

A-BOMBS FOR AMERICA'S AIR DEFENSE

AIR FORCE

THE MAGAZINE OF AMERICAN AIRPOWER



THE MANPOWER PROBLEM

A special report on
the AIR TRAINING COMMAND

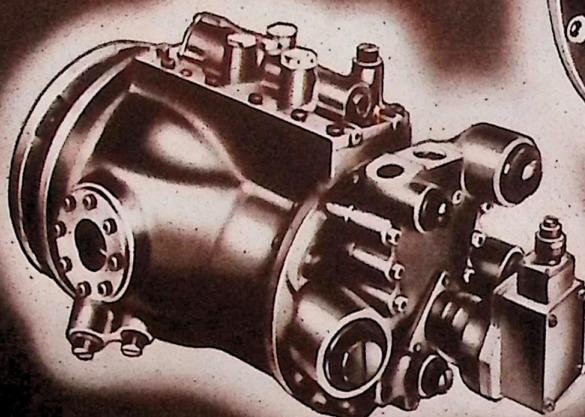
JULY 1952 • THIRTY-FIVE CENTS

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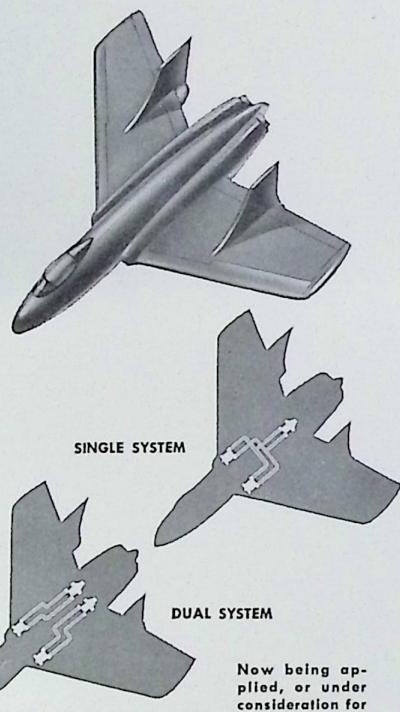
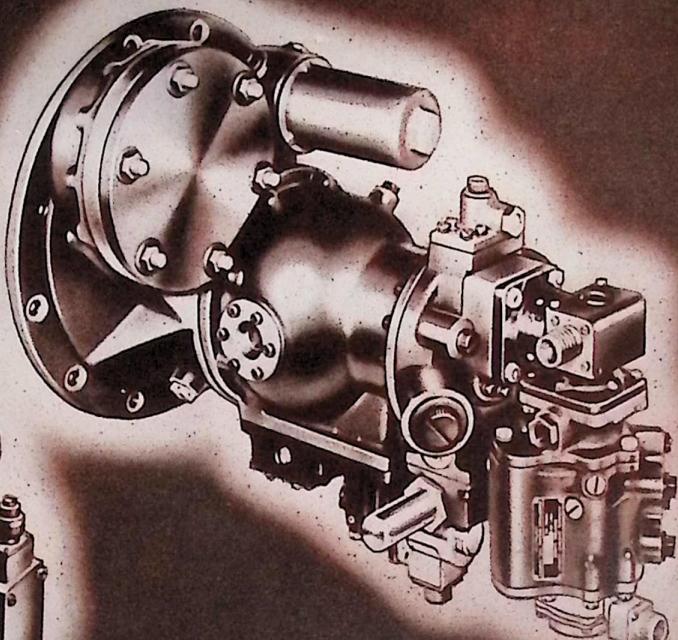


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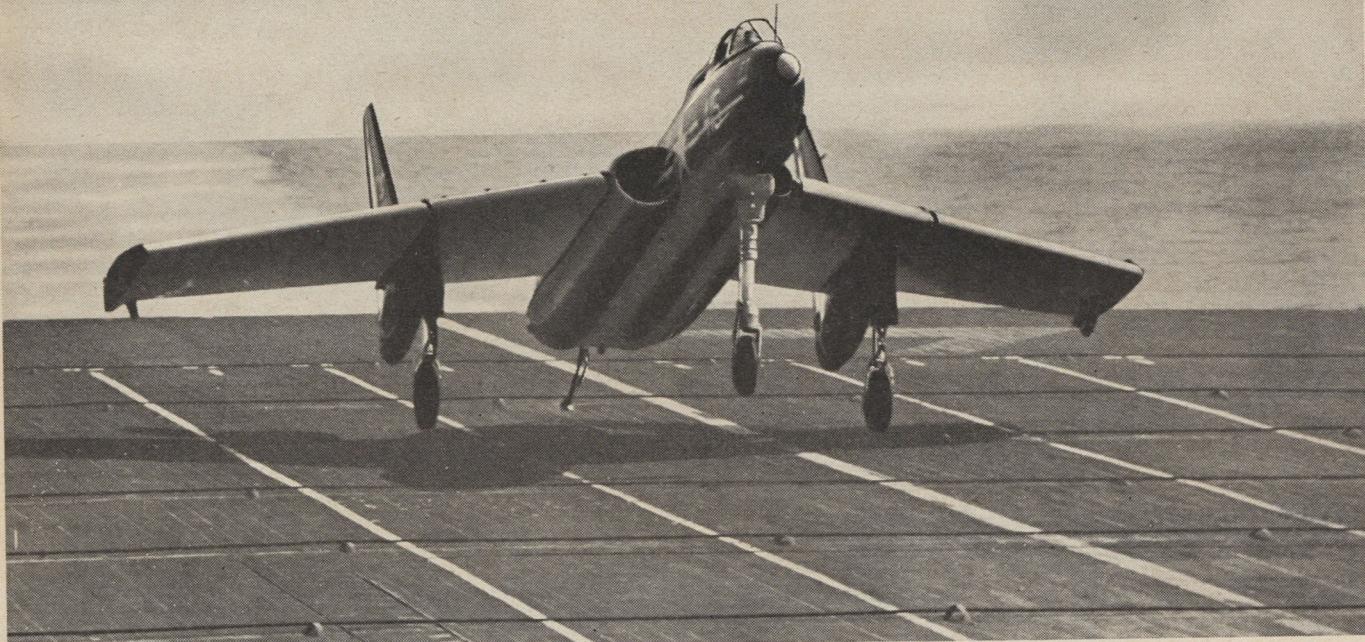
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(Photo courtesy U.S. Navy)

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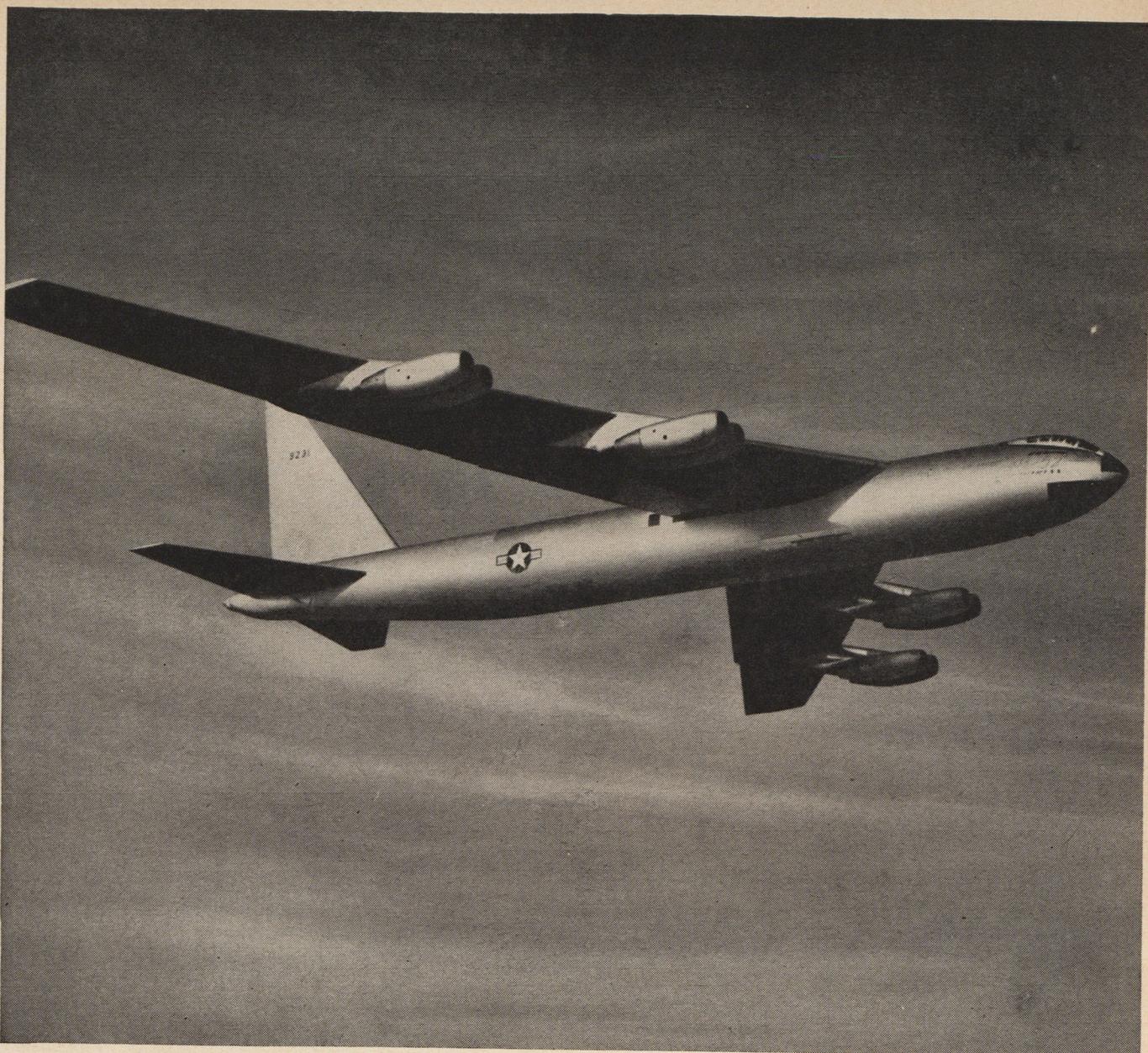
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With a roar like a mighty wind, America's new heavy bomber, the Boeing YB-52 Stratofortress, rips across the sky. That is a reassuring sound for the peoples of the free world. It means that our strategic air power — the right arm of peace — will be strengthened by a great new Boeing bomber designed for maximum effectiveness in an age of jet speed and scientific methods of interception.

The Boeing Stratofortress is not only a very large aircraft, but revolutionary in performance. It is streamlined like a javelin and propelled by eight powerful jet engines.

Obviously, the speed and range of the B-52 must remain closely guarded secrets. This photograph reveals none of its vital new elements of interior design and equipment.

First tests of the B-52 Stratofortress

have been an outstanding success. The plane was ordered into production by the Air Force even before testing. Like its speedy teammate, the B-47 Stratojet medium bomber, it has behind it 35 years of Boeing achievement. The accumulated skills and experience that gave our nation the B-17 Flying Fortress and the B-29 and B-50 Superforts have again proved their value in this new giant of the Air Force.

For the Air Force, Boeing also builds the **B-47 Stratojets**, **B-50 Superfortresses** and **C-97 Stratofreighters**; and for the world's leading airlines Boeing has built fleets of twin-deck Stratocruisers.

BOEING

Shooting the Breeze

Last September, in our anniversary issue, we ran the story of Major Louis "Flip" Sebille, the only Air Force man thus far to be awarded the Congressional Medal of Honor for action in Korea.

To illustrate the article we printed a fine sketch by Captain George Bales (a squadron-mate of Sebille's and, incidentally, a nephew of the beloved Ernie Pyle). The sketch depicted Sebille's death in the action which won him the coveted award.

We invited Mrs. Sebille and "Flip" Jr. to be our guests at AFA's Los Angeles convention. Their trip was coupled with ceremonies at which General Vandenberg presented Mrs. Sebille with her husband's medal.

Here's another chapter in the Sebille story. Not long ago we were contacted by Lieutenant Colonel Arthur J. Larsen, Chief of the USAF's Historical Properties Office.

He explained that the Air Force was compiling a fine arts collection and was tracking down every piece of original battle art that would be worthy of inclusion. The collection, a project in which General Vandenberg has been much interested, will one day hang in the projected Air Academy. Colonel Larsen wondered if we would be interested in donating the Bales sketch of Sebille's death as one of the few pieces of Air Force art to come out of the Korean War.

Needless to say, we were delighted. As a comparatively new and junior service the Air Force is sure to encourage the building of its own traditions, especially traditions of courage like that of Maj. Sebille rather than the traditions of solidified concepts of war which have so often hamstrung our military thinking.

**Don't Forget
AFA CONVENTION
and REUNION**

Detroit, August 28-31

See page 59
for hotel reservation blank

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THE COVER

We have been so gloomy, and justifiably so, about the state of American airpower that it was a relief this month to be able to come up with some encouraging news for a change. The utilization of the atomic bomb for defensive as well as offensive purpose, while still a long, long way from actuality, is the first ray of light to be found in an otherwise dark picture. See page 21.

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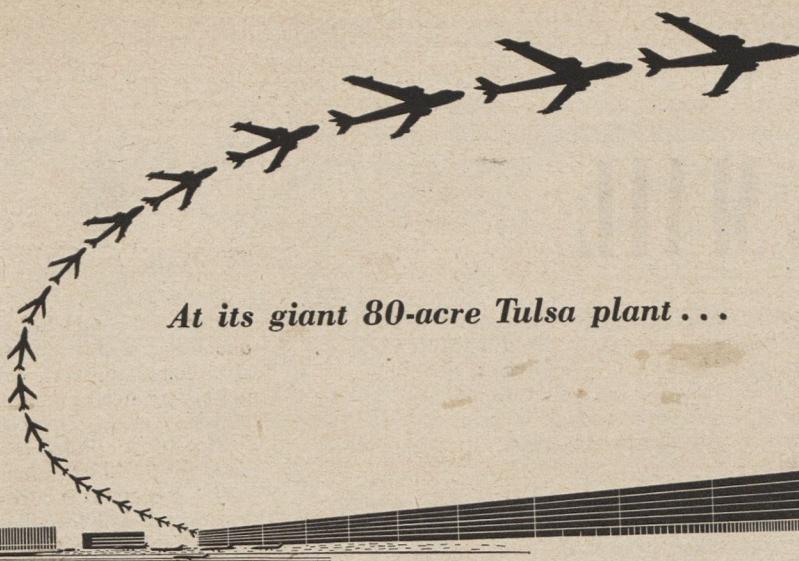
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At its giant 80-acre Tulsa plant...

DOUGLAS will produce the B-47 Stratojet in quantity!

Once again the United States Air Force has called upon Douglas experience and "know how" for extra effort to help accelerate the production of aircraft vital to the nation's defense.

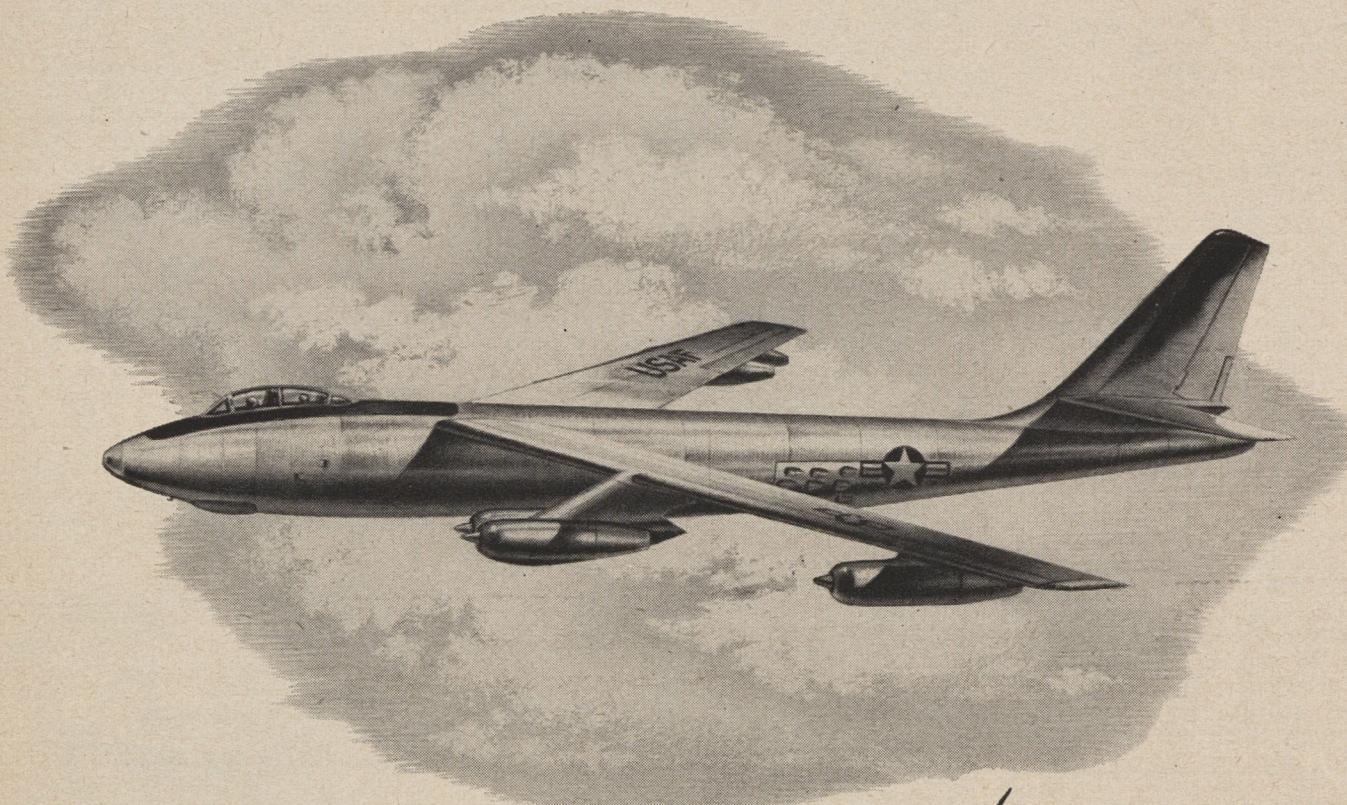
The huge plant in Tulsa where Douglas manufactured and modified 5,959 military aircraft during World War II has been reactivated.

Here Douglas engineers and craftsmen are combining their skills to give the Air Force substantial quantities of the Boeing-designed B-47 Stratojet.

It is a pleasure for Douglas to report, to the Air Force and the public, that the Tulsa plant is maintaining an "on schedule" pace. Already an undisclosed number

of B-47s are being modified here.

Douglas rolled up its sleeves and went to work from scratch at Tulsa in addition to the enormous load of maintaining production of the many types of military and commercial aircraft of Douglas design. Douglas is proud of its ability to thus further strengthen America's power in the air.



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AIR MAIL

Another Top Ace

Further investigation shows that James Gallagher (June "Air Mail") was quite correct in saying Lt. Col. Gerald Johnson, 49th Ftr. Gp., 5th AAF, should have been included among the top all-time aces. AF Headquarters says the original order (5th AAF General Order 148) had a couple of lines garbled, which explains why we omitted Johnson in our April issue. His official score of aerial victories comes to twenty-two, putting him in a



three-way tie for ace honors with Col. Neel Kearby and Lt. Col. (then Major) Jay Robbins. Here's a picture Reader Gallagher snapped of Colonel Johnson and Joe E. Brown talking things over in the Philippines in May '45.—The Editors

Enthusiast

Gentlemen: Please enter my subscription to AIR FORCE. In my opinion, it is the best aviation magazine published today, bar none. It is well written, well illustrated and tells what you want to know.

Michael O'Connor
Orange, Tex.

White Shirts and Cadillacs

Gentlemen: I have enjoyed being a member of your fine organization since my discharge from the Air Force, but I want to say that this will be my last year of membership if the increase in dues continues. I didn't think the AFA was made up of a bunch of "holdup men." You know as well as I do that, as fine a magazine as AIR FORCE is, it simply is not worth \$5 per year. About the only reason two-thirds of us guys belong to the Association is for the magazine. No kidding, gentlemen, you birds back there in Washington, D. C., may wear white shirts and sport big Cadillac autos, but remember the World War II AF wasn't made up of such altogether. So take it easy, will you, and let the rest of us "yardbirds" stay in AFA?

This is my one and only gripe, and it is with many of the boys around here who were former AF men but who will not join at this terrific "Washington stuffed shirts" price for dues. I do this

gripping only for the good of AFA.

Fred O. Mittendorf, Jr.
Ulysses, Neb.

P.S.—I'll bet you two bits you haven't got nerve enough to print this letter in AIR FORCE Magazine.

• We just won two bits. AFA members themselves, not the Washington "white shirts," voted the price increase at the convention in L. A. last year. Subscriptions to the magazine alone are still only \$4 a year.—The Editors

Civil Service Beef

Gentlemen: I'd like an honest answer to a question of AF policy that is troubling airmen on this base. Why are so many Civil Service people hired here and apparently on all AF bases?

The AF spends millions on technical schools to train us in specialties. Then there are no jobs open for our various grades because Civil Service gets preference and holds all key jobs. It is a big factor in continued low morale in the AF. Another result is inefficient and insufficient use of airmen and officers, causing the civil servants on lavish payrolls to sneer at airmen as incompetents.

We pray the Soviets don't strike and destroy vital paperwork and red tape, or logically, we're lost.

T/Sgt. Edwin D. Haberly
Norton AFB, Calif.

• Since military personnel are rotated periodically to different assignments, USAF headquarters feels civilians provide continuity and stability which contribute materially to the efficiency and strength of the Air Force.—The Editors

May Issue

Gentlemen: A very interesting issue—May. However, the fellow who wrote the article "The Ups and Downs" says on page 22, "Tinker AFB, Oklahoma City, works full time at only one specialty: service and repair of the heating equipment that keeps men and material from freezing in air operations." He seems to have overlooked 4,000 items of equipment, hundreds of B-29s, fifty F-47s, plus thousands of jet overhauls last year.

Maj. Gen. Fritz Borum
Tinker AFB, Oklahoma City, Okla.

• A low bow to General Borum and the men of Tinker.—The Editors

Gentlemen: Congratulations on your fine article on cost consciousness in the May issue. For us VART officers, who have been the low men of AF training, a bright spot appears on the horizon.



Have just completed, along with sixty-one other VART officers, an intensive sixty-hour, two-week course in personnel management and human relations at Hofstra College, Hempstead, L. I.

The 1st Air Force is to be congratulated for its effort in making this course such a success. It is hoped that this basic investment will be followed up by advanced studies in this field.

Capt. Charles Davidson, AFR
Elizabeth, N. J.

Gentlemen: I wish to compliment you of the AIR FORCE Magazine staff for the excellent material in the May issue. I feel the material is of sufficient value to seriously advise each of the engineers in my organizations to obtain a copy for their own information and file. The organization charts are extremely valuable because of the great amount of industry in this area and the frequent visitors from ARDC and AMC who contact this office for technical information.

Lt. Col. Carl E. Jackson, USAF
Los Angeles Engineering Field Office
Los Angeles, Calif.

