

# AIR FORCE



*In This Issue:*

## THE ATOMIC ILLUSION

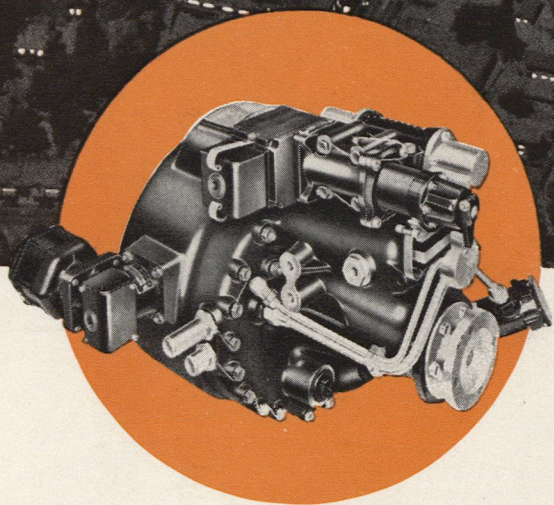
Why We Are Selling Russia Short

Plus Special Reports on: RESERVE OFFICER PROMOTIONS

COST-CUTTING RESEARCH • AIR POWER FALLACIES

January 1952





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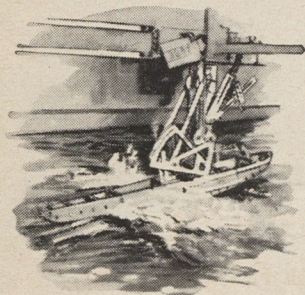
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*From the Birthplace  
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**NEW WATER-BASED WEAPONS**

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**A**N instrument-covered seaplane model  
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researcher pores over plans for a jet-  
powered, swept-wing flying boat. A Martin  
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**DETROIT 4**



# AIR FORCE

THE OFFICIAL JOURNAL OF THE AIR FORCE ASSOCIATION

VOL. 35, No. 1

JANUARY 1952

## THIS IS AFA

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

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

## ITS OBJECTIVES

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

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

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

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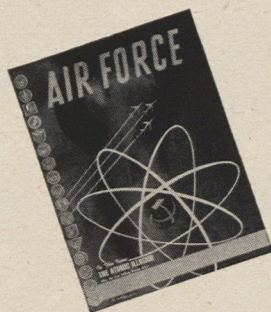
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## FEATURES

- BATTLE OF HEADACHE RIDGE.....by James H. Straubel 15  
THE ATOMIC ILLUSION.....by Ramsay D. Potts, Jr. 19  
WHAT ABOUT THOSE RESERVE OFFICER PROMOTIONS?..... 24  
THE FOUR FREEDOMS OF THE AIR FORCE  
PART III FREEDOM FROM WANT AND WASTE  
by Maj. Gen. Donald L. Putt..... 28

## DEPARTMENTS

- AIRPOWER IN THE NEWS .. 7      TECHNIQUE ..... 34  
RENDEZVOUS ..... 11      TECH TALK ..... 35  
AIRMAIL ..... 13      MOBILIZATION NEWS ..... 39  
AFA NEWS ..... 42



## THE COVER

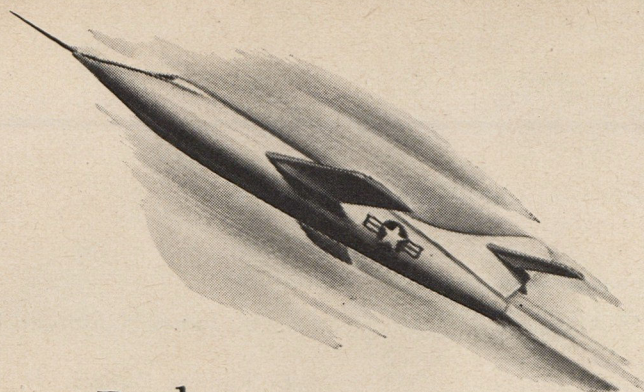
This month's cover drawing, by artist Charles DeM. Barnes, represents the enigma of Russia's atomic strength, believed to have been grievously underestimated over the postwar years by many who had a guiding hand in the formulation of our national defense policies. Such fallacious wishful thinking can be fatal as outlined in the first of a series on THE ATOMIC ILLUSION See page 19

## AIR FORCE STAFF

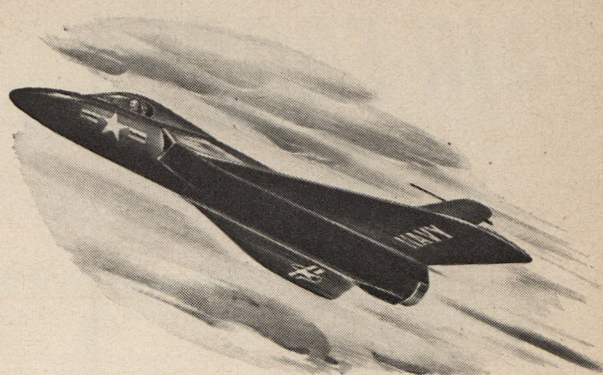
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**AIR FORCE MAGAZINE** is published monthly by The Air Force Association at McCall Street, Dayton 1, Ohio. **EDITORIAL OFFICE:** 1424 K St., N.W., Washington 5, D. C., Sterling 2305. Publisher assumes no responsibility for unsolicited material. **ADVERTISING OFFICES:** Main Office: 114 East 40th Street, New York 16, N. Y., Murray Hill 9-3817. Sanford A. Wolf, Advertising Director. Pacific Coast Offices: Keenan and Eickelberg, 638 S. Van Ness Ave., Los Angeles 4, Calif. Dunkirk 2-8458; 235 Montgomery St., San Francisco 5, Calif. Douglas 2-1323; 333 S.W. Oak St., Portland 4, Ore. Broadway 3210. Midwest Office: Urban Farley, 120 S. La Salle St., Chicago 3, Ill. Financial 6-3074. **MAILING:** Re-entered as second class matter, December 11, 1947, at the post office at Dayton, Ohio, under the Act of March 3, 1879. **SUBSCRIPTIONS:** \$4.00 per year. Single copy, 35 cents. **REGISTRATION:** Trademark registered by the Air Force Association. Copyright, 1952, by the Air Force Association. All rights reserved under Pan-American Copyright Convention. Printed in U.S.A. **CORRESPONDENCE:** All correspondence pertaining to editorial matter and change of address should be sent to Air Force Association, 1424 K St., N.W., Washington 5, D. C.





**Rocket...** World famed Navy-Douglas 558-2 Skyrocket, which, on August 7, 1951, set new world records for speed and altitude for airplanes of any type or size.



**Jet...** Designed for intercepting high-flying supersonic enemy planes, the F4D Skyray is an advanced-type bat-wing jet, developed by Douglas for the U. S. Navy.

# Only Douglas leads in

*Advance-type Douglas military and commercial aircraft are in service today...*

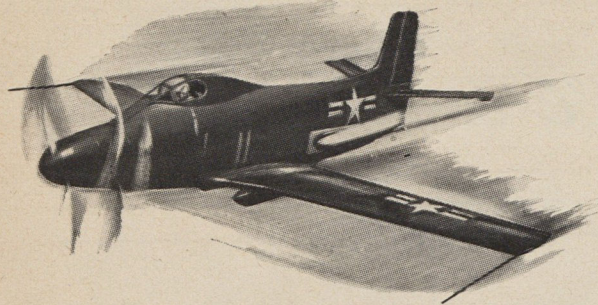
*You can depend on Douglas for the new "miracle" planes to come!*

## SINCE 1920...FIRST AROUND THE WORLD!

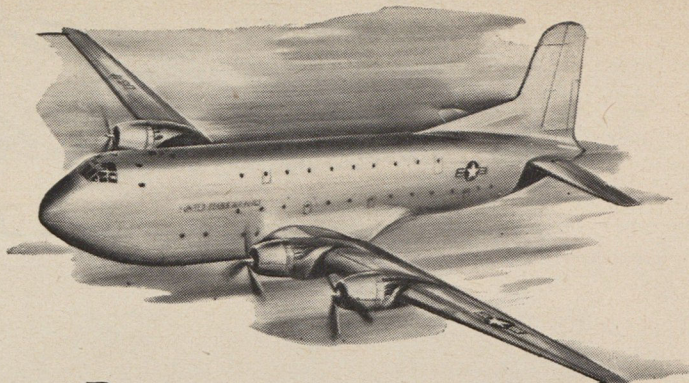
Douglas Cloudster, first airplane to lift its own weight in payload • Douglas M-1, first U.S. mail plane • Torpedo 1, world's first torpedo plane • C-1, world's first cargo plane • DWC World Cruiser, first to fly around the world • DC-1, prototype of famed DC-3 (C-47) • A-20 Havoc, famous World War II light bomber • A-26 (B-26 Invader), first 400 mph attack bomber • DC-4 (C-54) Skymaster, first 4-engine global transport • SBD, Navy attack bomber that stopped the Japs at Midway • AD Skyraider, Navy attack bomber, now fighting in Korea • C-74, largest World War II transport • C-124 Globemaster II, largest cargo transport in production • DC-6 and DC-6A Liftmaster, first post-war modern transports • F3D Skyknight, first Navy jet night fighter • D558-1 Skystreak, first Navy transonic research airplane.

WORLD'S LARGEST BUILDER OF AIRCRAFT FOR 32 YEARS ➤ MILITARY AND COMMERCIAL TRANSPORTS  
FIGHTERS ➤ BOMBERS ➤ GUIDED MISSILES ➤ ELECTRONIC EQUIPMENT ➤ RESEARCH AND DEVELOPMENT





**Turbo-prop...** First U. S. turbo-prop attack bomber, the A2D Skyshark, built for the U. S. Navy and now entering production at El Segundo Division of Douglas.



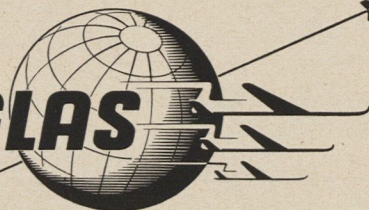
**Reciprocating...** World's largest cargo transport now in volume production. It's the C-124 Globemaster II, designed to support global operations of the military.

# all four power types...

From the DC-3 to the Skyrocket—fastest airplane ever built—Douglas has pioneered remarkable advances in every phase of the art of flight. Undisputed leader in the design and production of the finest in transport airplanes, Douglas has also developed basic airframe types to embrace the three new powers: turbo-prop, jet and rocket. *Douglas is the only manufacturer that has built and flown all four aircraft types!* Certainly this is a tribute to the foresight and creative engineering skills of the Douglas organization. Today, as Douglas continues to mass-produce the aircraft needed now, research and engineering teams push ahead in every field of aeronautics...planning the "miracle" planes that will supersede the near-miracle planes of today. Douglas Aircraft Company, Inc., Santa Monica, California.

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**DOUGLAS**



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*Beaver*

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after extensive competitive  
evaluation.

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THE DE HAVILLAND AIRCRAFT OF CANADA, LIMITED

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TORONTO



# AIRPOWER IN THE NEWS

VOL. 35, NO. 1

WASHINGTON, D. C.

JANUARY, 1952

CLAIM that US will soon replace Britain as leader in jet engine production has been made by Dr. Hugh L. Dryden, director of NACA. . . Test model of USAF's eight-jet B-52 bomber has been completed and moved from Boeing's Seattle plant to a hangar. . . Convair's new version of B-36 design, swept-winged and with all-jet power, designated B-60, awaits J-57 engines for its first tests. . . Production contract for new model of AF's Scorpion all-weather jet fighter, F-89D, has been received by Northrop. . . Small quantity of jet fuel will be stored by USAF in underground salt beds for one-year test. . . Hughes Aircraft Plant in Tucson will be used for production of guided missiles.

THOMAS G. LANPHIER, JR., AFA's Board Chairman, was elected vice president of Convair. . . Adm. Dewitt C. Ramsey (USN, Ret.), was reelected as president of Aircraft Industries Association.

MANPOWER is one of most formidable problems facing aircraft industry today, and worst is yet to come, said Adm. Ramsey in current issue of "Planes." Already critical and most serious in long view is shortage of engineers. Of the 38,000 '51 engineering graduates, 30 percent were immediately committed to Armed Services. . . Copper and nickel ban for civilian use in '52 has been hinted by Manly Fleischmann, head of Defense production and National Production Authority. . . Ordnance Aerophysics Laboratory has been established at Daingerfield, Tex., as separate division of Convair.

HELICOPTERS (H-23, Hiller), which have been procured by USAF for Army on Navy contract containing provisions for concurrent delivery of spares, will be accepted by Army only when spares are available to support each craft for 40 hours per month. . . AMC will transfer B-45 for Navy's use at North American plant in Los Angeles.

CHARGE that Air Force wastes manpower and money at six bases has been made by Senate Preparedness subcommittee. Example: using coffee as sweeping compound at one base. Investigators also thought it wasteful that airman dormitories at Carswell AFB, Tex., had dormitories "far superior to quarters provided for officers." . . . Cost of garrison ration has almost tripled since 1935. (\$.4367 in '35 as compared to \$1.18 for month of August, '51). . . Plans for placing aviation fuel in stock fund account are almost ready; world-wide implementation is to begin July 1, '52.

AIR COMMANDERS recently shifted include: Maj. Gen. Walter E. Todd, ass't for USAF programming, named commander of Western ADF, Hamilton AFB, Calif., to replace Maj. Gen. Herbert B. Thatcher who is now Dep. Director of Plans, Office of Dep. C/S of Operations at USAF Hdqtrs. Gen. Todd was relieved by Brig. Gen. Oliver S. Picher, Dep. for Personnel, FEAF.

COMBAT CREW TRAINING AF will have its headquarters at Randolph AFB, Tex., on April 1, '52. . . Dominican Republic has signed ten-year agreement giving AF electronic tracking and control sites in Dominican territory for long-range guided missile proving area that will extend eventually from Florida to Trinidad. . . Foster Army Air Field at Victoria, Tex., has been leased for ATRC's single engine jet advance training. . . Facilities at Cheyenne Municipal Airport, Salt Lake City Municipal Airport, and Buckley, Colo., are to be returned to Air National Guard this month. . . 500 additional

Continued on page 8



## AIRPOWER IN THE NEWS CONTINUED

Wherry Housing units are slated for Patrick AFB, Fla., another 500 for Edwards AFB, Calif.

ONE EXPLANATION for the increased Red air activity is the heavy toll of motor transport taken by UN aircraft in Korea.

27TH FIGHTER WING, which took part in first mass jet aircraft flight across Atlantic last year, was named recently as winner of Mackay Trophy, given by USAF to "AF personnel who make most meritorious flight of the year." . . . Since start of Korean war, more than 43,730 tons have been flown to Far East by Pacific Airlift aircraft. MATS, now in its fourth year of strategic airlift operations, has airlifted more than 300,000 tons, including 1,100,000 passengers and 181,000 tons of military cargo and mail throughout the world since June 1, '48. This does not include 2,000,000 tons delivered in Berlin Airlift.

USAF PERSONNEL who are partially disabled for further service to extent that they are eligible for separation or retirement under law will now be retained on active duty under certain conditions. . . . Maximum of 30 days delay en route may be granted airmen and officers returning from overseas combat. . . . Casualty Assistance Function has been transferred from Office of Chief of AF Chaplains to Directorate of Military Personnel. . . . USAF has shortage of 100 WAF recruiters. . . . Terms of navigator and bombardier will be replaced by "catch-all" term - aircraft observer. . . . JATO is the officially authorized term to be used for all kinds of assisted take-offs. . . . USAF armament test facilities at Eglin AFB, Fla., are now under jurisdiction of Air Research and Development Command.

USAF MEDICS: Long-range dental research program for USAF was subject of recent three-day conference at USAF School of Aviation Medicine, Randolph AFB, Tex. . . . Col. Oscar S. Reeder, USAF (MC) has assumed duties as Chief of Medical Consultants Division for Office of AF Surgeon General. . . . Newly-formed Aeromedical and Human Resources Division has been established in office of AF Dep. C/S for Development.

