D. CAMPBELL
Albuquerque, N. M.

Incumbent; wartime White House emissary; wheat farmer.

NORTHWEST REGION
(Wash., Ore., Idaho, Mont.)

HILLFORD R. WALLACE
Spokane, Wash.

Incumbent; AFA Wing Commander; wartime FEAF pilot; air service operator.

PACIFIC OCEAN AREA REGION
(Areas in or bordered on east by Pacific)

ROY J. LEFFINGWELL
Honolulu, T. H.

Incumbent; Past Director, Wing Commander; wartime exec. officer, 4th and 7th AFs; sugar association executive.

NATIONAL DIRECTORS

JOHN R. ALISON, *Redwood City, Calif.;* incumbent; wartime CBI pilot, Air Commando; corporation executive.

JAMES W. ASTON, *Dallas, Tex.;* wartime materiel chief, ATC; banking executive.

EDWARD P. CURTIS, *Rochester, N. Y.;* Past Board Chairman; wartime C/S, USSTAF; camera manufacturing executive.

WARREN DE BROWN, *Red Bank, N. J.;* incumbent; Past Wing Commander; wartime 9th AF CID officer; insurance claims examiner.

JAMES H. DOOLITTLE, *New York, N. Y.;* Past President; wartime CG 8th, 12th, 15th AF; oil company executive.

IRA C. EAKER, *Culver City, Calif.;* incumbent; wartime CG 8th AF and MAAF; aircraft company executive.

DR. CORTEZ F. ENLOE, JR., *New York, N. Y.;* incumbent; AFA Division Commander; wartime flight surgeon; physician.

JOSEPH J. FOSS, *Sioux Falls, S. D.;* wartime Marine ace; ANG leader; aviation service executive.

JOHN P. HENEBRY, *Park Ridge, Ill.;* incumbent; wartime combat group CO, Korean combat cargo CO; aircraft maintenance executive.

ROBERT S. JOHNSON, *Garden City, L. I., N. Y.;* Past President; wartime 8th AF fighter ace; aircraft company executive.

THOMAS G. LANPHIER, JR., *San Diego, Calif.;* Past President; wartime 5th AF fighter ace; aircraft company executive.

STANLEY K. McWHINNEY, *Lansing, Mich.;* Past Squadron, Wing Commander; wartime flight instructor; aeronautics executive.

DR. JEROME H. MEYER, *Dayton, Ohio;* incumbent; Past Squadron, Group Commander; wartime flight surgeon; surgeon.

WILLIAM F. MULLALLY, *St. Louis, Mo.;* incumbent; wartime chaplain; Catholic priest.

CHARLES W. PURCELL, *Baltimore, Md.;* incumbent; Wing Commander; wartime CBI pilot; radio producer-announcer.

MARY GILL RICE, *Huron, Ohio;* incumbent; Past Squadron, Wing Commander; wartime 8th AF WAC; housewife.

C. R. SMITH, *New York, N. Y.;* Past President; wartime Deputy CG, ATC; airline executive.

CARL A. SPAATZ, *Washington, D. C.;* Past Chairman of Board; former C/S, USAF; military analyst and columnist.

THOMAS F. STACK, *San Francisco, Calif.;* Past Squadron, Wing Commander, VP, Director; wartime 15th AF pilot; attorney.

HAROLD C. STUART, *Washington, D. C.;* incumbent Chairman of Board; Past President; former Ass't Sec'y of USAF; attorney.

HOYT S. VANDENBERG, *Washington, D. C.;* Retiring C/S, USAF; wartime CG, 9th AF.

T. F. WALKOWICZ, *New York, N. Y.;* former USAF research and development specialist; corporation executive.

ENNIS C. WHITEHEAD, *Newton, Kan.;* wartime CG, 5th AF; aviation consultant; wheat farmer.

GILL ROBB WILSON, *Trenton, N. J.;* incumbent; Past Conv. Chmn.; former Air Force pilot; aviation publisher.

MORRY WORSHILL, *Chicago, Ill.;* Regional VP, Past Wing Commander; wartime 5th AF operations specialist; pharmacist.

What JACK & HEINTZ *is doing about...*

ACCELERATION

Diving, climbing jet planes are super roller coasters. Sudden bursts of acceleration—sharp banks and turns—place aircraft electrical equipment under punishing stresses. But Jack & Heintz equipment can take anything a jet can "dish out". Take it because specialized J&H acceleration tests have subjected our units to conditions more severe than encountered in actual service.

It is our business to develop and produce compact electrical, electromechanical and hydraulic devices whose specialized design offers the maximum in generating, applying or controlling power under unusual and extreme operating conditions.

The name ***Jack & Heintz*** on aviation or commercial products stands for advanced engineering . . . precise manufacturing . . . pretested performance. Jack & Heintz, Inc., Department 750, Cleveland 1, Ohio.

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Aircraft Generating Equipment—a-c and d-c—including Control Systems and Components • Electric Starters • Actuators and Special Aircraft Motors • Custom-built Commercial Motors • J&H Eisemann Magnetos

DON'T MISS THIS TWIN OPP

See WASHINGTON, the Capital City . . . Enjoy the

Washington Monument

HISTORIC WASHINGTON

Delegates and guests to the 1953 AFA Convention and Reunion will have an opportunity to visit the many historic buildings and sites which are so much a part of the history of this great nation. Scenic tours will be especially interesting to the AFA families who will vacation at the Convention.

The White House

ATTEND . . .

AIRPOWER PREPAREDNESS SYMPOSIUM

Top representatives of industry, labor, Congress, and military will discuss their respective fields in relation to our airpower build-up.

LUNCHEONS & BANQUETS

The Preparedness Luncheon, Airpower Banquet, and Airpower Brunch will be feature events of the Convention.

AIRPOWER BALL

Two orchestras, Miss AFA of 1954 and her court of airline hostesses, and a top floor show will make this year's Ball the best yet.

LADIES FASHION LUNCHEON

This event will feature fashions of five of Washington's leading stores, the Airpower Gown, and the Air Age Wardrobe.

SUNRISE MEMORIAL SERVICES

Memorial services in Arlington Cemetery will include wreaths for the Tomb of the Unknown Soldier and General Hap Arnold's grave.