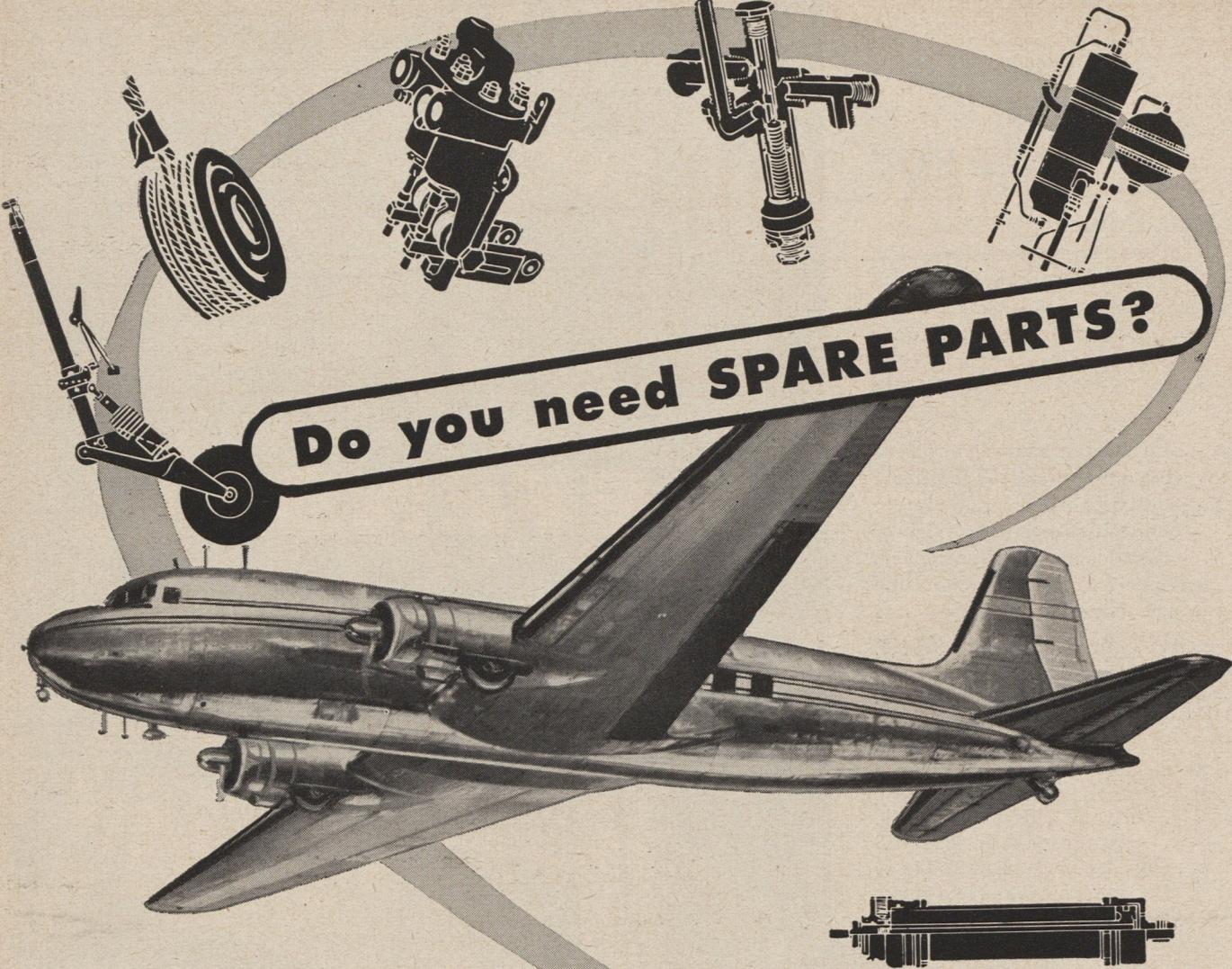
Gentlemen: In the May issue your drawing of the Douglas RB-66 should have been a swept-wing jet, not the Skyraider you picture. The photograph of the Beech T-34 is actually a TEMCO T-35 Buckaroo. On page 41, isn't Edwards AFB in California—not Florida?

Lt. B. G. Dudley
Lowry AFB, Denver, Colo.

• Right you are! Edwards is indeed in California. We'll have two Chambers of Commerce after us. We incorrectly used an AD Skyraider as our model for the



RB-66. We should have used the A3D, a twin jet that's so new the only picture available is of a desk model (top, above). And also here's what the Beech T-34 looks like.—The Editors



Do you need SPARE PARTS?

You can look to Canadair as a permanent, reliable, fully authorized source for spare parts for C47/DC3 type aircraft.

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CA52-13UST

INFORMATION on positions at NORTHROP

Northrop Aircraft, Inc. is engaged in vitally important projects in scientific and engineering development, in addition to aircraft production. The program is diversified, interesting and long-range. Exceptional opportunities await qualified individuals.

The most responsible positions will go to top-caliber engineers and scientists. However, a number of excellent positions exist for capable, but less experienced, engineers. Some examples of the types of positions now open are:

ELECTRONIC PROJECT ENGINEERS...
ELECTRONIC INSTRUMENTATION
ENGINEERS...RADAR ENGINEERS...
FLIGHT-TEST ENGINEERS...
STRESS ENGINEERS...
AERO- AND THERMODYNAMICISTS...
SERVO-MECHANISTS...POWER-PLANT
INSTALLATION DESIGNERS...
STRUCTURAL DESIGNERS...
ELECTRO-MECHANICAL DESIGNERS...
ELECTRICAL INSTALLATION
DESIGNERS.

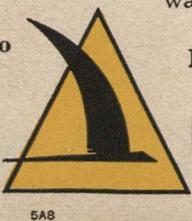


Qualified engineers and scientists who wish to locate permanently in Southern California are invited to write for further information regarding these interesting, long-range positions.

Please include an outline of your experience and training.

Allowance for travel expenses.

Address correspondence to
Director of Engineering,
Northrop Aircraft, Inc.
1045 E. Broadway,
Hawthorne, California



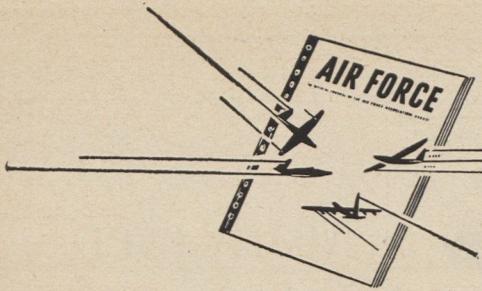
5A8

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Devastating armament, advanced search and navigation equipment and high speed make the Air Force's new Northrop F-89 Scorpion a powerful defensive weapon. Like the

Northrop Black Widow P-61 of World War II, the Scorpion was designed from the outset to do a specialized job superlatively well. This new all-weather interceptor is another product of the long experience of Northrop's top designers and craftsmen.



RENDEZVOUS

Where the Gang gets together

2D WEATHER RECON SQUADRON (M): Former members of the 2d Weather Recon Sqdn. are coming from all over the country to attend the annual reunion at the Palmer House, Boston, Mass., Labor Day Weekend (Aug. 30-Sept. 1, 1952). Send any addresses you may have to *Franklin Gunther, 1076 E. 29th St., Brooklyn, N. Y.; John McKenna, Brookside Dr., Noroton, Conn.; John Flynn, 535 N. Montello St., Brockton, Mass.; or Al Miles, 173 Cross St., Central Falls, R. I.*

68TH FIGHTER REUNION: Ex-officers and EM of the 68th Fighter Sqdn. are having their second bi-annual reunion at the Lincoln Hotel, Indianapolis, Ind., July 4-6. Send registration reply to *Allen G. Roth, 32 Adams Drive, Beech Grove, Ind.*

409TH BOMB GROUP (L) REUNION: The second reunion of the 409th Bomb Gp. (L) will be held at the Neil House, Columbus, Ohio, this Labor Day weekend. A bulletin is published to keep former members of the Group together, so even if you can't attend the reunion, contact *Bernard B. Bernstein, 6514 N. Albany, Chicago 45, Ill.*

488TH BOMB SQUADRON REUNION: Former members of the 488th Bomb Sqdn., 340th Bomb Gp., are invited to a reunion in Chicago, Ill., Aug. 15-17, at the Hotel Sherman. Write me for more information. *Al. Berg, Chairman, 2547 W. 63d St., Chicago, Ill.*

C-47 CREW: Would like to locate the following C-47ers who crossed the North Atlantic with me Oct. 7-8, 1944: George E. Prieston, 0-421212 (navigator); Joe F. Cook, 18036260 (crew chief); and Walter J. Fialkowski, 33593679 (radio operator). And where's Miles J. Murphy, 0-748746, Mason City, Iowa, last seen in Detroit in '44? Would like to hear from other old buddies. *Robert B. McMullan, Rt. 1, Rice, Tex.*

WEINSCHELBAUM-WINSCHEL: Would Dave Weinschelbaum (or Winschel) of Philadelphia, Pa., in charge of the 41st Troop Carrier Sqdn. book, please contact Seymour "Si" Speilier, 2250 Wallace Ave., The Bronx 67, N. Y.

SGT. JESSE RALPH SLAGLE: Does anyone know Jesse's present address? *Carol Mitchell, 149 W. Lanvale St., Baltimore, Md.*

410TH BOMB GROUP (L): Before the 410th left France for the ZI in July 1945 a unit history was in the making. Any one know if it was ever finished, and where available? Also, would like to hear from any former members of the 645th Bomb Sqdn. (L). *T/Sgt. Phillip Rouse, 3450th Motor Vehicle Sqdn., F. E. Warren AFB, Wyo.*

351ST BOMB GROUP: I'd like to hear from anyone formerly with the 351st Bomb Gp., 8th AF, and especially anyone with the 510th Bomb Sqdn. Also, is there a history of the 351st? *Maj. Walter Stockman, Rochester Air Regional Office, 20 Symington Pl., P. O. Box 1669, Rochester 3, N. Y.*

458TH BOMB GROUP ROSTER: Does anyone have a roster of the 458th Bomb Gp., 96th Wing, 8th AF, formerly stationed at Horsham Saint Faith, near Norwich, England? *Richard C. O'Brien, 1462 Silverlake Blvd., Los Angeles, Calif.*

WINGS OVER THE PACIFIC: Anyone know where I can buy a copy of *Wings Over the Pacific*, second edition? *Vernon C. Rubenking, P.O. Box 185, Beason, Ill.*

LT. JAMES BERTHEA BIGGS: We're gathering information about Lieutenant Biggs, for whom Biggs AFB, Tex., was named. Would like to hear from anyone who can give us pertinent data or who was a friend of his, as well as anyone associated with Biggs Field around 1919 or 1920. *Dorothea Magdalene Fox, Base Librarian, Biggs AFB, Tex.*

1ST LT. T. O. BAMBERG: Would like to hear from somebody who knew 1st Lt. T. O. Bamberg, 836th Sqdn., 487th Bomb Gp., 8th AF, or who knows the final word on his "missing in action" status. *Capt. H. J. McCarty, Jr., USAFR, 11 Park Pl., New York 7, N. Y.*

ATC RADIOMAN: Where's former Sgt. Thomas Gallagher, radioman, from New England? He was with ATC at Hickam and Canton Island. *Harry J. Barnett, 610 Irving St., Vandergrift, Pa.*



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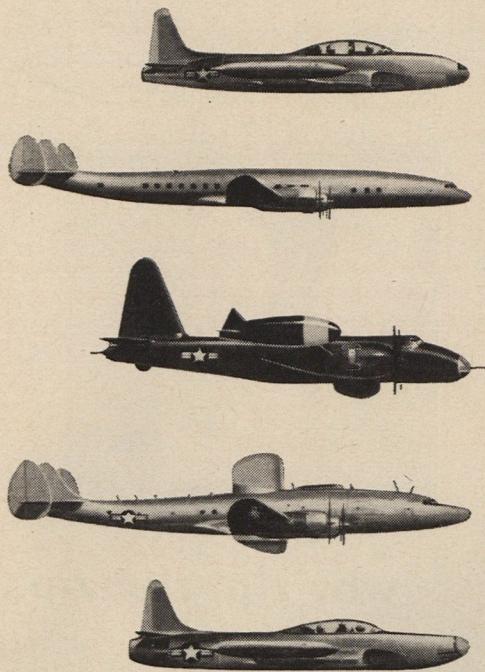
ZIPPO

**the one-zip
windproof lighter**

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

Leadership demands constant achievement



T-33 JET TRAINER
SUPER CONSTELLATION
P2V NEPTUNE
MILITARY CONSTELLATION
F-94 STARFIRE

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insures dependability and advanced design in Lockheed planes

AIRCRAFT DESIGNING and construction are *precise* sciences. That's why Lockheed Engineering has more departments than a big university.

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AIRPOWER IN THE NEWS

TOTAL FEAF combat losses (June 26, '50-May 23, '52): 693, including 261 jets. Total enemy combat losses: 473 destroyed, of which 328 were jets, 125 probables, including 74 jets. Record of F-86 vs MIG-15: F-86s lost, 35; MIG-15s, 278 destroyed, 46 probables. . . AF strength figures: 973,000, as of June 30, '52.

\$3.5 BILLION is sought by USAF for base construction in FY '53. . . A \$2.3 million aerial reconnaissance laboratory will be built by AF at Rome Air Development Center. . . A separation center has been established at Wolters AFB, Tex. . . Big Spring AFB, Tex., is getting a new name—Webb AFB—to commemorate 1st Lt. James S. Webb, Jr., AF pilot killed in aircraft crash in 1949. . . Only twenty-one of 154 AF ZI installations have "adequate family housing readily available at reasonable rents" for both officers and airmen.

49TH AIR DIVISION, made up of a wing of North American B-45 Tornado light jet bombers and a wing of Republic F-84G Thunderjet fighter-bombers, will move to UK soon from Langley AFB, Va.

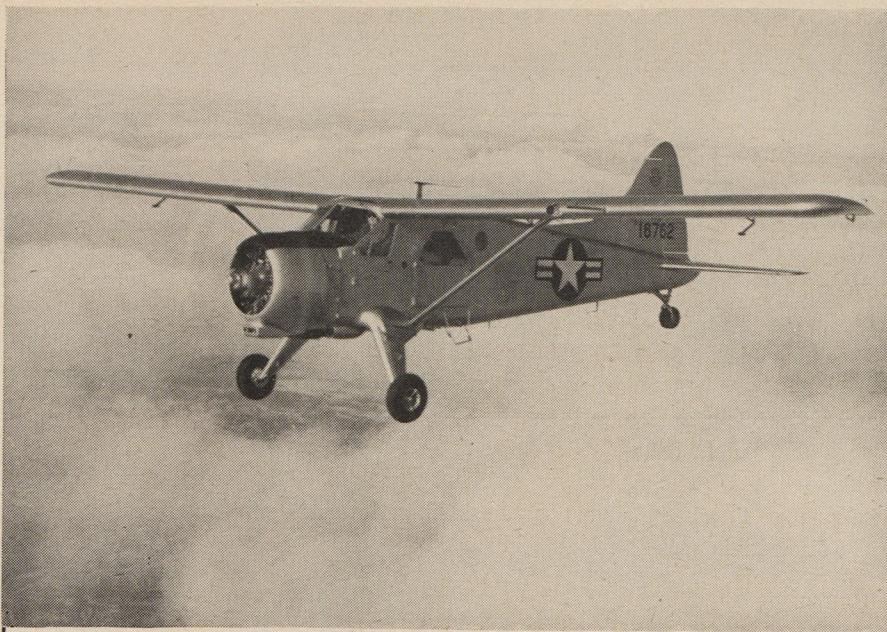
NATIONAL AIR RACES of '52 have been postponed until the Labor Day weekend, 1953. . . Defensive judo is being installed as part of physical conditioning program at all SAC bases.

COMMAND AND STAFF: Brig. Gen. Morris J. Lee, who has commanded Headquarters Command, USAF, with headquarters at Bolling AFB, since October of '50, was recently transferred to Pentagon where he replaced Brig. Gen. Harlan C. Parks as Director of AP Personnel Planning. General Parks assumed command of 3275th AF Indoctrination Wing, Parks AFB, Calif.

INDUSTRY: Republic Aviation's orders are now at largest volume since World War II, with backlog of more than \$800 million. . . Goodyear Aircraft is working under AF contract to design and develop radically different and improved tow target for jet-fighter gunnery practice. . . Contracts amounting to \$4.5 million for construction of sixty-six lighters and barges have been awarded to ten companies by Navy for use of Army Transportation Corps and USAF.

COLOR Photo Processing course is being set up at Lowry AFB. . . Unexplored Okefenokee Swamp in Georgia is being mapped through aerial photography by reconnaissance men from Lockbourne AFB, Ohio. . . Camera repairmen are soon to be offered electronics training to cover new equipment. . . Three-way safety in case of emergency bailouts is aim of latest automatic parachute release for Rapid City AFB, S. D., flight crew members. . . Under new Training Command Policy, from now on AF Reservists must be willing to fly before being called to active duty. . . Coast Guard Headquarters has announced the establishment of an Organized Reserve Aviation Training Program—the first in Coast Guard history. . . Flight training for Reservists will be resumed on limited scale at twenty-two bases this summer. Conventional aircraft will be used at start of program, with jet and advanced types scheduled later.

NOMINATIONS: For four-star rank — Generals Lauris Norstad and Otto Weyland. For three-star rank — Generals P. B. Cabell, Laurence C. Craigie, Leon W. Johnson, Charles T. Myers, and Joseph Smith.



VERSATILE!

The *Beaver*
L-20

IS CAPABLE OF MANY
AND VARIED MISSIONS

As a casualty evacuation version the L-20 carries a pilot and attendant, two litter patients and two sit-up patients. It is fitted with full navigation and radio facilities for day and night all weather operation.



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PEOPLE

In The Air News

Capt. Daniel J. Miller, 3d Air Rescue Squadron helicopter pilot in Korea, has won



the Cheney Award for 1951, presented annually to airmen for valor. Miller, in February '51, landed his copilot three times under heavy enemy fire to evacuate six wounded soldiers. He

later won a Silver Star for similar heroism. The Cheney Award honors a pioneer airman killed in Italy in 1918.

Col. Walker M. "Bud" Mahurin, one of the top all-time aces, downed by Red ground fire in Korea, on his 67th mission and third sortie of that day. The 33-year-old ace had 20.75 air victories in the last war (5th and 8th AF), plus 3½ MIGs, and another damaged. He had been CO of the 4th F-1 Wing, original Sabre outfit in Korea.



Lt. Gen. Earle E. Partridge, Commanding General of the Air Research and Development Com-

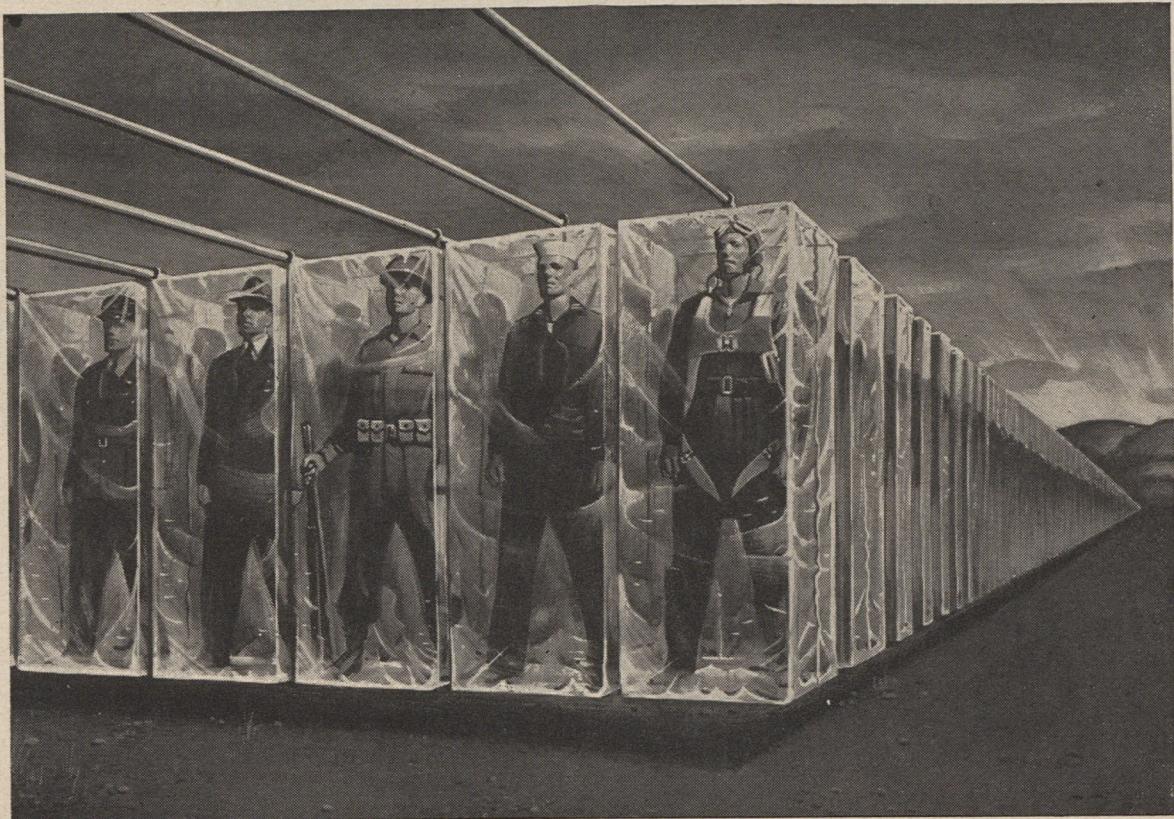


mand, and James H. Doolittle, civilian advisor to the AF Chief of Staff, head a board of ARDC experts studying AF equipment in Korea. The survey is to de-

termine how present equipment is functioning, what changes should be made, and what new equipment is needed.

Richard C. Hodges, president of the Michigan Hotel Assn., has been named by AFA President Harold C. Stuart to be general chairman of AFA's 1952 convention in Detroit. He will head more than 100 people in planning and staging the affair. He was an AF major during the war and won the Legion of Merit. A charter member of AFA, he manages a Detroit hotel.





WE COULDN'T PUT MEN IN MOTHBALLS!

But when the present emergency suddenly caused the need for electronics specialists, they were available just as surely as if they had been stored away with mothballed equipment. PHILCO's TechRep Division was ready to supply the needed manpower.

The highly trained electronics experts in this organization are excellently suited for the job at hand. Military electronic devices are becoming more complex than those in use at the end of World War II . . . but the PHILCO TechRep Field Engineer has kept pace with these develop-

ments. He is able immediately to go into the field to supervise and train others in the installation, operation and maintenance of the most complicated electronic systems. He is capable and resourceful. His years of experience are backed by intensive training in theory and its practical application.

Today, as in World War II, the TechRep Field Engineer is with military units wherever he is needed. He is proud of his organization . . . proud of the military team with which he works . . . and proud of his contribution to the security of the country he serves so well.



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GOVERNMENT AND INDUSTRIAL DIVISION

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Delco Radio is the world's largest builder of automobile radios—the leader in production and assembly of component parts.

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Each and every step in the manufacturing of Delco Radio products is closely supervised to maintain high, uniform product quality.

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Completely integrated for efficient production from raw material to finished product, Delco Radio meets any customer need.

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You can depend on Delco Radio for on-time delivery of products with uniformly high quality.

DELCO RADIO

DIVISION OF GENERAL MOTORS
KOKOMO, INDIANA





New Marine Jack-of-all-aircraft—Latest addition to the helicopter fleet of the U. S. Marine Corps is the Sikorsky HO5S, now being delivered in substantial quantities.

This is the third type of Sikorsky helicopter to be used by the Marine Corps which has pioneered many revolutionary combat tactics with helicopters in actual combat in Korea.

This type, also in service with the U. S. Army Field Forces, is a four-place development of the earlier Sikorsky S-52, holder of the world's speed and altitude records.

In service with the Marine Corps, the new HO5S helicopter is expected to be of great value as an observation-liaison aircraft and for evacuation of wounded and trapped men.

SIKORSKY AIRCRAFT
BRIDGEPORT, CONNECTICUT
ONE OF THE FOUR DIVISIONS OF UNITED AIRCRAFT CORPORATION

'Dear Senator...'

By Harold C. Stuart

President, Air Force Association

Last month, as a showdown vote on the future of airpower came up in Congress, this letter from AFA's president was sent to each U. S. Senator

Within a few days you will be called upon to engage the enemy in a battle for command of the air, just as surely as if you were piloting an F-86 over MIG Alley.

I refer, of course, to the forthcoming vote in the Senate on the defense budget for the 1953 fiscal year, and particularly the airpower portions of the budget.

As Gen. Carl A. Spaatz, then our Chairman of the Board, stated more than a year ago in AIR FORCE Magazine, "the battle for command of the air begins, not over the battlefield but in the White House, in Congress, in the press, on the drawing boards and on the production lines."

STRETCHING THE STRETCHOUT

Since that time the Administration has seen fit to postpone the readiness date for the Air Force program from twelve to eighteen months beyond the critical target date of July 1, 1954, recommended by the Joint Chiefs of Staff. The House of Representatives has stretched out our airpower capability even further, to late 1957. Activity on the drawing boards and production lines has been deliberately retarded. Our citizens have become confused over the increasing gap between the airpower strength of Russia and the Free World. The nation has lost the sense of urgency, a condition which seems made to order for the communist program of aggression.

The 1953 defense budget, as Air Secretary Finletter recently put it, "is the turning point in the decision as to whether we will have the kind of an Air Force that can determine whether we will have war or not have war."

The Air Force Association took exception to this defense budget at a time when it was decidedly unpopular to do so, when we were a voice in the wilderness crying against the airpower stretchout argument as "a shabby excuse for programming the nation's military requirement beyond the critical security date while maintaining a business-as-usual civilian economy and assuring a politics-as-usual election year."

Since then the arguments advanced to support the stretchout have fallen by the wayside, one by one. The evidence is available to you in statements made before

your Appropriations and Armed Services Committees, and particularly your Preparedness Investigating Subcommittee. And yet a number of misconceptions continue to prevail regarding our airpower capability.

OUR STRENGTH vs. RUSSIA'S

You have been told, for example, that the Air Force has "nearly 15,000 planes in active use," as if this indicated an adequate airpower buildup. The important question, of course, is how does the strength of our Air Force compare with that of Russia? Your Appropriations Committee received the answer recently from Gen. Nathan F. Twining, Acting Air Force Chief of Staff. The Soviet Union, he said, has "about 20,000 aircraft in organized air units and an equal number in the back-up and various other forms of reserve."

Then General Twining made a point which illustrates how misleading that 15,000-plane figure (which includes non-combat types) can be. "The figure to keep in mind," he said, "is the number of aircraft in organized combat air units; for that is a measure of immediate combat potential. Almost all of the 20,000 aircraft in the Soviet Union's organized air units are land-based combat aircraft. *This is twice as many combat aircraft as are presently in organized combat units of the US Air Force and naval aviation combined.* Compared to the sizable reserves of Soviet aircraft, the US Air Force has virtually none."

