WHAT'S WRONG IN OUR SERVICE SQUADRONS?

AIR FORCE

THE MAGAZINE OF AMERICAN AIRPOWER

JIMMY DOOLITTLE TELLS
HOW TO KEEP AHEAD OF RUSSIA

•

WHAT LIGHT FIGHTER
DO WE NEED?

Ambassadors in Blue
The Story of the Military
Air Transport Command

JUNE 1953 • THIRTY-FIVE CENTS

SIMS

HAMILTON STANDARD . . . leader for years in propeller design and production, is supplying other equipment for such outstanding new aircraft as the Douglas RB-66, Air Force jet reconnaissance bomber.

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Propellers • Starters • Air-Conditioners • Fuel Controls • Auxiliary Drives • Hydraulic Pumps

HAMILTON STANDARD, WINDSOR LOCKS, CONNECTICUT

Coming—another great Boeing

A history-making airplane is today taking shape in a Seattle plant. It is Boeing's prototype "Project X" jet transport.

There is real need and opportunity, both in military and commercial fields, for such an airplane — jet-powered for speed and smooth performance — large enough for ample range and capacity.

A jet tanker would make available to strategic air power the full potential of swift jet bombers — flying with them on long-range missions and refueling them in flight at their own choice of altitude and speed. The rapid transport of high-priority military personnel and cargo also calls for jet power. Commercial airlines are evidencing increased interest in a jet transport which will offer new speed and provide economically feasible operation.

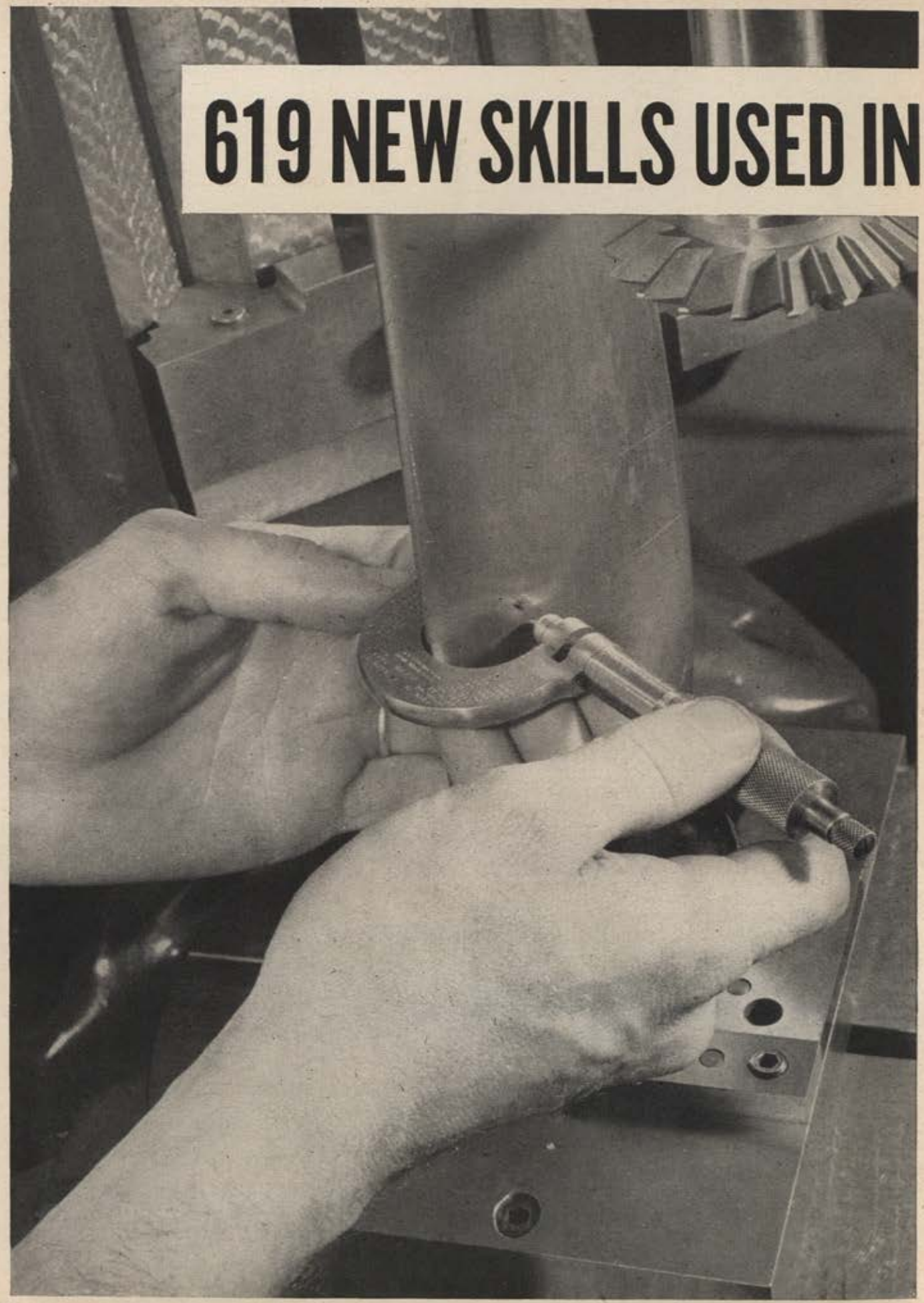
The Boeing prototype airplane, now well along in construction, is being built as a demonstrator model. It will be completed and flying in 1954. The early construction of this prototype, made possible through the use of Boeing's own funds, provides an advantage that will be shared in by its customers. It will make possible the building of production airplanes at lower cost and in a shorter time than if production orders were not preceded by the design and construction of a prototype. It will offer an early opportunity to develop and prove out engineering, production and operational details.

It is logical that Boeing should have undertaken this project. No other company in the world possesses such a background of experience in designing, building and flying multi-jet aircraft. More than 14,500 hours of aerodynamic research in Boeing's own wind tunnel and more than 5000 hours of test and research flying have gone into the development of the B-47 Stratojet medium bomber and the B-52 eight-jet heavy Stratofortress.

The company's 36-year record of integrity in research, design, engineering and manufacturing gives assurance that the new airplane will be another great Boeing.

BOEING

619 NEW SKILLS USED IN



BUILDING NEW POWER PLANTS

Nearly everyone knows that the high performance of today's combat aircraft depends on new engines of enormous power. But we wonder how many—even those closely associated with aviation—realize how immensely complex modern aircraft engine manufacture has become.

Take the number of different skills as only one example. Here at Pratt & Whitney Aircraft, where we make turbojets, ramjets, and turboprop engines, as well as piston engines, we now have 3051 *different* jobs in which our 30,000 people are employed. But in 1946, when only piston engines were in production, the number of such skills was only 2432.

This comparison clearly reflects one of the difficult problems which had to be solved to build such immensely powerful engines as the J-57 turbojet. New engineering and development goals, new tooling and manufacturing methods, the forming of new materials into new shapes and dimensions—all depend on the technical skills of men and women.

Finding qualified employees with essential skills is only one problem. In addition, we train and coordinate these men and women—representing hundreds of new skills—into a smoothly working team. The complexity of modern aircraft engines and the dependability which must be built into them demands nothing less than the highest standards of American craftsmanship.

The above chart illustrates the huge increase in the number of different skills at Pratt & Whitney Aircraft from 1946, when only piston engines were built, to today when four different types of engines are in production or are being prepared for production. Demands for new skills, of course, are only one phase of engine manufacture. But the relationship illustrated here is typical of all phases of manufacturing the advanced, complex engines required today.

Pratt & Whitney Aircraft

MAIN OFFICE AND PLANT: EAST HARTFORD, CONNECTICUT
BRANCH PLANTS: NORTH HAVEN, SOUTHINGTON, MERIDEN

ONE OF THE FOUR DIVISIONS OF UNITED AIRCRAFT CORPORATION

AIR MAIL

Air Force Wife

Gentlemen: I have just finished reading "Should My Husband Quit the Air Force?", by Norma Schenk in your May issue. My sincere thanks to you for printing her story and my deepest appreciation to Mrs. Schenk for putting on paper the very words I have been using for twelve years trying to convince my civilian friends that I'm not feeble-minded when I say I like being an Air Force wife.

My two children and I are "sweatin' out" another war at home with the folks, but we pray that before too long we'll be off again to somewhere with Daddy—and having a wonderful time all the way. A new, different house, new friends and new adventures, but we'll be together.

My only regret is that I must forward your magazine to my husband in Korea, thus will not be able to show the article to all my friends here. Perhaps, after reading it, they would understand a little better. Uncle Sam may fire us, but we'll never quit!

Mrs. George S. Roberts
Charleston, W. Va.

Gentlemen: At the Ohio State University there are, among 400 senior year AF-ROTC cadets, 135 who intend to be married at the time they are commissioned in June 1953. It is my desire that your excellent article, "Should My Husband Quit the Air Force?", be read by all of these cadets, and by their future wives, before being graduated.

May we have your approval to distribute it to our graduates?

Col. Merwin E. Potter, PAS&T
The Ohio State University
Columbus, Ohio

• *Permission granted.*—The Editors.

Ballistic Missile

Gentlemen: The recent article on ballistic missiles was one of the finest I have ever read, and in my opinion should be directed reading for every citizen. It seems that only the public can change our methods of warfare due to the deep feeling possessed by senior people in each of our services for their particular method. They would probably not be good officers if they did not have this loyalty to their own service and warfare methods. An example of this is the Coast Artillery and the Cavalry. Only when public pressure grew to the point that it overrode the views of the services did we get a significant change, the change coming many, many years too late and costing the taxpayers enormous sums and padding the rolls of our veterans' hospitals and retirement pay with large numbers of people who will be on these rolls for many years to come.

Our excuse to date for not developing the ballistic missile has been that we must fight today's war with today's weapons, and we have been getting ready for today's war. I hope sincerely that your article may broaden the knowledge of the public to the point where we can go after this ballistic missile right out. Dr. Dornberger, formerly with USAF, one of the renowned German missile scientists, pleaded with us years ago to go after this ballistic missile. We have a great deal more know-how now and could accomplish the job much faster than is generally known.

Brig. Gen. J. W. Sessums, USAF
Commanding, Hq. 13th AF
APO 74, c/o PM
San Francisco, Calif.

The Air Guard

Gentlemen: Colonel Millikan's article in the March issue of your magazine was naturally of very great interest and concern to me, and even more important to me than the article itself was the fact that the Air Guard received such fine coverage in your publication. Naturally, we guardsmen feel that the ANG activities are worthy of the kind of coverage that your magazine has given and it is most gratifying to see our opinions

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shared by others.

By the same token I am also impressed by your ANGuard Angles column and assure you that we will certainly get behind you one hundred percent in doing our part to support this column. In line with keeping the record straight, and in reference to the fine accomplishments of my friends Lt. Col. Alberto A. Nido and Maj. Mihiel Gilormini down in Puerto Rico, mentioned in the April column, their squadron is the 198th Fighter Squadron. The 178th, which your article had them in, is my unit here in North Dakota, and while we would be most proud to be able to claim their accomplishments, I am bringing this to your attention.

Maj. Marshall Johnson, NDANG
Commanding, Hq. 178th F-I Sqdn.
Hector Airport, Fargo, N. D.

Non-Regular Generals

Gentlemen: On page 12 of your April issue I observe a recapitulation of the officer strength of the Air Force in which there is listed as being on extended active duty twenty-four non-regular general officers. The latest publication by the General Officer Branch of the USAF lists only nineteen non-regular general officers. I thought you might desire this information for subsequent issues.

Maj. Gen. Geo. G. Finch, USAF
Deputy for ANG Affairs
Mitchel AFB, N. Y.

Instructional Material

Gentlemen: Just couldn't pass up the chance to tell you how much I enjoyed the May issue of AIR FORCE. Your staff studies are attracting much attention and are doing a needed job of informing both the Air Force and the public of what's going on behind the airpower scene.

We use your magazine constantly in lining up instructional material for our Residents in the Aviation Medicine Residence Program here at Langley.

Lt. Col. Joseph A. Connor
USAF (MC)
Langley AFB, Va.

Ouch!

Gentlemen: AIR FORCE tends to be too popular. The front covers often appeal more to the science-fiction minded than to the serious AF enthusiast. Your articles on such subjects as ramming seem to be based on abstract thinking rather than practical and rational evaluation of the facts. While such thinking is desirable, of course, I think you are overdoing it.

AIR FORCE lacks the technical and day-to-day articles that the airman, the AF-ROTC student, and the junior officer are looking for. Your coverage of the operations in Korea has been limited to a few pictures and reports of homecomings.

All this adds up to the impression that AIR FORCE is written by men sitting behind desks in Washington for a rather limited group of readers that does not include the men who do the flying and run the bases.

Sgt. John D. Holmfeld
Fort Campbell, Ky.


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CONSTANT
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More defense
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U.S. Air Force delivers it with Lockheed Starfire

Here's a military jet that does an outstanding job—*and saves money in the process*—the F-94C Starfire, a reliable new interceptor for home defense.

Economy is important with the Air Force, and here's how the Starfire helps on the budget.

An economical airplane is one that performs its mission with greatest efficiency and offers maximum availability on the ready line. Maximum time between servicings means *lower maintenance costs*. More important, it means *fewer planes are needed*. The U.S.A.F. provides both types of economy with the Starfire.

Since the Lockheed Starfire is a 2-place interceptor, it utilizes the cooperative efficiency of a 2-man team to compute the tactical problem and perform all the other split-second operations of intercepting an enemy at 600 mph-plus speeds.

No fighter-interceptor can get into the air quicker—none can climb faster—a valuable combination that saves vital minutes in reaching enemy bomber level.

The all-weather Starfire is equipped with automatic electronic controls—Hughes Radar System, Westinghouse Automatic Pilot, Sperry Zero Reader—and other advanced devices, making it very nearly an automatic airplane.

Reports coming in from the field indicate that Lockheed has again produced a "pilot's airplane." Air Force pilots like the Starfire and like to fly it. They find it simple to fly and rock-steady under actual instrument conditions.

Here is the happy combination of 4 important factors in one reliable airplane: (1) Superlative performance—(2) Easy maintenance—(3) Pilot popularity—(4) More defense for your dollar.

Lockheed

AIRCRAFT CORPORATION

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LOOK TO LOCKHEED FOR LEADERSHIP

ATTITUDES
or ALTITUDES . . .

At any altitude, the sleek Grumman F9F-6 Cougar operates at peak efficiency whether "standing on its tail" or flying on its back.

The turbine control needed to properly meter the fuel to the Cougar's powerful Pratt and Whitney J-48 Jet Engine at any attitude or altitude was designed, engineered, and manufactured by Holley.

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Shooting the Breeze

SOMETIMES we suspect there is a good deal of latent literary talent hidden among our readers. We get flashes of it occasionally in the letters to the editor, others in the growing group of contributors to our Jet Blasts Department. But there must be a great number of people, both in and out of the Air Force, who have a worthwhile contribution to make to our thinking on airpower and its related problems.

Frankly we'd like to hear from you. We'd like you to think of AIR FORCE as your own private forum where constructive or entertaining writing will get a careful reading. If you really have something to say, don't worry too much about your literary style or the lack of it. We're not too concerned about that. In fact, we have been known to use the well-known editorial blue pencil occasionally. But let us have a look at it.

If you're aiming for Jet Blasts and a check for $10, keep it short, under 500 words. If you're ambitious enough to undertake a full-blown article and a bigger check, query us before you forward your manuscript. Give us an outline of the scope and content of your proposed article and we'll let you know how it fits our editorial needs. Querying in advance saves a lot of headaches at both ends of the line.

Type your manuscript, triple spaced, and enclose an envelope with return postage so we can ship it back if it fails to ring the bell. —END

AIR FORCE

THE MAGAZINE OF AMERICAN AIRPOWER

Vol. 36, No. 6 • JUNE 1953

FEATURES

DEPARTMENTS

THE COVER

Lt. Col. Harold H. Sims, who heads the Graphics Division at Hq., MATS, Andrews AFB, Washington, D. C., painted this month's cover. Not all MATS transports will be found in such exotic surroundings, but this tropical scene is typical of many overseas bases through which MATS operates. A number of Colonel Sims' paintings were recently on exhibit in the Air Museum of the Smithsonian Institution in Washington.

AIR FORCE STAFF

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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 88.

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AIRPOWER IN THE NEWS

BY JAKE CULPEPPER

THE PLANES — Some USAF aircraft capable of carrying nuclear devices were displayed at Indian Spring AFB, Nev., in connection with latest series of atomic tests. Such aircraft include North American B-45 Tornado, Convair B-36, Boeing B-47 Stratojet, Republic F-84G Thunderjet, and Boeing B-50 Superfortress. . . . A Stratojet attained ground speed of 794 mph several weeks ago, with an assist from jet stream winds at altitude.

GOC — Ground Observer Corps program is bringing in volunteers at rate of two to three thousand new members per week. Current membership is 265,000 but goal is for 500,000 as soon as possible.

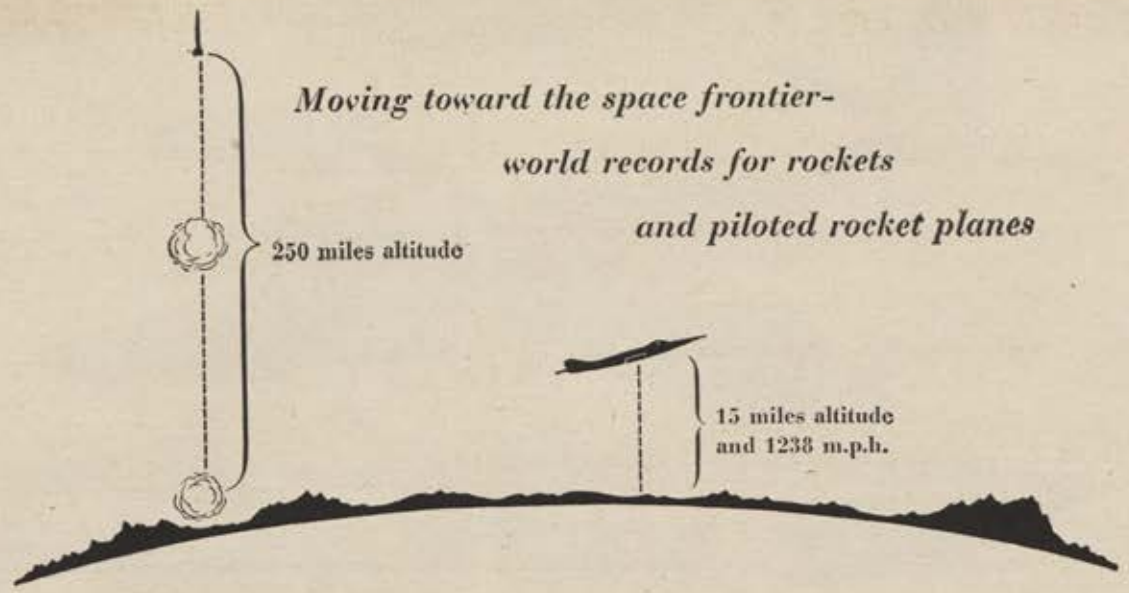
TRANSITION — AF and Army Exchange service reports 500 percent increase in sale of soft drinks in overseas exchanges during the past year. . . . AF plans to train its own chaplains at Lackland AFB in the future. . . . WAF Capt. Evelyn J. Blewett will coordinate Defense Department's plans to provide "beauty program" for women in Armed Services. . . . Special air mail stamp has been issued by PO Department to mark 50th Anniversary of powered flight.

AF BASES — Bergstrom AFB was host recently to largest sporting event in Texas history—the Lone Star National Sports Car Races. . . . Helicopter pilot training at Gary AFB, Tex., will soon be increased to thirty-eight student officers for each class. Gary AFB was formerly San Marcos, renamed on Armed Forces Day in honor of Lt. Edward Gary, flyer killed early in World War II. . . . Thirty-two Chinese Nationalist pilots are taking basic jet training at Williams AFB, Ariz. . . . First graduate of Spence Air Base, Moultrie, Ga., who downs five Red planes over Korea will receive $1,000 prize from the Civilian Contract School there.

LAURELS — Lt. Col. Della J. Angst, executive officer for WAF training at Lackland AFB, Tex., received a 1953 Headliner Award for distinguished service from Theta Sigma Phi, national journalism fraternity, last month. . . . Mathew B. Brady, Civil War photographer and first American to prove military value of photography, was recently honored by the military and his profession at Carswell AFB, Tex., ceremonies. . . . AMC's Central Air Procurement District at Detroit became first winner of Nelson S. Talbott Memorial Award for efficiency and economy. Trophy was donated last year by AF Secretary in memory of his brother, a brigadier general who headed AMC's procurement districts until his retirement shortly before his death last summer.

BRIEFS — A 143-page "Guide to AF-ROTC" will soon be distributed to AF personnel officers throughout the world. . . . DAR Congress in Washington recently came out for a super AF. . . . Union of South Africa has given AF a check for $5,000,000 to pay for planes and supplies that it has received in Korea. . . . Retired AF Lt. Gen. William E. Kepner has joined Bell Aircraft Corporation as an executive vice president.

STAFF — Recently nominated for promotion to rank of Lt. Gen. (temporary): Maj. Generals Emmett O'Donnell, Jr., Samuel E. Anderson, and Frank F. Everest. . . . AF Lt. Gen. Charles P. Cabell was confirmed last month by Senate to be Deputy Director of CIA. . . . Maj. Gen. John B. Montgomery is new CG of 8th AF. . . . Trevor Gardner, president of Hycon Manufacturing Co., Pasadena, Calif., has been named Special Assistant to AF Secretary for Research and Development matters. . . . Maj. Ed Kandel, former ANG public information chief and recently returned from FEAF tour, is now handling information for MATS at Andrews AFB, Md.



Moving toward the space frontier-

world records for rockets

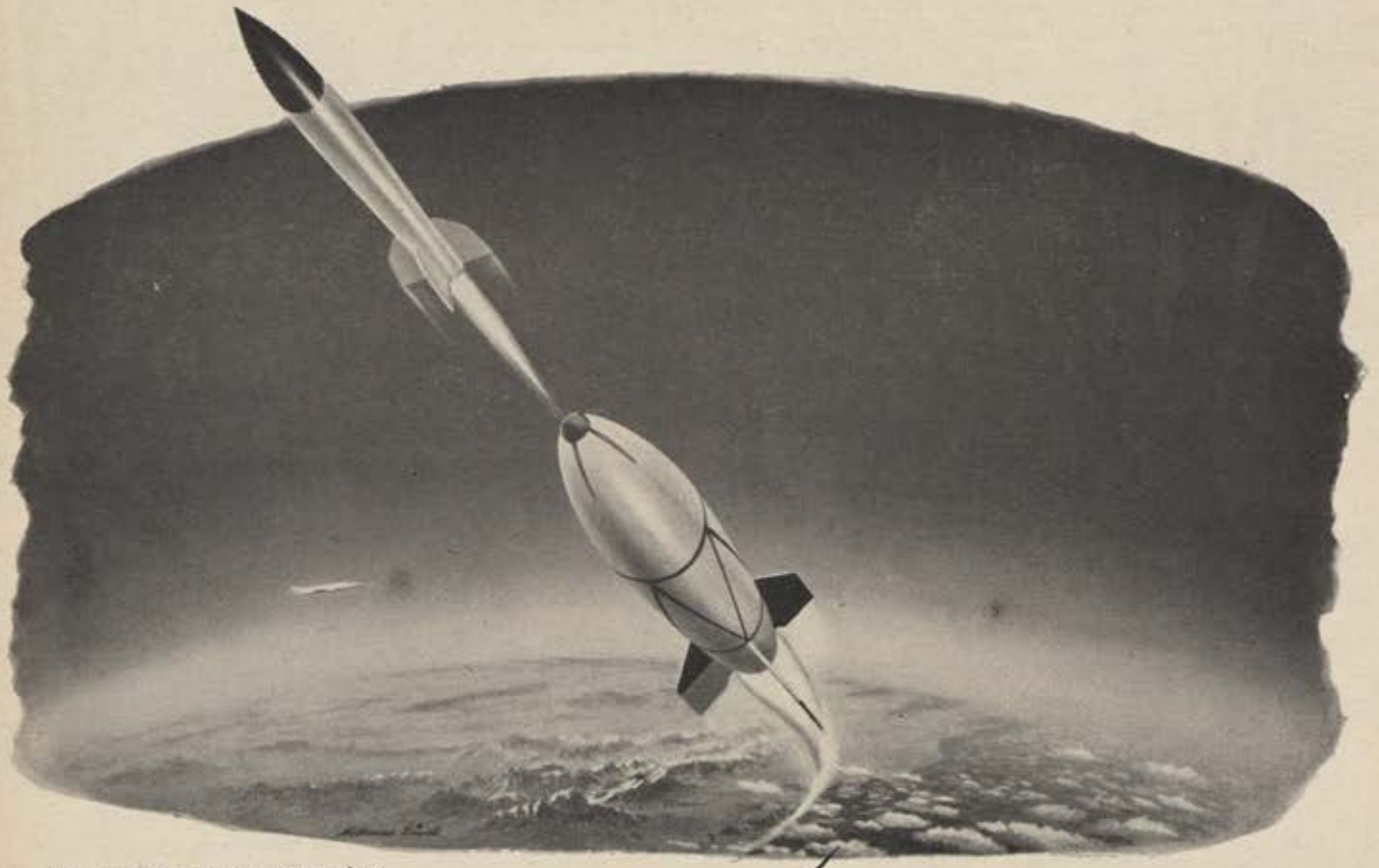
and piloted rocket planes

—the Douglas Skyrocket and Wac-Corporal

How soon will man cross the Space Frontier? Already, Douglas-built planes, rockets, and missiles—including the Wac-Corporal and D-558-2 Skyrocket—have probed at its fringes.

In a record climb, the Douglas D-558-2 reached an altitude where its pilot was *weightless*, as in a flight through space, while the Wac rocket, set in the nose of the V-2, travelled one-quarter of the way to the proposed orbit of a man-made satellite. Most important, both records came during *normal research*—planned to keep the United States and its Armed Forces out front in the fields of guided missiles and supersonic aircraft.

Performance of Skyrocket and Wac-Corporal are proof of Douglas leadership in all phases of flight. *Farther and faster with a bigger payload* is the basic rule of Douglas design.



Army's Wac shown leaving V-2

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AIRPOWER IN THE NEWS — CONTINUED

AF DEPENDENTS — Family housing is available immediately for AF personnel transferring to Sewart AFB, N. Y., MacDill AFB, Fla., Biggs AFB, Tex., Bergstrom AFB, Tex., Shaw AFB, S. C., Scott AFB, Ill., and Great Falls AFB, Mont. . . . Late figures reveal that AF dependents overseas total 80,000. . . . Alaskan Air Command places no limit on time a dependent may stay in Alaska if no expense to the government is involved.

AF-ROTC — Beginning this year, AF will give priority for acceptance to advanced ROTC training in this order: first, physically qualified men who desire to sign up for flying training after graduation; second, men majoring in the technical fields such as engineering, math, and physics and who do not choose flying training; and third, non-technical men who do not desire flying training. Number taken from the third group will be limited sharply.

CADETS — AF reached its goal of landing one-fourth of '53 West Point graduating class. One hundred seventeen AF pilot and nine AF ground officer volunteers have signed up. . . . Aviation Cadet applicants can expect to begin training as Aircraft Observers within three to four weeks if they apply now, says Maj. Gen. Howard M. Turner, CG of 1st AF.

HUMAN ELEMENT — First class has graduated from new AF Personnel Services course at Scott AFB. . . . Some 65,000 airmen serving on an indefinite enlistment will now be allowed to resign after six years of their unspecified terms and re-enlist on equal basis with specified-term airmen. . . . Men moving overseas in the future will know their specific area or country of assignment before leaving ZI base.

PRESTIGE — Scott AFB is first base to start active program which re-emphasizes privileges, authority, and responsibility of NCOs. One of the twelve points that serve as basis for Scott policy is that NCOs of first grade will not be placed on any additional duties except in a supervisory capacity. . . . NCO responsibility regulation is expected to be released in near future. . . . New chevrons for airmen first, second, and third classes have been designed, and project is now at ARDC in Baltimore for "coordination."

MISHAPS — 91,300 man-days were lost to the AF during 1952 because of ground accidents. ATRC estimates that time lost would be enough to operate a flying base for one month. Moneywise, these accidents represent the price of five B-47 bombers or 150 T-6 trainers.

ON THE HILL — Defense Department's recommended eight percent increase in pay for members of Armed Services has never been introduced in Congress. . . . AF officials are pessimistic over getting the AF Academy bill through this Congress.

NEW REG — AF recently revised its base memorialization program. The new regulation, AFR 34-55, states that any person may submit names of deceased officer or airmen heroes not already "memorialized" for consideration as titles for bases and special projects. Under former directive, only commanding generals of commands and air forces could do so. AF policy is to name large bases, with or without flying facilities, after top national heroes. Recommendations should go through "channels."

COMING UP — June 6, ICAO Assembly, Brighton, England; June 11-13, annual All-Women International Air Race, from Weeland, Ont., to New Smyrna Beach, Fla., sponsored by Ninety-Nines; August 20-23, AFA National Convention in Hotel Statler, Washington, D. C.

PEOPLE

IN THE AIR NEWS

Capt. Kendrick U. Reeves, 58th Air Rescue Sqdn., who is 1952 winner of the Cheney Award, given annually for an act of "valor, extreme fortitude, or self-sacrifice in humanitarian interest in connection with aircraft." Captain Reeves commanded the SA-16 that saved thirty-two passengers and crew members of a British Dakota (C-47) which crashed in the Mediterranean last July.

A/3C James E. White, East Aurora, N. Y., who saved the lives of his three-man crew during a recent combat mission over North Korea. Flying in a 17th Bomb Wing B-26, White held the propeller of a live bomb hung up on a broken lug for seven minutes until the other bombs were dropped and the hanging bomb could be jettisoned.