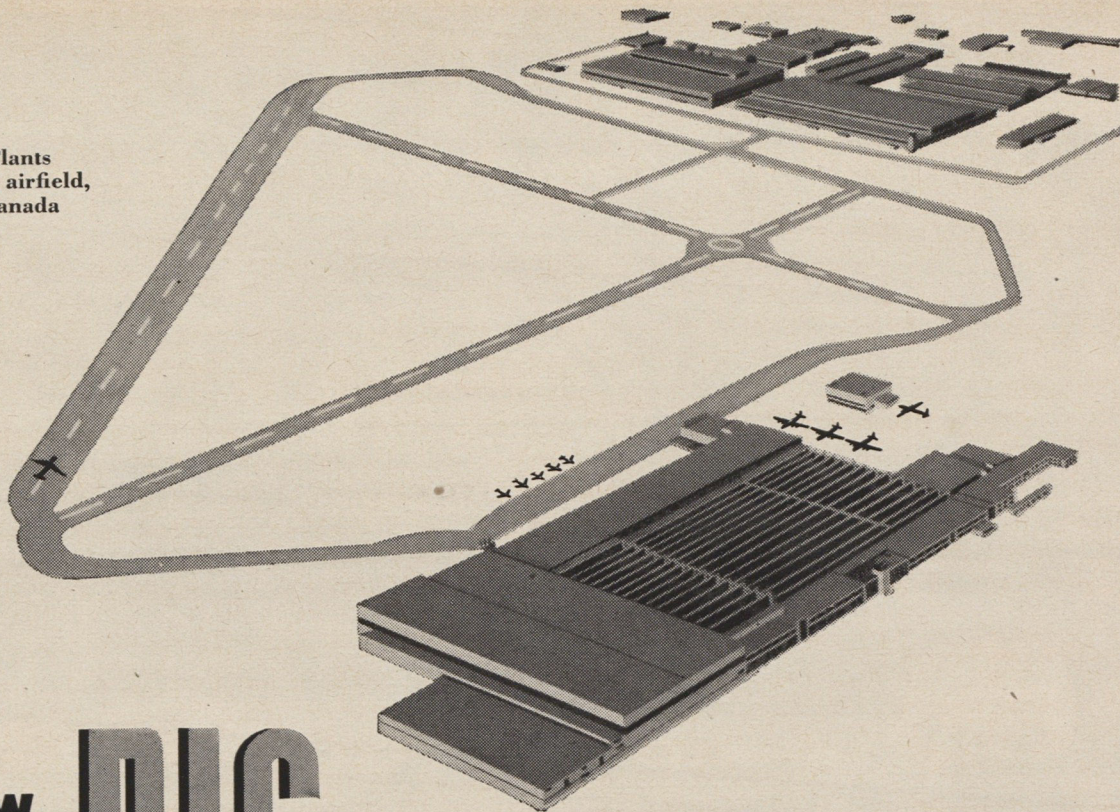
NEW WEAPON will soon go into use in Korea - this time against Korean body lice, said to be only lice in the world not affected by DDT. Lindane and pyrethrum powders have proved to be the answer, tons of which will be used by UN troops - and on Communist prisoners, to insure freedom from epidemic typhus.

OPERATION SANTA CLAUS. Sixty-four paraplegic, blind and multiple amputee patients of Armed Forces were flown home for Christmas from nine US military hospitals in air evacuation aircraft of MATS. . . . Personnel of Pope AFB, N. C., provided gifts for each of more than 4000 orphans in the state. Santa Claus in helicopter visited orphanages whose children did not attend base party. . . . Officers and airmen mingled socially for what was said to be the first time at a formal dinner and military ball staged for 4114th Organizational and Maintenance Sqdn., Fairchild AFB, at Spokane's Davenport Hotel on December 8.

VOLUNTEERS totaling over a million and half are enrolled in civil defense activities. . . . New kind of "lamp shade" by which Civil Defense personnel can determine accurately position of A-bomb explosion was described by scientist L. L. German at recent CD communications conference sponsored by GE.



Canadair Plants  
and adjoining airfield,  
Montreal, Canada



# HOW **BIG** IS CANADAIR?

Canadair is not the largest aircraft plant in the world... but, it is Canada's largest... and its 40 acres of covered factory space house some of the finest aircraft equipment in the world.

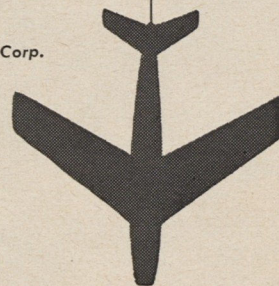
Today at Canadair, ten thousand skilled technicians and workers man great assembly flow lines, as they turn out sleek F-86\* Sabre jets... the world's fastest fighter planes in production... and tool up to produce advanced T-33\* jet trainers for the Royal Canadian Air Force and T-36\* trainer transports for the United States Air Force.

From initial design to delivery, this modern plant with its enviable record and excellent facilities is capable of producing aircraft to meet all specifications.

\*Made under license respectively from North American Aviation Inc., Lockheed Aircraft Corp., Beech Aircraft Corp.

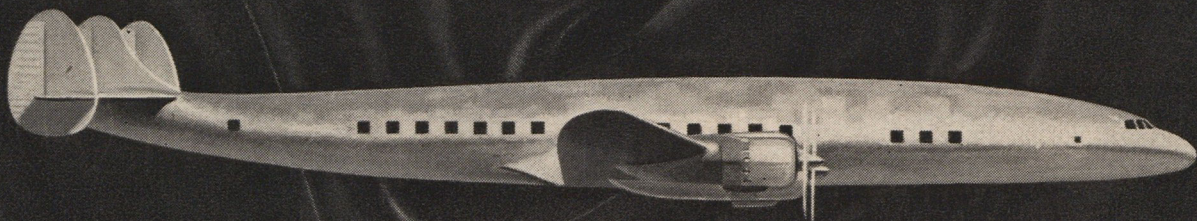
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LIMITED, MONTREAL, CANADA

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*Lockheed Presents The*

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*An even finer version of the World's Most Experienced Airliner*

*Lockheed's new Super Constellation combines the unmatched record of experience and dependability of the world-famous Constellation with greater speed, greater range, greater comfort and greater size—unquestionably the finest airliner in the world.*

*Now in service for Eastern Air Lines and soon in service for Trans World Airlines, Air France, K.L.M. Royal Dutch Airlines, Pakistan International, Qantas, Trans-Canada Air Lines, and other leading airlines.*

**LOCKHEED**

AIRCRAFT CORPORATION, BURBANK, CALIFORNIA

*Look to Lockheed for Leadership*



# Lockheed

## BOOSTS PROFITS FOR AIR CARGO OPERATORS

Air freight traffic has increased 467% since 1946, continues to grow at a rapid clip. During this period, Lockheed engineers worked steadily on the problems created by this fast-growing business and have come up with much-needed developments.

Some of these developments were recently previewed by airline executives and military officials in a 3-day seminar held at Burbank. It was revealed that Lockheed (1) has a new Super Constellation cargo plane designed to reduce freight-carrying costs, and (2) has thoroughly analyzed the problems of loading, tying down, unloading and handling of freight at airports. One exhibit was Lockheed's mechanically operated scale model of "the ideal air cargo terminal," which has attracted national attention.

The new Super Constellation cargo plane is the most highly mechanized freight carrier yet designed. Some of its outstanding advantages:

1. Solves major interior handling problems with three exclusive features: an all-metal (magnesium) floor, a built-in mechanical conveyor, and a portable, airborne cargo elevator of 10,000 pounds capacity.
2. Carries "more cargo farther and faster" than any other airplane.
3. Increases carrying capacity, both in total floor space and weight.
4. Guarantees greater profits because of its low direct operating cost—actually 4.9 cents per ton-mile.

The Super Constellation is the result of a decade of air cargo research at Lockheed. It combines the experience and dependability of the world-famous Constellation transport with greater size and greater operating economy.

It is 18.4 feet longer than the standard Constellation.

It will carry 38,500 pounds, or nearly 20 tons, across the nation.

It will carry over 25,000 pounds, non-stop from New York to Paris.

It has net usable space totaling 5,568 cubic feet, equal to nearly three standard railroad refrigerator cars.

And its metal watertight floor permits much heavier load limits (300 lbs. per sq. ft. or 1000 lbs. per running ft.), higher density cargo and a wider variety of cargo.

Military versions of this airplane already have been ordered in large numbers for both the Air Force and the Navy.



## RENDEZVOUS

### Where the Gang gets together

**COMBAT PHOTOGRAPHS:** Anyone interested in having combat photographs of the 91st Bomb Group (Eighth Air Force), contact William F. Morrison, Jr., 4201 Falls Road, Baltimore 11, Md.

**CALLING MAJOR REGAN:** Would you please assist me in contacting Maj. Charles J. Regan? The last I heard from him was when we were both members of the 5th Bomb Wing, 15th Air Force, Foggia, Italy, in 1944. Lt. Col. Joe B. Goodrich, AF-ROTC, Oklahoma A&M College, Stillwater, Okla.

**DEFENDERS OF BATAAN:** Would anybody who reads Rendezvous be able to furnish the correct mailing address of "The American Defenders of Bataan and Corregidor"? Capt. Coleman L. Adams, Turner AFB, Albany, Georgia.

**MISSING GRANDSON:** I have not heard from my grandson, Charles Geiss, for two years, and would like to know where he is. Could you help me find him? I am over 80, and think of him all the time. Celia Geiss, 205 St. Anns Ave., The Bronx 54, N. Y.

**MORE FROM THE 466TH:** I see in the December issue that someone has been asking about the 466th Bomb Group (H) of the Eighth Air Force, and if they ever published a unit history. Since I was a member of that group in England, I'd like the same information. Also, I'd like to hear from some others from that outfit. And by the way, is the 466th still operating, and if so, where? When I was with it, I was in ordnance, loading bombs on B-24s. James R. Carey, Jr., Box 286, Ossian, Iowa.

### BACK ISSUES

**1944 AND EARLIER:** I'd like to obtain the following back issues of AIR FORCE Magazine: 1944 (June and earlier, Aug., Sept., Dec.); 1945 (May, Oct. to Dec.); 1946 (Jan. to Aug.); 1947 (Dec.); 1948 (June). Robert M. Beall, 26 Coleman St., Abington, Mass.

**FOR PIO SCHOOL:** We're sending your publication to the binders so we may have complete files for future reference. But we find the following issues are missing: Air Forces News Letter (volume 25, numbers 1, 2, 4, and 6), and AIR FORCE Magazine for February

1943, and February and May 1947. Can anyone through Rendezvous help locate these? Helen M. Bartels, Armed Forces Information School Library, Fort Slocum, N. Y.

### UNIT HISTORIES

**96TH BOMB GROUP:** I'd like to find out if the 96th Bomb Group (Eighth Air Force) has ever published a magazine or pictorial book on the group's history. If they have, would you kindly advise me where I could purchase the publication? Dr. Ewing M. Johnson, 127 W. 25th, Spokane 41, Wash.

**99TH BOMB GROUP:** I first learned about AIR FORCE Magazine and Rendezvous a month ago at the base library. Then when I was home last, I told a friend about Rendezvous. He was a tail gunner with the 346th Squadron, 99th Bomb Group and wonders if a history was ever compiled for that unit. Also what has happened to the group CO, Colonel Lauer. Anyone with information may contact Terry D. Beasley, Third Ave., Durham, N. C. Cpl. David R. McGilvary, Langley AFB, Va.

**310TH BOMB GROUP:** Has there ever been published a unit history of the 310th Bomb Group, which was part of the 12th Air Force? The 310th was in England, Africa, Italy, and Corsica during World War II. I was first sergeant of the 380th Squadron in this group for more than two years. I'd like to hear from some of the old gang. M/Sgt. James A. Warman, Air ROTC, Davis-Elkins College, Elkins, West Virginia.

**458TH BOMB GROUP:** Has the 458th Bomb Group of the 96th Wing, stationed at Horsham St. Faith, near Norwich, England, ever published a Group History? Also, is the Group still activated. I would very much like to get in touch with some of the boys from that outfit. Eugene A. Pilon, 9025 W. Lincoln, West Allis 14, Wis.

**500TH BOMB GROUP:** I'd like to know if the 500th Bombardment Group (VH) of the Twentieth Air Force published a group history. If so, please tell me how I can obtain a copy. I was a gunner with this outfit from November 1944 until August 1945. Francis L. Kindseth, Frazee, Minn.

LOOKING FOR SOMEONE? ANY ANNOUNCEMENTS TO MAKE? WRITE RENDEZVOUS AND RENDEZVOUS READERS WILL WRITE YOU.



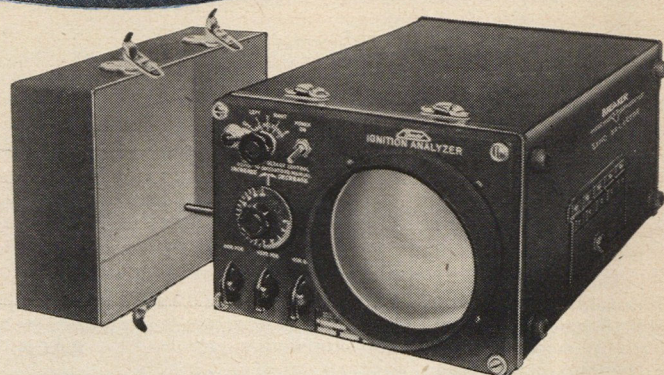
# The BENDIX IGNITION ANALYZER Checks More Plugs Faster!

## Result: TIME-SAVING

### KEEPS PLANES ON SCHEDULE BY ELIMINATING HIT AND MISS TROUBLE SHOOTING

Even before the wheels touch the runway, the ignition fault has been pin-pointed and a maintenance crew stands by to make a fast repair. Minutes later the ship departs *on schedule*. The fast, certain repair job was possible because the trouble shooting was done in flight, by the operator of a Bendix Ignition Analyzer. While making a routine check of several plugs the scope reading showed a trouble pattern. The operator quickly analyzed the location and seriousness of the trouble and the word was radioed ahead. Meanwhile, the pilot reduced power of the malfunctioning engine to cool it in flight and ready it for maintenance. Just such a case as this is the reason why one airline has reduced turn-around time by 18% with the Bendix Ignition Analyzer. It can do the same for you and much more besides.

*Write us for free literature concerning  
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# AIR MAIL



## Missing in Action

**Gentlemen:** As you may not know, Lt. Edwin Tabaczynski, whose picture appears on the cover of your November issue, has been officially listed as missing in action since last August 20 when his F-80 exploded.

He and I went through pre-flight and pilot training together at Connally AFB. He was my best friend. He and his wife were closely associated with my family, and I know his wife would treasure an extra copy of your November issue just as I would.

2nd Lt. Herbert H. Spiller  
Lake Charles, Louisiana

• *Extra copies of the issue with Lieutenant Tabaczynski's picture on the cover have gone to his friends and to members of his family. When we selected this picture from the many sent us regularly from FEAF, we didn't know Lieutenant Tabaczynski was missing—The Editors.*

## Anniversary Issue

**Gentlemen:** Belated congratulations on your fine anniversary issue. It contains considerable information that this section will be able to utilize frequently.

In fact, we have already clipped and mounted the article "Historical Highlights on AF Bases," and are giving the same treatment to the reprints of the USAF Command and Staff charts that you so graciously forwarded.

There is one item that might be clarified in the note on Selfridge AFB. The base is an Air Defense Command base, directly under Eastern Air Defense Force, with Hq., Tenth Air Force, as a tenant unit. An Air Rescue flight is also a tenant unit.

Command and operational control of the base are vested in the 56th Fighter-Interceptor Wing, commanded by Col. George S. Brown. The base was named after Lt. Thomas E. Selfridge, the first military casualty in US aviation history.

Oscoda AFB is also an ADC base under EADF but directly under the 56th Wing for operational control and logistical support, a sub-base of Selfridge at the present time.

Capt. Arthur F. McConnell, Jr.  
PIO, 56th Fighter-Interceptor Wing  
Selfridge AFB, Mich.

**Gentlemen:** The edition of AIR FORCE Magazine celebrating the anniversary of AFA was outstanding, and has provided this unit with an excellent source of information in answering the countless calls from parents and others interested in the location of various USAF bases.

Being a charter member of AFA, I feel very proud of OUR association in

providing both regular and reserve Air Force personnel with such an outstanding publication as AIR FORCE Magazine. S/Sgt. Joseph L. Scaletta, Jr.  
USAF Liaison NCO, 9367th VAR Sqdn.  
San Jose, Calif.

## Ample Reason

**Gentlemen:** The anniversary issue of AIR FORCE Magazine interested me enough to want to join AFA. The opportunity to get additional insurance while flying on active duty was the most attractive feature of AFA. Also the fact that I could get help on personal problems prompted me to join.

1st Lt. Patrick J. Mullins  
3516th CCTS  
Randolph AFB, Texas

## Mosquitoes Sound Off

**Gentlemen:** In the October issue of AIR FORCE Magazine, I was interested to note the statistical breakdown of close support missions flown by various aircraft during the Korean war. The T-6 Mosquitoes of our group have also contributed to the effectiveness of the tactical air program, and I must confess we were rather disappointed not to see our contribution mentioned.

Statistics-wise, we have flown more than 18,000 sorties totalling more than 50,000 combat hours. During that time we have directed the fire of more than 45,000 United Nations aircraft against every conceivable type of Communist target. It is the unusual nature of the Mosquito mission, however, that gives meaning to the figures.

In addition to our designated mission of controlling fighters, directing field artillery, and gathering reconnaissance and photo information, our crews have controlled air drops, directed Navy shelling, assisted in helicopter pick-ups, flown night and weather reconnaissance, dropped leaflets in conjunction with the psychological warfare program, acted as a relay for the cease fire talks, and played the role of mail man and PX officer for forward ground controllers.

Thank you for your kind attention. I know I speak for the personnel of our group when I say we read and enjoy your publication. Though we do not always receive them as soon as we might like, there is always quite a scramble for AIR FORCE when it comes in with our magazine shipment. The copies are well worn when the new issues come.

1st Lt. Robert R. Ogren  
PIO, 6147th Tactical Control Group  
APO 970, San Francisco, Calif.

• *An indication of how we feel about Mosquitoes and those who fly them appears in AFA President Harold C.*

*Stuart's article in our December issue, where he discusses in some detail the fine work of the Mosquito outfits—The Editors.*

## Operation Southern Pines

**Gentlemen:** Your special report on Southern Pines in the November issue ignores completely one important phase of the joint air-ground operations in that maneuver. I refer to the aerial reconnaissance missions flown by the 117th Tactical Reconnaissance Wing.

Two squadrons of the 117th, working with Ninth Air Force and the JOC, provided round the clock coverage of the "Combat" area. An RF-80 squadron flew daylight missions and the RB-26 squadron provided night coverage.

During the maneuver, aircraft of the 117th flew 879 sorties, amounting to more than 900 flying hours. When aggressor forces pulled a surprise night move during a critical phase of the exercise, Army commanders turned to aerial recon for information as to the disposition of enemy forces.