You have been told that, "We are trying to build the world's best air force, not the biggest." If this is an effort to justify the fact that Russia's MIG-15s outnumber our F-86s by about a six-to-one margin in Korea, the American airmen over MIG Alley cannot appreciate this reasoning. They know that the Reds can take air supremacy away from them almost at their leisure. They know that our eight-to-one superiority in air combat to date—also cited to help justify the airpower stretchout—is hardly a realistic barometer of relative air strength in the Korean War. The Soviet is committing to combat only a portion of its vast jet armada in the Far East, and is using MIG Alley as a training area, probably for future conflicts.

But more important than our position in Korea is this theory that we do not have to match the Soviet in

HAND IN HAND . . .



Peace . . . strength . . . freedom . . . are symbolically emphasized by the growing number of NATO countries who operate F-84 Thunderjets.

Belgium, Denmark, France, Greece, Italy, Netherlands, Norway and Turkey...in association with the USAF and Republic Aviation...are developing these strong defenses against aggression.

REPUBLIC

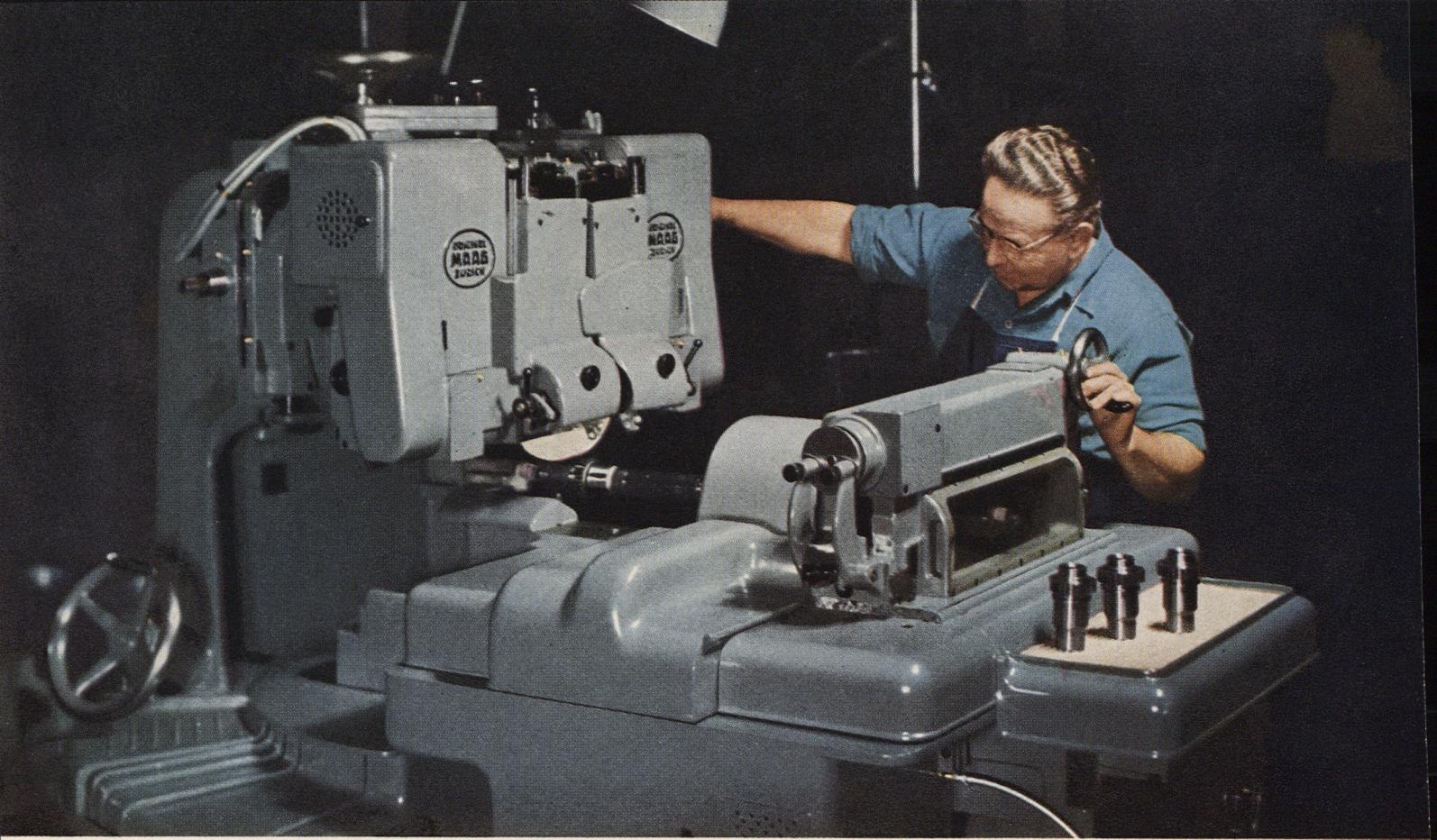


AVIATION



FARMINGDALE, LONG ISLAND, N. Y.

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How to slow down the fastest aircraft engine ever made!

Though the jet engine's record-breaking speed is an asset in a fighter plane, it's a handicap in driving many vital accessories of a plane.

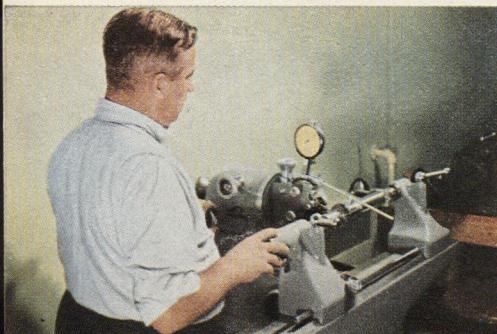
Hydraulic pumps, generators, radar equipment can't be driven directly from a shaft that turns 16,000-38,000 rpm. To reduce the shaft speed to 2,000 rpm without cutting the engine speed, proved a tricky problem.

Barium's Jacobs Aircraft Engine Co., Pottstown, Pa., solved it by grinding spe-

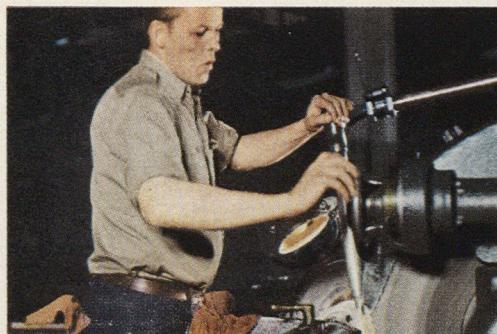
cial gear transmissions to precision tolerances on Swiss gear grinders.

Jacobs gear specialists can do as well for you. Other members of Barium Steel Corporation can supply your other steel needs. This group of strategically located companies controls quality from blast furnace to end product, works as a self-contained unit to speed urgently needed orders.

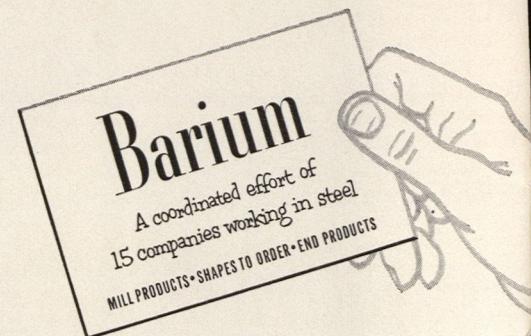
Address inquiries to Barium, 25 Broad Street, New York City.



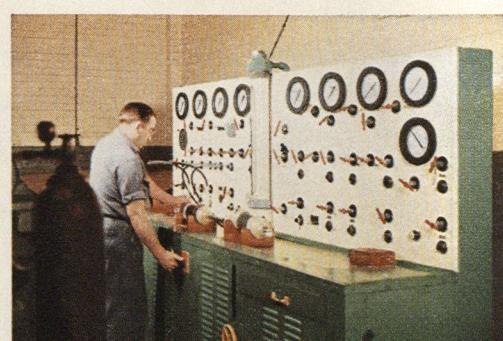
This inspector tests Jacobs gears for accuracy in a controlled temperature area. Tolerances to .0001 in. are needed to meet high load requirements on many parts such as those for aircraft gears.



This worker's skilled handling of the latest grinding equipment helps maintain Barium's Jacobs Aircraft Engine Co.'s leadership in spur and helical gears, from tiny sizes up to 12 in. diameter.



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This board tests hydraulic parts with rapid precision. In addition to auxiliary drives and other jet components, Jacobs makes complete reciprocating aircraft engines and auxiliary power plants.

DEAR SENATOR...

CONTINUED

numbers of modern aircraft. This is a most dangerous concept to be promulgated upon the public. General Spaatz has said that in counting our airpower needs the United States has but one alternative: "We must outmatch Russia in numbers of modern planes, and must build aircraft toward that goal."

There is no valid reason why the United States, in its position of world leadership, should be outnumbered in the air by the Soviet Union. At this critical juncture you are being called upon to rectify this situation.

NOT AHEAD IN QUALITY

As for building the "world's best air force," we must not delude ourselves with the belief that we are necessarily ahead of the enemy in the race for qualitative superiority. The MIG-15, at least as good as our best operational interceptor, is merely an indication of what Russia can do in quality of weapons—and she now has better and faster planes in production.

At present we are operating an Air Force sadly lacking in modern planes. General Twining, before your Appropriations Committee, clarified this point. He explained that "the large-scale production of jet-propelled aircraft, with speeds approaching and exceeding that of sound, has rendered obsolete or obsolescent all comparable piston-driven combat aircraft." And he added that the Air Force inventory of combat aircraft is made up of planes "of which nearly three-quarters still consists of World War II piston-driven types." Thus, only one fourth of the aircraft in today's Air Force can be classed as modern.

This, in itself, answers another claim; namely, that the 95-wing Air Force, authorized in 1950, will be achieved this summer, or virtually on schedule. The 95-wing program, it must be remembered, called for *modern* aircraft in all units. Under that program eighty of the wings were to be combat types. From General Twining's statement it can be concluded that at present we have an Air Force of *less than twenty-five modern wings*. And still we stretch out our airpower capability!

KEY IS RESEARCH AND DEVELOPMENT

The key to "the world's best Air Force" is to be found in its research and development program. The record shows that Congress hasn't cut, in recent years, the military's request for airpower research and development funds. However, serious cuts have occurred before the requests reached Congress, at the Department of Defense level.

The Air Force, for example, requested some \$725 million in research and development funds for the 1953 fiscal year, and made strong pleas to the Research and Development Board of the Department of Defense that it grant the Air Force this money. Instead, the Board arbitrarily cut the request to \$580 million. It was subsequently reduced to \$525 million, which amount the Senate is now considering. Despite the truly "fan-

tastic" weapons in the offing, Air Force research and developments is being handicapped by this cutback in funds.

We ask that the Senate consider the funds proposed for the Air Force in terms of modern air weapons on hand to control world balance of power. It seems clear to us that without this balance in our favor the Free World is subject to blackmail of the worst sort—and possibly surprise atomic attack.

The airpower stretchout already has taken its toll. It has slowed the pace of aircraft production below the industry's capability. It has retarded vital research and development programs. It has weakened the aircraft industry's subcontracting program, and thereby weakened the industry's production base. It has increased the unit cost of air weapons. (Due solely to the stretchout, for example, the unit cost of the B-36 has already been increased by some \$160,000.) It has proved beyond question of doubt that a stretchout of production schedules breeds further stretchouts.

AN ISSUE OF INTEGRITY

The issue, as we see it, is one of integrity. The "slippage" we hear so much about is too often a state of mind. We have by-passed target dates for security, and subsequently delivery dates for military goods, as if they had no meaning. You, Mr. Senator, must hold the line. Only you can make it possible to return to the Joint Chiefs of Staff original estimate of the situation—an estimate which never has been refuted—that 143 modern wings (126 combat plus 17 transport wings) must be in being by July 1, 1954; that anything less would be hazardous to the nation's security.

The Senate is being asked to consider an Air Force budget for fiscal year 1953 which, according to the Administration, should total \$20.7 billion, and which would deliver the airpower desired by late 1955 or early 1956. The Senate also is considering a budget of \$19.2 billion, approved by the House, which would deliver this airpower late in 1957. The Senate should provide, we submit, funds for a budget which would deliver 143 modern wings by July 1, 1954, a budget which, it is estimated, would cost about \$25.5 billion, and which would include, as a priority item, \$725 million for Air Force research and development.

It will be argued, of course, that we have lost so much time due to the stretchout that the July 1, 1954, date, under limited mobilization, is impossible of achievement. The stretchout, however, is based on an "it can't be done" philosophy. As an organization we are in close touch with both the military and the industry. We think it can be done—that 143 modern wings by July 1, 1954, can be achieved—without full mobilization—if the nation is given the necessary leadership. We ask the Senate to assume that position of leadership and, in so doing, alert our military, our industry and our people to the extent that, as a nation, we become fully aware of the threat which communist aggression has imposed upon us.—END



300 Mile Hike **WITHOUT A SINGLE BLISTER**

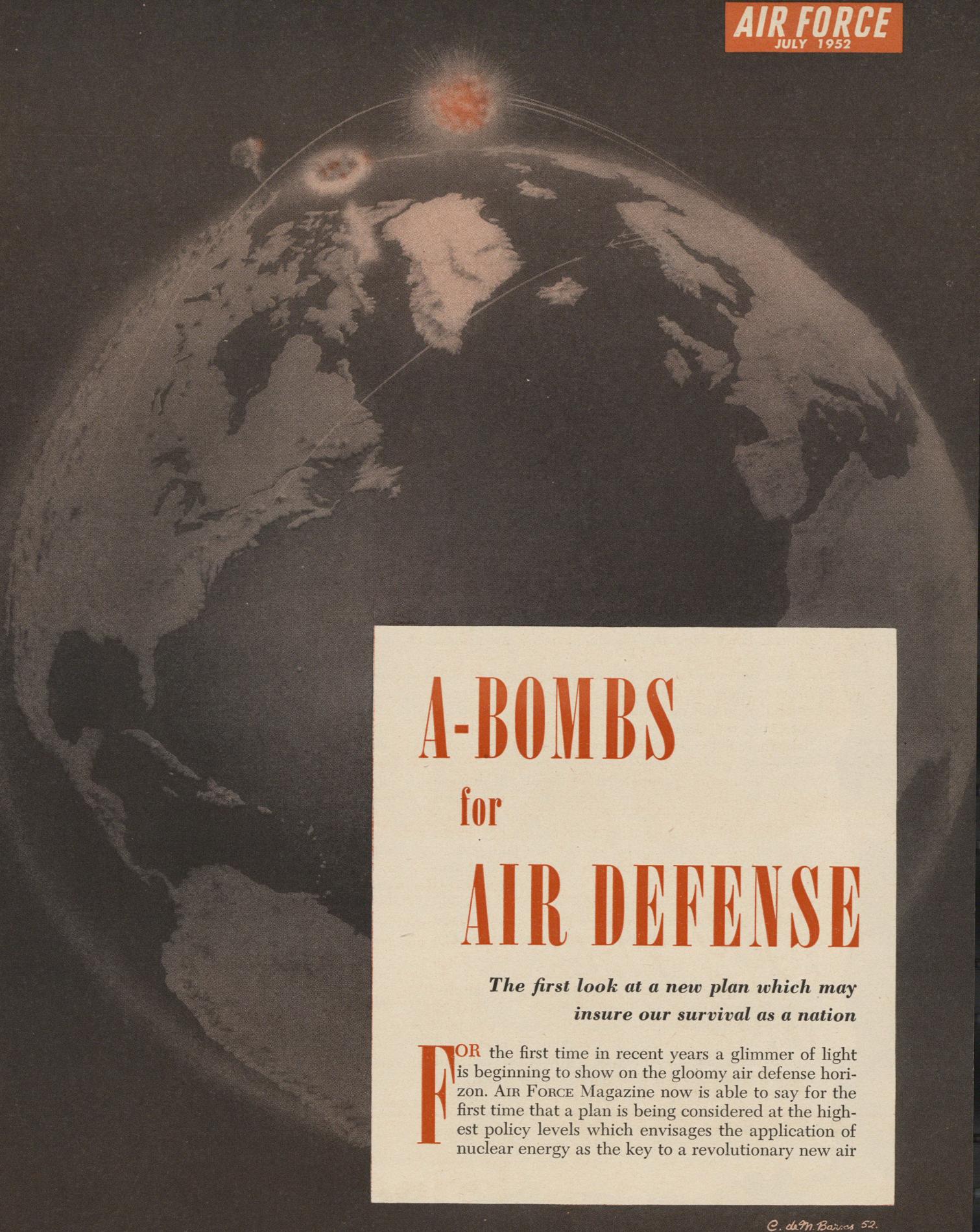
The marines have landed! Torn roads, blasted bridges, raging rivers can't hold back the steady, abundant flow of supplies vitally needed for victory. Guns, drugs, plasma, clothes are flown over impassable terrain by Fairchild's battle-proved "Flying Boxcar."

Battle-proved to deliver dependably—with or without an airfield—rugged and versatile for any combat assignment, the Fairchild C-119 lives up to its designers' intentions, giving speed, stamina, and utility under toughest conditions. It never lets our armed forces down! That's why the C-119 is number one all-purpose transport for military airlift operations of the UN forces in Korea, in Europe and in the United States.



FAIRCHILD *Aircraft Division*
Hagerstown, Md.

Other Divisions: Engine Division, Farmingdale, N. Y. Stratos Division, Bayshore, L. I., N. Y. Guided Missiles Division, Wyandanch, L. I., N. Y.



A-BOMBS for AIR DEFENSE

*The first look at a new plan which may
insure our survival as a nation*

FOR the first time in recent years a glimmer of light is beginning to show on the gloomy air defense horizon. AIR FORCE Magazine now is able to say for the first time that a plan is being considered at the highest policy levels which envisages the application of nuclear energy as the key to a revolutionary new air

defense system. Heretofore confined to an offensive role, the A-bomb, under this system, would make it possible for the United States to cope successfully with atomic attacks by piloted aircraft.

At the moment and for some time to come we can safely count on the destruction of no more than five percent of an enemy bomber fleet at night or in instrument weather—and no more than twenty-five percent in broad daylight. Some of our best authorities on air defense now feel that, with atomic defensive weapons, we may be able to knock down ninety-five percent under any conditions. These men do not claim that the nation would be spared wide-scale destruction and a heavy loss of blood and treasure. But they do anticipate that it would have a chance, a very good chance of survival. And this is a much more optimistic appraisal than anything which could have been predicted heretofore in the face of the growing threat of Russia's strategic-atomic capability.

The new look in national security is as yet only a potential. Its development will require bold and imaginative thoughts and deeds by a nation farsighted enough to exploit its atomic defensive capability.

Why Now?

Since World War II the United States has been the keystone of the defense of the free world. This responsibility has been a basic factor in shaping our policies concerning the development of our arsenal of atomic weapons.

First, we were called upon to create an overwhelming retaliatory strategic-atomic capability. This force, embodied in the men and airplanes of the Strategic Air Command, thus far has been the compelling factor in dissuading the Soviet Union from launching a major war.

Our next requirement called for the atomic defense of Western Europe. To combat the threat of Russian armies overrunning the western democracies on the continent, the Atomic Energy Commission developed its family of so-called "baby" A-bombs. Coupled with the perfection by the Air Force of a tactical-atomic delivery capability (AIR FORCE, December 1951), the tactical-size A-bombs promise to make it possible to bring our European defenses to the point where the Russians will think twice before making a move in that direction.

The United States originally was limited in its atomic weapon development by the small quantities of critical material available. Presumably, our production of fissionable material was sufficient only to provide a stockpile of strategic weapons of a size that would deter the launching of a full-scale war. But major increases in this production rate, coupled with advances in armament technology that have led to the design of small but efficient A-bombs, have drastically changed this picture. From a technological

point of view, therefore, the possibility of developing an atomic air defense system has arisen simultaneously with the need for doing so.

The need is all too obvious. As reported last month in this magazine, the probable development of a Soviet H-bomb capability introduces a new factor of major importance into our already obsolescent concepts of atomic warfare. The possibility that a totalitarian regime might soon have the ability to launch a surprise offensive of unprecedented destructive power now makes it mandatory for us to "win" the initial defensive phase, if we are to witness—as a nation—even the second day of a future war. Against such offensive power the conventional approach would be woefully inadequate. Something new must be added and now our scientific and military planners are becoming more and more convinced that this "something" must be atomic air defense.

What Will It Look Like?

Several factors will influence the nature of this "new look" in air defense. Atomic air defense weapons must have enough range to hit oncoming enemy aircraft far out at sea, or over the uninhabited Arctic regions. Otherwise, our own air defense system might cause considerable destruction of our populated areas. Furthermore, although our atomic stockpile is increasing rapidly, A-bombs are not yet as plentiful as hand grenades—nor as cheap. For air defense purposes, they will be available in only "limited" numbers for some time to come. Finally, we must arrange to keep our own air crews safely out of any areas in which atomic air defense weapons may be used.

These considerations lead to the conclusion that atomic warheads for air defense will be used only in area weapons—either pilotless aircraft having a range of several hundred miles or large patrol planes carrying atomic-antiaircraft rockets.

One stringent requirement must be imposed on the atomic air-defense arsenal. Every weapon must be absolutely explosive-safe in case of "malfunction over—" or "crash on—" our own territory. This would prevent extensive destruction of our own cities and permit salvaging of the critical material in the case of aborted missions. The foreseeable technological obstacles to this kind of safety device are not insurmountable.

When Will It Be Used?

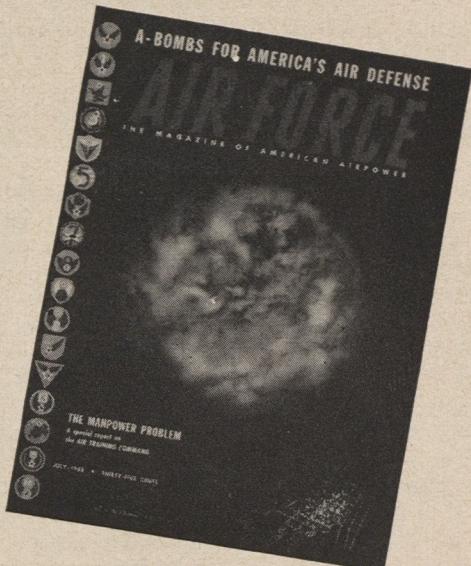
In top policy circles, plans are being made to exploit this new approach. As the Russian H-bomb menace reaches potentially disastrous proportions, all air traffic approaching the borders of the United States will have to be rigidly controlled. All unidentified air-

(Continued on page 24)

A NEW APPROACH TO AIR DEFENSE

A new plan, now being considered at the highest policy levels, calls for the use of atomic bombs as the key to a revolutionary air defense system. It would, for the first time, insure the survival of the nation under determined enemy air attack:

- At the moment we can safely count on destroying no more than five percent of an enemy bomber force at night or in bad weather.
- By using small atomic bombs as the warheads of ground-to-air or air-to-air missiles we could expect to reverse this ratio.
- Major increases in the production rate of atomic bombs, plus new discoveries in armament technology, now make it possible to develop such an air defense system.
- For the plan to work, all air traffic in the approaches to the US will have to be rigidly controlled by extending our radar interception network.
- Enemy aircraft must be intercepted far at sea or over the uninhabited Arctic.
- Conventional "point defense" systems will become useless except for overseas bases.
- Cost will be high but we will get more air defense for our money and, more important, for the first time can have "enough."



A-BOMBS FOR AIR DEFENSE

craft will have to be challenged far at sea and, if still unidentified, ordered to proceed to a special airport in an isolated area. If a challenge goes unanswered the aircraft undoubtedly will be attacked with conventional weapons. If an unidentified aircraft should approach a point from which an H-bomb attack could be launched against one of our coastal cities, atomic air defense weapons will be called upon.

Enemy Deception

The possibility of enemy deception cannot be ignored. The Russians might send a fleet of airplanes carrying conventional explosives—or no bombs at all—against the United States, in order to provoke us into expending our atomic air defense stockpile. But such tactics would be highly unprofitable.

In the first place, atomic air defense bombs will be cheap enough to make it worthwhile to expend one of them to destroy a single strategic bomber which might be a potential A-bomb or H-bomb carrier. Second, deception on the part of the Soviets is most improbable, for they would be depriving themselves of the element of surprise, which they otherwise could enjoy at the moment of their main attack against the United States.

A *surprise* atomic offensive against a conventional air defense system might succeed, in the words of Gen. Ennis C. Whitehead, "beyond the fondest hopes of the enemy commander." On the other hand, if the enemy chose to *alert* our air defense system by deception tactics—merely to cause the expenditure of a small fraction of our total atomic stockpile—he would deprive himself of his own certain method of defeating us—a surprise attack. It has become apparent that rigid control of all air traffic approaching the United States must be imposed—and that our atomic air defenses will be prepared to go into action whenever a "bogey" fails to respond to a challenge.