Lt. Gen. Glenn O. Barcus, winding up his tour as 5th AF chief, who has flown more than a dozen missions over North Korea in a marked Sabrejet and has radioed his identity and a challenge to the Communists. Irked by enemy broadcasts, he promised bombs on military targets in North Korea every time derogatory remarks were made about the 5th AF.

A/2C Myron J. Youtsey, B-26 gunner from Van Wert, Ohio, who is credited with saving the lives of his 17th Bomb Wing crew members during a recent attack in support of ground troops in North Korea. He volunteered to rewind the propeller of a 500-lb. bomb that had hung by its rear shackle during the bomb run, although the arming wire was pulled and the prop nearly unwound.

SIMPLICITY in hydraulic pump design is important for these reasons:

The Pesco hydraulic pump is a gear design—the simplest of all hydraulic pumps. There are actually only three moving parts in the pump proper. Fewer moving parts mean—

. . . less chance of pump malfunction
. . . less maintenance
. . . less cost for overhaul
. . . less weight
. . . less noise

plus the EFFICIENCY of "Pressure Loading" which makes possible:

"*Pressure Loading*" is Pesco's exclusive development that *automatically* holds end clearance of gears to a thin film of oil, thereby maintaining the volumetric efficiency throughout the long service life of the pump.

. . . volumetric efficiencies up to 97% over a wide range of temperatures

plus STATISTICAL QUALITY CONTROL which assures:

. . . uniform high quality and performance of each pump
. . . a longer, trouble-free service life

Simplicity of design, *efficiency* of "*Pressure Loading*" and *statistical quality control* in all phases of manufacture, are three important reasons why Pesco pumps are standard equipment on military and commercial aircraft and on many automotive and industrial products. Write today regarding your hydraulic pump requirements.

engineering Pesco production
PRODUCTS DIVISION

BORG-WARNER CORPORATION
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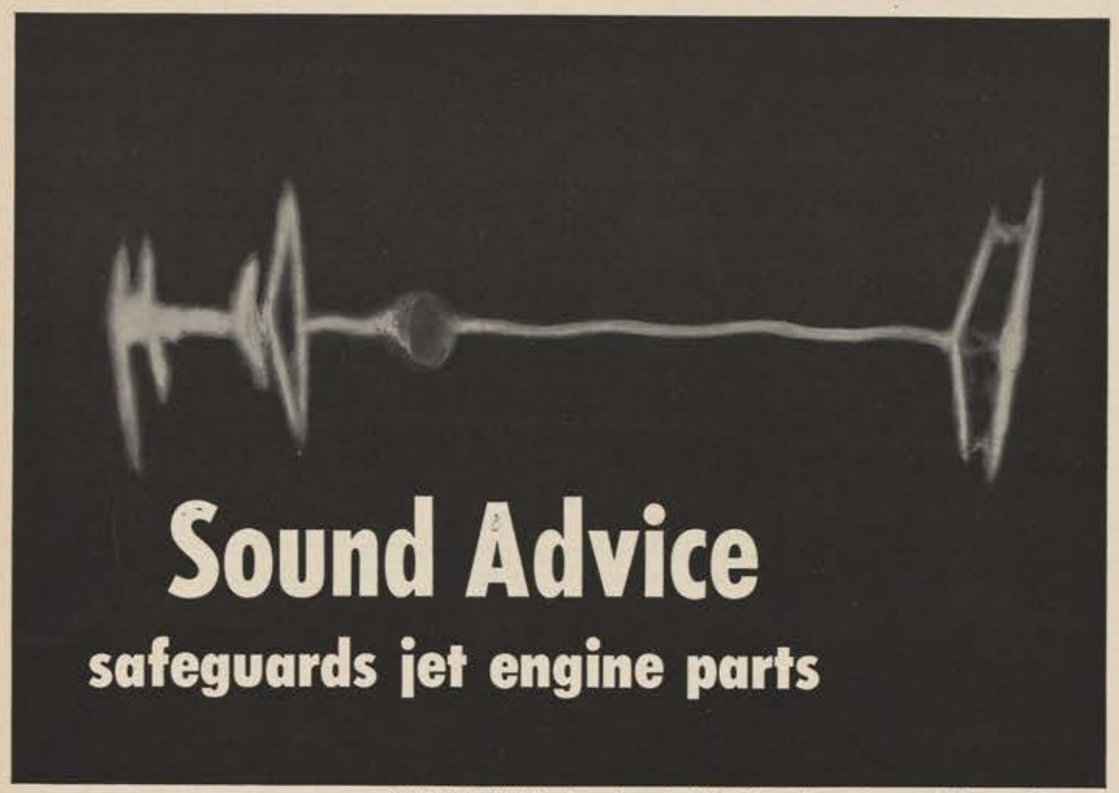
ANOTHER REASON ALLISON LEADS IN THE AIR



Sound Advice
safeguards jet engine parts

FINGERS OF SOUND probe metal parts for hidden faults as Allison engineers use the Ultrasonic Reflectoscope

It is important that the metals used in critical jet engine parts be completely free of even the tiniest flaws. To eliminate the possibility of minute defects that even X-ray testing will not reveal, Allison engineers rely on an *ultrasonic reflectoscope* to test parts.

Allison was the first aircraft engine builder to use this unique means to search out subsurface faults. Here's how it operates: High frequency sound waves are sent into the metal part under test, and flaws of a rejectable nature cause "echoes" which are electrically recorded on a screen. This "sound advice" enables Allison to detect hidden imperfections that could not be discovered any other way.

Tests like this are another reason for Allison leadership, because they are typical of the thoroughness that pays off in greater dependability and has won the confidence of jet pilots of many nations.

Several engine pieces, like this J33 compressor, receive 100% Ultrasonic inspection

GM GENERAL MOTORS

Allison
DIVISION OF GENERAL MOTORS
INDIANAPOLIS, INDIANA

World's most experienced designer and builder of aircraft turbine engines—*J35 and J71 Axial, J33 Centrifugal Turbo-Jet engines, T38 and T40 Turbo-Prop engines*

An Editorial

PUT DEFENSE IN THE DEFENSE BUDGET!

In the face of a growing Russian threat, the new defense budget would slacken our preparedness pace and slash our airpower. This is courting disaster.

By Arthur F. Kelly, *PRESIDENT, AIR FORCE ASSOCIATION*

The defense budget now before Congress resembles the first draft rather than the final version of a document designed to insure our security.

Like most first-draft papers in the defense budget arena, it represents the fiscal approach to the complex security problem rather than the full solution, and we hope Congress will consider it in that light.

Each year, for example, the Comptroller of Defense has opened the budget season at the Pentagon with a set of figures based on a stringent money ceiling. This is a bargaining budget obviously designed to "bring the services into line" and no one, except perhaps the Comptroller himself, thinks of it in terms of a finished product.

Last year the Comptroller called it a "benchmark budget." In its balanced force concept and its curtailment of land-based aviation, it was similar to the new defense budget which the administration sent to Congress last month.

It is rather amazing that this new "benchmark" budget ever got up to the front office, much less through the White House and to the Hill. This reflects, perhaps, not only incomplete staff work, but the terrific strain on the man in the White House during the first 100 hectic days of the new administration.

For it should be apparent to all by now that this new defense budget is lacking in one basic ingredient—defense.

If sustained in its present form, it could well mean the transfer, by default, of world balance of power to Russia.

At best, it is an open invitation for Russia to pursue its long range plan of conquest through limited aggression and atomic blackmail.

At worst, it is a tempting challenge for the Soviet to short-cut this route and get the job done quickly with all-out atomic attack on the United States.

If there are less frightening alternatives than these, they are not discernible in an analysis of the defense budget.

Russia's buildup of air-atomic striking power continues apace, unaffected either by America's obsession for solvency or by a homegrown peace offensive.

No one in authority has disputed the growing military might behind the Iron Curtain. Last month Gen. Omar Bradley told a congressional committee that Russia's "atomic capability is rapidly improving."

The Joint Chiefs of Staff have not changed their estimate, made more than a year ago, that by mid-1954 Russia will be able to deal this country a crippling atomic blow.

A group of eminent scientists on the LINCOLN air defense project, after a fresh and independent analysis, have come to substantially the same conclusion.

The President, in a press conference last month, made it clear that he was not taking issue with such grim appraisals of the Russian threat.

Yet, this new defense budget would slash drastically the military program projected for the next fiscal year.

It is a military fact, also undisputed by people of authority, that airpower is the key to our preparedness.

The President has long been on record in this regard, ever since a conference with his top wartime commanders in 1945, shortly after the fall of Germany, when he flatly declared that airpower had changed the nature of warfare, and that future military planning must reflect the change.

Last month Gen. Alfred M. Gruenther, Chief of Staff at Supreme Allied Headquarters in Europe, underscored this thinking in testimony before a Senate committee.

"Airpower," said General Gruenther, "is the dominant factor in war today."

Yet, in this new defense budget, the Air Force bears the brunt of the slash.

Against the budget submitted to Congress by the Truman administration, Air Force spending would be cut by about one-third, the overall military budget by only one-eighth.

Fully $5 billion would be taken from the Air Force program.

For the first time since the 1951 fiscal year, the Army would receive more money than the Air Force.

More than $3 billion would be cut from the Air Force program for the construction of new aircraft and the purchase of spares, parts and auxiliary items.

The strength of the Air Force would be reduced by some 50,000 military personnel and 11,000 civilians.

The Air Force research and development program, key to the quality of our future air weapons, would be reduced by more than $70,000,000.

This budget would ring the death knell of the 143-wing Air Force program.

Both the Army and Navy have virtually reached the force levels approved by the Joint Chiefs of Staff. The Air Force still is building toward those levels, and to a large degree still is a paper force. The budget of the new administration approves, in effect, the Truman administration's strength levels for the Army and Navy, and disapproves the strength level projected for the Air Force.

So it is that the administration, despite the growing Russian threat, against which airpower is decisive, would reduce our military strength in general, and the Air Force in particular.

It has been suggested by the press that such action stems from the belief that we can base our defense planning and defense spending largely on Russian intentions. If so, doesn't the unslackened military buildup in Russia reflect Russia's true intentions?

Last month, on the same day the new defense budget was sent to Congress, Gen. Omar Bradley told a Congressional committee:

"I know of no intelligence which reveals any change of attitude on the part of the Soviet Union or which would give us any reason to diminish, slow down, or stretch out our preparedness effort."

Another explanation advanced for what is now taking place in Washington is that the administration believes economic strength takes priority over military strength in the struggle against communism. It has also been suggested that this policy fulfills campaign promises as well.

In the great campaign weren't we promised security as well as solvency?

If our new leaders have approached national security from the standpoint of fiscal policy rather than defense policy, they invite these questions:

How much, at current prices, is a pound of flesh? How can we place a price tag on survival?

As Senator Stuart Symington said in an address last month:

"So long as the survival of the country is endangered, no one at any level has the right to place solvency above security."

And as long as freedom is the basic objective, we must think beyond mere survival. We must maintain a military stature capable of preventing not only war itself but aggression short of war. Lacking that stature, the free world is forever subject to one violation of freedom after another, a situation which inevitably leads to war or to conquest.

As we reported in this magazine more than a year ago:

"When Russia possesses the means to strike a mortal blow against us, the balance of power will have shifted from the United States and the western democracies to the Soviet Union and her communist satellites. The significance of the shift may, in the long run, be fully as disastrous as all-out atomic attack. For at this critical juncture in history, Russia might have less—rather than more—reason to embark on all-out war. Now she could begin a program of atomic blackmail by applying an "atomic squeeze" on the fringe nations and on our present allies; and the United States, contained by Russia's superiority in arms, would be unable to stop her."

As to the strength needed for security, our current position is even more critical than the figures in the new defense budget reveal.

The drastic cutbacks reflected in this new budget are cutbacks against the Truman defense program which, as we have repeatedly stated in the past, was inadequate to begin with.

In fact, when the new administration took over, one of its first frustrations was a National Security Council document which revealed that the Truman administration's force levels were inadequate to meet national objectives under the balanced-force concept dominant at the time. The situation obviously called for a hard decision: To revise the concept, or increase force levels and defense expenditures.

Instead, the new administration has retained the concept, and now would lower the force levels and reduce defense expenditures.

Our new leaders talk about a new and tough foreign policy. This recalls the time Gen. George Marshall, then Secretary of State, was asked why he didn't toughen his stand against communism. He replied, "Get tough with what?"

The new administration might ask itself the same question.

If we have been hard put to "contain" communist aggression under the Truman administration's concept of military strength, won't we be even harder put to "resist" communism and "liberate" enslaved nations with less strength?

These are some of the questions which arise in connection with this new "benchmark" defense budget. These questions must be raised so that the people will know exactly where we stand against aggressive communism.

No amount of sweet talk in defense of the new defense budget must be permitted to compromise public understanding of the true state of affairs. This is the responsibility of the free press, and a particular responsibility of this magazine and the Air Force Association.

We must see this new defense budget in full perspective. We must, for example, clearly realize that the effects of a drastic slash in defense spending would be felt for a long time to come, just as we are now feeling the results of Mr. Truman's impounding of airpower funds back in 1949. We must recognize that actions such as these cannot be overcome swiftly, if at all, by a sudden upswing in defense spending at some future date.

If Congress sustains this program by supporting the new defense budget, our legislators must be prepared to sit calmly by, and not shriek in anger and shame as they have in the past, when American rights are violated in the far corners of the globe, when free nations vanish behind the Iron Curtain, when new Koreas sap our blood and money in wars that can't be won.

A little more than a year ago we opposed, as strongly as it was in our power to do so, the military program of the Truman administration. An article in this magazine, called "The Airpower Scandal," exposed for the first time many of the dangers inherent in that program, and stimulated a congressional investigation of the major issues.

Twelve months later—twelve months closer to the day when Russia will have the atomic capability to deal this country a crippling blow—we can only conclude that if our security position was critical at that time it is even more critical today.

Any retrenchment in our airpower program is, in our opinion, a gamble with disaster.

We salute the long awaited reorganization of the defense establishment and the wealth of management genius in the new administration. We do not, however, look forward to even the best organized and best managed period of insecurity in our history.

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TA53-3

Gen. Nathan F. Twining

Gen. Hoyt S. Vandenberg

TWINING FOR VANDENBERG

Chief of Staff to retire after more than thirty-four years active service.

White to be Deputy Chief

AS THIS issue of AIR FORCE went to press, President Dwight D. Eisenhower altered the makeup of the Joint Chiefs of Staff by nominating Gen. Nathan F. Twining as new Chief of Staff of the Air Force to succeed Gen. Hoyt S. Vandenberg, who is retiring after more than thirty-four years of active service.

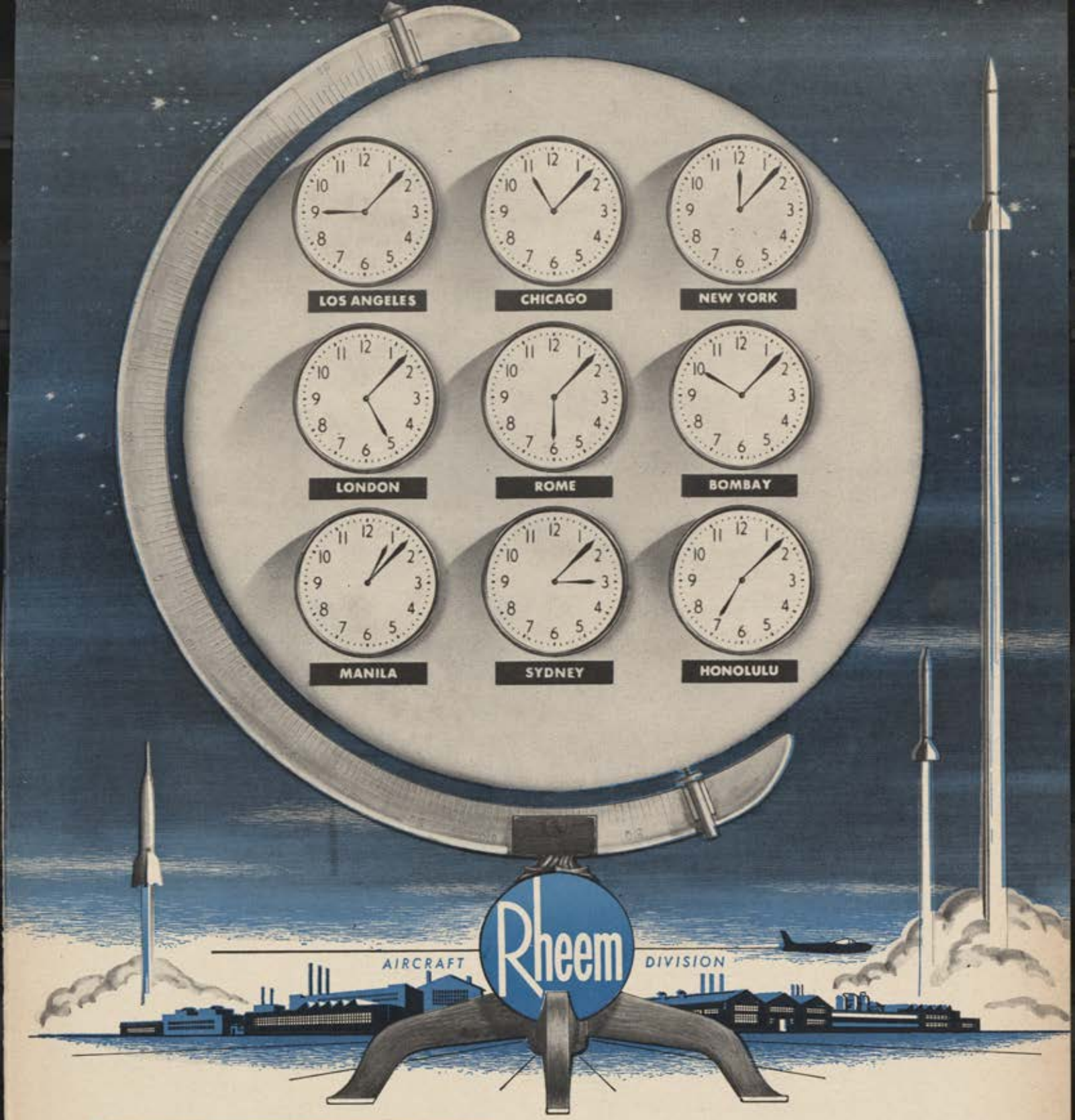
Appointed to replace General Twining as Vice Chief of Air Staff was Lt. Gen. Thomas D. White, 52, formerly Deputy Chief of Staff for Operations. The promotion will mean a fourth star for General White.

General Twining, 55, is a veteran of more than thirty-seven years' service who knows the Air Force from the ground up. His first tour of duty was as an infantry corporal on the Mexican border in 1916. He was graduated from West Point in 1919 as a lieutenant of infantry, transferring to the Air Corps in 1923.

During World War II, General Twining saw action around the globe. Among his many commands were the 13th, 15th, and 20th Air Forces—the Pacific, Europe, and back again to the Pacific.

General Vandenberg, 54, entered the Air Corps in 1923 upon graduation from West Point. He spent most of his earlier career as a pursuit pilot, attending staff schools and instructing in tactical air warfare. In World War II he was Chief of Staff of the Northwest African Strategic Air Force and later went to England, where he commanded the 9th. He succeeded Gen. Carl A. Spaatz as AF Chief of Staff.

Lieut. Gen. Thomas D. White



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TARGET SELECTION

Hitting the selected target has been a prime problem since man first armed himself. However, unlike the problem which faced the primitive native with his bow and arrow, selecting targets for guided missiles involves many new techniques.

Fairchild's Guided Missiles Division was among the first in this country to undertake the design and development of complete missile guidance systems. The systems have been proven in test missiles flown by all three branches of the Armed Services and are among the most advanced types.

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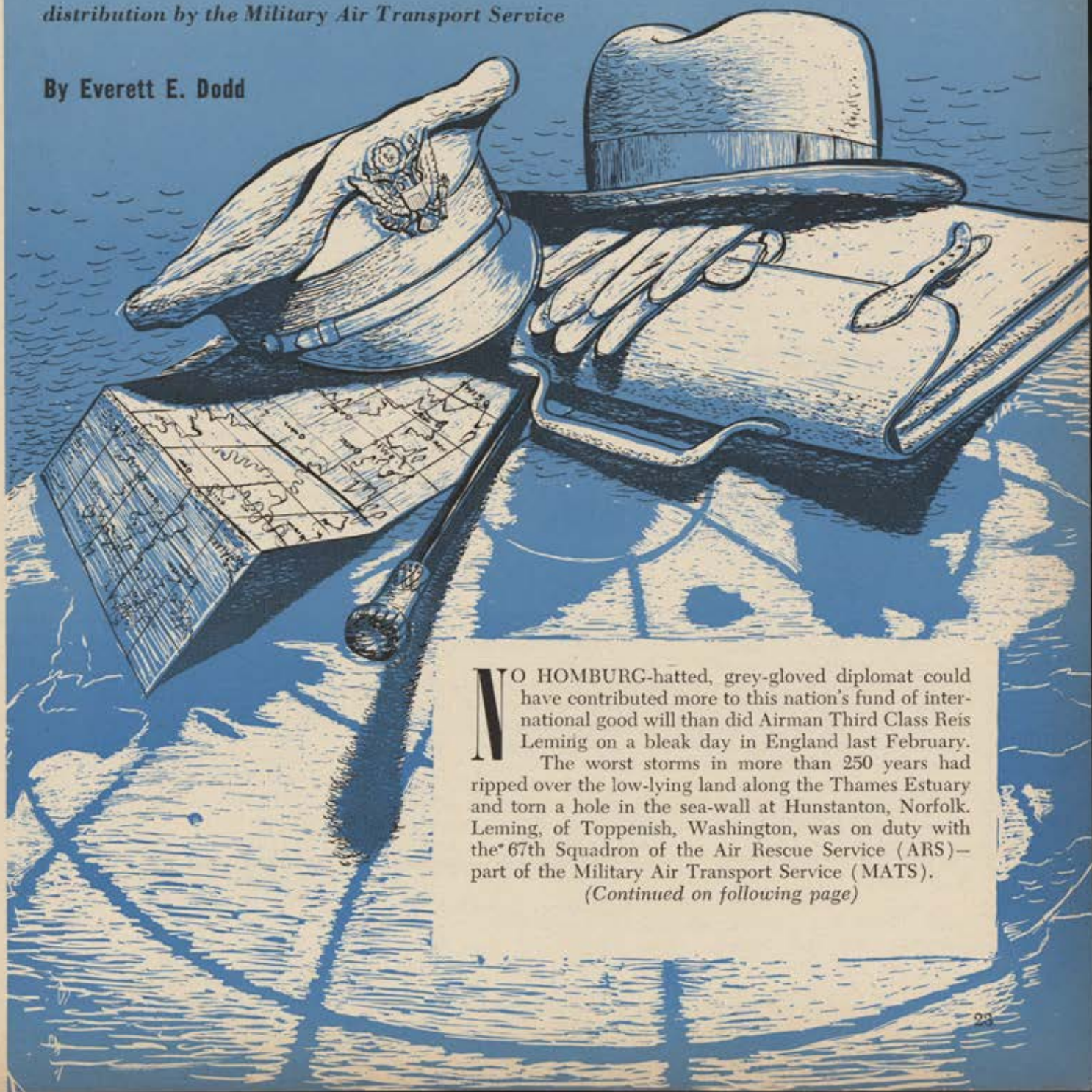
AIR FORCE
JUNE 1953

HOW AMBASSADORS IN BLUE WIN FRIENDS FOR FREEDOM

The prestige and influence of the United States get global distribution by the Military Air Transport Service

By Everett E. Dodd



NO HOMBURG-hatted, grey-gloved diplomat could have contributed more to this nation's fund of international good will than did Airman Third Class Reis Leming on a bleak day in England last February.

The worst storms in more than 250 years had ripped over the low-lying land along the Thames Estuary and torn a hole in the sea-wall at Hunstanton, Norfolk. Leming, of Toppenish, Washington, was on duty with the 67th Squadron of the Air Rescue Service (ARS)—part of the Military Air Transport Service (MATS).

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AMBASSADORS IN BLUE

As the sea roared through the gaping wall, villagers were trapped in their homes. Perched on rooftops, they watched helplessly as the icy waters swirled up and toward them.

The gale was so fierce that motor launches were forced to turn back. But Leming, in a rubber survival suit, waded into the waters. He pushed a life raft toward the nearest cottage. Eleven persons clambered aboard from their perilous perch. Leming pushed them to safety.

Two trips and two hours later, Leming and his last precious human cargo were helped ashore. His rubber suit was ripped so badly that an attending physician said five more minutes in the icy water would have killed him.

In three trips Airman Leming rescued twenty-seven persons, at the risk of his own life, since he couldn't swim a stroke. England awarded him her second highest decoration for heroism—the George Cross.

"If anybody ever deserved the bloody George Cross," one Englishman remarked later, "he does."

Leming's courageous action is an example of the "selfless actions" that Undersecretary of State Walter Bedell Smith was speaking of when he said in a recent statement that "MATS has provided US foreign policy a valuable assist in fostering international good will . . . . Although primarily a component of our national defense, MATS has been a potent factor in demonstrating the peaceful intentions of the United States.

"Since its organization five years ago, MATS time and again has demonstrated to the free world this country's humanitarian interests, principally by its selfless actions."

For while Leming was performing his heroic deed, helicopter pilots of the 9th ARS Squadron were flying mercy missions across the Channel in Holland. The same storm had inundated more than a half million acres of the Netherlands when dikes burst under the North Sea's pounding. The "eggbeater" pilots hovered low over dikes, barns, and rooftops and carried hundreds of marooned Hollanders to safety.

Mercy missions like these illustrates a kind of diplomacy that makes more friends and influences more people than any amount of haggling across a green baize table. And they are part and parcel of the worldwide prestige the United States has been building for itself through the far-flung operations of the Military Air Transport Service.

In times past when seapower dominated strategy, ships of the US Navy had a virtual monopoly on diplomatic missions involving the military. Today, in the fiftieth year of the air age, MATS is able to penetrate miles inland from seaports and bring American influence and prestige to people to who otherwise the United States would be no more than a name. In thirty-seven countries this side of the Iron Curtain, the men and women of MATS are representing America in a way that, although it lacks the traditional trappings of diplomacy, leaves a deep and lasting impression on those it touches. Truly they are ambassadors in blue.

Thus, in MATS, whose headquarters are at Andrews Air Force Base, near Washington, D. C., the United States has a two-edged weapon. During these times of queasy peace MATS is, as Undersecretary Smith also said, a "potent factor" for peace, yet an indispensable component of our armed services.

As such a component, MATS is charged with the day-to-day job of logistic air support to our military operations the world around. But this is only a fraction of the story. Lt. Gen. (then Maj. Gen.) Laurence S. Kuter, first Commander of MATS, put it this way:

"MATS engages in many varied activities which might be termed public service on an international scale—activities which might include airdropping food and medical supplies in the Arctic; conducting search and rescue operations for aircraft in distress; tracking storms and broadcasting hurricane warnings; assisting other nations along the 115,000 miles of MATS routes to operate airport facilities more efficiently; and supplying an entire city of two and one-half million population with more than 2,300,000 tons of food and supplies over a fifteen-month period."

This latter had reference to the Berlin Airlift. At that time, June 1948, MATS was but a few weeks old. It had been birthed by the Armed Forces Unification Act on June 1, 1948, and merged the old Army Air Corps' Air Transport Command of World War II with the Navy Air Transport Service. But during the Berlin Airlift MATS matured fast.

West Berlin was not starved into submission, and the Russians lost their first battle of the Cold War. Airpower had come of age as a diplomatic weapon.