While the 80 percent availability figure your magazine reported is nothing to be ashamed of, it is interesting to note that the 117th completed 96 percent of all missions scheduled. Weather caused the only cancellations.

Capt. Glenn W. Gilbert  
PIO, 117th Tactical Recon. Wing  
Lawson AFB, Georgia.

• *No slur intended toward the 117th in our article, "What, No Controversy?" Our correspondent just didn't discuss all the facts—The Editors.*

## Permission Granted

**Gentlemen:** The Air War College requests permission to reproduce Capt. James Jabara's article, "We Fly MIG Alley," which appeared in AIR FORCE Magazine last June. This material is to be incorporated in extension courses now being written in the Air War College.

Lt. Col. Miles R. Palmer  
Air War College  
Maxwell AFB, Ala.

• *We're happy to say yes—The Editors.*

## Pat on the Back

**Gentlemen:** I am writing to let you know how much I have been enjoying your issues of AIR FORCE Magazine. To me, and I know to many others, it is the only true source from which we, who now have drifted somewhat, can get factual and enlightening news, data, and personnel information about our Air Force.

Robert E. Knauer  
Covina, Calif.





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# Battle of Headache Ridge

Out of confusion, doubt and uncertainty is arising a better understanding of airpower in war, with a few die-hard exceptions

By James H. Straubel

A YEAR AGO this month our desk was piled high with newspaper clippings which represented press commentary on the role of airpower in the first six months of the Korean war. Many of these reports were quoted in the March issue of this magazine under the heading, "Out of Millions of Words—Confusion, Doubt and Concern," and with an accompanying request that "the quotes on these pages and thousands of others like them be weighed against the airpower facts presented in this issue" (devoted entirely to "The Air-Ground Operation in Korea").

A year later the newspaper clippings reveal far less confusion and even less doubt over the role and effectiveness of airpower in Korea, and the major concern these days is over the increasing effectiveness of the enemy's airpower in the war.

In our special issue of last March we devoted a number of words to an understanding of air superiority as the key to air and surface operations in Korea, realizing at the time that the point would be missed or avoided by most of the commentators as long as the skies were clear over the battle area. Quite in tune with the times some of them observed that this concern over enemy airpower was just another bid for a larger Air Force, and so to their readers it became just another indication of "service rivalry."

Today, as the MIGs step up the challenge, few words are needed to explain the importance of command of the air. In fact, the cycle has begun to swing in the other direction. The editors of *Time*, for example, appeared shocked out of their wits recently at General Vandenberg's report on the growing threats to Allied air superiority in Korea. *Time* lamely asked why it hadn't been told about this earlier. A strange reaction, in light of the fact that the story of

our airpower deficiency had been there for all to see, if they cared to see it, ever since the Finletter committee's report in 1948.

The new respect for airpower's significance in Korea, stemming from fright, can hardly be called deep rooted. It is based on the result of tactical airpower's two most obvious and most colorful missions—close air support, which can be observed in a familiar battlefield setting and, at the other extreme, air superiority, with its dramatic aerial dogfights, plus an added attraction, the ever popular box score. Meanwhile, tactical airpower's most lucrative military mission—interdiction—goes begging for understanding and for appreciation. Today in Korea, for example, this employment of the air weapon against enemy reinforcements and supplies represents the primary offensive of the United Nations, though the daily headlines seem quite oblivious to that fact.

Interdiction, by the very nature of the task, doesn't lend itself easily to daily headlines. It involves operations which cannot be seen or appraised on the spot. It is a repetitious and laborious task. Its box scores of trains, trucks and bridges—never as intriguing as the dogfight counts—cannot be added up immediately. Its full effect may not be realized for weeks or months. It is "delayed action warfare" and delayed action is seldom appealing. As Lord Tedder, Marshal of the Royal Air Force, once observed, "It is when one comes to the use of airpower that one begins to meet the misconceptions and consequent disagreements which still linger. It is the old question of the seen and unseen wars. Enemy air interference with our surface operations is seen and very real; consequently, superiority in the air over our land and sea forces, so as to prevent that interference, is obviously a very desirable thing. But when

it comes to operations which are literally right off the mat the outlook tends to be different. The old saying, 'out of sight out of mind,' is apt to apply."

The correspondent covering the day by day action in Korea hardly can be blamed for not giving more emphasis to a subject like aerial interdiction, any more than he can be blamed for filing lengthy stories about small engagements regardless of their over-all significance. If the story value is there, the correspondent must give it the full treatment. But for interpretation of the war in Korea the daily reader must lean on the men whose business it is to probe behind the headlines and analyze the result. These men, in turn, having set up shop as military analysts, have a heavy responsibility to the reader to do their analyzing wisely and objectively. And, after a shaky start, the commentators have, by and large, done a creditable job on the war in Korea and on airpower's place in this war. Even David Lawrence, who for a long time found it hard to understand, has turned out some excellent reports on airpower in the last year.

The dilemma of the "old-school" commentator in his dealings with airpower is best illustrated perhaps in the writings of Hanson Baldwin, military analyst of the *New York Times*. A graduate of Annapolis and well schooled in the Navy tradition, Mr. Baldwin is a recognized authority on sea power and well known for his writings on Navy subjects. His views on airpower are of little consequence, except that they find expression in the *Times*, whose prestige is respected throughout the publishing world.

Mr. Baldwin, despite a valiant effort now and then, has found it most difficult to consider warfare except in the "classical pattern," and next to impossible to project his



thoughts and interests into the third dimension. Although not an elderly man his daily outpouring of words makes it quite clear that war with modern weapons has moved too fast for him and, as a result, has left him in its rear areas. An examination of his writings indicate that Mr. Baldwin visualizes without undue mental strain the air weapon as a projection of artillery and as a projection of naval fire power. Both fit the accepted pattern. Also, he has conditioned himself to the spectacle of plane chasing plane around the sky in combat. But when the plane takes off on its own against ground targets, strategically against the enemy's warmaking sources or tactically against his supply lines, the mental battle really begins.

On occasion, when the airplane is our only weapon in action against the enemy, as was the case in the first two years of the war in Europe, the mental problem of the reactionary thinker is eased somewhat by the fact that there are no alternatives to worry about. At this juncture in this mental pattern it is normal procedure to discount the effects of the aerial activity and urge that surface forces be employed to "get on with the war," with little regard for their capability to do so. Should the enemy capitulate without surface invasion, as did Japan in the last war, it becomes inconceivable that a new element such as aerial invasion, might have been the decisive factor. The mind automatically reaches out beyond the realm of logic, searching for the surface action that must have been the responsible factor.

When the choice must be made between utilization of the airplane as an adjunct to surface action and as a separate instrument of war—a choice usually dictated by the lack of aircraft to accomplish both jobs successfully—the reactionary observer has no problem at all. Quite irrespective of the over-all war situation he chooses the airplane as an accessory to surface activity and he revolts at the thought of the other alternative. When the men running the war disagree with this masterminding, and, in fact, choose the separate instrument role for the airplane, they strike out blindly in an effort to rationalize their own pre-conditioned beliefs.

Mr. Baldwin of the *Times* usually is a cautious boxer and always fast on his feet. But a month or so ago he let his guard down and stood there, flat-footed in the center of the page, slugging out words with abandon in

a three-round flurry of columns under the grossly exaggerated title, "Airpower in Korea."

The punch which sent Mr. Baldwin reeling into this unbecoming role was the article "The New Look in Korea", by Harold C. Stuart, AFA President, based on Mr. Stuart's observations during a recent tour of the Far East. Newspapers throughout the country devoted considerable space to his article. The editors of Mr. Baldwin's own paper gave it front-page display in their Sunday edition of November 25. The *New York Herald Tribune*, in an editorial page feature by its veteran Washington correspondent, C. B. Allen, commented: "The clearest exposition of what has been going on in the Korean war—on the ground and in the air—and the reasons therefore yet to come out of the Far East was given last week in separate accounts by General Hoyt S. Vandenberg, Air Force Chief of Staff, and Harold C. Stuart, former Assistant Secretary of that service. Between them the two men threw a lot of light on the increased tempo of air combat over Korea in the last few months."

To Mr. Baldwin, however, from his vantage point on Times Square, Mr. Stuart had presented "... a complete reversal ... of the actual picture." Both General Vandenberg, in a press conference, and Mr. Stuart, in the *AIR FORCE* article, had reported that the ground stalemate in Korea finally had permitted concentration of airpower on interdiction against enemy supplies and reinforcements in the rear areas and, to make this possible, close support sorties had been curtailed and rationed along the Eighth Army front. To Mr. Baldwin this was something akin to treason, if we can believe his column. Here was an example of airpower being used separately against enemy ground forces. This, of course, could only mean that our own ground troops were suffering unmercifully as a result. As Mr. Baldwin saw it, the decision to ration close air support merely confirmed this conviction. The whole situation, he implied, was another plot by those unseen enemies known as "airpower enthusiasts," though it was quite evident that the "enthusiasts" in this instance included a couple of hardbiten ground generals named Ridgway and Van Fleet. For they had made the final decision in the matter.

Mr. Baldwin's firm belief that the ground forces were being robbed of essential air support at the front was based on the assumption that a

fluid battle situation still existed in Korea. It had been apparent, even in the daily communiques, that a ground stalemate had existed in Korea for several months unless, of course, Mr. Baldwin considered regimental actions such as the battle for "Heartbreak Ridge" as major encounters. Mr. Stuart, based on a discussion with General Van Fleet, had explained that the stalemate was of our own choosing, that our ground forces could advance but, under prevailing circumstances, had no better place to go. It also should have been evident to Mr. Baldwin that the UN forces had been maneuvering and fighting their way into the best defensive position possible and, now that they occupied that position, would only jeopardize it by moving forward. Not accepting the importance of our own interdiction effort, it would not have been as easy for him to grasp the fact that, if General Van Fleet moved his forces to within range of enemy aircraft, he would expose them to an "Operation Strangle" on the part of the enemy.

One of Mr. Baldwin's major conclusions in his three-round bout with logic was this: "Ground power, not airpower, is the dominant arm in Korea, and is likely to be in any continental war of the foreseeable future. We do not have enough ground superiority over the enemy to make decisive victory possible." However, General Van Fleet recently made it clear as to the vital areas of decision in Korea when he said: "The point of balance lies in the air. If the enemy throws in his Manchurian potential (in planes) and we don't have enough additional airpower to combat the threat, the Eighth Army might be jeopardized."

On the basic issues at least it would seem that the readers of his column are going to make a choice on this important issue—Baldwin or Van Fleet. And it becomes increasingly clear that our ground forces haven't moved forward in Korea for sound military reasons, aside from any possible diplomatic reasons which might be involved. And further, that the stalemated ground war simply hadn't called for, in these last few months, a heavy outlay of close air support. Mr. Baldwin revolted at the fact that, to make the interdiction campaign possible, General Van Fleet had rationed the Eighth Army to approximately 100 close support sorties per day. Examination of the sortie record reveals that the ten divisions of the Eighth Army actually have not demanded, based on their own request, an average of 100

(Continued on page 47)



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# THE ATOMIC ILLUSION

*The first of a series of articles outlining  
a fallacious defense policy that is selling Russia short*

**I**N THIS FIRST MONTH OF 1952, with a critical year behind us and another critical year ahead, the signposts to potential disaster seem even more ominous than usual.

The overpowering problem of the day is our national reluctance to sacrifice butter for guns, and our resultant inability to maintain the military production schedules established as necessary to national security.

The problem centers, not merely in shortages of machine tools and skilled manpower and strategic resources, but in the shortage of perspective on the part of some leaders, both civilian and military; and the problem is compounded in their insistent rationalization of our present position.

We downgrade military production schedules and credit the loss to "slippage" as if the word itself described a solution. We advance our programming deadlines at will, as if our security were being advanced in the process.

Meanwhile, the threat grows, time closes in, and the military requirement increases.

Somewhere along the line, wrapped up in our internal problems, we have forgotten that the defense program is not a family affair, not just a matter of meeting quotas and schedules like a door-to-door sales crew. We seem intent on avoiding the main issue—that, like it or not, we are on the schedule of a ruthless and coldly calculating aggressor; that the timetable we must work against has been drawn up, not in Washington, but in Moscow.

In this predicament, we must continue to ask how and why we have permitted ourselves to become ensnared in this booby trap of national insecurity and world peril. For

unless we keep asking the questions we can hardly expect to find the answers.

The editors of AIR FORCE have sought some of the answers from a brilliant young lawyer, Ramsay D. Potts, Jr., whose firsthand experience with events which shape our present course has given him an unusual grasp of the situation. Mr. Potts has responded with the series of articles which begins on the following pages.

Ramsay Potts, now a colonel in the Air Force Reserve, went to England with the first B-24s assigned to the theater, led a B-24 group on the famous low-level raid against Ploesti on August 1, 1943, advanced to Wing Chief of Staff, and to Director of Bombing Operations of the Eighth Air Force. At the end of the war he became chief of the Military Analysis Division, US Strategic Bombing Survey, interrogated large numbers of former military and civilian leaders of Germany and Japan, and helped draft the final Survey reports. Since the war he has practiced law, served as a Special Assistant to the Secretary of the Air Force, as a member of the faculty of the Air War College, and as Assistant to the Chairman of the National Security Resources Board in Washington. While at NSRB he was one of the principal architects of the government's industrial dispersion plan. In this capacity he had the assignment of appraising the impact of the atomic energy program on our national resources and our military program. He is now a Special Assistant to the RFC Administrator. We present his views as a valuable contribution to an understanding of the present dilemma.

The Editors





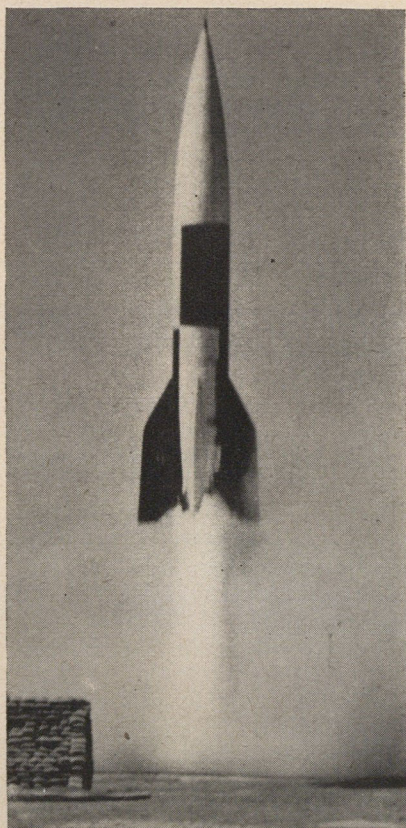
# The ATOMIC ILLUSION

**I**N THE SUMMER of 1945 I sat in a small sparsely furnished room in a military camp in England and talked with General Adolph Galland, who, during the last six months of the war in Europe, was commander of the German Air Defense Fighter Force.

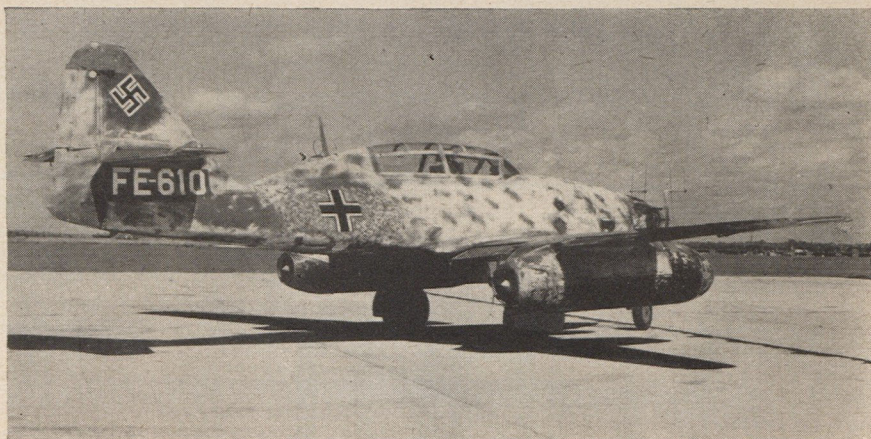
This conversation was one of a series of interrogations being conducted by the US Strategic Bombing Survey, in preparation for an analysis of the effects of Allied air operations upon the German military machine.

Galland was then in his late thirties, a bold and imaginative airman, whose period of confinement and contemplation had whetted his desire to discuss the great air war in which he had played a major role on the losing side.

We talked first of the air battles over Germany, and Galland's eyes sparkled and he waved his hands as he told me of a test flight he had flown in an Me-262 jet during which he had overtaken a formation of Flying Fortresses and shot down three in flames.



The Nazi dictatorship also was the first to come up with an operational long-range missile. We're still using captured V-2s in our own research.



First jet airplane to be used operationally, this German Me-262 is a good example of the danger of underestimating the technology of a dictatorship.

"Your piston fighters could not hope to catch me," he said, "and I proved what I had been shouting to Goering, that our weapons were better than yours if only we were allowed to use them properly. But Hitler insisted upon making the Me-262 a ground attack plane, and six critical months were lost before we could get the plane into service against your Mustangs and heavy bombers."

Galland spoke with bitterness of Hitler's fanatical belief in his own instinctive genius as a military strategist, and expressed contempt for Goering's preoccupation with money and power to the detriment and defeat of the German Air Force.

From this interrogation and others, and from our comparative study of Allied and German weapons, we in the Military Analysis Division of the Survey concluded that the Germans were ahead of the United States, and also the British, in four major fields of aerial development:

- In jet aircraft;
- In guided missiles;
- In aircraft armament, and
- In wind tunnel research.