"Point Defense" a Luxury

With the development of these atomic air defense weapons, antiaircraft artillery batteries for the defense of the United States will be as useless as were the wooden guns that guarded Washington in the dark days of December 1941. The same will be true of all short-range weapons, including guided missiles such as NIKE, which are useful only for "point defense" systems. The local air defense of a critical plant deep in the hills of Tennessee is senseless—and a waste of defense dollars—since an enemy bomber bound for Tennessee would have to pass over hundreds of industrial plants and cities which would offer far more lucrative targets. Of course, "point defense" systems are mandatory for overseas bases but they are a luxury at home, since their cost could be better spent on area weapons which can stop the enemy long before he reaches our borders.

The biggest weakness of present-day air defense is in fighter armament. This armament deficiency greatly

raises the cost of air defense by increasing the number of fighters required. Now, given atomic air armament which can achieve an "almost-certain" kill of an enemy bomber, the number of air defense weapons required could be substantially reduced while still maintaining the same level of defense. This basic consideration is modified, however, by the necessity of providing a much higher level of defense than has heretofore been thought possible—something well over ninety percent—against the H-bomb threat. The "saturation raid" becomes a thing of the past with the development of atomic air defense. But "saturation streams" of bombers—spaced several miles apart—may be used by the enemy along the approaches to critical industrial areas. This possibility creates a need for additional atomic air defense weapons, to keep pace numerically with the Soviet strategic-atomic fleet.

The Cost Element

The electronic gear which constitutes a major part of the cost of any air defense system will be modified in two important ways by the introduction of atomic weapons into the air defense arsenal. In the first place, the radar warning range will have to be extended far beyond the continental limits of the United States, and the reliability of the early warning system will have to be improved. This will mean additional major investments in new radar and communication nets, far beyond those already planned. On the other hand, the use of atomic warheads will make the requirements for precision in the radars and in the fire control and guidance equipment less severe than they are at the present time. These savings, however, will be outweighed by the cost of providing greater reliability and greater range in the radar early warning system.

Thus, atomic air defense might cost more than the savings which it would make possible in conventional defense systems. But the increased costs would produce major increases in air defense effectiveness. We would get more and better air defense for our money and, more important, we would for the first time be able to have "enough."

What Will It Achieve?

Just as the atom has proved to be "less than perfect" as an offensive weapon, so it will also prove to be a "less than perfect" defensive weapon. But there is little doubt that it will constitute a major step forward and, in fact, would offer the sole chance of survival against the kind of destruction toward which modern weapon technology is leading.

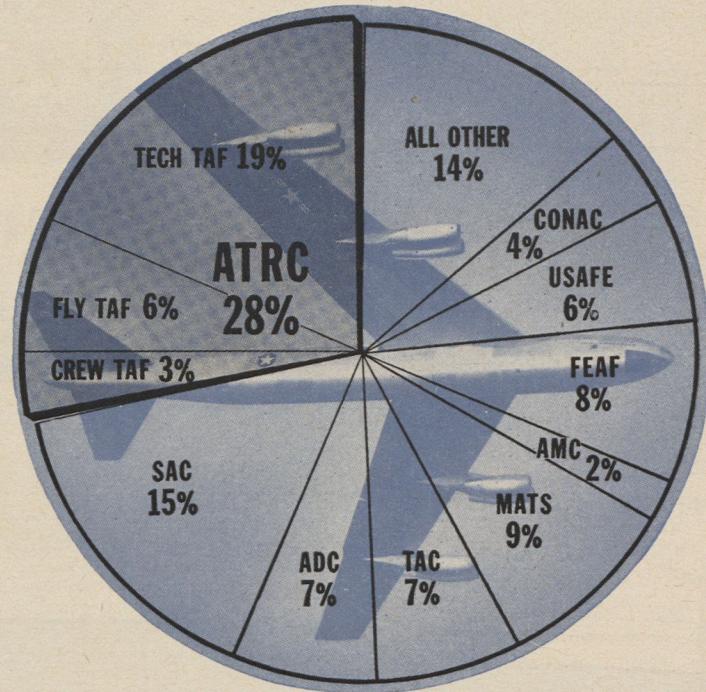
There are wishful thinkers who continue to look for "perfect security" in a miracle of science. These people forget that *both* offensive and defensive warfare are dynamic, and that new discoveries can be applied to one as well as the other. That is why some of us will still have to run for the cellars when the chips are down. For this major step forward in air defense capa-

(Continued on page 51)

THE HUMAN ELEMENT IN AIRPOWER

Air Training Command, USAF's largest, must match US quality against Red quantity in the manpower field

A SPECIAL REPORT



BASEBALL FANS say that the team in first place on the Fourth of July will win the pennant.

Like many another hallowed proverb, this one has been shot full of holes time and again. But it comforts the fans whose favorites lead the league at mid-season, and sends less fortunate rooters digging into record books for examples of teams which shook off this jinx to win.

A good many Americans have been telling themselves that the standings in the MIG Alley league indicate another pennant for the US Air Force. But proverbs don't win pennants, and the Air Force is meeting tougher opposition every day.

Where does our lineup show an advantage?

In equipment? The MIG is a pretty fair match for our F-86. We have some better planes coming, but so have the Reds.

In productive capacity? We probably could have the edge, but right now we're more interested in cars and

refrigerators. We count on having time to convert, when and if we have to. Meanwhile, the Reds turn out many more airplanes than we do.

In our A-bomb and H-bomb production? We've been feeling smug on this score, but did you see last month's AIR FORCE?

In manpower? Not in numbers, certainly. The Iron Curtain countries are way ahead, and they produce a bigger annual crop.

In skilled manpower? This one is in our favor. General Vandenberg has said, "Superior training has given us the edge in Korea."

In previous issues, AIR FORCE has presented the facts on various elements of airpower. Speak of "Airpower" and you raise a picture of combat aircraft, industrial potential, fire power, strategic bases. But airpower, despite our dreams, is not yet at the push-button stage. So far, as Lt. Gen. Ira Eaker said years ago, we have the button. Meanwhile, combat aircraft continue to be operated with men at the controls, with other men on the ground to maintain the airplanes and serve the flying team.

Thus the factor which may, as General Vandenberg says, represent our "edge" over the enemy is the human element in airpower—trained to a level which cannot be matched behind the Iron Curtain.

Many segments of American life share credit for developing the high

quality of our human resources. Our standard of living permits a large percentage of our youth—in relation to those in other parts of the world—to attend high school and college. Our democratic philosophy promises advancement to anyone with ability and ambition. Just in growing up we develop an inherent familiarity with mechanical devices. Our farms and homes are mechanized; almost every family has a car and a radio. Youngsters advance from taking apart a battered alarm clock and adjusting the television set to more intricate and sometimes exasperating experiments.

Accepting this product, and adapting its native ability to the skillful use of the tools of airpower, is the mission of the USAF's Air Training Command, with headquarters at Scott AFB, Ill. It conducts its training mission through three subordinate commands—the Technical Training Air Force (TTAF) at Gulfport, Miss.; Flying Training Air Force (FTAF), Waco, Tex.; and Crew Training Air Force (CTAF), San Antonio, Tex.

ATRC must wrestle with our manpower anomaly, that while we are ahead in skilled—or rather potentially skilled—manpower, we are far behind in total manpower. Our quality must outfight the enemy's quantity. To do this the potential ability of every individual entering the Air Force must be ascertained, and each man trained to the peak of his ability.

TRAINING COMMAND 9 YEARS OLD

ATRC celebrates its ninth birthday this month. It was activated July 7, 1943, with the merger of the Technical and Flying Training Commands. ATRC's official abbreviation includes an "R" to distinguish it from the wartime ATC—Air Transport Command.

JOINT CHIEFS OF STAFF

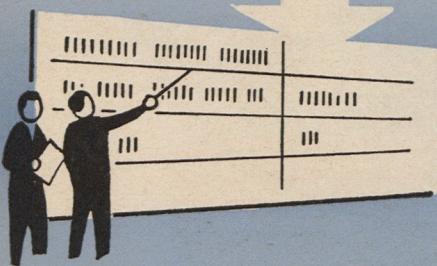
Determines Size of Air Force



DSC/OPERATIONS



ASSISTANT FOR PROGRAMMING



Develops over-all program in terms of groups and troop strengths.

DIRECTOR MANPOWER & ORGANIZATION



Prepares breakdown of groups in terms of authorizations by AF specialty codes known as SC-PR-9. This report is furnished to Director of Military Personnel.

DSC/PERSONNEL

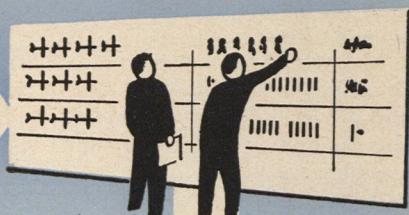


DIRECTOR OF MILITARY PERSONNEL



Applies latest personnel inventories and gains and losses to authorizations by AFSC to obtain what is known as the TPR (Trained Personnel Requirement).

DIRECTOR OF TRAINING



Determines which AFSCs will be trained by ATRC and prepares consolidated training directive to ATRC based on the TPR.



AIR TRAINING COMMAND

TECHNICAL TRAINING AIR FORCE

BASES

FLYING TRAINING AIR FORCE

BASES

CREW TRAINING AIR FORCE

BASES

THE HUMAN ELEMENT IN AIRPOWER

ATRC's emphasis on quality permeates activities in all of its three training air forces, but currently Crew Training is achieving it under the most difficult circumstances. To meet urgent requirements for trained air crews in SAC, TAC, ADC, and overseas commands, Crew TAF bases are running the heaviest schedules in ATRC.

At Randolph AFB, Tex., bomber crews destined for SAC are on schedules that require flying operations around the clock six days a week, with frequent Sunday make-up flights. Tyndall AFB, Fla., which trains two-man intercept crews, has logged more than a hundred hours a month on some of its F-94s. At Wichita AFB, Kan., where future B-47 pilots undergo jet transition training, one squadron set an unofficial record of averaging eighty-three hours a month on its assigned T-33s.

Fighter-gunnery students at Nellis fly F-84s and F-86s from dawn to dusk, and their schedules often call for ground school classes after dinner.

These high-pressure schedules are expected to be alleviated when new bases, now being readied, are put into use. But in the meantime, combat commands need CTAF's graduates. Maj. Gen. K. P. McNaughton, ATRC Vice Commander, summarizes: "There's an airplane waiting for each crew, and a place to use the airplane."

But despite the pressure under which crew training is being conducted, the quality of its graduates remains tops, as experienced SAC crews recently discovered.

At Randolph, graduating crews are rated either first or second priority. First priority crews are considered ready for combat operations without further training. Second priority crews, judged to need more operational practice, are assigned to SAC to replace crews sent overseas. Yet one of these second priority crews, fresh from Randolph, recently won a SAC-wide bombing competition.

Crew training is a function ATRC did not have during the war. At that time, ATRC-trained pilots, navigators, bombardiers, and gunners were assigned upon graduation to operational training units (OTUs) run by the four continental air forces. Multi-engine crews were first introduced to the B-17 and B-24 at OTUs, having trained in ATRC on planes like the T-7. Similarly, fighter pilots graduated in the T-6, moving into P-38s, -47s, and -51s at OTUs.

This wartime operation was far from ideal, but it was adopted be-

This is the way the Air Force arrives at its manpower requirement for the Training Command.

cause all possible combat aircraft were needed overseas, and it seemed the best way to prepare crews with least use of combat planes.

Later studies showed, though, that the system actually wasted time and aircraft. Crews were checked out in combat types at OTUs, then spent months overseas in simulated missions before operational commanders judged them fit for combat. Much the same condition applied with ground crews, trained on mockups and whatever parts could be salvaged from wrecked planes, who needed further orientation on combat equipment.

Today ATRC is listed in all AMC contracts to receive early production models of new planes and equipment. Students in each of ATRC's three air forces now train on the latest gear.

The same is not true, however, of personnel trained in ground specialties. A significant percentage is unaccountably "lost" between graduation from tech schools and assignment to the niches for which the individuals were trained.

An ATRC officer, on temporary duty in Korea to check the effectiveness of training as indicated in on-the-job performance, was confronted by a bomb group commander who complained that he was critically short of armament systems technicians. This surprised the ATRC colonel, for he was from Lowry AFB, where armament specialists are trained, and was unaware that a critical shortage existed.

During the next few days he interviewed airmen of the bomb group.

'WE'D RATHER BE GOOD THAN BIG'

By Lt. Gen. Robert W. Harper
COMMANDING GENERAL, ATRC



AMERICANS have a fascination for bigness. The fact most people will probably remember about ATRC after reading this issue is that it is the biggest command in the Air Force.

But we in ATRC cannot take credit for our size. Like someone with overactive pituitaries, we cannot control our dimensions. The size of our training establishment is determined by Air Force requirements.

In ATRC we are instead deeply concerned with a factor the Soviets have come to respect more than our size. That factor is *quality*. How big we are is beyond our control, but quality is the keystone of our operations.

Vast strides in development of new aircraft and electronics equipment, new concepts of aerial warfare, our vulnerability to air attack, and the increased requirements for ground support are all adding tremendously to the problem of training a modern Air Force.

ATRC's instructors and supporting staff can be proud that, so far, their efforts have been successful. We have kept pace with Air Force expansion. We are proudest of the record of quality ATRC's graduates are achieving in the skies over Korea.

Typifying this new concept in training as well as the urgency of crew training, CTAF personnel ferry latest airplane types direct from factories to their bases for use in training, even before these types are service-tested by AMC.

By keeping flying personnel in one organization from their first military flight until they are turned over to combat commands as members of a team, the Air Force can keep close track of the number of individuals who need to be trained for air crews and put them into proper assignments upon graduation.

He found armament technicians—graduates of the Lowry course—in supply warehouses, in administrative jobs, even in kitchen duties. Soon he was able to return to the bomb group commander with enough names to make up the group's shortage of highly skilled men.

The Air Force recognizes that such malassignments dissipate the advantages of our edge in skilled manpower; they also require ATRC to train men all over again for jobs that should have been filled.

This is how the system is designed to work. The Pentagon, figuring needs

of the Air Force for all the special skills it uses, directs ATRC to train the numbers it estimates will be required by a certain date, usually a year away. This order is in the form of a TPR-trained personnel requirement.

ATRC screens all new arrivals to the Air Force through interviews and tests given at its three indoctrination bases. Those who indicate an aptitude for one of the needed skills are sent to ATRC's seven technical schools or to schools operated by the Army and Navy for training of common specialists.

Toward the end of the training period, the Pentagon issues shipping instructions—so many jet engine mechanics to TAC, B-50 flight engineers to SAC, radar maintenance technicians to ADC. These "using" commands accept the trainees to fill vacancies in their units.

This system requires the Pentagon to mesh production of equipment with production of technicians and crews. But as often happens in production of new equipment, the Air Force may delay acceptance of a quantity of planes because of the shortage of one vital part. When that part arrives, USAF may acquire dozens of planes at a time, and at this point mechanics must be available to service them.

It would be impossible to match this erratic schedule in training, so ATRC trains men at a steady pace and gives graduates useful work to do while production snags are cleared up. About that time a Congressional committee visits a base and makes headlines when it finds highly skilled people doing menial chores.

ADC's aircraft control and warning units are manned in part by technician specialists trained months ago at Keesler AFB, Miss. When deliveries of electronic equipment fell behind schedule, they were put into other duties. Now most of them are back in their specialty.

"You can't put men in cocoons," says General McNaughton. "We're actually more sensitive to a change of production than is the Air Materiel Command. They can put their hardware items in a bin until they're needed. We can't store people like you can nuts and bolts."

The colonel who visited the bomb group in Korea named a typical case. Upon graduation from the armament course at Lowry, an airman had been assigned to a stateside bomb group. But the group did not yet have the electronic equipment on which he had been trained. The personnel office noted that the airman could type and assigned him to a desk job. His immediate supervisor, happy to get a capable typist, arranged to give him

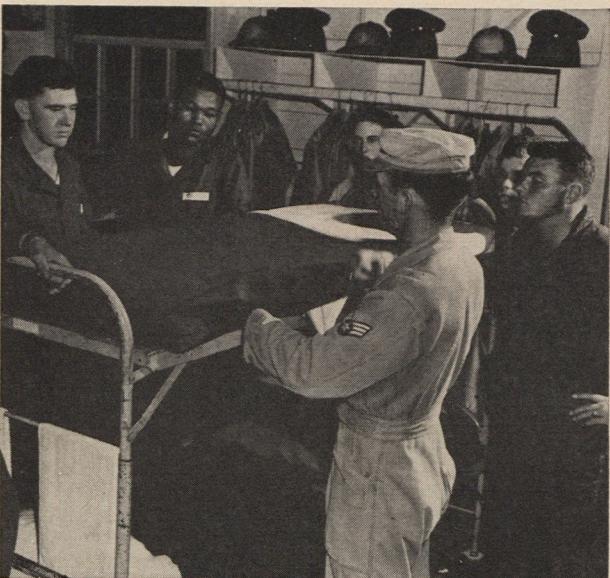
(Continued on page 32)

U.S. ARMY-U.S. AIR FORCE RECRUITING

MAIN STATION



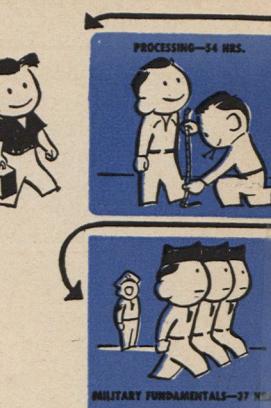
School's out, and Waldo Gafford elects to volunteer.



With barracks-mates, Waldo learns how to make a bed.



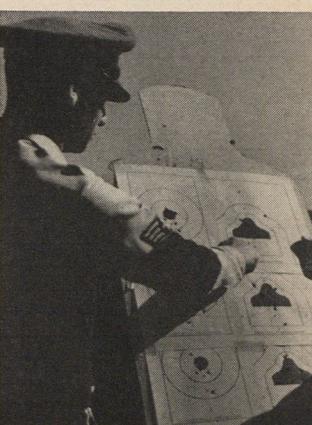
There must be better ways to get airmen into shape.



Newcomers to basic training m



He sweats over aptitude tests



Waldo checks his scores on the

THE HUMAN ELEMENT IN AIRPOWER

INDOCTRINATION TRAINING

3 WEEKS



9 WEEKS



After talking it over, he picks the Air Force.



Meet the sergeant ... hear about services chaplains perform

... stoically accept their shots ...

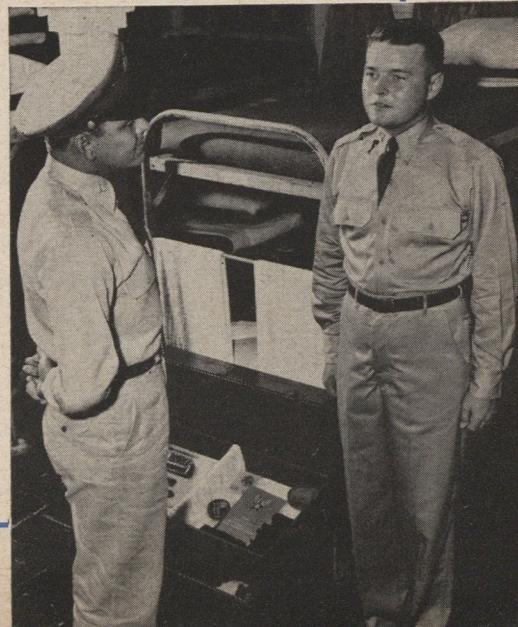
... and have their suntans fitted.



... and over pots and pans!

Midway in basic, a 12-hour pass.

The group discusses citizenship.



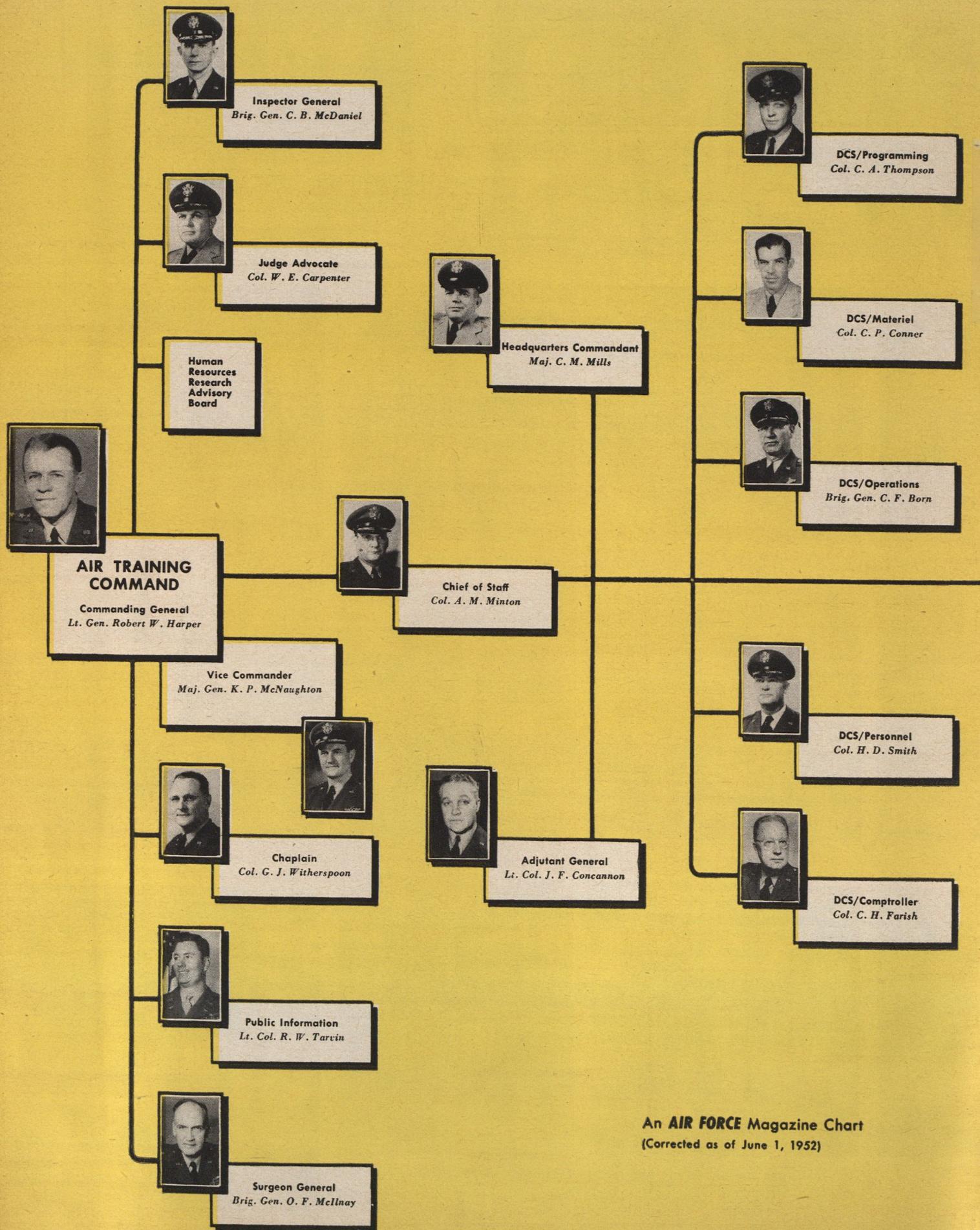
range.

He finds a gas mask comes in handy.