Today on the *Platz der Luftbruecke* (Place of the Airlift), in front of the Administration building

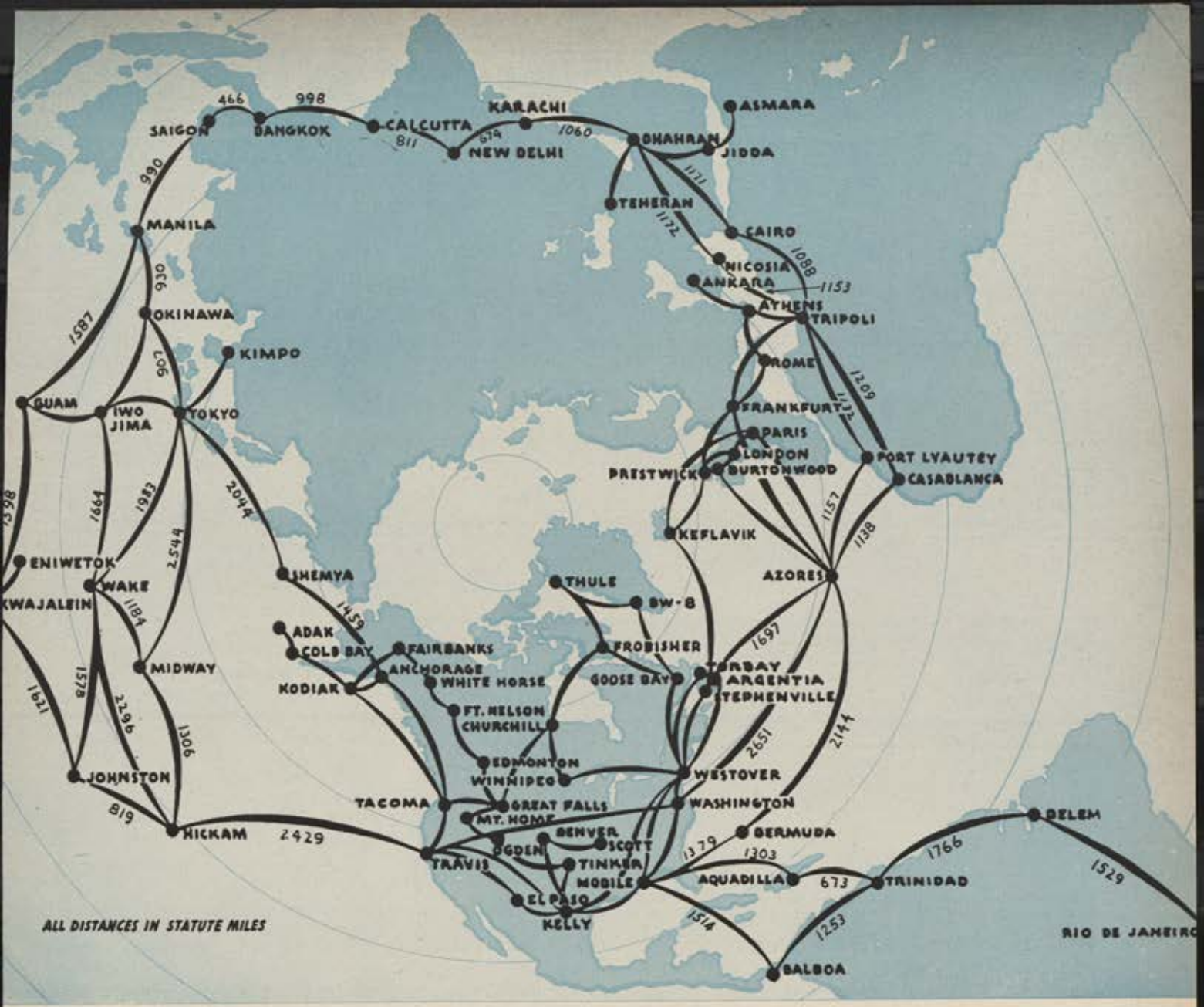
AF DONATES TO DUTCH RELIEF

ACTIONS like these," said the Netherlands Ambassador to the US J. H. van Roijen, "certainly promote good feelings amongst the nations of the world.

The ambassador was speaking of those thousands of Air Force officers and airmen who attended Palm Sunday services in 261 chapels around the world this year. At the services a special offering was asked for the relief of the people of the Netherlands who suffered from the violent North Sea storms of last February.

Each chapel's check was forwarded to Washington. There Chief of Air Force Chaplains (Maj. Gen.) Charles I. Carpenter took them (they totalled $26,000) to the Netherlands Embassy for presentation to the ambassador. All Air Force commands took part in the donation except the European Theater. AF personnel there had made their contribution earlier.

Of the Air Force's commands, the Air Training Command gave most, $9,000. And second largest contributor was an overseas command that took time out from fighting a war and donated $6,000. It was the Far Eastern Air Forces, stationed in Japan and Korea.



RESEMBLING A SPIDERWEB, MAP SHOWS EXTENT OF MATS' OPERATIONS

The sun never sets . . . Every forty-five minutes of the day, a MATS plane averaged a crossing of the Pacific in 1952. And every hour of the day a MATS plane sets down or takes off from one of its bases in the vast network of bases that gird the periphery of Communist Russia and her satellites. Each base an instrument of both war and peace.

at Berlin's Tempelhof Airport, there stands a white, steel and concrete shaft sixty-three feet high. It faces toward the West. On its base are inscribed the thirty-one names of Americans who gave their lives that Western Berlin might live. Also inscribed are thirty-nine British and five German names of others who were killed during Vittles' lifetime.

A little more than 2,000 miles west of Berlin is an air-stepping stone between Europe and the United States, the tiny island of Terceira in the Azores, owned by Portugal.

Terceira's manners and customs haven't changed much since even before the days of Columbus. Ox-carts with creaking wooden wheels still ply the narrow, rough, island roads. Occasionally a car is seen. Isolated in the Atlantic, one-third the distance between Europe and North America, Terceira appears to be slumbering.

The appearance is deceptive. For on Terceira, at Lages Air Base, is the largest MATS base in the Atlantic Division. (MATS operates three divisions: Atlantic, Pacific, and Continental.) And here at Terceira the influence of the United States and the naturalness of the military and civilian personnel are felt island-wide. And not only in a diplomatic way, for the United States is the largest single employer on Terceira and expends in wages more than $165,000 a month. More than a drop in the little island's pint-sized economy.

Thus a strategic island base is maintained among friendly peoples—a vitally important base that funnels transport craft from the United States to England, Europe, Tripoli, and the Middle East. Another example that "the airplane, unlike any other weapon known to date, has the inherent ability, apart from its destructive power, to win friends and influence enemies" (AIR FORCE, February '52).

Of no little influence on the Russians is the recently constructed Far Northern American base at Thule on the island of Greenland. It isn't exclusively MATS, but MATS aided

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materially in speeding its construction. Built in cooperation with the government of Denmark, which owns Greenland, Thule is one of the major contributions to the defense of the North Atlantic Treaty nations.

Yet Thule's potential in peace is tremendous. Scandinavian Airlines plans to inaugurate an airline through Thule to the West Coast of the United States. By flying across arctic expanses to San Francisco and Los Angeles—6,290 miles—the airline can save more than 1,500 miles. Thus Thule becomes a link to bind the United States closer to its Scandinavian allies.

"If Thule is never called upon to play a warlike role in the air defense of North America," Col. Bernt Balchen, well known arctic explorer, said, "the taxpayers' money spent on it will be worthwhile as an investment in the future of commercial aviation."

From Thule to Beirut, Lebanon, in the Middle East, climate, customs, and religions change radically. Yet MATS planes may one day set down in sub-zero weather at Thule, and two or three days later land in a country where the burnoose is as necessary for protection from the burning sun as the parka is to shut out frigid winds.

Last summer Lt. Gen. Joseph G. Smith, now MATS Commander, in cooperation with the State Department, ordered his men of MATS to undertake a different kind of airlift. It was called Operation *Hadjii Baba.* (*Hadjii* means "pilgrim" and *Baba* is from the Ali Baba of Arabian Nights.)

Each year during the last month —*Dhu-Hijja*—of the Moslem Calendar, Mohammedan pilgrims make the annual trek to Mecca. There, on the eighth day of the month, they are cleansed of sins and granted the title *Hadji.* Back home, a *Hadji* becomes important and respected person of the community, and the tales of his trip to Mecca are major sources of conversation for months.

Last year the eighth day of *Dhu-Hijja* fell on Friday—which multiplies a pilgrim's blessings seven-fold. (*Dhu-Hijja* is August on our calendar.) It also attracts many more pilgrims to Mecca.

Every good Moslem should make the journey to Mecca once during his lifetime. This year thousands of faithful throughout the Middle East began the annual pilgrimage. At Beirut's airport in Lebanon thousands queued up at the plane gates. But there were just not enough planes to go around. Aging pilgrims, who had staked their life savings on this trip, would never have another chance.

For hours they patiently waited bareheaded under the scorching Lebanese sun—special blessings are accorded pilgrims who make the journey without covering their heads.

Harold Minor, United States Minister to Lebanon, took stock and got in touch with the State Department. State contacted MATS. And MATS immediately ordered thirteen of its C-54s from Libya and Germany to Beirut. Their mission—to transport the pilgrims to the Saudi Arabian base at Jidda, which is only forty miles from Mecca.

In all MATS planes made seventy-five round trips between Beirut and Jidda and flew 121,000 miles. The language barrier prevented the Moslems from extending their thanks, but as one pilot said:

"I knew these people could show hostility with their eyes. Now I know they can say thanks the same way."

One of the passengers was Mullah Ayatollah Kashani, a powerful political leader of strategic, oil-rich Iran. Traditionally an outspoken critic of the United States, Kashani nevertheless expressed thanks by kissing the pilot and co-pilot while the plane was in flight. And, for the first time in many months the United States enjoyed a good press in the middle East. Said Beirut's *Al Massa:*

"We are glad to acknowledge this humanitarian mission made possible through the American Government and its Air Force Headquarters. God the Almighty will certainly recompense this mission. The Holy Koran says, 'Good deeds efface bad ones.' America's bad deeds are many, but God will forgive them."

Today, even with its quasi-diplomatic exploits, MATS is still largely concerned with its military mission, operating its Pacific Airlift. Like the Berlin Airlift, its growth was spectacular.

When on June 25, 1950, a Communist Yak strafed Kimpo Airport at Seoul and left a flaming hulk of a MATS C-54, the cold war suddenly became a hot one. To air-freight critical supplies and personnel to Japan and Korea demanded immediate action. MATS acted. Forty C-54s of the Continental and Atlantic Divisions were immediately called to duty. To support the airlift, according to prearranged plans, civil airlines were tapped. They provided planes and extra crews.

From an initial start of seventy tons delivered to the Far East one month after the war started, MATS and commercial airlines are now delivering more than seventy tons per day. Of the commercial airlines participating in the Pacific Airlift, Pan American World Airways leads the list in tons of cargo and passengers flown. In total ton-miles flown, it is again the leader, with Seaboard & Western Airlines and the Flying Tiger Line second and third.

Since the beginning of the Pacific Airlift in 1950, more than 443,200 military passengers have been carried across the Pacific by MATS. And more than 57,700 wounded and sick have been evacuated to the United States. Total tonnage airlifted is more than 144,000 tons.

(These figures also include those

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Home for some, departure point for others, Travis AFB, stateside terminal for Pacific Airlift, is visited by Thailand's Air Vice Marshal, Chua Pusoni.

"Magic Carpet" to Mecca. Ayotollah Kashani, Iran's second most important leader, boards plane en route to Mecca. MATS's emergency airlift to transport Mecca-bound pilgrims from Lebanon to Sauri Arabia evoked Moslem praise.

registered by the commercial airlines of the United States and the Canadian Pacific Airlines and Belgium's Sabena. Sabena has now withdrawn from the airlift.)

Another strategically important airlift is called Operation Bluejay. It operates between the United States and our Far Northern base at Thule, Greenland (AIR FORCE, November '52).

Baffin Bay, the only water access to Thule, is ice-locked nine months out of the year. The AF couldn't wait until July for it to thaw, so the airlift began. That was in March 1951. By the time Baffin Bay was clear for navigation, more than 3,000 construction workers had been moved in, along with prefabricated houses and heavy construction materials.

In two years of Operation Bluejay, 2,657 round trips between Westover AFB, Mass., were flown over some of the most treacherous terrain in the world without the loss of a single life or a major accident. During that time 30,288 passengers and 14,814 tons of supplies were transported. Army engineers estimated that the airlift made it possible to finish Thule a year ahead of schedule.

Besides its Air Transport Service, MATS operates six other services: Air Rescue Service, Air Weather Service, Air Photographic and Charting Service, Air Resupply and Communications Service, and Flight Service.

- *Flight Service* (FS), operating domestically, is an important adjunct of our civilian defense, and maintains close cooperation with the Air Defense Command. It handles more that 1,850,000 flight plans during the course of a year and assists in test air raid alerts conducted by civilian and military defense agencies.

FS also teaches military pilots the rules and regulations of civil and military flight. Another chore is its processing of reckless flying reports by civilian or military personnel. And, when Air Weather Service reports that AF bases are in the path of a hurricane, FS plans and supervises the evacuation of planes from the danger areas.

- *Air Photographic and Charting Service.* (APCS) distributes each month more than 5,000,000 aeronautical charts and is responsible for the photographic requirements of the USAF. In addition APCS must meet the AF's demand for training charts, film strips, still and motion coverage of combat operations for historical and staff study. Its headquarters are at Orlando, Fla.
- *Air Resupply and Communications Service* (ARCS) would in time of war prepare, reproduce, and disseminate psychological warfare material as directed by theater commanders. Recently ARCS was directed to set up a school to train MATS personnel in survival techniques.
- *Air and Air Communications Service* (AACS), with approximately 230 locations around the world, provides pilots with radio, electronic, and navigational aids in flight and prior to take-off. Its 1,251 facilities furnish more than a dozen services to pilots.

To any airman who has ever flown on instruments with a dwindling gas supply, with an undercast beneath that he knows conceals mountain tops, the friendly voice and advice of AACS as it directs him to the nearest open field is like the sound of carolling angels.

One veteran airman put it this way:

"I believe," said this airman, "I can hear an 'Amen' from countless cockpits when I say, in all sincerity, it is AACS who today 'plays God' to our airmen and airwomen in a very real manner. AACS has taken the alone-ness out of flying and with it whatever dread there might otherwise be of air routes over lonely and

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Australian representatives of Quantas Empire Airways plan transportation and evacuation of Aussie and New Zealand troops in Korea with MATS at Guam.

dangerous areas, such as vast expanses of ocean, unconquered mountain peaks, relentless deserts. Small wonder the flyer grows to lean on this unseen guide almost as importantly and instinctively as he does on the Great Unseen Force."

The airman? General of the Air Force Henry H. "Hap" Arnold.

● *Air Weather Service* (AWS). Members of the 58th Strategic Reconnaissance Squadron, based in Alaska, regularly fly missions over the North Pole. Recently they completed their 700th mission.

In the Atlantic and Pacific AWS has the job of flying to and and through the hurricanes and typhoons that sweep these areas. Their mission is to log and chart the movement of the weather masses. Through its 250 weather stations, twenty mobile weather vans and six aerial reconnaissance squadrons it provides men of the USAF with the latest meterological data.

● *Air Rescue Service* (ARS). At B-29 briefings in Japan and Okinawa the invariable question is "Where will Dumbo be orbiting?"

The name is not flattering, but the query is. Dumbos are ARS B-17s equipped with drop-boats, which orbit over the coast-out points of a bomber strike. If a crippled bomber can make it to coast-out, the crew has it made, even if they have to hit the silk. For within minutes either a boat will be dropped, or a helicopter hovers into view.

And, for the ground-support pilots or Sabrejet jockeys shot down behind enemy lines, the situation is never hopeless. Not as long as the 3d ARS Squadron has an egg-beater to fly.

The 3d is the most decorated squadron in the Korean war. Since the war started they have rescued more than 952 men from behind enemy lines and removed more than 8,000 from near the front lines or dipped them out of the sea.

But the 3d ARS squadron doesn't have a monopoly on heroics.

Last July after a British Dakota DC-3 had radioed it was ditching in the Mediterranean, a SA-16 Grumman amphibian of the 58th ARS Squadron, stationed at Wheelus Field in Tripoli, took off in search. It was piloted by Capt. Kendrick U. Reeves (see page 14).

Reeves sighted the downed craft and reported to his ARS base. Two British planes were already circling overhead but they were not equipped for rescue work.

"I then made my decision," Reeves said later, "with the full concurrence of the entire crew." The decision: to land even though crewmen knew they couldn't take-off in the choppy sea. The landing was made and the thirty-two survivors hauled aboard, where they were wrapped in blankets and offered hot food and drink. A British destroyer craft soon arrived and the rescued were transferred, while the rescuers stayed with their craft. Three days later the badly battered SA-16 was taxied and towed into port.

For this Captain Reeves will receive the Cheney Award—a certificate, a bronze plaque and $500—for valor and extreme self-sacrifice in a humanitarian interest in connection with aircraft.

● *Air Transport Service* (ATS). When MATS is mentioned, ATS' activities are uppermost in mind. It is the service that helped sustain Berlin, is flying the Pacific Airlift, and flew Operation *Hadji Baba*.

One of the little known facets of ATS, but nevertheless a flashy member, is SAM—Special Air Missions. SAM is the crack outfit that is entrusted with flying VIPI—very important personages indeed. It is a crack outfit of veteran pilots and crewmen who number among their passengers, Sir Winston Churchill, the Crown Prince of Saudi Arabia, Queen Juliana and Prince Bernhardt of the Netherlands and others.

On the domestic scene it is a SAM crew that flies President Eisenhower in his Lockheed Constellation, the Columbine.

If there is an elite in MATS the men of SAM must be classed in that category. But, like the men and women of MATS everywhere they perform their assigned missions without thought of praise. Yet in assessing the accomplishments of MATS, one must agree with Undersecretary Smith's words:

"In the United States and thirty-seven foreign countries [they] are dramatically emphasizing this nation's concern for human values in our concerted efforts with other nations to find a just and persevering peace."—END

HERE'S WHAT MATS FLIES

SINCE its organization five years ago, MATS has logged more than 2.9 billion passenger miles. These miles were flown in everything from 185-hp L-5s to 14,000-hp C-124s. Add helicopters, gliders, and tactical aircraft—T-33s, B-25s, etc.—and the variety of MATS' operations is a little better envisioned. Helicopters are used in ARS missions; tactical craft for training and transition of ferrying pilots. MATS ferrying pilots in 1952 made the first delivery of F-84s to NATO nations. These are MATS planes:

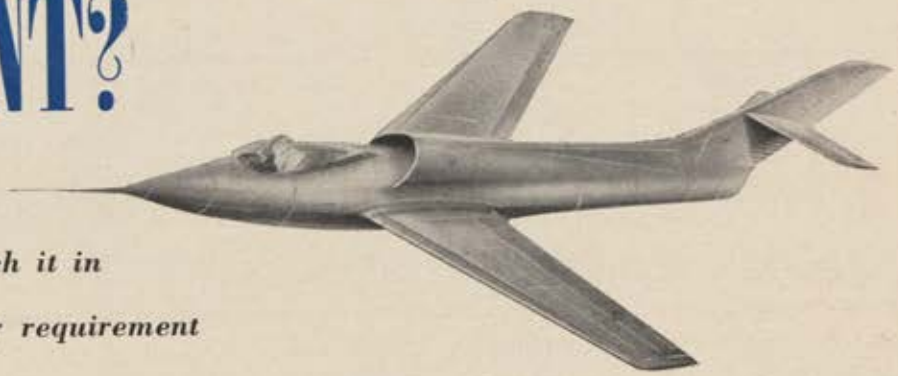
C-124 Globemaster rests at Thule.

Helicopter, guardian and savior.

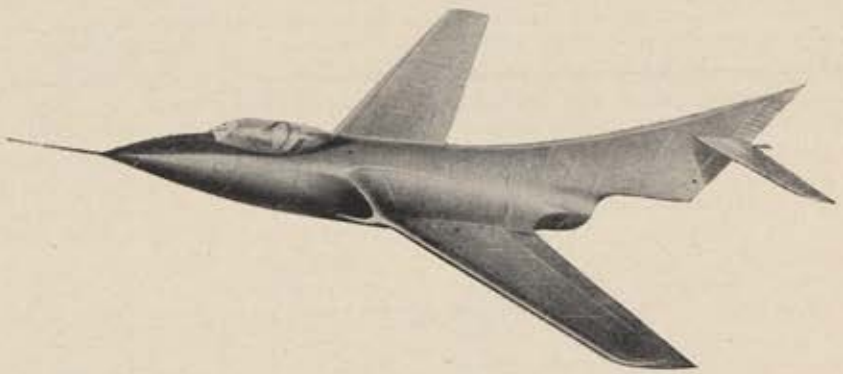
C-45	Beech Expediter
C-47	Douglas Skytrain
C-54	Douglas Skymaster
C-74	Douglas Globemaster
C-82	Fairchild Packet
C-97	Boeing Stratofreighter
C-118	Douglas Liftmaster
C-119	Fairchild Flying Boxcar
C-121	Lockheed Constellation
C-124	Douglas Globemaster II
SA-10	Convair Catalina
SA-16	Grumman Albatross
SB-17	Boeing Flying Fortress
SB-29	Boeing Superfortress
H-5	Sikorsky helicopter
H-19	Sikorsky helicopter
L-5	Convair Sentinel
CG-15	Glider
T-6	North American Texan
T-11	Beech Kansan
T-33	Lockheed jet trainer
B-25	North American Mitchell
B-26	Douglas Marauder
F-51	North American Mustang

WHAT KIND OF LIGHT FIGHTER DO WE WANT?

There's no reason we can't get a good one if we approach it in terms of the over-all military requirement



One proposed light fighter looks something like this.



This version has bifurcated duct in wingroots.

Delta-type, with external engine nacelles.

IN THE current rash of discussion about whether or not the Air Force needs, as rapidly as possible, a lightweight, day superiority fighter, a great deal of heat has been generated with comparatively little light. The problem has been presented generally as a choice between light weight, simplicity, high performance, and low unit cost on one hand, and increased weight, complexity, reduced performance, and high cost on the other.

But it ain't necessarily so. And it's not that simple.

The current clamor for a light, day fighter began with complaints from MIG Alley pilots that the MIG-15, primarily due to a better thrust-weight ratio, could outperform the heavier, more complex F-86. At the same time these pilots were racking up a kill ratio that has averaged out to about nine MIGs downed per Sabrejet lost and which, during the past months, has climbed to about twelve to one. On that basis the 86 has consistently outflown and outfought the MIG in Korea.

But, said the pilots, with a lighter, simpler, higher performance aircraft they could do even better.

Perhaps. But let's take a look at some of the factors involved. Why don't we have, right now, a light, day superiority fighter that can fly rings around the MIG? You have to go back a little for the answer. Someone once defined a statesman as "having his eye on the next generation" and a politician as "having his eye on the next election." The same reasoning applies to Air Force planners. They must keep one eye firmly glued on the future requirement while assessing the needs of the moment.

We fight today with planes that were on the drawing boards five to ten years ago. They were designed to meet a military requirement that went far beyond aerial dogfights in a small chunk of atmosphere over Korea. Money was limited, so much so that in 1947, for example, no new prototypes at all were built. Some choices had to be made and it is safe to say that, if the decision had been made at that time in favor of a stripped-down fighter, we might be looking very well in MIG Alley but very foolish in terms of ability to fight elsewhere in the world or to protect ourselves against bomber attacks on this country.

The next question is, do we need a light fighter now? The answer is probably yes, providing we do not compromise the military requirement in getting it. An all-weather capability is our prime requirement. But there is a limit to the number of all-weather fighters we can effectively employ within the capacity of our ground radar and navigation system. We could conceivably reach a point where it would be wise to invest in numbers of the cheaper, less complicated airplane, providing we have all the all-weather fighters we need in addition. Such a light fighter would be a useful hedge against future Koreas.

A more forward-looking approach,

(Continued on following page)

Dual-mission plane. Republic's F-84F, designed as fighter-bomber, is fast enough to be escort or interceptor.

though, would be to continue trying to get the most fighter we can get in terms of capability and trim the weight off that—on the drawing board, not after it is in production. We need not necessarily tie increased performance to increased size, weight, or even complexity.

Take your home radio. Once it was little more than a crystal, a catwhisker, and a set of headphones. It lacked range and good tonal qualities. You demanded higher performance. So radios got bigger and more complicated. Remember the thirty-six tube monstrosities?

Then engineers began to think in terms of simplification without sacrificing performance. Components began to shrink, both in size and in numbers; multiple-duty tubes were devised. Your radio got better, simpler, smaller, and cheaper.

It is not asking too much to expect a similar cycle in fighter aircraft.

Take engines, for example. It is useless to talk of a truly light fighter in terms of today's power plants. The engine represents the biggest single item of weight in a fighter and today's engines are big and heavy. They are essentially bomber engines, designed with an eye to high thrust coupled with low fuel consumption. Weight is secondary. Engines will undoubtedly get lighter in relation to thrust. But we may, in an effort for extreme lightness, have to sacrifice some fuel economy and some ruggedness of construction. This will mean shorter over-all engine life and less time between overhauls.

Even a light, day fighter will need electronic gear—range radar coupled with an optical sight, and radio equipment. In this field, too, the potential savings in weight and volume are tremendous. As the transistor replaces the vacuum tube, for example, and other components are made smaller, it should be posisble to build a UHF radio of about a third the weight of present equipment. Increased use of plug-in, throw-away components will make field maintenance more feasible.

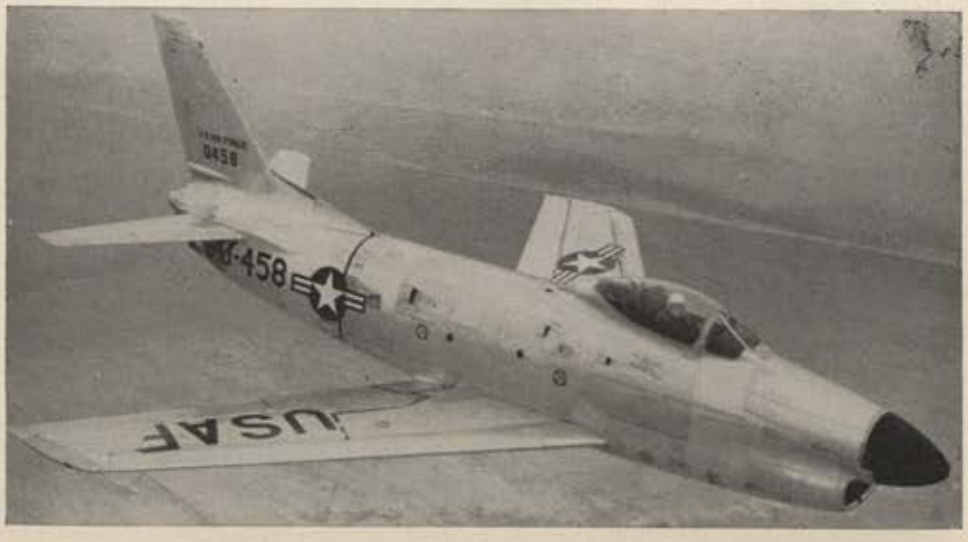
In armament, as well, we can make similar savings with concomitant savings in total aircraft weight. And the answer appears to be, not the slow-firing MIG cannon, but better, lighter rockets. Right now the best air-to-air rocket is the 2.7-inch Mighty Mouse. But it is designed to knock down bombers. A one-incher would be plenty for enemy fighters. And there's no reason why one can't be designed.

Thus, in terms of a future requirement for aircraft primarly designed for Korea-type, fighter-vs-fighter arenas, a lightweight, day superiority fighter would be desirable. But it must be approached in terms of the over-all problem and designed from the ground up in accordance with the weapons systems philosophy. We cannot arrive at it by stripping weight from existing fighters.

And unit cost alone must not be the sole criterion. Logistic factors, too, must be taken into consideration, such as the need for more pilot training, additional airfields, maintenance personnel, and so on. Very often the design that looks best from a unit cost point of view proves to be least desirable from an over-all weapons system viewpoint.

By all means, let's pursue the light fighter. But let's do it in terms of the long-range requirement, not in terms of an immediate and somewhat unique tactical situation.—END

North American's F-86D, one-man, all-weather interceptor, is necessarily complex because of nature of its mission.



The Squadron CO has a twenty-four hour-a-day job.

WHAT'S HAPPENED TO THE SQUADRON COMMANDER?

A Reservist says leadership is weak in the non-tactical squadron

By Lt. Col. Robert Kahn, USAFRes

LEADERSHIP and initiative are disappearing in the non-tactical squadron commander. Mission and morale are suffering as a result.

Both the Air Force and the officer corps can be blamed. Unfortunately, most of the blame must be placed on the Air Force for its failure to tackle the problem effectively.

When the Air Force became independent, it adopted many good techniques from industry and science. It undertook a program of qualification testing to place the round pegs in the round holes. It developed the career program in an attempt to keep them there. It tied promotion into development in the career field.

Two factors, however, were lost. First, leadership and command were overlooked as identifiable skills. Second, squadron command became a forty hour-a-week rather than a twenty-four hour-a-day responsibility.

What happened to command? Since most squadrons call for a lieutenant colonel as CO, a one-grade career field would be extremely limiting. It could not cover both squadron and group because the job requirements are so different. So it was left out.

The Air Force looked upon the individual officer as a specialist. If a major, he had to reach the "6" skill level in his career field to be promoted. Skill level reflects technical knowledge and experience, not command ability. But specialized squadrons (supply, maintenance, etc.) were to be commanded by officers from that career field.

Here are two weaknesses—the first is the assumption that staff and command call for the same qualifications; the second is that the problems of commanding a specialized squadron fall mainly in that specialized career field.

Let's take these assumptions apart. The basic qualifications for staff and command are completely different. A staff officer does assigned work. He refers policy decisions to his commander. Conversely, the commander must assess the work to be done, assign it to the appropriate staff

(Continued on following page)

section, and (frequently alone) make the "do or don't" decisions. Each job calls for different temperament and training. Yet the Air Force apparently assumes that every officer can be thrown alternately into positions of command and staff with equal effectiveness.

The second weakness is equally serious. Because a squadron performs a specialized function it does not follow that the problems of the non-tactical squadron commander are mainly related to that field. Actually, under the new wing-base organization, the CO is presumed to fill two positions. For example, in an air installations squadron one man will be both CO and wing air installations officer. Squadron operation is farther complicated by the fact that most NCOs get their stripes because of their technical qualifications.

Under the career program, assignments are made according to specialty with only minor regard to grade specified in the T/O&E. Even promotion is now independent of the authorized T/O&E level. With this setup, it is virtually impossible to assure leadership and command ability at squadron level.

Food's a big morale factor.

Though the wing commander can designate an individual other than the senior officer as the squadron commander (assuming both officers are of the same grade), most CO's follow the easy way of not making this embarrassing decision. As a rule, the senior officer becomes the squadron commander.

Sometimes this works out well. Fortunately for the Air Force, many officers can do justice to both their career field and the men in their squadron. But too often the senior officer is the man who has been passed over for promotion and is unqualified to lead men.

Both these weaknesses showed up not long ago in the case of the commanding officer of a motor vehicle squadron. With ten years of active duty behind him, he was senior to three captains assigned to the unit. He had had some experience in motor vehicles, but his inability to handle men was obvious. As discipline and organizational problems became more serious, it showed up in both squadron morale and his own, and each fed on the other. When the captain was relieved and replaced by an experienced squadron commander—and incidentally, one *without* motor vehicle experience—the squadron improved considerably. And the ex-CO also improved when he was given a job in maintenance, which didn't require supervision of a large number of men.