Since the Germans had technical superiority in many fields of aerial development, how then was the air war over Europe won by the Allies?

The answer has been chronicled in the reports of the Survey and in other publications, but in summing up the reasons, my own assessment, without any attempt at priority, is:

- Allied commanders had a superior strategic concept of the role of air power in modern war, and US and British air commanders used greater imagination in employing the

air forces they had at their disposal.

- Allied pilots were increasingly better trained in comparison with Luftwaffe pilots after 1943, due mainly to the German shortage of aviation fuel, which caused a cut-back in the number of hours of training given a Luftwaffe pilot before he was sent into combat.
- From early 1944 onward, the Allies possessed a numerical advantage in planes available for combat. This Allied numerical advantage was pronounced from about May of 1944 to the end of the war.

In addition, there were some important fields of aerial development in which the Allies were technically superior to the Germans. The most vital of these was in radar, both airborne and ground-based. Goering, when interrogated, gave this as his major reason why Germany lost the air war.

Needless to say, the lessons of the air war in Europe made a sharp impact on the thinking of the US air commanders, and especially on the minds of those who had had the responsibility for planning the air campaigns against Germany. The narrow margin of the air victory, upon which the invasion of Normandy and the entire land campaign were predicated, left no room for self-congratulation, but rather tended to induce a sober respect for German technology and industry. It is no surprise that US air leaders, schooled in this experience, have consistently appraised the Russian threat and capa-

**First of a Series**

**By Ramsay D. Potts, Jr.**



# Dangerous Blind Spots

Our war experience in Europe should have warned us against underestimating the technological potential of a dictatorship. Yet today our illusions about another dictatorship are undermining our national security. Why? Here are some of the answers:

- We still base our defense thinking on a fallacious concept of Russia's "ox-cart economy."
- We still suffer from dangerous miscalculations by some of the scientific and military leaders in the early postwar period.
- We continue to forget that Russia's productive capacity centers in a "guns-over-butter" economy.
- We underestimate Russia's ability to manufacture and deliver atomic weapons.
- We cannot be sure that the first Russian atomic explosion took place as late as 1949.
- We cannot count on more than a four-year lead in atomic development.
- We must plan against an era of Russian atomic "plenty" by 1955.
- We must cast aside our illusions and face the facts of Russian strength.



bility for the harsh reality that it is.

Others, however, have not been so circumspect.

The many lessons we learned from experience in war against Germany should have furnished valuable guides to those of our national leaders who since 1946 have been trying to estimate Russian capabilities. These lessons should have made any estimator chary of low-rating the technological potential of a dictatorship with vast resources at its command. But among those who shaped our national policy in the immediate postwar period there were men who did not interpret the lessons of the war against Germany this way. So it was that as a country we rolled along right up until Korea on the premise that Russia was an "oxcart" economy, incapable of producing the complicated paraphernalia of modern war.

Of the estimates that have had to be made, the most important of all is the estimate of Russia's capability to manufacture atomic weapons and deliver them on targets in this country. And in this critical area were made some of the most grievous miscalculations.

In a statement released to the press on October 30, 1947, Lt. Gen. Leslie R. Groves, head of the wartime Manhattan Project, was reported as saying that the Russians would need 15-20 years to develop the atomic bomb if they did it in secrecy and without aid from the United States, Britain, or Switzerland.

Elaborating upon this theme, General Groves explained in *The Saturday Evening Post* of June 19, 1948: why he had a low opinion of Russian technology. In this article he modified his previous "fifteen-twenty years" required by Russia to develop the atomic bomb, but he still put 1955 as the earliest date the Russians could possibly produce a "quantity" of A-bombs. In 1948 a "quantity" of atomic bombs was thirty or forty, not the hundreds in which we are beginning to think today. Here is what General Groves said:

"Obviously, we are not going to give anyone the Manhattan Project plans now. It therefore will take Russia at least until 1955 to produce successful atomic bombs in quantity. I say this because Russia simply does not have enough precision industry, technical skill, or scientific numerical strength to even come close to duplicating the magnificent achievement of the American industrialists, skilled labor, engineers, and scientists who made the Manhattan Project a success. Industrially, Russia is primarily a heavy industry nation; she uses axle grease where we use fine lubricating



oils. It is an oxcart-versus-automobile situation."

This low opinion of Russian science and industry has also been the view of Dr. Vannevar Bush who from 1946 to 1948 held the key scientific advisory post in the Department of Defense as Chairman of the Research and Development Board.

Because of his dual position during World War II as Director of the Office of Scientific Research and Development and as Chairman of the Joint Committee on New Weapons and Equipment of the Joint Chiefs of Staff, Dr. Bush's views were accorded great weight in the high councils of government. It can be said that the Bush view of Soviet Russian capabilities exercised virtually a controlling effect on national policy and military programs during the period from 1946 up to the end of 1949.

An example of this influence is to be seen in the testimony given to the House Armed Services Committee by Secretary of Defense Forrestal on April 12, 1948.

Secretary Forrestal was testifying on the Universal Military Training bill before a tense and critical Committee that seemed insistent upon giving precedence in the military budget to a 70 group peacetime Air Force over UMT. Secretary Forrestal wavered on this point and then, in response to questions, said he was reluctant to recommend 70 groups for the Air Force, but might later authorize such an increase. It is clear from the Secretary's testimony that he had great difficulty in making up his mind as to whether or not 70 groups were needed at that time. Probably the most compelling of the several reasons he gave for not approving 70 groups in 1948 was his belief that Russia had the scientific knowledge and information but not the industrial capacity to produce the atomic bomb for many years—perhaps a decade. Mr. Forrestal

stated this as his view in answer to a question from a member of the Committee. And the Secretary added that he had received his information from Dr. Vannevar Bush.

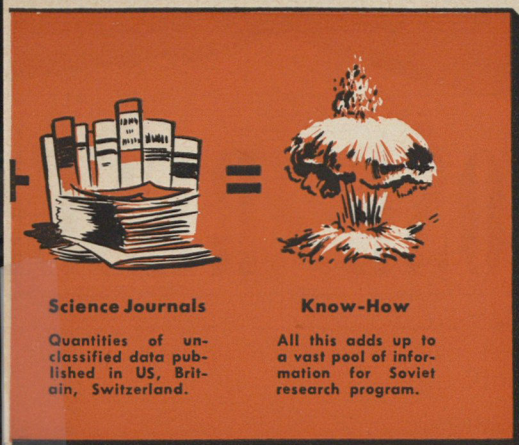
There were other assessments made between 1945 and 1949 of Soviet Russia's capacity to produce atomic weapons. The most notable of these, and the one which deserved to be given the most careful attention, was the estimate of the President's Air Policy Commission that "it would be an unreasonable risk and therefore a reckless course to rely on other nations not having atomic weapons in quantity by the end of 1952."

Unfortunately, little heed was given this view in planning the size and composition of the military budget for 1948, 1949, and 1950.

Why, then, if there were reliable signposts at hand to mark the way, did we underestimate the Russian atomic capacity? The answer to this is worth attempting if it does no more than one thing: warn us against underestimating in the future the Soviet capability to produce in quantity complex weapons.

We of the Western democracies seem to have a habit of thinking of Soviet Russia as a semi-barbaric country full of louts in baggy pants who somehow manage to win military victories by overwhelming an enemy with masses of troops. This was sharply brought home to me by a man who had spent several years of the post-World War II period in making analyses of military problems for the RAND Corporation. He said that even after he and his associates pieced together a picture of Soviet strength in certain fields of armament, he nevertheless tended subconsciously to reject his own conclusions. "The picture that always crops into my mind when I think of Soviet Russia," he said, "is of a woman plowing a field behind an animal-drawn plow. I am trying to erase that mental image, and replace





it with one of the MIG-15 pulling away from the F-86 at 40,000 feet."

The information that the US has been able to obtain about technical activity behind the Iron Curtain is extremely sketchy. Nevertheless, in making our estimates of Soviet Russia we have tried to draw a complete and rounded picture from this scanty information. When, however, there is little information, it is dangerous to rely only upon proven facts to the exclusion of developing general theories on a deductive basis. This was one of our mistakes. We seem to have reasoned from meager information to a general premise that would fit a preconceived notion of Russia as industrially backward.

Of the strategic compulsions under which Soviet Russia is operating, probably the most important of all is the need to obtain a satisfactory atomic potential in relation to the US. As evidence of the fact that the Soviets have reacted with tremendous vigor to this compulsion, they placed at the head of their atomic energy organization (in 1946) one Lavrenti Beria, the number-four man in the Communist Party hierarchy, the head of the NKVD, and a man recognized as having unique organizational abilities.

The result of Beria's appointment has been the creation in Soviet Russia of an atomic energy organization that compares favorably in size and scope with the atomic energy organization of our own country. Slave labor by the thousands has been put to work in the uranium mines of Czechoslovakia and elsewhere. German nuclear scientists numbering in the hundreds have been brought from the East Zone of Germany and pressed into Soviet service, and resources on a vast scale have been allocated to the various Soviet atomic projects. Knowledge of these facts should have warned us against underestimating the results that might be achieved by Soviet Russia, but

since these were general facts rather than specific knowledge of Soviet production of atomic weapons, they were given little weight.

In making comparisons of US and Soviet industrial and technological strength, the popular method is to compare indexes of basic industrial output. By this method, the US steel production for 1950-1952 of four times the estimated Soviet steel production is sometimes taken to indicate that the US is four times as strong as Soviet Russia. This method of comparing strengths can be vastly misleading, for the truth, as we all know, is that the Russians have depressed their civilian standard of living to a minimum subsistence level in order to concentrate upon investment in capital goods, machine tools and armaments. By dint of this and by borrowing and stealing designs from German, British, American, Swiss and other sources, the Russians have been able, by concentrating on the armaments segment of the technological front, to achieve performance that matches the best in the US. The most striking illustration of this is the quantity production of the MIG-15, but other examples can be noted in the quality and quantity of Russian tanks, artillery pieces, rockets and radar.

Finally, an area in which we badly underestimated the Russians was in the amount of atomic information we credited them with having at their disposal. When the Russians were told that the US had solved the problem of making atomic bombs, Stalin was able to receive the news with the utmost composure. For the great secret was no secret to him. The Russian espionage organization functioned throughout the war with remarkable success, especially in the field of atomic energy. The cases of Allen Nunn May and Klaus Fuchs are familiar to all of us. Through these and other spies, the Russians were able to obtain the most complete information about our vital processes and production techniques for making atomic weapons.

In addition to the information which they have obtained from spies and from our technical journals, the Russians have also had available to them the services of such men as Bruno Pontecorvo, the noted Italian physicist who disappeared behind the Iron Curtain in 1950. And the former head of the French atomic energy program, Frederic Joliot-Curie, is an avowed Communist!

There are other brains and talent also in the service of the Russian atomic program. One recent report lists German Nobel Prize winner, Prof. Gustav Hertz, formerly head of

the Siemens Research Institute in Berlin, as doing important atomic research for the Soviets. In addition, thirty-seven other top-ranking German physicists have been identified as doing "extremely valuable work" on Russian atomic bombs.

Of course the Soviets also have their own expert scientists and physicists in the field of atomic energy. Peter Kapitza, the world-renowned Russian nuclear scientist, is probably the most important of the group working to solve the Soviet atomic weapons production problem. And there are many other competent Russian scientists and engineers.

What, then, is the conclusion from all this?

In September of 1949, the President announced that the Russians had achieved an atomic explosion. This announcement was shortly followed by a statement from General Bradley that the Russians had beaten our best estimate by several months, which, although technically true, seems to have been rather an understatement, for actually the Russians beat our *best accepted* estimates, not by months, but by years.

If the President's announcement is taken as an indication that 1949 was the year of the first Russian atomic explosion, this would place them about four and one-half years behind the US. We are not sure, however, that this was the first explosion, and so we would be justified in estimating that the Soviets have been only three to four years behind the US in atomic technology.

This means that in 1951 the Soviets might be where the US was in 1947, and in 1955 the Soviets may be where the US is today. Since the US in 1951 is passing from a period of atomic "scarcity" to an era of relative "plenty," we must look forward to the day around 1955 when the Soviets will also pass from "scarcity" to "plenty" in atomic weapons. This conclusion is predicated upon the Soviets continuing to advance at the same rate the US has advanced in atomic weapons production. It is also predicated upon applying the same definition of "scarcity" and "plenty" to the Soviet stockpile that we apply to our own stockpile. Since the validity of these two assumptions is questionable, we will attempt to analyze them in a later article. At this stage they suffice as general assumptions to drive home the seriousness of the predicament of the Western democracies, and to inform us that time may be working to undermine rather than to strengthen our position.

(First in a series of articles on *The Atomic Illusion*.)



# WHAT ABOUT THOSE RESERVE

**A**S PROBLEMS fundamental to national security still go begging for answers, it requires some effort to become concerned over alleged inequities in the military promotion system. Further, in an Air Force Reserve which promises to be non-existent as an organized and equipped force through 1952, the promotion of Reservists not on active duty would seem to be rather academic at this time. And with this Reserve plan lacking primarily in incentives for airmen, it takes additional effort to limit one's concern to the promotion problems of the Air Force's off-duty Reserve officers.

However, since the pending legislation could have an effect on the long-range capability of the Reserve, the sub-

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*Note: The editors of this magazine have been asked by a number of readers to clarify the issues behind pending legislation to revise the laws governing the promotion of Reserve officers. This report represents a preliminary staff study on the subject.*

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ject is worthy of attention. The legislation in question will, of course, cover all three services, but since the Air Force is our primary area of interest we will confine our report to this area. And since it would take a book to cover the many complexities of military promotions, we shall limit our observations to certain phases of the problem which, it seems to us, are most pertinent right now.

## The Directive

First, the directive from Congress, as contained in Section 260A of the Armed Forces Reserve Act.

"Prior to 1 February 1952 the Secretary of Defense is directed to submit to the Congress adequate and equitable recommendations, as uniform as practicable, for all of the Armed Forces of the United States, recognizing the inherent differences between the Armed Forces for the promotion of Reserves, which shall conform as nearly as practicable to the system for the promotion of Regular members of that Armed Force, including recommendations concerning precedence (date of rank), forced attrition, distribution in grades and constructive credit."

Air Force Reserve leaders and the Regulars assigned to the project at the Pentagon both have welcomed this expressed interest of Congress in molding the Reserves to the promotion system governing Regular officers.

To the Regulars, quite logically, it has become a matter of fitting off-duty Reserve officers into the pattern of the Officer Personnel Act of 1947, the basic document governing the promotion of Regular officers and Reserve officers on active duty. In making the fit, they have found certain

portions of the Act which, so they say, could not be applied to the Reserve at this time.

## Complete Equality

Leaders of the Reserve Organizations, when called upon to express their views at the Pentagon, have accepted the Officer Personnel Act as the basic pattern and have warned that they will campaign before Congress for "complete equality" under the Act, though they also have thrown in a few exceptions of their own.

So it is that the Officer Personnel Act of 1947 has become the planning "bible" for Reserve officer promotions and, with a few alterations, seems destined to become the legal "bible" of the future.

## Temporary Promotions

Before looking over the OPA (as personnel people at the Pentagon fondly refer to it) and its potential effect on officer Reservists, let's look at some of these exceptions to the Act; first, at temporary promotions.

The OPA, it should be understood, provides for both permanent and temporary promotions, the first with requirements fixed by statute, the latter with requirements prescribed by administration, in this instance by Air Force regulation.

More than fifty percent of all Regular officers of the Air Force are serving in grades higher than their permanent ranks. For example, of approximately 2,100 Regular second lieutenants in the Air Force, about 600 are serving in temporary grades ranging from first lieutenant to, in one instance at least, full colonel. Of approximately 2,500 permanent first lieutenants, almost 1,800 are serving in higher temporary grades. About half the 8,700 permanent captains, half the 3,800 permanent majors, and half the 3,500 permanent lieutenant colonels all hold higher temporary ranks. And more than 200 of the permanent colonels wear stars as temporary general officers.

Reserve leaders, conscious of this situation, have expressed the need for better promotion treatment for on-duty Reserve officers, and usually cite as evidence the fact that, by Air Force regulation, a considerable number of such officers are serving in temporary ranks lower than their permanent ranks in the Reserve. Also, it is claimed that the Regulars invariably receive the preponderance of temporary promotions, especially to field grade, though vastly outnumbered by Reservists on active duty. And it is added that "inequities" such as these, rather than a new permanent promotion system, have prompted the directive from Congress, though the directive hardly supports the claim. In committee meetings at the Pentagon, however, Reserve leaders seldom press these touchy points with vigor and, in fact, have formally endorsed the current procedure.

At any rate, the Pentagon has interpreted the Congressional directive as applying only to a permanent pro-



# RESERVE OFFICER PROMOTIONS?

motion system for Reserve officers not on active duty. At this writing, as the Department of Defense prepares the final draft of the proposed legislation, that's the way it stands. No one has seriously proposed temporary promotions for Reservists not on active duty.

## Up or Out

Reserve leaders, to date at least, have taken exception to the letter of the OPA law in the matter of "forced attrition," though it was mentioned specifically in the Congressional directive. By "forced attrition" is meant the system, provided for in the OPA, which requires that officers progress into higher ranks or be eliminated from the service. In effect, it requires a Regular to "go up or out," to qualify for promotion after a specified length of service in grade or make room for someone who does qualify.