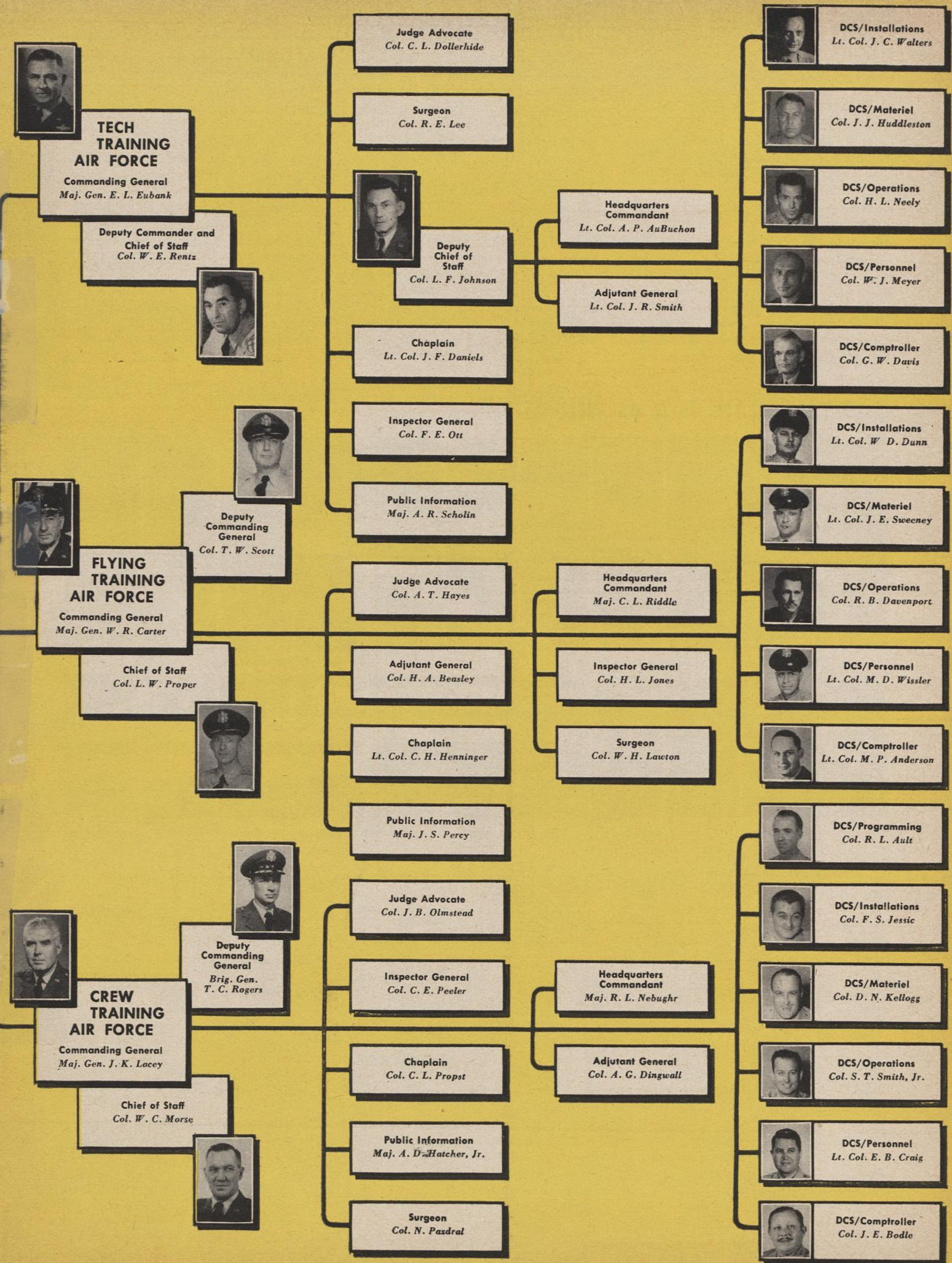
Training ends, an airman's born.

Photos by S/Sgt. Robert L. McManus, Hq. TTAF

The AIR TRAINING COMMAND



An **AIR FORCE** Magazine Chart
(Corrected as of June 1, 1952)



THE HUMAN ELEMENT IN AIRPOWER

the group went overseas, the armament specialist had "disappeared."

This is what Brig. Gen. Carl A. McDaniel, ATRC's inspector general, calls the "rathole" factor. "We train enough men," he says, "but many of them disappear down the rathole."

USAF emphasizes that the system can work only if personnel officers all over the Air Force identify graduates of highly skilled courses and make them available when needed.

In its program to select and train personnel, ATRC is guided by studies conducted by research psychologists at the Human Resources Research Center at Lackland AFB, Tex. Perhaps best known of the work performed by psychologists to improve

ners, and more prone to accidents.

Stanine tests save money by eliminating poor prospects before they ever get started. They have also produced one important by-product. Through compilation of test results over a long period, ATRC now knows how many qualified applicants it must have to graduate a given number of pilots.

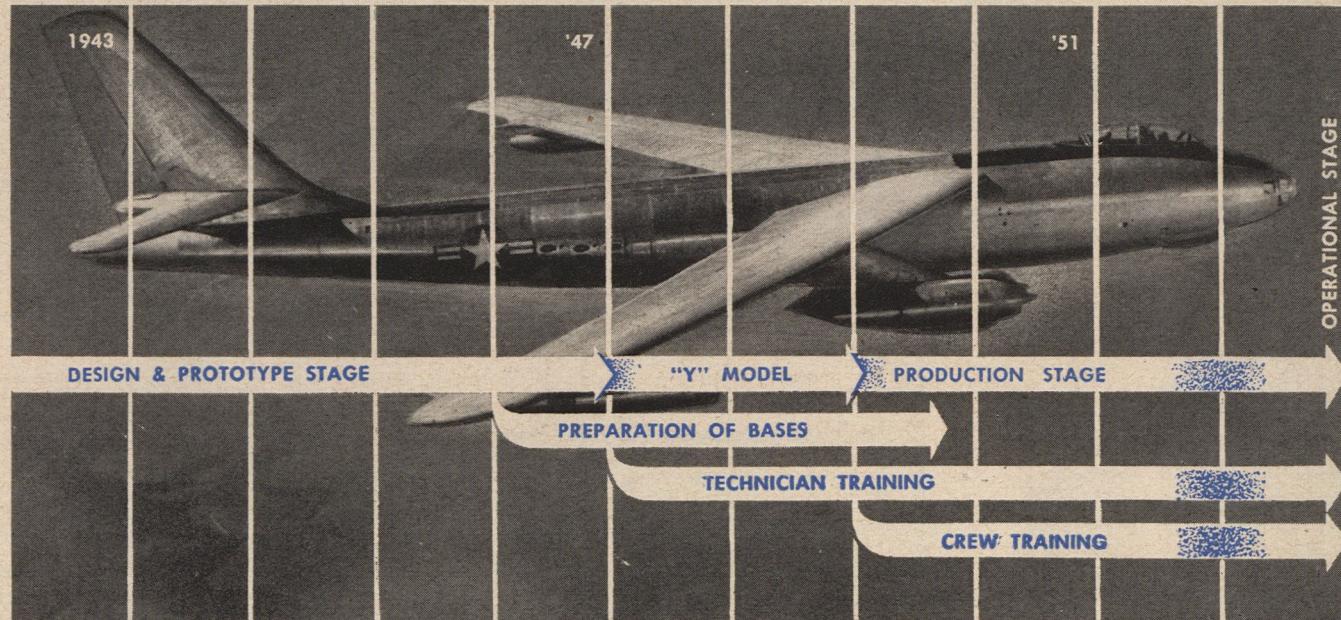
For example, if ATRC wants to wind up with 1,000 pilots, it can do so by accepting 1,097 applicants who make the top stanine score of nine. Only ninety-seven will wash out, and ATRC will get the most mileage out of its training dollar. But to get 1,097 candidates who make a score of nine, ATRC would have to reject 12,429 physically qualified applicants, in

On the theory that almost everybody has one field in which he is better than in others, ATRC now uses a battery of tests to measure an individual's ability and aptitude in eight broad fields — mechanical, clerical, equipment operator, radio operator, technician specialty, services, craftsman, and electronics technician.

A man may score poorly in the clerical field, yet may prove to have the makings of a good mechanic. Through the use of these tests, ATRC estimates that it has raised the Air Force's level of ability by thirty percent.

The wartime test showed only eleven percent in the top level. Present aptitude tests find thirty-eight percent making a top score in at least one of

LEAD TIME MEANS MEN AS WELL AS PLANES



This photochart of the B-47 program illustrates how USAF training requirements must be meshed with aircraft production.

our manpower resources are the classification tests developed during World War II for prospective pilots, navigators, and bombardiers. These tests, popularly known as "stanines," were outstandingly successful and are still in use today.

Through stanines, ATRC can predict that ninety-one percent of candidates who score a nine in the tests will graduate from pilot training. Seventy-six percent of the eights will get through; seventy-one percent of the sevens. On the other hand, if ones were admitted to training, ninety-five percent would wash out.

Following up through combat records, ATRC discovered that its wartime graduates who made low stanine scores when the tests were being validated turned out to be mostly co-pilots instead of pilots, poorer gun-

these times an intolerable waste of available manpower resources.

If, however, ATRC were to set the pilot selection standard at a stanine score of five, it could get 1,000 graduates out of only 2,403 qualified applicants, rejecting about 800 who score below five and washing out 600 more during training.

Thus, out of the same manpower pool, ATRC will graduate more than five times as many pilots using a cut-off of five as it would get with a cut-off of nine, but at a much higher training cost per pilot.

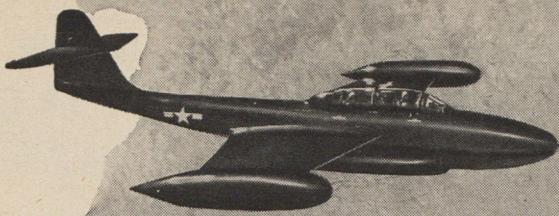
A similar series of tests has been devised since the war to predict success in training of Air Force technicians. During World War II, prospective ground crewmen were selected for school on the basis of their AGCT score alone.

the eight fields. At the other end, only six percent are rated unqualified for technical training, as compared to fourteen percent during the war.

These tests might make ATRC's job easier except that training is in a constant race to keep our human element abreast of technological developments. The advent of the jet engine, greatly increasing the speed of aircraft, has brought on the development of entirely new systems of bombing and gunnery, and of fighter and bomber tactics.

One example is the short life of the Norden bombsight. During the war it was one of our proudest achievements, its workings a closely guarded secret. But, as Price Day of the *Baltimore Sun* recently wrote: "Beside today's electronic and radar devices, the Norden sight has a little of the look

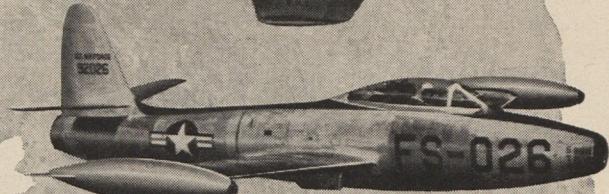
LOCKHEED T-33 TRAINER POWERED BY ALLISON
J33 TURBO-JET (Also F-80 Shooting Star)



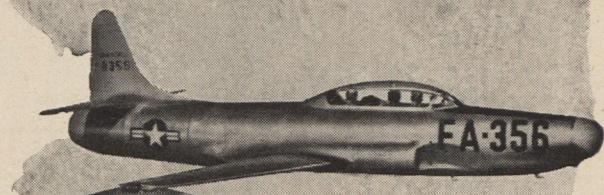
NORTHROP F-89 SCORPION POWERED BY TWO ALLISON
J35 TURBO-JETS WITH AFTERBURNERS



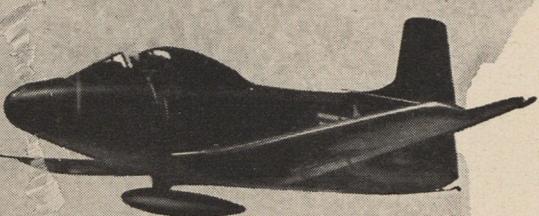
GRUMMAN F9F-3 PANTHER POWERED BY ALLISON
J33 TURBO-JET



REPUBLIC F-84 THUNDERJET POWERED BY ALLISON
J35 TURBO-JET



LOCKHEED F-94 ALL-WEATHER FIGHTER
POWERED BY ALLISON J33 TURBO-JET WITH AFTERBURNER

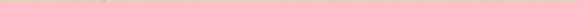


DOUGLAS A2D SKYSHARK POWERED BY ALLISON
T40 TURBO-PROP

NORTH AMERICAN XA2J-1 SAVAGE POWERED BY
ALLISON T40 TURBO-PROP



CONSOLIDATED P5Y FLYING BOAT POWERED BY
FOUR ALLISON T40 TURBO-PROPS



Around the world

ALLISON JET ENGINES
have accumulated more than
1,600,000 hours in the air

an unsurpassed record of experience covering
every condition of training, alert and combat



Allison

DIVISION OF GENERAL MOTORS, INDIANAPOLIS, INDIANA

Builders of J35 Axial, J33 Centrifugal Flow Turbo-Jet Engines, T38 and T40 Turbo-Prop Engines

THE HUMAN ELEMENT IN AIRPOWER

of an arrowhead just unearthed."

The Norden operated on a visual-mechanical principle. Now sights are electronic. Newest in production is the K-1, replacing another relatively new system, the AN/APQ-24.

General McNaughton points out that while the Q-24 imposes some strain on the operator, maintenance is within tolerable limits. The K-1, on the other hand, is "an operator's dream, but a maintenance man's nightmare."

HRRC, evaluating the degree of ability necessary to maintain the K-1, found that it approximates the level of a graduate engineer. Yet the men being trained to maintain it are nineteen and twenty years old.

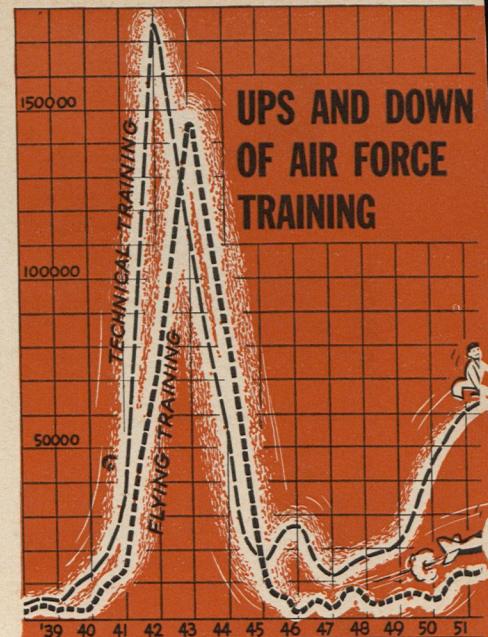
If the development of this new system were an isolated example, it would be difficult enough to find and train men capable of understanding

its maintenance. But the trend is toward more complex equipment all down the line.

There are two possible solutions to the training problem imposed by complicated equipment. First, ATRC's present solution is to break down the equipment's functions into a series of operational concepts, each of which can be taught to one individual. This means that maintenance of the whole system is handled by a team, no member of which is fully qualified to trouble-shoot the entire device. It is the only solution available to ATRC, but it is costly in time and manpower, and one absent member hampers the effectiveness of the team.

The second solution lies in the development of the equipment.

"We must impress on the designers of new equipment not to make it so easy to operate that it can't be main-



tained," says General McNaughton.

Taking into account the qualifications of personnel available to maintain and repair equipment will increase the design cost and lengthen the time before the equipment will be available for operational use.

But what good is a superb piece of equipment if it cannot be kept in working order?

This problem may become all the more acute in light of a reduction in quality of individuals now entering the Air Force. A year ago only one in a hundred new recruits failed to score higher than three on at least one of the eight aptitude clusters. Today, six out of each 100 are in that class.

The principal reason for the decline is the Department of Defense order requiring all three services to share equally in the manpower pool.

The mechanics worked out to administer this order are rather complicated, but essentially it limits the percentage of desirable people which each service is permitted to recruit. Only eight percent of a service's strength may come from top level, or Class I, individuals who score between 93 and 100 on the Armed Forces Qualification Test (AFQT).

The services are allotted thirty-two percent in Class II, which embraces those who score between sixty-five and ninety-two. Scores between thirty-one and sixty-four are in Class III, with thirty-nine percent authorized. The remainder must come from Class IV, scoring between thirteen and thirty. Men scoring below thirteen are not accepted by any service.

Recruiting of Class IV people is not restricted, but must include at least twenty-one percent of the service total. If a service finds it cannot meet its quotas in Classes I, II, and

Wanted: Combat Veterans

THE INSTRUCTOR is the key man in ATRC, and one of the most important in the Air Force. Yet in attracting candidates to instructor jobs, ATRC is bucking both personal and administrative prejudices.

Personal because individuals who would make the best instructors feel they would get ahead faster and enjoy more satisfaction in doing a job themselves rather than in teaching others to do it.

Administrative because until recently the Air Force classification system had no provision for recognizing an instructor. USAF headquarters, assigning overseas quotas, knew only that ATRC was well stocked with specialists, but not how many were instructors.

ATRC is tackling both these problems. To improve the quality of training, it seeks to blend veterans of combat and combat-support activities with honor graduates from its courses. Maj. Jim Jabara, USAF's first jet ace, is a training advisor at ATRC headquarters. Capt. Russell Brown, first pilot in history to shoot down a jet plane, is an instructor in the fighter-gunnery school at Nellis AFB, Nev. So is Lt. Ralph Gibson, also a jet ace. Enlisted veterans of Korean operations are joining the faculty of ATRC's technical schools.

What does ATRC offer an instructor? First, a promotion policy that favors instructors. Also, now that the new Air Force Specialty Code identifies instructors, ATRC can assure applicants a normal tour of duty at its stations.

Who makes a good instructor? ATRC looks for experience and enthusiasm. If you know your job and prefer it to any other in the Air Force, you're good instructor material.

Let's say you're an armament systems mechanic just returning from overseas. After a short instructor training course, you'll start out teaching airmen to strip a 20-mm cannon, for instance. For an hour or so each day after your six hour instruction stint, you'll meet with other instructors to acquaint yourself with what they teach. Before long you'll progress to supervision of an entire branch.

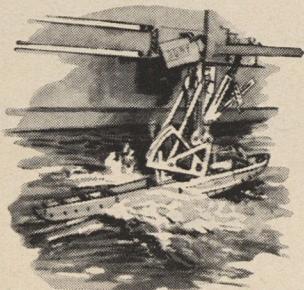
These instructor training methods have brought results that amaze civilian educators. "We don't need people with degrees to teach by the methods we use," comments Maj. Gen. K. P. McNaughton, ATRC vice commander. "We've left no stone unturned to improve the quality of our instructors. In many respects they're way ahead of those trained in universities." —END



*From the Birthplace
of Phantom Shapes*

NEW WATER-BASED WEAPONS

Seaplane research is bringing new phantoms to life in Stevens Tech's towing tanks, testing ground for the U. S. Navy Marlin's advanced hull design.



Bringing such advancement as the Martin M-270 experimental hull, delicately instrumented models prove today's dreams for tomorrow's air-sea power at the Experimental Towing Tank, Stevens Institute of Technology.

AN instrument-covered seaplane model knives through the waters of a Stevens Tech towing tank. A Naval Bureau of Aeronautics researcher pores over plans for a jet-powered, swept-wing flying boat. A Martin engineer makes dreams take wings on his drawing board. And, step by step, planes that combine water-based mobility with land-based speed come closer to reality!

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THE HUMAN ELEMENT IN AIRPOWER

III, it must resort to Class IV for men. The percentages cited by the Department of Defense are presumably a reflection of the national average. An HRRCC study, however, came up with the opinion that those figures are optimistic, and that the national average is somewhat lower. Furthermore, individuals who might score in the top grades often secure deferments from military service to continue college study or to go into professional jobs in essential industries and research activities, thus materially lowering the quality of the pool available to the services.

Prior to the Defense Department order, issued in May 1951, the Air Force filled its quotas without using Class IV recruits. But when the order became effective a large backlog of Class IV individuals flocked into the Air Force. For several months, ATRC indoctrination centers reported fifty percent of all trainees in Class IV. The percentage has now slacked off, but in May it stood at 27.4, still well above the twenty-one percent cited as normal by the Pentagon.

For the present, relying on men who entered under its previous high standards, ATRC believes the Air Force can absorb Class IVs without adverse effect on its over-all capability. This opinion presumes that units throughout the Air Force will cooperate all-out in a program to upgrade men to their highest abilities.

Early in 1951 when Air Force recruiting quotas were lifted to provide manpower for the buildup voted by Congress, the Air Force received a high percentage of airmen qualified for technical training. Since tech schools were running at capacity, many eligible airmen did not have an opportunity to attend. Now the flow of qualified airmen from indoctrination bases is insufficient to meet tech training quotas, and ATRC is appealing to other commands to locate eligible men who were by-passed before and return them to school.

"We can use Class IV people," says General McNaughton, "because there is still a requirement for the helper, the assistant. It would be desirable, of course, if every man in the Air Force was a Class I technician, because then we would have great flexibility in their utilization."

"But since human beings aren't born that way, we have to cut the cloth to fit the pattern, and educate a percentage very highly and use them in supervisory positions over the less talented and less capable. Naturally, the more Class IV people we have, the less flexibility a commander has in getting his work done."

ATRC is studying the problem



With two-year selective service recruits, USAF training needs would triple. Four-year volunteers grow more efficient, win promotion, tend to re-enlist.

thoroughly. One controlled group of 1,000 Class IV airmen has been sent to technical schools, even though their aptitude scores might have been below recommended minimums. Their progress is being closely supervised.

In another project, just completed at Lackland, two identical groups of Class IV trainees were pre-tested upon entry. One group was given the normal eight weeks' basic training; the second received fourteen weeks, with added emphasis on subjects intended to help raise their aptitude level. Both were tested again on completion of training. The basic training course was scheduled to be increased from eight to twelve weeks on July 1,

1952. Results are now being studied to determine what improvements can be made to bring out latent abilities.

These efforts, however, do not alter the basic fact that, in the words of General Harper, the Air Force "has need for a higher skilled man than the surface forces."

"I don't say that all of our men have to be mental giants," he concedes, "but we do have to train our men to a higher degree of technical skill than the average, I would say, in the Army and the Navy."

By the time the pinch in quality of airmen begins to get serious, ATRC hopes to have new procedures developed to get the best out of men with marginal capabilities.—END

WHO PAYS THE BILL?

ATRC not only supplies the Air Force with trained personnel, but it contributes to the civilian aircraft industry as well. Many graduates of ATRC schools leave after one "hitch" to take better paying jobs in industry.

As a result, ATRC's annual training load reflects a high percentage for replacements.

The immediate effect of losing experienced personnel to civilian industry is to impair Air Force efficiency, but in the long run it may be beneficial to the nation. The aircraft industry is currently suffering from a critical shortage of skilled personnel; it would be worse without Air Force alumni who contribute directly or indirectly to production of Air Force Materiel. This constant turnover also serves to build up a potential reserve of trained people who are keeping up their skills at no expense to the Air Force.

While it recognizes that the loss of trained men may have its brighter side, ATRC points out that the Air Force gets stuck with the check.

"The boy who leaves the service after having secured this training," General Harper comments, "doesn't necessarily have to remain on a reserve status. Furthermore, the Air Force gets no credit in Congressional appropriations for this loss. Its value to the country is undoubtedly great, but there isn't any way to put a price on it. It's just charged completely against us."—END

THE HUMAN ELEMENT IN AIRPOWER THE CASE AGAINST FLYING

Qualified men are passing up chances at pilot training

in favor of non-rated Air Force assignments. Why?

JJUDGING from the huge audiences of "Space Cadet" and "Captain Video," you'd think the Air Force would have no problem in filling its quota for aviation cadets. But apparently the older brothers of the TV flying set have a few misgivings about life in the blue.

To meet stepped-up requirements for pilots, the Air Force has had to lower its standards in selection of aviation cadets, a move which cannot fail to affect the quality of its pilots.

The men it would most like to have—men who possess the aptitude and educational background to master the techniques of flying and to exercise leadership as well—are not volunteering in the numbers the Air Force needs. And this year, for the first time, the Air Force failed to get its quota of volunteers from the graduating class at West Point.

Does this mean that the airplane has lost its fascination for young Americans? Is the adventurous spirit

gone—the ambition to accept this challenge to their physical and mental ability, to cope with the tremendous power of modern planes?

Youth is still interested in engines and speed. "Hot rod" clubs are flourishing all around the country. Model airplane kits are selling better than ever. The basic appeal is still there.

Where does the trouble lie? Psychologists at ATRC's human resources research center are staying awake nights to find the answers. There seem to be several.

Take the average college graduate with a brand new degree in, say, business administration, with the prospect of a military tour ahead. Assume that he could meet the physical standards and that he would like to fly. If we were at war, he would very likely apply. But in our present twilight "peace," he is not convinced.

Sure, it would be a real satisfaction to make the grade as a pilot. The Air Force tour would be fun while it lasted, but what a let-down afterward. It would mean starting in at the bottom, putting his education to work three years behind his classmates.

Instead, why not get into an Air Force desk job? Personnel, materiel, even a squadron officer slot would give him experience useful in his civilian career. That way his military service wouldn't be a waste of time.

This is conjecture, but Dr. Abraham Carp, a motivation expert at HRRC, expects a current project of his office to bear this out. He is now collecting questionnaires answered by Air ROTC students.

Dr. Carp reasons that of two college graduates entering the Air Force, one with a degree in agriculture is more likely to apply for pilot training than an architectural engineer. The first couldn't enhance his agricultural knowledge appreciably in the Air Force, so he makes a free choice of a military specialty. But the architectural engineer hopes to pick up valuable experience in the Air Force, perhaps as an installations officer.

For the same basic reason, Dr. Carp also suggests that the ratio of individuals expressing an interest in pilot training would be highest among freshmen, lowest among seniors. Freshmen aren't far along in prepar-

(Continued on page 42)

CHERCHEZ LA WAF

By Lt. Col. Mary L. Kersey

WAF Staff Director, TTAF

AT WARREN AFB, Wyo., a WAF pleaded to enter the teletype repairman course. School officials were reluctant. WAFs, they said, weren't qualified for that kind of job. WAF leaders went to bat for the girl, and arranged for her to be admitted on an "experimental" basis. She graduated as honor student in her class, and WAFs have been welcomed to the course ever since.

