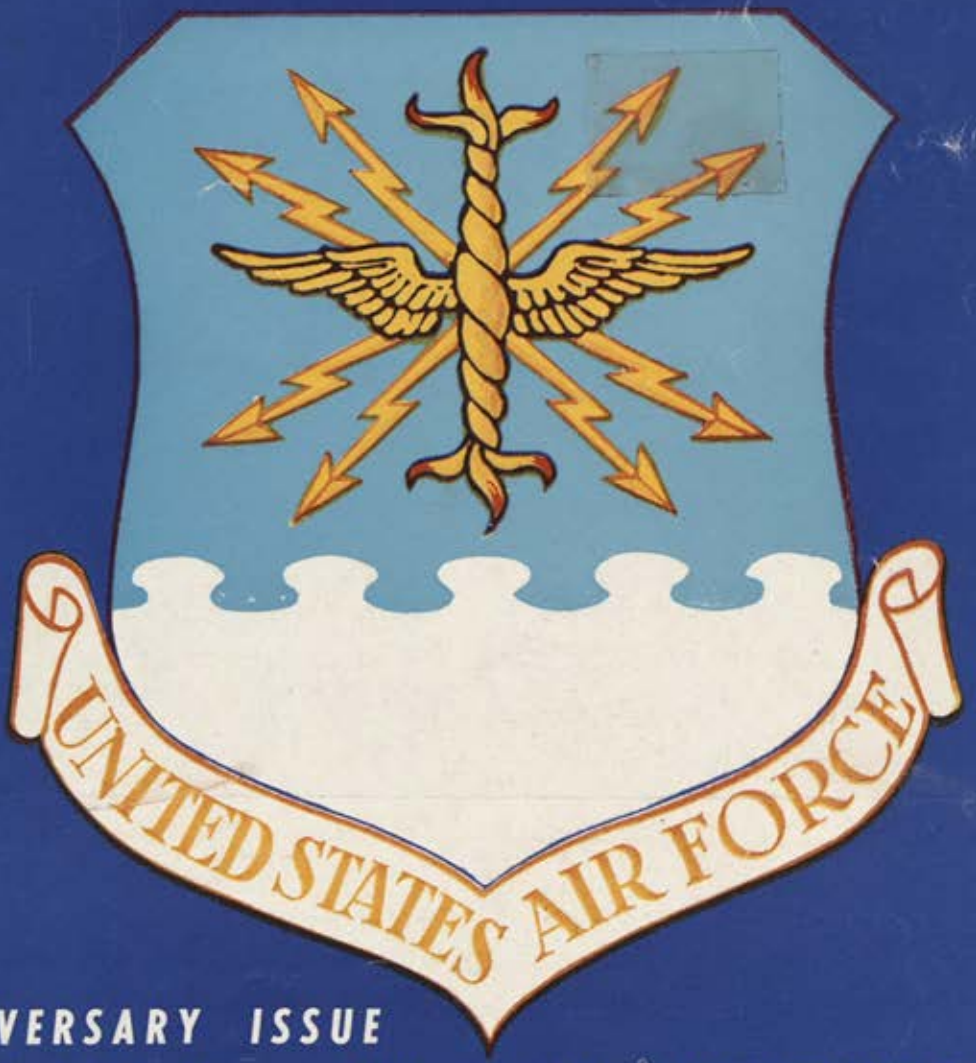
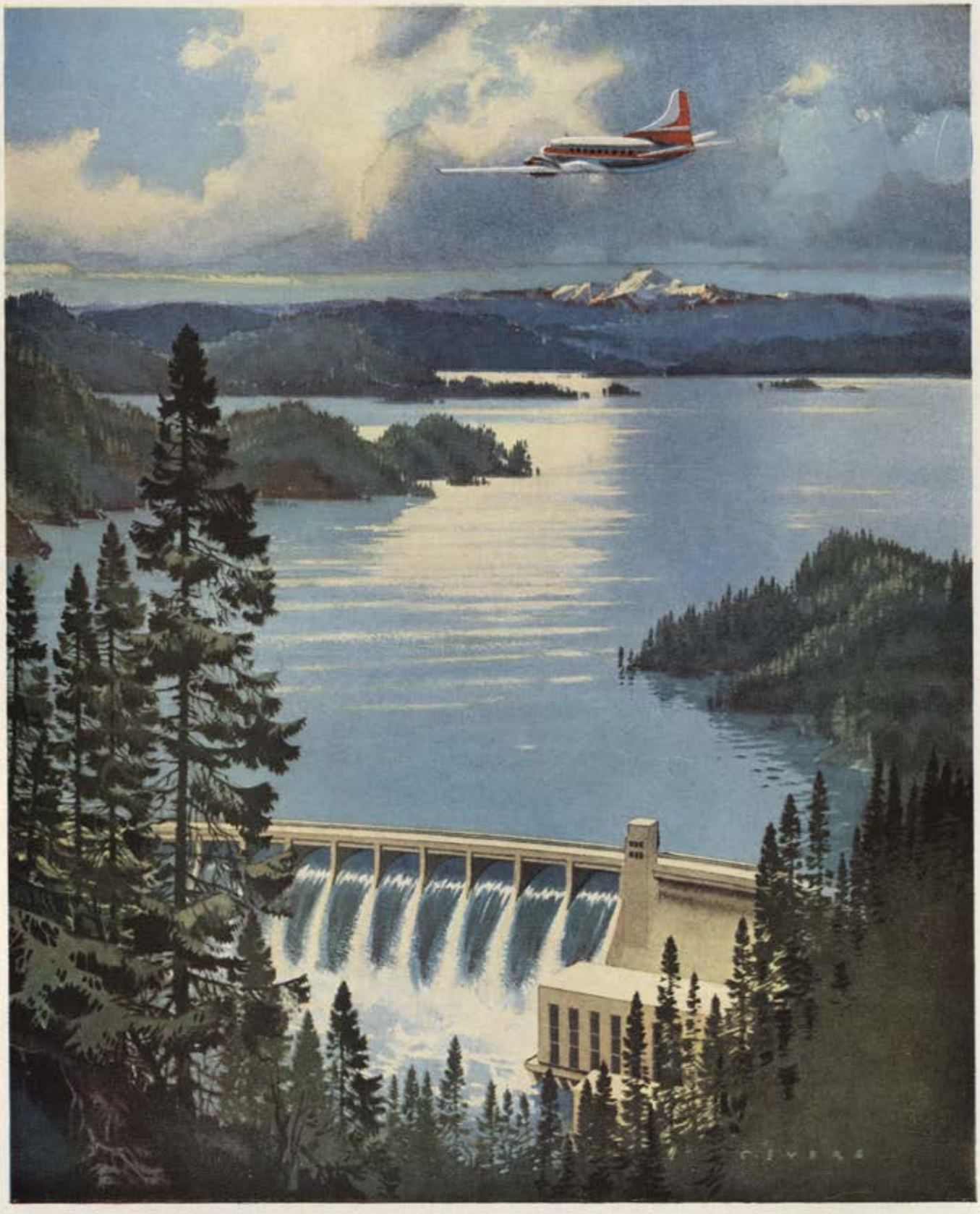
AIR FORCE

SEPTEMBER, 1951



ANNIVERSARY ISSUE

A Salute to the Men and Women of the United States Air Force



133 out of 133 Martin 202's and 404's in service or on order are equipped with Hamilton Standard *Hydromatic* propellers. In fact, *Hydromatics* now are specified for 98% of all U. S. transports.

HAMILTON STANDARD
EAST HARTFORD CONNECTICUT
UNITED AIRCRAFT CORPORATION

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First Commercial Jet Plane

In North America adopts **GOODYEAR ICEGUARD** *equipment*

THE AVRO Jetliner—first commercial jet plane in North America—is protected against icing up to its 30,000-35,000 foot ceiling with Goodyear Iceguard equipment on leading edges of wings, cabin air intakes, horizontal and vertical stabilizers.

The Iceguard uses the principle of electro-thermal de-icing developed by The National Research Council of Canada. Resistance wire elements, molded into a special erosion-resistant synthetic rubber compound, generate heat for de-icing.

On the Canadian-made AVRO Jetliner the Iceguard equipment—designed, fabricated and installed by Goodyear—is only 1/10 inch thick, giving maximum ice protection with minimum thickness and a glove-like fit.

GOODYEAR
AVIATION
PRODUCTS

The Iceguard is one more in a long list of contributions to safer flying that make Goodyear Aviation Products first choice of private and commercial operators the world over. Write for details today.

Goodyear, Aviation Products Division
Akron 16, Ohio or Los Angeles 54, California

Boeing B-1 flying boat of 1919 vintage, first international mail plane, is dwarfed by U. S. Air Force's new Boeing C-97 Stratofreighter transport.

Out of the past comes the future

Boeing celebrates its 35th anniversary this year. Not old by ordinary standards; but in aviation, it's a whole age — virtually the age of flight.

During those 35 years, Boeing engineers and production men have seen — and played an important part in — the transition from stick and wire "flying machines" to today's comfortable, speedy, commercial transports. They have contributed to the nation's defense with a variety of military aircraft — from tiny fighters of the 20's to the B-17 Flying Fortress and B-29 Superfortress of World War II.

Today the company still pioneers — with planes like the huge Stratofreighter and Stratocruiser, the B-50 Superfortress, the 600-mile-an-hour B-47 Stratojet, the soon-to-appear B-52 eight-jet bomber and highly secret guided missile projects.

Boeing regards the experience gained during its first 35 years as a steppingstone toward continued progress — a solid foundation for meeting the challenges that lie ahead.

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

BOEING

AIR FORCE

THE OFFICIAL JOURNAL OF THE AIR FORCE ASSOCIATION

ANNIVERSARY ISSUE VOL. 34, NO. 9

SEPTEMBER, 1951

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.

ITS OFFICERS AND DIRECTORS

FEATURES

DEPARTMENTS

AIR FORCE STAFF

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Today's speeds demand electronic gunnery

Today, with interceptors capable of closing in at blinding speeds, the problem of effective gunnery for bomber protection becomes increasingly acute. Split-second tracking, computation and firing are demanded — and complex, compact, light-weight electronic instruments furnish the answer. Arma — working closely with our Armed Forces since 1918 — has supplied the outstanding engineering, imaginative design and precision manufacture that play a leading part in producing these miraculous instruments.

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SUBSIDIARY OF AMERICAN BOSCH CORPORATION

QUALITY ARMA INSTRUMENT PRECISION

Air Mail

The Stooge

Gentlemen: I thought that the following poem might be of interest to AIR FORCE Magazine readers. I copied it off the bulletin board of Group I Headquarters at Ardmore, Oklahoma Air Base in February, 1945. If you should publish it, I would appreciate a comment to the effect that if anyone has a similar poem that would apply to bombardiers, I would certainly like to hear from them.

I'm the co-pilot, I sit on the right
I'm not important, just part of the flight
I never talk back lest I have regrets
But I have to remember what the pilot forgets.

I make out the flight plan and study the weather
Pull up the gear and stand by to feather
Make out the forms and do the reporting
And fly the old crate when the pilot's a-courting.

I take the readings, adjust the power
Handle the flaps and call the tower
Tell him where we are on the darkest night
And do all the bookwork without any light.

I call for my pilot and buy him cokes
I always laugh at his corny jokes
And once in a while when his landings are rusty
I come through with, "Gawd but it's gusty."

All in all I'm a general stooge
As I sit on the right of a man called Scrooge
I guess you may think this is past understanding
But maybe someday he will give me a landing.

Douglas M. Keeney
4 Philips Terrace
West Haven, Conn.

Out in August

Gentlemen: Have been reading your articles about AFA members dropping out because they have been called to active duty. I have been on active duty for the past eleven months and hope to be discharged in August, 1951. Am still keeping my membership with AFA.

Lee O. Barnes
3391 Main St.
Riverside, Calif.

• *Nice going, Barnes. One of AFA's objectives is to preserve and foster the spirit of fellowship among former and PRESENT members of the Air Force. An increasing percentage of AFA's*

(Continued on page 7)

IN ANY LANGUAGE . . . .

DEFENDER OF PEACE

DEFENDEUR DE LA PAIX

VERDEDIGER VAN DE VREEDE

VERTEIDIGER DES FRIEDENS

F84Es are in service in France, Belgium, Holland, Germany, England, as well as in the U. S. A. and Korea

REPUBLIC AVIATION

FARMINGDALE, LONG ISLAND, N. Y.

Makers of the Mighty Thunderbolt · Thunderjet · XF-91 · F84E

membership is on active duty at present time.

A Substitute for Axle Grease

Gentlemen: Thanks for Bob Johnson's "personal" printed letter. I am an Air Force man, and I still believe in the Air Force; but I do not look at it from the lofty point of view of global strategy—political force-in-being, etc. I am interested in the human side of the Air Force, for the simple reason I fought the war as a human being. In the troop carrier command in England we got butter that I swear would have made a good substitute for axle grease. I am not maligning the cooks, (they were good), the blessed stuff came out of cans; my point is this, the butter, guard duty on wintry British nights and the day a V-1 went over are my strongest memories of the war, as a human being. Now, the next war will be fought using global strategy,—*by human beings.* Well, has the butter improved any? Are you still issued two with a pass into town? What's the *human* side of global strategy? The article about the B-36 bomber crews was wonderful, but it was one in four years. Raise the percentage.

Henry S. Blossom
Hudson, Ohio

• *Quartermaster informs us that the "axle grease" included in field packages during World War II has been replaced by canned oleomargarine, which is said to be more palatable to overseas personnel. A call to the first sergeant of a unit stationed at Bolling AF Base, Washington, revealed that a present day airman uses his own judgment in preparing for a pass into town.*

Point of Interest

Gentlemen: As a point of interest, wonder how many other AFA members like myself are now with another branch of Service. I am an Ensign in the Naval Reserve. There are two other former Air Force men with me. I note with amazement the fact that men of both services cannot see the other's point of view. May I suggest some kind of article on how Navy and Air Force men can better understand each other.

Bertram L. Steinberg
Brooklyn, N. Y.

September's Plum

Gentlemen: I received my membership card and pin today, and I just had to write to tell you that I am extremely proud to be a member of AFA. I am looking forward to receiving the magazine as I enjoyed it very much in service and since I've been discharged. It sure is a fine publication as it expresses my sentiments about airpower to a tee. I would like you to know that I am Air Force from the top of my head to the tips of my toes and at last I have found an organization that has the same sentiments that I have.

Alice V. Suran
Long Island City, N. Y.

(Continued on page 11)

The Aircraft: Grumman F9F-5 Panther

The Engine: Pratt & Whitney Aircraft J-48 Jet

The Fuel System: Holley Turbine Control

HOLLEY Carburetor Co.

DETROIT 4, MICHIGAN

FOR HALF A CENTURY—ORIGINAL EQUIPMENT MANUFACTURERS FOR THE AUTOMOTIVE AND AIRCRAFT INDUSTRIES

A-8

William Johnson finds it easy to do "double duty"

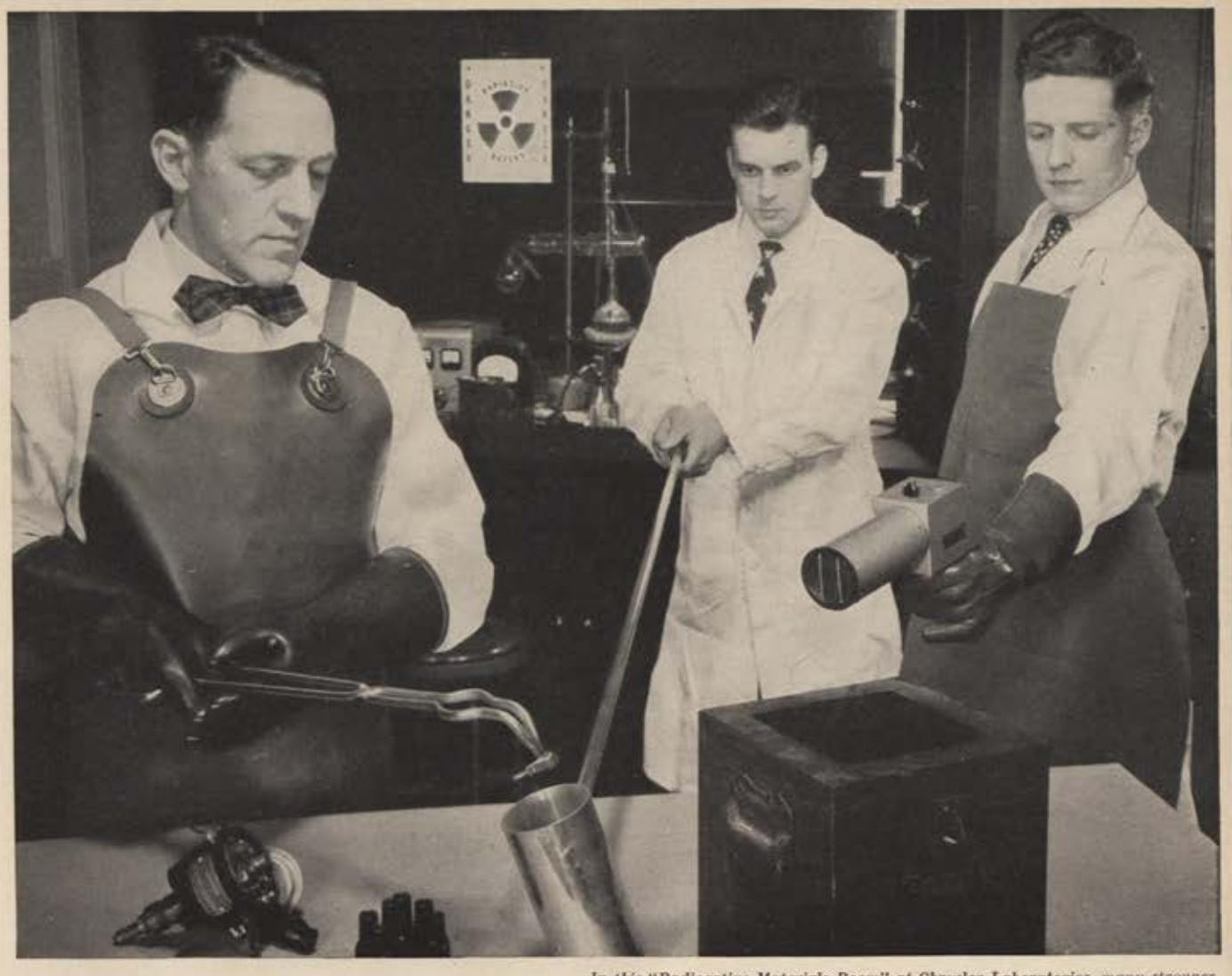
Mr. Johnson has an important desk job as General Manager of Charles B. Johnson, maker of sizing machines for textile mills. It's vital that he and other key men make field trips, too. The company's Twin-Engine Beech Executive Transport and Beechcraft Bonanza allow them to do *both* jobs. They clip travel time as much as 75%! Today, with mills filling government contracts, these Beechcrafts help keep production rolling. Example: A Johnson Sizer in a deep-south mill after long operation needed a replacement part. Thanks to Beechcraft "special delivery," the machine was idle just four hours!

The sleek, unsurpassed Beech "Twin" is a familiar sight on all the world's airports. Its versatility, reliability and high performance characteristics have been proved in service of leading industries and the Armed Forces. The cabin is comfortable and soundproofed—with several custom-interior plans available. With maximum speed of 230 mph, the Beech Executive Transport gives executives complete mobility of action, any time, any season. See your Beechcraft distributor for details. Or write Beech Aircraft Corporation, Wichita, Kansas, U. S. A.

- Cruising speed, 200 mph
- Range up to 900 miles
- Service ceiling, 20,500 feet
- Seating arrangements for 7, 8 or 9

Beechcraft

BEECHCRAFTS ARE THE AIR FLEET OF AMERICAN BUSINESS



In this "Radioactive Materials Room" at Chrysler Laboratories, many stronger metals . . . better designs . . . smoother-running, longer-lasting parts have their beginning. Note the protective lead-and-rubber gloves and aprons, and the thick lead box in the foreground where "hot" parts are safely stored.

ATOMS FROM OAK RIDGE COME TO DETROIT

The men in the picture are handling "hot" or radioactive automobile parts. That's the reason for their long-handled tools, the radiation exposure meter held by the man at the right—and their caution. It's all part of a new kind of research at Chrysler Corporation.

Our engineers send engine distributor points to the U. S. Atomic Plant at Oak Ridge, Tenn., where they are made radioactive in the famous Atomic Pile.

Returned to Detroit, a "hot" point is mounted in a standard distributor, and given a test run as though in your car. Ordinarily it takes hundreds of hours of engine operation for points to wear enough to be measured. But in a few minutes of this test, some radioactive atoms are transferred from the "hot" point—enough to be measured accurately by sensitive Geiger Counters.

In this way, we find out where wear starts, and how and why, and thus learn to develop better points that will run much longer without replacement.

Similar tests, using "hot" piston rings, gears, bearings and the like, are helping us to develop longer-lasting parts for cars and other vehicles, and improved ways of lubricating them.

Chrysler Corporation was an auto industry pioneer in this peaceful use of atomic energy. It's one more example of the practical imagination that leads directly to the fine performance and long life of the products we make. And another reason why our experience and skills are always ready for a wide variety of challenging jobs—from cars and trucks and military vehicles to industrial engines, heating and cooling systems—and even railroad freight car trucks.

Practical IMAGINATION guides research at **CHRYSLER CORPORATION**

PLYMOUTH, DODGE, DE SOTO and CHRYSLER CARS and DODGE TRUCKS

Airtemp Cooling, Heating, Refrigeration **Chrysler** Marine & Industrial Engines **Dodge** Job-Rated Trucks **Oilite** Powdered Metal Products **Mopar** Parts & Accessories **Cycleweld**

AIR MAIL CONTINUED

A Consolation Prize

Gentlemen: Please refer to the Mobilization News department in June issue of AIR FORCE Magazine. On page 45 you state that "upon acquisition of a fourth dependent, any Reserve officer or airman on active duty may request an immediate return to inactive status." Would you please advise me of the authority for this statement? This policy was in effect in FEAF until April 1, 1951, at which time it was supposedly discontinued.

Maj. George L. Kittle
APO 963

• *USAF Headquarters has informed us that it is complying with a directive issued by Secretary of Defense George C. Marshall on October 24, 1950, which states, "Officers with four or more dependents will not be recalled involuntarily and both officers and airmen already involuntarily recalled who have four or more dependents will be separated upon application." However, in some cases of financially-secure officers, it may be necessary to prove hardship before they will be given releases.*

Another Laurel

Gentlemen: Thanks for the fine article on the 4th Fighter Interceptor Group's jet ace, Captain Jabara.

Capt. Charles J. Brown
4th Fighter Interceptor Group
APO 970

Correction

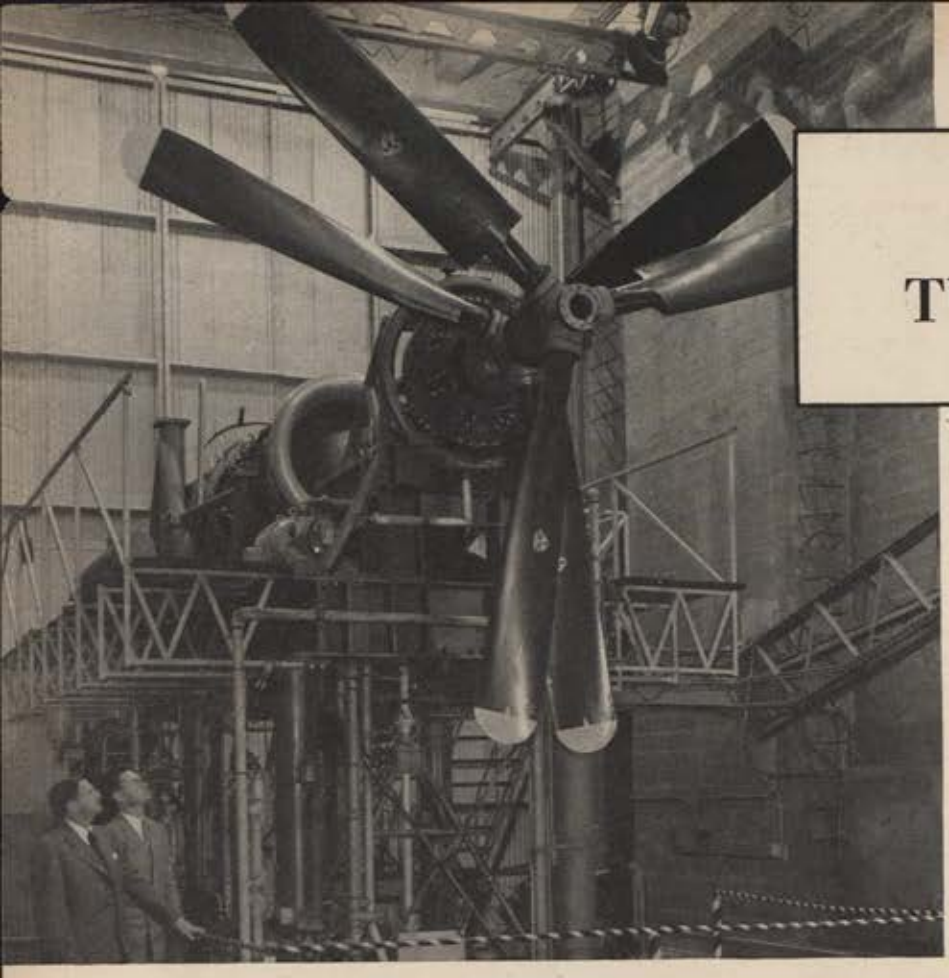
Gentlemen: "USAF's Airlift to God" is a fine article—August '51 issue, but I feel one error should be corrected. The young men who are trained at Lackland AFB and Sampson AFB are not inductees. They are enlistees. There is a freedom of choice to serve in the Air Force. The Army can have an enlistee or he can be at a basic training center as an inductee. Please don't mix these two methods of becoming a part of the Military Service.

Dorothy E. Engle
Capt. USAF
WAC-WAF Recruiting Officer
Central Recruiting District
Sixth Army

The Magazine's Job

Gentlemen: As a reserve officer in a sister (and senior) service I want to put in my little two-bit plug in appreciation of the service AIR FORCE magazine is performing in the field of military journalism. You have several functions —to explain the Air Force point of view to the public at large, to keep reservists and Guardsmen up to date, to keep other services posted on AF developments, and to criticize internally when such criticism is just and necessary. You're doing a splendid job in all respects. Keep it up.

F. L. J.
Silver Spring, Md.



IN THE NEWS

TURBOPROPS

The Turbodyne, most powerful propeller-type aircraft powerplant in the country, delivers more than 8000 horsepower in addition to an undisclosed amount of thrust. Here, Jim LaPierre, manager of G-E's Aircraft Gas Turbine Divisions, and Virg Weaver, in charge of the Turbodyne project, take a look at the engine on the stand where it is undergoing rigorous tests.

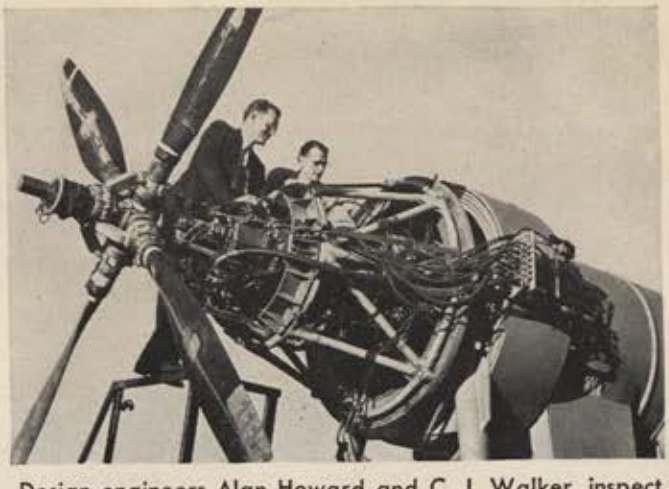
Ten years ago, in July, 1941, G-E engineers started work on a new type aircraft powerplant—an axial-flow gas turbine driving a propeller. This was the TG-100, the first turboprop in the country and the forerunner of future powerful engines.

General Electric engineers today are experimenting with the Turbodyne, a Northrop development. Although larger than required for today's transport needs, the Turbodyne presents an ideal vehicle for testing new ideas and methods.

New and improved turboprop engines are in the books at General Electric. Light weight and high powered, these engines will someday be lifting new aircraft to new uses and new records.

When you're considering powerplants, call in the company that pioneered the aircraft gas turbine industry. Telephone your General Electric aviation specialist, or write General Electric Company, Schenectady 5, N. Y.

Convair XP-81, first turboprop-powered aircraft to fly in U.S., powered by TG-100, first American turboprop.



Design engineers Alan Howard and C. J. Walker, inspect an early TG-100 turboprop on test stand in Schenectady.

AIRCRAFT GAS TURBINES

GENERAL ELECTRIC

210-22

AIRPOWER IN THE NEWS

VOL. 34, NO. 9 WASHINGTON, D. C. SEPTEMBER, 1951

USAF STRENGTH by July 1, 1952, is expected to total 1,061,000 of which 925,000 will be airmen and cadets. Recent Congressional budget hearings revealed that 23,000 Regular and 113,000 non-Regular officers will be on active duty by end of FY '52. Approximate personnel percentages in each airman grade with the AF at present time are: private, 10%; private first class, 30%; corporal, 15%; sergeant, 15%; staff sergeant, 13%; tech sergeant, 10%; and master sergeant, 7%.

PROPOSED removal of ConAC Headquarters from Mitchel AF Base, N. Y., to Grandview, Missouri, some time after June, 1952, has been announced by USAF. Authorization for the move is in pending legislation, but no funds have been requested for this fiscal year. . . USAF has activated Smokey Hill AF Base, Kans., for use by SAC bomber units, and Parks AF Base, formerly Camp Parks, Pleasanton, Calif., as an ATC indoctrination center. . . 829th AF Specialized Depot at Gadsden, Ala., became active on August 1 with Clovis AF Base, N. M., scheduled for activation under TAC this month. . . Youngstown Municipal Airport, O., has been leased by USAF and activated under ADC.

THREE installations of AMC will soon be renamed in honor of AF Medal of Honor winners. Under the USAF Memorialization program, 822nd AF Specialized Depot, Maywood, Calif., will be redesignated Cheli AF Specialized Depot in honor of Major Ralph Cheli; 831st Specialized Depot, Shelby, O., will become Wilkins AF Specialized Depot after Major Raymond Wilkins; and 862nd Specialized Depot, Dayton, O., will be named Gentile AF Specialized Depot for Major Don Gentile.

FIRST USAF unit in Europe equipped with the F-86 -- 81st Fighter-Interceptor Wing -- will leave the U. S. soon for duty in UK, where a medium bomber wing of SAC is on rotational training duty. . . 12th Fighter-Escort Wing, Bergstrom AF Base, Tex., will replace 31st Fighter-Escort Wing now on rotational training duty in England. It will be a personnel rotation only; the aircraft -- Republic F-84 Thunderjets -- will remain in England for use by the 12th.

NEW swept-wing, all-jet version of B-36 heavy bomber, being built for USAF by Convair at Forth Worth, has been designated YB-60. New eight-jet bomber is a development of basic B-36 design, but it will differ from B-36 so markedly in appearance and performance that new designation was set up.

INDUSTRY will find it difficult to provide the 5,000 military planes scheduled this year with present production output estimated to be twenty percent below target. (Procurement officials have stated that 48 cents out of every defense dollar to be spent in the next year is earmarked for aircraft.) Harold R. Boyer, General Motors' director of engineering production, has been named by Defense Mobilizer Charlie Wilson as DPA's Deputy Administrator for Aircraft Production and Chairman of DPA Aircraft Production Board. This group is charged with over-all coordination of aircraft production program.

(Continued on page 14)

MATS aircraft hauled 50 tons of sandbags from California to Kansas in one night during recent flood. Troop carrier aircraft of 18th AF were assigned to flood for four days on top priority flight, hauling sandbags, launches, blankets and medical supplies -- air drops were made when landings were impossible. An SB-29 of Air Rescue Service flew 1000 miles to drop an urgently needed airborne lifeboat. In Topeka, Forbes AF Base men and equipment were instrumental in keeping property losses down and eliminating the loss of life. 10th AF directed USAF participation.

GENERAL CARL SPAATZ, Chairman of AFA's Board, was honored last month by his native Reading, Pa., as Municipal Airport Field formally became the General Carl A. Spaatz Field. Ceremony highlighted 1951 Annual Reading Airshow.

TWO HUNDRED questions and answers providing knowledge which will enable the private pilot to fly with greater safety have been published in booklet form by CAA. Future written examinations for private pilot ratings will be on questions taken verbatim from this booklet. Entitled "Questions and Answers for Private Pilots," the publication is on sale at fifteen cents each by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

INCREASED use of vital electronic equipment in military aircraft has caused complete revamping of training so as to provide aircraft observers adept at new skills required by tremendous speeds and all-weather operations. A new Observer Training Plan will be embodied in aviation cadet flying training program with first class scheduled to start September 15 at Ellington AF Base, Tex.

EDWARD T. DICKINSON, JR. of Brooklyn, N. Y., has been appointed Deputy for Installations in Office of Secretary of AF. . . George Ramsey of Brookeville, Md., has succeeded Knox Phagan as Deputy Comptroller of AF. . . Maj. Gen. Samuel R. Brentnall is new Assistant Vice-Commander of FEAF.

BILL naming Navy's supercarrier the James V. Forrestal has been signed by Mr. Truman. The 60,000-ton carrier will be built at Newport News, Va.

DAN A. KIMBALL, Army Air Corps aviator of World War I and Under Secretary of the Navy since May, 1949, took oath of office on July 31 as Secretary of the Navy, succeeding Francis P. Matthews, who resigned to become U. S. Ambassador to Ireland. . . Adm. William M. Fechteler, Commander of the Atlantic Fleet, has been named by the President to succeed the late Admiral Sherman as Chief of Naval Operations. . . Rear Adm. Ralph R. S. Riggs, Assistant Chief of Naval Operations for Naval Reserve, retired on August 1. He was relieved by Rear Adm. W. K. Phillips, former Commandant of Eighth Naval District.

AF NURSE CORPS needs 2000 qualified registered nurses by July, 1952. Candidates between the ages of 18 and 35 will be accepted. Married women are eligible if they have no dependents under the age of 18. All nurses commissioned in the Air Force are automatically at least second lieutenants. They may be commissioned in higher ranks.

KOREAN CASUALTIES totaled 80,079 as of August 4. Of the total, 11,933 were killed in action, 55,898 were wounded -- of whom 1,357 died -- and 12,248 are missing in action. USAF battle casualties totaled 697.

Even A Polar Bear Would Shiver!

Behind this foot-thick door is one of the world's coldest places—a room where the thermometer often reads 90° below zero F. – where a polar bear would need an *extra* fur coat to keep warm!

In this rigorous, arctic-type "weather," Honeywell Autopilots, Electronic Fuel Gauges and other important equipment are put through their paces regularly—to prove they will operate dependably in the most taxing conditions nature has to offer.

The temperature of this room can be raised to 200° above zero F.—to test Honeywell equipment in worse-than-desert heat.

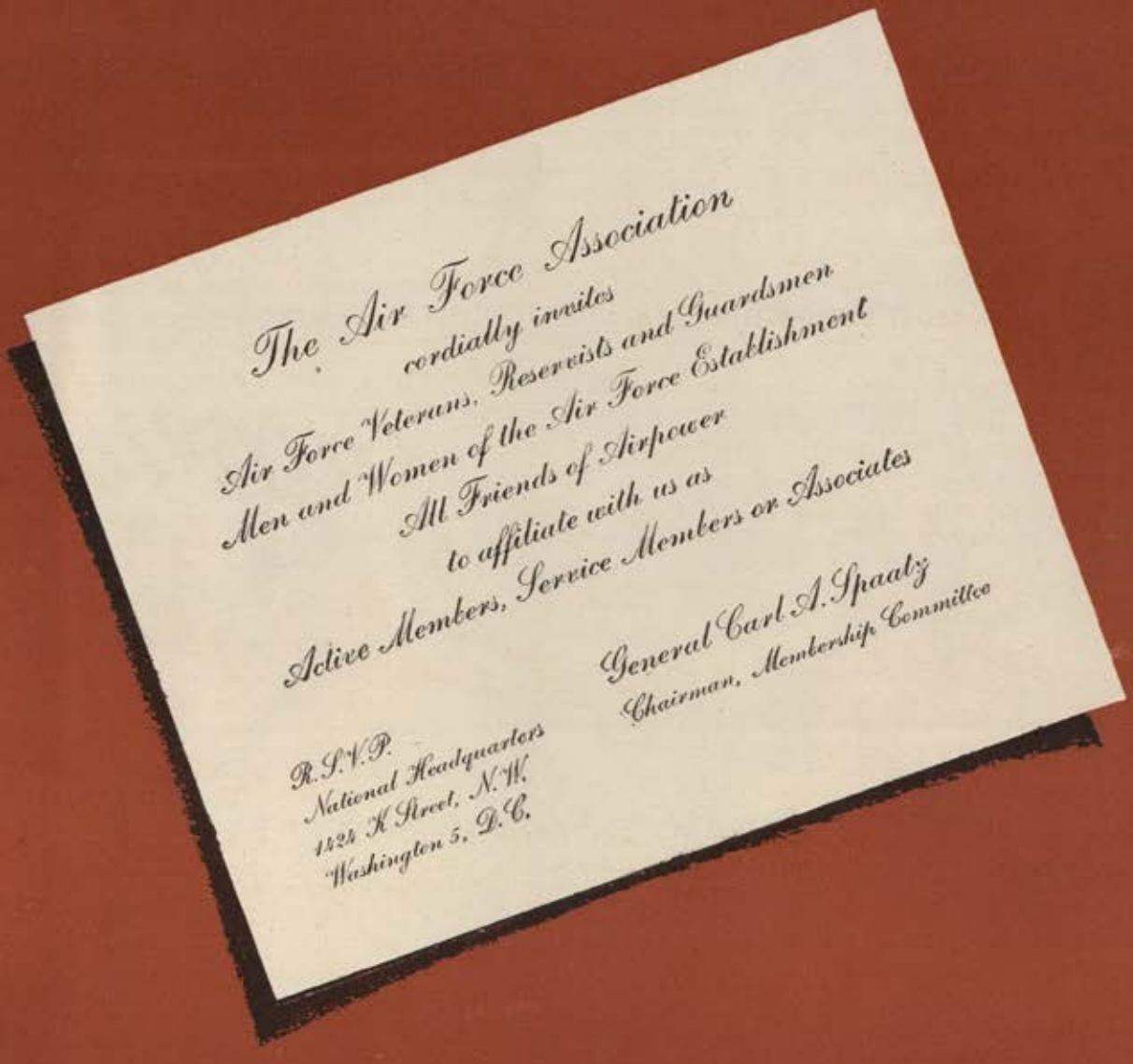
Other chambers in Honeywell's Environmental Laboratory subject controls to extreme humidity, sand, dust, vibration, fungus and salt spray. Quality standards are the highest. Honeywell designs its controls to perform their life-protecting duties *perfectly*—wherever our air forces fly.