Under the Officer Personnel Act, all Regular officers must be considered by a selection board for promotion at specified times. In the event an officer is considered by one board and fails to receive a recommendation for promotion, he may be considered by a second board. If the second board does not recommend him (known as a "double pass-over"), he is eliminated from the active list and retired or separated (up to permanent lieutenant colonel).

However, if he is within two years of being retired (after 20 years' service), he is retained on the active list until the completion of this period and then retired. In addition, a provision exists for the payment of severance pay for Regular officers who receive a double pass-over, and thus are eliminated from the service. After a Regular officer is promoted to the permanent rank of lieutenant colonel, he is not considered as being passed over if he does not receive a permanent promotion to colonel.

Under present Air Force policies a Reserve officer is not forced into consideration for a promotion. He may obtain a promotion provided he occupies a position vacancy, is of the appropriate age, and has participated in Reserve programs to the extent that he has earned the number of points required for promotion to the next higher grade. There is no pass-over system and the officer is not eliminated from the Reserve in the event he is not promoted.

If a Reserve officer becomes over-age-in-grade, but has met participation requirements, he is not dropped to the Inactive Reserve if he does not so choose. He is permitted to remain in the Volunteer Reserve without occupying a position vacancy as such. He is permitted to earn points for his retention of status and for retirement under Public Law 810. In this manner a Reservist's equity in the Reserve Retirement Act may be protected. If the over-age-in-grade Reserve officer does not meet participation requirements, he is transferred to the Inactive Reserve. In any event, should a pass-over system be adopted for Reserve officers, it is logical to assume that an accompanying severance pay system also would be required. Without it an officer could

lose a considerable amount of equity in the present Reserve retirement plan.

This issue over "forced attrition" brings into focus a basic difference in the individuals involved: on the one hand, the part-time officer with Reserve status whose residence is fixed by the nature of his civilian occupation; who must measure his promotion opportunities in terms of the Reserve structure existing within his occupational area; who cannot take advantage of a promotion opportunity in another part of the country. The Regular, on the other hand, making a full-time career of the service, has his residence fixed only by the nature of his military assignment.

Relatively little consideration has been given these basic differences, either by the Regulars involved or by the Reserve leaders campaigning for "complete equality" under the Officer Personnel Act. Re-establishment of the Air Force Reserve as a program which will be active only in specified areas where Reserve population warrants, as presently being programmed, could conceivably eliminate many of these promotion problems for the immobile Reservist.

## Permanent Promotions

Now let's take a closer look at the permanent promotion provisions of OPA to see how they might affect the Air Force Reserve officer:

First of all, the OPA establishes a central selection board system, and permits the Secretary of the Air Force a choice of three procedures for such boards. He may furnish the board a list of officers to be considered for promotion and direct that the Board select a specified number of officers on a "best qualified basis"; he may direct that the Board consider officers in order of their seniority as their names appear on the promotion list, recommend those who are fully qualified and pass over those who are not, until a specified number are selected; or, because of the mandatory provisions of the Act, he may furnish the board a list of all officers required to be promoted under the statute and direct recommendation of all those fully qualified.

The promotion of Reserve officers currently is not controlled by a central selection board. Rather, each major command convenes or appoints a sufficient number of boards to consider for promotion the officers within that command. Reserve officers are recommended for promotions by their immediate commanding officers, through channels, to the major Command concerned, and the major Commands refer all such recommendations to their Air Force Reserve Selection Boards.

Under the central selection board system of the Regulars all officers eligible for promotion to the next higher grade are considered for promotion regardless of their location and regardless of position vacancies. A Reservist, on the other hand, must occupy a position vacancy. If the central board procedure were applied to the Reserves, it could



create certain unusual situations. For example, it would be possible for an officer occupying a position vacancy in a Reserve unit calling for a higher rank not to receive such a promotion, and for an officer not in the unit to receive it. Further, a Reservist receiving a promotion to the next higher grade could be promoted completely out of a Reserve unit because, if he received a promotion for which no T/O&E or T/D position vacancy existed, the grade would be unauthorized for the unit. Obviously, if the Regular system were adopted, provision would have to be made to eliminate inequities of this type; and, from the Air Force's viewpoint, permit further utilization of these individuals.

Under present policies a Reservist occupying a position vacancy calling for a higher rank is eligible for consideration for promotion when he meets time in grade and point-earning requirements as follows:

2nd Lt. to 1st Lt.	2 years	70 points
1st Lt. to Captain	3 years	105 points
Captain to Major	5 years	175 points
Major to Lt. Col.	3 years	105 points
Lt. Col. to Colonel	4 years	140 points

**If the Officer Personnel Act of 1947 is to become the planning "bible" for Reserve officer promotions the Reservist must understand some of the problems he invites by asking for "complete equality" under the Act.**

Regular officers' permanent promotions, being based on a different concept, vary considerably from the requirements of the Reserve promotion policies. Because a Regular is in active military service, no participation factor is required. Because he is on duty he can be moved to new locations where vacancies exist for equal or higher rank; therefore, no position vacancy, as such, is required. Maximum years in grade have been established and, with a few exceptions, a Regular who meets them must be promoted or eliminated. The in-grade maximums follow:

2nd Lt. to 1st Lt.	3 years
1st Lt. to Captain	7 years
Captain to Major	14 years
Major to Lt. Col.	21 years

The Officer Personnel Act provides a ceiling of 27,500 Regular officers for the Air Force. Of this total, 8 percent may be permanent colonels; 14 percent may be permanent lieutenant colonels; 19 percent may be permanent majors; 23 percent may be permanent captains; 18 percent may be permanent first lieutenants and 18 percent permanent second lieutenants. These percentages do not apply to temporary ranks.

#### **How Many Colonels?**

No maximum size has been established by statute for the Air Force Reserve. At present there are approximately 225,000 Reserve officers not on active duty. Of this number .76 percent are colonels, 3.3 percent lieutenant colonels, 8.7 percent majors, 23.3 percent captains, 38.8 percent first lieutenants and 24.6 percent second lieutenants. The Reserve grade structure is not based on the total number of individuals involved as it is in the Regular establishment.

It is based solely on those grade authorizations for T/O&E units, T/D Mobilization assignees and designees, and the VARTU programs. Together they provide a grade structure for approximately 125,000 Reserve officers, leaving some 100,000 officers for whom no grade structure is established for ranks other than those they now hold.

A percentage system comparable to that in effect for the Regulars hardly could be applied to the Reserve. If, for example, the Reserve was authorized 8 percent colonels, as is the Regular establishment under OPA, it would create positions for approximately 18,000 Reserve colonels.

Nevertheless, if a forced promotion system were adopted for the Reserves, it would seem necessary to expect a grade structure based on either a maximum number of officers against which percentages could be applied, or a fixed overall percentage for Reservists. If neither is forthcoming, or in the event the number or percentage is so flexible as to permit yearly changes, a Reserve officer would have no possible way of knowing whether in any given year he would be eligible for promotion, surplus in his present grade, or merely status quo.

#### **Date of Rank**

The matter of relative rank between Reservist and Regular has caused considerable discussion in Reserve circles, and was specifically mentioned in the Congressional directive. Under present statutes a Reserve officer coming on active duty receives a date of rank which precedes the date of his appointment in grade. If a Reserve officer, for example, was commissioned a major in 1942 and was relieved from active duty in 1945, he would have had, at that time, three years' service in grade. By 1951 he would have had nine years' service in grade as a Reservist. However, under current law he is credited only with service in grade while on active duty. If he were called to duty in 1951, for example, his date of rank would be back-dated by a period equalling the total number of years spent on active duty in grade, in this case three years. Three years subtracted from 1951 would give him a date of relative rank of 1948, as against 1942, when he received his initial appointment to grade of major. On the other side of the fence, the date of rank of a Regular officer is the same as the date of his commission. On this score, the Reservists are seeking "complete equality"—and no exceptions.

#### **Promotion Lists**

For purposes of determining his permanent grade and position on a promotion list, a Regular officer is credited by law with the length of active Federal service performed after 21 years of age and subsequent to December 31, 1947. For an initial appointment in the Reserve, no such credit system is in force. Instead, an experience factor in combination with age is used to arrive at appropriate rank. And should the list system be adapted to the Reserve, both the method and procedure are needed to establish an adequate initial promotion list for Reserve officers.

This procedure, however, does not apply to individuals who received Reserve commissions upon separation from the service under World War II demobilization; they were appointed to the Reserve in ranks commensurate with their AUS ranks which they held upon separation and, if eligible, received, as a gift, terminal leave promotions (generally sneered upon by seasoned Regulars). Approximately 20 percent of all Reserve officers received such promotions.

If a service credit system were inaugurated for an initial appointment in the Reserves, as in the Regular establishment, it might curtail the procurement of needed professional and technical personnel, since the majority of individuals applying for initial appointment have had little, if any, World War II experience. This again points up the fact that in many respects we are dealing with two basically different groups of individuals.





# Allison Turbo-Prop Engines Power 3 New Cargo Planes—

## ★ The Lockheed XC-130

## ★ The Douglas R6D

## ★ The Lockheed R70

While testing continues with the first U.S. Turbine Transport—the Allison Turbo-Liner—military contracts have been awarded for the installation of Allison Turbo-Prop engines in three additional types of transport aircraft.

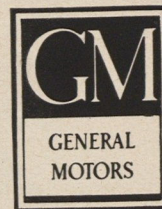
★ The Lockheed XC-130—a U.S.A.F. four-engine medium cargo plane—is the first military transport ever designed originally around Turbo-Prop power. It won U.S.A.F. design competition over five other makes and the selection of Allison engines

represents another first for Allison in the development of turbine transports in this country.

★ The new Navy-sponsored R6D is a modified configuration of the world-famous Douglas DC6A Liftmaster.

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# The Four Freedoms of the Air Force

By Major General Donald C. Putt, USAF

(Acting Deputy Chief of Staff, Development)



## III Freedom from WANT and WASTE

*How the systems approach to weapons development results in  
more combat power per taxpayer's dollar spent*

**W**ANT can lead to defeat in war. Waste can lead to subjugation without war. As a nation, we can not risk "want" or afford "waste" in our armed forces. The stakes are too high. If we "want" in the combat elements needed most, we may starve ourselves into defeat and destruction. If we waste money and vital resources on the elements needed least, we may gorge ourselves to death.

For a recent example of "want," take the case of tactical air during the early months in Korea. There were complaints that the Army had trouble getting timely air support. Defective organization was said to be the cause. The complaints



# B-29



**Gross Weight—140,000 pounds**

**Cost—\$680,000**

Difference in airplane costs is partly result of inflation, mostly result of increasing complexity of today's airplanes. In World War II airframe and engine accounted for 85-90

# B-36



**Gross Weight—360,000 pounds**

**Cost—\$3,500,000**

percent of cost of typical plane. Today, with automatic fire control systems, tracking systems, navigational equipment and like, electronics make up half of cost of airplane.

were fairly legitimate, but the reason given was incorrect. The main factor was the almost total initial lack of communications for tactical air support. When the Korean war started, the entire Air Force had only one Tactical Air Control Group and the entire Army had only one Air-Ground Operations Signal Company. Inadequate military appropriations had cut the units of all services to a fraction of their combat strength. Our military readiness had been permitted, in many instances, to deteriorate to the house-keeping stage.

However, now that the danger we face is more clearly recognized, we must remember that the nation cannot afford the waste of a blind armaments race. Our cold war defense budget may amount to perhaps twenty percent of the gross national product. The Soviets have for many years suppressed civilian consumption far below normal levels, leaving vast sums available for armaments even in "peacetime." On the other hand, our democracy has had no similar experience. And it is at least questionable whether we can compress civilian consumption—in the absence of a hot war and over the long pull—without bringing on serious inflation.

Therefore, as Secretary Finletter explained recently, "We must give increasingly serious thought to the sobering fact that our resources *are* limited." We should dispose, the Secretary further explained, "of any notion that the Defense Establishment of the future is to be based on balanced forces, at least on balanced forces as that term is sometimes misused. This term 'balanced forces' is an example of a good phrase which has gone wrong. For it has come to mean in the minds of many the idea that the defense dollar should be divided equally among the three Departments which make up the Defense Establishment. This never was the intention of the men who first used the term. Anyone can accept the term 'balanced forces' if they interpret it in its right meaning, which is that in these days, with a military budget already at sixty billions of dollars, nothing less than a most exacting calculation of forces in relation to the top priority tasks these forces have to perform can be used as the basis for determining the kind of military establishment the country should have.

"Perhaps in the past we could afford to have military units which were not strictly necessary on the day war starts or during the period immediately thereafter, or were not calculated to meet the top priority needs of ourselves

and our allies. Now we have to calculate the things which are the musts—that is, the tasks which are indispensable to our great purposes of deterring war and of seeing to it that if war comes this country and its vital interests are protected. Then we must calculate how we can use most effectively not only our presently available resources to accomplish these results, but also the resources we will have from two to four years from now. We must then allocate the planes, tanks, and ships, and the men who man them, to create an integrated force which will be able to accomplish these top priority tasks with the most devastating effect. It must be already plain to all of us that the claims upon our resources represented by the top priority tasks alone will by themselves require a most frugal husbanding of our manpower, our raw material, and



**Manpower requirements for operations like this ground-controlled intercept board must be shaved through new methods.**



our industrial facilities. A wise strategy, the only possible strategy for this country is one based upon a wise and economical use of our total resources."

Most important among the top priority tasks, to which Secretary Finletter referred, is the one of delivering the atomic weapons which are available. We have the word of men like General Bradley that airpower is the most efficient means for this purpose. But airpower—the nation's priority weapon—is becoming increasingly expensive. Let's see why this is the case.

## **RIISING DEVELOPMENT COSTS**

The cost of airpower in recent years has increased far beyond that of the inflationary increase in the cost of labor and materials alone. This can be attributed, first, to considerable increases in aircraft size and weight necessitated by the increased performance requirements of speed, range, altitude, and various operational needs, such as all-weather operation; second, to increased cost per pound of aircraft, resulting from a very marked increase in the complexity of modern airframe structures and equipment.

To gain a little perspective, consider the fact that the Army has increased its basic speed from the three miles per hour of Caesar's foot soldier to about forty miles per hour of the jeep-carried soldier under Eisenhower (thirteen times); the basic naval vessel has increased in speed from the five knots of the Phoenician galleys to about thirty-five knots of the present Navy (seven times); whereas aircraft have increased in speed, in the short space of time since the Wright Brothers, from about thirty miles per hour to the 600-700 miles per hour of today's operational combat aircraft (more than twenty times). This has been made possible by major increases in technological complexity and degree of refinement of aircraft, which are reflected in increased costs.

The increase in aircraft size brought about by the ever-increasing performance requirements has been phenomenal. What was considered a "heavy" bomber at the start of the last war—the B-17—weighed only 60,000 pounds gross, whereas our heavy bomber—the B-36—weighs almost 360,000 pounds, roughly a six-fold increase. A World War I fighter weighed approximately 2,000 pounds, whereas a modern fighter may weigh over 40,000 pounds—as the F-89D.

Not only have aircraft grown considerably in size, but their cost per pound has increased considerably. That of experimental aircraft has increased approximately ten-fold

in the past ten years. For example, the XF-38 cost about \$25 per pound, whereas the XF-86 cost approximately \$230 per pound. Bombers rose in cost in a similar fashion—the XB-29 costing about \$60 per pound, while the XB-52 cost some \$250 per pound. Estimated costs of a new experimental bomber if initiated today would be over \$400 per pound. This is primarily the result of increased complexity and refinement of the airframe and equipment. For example:

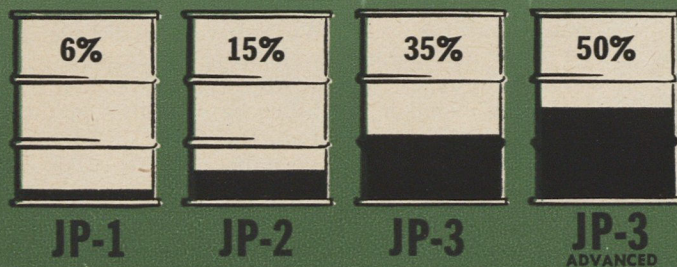
- Engineering manhours have grown from approximately 140,000 for the first B-17 to 3,500,000 for the B-47.
- Airplane structures have become far more expensive. World War II airplanes had aluminum skins approximately one-eighth of an inch thick, requiring considerable sheet-metal fabricating facilities. Modern aircraft require structures of considerably greater refinement and expense. For example, the B-47 wing skin consists of a plate twenty-four feet long, five-eighths of an inch thick, and tapered in thickness along its length. This represents a whole new approach in production techniques and facilities, requiring special large capacity milling machines, instead of relatively simple sheet-metal forming machines. This type of construction is necessary for a thin swept wing for high speed and greater aerodynamic efficiency.
- A large amount of the increased cost of aircraft is the result of astronomical increases in fixed equipment, items such as navigational equipment, bombing and armament systems, oxygen systems, air-conditioning systems, and power boat control systems. Thus, the B-10 of the middle 1930's had approximately 1,000 pounds of fixed equipment, whereas the B-36D has over ten tons (20,000 pounds) of fixed equipment.
- The increased speed and altitude required for bombers to survive in the combat zone has aggravated the bomb-aiming problem. This, plus the all-weather requirement, have required costly development of new bombing systems, such as the "K-1" optical and radar bombing system weighing approximately 2,000 pounds installed, and costing about \$260,000, to replace the old "Norden" (N-9) bombsight of World War II, which weighed about 125 pounds installed and cost \$5,000.

In the light of these trends, we in Air Force research and development activities have long since become "cost conscious."

Here are some of the things we are doing to reduce the resources—dollars, materials, and men—required to give the country superior airpower.