Today, of the forty-four career fields, WAFs are freely admitted to twenty-eight, and to parts of eight others. Only ten are closed to them. These require flying status or heavy physical labor.

Other ATRC schools have discovered, like Warren, that women are "naturals" in many Air Force jobs. At Chanute AFB's weather school, which enrolls both male and female students, three of the four shift chiefs are WAFs. Keesler AFB's instructor corps includes ten WAFs who teach men and women the techniques of radio and radar.

Lowry launches WAFs into fields of career guidance, intelligence, photography, comptroller, and transportation. Warren trains administrative and supply technicians as well as teletype repairmen. At Keesler, WAFs are trained to become control tower operators, radio operators, radar repairmen, and air traffic control technicians. Scott qualifies WAFs in cryptography and radio repair. Chanute trains parachute riggers and weather observers.

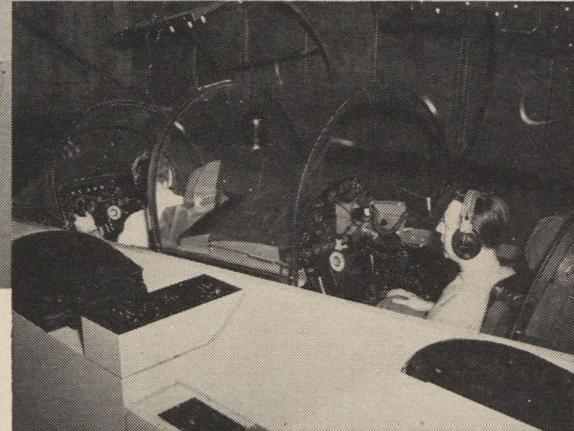
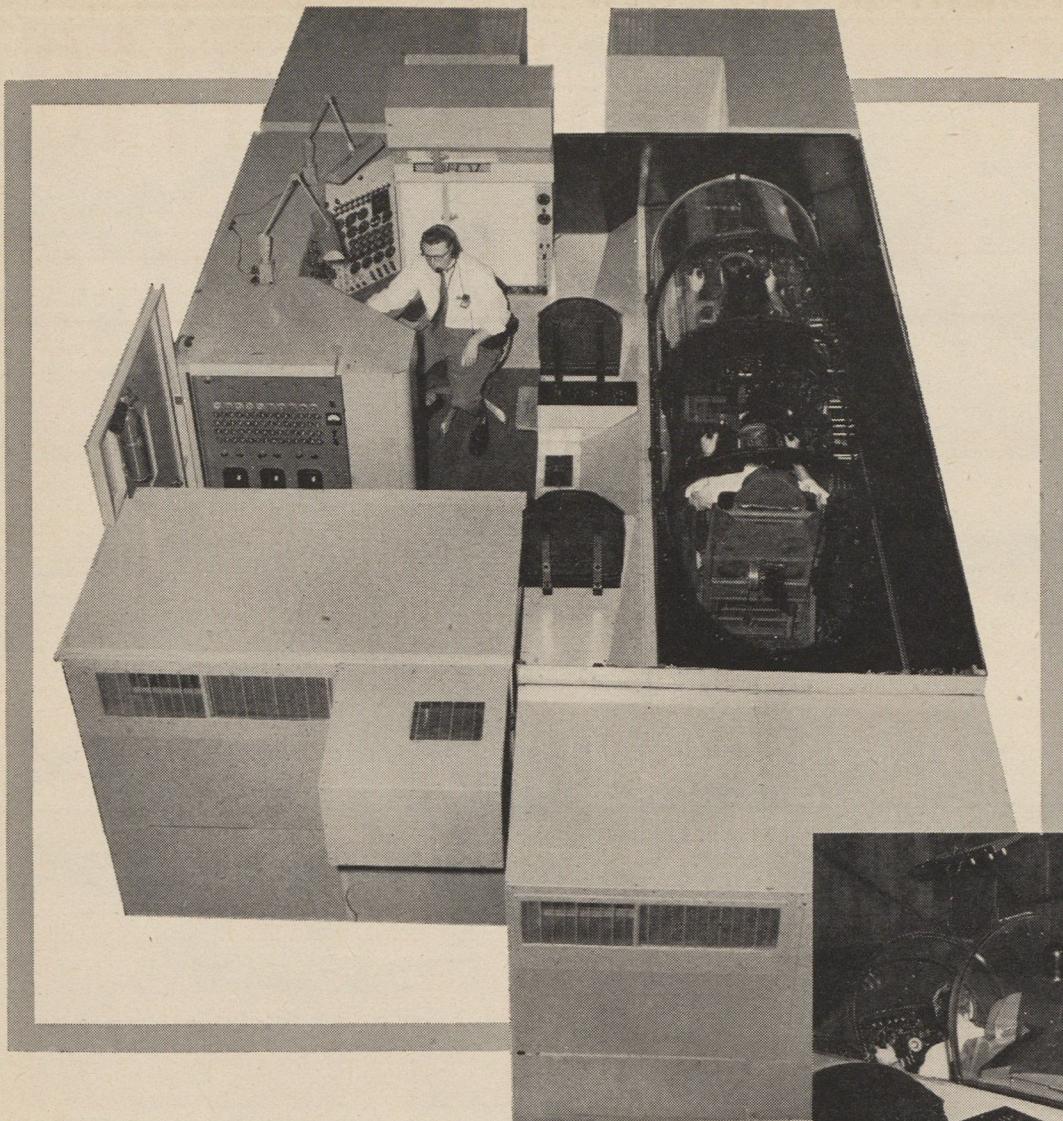
WAFs undergo indoctrination training at Lackland AFB, Tex., where new dormitories recently completed have a capacity of 2,700. WAF trainees are under supervision of WAF instructors who are, according to a Lackland staff officer, "uniformly better than our male instructors."

Lackland is also the home of the Air Force officer candidate school, a co-educational enterprise which enrolls about forty WAFs per class.

Air Force fields in which WAFs can work have probably not been exhausted. A feasibility test recently conducted at Lackland showed that WAFs could be used in ninety-three percent of all airman positions. The conclusion was academic, however, since there is a shortage of WAFs to fill jobs in which they have already proved themselves.

To the Air Force problem of finding skilled manpower for its complex technical duties, Air Force officers who are acquainted with WAF capabilities have a partial solution—"Bring in more WAFs."—END





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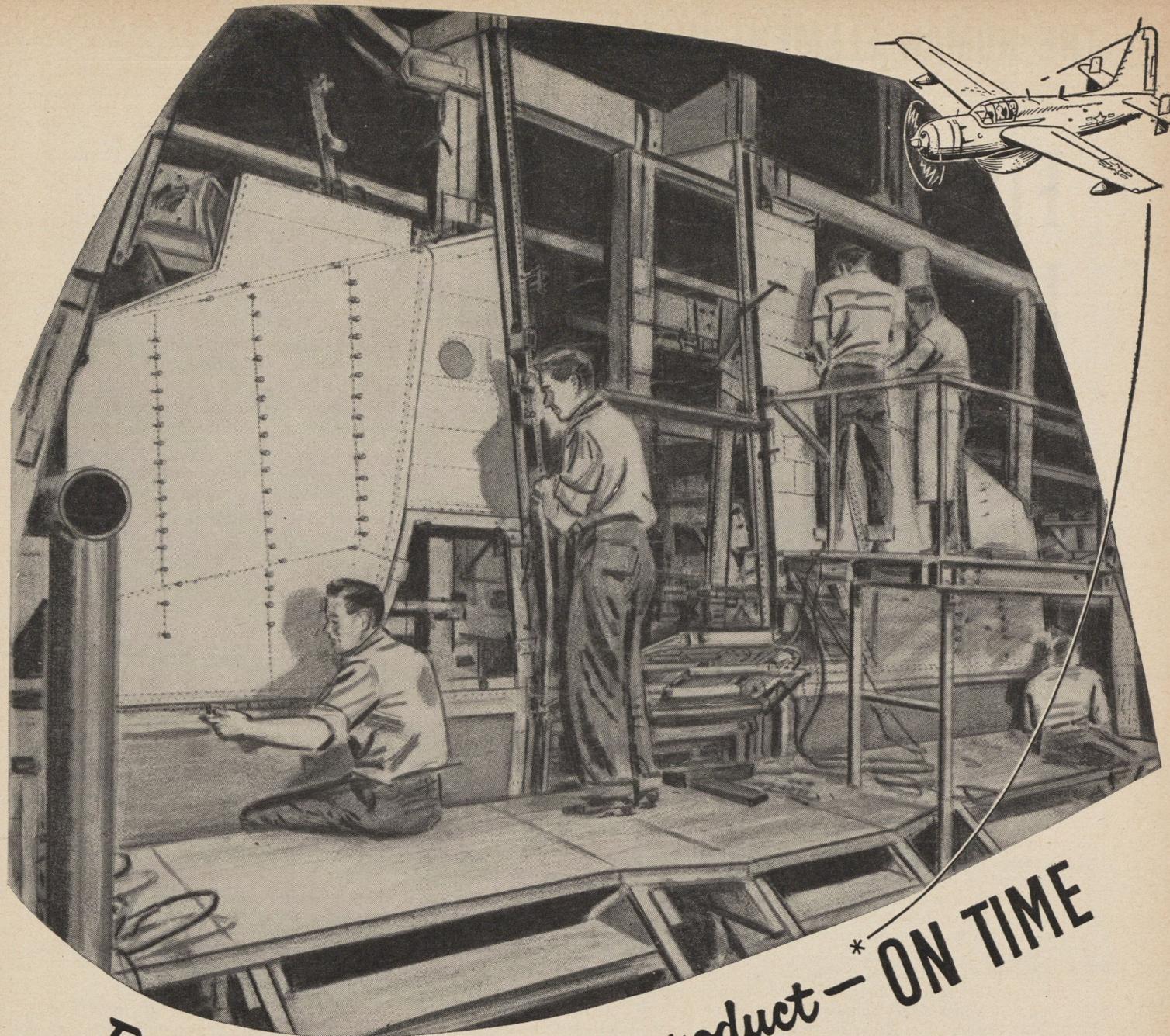
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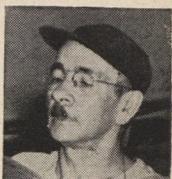
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Flying Jets Is Hard Work



Captain Smolen

A mission with one who knows the score

SO YOU GOT yourself a MIG. So what's so heroic about that? Aren't you that dashing AF pilot they've all been talking about?

Let's see now. You pulled about seven Gs getting into position for the kill. You probably weren't worrying about your weight but for the record you were pushing 1,225 pounds-worth on that Sabre seat. That is, if you still weighed 175 pounds after spending a couple hours strapped in a two-and-a-half by three-foot cockpit. And you were lucky to have that much room. Matter of fact, some cockpits take only a five-foot, six-inch pilot who can't weigh more than 150 lbs. There's no sweat getting into a cockpit—if you own a shoe horn.

Getting back to those Gs. A man's head weighs about sixteen pounds. Crash helmet and goggles add about ten pounds. So while you were pulling seven Gs you were toting about 182 pounds on your shoulders. My neck size increased almost an inch during my flying career. It wasn't fat, either.

You chased that guy from 40,000 feet down to 5,000. But if you want to make it back to base you'd better get back up to 40,000 feet and head for home. You've just enough fuel to make it. And no gas stations along the way. You either bail out or belly in.

Let's see, the base is almost due south, you think. No street signs either and rough weather brewing.

How's your instrument flying? Check that oil pressure. Your tail pipe temperature is hot. I'll bet you picked up some flak as you climbed back out. Engine still sounds all right. But making it home will be a little sweat.

Well, you're in weather now. That first jar was like running over an open manhole. Your P-1 crash helmet comes in handy. I guess the extra ten pounds is worth it.

Weather's getting worse. Can't even see your tip tanks now. It's like flying through dish water. This is the old-fashioned cumulobumpus that can easily clip your wings. Can't pull over to the side of the road until it clears up.

Let's face it. You either ride out the weather or bail out. Well, needle ball and airspeed, let's stay with it. Remember the instrument training you complained about?

Times like this I wonder why I became a fighter pilot. I tell myself I should have been a plumber, but I knew all along that I'd rather fly these jets than eat. When you're whizzing around in all that space and get that feeling of freedom, you realize that despite all the work and strain flying is for you.

Finally it clears up. And there's the field right over there. A sight for sore—or rather tired—eyes. You made it with gas to spare. A few gallons anyway. Set her down easy now, these makeshift runways aren't quite as smooth as LaGuardia Field. See what I mean?

You're home. But you're not climbing out. You just sit in the cockpit. Just a bit tired. Sure good to have a crew chief help you drag yourself out. From the looks of your G-suit some of that weather seeped through the cockpit. But who ever heard of salt water clouds? That's sweat, honest sweat.

Going to the club for a few cool ones and tell that little blonde nurse all about how you got that MIG? That figures. Just like the movies. The fighter pilots who bounce out of their planes and head for the club, laughing like crazy and making dogfight talk with their hands.

Hey, the club isn't that way. You're walking toward the barracks. Your crew chief was right. "It ain't like the old Army."

Flying is work.

The author is monitor of Flying Training Air Force's basic single engine pilot schools, both jet and conventional. He is a veteran of the Acrojets and one of the Air Force's first jet instructors. A senior pilot, he has logged more than 2,700 hours, 1,500 of them in jets.

ing for a civilian career; therefore, they too make a relatively free choice after entering the Air Force.

But what about the West Pointer? The service is his career. Why did the Air Force fail to attract its quota this year? No one really knows the answer but ATRC thinks it might stack up something like this:

The ambitious West Point graduate has his sights set on those general's stars. The Air Force, at first glance, looks good to him; Air Force generals are young. He realizes that pilot training is essential to getting ahead. You can count on your fingers all the non-rated generals in the Air Force.

These factors, plus the prospect of extra pay, brought the Air Force more than enough volunteers from previous Academy classes.

But what if you wash out?

About one out of three aviation cadets washes out of pilot training. A career officer then has no alternative but to go into a nonrated job, or a secondary air crew assignment. Goodbye stars.

There are other reasons, too, why the prospect of being an Air Force pilot may have dulled for both regulars and reservists.

The odds in Korea. Our pilots are better trained than Soviet airmen, but superior training didn't save George Davis or Bud Mahurin. "If top aces get hit," say the boys, "what chance have I?" If we were at war, their attitude would be different.

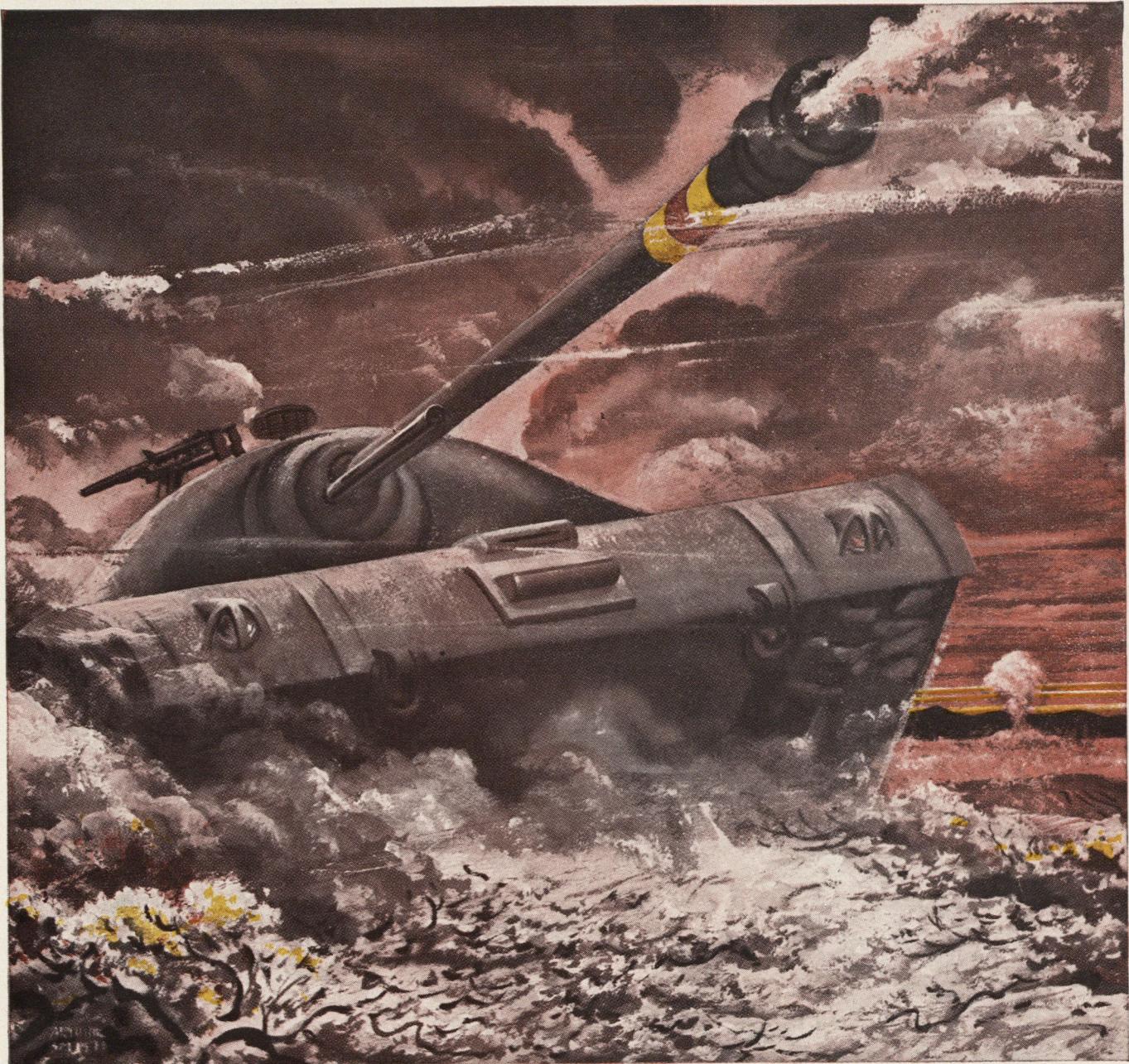
Flying is work. Captain Mike Smolen, one of ATRC's top jet pilot instructors, makes this point clear in the accompanying article.

Life can be shorter. In justifying flight pay, the Pentagon points out the fact that pilots have a much slimmer chance to enjoy the fruits of a well-ordered life. You might take the chance if there were other compensations, but what are they?

The coming guided missile era. It's obvious that, as one technological development follows another, a degree from MIT may mean far more than a pair of pilot's wings—or should.

Americans have never shirked a duty when the necessity was clear. But today military necessity competes with "business as usual." One element engages in a war while others bask in civilian prosperity. If the national conscience is untroubled by this paradox, a young man reasons, why should I set aside my personal ambitions?

Until this question can be answered to the young men's satisfaction—and only the nation can answer it—the Air Force cannot expect to get or keep the kind of men it needs for maximum effectiveness.—END



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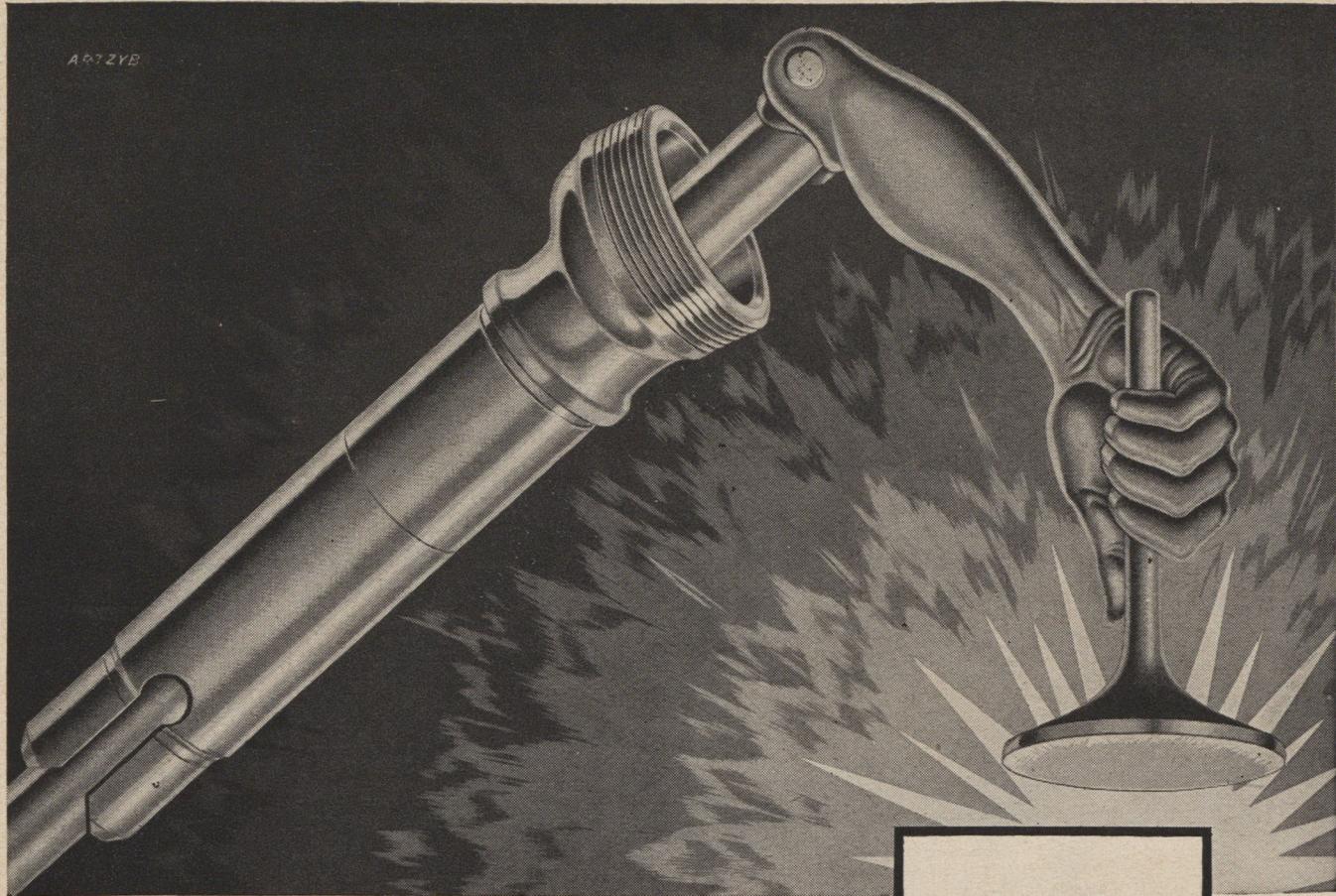
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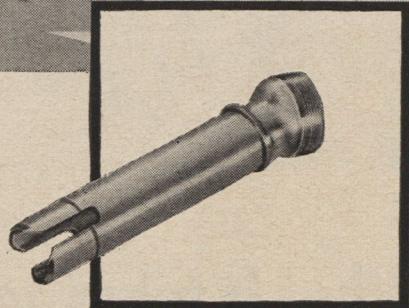


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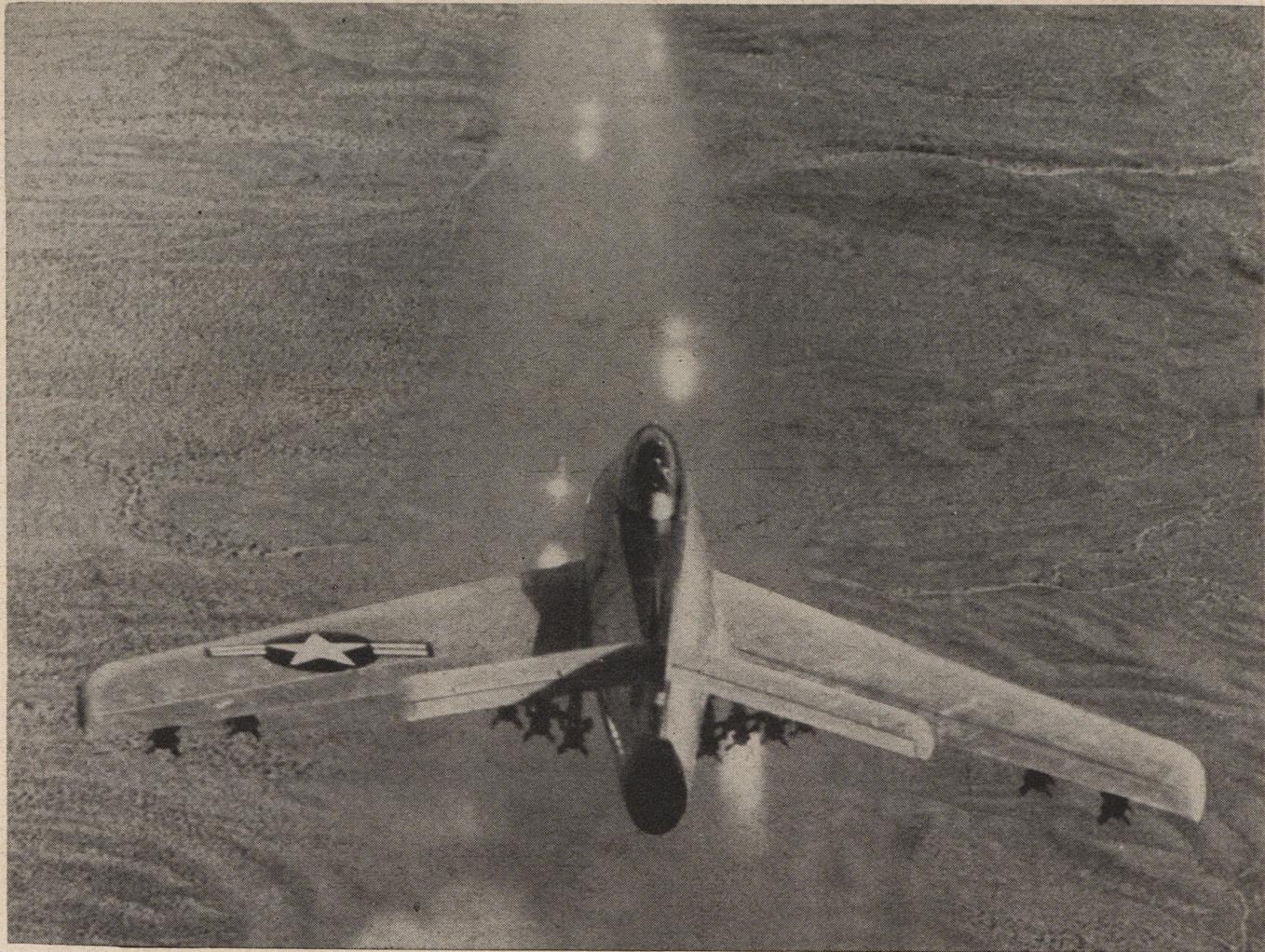
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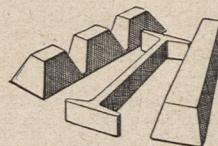


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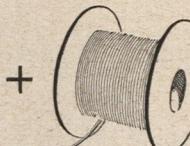


F84, USAF

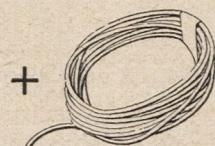
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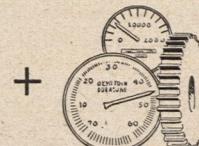
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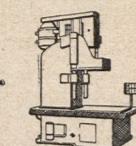
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MOBILIZATION NEWS

AFA PRESIDENT Harold Stuart in recent testimony before members of Brooks House subcommittee urged speedy action on Armed Forces Reserve Act, which he called foundation for rebuilding Reserves.