This situation is aggravated by an effectiveness report system which hampers assignment of commanders. Each effectiveness report is a separate entity. The rating officer must certify he has destroyed all working papers before the report is submitted. Prior ratings are not allowed to affect the current report on the premise that the officer may have overcome weaknesses noted previously. Even the field 201 file and form 66-2 omit the ratings. Unfortunately, the reasons an officer hasn't been promoted may have direct bearing on his qualifications for command. In such cases, the wing commander doesn't find out until it is too late.

We used to hear much about Mission-Men-Self. The entire concept of officer training was embodied in those three words.

I'm sure the Air Force doesn't know how far this concept has fallen in the non-tactical squadron. This failure is linked to the career program and the concept that each person has an individual skill. Along the way the concept of squadron Mission has been lost.

The concept of Mission has been further blurred by the wing-base concept. The staff and specialization program has taken over. The "can-do" and "get-done" idea of World War II is fast disappearing, at least from the non-tactical side of the Air Force.

Unfortunately, this becomes an ever expanding cycle. The CO of the motor vehicle squadron figures that no one could ever blame *him* for failing to accomplish *his* mission because, after all, the air installations officer never did build the motor pool or the second echelon shops, supply won't give him parts, and he doesn't have a telephone in the motor pool. How can they expect him to accomplish his mission if the rest of the outfits aren't on the ball?

The AIO, on the other hand, feels that *he* can't be blamed because, after all, he doesn't have any transportation or supplies or a phone.

Thus each non-tactical squadron excuses its own failure. Gone is the concept that, despite the other units of the wing, each squadron must do its job. If each squadron concentrated harder on its own mission and made fewer justifications for its own failure, bases would blossom rather than totter. The wing commander's task would be much easier.

The squadron commander is supposed to be the "self-starter" who combines his own knowledge and training with that of the personnel assigned to him and applies all these factors to the immediate accomplishment of his squadron's mission, with a minimum of supervision.

The Air Force, therefore, has the right to say that its squadron commanders should deliver to the best of their ability. In its non-tactical squadrons, the Air Force is frequently short-changed.

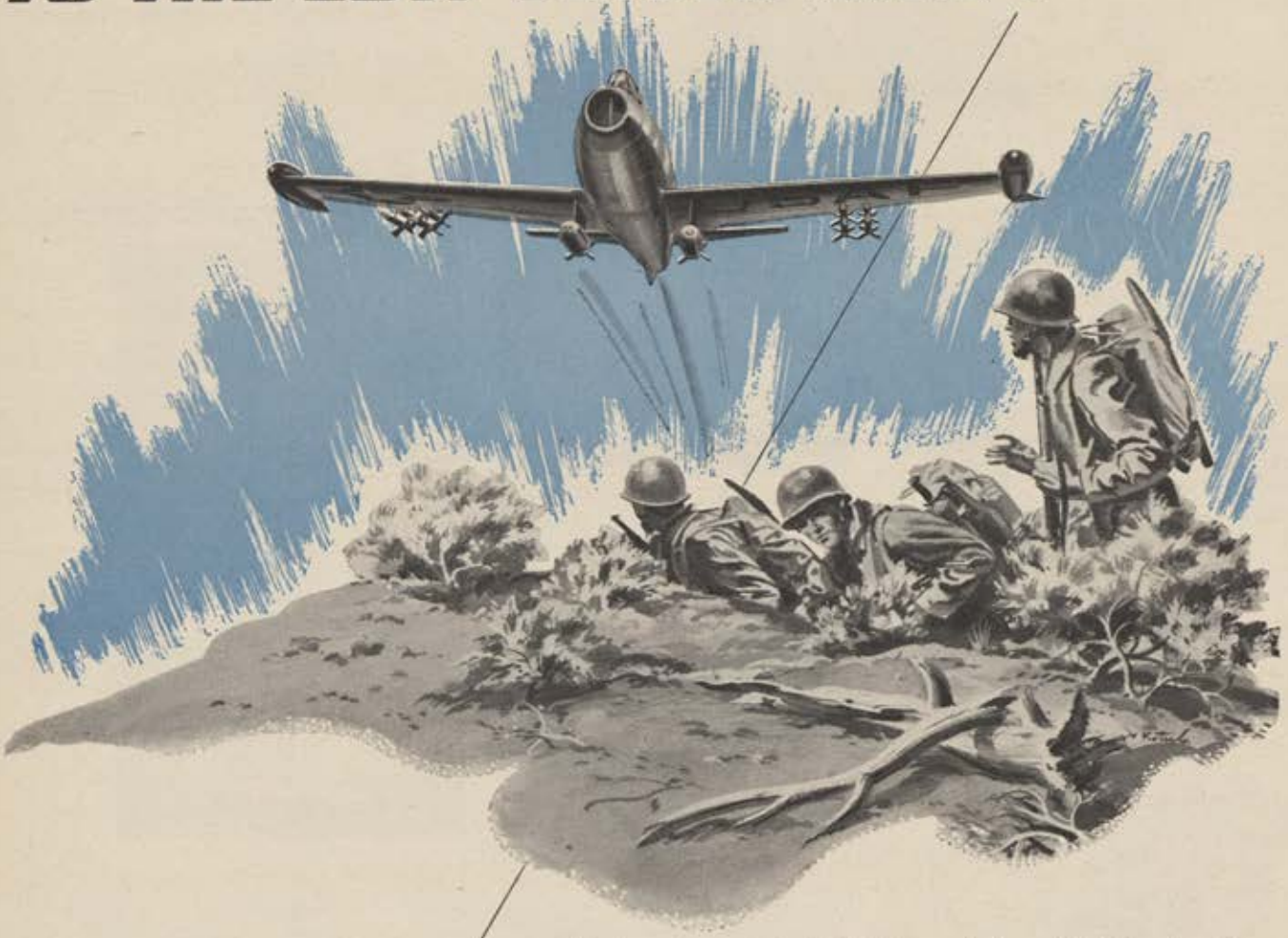
The squadron commander has special responsibilities. Anywhere from a handful to more than a thousand men will reflect his action and conduct. If his example is good, their work will be good. If his example is bad, their work will be bad. The Air Force will stand or fall on his quality.

Once he is assigned, whether he sought it or not, the

(Continued on page 35)

A Salute

TO THE LOW-FLYING MEN!



All hail to the ace in the "wild blue yonder" . . . but let's give with some man-sized cheers for the lads who slug it out at hill-top level. From the time they take off . . . till the mission is completed, these strategic fighter bombers and tactical close support pilots face a brutal blasting all along the way.

➢ ➢ ➢ Sniped at by small arms and machine guns . . . bracketed by flak with the constant hazard of limping home harassed by enemy aircraft . . . these are the stout warriors for whom we've planned Republic's rugged THUNDER-craft . . . to get them there . . . do the job, and bring them back.

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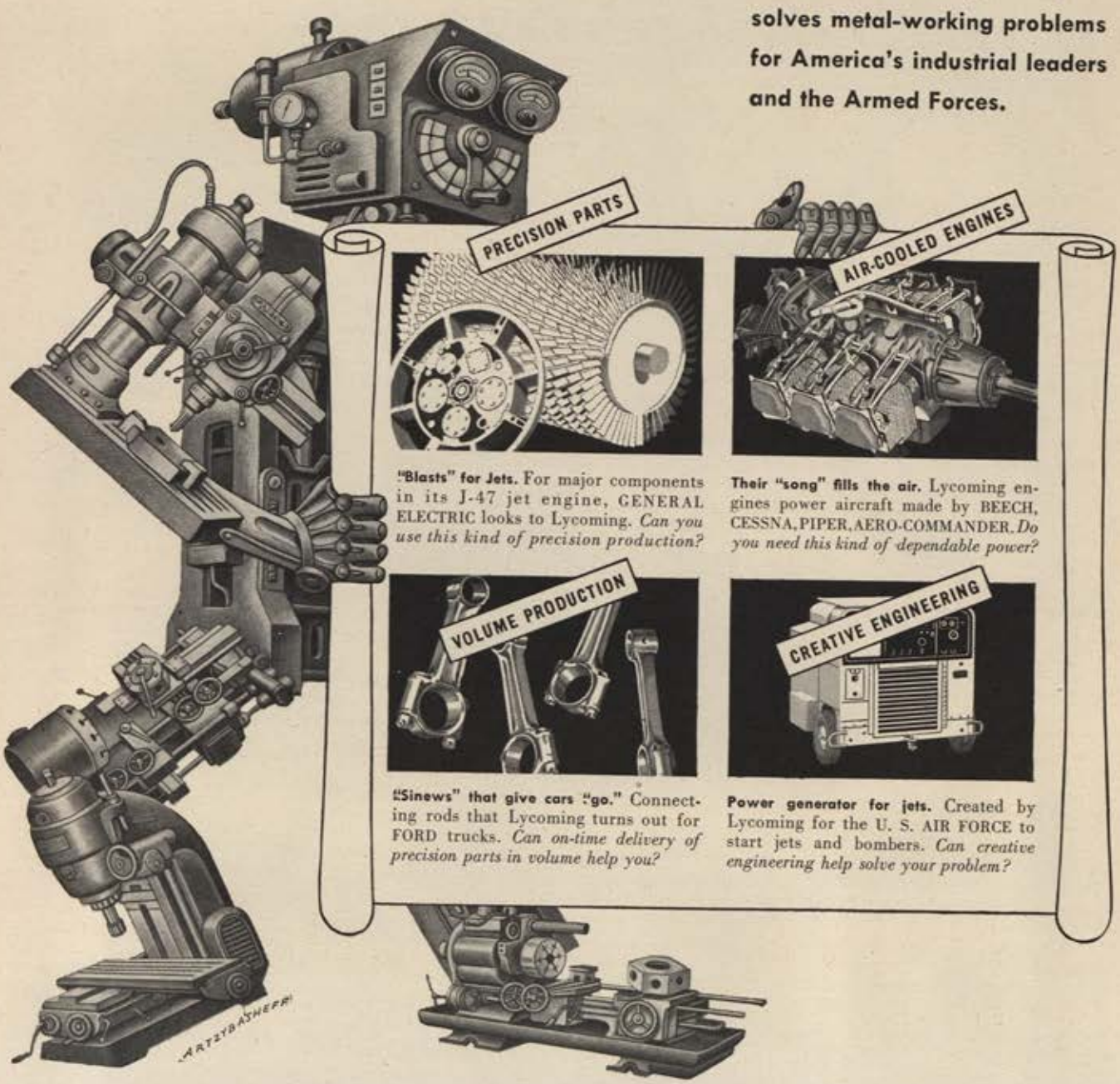

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Their "song" fills the air. Lycoming engines power aircraft made by BEECH, CESSNA, PIPER, AERO-COMMANDER. *Do you need this kind of dependable power?*

"Sinews" that give cars "go." Connecting rods that Lycoming turns out for FORD trucks. *Can on-time delivery of precision parts in volume help you?*

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LOOK TO LYCOMING

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AIR-COOLED ENGINES FOR AIRCRAFT AND INDUSTRIAL USES • PRECISION-AND-VOLUME MACHINE PARTS • GRAY-IRON CASTINGS • STEEL-PLATE FABRICATION

squadron commander should accept his responsibilities. He lives in a fish bowl, watched by both his men and his officers. He must produce a smooth-working team through his own leadership. He needs judgment, fairness, honesty, and good conduct. He may have to isolate himself from his friends. It means instant and constant loyalty to his superiors and his subordinates.

Where does the squadron commander fall down? Probably the first failure arises from his inability to be objective in his relationships. He wants to be known as a "Good Joe," and this frequently leads him to make decisions based on what his men want rather than what is right.

When a higher echelon (wing, group) decides to follow an unpleasant policy, the squadron commander too often stands by his men and complains about "headquarters." This is an intolerable situation but it exists. The other officers and the non-coms will reflect it. Once this happens, military control is gone.

The squadron commander has channels through which to sell an alternative procedure to his group commander or group staff. This, in the long run, will accomplish much more than complaining about "headquarters." Usually *constructive* suggestions are welcome.

The next shortcoming is the failure to follow the Golden Rule. The Air Force doesn't pretend to outline how every single thing should be done under every possible circumstance. It creates organizations with missions and officers who have both the authority and responsibility of carrying out the mission. If each squadron commander would recognize the problem of other squadron commanders and help them, each would do his job better. Perhaps, for the Air Force, the rule should read "Do unto the AIO as you would have the APs do unto you."

The next failure of the squadron commanders is in the Men part of Mission-Men-Self. Each man considers himself an individual and rightfully feels that his squadron commander and other superiors should so consider him. The squadron commander is specifically charged with this responsibility. The Air Force gives him hundreds of aids. The only limits are those imposed by the squadron commander's imagination. In too many cases, imagination is lacking.

It is often said that morale consists of food, mail, housing, and recreation.

Food is no longer under the direct control of the squadron commander. The wing-base utilizes a consolidated mess. Sometimes this is not as good as it should be. More often individuals fail to recognize the specific problems of the food service squadron. But it works both ways. In one food service squadron going overseas, a captain, food service officer, was with the advance party. When the squadron arrived, he took over as CO from a first lieutenant. The captain, a recalled Reservist, had some civilian experience in a small restaurant. But feeding 4,000 men on one base was a different matter. His trouble was that he was unqualified to run that size mess operation and completely unable to command men. He recognized the latter shortcoming but not the former.

In addition, he failed to understand the mission of his squadron, which was to feed the *entire wing*. But since he was part of an air base group, his main interest was in that group, which worked to the detriment of the rest of the wing.

The answer is proper command action—talks with the CO of the food service squadron (the Golden Rule method); constructive suggestions through command channels (responsibility to superiors); and indoctrination of his own personnel in the problems facing the food service squadron (leadership through knowledge).

Action by squadron commanders on a bad mail situation is often far out of line with other regard they show for their men. I think this is explained by the completely democratic nature of the APO system—when there isn't any mail for the enlisted men, there isn't any for the CO.

Good housing, whether in the States or overseas, is largely a matter of ingenuity. In a squadron it must be sponsored and supported by the squadron commander. Only a few outfits enjoy the luxury of the new permanent airmen quarters. The ordinary situation is barracks, quonset or Dallas huts, or tents.

Recreation finds the squadron commander's position particularly weakened by the wing-base concept of specialization. Since there is a base special services officer, a base athletic officer and others, many squadron commanders feel that they have no responsibility in this field. This is not true. The base officers serve a purpose but their plans are in terms of thousands of men. Any squadron with more than 75 or 100 men should have a program of its own. That's why there is a unit fund. Only a few of the men can play on a base team, but all of them can take part in a squadron program.

Squadron programs recognize another factor. Most men like the other guys in their squadron. Close friendships between men in different squadrons are relatively rare. This works against base programs and for squadron programs. No situation is so hopeless that initiative by the squadron commander won't immediately be recognized and multiplied by the men in the squadron. But once again, the starter must be the CO.

APO mail system is democratic.

Squadron administration was not included on the morale list. Good administration doesn't raise morale (it is not a positive program like a good recreational setup) but bad administration can ruin morale.

(Continued on following page)

Here we find the career field qualifications at variance with those needed by a squadron commander. Because a man holds a "6" skill level in a specialized field doesn't mean that he knows squadron administration. Too many squadron commanders resign this responsibility to their adjutant, and too many adjutants are not qualified to be commanding officers.

Most squadron commanders don't understand the things that happen in their orderly rooms. They haven't read the regs on the new morning report or the new sick book. Most of them can't properly prepare a charge sheet. The new pay system and MPOs baffle them. They don't know how to use the form 20. The recent rapid changes in classification procedures left many of them behind. We often find the CO depending entirely upon an airman third

Athletics build squadron spirit.

class—and unfortunately that poor airman may often be wrong.

An error in any of these fields can destroy completely the morale of at least one man. A poor orderly room operation can destroy morale faster than the best squadron commander can build it up.

But the orderly room situation goes even further. The CO can set the pace for an aggressive USAFI, airmen's deposit, or other program. Because this means more work for the orderly room, the adjutant seldom takes the initiative. Most COs can't tell you how airmen's deposit works and so can't sell it. Yet one of the great things that can come out of military service is a good-size bank account. Under a proper USAFI program, many men can better their education. It is amazing how many smart, well-qualified master sergeants, with seven to seventeen years of service, have not completed high school and have never taken the GED-High School Level Test. Ninety-nine percent of them can pass—yet their form 20 continues to show them as having only sixth or seven grade education.

The final weakness of the squadron commander is his failure to work with his men to avoid bad situations. Despite lip service to the concept that praise should be given when due, it is usually not practiced. Too often the CO watches a man get progressively worse until suddenly he has to slap him with a court-martial. There are so many ways to avoid this—the development of a sound supervisory program using both officers and noncoms; establishing a clear-cut and current set of squadron policies; making the squadron commander accessible to his men; seeking help through the chaplain, the Red Cross, or the air inspector; and many others.

It would appear that everything conspires to reduce the effectiveness of command at the squadron level. Here are some things which can be done about it:

- No man should be assigned to command who has not indicated a desire to command.
- Each officer should be tested to determine his potential qualifications for command.
- A prefix or suffix letter should be added to all existing Air Force Specialty Codes to indicate command experience *at or above a prescribed level of command performance*. Such a code might be:

  A. Potentially qualified, no experience
  B. Under one year experience, squadron level
  C. One to three years experience, squadron level
  D. Over three years experience, squadron level
  E. Under one year experience, group level

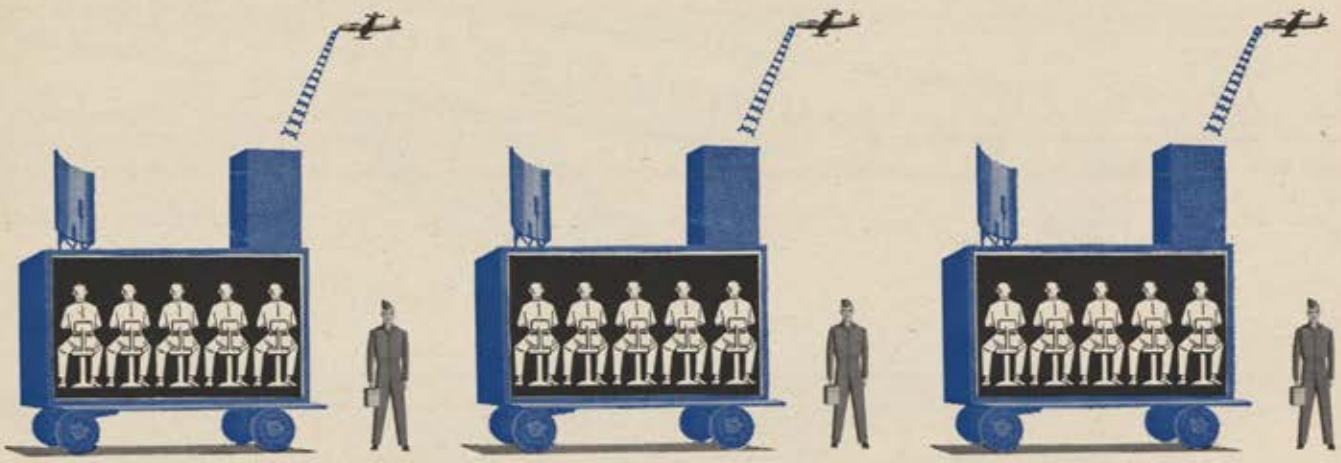
  And so on through group, wing and air division.
- A special effectiveness report should cover only performance in a command position, completely separated from collateral duties under an AFSC. This should be prepared jointly by the next higher commander and the appropriate air inspector to include an evaluation of the squadron in terms of morale, delinquencies, VD rate, AWOL rate, squadron recreational program, and others. This report should be a part of the officer's field 201 file for use in future assignments.
- A special evaluation of the leadership characteristics of officers rated as potential commanders should be prepared at the time as the regular effectiveness report. This also should be kept in the field 201 files.
- Each major command should conduct, at least once a quarter, a two-week school on squadron command. All newly assigned squadron commanders and as many potentials as possible should attend.
- Leeway should be permitted in requisitioning replacement personnel so as to avoid undue changes in command. For example, a requisition for a replacement AFSC 6416 might read as follows:

  6416 To grade of lieutenant colonel
  6416 N To grade of colonel
- Group and wing commanders must do a better job of developing commanders. Most higher echelons carefully consider available personnel when making squadron commander assignments, but after their assignment, there is little or no guidance or counsel. If a squadron commander is not doing a good job he is seldom told about it. Then after a certain point, he suddenly finds himself relieved.

Finally, the Air Force must once again impress its officer corps with the concept of Mission-Men-Self.—END

The author is a Reservist who commanded an air materiel squadron during World War II and during the Korean war spent his entire tour as CO of a tech supply squadron, including activation, training, and overseas duty. Between tours, he activated and trained a corollary tech supply squadron. In civilian life he is a business counselor in California.—The Editors.

DISAPPEARED! 14 Men and 2 Gilfillan GCA Radar Trailers!



It took 18 men* and 3 Gilfillan GCA trailers to land 3 aircraft in 1943

(*15 operators, 3 maintenance men)

It takes only 4 men and 1 Gilfillan GCA trailer to land 3 aircraft in 1953**

(**3 operators, 1 maintenance man)

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DENMARK
GREAT BRITAIN
ITALY
NETHERLANDS
NORWAY
PORTUGAL
UNION OF SOUTH AFRICA

In GCA and Radar Research, Design and Production the FIRST name is...

Gilfillan
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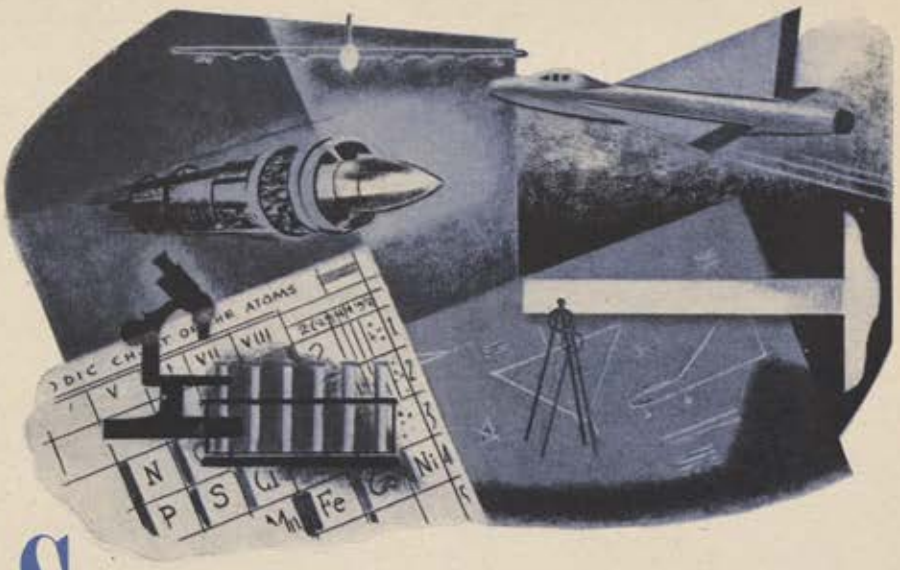

SCIENCE, Key to Supremacy

We cannot match the Soviets man for man. If we should have to fight, we should be prepared to do it from the neck up and not from the neck down

By James H. Doolittle

HAP ARNOLD'S willingness to use the best brains he could find—in and out of the Air Force—helped to shorten World War II. General Spaatz and General Vandenberg continued the practice, and it has now become habitual. I am sure that the Air Force policy of utilizing the invaluable assistance of scientists and technologists is helping to prevent World War III.

To start off in step together, I should like to state what I understand to be the distinction between science and technology. To my mind, "science" relates to the acquisition, interpretation, and classification of fundamental knowledge, often through academic endeavor, in such basic fields as astronomy, mathematics, physics, chemistry, biology, and so on. "Technology" is more directly related to the industrial development of the ideas which science uncovers and is largely the concern of the engineer.

I speak as a technologist, and from the viewpoint of my position as Special Assistant to the Chief of Staff on Technical Matters. We in the Air Force believe that air supremacy is the key to survival, and that science is the key to air supremacy.

We cannot match the Soviets man for man. We need not match them piece for piece in equipment so long as the quality of our equipment remains decisively superior to theirs. If we should have to fight, we should be prepared to do it from the neck up and not from the neck down.

Our present military advantage is largely a technological one. It lies in our stockpile of atomic bombs and in our ability to deliver them accurately, by air, upon targets in any part of the globe. This ability has, more than any other thing, prevented the outbreak of World War III.

To my mind, the Soviets will not consider starting a war until they are no longer able to progress toward world communization and world domination by their usual means of false promises, subversion, and terror. Even then, a prior condition will be the possession of a stockpile of nuclear weapons which the Soviets believe is large enough to assure that their initial sneak attack would be decisive.

We can deal successfully with the Soviets only through strength. We can hope for a peaceful solution but must not let our guard down until it is achieved—until peaceful actions support peaceful words—and on a lasting basis. When they have built up a stockpile of A-bombs which they, at that time, would consider adequate for a decisive attack against us, it is imperative that our science and technology, has, by then, devised and developed an adequate defense, and more powerful weapons with which to strike back.

Ideally, all our weapons should be, and should continue to be, qualitatively superior to those in the Soviet arsenal. Our air superiority fighters should be able to shoot down Soviet air superiority fighters. Our early warning radar net should be able to detect an attack by the best Soviet bombers and direct our interceptors to a position where they can shoot the attackers down short of their targets. Our bombers should continue to be able to penetrate Soviet defenses and accomplish their mission of destroying the source of their military power.

When the Soviets have atomic bombs in quantity we should have bombs of much greater force in quantity.

We must beat them to the supersonic fighter, the supersonic bomber, the pilotless fighter, the long-range controlled air missile, the hypersonic ground-to-air missile to intercept their supersonic long-range missiles and we must beat them to the hypersonic or ballistic long-range missile.

We are doing research and development on all of these. Real progress has been made but practical success with some is farther away than "just around the corner." Our rate of progress is limited by what is known as the "state of the art." At any juncture in time, the capabilities of the weapons we can build are necessarily restricted by the limitations of our scientific knowledge. As we learn more, our scientific horizons are pushed forward, are broadened, and by taking full advantage of the new knowledge we can fly a little faster, a little higher, and a little farther. Our electronic equipment becomes more accurate and more reliable. Our armament becomes more deadly.

Normally, progress is gradual and slow even though the effort expended may be great. There is really no such thing as a sudden scientific break-through. Even the truly revolutionary atomic bomb was the culmination of many years of slowly acquired scientific and technical knowledge. So called push-button warfare is yet some distance ahead of us. We will have piloted airplanes for a long time to come.

I am confident that, if we determine to do so, we can stay ahead of the Soviet Union in the pursuit of scientific and technological knowledge. So long as we do, we can avoid an economically crippling all-out armament race. But we can pur-

(Continued on following page)

sue this policy successfully only while we continue to maintain a modern air force-in-being large enough to assure that a Soviet sneak attack will not be decisive, and capable of an immediate devastating counterattack.

Our production capacity is one of our great national assets. To take full advantage of it in the future we must devise and design now the equipment that we may wish to mass-produce five or ten years hence. If we do not, we may find ourselves turning out large quantities of equipment that is technically inferior, probably unsuitable, and possibly worthless.

The "lead time" between the conception of a weapon and its availability for use is often underestimated. For modern, complex aeronautical equipment, this is from five to ten years. The North American F-86—the only plane in combat units today capable of fighting the MIG-15 successfully—came off the drawing boards in 1945. Our Convair B-36s, which will be in production for another year and a half, were conceived in 1939, entered in a design competition in 1941, and first produced in 1947.

Up to this point I have dealt primarily with research and development. Just as important are the problems encountered when the decision is made to begin the quantity production of an airplane or a weapon created in prototype by the scientist and the engineer.

Once production has been decided upon, we must be willing to proceed with the mass-production of that item, reassured by the knowledge that it is the best we know how to make at the time. Research and development must not thereafter interfere unduly with the business of production. If we try to introduce improvements continuously, after the assembly line is in motion, we will seriously lessen our output. If we endeavor to produce the ideal article we will inevitably discover how we might improve it before it has been completed, and consequently never finish it.

This is not to say that a model in production should not be improved upon. A parallel program of development must proceed alongside the production program. At designated and not too frequent intervals cumulative improvements and modifications must be fed into the production program and incorporated in the model.

Better performance in a combat plane means not only better flight characteristics but better guns and gunsights, better communications, better navigation and bombing systems and so on. Increasing complexity is the inevitable result.

And now let me mention complexity. There is frequent comment in the press and elsewhere on the undeniable fact that Air Force equipment is becoming costlier, heavier, and more complex. The public is often told that this trend is bad, that it increases the tax burden, that it pampers the air crews, and that it even handicaps our pilots in combat.

Actually, the enemy determines how complex our equipment must be. It must be better than his. Much of it must be able to operate in any part of the world, at any time, under any and all weather conditions. An airplane must be complex enough to accomplish its mission and bring the crew safely home. No matter how complex, equipment that increases the likelihood of a successful mission and that gives the aircrew a better chance of survival is desirable.

Unfortunately—and we might as well face it—scientific and technological advances being made by the Soviet Union are forcing us to call for aircraft with better and better performance. Better over-all performance in a combat plane means not only better flight characteristics but better guns and gunsights, better communications, better navigation and bombing systems, and so on. Increasing complexity is the inevitable result.

I recently attended a conference in General Vandenberg's office which brought together a number of combat pilots who recently had returned from Korea. Listening to their opinions on combat equipment was one of the most interesting experiences I have had in the Pentagon. These eager, superbly trained young men were intensely interested in their profession. They represented young American manhood at its best. It was impossible to rub elbows with them and not have faith in the ultimate victory of our cause. Nor could one fail to realize the great obligation to provide them with the best equipment that could be built.

