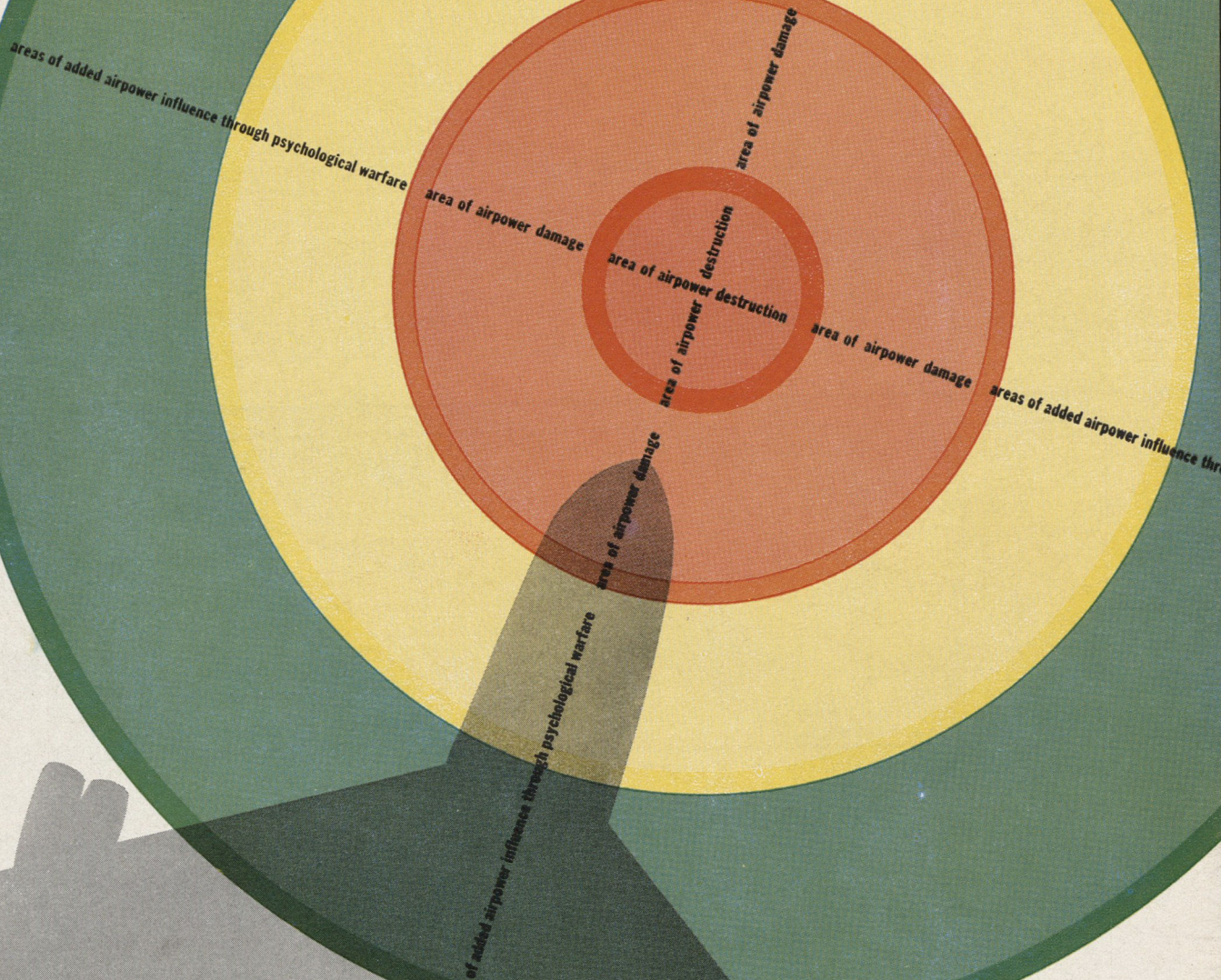


# AIR FORCE

THE MAGAZINE OF MILITARY AVIATION



*In This Issue:*

## THE GAP IN OUR AIR STRATEGY

Plus Special Reports on: RUSSIA'S A-BOMBS • GUIDED MISSILES • February 1952

35  
CENTS





Hamilton Standard's long experience as the leader in propeller design and production is also devoted to supplying other equipment for such outstanding airplanes as the Lockheed F-94C, jet fighter for the Air Force.

Wherever Man Flies



PROPELLERS ★ STARTERS ★ AIR-CONDITIONERS ★ FUEL CONTROLS ★ AUXILIARY DRIVES ★ HYDRAULIC PUMPS





## What's it like to fly the Stratojet?

Even tough old combat fliers and veteran test pilots ask eager questions about the Boeing B-47. What's it like to take up this new bomber—fastest in the world? How does she handle? How does she ride?