## **LICKING THE JET FUEL SUPPLY PROBLEM**

### **More Fuel Per Barrel of Crude Oil**



### **More Needed for Today's Jets**



Big strides have been taken in crucial field of jet fuel supplies. At beginning of jet era only six percent of a barrel of crude oil became usable fuel. Through improved distillation processes this ratio has ben gradually raised to

around fifty percent. Importance of increasing this factor still more is seen in needs of present day jet fighters—which require about three times as much fuel per given mission as conventional piston fighters of World War II vintage.



## THE SYSTEMS APPROACH: MORE COMBAT POWER FOR LESS DOLLARS

*Weapons systems development.* The increasing complexity of our weapons no longer permits the isolated and compartmented development of all the equipment and components which are then assembled, enclosed in a structural shell, and put together to form an aircraft or guided missile. The great demands for improved performance require the integration of the design of the weapon system as a whole from the beginning, so that the characteristics of each component are compatible with all others. That is why, to an increasing degree, the Air Force is asking industry to develop weapons systems which solve specific military problems in their entirety, rather than going to industry with a multitude of component design jobs.

*Weapons systems analysis in development planning.* Another trend, and a logical step from the system-design

pensive guided missiles which make a one-way trip and are destroyed. However, analysis of the cost of guided missile operations and their supporting systems indicates that the missile, when fully developed into a satisfactory combat weapon, may yet prove to be less costly than other weapons systems.

The Air Force has taken the lead in the field of weapons systems analysis, largely because of the vision of Generals Arnold and LeMay in the establishment of Project RAND immediately after World War II. RAND analyzes weapons systems and strategies for offense and defense, with a view to economy of national wealth and resources. For example, a comparison of aircraft and missiles, with attention to mixtures and phasing-in and phasing-out of the Air Force-in-being, is under way. I do not want to give the impression that systems analysis is already a *perfect tool*, with a ready answer to every problem. Rather, it is a *useful tool*, which we must use where possible and strive to perfect as time goes on. Modern warfare has become so complex that conceivably we could lose a war or bankrupt the nation by "betting on the wrong horse" in our development program.

*Evaluation of air, sea, and ground weapons systems.* This is the final step in the *systems approach* to the problem of reducing the cost of national security. In this step, the capacity of air, sea, and ground forces to carry out their assigned roles and missions is determined. Also, here is measured the capability of air, sea, and ground power to accomplish the priority tasks—to which Secretary Finletter refers—with minimum drain on the national economy. This important part of the systems approach is the responsibility of the Weapons Systems Evaluation Group. In view of the nature of its task, this Group is quite properly a Department of Defense agency.

Thus, the *systems approach* is the general method of building maximum combat power at minimum cost in national treasure. However, let us also discuss some specific contributions of research and development toward the reduction of want and waste in the Air Force.

## MAXIMUM ECONOMY IN USE OF CRITICAL NATIONAL RESOURCES

*Optimum utilization of fissionable material.* Since it represents so much military power, and because supplies are not unlimited, fissionable material is one of our priceless national resources. Its optimum utilization involves interrelated questions of weapon design, weapon sizes, ability to deliver, types of targets, and desired damage to targets—both strategic and tactical. Although it is extremely complex, this problem can be—and has been—tackled by systems analysis. The objective is to insure that we "package" our supply of fissionable material in weapon shapes, sizes, and numbers which represent the greatest damage potential, and therefore have the greatest deterrent effect on our enemies.

*Reducing needs for strategic and critical metals.* This is an area in which research and development continually "makes work for itself." We first work to discover metals and alloys that permit development of weapons with superior performance. When we succeed, we then have to obtain the metal or a satisfactory substitute in sufficient quantity to permit mass production.

Some of the strategic and critical metals at the present time are columbium, cobalt, chromium, molybdenum, nickel, and tungsten. Encouraging progress has been reported on the problem of obtaining adequate hardness in steel without the use of large quantities of scarce alloying metals. For example, one method promises savings of about fifty percent in the requirements for nickel and molybdenum. This releases more critical metals for high performance components such as jet engine turbine blades.

(Continued on page 43)

## PUTT HONORED BY CARNEGIE TECH



Major General Donald L. Putt, author of this series on "The Four Freedoms of the Air Force," received the Carnegie Institute of Technology Distinguished Service Achievement Award for his contribution to research and development. Photo shows A. M. Cox, president of Carnegie Alumni Federation making award.

philosophy, is the increasing use of systems analysis as a tool for development planning.

Using techniques developed during the last war, weapons systems can be analyzed and their effectiveness measured against established or desirable criteria. Such analysis not only takes into account the technical performance of the individual weapon, but also considers reliability, vulnerability, accuracy, human factors, and economic criteria. These analyses have produced some startling conclusions which would not have resulted from intuition, judgment or performance comparison of single weapons. As a result, we are able to make sounder development planning decisions, whenever alternate weapons systems could be developed for the same job. Using dollars as a measure of our resources, we can, by systems analysis, determine which weapons are the most efficient in minimizing costs for the accomplishment of given missions or in maximizing combat power while incurring given costs.

One may shudder at the thought of using large and ex-





Pictured is the Chase XC-123  
— prototype of the C-123

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# ROHR

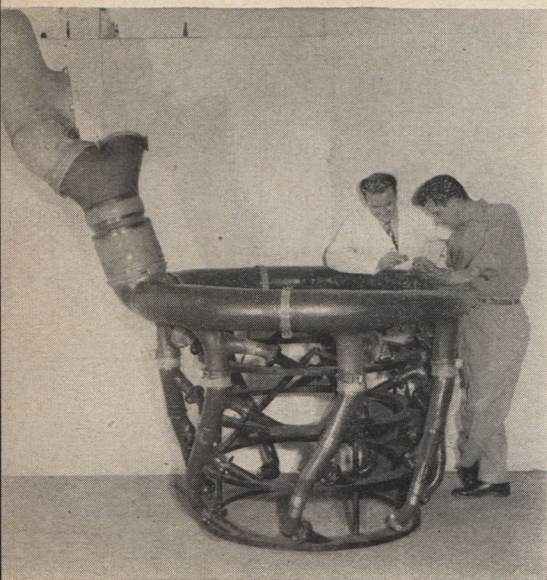
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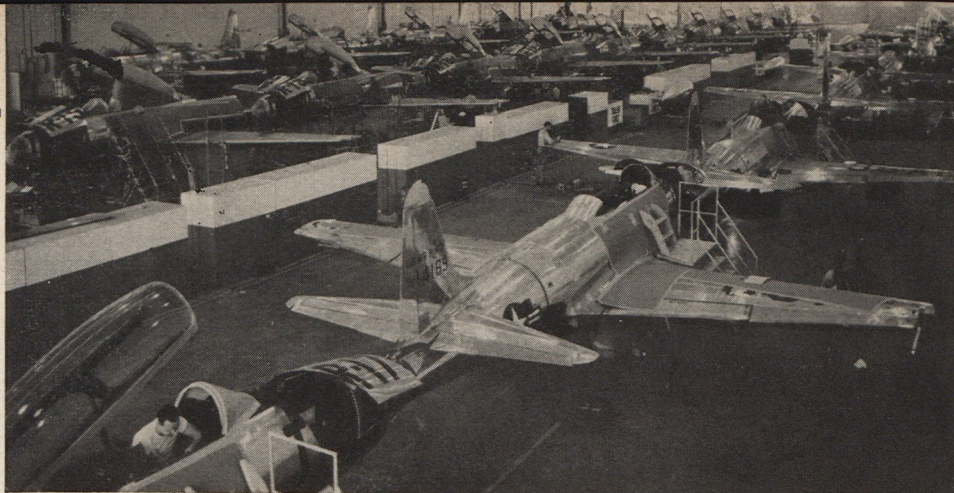


## Coated Exhaust Pipes

Aircraft exhaust systems get a new lease on life from a thin (.001 inches) ceramic coating that protects them from oxidation, corrosion, and dangers of carbon absorption. Ryan metallurgists, like this one examining a treated installation for a Boeing Stratocruiser, also feel the process will let manufacturers use cheaper alloys. These alloys, protected with the coating, will permit release of more critical elements for other uses.

## Airborne Aspirator

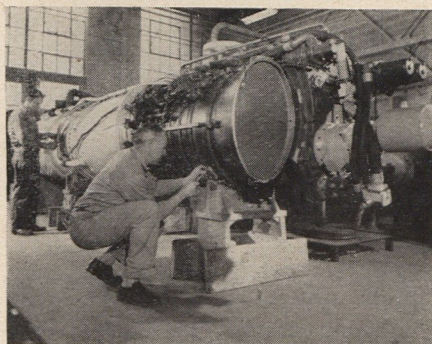
Keeping a polio victim's windpipe open during a medical evacuation flight is the job of this new compact aspirator, being checked by a flight nurse. The 25-pound, electrically-powered aspirator draws off secretions and keeps the patient's lungs dry. The apparatus is also useful in keeping blood from draining into the throat in mouth wounds or skull fractures.



## More T-33s for Round-the-World Delivery

Greater production, soon to spread to Canada, for Lockheed's T-33, two-place jet trainer, is linked to increased MDAP

deliveries to France, Turkey, and Greece. Portugal and three as yet undisclosed areas are also in line to get the tandems.



## Full Size Wooden Jet

Wood, glue, and screws are the only materials in this full size mock-up of Westinghouse's J-40 jet engine. The precise replica (the engine is in quantity production) makes it easy for designers to keep up with changes as they come off engineers' drawing boards.

## Bush Plane for USAF

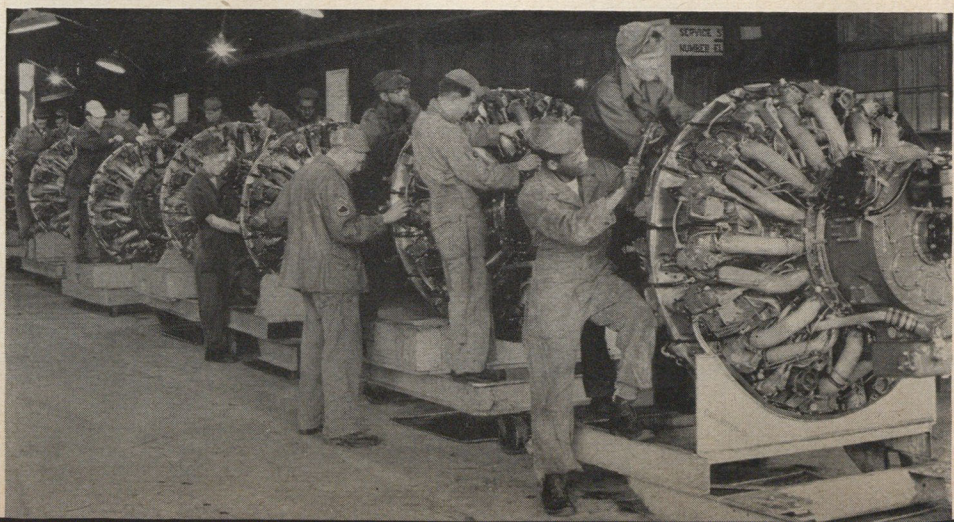
First foreign-made aircraft delivered to the USAF in peacetime history is the de Havilland Beaver L-20A, a Canadian plane designed in 1947 for bush use. Philip C. Garratt, de Havilland Managing Director, took part in delivery ceremonies. It will be used for ambulance and liaison duty.



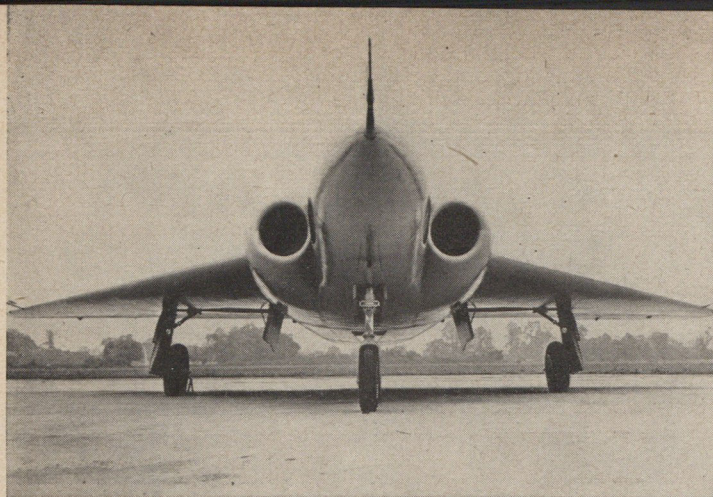
## Canned Engines Speed Powerplant Changes

One of the steps in getting B-29 engines installed on Superforts as replacements for war-weary units is adding the more than eighty-five parts that make each

"raw" engine flyable. A FEAF production line in Japan unpacks the new engines from the cans they come in and readies them for final installation and testing.





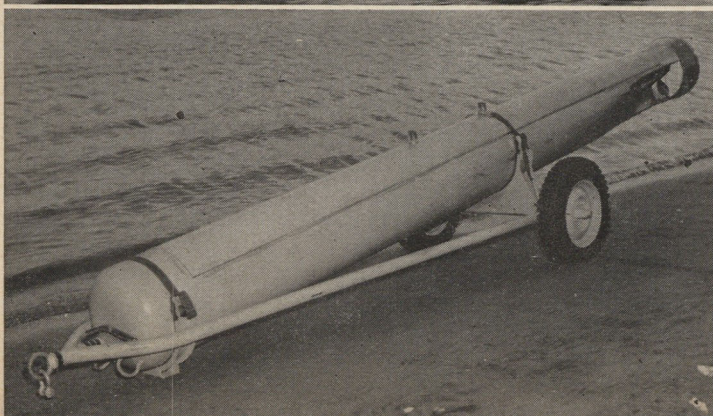


## British Twin-Jet Interceptor

A British plane that's making its bid as an interceptor is the newly unveiled Gloster GA5. The delta wing craft, powered by twin Sapphire jet engines, is listed as an all-weather day and night fighter. Performance figures of the Hawker-Siddeley plane are scarce, but recently a similar British plane with twin Sapphires, which develop 7,000-plus thrust, climbed to 39,370 feet in three minutes and seven seconds. The Gloster GA5, reliably reported to be a long range plane, will be crammed to the gills with radar intercept gear. Catch is that, like most of the new and vaunted British aircraft, production models are a long way off. (AIR FORCE, Dec. '51.)

## Not the Queen Mary But It Floats

New hope for downed airmen in this air-sea rescue life raft that can be either dropped from a plane or released from a ship having torpedo tubes. The raft comes packed in an aluminum alloy cylinder the size of a torpedo, about 20 feet long and 21 inches in diameter (lower picture). Carbon dioxide blows the cylinder up into an 8 by 22 foot raft with a 4-cylinder inboard engine, fuel for 300 miles cruising, remote control radio system, heating unit, automatic pilot, and provisions for eight people (upper picture). The parent plane or ship will be able to start or stop the engine and steer the raft by remote control to wherever it may be needed. Douglas Aircraft, which developed the raft, recently announced the successful completion of first phase tests.



# TECH TALK

By Helena Redmond

One bottleneck in the production of aircraft parts has been the way metal dies warp and shrink while they're being cast. Armour Research Foundation people now hope to whip that problem with a new cooling system. Cold water, pumped through a 1/2-inch copper tube buried in the sand mold a few inches below the surface of the die, carries off heat. This controls the rate of solidification and results in far fewer miscasts.

Getting aircraft warmed up and aloft in sub-zero temperatures often takes up to four hours. A new system for warming up engine oil now whittles that time down to about half an hour, in weather as cold as 65° below. Tests on a B-36 at Eglin AFB's cold hangar show how the system, developed by United Aircraft Products, removes trapped air and other gases that combine with the oil to form sludge. The system, using a separate oil tank for warm-ups, requires no external heat while the plane is on the ground.

CAA certification of Lockheed's latest four-engine transport for immediate passenger operations makes the 88-passenger Super Constellation the largest airplane in commercial service anywhere. Sixty-eight of the Super Connies are now on order for seven US and foreign airlines, and the USAF and Navy are also eyeing the Lockheed airliner. The plane, eighteen feet longer than its older sisters, carries forty percent more payload. During certification tests, the Super Connies indicated a 327 mph cruising speed at an optimum altitude of 21,500 feet, with a maximum of 350 mph on present engines. Compound-reciprocating and turboprop engines are scheduled for future installation.

Honey bees returning to their hives fly, whether they know it or not, on the principle that polarization of the sky is always greatest at right angles to the direction of the sun. Arctic pilots flying where magnetic compasses fizzle out now use the same principle for navigation when they can't see the sun during the long winter nights. One gimmick that makes this sort of navigation possible has been developed by Polacoat, Inc., of Blue Ash, Ohio, who find that the hidden sun can be located accurately by using a polarized plate of 1/4-inch wide stripes with alternate direction of polarization. Knowing the time and the angle of maximum polarization, navigators quickly find compass direction.

Control problems for throttle valves on B-36 jet engines have been solved by Minneapolis-Honeywell in an electronic remote-positioning development. Pulley-cable systems bog down on the intercontinental bomber where the jet pod is some 100 feet from the fuselage. The cable system's weight and the wing's structural flexibility add difficulties. But Honeywell's unit, weighing only a few pounds, now links pilot and throttle valve in a way that gives the pilot fingertip control over his jet engines. In case of a short or open circuit, a fail-safe feature freezes the throttles at the position they were in before the trouble began, and immediately signals the pilot.