They were pleased with their eleven-to-one victory record in MIG Alley, but they were critical of the equipment they were flying—the F-86. They felt that with better equipment they could make the score twenty to one. They all wanted higher performance and greater simplicity. But when we discussed armament, computing sights, armor plate, self-sealing tanks, ejection seats, integral starters, duplicate controls, emergency systems, parking brakes, and relief tubes; and when we considered their elimination in the interests of lighter weight and greater simplicity, only the removal of the parking brakes, the relief tubes, and some armor plate were unanimously agreed upon.

The organization of the Air Force indicates its recognition of the truth that the Air Force of tomorrow is as important as the Air Force of today, and that quality is as important as quantity. In Air Force Headquarters, there is a Deputy Chief of Staff for Development, who acts for the Chief of Staff in this area. He and his assistants and directors have a variety of tasks and responsibilities.

First, they must match the developments they estimate will culminate five, ten, or more years hence with the anticipated future requirements of the Air Force. In other words, they must arrive at a statement in broad engineering terms of the equipment they feel will be needed and can be produced at a date well beyond the all too short period encompassed by budget planning.

A second task is to relate these long term objectives to the continu-

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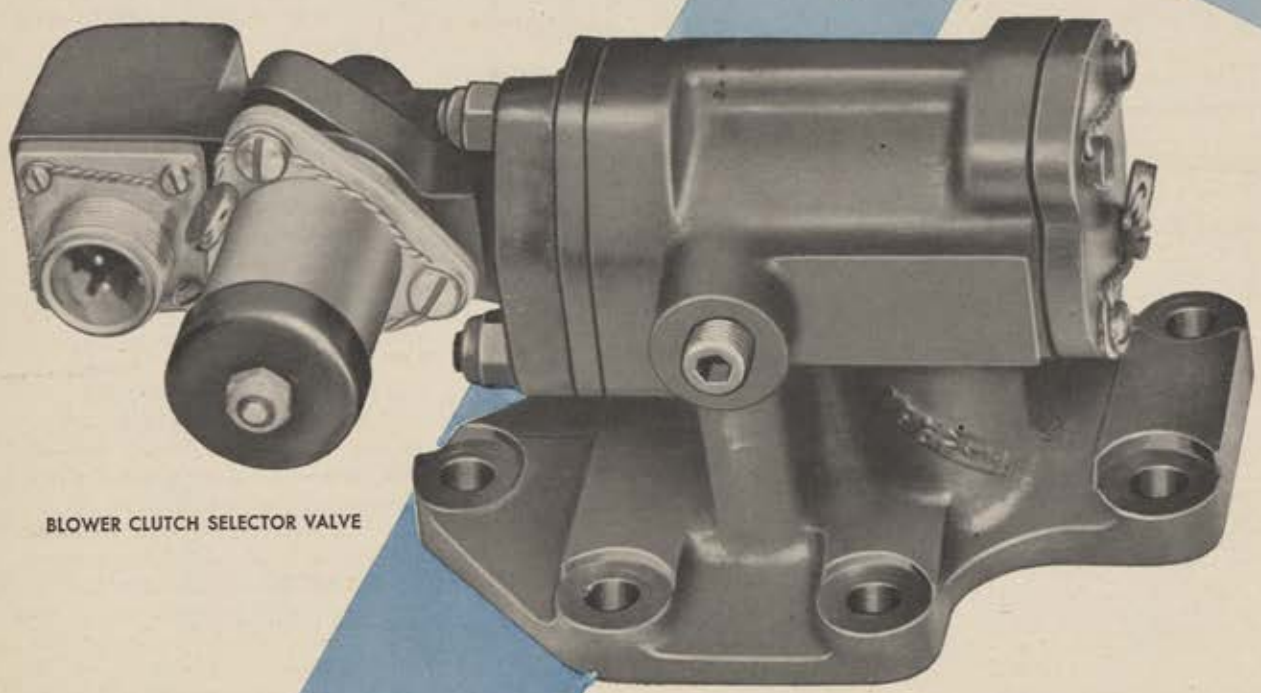
control

is the vital element



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THE AMAZING MR. DOOLITTLE

A Book Review

THE JIMMY DOOLITTLE who speaks with authority, as in the accompanying article, on scientific development and its impact on national security, speaks from first-hand experience on a variety of subjects.

Like the pilot-navigator-bombardier-observer packed into one uniform for our new jet bombers, James Harold Doolittle, in current AF lingo, is a "many-headed monster."

Stunt pilot, aeronautical engineer, combat leader, scientist, business executive, air force commander, salesman, technical consultant—all these, and more. And tops in each.

"A Jack of all trades and a master of all trades," writes Quentin Reynolds in *The Amazing Mr. Doolittle* (Appleton-Century-Crofts, New York City, 313 pp. $3.95).

Jimmy Doolittle is as unlike the monster the general officer can be to his subordinates as any man who ever wore stars on his shoulders. As this book documents again and again, he is a GI's general.

The Amazing Mr. Doolittle presents for the first time a comprehensive report on the Doolittle story. It ranges from his boyhood in a rough Alaskan town to his current part-time assignment as consultant on technical matters to the US Air Force's Secretary and Chief of Staff. It covers the achievements and personality which have contributed so richly to aviation progress, to victory in war, and to Air Force development.

This book, as the author states in the foreword, is a story which "fairly yelled to be put into print," and it is an important contribution to our understanding of the air age. At the same time, it is not the definitive document on this man. Doolittle is even more amazing than the book would have him. Those who know him only by reputation will enjoy this introduction to one of the most engaging personalities on the American scene. Those who know him personally will find the book a springboard for recalling other "reminds me of the time . . ." type of stories which help to round out his character.

Many in both groups will be surprised to learn that Jimmy Doolittle's greatest gamble in a life of "calculated risks" may well have taken place in the 1930's when he risked his whole career at Shell Oil, of which he is now a vice president, on the thin chance that the War Department would standardize on 100-octane gasoline as its aviation fuel. He talked Shell into this multi-million dollar gamble and won, after many hectic experiences, to the benefit not only of Shell but of the entire Allied war effort.

The report on the Tokyo Raid seems to fulfill the publisher's promise that it is the most complete story ever presented on this famous mission. Doolittle's stubborn objection to being awarded The Medal of Honor for leading this mission, as covered in the book, gets close to the real nature of the man who told General Marshall "I feel that I don't deserve it but I can tell you I'll spend the rest of my life trying to earn it."

No one, of course, except Doolittle himself, questions that award, and he has more than lived up to it as Commanding General of the Northwest African Strategic Air Force and the mighty Eighth Air Force, and now as an Air Force consultant, an assignment which may, in the last analysis, overshadow in importance any of his remarkable achievements.

Perhaps he lived up to the Medal of Honor most, in a war fought largely with citizen soldiers, as the epitome of the citizen commander. The "Mr." in the title of this book is well put. Too few people realize that Jimmy Doolittle, who almost lost important assignments during the war because he "didn't fit into the military tradition," has been a Reserve officer since 1930 (as Lieutenant General, he is now the ranking Reservist in the nation). He has been a citizen first, soldier second.

This is one of the reasons Jimmy Doolittle was a "natural" to sparkplug, in 1946, the formation of the Air Force Association, an independent citizen's organization devoted to adequate air power for national security, and a year later serve as its first president (he is now a permanent director and a member of the executive committee). The editors are especially proud and appreciative of the important part he has played in the development of AIR FORCE Magazine.

We have always found Mr. Doolittle truly amazing and predict that he has many more amazing years to come.—JHS

ous stream of requests from Air Force commands all over the world for improvements in existing equipment, for new equipment, and for new techniques. In so doing, the Office of the Deputy Chief of Staff, Development, assures that development projects comprise a well-balanced program that takes careful consideration of the funds available and the estimated capabilities of the Soviet Union present and future.

Finally, the various projects are grouped into integrated systems which must be complete and combat ready when required. Policies that will guide those who carry out the projects are decided upon and directives to carry out the research and development work are issued.

The work called for in these directives is done under the supervision of the Air Research and Development Command, whose headquarters are in Baltimore. Subordinate to this command are the several research and development centers which are scattered throughout the country. These centers evaluate the Air Force research and development work, most of which is done under contract by private industry, by research organizations, and by universities.

It adds up to this—we who are involved in the Air Force research and development program have a double-barreled responsibility. To assure our nation's survival we have, on the one hand, to develop existing equipment, as near as economically feasible, to the point where its actual performance approaches its theoretically possible performance. On the other hand, we must not allow improving today's equipment to consume too much of our energies and resources. We must conceive, develop and prepare for production and use the weapons that will be required in future—new prototypes. So we in research and development must remain aware of and serve both the short-range and the long-range needs of the Air Force. For the time may come when our civilization will depend for its survival upon our airpower.

Our ability to defend ourselves against an aggressor's unprovoked and unannounced attack, and to redress the balance by the swift annihilation of his capacity and will to wage war, depends upon our taking full advantage of the potentialities of science and technology today, tomorrow, and from now on.—END

From a speech at AFA's California Wing Convention.—The Editors.

AIRMAN'S BOOKSHELF

Wings For Peace

by Brigadier General Bonner Fellers, USA, Ret.
Henry Regnery Co., 255 pp., $3.50

"This is the first book to be written by a ground force general which views the Air Force as the key instrument for peace."

So states the publisher of *Wings For Peace: A Primer For A New Defense* by Brig. Gen. Bonner Fellers, USA, Ret.

The author is an infantryman by trade and, according to Constantine Brown, veteran Washington columnist, has had a distinguished career. "Before joining General MacArthur's staff in the Far East (as Chief of Psychological Warfare) he was military attache at Cairo," Brown reports. "He predicted the imminent fall of Tobruk at a time when Prime Minister Churchill was in Washington assuring Presdent Roosevelt that that fortress in Libya was impregnable and 'ten Rommels' could not conquer it. Fellers also was one of the few military men who warned the Pentagon in the summer of 1951 that a Nazi victory in Russia was highly questionable."

Wings For Peace presents a commanding argument for the thesis that our salvation depends largely on strategic airpower, that our defense effort is being awakened by misplaced emphasis on ground power, that the assignment of a major offensive role to carrier-based aviation is like sending a boy to do a man's job.

This argument by a ground force general is of more than usual importance in light of the decisions of the Eisenhower administration as embodied in the new defense budget. This program further stretches out the Air Force program, recognizes a major offensive role for carriers by recommending funds for another supercarrier, and for the first time since fiscal 1951 presents a budget in which the Army would receive a larger appropriation (by $2 billion) than the Air Force.

General Fellers has some ideas of his own on the defense budget. He would, for example, spend more than two-thirds of the total budget on building American global air superiority, with the remaining one-third going to "the supporting arms, the Army and Navy." Thus, in the administration's new defense budget of $36 billion, he would presumably allocate some $24 billion to the Air Force, which actually is given $11,688,000, or less than half of that. In fact, the administration's budget provides two-thirds of the total appropriation to Army, Navy and Department of Defense, one-third to the Air Force—just the reverse of General Fellers' proposal.

Since airpower would receive far less under the Eisenhower budget than was scheduled for the next fiscal year under the Truman budget, it can be assumed that General Fellers must feel that the

(Continued on page 49)

Gunner A/1C M. E. Padilla seans night sky from waist blister of B-29.

Watchman of the night. Though night shrouds the battlefront, war goes on. Men and machines of the air become "blips" on radar scopes. Capt. R. A. Miller, 502d Tactical Control Group, must decide which is friendly. An unidentified "blip" will scramble F-94 pilots, make night resound to jet blasts.

Business for tonight. Someone pressed the button, the scramble is on. F-94 pilots of the 319th F-I Squadron dash from their ready room to their ships. Seconds later they'll be airborne and searching for the intruder. It may be a foe, or it may be an allied pilot who, "head up and locked," forgot to turn on his IFF — Identification, Friend or Foe.

Out of the night. Capt. John P. Marion, jet jockey, and his radar observer, Lt. Wallace Henderson, doff the canopy of their F-94. They've just returned from a night-interceptor mission over North Korea. Work over for tonight, they'll go out again tomorrow.

SHOOTING WAR IN KOREA

Hours of darkness are longer, more lonesome when you're in a B-29

plodding across untracked sky . . . but you aren't really alone

Eye of the night. Housed in the bulbous nose of the F-94 is the radar set that searches the night and fingers out enemy night fighters bent on destroying USAF bombers. The Starfire's afterburner gives additional thrust on take-off and makes possible speedier interception of "bandits."

A job of the night. A never-ending chore of the nightside in an aerial war is keeping the planes fueled. Here refueling an F-94 is A/2C R. L. Huber. Tomorrow night it's the same thing all over again.

Their vigil is from twilight to dawn and they have taken a little of the aloneness out of the night for B-29 crewmen. They're the "Little Friends"—F-94s—who nightly stand by ready to scramble to the aid of B-29s stalked in Korean skies by Red interceptors.

Into the night. A Lockheed F-94 Starfire belches flame as it roars off in search of Red intruders prowling the Korean sky.

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Eclipse-Pioneer's "Polar Path" system guided the first commercial over-the-Pole flight* with such accuracy that the log of the now-famous Scandinavian Airlines System's flight carried the notation "works to a miracle". How was it possible to produce this gyro that actually proved to have less than 1° random drift? Admittedly, it was a special gyro, but the answer nevertheless lies in advanced production techniques and facilities that are pushing gyroscope precision toward perfection. Today, *even machining* of gyro parts is being accomplished at E-P in a specially constructed, atmosphere-controlled room where castings "soak" for 36 hours to assure stability of carefully machined tolerances—where electronic air cleaners snatch up foreign particles so fatal to delicate mechanisms—where specially constructed machines automatically hold split-hair tolerances as a matter of routine and surface finishes are maintained to the incredible limits of the thickness of a single light band. In the entire industry, only Eclipse-Pioneer can offer precision mass-production facilities like these—facilities that literally are pushing gyro precision toward perfection.

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situation is even worse than it was at the time he appraised the Truman military program for this book. His appraisal included these danger signals:

"Our present supply of long-range bombers is so small that all would be lost in a few weeks of war.

"Our interceptor fighter force is too small to offer even reasonable defense to the great industrial centers of the United States.

"Our anti-aircraft defenses at home are utterly inadequate.

"Our coastal defense against Russian submarines has not been solved.

"Defense of our pivotal strategic bases has not been provided in Alaska, Greenland, Iceland, Labrador, the Azores and North Africa.

"Proper air cover for NATO ground forces is not even on order."

General Fellers gets at the heart of the problem when he writes:

"Despite the $111.5 billion obligated for military purposes since the Korean War started, our military structure today is an all-purpose conglomerate. It reflects the roles and missions required of it in the last two world wars. It is not designed to perform the major military roles essential to our survival during the early phases of a World War III. . . . The Kremlin could scarcely do a better job of diffusing our strength than we have done ourselves. This is not astonishing, because it has been done largely according to the Kremlin plan. By reacting defensively to its every move, we have yielded the initiative and done whatever the Kremlin wanted to make us do."

If General Fellers could write these words in reaction to the Truman military program, he could, with consistency, underline them in terms of the Eisenhower program.

In light of the new defense budget, *Wings For Peace* becomes "must" reading for all who are seriously interested in our security position.

Congressman Ralph W. Gwinn in a highly favorable review of this book, quotes General Fellers in a summary statement as follows:

"Figuratively speaking, our defense policy since 1947 has been to build up our bow-and-arrow attack of massed ground forces, while neglecting and submerging the intercontinental bomber —the only weapon we have capable of striking at the very heart of an enemy. . . . The real defense job remains to be done. When do we start? When shall we stop pouring billions upon billions down the Pentagon rathole of 'an eventual climactic ground attack?' "

The Congressman comments:

"Is the air age here? Or is the Pentagon still living with the textbooks of Hannibal and Caesar?"

As the military program of the new administration evolves, these become vital questions for every American. General Fellers, who knows his Pentagon from first-hand experience, does a good job of answering them.—END

MOUNTAIN...dead ahead!

New radar "sees" it through darkness

You are looking at the makings of a crash. But it won't happen. Through the darkness a new Aircraft Radar revealed a mountain range directly in the flight path. Now the pilot is climbing to clear it.

Like a powerful telescope, this advanced-type radar equipment enables the pilot to study obstacles "close-up"—in a choice of five different ranges between 5 and 200 miles. Here is a compact lightweight radar that will readily indicate mountains and near-by aircraft. It can locate thunderheads and other cloud formations—permit the pilot to navigate a safe course. It can map terrains, showing the pilot the salient characteristics of the ground he's flying over. It can help the pilot keep his plane on the desired flight path. It can even be used as a visual check against the landing and approach instruments in his plane.

This new Aircraft Radar, made by RCA for the Navy Bureau of Aeronautics, is another technical achievement worked out in close co-operation with the military to insure U.S. supremacy in electronics. Meet the RCA engineers and field technicians in your branch of service.

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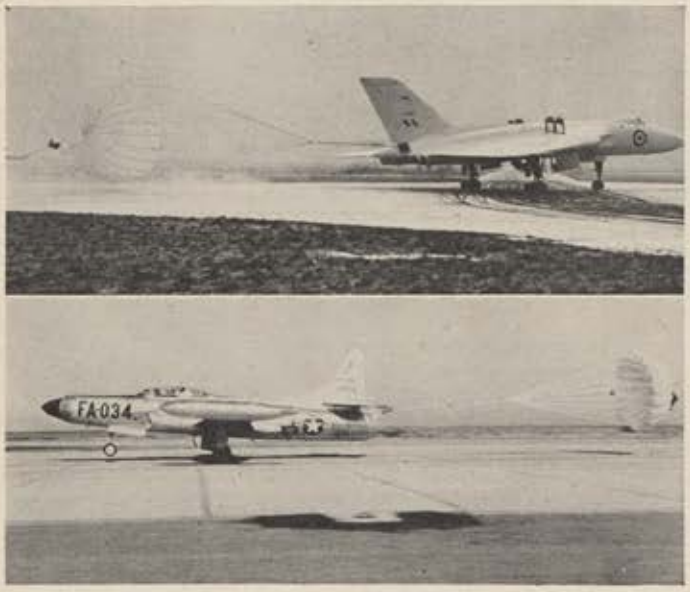


'Chute-Popping Aids Stopping

On both sides of the Atlantic aero-engineers have come up with a new way of stopping jets before they use up all the runway. The answer is a ribbon-parachute packed in a compartment below the vertical fin. Being para-braked above are an RAF Avro Vulcan (top), delta-wing, super-priority medium bomber, and a Lockheed F-94C Starfire, all-weather jet. Ribbon 'chutes take the opening shock better than conventional 'chutes and fold smaller. The F-94's 'chute makes stops possible in half the distance formerly taken. They can be used 100 times. Note the Starfire's new pointed, plastic radome, replacing the earlier bulb-like nose.

X-1A Ready for Supersonic Tests

The USAF's latest assault on the sonic barrier will be in Bell Aircraft's X-1A, rocket-powered airplane that is hoped will hit Mach 2. The plane's rocket engine, built by Reaction Motors, Inc., is fueled with liquid oxygen and an alcohol-water mixture. Project pilot for the X-1A is Maj. Charles Yeager, world's first supersonic pilot, who cracked the barrier in 1947 in the Bell X-1. That historic aircraft is now in the Smithsonian Institute's Air Museum in Washington, D. C. After initial tests by Bell pilots, the X-1A will be turned over to the Air Research and Development Command.

Sabrejet Flight Simulator

The AF has placed a second order for these units which can simulate every condition an F-86 pilot might encounter. A development of the Engineering & Research Corp., the simulator is complete in every detail, can even reproduce operations of the Sabrejet's radar fire control system.

Navy's New T-28B Tested

Above, first flight of North American's advanced, single-engine trainer for the Navy. Its 1,425-hp Wright R-1820 engine gives it 346 mph and a 35,500-ft. service ceiling.

Two-Way Communication

"Maskfones" developed by Mine Safety Appliance Co. speed cleaning underground storage tanks at Tinker AFB by permitting workmen to keep in touch with surface.

Last year sixteen aircraft were flown ninety hours to blow rain and dew off cherry trees. **Eight others were used to knock** ripe fruit off trees with their prop wash. **And 35,000 hours** of flying were accounted for by planes **blasting leaves off** cotton plants to help speed the work of mechanical cotton pickers.

° ° °

These and other facts about the work being done by America's lightplanes are compiled by the Civil Aeronautics Administration, which reports that aerial advertising takes about 12,000 hours of flying time in the course of a year. Rain-making attempts by seeding clouds from airplanes involve something like 2,600 hours of flying a year.

° ° °

More than 5,000 hours of small aircraft use is devoted to chasing birds from rice fields. Birds roosting in rice-growing

areas often break the stems of the plants and cause extensive damage.

° ° °

About 400 acres of alfalfa grown at the city airport in Topeka, Kansas, last year boosted airport revenues by nearly $8,000.

° ° °

In-flight refueling may become of great importance to future non-stop flights between New York and Europe, because of the heavy fuel requirements of the jets. So far more than fifty scheduled transatlantic flights have been made with mid-air refueling.

° ° °

Want a fast round-the-world jaunt by scheduled airline? You can leave New York at 11:30 Tuesday night and be back in the Bronx by Saturday. It's India on Thursday, Japan on Friday, California Saturday morning, and New York by 9:50 that evening.

° ° °

An airborne state trooper operating in Oklahoma claims that with his airplane he can catch seven times as many speeding motorists as was possible with a patrol car. As many as 3,500

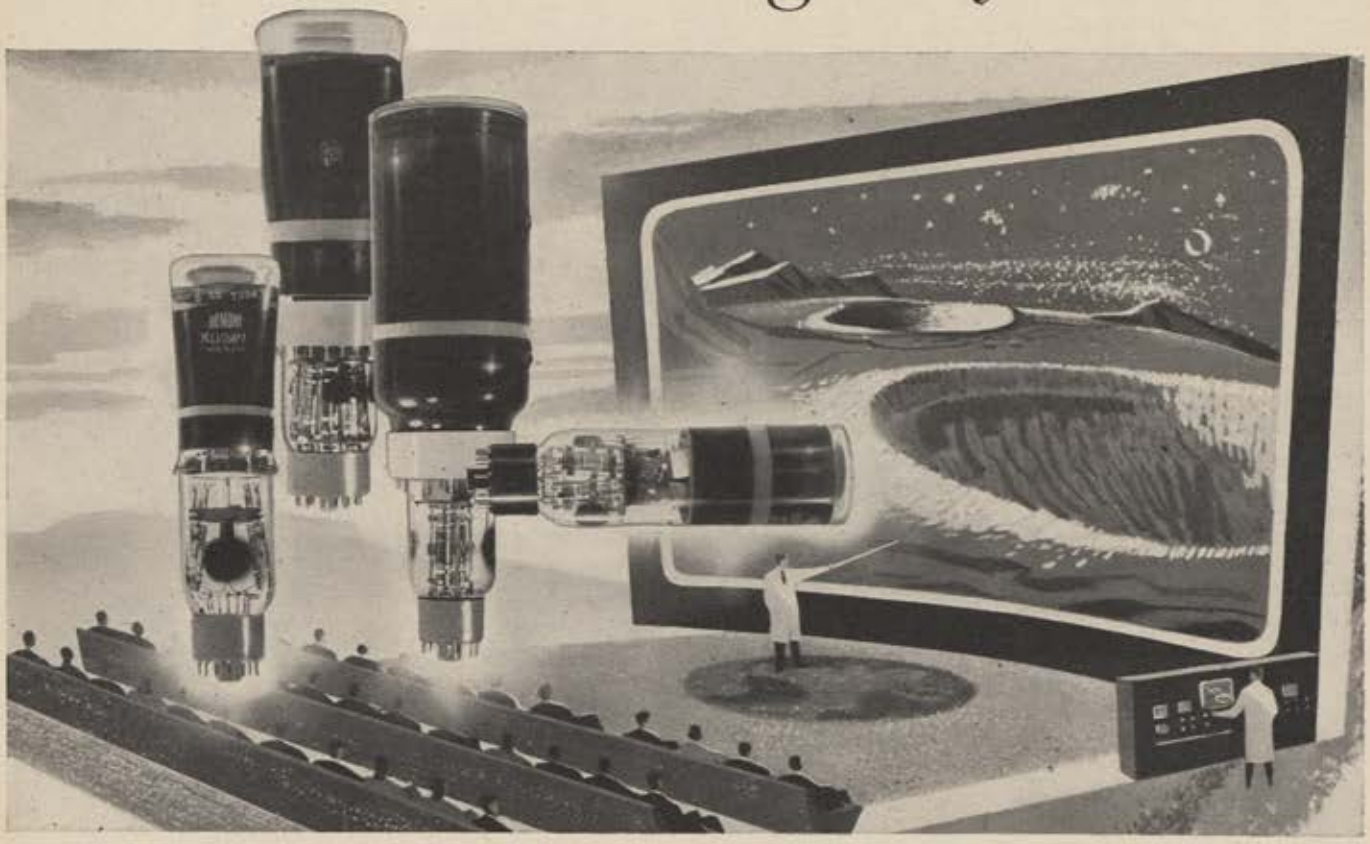
unsuspecting speedsters per year can be apprehended from above, and the folks that travel up to 90 and 100 mph don't get away from the air arm of the law.

° ° °

According to Braniff Airways, the average airline captain on domestic runs is pushing forty years, and forty-five is the ripe old average for captains operating internationally. Both are poor matrimonial prospects, with ninety-eight out of 100 spoken for.

By Wilfred Owen

DuMont *Research* gives you more!



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Right now, Du Mont Laboratories are producing cathode-ray tubes that perform unbelievable wonders. Here are tubes that make it possible to multiply light 10,000,000 times . . . measure time to 1/100,000,000th of a second . . . store up and recall 50,000 different facts!

With the full possibilities of these amazing tubes yet unknown, science, industry and defense look to the Du Mont Research Laboratories for future electronic marvels. Here, also, men seeking a career in electronics will best realize their ambitions. For Du Mont permits no limit on progress in this great new field.

WINDOWS TO TOMORROW

At this testing point, Du Mont scientists predict the capacities of new tube marvels. They are then returned for further improvement, or advanced to commercial production.

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IT'S AEROPROPS - FOR TURBOPROPS!

Powerful Allison Team Used in all Four U. S. Turbine-Propeller Planes

Turbine-driven propellers solve many urgent needs for truly high performing aircraft. They provide the answer to the desired combination of heavy payload, higher speed and longer range. Yet turbine engines, plus propellers, permit take-off and landing from shorter runways.

Out in front and pioneering to prove the place of turboprops in today's *and tomorrow's* aviation spectrum are three U.S. Navy aircraft powered with six-bladed contra-rotation Aeroprops and Allison T40 twin turboprop engines.

Serving with all three is America's only commercial-type turbine transport—the Allison Turboliner. Equipped with Aeroprop four-bladed propellers and Allison turboprop engines, it is General Motors' contribution to the proof-testing of turbines and propellers in a broad band of military and commercial aircraft applications.

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AEROPRODUCTS GM

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ALLISON DIVISION • GENERAL MOTORS CORPORATION
DAYTON, OHIO

TECH TALK

By Richard Skinner

A new British bomber, the Handley Page Victor, recently taken off the secret list, has controls on the leading edge of its "scimitar" or "crescent" wing. These high lift slats are located along the thin outer section of the wing where there's little or no sweepback as there is on inboard portions. The Victor, which is powered by four Armstrong Siddeley Sapphires, joins the Vickers Valiant and the Avro Vulcan in Britain's stable of new bombers.

Chance Vought has received a Navy letter of intent for an attack version of the twin-jet F-7U3 Cutlass. The new carrier-based plane has been designated the A-2U.

An aging workhorse of the Korean war, the nine-year-old F-80 Shooting Star, has been retired from combat in the Far East, but a late version of the Lockheed plane has been put to work in a new job—as a pilotless drone in A-bomb tests in Nevada. F-80s were the first jets to see action in Korea and at that time were the hottest things in the Korean skies. They were eclipsed by the arrival in November 1950 of the Red MIG-15s and thereafter were assigned daylight bombing and close support missions. But F-80s tangled with MIGs a number of times and scored some victories. With the change-over last month of the last F-80 unit in Korea—the Eighth Fighter Wing—to Sabres, the oldest US jet left in Korea became the F-84 Thunderjet. The Shooting Star's new role (as the QF-80 drone) is made possible by a Sperry robot system that permits the drone to be directed from a pair of ground stations or from a nearby jet "director" plane. During one of the recent A-bomb shoots at Yucca Flats, Nev., two QF-80s penetrated the atomic cloud at about 30,000 feet. Each carried sixty mice and two monkeys for biomedical studies. The drones afterward landed safely at Indian Springs AFB.

Boeing is in production on a recon version of the B-47 Stratojet, with deliveries scheduled to begin later this year.

A rocket able to travel four times the speed of sound? That's about 2,700 mph. Dr. Jerome C. Hunsaker, NACA chairman, told a Congressional subcommittee recently that the Armed Forces have developed such a rocket. He also urged the subcommittee to approve research facilities for guided missiles that will fly about 4,600 mph, nearly seven times the speed of sound.

A new, all synthetic lubricant for jet engines, the first to meet military specifications, has been developed by Standard Oil and may help push tomorrow's more powerful jet engines to higher altitudes and faster speeds. Jets present a tough lubrication problem, since at 40,000 feet the outside air gets down to 65 below zero. But the central bearing of a jet rotator shaft operates at temperatures higher than 450 degrees above. Your lubricant has to operate efficiently at these extremes. No mineral lubricant has been found that will. But 10,000 test hours on the synthetic lubricant, both here and in England have shown, Standard Oil scientists say, that it's as good or better than any of the conventional mineral oil.

CONVENTION PROGRAM SET

Sunrise Memorial Services in Arlington National Cemetery will climax Convention

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

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

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

The Air Force Association will pay tribute to deceased and missing airmen in a sunrise memorial service in the Arlington National Cemetery Amphitheatre, Sunday morning, August 23, last day of the 1953 National Convention. The Chaplain Division of AFA is in charge of the ceremony.