These environmental tests are just one phase of Honeywell's continuing research on aeronautical control problems. We expect not only to continue, but to expand this research program – because *automatic control* is such an important part of aviation progress. And *automatic control* is Honeywell's business.

AERONAUTICAL DIVISION

MINNEAPOLIS-HONEYWELL • MINNEAPOLIS 13, MINN.

MINNEAPOLIS **Honeywell** *Aeronautical Controls*


The Air Force Association
cordially invites
Air Force Veterans, Reservists and Guardsmen
Men and Women of the Air Force Establishment
All Friends of Airpower
to affiliate with us as
Active Members, Service Members or Associates
General Carl A. Spaatz
Chairman, Membership Committee
R.S.V.P.
National Headquarters
1424 K Street, N.W.
Washington 5, D.C.

Another **"FIRST"** *from Gilfillan's years-ahead research...*

NEW GILFILLAN GCA NOW LANDS 'EM 3 AT A TIME!

THE FIRST GCA UNITS needed *five* men to "land" *one* aircraft. Today, thanks to Gilfillan research and development, *one* man does the work of *five! Three* men the work of *fifteen!*

The new Gilfillan GCA Trailer contains three complete GCA's in one. So every Gilfillan GCA Radar Trailer has three independent operating positions. Thus, it can land one, two or three aircraft simultaneously—depending on traffic volume.

OTHER AMAZING FACTS ABOUT NEW GILFILLAN GCA:

It can be transported anywhere by air!

New Gilfillan GCA is light and compact—it can be quickly, easily transported in cargo planes...anywhere in the world.

It's the Official Landing Equipment for USAF, USMC, Royal Australian Air Force and Royal Canadian Air Force.

Plus other Gilfillan GCA equipment being used by USN, CAA, RAF, France, South Africa—and scheduled airlines throughout the world.

Today Gilfillan GCA is the most widely-used navigation aid in both civil *and* military aviation.

It is being produced and delivered at the rate of one complete GCA Trailer every 48 hours—7 days a week!

New Gilfillan GCA is a challenging, complex production problem. Has over 35,000 intricate, custom-made parts!

Yet Gilfillan—and only Gilfillan—has pioneered the mass production of this GCA, one of the most complex electronic devices ever constructed.

No wonder when you say GCA, you mean...

Gilfillan
Los Angeles

Developers and Producers of GCA for USAF in World War II

PERMANENT CAREERS
for Electronic Design Engineers
Write
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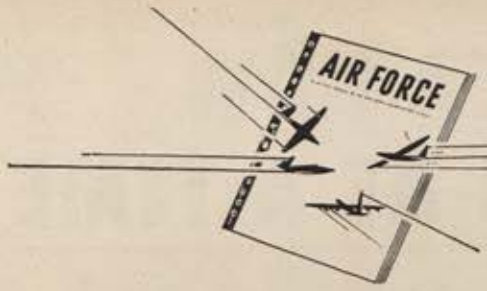
Los Angeles 6, Calif.



RENDEZVOUS

Where the Gang gets together

CCC MEMORIAL: I'm interested in achieving a national memorial to the CCC boys. One of the major obstacles: no one knows who the CCC alumni are or where they are. Existing records are valueless. We are dependent upon alumni identifying themselves voluntarily. Could AFA ask any CCC alumni among its membership to write that fact to me? I would then be in position to approach such people to see whether they are interested in a national CCC memorial to the extent of a dollar contribution. CCC alumni includes camp leadership as well as enrollees. *Clarence C. Case, 301 W. Lenawee St., Lansing 15, Mich.*

1946 VINTAGE: As an ex-AAF pilot, I keep plugging away at the wild blue yonder by non-commercially teaching my friends here in Mexico how to fly. I try not to stop with flight instruction alone, but give as much ground instruction as possible. I had my old World War II Pilots Information File to assist me in lots of different things, but recently it disappeared. Could any of the readers provide a P. I. F. of about 1946 vintage for me? Name your price, and I will be glad to send you immediately a check to cover. *Edwin J. Surman, Jr., c/o T. H. Gonzalez, Eagle Pass, Tex.*

HUMP PILOTS: I would very much appreciate getting some publicity for the 6th annual reunion of the Hump Pilots Association to be held at the Netherlands Plaza Hotel, Cincinnati, Ohio, Saturday, September 8, 1951. Anyone who served in the China-Burma-India theater during World War II is eligible and welcome to attend. Please make your own hotel reservations by mentioning "Hump Pilots." *James E. Noe, 312 Armory Place, Louisville 2, Ky.*

22ND BOMB GROUP: To all former members of the 22nd Bomb Group: The current News Letter is now being sent out. It contains correspondence from former members and also pertinent information regarding our second reunion which will be the day of the Army-Navy football game. If interested, please get in touch with *Walter Gaylor, 367 Broad St., Newark 2, N. J.*

CALLING FRANK: While attending the University of San Francisco, I made the acquaintance of a chap who was, at that time, an AFA member and very proud USAAF veteran. He was Cadet Colonel of the U. S. Army (CAC) ROTC unit at the USF, and I have since lost track of him. His name is Frank Williams, last known address in San Francisco, California. Does anyone know his present address? *William R. Vizzard, Jr., 2410 Eighteenth Ave., San Francisco 16, Calif.*

UNIT REUNION: 37th Service Group's second reunion to be held August 31-September 2, at the Hotel Biltmore, Oklahoma City, Okla. For further details, contact *George E. Reed, 502 Magee Building, Pittsburgh 22, Pa.*

PINELLAS WARRIORS: There will be a get-together at the Ambassador Hotel in Los Angeles during the AFA Convention of all the fellows who served at Pinellas Air Field, St. Pete, Florida, during the last war. Rendezvous will be listed on the bulletin board in the Ambassador Lobby. Self-appointed chairman of the shindig is Ralph Whitener, who hung out at the 304th and Squadron "T" Armament shop. For information write to *Whitener, Air Force Association, 1424 K St., N. W., Washington 6, D. C.*

EAGLE SCOUTS: My Boy Scout Troop at home is compiling a booklet on all former members of the troop who became Eagle Scouts. I would greatly appreciate any information you may be able to obtain on the following Air Force officer: Lt. (Capt.) Willard Synder. He is believed to be a weather forecaster and must be a reserve officer because his name is not listed in the Air Force Register. *Capt. Richard L. Dennen, General Delivery, Fairborn, Ohio.*

UNIT HISTORIES: AFA is interested in obtaining imprint information, place of publication or printing, printer or publisher, and date of the following World War II unit histories: "IX Air Defense Command", "325th Photo Wing Base Laboratory", "Pirate's Log", "History of 19th Bomb Gp. (VH)", "History of 25th Air Service Gp.", "King's Cliffe", "Forty First Service Record", "The 44th Air Service Gp. in India", "Year Book, 81st Air Depot Gp.", "Strikes, 323rd Bomb Gp.", "352nd Ftr. Gp., Second to None", "From Seattle to IE Shima with 413th Ftr. Gp.", "History, 435th Troop Carrier Gp., 9th Troop Carrier Command", Pictorial Highlights from History of 460th Bomb Gp.", "Combat Diary, 504th Bomb Gp.", "Diary of 8th Photo Sqdn., New Guinea". Write *Service Dept. AFA Headquarters, 1424 K St., N. W., Washington 6, D. C.*

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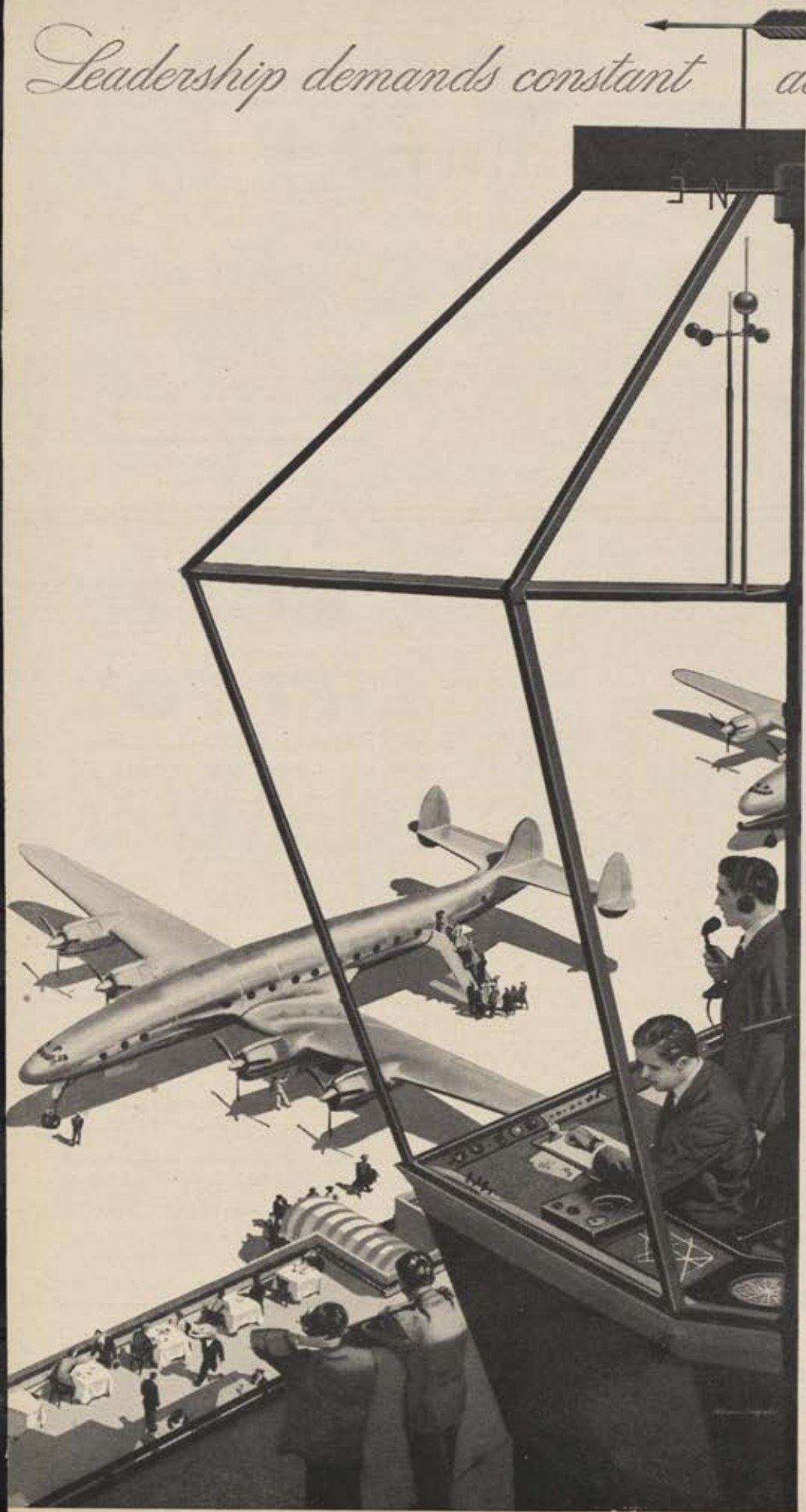

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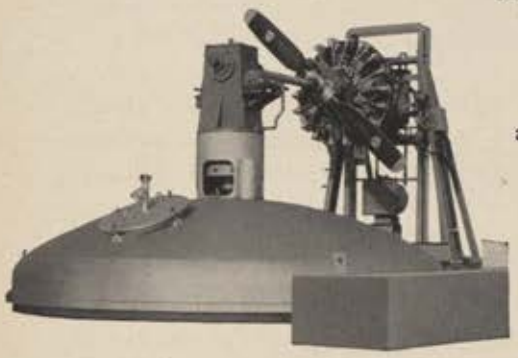
to speed the Fairchild Packet on its way!

Vast power lifts this 35-ton Flying Boxcar . . . power converted to lift and speed by Aeroprops. And the power of this mighty engine-and-propeller combination gives new mobility, range, and striking power to the fighting men of our armed forces.

The propellers for this giant C-119 are another example of the vision of Aeroproducts engineers . . . vision and pioneering spirit that have carved an enviable position for Aeroproducts as a leader in propeller design.



Developed under Navy and Air Force contracts, the world's first supersonic spin pit is now in operation at the Aeroproducts Division of General Motors. This new technical advance permits study of new Aeroprops spinning at supersonic rotational speeds.

The same organization is available for consultation if you have any problems in the subsonic, transonic, or supersonic range. Aeroproducts—backed by the full facilities of General Motors—will be glad to serve you.

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DAYTON, OHIO

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Building for today
Designing for tomorrow

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Aeroproducts

Sub Smasher . . . One of the most completely electronically equipped planes ever built, the U. S. Navy's new Martin P5M-1 Marlin is a deadly anti-submarine weapon designed to detect surfaced and snorkeling submarines. And, once the sub has been located, the Marlin carries the killing punch in its bomb bays to destroy the enemy raider.

The big seaplane's features—many of them still secret—are a product of teamwork among Navy BuAer, N. A. C. A. and Martin aircraft systems engineering. Long, extended hull for greater water stability—clean, streamlined profile for higher speed—hydro-flaps for fast stops and quick turns in taxiing—all contribute to the superior peformance that will aid the Navy in keeping our sealanes swept clean of undersea raiders.

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Thought of the Month

By Representative Carl Vinson of Georgia *Chairman, House Armed Services Committee*

The development of airpower has, in combination with new weapons of mass destruction, changed the entire strategic situation.

This country is today vulnerable to air attack.

The most effective defense against such an attack is adequate airpower to meet it, and, above all, to strike back at its sources.

It is impossible in modern war to postpone or avoid decisive action in the air. No matter how much strength we may be able to assemble on the ground or the sea, we cannot hope to defeat Soviet power unless we have superior strength in the air. Air warfare, once begun, moves very rapidly toward a decision.

If the air battle is lost, the war is certain to be lost.

In order to win the air battle, we must have in being an Air Force superior to any that could be thrown against us. An Air Force of the size that I propose is essential for the defense of our allies and for our own security.

The airplanes that this force would require, in addition to the number planned for the 95-wing Air Force, can be provided without the construction of a single new aircraft factory.

The immediate outlay for additional base facilities would be in the order of $400 million. The 138 combat wing force will require the addition of approximately 300,000 airmen.

Because of the long lead time required for the development and manufacture of present-day airplanes, particularly those of the bomber type, and for the training of airmen, this program will take several years to complete.

If we are to have this force in time, the decision to allocate the necessary resources must be made immediately, and the funds should be included in the next budget to be submitted to the Congress.

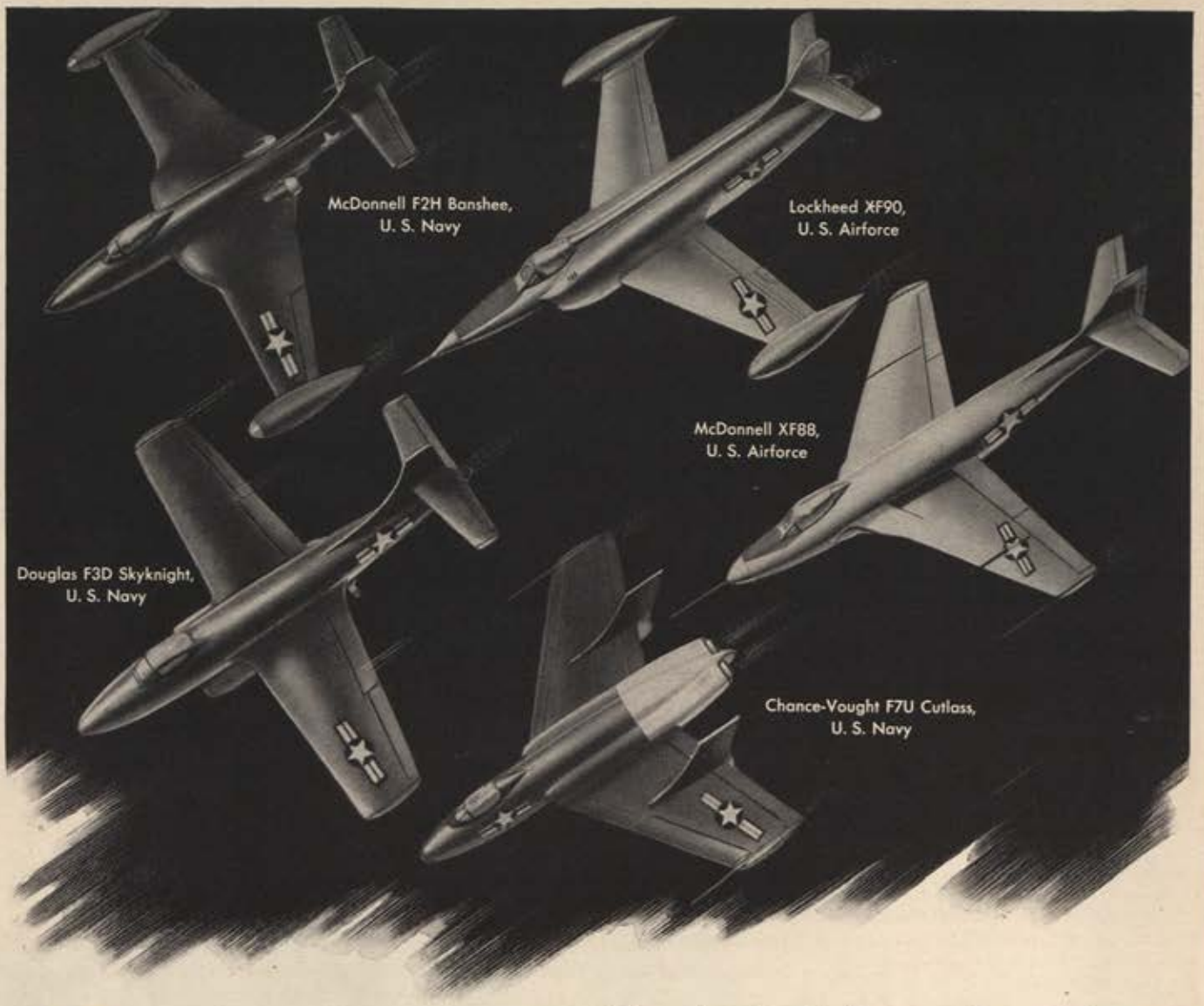
I have complete confidence in the ability of American industry and engineering talent to produce airpower on this scale. The broad base for production expansion laid down during the past year has already begun to justify the investment. Last month, the aircraft industry, under its gathering momentum, produced more airplanes than the schedule called for.

The requirements of the 138 combat wing Air Force can be met by the addition of extra work shifts at the factories, more production tools, and the proper allocation of materials.

This program is not a war program. It will serve as a demonstration of our determination to defend ourselves and our allies against the threat of war. This program will be costly. It will require some sacrifices. But anything less would compromise the security of our nation and the safety of our people.

I am confident that the great majority of Americans will give the Air Force and naval air expansion their full support.

August 7, 1951



Five Great Entries
in a vital air race

These first-line fighters—each powered by two Westinghouse turbojet engines—will play an important role in the most vital race of all... the race for World Air Supremacy.

Westinghouse takes pride in the part it is playing in supplying engines for the U. S. Navy's and U. S. Air Force's highest performance aircraft—engines providing high power and reliable service for planes that must combine flashing speed and top dependability to qualify as a part of America's air arm.

In addition to the already famous J34, Westinghouse has developed the J46 and the J40, big brother of the Westinghouse jet engine family and the most powerful turbojet engine known to be in production anywhere.

J-54009

YOU CAN BE **SURE**... IF IT'S

Westinghouse

AVIATION GAS TURBINES

See the Westinghouse J40 turbojet engine in the lobby of the Statler Hotel.

Want to pick AC power from a DC "plant"?

JACK & HEINTZ does it!

J&H INVERTERS, operate in a wide range of output capacities from 250 to 2,500 volt-amperes. They can be adapted to any special AC power requirement—single-phase, three-phase, or both. All J&H Inverters are self-protected against sudden shocks and also against extreme changes in temperature and air pressure.

You need only one kind of electricity for your car—*direct* current . . . only one kind for your home—*alternating* current. But electrical requirements of a modern airplane demand *both* DC and AC.

PROBLEM—Since airplane generators usually supply only DC current, how can you get necessary AC power from this DC "plant"?

ANSWER—The DC current from the generators is used to power inverters which generate 400-cycle AC—closely regulated for voltage and frequency.

Compact, closely-controlled power—tailored to fit unusual requirements—is a characteristic of all J&H *Rotomotive* equipment. Right now we're building this into such specialized aircraft devices as generators, inverters and control systems. If the same techniques can help you improve defense equipment, or aid in your planning for the future—remember, *JACK & HEINTZ does it!*

New *Rotomotive* Equipment Booklet—This 24-page picture story shows why we can help you solve unusual problems. Write, on your company letterhead, for a free copy of the new "Jack & Heintz Does It!" book. Address Jack & Heintz, Cleveland 1, Ohio.

JACK & HEINTZ *Rotomotive* EQUIPMENT

means electrical, hydraulic or mechanical devices designed to solve unusual problems of developing power, controlling it, or using it

TECH TALK

By Helena Redmond

A miniature jet combustion chamber tests efficiency of fuels and their carbon-depositing tendencies at Wright Air Development Center's Power Plant Laboratory. Jet fuel and air heated to 400° F. are forced into a two-inch diameter chamber for burning. The tiny cylinder assesses the carbon content of a fuel mixture as accurately as if a full-size engine were run and its combustion chamber liner weighed.

The AF has given up its fight with the elements on jeeps, vans, and trucks. Open-air storage of these items at AF bases in continental US has been labeled unprofitable. Indoor storage, maintenance and preparation for overseas shipment will be handled by commercial contractors in the future. Cost of the new system will be about $2 million a year—but savings are estimated at $3 million.

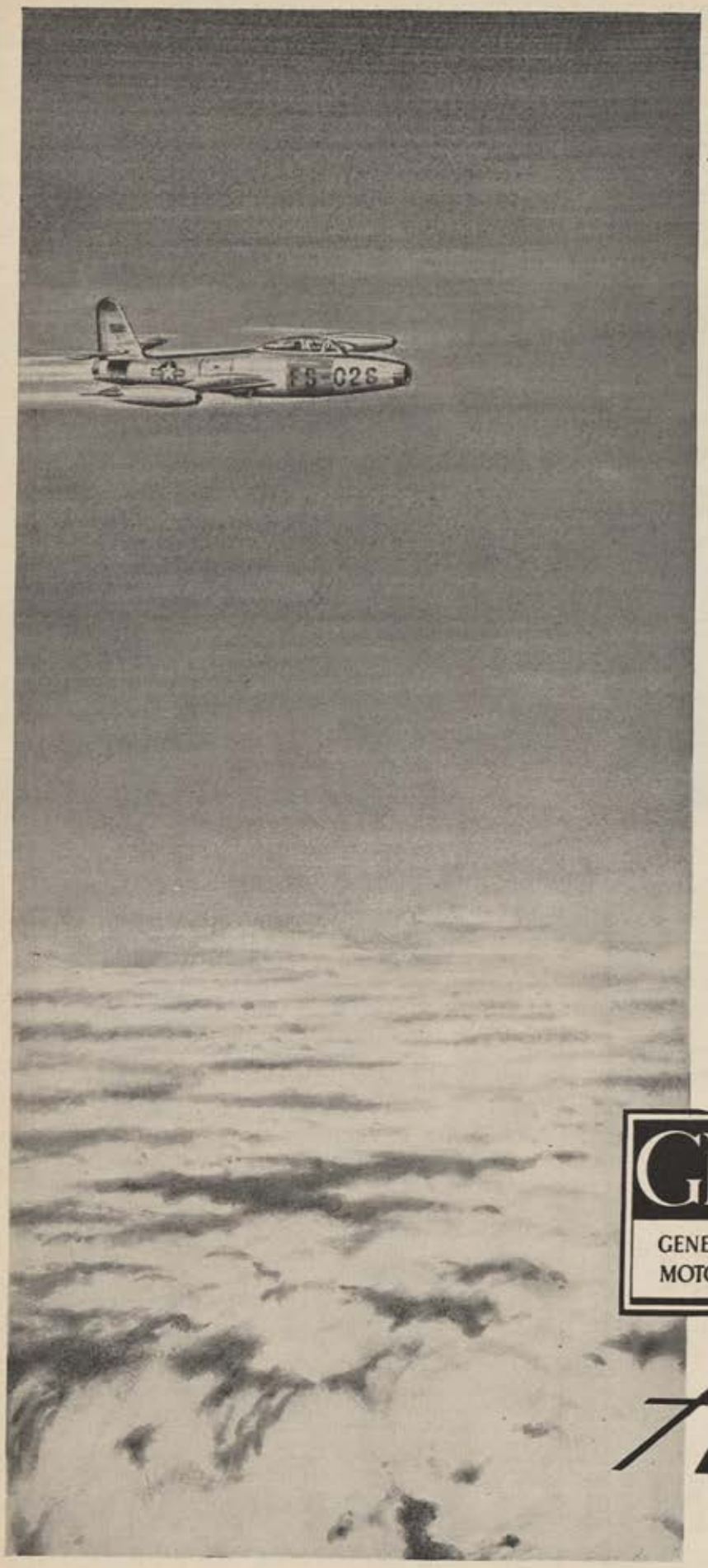
Dayton's changeable weather, which rates no compliments from residents, is considered ideal for all-weather flight and instrument training. A year of daily flight around Wright-Patterson AFB would expose a pilot to almost every type of weather in the world. The AF's instrument school, now located at Wright-Patterson, is destined to stay right there until some Chamber of Commerce presses a claim to the dubious distinction of having more "ideal" weather.

Centralized control and revamping of the Armed Forces packaging program have been recommended by industrial packaging experts and AF officials meeting at the invitation of Asst. Secretary of the AF Eugene Zuckert to study the problem of world-wide shipping. Air Matériel Command, which handles 90 percent of AF packaging, rated a pat on the back when the committee rated its present packaging program as "coming close" to the ideal.

A new use has been found for self-developing camera film. The AF School of Aviation Medicine recommends it for use as dosimeters—agents to measure atomic radiation exposure. The dosimeter is a miniature film pack, to be pinned on the shirt or attached to the dog-tag around an airman's neck. It contains a chemical pod that develops and fixes the film automatically when it is withdrawn from the pack. The process takes only one minute and gives an immediate record of the amount of radiation absorbed.

Pre-service tests of helicopter blades and rotors are now being conducted on actual equipment instead of scale models. Wright Air Development Center does the job in two "whirley-bird" cages where all new and experimental rotors are tested for aerodynamic calibration for power and thrust, strain on blade parts and endurance. The larger cage is enclosed by six layers of chain link fence 75 feet high and 100 feet in diameter, uses a 4,000-hp motor to whirl rotors at speeds of 450 rpm.

A new digital differential analyzer built for North American by Computer Research, Inc., will become part of a flying laboratory the company is preparing for in-flight testing of guided missile components.



Sweeping past the 1,000,000th hour

SOMEWHERE in the World, on a flight from an American base—at home, in Alaska, in Japan or somewhere in Europe, or from the deck of a Navy carrier, an unknown jet pilot has just made aviation history.

Reports just tabulated from fighter squadrons all over the world, record that Allison-powered jets recently swept past the 1,000,000th hour mark to establish another "*first*" for these famous Allison J33 and J35 Turbo-Jet Engines.

More than 10,000 of these high-powered, battle-proved engines are piling up a record of availability and reliability never before equaled. They lead the world in experience—in actual time in the air. And, even more important — these Allison engines have met *and have exceeded* every military specification for operation and performance — *under the stern test of combat!*

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DIVISION OF GENERAL MOTORS
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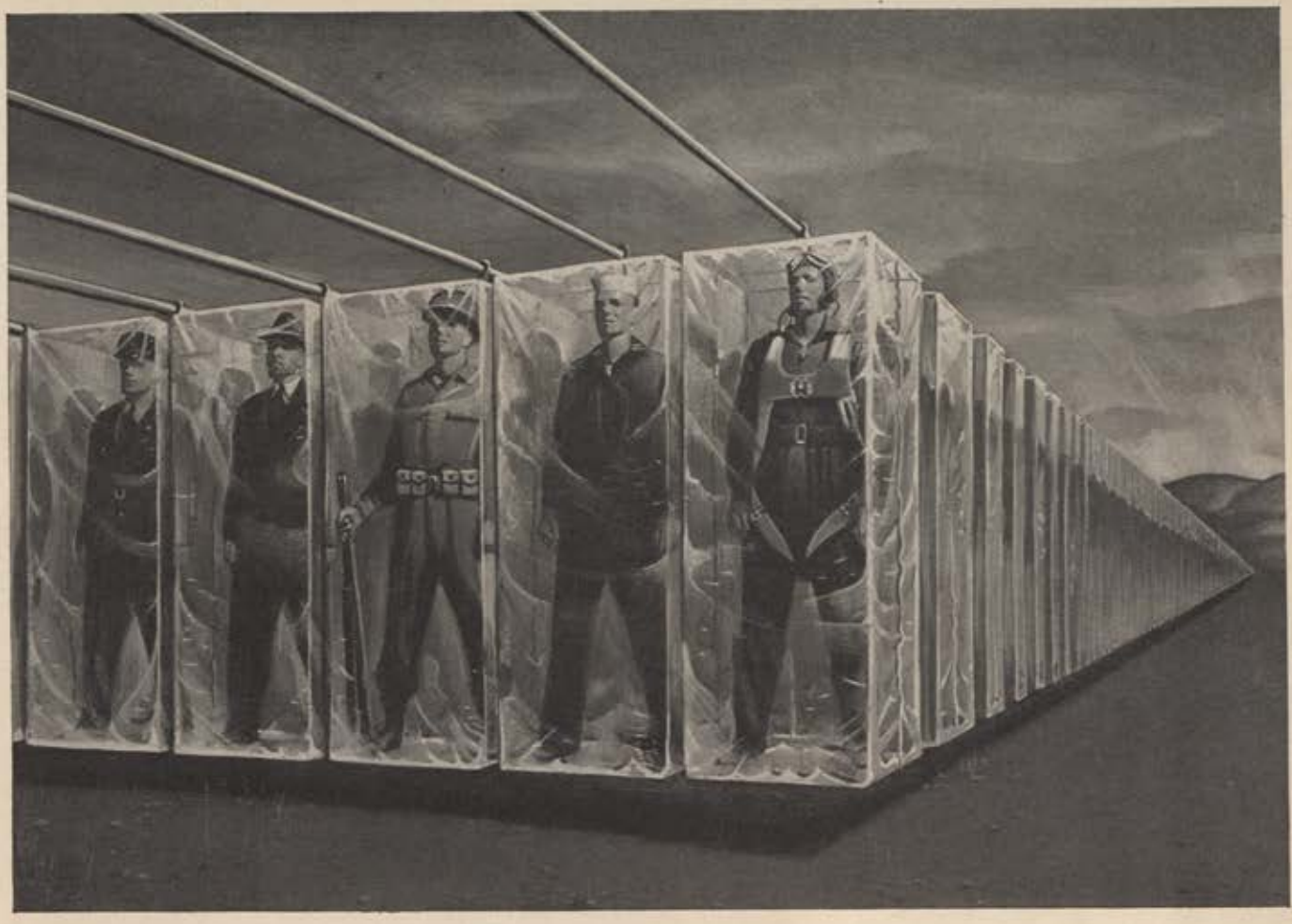
DEFENSE IS EVERYBODY'S BUSINESS — AIR POWER IS EVERYBODY'S PROTECTION



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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 developments. 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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ANNIVERSARY

ON SEPTEMBER 18, 1947, only four years ago this month, the U.S. Army Air Forces became the United States Air Force in the newly-created Department of the Air Force.

We called it "the day Billy Mitchell dreamed of" in our issue of that month. And to his name we should add those of Andrews, Arnold, Spaatz and all the others who pioneered the cause of autonomy for our national air arm.

Yes, and we should add the names of all the men and women of the Air Force who, over the years in war and peace, have proved by their deeds the compelling need for recognition of the Air Force as our first line of defense and offense and for establishing a true airpower concept for the security and peace of the United States and all the free world.

And so it prompts us, on this occasion, to step back in salute to these men and women of the Air Force and then, for our own better understanding, to step up and take a close look at some of them in their jobs of today.

To that end this Anniversary Issue is dedicated, and it is done so with pride in the fact that this month the Air Force Association, dedicated to the cause of airpower, celebrates the fifth anniversary of its founding.

With these thoughts in mind, we can turn the page and begin, not by examining the past, but by looking ahead at our hope for security in the future, at "The Air Force of Tomorrow."

The AIR FORCE of TOMORROW

Two considerations are inescapable. Air Force functions will not change but equipment used to perform these functions will change radically.

By James H. Straubel

"THESE days," said an Air Force pilot recently, "you don't get into a jet, you put it on." He wasn't kidding.

When you look for the pilot in the cockpit of a new fighter you find a switchboard operator squeezed into a maze of little black boxes. And the situation is going to get worse before it gets better.

Our newest all-weather interceptors have a rear cockpit, too, where a radar observer also is squeezed by the black boxes of electronics. Next step is to eliminate the observer and turn all of the airborne radar job over to the pilot. Then the squeeze really will be on.

By this time, the pilot will hardly justify his name. On an intercept mission he will chauffeur the plane to the end of the runway for takeoff. Here a ground control operator from a comfortable perch in a nearby office takes over. Working from a radar scope, this non-pilot, non-commissioned operator takes the plane off the ground and flies it to within perhaps 20 miles of its target. The pilot merely monitors the gadgets that surrounds him. When the target, let's assume an enemy bomber, appears on his radar scope, the pilot turns a knob, switching control from the ground operator to an automatic pilot in the plane. The robot, in turn, with no assistance from the pilot draws an electronic bead and fires the plane's air-to-air missiles precisely as the target comes into range. Then the ground operator takes over again, flies the plane to base and controls the landing. The pilot chauffeurs the ship from the runway and calls it a mission. Later on, perhaps, he is told that he blasted the enemy from the skies. The radar scope report proves it, but the pilot wouldn't know because he didn't see a thing—except those little black boxes.

This type isn't quite possible today—the pilot still takes off and lands and does a few more things in the air—but automatic interception, as described, is not more than a few years away. It should be taking place by 1956.

The next step toward automatic flight probably will be accomplished gradually and "without incident," as the military would put it. The first guided missiles to see service probably will be short-range tactical missiles which, to all appearances, will resemble the fighters they replace. With these new aircraft lined up on the runway, it will look like the good old days. There will be names like "Dirty Gertie" and all the rest. Crew chiefs and armorers will be at the same old stand. The chaplain won't be quite so busy, but he'll be around. The one big difference—all of our pilots will be missing. Replacing them in the cockpit, and doing a better job of it, will be those little black boxes—improved versions. This transition should begin about 1955.

Even today, as the fighter pilot "puts on" his jet, electronic equipment is beginning to crowd him out of the cockpit before it takes over his job. The little black boxes are, in fact, crowding the Air Force in areas other than the cockpit, and crowding hard, noticeably on the production line and in the manpower pool.

Today, unlike World War II, the time factor in production is controlled by the electronics industry, and the airframe manufacturers refer to themselves as "furniture makers." It is not merely a question of a time lag in delivering the black boxes to the completed airframe. The equipment for a new aircraft design must be developed many months before the plane itself reaches the design stage. Today the Air Force opens design competition for the electronics equipment going into a new plane some nine months before it opens design competition for the plane itself.

On the personnel front, there is a serious shortage of scientists and engineers to design and develop the black boxes around which the Air Force of tomorrow is being built. The years ahead promise only a sharp decline in the number schooled as scientists and engineers. The demand is tremendous—of the 50,000 engineers and scientists graduated this year by American colleges and universities, all have been absorbed. Even more alarming, fewer students are entering these professions. By 1954 the annual graduate list of scientists and engineers will have dropped below the 16,000 mark. The estimated need is 30,000 yearly.

The crowded cockpit, the airframe furniture makers, the dearth of scientific brainpower—these are a few of the signs of our times as we enter the era of electronic warfare and mold the Air Force of tomorrow.

Personnel futures in this Air Force, individually and collectively, will be keyed as always to the weapons and equipment. Thus, it behooves Air-Force men and women to have at least general knowledge of what developments lie ahead. Let's speculate, therefore, on the trend of Air Force things to come—independently, unofficially, at times quite at variance with what we assume to be official Air Force thinking, and always within the limitations of security. As we see it, these are the trends, keyed to the four major missions of the Air Force:

Air Defense

The first and most important job of the Air Force is the air defense of the United States. By this we mean defense against enemy bombing attacks after they are airborne. Many factors bear on this problem and we may find that this is the hardest way to defend the country against attack. For example, rocket attacks from submarines off the coast will be much more difficult to repel after the rockets are launched than if the submarine is attacked en route.