The Pentagon, Defense Headquarters

Capitol Building

Arlington Nat'l Cemetery Amphitheatre

AIR FORCE ASSOCIATION
1953 Convention and Reunion
PROGRAM

THURSDAY—AUGUST 20
10:00 AM: AFA Leaders Meeting
2:00 PM: Opening Business Session
7:30 PM: Second Business Session

FRIDAY—AUGUST 21
8:00 AM: Commanders' Breakfast*
10:00 AM: Industrial Symposium
Ladies Aux. Bus. Session
12:30 PM: Ind'l Symposium Luncheon*
Ladies Fashion Luncheon
2:45 PM: Industrial Symposium
Ladies Aux. Bus. Session
6:00 PM: Reunion Cocktail Party
10:00 PM: Annual Airpower Ball

SATURDAY—AUGUST 22
9:00 AM: Third Business Session
12:30 PM: Unit Reunion Luncheons*
2:30 PM: Final Business Session
7:30 PM: Annual Airpower Banquet
Speaker: Hon. H. E. Talbott

SUNDAY—AUGUST 23
8:30 AM: Sunrise Memorial Services
10:30 AM: Airpower Brunch

REGISTRATION FEE: Members: $15.00
Ladies: $15.00
Non-Members: $20.00
Fee includes all functions except *

ORTUNITY...

Annual AFA Convention and Reunion

Sec'y Talbott

Gen. Twining

Col. Gabreski

The Elite of the Air Will All Be There!

No other airpower meeting during this 50th year of aviation will have as many airpower dignitaries in attendance as the AFA National Convention in Washington. When we say dignitaries, we are not referring to the generals alone. We mean the fighter pilots who haunt MIG Alley, the bomber boys who stop the flow of enemy supplies, the ground crews who keep the planes in the air, and the John Does on the street corners who, in their civilian pursuits, carry the message of airpower to the people.

Of course, the Secretary and Chief of Staff of the Air Force, the Commanding Generals, members of Congress, and industry leaders will be present. More than 1,500 airmen will "invade" Washington.

Old friends meet at AFA convention.

UNIT REUNIONS

AIR TRANSPORT COMMAND
J. O. "Bill" Urquhart
c/o Capital Airlines
Washington Nat'l Airport
Washington 1, D. C.

AIR FORCE CHAPLAINS
Chaplain Albert C. Schiff, Jr.
Hdqs., Civil Air Patrol
Bolling Air Force Base
Washington, D. C.

315th TROOP CARRIER GROUP
Lt. Col. Wm. L. Brinson
Headquarters, MATS
Andrews Air Force Base
Washington, D. C.

321st BOMB GROUP (M)
James E. Toohey
Bennett & Edwards, Inc.
First Nat'l Bank Bldg.
Kingsport, Tenn.

AIR FORCE MEDICS
Cortez F. Enloe, Jr., M.D.
500 Fifth Avenue, Suite 5130
New York 36, N. Y.

NIGHT FIGHTERS
W. W. Kratz
1500 Mission Canyon Road
Santa Barbara, Calif.

1st AIR COMMANDO GROUP
John R. Alison
816 Chestnut Street
Redwood City, Calif.

90th BOMB SQUADRON (L-NI)
Joseph H. Corbin
2310 Ellingham Drive
Wichita Falls, Texas

366th FIGHTER GROUP
Lt. Col. Albert Hinckley
Henchman's Lea
Orlean, Va.

RESERVE YOUR ROOM EARLY FOR THE CONVENTION AND REUNION

Three famous Washington hotels have been reserved for AFA's 1953 Convention. They are the Statler, which will be Convention Headquarters, the Mayflower, and the Ambassador. AFA will not operate a housing bureau for the Convention. Delegates and Guests should request accommodations directly from the hotel of their first choice. A first and second choice of hotels should be listed.

Rates	Single Room	Double Room	Twin Room
Statler	$7.00-15.00	$10.50-15.00	$11.00-17.00
Mayflower	6.50-16.50	12.50-18.50	13.00-19.50
Ambassador	5.00- 9.00	7.50-10.50	8.50-12.00

Suites: 1 Bed/Rm.: 23.00-37.50 2 Bed/Rm.: 36.00-55.50

AIR FORCE ASSOCIATION CONVENTION ROOM RESERVATION REQUEST FORM
August 20-21-22-23, 1953

(Please Print)

NAME_____

ADDRESS_____

CITY_____ STATE_____

ARRIVAL DATE_____ HOUR_____

DEPARTURE DATE_____ HOUR_____

NAME OF PERSON(S) SHARING ROOM:

_____

_____

MAIL DIRECTLY TO:

Reservations Manager
(Name of hotel of first choice)
Washington, D. C.

(Please list two choices of hotels)

CHOICE: HOTEL DESIRED:

First_____

Second_____

TYPE ROOM DESIRED

☐ Single ☐ Double ☐ Twin

☐ Suite—Number of Bedrooms_____

Desired rate per day: $_____*

*Room available at rate nearest that requested will be assigned.

WING CONVENTION IN WISCONSIN

At its first convention, AFA's newest Wing hears General Mills describe A-bomb tests. Capital Squadron revamped

Wisconsin, AFA's newest Wing, held its first Wing Convention May 3, in Milwaukee. Sandwiched between two business sessions was an Airpower Luncheon, attended by some seventy members and guests. Maj. Gen. John S. Mills, CG, Special Weapons Command, Albuquerque, N. M., was the principal speaker. He explained how his command took part in the A-bomb tests conducted recently in Nevada, and showed the film "Target: Nevada."

Sen. Alexander Wiley, Republican of Wisconsin, was also a guest, and spoke briefly at the luncheon.

New Wing officers elected include John F. Whitmore, 118 S. Owen St., Madison, Commander; William Eisner, 3530 N. 8th St., Milwaukee, Deputy Commander; and Mary Jane Rosenqvist, Milwaukee, Secretary-Treasurer.

Chairman of the convention was Fran Hyland, a councilman of Milwaukee's Billy Mitchell Squadron. Guests at the Convention included Morry Worshill, Great Lakes Regional Vice President; George Anderl, Illinois Wing Commander; several Squadron Commanders from the Chicago Group; and Gus Duda, from National Headquarters.