NATION-WIDE inventory of AF Reserve personnel will begin on July 1, 1952. Twenty-five traveling teams, each composed of eighteen officers and airmen on EAD, will personally interview majority of 294,512 Reservists not in active service who are most accessible, with those few residing in remote areas being surveyed by mail. Inventory is designed to bring Reservist up-to-date and acquaint him with new Reserve program and other policies. Availability of each Reservist with regard to possible future active military service will be part of survey.

MOST of Organized Air Reserve officers will be converted to Air Force specialties simultaneously with those on active duty. However, for Volunteer Air Reserve officers, present plans are to accomplish this conversion through Reserve Availability Survey. Since inventory will not be completed for many months to come, Directorates of Military Personnel and Personnel Planning are cooperating with Statistical Services in an automatic machine conversion of VAR officers. These AFS's of VAR officers will be utilized until such time as changed or validated during conduct of survey.

ELIGIBILITY criteria for assignment or retention with Organized Air Reserve will now be Availability Code I (one to three months). Previously, ConAC had required individuals to sign statement that they would be available for active duty within thirty days.

OFFICERS selected for assignment to tour of duty in Headquarters USAF will normally have foreign service selection date (FSSD) within three years prior to beginning the tour. Officers completing tour in Headquarters USAF whose FSSD is more than five years prior to effective date of reassignment will be considered vulnerable for oversea duty and will be given first consideration for such an assignment. This policy will not prevent an officer completing a tour from being assigned to a school.

RESERVISTS assigned to units or holding mobilization assignments who are authorized to enroll in course of instruction under contract school training program are authorized inactive duty pay for attendance at each scheduled class of instruction provided that combined total of classes attended and other training periods or unit training assemblies attended not exceed six each month or forty-eight in each fiscal year.

ADDITIONAL "early release possibilities" for active duty Reservists are not planned for immediate future. Several early exit programs already announced are expected to remain in effect for some time. . . Approximately 12,000 AF ROTC cadets will attend summer camp at fifty-two ZI bases during encampment period of June 23 to July 19.

24-HOUR operation of Ground Observer Corps has been postponed by USAF for further study. . . Recent figures reveal that total Civil Air Patrol cadet membership represented net increase of 14,635 boys and girls (about 51 percent) over previous year (1950). . . Breakdown of new service pay scale may be obtained by writing AFA's Service Department.

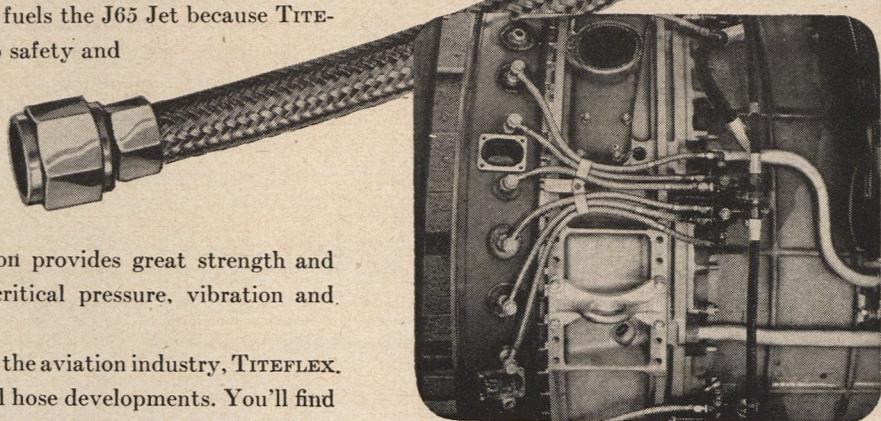


Flexible Metal Throat Feeds Fire in the Sapphire

Here's the new Wright J65 (Sapphire) Turbojet engine—and the TITEFLEX® metal hose throat through which it gets its fuel. Flow must be regular and unfailing and the fuel line must be leakproof.

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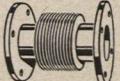
Close up of Titeflex fuel injection lines for the Wright J65. Tested for temperatures from -70°F to $+600^{\circ}\text{F}$ and for pressures up to 500 p.s.i.

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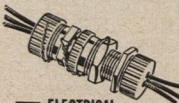
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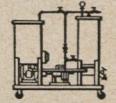
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TECH TALK

By Richard Skinner

Is the Air Force getting saltier? More or less in line with the recent switch from sergeant and PFC to the Navy-like A/1C and A/3C designations, the AF this month dropped mph in favor of knots. A knot is one nautical mile (6,080.20 feet) an hour. Though the scale of most modern aeronautical charts is in both statute and nautical miles, the AF seems to be bowing to an increasing amount of over-water navigation in making the change. To find nautical miles, divide statute by 1.15, or multiply to find statute.

A compact refueling system, designed for jets at advanced bases and able to service twenty-four planes at a time with up to 300 gallons per minute per plane, has been developed by AF technicians and the American Pipe and Steel Corporation. The system is fully air transportable. Each unit includes tank car unloading assemblies, storage tanks, pumps, dehydrators, piping and valves, mobile hose reel pumping trailers, and special separator-filters for keeping the jet fuel better than 99.44 percent pure.

A newly announced "swimming pool" reactor, designed to help solve two of the toughest problems besetting an atom-powered airplane, is being used at Oak Ridge, Tenn., to study weight and shielding of a power plant for the A-plane. The use of the reactor, which is submerged in ordinary water, suggests that scientists may have found some "reflector" material lighter than the lead or concrete conventionally used for protection from neutrons and gamma rays. The low power reactor puts out a comparatively high volume of neutrons. But the experimental unit wasn't designed to drive an atomic plane, for which two types of airframes and engines are now being built.

The AF has scrapped the Chase C-123A, jet-powered version of the twin-engined C-123 assault transport and first US cargo type aircraft to fly with jet power. The cancellation doesn't affect plans for production of the piston engine version. The C-123A started as a glider project, called the G-20. It was later powered with two GE J-47 turbojets and successfully test flown.

The problem of a pilot "simmering like a beef stew" is getting serious consideration from aircraft engineers and designers at North American these days. With Sabres in Korea regularly piercing the sonic "barrier," the engineers are looking ahead toward the next theoretical barricade to true supersonic flight. This one is heat. The thermal barrier, engineers feel, will be reached at about Mach 3.5 (some 2,500 mph), and no airplane or missile that flies today would last long beyond that speed. There's trouble enough with today's planes. With the present refrigerating system of the F-86, for instance, you could freeze 175,000 standard ice cubes a day. And as speed increases, so does heat. The skin of an imaginary missile flying 2,000 mph at 60,000 feet would be 700° while at 3,000 mph it would be 1,613°. This "aerodynamic heating" is produced by the friction between the moving object and the still air. Heating occurs in what North American engineers call the boundary layer, a thin film of relatively still air which blankets the object in flight, and is transferred to the object itself.

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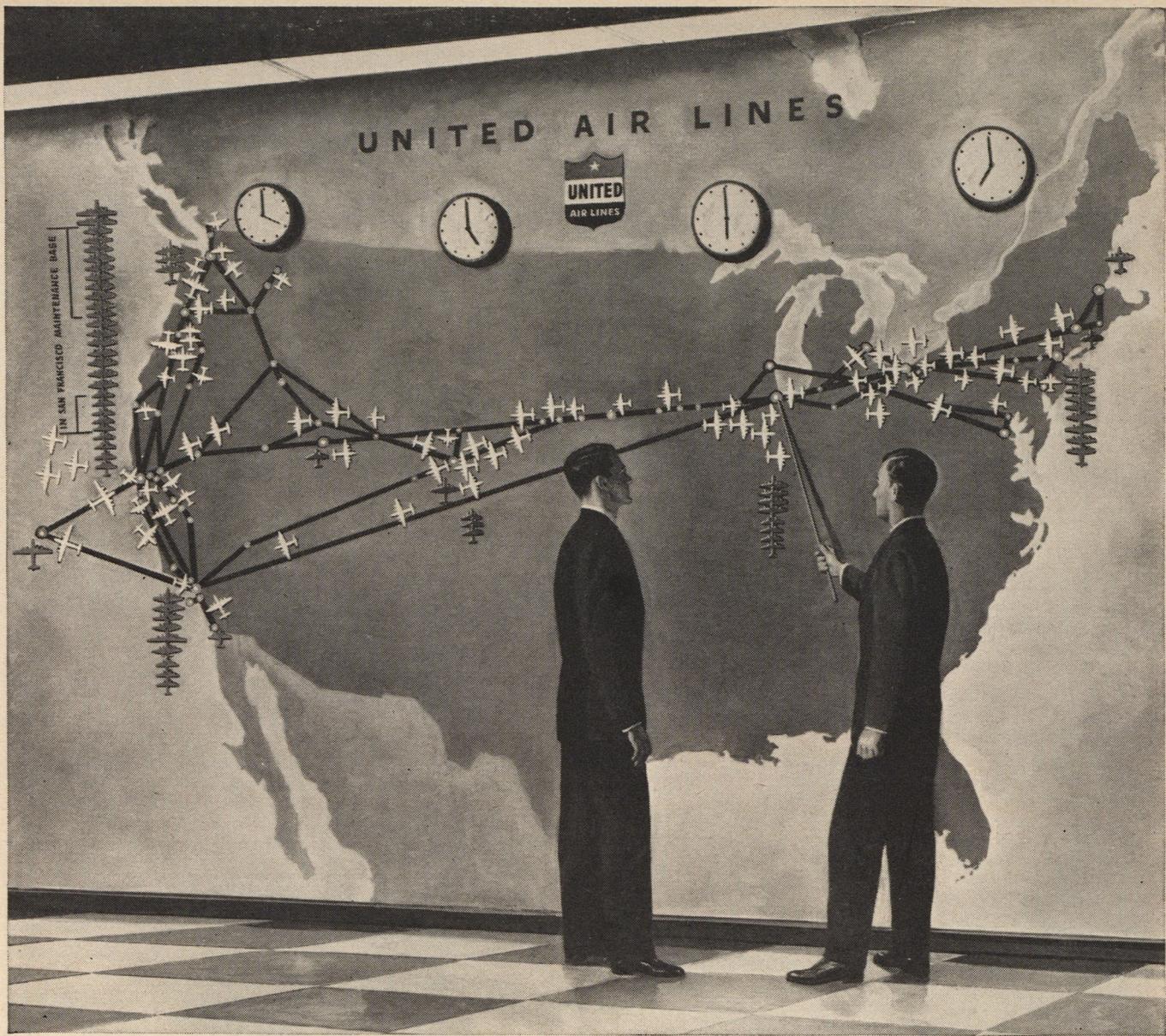
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Would-Be Reservist

Gentlemen: I'd like to know if there is any way of joining the Air Force Reserve without having prior service of any kind. I have tried to join, but always get the same answer—that it takes prior service.

Randell Warren
Lubbock, Tex.

• It's possible to join the AF Reserve without prior service under certain conditions. Your local AF recruiting station can brief you on these.—The Editors

What About Commissions?

Gentlemen: In a recent issue I read that the Air Force needs trained personnel in psychological warfare and other specialties. If this is the case, the personnel at Chanute AFB, Ill., haven't found it out, as yet. There are five of us who have sought commissions in this branch of the service without success. My qualifications, which weren't high enough for the Air Force, are: B.S., Univ. of Illinois (Clinical Psychology); Ed.M., Univ. of Illinois (Adult Education); and Veteran, 47 months, 12 active.

From this university, at least, the Air Force is taking ROTC graduates who

have no background in group methods, psychology, social foundations, and education, and making officers of them in psych warfare, etc. Seems to me they might accept some few who have had training for these posts. In June a number of men will graduate who desire commissions in the Air Force. Why not give these men—already trained—commissions in the grade they deserve?

J. S. Frazier
Champaign, Ill.

• Psychological Warfare Branch in the Pentagon advises that Reader Frazier should submit his application to Personnel Branch, Hq. 10th AF, Selfridge AFB, Mich. He may obtain special application forms under the provisions of AF Manual 36-5 from Personnel at Chanute AFB.—The Editors

● BULLETIN

USAF headquarters, disturbed over the loss of some of its finest officers in Korea, was heartened by the return to friendly lines of Col. Albert W. Schinz, deputy wing commander of the 51st Fighter-Interceptor Wing. Col. Schinz had been missing in action since May 1, when his F-86 went down near the Yalu.

AIR FORCE ALFIE

By RAY BECK



"Bail Out What, Sir?"

THIS IS AFA

The Air Force Association is an independent non-military, airpower organization with no personal, political or commercial axes to grind; established and incorporated as a non-profit corporation February 4, 1946.

Active Members are men and women honorably discharged from military service who have been assigned or attached to the US Air Force or its predecessor services, or who are currently enrolled in the Air Force Reserve or Air National Guard. **Service Members** (non-voting, non-office holding) are men and women currently assigned or attached to the US Air Force. **Associates** (non-voting, non-office holding) are men and women not eligible for Active or Service Membership who have demonstrated an interest in furthering AFA's aims and purposes, or in proper development and maintenance of US airpower.

ITS OBJECTIVES

To preserve and foster the spirit of fellowship among former and present members of the Air Force.

To assist in obtaining and maintaining adequate airpower for national security and world peace.

To keep AFA members and the public at large abreast of developments in the field of aviation.

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bility will be achieved only against a "conventional" air offensive as we know it today. The development of a long-range fusion-bomb capability, with a supersonic step-rocket delivery system, is a scientific possibility. An air defense system which could insure even semi-survival against such a weapon can scarcely even be foreseen at this time.

Thus, the world has seen airpower pass through three phases as a result of the development of atomic weapons. First, the strategic-atomic retaliatory capability of the Air Force inhibited large-scale Soviet aggression during the period immediately after World War II, when the entire free world was defenseless. Second, the development of tactical-atomic airpower has made the successful defense of Western Europe attainable. Finally, the development of atomic air defense can prevent the decisive application of Soviet strategic-atomic power against the all-important industrial capacity of the United States.

In each of these phases, atomic airpower has stayed the aggressive tendencies of the Soviet Union. At each stage in the development of aggressive Soviet military power, new atomic developments in the United States have extended the period of armed truce, thus proving—three times now—that "airpower is peace power" is more than a slogan. The next stage beyond atomic air defense is difficult to foresee and not pleasant to contemplate. It appears certain, however, that the work of the diplomats had better be done—and had better be done well—before that phase arrives.—END

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San Diego Squadron

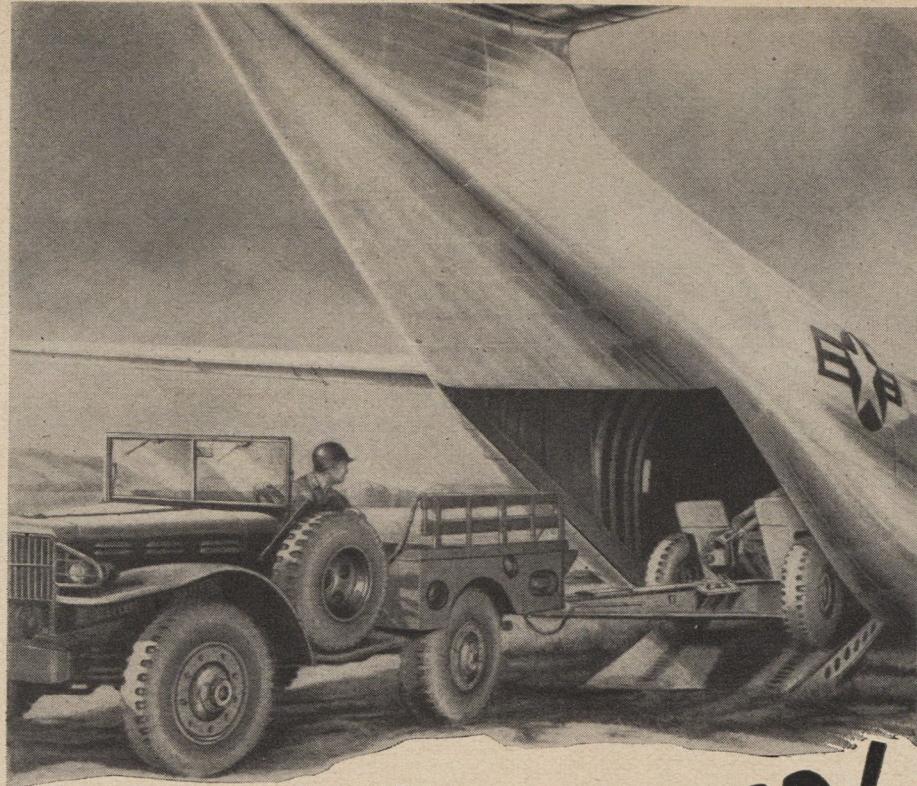
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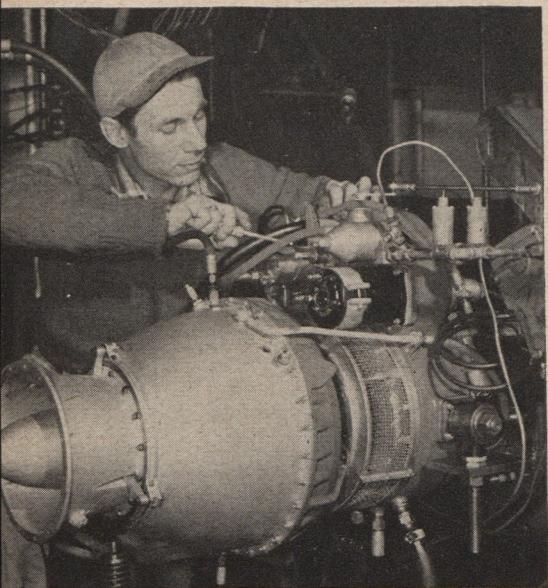
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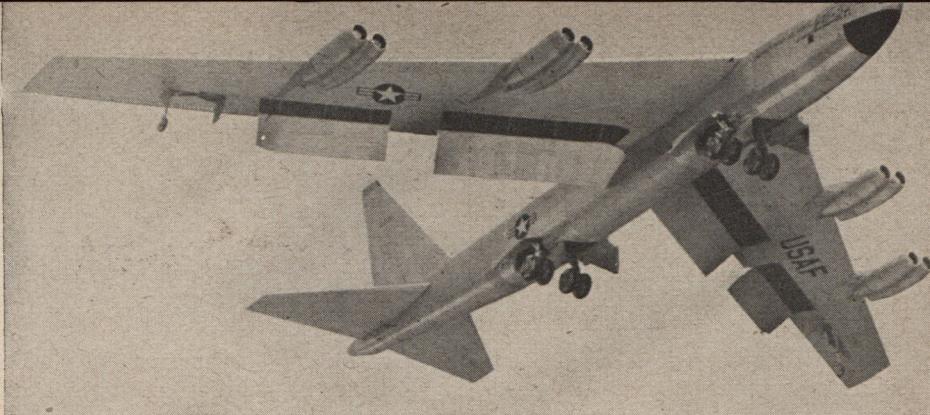
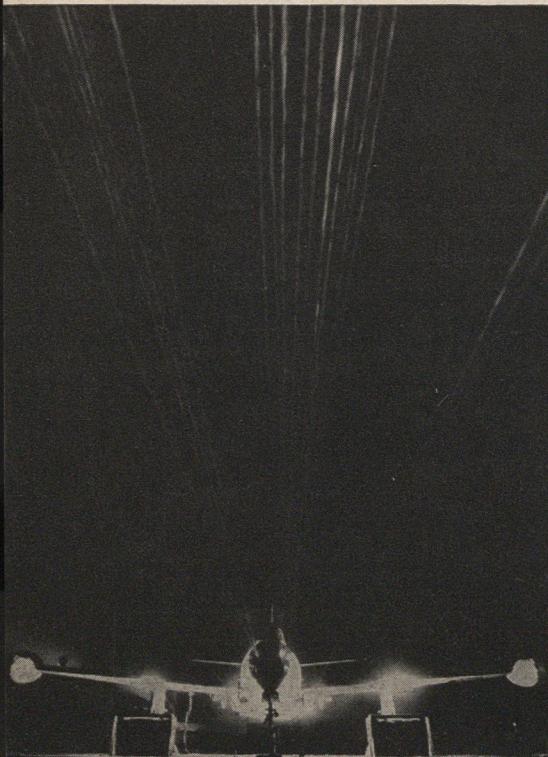


Custom-Built

A compact French-built gas turbine takes to the Fairchild test stand in the modification program the Stratos Division is conducting. After being tailored to American requirements, the Oredon turbines will be produced here under license from Turbomeca. The 140-shaft-hp unit is well suited for operating alternators and other accessories. A speed control system holds rpm within plus or minus .4 percent.

F-84's Business End

Here's where not to stand when a Thunderjet cuts loose with its six 50-caliber machine guns. The M-3 type guns (four in the nose and one in each wing) spew out 1,300 rounds per minute. The battle-tested version of the Republic fighter-bomber also carries 4,000 pounds of bombs, while the sweptwing version, the F-84F scheduled for production later this year, is expected to top this armament load.



Two New Super-Bombers Take to the Air

It's a long way and many millions of dollars from the Flying Forts and Liberators of World War II to the AF's two latest giants for global air warfare. Both the XB-52 (above) and Convair's YB-60 (below) made their first flights recently. Designed to carry the A-bomb at higher speeds and at higher altitudes than any plane now in the USAF stable, each new super-bomber has eight jet engines. The Boeing Stratofortress, which dates back to 1946, is a far cry from B-29 Superforts of the last war, though its sweptback wings are a concession to the jet age. Note also the double-tandem landing gear and the small "protection" wheels that retract into the wing tips. In designing the XB-52, Boeing used flight data obtained from building and flying their B-47 Stratojet, until now the world's fastest bomber. The B-52, which is powered with

Pratt and Whitney J-57 jets mounted in pairs on sharply raked forward pods, has already been ordered into production. The YB-60 is a development of the B-36, the AF's intercontinental bomber which originally had six piston engines but to which four jets were later added for more speed. In the picture below, the YB-60's landing gear has been air-brushed out. The plane's 171-foot length is nine feet more than the giant B-36's, while the XB-52 is 153 feet long. But the 60's 206-foot wingspan measures twenty-four feet less than that of the B-36 (230 feet) because of the superbomber's sweepback. Wingtip to wingtip, the XB-52 measures 185 feet. Both new planes are taller than the B-36, however, with the YB-60 towering fifty feet, and the XB-52 forty-eight. The B-36's tail points forty-six feet, nine inches straight up.