The requirements imposed on an air defense force have been changed quite radically by the advent of the atomic bomb. Heretofore, the idea was to effect such an attrition against an enemy bomber fleet that it became too expensive for him to continue bombing. This is hard, but not impossible. It was accomplished in the Battle of Britain, and it was almost accomplished by the Germans at Regensberg and Schweinfurt against America's daylight bombing forces. Against conventional intercontinental bombing attacks, one normally could expect effective defense with reasonable ease.

However, while World War II experience indicates ten percent attrition will do the trick (the British did it with eight) the atomic bomb gives any single bomber a destructive capacity many times greater than its worth, and demands an attrition nearer 90 percent to be effective. This is, for all practical purposes, impossible. It means that if the enemy begins all-out war, the United States is going to be on the receiving end of some atomic bombs. Our air defense force must prevent as many as possible from falling on useful targets or from being delivered at all.

The joker in all our computations, official and unofficial, in this sphere of Air Force activity is our lack of knowledge of Russia's military development. But we do know that Russia possesses the means of delivery. That is, she has quantities of B-29 type bombers, and we can assume she has perfected them to the efficiency of our B-50s. We also can assume she has mastered in-flight refueling. And we know beyond doubt, as this magazine first revealed several months ago, that Russia is developing a truly intercontinental bomber.

However, from the best information available, Russia is not planning to A-bomb the United States this week for a very simple reason. If she did, we would drop a much greater number of A-bombs on Russia. In this exchange, at the moment, she would be sure to lose. But this favorable balance will not continue forever, and by 1955 it is quite likely that each team will have enough atomic bombs to completely destroy the other, if the bombs can be delivered. So we can assume—though we can never be sure—that we will have a brief but welcome grace period in which to build up our air defenses.

If called upon, what could we produce in terms of air defense against intercontinental atomic bombing through 1955? Not much. The air defense force we will have for the next few years is already fixed. Through 1955 the weapons of the Air Defense Command will be F-89s, F-94s and F-86Ds. They are our so-called "interim" interceptors, the almost-but-not-quite automatic interceptors, inadequate in both control systems and armament for the job that would be demanded. Beyond 1955, however, decisions of today may affect the course of events. One of the first improvements will be air-to-air guided missiles. At about the same time, we can assume, improvements in Early Warning Radar and transmission of data to filter centers will greatly increase the capability of our control and warning systems to handle large groups of enemy aircraft.

The trend in all Air Force operations is for automatic computers to take over the work now being done by hundreds of thousands of fingers. This is evident in gunnery, bombardment and navigation. It seems plausible that computers will take over many of the ground control and warning jobs, nor is there any logical reason why radar data cannot be fed to digital computers and relayed to interceptors roaming the sky. Filter Centers bursting with all types of workers, and the patriotic, hard-working ground observers may be vital for the moment, but it's a fair assumption that by 1955 we will have eliminated the need for both. We'll have more black boxes, less people.

With the advent of automatic computers, the pilot will rapidly become redundant in an interceptor and will go along only for the ride—to save the aircraft in case something goes wrong. As electronic equipment becomes more reliable, the pilot will be eliminated entirely. At this point, about 1960, non-manned interceptors—guided missiles—will become the backbone of our air defense. This transition will also take place gradually, with squadrons being furnished non-manned interceptors as replacements for their piloted aircraft. By that time the pilot already will be playing such an insignificant role that the change-over will probably take place "without incident," although the going-away parties for the pilots should make history.

Strategic Operations

The second mission of the Air Force is to destroy by the application of airpower the enemy's capability and will to wage war. This mission has two important parts—to destroy the enemy's bombing forces (and this may very well be more easily accomplished by destroying his bases, thereby aiding our air defense forces), and to destroy his production capability and communications. This, of course, is the job of the Strategic Air Command which, it is generally agreed, is now the major deterrent to all-out war.

As the boys in Korea will attest, the B-29 is now marginal in daylight against first-string jet fighters, perhaps obsolescent when such fighters are flown by first-string pilots. The B-50 is little better. The B-36, although it can deliver an atomic attack against Russia for several years to come, for planning purposes must also be considered marginal in daylight. At night or in bad weather, however, these planes of the Strategic Bomber Command should be invulnerable to Russia's fighters for a few more years, since, based on the best information available to us, Russia is poorly equipped for all-weather interception. At the same time, we must assume that she has given it top priority. Beyond the planes mentioned, we have the B-47, which should be able to do a fair bombing job against Russia for quite a while, although by 1960 Russia should have surface-to-air guided missiles capable of shooting it down.

In this connection, it is interesting to note that the speed of the airplane is not nearly so important as the size—if you are looking at a bomber as a guided missile would look at it. In fact, against guided missile defenses, doubling the speed of the bomber is only about half as effective as cutting its size in two.

As we have indicated, by 1960 we must assume an enemy with guided missile defenses able to inflict prohibitive losses on piloted aircraft. Here several schemes can be adopted. One is the air-to-ground missile launched from the bomber outside the range of local air defenses. Another may be a bomber which flies at tree-top level—very difficult to shoot down, and also very difficult to develop since navigational problems at 500 mph at tree-top level are quite complex.

The long range trend, of course, is toward what is expected to become the primary strategic attack weapon of the future—the true, intercontinental, supersonic guided missile with atomic warhead. Based on the trends in the development of shorter-range missiles, it should be available by 1965.

It is reasonable to expect that in ten years the primary job for pilots in the Strategic Air Command will be in re-

(Continued on page 110)

Above and Beyond the Call of Duty

This is the story of Major Louis J. Sebille, first Air Force man to be awarded the Medal of Honor in Korea, told by the pilot who was his wingman on that day

By Captain Martin H. Johnson

ILLUSTRATION BY BOB BALES

"WE HAD been flying combat only for four or five days. Our outfit, the 67th Fighter Bomber Squadron of the Far East Air Forces, had moved up from Clark Air Force Base in the Philippines to Japan.

"This mission on which a heroic pilot willingly sacrificed his life took place on August 4 or 5. It was a close air support strike against enemy targets in Southern Korea. It was a grand day for flying when our four F-51 Mustangs took off about two that afternoon.

"Shortly after taking off one of the F-51's had to turn back for mechanical reasons. It was the wingman of Major Louis J. Sebille, our Squadron commander. I was leading the second element, and flying my wing was Lt. Charles R. Morehouse.

"The three of us crossed the Sea of Japan and made landfall near Pusan. We headed north toward Taegu and reported in by radio to Joint Operations Center who were operating there.

"We received instructions from JOC 'Mellow Control' to check in with a Mosquito control aircraft near Hamchang. Shortly before three o'clock we made contact with him. At this time elements of the enemy ground forces were crossing the Naktong River at a point about five miles southeast of Hamchang.

MAJOR LOUIS J. SEBILLE

"We were carrying two 500-pound general purpose bombs each, and immediately made bombing attacks on these enemy troops and on horse-drawn artillery pieces which were on a sand bar in the middle of the river. When Major Sebille made his first dive bombing pass he released only one bomb. He was unable to release his second bomb even though he made several attempts to do so.

"After Major Sebille found out that he was unable to release his second bomb, we both began strafing enemy troops on the sand bar and on the east bank of the river, his plane still carrying the 500 pounds.

"During the strafing we spotted several well camouflaged enemy trucks on the west side of the river under a row of trees. We diverted our attention immediately to these vehicles in order to utilize our rockets on them.

"I was turning in for a pass on another vehicle about the time the major cut loose on his target and I could see that we were drawing ground fire from the vicinity of the vehicles. I made another run, destroying one armored vehicle, and then pulled up to check Major Sebille.

"I called a second and third time telling him he was

losing his engine coolant. After the third call Major Sebille answered, 'They hit me'. I called him again telling him to head southeast toward Taegu.

"During this time we had made two complete circles over the target and he apparently had complete control of his airplane. After telling him again to head southeast he radioed back, 'No, I am going to get that bastard.' As he said this, Major Sebille made a tight turn to the right under me and went into a shallow dive toward the area where the vehicles were partly hidden.

"As he drew into point blank range he cut loose with his six .50s and flew right into the truck with all guns blazing away. He still had one bomb and several rockets.

"There was a terrific explosion and a huge ball of fire rolled along the ground for several hundred yards.

"Lt. Morehouse and I joined up again and headed back to Ashiya, feeling that on this summer afternoon in Korea we had lost a remarkable friend, a fine commander and a very brave man."

Major Louis J. Sebille, 6663A, United States Air Force, distinguished himself by conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty near Hamchang, Korea, on 5 August 1950. During an attack on a camouflaged area containing a concentration of enemy troops, artillery, and armored vehicles, Major Sebille's F-51 aircraft was severely damaged by antiaircraft fire. Although fully cognizant of the short period he could remain airborne, he deliberately ignored the possibility of survival by abandoning the aircraft or by crash landing and continued his attack against the enemy forces threatening the security of friendly ground troops. In his determination to inflict maximum damage upon the enemy Major Sebille again exposed himself to the intense fire of enemy gun batteries and dived on the target to his death. The superior leadership, daring, and selfless devotion to duty which he displayed in the execution of an extremely dangerous mission were an inspiration to both his subordinates and superiors and reflects the highest credit upon himself, the United States Air Force and the Armed Forces of the United States.

How it all started. Not long after Orville Wright flew this number from Ft. Meyer, Va., to Alexandria the Army accepted delivery, Aug. 2, 1909.

Armed with a GI Springfield, Maj. J. E. Fickel became the first man to fire a rifle from a plane; at Sheepshead Bay, N. Y., 1910. Pilot—Charles Willard.

Billy Mitchell's crusade. A phosphorus bomb hits crow's nest of battleship *Alabama*, finally sunk by direct hit with 2000-lb bomb, September, 1921.

This young lieutenant, H. H. Arnold by name, learned to fly from the Wright brothers at Dayton in 1911.

The Early Birds

ON August 1, 1907, an Aeronautical Division "to study the flying machine and the possibility of adapting it to military purposes" was established in the Office of the Chief Signal Officer, U. S. Army. One officer and two enlisted men were assigned to the division. There were no airplanes. These pictures trace the development of the infant service from its fledgling days, through the brief flash of glory on the Western Front, and into the pre-World War II period.

The "Question Mark" record-breakers—Sgt. Hooe, Lts. Quesada and Eaker, Capt. Halverson and Maj. Spaatz.

Lt. Col. Arnold commanded a flight of ten B-10s from Washington, D. C., to Alaska and return in 1934.

The man fumbling around in the dishpan is Riley Scott, who is about to try out his mechanical bombsight. His two 18-lb bombs hit the target, or almost, and long before the days of Norden.

Casual was the word for dress on the Western Front. This outfit is the 11th Aero Squadron, Day Bombardment, France, 1918.

The first American fliers to hit France during World War I were issued this streamlined little number—a Morane Roulier.

Beginning of ground support. Capt. C. DeF. Chandler with first machine gun fired from a plane, 1912; pilot, Lt. Roy Kirtland.

Lieutenant R. L. Maughan was one of the Air Force's post-World War I speed demons. He flew this Curtiss coast-to-coast in 1924.

They flew round the world in 1924, made first trans-Pacific flight, first westbound Atlantic crossing. Time—175 days.

Death in the Night

The cloak of darkness no longer shields the Reds from probing electronic eyes

By Captain Ken Black

NIGHTFALL settles on the Korean front. Gentle rains drench the Chinese troops as they massed for an attack. Low clouds fringe the hilltops. All is quiet.

Three thousand yards away, United Nation forces brace themselves. Some are scared, some are too tired to care, but all watch for the attack.

Three miles overhead a black bellied B-29 Superfort plods through the cloud-cloaked night, its bomb bays open, forty 500-pounders ready to release.

Two regiments of Chinese Communists jump off across the empty space, creeping slowly so they will draw no fire from across the line. But they start too late.

The heavens flash with jolting, thundering explosions. The earth rocks. Burning hot steel rips the Chinese masses. Shrieking, moaning, they run in every direction, stumbling and falling over the newly dead and wounded.

Confused and terrified the two regiments fall back, their officers unable to control the terrorized mass.

On a hilltop just north of the Hant'An-Ch'on River, sits a small caravan of six vans and trucks. Atop one of the vans a six-foot saucer-like radar dish silently turns on its mount. Inside the van Sgt. John T. Hunter watches the radar scope. Small pips blink on the scope face. The sergeant calls to a nearby van over the intercom.

"Controller, I have him in my scope," meaning that the radar has located the aircraft. The big dish stops turning, focused on the approaching plane.

The controller, Chief Warrant Officer Marvin G. Carnal, answers.

"Roger, tracker, let me know when he is within range." He leans over an electronic table covered with a yard-square sheet of white paper. A small tracking pen makes a dot of red ink on the paper. That is the target.

"Controller, Phantom Leader, is in range," comes the tracker's voice over the intercom.

Carnal feeds figures into an electronic computer beside the plotting table. The computations are set and checked. He picks up the microphone. Radio operator Cpl. G. W. Collins is now in contact with the Phantom.

"Phantom Leader from Red Lantern, you are 25 miles from release. Take up a heading of 305 degrees." While the controller speaks he watches the tracking pen move toward one corner of the paper. A tiny red line heads towards the pinpoint red dot sheet.

Again Carnal picks up the mike.

"Phantom Leader, this is Red Lantern, give me your airspeed and bomb load." The radio receiver crackles back.

"Red Lantern from Phantom, airspeed two one zero, forty five-hundred pounders with proximity fuzes."

"Phantom Leader from Red Lantern, correct heading three degrees right, you are fifteen miles from release. Do not open bomb bay doors until you're advised. You are still over friendly troops."

"Phantom Leader from Red Lantern, correct one degree right, you are within eight thousand yards of release. Open bomb bay doors and set intervalometer for three hundred, check bomb switches."

"Bomb bay doors open, switches on, intervalometer three hundred, check," crackles the Phantom. The intervalometer spaces the big bombs into a pattern of three hundred feet separation as they drop from the bomb bay.

"Phantom Leader, correct one degree left, your run is good." The controller watches the red line as it creeps toward the target. Ballistics controller Sgt. Raymond A. Peal marks the bomb release distance from the target with a small graduated scale along the course line made by the tracking pen.

"Phantom Leader from Red Lantern, you are four thousand yards from release, stand by for cadence, drop on zero, your course is good." The controller is tense but talks in a slow clear voice, watching the red line progress towards the red dot.

"Phantom Leader from Red Lantern, this is cadence coming up, check all switches, hold your course, cadence—five—four—three—two—one—zero." The tiny red line splits the red dot. The pen lifts automatically and moves over to its stop position at the side of the table.

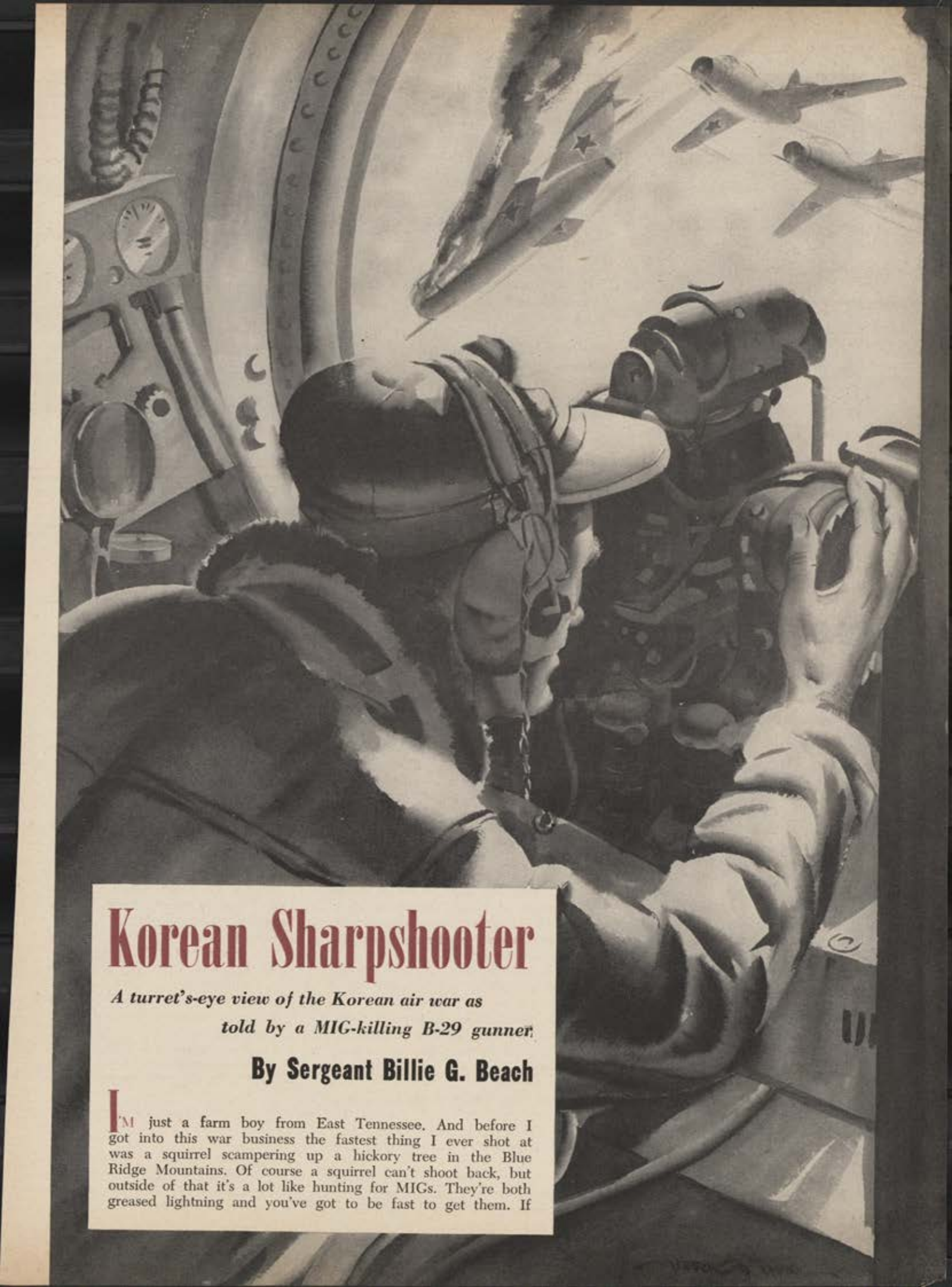
On the dark horizon white flashes turning into reddish fire illuminate the cloud layers overhead. The sky glows, then all goes black.

Seconds later flashes of ammunition rocket into the sky and again the heavens become aflame.

"Phantom Leader from Red Lantern, your target was ammo supply, troops, and artillery positions. Your strike was zero zero. Thanks a million, Phantom—we hit them tonight."

"Red Lantern from Phantom, good hunting tonight, will see you again".

This is the warfare the enemy cannot understand. Atop a Korean hill, along the front lines, these mobile caravans direct the Phantoms as they fight the Red soldier from the sky. Enemy casualties have been heavy and UN ground force commanders like the results.



Korean Sharpshooter

A turret's-eye view of the Korean air war as told by a MIG-killing B-29 gunner

By Sergeant Billie G. Beach

I'M just a farm boy from East Tennessee. And before I got into this war business the fastest thing I ever shot at was a squirrel scampering up a hickory tree in the Blue Ridge Mountains. Of course a squirrel can't shoot back, but outside of that it's a lot like hunting for MIGs. They're both greased lightning and you've got to be fast to get them. If

THE AUTHOR

At this counting Sergeant Billie G. Beach, 21-year-old B-29 gunner has shot down more MIGs than any other aerial gunner in the Far East Air Force Bomber Command. The Mosheim, Tennessee, airman, stationed on Okinawa with the 19th Bomb Group, downed two within five minutes of each other on April 12. His record has earned him a recommendation for the Distinguished Service Cross. Here is his story:

you miss on the first shot you generally don't get a second chance.

You only have a split second to spot your target, draw your bead and fire. But you've got to be cool and deliberate. I never saw a jumpy, excited guy drop a squirrel. And I don't think I'm off base when I say that goes for jet airplanes, too.

I was just an extra gunner when the 19th Bomb Group got a hurry-up call to move from Guam to Okinawa last June. When we first started working over the Commies, I didn't get a chance to go along unless a regular crew member was sick or had some other duty. As a matter of fact, I didn't get a permanent assignment until three missions before my big day.

Those first months of the war were just so much flying time for us gunners. We sat and watched—maybe ate an apple or read a book or a comic magazine—while the bombardiers and pilots did all the work.

There was some flak but all a gunner could do was help pray that it wouldn't find us.

We came into our own early this year when the Reds brought in their jets. At first it was an off-hand pass here and there. The Commie pilots were skittish and wouldn't get close enough to get our range.

But they kept getting bolder and bolder. They started shooting up the Superforts. It got so you hadn't lived if you didn't come back with a few bullet holes in your plane.

So we got fighter escort for the big missions. And the aerial gunners on the bombers were back at war—something more than excess baggage for the first time.

I decided I wanted to knock down one of those MIGs. We used to have a lot of arguments about whether a gunner with a .50 caliber machine gun on a propeller-driven bomber could bag a jet fighter flying at maybe twice the speed.

I said it could be done and I promised myself I'd prove it. I didn't realize at the time, though, how near carrying out that pledge would take me and the crew to our deaths.

It happened on my nineteenth mission (I now have 26)—my third flight out as the regular right gunner on the B-29, "No Sweat."

The briefing officer told us it would be one of the most dangerous missions of the war. Our targets were those bridges across the Yalu over which the Chinese were shipping all their men and supplies.

We were told the flak would be thick and accurate and that MIGs would be on our tails in large numbers. Our targets were in sight of the big Red airbase just across the Yalu River—in the deep end of "MIG Alley."

Twelve Superforts, in flights of four, were assigned to the mission. A cover of F-84s and F-86s was scheduled to rendezvous with us over Korea before we headed out for enemy territory.

They loaded the "No Sweat" with 2,000-pound bombs.

We took off at dawn. The day broke bright and clear—perfect for flying. We could make a visual drop.

About 40 minutes out we test-fired our guns. Mine was working smooth as clockwork.

Then we settled down for a long ride.

I pulled out a book from my hip pocket and settled down to enjoy the flight.

I wasn't thinking about anything in particular, certainly not MIGs. In the back of my mind I was sort of wondering about the flight lunches. I was hoping I would get one with boned chicken in it—most of them are not so tasty.

After about two and a half hours we began to climb. We pulled up to 21,000 feet before leveling off. The planes pulled into formation and over Korea we picked up the fighters according to schedule.

It was about noon when we got the alert that we were approaching the target area. Everybody got ready for the bomb run. We were less than five minutes away from the bridges.

The sun was shining brightly. Although it was 35 degrees below zero outside and the mountains below us were snow-covered, we were comfortable in the pressurized cabin. I had on only my flight suit and my fur-collared B-15 jacket.

Then the tail gunner shouted into the interphone:

"MIGs, about 30 of 'em, coming in at six o'clock."

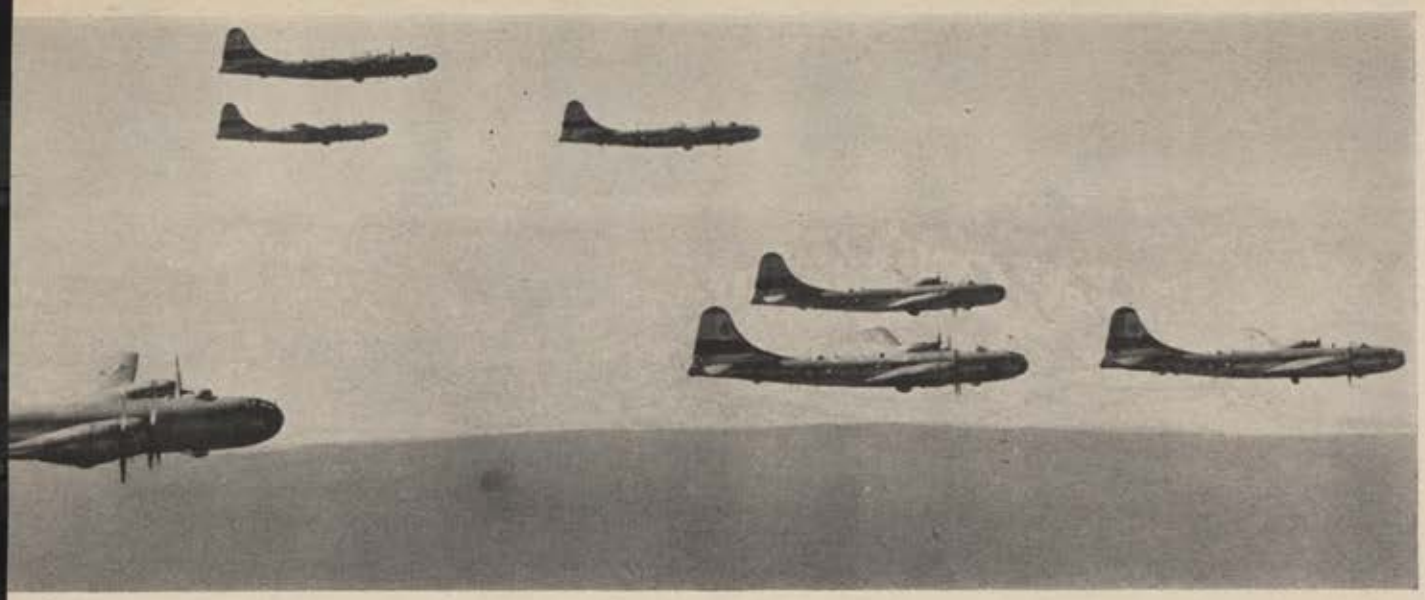
I had just taken a big bite out of a juicy apple I had tucked into my jacket. I don't know to this day what happened to that apple. It just disappeared.

They were MIGs all right. They were coming in fast at six o'clock and breaking away at four—right in line with my sights. They shot for the tail first and then swung to hit us amidships.

They were coming so close I could see the orange fire spit from the barrels of their .20 millimeter cannons.

I started firing as soon as I got one in range.

I caught my first MIG on the breakaway. I tracked him and kept firing short bursts. He got out about 900 yards before I saw he was out of control.



The last I saw of him he was spinning like crazy—straight down. One of the crewmen saw the plane crash.

Still they came.

Three minutes and four passes later, I spied this other baby coming in at 1:30, low. I picked him up 1200 yards away. I chopped into him with short, steady bursts.

That MIG got out about 400 yards and keeled over on one side. I watched it go into a headlong dive and crash and explode on the mountain below.

That was the last shot I've had at a MIG. And I had about 100 rounds of ammo left in my belts.

The fighters moved in and got the MIGs off us. But in the eight minutes they were on us they hurt the "No Sweat" plenty bad.

Both the number two and four engines were shot up and had to be feathered. The right aileron was shot out. The interphone conked out. The number two gas tank caught fire.

Our formation was broken up. Two of the four planes went down in flames. I saw one of them explode into the side of a mountain. Nobody saw anyone bail out.

The third ship had to turn back but it made it to Okinawa okay.

The fighters were gone and we were all alone. The pilot rang the alert bell—three rings, the signal for "prepare to bail out."

All of a sudden I realized I was scared, plenty scared. I'd never jumped before.

Then the Commies on the ground started throwing flak at us. I couldn't hear it but I could see the little black puffs jumping up at us. Bursts caught us along the wings and engines.

But the bail-out signal didn't come.

It dawned on us that we were going to make our bomb run anyway. The pilot tried to catch up with the flight in front of us, but with two engines gone we couldn't make it.

We went it alone. It seemed we were suspended there in space. Like a big bird with a broken wing, we limped in over the bridges.

But we got them—direct hits, smack on the nose.

The "Old Man" sent word back that he was going to try to make it back to the lines, or as close as he could get us to them. But he told us to be prepared to jump on a second's notice.

The next hour was the longest I've spent in my young life.

I was shaking. I chewed my fingernails into the quicks. I broke out in a cold sweat.

I prayed.

We lost altitude. The captain had to depressurize the cabin.

It got so cold we nearly froze.

With each ticking minute we dropped closer and closer to the mountaintops. They looked like big hands, reaching up to pull us down. I thought for sure that we were goners—if not killed in the crash, then doomed to capture behind the enemy lines.

It was the most spectacular flying I've ever seen. We were just barely in the air when the plane broke out over the Han River flats and over an advance fighter strip.

The runway was much too short but we went in anyway. It was the last chance and we made it. The landing gear had been riddled and collapsed when we touched down.

We slid in on the belly and nose wheel.

The old "No Sweat" came to a halt with her nose over the road running alongside the airstrip. It was 0200 and she disrupted traffic.

But after 90 missions during the last war and I don't know how many in this one she had come through once more—she brought her crew home safely.

We examined ourselves and found nothing worse than shrapnel scratches. But after inspecting the plane we realized what a miracle that was.

It looked like a sieve. There were flak holes in the wings big enough to stick your head through. The sides looked like Swiss cheese.

We spent that night at the fighter strip and hitched a C-47 ride to another Korean airstrip the next morning. There we boarded a C-54 for the return to Okinawa.

We were treated like heroes when we got home. I was put in for the Distinguished Flying Cross.

I certainly don't want another day like April 12, but I want to stay in the Air Force and fly—even if it does mean more close scrapes.

I joined the Air Force when I was 19 because I wanted to get away from the farm. I don't regret the decision. I'm looking forward to rotation only because I want to see the folks again—Mom, Dad, and my three brothers and four sisters.

As far as I'm concerned, only two things bother me.

I hated to see the "No Sweat" scrapped because I'd like to have had the pleasure of painting the two MIG symbols over my gun.

And I'm sorry we got a new commanding officer two weeks before I made the kills.

The Group's old CO had promised a prize to the first man to down a MIG—a four-day pass in Tokyo.

Maj. Gen. Frank B. Andrews

Lt. Eugene H. Barksdale

Capt. Wendell H. Brookley

Maj. Horace S. Carswell

Brig. Gen. F. W. Castle

Capt. Charles M. Dobbins

Capt. John O. Donaldson

Lt. James F. Dow

Capt. Glen W. Edwards

Lt. E. L. Ellington

Gen. Uzal G. Ent

Gen. Muir S. Fairchild

Brig. Gen. Harold H. George

Capt. Robert M. Gray

Lt. Jean Grenier

Lt. Lloyd A. Hamilton

HISTORICAL HIGHLIGHTS ON BASES OF THE AIR FORCE

Where they are, what they are, who they were named for, as compiled by the staff of Air Force Magazine. *Most of this material is presented for the first time.*

Maj. Gen. Frank O'D. Hunter

Lt. G. E. M. Kelly

Maj. Gen. F. D. Lackland

Lt. Frank Luke, Jr.

Col. Leslie MacDill

Maj. Thomas B. McGuire

Maj. John P. Mitchel

Capt. William M. Randolph

Maj. Gen. C. L. Tinker

Brig. Gen. Robert F. Travis

Wilbur Wright

Orville Wright

ANDREWS AFB, Washington, D. C. Hq., MATS; formerly known as Pyles Field, renamed in honor of Lt. Gen. Frank M. Andrews, pioneer exponent of airpower, CG of US forces in Europe, killed in Iceland, 1943.

AMARILLO AFB, Amarillo, Tex. Technical school, Air Training Command; named for city.

ATTERBURY AFB, Camp Atterbury, near Columbus, Ind. Troop Carrier base, Air Training Command; originally known as Columbus Army Air Field, renamed for Camp Atterbury.

BARKSDALE AFB, Shreveport, La. Hq., 2nd Air Force, Strategic Air Command; medium bomber and strategic reconnaissance base; named in honor of Lt. Eugene H. Barksdale, test pilot, killed in US, 1926.

BERGSTROM AFB, Del Valle, Tex., near Austin. Fighter base, 8th Air Force, Strategic Air Command; originally known as Austin Army Air Field, renamed in honor of Capt. John A. E. Bergstrom, killed in Philippines, 1942, first Texan in Air Force to lose his life in WW II.

BIGGS AFB, El Paso, Tex. Medium bomber and tow-target base, 8th Air Force, Strategic Air Command; named in honor of Lt. James B. Biggs, WW I fighter pilot, killed in France, 1918.

BOLLING AFB, Washington, D. C. Hq. Command, USAF; named in honor of Col. Raymond C. Bolling, Ass't Chief Air Service, killed in France, 1918.

BROOKLEY AFB, Mobile, Ala. Air Freight Terminal, Air Materiel Command; Foreign Clearing Station, Military Air Transport Service; originally known as Bates Field, renamed in honor of Capt. Wendell H. Brookley, test pilot, killed in US, 1934.

BROOKS AFB, San Antonio, Tex. Hq., USAF Security Service; security training school; named in honor of Lt. Sidney J. Brooks, killed in US, 1917, during cadet training, awarded commission posthumously.

BRYAN AFB, Bryan, Tex. Pilot training school, Air Training Command; named for city.

CAMPBELL AFB, Clarksville, Tenn. Special Activities Center, 2nd Air Force, Strategic Air Command; named for nearby Camp Campbell.

CARSWELL AFB, Fort Worth, Tex. Hq., 8th Air Force, Strategic Air Command; heavy bomber base; originally known as Fort Worth Army Air Field, renamed in honor of Maj. Horace S. Carswell, bomber pilot, Medal of Honor holder, killed in China, 1944.

CASTLE AFB, Merced, Calif. Medium bomber base, 15th Air Force, Strategic Air Command; formerly known as Merced Army Air Field, renamed in honor of Brig. Gen. Frederick W. Castle, bomber pilot, killed in ETO, 1944.

CHANUTE AFB, Rantoul, Ill. Aircraft maintenance, weather, and administrative schools, Air Training Command; named in honor of Octave Chanute, pioneer navigation engineer, died in US, 1910.

CLOVIS AFB, Clovis, N. Mex. Advanced single engine school, Air Training Command; named for city.

COLUMBUS AFB, Columbus, Miss. Contract pilot train-school, Air Training Command; named for city.

CONNALLY AFB, Waco, Tex. Liaison, helicopter school, aircraft pilot training school, Air Training Command; originally known as Waco AFB, renamed in honor of Col. James T. Connally, killed on bombing mission over Yokohama, 1945.

CRAIG AFB, Selma, Ala. Aircraft pilot and instructor school, Air Training Command; named in honor of Lt. Bruce K. Craig, test pilot, killed in US, 1941.

DAVIS-MONTHAN AFB, Tucson, Ariz. Medium bomber base, 15th Air Force, Strategic Air Command; named in honor of Lt. Samuel H. Davis, killed in US, 1921, and Lt. Oscar Monthan, bomber pilot, killed in Hawaii, 1944.

DOBBINS AFB, Marietta, Ga. Fighter base, Eastern Air Defense Force, Air Defense Command; formerly known as Marietta AFB, renamed in honor of Capt. Charles M. Dobbins, killed transporting paratroopers over Sicily, 1944.

DONALDSON AFB, Greenville, S. C. Hq., 18th Air Force, Tactical Air Command, troop carrier base; formerly known as Greenville AFB, renamed in honor of Capt. John O. Donaldson, fourth ranking ace in WW I, killed in US, 1930.

DOVER AFB, Dover, Dela. Fighter base, Eastern Air Defense Force, Air Defense Command; named for city.

DOW AFB, Bangor, Me. Fighter base, Strategic Air Command; named in honor of Lt. James F. Dow, killed in US, 1940.

EDWARDS AFB, Muroc, Calif. Air Force flight test center, Air Research and Development Command; originally known as Muroc AFB, renamed in honor of Capt. Glen W. Edwards, test pilot, killed in US, 1948.

EGLIN AFB, Valparaiso, Fla. Hq., Air Proving Ground Command; named in honor of Lt. Col. Frederick J. Eglin, killed in US, 1937.

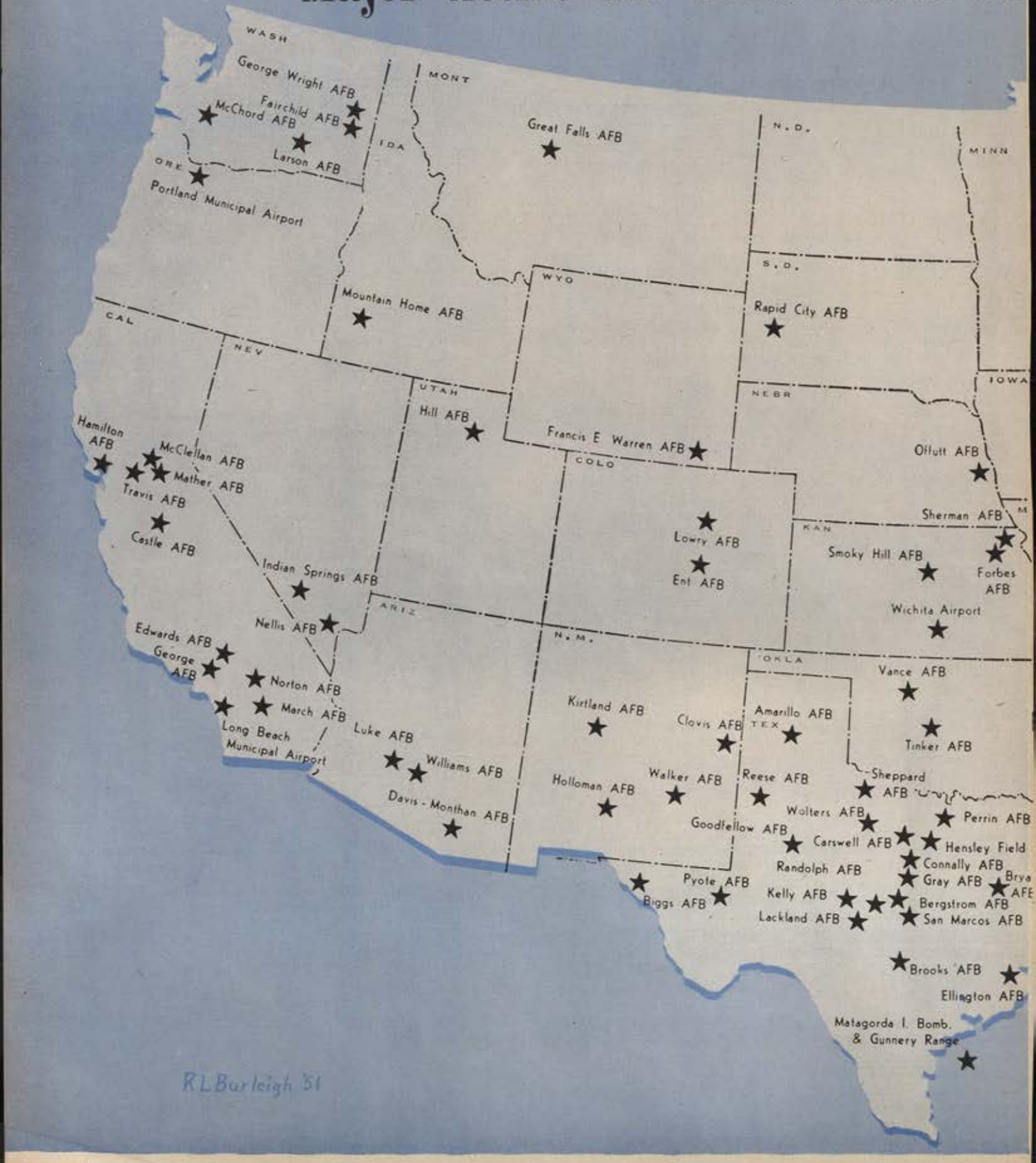
ELLINGTON AFB, Houston, Tex. Bombardier School, Air Training Command; named in honor of Lt. Eric L. Ellington, killed while making a training flight in US, 1913.