Following the services in the Amphitheatre, Convention delegates and guests will witness the placing of a wreath on the Tomb of the Unknown Soldier and on the grave of the late General Hap Arnold in memory of all airmen who gave their lives in the service of their country.

Friday, second day of the Convention, has been set aside for a day-long Industrial Symposium, including a luncheon. Top leaders in government, industry, and labor will discuss how their activities relate to our airpower build-up.

The Airpower Ball Friday evening will feature two orchestras, Miss AFA and her court of airline hostesses, and a special floor show. Friday, Ladies Day, will feature a luncheon and fashion show for the ladies.

The following four groups have made plans for reunions at the AFA Convention in Washington, August 20-23:

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

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

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

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

NOTE: If you would like to have a reunion of your outfit, write AFA, 1424 K Street, N. W., Washington, D. C.

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.**

This valve is a Spendthrift

But it needn't be! Valve clearance trouble, with resulting fuel and power waste, is easily detected by the Sperry Engine Analyzer. By using vibration analysis to check each cylinder under normal operating conditions, valve clearances can be adjusted for smoother engine performance. Result . . . engines develop full power—run cooler—use less fuel—last longer.

Vibration analysis, exclusive with the Sperry Engine Analyzer, can be employed either in flight or on the ground. When using the Engine Analyzer, valve clearance can be easily checked at each inspection and overhaul—a profitable procedure for airlines and executive aircraft operators.

In addition to vibration analysis, the Sperry Engine Analyzer also provides detailed ignition analysis. It immediately detects, locates and identifies irregularities in aircraft power plants—either during flight or on the ground. Aside from saving ground maintenance time, the Engine Analyzer enables the flight engineer to maintain proper operating conditions at all times and prevents unnecessary component replacements.

Our nearest district office will give you complete data upon request.

SPERRY PORTABLE ENGINE ANALYZER

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JET BLASTS

FAREWELL TO ARMS—AF THAT IS

Thwarted for years by endless policy changes, this die-hard is now turning to another branch of the service

Good-bye to the Air Force! My reserve enlistment expired in March '53 after 9¼ years of struggle with cataclysmic switches in Air Force policy. Is my disillusionment only a sham? Judge from the facts.

As a "young man of seventeen" I enlisted in the Air Cadet Reserve in November 1943. Called when eighteen, I was at once washed-out on the pilot psycho-motor tests and trained as an AACS radio operator. Twenty-three months later I was discharged as a corporal. Undaunted, and still greatly desiring to be commissioned despite my setback, I enlisted in the Reserve and started taking extension courses like mad. You may remember AF Reg. 45-19 under which reserve personnel could be commissioned if they had served at least one year during WW II, held a college degree, and completed the Ten Series Extension Course. Well, after practically completing the entire Ten Series (this was around my second year of college), it was announced that this was no longer necessary for direct commissions. When the Korean war struck I had earned 101 college credits, nineteen short of a degree—and short of my commission I must add.

I applied for OCS, and after many, many examinations and interviews fully qualified. Then, one fine morning about three months after my initial application, all my papers were returned with a nice letter saying that OCS was filled up with college graduates (non-reservists, of course)—apply again in six months! Shocked, but undaunted still, I applied for navigator training. More examinations, interviews, etc., and I fully qualified. Offered the inducement of an early call, I signed up for the *first* radar observer class. During this time I was finishing up my college work and received my AB degree in June 1951. A few days after graduation I was notified that I could not be called to a class before April 1952!

Not being endowed with unlimited youth, I decided to apply at once under my old friend, AF Reg. 45-19. As you will suspect by now, it had been rescinded two months before. However, a new regulation said that you could receive a direct appointment if you held a degree *plus* one year of business experience in an executive capacity. Deciding that I was too old to wait ten months for a class, I withdrew my aviation cadet application and proceeded to rack up appropriate business experience, intending to apply for a direct commission and serve in the Air Reserve. Upon satisfying the original requirements, I applied for my commission. You know what happened. The regulation had been amended to state that you must go on active duty for two years upon receiving an appointment.

Somewhat wearily I turned my back on the Air Force and settled down to wait for the expiration of my enlistment. Call me *mister!*

Joseph L. Bowen
Baltimore, Md.

P.S. Never say die! I have in an application for an *Army* Reserve commission.

Air Farce

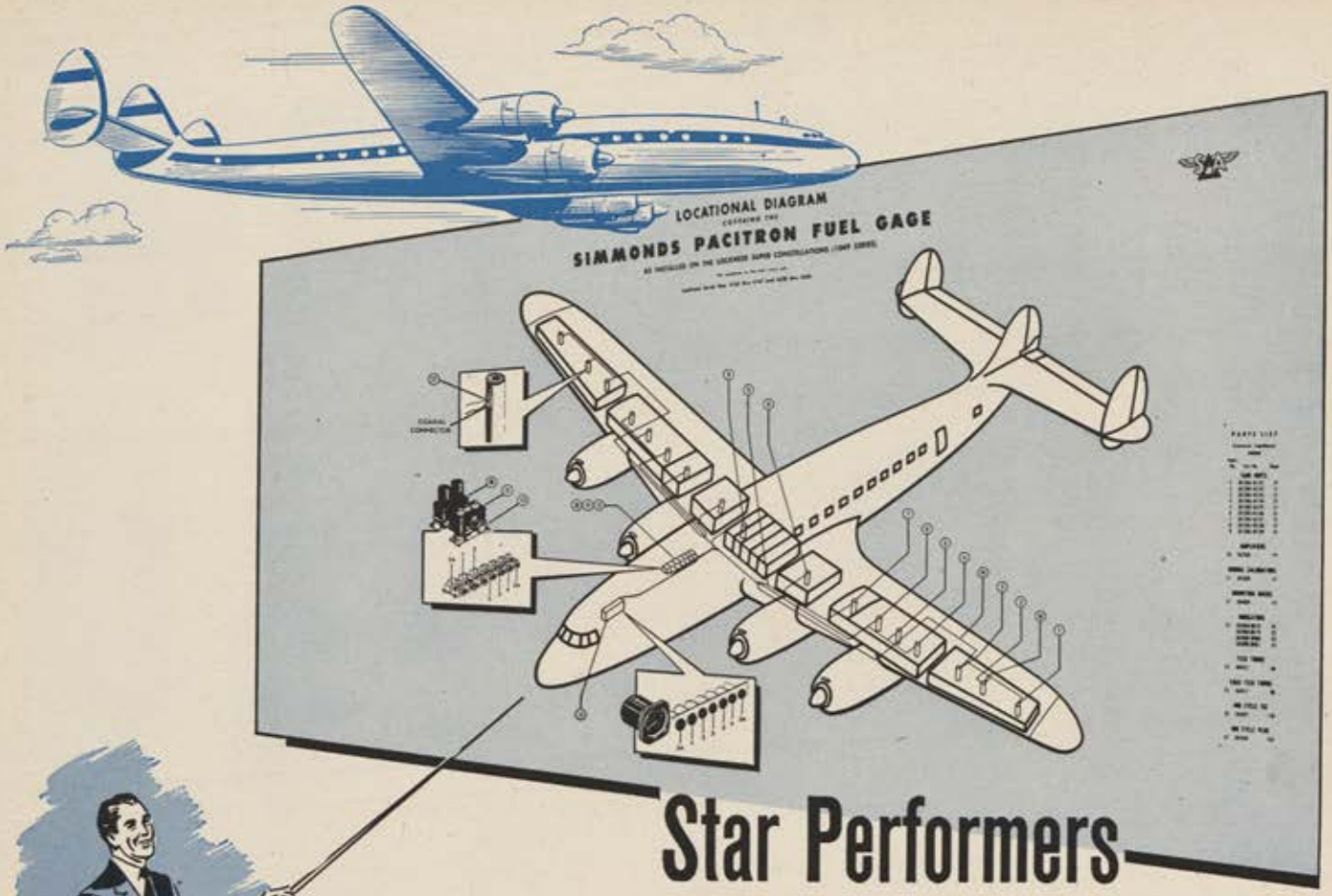
I've read the articles in your magazine and listened to all the gripes and complaints, but have never written anything myself. Your "Jet Blast" in the March issue has finally made me flip my lid. These articles were written and suggestions given under the guise of giving us a better and more efficient Air Force. Yet it doesn't take much reading between the lines to see that they are thinking of themselves and taking the opportunity to kick at pilots. In view of this, may I say a few words in defense?

First, of what use is an Air Force without pilots and other rated crew members? It takes many duties on the ground to make the Air Force, but we haven't reached the push-button stage yet. It still takes pilots. Yet some complain about pilots first and swivel-chair jockeys second. Swivel-chair men cannot fly airplanes, but pilots can hold down swivel-chair jobs. It's been done, and efficiently, too. I continuously read of complaints against our flying pay, but who takes all the risks? How many swivel-chair men get killed as compared to flying personnel? Who flies the combat tours and does the fighting? Only pilots and rated crews, of course. It's our job, yes, but I resent people who know nothing of hazard complaining about our extra pay. Some say flying isn't hazardous any more. People who say that are usually people who do not fly! Flying is increasingly becoming more technical and cannot be compared to

(Continued on page 61)

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.



Star Performers in the New Super Constellation

. . . SIMMONDS CAPACITANCE FUEL GAGES

'Certain to set new records in speed, economy and range are Lockheed's new Super Constellations with Wright Turbo Compound engines. Like their distinguished predecessors, these luxury liners are equipped with Simmonds capacitance fuel gages.

From the day the latest Super Constellations are delivered to more than a dozen U.S. and foreign airlines, operating crews will have the advantage of accuracy unsurpassed in fuel gaging – plus Simmonds' complete field service. This includes clear, detailed instruction manuals, technical bulletins and the unique visual aid location charts (illustrated above).

Also available for initial instruction and routine checks is Simmonds' staff of expertly trained field engineers – strategically located throughout the U.S. and Europe.

More U.S. commercial transport planes are equipped with Simmonds fuel gage systems than any other electronic type gage. For star performance, look to Simmonds – "first in electronic fuel gaging."

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1. SYNCHRO, Size 16, O.D. 1.537", 115 V, 400 Cycles *(Transmitter, Receiver, Control Transformer)*
2. INDUCTION MOTOR, O.D. 1.750", 3 phase 2 Pole, 115 V, 60 Cycles
3. SYNCHRO, Size 18, O.D. 1.750", 115 V, 400 and 60 Cycles *(Transmitter, Receiver, Differential, Control Transformer)*
4. SERVO MOTOR, O.D. .937", 26V, 400 Cycles
5. SYNCHRO, O.D. 1.437", 14.4 V and 26 V, 400 Cycles *(Transmitter, Receiver, Resolver, Differential, Control Transformer)*
6. SERVO MOTOR Mk 7, O.D. 1.437", 115 V, 400 Cycles
7. SYNCHRO, Type 1F or 1HG, O.D. 2.250" 115 V, 60 Cycles *(Receiver, Transmitter)*
8. SYNCHRO, Size 31, O.D. 3.10", 115 V 400 and 60 Cycles *(Transmitter, Receiver, Differential, Control Transformer)*
9. SYNCHRO, Size 23, O.D. 2.250", 26 V and 115 V 400 & 60 Cycles *(Transmitter, Receiver, Resolver, Differential, Control Transformer)*
10. SYNCHRO, O.D. .937", 26 V, 400 Cycles *(Transmitter, Receiver, Resolver, Differential, Control Transformer)*
11. LINEAR TYPE CONTROL TRANSFORMER, O.D. 1.625", 26 V, 400 Cycles
12. SYNCHRO, Size 11, O.D. 1.062", 26 V and 115 V, 400 Cycles *(Transmitter, Receiver, Resolver, Differential, Control Transformer)*
13. SERVO MOTOR, O.D. 1.062", 115 V, 400 Cycles
14. SYNCHRO, Size 15, O.D. 1.437", 26 V and 115 V, 400 Cycles *(Transmitter, Receiver, Resolver, Differential, Control Transformer)*
15. SYNCHRO, Size 19, O.D. 1.90", 115 V, 400 Cycles *(Transmitter, Receiver, Control Transformer)*

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If you are searching for a specific size or type... if availability is a problem... if engineering counsel is needed... Ketay can help. Why not join us for an exploratory discussion of your particular problem. Write today to Dept. G

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bus driving, and should not be paid for on such a basis. If flying is so simple, why does it take a year to train a military pilot?

Second, they say make pilots fly their airplanes and use highly paid civilians and non-rated officers and airmen with college degrees to hold down the behind-the-line jobs and run the Air Force. Our army of civilians is much too large now; and as for the college degrees, does a degree in education, biology, or physical education make a man eligible to be a general overnight and run the whole show? Is a degree in a non-technical field equal to ten years or more of active duty experience? I think not.

Third, what of us who have over ten years of service and have flown as many as two combat tours and are now serving a three-year tour in the Training Command as flying instructors? When we're too old to fly are they going to tells us there are no jobs for us because they're all filled by civilians and swivel-chair men with degrees? Will they say, "Thank you for services rendered," and kick us out before we have enough time for retirement?

Those who make the plans had better think twice before such a thing shall come to pass, else we'll have a very efficient Air Force with no one to fly the airplanes. It's beginning to look like the brightest and securest future is on the ground. In which case we should drop the Air from the Air Force and call it just a Force, or maybe even a Farce!

A Wondering USAF Captain & Pilot

Combat-Ready AFRTC

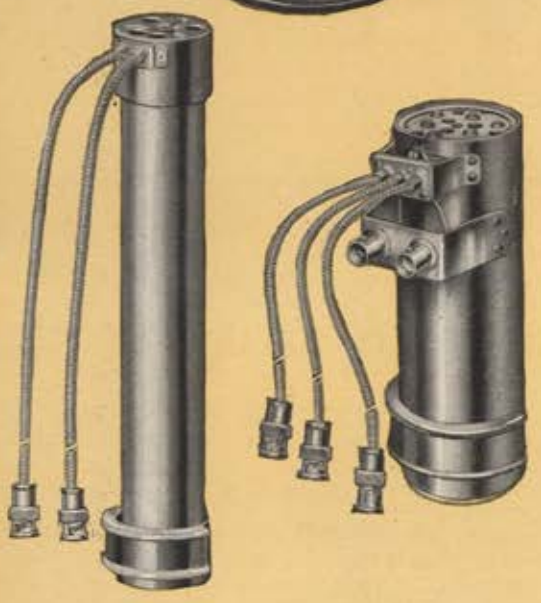
It is my considered opinion that this nation can afford the type of defense establishment that the present world crisis demands only by the use of adequately equipped, organized, and manned Reserves. And by an *organized* Reserve, I do not mean a lot of names on cards with addresses and serial numbers of bodies that may eventually be used as fillers in some other organization. I envision completely organized units made up largely of reserve personnel, completely equipped and combat-ready. Such a program could be constructed by carrying the present AFRTC wing organizations to their logical conclusion.

To use the wing near Kansas City as an example, I would recommend that the 442d Troop Carrier Wing be a fully equipped troop carrier wing under the command of an active duty Air Force officer who could be held responsible for the organization's training, etc. I would expect this wing to be made up of seventy-five to eighty percent inactive duty reserve personnel from the Kansas City area. This wing should be fully equipped and as combat-ready as any regular Air Force organization. It would be made up of personnel who knew

(Continued on page 63)

LIQUIDOMETER Gravimetric and Volumetric Liquid Measuring Systems

Capacitor Type



Liquidometer capacitor type fuel quantity measuring systems feature the simplest and most fundamentally straight-forward circuits.

These systems can provide individual indication or totalizing of fuel volume or weight, low level warning, fuel transfer switching, airplane center of gravity control and other auxiliary functions.

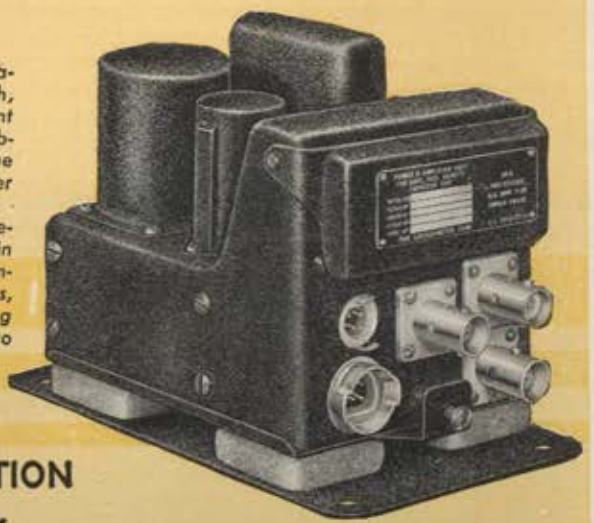
One type measures the weight of fuel based on an assumed relationship between its density and its dielectric constant. Another type is independent of fuel dielectric constant and is the only system which really gives "true" fuel weight indication. This type automatically combines the volume as measured by tank units and a dielectric reference condenser, with density as measured by a Liquidensitometer. An uncompensated type is also available.

If desired, Liquidometer fuel weight measuring systems can be arranged to provide volumetric "full' tank indication, regardless of the type fuel or its temperature. This feature is of material benefit during ground or airborne refueling operations.

Indicators, power units and tank units are rugged, compact and are of lightweight construction. They combine the features of sound progressive engineering, expert workmanship and best quality materials.

For more than three decades The Liquidometer Corporation has concentrated almost exclusively on the research, design and manufacture of liquid quantity measurement systems and the attendant installation and service problems. This specialization has proved to be of great value to the aircraft industry which has used Liquidometer products extensively since 1929.

In the capacitance method of fuel quantity measurement Liquidometer started extensive research back in 1940. It was the first to recognize such needs as compensation for fuel dielectric and density differences, correction for variations in fuel levels caused by varying attitudes of aircraft, and tank unit characterization to provide uniformly spaced indicator graduations.



THE LIQUIDOMETER CORPORATION

Long Island City 1, New York

each other, knew their capabilities, whose organization and records were complete and as ready to move as any other Air Force unit.

I recognize that such an organization is not feasible unless the Universal Military Training program, or some other similar legislation, provides compulsory membership. The cost of the physical plant for such an organization is substantially less than the cost of a full, active duty outfit. The necessity for theaters, laundry facilities, day room facilities, etc., is considerably reduced. The actual cost of maintaining such a program, once the physical plant is established, is less than one-third of the cost of maintaining a regular Air Force wing. The net result of this type of organization is that for X dollars, which may be available, the Air Force can have fifty percent more airpower available than under the present organization. I realize that this requires some basic change in the thinking of some of the top ranking officers in the staff, but I believe it is essential if we are to maintain the size Air Force presently demanded.

Of a more immediate concern is the actual operation of the reserve organization that presently exists. I was with the 442d Troop Carrier Wing from its origin up to the time it was ordered to active duty in March 1951. I found that one of the major problems was the anomalous, two-headed character of its command. I think immediate steps should be taken to eliminate the confusion which exists by having an AFRTC base commander and a reserve wing commander. It is almost axiomatic that divided responsibility means no responsibility. It would be my recommendation that the regular Air Force officer who is in charge of the reserve unit be the wing commander and responsible entirely for its direction, or that the reserve wing commander be given full command authority, and the base commander only housekeeping duties. I much prefer the idea of having the full active duty officer in command of both the AFRTC unit and the reserve wing.

Claude L. Rice
Kansas City, Kan.

Youth's Plea

I am one of the many youths who are seeing and hearing about the changes in modern aviation. All that we can do is sit and watch the changes. Why? Because there aren't many sources that could help us learn about aviation. Our only source is through books and magazines which many of us cannot get.

Clubs and classes should be started to help teach us more about aviation. If there were more clubs started we would have more "air-minded youth."

Remember some day the youth will be running America. So, help our youth out. Keep America strong.

John Hanle
Steubenville, Ohio

Helping America's fastest moving industry forge ahead!

You're looking at a good reason why top plane builders are attaining faster, greater production.

This photo shows a seamless tube hot-extruded by Curtiss-Wright from a forging of Barium's Industrial Forge & Steel, Inc. (the tube will become a hollow steel propeller blade). It's this ability of suppliers to provide plane producers with vital raw materials, parts, complete assemblies, that helps boost aircraft output.

Other Barium subsidiaries supply the industry with the key components described in the captions below, gearbox assemblies, cylinder liners, Fiberglas and magnesium wings, and many more.

The group of strategically located companies known as Barium Steel Corporation serves aviation as a *unified* source for its needs in steel and other materials . . . controlling quality from blast furnace to end product, working as a self-contained unit to speed urgently needed orders.

Barium can do the same for *any* industry. Write Barium at 25 Broad St., New York City, for information. No obligation.

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"FLYING BOXCAR" (C-119), carrying 10,000 lbs. of cargo or equivalent weight in passengers, is made by Fairchild Engine and Airplane Corp. with gear blanks produced by Barium's Globe Forge, Inc.

"STRATOFORTRESS" (B-52), heavy bomber, with inlet (for filling oil, fuel, water-alcohol tanks) protected by a filler cap, made by Barium's East Coast Aeronautics, Inc. Boeing Airplane Co. makes B-52s.

"THUNDERJET" (F-84F), fighter-bomber, speeding on swept wings at 650 mph plus, uses hydraulic assemblies, manufactured for the builder, Republic Aviation Corp., by Barium's Jacobs Aircraft Engine Co.

MOBILIZATION NEWS

BY JAKE CULPEPPER

GREENBACKS — Reservists with training assignments should claim uniform allowance through local unit. Other eligible AF Reserve officers must apply "in duplicate" to one of the seven finance offices serving ConAC: Dobbins AFB, Ga.—for those living in Ala., Fla., Ga., Miss., N. C., S. C., and Tenn.; Atterbury AFB, Ind.—Colo., Ill., Ind., Iowa, Kans., Neb., and Mo.; Brooks AFB, Tex.—Ark., La., N. Mex., Okla., and Tex.; 2347 AFRTC, Long Beach Municipal Airport, Calif.—Ariz., Calif., Idaho, Mont., Nev., Ore., Utah, and Wash.; 2230 AFRTC, Floyd Bennett Naval Air Station, Brooklyn, N. Y.—Conn., Me., Mass., N. H., N. J., N. Y., R. I., and Vt.; 2252 AFRTC, Clinton County AFB, Del.—Del., Ky., Md., Ohio, Pa., Va., W. Va., and D. C.; 2473 AFRTC, General Billy Mitchell Field, Milwaukee, Wis.—Mich., Minn., N. D., S. D., Wis., and Wyo.

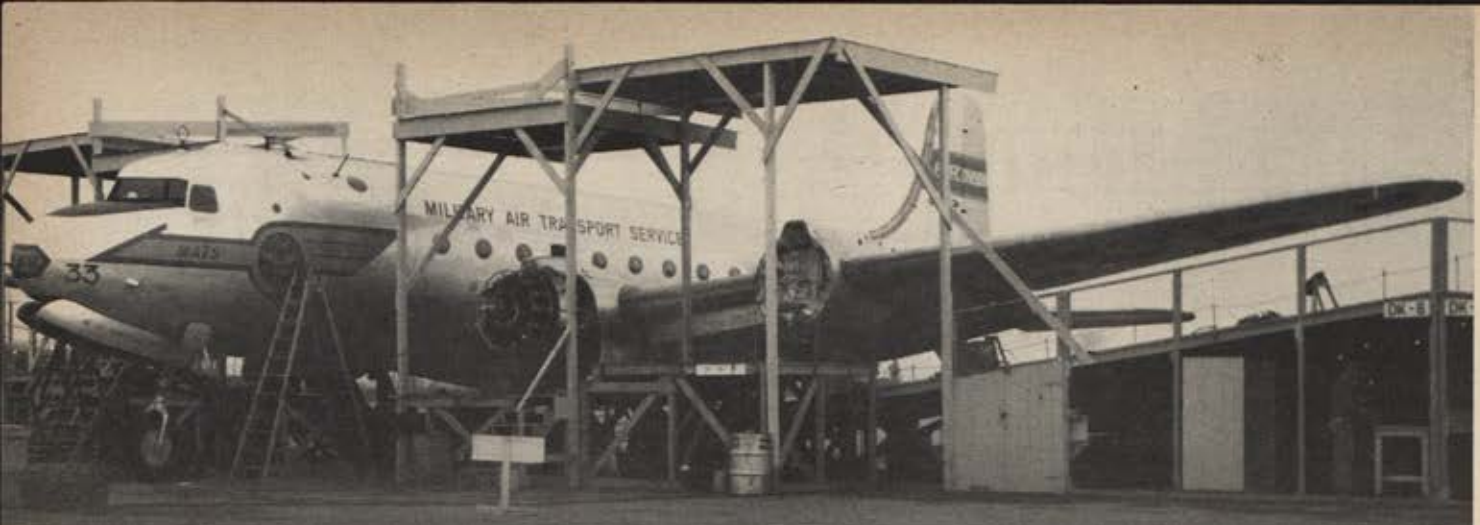
ACTIVE DUTY — "Two tour" Reservists in Ready Reserve, now safe from involuntary recall to active duty, will lose this deferment after June 30 if they retain Ready status. . . . Individuals who receive direct appointments in AF Reserve in the future must serve minimum period of three years in active service. Medical and Chaplain service appointees will continue to serve a minimum tour of two years. . . . Another call for officers to fill instructor positions in the AF-ROTC program has gone out from Maxwell AFB, Ala. . . . A general shortage of linguists in Slavic and Oriental languages exists in AF.

SUMMER TRAINING — Training locations and dates for AF Reserve wings have been scheduled as follows: 88th Air Depot Wing of New York City, August 2-16, Robins AFB, Ga.; 65th Troop Carrier Wing, August 2-16, Mitchel AFB, N. Y.; 434th Troop Carrier Wing, formerly 87th Troop Carrier Wing, July 5-19, Atterbury AFB, Ind.; 435th Troop Carrier Wing, July 5-19, Miami International Airport, Fla.; 94th Tactical Recon Wing, August 2-16, Dobbins AFB, Ga.; 403d Troop Carrier Wing, August 13-27, Portland International Airport, Ore.

COMING UP — Twenty-four AF reserve wings will be trained by TAC during the next three years. Scheduled to get underway this summer, program is part of AF Long Range Reserve Plan. . . . CAP's sixth annual International Cadet Exchange will begin July 19 when 120 CAP cadets meet in Washington to prepare for a three-week visit to sixteen foreign nations.

BRIEFS — AF committee is attempting to set up a plan whereby warrant officer grades may be integrated in the Reserve setup. . . . Hospitalized Reserve officers who declined indefinite term appointment will be afforded another opportunity to accept reappointment. . . . Mobilization assignees in non-rated training slots who are unable to log the required number of flying hours may ask to be excused from meeting this AFR 60-2 requirement. . . . President Eisenhower has signed a bill to continue letting GIs abroad bring home gifts and personal effects duty-free. . . . Group of lectures containing discussions on progress of military technology and trends in American economic and scientific methods has been published by Industrial College of Armed Forces, Washington, D. C. Copies of the lectures are available to AF Reserve officers upon request.

VETS — Loans for ex-GIs have topped the $20 billion mark. VA has approved 3,264,180 loans for homes, farms, and businesses totaling $20,349,872,750 since beginning of the GI loan program in 1944. . . . Nearly two-thirds of the 84,000 veterans in training under K-Vet Bill have enrolled in colleges and universities across the nation, a VA survey recently showed.



THE NEW LOOK IN AF MAINTENANCE

Increasing reliance on civilian contractors is evidence of a new and different approach to the Air Force's maintenance headaches

IN THE best tradition of American free enterprise, private industry is dipping more and more into the maintenance side of the biggest business in the world—the United States Air Force. Right now, according to officials of the Air Materiel Command twenty-six percent of the kind of maintenance work formerly done by AF depots is contracted out to industry. By fiscal year 1955, they predict, this ratio will be hiked to forty-three percent.

This increasing reliance on the civilian contractor is part and parcel of a brand new approach to Air Force maintenance, an approach dictated to a great degree by the hard fact that there just aren't enough dollars to do things the old way. The new concept includes these points:

- Maintenance is being limited only to those things which must be done to make an aircraft fly its mission safely and efficiently.
- The various echelons of maintenance are more clearly outlined. AF bases will handle organizational and field maintenance; the eight AF depots will repair and recondition tactical aircraft; civilian contractors will maintain support-type aircraft.
- AF depots are being set up to fill a "fireman" role. That is, their workload will be held to that which can be done on a one-shift basis. This leaves room for expansion in case of a sudden emergency, when the capacity of a depot can be tripled without additional construction, merely by going to three shifts. Depots also are switching from the production-line type of operation to a more flexible "dock" type. In other words, each aircraft being overhauled will be treated as an individual patient rather than having to pass through the entire clinic.
- The prime manufacturer and his subcontractors in the future will be responsible for initial overhaul of new aircraft and related equipment.
- Air Materiel Command's six air procurement districts will administer all maintenance contracts.

Contract maintenance became inevitable as a result of limitations on new government construction. Work space at depots is critically short even now, and AMC expects the deficit to triple over the next two years. Right now the Air Force needs an estimated 10,300,000 square feet of aircraft maintenance space. It has only 4,600,000. The difference is made up through private contractors. By 1955, predicts AMC, the defict will have swelled to 16 million square feet and nearly half (forty-three percent) of the maintenance workload will be in the hands of contractors.

Like almost everything in this vale of tears, contract maintenance has its price tag. In fiscal year 1952, for example, it cost the Air Force $97 million. The bill for fiscal 1953 will be about $147 million. The new techniques are designed to cut these costs to the bone.