New York Wing Meets

The Sixth Annual New York Wing Convention was held the weekend of May 23d in Brooklyn's St. George Hotel with the Brooklyn Squadron as host.

Principal speaker at the banquet was Lt. Gen. Leon W. Johnson, CG, ConAC. Other guests included Brig. Gen. Robert E. Condon, Deputy for Reserve Affairs, ConAC, and Randall Leopold, AFA's Northeast Regional Vice President.

The Wing adopted a statement of policy calling for Congress to adopt the National Security Training Program and demanding that the Air Force build-up be stressed.

David S. Levison, 216 Forbell St., Brooklyn, was elected Wing Commander, replacing Forrest L. Vosler. Other new officers are Richard Lasher, Vice Commander, Ruth Stern, Secretary, and Arthur Wegman, Treasurer.

Convention chairman was Stanley Denzer, past commander of the host Brooklyn Squadron.

SQUADRON OF THE MONTH

San Francisco Squadron

CITED FOR

the success of its membership committee in obtaining new and renewal members at a record rate. For this outstanding contribution in membership procurement, the Air Force Association salutes the San Francisco Squadron.

Capital Reorganizes

At a meeting in Washington, D. C., on May 18, the groundwork for the new Capital Squadron was outlined for key organizers by George Hardy, Regional Vice President. Other meetings are planned to activate the Squadron and enlist the support of members to help during the forthcoming National Convention. Hardy's address is 2501 Allison St., Mt. Rainier, Md.

Florida Organizes

After an organizing effort headed by Alex G. Morphonios, 3131 NW 16th Street, Miami, the Greater Miami Squadron has become an official part of AFA with Morphonios as Commander. At a meeting on May 14, the Charter was presented by Andrew J. Lee, Chairman of the Miami Planning Board.

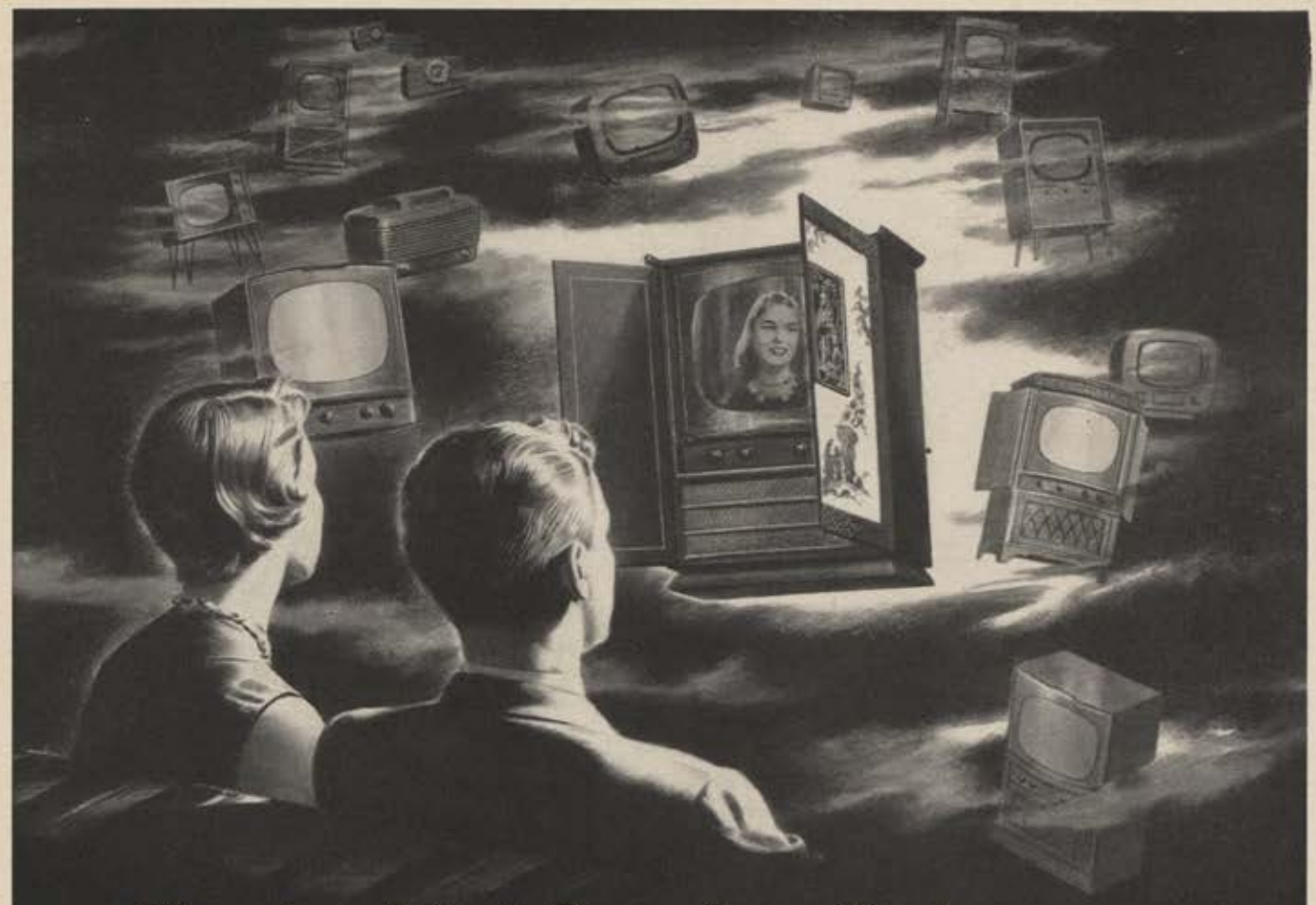
Among those elected to help Mor-

(Continued on page 71)

At Santa Monica, Calif., Squadron installation, President Arthur Kelly looks over original Charter, signed in 1946 by Jimmy Doolittle and Francis Gabreski, first Commander. Joseph Myers, the new Commander, is at Kelly's right.

Shown above with theater display during recent sponsorship of film "Above and Beyond" in Chicago are (from left) Theater Manager Maier and these members of Chicago Southwest Squadron: Jack Riedle, Commander Donald Spoerer, and Charles Lynch, Program Committee Chairman.