EDITOR'S NOTE

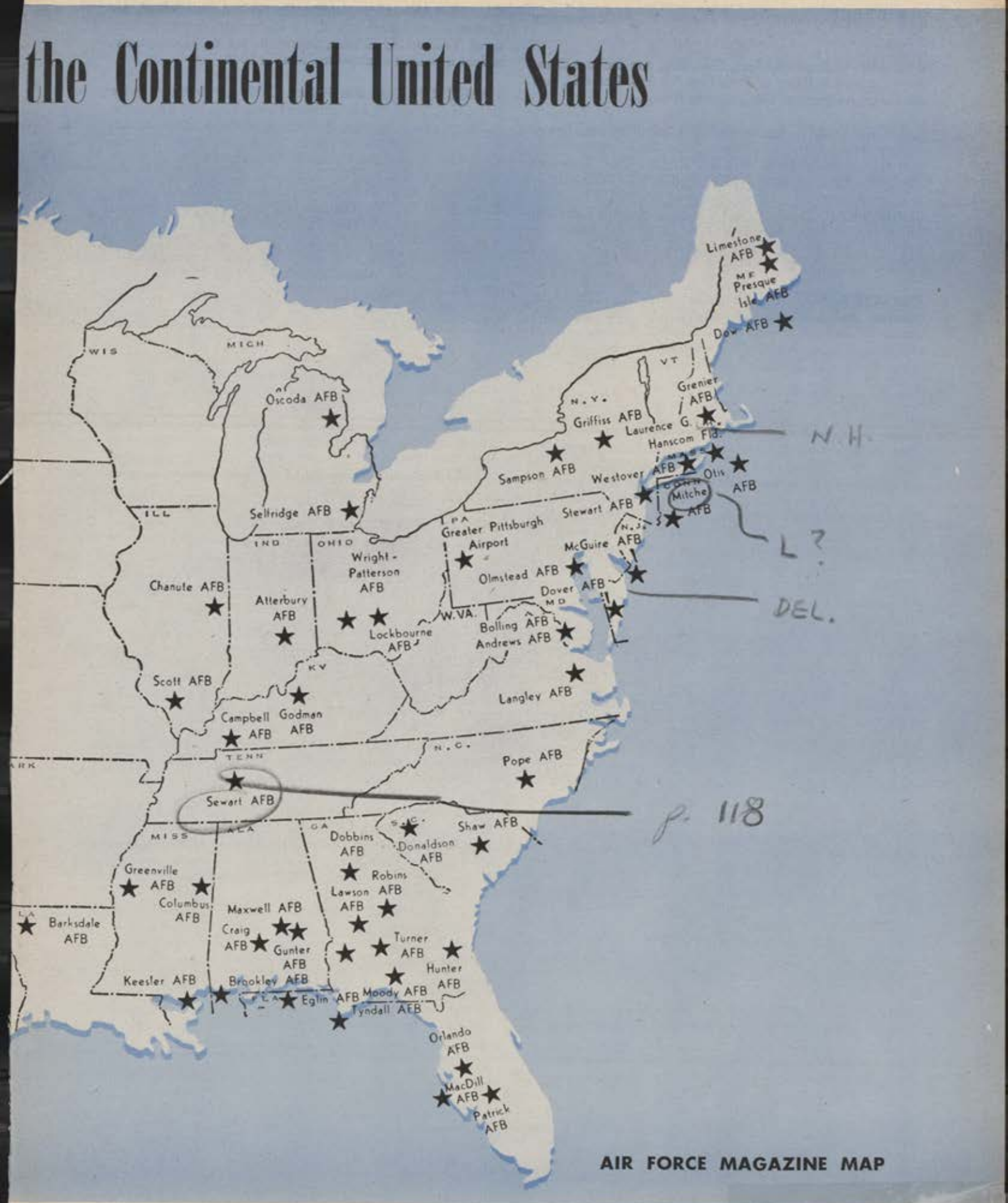
This compilation uncovered some interesting facts. One was that a map of bases classified in the Pentagon could be had from the AAA for a dollar. Another was that the information we desired was in no central location. We prowled the Pentagon, delved into the National Archives, consulted the Historical Records people at Maxwell, and finally made dozens of long distance calls. We snatched every available picture of men for whom bases had been named. We're sorry we couldn't find them all. But we feel we've come up with a directory full of useful information.

(Continued on page 46)

Major Active Air Force Bases in



the Continental United States



AIR FORCE MAGAZINE MAP

AIR BASES CONTINUED

ENT AFB, Colorado Springs, Colo. Hq., Air Defense Command; named in honor of Brig. Gen. Uzal G. Ent, CG, 2nd Air Force, recipient of DSC, died in 1948.

FAIRCHILD AFB, Spokane, Wash. Medium and heavy bomber base, 15th Air Force, Strategic Air Command; named in honor of Gen. Muir S. Fairchild, WW I bomber pilot, Vice Chief of Staff, USAF, died in US, 1950.

FORBES AFB, Topeka, Kans. Medium bomber base, 8th Air Force, Strategic Air Command; originally known as Topeka Army Air Field, renamed in honor of Maj. Daniel H. Forbes, killed in US, 1948.

FRANCIS E. WARREN AFB, Cheyenne, Wyo. Engineer, weather, and administrative schools, Air Training Command; formerly known as Fort Francis E. Warren, named in honor of U. S. Senator, first elected Governor of Wyoming, Civil War holder of Medal of Honor, died in US, 1929.

GEORGE AFB, Victorville, Calif. Fighter base, 15th Air Force, Strategic Air Command; originally known as Victorville AFB, renamed in honor of Brig. Gen. Harold H. George, WW I Ace, Commander of US Air Forces in Australia in WW II, killed in Australia, 1942.

GEORGE WRIGHT AFB, Spokane, Wash. Housekeeping installation of 15th Air Force, Strategic Air Command, for Fairchild AFB; originally known as Fort George Wright, named in honor of Brig. Gen. George Wright, US Army CG, Dep't. of the Pacific, died in 1865.

GODMAN AFB, Louisville, Ky. Fighter base, 9th Air Force, Tactical Air Command; originally known as Fort Knox Army Air Field, renamed in honor of Lt. Kirkwood Godman, killed in US, 1918.

GOODFELLOW AFB, San Angelo, Tex. Basic pilot training school, Air Training Command; named in honor of Lt. John J. Goodfellow, Jr., killed in fighter combat, France, 1918.

GRAY AFB, Killeen, Tex. Special Activities base, 8th Air Force, Strategic Air Command; formerly known as Camp Hood, renamed in honor of Capt. Robert M. Gray, pilot on first Tokyo bombing mission of WW II, killed in India, 1942

GREAT FALLS AFB, Great Falls, Mont. Foreign Clearing Station, Military Air Transport Service; named for city.

GREATER PITTSBURGH AIRPORT, Coreopolis, Penna. Fighter base, Eastern Air Defense Force, Air Defense Command; named for the city of Pittsburgh.

GREENVILLE AFB, Greenville, Miss. Basic contract pilot training school, Air Training Command; named for city.

GRENIER AFB, Manchester, N. H. Fighter base, Eastern Air Defense Force, Air Defense Command; named in honor of Lt. Jean D. Grenier, killed in US, 1934.

GRIFFISS AFB, Rome, N. Y. Electronics development center, Air Research and Development Command; formerly known as Rome Army Air Field, renamed in honor of Lt. Col. Townsend E. Griffiss, recipient of Distinguished Service Cross, killed on flight Russia to England, 1942.

GUNTER AFB, Montgomery, Ala. Special Staff School, Air Command and Staff School, Air University; named in honor of William A. Gunter, former mayor of Montgomery, ardent exponent of airpower, died in 1940.

HAMILTON AFB, San Rafael, Calif. Air Rescue Service base, Hq., Western Air Defense Force; Hq., 4th Air Force; Military Air Transport Service; named in honor of Lt. Lloyd A. Hamilton, recipient of Distinguished Service Cross, killed in fighter combat, France, 1918.

HENSLEY AFB, Dallas, Tex. Troop Carrier base; named in honor of Lt. Col. William N. Hensley, WW II bomber pilot, former AFA Vice President, killed in US, 1951.

HILL AFB, Ogden, Utah. Hq., Air Materiel Area, Air Materiel Command; named in honor of Maj. Ployer P. Hill, killed in US, 1935.

HOLLOMAN AFB, Alamagordo, N. Mex. Guided missile test base, Air Research and Development Command; formerly known as Alamagordo Army Air Field, renamed in honor of Col. George B. Holloman, guided missile pioneer, killed in US, 1946.

HUNTER AFB, Savannah, Ga. Medium bomber base, 2nd Air Force, Strategic Air Command; named in honor of Maj. Gen. Frank O'D. Hunter (Ret.), WW I ace, recipient of Distinguished Service Cross, four clusters, member of Board of AFA Directors.

INDIAN SPRINGS AFB, Indian Springs, Nev. Air crew school, Air Training Command; named for city.

KEESLER AFB, Biloxi, Miss. Electronics, communications, radar and administrative schools, Air Training Command; named in honor of Lt. Samuel R. Keesler, killed on special bomb mission, France, 1918.

KELLY AFB, San Antonio, Tex. Hq., Air Materiel Area, Air Materiel Command; foreign clearing station, Military Air Transport Service; named in honor of Lt. George E. M. Kelly, pioneer Army pilot, killed in US, 1911.

KIRTLAND AFB, Albuquerque, N. Mex. Hq., Special Weapons Command; named in honor of Col. Roy C. Kirtland, former CO of Langley Field, died in 1941.

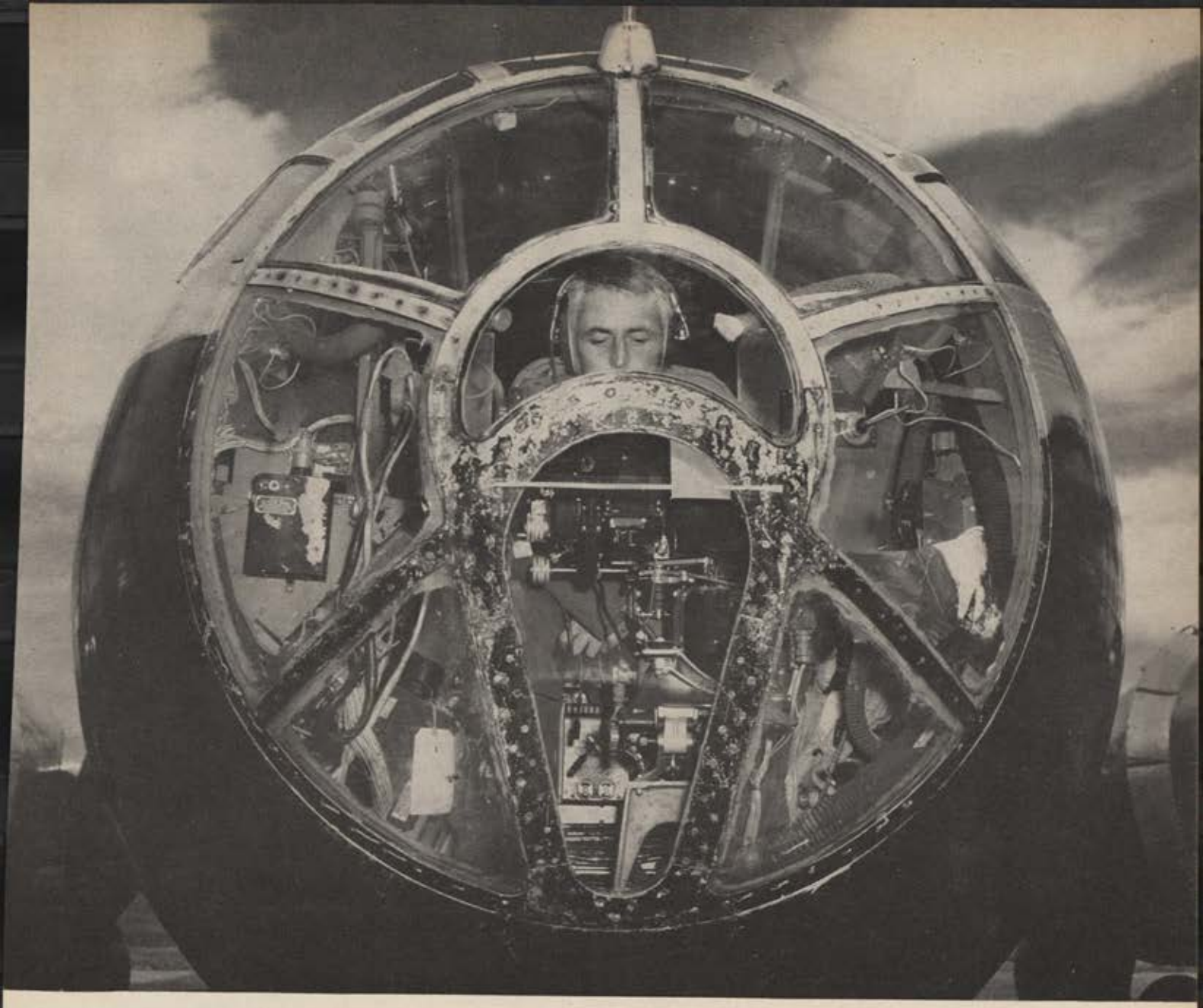
LACKLAND AFB, San Antonio, Tex. Processing Center, Basic Training School, Officers Candidate School and WAF Training School, Air Training Command; named in honor of Maj. Gen. Frank D. Lackland, former Commandant of Advanced Flying School, Kelly Field, died in 1943.

LANGLEY AFB, Langley, Va. Hq., Tactical Air Command; Air Crew School, fighter and light bomber base; named in honor of Samuel P. Langley, pioneer aeronautical scientist, died in 1906.

LARSON AFB, Moses Lake, Wash. Fighter base, Western Air Defense Force, Air Defense Command; originally known as Moses Lake AFB, renamed in honor of Maj. Donald A. Larson, killed on mission over Germany, 1944.

LAURENCE G. HANSCOM FIELD, Bedford, Mass., near Boston. Electronics research center, Air Research and Development Command; fighter base, Eastern Air Defense Force, ADC; formerly known as Bedford AFB, renamed in honor of Laurence G. Hanscom, Boston and Worcester newspaperman, Army reserve pilot, killed near field, 1941.

(Continued on page 116)



Bombing the Red Hornets' Nest

The Yalu River bridges aren't exactly a bombardier's dream. It's a tight-rope walk down MIG Alley with Red fighters and flak thrown in for good measure

By Lt. Robert B. Almach

IT'S a big jump from selling stationery to dropping bombs on Commies but I was ready for it. I was ready the day the war started in Korea. The Air Force called me back to duty in August 1950 and from then on I moved fast.

I got a one-month refresher course at Mather AFB in Sacramento, California, to brush away the cobwebs and get back into the swing of things. I met my crew at Fairchild Air Force Base in Spokane, Washington, and we took off together to MacDill AFB, Tampa, Florida, for five weeks of combat training in B-29s. Then back to Fairchild for more training in weather more like the kind we would run into in Korea. By then it was November and colder than blazes.

For me, the transition to B-29s from the B-17 we flew from England during World War II was easy. The equipment I used as a bombardier was just about the same and the '29 was a lot more comfortable than the old "forts."

Finally, they figured we were ready and we got our travel orders for Japan. We arrived on March 8 and were assigned to the 98th Bomb Wing operating out of Yokota Air Base near Tokyo. Two days later we flew our first mission in the "Heavenly Laden," a B-29 we had inherited from a crew that was going home.

I don't remember where we went that first time. I was too excited

It brought back a lot of memories of Eighth Air Force days in England, days when we were bombing the Jerries in Berlin and Frankfurt.

I've flown 25 missions here since that first one and most of them have been pretty much the same. There's one, however, that I'll remember as long as I live. Even as long as the time we had two engines shot away over Germany and barely limped back to Belgium before bailing out. That one is the big raid on the bridges over the Yalu River at Sinuiju on April 12.

We knew it was a top priority target even before the target-study briefing the night before. We could feel it in our bones. The crews gathered in the briefing room at 1700, and when they pulled back the curtains and showed us the maps with the crayon streaks marking the target you could hear a murmur run through the room. We were headed for the hornets' nest at the mouth of the Yalu.

Our mission was to knock out the two railroad bridges that connect North Korea and Manchuria. The Communists were funneling all their supplies for the western front across those bridges. It was our job to stop them.

They didn't have to tell us it wouldn't be easy. We'd heard stories about Sinuiju. About big concentrations of anti-aircraft guns there, and, more important, those flashy, MIG jets based just across the river in Manchuria. We heard a lot about those MIGs. The intelligence officer's report that we'd probably run into swarms of them didn't make us feel any better.

To complicate our job, we had to hit the two bridges between Antung and Sinuiju without violating Manchurian territory. It wasn't going to be easy.

We hit the sack early that night. As usual, I slept like a baby, despite the forecast for a rough one the next day.

We were up at 0200 for a breakfast of eggs (cooked to order), bacon, toast and coffee.

The final combat briefing on the latest weather information, intelligence reports and the front-line situation was at 0300. The crews were joking back and forth and I needled our co-pilot, Lt. Courtland Moore, "Don't forget to hit the right switches today, you truck driver."

It was chilly riding out to the "Heavenly Laden" in the 2½-ton truck. The sky was inky dark and the stars twinkled like bright candles at the far end of a room.

We were carrying one-ton demolition bombs so I put the fuzes in

THE AUTHOR

The multi-million dollar airplanes, the superbly trained pilots and gunners, navigators and radar operators, flight engineers and ground crews; all the components of a lethal bombing team of the United States Air Force, are concentrated on one man—the bombardier. His job is the focal point of every mission. Typical of the men who helped destroy the German and Japanese war machines and who were called back to have it out with the Communists is 1st Lt. Robert B. Almach. Here is his own story, and the story of the April 12 bombings of he Yalu River bridges.

and armed them myself. Shortly before takeoff at 0500 we lined up for personal equipment check and each man inspected another's chute. I checked my survival kit in case I had to walk home. The kit contains maps, a compass, and gold coins for bartering purposes. I made sure I had my knife and .45 pistol.

Our pilot, Lt. Junior Jamison, a lanky Southerner who has the perfect physical and mental combination to be a bomber pilot, said: "Boys, where we're going today we might get hit hard. Let's all keep our eyes open."

That's all he said but it was enough.

The planes took off at one minute intervals and by 5:30 we were all in the air, headed for the rendezvous over Korea. We hit the meeting place right on the nose and swung into formation. All I had to do was keep track of where we were and make sure my equipment was working properly.

We began a slow climb to 21,000 feet, the bombing altitude for the day.

From my spot in the nose, in front of and between the two pilots, the whole panorama of Korea spread out in front of me. As the morning wore on the first flush of dawn crept up out of the Japan Sea and finally the sun began bouncing orange rays off the snow-capped mountain peaks below us.

Some distance from the target—I can't say how far because it's classified—we picked up our fighter escort. We had both F-86s and F-84s with us. They looked good out there, with the sun flashing off their silver sides and wings when they banked for a turn around the formation. They were flying the "buddy system," protecting each other's tails and they flew like they were tied together.

I ate my "in-flight" lunch and drank some coffee and hot soup. I figured that if we were shot down I'd bail out with a full belly.

The 19th and 307th Bomb Groups from Okinawa were a few minutes ahead of us. They were scheduled to attack in the first wave. We were to hit the bridges in a second wave. I could see their rear echelon planes ahead of me through the nose.

A few moments before we got to the IP (the initial point, or start of the bomb run) I got up and put on my 60-lb. flak suit, flak helmet and immersion suit.

Just before reaching the IP, I checked the wind. Then, as we passed over the start of the bomb run, I made a quick wind drift reading. I threw in the bomb sight, taking over control from the pilot, and said to Junior, "I've got it, boy."

I began searching for the target with my binoculars and found it quickly. After all, you can't miss a thing like the Yalu River. I got the bridges in the sight and began "killing course" by adjusting the controls.

It was about 1100 as we began the bomb run.

The plane was entirely under my control and I flew it by moving the knobs and switches of the bomb sight to alter course. We were bombing visually.

The Communist flak and MIGs hit the formations about the same time. The boys from Okinawa were getting hit hardest because they were already over the target and making their final approach. They couldn't evade because to shift course would have thrown their bombs off target and made the whole mission useless.

They stuck to their course and made a good run of it but they paid for it with blood, lives and planes.

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The sky around them was pitted with ugly, black balls of flak. Some of it was striking home. The Commies don't throw up as much as the Germans did but it is just as accurate. Don't let anyone tell you those babies can't shoot.

I still think that "One-Eye Charley," the same guy who taught the Jerry gunners at Berlin and Leipzig, must have tutored those Communist gunners at Sinuiju. The Chinese and North Koreans can't be that good.

They were throwing up big stuff—105 and 155 millimeter. It was good shooting.

Dozens of jet fighters streaked in and out of the bomber formations. Some were ours. Some were Communists. I don't know. It's hard to tell the difference between a MIG and a Sabre in the air. Some of them went down flaming.

I saw a bomber wing burst into flame and the plane flutter down. Another '29 lumbered back through our formation, smoke trailing from its body and wings. I saw five parachutes and no more. A B-29 carries more than twice that many men.

The MIGs would make long, swooping passes at the bombers, starting from the Manchurian side of the river, and then scoot back to where our boys couldn't follow.

By then we were on the final approach and I concentrated on the bomb sight. I didn't have much trouble keeping on course. There were a few near flak bursts that threw us slightly off, but I quickly shifted back onto the right track.

When the bomb sight marker touched the bridges the 2,000-pound blockbusters let go automatically. There was no upwards surge like we had with the 'forts because the '29 is so much heavier.

I had a clear view of the bridges and I watched my bombs walk right down the middle of them. A perfect strike. And not one hit Manchuria.

While the bombs were falling I punched the button to shut the bomb bay doors and unlatched the bomb sight from the automatic pilot so the pilot could take over and fly evasive maneuvers.

We made a sharp turn to pull away from the river and started the long trip home. The flak and the MIGs followed us a short distance but there wasn't much they could do once we got away from the area. The MIGs scuttled back to their fields across the river at Antung.

If our fighters could have crossed the river after them and if our light bombers had been able to hit them while they were all jammed up landing, there would have been some tears and broken hearts at the Chinese air force headquarters that night. We would have smeared them good. But we couldn't help that.

After we got safely away I took off the flak suit and helmet and the rubber immersion suit. It was good to stretch away the tension of the last half hour.

It was good to be alive.

I did a lot of thinking on that ride home. About how I had joined the Air Force to be a pilot and how I washed out. I remembered my feeling of pride when I graduated from bombardier school at San Angelo, Texas.

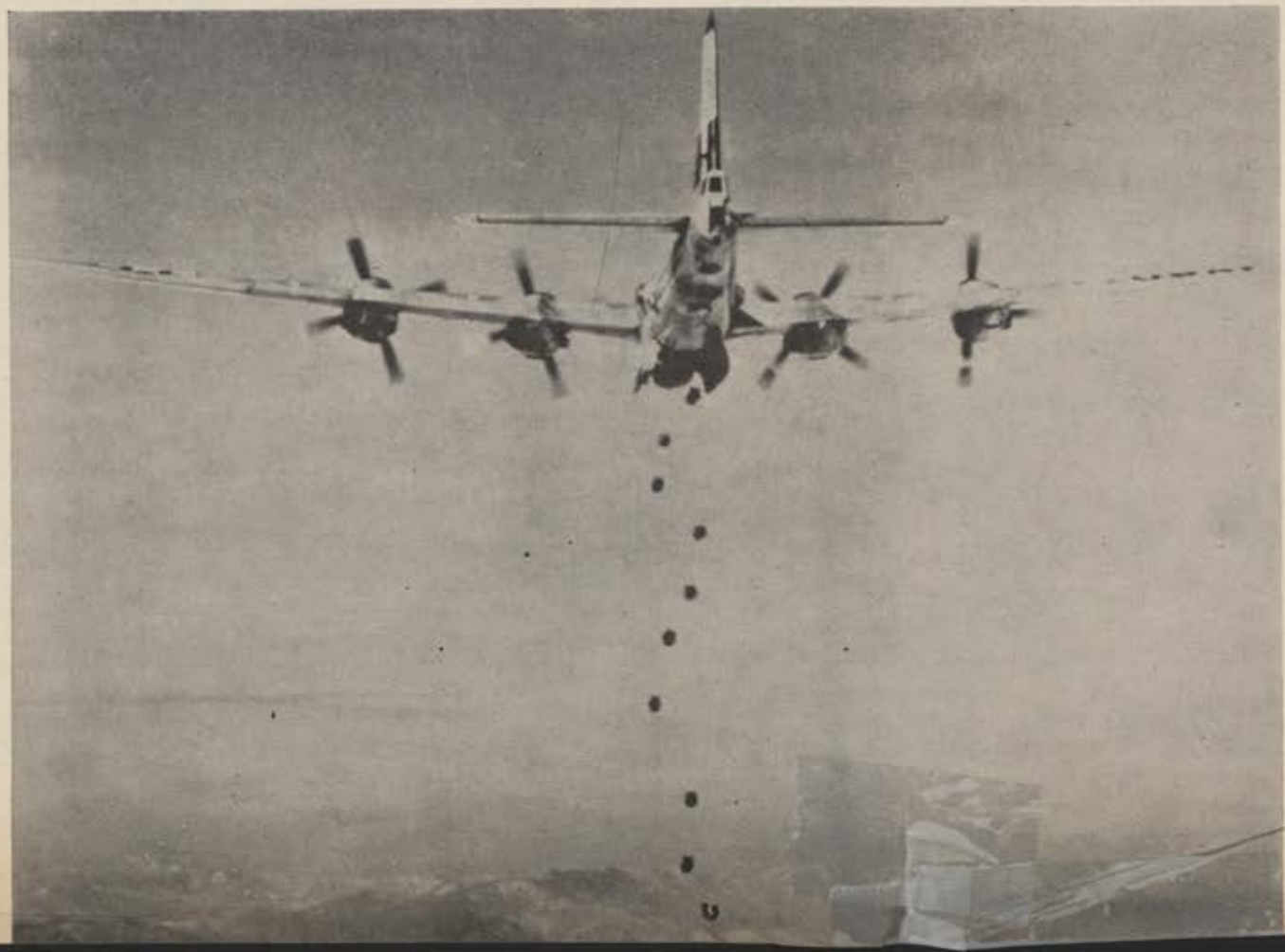
We fought a tough war in Europe. I flew 35 missions over Germany, lost one plane and had to walk out from the Belgium countryside. We stayed three days in Brussels that time and could have stayed a week because we had been reported shot down in flames over the target.

I was discharged after three years in the Air Force. I got married and have a beautiful daughter, "Lynnie," who is 5½ now and named after her mother, Madeline.

I'm from the Bronx in New York originally but for the past five years I've been living in San Francisco. I had a good business worked up out there, selling stationery wholesale to business offices.

But I don't think I'll go back to it. I've found my spot. The Air Force is spreading out in a big way and I would kind of like to be a part of it.

A B-29 lays its lethal eggs over North Korea. They have been carrying the brunt of the strategic part of the Korean air war.



B-17s of the 95th Bomb Gp leave their mark over Germany.

Remember This?

IT WAS during World War II that the Air Force really came into its own, as a virtually independent service ready to stand on its two feet. From Berlin to Tokyo it carried the war to the enemy through the fluid medium of the air. Exotic place names were stamped indelibly into the history books and into the minds of the men who fought and suffered above them—Regensburg, Ploesti, the "Hump," Guadalcanal, Schweinfurt, Rabaul, Bismarck Sea, Attu. That was the war. Remember?

Fighter pilot back from a rough escort mission over Europe.

B-25s of the 13th Air Force hit the Japs on Bougainville.

This was Africa—bomb craters, bulldozers and engineers.

Japanese shipping at Rabaul Harbor gets a working over.

The flak was as thick as the clouds over Ludwigshafen.

This B-24 of the 15th Air Force hit flak over Yugoslavia.

No bulldozers on Guadalcanal. Henderson Field patchwork.

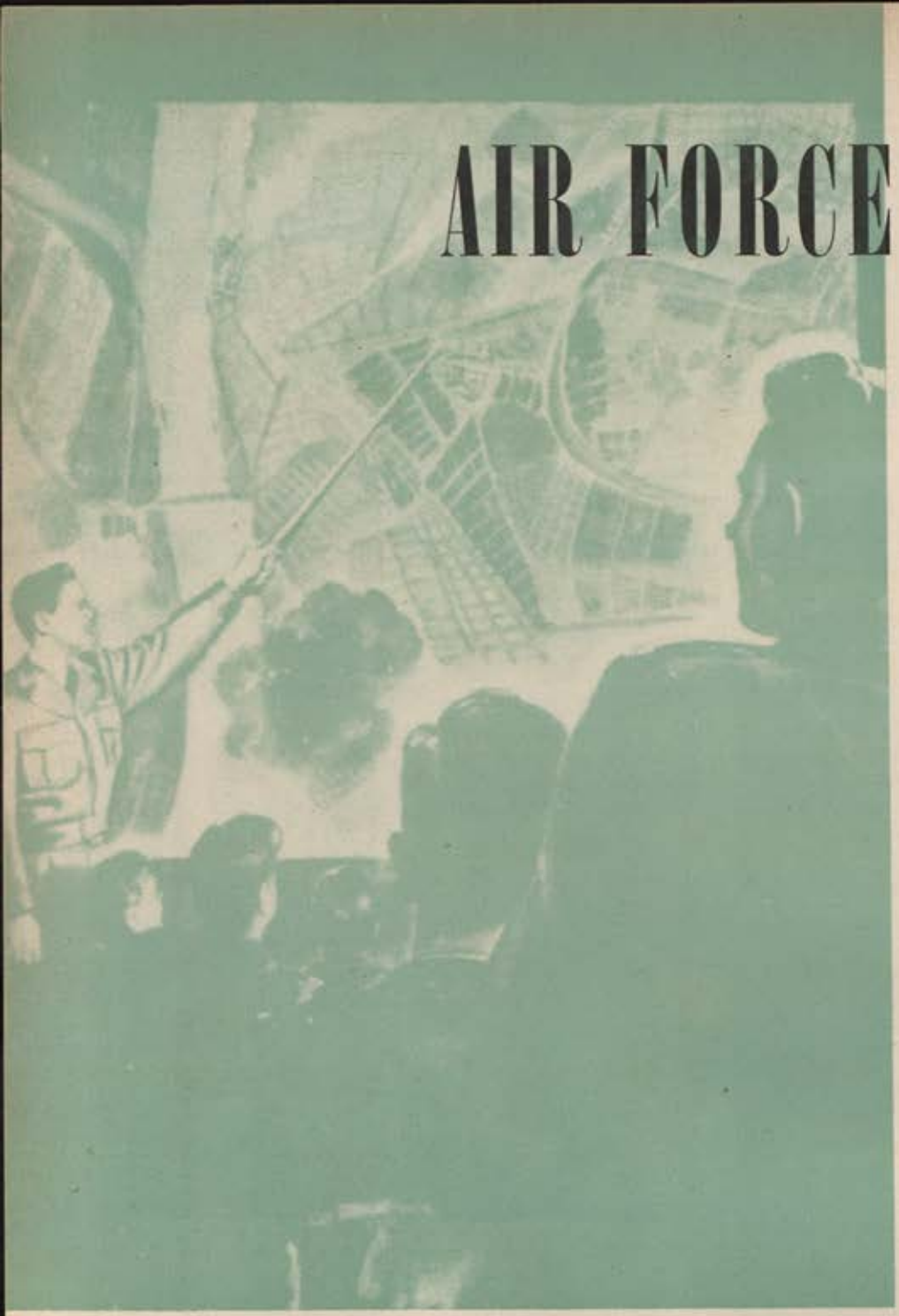
Air Transport Command's faithful C-47s really got around.

Wet landing. P-38 returns from a strike on foggy Attu.

Tent hangar doubles as chapel at 9th AF base in England.

Air war the hard way. 1st Air Commando Force in Burma.

End of the ride. A 20th Air Force B-29 over Fujiyama.



AIR FORCE SCHOOLS

In the Air Force of today mere numbers is not enough. Hundreds of skills are needed—to man the planes and mend them, to feed the crews and pay them, to keep intricate electronic and mechanical gear running smoothly. To impart these skills the Air Force relies on its system of technical schools.

With the increasing complexity of aerial warfare and its dependence on the science of electronics with its multifarious gadgets, the Air Force's school system plays an important role. From basic airmen to beribboned staff officer, the Air Force is dependent upon the quality of its instruction for its ultimate efficiency.

As a public service, to the men and women in the Air Force, to Reservists and Guardsmen, to potential Air Force personnel, AIR FORCE magazine herewith presents a list of the courses available to them.

The requirements for entry, of course, vary widely. Courses of a basic nature are available at the 19 bases of the Air Training Command. Under the unification setup other specialized courses are given at Army or Navy bases.

To maintain a semblance of continuity, graduates of one school will not be permitted to begin a course in a different field of skill until at least one year has elapsed. Only in exceptional cases will graduates of a technical course be permitted to pursue the same or a similar course later on. An airman must have enough time remaining on his present enlistment to finish a course before he is allowed to enroll.

Each course is set up on the basis of Air Force needs for specific skills. As Air Force requirements change, the following list will likewise change. For specific prerequisite qualifications, the base Information and Education officer is the man to see:

Aircraft Maintenance

At Chanute AFB, Ill.: aircraft maintenance officer, 200 days; machinist, 105; air hydraulic mechanic, 60; flight engineer technician (ground phase), 120; fabric and dope mechanic, 40; mechanical accessories and equipment repairman, 50; airframe repairman, 90; welder, 100; personnel equipment technician, 50; aircraft reciprocating engine mechanic, 40; aircraft electrician, general, 60; aircraft electrician, specialized, B-36, 50; aircraft instrument mechanic, 60; aircraft propeller mechanic, 60; aircraft supercharger repairman, 40; aircraft jet engine mechanic, 35; maintenance administration (for aircraft maintenance officers only), 60; metals technician, 50.

At Sheppard AFB, Tex.: aircraft mechanic, specilized B-29, 40 days; aircraft mechanic, specialized, B-36, 35;

aircraft mechanic, 130; aircraft mechanic, specialized, B-47, 40.

At San Marcos AFB, Tex.: rotary wing mechanic, 40 days.

Armament and Ordnance

At Lowry AFB, Colo.: armament officer, 85 days; basic weapons repair, 60; armament electronics fundamentals, 95; "A" and "K" series gun-bomb-rocket sight mechanic, 60; system checker "K" series, bombing-navigational system, 95; armament systems officer, 195; "A" series gun-bomb-rocket sight and AN/APG-30 radar, 35; "A" series gun-bomb-rocket sight and AN/APG-33 radar, 45; turret system mechanic, B-29, B-50, 90; turret system mechanic, B-36, 40; system checker gunlaying, B-36, 60; system checker gunlaying, B-45 and B-47, 75; computer and servo specialist, 60; radar specialist, 60; turret system technician B-29 and B-50, 35; system analyst gunlaying, B-36, 85; system analyst gunlaying, B-45 and B-47, 85; "M" series bombsight mechanic, 30.

Engineer

At Ft. Belvoir, Va.: engineer drafting, 11 weeks; construction equipment maintenance and repair, 12; refrigeration equipment repair, 10; map reproduction, 10; topographic computing, 12; water supply and purification, 7; topographic drafting, 11; photomapping, 10; engineer equipment maintenance, 7; topographic surveyor, 11; maintenance and repair supervision, 12; power shovel operations, 7.

At Francis E. Warren AFB, Wyo.: powerman, 90 days; teletype operator, 60; installer cableman, 110; teletype mechanic, 90; wire mechanic, 150.

At Scott AFB, Ill.: communications officer, 225 days; cryptographic operator, 40; radio fundamentals, 110; radio mechanic, airborne equipment, 40; ground equipment, 40; radio repairman, aircraft equipment, 135; ground equipment, 160.

Keesler AFB, Miss.: radio operator, general, 160 days; control tower operator, 70; air traffic control operator, 40.

Ft. Monmouth, N. J.: dial central office maintenance, 20 weeks.

At Carlisle Barracks, Pa.: cryptographic equipment installation, maintenance and repair, 10 weeks.

At Brooklyn Navy Yard, N. Y., and Mare Island, Calif.: cryptographic repair, 4 weeks.

Photography

At Lowry AFB, Colo.: aerial photographic officer, 140 days; aerial photo-rapher, 60; photo and lab technician, 80; camera repairman, 60.

At Ft. Monmouth, N. J.: motion picture cameraman (officer), 17 weeks; motion picture sound recording, 13.