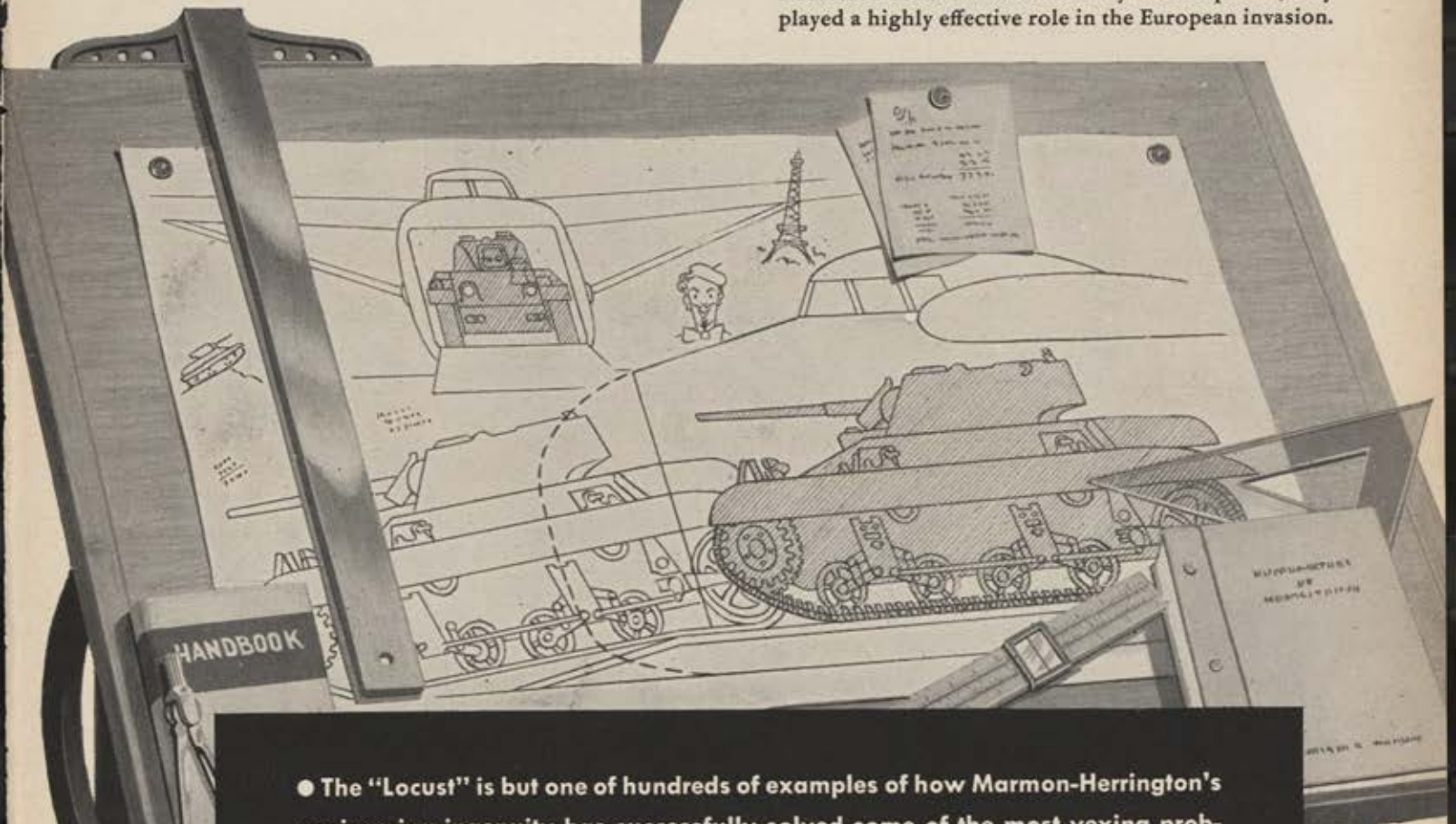
One villain in the cost picture was the way in which reconditioning specifications were written. To make sure that each reconditioned aircraft went out of the shop in top condition, the overhaul specifications were written broadly enough and high enough to take care of the

(Continued on page 69)

Photo above shows an AF C-54 being overhauled by Pacific Airmotive, Chino, Calif. PAC says workdock saves 2,000 man-hours per plane.

IMAGINATION IN ACTION!

The "Locust" Developed in collaboration with Ordnance engineers, Marmon-Herrington built more than 1,000 "Locust" tanks during World War II. These were the world's first airborne tanks, designed specifically for surprise landings behind enemy lines. Possessed of remarkable mobility and firepower, they played a highly effective role in the European invasion.



● The "Locust" is but one of hundreds of examples of how Marmon-Herrington's engineering ingenuity has successfully solved some of the most vexing problems of military transport. No matter how difficult your own requirements may seem, if mechanization is involved, the chances are strong that Marmon-Herrington can help you find the right answer. Let's talk it over.

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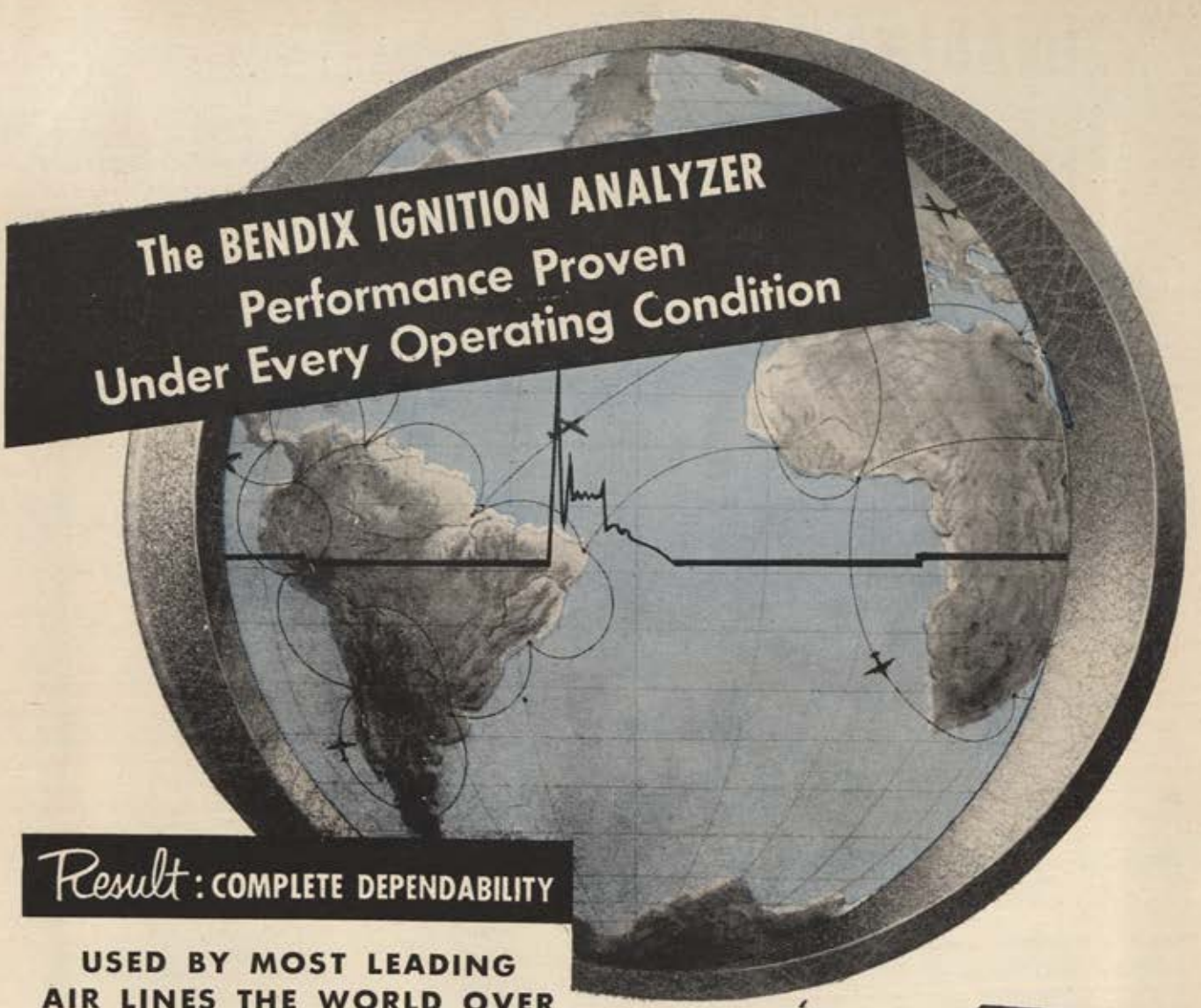

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Shifting of more of the maintenance workload to civilian contractors, like Aerodex, Miami, Fla. (above), will help relieve the congestion at AMC depots.

worst possible airplane. As a result, a lot of unnecessary work was done on planes that, essentially, were in pretty good condition to begin with. This didn't make sense to Maj. Gen. Carl A. Brandt, Director of Maintenance Engineering, AMC. So a group of AMC officers, headed by Col. Charles H. Dolan, visited commercial airlines and also plants of the three contractors who were overhauling C-54s. They found nine unnecessary things being done, such as replacement of de-icer boots, resealing of fuel tanks, new cargo floors, engine changes, and so on.

Merely by patching tanks instead of re-sealing them, $9,000 per aircraft could be lopped off the reconditioning cost. Eliminating the other items should save about $3,500 more, they estimated.

So a new, abbreviated, blanket-type work specification was thrown at three contractors—TEMCO, Pacific Airmotive, and Aviation Engineering and Maintenance Co. They used it to bid on new contracts. The bids came in at from twenty to thirty-three percent under previous contracts for reconditioning C-54s. And AMC thinks the final savings may be much greater.

The next step was a simple one, so simple you wonder why no one had thought of it before. When you take your car to a garage, you have it looked over. Then you contract for the work that actually has to be done. You don't turn it over to the foreman and say, "Make it like new." You couldn't afford to. Yet, in effect, this is how the Air Force was handling its aircraft reconditioning. AMC decided an "inspect and repair as necessary" approach would work as well for aircraft as for automobiles.

To test the theory, General Brandt accompanied another AMC team headed by Col. Claire W. Bunch, which visited a contractor (Aerodex) where two C-47s, known to be in good condition, were due for their periodic reconditioning.

Instead of the old system, whereby certain work was done whether the aircraft needed it or not, the only requirement was to make the plane capable of flying its mission safely and efficiently until its next overhaul period. The overhaul was based on a shakedown inspection by AMC personnel. Discrepancies were jotted down on an inspection sheet. Any deficiencies which should have been taken care of by organizational and field maintenance were ignored, unless flight safety was involved. These were referred to the unit to which the plane belonged.

The results were amazing. These first two C-47s cost nothing more than the man-hours involved in the shakedown. They actually needed only a few minor items of field maintenance. A third C-47 similarly inspected required only a minimum of work. Yet under the old system they would have been overhauled from stem to stern regardless. AMC figures it can overhaul two planes now for about the cost of one under the old system, which represents an estimated saving of approximately $15,000 per plane.

All this saving, both in time and money, could be nullified, however, unless organizational and field maintenance is kept up to snuff. In the past it was common practice for a unit to skip normal maintenance and tech order changes when a plane was almost due for an overhaul. This threw extra work on the depot, in the case of tactical aircraft, and on the contractor, in the case of support aircraft. Now depots and contractors will perform only work spelled out in a new tech order, 00-25-68. Any other discrepancies will be taken care of by the unit when the plane is returned. Only exception will be in the interest of flight safety.

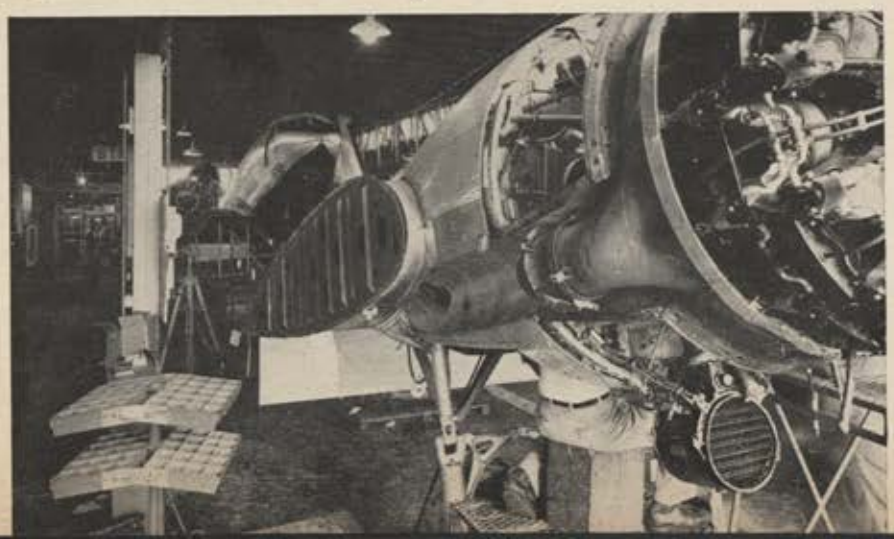
Another advantage of contract maintence is that AF depots can be kept on a forty-hour, one-shift work week. That leaves them room to expand to two or three shifts in case of an all-out war or a major aircraft disaster like the tornado which tore up the B-36s at Carswell AFB last fall. Changing from the production line to the "individual dock" technique also will make depot operations more flexible. No two reconditioning jobs are exactly alike and the dock system permits individual handling.

AMC's eight major overhaul depots are Olmsted AFB, Middletown, Pa.; Robins AFB, Warner Robins, Ga.; Brookley AFB, Mobile, Ala.; Tinker AFB, Oklahoma City, Okla.; Kelly AFB, San Antonio, Tex.; Hill AFB, Ogden, Utah; McClellan AFB, Sacramento, Calif.; and Norton AFB, San Bernardino, Calif.

Another factor which AMC believes will make maintenance better and cheaper is that contracts for new aircraft now specify that the prime contractor will do initial overhaul on the airframe, engine, and other equipment. Since the manufacturer will be working on his own equipment, sound overhaul procedures should be established early. Modifications can also be built in more easily, using contractor-furnished parts and the manufacturer's own tools. And, perhaps most important of all, the contracts will help ease the peaks and valleys that have heretofore existed in a manufacturer's workload.

It all adds up to what should be good news for the taxpayer. Air Materiel Command's "More Air Force per Dollar" program is fast becoming more than just another slogan. —END

Under old system each aircraft due for overhaul got the complete treatment whether it needed it or not. New system calls for repair only if necessary.



ANGuard ANGLES

Al Scholin

A FEW days after you read this, on June 6, the 136th Fighter-Bomber Wing from Texas will head for Travis Field, Savannah, Ga., to lead off ANG summer training encampments in which more than 30,000 Air Guardsmen will join by Labor Day.

Meanwhile, Hancock Field at Syracuse, N. Y., had to be scratched as a training site this year and as a result four wings will train at other locations, though at the same dates we posted in April.

New York state's two wings—the 106th from New York City and environs and the 107th from the Buffalo sector—will go to Spaatz Field, Reading, Pa., instead of Hancock. New Jersey's 108th Wing switches to McGuire AFB, Fort Dix, N. J., as does the 113th Wing from D. C., diverted from Reading to make room for the 107th. The 111th Wing from Philadelphia will double up at Reading with the 106th.

You'd never guess why Hancock was scratched. Operational difficulties? Nope, it got hung up on sewage disposal.

• • •

Two of the three ANG pilots who became jet aces in Korea are back with their old outfits teaching other ANG pilots some tricks of the trade. The third has remained on active duty.

Capt. Bob Love, 11th USAF jet ace and first from the ANG, has rejoined the 196th Fighter-Bomber Squadron at Ontario, Calif., as base maintenance officer and squadron exec. Love's C. O. in the 196th, Lt. Col. Arthur Bridge, adds this highlight on his combat marksmanship. "In 40 missions," says Colonel Bridge, "Love fired eight times—got six confirmed and one very sure probable."

Also back with his unit is Capt. Clifford Jolley who became USAF's 18th jet ace on August 8, 1952, and was credited with seven MIGs before he headed home. He's in Salt Lake City's 191st Fighter-Bomber Squadron and his C. O., Lt. Col. George Lamb, reports he's employed full-time as flying training supervisor in the squadron's air technical detachment.

Third USAF jet ace from ANG ranks is Capt. Robinson Risner. Recalled to active duty with the 185th Fighter Squadron in Oklahoma City, he went to Korea in May 1952, shot down eight MIGs and earned a spot promotion to major. He elected to remain on active duty, says Capt. Doyle Hastie, now commanding the 185th, reverted to captain on his return, and is now stationed at Clovis AFB, N. M.

• • •

ANG personnel enjoy a real advantage over those in USAF on selection for Air Force schools. Maj. Chatham P. Bussells, who handles school applications in the NGB's air division, says every eligible air guardsman who applies is being accepted, while many in USAF have to wait months, even years, to attend. Besides, says Major Bussells, all ANG personnel can specify dates when they're best able to go, subject only to school schedules.

As a recruiting inducement, some states are offering to send new air guardsmen to USAF indoctrination training centers as soon as school is out this month. Result: these new airmen will get off to a good start in their ANG careers.

• • •

SPARKS FROM THE FIRE CAN . . . A letup in Korea and continued Commie peace gestures could bring a fast improvement in the ANG equipment picture. But for the present airplanes are still coming to the ANG at a trickle. NGB contracted with North American to rebuild 110 T-6Gs acquired from USAF for fall distribution. From now through the summer any additional planes acquired by ANG will go direct to training sites, to be redistributed after summer camp. . . . Col. Royal Hatch, C. O. of Alabama's 117th Tac Recon Wing, will wind up his duties with USAF's air staff just in time to rejoin his wing for summer camp July 5.

By Maj. Allan R. Scholin, ANGUS

Air Strike....Submarine Style

Guided missiles launched from submarines promise to be major offensive weapons in case of war. A missile of this type travels to its distant destination under unerring electronic orders. The brain center for such missiles will be typical of the electronic systems developed and manufactured by Arma Corporation.

In close collaboration with the Armed Forces since 1918, and more recently with the Atomic Energy Commission, Arma has contributed much in basic research, design, development and manufacture to the advancement of electronic and electromechanical weapon control, navigation, and other precision remote control systems. There is every reason to believe that engineering background and techniques—first used successfully in these devices—will see widespread industrial applications. *Arma Corporation, Brooklyn, N. Y.; Mineola, N. Y. Subsidiary of American Bosch Corporation.*

ARMA ADVANCED ELECTRONICS FOR CONTROL

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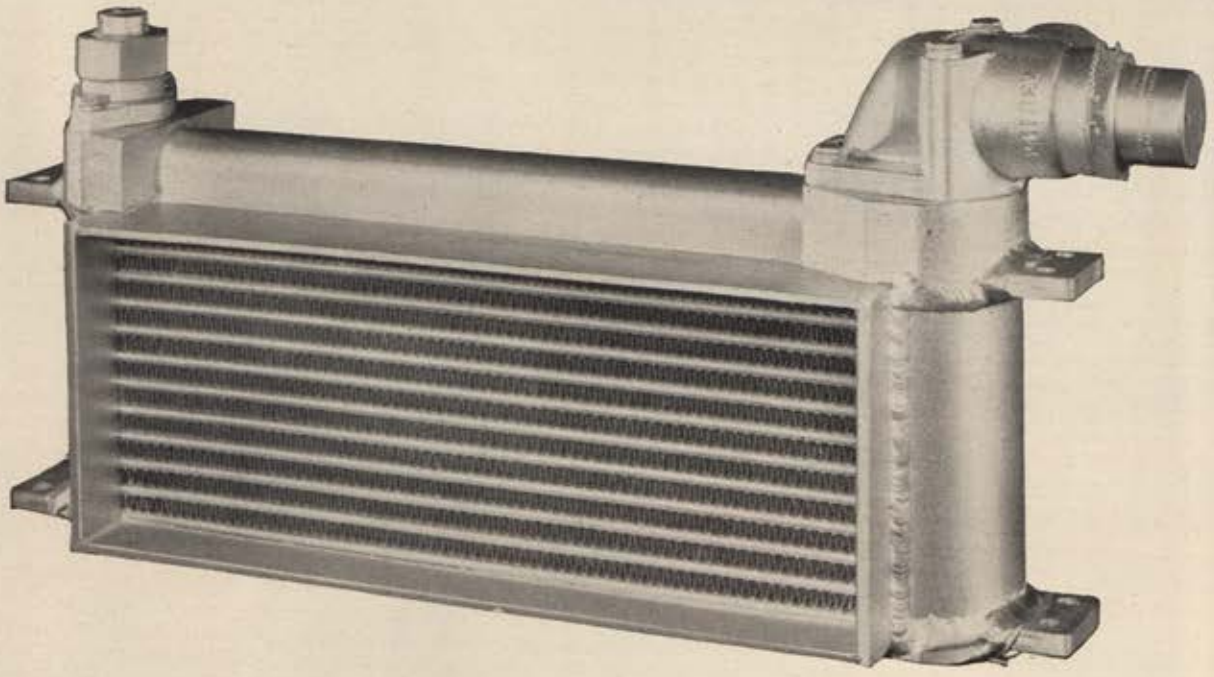

Long experience in the development of heat-exchanging equipment for a variety of purposes has made it possible for Harrison to design an aluminum plate-type oil cooler that meets the specific needs of modern aircraft, both commercial and military.

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Moreover, this modern aircraft oil cooler may be used for a variety of jobs—to cool the fluid in hydraulic systems, to cool helicopter engine and gearbox oil, to cool turbojet and turboprop compressor bearings and turbine bearing lube oil. Aircraft engine and airframe manufacturers are urged to write for specific performance data.

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Edward C. Kranch, right, presents Citation of Merit to Charles E. Salik, owner-manager of San Diego radio station KCBQ, for his contributions to airpower during '52.

M-G-M star Vera-Ellen accepts award for her studio's film "Above and Beyond." Outgoing Wing Commander James McDivitt presents the award while Jimmy Doolittle looks on.

CALIFORNIA'S AFA WING SOARS HIGH

From beer bust to brunch, AFA's West Coast Wing puts on a great show

At the Airpower Banquet, from left above, are Rev. Jacob Deshazer, one of the Tokyo Raiders, Donald Douglas, Jr., Vice Adm. Harold Martin, and outgoing California Wing Commander James McDivitt. Below, Vera-Ellen, Jimmy Doolittle, and Rev. Deshazer place a wreath on the monument to aviation pioneer John J. Montgomery who flew the first controlled wing glider from this spot in 1883.

THE three-day convention of AFA's California Wing had a lot of everything, including a parade, a ceremony honoring a pioneer of flight, movie star Vera-Ellen as "Miss Golden Flight," an Airpower Banquet and Ball, a speech by Lt. Gen. James H. Doolittle, and a reunion of thirty-three of his Tokyo Raiders. It all wound up with a brunch Sunday morning, April 19, in convention headquarters at the Manor Hotel, San Diego. General Doolittle placed a wreath at the monument to John J. Montgomery, who in 1883 flew the first controlled wing glider at Otay Mesa, near San Diego. AFA President Arthur Kelly summed up by saying the national convention in August would be hard put to measure up to the Wing's show.

More than 200 AFA members and their wives registered for the convention. Well over twice that number were at the banquet in the Hotel del Coronado across the bay from San Diego when Vera-Ellen accepted an AFA Citation of Merit awarded her studio, M-G-M, and the cast of the film "Above and Beyond." The man who wrote the screen story, Beirne Lay, Jr., was also cited for merit. Marvin Miles, *Los Angeles Times* aviation editor, was honored for his coverage of aviation news. Other awards went to the Civil Air Patrol, the Ground Observer Corps, Col. Harold E. Todd for reorganizing the AF Reserve program in California, and to AF Col. James Gaylord for service to AFA.

Convention chairman Edward C. Kranch helped Wing Commander James McDivitt stage the convention. Regional Vice President Michael Kavanaugh was toastmaster.—END

AFA'S MICHIGAN WING TAKES A BOW

Squadron and Wing programs contribute to Michigan's growth this year. Units in Florida and Colorado join AFA's ranks

The Michigan Wing of Air Force Association is proud of its accomplishments and its growth during the past months. Since Stanley K. McWhinney, of Lansing, took over from William Amos as Wing Commander last year, one new Squadron has been formed and two more reactivated. In addition, three auxiliary units have been formed, and an auxiliary Wing is to be organized this month during the Wing Convention in Lansing.

A number of Squadron and Wing programs contributed to Michigan's growth this year. These included the holiday dinner-dance sponsored by the Detroit Squadron, the Industrial Symposium planned by Battle Creek, the promotion of the film "Above and Beyond" by several Squadrons, and the help given the National Convention in Detroit last summer.

Miami Organizes

A group of Miami airpower enthusiasts, headed by Alex Morphonios, 3131 N. W. 16th St., has held its first AFA organizational meeting and formed the Greater Miami Squadron. Future plans include making this unit the first Squadron in what will eventually be the Greater Miami AFA Group.

Morphonios has been selected as the temporary Commander. Other officers include Ralph Royce, Hugh J. Knerr, and Jack R. Younger.

SQUADRON OF THE MONTH

Pasadena Area Squadron

CITED FOR

outstanding contributions in programming and membership. The Pasadena Squadron has instituted a successful Air Scout program and during the past year led all other units in membership procurement.

4th Colorado Squadron

A fourth Squadron has been chartered in Colorado, reports Wing Commander Warren Jewett. The Denver Metropolitan Squadron was organized with twenty-one signers on the Charter. Commander is Lee D. Lambert, 3075 S. Jackson, Denver. Harry R. Glick, 323 E. 17th Ave., was elected secretary.

June Wing Conventions

Four Wing conventions are planned this month. On June 7, the Illinois Wing will hold its third annual convention, in Chicago, at the Sheraton Hotel. Lt. Gen. Nathan Twining, Deputy Chief of Staff, USAF, has been invited to be the principal speaker. George Anderl, 412 N. Humphrey Ave., Oak Park, is chairman of the Convention Committee, and invites all Illinois AFA'ers to contact him for details.

On June 14, the Michigan Wing will meet in Lansing, says Wing Commander Stanley McWhinney, 6140 W. Saginaw, Lansing. At the Airpower Ball, the out-

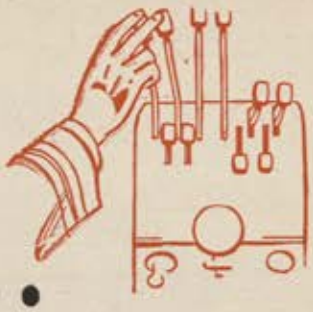
(Continued on page 77)

Burton W. Chace, Mayor of Long Beach, Calif., presents AFA Charter to James Regan, Long Beach Squadron Commander. From left are outgoing Wing Commander James McDivitt; Regan; Mayor Chace; Mrs. James Regan, President of the Long Beach Auxiliary; and Maj. Raymond Harvey, who was the guest speaker at the presentation ceremony. Major Harvey won the Congressional Medal of Honor in Korea while serving with the 7th Infantry Division.

California's Stanislaus Squadron Commander Zenas Hanson receives Charter from former Wing Commander James McDivitt during installation ceremony. From left to right are Mike Kavanaugh, Regional V-P; Stockton Commander Thomas Nichley; McDivitt; Hanson; and Mike Pisani.

At AFA booth during sponsorship of "Above and Beyond" in Philadelphia are, from left, Wing Commander I. E. Brodsky; Metropolitan Philadelphia Squadron Commander Elizabeth MacKenzie; M-G-M's Mr. Levine; Col. Victor Dallin; and Tess Ferry, AFA Wing Auxiliary President.

a fingertip flip...



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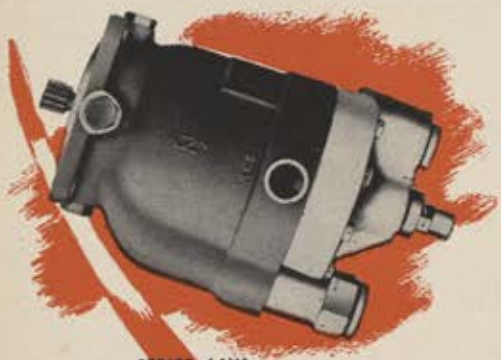

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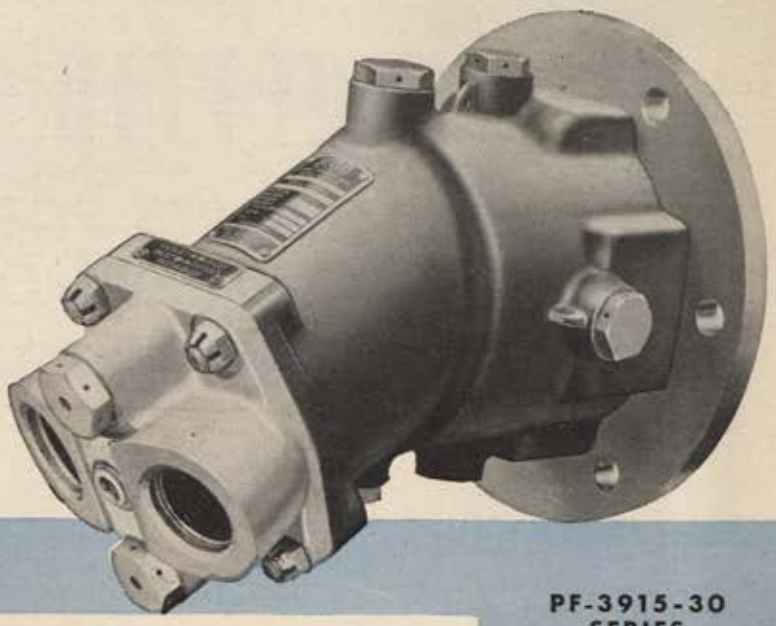

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ENGINEERS AND BUILDERS OF OIL HYDRAULIC EQUIPMENT SINCE 1921

The eight fighter aces in whose honor a reception was held during the premiere of "Angels One Five" are, beginning second from left, Group Capt. Arthur Donaldson, Sqdn. Leader Donald Kingaby, Group Capt. Robert Stanford-Tuck, Col. David Schilling, Col. Hubert Zemke, Wing Cmdr. Michael Crossley, third from Zemke, Group Capt. John Kent, and Col. Glenn Duncan, second from right.

standing ROTC Cadet from Michigan State College will receive AFA's Silver Medal.