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**SPARTAN SCHOOL OF AERONAUTICS**  
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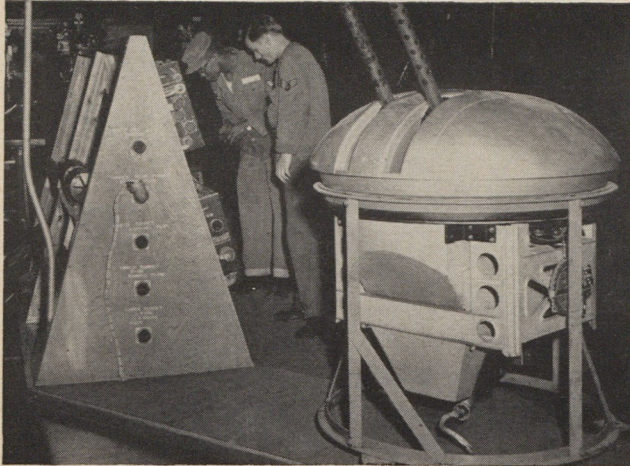
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## Getting the Lead Out

When a MIG crosses your sights in the sky over North Korea and you squeeze the trigger, you want to be darn sure your twin 50's are kicking out hot lead. A turret gun mock-up in the armament shop of Far East Air Materiel Command in Japan helps assure this. Using no ammunition, the mock-up tests turret systems of both B-29s and B-26s. The unit consists of a turret, control box, and sighting sections. Previously the FEAMCOM shop had been able to test only B-26 turrets, with nothing better than hit-or-miss facilities for testing Superfort armament. The shop inspects and overhauls all aircraft weapons for FEAF.

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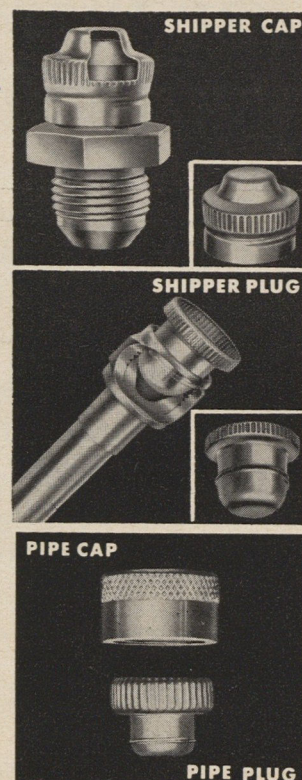
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## *Mobilization News*

EARLY RELEASE has been authorized for Organized Reserve and Air Guard airmen serving on EAD involuntarily who (a) desire early release, (b) are deemed surplus to immediate requirements, and (c) have six months or less of active service remaining under present tour. Preference normally will be given to airmen with prior active service who have least amount of obligated service remaining. Involuntary Reservists and Guardsmen returning from Korean tour may be released immediately regardless of time left on tour. . . Policy, to be effective by end of July '52, will allow all airmen returning from overseas to request duty assignment in one of six ZI geographical areas. . . AFR officers returning from overseas for ZI assignment who have less than 90 days remaining in current tour will be released immediately from EAD.

ENLISTMENT PERIOD for civilians qualifying for aviation cadets has been reduced to two years. For other airmen, period remains at four years. . . Active duty airmen who are high school graduates and have completed eighteen months active duty may now apply for cadet training. . . ANG fighter and bomber squadrons scheduled to return from EAD with USAF will have vacancies for at least 1,584 lieutenant pilots during FYs '52, '53, and '54. Young men wishing to earn pilot's wings should apply in person or by letter to office of State Adjutant General.

FIRST AIR RESERVE DISTRICT, one of AF's four established experimental Reserve headquarters, will be commanded by Col. Charles W. Skeelee, of DeRuyter, N.Y., with headquarters in downtown Harrisburg, Pa. District, which embraces Pennsylvania and its 40,000 Reservists, will have under its control: 2253 AF Reserve Training Center, commanded by Maj. James B. Skelkregg at Greater Pittsburgh Airport; three Volunteer VART groups divided among Philadelphia, Wilkes-Barre, and Coraopolis; and fifteen VART squadrons distributed throughout the state.

COMMAND JURISDICTION of Airport, Clinton County AFB, Ohio, has been assumed from AMC by ConAC for use as an AFRTC to replace Greater Cincinnati Airport. No flying training is scheduled at this center until FY '53.

SHORT-TERM (11 days) refresher courses in ten technical fields for Reserve officers and in three specialties for Reserve airmen will be available during next few months. Reporting dates are March 31, April 14 and 28, May 26, and June 9. Officer courses are Aerial Photography, Armament, Budget & Fiscal, Classification and Assignment, Intelligence, Photo Interpreter, and Stat Control, all at Lowry AFB, Colo.; Aircraft Maintenance, Chanute AFB, Ill.; Communications, Scott AFB, Ill.; and Supply, Warren AFB, Wyo. Courses for Reserve airmen are: Airplane & Engine Mechanic, Sheppard AFB, Tex.; Armament Technician, Lowry; and Supply Technician, Warren. Reservists interested in this training should apply through office having custody of their personnel records. Orders will allow time for travel in addition to eleven days.

COLLEGE GRADUATES, as USAF male or WAF lieutenants on either active or inactive duty, who have obtained credits for math through integral calculus and for one year of college physics, may apply for immediate attendance at one-year course in meteorology conducted at one of several civilian universities. Near-graduate AF ROTC and USAF OCS students who have fulfilled educational requirements upon graduation also may apply for course.

(Continued on page 40)



RESERVE officers and airmen who are active in VAR units and wish to be considered for 15-day tours between now and next July should apply to group liaison officers. About 3,050 will be selected for these tours. Some 2,880 will be chosen from VAR units for two-week indoctrination course, another 172 will be mobilization designees affiliated with ConAC organizations. . . USAF Extension Course Institute enrollment totaled approximately 42,000 on January 1.

SERVICE in "spot" grade of first lieutenant will be counted for time in grade purposes only as double time in grade of second lieutenant toward eighteen months requirement for temporary promotion to first lieutenant, unless officer has been demoted from "spot" grade for cause. . . AF pilots must be under 33 years of age and possess at least 800 hours total pilot time to qualify for observer training program. Non-regulars must have two years of college or equivalent and have expressed desire to remain on active duty.

OFFICERS with SSN 0142, 0520, 1028, 1034, 1031, 1035, 1037, or 7888 who were suspended from flying status in recent years for "budgetary reasons," will be considered for return to flying status if they meet following criteria: (a) are below grade of lieutenant colonel, (b) are serving on an AF service statement or an indefinite statement, (c) voluntarily request return, (d) meet age-in-grade requirements, (e) are physically qualified for flying, and (f) hold a currently effective aircraft observer rating.

TOTAL of 114,245 students were formally enrolled in this year's AF ROTC program. Totals, by year: first year basic, 64,904; second year basic, 25,842; first year advanced, 12,672; second year advanced, 10,652; and third year advanced, 173. . . First AF's Chaplain, Lt. Col. William F. Taylor, Jr., is currently making an extensive tour of 40 AF ROTC advance training units at colleges in this area. He speaks to cadets on military life in AF and responsibilities which will be assumed upon being commissioned.

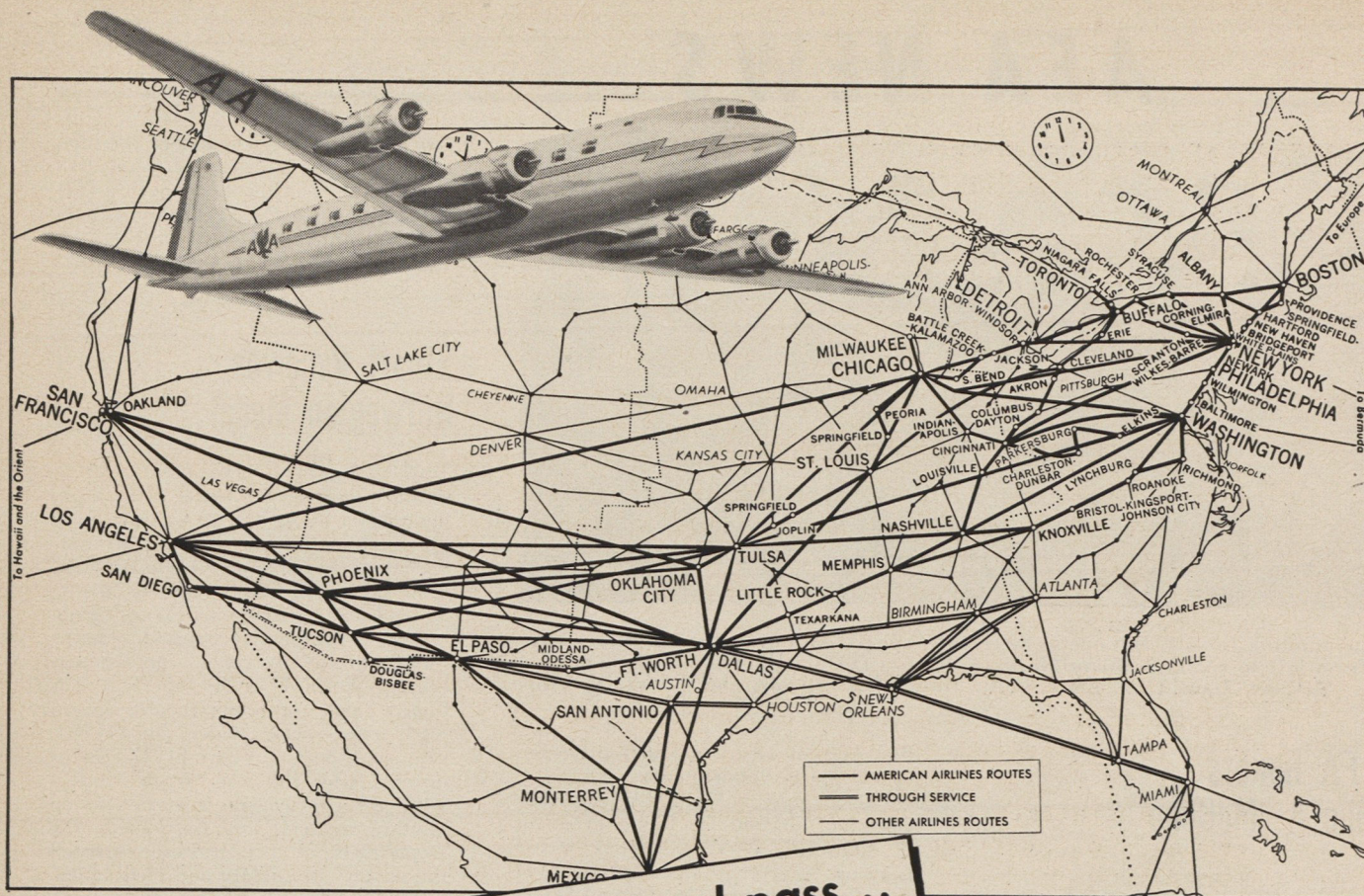
SALE of uniforms to CAP members at AF clothing sales outlets is now authorized . . . Connecticut, Massachusetts, New York, and New Jersey have completed mutual assistance agreements for civil defense.

SUPER-GRADE vacancies within USAF for civilian personnel at present time include: Special Ass't to Dir. of Installations (GS-17), Civilian Dir. of Industrial Resources (GS-17), and Ass't for Air Weapons Evaluation (GS-16), all at USAF Headquarters; Civilian Chief, Engineering Operations (GS-17), Wright Air Dev. Center, Dayton, Ohio; and Dir. of Component and Systems Development (GS-16) at ARDC Hdqtrs. in Baltimore. Current openings in positions above GS-15, as authorized by Public Law 313, are: Dir. of Tech. Operations, Patrick AFB, Fla.; Tech. Director, Arnold Engineering Dev. Center, Tullahoma, Tenn.; Engineering Consultant (Applied Mathematics) at Wright Air Dev. Center; and Director of Research, USAF School of Avn. Medicine, San Antonio, Tex.

INITIAL CLOTHING ALLOWANCE for male airmen was increased from \$230 to \$266.75 on January 1. \$324.65 for female airmen remains unchanged. Airmen are authorized to wear Army-type uniforms until further notice; officers may wear them until July 1, '52.

MARCH 31, 1952, is the final date for filing claims with the War Claims Commission. Claims forms may be obtained from AFA Headquarters.





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# AFA NEWS



Surrounding John A. McCone as he receives special AFA award in Los Angeles are (from left to right) William Morgan, Emmett O'Donnell, Thomas G. Lanphier, Jr., McCone, Harold C. Stuart, C. R. Smith, Carl Spaatz, and James Doolittle.

## AFA Honors John A. McCone

At a banquet recently in Los Angeles, attended by more than sixty aviation leaders and industrialists, John A. McCone, former undersecretary of the Air Force, received a special AFA award in recognition of his work toward rebuilding US air strength during his 16 months' service as undersecretary.

The award was made by C. R. Smith, past president of AFA, with Thomas G. Lanphier, Jr., AFA board chairman, acting as toastmaster. AFA President Harold C. Stuart spoke briefly in tribute to McCone's outstanding public service between June 1950 and October 1951.

Among those honoring McCone at the California Club banquet were such Air Force figures as Gen. Carl A. Spaatz, Jimmy Doolittle, Maj. Gen. Emmett O'Donnell, and Maj. Gen. William M. Morgan, head of the Western Air

Procurement District, who represented Gen. Hoyt S. Vandenberg.

Other guests included Miss Jacqueline Cochran; LaMotte T. Cohu, president of Consolidated Vultee; Gen. Ralph Cousins, executive vice president of Founders' Insurance Co.; Donald Douglas, Jr., vice president of Douglas Aircraft; Gen. Ira C. Eaker, vice president of Hughes Aircraft Co.; Gen. Oliver P. Echols, board chairman of Northrop Aircraft; Dr. Fred D. Fagg, Jr., president of the University of Southern California; A. J. Gock, board chairman of the Bank of America.

Willard W. Keith, president of Cosgrove and Co.; R. L. Minckler, president of General Petroleum Corp.; William C. Mullendore, president of Southern California Edison Co.; George O'Brien, vice president of Standard Oil of California; Floyd B. Odum, board chairman of Consolidated Vultee; James R. Page, board chairman of California Institute of Technology; Neil Petree, president of Barker Brothers Co.; Ar-

thur C. Stewart, vice president of Union Oil Co.; Dr. Charles Strub, executive vice president of the Los Angeles Turf Club; Frank S. Wade, board chairman of Southern California Gas Co.; and Fred C. Walker, president of P. J. Walker Co.

## Stuart Receives Norwegian Medal

AFA President Harold C. Stuart recently received the Order of St. Olaf, highest honor given by Norway, in a presentation by the Norwegian ambassador, Munthe de Morgenstierne, at a dinner in Stuart's honor at the Norwegian Embassy in Washington.

The decoration recognized Stuart's service to the Norwegian government during World War II. He was stationed there for seven months as an intelligence officer under the SHAEF command of Gen. Dwight D. Eisenhower. After the war, Stuart worked with the Norwegian government on military matters, and later, with the Department of the Air Force, assisted the country in military and civil affairs.

The jeweled medal is a white cross, containing a crown and the Norwegian coat of arms, and hangs from a red, white, and blue ribbon.

## Oklahoma Holds Wing Convention

Highlight of the recent Oklahoma Wing convention was an airpower luncheon at which Lt. Col. Lester Weaver, commanding officer of the Air Force Reserve Availability Survey, now being conducted in Dallas and Fort Worth, described how this USAF project will bring Reserve records up to

(Continued on page 44)



Members of the Albany, N. Y., Squadron, the local VARTU, and their wives joined forces to celebrate Hallowe'en in true fashion. Former Director Earle Ribero is the skeleton.



Oklahoma Wing Commander John H. Crawford, right, welcomes Lt. Col. James England, 1st Lt. Juanita W. Rose, and Capt. Clarence Cone to recent convention in Oklahoma City.



At the same time, work continues on the problem of reducing the need for these metals in jet engines. This work includes the redesign of parts, such as turbine blade cooling; increasing use of titanium; and development of substitute or protective materials such as ceramics and ceramic coatings. In the field of ceramics, the Air Force has received a major assist from research performed by the National Advisory Committee for Aeronautics.

**Increasing jet fuel supplies.** In previous articles, I have discussed some of the work being done to reduce the fuel consumption of jet engines. However, the basic fact remains that near-sonic speeds require tremendous power and this in turn means high fuel consumption. Jet propulsion has just about tripled the fuel required per fighter mission.

The original jet fuel, JP-1, was kerosene. Although relatively cheap, JP-1 would have made only about six percent of every barrel of crude oil available as jet fuel. To keep from ruining our oil fields, the rate of crude oil production cannot be greatly increased. Instead, we must conserve our resources by designing our equipment to give top performance on the lowest possible grade of fuel. As a result of work on this problem, over half of our crude oil production is now useable as jet fuel.

**Cutting manpower requirements.** Every man required by the armed forces means one man less in critical production work. In research and development, we are constantly searching for new ideas which will reduce overall military manpower needs. We try to cut down where possible on the number of people required to produce, maintain, and operate the military machine. For example, some novel—yet relatively elementary—work in the field of air defense (being done by Project LINCOLN, which I discussed in the second article) may well reduce the overall manpower needs of radar early-warning nets by an appreciable margin. This is a very clear example of “the returns” on an investment in research and development work.