John Garcia, retiring Commander of AFA's San Juan Squadron, presents Squadron award to Cmdr. John Natwig, USCG, designated Puerto Rico's outstanding Military Aviation Man of the Year. Presentation was at annual banquet at which Island airpower accomplishments are recognized.



There's a bit of Stromberg-Carlson in every radio or TV receiver!

EVER STOP to think that your radio or TV—even if you bought it *today*—could be 10 to 15 years behind the times without certain of Stromberg-Carlson's pioneering developments?

Many of the fundamental engineering principles which make modern receivers efficient were Stromberg-Carlson firsts. Like the *Automatic Volume Control,* introduced in 1929 . . . or the *Coaxial Cone Speaker,* first used in 1939 . . . or the first console which combined *radio-phonograph* in one unit . . . or the pioneering, along with Major Armstrong, of the whole idea of *FM radio reception,* 14 years ago.

Stromberg-Carlson has also been first with other reproduction techniques which are available only in its own receivers. Long famous for the tone quality of its radios, inventor of the *Acoustical Labyrinth,* finest speaker housing in the world, it also manufactures the unique *"Panoramic Vision"* receivers, which provide the widest-angle viewing in all television.

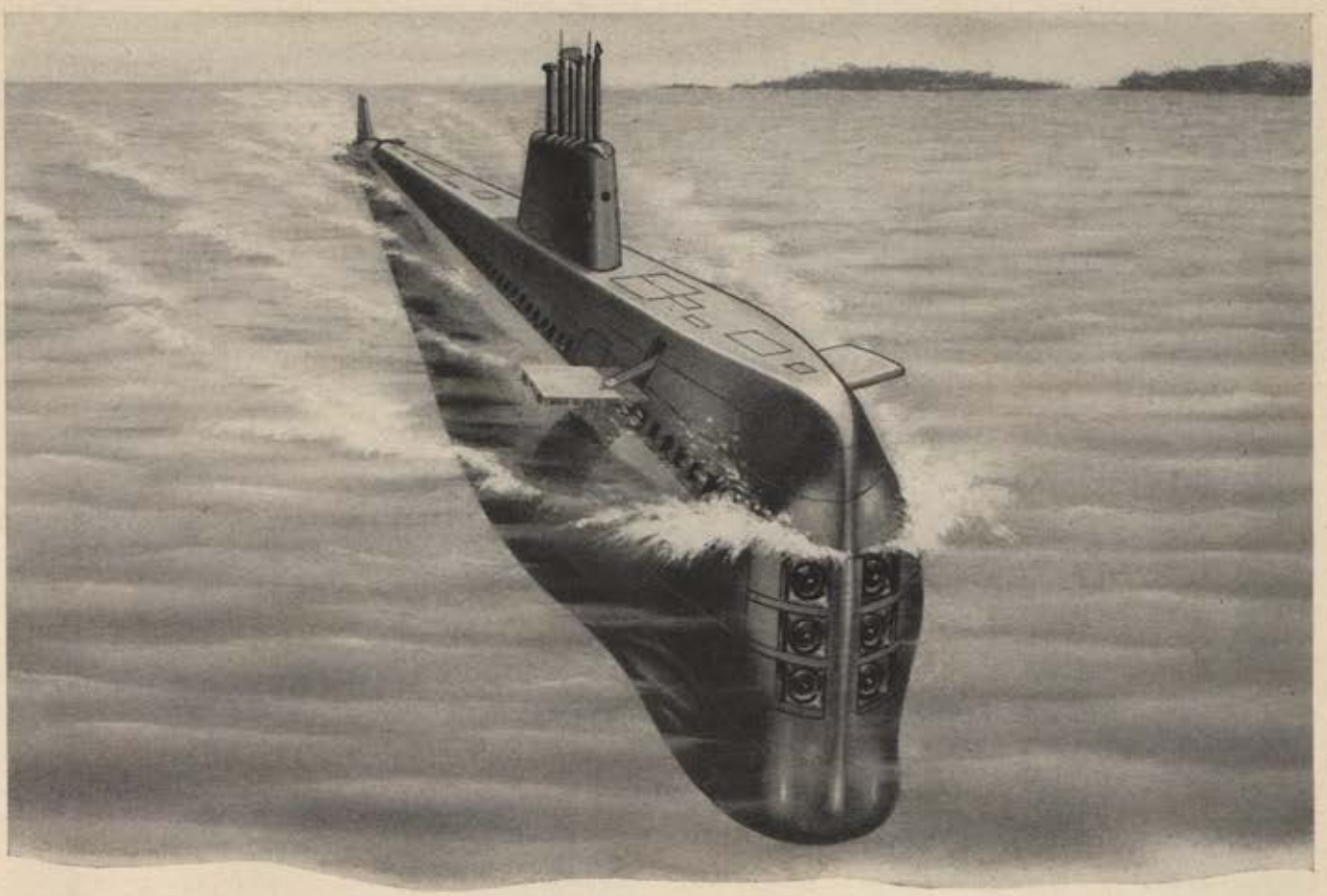
Ask any electronics expert. He'll say: "Stromberg-Carlson? They're tops!"

STROMBERG-CARLSON ALSO LEADS IN:

- Telephone Instruments and XY Central Office Dial Equipment
- High-Fidelity Radios and Radio-Phonographs
- Electronic Carillons for Churches and Public Buildings
- Office Intercom Equipment
- Sound and Public Address Systems

There is nothing finer than a

Stromberg-Carlson® *Rochester 3, New York*



Our National Security depends on...

RELIABLE ELECTRONICS!

It is conceded that all elements of the national defense network are interwoven with electronics. Therefore, it is vital to every phase of national security—land—sea—air—that communications, navigation, detection and ordnance equipment shall include only *reliable* electronics systems.

Complete *reliability* on electronics equipment is based upon precision of design, manufacture, inspection and test methods.

Defense projects in electronics at Du Kane Corporation are fulfilled with meticulous design and assembly procedures, up-to-the-minute facilities and manufacturing techniques, followed by close inspection and rugged testing. Our excellent record for high quality maintained throughout many years of commercial electronics production, enables Du Kane to meet exacting standards.

Should your service have a classified project—if your prime contractor has a project where electronics *reliability* is the major factor, take advantage of Du Kane's thirty years of experience and discuss details with our technical staff.