On June 19, the Pennsylvania Wing will open its three-day convention in Pittsburgh, with headquarters in the Roosevelt Hotel. Among the activities scheduled are business sessions, a Gay Nineties Rendezvous, cocktails at Pittsburgh's new Municipal Airport, an Airpower Banquet and Ball, and reunions. Chet Richardson, Union Trust Building, Pittsburgh, is chairman for this one.

On June 21, the recently reactivated Indiana Wing will hold its convention in Indianapolis. AFA members in Indiana are urged to contact Robert Logan, 210 Glenwood Ave., Muncie, for details. Logan is Wing Commander.

Angels One Five

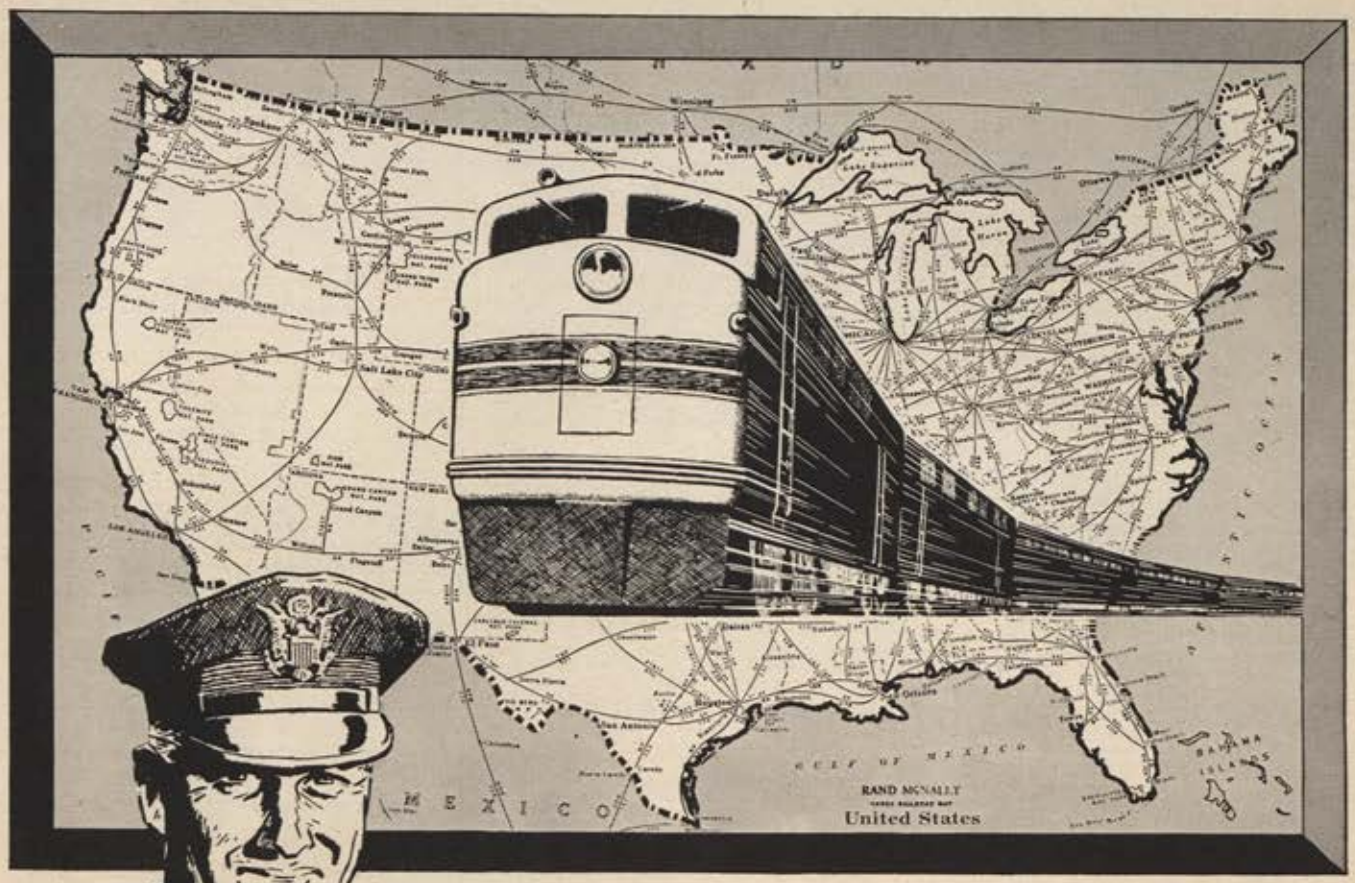
Altitude 15,000 feet is the meaning of this unique headline. It's also the title of a new motion picture which tells the epic story of the Royal Air Force during the Battle of Britain in World War II. The movie recently opened in the United States with the International Premiere at the MacArthur Theatre in Washington, D. C., co-sponsored by the Washington Branch of the Royal Air Force Association and the Air Force Association of the US.

The premiere turned into an international reunion for five RAF and three USAF fighter aces. Group Captains John Kent and Arthur Donaldson, Wing Commanders Michael Crossley and Robert Stanford-Tuck, and Squadron Leader Donald Kingaby flew from England to Washington for the premiere where they met, for the first time since the close of World War II, Colonels David Schilling, Hubert Zemke, and Glenn Duncan. Together, the eight aces had destroyed some 200 enemy aircraft during the war.

Harold Stuart, AFA Board Chairman, introduced the USAF aces from the MacArthur stage. Group Captain Philip Haynes, Air Attaché of the British Embassy, introduced the RAF aces.

The unique stage program preceding the film included a concert by the USAF Drum and Bugle Corps, under the direction of Capt. H. J. Gall and M/Sgt. Sigvald Norman. The Washington Pipe Band furnished familiar Scottish bagpipe music for highland dances by members of the St. Andrews Society. Fourteen members of Congress and their

(Continued on page 79)



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wives, and many top Air Force leaders were among the honored guests.

California Wing Officers

The newly elected officers for the California Wing, who were installed April 19, include Michael Pisani, 1520 Sweetwood Drive, Colma, Calif., Commander; Miss Florence Spaniel, Stockton, Secretary; Charles Morgan, San Francisco, Treasurer; and Albert Pinheiro, Fresno, Sergeant-at-Arms. Group Commanders elected were Edward C. Kranch, Cecil C. Howard, Francis J. Dolin, George Mantell, and Frank Chun.

Pisani replaces James H. McDivitt, whose term of office as Wing Commander wound up with the impressive Wing Convention in San Diego.

The Wing Auxiliary held its first annual convention in conjunction with AFA, and Mrs. Hazel Riley, North Hollywood, was elected Wing President, succeeding Mrs. Elinore Gyopyos. Other Auxiliary officers are Mrs. Dorthea Bohde, Mrs. Phyllis Christensen, and Mrs. Esther Erdie. Mrs. Gladys Kranch, Auxiliary Vice President, was the installing officer.

General Lahm Speaks

At their regular meeting recently, the Los Angeles Squadron heard the nation's oldest pilot, and its oldest living Air Force flyer, Brig. Gen. Frank P. Lahm. General Lahm is one of two Army officers taught to fly by the Wright Brothers.

Lahm's discussion of "The Early Days of the Flying Crates" was televised and broadcast throughout the Southern California area. Nicholas Gyopyos is the Program Chairman for these meetings.

Santa Monica News

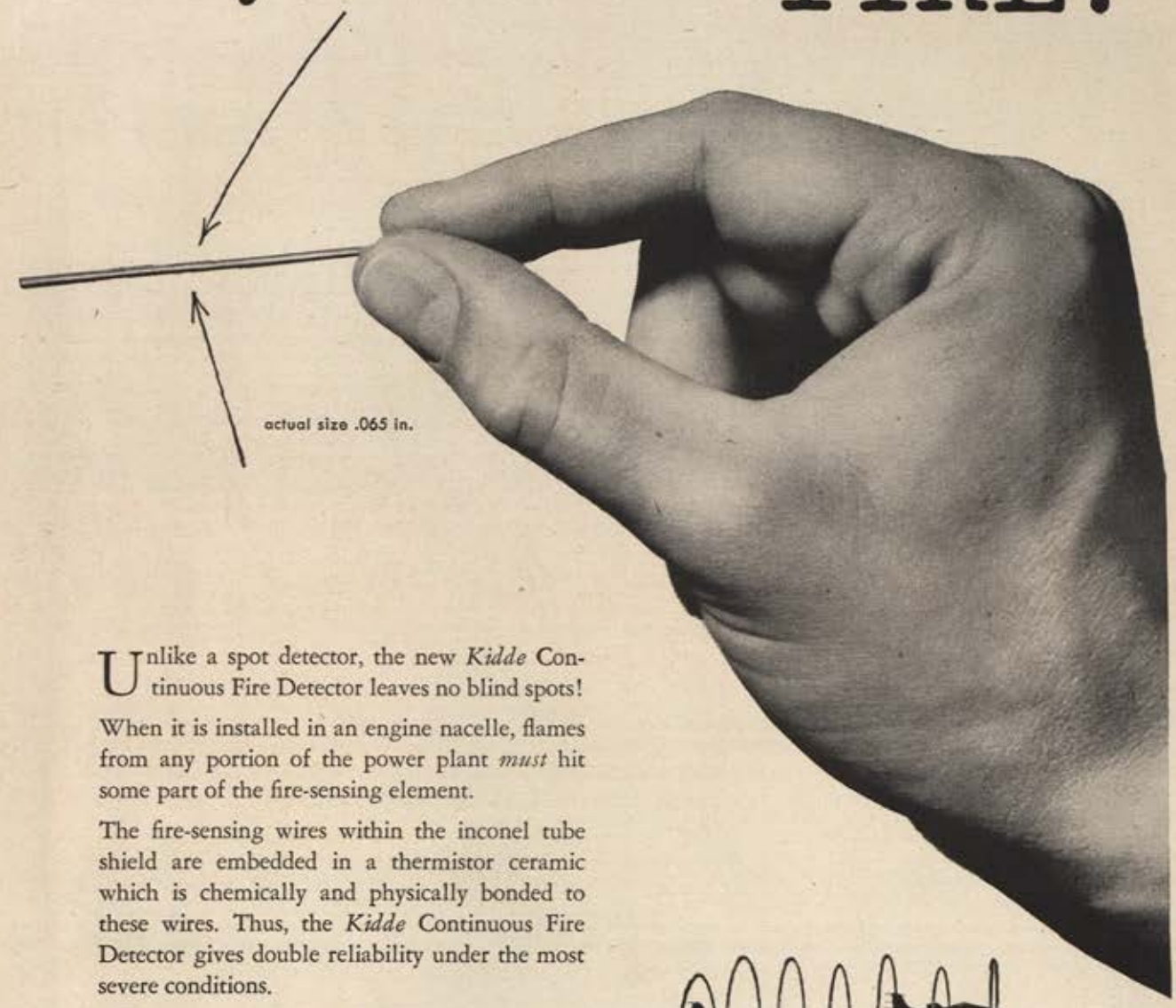
AFA President Arthur Kelly was the principal speaker recently at the Santa Monica Squadron's annual installation dinner. Kelly is one of a number of outstanding AFA figures who started with this Squadron. Among others are Col. Francis Gabreski, California's first Wing Commander, and Bert D. Lynn, a past vice president.

The newly elected Commander, Joseph D. Myers, pledged himself to carry on the traditionally strong airpower programs which have become a part of the oldest chartered Squadron in California. Monthly meetings are held in the Santa Monica Swim Club, on the third Thursday.—END

CREDITS

Front cover—Lt. Col. Harold Sims; page 19—Arlo Greer; page 23—Lt. Col. Harold Sims; page 25—Arlo Greer; page 39—Watson Holley.

...the tiny wire that screams FIRE!



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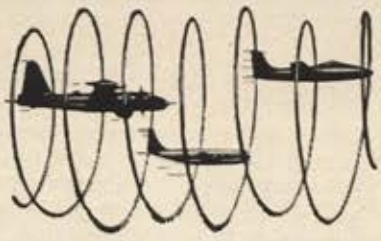

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When the New World meets the Old on a man-to-man basis, most of the problems that beset statesmen vanish in a grin.

HOW TO GET ALONG IN EUROPE

You can't drop thousands of uniformed men into any community without creating a problem. Here's how it's being solved in Europe

THE AMERICAN Air Force officer climbed out of his light truck and regarded the farmers who stood like a barrier across the road. It was France. It was spring, the spring of 1952.

Some of the farmers had pitchforks. Some just stood, hostility in their shoulders and planted feet.

The officer spoke fair French. He told the other men of his cadre to wait and he walked up to the group, stopping well in front. He asked for the leader. There was quite a long silence before the answer came. Then the officer told the group who he was and why he was there. He didn't understand their hostility. He was bewildered and concerned and he said so.

There was a burst of reply. The officer began to get a glimmer of comprehension and suggested gently that they all stroll back to the village, to the cafe where they could undoubtedly get a glass of wine while they talked the matter over.

This they did and the officer finally understood fully enough to be able to explain to his superiors.

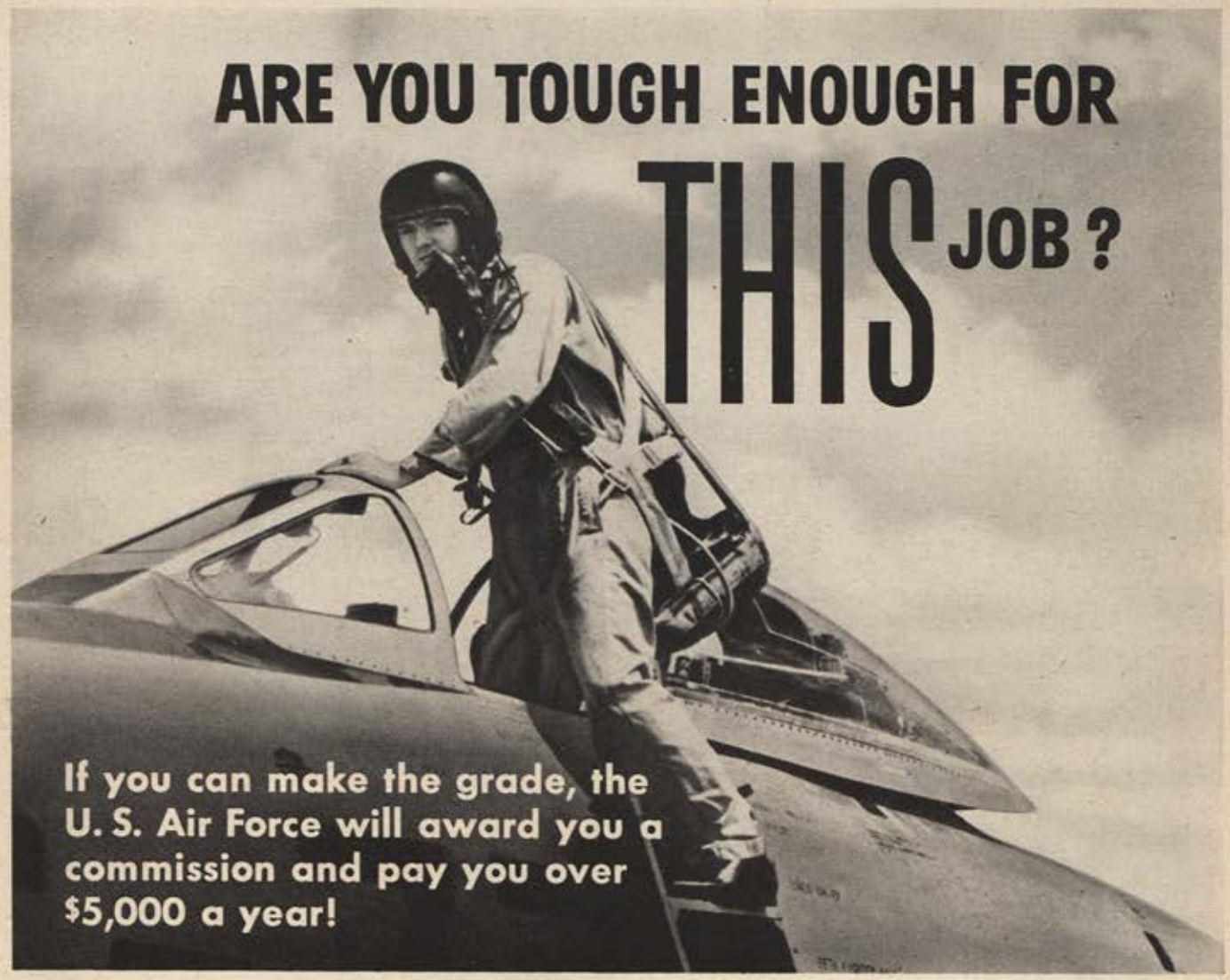
"The local government," he said, "expropriated land for an air field. That was bad enough. When you take a French farmer's ground away from him, you are taking his life. Sure, he gets paid for it. But he can't go and buy another piece of land. Decent farming land isn't for sale in France.

"The people in the French government know this and they are as considerate as they can be. They take waste land and poor land whenever they can.

(Continued on page 83)

By Lt. Col. Clarke Newlon

ARE YOU TOUGH ENOUGH FOR THIS JOB?



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2. If application is accepted, the Air Force will arrange for you to take a physical examination at government expense.
3. Next, you will be given a written and manual aptitude test.
4. If you pass your physical and other tests, you will be scheduled for an Aviation Cadet Training Class. The Selective Service Act allows you a four-month deferment while waiting class assignment.

U.S. AIR FORCE

Where to get more details:

Visit your nearest Air Force Base or Air Force Recruiting Officer. Or write to: Aviation Cadet Headquarters, U. S. Air Force, Washington 25, D. C.

"But the trouble is greater than that. Neither the French government nor the Americans got around to telling the people of the neighborhood the story of why it is necessary to take the land. The French government doubtless has its own reasons for not. The Americans didn't explain either. One of the reasons might be because the business of opening up an air base is a military secret.

"But nobody fells the Communists about this secret classification. Of course everyone in the area knows the land is being expropriated and everyone knows it is to be used for an airport. And the Commies have their own and very easy means of knowing a whole lot more.

"So they go to work and they have several months to operate. Do they tell the farmers that this is to be a NATO air base? That the American airmen there are NATO forces? Do they point out what part their own country has in NATO and that this air base is part of a Europe-wide defense system?

"They don't, of course. The Commies use every means they can to misinform. They tell the farmers this is a new 'occupation' by the Americans; that the Americans want to establish their air bases in Europe so the atom bombs will drop there instead of in America. And then they add the last touch. That this first land grab is just a starter—the Americans are really going to take acres and acres adjoining the air base, too, and throw scores more farmers out of their homes."

It took several glasses of wine and several meetings and a lot of tolerance and common sense to get the matter straight at this base. It took months of careful, painstaking effort to rectify a situation which could probably have been prevented. Chaumont, where it happened, now has good relations with its neighboring community.

It has taken some time, but the American military and other government agencies are realizing that you can't drop a large uniformed unit into any section of the world (the US included) without having a community relations problem.

The services have long oriented their units going overseas on the geography of the land in which they will serve and the customs of the people they will be among. And in the highest levels of both the military and other government agencies responsible there is a full appreciation of the fact that our objectives in Europe can be greatly influenced for good or bad depending on the impact the American military have on countries where they're stationed.

The responsibilities are divided by the complexity of the problem, but top level officials, working with their opposite numbers in the host governments are now formulating programs which will use the resources and good will of both countries to work out a solution on national levels.

This, however, still leaves, in most cases, the pick-and-shovel work to be done locally where the commander and the mayor, the sergeant and the storekeeper come together.

One such attempt is being made in Europe where a group of Army, Navy, and Air Force officers have organized themselves into what *The New York Times* called a "shirt sleeve" Military-Community Relations Working Group. They range in rank from captain to lieutenant colonel or equivalent, and they represent the Public Information, Troop I&E, and the Civil Affairs divisions of all three services. The Working Group also invites to help out, representatives of State and Defense Departments, the High Commissioner in Germany, interested Embassies, and the Special Representative in Europe.

The Group is composed, by and large, of men of considerable experience at the base level where it counts. They are the salesmen of the American military, their product is the GI, and they've been on hand to get the complaints from the customers. They have been in that local pub or bistro when one of the town lads nudged a GI and said: "What are you doing here, Yank? Why don't you go home where you belong?" They've fought the housing problem and the traffic problem and the prostitute problem.

After starting out informally, the Working Group has now been "legalized" and reports to Gen. Thomas T. Handy, deputy commander-in-chief of all US forces in Europe. All its members have other and normally full-time assignments though in almost every instance these jobs touch in some fashion the problem of a military's relations with the public. Normally they meet about once a month, and their studies and recommendations are translated into action through the Personnel Division of General Handy's headquarters in Frankfurt.

Here's one way to make friends. German kids from Offenbach orphanage are feted by members of the 40th Troop Carrier Sqdn. at Rhein-Main Air Force Base.

No one could know better than the Working Group that military community relations is primarily a command function; i.e., how well any US military unit gets along with its community is up to the Old Man—the unit commander. If he is interested, ingenious, and resourceful, he can do a lot. If he puts the problems somewhere along about fifth or sixth in the priority order of importance, so will the members of his unit—and so will the community. The Working Group has no illusions about solving the commander's problems for him. But they do think that the experience they've had at

(Continued on following page)

first and second hand can help out.

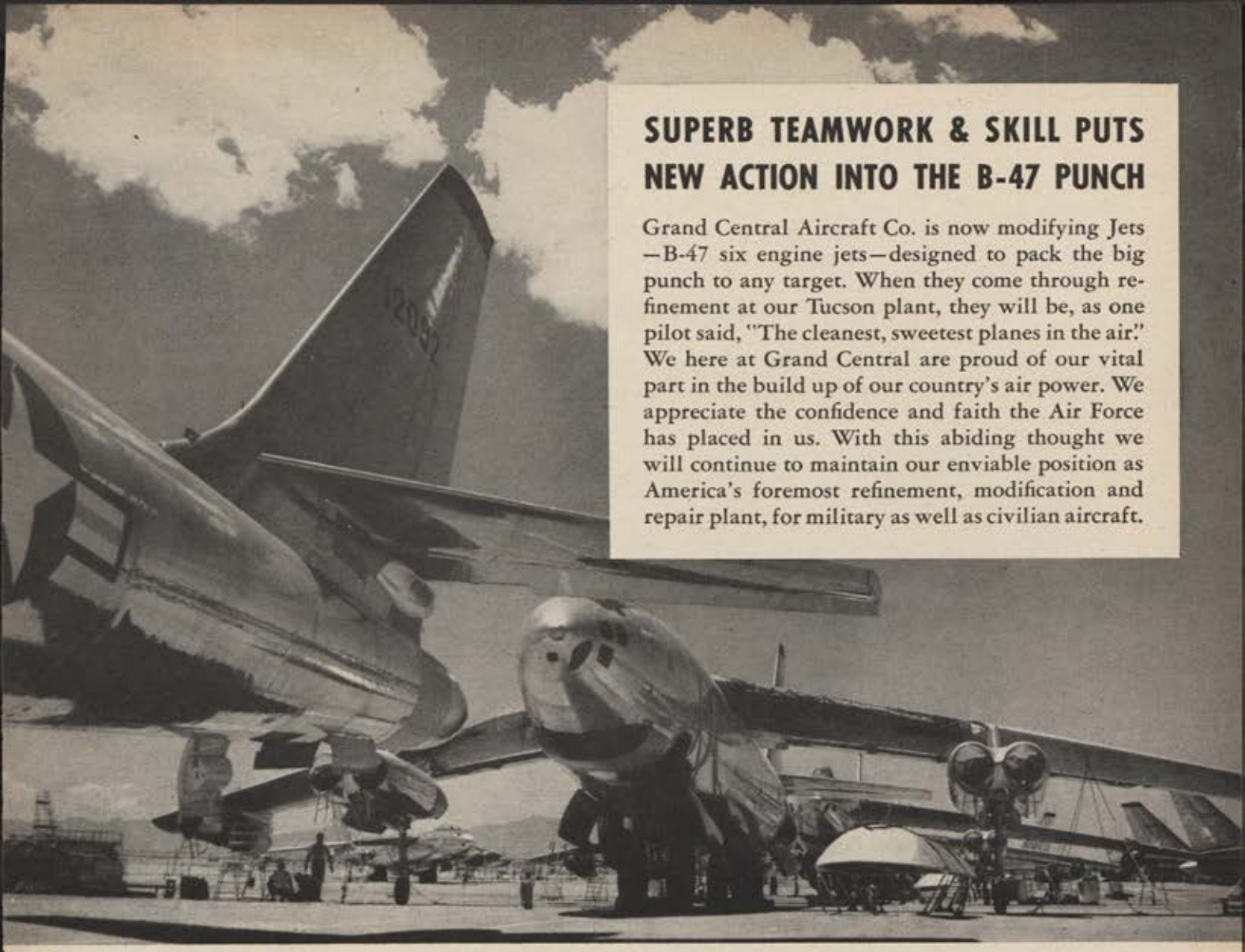
All three services—although the Navy with its ship rotation plan is not as concerned as are the Air Force and the Army—spend lots of well directed time, effort, and money in indoctrinating their personnel before they leave the States. The boys get lectures, are shown movies and given pamphlets for a required number of hours.

The soldiers and airmen also get an orientation after they arrive but then it may be a different thing. How good it is depends on the materials available at the base or station, upon the man's duties and upon the expertness of the instructor.

First order of business for any commander, the Group advises, is to form a committee composed of members of the military staff and the community leaders. Such a committee is designed to handle the "points of tension" which are as certain to arise as the sun in the morning. What are the "points of tension"? Well, for instance:

- Housing. There is never enough, it is rarely up to US standards, and the prices go up to hell and gone the minute American units move in.
- Cultural differences—in manners, clothes, and customs. We whistle at the girls. We eat with the wrong hand. In or out of uniform our clothes aren't the same (remember the dependents, too); we aren't up on local traditions and we may laugh at the mayor in his cocked hat.
- Traffic—and this is one of the worst. Our cars are big and our trucks bigger. They tear up the roads and take up all the parking spaces. We like bright lights, the Europeans don't. Same for loud horns. Local damage claims may be slow in payment. We don't know local traffic laws—and sometimes don't learn.
- Law enforcement. Who has jurisdiction in that street scrap—the US military courts or the local courts? Girls from the city flock in on payday, the VD rate goes up. Whose job is it to police the streets, MP or local constable?
- Trade practices. Local prices go up and the local people get mad. A two-price system and we get mad. Our well stocked commissaries and PXs infuriate the local people who can't buy there. And then there is the local tax problem on automobiles and radios and other things. There may be a black market in cigarettes or even in money. There are legal problems galore surrounding mar-

(Continued on page 87)



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Your Association offers this insurance as a result of many requests for it. There have been numerous instances in the past when beneficiaries of AFA coverage, suddenly confronted with tragedy, have expressed their gratitude to the Association for helping, at least partly, to relieve the financial burden imposed. We urge you to investigate this means of protecting your dependents.

ARTHUR F. KELLY,
President, Air Force Association

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☐ 6,000	☐ 72.00	☐ 28.80
☐ 7,000	☐ 84.00	☐ 33.60
☐ 8,000	☐ 96.00	☐ 38.40
☐ 9,000	☐ 108.00	☐ 43.20
☐ 10,000	☐ 120.00	☐ 48.00

* Make check or money order payable to AIR FORCE ASSOCIATION and send to 1424 K St., N. W., Washington 5, D. C.

riage—not to mention illegitimate children.

• Airplanes make noise and they fly at night when other citizens would prefer not to be awakened. Ground troops go on field exercises and farmers have to be compensated for losses.

Those, then, are some of the problems facing the commander. There are others, like crowding the local transportation, movie, or bistro.

The committee of local people and military won't solve them just like that. Nothing will, but the committee will help a lot and, the Working Group believes, so also would a little advance education.

The members would like, for instance, to see the community informed that the American Air Group, say, which is about to move in will be there as part of a fourteen-country military force—the North Atlantic Treaty Organization. The US units are coming because the host government agreed with thirteen other governments that they should, and furthermore the host government chose that precise spot to put them.

Why let the Commies get in the first licks? The community should have a thorough briefing not only on what NATO is but just exactly what NATO means to them and the part their own country plays in it.

This education and these explanations and briefings can be done with films, news stories, radio broadcasts, lectures, pamphlets, or with entire mobile units if need be. The military is not in position to carry out such a program nor would it be permitted to, normally, within the terms of the bi-country agreement under which the unit operates. Ideally such a program would be done by the country itself, aided perhaps by other US agencies.

The problem of the American getting along with his foreign neighbors will never be completely solved and no one expects it to be. A distrust, if not an actual dislike, of aliens seems inherent in all peoples. But many things can be done on both sides which will make the American in uniform the good ambassador we fondly like to think he is, and the European the gracious host.—END

The author, Lt. Col. F. Clarke Newlon, USAF, is on the staff of the US Special Representative in Germany, Ambassador William C. Draper. He was formerly on duty with OPI, Defense Dept., in the Pentagon and has written many articles for national magazines.—The Editors.

THIS IS AFA

The Air Force Association is an independent, nonprofit, airpower organization with no personal, political or commercial axes to grind; established January 26, 1946; incorporated February 4, 1946.

OBJECTIVES

• To assist in obtaining and maintaining adequate airpower for national security and world peace. • To keep AFA members and the public abreast of developments in the field of aviation. • To preserve and foster the spirit of fellowship among former and present members of the United States Air Force.

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