Radar

At Keesler AFB, Miss.: electronics officer, air, 210 days; electronics officer, ground, 200; radar observer all-weather fighter, ground phase (rated officers), 45; electronic counter-measure officer, 240; aircraft control and warning operator, 30; aircraft landing control operator, 60; electronic fundamentals, 110; radar mechanic, airborne equipment, 70; radar mecnanic, ground, 70; system checker, AN/APG-24, 70; radar repairman, airborne equipment, 80; system analyst, AN/APG-24, 75; radar repairman GCA, 100; radar repairman, ground equipment, 140.

Weather

At Chanute AFB, Ill.: intermediate meteorological, 200 days; high altitude forecaster, 60; basic weather service, 110; advanced weather equipment, 120; advanced meteorological, 160; weather equipment engineering officer, 240; intermediate weather equipment, 150 (last two courses also offered at Keesler AFB, Miss.).

Intelligence

At **Lowry AFB, Colo.:** air intelligence officer, 60 days; intelligence specialist, 50; photo interpretation technician, 60; photo-radar interpretation officer, 95.

At Arlington, Va.: security agency officer (Parts I and II).

Flying

At Goodfellow AFB, Perrin AFB, Connaly AFB, all in Tex.: basic pilot training, 26 to 29 weeks.

At Craig AFB, Ala., and Williams AFB, Ariz.: pilot training, advanced single engine, 22 to 25 weeks.

At Reese AFB, Tex., and Vance AFB, Okla.: pilot training, advanced two-engine, 22 to 25 weeks.

At Tyndall AFB, Fla.: instrument pilot instructor, conventional, 8 weeks; aircraft controller (officer), 8 weeks; instrument pilot instructor, jet, 8 weeks.

At San Marcos AFB, Tex.: helicopter pilot (rated pilots only), 11 weeks.

At Mather AFB, Calif.: bombardment, 14 to 16 weeks.

At Ellington AFB, Tex.: navigation, 33 weeks.

At Nellis AFB, Nev.: fighter gunnery instructor, 10 weeks.

Military Indoctrination

At Lackland AFB, Tex.: officer candi date, 24 weeks; USAF recruiter, 1 week; USAF basic training (this given also at Sampson AFB, N. Y.).

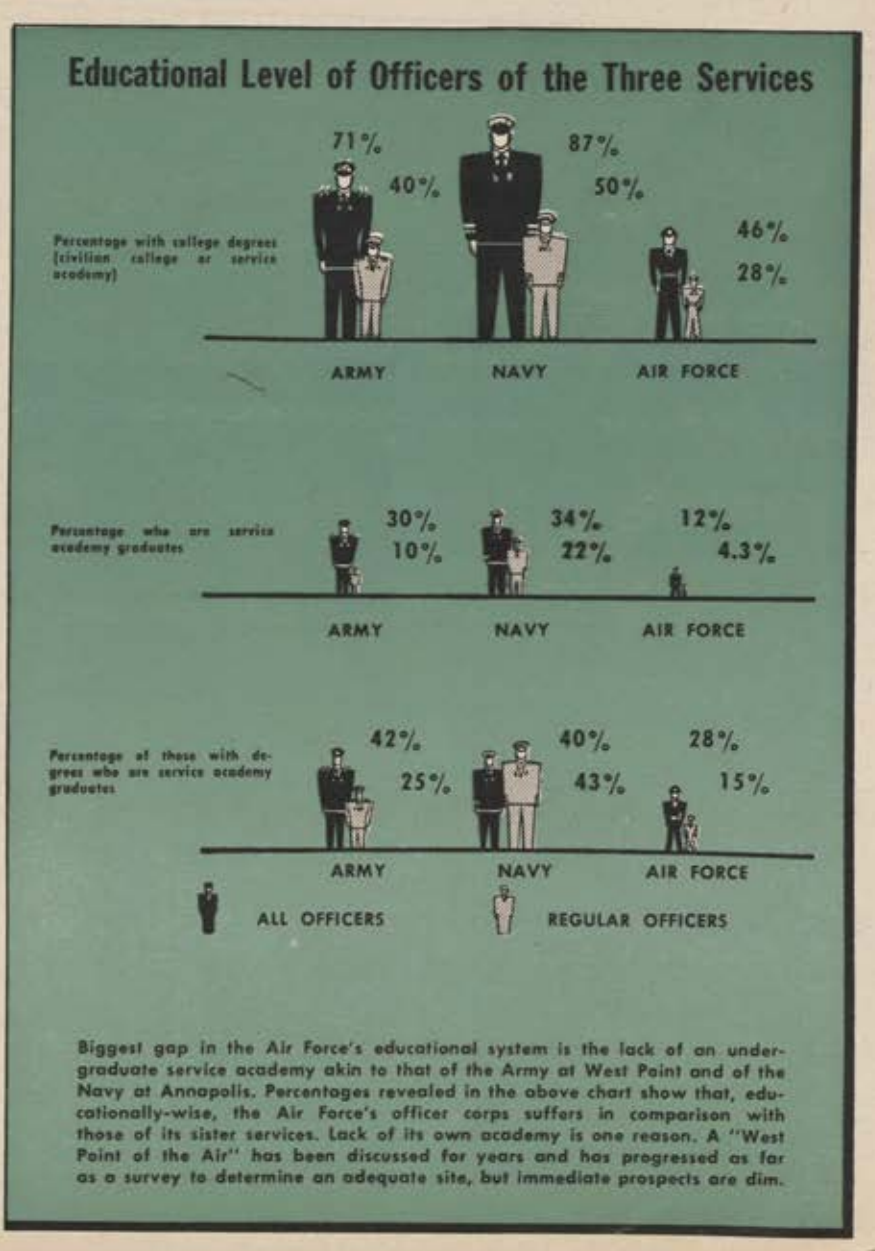
Administrative

At Camp Lee, Va.: adjutant general's officer associate basic, 12 weeks.

At Ft. Benjamin Harrison, Ind.: recruiting management, 5 weeks.

At Ft. Slocum, N. Y.: public informa-

(Continued on page 109)



That Tired Feeling

Aeromedical research at the School of Aviation Medicine is looking for the answers to some of the physiological problems that plague modern flight

Sergeant on treadmill gets nowhere but researchers get valuable fatigue data.

Device on ear electronically tells pilot when he's running low on oxygen. (Below) Here's an airman who gets air-sick on purpose for the sake of science.

FLYING in the thin, mysterious spaces ten miles above the earth is now commonplace. And supersonic craft now on drawingboards will go even higher and faster. That brings up the problem of the men who will fly them. The air age is fast becoming too swift for man to keep up with his machines.

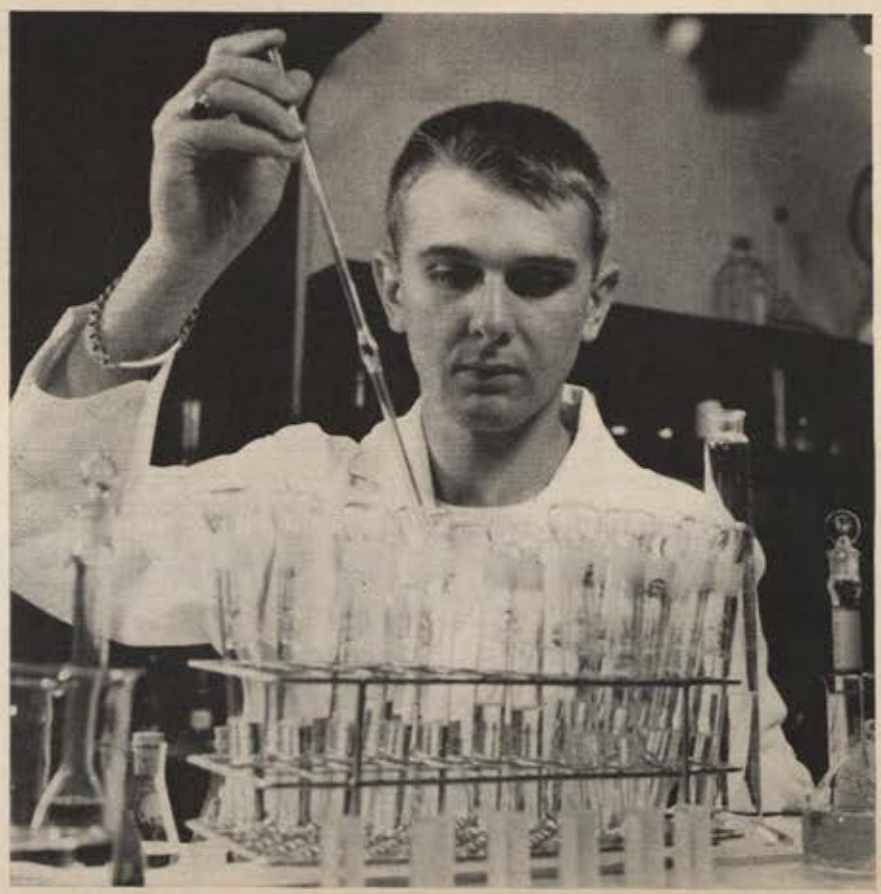
Air crews and their comfort are the incessant worry of American aeromedical scientists, who are striving to match medical developments with mechanical genius in order that our airmen can perform at top peak in the aircraft of the future.

Scene of the research is the School of Aviation Medicine at Randolph Air Force Base, Tex. Commanded by Brig. Gen. Otis O. Benson, Jr., the school is gaining a world wide reputation in its unique field.

Through its experts, for example, the pilot's ears may have other vital uses than just hearing. In high altitude flights of the future, the ear will be used as a light filter on a new type oximeter called the Photoelectric Hypoxia Warning Device, the brain child of Dr. Kurt Kramer, a German physiologist at the school.

This will warn the pilot when he is in danger of "passing out" for want of oxygen. An electric eye is activated by a change in color of your blood, which in turn results from a

A biochemistry lab technician at the USAF's School of Aviation Medicine takes sample of fat content from test tube as part of experiment work in biometrics.



New AF camera takes inside shots in black and white, color and infrared.

change in the oxygen content of the blood. If you're not getting enough oxygen your blood takes on a dark, heavy color. The change is detected by the photoelectric cell attached to the ear. A red light flashes on the instrument panel.

Many promising student pilots never get their wings because of air sickness. The School of Aviation Medicine has made a desperate search for a preventative for this miserable "disease", and, has come up with several sedatives that at least will prevent some from becoming nauseated.

One of the answers the air medics hope to find is what causes fatigue. What makes a B-29 crew return from a long flight haggard, worn, and irritable? Is it muscular weariness? Nervous fatigue? Or some inner anxiety?

To dip into this mystery, SAM blood tests bomber crews before they take off on extended practice flights. The same tests are administered again as soon as the plane returns 12 to 15 hours later.

To test the degree of fatigue the blood taken from crew members' arms reveals the level of lactic acid, which indicates muscular weariness.

(Continued on page 103)

B-29 crewmen (right) check equipment before taking off. Medical technicians then will take over for blood tests. Tilting chair (below) is used to solve vision problems of night flight.

Cpl. Gloria Petrillo is a weather technician at Travis Air Force Base, Calif. Also at Travis is Cpl. Colleen Fitzgerald, (below) who works in the out-patient clinic.

Look to the Women

Why WAFs? The answer is simple. There just aren't enough qualified men to fill manpower needs both in the service and on the defense production front

NO LONGER secret is the location of the Air Force's new communication center in the basement of the Pentagon. And no longer a surprise is the fact that women wearing the Air Force uniform man the strategic system 24 hours a day. This is only one illustration of the new Air Force look and part of the reason why the Air Force wants 40,000 more WAFs. There are 8000 women in the Air Force now on duty.

A cold, hard fact underlies this expansion of the WAF. There simply are not enough qualified men to meet all military as well as industry requirements in this period of stress. Besides, the girls have proved themselves ready, willing and highly capable of performing a vast number of Air Force jobs. Underneath both considerations is another factor affecting both Air Force men and women. Volunteers make for better personnel. All WAFs are volunteers.

Why does the Air Force want 40,000 additional WAFS?

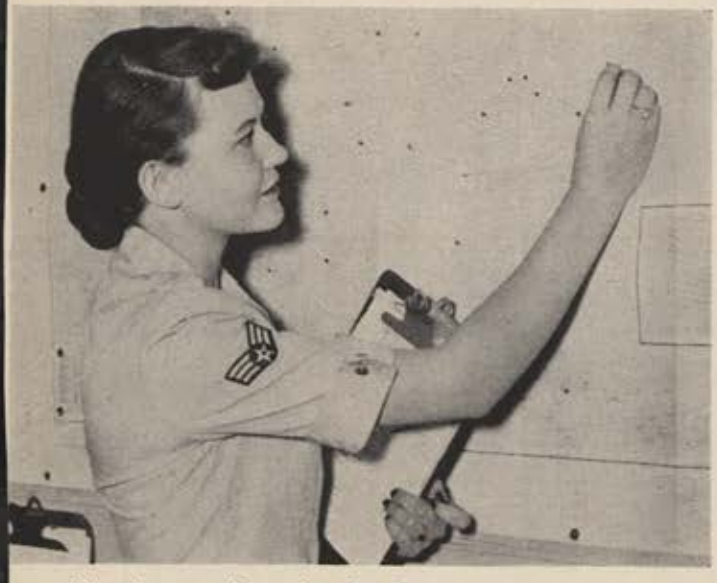
The answer starts with the Air Force Mobilization Plan. This plan has been in existence for months, was actually completed before Korea. Its objective is to provide manpower and material requirements necessary to accomplish the Air Force mission on the basis of 95 wings. Air Force Association members are thoroughly familiar with that mission as defined by Congress.

One policy consideration in the plan came from the President's Manpower Mobilization Policy Committee through the Joint Chiefs of Staff,

(Continued on page 106)

Travis is in luck. Cpl. Carlene Bruns works there, too. She's assigned to Special Services office for radio training, does newscast from base station.

Cpl. Phyllis Swiger is an Air Force career gal. She's a teletype operator at Davis-Monthan Air Force Base, Ariz.



Pinpoint precision in plotting cross-country aircraft is all in a day's work for Sgt. Selma Danielson, Walker AFB. Cpl. Claudia Jerome (below) plugs away at her switchboard in the maintenance control section at Davis-Monthan.

At March Air Force Base, Calif., Sgt. Louise Weskamp turns out contact prints as part of her work as a photographic laboratory technician. Travis again (below). Sgt. Rose Hartlun is assigned as a typist-stenographer at the base legal office. Sgt. Hartlun has two years' service.

Repeat Performance

YOU used to get about twenty years' breathing space between wars. Now about five seems to be par for the course. We scarcely had time to get our mighty World War II air arm safely junked or sold for surplus when the cycle began anew. This time it started in an obscure little Asian peninsula, just a name on a map to most of us. It turned out to be a strange kind of war, primarily tactical, with our strategic air arm hemmed in by all sorts of ground rules. Jets had come along in the meantime, taking the air war into new and dizzying altitudes and into hitherto untapped regions of speed. Much had changed but the U.S. Air Force, combatwise, was back in business.

Under two flags in Korea, United States and United Nations.

Jeep control tower guides C-54 into an advanced airstrip.

Paratroopers spill out of a C-119 over a Korean drop zone.

Fuel for a Sabre's wing tanks.

Flight line at a Japanese base.

A fading sunset silhouettes a B-26 crew getting ready to work the night shift.

Fuzes and fins for an F-51's frag bomb-load.

The .50 caliber is still the old reliable.

Between sundown and sack-time the stuff flies thick and fast around the fire.

Ground support mission for a pair of F-84s.

Helicopter evacuation of wounded is helping to write military medical history.

F-86s leave for another crack at MIG Alley.

A napalm fireball scorches a Red supply dump.

F-80s fighting from Japanese bases, were first US jets to see action in any war.

A WRENCH JOCKEY TALKS SHOP

The crew chief's job is short on glory, long on work, but the pilot loves him like a good right arm

By Technical Sergeant Richard P. Gooden

EDITOR'S NOTE: *There's no glamour in being a wrench jockey; no glory in wielding a screw driver and ball-pein hammer. But it is the men who do these jobs—the ground crews and the crew chiefs—who are the backbone of the United States Air Force. Typical of the men who breathe life into dead engines and patch up broken airplanes is 25-year-old Technical Sergeant Richard P. Gooden, a jet crew chief in Korea. Gooden, a husky, 200-pound, six-foot, one-inch airman with close cropped blond hair plans to make the Air Force his career. Here, is his own words, he tells why:*

WHEN I enlisted in the Army Air Forces back in April 1943, I was just seventeen and fresh out of high school. I wasn't dry behind the ears but I knew that airplanes were my meat. And I've never changed my mind.

I'm a jet crew chief in Korea now, babying the Lockheed F-80s that go out, day after day, to strafe, rocket and bomb the Chinese and North Korean Reds. And the Communists don't just sit there and take it. They fight back. Some times my planes come back with chunks of the fuselage shot away and part of a wing or tail missing. My job is to put them back together so they can go out again.

I haven't always been grounded. I flew 24 missions as a tail gunner on a B-29 over Japan and have one confirmed "Tony" to my credit. After the war there wasn't anything for a tail gunner to do so I transferred to the ground crew. I think it was the smartest thing I ever did.

I've been told I'm typical of the

A fighter-bomber mission actually starts when the crew chief heads for the airplane with his heavy tool box.

airmen who make up the US Air Force. Maybe I am. I don't know. What I am, where I've been and what I've done are unique as far as I'm concerned, but perhaps they will tell in a small way what it's like to be part of the greatest air force in the world.

I'm from Clarinda, Iowa—a small farming town about 60 miles southeast of Omaha, Neb. I went to school there, played football and baseball in an inconspicuous way and went from there into the Air Force. I liked it in my home town. My mother still lives there.

Most of the men in Clarinda who went to war—including my three brothers—went into the Navy. It's almost a tradition in our town. I wanted to get into Naval aviation, but a trick football knee stopped that. I've blessed that knee a thousand times since.

After I enlisted, the Air Force sent me to Laredo, Tex., where I got basic training as a gunner. Six weeks later I was shipped to the B-29 school at Fairmont, Neb., for three months. Then it was back to Laredo for more training.

In February 1945, I was flown to Saipan where I spent the rest of the war. It wasn't an exciting tour. I was never shot down but my plane got hit pretty badly the day I got the "Tony."

My enlistment was up shortly after the end of the war so I signed over for duty in Germany. In Europe I kicked around from job to job. For awhile I flew as tail gunner on photo missions but since the war was over that got terribly boring.

Someone in personnel checked my service record and saw I was an athlete in high school so I became a physical training instructor. In July 1946, I heard about the jet crew chief school for the first F-80s to go to Europe and I applied for a transfer. It went through without a hitch and I joined the 55th Fighter Group at Gebelstadt, Germany.

I had finally found my place. I liked jets and liked to work on them. We had a little excitement that year, in August, when the two C-47s were shot down over Yugoslavia. Our jets were all armed and bombed-up, ready to go, but things quieted down and nothing happened.

Then we transferred to Kitzengen, Germany and became the 31st Fighter Group. I stayed on jets until they were sent back to the States and then worked on C-47s. I was a jet man and not too handy on a reciprocating

Checking the F-80's oil level is one of the first of many pre-flight jobs. And you can't afford to miss a trick.

His pre-flight check completed, Sgt. Gooden plugs in the auxiliary starting device that takes the load off the jet's battery. Gooden is a F-80 fan, calls it "old indestructible" because of the incredible amount of punishment it can absorb and keep on flying.

The aircraft is ready, the pilot briefed. Sgt. Gooden helps 1st Lt. John R. Bradley into his shoulder harness (above). Both are members of the Fifth Air Force's 49th Fighter-Bomber Wing in Korea. (Below) All clear for takeoff says the time-honored hand signal. A close pilot-crew chief relationship make for efficient operation. And the pilot needs the crew chief more than the chief needs the pilot. He fills a key job.

engine so there wasn't much I could do. I found myself back on physical training.

In March 1948, things took a turn for the better and I was transferred to the 4th Fighter Interceptor Group, at Andrews AFB. I was back on jets and never happier.

In October we went to Alaska for three months of cold weather indoctrination. It was really cold up there but we learned a lot about caring for our jets in sub-zero weather.

When we came back I was sent to Langley AFB to work on the then new F-86s. In May I went to the North American factory to learn everything about Sabres, down to the last rivet. I found it to be the most complicated airplane I had ever worked on but a beautiful ship nevertheless.

That spring we participated in Operation Swarmer to get training under conditions as close as possible to actual combat. In the operation our outfit—as the defending forces—was equipped with Sabres and the Aggressors had F-84 Thunderjets.

It was pretty realistic. The Aggressors had a white triangle with a green circle around it painted on their fuselages and wings as their insignia. It was as close to combat conditions as they could make it. The Aggressors made simulated strafing and bombing attacks on our bases and dropped propaganda leaflets telling us not to work on our planes or we would be attacked again.

We returned to Langley AFB after the exercises and had hardly unpacked our gear when word came that there was trouble in Korea. We were alerted at 3:30 one morning and packed onto planes for Andrews AFB in Maryland. We were assigned to protect Washington against whatever might happen. We didn't even have time to pack our clothes or take our gear with us. Some of us took off wearing just a pair of pants and the house slippers we had put on when the alert came.

I stayed with the group at Andrews for two weeks while we waited to see what would happen. I've always been eager so when our Air Force entered the fight I volunteered for duty in Korea. I went home for a last furlough and then shipped out on July 15 for Japan.

The trip over on the troopship *General Gafney* wasn't bad at all. In fact, it was the best troopship I was ever on. We traveled three men to a cabin, with sheets on the bunks. The chow was good and we had movies every night. There was no blackout and the only duty we had during the

(Continued on page 99)

The UNITED STATES AIR FORCE

COMMAND and STAFF

The Surgeon General
Maj. Gen. Harry G. Armstrong

The Inspector General
Lt. Gen. Howard A. Craig

Vice Chief of Staff
Gen. Nathan F. Twining

Judge Advocate General
Maj. Gen. Reginald C. Harmon

Air Adjutant General
Col. K. E. Thiebaud

Chief of Staff
Gen. Hoyt S. Vandenberg

Scientific Advisory Bd.
Ch., Dr. Theodore von Karman

Ass't Vice Chief of Staff
Maj. Gen. William F. McKee

Secretary, Air Staff
Col. H. C. Thorson

Sp. Ass't, Reserve Forces (Acting)
Brig. Gen. Robert L. Cooper

Dir. of Public Relations
Brig. Gen. Sory Smith

An AIR FORCE Magazine chart

The DEPUTY CHIEFS

Deputy Chief of Staff
Comptroller
Lt. Gen. Charles B. Stone III

Assistant Deputy
Chief of Staff
Maj. Gen. E. W. Anderson

Deputy Chief of Staff
Personnel
Lt. Gen. R. E. Nugent

Assistant Deputy
Chief of Staff
Maj. Gen. E. S. Wetzel

Deputy Chief of Staff
Development (Acting)
Maj. Gen. Donald L. Putt

(Gen. Putt also is Assistant Deputy Chief of Staff—The Editors.)

Assistant for
Plans and Policy
Brig. Gen. F. J. Dau

Auditor General
Brig. Gen. T. R. Rampy

Assistant for
Ground Safety
Col. W. L. Tubbs

Chief of AF Chaplains
Maj. Gen. C. I. Carpenter

Special Assistant for
AF Academy Matters
Lt. Gen. H. R. Harmon

Director, WAF
Col. Mary Jo Shelly

Assistant for
Development Planning
Col. B. A. Schriever

Assistant for
Development Programming
Brig. Gen. M. S. Roth

Deputy Chief of Staff
Operations (Unassigned)
Lt. Gen. Thomas D. White

Assistant Deputy
Chief of Staff
Maj. Gen. Robert W. Burns

Assistant for
Atomic Energy
Maj. Gen. K. C. Wilson

Assistant for
Programming
Maj. Gen. W. E. Todd

Assistant
for Air Bases
Col. H. E. Maddux

Deputy Chief of Staff
Materiel
Lt. Gen. Orval R. Cook

Assistant Deputy Chief
of Staff
Maj. Gen. C. A. Branch

Assistant for
Materiel Program Control
Brig. Gen. P. E. Ruestow

Assistant for
Logistics Plans
Col. W. T. Hudnell

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Director of Accounting
Col. W. I. Miller

Director of Statistical Services
Brig. Gen. C. R. Landon

Director of Budget
Brig. Gen. M. J. Asensio

Director of Program Standards & Cost Control
Col. B. J. Webster

Director of Finance
Brig. Gen. K. E. Webber

Director of Personnel Planning
Brig. Gen. H. C. Parks

Director of Military Personnel
Maj. Gen. J. H. McCormick

Director of Civilian Personnel
Mr. J. A. Watts

Director of Training
Brig. Gen. G. P. Disosway

Director of Requirements
Maj. Gen. M. R. Nelson

Director of Research & Development
Brig. Gen. D. N. Yates

Air Force Finance Division
Brig. Gen. John R. Gilchrist

Air Pictorial Division
Col. B. E. Allen

Director of Intelligence
Maj. Gen. C. P. Cabell

Director of Plans
Maj. Gen. Joseph Smith

Director of Communications
Maj. Gen. F. L. Ankenbrandt

Director of Manpower and Organization
Maj. Gen. E. C. Lynch

Director of Operations
Maj. Gen. R. M. Ruwy

Director of Maintenance Engineering
Brig. Gen. W. W. Wise, Jr.

Director of Supply & Services
Brig. Gen. A. A. Kessler, Jr.

Director of Installations
Maj. Gen. P. W. Timberlake

Director of Industrial Resources
Col. Trump Miller, Jr.

Director of Transportation
Maj. Gen. W. E. Farthing

Director of Procurement and Production Eng.
Brig. Gen. H. A. Shepard

The MAJOR COMMANDS

Air University
Lt. Gen. Idwal H. Edwards

Air Defense Command
Lt. Gen. B. W. Chidlaw

Continental Air Command
Maj. Gen. Willis H. Hale

Military Air Transport Service
Lt. Gen. Laurence S. Kuter

Air Materiel Command
Lt. Gen. Edwin W. Rawlings

Strategic Air Command
Lt. Gen. Curtis E. LeMay

Air Proving Ground
Maj. Gen. Bryant L. Boatner

Special Weapons Command
Brig. Gen. John S. Mills

Far East Air Forces
Lt. Gen. Otto P. Weyland

Air R & D Command
Lt. Gen. Earle E. Partridge

Headquarters Command
Brig. Gen. Morris J. Lee

Tactical Air Command
Lt. Gen. John K. Cannon

USAF Security Service
Brig. Gen. Roy H. Lunn

Caribbean Air Command
Brig. Gen. Emil C. Kiel

USAFE
Lt. Gen. Lauris Norstad

Alaskan Air Command
Maj. Gen. William D. Old

Northeast Air Command
Maj. Gen. Lyman P. Whitten

Air Training Command
Lt. Gen. Robert W. Harper

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The AIR FORCES

1st Air Force
Maj. Gen. James P. Hodges

4th Air Force
Maj. Gen. William E. Hall

10th Air Force
Maj. Gen. Harry A. Johnson

14th Air Force
Maj. Gen. C. E. Thomas, Jr.

2nd Air Force
Maj. Gen. J. H. Atkinson

8th Air Force
Maj. Gen. S. E. Anderson

15th Air Force
Maj. Gen. Emmett O'Donnell

5th Air Force
Maj. Gen. Frank F. Everest

13th Air Force
Maj. Gen. Howard M. Turner

20th Air Force
Maj. Gen. Ralph F. Stearley

9th Air Force
Maj. Gen. W. E. Kepner

18th Air Force
Maj. Gen. Robert W. Douglass

MAJ. GEN. EDWARD J. TIMBERLAKE, JR.

3rd Air Force
Maj. Gen. Leon W. Johnson

12th Air Force
Maj. Gen. Dean C. Strother

Flying Training Air Force
Maj. Gen. Warren R. Carter

Technical Training Air Force
Maj. Gen. C. C. Chauncey

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Air Force Association

1424 K Street N. W.

Washington 5, D. C.

An AIR FORCE Magazine chart

(Corrected as of August 1, 1951)

Working for Airpower in Mufti

Worrying the Air Force in a period of military expansion is an unpublicized but nonetheless critical manpower shortage in civilian occupations essential to the defense effort

WANT a job? Good ones are going begging in the USAF. Air Force civilian personnel experts are double-timing to keep in step with rapid military expansion. AF field installations are frantically trying to fill highly-responsible civilian administrative, technical and scientific job vacancies in 44 different specialized occupations.

The vacancies form a critical gap in the present defense buildup. The Air Force would like to fill them from among the thousands of AF veterans, ex-WASPS and women employees trained by the USAF in World War II. As of July 27, AF civilian strength within the United States totaled approximately 250,000.

The "hard to fill" specialized civilian jobs and the Civil Service grade range of each are:

Professional and Scientific	
Architectural Engineer	GS 7 through GS 12
Construction Engineer	GS 7-13
Sanitary Engineer	GS 11-12
Flight Test Engineer	GS 9-12
Aeronautical Engineer	GS 6-12
General Engineer	GS 11
Mechanical Engineer	GS 7-12
Structural Engineer	GS 7-11
Civil Engineer	GS 7-12
Electrical Engineer	GS 5-12
Air Intelligence Specialist	GS 9
Mathematical Statistician	GS 7-12
Electronic Engineer (Radio)	GS 7-12
Electronic Engineer	GS 7-13
Electronic Engineer (Installer)	GS 11-12
Electronic Scientist	GS 5-12
Physicist	GS 5-12
Ordnance Engineer	GS 7-12
Operations Analyst	GS 9-13
Data Reduction Engineer	GS 11-12
Ground Safety Engineer	GS 7-9
Safety Inspector	GS 6-7
Property Utilization Engineer	GS 11
Information and Editorial Specialist	GS 9
Educational Specialist	GS 9-12
Administrative	
Cost Analyst	GS 5-9
O. & M. Examiner	GS 5-9
Budget Examiner	GS 7-11
Purchasing Agent	GS 6-9
Procurement Assistant	GS 5-7
Supply Supervisor	GS 7-9
Cost Accountant	GS 7-11
Training Officer	GS 5
Production Planner	GS 7
Miscellaneous	
Engineering Draftsman	GS 4-7
Engineering Aide	GS 4-7
Photographer	GS 7
Laboratory Electronics Mechanic	GS 7
Firefighter	GS 6-9
Illustrator	GS 5-6
Medical X-Ray Technician	GS 4

Current pay scales for Government employees lists starting annual salaries for top grades as: GS 7, $3824; GS 9, $4600; GS 11, $5400; GS 12, $6400; and GS 13, $7600.

If you would like to serve the Air Force in a civilian capacity and feel qualified for one of the critical jobs, apply to the Commanding General of the appropriate AF Command. He will refer your application to an installation where a suitable vacancy exists. During the present emergency, AF installations do their own hiring within restrictions established by Civil Service Commission.

Typical specialized civilian occupations in which vacancies occur from time to time throughout the various AF Commands are:

USAF Security Service, Brooks AFB, San Antonio, Tex.: Electronic engineers.

Air Matériel Command, Wright-Patterson AFB, Dayton, O.: Scientific, engineering, technical, legal, procurement, inspection, supply, maintenance, trades and crafts employees.

Air Training Command, Scott AFB, Ill.: Technical and vocational instructors, training specialists, aircraft and electronics equipment supply and maintenance technicians.

Continental Air Command, Mitchell AFB, New York City, N. Y.: Aircraft and electronics maintenance mechanics and technicians.

Air Defense Command, Ent AFB, Colorado Springs, Colo.: Aircraft and

(Continued on page 114)

University of Southern California—Honorary cadet colonel Gail Ferguson salutes Cadet John F. Bradley.

University of Wichita—Colonel M. J. Coultee, PAS&T at Notre Dame, pins AFA medal on Cadet Harry L. Hobson.

The Citadel—Lt. Colonel Daniel B. Orr, Professor of Air Science and Tactics at the Citadel, and Cadet Jack W. Chandler.

For Outstanding Achievement

Selected ROTC cadets from coast to coast step forward to accept AFA's Silver Medal

FOR the fourth consecutive year more than 100 outstanding advanced Air Force ROTC cadets have been presented the 1951 Air Force Association Air-ROTC award in military ceremonies staged by colleges and universities from coast to coast.

Recently-adopted uniform standards for selection of colleges and students to participate in the ROTC program will assure the Air Force of more than 9000 new second lieutenants each year, a further indication that the Air Force will continue to depend upon this program as the major source of its future leaders. Under the new standards, each ROTC unit—the Air Force presently has 187—must be capable of producing annually a minimum of 50 commissioned officers in non-technical branches or 25 in those of a technical nature.

AFA has distributed over 400 medals since the award was initially established in 1948. Most of the schools have been selecting the winner from members of the junior class, but some prefer to wait until a candidate's senior year so that his field training may be taken into consideration.

Each winner is selected entirely at the discretion of the professors of air science and tactics in the university concerned, but the Association has made available to them a suggested rating sheet guide which gives equal weight to scholastic grades in general subjects, scholastic grades on military subjects, and slightly more importance to such individual qualities as leadership, initiative, military bearing, resourcefulness and neatness.

A bill designed to place the ROTC programs of the Army, Navy and Air Force on an equal basis is presently awaiting action by Congress. If enacted, this bill would enable each service to operate its ROTC program similar to the Holloway type program which is being conducted by the Navy at the present time.

Under an amendment to the AFA constitution, any individual enrolled as an Air Force ROTC cadet is eligible for cadet membership in the Air Force Association. Cadets interested in joining the Association and receiving AIR FORCE Magazine should contact their PAS&Ts.

College of St. Thomas—John Koucourek, commander of the St. Paul Squadron, AFA, and Cadet George L. Ebling.

University of Mississippi—Dr. J. D. Williams, Chancellor, Major Hoyt A. Jolly, PAS&T, and Cadet Brelon E. Grantham.

Michigan State—Mrs. F. N. Miller, Cadet Richard R. Robie, Lt. Col. G. O. Commenator, and F. N. Miller, Lansing AFA.

Duquesne University—Bob Patterson, Pittsburgh AFA, Cadet Stanley Chlystek, Maj. Gen. Willis H. Hale, CG, ConAc.

University of California at Los Angeles—David F. Jackey, Dean of College of Applied Arts and Cadet George M. Browning.

University of Cincinnati—(Below) Major Charles H. Green, PAS&T shakes hands with Cadet winner Frank G. Jones.

THIS YEAR'S LEADERS

The 1951 scholastic year set an all-time record in the number of colleges presenting the annual Air Force Association ROTC awards to outstanding students. These are the winners that have been named to date:

Arizona State College—
Richard J. Schimberg
University of Arkansas—
Wayne D. Ortloff
Baylor University—
Robert M. Stapleton
University of Cincinnati—
Frank G. Jones
The Citadel—
Jack W. Chandler
Coe College—
David McLaughlin
Cornell University—
William D. Ralph, Jr.
University of Denver—
William L. Mathews
University of Detroit—
Howard W. McKenna
Duquesne University—
Stanley Chlystek
East Texas State Teachers College—
Robert Sloan
Gettysburg College—
Henry W. Parlett
Harvard University—
Robert A. Russell
University of Hawaii—
Wilton Ching
Howard University—
Charles Johnson, Jr.
University of Idaho—
Wayne R. Leach
Indiana University—
Stuart M. Grossman
State University of Iowa—
Donald Frank Fryauf
Iowa State College—
Daniel M. Youngblade
University of Kansas—
Wayne D. Bradley
Lehigh University—
Raymond C. Updegraff
Louisiana State University—
Edward F. Kramer, Jr.
University of Louisville—
John L. Becker
Loyola University (Los Angeles)—
William E. Smurro
Michigan State College—
Richard R. Robie
University of Mississippi—
B. E. Grantham
Montana School of Mines—
Donald K. Percival
Montana State University—
Stanley E. Spangler
University of Nebraska—
Lyle D. Altman
University of New Mexico—
James W. Caylor
New Mexico A. and M.—
Raymond A. Kucharchuk
New York University—
Frank C. Maixner
University of North Carolina—
James R. Strickland
North Carolina State College—
Wesley Osborne Doggett
Ohio State University—
Earl J. Collins
Ohio University—
Leonard T. Lane
University of Oklahoma—
Wayne N. Whatley
University of Oregon—
Clarence E. Ford
Pennsylvania State College—
William J. Frech
Purdue University—
John E. Shuter
Rensselaer Polytechnic Institute—
James G. Darrah
San Jose State College—
Charles N. Royds
College of St. Thomas—
George L. Ebling
University of Southern California—
John F. Bradley
Southern Methodist University—
Lawrence G. Edwards and Claude D. Stephenson
Syracuse University—
Henry A. Domian
University of Texas—
Michael B. Miraglia
Trinity College—
Howard W. Rogerson
Tuskegee Institute—
Sherman Todd
UCLA—
George M. Browning, Jr.
Utah State Agricultural College—
Jerald E. Christensen
Virginia Polytechnic Institute—
William P. Brown
The State College of Washington—
Wayne J. Bailey
Wayne University—
Raymond D. Martin
West Virginia University—
James K. Brown
University of Wichita—
Harry L. Hobson
Williams College—
John Richard Duffield
University of Wisconsin—
Richard A. Larson

East Texas State Teachers—Cadet Robert Sloan with Lt. Col. Gordon Paulson, PAS&T.

Harvard U.—Cadet Robert A. Russell receives award from his father, Col. Sol Rosenblatt.

Syracuse U.—Forrest Vosler, Medal of Honor winner and AFA member, and Cadet Henry A. Domian.

Ohio State U.—Cadet Earl J. Collins, AFAer Carl Glade, and President Howard L. Bevis, Ohio State.

U. of Oklahoma—Rear Adm. W. K. Phillips, 8th Naval Dist., and Cadet Wayne N. Whatley.

University of Denver—Cadet William L. Mathews and cadet sponsor Patsy Chambers.

Purdue University—Edward J. Lanagan, AFA, Indianapolis, and Cadet John E. Shuter.

Howard University—Paul Devine, Capital Sqdn. AFA, and Cadet Charles Johnson, Jr.