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100 N. ELEVENTH ST., ST. CHARLES, ILL. • ESTABLISHED AS "OPERADIO" 1922

Philadelphia's Mayor Joseph Clark, Jr., an AFA Charter member, proclaims May 1 "AFA Day," as Wing Commander I. E. Brodsky (left) and Councilman Joseph Dougherty watch.

phonios lead the Squadron are Maj. Gen. Ralph Royce (USAF-ret.), Vice Commander; Maj. Gen. Hugh J. Knerr (USAF-ret.), Secretary; Jack R. Younger, Treasurer; and W. F. Renegar, Bruce von G. Scott, Charles P. Eckhert, and Bob Myer, Councilmen.

After the announcement of this chartering came word that Miami Beach had organized a Squadron too. Gen. Francis M. Brady, (USAF-ret.), was elected Commander. Other officers include Ross D. Young, Vice Commander; Orville C. Thompson, Secretary; Raymond G. Vallen, Treasurer; and Lloyd Fales, Leslie Buswell, Stuart Moore, and M. S. Altmayer, Councilmen.

New Unit in Michigan

AFA members in the St. Joseph-Benton Harbor area of Michigan have formed AFA's newest addition in that state, the Fruit Belt Squadron.

Stanley G. Mull, 1092 Woodward Ave., Benton Harbor, was elected Commander. Other officers are Raymond L. Mull, Vice Commander; Ralph A. Palmer, Secretary; Morris M. Lutz, Treasurer; and Vernon W. Peters, Gerald Howard, and Kay A. Spooner, Councilmen.—END

Andrew J. Lee of Miami Planning Board presents Charter of Greater Miami Squadron to Alex Morphonios (right), Commander, and Maj. Gen. H. J. Knerr, USAF ret., Secretary, left.

Experiencing the sensation of being "shot" out of disabled jet's cockpit is just one form of indoctrination.

USAF's new recruiting and training program

The Tale of 'Tiger'

By Everett E. Dodd

EACH DAWN Nellis AFB, Nev., comes to life with a roar—the roar of jets taking off for the first of the day's many scheduled missions. In nearby Las Vegas, many a red-eyed gambler is still wearily pressing his luck at a gaming table. But at Nellis the men jockeying the F-80s or F-86s are clear-eyed, aggressive, and alert. They have less need for artificial stimulus to lighten their lives.

It's been nearly fifteen months since these youngsters—students with two years of college, ex-airmen, and some college graduates from AFROTC—began the training that is winding up in the skies over Nellis. Now they're student officers with bars of gold on their shoulders. They'll leave Nellis wearing the same bars, and over their left blouse pocket the silver wings they sought.

At other bases in the United States other student officers in the USAF are pursuing the same goal. In Wichita, Kan., at the Municipal Airport, the three-man crew of a B-47 already has been up an hour. A few weeks ago these men didn't even know each other. Their only common denominator was that a year and a half earlier they'd determined to fly. Two had entered the observer phase of the flight training program, the other the pilot's. Today they're a team that will soon become part of the Strategic Air Command.

In their flying togs, whether they are a crew of a B-47 or a fighter pilot of a F-86, the men seem stamped from the same cookie-cutter. Helmets, dangling oxygen masks, G-suits, GI shoes and zippered flying suits. The similarity disappears at night at the officers club, when dressed in their blues or civilian clothes, they are individuals again.

But their alikeness runs a little deeper than just their flying regalia. It's hard to finger. They're different one from another and vastly different from those who haven't learned what it means to want to fly. A flight surgeon once summed it up this way:

"If they're different, it's because they feel they should be different. I know that their blood pressures, their pulses, their whole bodies are the same as the rest of us . . . maybe a little more tendency to piles because of the Gs they have to take. But they know they are living hard. When they play, they play hard, and when they work, they work like the devil, because they want to make good. This training definitely brings out aggressiveness which may have been hidden away before."

These are the young men of Project Tiger, a program initiated by the Air Training Command. They are the answers to the dark hints that America's youth isn't fulfilling its obligations, that youths are afraid to fly.

They haven't mouthed back at their carpers. They've done more—they are now flying, and at speeds near that of sound and at altitudes where death is seconds away if a canopy is blown. The apprehension voiced about the nation's youth has proved groundless. The nation can call; youth will answer.

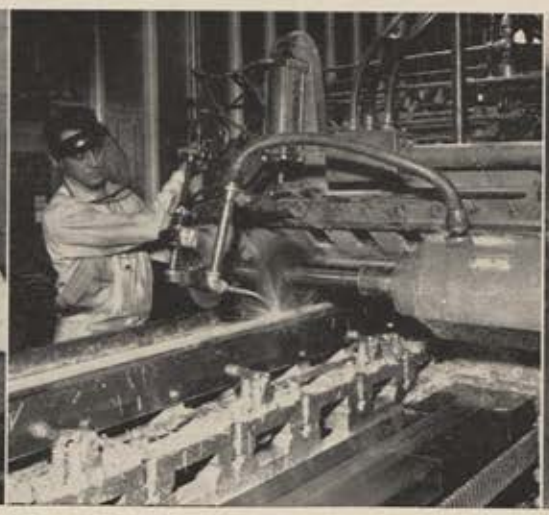
In recent issues of some trade and popular magazine's articles about the Air Force's Project Tiger concentrated on Nellis AFB. This seeming penchant to describe Nellis, its students, and instructors as all there is to Project Tiger isn't completely erroneous. But it is only about one thirty-seventh correct. For Project Tiger applies to thirty-six other bases as well. And not all train F-86 pilots as Nellis does. Some train B-47—medium bomber—pilots. Others concern themselves solely with training cadets who enter into the aircraft observer phase of the cadet program.