No Housing Problem

Interceptors of the Eastern Air Defense Force are having no trouble outside the low-rent area. A new alert hangar at Burlington, Vt., permits planes to stand by at the end of the runway instead of in the open or along a flight line, cutting vital minutes from takeoff time.

British Marathon

Part of the \$1 billion Britain is spending this year for her air force is going for thirty of these Marathon aircraft for advanced-navigation training. The Handley Page planes carry students from Britain to as far as Malta and Gibraltar. Four D. H. Gipsy Queen engines provide a cruising speed of more than 200 mph.





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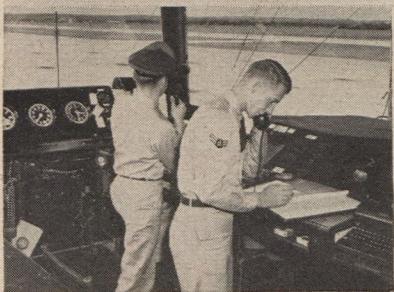
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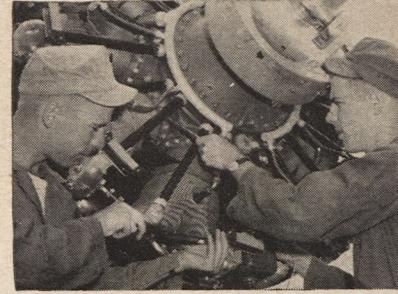
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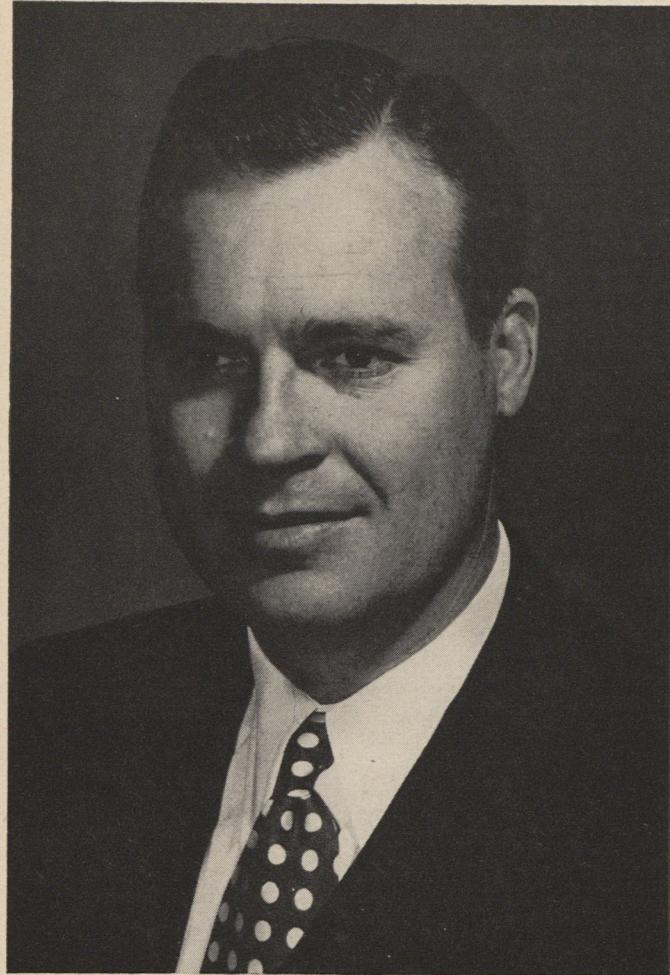
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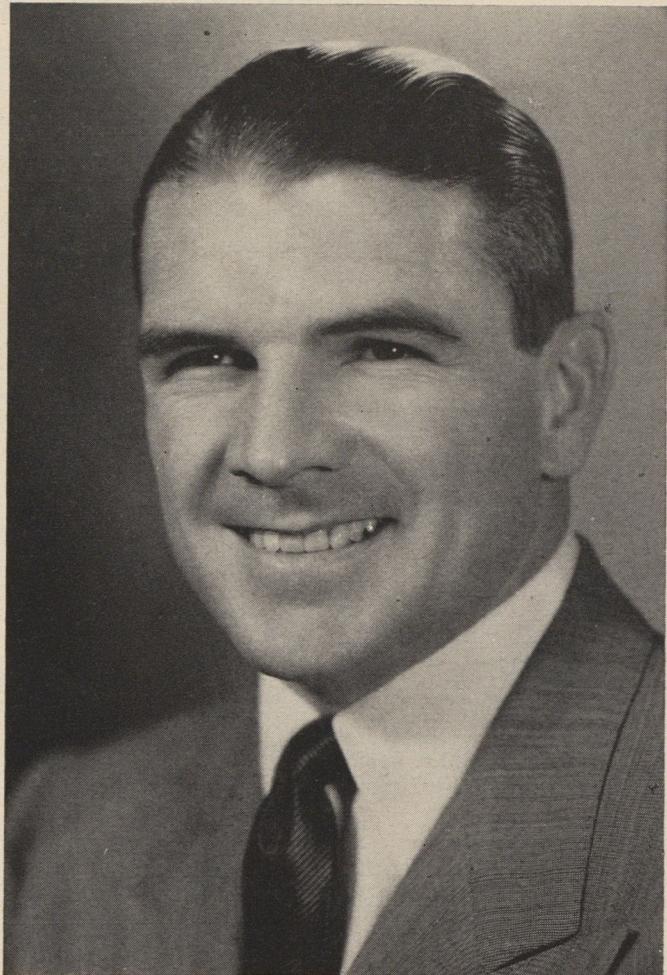
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Arthur F. Kelly



Harold C. Stuart

AFA NOMINEES for 1953

*National Nominating Committee names Arthur F. Kelly
for President, Harold C. Stuart for Board Chairman*

AT A MEETING in Washington, D. C., on May 17, the national nominating committee of AFA selected seventeen officers, eighteen directors and five ex-officio members of the Board for presentation to the delegates at the 1952 AFA convention in Detroit, August 28-31. The nominating committee, by constitutional authority, consists of the national officers and directors, and Wing commanders. All Squadrons were polled by mail for nominations for their respective regional vice presidents.

Arthur F. Kelly of Los Angeles was selected by the committee for national president. This nomination cli-

maxes his nearly six years of AFA service, including service as Wing Commander of California, two years as a national director, and one term as Far West regional vice president. Kelly gained national recognition as chairman of the 1951 convention. He served four years in the AF in World War II, in the Ferrying Division and Air Transport Command. Kelly has spent nearly twenty years in the airline business and is currently vice president-sales of Western Air Lines. He is a member of the Air Staff Committee on Reserve Policy.

Harold C. Stuart, incumbent AFA president, was named by the com-

mittee as Chairman of the Board of AFA. Stuart is a life member of the Association and first became active in AFA as Wing Commander of Oklahoma. He was elected national president in Los Angeles last August, succeeding fighter ace Bob Johnson. Stuart was Assistant Secretary of the Air Force in 1950-51. He has distinguished himself as AFA's most traveling president. Shortly after his election to office last year, he flew to Japan and Korea, where he spent seven weeks touring the war zone.

The Board of Directors, which met concurrently with the nominating

(Continued on page 60)

AFA NOMINATING COMMITTEE'S SLATE FOR 1953

President

ARTHUR F. KELLY

Los Angeles, Calif.

Past AFA Reg. VP, director and Wing Commander; Dep. C/S ATC, Europe; airline VP.

Secretary

JULIAN B. ROSENTHAL

New York, N. Y.

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

Chairman of the Board

HAROLD C. STUART

Washington, D. C.

Incumbent AFA president; former Ass't Sec'y USAF; combat intelligence officer; attorney.

Treasurer

GEORGE H. HADDOCK

Washington, D. C.

AFA charter member; wartime public relations officer; magazine promotion director.

REGIONAL VICE PRESIDENTS

NEW ENGLAND REGION

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

WILLIAM H. HADLEY, JR.

Mansfield, Mass.

Incumbent; AFA Wing Cmdr.; wartime glider pilot; radio producer.

NORTHEAST REGION

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

RANDALL LEOPOLD

Lewiston, Pa.

AFA director, Wing Cmdr.; wartime intelligence officer; automobile dealer.

CENTRAL EAST REGION

(Md., Del., D.C., Va., W.Va., Ky.)

GEORGE D. HARDY

Mt. Rainier, Md.

Incumbent; wartime armorer in 12th AF; grocery wholesaler.

SOUTHEAST REGION

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

JEROME A. WATERMAN

Tampa, Fla.

Incumbent; wartime administrative officer, 3d AF; dept. store exec.

GREAT LAKES REGION

(Ohio, Mich., Wis., Ill., Ind.)

MORRY WORSHILL

Chicago, Ill.

AFA director, Wing Cmdr.; wartime 5th AF opns. spec., Sgt.; pharmacist.

NORTH CENTRAL REGION

(Minn., N.D., S.D.)

MERLE S. ELSE

Minneapolis, Minn.

Incumbent; AFA director, Wing Cmdr.; wartime 5th AF pilot; sales executive.

SOUTH CENTRAL REGION

(Tenn., Ark., Ala., La., Miss.)

FRANK T. MCCOY, JR.

Nashville, Tenn.

Past AFA Wing Cmdr.; wartime 5th AF & FEAFF pilot; attorney and seed executive.

MID-WEST REGION

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

LAUREN C. REYNOLDS, JR.

Joplin, Missouri

Active AFA member; wartime service in US Navy; Maj. USAFR; business executive.

FAR WEST REGION

(Calif., Nev., Ariz.)

N. MICHAEL KAVANAUGH

San Francisco, Calif.

AFA Wing Cmdr.; member NWAC; wartime CBI pilot; sales manager.

NATIONAL DIRECTORS

CASS S. HOUGH, Plymouth, Mich.: AFA charter member, Wing Cmdr.; wartime 8th AF ftr. officer; mfg. executive.

RUSSELL F. HUNT, Tulsa, Okla.: AFA Sqdn. Cmdr.; wartime 12th AF staff judge advocate; banking executive.

GEORGE C. KENNEY, New York, N. Y.: Incumbent; wartime CG of 5th AF, CG of SAC, Air Univ.; foundation exec.

REX V. LENTZ, Dallas, Tex.: AFA Wing, Sqdn. Cmdr.; wartime Tng. Com. Sqdn. CO, PRO; banking executive.

JEROME H. MEYER, Dayton, Ohio: Incumbent; AFA Gp. Cmdr.; wartime 3d Tac. Air Div. ftr. surgeon; surgeon.

WILLIAM F. MULLALLY, St. Louis, Mo.: AFA Chap. Div. director; wartime 10th AF, AFTAC chaplain; Catholic priest.

EX-OFFICIO BOARD MEMBERS

THOMAS G. LANPHIER, JR., San Diego, Calif.: AFA president, 1947-48; wartime 5th AF fighter ace; aircraft company executive.

C. R. SMITH, New York, N. Y.: AFA president, 1948-49; wartime Deputy CG of ATC; airline executive.

ROCKY MOUNTAIN REGION

(Colo., Wyo., Utah)

WILLIAM THAYER TUTT

Colorado Springs, Colo.

ADCM-Day designee; wartime AMC personnel officer; hotel and corp. executive.

SOUTHWEST REGION

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

THOMAS D. CAMPBELL

Albuquerque, N. M.

Incumbent; AFA director, Wing Cmdr.; wartime White House emissary; farmer.

NORTHWEST REGION

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

T. EDWARD O'CONNELL

Spokane, Wash.

Incumbent; wartime service with Tng. Command; plumbing & heating executive.

PACIFIC OCEAN REGION

(Areas in or bordered on east by Pacific)

ROY J. LEFFINGWELL

Honolulu, T. H.

AFA director, Wing Cmdr.; wartime exec. officer, 4th & 7th AF; sugar assoc. exec.

CHARLES W. PURCELL, Baltimore, Md.: AFA Wing, Sqdn., Cmdr.; wartime 14th AF ATC pilot; radio producer-announcer.

MARY GILL RICE, San Francisco, Calif.: Incumbent; AFA Wing, Sqdn. Cmdr.; wartime 8th AF WAC; secretary, housewife.

JAMES STEWART, Hollywood, Calif.: Incumbent; past AFA VP; wartime 8th AF bomber pilot; movie actor.

J. H. HENEBRY, Kenilworth, Ill.: Member 1949 convention comm.; wartime combat gp CO; Korea combat cargo CG.

C. V. WHITNEY, New York, N. Y.: Incumbent; wartime intel. officer, former USAF Ass't Sec'y; financier.

GILL ROBB WILSON, Trenton, N. J.: AFA charter member, Conv. Chmn.; World War I pilot; publisher, military analyst.

EDWARD P. CURTIS, Rochester, N. Y.: AFA Board Chairman, 1946-47; wartime G/S, USSTAF; camera mfg. executive.

JAMES H. DOOLITTLE, New York, N. Y.: AFA president, 1946-47; wartime CG of 8th, 12th, 15th AFs; oil firm executive.

ROBERT S. JOHNSON, Garden City, L. I., N.Y.: AFA president, 1949-50-51; wartime 8th AF fighter ace; aircraft company engineer.

CARL A. SPAATZ, Washington, D. C.: AFA Board Chairman, 1950-51; first C/S, USAF; military analyst and columnist.

REUNIONS, EXPOSITION AND INDUSTRY FORUM TO HIGHLIGHT CONVENTION

Sheraton-Cadillac Plans Unique Rendezvous; Int'l Aviation Exposition Year's Greatest

In addition to nearly a score of individual reunions of wartime Air Force units at the AFA convention, a unique reunion room will be opened by the Sheraton-Cadillac Hotel. This room will be known as the "Air Force Rendezvous," and will be decorated in three themes, representing three wartime theaters—European, CBI, and South Pacific. The "Air Force Rendezvous" will be open from 11 AM to 2 AM each day of the convention and will feature special entertainment and refreshment facilities. This room will be "the place where airmen meet" in Detroit.

Another key attraction for AFA convention delegates will be the Aero Club of Michigan's "International Aviation Exposition" at Detroit's Wayne County Airport. AFA convention registrants will be given reserved seats at this event on Saturday, August 30. This exposition will feature ground exhibits, aerobatics, dive bombing, etc.

Delegates to the AFA convention will get a first-hand report on the aviation industry—its progress, problems, and contributions to our defense effort. At a recent meeting in Washington, AFA's Board of Directors voted to set aside a half day at the convention for industry to make its report. Friday morning, August 29, has been designated for this purpose. This meeting will be open to AFA delegates and guests, military personnel, and industry representatives. It is planned to divide the topics to be discussed into four categories—airframes, engines, electronics and accessories, and manpower. A prominent industry representative will discuss each subject.—END

AIR FORCE UNIT REUNIONS

Individual reunions of wartime Air Force units are always a highlight of AFA conventions. These reunions are "little conventions" within themselves and feature cocktail parties, luncheons, dinners, and balls. The following reunions are already planned during the AFA convention:

AIR FORCE CHAPLAINS

Chap. Francis Quinn
Selfridge AFB, Mich.

AIR FORCE MEDICS

Dr. Cortez F. Enloe, Jr.
500 Fifth Ave., Room 5130
New York, N. Y.

AF PAWLING ALUMNI

Arthur J. Kahn
92-16 Whitney Avenue
Elmhurst, L. I., N. Y.

AIR TRANSPORT COMMAND

James W. Austin
1203 Washington Blvd.
Detroit, Mich.

THE NIGHT FIGHTERS

Col. William Odell
1004 Jefferson Street
Arlington, Va.

1ST AIR COMMANDO GP.

Neil Holm
4130 Hawthorne, Apt. 4
Dallas, Tex.

13TH JUNGLE AIR FORCE

Robert E. Enger
2456 Overland Avenue
Los Angeles, Calif.

15TH AIR FORCE

Robert L. Green
5857 N. Lawrence St.
Philadelphia 20, Pa.

OTHER REUNIONS PLANNED

Air Materiel Command
WACs and WAFs
8th, 10th, 12th AF
56th Fighter Gp.
451st Bomb Sqdn.

NOTE: Write your reunion contact. If your unit is not listed, write AFA Hq. in Washington for information.

RESERVE YOUR ROOM EARLY FOR THE AFA CONVENTION AND REUNION DETROIT, MICHIGAN—AUGUST 28-31, 1952

Seven Detroit hotels have been reserved for use by delegates and guests to AFA's sixth annual national convention. AFA will not operate a housing bureau for the convention. All room requests must be forwarded by the applicant directly to the hotel of first choice. When the hotel of first choice has confirmed all rooms allocated to AFA, the request will be automatically forwarded to the hotel of second choice. Please use the official form below to request rooms.

HEADQUARTERS: Sheraton-Cadillac and Statler Hotels.

AIR FORCE ASSOCIATION CONVENTION HOTEL ROOM RESERVATION REQUEST August 28-29-30-31, 1952

(MISS
(MRS.

(Please Print)

NAME (MR. _____)

ADDRESS _____

CITY _____

STATE _____

ARRIVAL DATE _____

HOUR _____

DEPARTURE DATE _____

HOUR _____

NAME OF PERSON(S) SHARING ROOM:

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

HOTELS RESERVED FOR AFA CONVENTION

HOTELS	RATES: Single	Double	Twin	Ex Cots
Sheraton-Cadillac	\$8.00	\$11.00	\$12.50	\$3.00
Statler	8.00	11.00	12.50	3.00
Detroit-Leland	6.00	8.50	9.00	2.50
Fort Shelby	5.50	8.00	9.00	3.00
Tuller	4.50	7.00	9.00	2.00
Wolverine	4.25	6.50	8.75	2.00
Detroiter	4.00	6.50	8.25	2.00

MAIL DIRECTLY TO:

Reservations Manager

(Name of hotel of first choice)

Detroit, Michigan

(Please list three choices of hotels)

CHOICE:

First _____

Second _____

Third _____

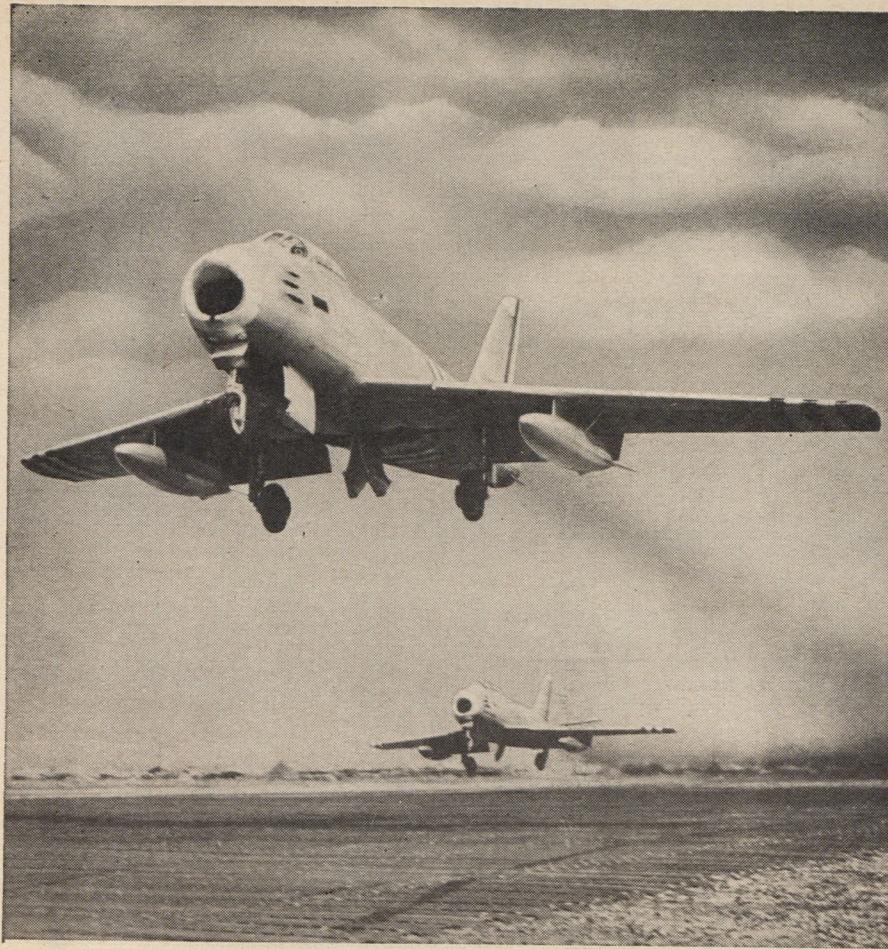
TYPE ROOM DESIRED

Single Double Twin

Extra Cots

Suite—Number of Bedrooms _____

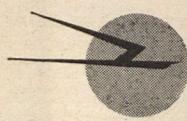
Desired rate per day: \$ _____ *



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Address _____

City _____

Zone _____ State _____

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NOMINATIONS — **CONTINUED**

committee, voted to increase the number of AFA regions from twelve to thirteen, establishing the Pacific Ocean Region. This new region includes all land areas located within, or bordered by, the Pacific, except the continents of North, Central, and South America. Roy J. Leffingwell of Honolulu was nominated vice president of this new region.

The nominating committee named other new regional vice presidents: Randall Leopold of Pennsylvania, Frank T. McCoy, Jr., of Tennessee, Morry Worshill of Illinois, Lauren Reynolds, Jr., of Missouri, and Michael Kavanaugh of California.

The Board also voted to amend the constitution of the Association with a provision that all AFA past presidents and Board Chairmen be ex-officio members of the Board. This was done so as to retain the experience and counsel of the Association's top leaders from year to year and, at the same time, allow the full eighteen-man Board to be filled by new blood. As a result of this new provision, James H. Doolittle, Edward P. Curtis, Tom Lanphier, Jr., incumbent Board Chairman, C. R. Smith, Bob Johnson, and Carl A. Spaatz become ex-officio members of the Board.

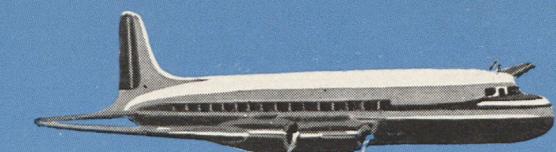
New members named to the Board include: John R. Alison of California, George Anderl of Illinois, Warren De Brown of New Jersey, Ira C. Eaker of California, Dr. Cortez F. Enloe, Jr., of New York, Samuel M. Hecht of Maryland, Cass Hough of Michigan, Russell F. Hunt of Oklahoma, Rex Lentz of Texas, William F. Mullally of Missouri, Charles Purcell of Maryland, Jerome Waterman of Florida, and Gill Robb Wilson of New York.

Julian B. Rosenthal of New York City was re-nominated for his fifth consecutive term as secretary of the Association. George H. Haddock of Washington, D. C., was named treasurer, succeeding Benjamin Brinton.

A key topic of discussion at the Board meeting was the status and activities of AFA Wings and Squadrons. A special committee, headed by Morry Worshill of Chicago, was appointed to study this matter.

Board Chairman Tom Lanphier, Jr., was appointed head of the national convention attendance committee. The Board also amended the constitution to authorize the revocation of the charter of an AFA Squadron inactive nine months or more.

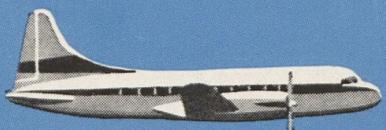
Officers and directors attending the meeting signed a special letter to General Hoyt S. Vandenberg, USAF Chief of Staff, who is presently in a Washington, D. C., hospital.—END



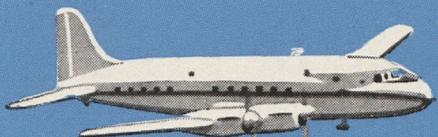
DC-6A Liftmaster



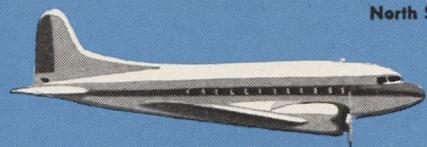
Grumman Mallard



Convair



North Star



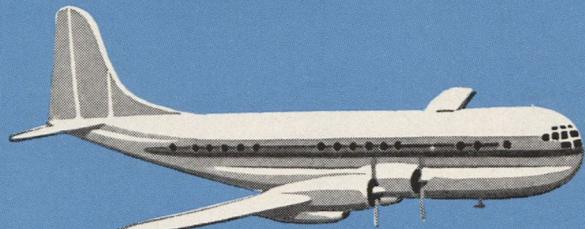
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Super Constellation



Martin 4-O-4



Stratocruiser

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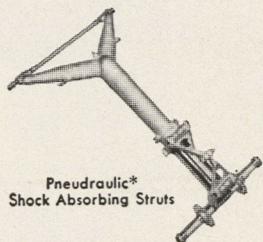
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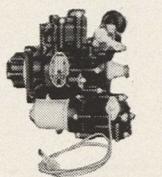
Export Sales: Bendix International Division,
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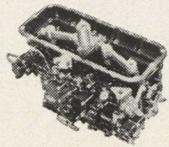
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for jet engines



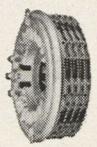
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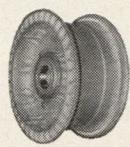
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