AFA THROUGH THE YEARS

Although only in its sixth year the Air Force Association already has compiled a proud record of achievement and endeavor. Here, for the first time, is a chronological account of what it is and what it has done

1946

JANUARY: Air Force Association formed as independent, civilian airpower organization with Jimmy Doolittle, New York City, president.

AFA national leaders received at White House by President Truman.

FEBRUARY: AFA chartered in Washington as non-profit corporation.

JUNE: Nation's first AFA Squadron established in Baltimore, Md.

JULY: AIR FORCE magazine, wartime Official Service Journal of the Army Air Forces, becomes Official Journal of the Air Force Association.

SEPTEMBER: Ohio Wing is first AFA state organization established in the nation.

OCTOBER: First local AFA youth education program started at Paducah, Ky., with surplus non-flyable B-17 utilized as classroom for AFA-sponsored Air Scout troop.

1947

JANUARY: AFA supports compromise plan of Congress for unification of the Armed Forces, calling it "a step in the right direction."

APRIL: AFA denounces current reductions in Army, Navy and Air Force appropriations, calling them "an invitation to national calamity."

MAY: AFA's Silver Medal established for presentation annually to outstanding Air ROTC cadets.

JUNE: Annual entertainment program for hospitalized veterans inaugurated at Halloran Hospital by WAC Squadron of New York City.

AUGUST: AFA becomes the largest independent air organization in the United States.

SEPTEMBER: First National Convention and Air Force Reunion in Columbus, Ohio, establishes basic structure of AFA; national constitution ratified by delegates emphasizes civilian control for organization by specifying that only civilian members may vote and hold office. Thomas G. Lanphier, Jr., Boise, Idaho, elected AFA's president; Jimmy Doolittle, New York, Chairman of the Board.

Statement of Policy adopted at convention expresses basic premise of organization: "We speak not as military men laying strategic plans, but as citizens from all walks of life and from all sections of the country who have had a relatively brief but unforgettable experience in the military service, who now cherish the role of civilian and hope that it is never again interrupted . . . who have a steadfast belief in a strong U. S. as the best insurance for world peace, and in airpower as the key to our future."

General of the Army Dwight D. Eisenhower, principal convention speaker, states, in part: "Creation of the Air Force Association recognizes aviation problems that require specialized and organized civilian assistance toward their solution."

AFA members told by General Carl A. Spaatz, first Chief of Staff, US Air Force: "The Air Force Association has a major responsibility to the people of the country. They will depend on you for the proper expression of the doctrine of airpower. No other organization can more appropriately assume this function."

AIR FORCE magazine presents special report on the newly created USAF and reviews the 30-year struggle to achieve autonomy.

OCTOBER: AFA presents its proposal for an Air Force "comprising 70 combat groups with supporting establishments and services" to the President's Air Policy Commission, currently preparing its report to the nation.

AIR FORCE magazine, in special report from its Far East correspondent, reveals "the Russian threat has grown," the 38th parallel is "our most dangerous boundary."

NOVEMBER: AFA presents a Brockhurst portrait of General of the Air Force Henry H. Arnold to the U. S. Air Force at Pentagon ceremony.

1948

MARCH: Entire issue of AIR FORCE magazine is devoted to special presentation of "Survival in the Air Age," the report of the President's Air Policy Commission, and heralds the report as "a blueprint for national airpower . . . a workable airpower platform—the kind we have been fighting for both as individuals and as an organization."

AFA Squadrons and individual local leaders inaugurate monthly program to personally distribute AIR FORCE magazine to people of influence at local, state and national levels.

APRIL: Airpower rallies sponsored by AFA units at principal cities throughout nation support the "Survival in the Air Age" report and the recommended 70-group Air Force establishment.

AFA receives Friendship Plaque from Great Britain's Royal Air Force Association.

MAY: Chicago Group of 24 Squadrons organized as AFA's largest unit activity.
AFA denounces "balanced force" concept of defense as unrealistic approach to national security.

JUNE: Outstanding Air ROTC cadets at 80 colleges receive AFA's Silver Medal in first annual presentation ceremonies.

SEPTEMBER: AFA again serves as official sponsor of nation-wide observance of Air Force Day.
Second annual National Convention and Air Force Reunion in New York City features Operation Wing Ding, judged "The greatest show ever put on in Madison Square Garden;" C. R. Smith, New York, elected AFA's president; Jimmy Doolittle, Chairman of the Board; principal convention speaker, W. Stuart Symington, Secretary of the Air Force.
AFA establishes annual Airpower Awards in recognition of outstanding contributions to airpower development; major trophy, the H. H. Arnold award, is presented to W. Stuart Symington.
Annual Statement of Policy adopted at convention declares, in part: "We repeatedly have expressed the desire to make unification work . . . at the same time we have deplored the compromises necessary to effect passage of the National Security Act as failing to recognize the relative importance of the proper use of airpower in our military structure."
New England Model Plane Meet sponsored by Rhode Island Wing of AFA.

OCTOBER: Independent survey shows approximately half the total membership of AFA served with the wartime Air Force in flight assignments, half in ground assignments, that approximately 54% of current AFA members completed wartime service as enlisted men.

NOVEMBER: AFA assists in establishment of Royal Canadian Air Force Association.

1949

FEBRUARY: AFA units throughout country sponsor premiere showings of the Air Force motion picture "Command Decision."

APRIL: AIR FORCE magazine presents special survey report analyzing status of the Finletter Committee's airpower recommendations, now a year old, finds they have been given "far less consideration than they deserve."

MAY: First annual AFA glider meet held under auspices of Dayton Squadron.

JUNE: AIR FORCE magazine presents special report introducing new Air Force Reserve training program.

JULY: Third annual National Convention and Air Force Reunion in Chicago features National Air Fair and Air Age Exposition, judged "the greatest military air demonstration ever presented to the public" which includes presentation by Air Force of Lucky Lady II, B-50 of non-stop, round-the-world flight fame, to National Air Museum. Robert S. Johnson, New York elected AFA's president; C. R. Smith, Chairman of the Board; principal convention speaker: W. Stuart Symington.
H. H. Arnold award of AFA is presented to Maj. Gen. William H. Tunner and personnel responsible for the Berlin Airlift.
Annual Statement of Policy declares, in part: "The U. S. has no settled conviction concerning the strength of the Air Force required . . . the U. S. is basing its defense budget not on strategic requirements but rather on political concepts . . . a new strategic concept of security is requisite and that concept rests primarily on airpower . . . we believe that U. S. airpower in being is the condition precedent to the survival of western civilization."
Chaplains Division of AFA chartered.

NOVEMBER: AIR FORCE magazine presents first annual report recognizing the ten major Air Force technical developments of the years.

DECEMBER: AFA co-sponsors the 46th anniversary program at Kitty Hawk, N. C., commemorating first flight of the Wright Brothers.
AFA initiates and sponsors round-the-world flight by scheduled airline to dramatize air age development, with past president Tom Lanphier, Jr., completing flight in less than 120 hours, breaking all scheduled airline previous records.
AIR FORCE magazine presents special report analyzing B-36 hearing of the House Armed Services Committee.

1950

JANUARY: AFA's long-range Airability Program inaugurated nation-wide drive to survey civil aviation needs and development at local level and stimulate corrective action where needed.
AFA officially represents all Air Force veterans at funeral services at Arlington National Cemetery for General of the Air Force Henry H. Arnold.
Premiere showing of the Air Force motion picture "Twelve O'Clock High" celebrated by AFA at banquet at Waldorf Astoria, New York City.

MAY: AFA initiates and sponsors amalgamation of major Air ROTC student groups into one national fraternity, the Arnold Air Society, and establishes Cadet Membership for students enrolled in Air ROTC program.
AFA initiates and co-sponsors, with Navy League and Military Order of the World Wars, in Washington, the first annual kickoff banquet for the national Armed Forces Day observance, with President Truman and Defense Secretary Johnson the principal speakers.

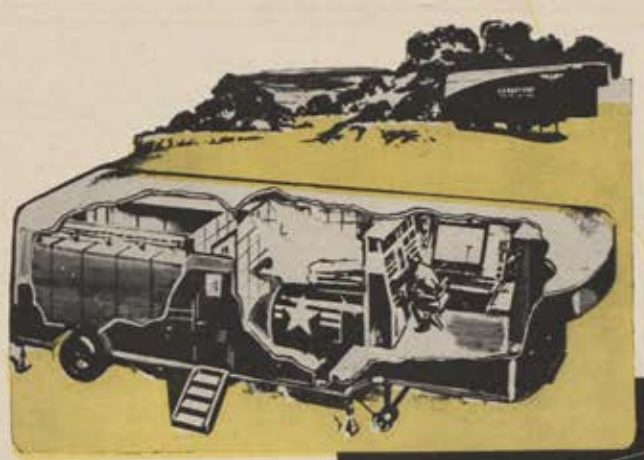
JUNE: AIR FORCE magazine devotes entire issue to "Key to the Future," a special report on the new Air Force reserve and development program.

AUGUST: Fourth annual National Convention and Air Force Reunion in Boston features National Air Fair and presentation by Air Force Chief of Staff General Vandenberg of the first supersonic aircraft, the X-1, to National Air Museum; Robert S. Johnson reelected AFA's president; General Carl A. Spaatz, Chairman of the Board; principal convention speaker: Air Force Secretary Thomas K. Finletter.
Annual H. H. Arnold award of AFA is presented to the Airmen of the United Nations in Korea.
Annual Statement of Policy adopted at convention declares, in part: "We protest—as we have protested—the careless and ill-considered abandonment of the peacetime power essential in this post-war world to our security and world peace . . . With the war in Korea two months old, we are told that the required organization is 69 groups—compared with the proposed 70 peacetime groups and the 273 groups required in World War II. Should our people be led to

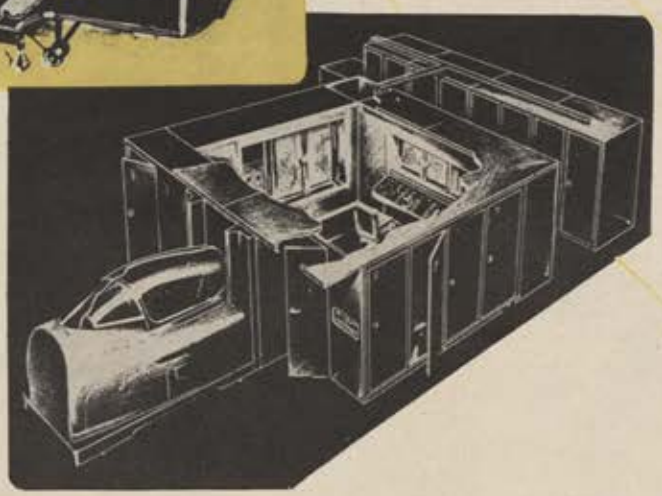
(Continued on page 119)

safety through electronics

Engineering and Research Corporation, manufacturers of the spin proof Ercoupe, again make a notable contribution to safety in aviation. The "ERCO FLIGHTRONIC" flight simulators are the latest advancement in pilot training. We are proud to participate in this new era of aviation safety. The F-86D "Sabre Flightronic," developed under sub-contract with North American Aviation, Inc. and the Equipment Laboratory, Air Materiel Command; and the F9F-5 "Panther Flightronic," developed under contract with Special Devices Center, Office of Naval Research, are but two of our latest developments in this field devoted to the saving of lives and equipment.



F9F-5
Operational
Flight Trainer



F-86D
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► Nearly a year of intensive air and ground training is needed to qualify an Air Force student as a navigator. To speed up the training program, the Air Force now instructs groups of 10 to 14 men simultaneously in flying classrooms equipped with Sperry instruments.

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► Sperry navigational facilities provided are the Gyropilot*, its standard accessory, Automatic Approach Control, and flight instruments for attitude and direction. Fourteen repeaters . . . one at each student station . . . are controlled by the Master Gyrosyn Compass. Thus Sperry—by providing the very latest aids to navigation—helps the U. S. Air Force develop new "men of precision."

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Mobilization News

USAF announces following 1952 Reserve program:

PRIORITY for training and for call to active duty during fiscal year which began last July 1 will go to the Organized Reserve. Vacancies in the new OAR the Air Force hopes, can be filled from among those now in the Volunteer Reserve, from the large number of AF veterans not previously associated with the Reserve, and from those Reservists being returned to civilian life from active service. While USAF hopes to redevelop its Organized Reserve with veterans as far as possible, recruitment of men without prior military service must be carried out to augment the Reserve buildup.

EMPHASIS will be placed on activities of the Air Force Reserve Training Centers since, in numbers involved, they constitute main segment in Air Force effort to reconstitute its Organized Air Reserve. This program includes operation of 30 Training Centers in areas of dense reserve population. Twenty-six of these sites have already been chosen, including six new AFRTCs at Seattle, Wash.; San Antonio, Tex.; Houston, Tex.; Baltimore, Md.; Milwaukee, Wis., and Covington, Ky. Other sites include: Columbus, Ind.; Birmingham, Ala.; Marietta, Ga.; New York City (two centers); Coraopolis, Penna.; San Rafael, Calif.; Bedford, Mass.; Dallas, Tex.; Long Beach, Calif.; Memphis, Tenn.; Miami, Fla.; Wilmington, Del.; Chicago, Ill.; Olathe, Kan.; Portland, Ore.; Belleville, Ill.; Mt. Clemens, Mich.; Louisville, Ky.; and Minneapolis, Minn.

USAF will continue offering Mobilization Assignments to Reserve officers and airmen and provide on-the-job training with pay to the assignees at various command headquarters and air stations.

SEVERAL new types of corollary units are planned in the fiscal year '52 program. Corollaries are Reserve units whose on-the-job and special-project training are usually supervised by active AF organizations (termed "parent" units) having similar organization and mission. The Corollary uses the parent organization's equipment and certain of its office and housing facilities during periodic training at air bases. The Corollary Program, as part of Organized Reserve, provides pay for participating Reservists.

PROGRAM for new fiscal year also envisions considerable enlargement of Volunteer Air Reserve Training Unit Program. Additional VART Units are planned in order to bring inactive duty training to as many Reservists as possible. In addition, other Reservists will be offered mobilization designations under Volunteer Program and earmarked for specific duties.

ADDITIONAL full-time liaison officers and airmen will be administering and supervising the training of Reservists affiliated with the VARTU program during FY '52.

FIFTEEN-DAY tours of active duty training with pay will continue to be provided on as broad a scale as funds will permit.

OTHER planned projects affecting the Reservist include a continuing classification review and an availability survey to provide data for Reserve records relative to civilian experience and factors influencing orders to active duty. Technical refresher instruction is proposed to be offered through civilian contract schools. This proposal and details of all other aspects of '52 program will be developed further when final budgetary action is taken.

(Continued on page 76)

AFRTCs, together with Corollary Units and Mobilization Assignments, are expected to include a total of 11,000 officers and 20,500 airmen. Membership in Volunteer Reserve Training Units, with present inactive duty training of academic instruction type and without pay, will number approximately 88,000 officers and 17,000 airmen.

UNIFORM PAY GROUPS will be established by the Military Departments within their Ready Reserve and Standby Reserve, according to a recent directive issued by Sec'y of Defense. Pending legislation which creates these two Reserve categories, all Reservists are considered to be members of Ready Reserve.

READY RESERVE will consist of those units and individuals, or both, available for immediate employment in expansion of active forces when, in opinion of the President, an emergency exists, or as otherwise provided by law. Members will be subject to involuntary active duty for training not to exceed fifteen days annually and to such additional reserve training, other than active duty, as may be prescribed by Secretaries of respective Military Departments. In addition, its members will be permitted and encouraged to perform voluntary active and reserve training duty, with or without pay, and shall be entitled to all rights, privileges and benefits accorded to members of Reserve Forces.

STANDBY RESERVE will consist of those units or individuals, or both, available for involuntary employment in expansion of active forces only upon declaration of war, or a national emergency declared by Congress. In addition, its members will be permitted and encouraged to perform vountary active and training duty, with or without pay, and shall be entitled to all rights, privileges and benefits accorded to members of the Reserve Forces. Within the Standby Reserve, an Inactive Status List will be maintained. It will consist of individuals unable to participate actively in the reserve program who, if qualified, may be transferred thereto for retention. They are available for involuntary employment in expansion of active forces only when no qualified individuals in the required categories are available in the Ready Reserve or otherwise in the Standby Reserve. Members of the Inactive Status List shall be entitled to all rights, privileges and benefits accorded to the Reserve Forces except that they shall not be eligible for pay, accrual of non-disability retirement benefits, or for promotion.

TRAINING PAY GROUPS within either the Ready Reserve or Standby Reserve shall be as follows: Training Pay Groups A, 48 drills - 15 days active duty; B, 24 drills - 15 days active duty; C, 12 drills - 15 days active duty; D no drills - 15 days active duty; E, prescribed drills without pay - annual training duty, funds permitting; F, no training - no pay.

UNIFORM STANDARDS for selection of educational institutions to participate in ROTC programs and selection and retention of ROTC students have been approved by Sec'y Marshall. New policies provide that in order to be eligible for ROTC participation, an institution must: 1. Through application express a desire for establishment of ROTC unit; 2. As a minimum basis, to be accredited by appropriate regional association; 3. Offer and provide adequate physical facilities as required by respective Military Department; 4. Be capable of producing annually for any one Department a minimum of 50 commissioned officers in non-technical branches, or 25 officers in technical branches, for all of the ROTC activities, except that special consideration may be given to units offering unusual types of training.


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TECHNIQUE

An Eye for Weather

The Fairchild C-119 is getting an owly-eyed new look. In the center of the nose-cap which these flight mechanics are attaching is a new installation of the airplane's glide antenna. Formerly carried on an external mast, the antenna now is mounted internally, covered with a plastic "eye" that is flush with the nose-cap. The new type mounting is part of a general drag-reduction program in operation throughout the Air Force. The antenna is part of the C-119's instrument landing system which helps guide the bulky transports to safe landings in murky weather.

Scorpion Gets New Sting

Sixteen five-inch high velocity aerial rockets, tucked eight under each wing, make the Northrop F-89 the most heavily-armed all-weather interceptor in the USAF's stable. This flight photo shows the rockets streaking from the Scorpion's wings during recent air-to-ground firing at Edwards AFB. As pointed out previously in this magazine, (AIR FORCE, May, 1951) the F-89 has a high weight-carrying capacity and great possibilities for future armament. The recent demonstration points up the possible future employment of new rocket and cannon developments and, if and when, air-to-air guided missiles.

USAF's X-5 Gets First Flight Tests

First USAF aircraft capable of changing the degree of wing sweep-back in flight, the Bell X-5 is getting its first workouts over Edwards AFB, Muroc, Calif. Powered by a single axial-flow turbo-jet in the lower part of the fuselage, the X-5 will be used as a flying lab to test aerodynamic qualities of variable sweep wings.

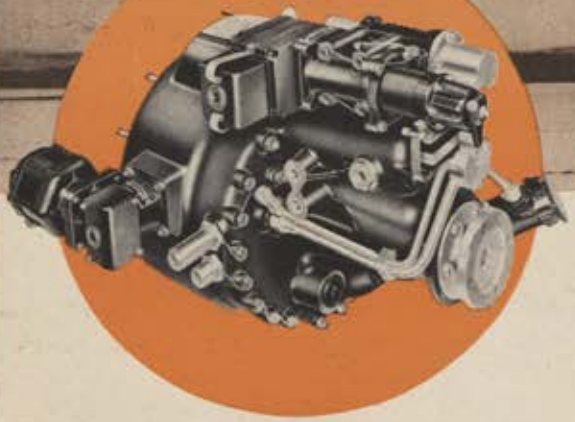
'Copter Flies High

This ram-jet Hiller-Hornet is hovering above the 7500-foot level in California's Sierras. The height is said to be an unofficial altitude record for jet helicopters, previously limited to low altitudes because of poor power-off landing characteristics. The Hornet can land safely without power.

AF Water Wings

Newest piece of life-saving equipment tested by the Sea-Survival Unit of Wright Air Development Center's Aero Medical Lab is a first cousin to the old-fashioned water wing. The new life preservers are contained in two packets which strap under the arms. Each inflates independently with carbon dioxide when the jumper pulls two lanyards when he hits the water. If necessary the air sacs can be inflated orally. The new preservers got their first important tryout recently at Old Indian Lake, north of Dayton, O. Purpose was to determine whether airmen bailing out over water could get out of their chute harness, inflate the new water wings, and stay afloat without becoming entangled in the chute lines. All test jumpers approved the new bail-out equipment.

Sundstrand Constant Speed Alternator Drives on B-36's log more than 6500 TROUBLE-FREE HOURS



Service records verify reliability of this precision-built transmission

Studies of service records at Travis, Rapid City, and Carswell Air Force bases reveal that Sundstrand's alternator drive for the B-36 has acquired an enviable reputation for dependable performance. At Travis, for example, there was only one minor accessory adjustment reported in more than 6500 constant speed drive hours logged on B-36's at this base. Similar records are being set at other fields. This remarkably efficient drive—which makes possible greater use of AC power—has so proved itself that aircraft and engine designers are now incorporating it in other types of bombers, transports, fighters and engines. Special adaptations can be developed for you through Sundstrand's *reliable* research, *expert* engineering, and *precision* production.

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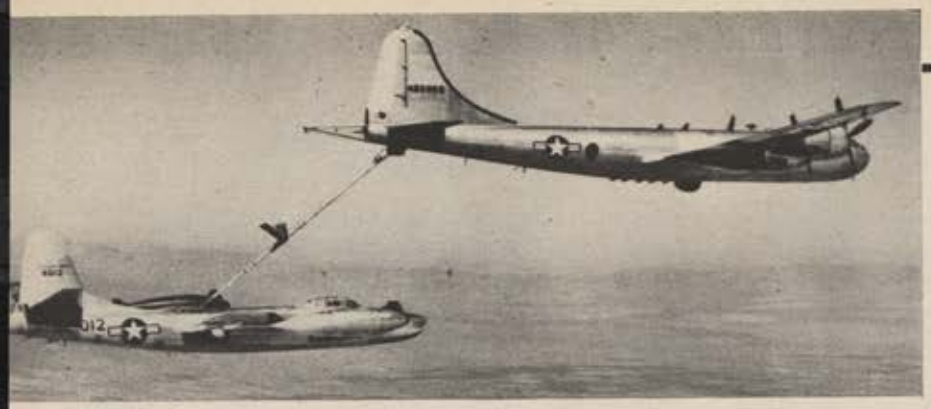


B-45 Gets a Drink

First USAF jet bomber to be successfully refueled in the air, this North American RB-45C is shown taking on fuel during a test run over Edwards Air Force Base. The tanker is a KB-29P. Method used was the Boeing-developed "flying boom" which moves fuel at a much faster rate of flow than previously possible while flying faster and higher.

Photo Slide Rule

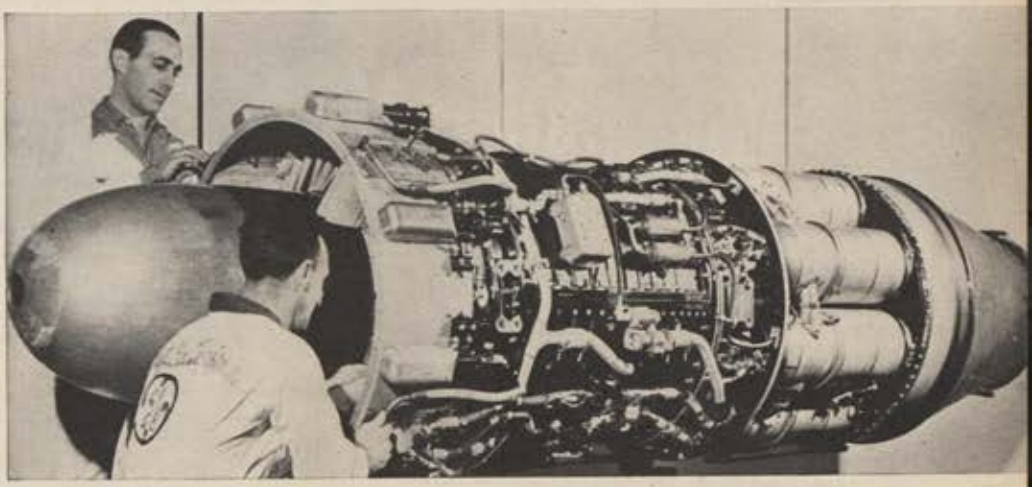
A new aerial photo rule is said to give quick answers to problems like: comparative size of object on ground and in photo; ground area covered by one exposure; speed image moves under lens; ground feet covered in flight per inch of photograph; and many more. The new rule was designed by the Air Force's Aerial Photo Division.

Litter Windshield

This new litter platform, developed by Bell for use with their helicopters, features a plexiglas cowling which acts as a windshield without interfering with ventilation or visibility. Old fabric-covered, crate-like carriers often induced claustrophobia in wounded.

Robot Steers Plane

This new electronic steering device developed for autopilots by Minneapolis-Honeywell, enables the human pilot to maintain control of the plane even when an autopilot (Tech Talk, AIR FORCE, Aug. 1951). Device takes over after pilot indicates direction of turn and relays information to the autopilot.



"Hot Nose" Makes B-47 Engines Iceproof

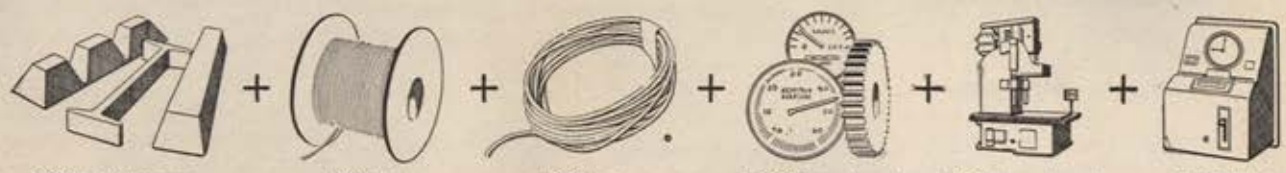
GE's J-47-23 engine, rated at more than 5,800 lb. thrust, will give future B-47s more range and speed. Icing problem was overcome by a "hot nose." Hot air from the compressor is fed into hollow parts of the nose to melt ice. Packard is building the new engines under license. Entire Packard production will go to B-47 program.

Martin 4-0-4 in Maiden Flight

First of the new Martin 4-0-4s made its first flight at Baltimore under TWA colors, part of an order for 41 planes from that airline. Eastern has ordered 60, the Coast Guard two. Plane is pressurized, seats 40 passengers, has four P & W R-2800 engines.

F84, USAF

What it takes to send one jet into action!



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It pays a manufacturer to build a better part, a better product. It pays a worker to do a better job... to take pride in it. Jet or "Jig-saw" the finished product is *bound* to be better.

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WHAT'S YOUR AIRPOWER IQ?

Do You Know—

1. That adequate airpower can be obtained only if it is understood and supported by the public?
2. That the Air Force Association, the largest independent air organization in the nation, offers you the best possible opportunity to help accomplish this?
3. That you and just nineteen of your comrades can form an AFA Squadron right in your own home town?

We are a little behind in this airpower business. Just whose fault it is, is hard to say. Affixing blame is not what we need to get us in shape—quick. We need every person in the nation unified in a program which will make us number one in the air.

When we say airpower, we don't mean just the military, or just the airlines. We like Hap Arnold's definition: "A nation's airpower is its total aviation activity—military and civilian, commercial and private, existing as well as potential." You can see how important this airpower business is to all of us.

There are many ways through which AFA tries to spread the airpower gospel—the pages of AIR FORCE magazine, national committees, special campaigns, and a network of local units known as Squadrons. Squadrons are made up of twenty or more former members of the Air Force, banded together by a charter. AFA has made considerable progress in building this Squadron network, but many more units are desired and badly needed to do the job facing us.

Why not form a Squadron in your town? You can do a service for your country and at the same time renew the fellowship you enjoyed in the Air Force. Drop a note to AFA Headquarters and ask about forming a Squadron. You will be sent a kit containing full information and materials on just how to organize a unit and apply for charter. You will also be sent a roster of all AFA members living in your area.

All Squadron activities are not hard work. Just take a look at the letter from the Commander of Chicago Squadron 41 on page 89 of this issue and you will see a good program of activities.

Give airpower a hand. Write today for information and supplies!

Organizational Director
Air Force Association
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Let's Make US Supreme In the Air!

WHO'S been hibernatin'?

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You see, we've really been busy . . . busy getting additional experience . . . busy acquiring greater facilities . . . busy finding new ways to increase production efficiency. And, today, we can truthfully say that we're better prepared than ever to serve our country. Just say the word. We're ready to go!

Delco Radio

DIVISION, GENERAL MOTORS CORPORATION
KOKOMO, INDIANA

Blair County Squadron's Clubhouse, scene of the recent Pennsylvania Wing Convention, located on a shady cool mountain-side, just 10 minutes from Altoona.

How One Squadron Got Its Clubhouse

A little money, a lot of elbow grease and unlimited enthusiasm gave Blair County AFA Squadron, Altoona, Pa., a new home

When Blair County AFA Squadron, Altoona, Pa., was organized in 1947, it had a housing problem. Several veterans' organizations volunteered the use of their post homes as a meeting place. The YMCA, a community room in the Altoona City Hall, an Army Reserve Armory, and the Blair County Airport were all used on various occasions.

But as a result of moving the meeting place each month, the squadron attendance gradually declined. The remaining members realized that their greatest need was a permanent meeting place where all squadron affairs could be conducted. The only solution was the dream of every active AFA Squadron—a clubhouse of their own where they could really "keep the gang together."

They decided that the possibility of renting a suitable clubhouse should be considered while the treasury was still in a favorable condition. A committee consisting of the present Pennsylvania Wing Commander, Kenneth V. Moore, then Squadron Commander; J. Murray Shollar, a World War I balloonist, who served with Roscoe Turner in the Balloon Corps; and H. Richard McCord, a World War II Air Force bombardier and POW in the ETO, who was Squadron Treasurer, contacted a local realtor, Mrs. Dorothy Sullivan.

Mrs. Sullivan owned a property which had been originally used as the Clubhouse of Blair Voiture 350 of the American Legion fun organization, the 40 and 8. The 40 and 8 had moved out long since and Mrs. Sullivan offered to lease the place to Blair County Squadron. A suitable lease was arranged in February, 1950, and Blair County Squadron became the tenant of three acres of land and a two-story, six-room stone house, just a 10-minute ride from the center of Altoona on Frankstown Road.

Plans were made to renovate the entire building and surrounding area. The owner furnished the materials and the Squadron furnished the labor, gratis.

During the next 23 weekends, an AFA work detail attacked the house with hammers, saws, paint brushes and wrenches to complete the remodeling of their prize possession. It was a big job since many needed repairs had been postponed over the years. The outside stairs were unsafe. The porch had many floor boards in need of replacing. The roof leaked. The walls inside had been painted a dreary dark blue. In several strategically located spots the plaster was about to take a dive. The basement was damp and the hot air furnace gave off more fumes than heat. Antiquated light fixtures hung from the walls and the outside lighting had long since given up the ghost. In brief, the new clubhouse was the original "before" picture of a magazine "before and after" remodeling scene.

A crew, under the direction of Fred Lakner, consisting of Fred Jones, Dick Johnson, Alvin Koelle, Ed Kough, George Knab and Dave Pasquino tore down the old front steps, built new ones and repaired the holes in the porch.

Another group under the supervision of Joe Holland, a roofer, tinner and furnace man, completely recovered the porch roof with 21 rolls of roofing paper. Joe's crew consisted of Raymond Koelle, Tom Stephenson, Jim Miller, Paul Greene, Irvin Koelle and Arnold Love. They considered putting in for hazardous duty pay since thousands of bumble

The most popular room in the Squadron Clubhouse, the bar. Covers of all past issues of Air Force magazine and photos of outstanding airmen adorn clubhouse walls.

Mrs. Fred Lakner, left, and Mrs. Frank Battisti are a little skeptical about the culinary ability of Larry Wesner, in apron. Squadron Commander James Miller supervises operation.

bees had made their nests under the edge of the roof and swarmed around the roofing crew.

The tap room was papered by Joe Seidel, a navigator, who has since been recalled to Randolph Field.

New light fixtures were installed throughout the house and on the porch. Flood lights were put around the driveways and parking areas by the Squadron electricians, Don MacDonald and Frank Battisti, who are registered electricians, and Fred Lakner, a line foreman for Bell Telephone.

Inside painting was completed by Ken Moore, Joe Holland, Dick Johnson, Don Maloy, and Dave Pasquino. Upstairs rooms and the hall are light green. Likewise the living room except for the wall containing a large stone fireplace. This wall is dark green. The kitchen is painted yellow and the tap room is papered knotty pine.

A local bakery manager, James Leahy, donated and delivered a wooden bakery counter which served as a bar, after the top had gotten several coats of varnish. Later the increase in business demanded that a larger bar be obtained. Member Paul Greene, a grocery store operator who serves as club chef, donated a used counter. This was attached to the former bar, extending the complete unit to 13 feet.

Another member, Bob Williams, a former crew chief who is now a plumber, repaired the bathroom and kitchen plumbing.

A local appliance dealer, who is not a member but happens to be the brother-in-law of one, donated a used electric range and recently added a 6 cubic ft. electric refrigerator gratis.

A large beer cooler was picked up by member Fred Jones, who sells meat market equipment. Francis Clabaugh, a former B-17 pilot who is now a painter, produced a large sign bearing the Squadron name and AFA emblem in official colors. This hangs in front of the clubhouse.

J. Murray Shollar made a two-sided sign painted blue, bearing the name "Air Force Association" and the emblem. This sign hangs near the side of the road. Both lettering and emblems are made of scotchlite material, which reflects light from the headlights of passing cars.

Charlie Ford, a former member of the original U. S. Air Force Band and now owner of a local music store, donated a piano and the services of a tuner.

Herb Wolfe, a non-member, who with his father operates the largest furniture store in Altoona, donated several sofas and overstuffed chairs for the living room.

A large dining room table left by a former occupant was given a coat of paint, repaired, and is now used as a card table in one of the second floor rooms.

Several years ago someone shipped a Link Trainer to Blair County Airport but failed to call for it. Commander Jim Miller watched it for 4 years then claimed the control desk as a donation from the Airport Operators. The desk was repainted and now takes up most of the space in the second floor office.

Another member, Bob Blum, informed the Squadron that his father was about to buy new tables and chairs for his tavern and would gladly sell his old equipment at a reasonable price. The chrome and leather chairs and formica topped tables were immediately purchased by the Squadron. A television set was purchased at cost from a member who is a dealer and distributor but wishes to remain anonymous. Jumbo glass ash trays were contributed by the local Buick dealer. A juke box and a bowling game were installed on a percentage basis and the "take" from these pay the light bill.

The only other purchases made from Squadron funds were for two Deltox rugs and three linoleum rugs. The drapes were donated and hung by the Ladies Auxiliary.

Recently the Squadron purchased a used oil burner and had it installed.

No member could promote a bulldozer so the Squadron hired one to enlarge the parking area on one side of the clubhouse. Squadron member Raymond Koelle, resident engineer at the Altoona VA Hospital, donated 22 truckloads of cinders for the parking area and the driveway which completely encircles the building.

Lumber used at a former Air Show was trucked from the Blair County Airport on a vehicle owned by member John Good, a post commander. The lumber had been used for a speakers' platform and stairs around static displays of aircraft. It was torn apart and converted to tables and benches used on the outside porch during the summer. These double as picnic tables when meetings are held outside in warm weather.

The Squadron meets on the first Thursday of each month. On other Thursdays the clubhouse is occupied by the local VARTU of the USAF. This arrangement works out well since about 95 percent of the AFA Squadron members are also VARTU members.

The AFA Ladies Auxiliary meets at the club every other Friday evening, giving the clubhouse the needed "woman's touch".

The members have shown greater interest and attendance has been more consistent since the clubhouse was officially opened. Upon the celebration of the first anniversary of the clubhouse, June 16, 1951, all members who contributed to its completion looked back with pride on a year of successful accomplishments.

Perhaps at some time in the near future the squadron's landlady, Mrs. Sullivan, may be present at a ceremony when the deed to this property could be given to Blair County Squadron as an airman's memorial.

All Squadrons interested in acquiring a similar club can do so, providing its members are willing to devote many hours of leisure time to reaching their ultimate goal—A Squadron Clubhouse.

Squadrons interested in additional information concerning the Blair County Squadron's Clubhouse are asked to write Box 777, Altoona, Pa. Former Air Force members living in Blair County and interested in joining Blair County Squadron are invited to attend the meetings held the first Thursday of each month at the clubhouse.

Bay Group In Comeback

Despite the loss of two-thirds of its members recalled to active duty with USAF, East Bay Squadron has staged a come-back in its Oakland-Alameda-Berkeley area.

The squadron, headed by George D. Mantell, 2807 Windsor Drive, Alameda, is growing. Its new meeting place is the Alameda Veterans Memorial Building, Alameda. Monthly meeting night is the first Thursday.

The squadron is contacting VA and military hospitals in its area to distribute magazines and aid hospitalized personnel. The squadron is also actively represented on the San Francisco Bay Area Aviation Committee.

Hunter AFB Enlarged

The last day of a two-day celebration of Armed Forces Day at Savannah, Georgia, was the occasion of the transfer of 3,000 acres of land adjoining Hunter Air Force Base to be used for the expansion of the installation. The land was purchased by the City of Savannah and Chatham County and turned over to the Air Force. Judge James P. Houlihan presented the sales tickets to Maj. Gen. Joseph H. Atkinson, Commanding General of the Second Air Force, which has charge of the installation. AFA was represented by General Frank O'D. Hunter, Retired, a member of the Board of Directors, and Brig. Gen. Haywood Hansel, Commander of the Savannah AFA unit. Hansel has since been recalled to active duty.

Judge James P. Houlihan, left, and Maj. Gen. Joseph H. Atkinson, CG of Second Air Force, complete transaction for the expansion of Hunter Air Force Base, Savannah, Georgia.