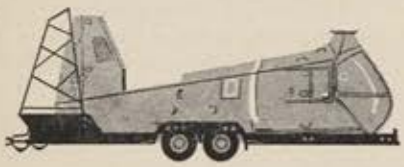
True, at Nellis the student flying officer receives an extra dose of Tiger. Aggressiveness and confidence in himself and his ship are stressed. He listens to veteran jet pilots—more

(Continued on page 75)

EXPERIENCE
EQUIPMENT
FACILITIES

Twin Coach has what it takes *to meet schedules—...*





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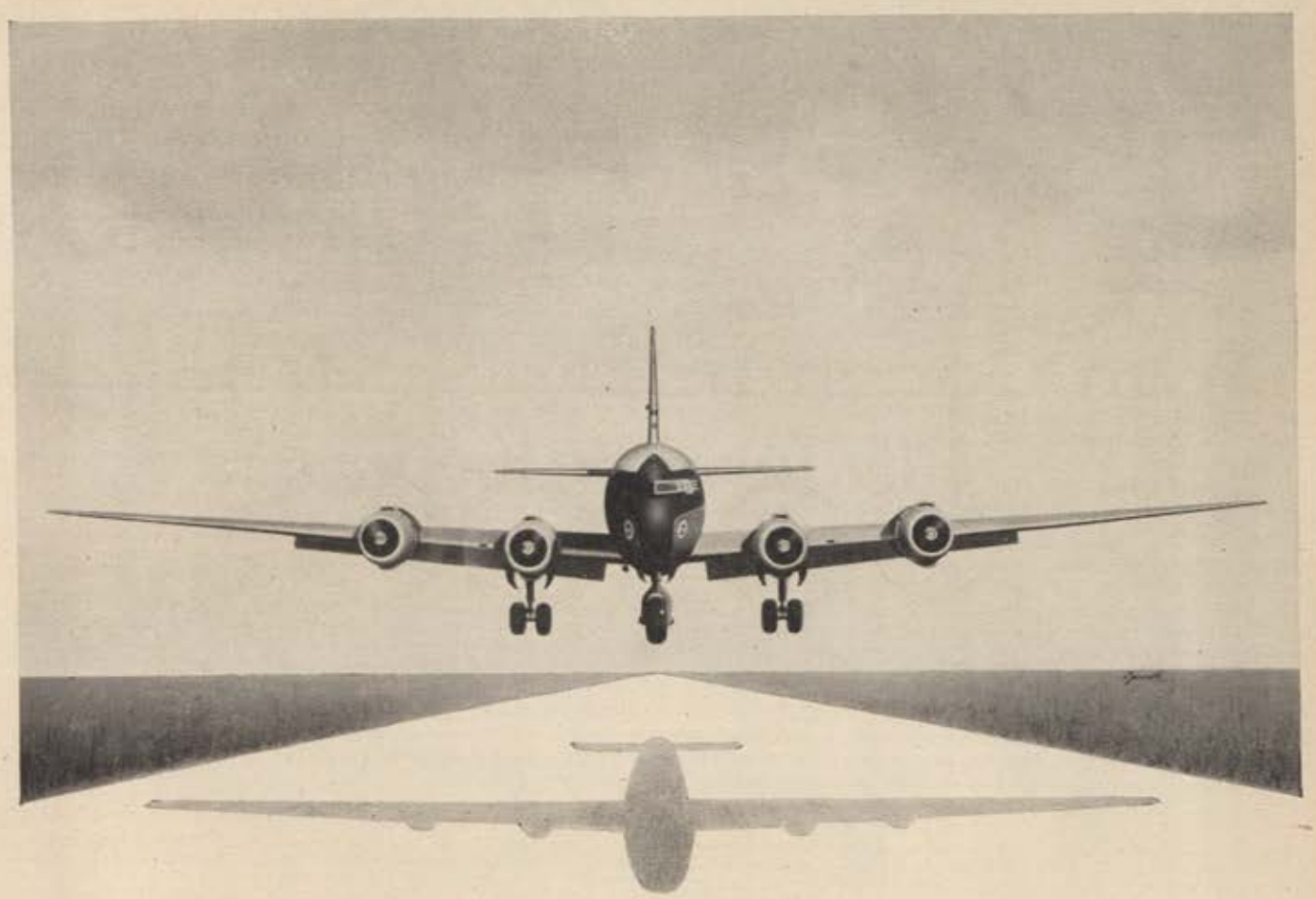

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At basic training a cadet gets his first indoctrination in a T-33 jet.

than seventy-five percent are Korean returnees, more than a half-dozen are jet aces. For three months their accumulated knowledge of MIG and F-86 tactics is dinned into his ears. And in simulated aerial dogfights he learns the application of those tactics.

If the student hasn't absorbed the lessons of his previous thirteen months' training, Nellis is his last chance. Next stop is Korea. There an unlearned lesson can be fatal.

Long before he reaches Nellis, the student officer has been scratched by Tiger. From the day he exchanged mufti or airman's uniform for the "boards" and insignia of a cadet, or entered the flying training program as an AF-ROTC graduate, he has been an integral part of the project and the prime reason for its existence.

The program began in the summer of 1952, when there was a distinguishable lack of enthusiasm among young men of cadet age—19 to 26½ years—to volunteer for cadet training. Also, records showed that pilot trainees of that period were not asking or seeking service in jets. Most—more than seventy-five percent—wanted service in propeller-driven aircraft.

Instructors in primary were for the most part World War II veterans, with little or no jet experience. Their flight-line talk was heavily larded with reminiscences of that war and its planes. Tiger remedied this by intensifying a cadet's indoctrination at preflight, where he spends three months before going to flight screening and primary.

From the day he enters preflight at Lackland AFB, Tex., until he graduates to primary three months later, the new cadet is thoroughly indoctrinated into his new role as a prospective pilot or observer and officer of the USAF. He is steeped in Air Force lore, history, and customs. He learns the role of the present-day Air Force and its mission; knows that he is one of a "thin blue line" that stands between world-wide tyranny and freedom. His heroes in barracks talk are not only the Arn-

(Continued on following page)

Three Nellis AFB students listen and watch as Lt. Bob Moore describes tactics that made him ninth jet ace of the Korean war. But his closest call came stateside when he was forced to bail out from a height of 40,000 feet.

olds, Spaatzes, and Kenneys, but the McConnells, Lows, and Jabaras.

The problem posed by the decrease in applicants for cadet training proved harder to cure. Graduating classes at West Point were failing to meet their Air Force quota, AF-ROTC graduates were seeking administrative jobs, and eligible men with two years of college just weren't enlisting. A new appeal had to be made.