**Optimum manpower utilization.** The need for freedom from want and waste is greatest in the area of manpower utilization. We are suffering now and will suffer more in the future because of the dearth of trained technical personnel. The shortage of newly graduated engineers, and the downward trend in their numbers in the years ahead is a ringing challenge to the nation. Unless we

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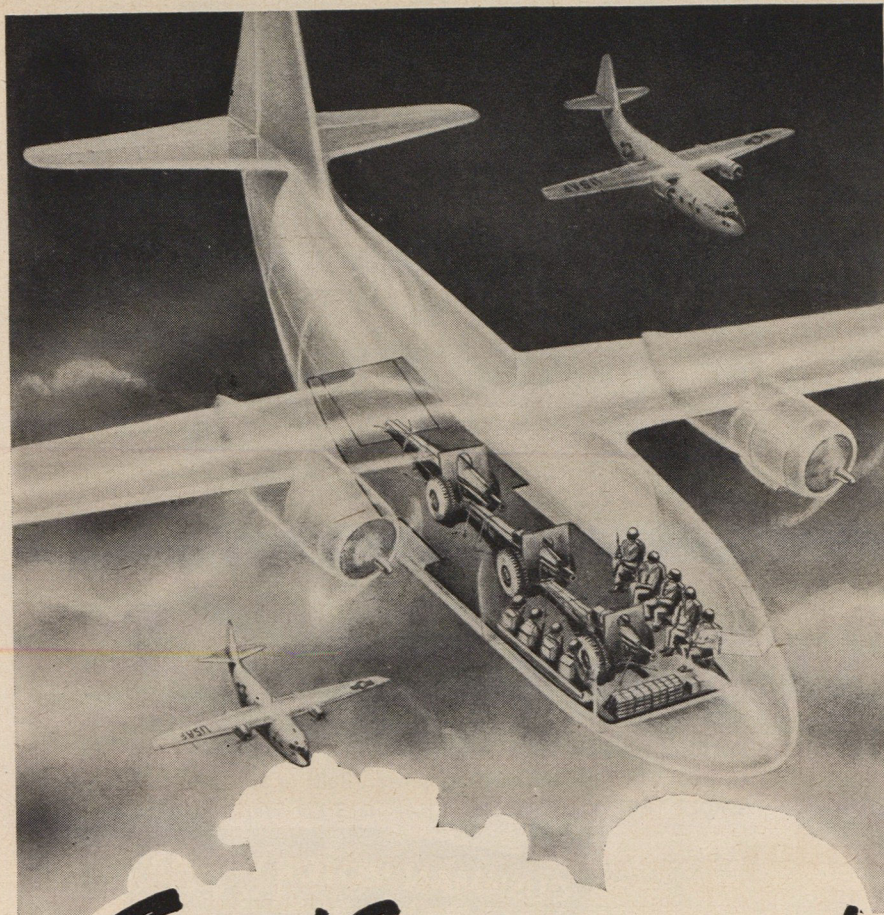
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solve this problem, we have unwittingly developed an Achilles heel in our security structure which can, in the long run, form the pattern for our defeat in arms. In view of the shortage of trained manpower, we can and must get the most out of the training and skills which each man in the Air Force possesses. I will discuss the contributions research and development is making toward this end next month in the concluding article of this series.

Thus, modern war has become more complex and expensive—but the systems approach helps us plan

the development of the required combat power for minimum cost. In addition, research and development work continually leads to the most economical use of our national resources—men and materials. The Air Force budget runs many billions of dollars. Our investment in research and development helps reduce the cost of doing the Air Force job, and it helps insure that the taxpayer gets maximum protection for every dollar the Air Force spends. In short, the cost of research and development helps buy Freedom from Want and Waste in the Air Force.





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## AFA NEWS

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date. The survey is part of the new long-range Reserve program, just getting underway in certain areas on a pilot-model scale.

John H. Crawford, chairman of the Oklahoma AFA Organizing Committee, handled the arrangements for the convention, held at the Biltmore Hotel in Oklahoma City. He presided over business sessions and was elected commander of the Oklahoma Wing. Other new officers include: George Miller, Chickasha, vice commander; E. E. Raffee II, Oklahoma City, deputy vice commander; F. L. Sibel, Oklahoma City, secretary; and Morris L. Bradford, Tulsa, judge advocate.

Among the key committees established were Wing Advisory Council, headed by Tony J. Lyons of Norman; and Wing Publicity Committee, with George Miller as chairman.

Crawford, who has launched an extensive Squadron organizing campaign throughout the state, can be reached at 415 East 15th St., Tulsa 14, Okla. His telephone number there is Tulsa 2-5091.

## Operation Ace Chase

Four golfers at the San Francisco Squadron's recent Hole-In-One golf derby laughed at 10,000 to 1 odds and banged out holes in one. One contestant even scored two of them, prompting sports columnist Herb Caen to dub the session "Operation Ace Chase."

During the ten day tournament a total of 16,765 shots were fired.

Professional golfer and screen star Joe "Palooka" Kirkwood, Jr., and his actress wife, Cathy Downs, flew from Hollywood to help the proceedings along. They had volunteered to help



AFA Group Commander Mike Pisani welcomes screen star Joe "Palooka" Kirkwood, Jr. and his actress wife, Cathy Downs, to the San Francisco Squadron's Hole-In-One Golf meet.



publicize the event, and Kirkwood shot out a gold golf ball to open the contest.

Prize chairman Jack Williman handed out 300 prizes to the winners of hourly, daily, and over-all best shots. Prizes included five custom tailored suits by Cortez, silverware, a food mixer, a set of tires, and California Queen and King turkeys.

The event, which was under the general chairmanship of Mike Kavanaugh, was reported in 150 newspaper stories, 20 television and radio shows, and 185 spot announcements. Squadron commander Stewart Reed and Mike Pisani handled publicity, while Charles Morgan and his wife, Pat, lined up Auxiliary assistance.

Profits from the derby financed the Squadron's Christmas charities. The group now plans to make the Hole-In-One Derby an annual event.

## Stuart Names Wing Advisory Council

In compliance with Resolution Thirteen, passed by the 1951 national convention, AFA President Harold C. Stuart has set up a National Wing Advisory Council consisting of a chairman and four members. The council will do three things: (1) advise the president on Wing matters, (2) advise and assist Wing organizations, and (3) act on all Wing requests for expense allocations from the AFA general treasury.

Chairman is Morry Worshill, commander of the Illinois Wing. His address is 2054 Hood Ave., Chicago 45, and his telephone number is Edgewater 4-1137. The other council members are Mike Kavanaugh, of Arden Farms, 925 Golden Gate Ave., San Francisco; William Amos, 14819 Linnhurst Ave., Detroit 5, Mich.; Charles Purcell, 1102 No. Charles St., Baltimore, Md.; and Randall Leopold, Leopold Chevrolet Co., Box 150, Lewistown, Pa.

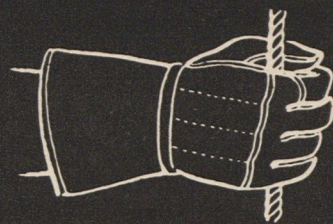
Wings may request help from the Council whenever a problem arises. And using the council, Wings may pass on ideas and reports on activities that might interest other Wings.

## Taunton Squadron Sparks B-Day

The Taunton, Mass., Squadron recently sparked a B-Day, blood donor, campaign among veterans organizations in that area. The Squadron expanded its personal blood campaign into a city-wide drive for blood donations by veterans and civic groups. Pearl Harbor Day was picked as target date for the end of the campaign.

Latest social event enjoyed by this Squadron was a Halloween party at the Alice Grill in nearby Raynham, which was attended by thirty-four members and their wives.

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close support sorties per day over the past four months.

With his entire argument based on a faulty premise concerning the battle situation in Korea and the objectives of the Eighth Army, Mr. Baldwin, like that Army, really had no place to go. But go he did and, in the assumption that some readers might have gone along with him, it will pay us to examine Mr. Baldwin further.

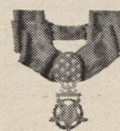
Another major conclusion in his series of articles was this: "The experience to date of Operation Strangle, though statistics are incomplete, tends to suggest that the concentration of airpower on interdiction roles at cost of close support work may be unjustified. It seems probable, particularly when the battlefield is terrain like Korea's and the enemy one like the Chinese, that the most remunerative target for airpower will be found, not in the enemy's dispersed communications zone, but in the forward battle area where the enemy must concentrate men and supplies. Dispersal is always possible behind the front, but the front itself forces concentrations—hence, targets." And Mr. Baldwin's dying words of the series were these: "It may be that close ground support represents a more economical and accurate use of airpower than its use in attempted interdiction."

General Vandenberg, in a radio interview shortly after his return from the Far East, made the following statement: "Both General Ridgway and General Van Fleet are convinced that we are saving more lives on the front by the Air Force interdiction program—which is to deny to Communists their supplies—than we could by concentrating on close support. This does not mean that when the Army is hard pressed we will not throw everything we can into close support of the ground army. Part of the Korean problem is lack of adequate artillery for the Army, and we are utilizing aircraft in some instances to supply that lack. But the interdiction campaign is a much more effective way of utilizing airpower. I've often said—and it's agreed by General Ridgway and General Van Fleet—that the best way to assist the ground army is to knock out the enemy's supplies before they get started toward the front. The next most efficient way is to knock them out enroute to the front. The least efficient way is to attack them after they are widely-spaced and sandbagged at the front. Obviously,

(Continued on page 48)



## Captain Lewis L. Millett Medal of Honor



While personally leading his Infantry company in an attack on a strongly held position near Soam-Ni, Korea, Captain Millett noted that his 1st Platoon was pinned down by heavy enemy fire. Ordering another platoon to the rescue, he placed himself at the head of both groups. Then, in the traditional Infantry spirit, he led a fixed bayonet assault up the fire-swept hill. Captain Millett charged into the enemy positions, bayoneting two of his foes, then shouting encouragement to his troops, continued throwing grenades, and clubbing and bayoneting the enemy. Inspired by his example, the attacking unit routed the enemy, who fled in wild disorder.



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## HEADACHE RIDGE

CONTINUED

the commander of a small unit is going to be much more interested in the protection he can see and hear directly in his front... But from the overall picture of the good to the entire forces over there, we are in complete agreement with General Van Fleet and General Ridgway—who have told the air commander to reduce the close support in order to put more emphasis on the interdiction program... where we are getting the major results." From this it is quite evident that General Ridgway and General Vandenberg, as well as General Van Fleet, would discount completely Mr. Baldwin's views on this subject.

In a third major conclusion, Mr. Baldwin bluntly states: "There is no such thing as real isolation or interdiction on any continental battlefield by airpower. The enemy supply lines can be cut finally and irretrievably only when ground forces are firmly astride them." "The trouble with Operation Strangle," he adds, "is that so far it has obviously failed to strangle."

This disbelief in aerial interdiction as a worthy military operation, is rather strange for a man of Mr. Baldwin's background and interests. He must have learned back at Annapolis, for example, that blockade is basic to the Navy concept of war, and he has been steadfast in his support of the Navy concept. Interdiction, he must realize, is really nothing more than internal blockade. Indeed, interdiction as a concept is not far removed from the "classical pattern" of making war which Mr. Baldwin embraces so readily.

Surely he is aware that the Navy's primary mission in Korea is the blockade of enemy ports. Mr. Baldwin, however, even if he accepted blockade by air as a worthy objective, makes it clear that he doubts its ability to become a decisive factor in war. If Operation Strangle is successful, he asks, why hasn't it permitted our troops to proceed to the Yalu (forgetting, as usual, that it makes little sense to go there) and then answers his own question in his own way—because it has allowed some enemy supplies to get through.

Surely Mr. Baldwin's Navy training taught him that in every sizable sea blockade in history there always have been blockade runners, and some enemy supplies always have pushed through. Yet, we don't find Mr. Baldwin condemning sea blockade as a concept of war, or urging that the Navy abandon it. He has only concern for the fact that, after

three or four months of concerted aerial interdiction in Korea, our planes still go back again and again after the same old targets. Yet, the sea blockade off Korea is waged against the same ports month in and month out. The port of Wonsan, for example, has been shelled over and over again by the Navy.

As to the effectiveness of Operation Strangle, it was undertaken with the prime objective of preventing the enemy from getting enough supplies through to the front to conduct a sustained offensive and, in the process, to drain him by relentless attrition. Criticism of it on any other basis obviously is unjustified.

Mr. Baldwin may not think Operation Strangle is doing a job, but General Bradley thinks so and has said so in these words: "Fliers of the US Air Force and the US Navy, as well as those of other United Nations, have been doing a marvelous job in keeping after the rail and highway arteries running down through North Korea. One of the very important reasons why their sightings of trucks, carts and other vehicles have been increasing in recent months is that air operations have knocked out the railway system in North Korea so badly that the enemy has been forced to use trucks. On one of the principal railroads left to the enemy south of the Air Force interdiction line the longest stretch of rail is twelve miles. Air Force and naval planes have been destroying an enormous number of trucks. Our aerial operations against enemy movement of supplies and reinforcements toward the battle area have been costing somebody approximately 7,000 trucks a month."

That "somebody" quite obviously is Russia, for few trucks are made in China and none in North Korea. The question, therefore, is how long Russia will permit 7,000 trucks a month to be poured into a Chinese-Korean army that is not going any place.

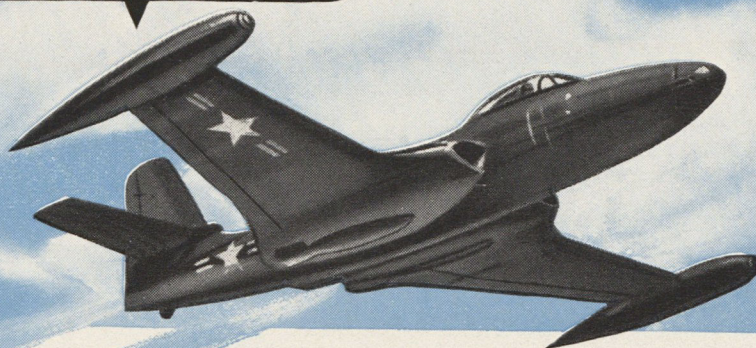
At any rate, we must assume from General Bradley's statement that he now qualifies to join the list of "air-power enthusiasts", who, by virtue of their statements, disagree with Mr. Baldwin on basic airpower issues. If so, the list at the moment is composed, on the one side, of the chairman of the Joint Chiefs of Staff, the United Nations commander in the Far East, the ground commander in Korea and the Air Force Chief of Staff; and, on the other side, Mr. Hanson Baldwin. You can pay your money and take your choice.



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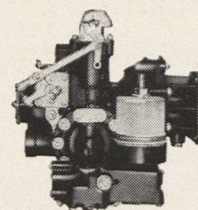
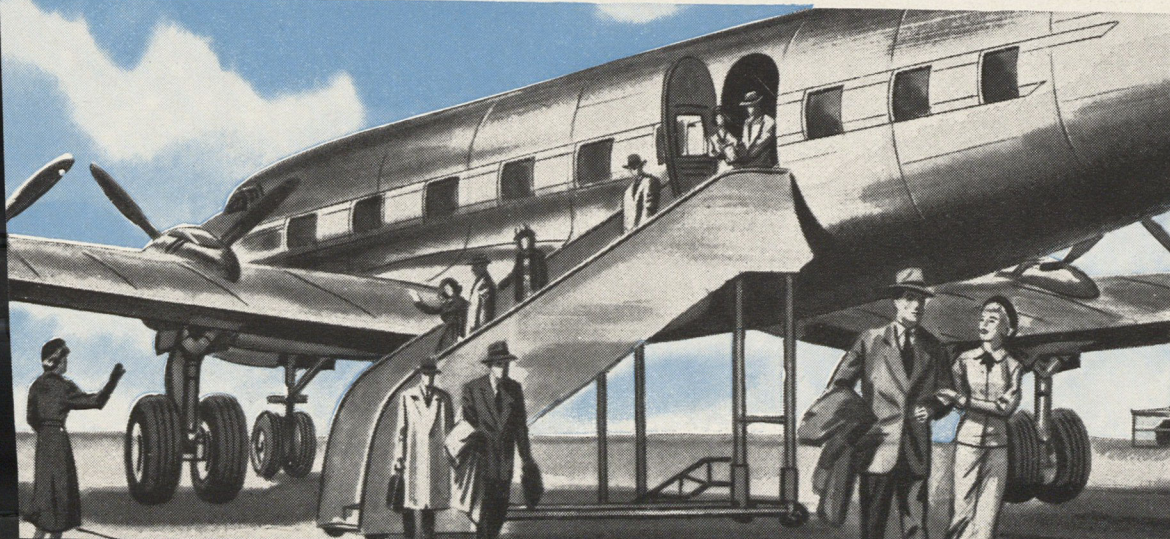
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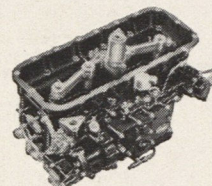


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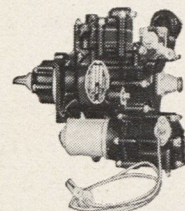
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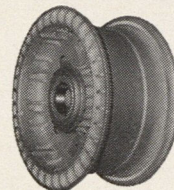
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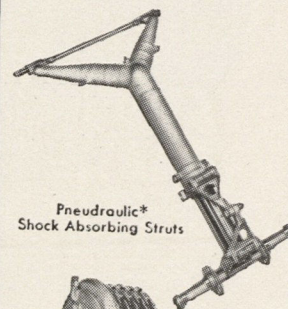
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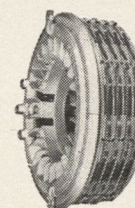
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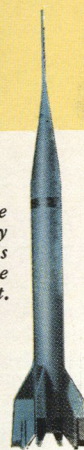


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