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AFA STATE ROUNDUP

ILLINOIS

Chicago: Editors note—*The following is an open letter from George Wilson, Commander of Chicago AFA Squadron 41, summarizing the activities of his unit for the past year and indicating some of its plans for the future. This is printed in its entirety so that other AFA groups may benefit from this excellent program:*

Our Squadron activities are based on the fact that we have our own private hangar (clubroom). This enables us to have an unlimited number of meetings, social affairs, etc. Our social affairs in turn give us additional revenue to meet our monthly expenses of approximately $100 ($75 rent plus electricity, telephone, and miscellaneous items.) This cycle has been quite beneficial to the squadron. Through our monthly social affairs and the incentive of keeping our own hangar we have molded together a very strong squadron.

The facilities of our hangar had been used by the Chicago Group Council until recently, when a meeting place more centrally located was obtained. At present the 15th Air Force Squadron of Chicago is using our hangar for meetings to stimulate the incentive of their members.

(Continued on page 90)

John Most, Commander of the St. Petersburg, Florida, AFA Squadron, accepts the permanent charter from Southeast Regional Vice President Jerome Waterman, while Tampa Squadron Commander Joe Unger looks on. The ceremony took place at a joint Tampa-St. Pete meeting of former and present AF personnel.

Illinois Wing Commander Morry Worshill presents the Wing's trophy to Dallas Wise of Detroit for attaining an altitude of 4700 feet and remaining aloft for 4½ hours during the first annual meet of the Chicagoland Glider Council, held at Woodale Airport. William Bergstrom, Wing Secretary, observes the ceremony.

This picturesque outdoor setting at the Menlo Park, New Jersey, Home for Disabled Veterans, contributed greatly to the success of the picnic and party recently given them by the members of the New York City all-girl AFA Squadron.

Airmen at Lockbourne Air Force Base, near Columbus, Ohio, tune in the new 20 inch television set which was purchased by and presented to the Airmen's Service Club by the Columbus AFA Squadron. In a special ceremony, Squadron Commander Carl Glade turned the bill of sale over to Major Saul Cohen, Adjutant.

ROUNDUP

CONTINUED

At the request of our National Office, our Squadron has been corresponding with an RAFA Branch (Squadron) in Bromley-Kent, England, for the past three months. We have been exchanging ideas and trying to promote a better understanding and good will between the two organizations. Through this correspondence, we learned about a Chicago Branch of the RAFA and contacted their chairman, Mr. Frank Barker, who was the guest speaker at our June meeting.

Our Ladies' Auxiliary, which is quite an asset to our squadron, was the first in the Illinois Wing to receive a National Charter.

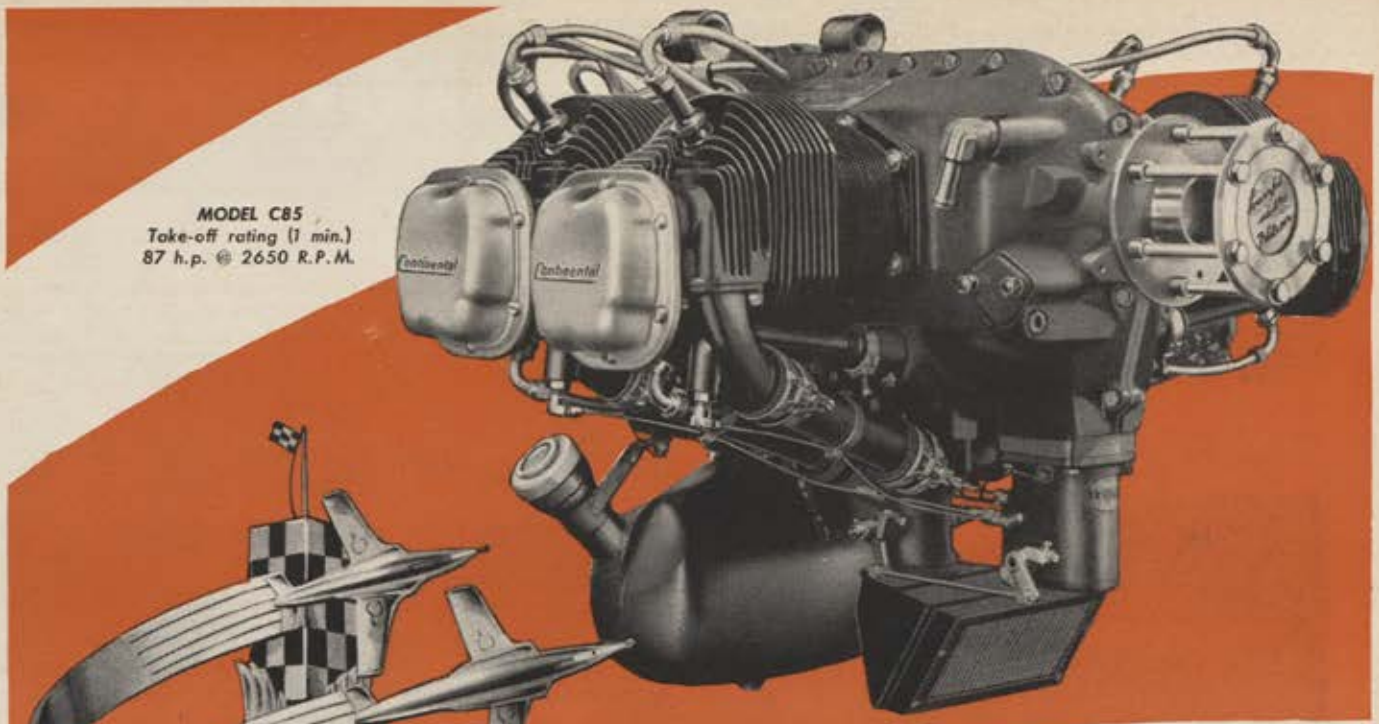
This spring our Squadron sent five members to the Michigan State Convention, and two to the Ohio State Convention, in an effort to strengthen interstate relations.

During the past year, our social affairs have been many and varied in theme. They have included the following:

Monte Carlo Night—when various games such as roulette, blackjack, beat the dealer, over and under, are played with play money. Special activities aid our treasury.

Hallowe'en Party—when ghost stories, games, and costumes are the order of the day.

(Continued on page 93)



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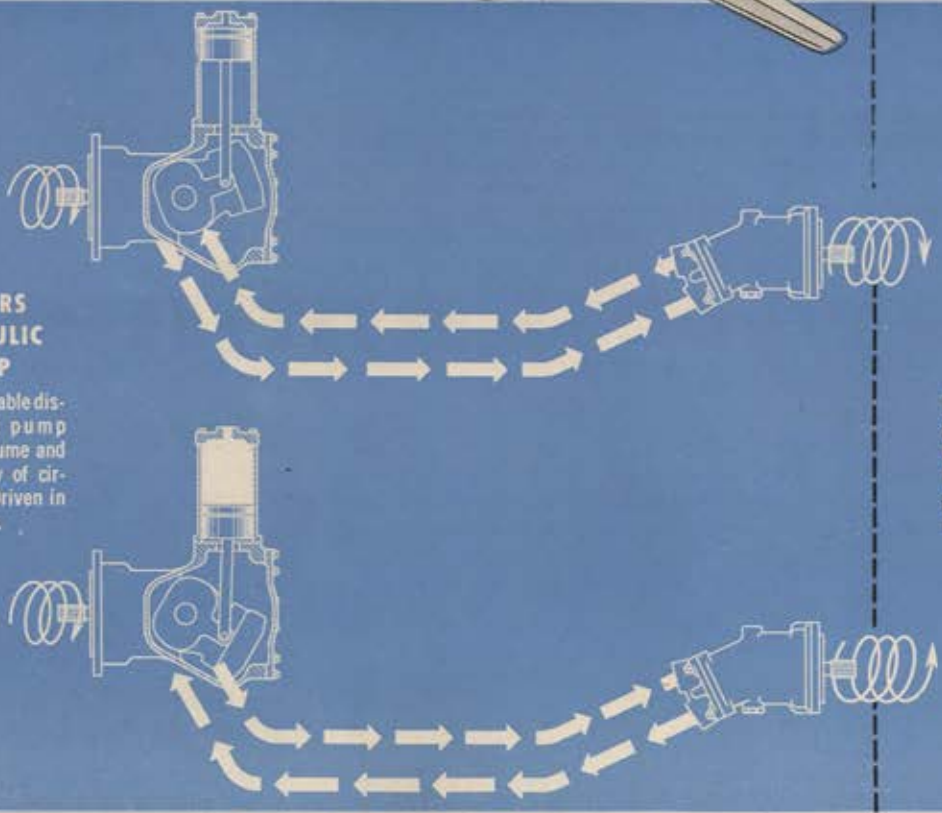

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His Worship the Mayor, F. G. Dowell, J. P. Taunton, Somerset, England, admires the plaque presented to the people of Taunton, England, by the members of the Taunton, Massachusetts, AFA Squadron in appreciation for hospitality shown US Armed Forces during World War II. Taunton, Massachusetts, Mayor John F. Parker, far left standing, made the presentation on behalf of the Taunton unit.

ROUNDUP CONTINUED

Thanksgiving Party—with barn dancing, apple cider and doughnuts, and a turkey raffle.

Children's Christmas Party—with a Santa Claus and gifts for the kids, sponsored by the Ladies Auxiliary.

Gala New Year's Eve Party—!!!

Regina's Cocktail Party—a one-act play written, directed, and produced by members of our Squadron. All parts were male impersonations of old maids at a gossip session.

Installation Dinner-Dance—held at an exclusive private club.

Family Bingo Night—a good old-fashioned bingo game.

Television Night—many TV programs were impersonated with slight deviations, to the delight of the membership.

Fashion Show—our latest drama produced by the "Broadway Players" (the name was derived from the fact that our hangar is located on Broadway Avenue in Chicago) with female impersonation by an all-male cast. A crowd of 95 filled our hangar for this event, the largest crowd to date.

Picnic—approximately 75 people attended our picnic with the usual picnic games, baseball, swimming, taking place.

Plans for the fall include a Model Airplane Contest in conjunction with several Chicago Park District Field Houses located in our vicinity and a

(Continued on page 94)

Members of the Queens, New York, Squadron start their blood bank program rolling by donating blood for Korea at the Jamaica Red Cross Blood Center. The Squadron plans to give blood periodically during the present emergency period.

ROUNDUP

CONTINUED

Fall Dance to be held at one of the larger ball rooms on the North side of Chicago.

Sincerely yours,
s/George W. Wilson
Squadron Commander

MICHIGAN

Battle Creek: Two distinguished citizens were elected honorary members of the Michigan Wing during its recent convention at Battle Creek. The first honorary scroll was awarded to Lester J. Maitland, State Director of Aeronautics and State Civil Defense Director. Maitland stressed the importance of civil defense preparation and informed the group that 2500 of Michigan's 2800 registered airplanes have been organized into a civil defense air transportation network. The theme of his remarks was "It can happen here."

The other scroll was presented to William Lear of Lear, Inc., at Grand Rapids, for his outstanding contributions in both research and production of electronic devices for aviation. Lear gave a brief outline of the possibilities and role of guided missiles, especially ground-to-air missiles which are so important to the defense of this country.

William Amos of 14819 Linnhurst, Detroit, was elected to succeed Frank Ward of Battle Creek as Wing Commander. Stanley K. McWhinney was elected Vice Commander to assist Amos.

NEW YORK

Albany: Earle P. Ribero, New York Third Group Commander, was recently called on to conduct the regular meeting of the Albany Squadron, due to the recall to active duty of both the Commander and Vice Commander. Ribero gave the unit a report on the forthcoming national AFA convention in Los Angeles and stressed the importance of attending this vital annual meeting of the Association.

Squadron members recently held a picnic in conjunction with the Albany Air Reserve Squadrons.

Until a new Squadron Commander is elected, information on the activities and meetings of the unit can be obtained from Ribero at 416 Delaware Avenue, Delmar, New York.

New York City: Patients of the Home for Disabled Veterans, Menlo Park, New Jersey, were fed, entertained and given prizes by the New York WAC AFA Squadron, which has gained a reputation for rounding up more and better food and entertainment for the least amount of money than any other outfit.

Sun-dressed WAC Squadron members decorated the tables on the hospital lawn, then covered them with turkey, ham, potato salad, relishes, cup cakes, cookies, ice cream, and all the trimmings.

While the patients enjoyed the lunch, Henry Ziegler and Edward Carswell moved among them and did their portraits in crayons and watercolors. These

(Continued on page 96)

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This new supercharger weighs only 66 lbs. and is hat box in size. Yet one of them produces 73 lbs. of compressed air a minute—enough to keep 40 people breathing comfortably at high altitudes. Also, its two-speed principle permits plane's refrigeration system to operate *on the ground,* keeping cabin air cool and fresh.

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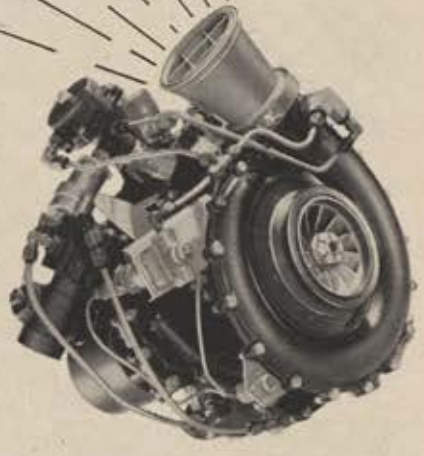

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were given the patients as souvenirs.

Following the meal was entertainment by top performers. Percy Wyckoff, a one-man band, played every tune the men could name. Ann Tracey, a member of the Squadron, played the accordion. Tim O'Sullivan sang Irish songs and tapped to the piano accompaniment of Ben Saunders. For those who longed for the opera, Miss Alethea obliged with a medley of operetta arias. Throughout the program the audience reacted spontaneously. The happy looks on their faces, the swaying of their bodies, were a genuine tribute to the performers. A blind man waved his hands from side to side in evident enjoyment.

A generous gesture climaxed the event. Every patient was given either a knitted pullover or a jersey polo shirt through the courtesy of Ware Knitters, of Ware, Massachusetts.

The Red Cross helped make all this possible by transporting the Squadron members and entertainers to and from the hospital site. Everyone was singing "So Long, It's Been Good To Know You" as the party came to a close.

OHIO

Cleveland: The Cuyahoga Founder Squadron recently held its annual picnic at Alexander's Grove. Invitations to attend were extended to all former Air Force men and women in the area, whether members of AFA or not. As a result, several potential members were interested in AFA.

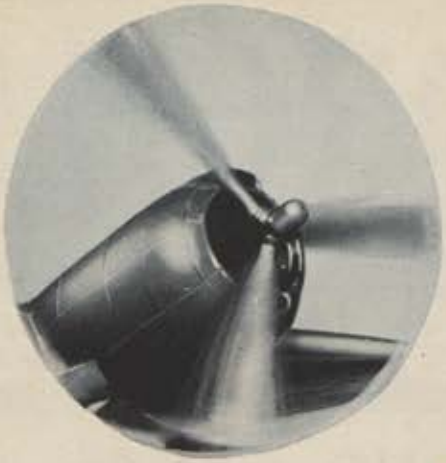
Milt Hahn and his committees had planned entertainment for everyone, from the youngest toddlers to the AFA grandpas. Games and races were held for the small fry. The teen-agers participated in special contests. Highlight of the day was the big baseball game. Some of the Squadron members feel that the bases should be moved a little closer together each year.

The Squadron Ladies' Auxiliary made the gathering a success by preparing plenty of good food.

The Squadron Commander extended his deep appreciation to the members for their assistance as he informed them that he was resigning as a result of leaving Cleveland for a new position. He will be succeeded by Ed Plecko, Vice Commander.

OREGON

Portland: Ashley Greene, who called the first meeting of the Portland AFA Squadron several years ago, has just accepted appointment as Oregon Wing Commander by National President Bob Johnson. Greene will succeed Glenn Currey, who has returned to active duty with the Air Force. Under Greene's guidance the Portland unit obtained one of the first AFA clubhouses. He is a lawyer, with offices at 1207 Public Service Building. AFA members in all Oregon cities are urged to contact Greene for assistance and information concerning the formation of an AFA Squadron in each area.



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"... my S-72 is performing very well. On the standard broadcast very good at night. I have been able to pick up Tokio and San Francisco direct on that wave."

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WRENCH JOCKEY CONTINUED

entire trip was boat drill. It was almost like a vacation—without girls.

But the soft life ended when I hit Japan on September 10. They shoved me on a plane for a jet airfield in southern Japan. Next day I drew a tool box and started to work. I've been working seven days a week ever since.

I was there for about a week and then went with an advance party to Korea to prepare a base for the group to operate from. We had the planes operating out of the Korean field three days after we arrived. As far as I know, it was the first time that jets operated from a dirt strip. And the strip was a humdinger. When the planes were taking off or landing you couldn't see the other side of the field for dust.

What we did with those Shooting Stars in the early days of the war was unbelievable. The Lockheed technical representative was shaking his head in amazement. We'd load them with napalm bombs and rockets until they'd sink down on their tires.

"They'll never make it off," he would say.

But they always did.

Our biggest trouble in those early days was the fuel shortage. Some times we would be 12 hours behind schedule and would sit up all night waiting for the tank cars to come up from Pusan so we could fuel the planes for the morning flight. We'd catch a few hours sleep until the planes came back when we would load and arm them again for the afternoon flight.

I don't believe there is any plane better than a jet. And the sweetheart of them all is the F-80. We can get ten flying hours out of it for every hour of maintenance. It does things it was never built to do. I think the F-80 is to the fighters what the old C-47 is to the cargo planes and the jeep is to vehicles. We call it "old indestructible."

It's hard to believe that some of them ever came home after the beatings they took on close support strikes. I remember one that hit a telephone pole in a dive. It came back with one air duct ripped away, the other smashed shut, the nose peeled open, the wing ripped and the tail bent.

"My God," the pilot groaned when he looked at it after making a routine landing. "If I'd known it was that bad I'd have taken my chances on walking home."

My first F-80 in Korea and the one that was my favorite was number

(Continued on page 100)

"789". It was originally piloted by Lt. Anderson, who later made headlines when he caromed off the top of a mountain and flew the plane home with only about two degrees manuverability in any direction.

Our pilots are an eager bunch. They get right down on the deck to attack the Communists. I remember one lieutenant who was really serious about close support. He flew so low none of the other pilots would fly wing-man with him. He tore off so many wingtips that the CO made him take a screw driver and help us put the new ones on his plane. After that he let up a little, but not very much.

In November, old "789" threw her buckets (excessive vibration caused by an unbalanced turbine wheel which has been damaged by a bullet or flak) and had to land at Pyongyang, the former Communist capital which we held at the time.

I grabbed a tool box and scooted up there. After I got her fixed an F-51 pilot who had lost his own plane and walked in, flew her out. The Chinese were driving on the city and we had to abandon the airfields. I stayed around for a couple of days to help get out what gear we could and then helped destroy the rest. I gave away gasoline to anybody who asked for it. Truck and tank drivers coming down from the north refueled there so we got some use out of it after all.

Even though we got some equipment out, there was still a great deal that was blown up and burned. I'll never forget a British soldier who came along while we were burning some of the stuff.

"I say, Yank—isn't that a nasty waste of material?" he asked.

It was but there was nothing else we could do.

Back at the airbase I got back into the regular grind—working 15 and 16 hours a day and sweating out the pilots when they were out on a mission. I finally lost "789" when a pilot landed her so hard the struts were shoved through the wings. She had done a good job and was ready for retirement anyway.

In the early days the work consisted mostly of arming, fueling and routine maintenance. Now that the Communists are using more anti-aircraft and with greater effect I have more repair work to do.

There are no weekend passes here in Korea and even if there were there's no place to go. In what little spare time I have, I read up on my

(Continued on page 103)

Motorola strengthens our national defense!

Of the thousands of Motorola communications systems already in full operation, many are wholly devoted to speeding up defense production, materials handling, control and delivery. Because they offer the most practical efficiency and dependability in the field of industrial communications, Motorola installations continue to grow . . . spreading a mighty network to guard the safety of our nation.

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WRENCH JOCKEY CONTINUED

technical manuals, play cards, sleep and work out in my exercise tent near the field.

It's a funny thing about that tent. I set it up with some home-made barbells and a chinning bar to keep in shape. The guys would come down to watch and razz me and call me "Tarzan". But after awhile, some of them started fooling around and now it is one of the most popular places on the field. The boys going home use it the most. They want to be in top shape when they go back, I guess.

I'm due for rotation in January. I'll be glad to get back and see my mother but I'm in no hurry to get out of the Air Force. I'm a 30-year man. I hope to stay on jet fighters. Bombers are all right but being on fighters makes me feel closer to things.

I hope some day to get into the guided missile program. That's the coming thing and I want to stay on top. I have no regrets about coming into the Air Force. It's been good duty. I've been given every break. As long as they have airplanes I'll stay with them.

TIRED FEELING CONTINUED

Blood samples show the presence of blood elements associated with the response of the adrenal gland to stress. Urinalysis may detect further signs of strain.

When one-eyed Wiley Post flew around the world people wondered—can a pilot with half-sight possess as good depth-perception in landing a plane as one with perfect sight? Not until recently has much light been thrown on that subject. Now Dr. H. W. Rose, a German research expert at the school, has come up with a motion parallex machine.

"I believe," he says, "my machine will ultimately prove that a pilot returning from missions with one eye injured will be able to judge the distance between his plane and the runway as well as with both eyes."

Another of the many experiments concerns vicious frostbite.

Old methods call for immersing the injured part in cold water or placing it in cold packs, then slowly raising the temperature. The victims moaned with pain and a bulbous swelling usually ensued. But experiments at SAM have proved that rapid thawing with warm water saves more tissue and thus reduces the hazard of gangrene.

(Continued on page 105)

for long or short trips–

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TIRED FEELING

CONTINUED

Today, dozens of B-29 Superfortress crewmen are getting combat crew training at Randolph. As part of their training, SAM puts crews through two high altitude pressure chambers. Three basic types of flights are tested—high altitude, low temperature, and explosive decompression.

These "air trips" include such giblet-twisters as a 15,000-feet pressure increase to give the effect of a free air fall, a 10-minute stint to "see how it feels" with an electrically-heated flight suit turned off in a chamber where the temperature is between 55 and 65 degrees below zero, and finally, an explosive decompression test to show what happens to your insides when a pressurized cabin is suddenly opened and the altitude skyrockets from 8,000 feet to 22,000 feet in a split second.

At SAM they have even delved into the photographic equipment business. It has proved a worthwhile venture. A small compact camera, designed especially for use by doctors and dentists, has been created by Capt. Harry R. White, research photographer. The camera will meet a special need of doctors and dentists for photographing interior parts of body cavities such as the eye, ear, nose, mouth and throat.

Standard instruments can be attached to the camera as accessories. By funneling light through them, interior parts are illuminated and photographed through a small, adjustable lens. Black and white, color and infra-red pictures can be made.

Then there are sun glasses to consider. Do darker lenses add more comfort to the eyes of airmen? Or do the lighter lenses better protect the eyes from the blinding rays of light while flying? Tests were made from a light pale green to almost black lenses. Shade N-15—a dark gray—gave the best comfort.

A sun glass experiment whereby the bottom half of the lenses were cut off—so that pilots could see their instrument panel without sun glasses, and at the same time see the horizon through the glasses—was recently performed. The conclusion was that the intense light rays, even in the cockpit, caused the pilot's eyes to water and strain.

Cooperating with the medical services of the Army and Navy and giving to civilian sources the benefits of its wealth of research knowledge, the School of Aviation Medicine is a symbol of the desire of the Air Force to provide more and better things for the men and women who fly.

LOOK TO THE WOMEN

CONTINUED

that the military would plan to utilize women to the maximum extent possible. Back of this was the practical realization from World War II that our manpower reserves are limited to the point of danger in the event of another war. It was only sensible to plan to use women since they comprise 52 percent of the total national population.

The Air Force has decided that up to 10 percent of its military personnel can be WAFs and that is the reason for the new target of 48,000 total strength by July of 1952.

How Does the Air Force Expect To Use WAFs?

As long ago as pre-Korea June 1950, a study was started, and will continue for a long time, to determine which jobs can best be done by women, by men or women, and by men alone. There is no plan to use women as pilots, at least for the time, and this job is not included in the study.

The results can be summarized quickly. There are 556 different types of jobs in the Air Force and WAFs are capable of doing at least 70 percent of them, are actually on the job in 50 percent of them. The discrepancy will be made up as the organization grows, and should the emergency become more acute, it is possible they will step into additional spots not now listed.

These are not dull statistics. They reflect a tremendous progress in recognizing the value of women in the military and almost a revolution from the early World War II days when seasoned military men raised their eyebrows in horror on view of the first WACs and Waves. In those days, women were thought to be limited in the military to only four jobs—cooks, clerks, telephone operators and stenographers. The girls were doing 239 jobs at war's end. And in the period between, careful tests revealed they could accomplish still more. Today, thousands of WAFs hold jobs as parachute riggers, model-trainer instructors, plane dispatchers, cryptographers, radio mechanics, photographers, traffic analysts, medical and dental technicians —and many others. Obviously the bulk of them are in administrative, communications, personnel and food service jobs. Occupational fields pretty much dominated by women in civilian life are paralleled in the Air Force.

In fact, basic to the study of how women could best be used, was consideration of data concerning employment of women in industry. Field requirements and problems such as housing were also considered. The final result of the study eliminated the obvious—women would not be used in combat and they would not be used in jobs calling for great physical strength. For example, women normally would not be in fire fighting, marine, rescue and survival assignments, construction, munitions and weapons maintenance, rocket propulsion, armament systems maintenance and guided missile systems. And women are not expected to drive trucks heavier than 1½ tons.

What Kind of Women Does The Air Force Want?

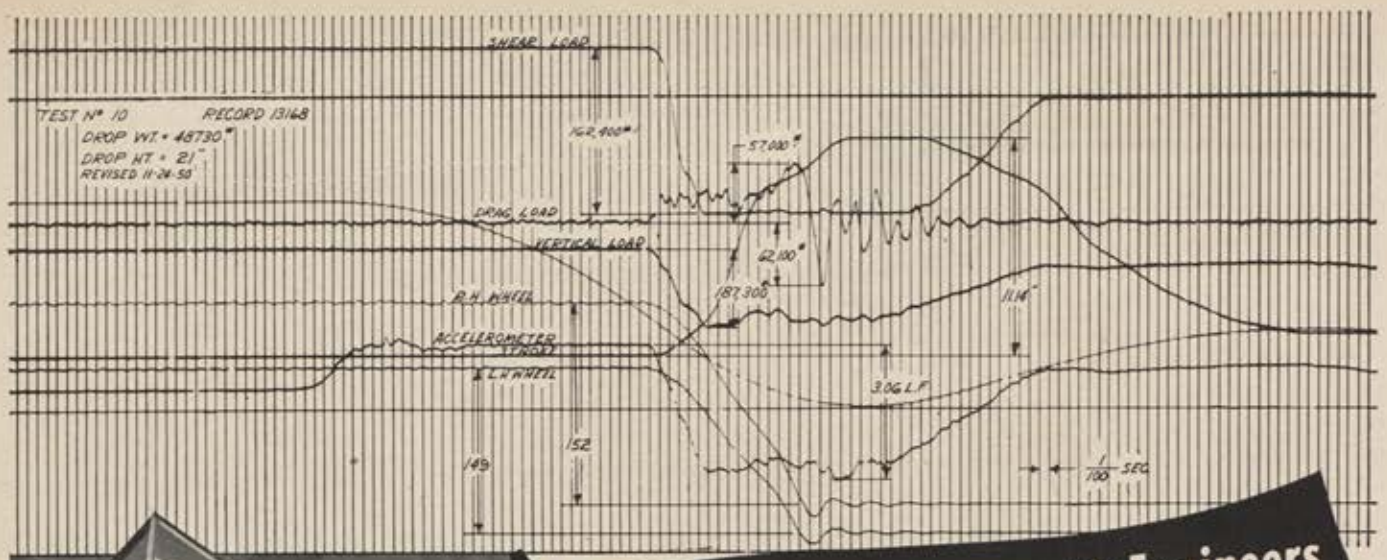
Women in the Air Force qualify, train, compete and are assigned to jobs on identically the same basis as airmen and officers. But the policy of complete integration was not always so simple. In fact, the thought of women sitting in a male classroom conjured visions of feminine curves and wiles competing with textbooks and instructor's drones. The first experiments proved the opposite. In fact, two successive officer candidate classes produced women honor graduates topping the record of their brother classmates.

The law that established the women's services as an integral part of the military (Public Law 625, 1948) provided for equality. It gave women equal rights, privileges, pay and responsibilities granted to men. But it did not establish equality of qualification and the girls have to be smarter. They have to pass the qualifying tests by as much as 10 points more than is required of men.

Averaging 19½ years, the WAF is fundamentally appealing to young women. These women lend themselves to military discipline, respond to training in many technical fields and have proved themselves to the extent that many commanding officers are requesting then in numbers that go beyond any present plans for recruiting.

The Air Force has the job of selling American girls between 18 and 35 years of age on the idea of volunteering for active duty. There is no plan to resort to drafting women until the volunteer system has been given a real try. Part of the strategy will be to persuade the girls that they owe it to their country to don a uniform for at least as many years as every young man can expect to do so whether he does it by compulsion (draft or UMT) or voluntarily.

The Air Force looks to women for an important role in accomplishing its mission.



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As pioneer and leader in aircraft struts, Cleveland Pneumatic Tool maintains a highly trained and experienced staff of landing gear engineers. These engineers work with such special equipment as the drop-test machines illustrated, which closely simulate an actual landing. Chart records like the one shown indicate the reactions which occur in a fraction of a second when the struts "land".

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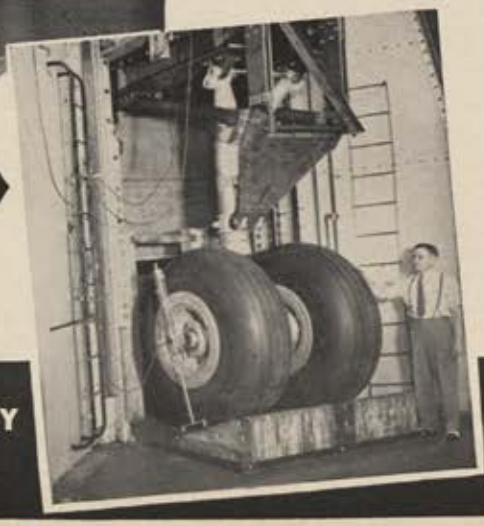

Main Landing Gear of the Douglas C-124A "Globemaster" in Drop Test Jig.

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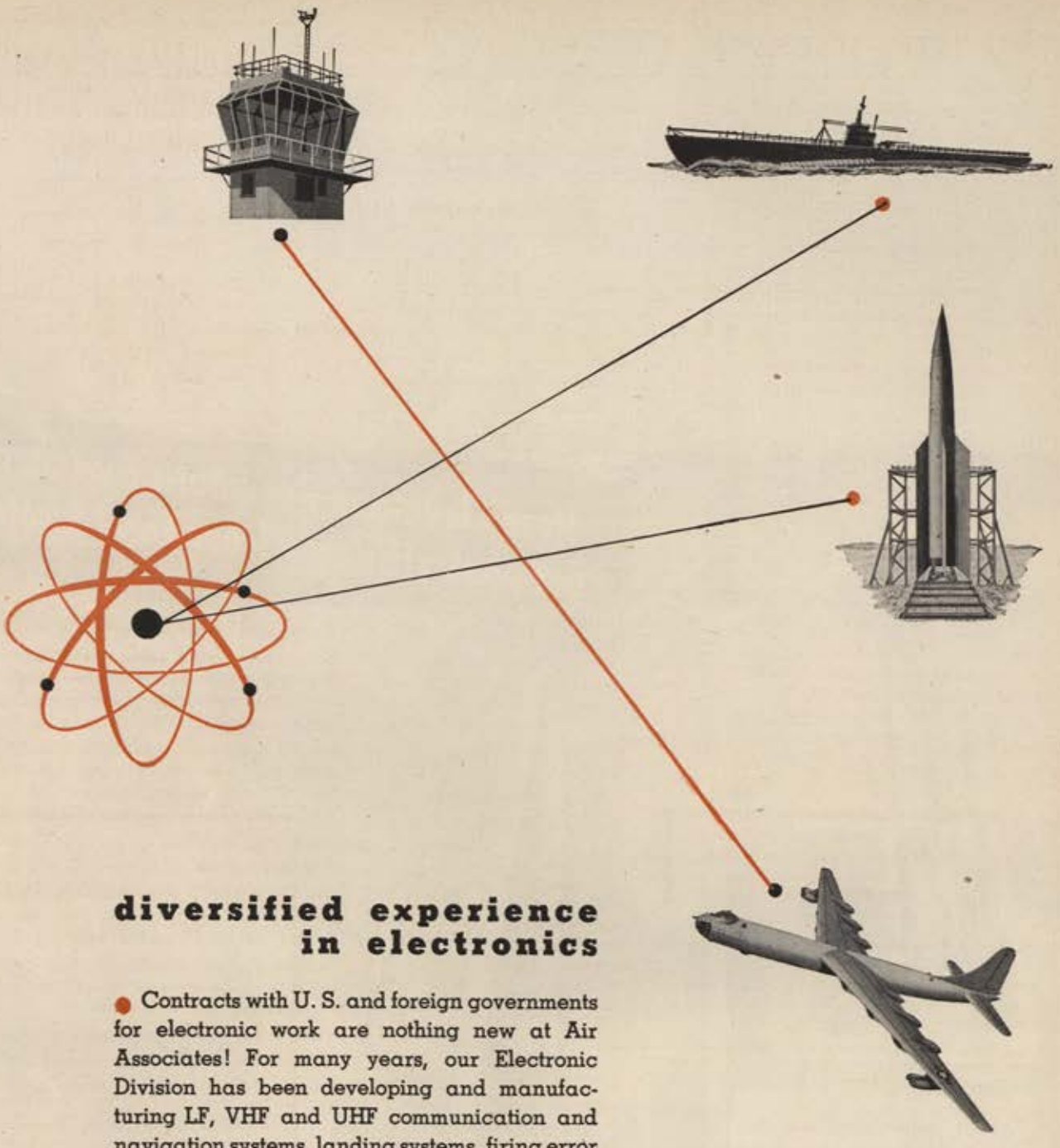

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CONTINUED

tion, airmen, 6 weeks; troop information and education, 6 weeks.

At Chanute AFB, Ill., Keesler AFB, Miss., Lowry AFB, Colo., Scott AFB, Ill., Sheppard AFB, Tex., and Francis E. Warren AFB, Wyo.: technical instructor, officers and airmen, 40 days.

At Francis E. Warren AFB, Wyo.: administrative specialist, 6 weeks.

At Lackland AFB, Tex.: general instructor, 4 weeks.

At Lowry AFB, Colo.: classification and assignment officer retraining, 15 days; classification and assignment officer, 40; career guidance, 45.

Food Service

At Army Area Food Service Schools: baking, 12 weeks; cooking, 8; meat cutting, 8, mess administration (officer), 4; mess management (airmen), 8.

At Ft. Lee, Va.: bakery management, airmen, 11 weeks; food service supervision (officer), 15; food service supervision (airmen), 13.

At Chicago Quartermaster Depot: meat and dairy hygiene, 8 weeks.

Supply

At Lowry AFB, Colo.: supply officer, 50 days; supply technician, 50.

At Ft. Lee, Va.: QM officers basic, 20 weeks; QM officers associate basic, 15; QM officers advanced, 29; QM officers associate advanced, 15; salvage, 10.

At QM Food and Container Institute, Chicago: QM subsistence, 26 weeks.

At Aberdeen Proving Ground, Md.: ordnance parts supply, 12 weeks.

At Kelly AFB, Tex.: USAF salvage, (officer and airmen), 5 weeks.

Comptroller

At Lowry AFB, Colo.: statistical services officer, 60 days; budget officer, 45; budget and fiscal clerk, 35; finance technical clerk, 70; statistical clerk, 60; cost and analysis technician, 60; tabulating machine operator, 60; machine records officer, 45; cost and anallysis technician, 50.

At Ft. Benjamin Harrison, Ind.: disbursing officers, 12 weeks; finance officers advanced, 29; enlisted disbursing, 12; basic finance procedures, 12; accounting and auditing (officer), 17.

Air Police

At Camp Gordon, Ga.: MP officers basic, 25 weeks; MP officers associate basic, 12; MP officers advanced, 37; policeman, 8; correction and confinement, (officer), 4; disciplinary guard, 4; criminal investigations (officer), 9.

At Tyndall AFB, Fla.: air police officer, 6 weeks; air police NCO, 6; air police, 6.

Command and Staff

At Maxwell AFB, Ala.: Air War College, regular course, 5⅔ months; Air Command and Staff School—regular Command, 3⅔ months; squadron officer course, 8 weeks; logistic staff officer course, 15; comptroller staff officer course, 15; judge advocate general course, 12; inspector course, 6, academic instructor course, 6; intelligence staff officer, 15.

At Gunter AFB, Ala.: communications-electronics staff officer course, 15 weeks.

Aviation Medicine

At Randolph AFB, Tex.: aviation medical examiner, 6 weeks.

At Gunter AFB, Ala.: flight nurse, 6 ; medical services supervisor (airmen), 13; aeromedical specialist (airmen), 8; aeromedical technician (airmen), 11.

USAF Institute of Technology

At Wright-Patterson AFB, O.: air installation officer staff, 21 weeks; air installations officer, 20 weeks.

At selected civilian corporations: industrial planning and procurement training, 1 year.

At selected civilian graduate universities: specialized officer training, 20 weeks.

Dept. of Defense Colleges

At Ft. McNair, D. C.: National War College, 10 months; Industrial College of Armed Forces, 10 months.

At Norfolk, Va.: Armed Forces Staff College.

Joint Staff Schools

At Washington, D. C.: Strategic Intelligence School.

Miscellaneous

At Lowry AFB, Colo.: transportation officer, 50 days; crash-rescue officer, 40; crash-rescue man, 40.