Lacking the impetus of a not-wanted, all-out war, Personnel Procurement altered its approach. Out went the posters luring prospective cadets with promises of a lush life—golf in the afternoon and cooling "ades" beside swimming pools. A new type of campaign to "sell" the Air Force brought realistic posters with the emphasis on "Can you take it?"

Either because or in spite of it, the recruiting phase of Tiger is resulting in increased applicants. There is now a sizeable backlog of pilot candidates. West Point easily filled this year's quota. And the number of AF-ROTC graduates entering flight training will be nearly double that of last year. Under a new ruling [AIR FORCE, May '53] AF-ROTC students taking flight training will be credited with active duty while in training. Formerly they were not. And right now there is a slight backlog of those entering into observer training.

But citing backlogs can be misleading. The influx of entrants into aviation cadet training is seasonal. And June graduation is harvest time for the Air Force. During school terms enlistments in both pilot and observer categories lag.

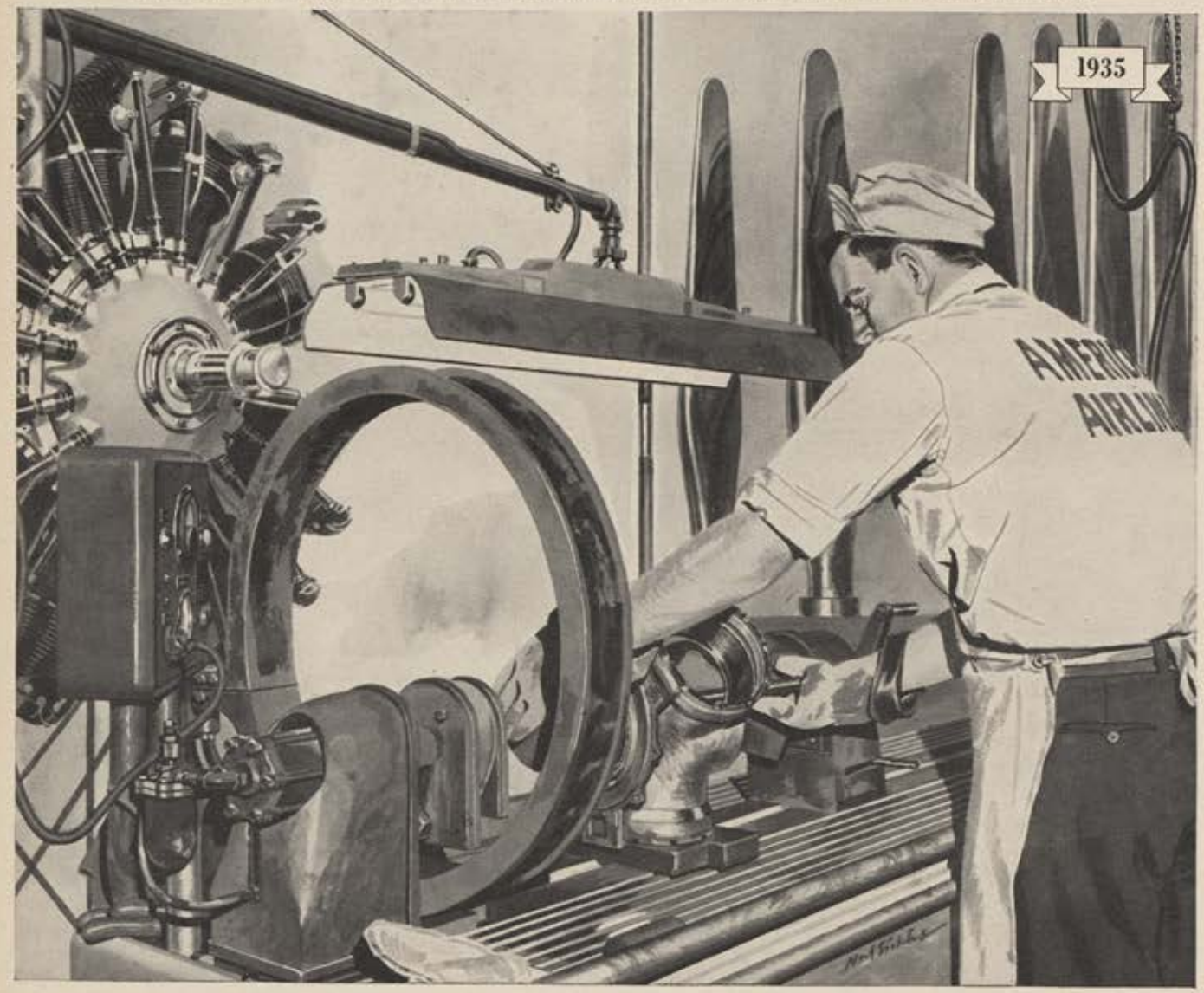
So far the pilot training program has met its commitments, and only recently the Air Training Command announced it had neared its goal of 10,000 civilian-school-trained pilots, that nearly 7,200 had been graduated thus far. But the observer program is leading a hand-to-mouth existence. Not long ago there was such a shortage that there were no students for scheduled classes.

One reason is, as Lt. Gen. Robert W. Harper, commanding general of the Air Training Command, said, that "the Air Force has oversold the role of the pilot" to the extent that many feel the "observer jobs are second best." The second and more important reason is that under present regulations an observer can hardly hope to command a tactical unit.

(In one experimental instance—there have been two—an observer

(Continued on page 79)

AMERICAN AIRLINES CONTRIBUTIONS TO THE DEVELOPMENT OF AIR TRANSPORTATION



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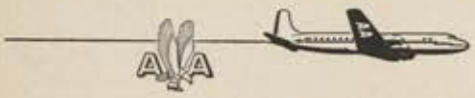
Magnaflux detection devices are only one of a long series of milestones in the history of air transportation that have been introduced first by American Airlines.



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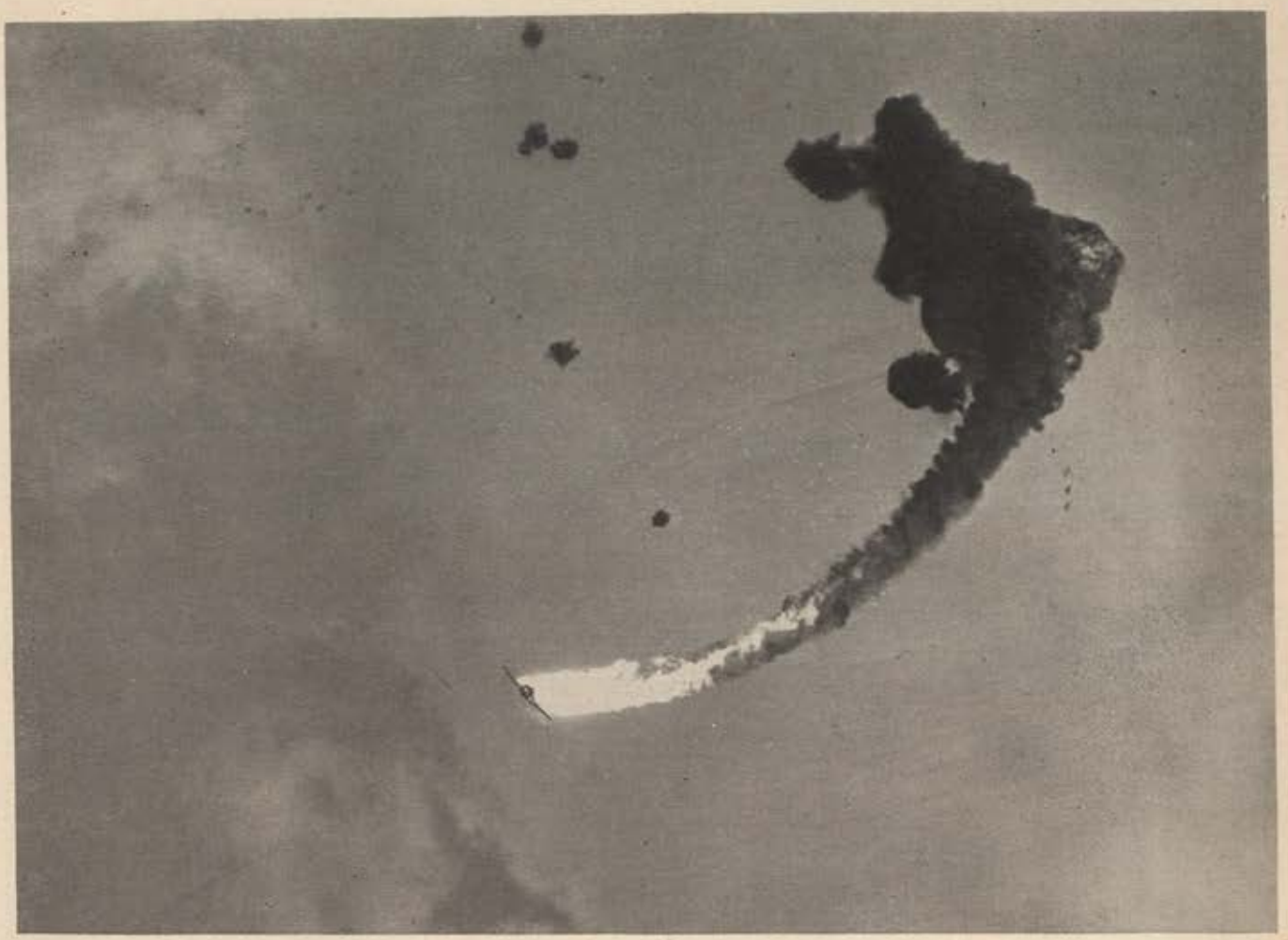

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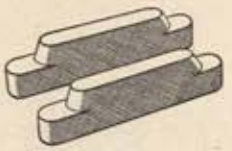

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commanding a tactical unit had to have two pilots sign his operational orders. Even though he was rated "superior" for his work, when superior officers found out he was rated but non-pilot, they asked him to relinquish his command.)

The two reasons—overselling the pilot's role and lack of opportunity—constitute a one-two body blow to the observer recruiting phase of Tiger. On the one hand, the lack of opportunities for observers leads to an ever-present turnover which must be met by incoming cadets. Yet applicants naturally enough want, as one colonel said, "to be captain of the team. Consequently they just do not ask for observer training."

The situation is serious. The Air Force is knocking at the door of the guided missile era, and the specialty of many observers—electronics—will play the leading role. This fact has been recognized in staff studies pointing out the "pathetic plight" of the observer and listing some reasons:

- Advancement is limited in tactical units because he is not permitted command functions.
- Advancement in non-tactical units is likewise limited because there is such a shortage of observers that his transfer from a tactical unit is restricted.
- Proportionally speaking, he is required to fly in combat crews longer than pilots. Sixty percent of observers of thirty-five years of age are on combat crews; the figure is twenty percent for pilots.

Solution of the problem will call for laying aside biases and prejudices that are deep-rooted and the laying aside of the kind of thinking epitomized by one lieutenant colonel pilot who said:

"Why should they be jealous? After all I can't ever expect to command a base hospital unit."

Most possible solutions urge the elevation of observer's status to that of a pilot. That there is a caste system was illustrated by one study which said that even after ten years of having aircraft observers there are Wing Commanders who continue to post "For Pilots Only" signs on doors leading to weather offices and officer lounges in Operations buildings. One observer put it succinctly when he said, "Just make us first-class citizens."

There is little Project Tiger can do to alleviate this particular situation. For by the time a man has pinned on his observer or pilot wings, Tiger has completed its mission.—END

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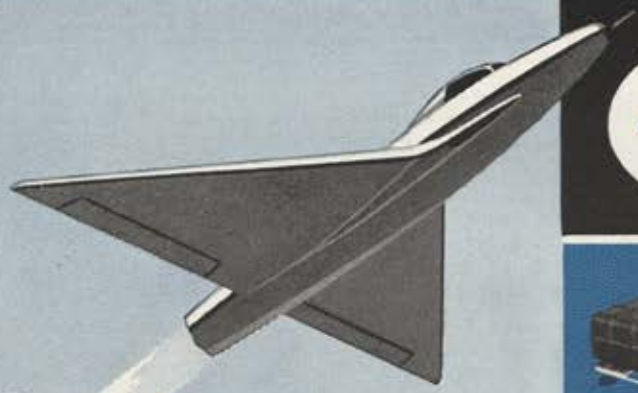

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