At Francis E. Warren AFB, Wyo.: special vehicle operator, 50 days; automotive maintenance and repair officer, 80; stenographer, 130; clerk-typist, 60; automotive repairman, 90.

At Keesler AFB, Miss.: radiological equipment operator-technician, 20 days; electronic fundamentals (officers and airmen), 110; radiological defense officer, 36; radiological specialist, 25.

At Chanute AFB, Ill.: instrument trainer repairman, 80 days; survival training and equipment officer, 10.

At Ft. Benjamin Harrison, Ind.: recreational officer, 9 weeks.

At Ft. Eustis, Va.: harbor craft deck officer, 18 weeks.

At Ft. Lee, Va.: laundry equipment maintenance, 7 weeks; leather and canvas repair, 10; office machine repair, 8; shoe repair, 12; tailoring, 12.

At Ft. Sam Houston, Tex.: X-ray procedure, 16 weeks; psychiatric social work, 16; Medical equipment maintenance, 8; dental laboratory technician, 16; pharmacy procedure, 16; medical technician procedure, 8; surgical technician procedure. 8.

At Chemical Center, Edgewood, Md.: chemical techniques and tactics, 12 weeks.

At Aberdeen Proving Ground, Md.: watch repair, 12 weeks.

At Ft. Monmouth, N. J.: entertainment and recreation, 10 weeks.

At Great Lakes Naval Training Center, Ill.: dental technician, 12 weeks.

connaissance force, and that missiles of one sort or another will be doing the bombing job. As for the future of reconnaissance—we have established the feasibility of nuclear-powered aircraft, and this revolutionary type of propulsion is almost sure to provide aircraft with the unlimited endurance desired by the reconnaissance people.

From a job standpoint the gunner is doomed. In his place will be an electronic countermeasure operator, who will monitor radar jamming sets. The B-36 still offers the gunner a job, but the B-47, now getting operational, and presumably the B-52, now abuilding, both eliminate him. And the navigator, as we know him, is on the way out. Automatic navigation systems secure from all forms of counter-measures, except by destruction of the vehicle itself, and capable of operating independent of contact with the ground, are just around the corner. They will demand, at best, a relatively unskilled monitor of the equipment. The bombardier, as such, will disappear, except in the B-36, for the B-47 and presumably the B-52 both will employ pilots who do the bombardiering along with navigation and radar duties. The aircrew, as we knew it in World War II, passes out of existence with the B-36.

Tactical Operations

It's worth re-stating the point that Tactical Air Operations include three major tasks: Gaining and maintaining air superiority in areas of ground operations, interdiction of enemy communication and transportation, and close air support of ground troops. And it is worth noting that, where tactical air operations are concerned, a reasonable balance must be maintained between the excessive cost of firepower when exercised from airplanes in combat and the extreme mobility and flexibility which is gained at this expense.

With the present overwhelming numerical air superiority of Russia's tactical air force, the primary requirement for a future fighter-bomber is to be able to live in the air, although not necessarily to command it. Lacking this qualification, it will never get to do its ground job. This requirement, however, competes with what we want in a good fighter-bomber, and it is too easy to build an airplane which can do neither job very well.

Apart from these ground-support fighter-bombers, our air superiority fighters may be as good, perhaps a little bit better, than Russian fighters. But we are terribly short on quantity. It is not likely that we can catch up to the Russians, quantitatively, with the fighters now on the production lines. While the trend has been toward large, costly complicated aircraft highly specialized for air superiority missions, it is quite likely that a cheap, easily-produced fighters, good only for day fighting, will have to be built in the next few years to lick the quantity problem.

The greatest advance likely to be seen in tactical air operations in the next few years is increased capability for night attack. Infantrymen know that keeping a man awake for 72 hours is almost as good as shooting him. This capability is the one remaining weak spot in the exploitation of American productive superiority. But it will be licked by 1955 as electronic equipment becomes more reliable and as the significant trend toward reducing the size and weight of this equipment continues.

The piloted airplane is likely to last longer in tactical operations than in strategic or air defense work. The first tactical missile, it is assumed, will supplement rather than replace the piloted aircraft. It should be especially potent in the interdiction of fixed communications and transporta-

tion targets. But the missile has an inherent incapability against targets of opportunity, for there is little likelihood that it will ever be able to shift its course at a moment's notice. It might have a future in close support work against targets which can be located geographically and seen visually from ground or air. Behind the lines, against moving targets—convoys, trains, and so on—the missile is likely to be ineffective. There is, however, a promising future for air-to-ground guided bombs in tactical operations.

Air Transport and Auxiliary Services

The air transport mission of the Air Force is tied quite closely to that of the commercial air operators and the same yardstick (cost per ton-mile) can be used to measure its effectiveness. This refers, of course, primarily to the long range, inter-theater hauling of supplies and the return to this country of wounded troops.

There is an obvious and worrisome lack of interest within the Air Force in transport development, although a development contract has been let for a turbo-prop powered medium transport and this undoubtedly marks a trend for future equipment. The field for both is wide open.

Assault aircraft that can deliver troops and supplies by air drop or landings on short, rough fields are much in demand, with the ideal being a plane with vertical takeoff and landing characteristics plus the forward flight capabilities of fixed-wing aircraft. The convertiplane, now under development, offers a potential in this field, but is too remote to make definite predictions.

The Air Force's world-wide air-sea rescue work calls for a plane with 2,000-mile radius of action, speeds up to 300 mph, a navigation capability at both very high and very low altitude, and the ability to takeoff from and land on snow, ice, water and other unprepared surfaces. No single operational aircraft now meets this requirement, and few prospects are in sight.

These are some of the developments in future hardware that will influence, in some cases quite drastically, the futures of the men and women of the Air Force.

That we are finding it difficult to accept or understand what lies ahead is quite obvious, not only from what we read in the papers but also from what we see within the service itself. One might assume, for example, that career officers in the Air Force would be flocking to graduate technical schools. And yet, these schools normally find it hard to fill their quotas from volunteers. Even the Air Force's major guided missile school at the University of Michigan runs short of its volunteer quota. This sad situation is not necessarily a condemnation of the individual, for he must volunteer through channels and if he is a top man the chances are he will be labeled "unavailable" by his immediate superior.

Consider the bright young scientist or engineer who is in demand for a career post in the services. First of all, a far bigger pay check awaits him in industry. But leaving all monetary considerations aside, in the military he finds himself, from a career standpoint, confronted not only with a seniority problem threatening his promotion prospects but also with traditions—fleet duty in the Navy, field duty in the Army, pilot's wings in the Air Force—which are important factors in the present promotion system. Also involved is the blunt fact that in all the services these scientists in uniform run headlong into men in command who, though it bleeds them to admit it, are products of a bygone era and must depend upon their science-trained junior officers to the extent that the term "staff work" becomes sorely abused, and the juniors become frustrated and discouraged. Nor

(Continued on page 112)

has Civil Service provided the answer. Civil Service has never been able to stomach the idea that some people in government should get paid, and paid well, to do nothing more than put their feet on the desk and think, an operation which is as much a military necessity these days as is the supersonic test pilot.

Or consider an important phase of the airman recruitment problem. For the Air Force abuilding, electronics technicians by the thousands will be needed. The requirement calls for, at minimum, upper-grade high school graduates with a bent for things technical and the ability to master an Air Force electronics course which may take a year of basic study. Obviously, this demands young men with high IQs. And just as obviously, the prevailing "qualitative distribution of personnel" policy of the Department of Defense doesn't help fill this demand. This policy, in fact, sets a limit on the number of high-IQ people the Air Force can accept through regular channels. It is a "balanced force" allocation of manpower which assumes an equal requirement for brainpower among the three services. During World War II the Army conceded it didn't need brains in the same proportion the Air Force needed them and permitted a more sensible division of draftees. With VJ-Day, the Army demanded its equal share of new brainpower and, as a consequence, the Air Force stands to experience a shortage in electronic technicians.

Of course, it is useless to obtain the kind of men needed if they are not properly utilized, and the files are full of evidence, gruesome evidence, of the mis-use of personnel within the military, especially the technically qualified personnel. The Air Force must plead guilty along with the older services. The problem calls for, among other things, a huge intra-service educational program, the strongest directives possible all down the line and a rigid inspection system. It probably never will be solved without central monitoring of assignments from Hq, USAF. We've got to do better in matching the job and the man. We've got to know more about, to begin with, what the jobs are and the skills these jobs require, especially in our non-operational activities. There has been over emphasis on hardware at the expense of human resources and, as we begin dipping into the bottom of the brain-power barrel, the pressure of technological development will increasingly spotlight the waste and increasingly demand corrective action.

And ever present even among Air Force people, is the fetish for modifying and improving old weapons at the expense of developing new ones, and nostalgic adherence to "the way we did it in the last war."

Pre-occupancy with the hardware of the day, the military problem of the day, the individual assignment of the day, the military politics of the day—each of these makes it just a little harder to achieve an orderly evolution into the Air Force of tomorrow.

There is widespread lack of understanding of the changes at hand, and it may be due to several factors. For one thing, we are now experiencing a transition period between manually controlled aviation and unmanned guided missiles. The gadgets that we now have are not always reliable and are clumsy and bulky. As a result, we have an inborn suspicion of them. We've been talking push-buttons and they haven't taken over yet. Perhaps they won't for a number of years. Why worry about them? So goes our line of reasoning.

Also, while we speak of the day when the human being is eliminated from aircraft, we are faced, in this transition period, with the fact that the human element is of particular importance. For example, a whole new field of aviation medicine has developed around the job of mating man and machine. We must select our combat airmen today, as one expert put it, "with emphasis on vision, hearing, reaction time, neuropsychiatric normality, cardio-respiratory efficiency, physical prowess and psychologic adaptability." This temporary emphasis on the human element may well be a factor in discouraging interest in the automatic Air Force of the future, for, on the surface at least, we seem to be moving in the opposite direction. And further, the war in Korea is a throw-back to the past. Here we are employing our aircraft like hand grenades against hordes of little men, against horse-drawn vehicles and even camel caravans.

Any look at the future demands that the individual consider how it is likely to affect him personally. In this regard, two considerations stand out. The first is that the functions of the Air Force will remain unchanged. The second is that the equipment used to perform these functions will change radically. Accordingly, it would seem to behoove all Air Force personnel to school themselves in the fundamentals of Air Force operations, and in the techniques and doctrine of airpower. At the same time, it is clear that the means of applying these doctrines will change, and are already becoming increasingly more complex, more technical in nature than anything we knew in World War II.

Above all, it will pay to get our thinking straight on the trends of development and its effect on the Air Force of tomorrow. In the early days of the Air Force, we have heard, it was determined that the "wireless" would never become important enough to require the full time attention of even one commissioned officer. The jet pilot of today, wedged in the cockpit among his little black boxes, has the answer to that one. All of us have a responsibility to see that this sort of thinking doesn't crop up again with regard to missile development, or even the space ships of the distant future.

believe that if a 70-group program was a peacetime requirement in 1948, a 69-group program is adequate today?"
AIR FORCE magazine presents special report from its Far East correspondent, "Air War in Korea," the first comprehensive analysis of the subject yet published.
Air Force Association establishes, through Lloyd's of London, low rate group insurance program for its members featuring special protection for flights in military aircraft.

NOVEMBER: AIR FORCE magazine's special report on civil defense measures against atomic attack is widely circulated to local civil defense groups, schools, civic organizations, etc.

1951

JANUARY: Complimentary distribution of AIR FORCE magazine to hospitalized Air Force veterans inaugurated monthly at 127 VA installations.
Air Force Association's standard presented, as expression of good will, to Royal Australian Air Force Association at ceremonies in Sydney with General George C. Kenney making presentation in behalf of AFA.

FEBRUARY: AIR FORCE magazine reveals publicly for first time Russia's emphasis on strategic aviation and development of an intercontinental bomber.
AFA presents to the Special Subcommittee on Reserve Components of the House Armed Services Committee a statement which declares, in part: "Air Force Association has long been concerned over an Air Force Reserve program, lacking in equipment, whose mission has been indistinct, troop basis indefinite, organization incomplete and supervision inadequate . . . An unequaled opportunity presents itself to reorganize the entire reserve structure of the Air Force . . . let such an organization be founded, we suggest, not on outmoded blueprints for national security and the state militia formula of the past or on the continued and organized pressure for reserve benefits, but on long-range security objectives—and first and last on military necessity . . . let it be attuned to cold as well as hot wars, to partial as well as all-out mobilization."
AIR FORCE magazine presents annual report recognizing the ten major Air Force technical developments of the year.
AIR FORCE magazine reveals publicly for first time the inadequate number of intercontinental bombers operationally available.

MARCH: AFA sponsors special Air ROTC conference at Pentagon, bringing together USAF leaders and eight ROTC cadets, the elected representatives of cadets at 76 colleges.
AIR FORCE magazine's special issue "The Air-Ground Operation in Korea," first comprehensive evaluation of the use of tactical airpower in the war, is widely accepted as the most authoritative coverage of the subject ever presented, and widely used as a supplementary text in the schools of all the military services.

APRIL: AIR FORCE magazine, in article by General Carl A. Spaatz (quoted widely in Congress and reprinted in READER'S DIGEST) reveals for first time that the so-called 95-group Air Force program actually adds up to an Air Force of 50 modern groups through 1952, and, lacking reserve strength, "would not equal in numbers of planes or in sustained striking power the 70-group Air Force recommended by the Finletter Committee."

(Continued on page 121)

WORKING FOR AIRPOWER CONTD.

electronics maintenance mechanics and technicians.

Tactical Air Command, Langley AFB, Hampton, Va.: Aircraft and electronics maintenance mechanics and technicians.

Strategic Air Command, Offutt AFB, Omaha, Neb.: Aircraft and electronics maintenance mechanics and technicians.

Military Air Transport Service, Andrews AFB, Washington, D. C.: Aircraft and electronics maintenance mechanics and technicians, weather, traffic and air transportation specialists.

Air University, Maxwell AFB, Montgomery, Ala.: Educational specialists, university and post-graduate level teachers and researchers.

Headquarters Command, USAF, Bolling AFB, Washington, D. C.: Aircraft and electronics maintenance mechanics and technicians.

Air Research and Development Command, Detachment A, P. O. Box 1921, Washington 13, D. C.: Aeronautical, electronic and propulsion research scientists, engineers, technicians and craftsmen.

Air Proving Ground, Eglin AFB, Valparaiso, Fla.: Engineers, mathematicians, statisticians, testing equipment technicians, ordnance and climatic specialists.

Special Weapons Command, Kirtland AFB, Albuquerque, N. M.: Physical science research engineers, mathematicians, technicians, and craftsmen.

AF Finance Division, AF Finance Center, Denver, Colo.: Financial accountants, fiscal accountants and auditors.

Professional, scientific, technical and administrative positions are also open at Headquarters, USAF, Washington, D. C.

Most Air Force installations also need civilian typists, stenographers, maintenance and repair men, custodians, clerks, and many others. If your skill falls into one of these categories, apply directly to your nearest AF base. (See map, page 44.) Grades assigned will be determined by responsibility of job for which hired. But salaries of ungraded employees will be based on prevailing local wage scales.

Although the Air Force can now offer only indefinite appointments, which are not under the retirement program, employees will be entitled to annual and sick leave, advancement on basis of skill and performance, Social Security benefits, periodic salary increases, and a chance for permanent employment later.

Why more than 3 million passengers will fly United this year

The change in travel habits — from ground to air — was swift during the Forties. More than half of all first-class domestic travel is now by air. And the number of people who fly United is increasing faster than ever — three million passengers will be carried in 1951 alone.

Some of these passengers choose United because it's the natural business route of the nation. Others like United's all-season dependability — the clean, comfortable Mainliners — and the competent, experienced pilots, gracious stewardesses and other United people, aloft and on the ground, who do so much to make their flight enjoyable.

Back of all these reasons is another quality that's hard to put in words. It's the *spirit* of the United organization, proud of its work, loyal to its ideals, honest in its aim to give you the best airline service in the world.

And with all its advantages of speed and convenience, Mainliner travel often costs *less* than first-class surface travel! For reservations, call or write United or an Authorized Travel Agent.

Read "HIGH HORIZONS," a new book published by McGraw-Hill. It's the fascinating story of United's first 25 years.

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THROUGH THE YEARS

CONTINUED

AFA sends Congressmen W. J. Bryan Dorn (Dem., S. C.) and O. K. Armstrong (Rep., Mo.) on survey tour of the Far East to evaluate lessons of the Korean War. Their findings, reported in AIR FORCE magazine, in Congress, and given wide dissemination through the press, radio and television, feature three basic lessons: 1. That the war in Korea, due to our unchallenged air superiority, is an unreal war; 2. That airpower, given command of the air, has become the predominant destructive force against ground troops in the field; 3. That airpower must be the keystone in the military defense structure of the free world.

MAY: AFA co-sponsors, with Navy League and Military Order of the World Wars, in Washington, the second annual kickoff banquet for national Armed Forces Day observance, with President Truman and Defense Secretary Marshall the principal speakers.

AIR FORCE magazine's reports on tactical air operations in Korea quoted at length in questioning of Defense Secretary Marshall and General Vandenberg at Senate's MacArthur inquiry.

JUNE: AIR FORCE magazine's exclusive article by Capt. James Jabara, history's first jet ace, is reprinted widely in newspapers throughout nation, and its exclusive interview with Brig. Gen. John H. Michaelis, U. S. Army, on air support results in Korea is reprinted in Congressional Record and used as a supplementary text in many service schools.

AUGUST: Air Force Association collaborates with Milton Caniff in the publishing of STEVE CANYON'S AIRPOWER MAGAZINE, a military aviation publication in comic book format for the air-minded youth of America.

Medics Division of AFA chartered.

Fifth annual National Convention and Air Force Reunion held in Los Angeles.

AIR FORCE BASES

CONTINUED

LAWSON AFB, Fort Benning, near Columbus, Ga. Fighter base, Air Training Command base; named in honor of Capt. Walter R. Lawson, killed in US, 1923.

LIMESTONE AFB, Limestone, Maine. Heavy bomber base, 8th Air Force, Strategic Air Command; named for city.

LOCKBOURNE AFB, Lockbourne, Ohio, near Columbus. Fighter reconnaissance base, 2nd Air Force, Strategic Air Command; named for city.

LONG BEACH MUNICIPAL AIRPORT, Long Beach, Calif. Fighter base, 4th Air Force, Continental Air Command; named for city.

LOWRY AFB, Denver, Colo. Air rescue base, flexible gunnery, armament and ordnance, photographic, supply and administrative schools, Air Training Command; named in honor of Lt. Francis B. Lowry, recipient of Distinguished Service Cross, killed on photographic mission over France, 1918.

LUKE AFB, Chandler, Ariz., near Phoenix. Air crew School, fighter-bomber base, Air Training Command; named in honor of Lt. Frank Luke, Jr., WW I Ace, Medal of Honor, holder and recipient of Distinguished Service Cross, killed in France, 1918.

AIR FORCE BASES CONTINUED

MacDILL AFB, Tampa, Fla. Medium bomber and Air Rescue Service base, 2nd Air Force, Strategic Air Command; named in honor of Col. Leslie MacDill, fighter pilot, killed in US, 1938.

MARCH AFB, Riverside, Calif. Hq., 15th Air Force, Strategic Air Command; medium bomber and Air Rescue Service base; formerly Riverside Drive Aviation Field, renamed in honor of Lt. Peyton C. March, killed in US, 1918.

MATAGORDA ISLAND BOMBING AND GUNNERY RANGE, Gulf of Mexico, near Brownsville, Tex.; training installation of Strategic Air Command; named for the island.

MATHER AFB, Sacramento, Calif. Bombardier school, Air Training Command; Air Rescue Service base; named in honor of Lt. Carl S. Mather, killed in US, 1918, five days after receiving commission.

MAXWELL AFB, Montgomery, Ala. Hq., Air University; Air War College; tactical school, Air Rescue Service base; named in honor of Lt. William C. Maxwell, killed in Philippines, on routine flight, 1920.

McCHORD AFB, Tacoma, Wash. Fighter and troop carrier base, Air Defense Command; Air Rescue Service base; foreign clearing station, Military Air Transport Service; named in honor of Col. William C. McChord, killed in US, 1937.

McCLELLAN AFB, Sacramento, Calif. Hq., Air Materiel Area, Air Materiel Command; named in honor of Maj. Hezekiah McClellan, pioneer in Arctic aeronautical experiments, killed in US, 1936.

McGUIRE AFB, Fort Dix, Wrightstown, N. J. Fighter base, Eastern Air Defense Force, Air Defense Command; formerly known as Fort Dix Army Air Field, renamed in honor of Maj. Thomas B. McGuire, Air Force's second top ace of WW II, Medal of Honor holder and recipient of Distinguished Service Cross, killed over Leyte, P. I., 1945.

MITCHEL AFB, Hempstead, Long Island, N. Y. Hq., Continental Air Command; Hq., 1st Air Force, named in honor of Maj. John P. Mitchel, Mayor of New York, fighter pilot, killed in US, 1918.

MOODY AFB, Valdosta, Ga. Fighter base, Strategic Air Command; named in honor of Maj. George P. Moody, bomber pilot, killed in US, 1951.

MOUNTAIN HOME AFB, Mountain Home, Idaho. Fighter range, Western Air Defense Force, Air Defense Command; named for city.

NELLIS AFB, Las Vegas, Nev. Air Crew School, Gunnery School, Air Training Command; originally known as Las Vegas AFB, renamed in honor of Lt. William H. Nellis, fighter pilot, killed over Germany, 1944.

NORTON AFB, San Bernardino, Calif. Hq., Air Materiel Area, Air Materiel Command; formerly known as San Bernardino AFB, renamed in honor of Capt. Leland F. Norton, killed on fighter mission over France, 1918.

OFFUTT AFB, Omaha Neb. Hq., Strategic Air Command; named in honor of Lt. Jarvis J. Offutt, killed in fighter action, France, 1918.

(Continued on page 118)

AF BASES CONTINUED

OLMSTED AFB, Middletown, Pa. Hq., Air Materiel Area, air freight terminal, Air Materiel Command; originally known as Middletown Air Depot, renamed in honor of Lt. Robert S. Olmsted, balloon pilot, killed in Belgium, 1923.

OSCODA AFB, Oscoda, Mich. Fighter base, Eastern Air Defense Force, Air Defense Command; formerly known as Camp Skeel, renamed for city.

OTIS AFB, Falmouth, Mass. Fighter base, Air Defense Command; Air Rescue Service base; named in honor of Lt. Frank J. Otis, killed in US, 1937.

PATRICK AFB, Cocoa, Fla. Air Force missile test center, Air Research and Development Command; formerly known as Long Range Proving Ground AFB, renamed in honor of Maj. Gen. Mason M. Patrick, Chief of Army Air Service, died in 1942.

PERRIN AFB, Sherman, Tex. Basic pilot training school, Air Training Command; named in honor of Lt. Col. Elmer D. Perrin, test pilot, killed in US, 1941.

POPE AFB, Fort Bragg, N. C. Hq., 9th Air Force, Tactical Control Base, Tactical Air Command; named in honor of Lt. Harley H. Pope, killed in US, 1919.

PORTLAND AIRPORT, Portland, Ore. Fighter base, troop carrier base, 18th Air Force, Tactical Air Command; named for city.

PRESQUE ISLE, Presque Isle, Me. Fighter base, Air Defense Command; named for city.

PYOTE AFB, Pyote, Tex. Aircraft storage base, Air Materiel Command; named for city.

RANDOLPH AFB, San Antonio, Tex. Basic pilot training school, Air Training Command; School of Aviation Medicine; named in honor of Capt. William M. Randolph, fighter pilot, killed in US, 1928.

RAPID CITY AFB, Weaver, S. Dak. Heavy bomber and strategic reconnaisance base, 8th Air Force, Strategic Air Command; named for city.

REESE AFB, Lubbock, Tex. Pilot training school, advance multiple engine school, Air Training Command; formerly known as Lubbock AFB, renamed in honor of Lt. Augustus F. Reese, killed on volunteer fighter mission over Sardinia, 1943.

ROBINS AFB, Macon, Ga. Hq., 14th Air Force; Hq., Air Materiel Area, Air Materiel Command; named in honor of Brig. Gen. Augustine W. Robins, chief, Materiel Division, Air Corps, died in 1940.

SAMPSON AFB, Sampson, N. Y. Processing center; basic training school, Air Training Command; former Navy base named in honor of Rear Admiral William T. Sampson, died in 1902.

SAN MARCOS AFB, San Marcos, Tex, Liaison Helicopter School, Air Training Command; named for city.

SCOTT AFB, Belleville, Ill. Hq., Air Training Command; communications school; named in honor of Corporal Frank S. Scott, first enlisted man to lose life in an air accident, killed in US, 1912.

SELFRIDGE AFB, Mt. Clemens, Mich. Hq., 10th Air Force, Continental Air Command; fighter base, Air Defense Command; Air Rescue Service base; named in honor of Lt. Thomas E. Selfridge, killed in 1908 demonstrating Wright brothers' plane for Government.

STEWART AFB, Smyrna, Tenn. Troop carrier base, Tactical Air Command; originally known as Smyrna AFB, renamed in honor of Maj. Allan J. Stewart, bomber pilot, recipient of Distinguished Service Cross, killed in Solomons, 1942.

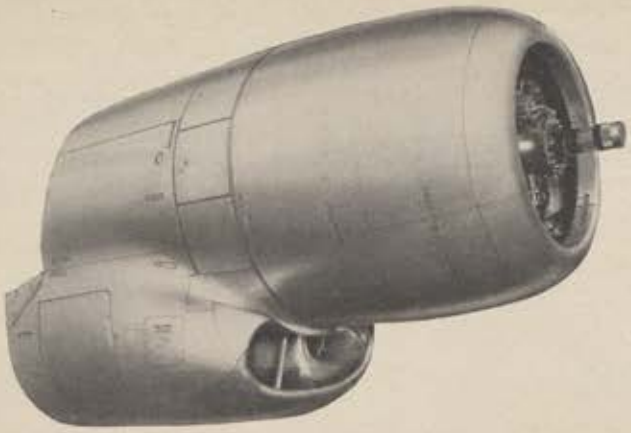
SHAW AFB, Sumter, S. C. Fighter base, 9th Air Force, Tactical Air Command; named in honor of Lt. Ervin D. Shaw, killed in ETO in 1918 on active duty with Royal Flying Corps.

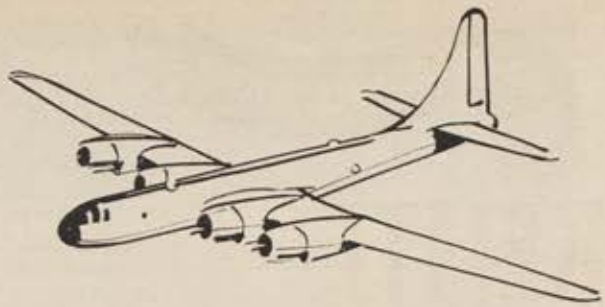
SHEPPARD AFB, Wichita Falls, Tex. Aircraft maintenance school, Air Training Command; named in honor of U. S. Senator Morris Sheppard, Chairman, Senate Military Affairs Committee, in recognition of long and distinguished service in cause of national defense, died in 1941.

SHERMAN AFB, Fort Leavenworth, Kan. Service base, 10th Air Force, Continental Air Command; named in honor of Maj. William C. Sherman, instructor, Command and Staff School, died in 1927.

SMOKY HILL AFB, Salina, Kan.

(Continued on page 121)





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AF BASES CONTINUED

Bombing range, 15th Air Force, Strategic Air Command; named for the geographical area.

STEWART AFB, U. S. Military Academy, Newburgh, N. Y. Hq., Eastern Air Defense Force, Air Defense Command; named in honor of Lachlan Stewart, whose father provided the original land for the base.

TINKER AFB, Oklahoma City, Okla. Hq., Air Materiel Area, air freight terminal, Air Materiel Command; named in honor of Maj. Gen. Clarence L. Tinker, bomber and fighter pilot, CG, 7th Air Force, killed over Midway, 1942.

TRAVIS AFB, Fairfield, Calif. Medium bomber base, 15th Air Force, Strategic Air Command; foreign clearing station, Military Air Transport Service, formerly known as Fairfield-Suisun AFB, renamed in honor of Brig. Gen. Robert F. Travis, bomber pilot, recipient of Distinguished Service Cross, killed in US, 1950.

TURNER AFB, Albany, Ga. Fighter base, 2nd Air Force, Strategic Air Command; named in honor of Lt. S. Preston Turner, killed in US, 1940.

TYNDALL AFB, Panama City, Fla. Instrument pilot school, Air School, Air Police School, Air Training Command; named in honor of Lt. Frank B. Tyndall, WWI fighter pilot, killed in 1930.

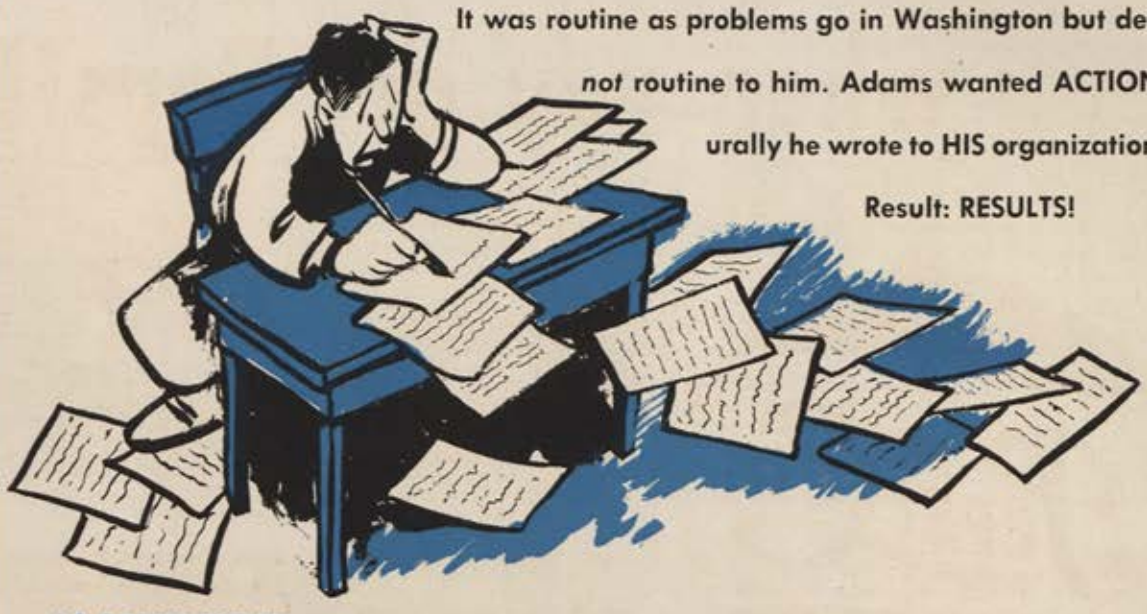
VANCE AFB, Enid, Okla. Pilot training school, advance multiple engine school, Air Training Command; named in honor of Lt. Col. Leon R. Vance, Medal of Honor holder, lost in hospital aircraft when forced down at sea off Iceland, 1944.

WALKER AFB, Roswell, N. Mex. Medium bomber base, 8th Air Force, Strategic Air Command; formerly known as Roswell Army Air Field, renamed in honor of Brig. Gen. Kenneth N. Walker, Commanding General, 5th Bomber Command, Medal of Honor holder, killed in Southwest Pacific leading a bombing attack, 1943.

WESTOVER AFB, Chicopee Falls, Mass. Hq., Atlantic Division, Military Air Transport Service, Air Rescue Service, foreign clearing station; named in honor of Maj. Gen. Oscar Westover, Chief of Air Corps, killed in US, 1938.

(Continued on page 128)

Adams had a problem!



It was routine as problems go in Washington but definitely *not* routine to him. Adams wanted ACTION. Naturally he wrote to HIS organization, AFA. Result: RESULTS!

AS ADAMS PUT IT "Last year I wrote to your office regarding an appointment in the USAFR. I came out of the last war as a corporal. Through your courtesy I was sent a copy of the Air Force regulations pertaining to me and other information regarding a commission. I followed your instructions and, by golly, I MADE IT. Second lieutenant, USAFR!"

Merlin R. Adams
North Hollywood, Calif.

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ASSISTS Air Reservists on assignments, commissions, promotions, field training, extension courses, MOS changes, applications for reserve and active duty assignments and Aviation Cadet training, requests for Awards and Decorations.

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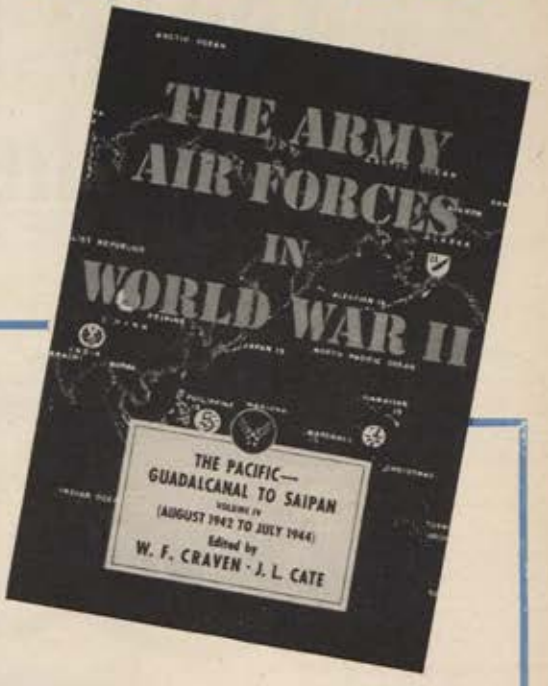

2.

THE ARMY AIR FORCES IN WORLD WAR II

Vol. IV—The Pacific—Guadalcanal to Saipan

(August 1942 to July 1944)

Edited by W. F. Craven and J. L. Cate

Pacific veterans of the Fifth, the Seventh, the Tenth, the Eleventh, the Thirteenth, and the Fourteenth Air Forces will find in this book the full story of our Pacific air operations to the summer of 1944. Widely scattered geographically, these air forces operated under varying conditions which tended to mark each with its own individuality. The text frames this in the light of the underlying unity given their several tasks by the over-all strategy of the Joint Chiefs of Staff.

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Designed especially for pilots and other flight crew members in the RESERVE military services, whose flying activities are part-time (generally limited to weekends and the two-week annual military service period). B-1 covers all types of accidental death, whereas B-2 is limited to death from aviation accidents only. B-1 also has broader loss of sight and limb benefits than B-2 (see chart).

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Designed for all persons who are not flying personnel and whose participation in aviation is limited to traveling in aircraft as passengers or to working in or around aircraft on the ground. Death or injury from every type of non-aviation accident, and from certain types of aviation accidents, is covered (see chart).

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B-1	Flight-rated REGULAR military personnel not eligible (see note 1)	√ (see note 2)	√ (see note 2)	√		√ (see note 2)	√	7.20
B-2	Flight-rated REGULAR military personnel not eligible (see note 1)	√ (see note 2)	√ (see note 2)			√ (see note 2)		4.80
C	FLIGHT-RATED Regular and Reserve military personnel not eligible (see note 1)	√ (see note 3)	√ (see note 3)	√	√	√	√	3.00

NOTE 1: "Flight-rated personnel" means pilots, co-pilots, navigators, flight engineers, radio operators, bombardiers, aerial gunners, and similar flying personnel of the military services or their reserve components.

NOTE 2: Class B-1 and Class B-2 policies expire with respect to aviation accident coverage if the insured person serves 120 days, consecutively or non-consecutively, on active military duty during the policy period; but Class B-1 coverage continues in effect thereafter for other types of accidents.

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AF BASES CONTINUED

WICHITA AIRPORT, Wichita, Kan. B-47 combat crew training school, Air Training Command; named for city.

WILLIAMS AFB, Chandler, Ariz. Advance single-engine pilot training school; Air Training Command; named in honor of Lt. Charles L. Williams, bomber pilot, killed in Hawaii, 1927.

WOLTERS AFB, Mineral Wells, Tex. Division headquarters of Engineer Force, Continental Air Command; formerly known as Camp Wolters, named in honor of Brig. Gen. Jacob F. Wolters.

WRIGHT-PATTERSON AFB, Dayton, Ohio. Hq., Air Materiel Command; Wright Air Development Center, Air Research and Development Command, USAF Institute of Technology; formerly two separate bases known as Wright Field and Patterson Field; named for Orville and Wilbur Wright, and Lt. Frank S. Patterson, killed during the first tests of synchronized machine gun firing, in 1918.

EDITOR'S NOTE: *Reprints of the Air Force Base map and of the background material which accompanies it are being prepared. Copies may be obtained free of charge by writing to:*

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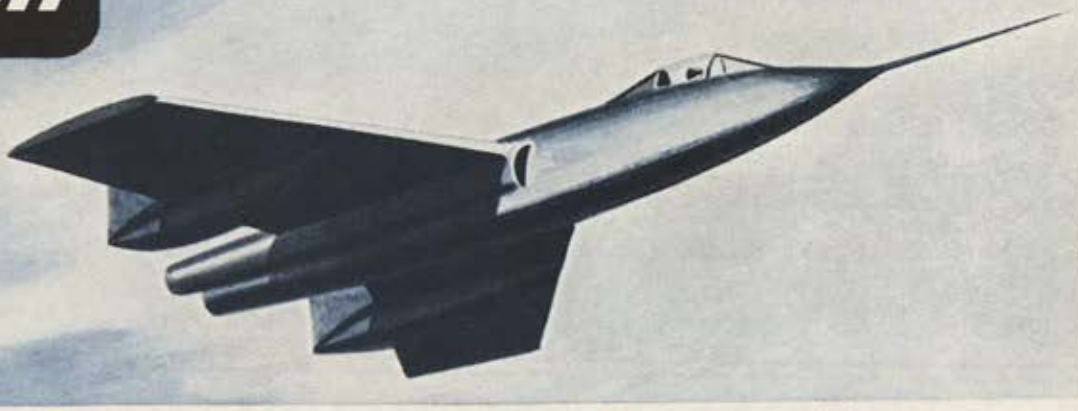

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