More and more Air Force pilots now have the answers, and they'll tell you nothing in flying can touch it. They like the mighty thrust of the jets. They like the flexible, high speed swept-back wings that absorb most turbulence; make for smoother flight. And they like the easy

way she handles. "Why, she flies more like a fighter than a bomber!" Stratojet pilots say.

Big as a B-29 or B-50 Superfort, the B-47 is flown by a three-man crew. Commanding the Stratojet is the pilot. At better than 600 miles an hour he has plenty to do, for as one pilot puts it, "You have to fly *ahead* of an airplane this fast!"

Behind him in the cockpit rides the co-pilot-engineer. And below, in the nose, is the triple-threat man—navigator, bom-

bardier and radar operator all in one, aided by amazingly fast and accurate computing equipment.

For the Stratojet the Air Force has set up a special accelerated testing program—special training procedures for the crews which will fly it. Boeing in turn has gone all out in production effort. Two other major manufacturers—Lockheed and Douglas—are also being brought into the program to produce this key medium bomber of America's growing air strength.

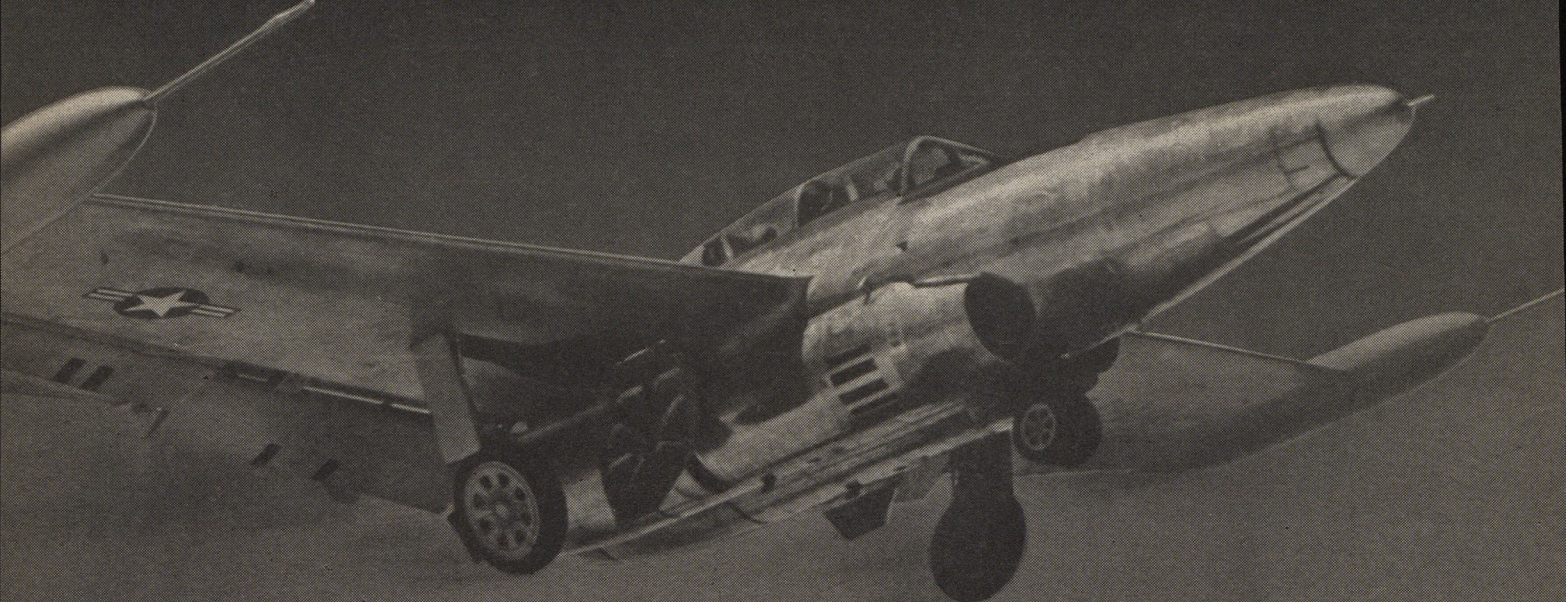
For the Air Force, Boeing is building

**B-52 Stratoforts    B-47 Stratojets    TB-50 Superfortresses    C-97 Stratofreighters**

and for the world's leading airlines, Boeing has built fleets of Stratocruisers.

**BOEING**  
S T R A T O J E T





## Specially equipped to strike through fog and darkness

The elaborate radar gear of the Northrop Scorpion F-89, the Air Force's top all-weather jet interceptor, makes it possible for a pilot to shoot down enemy aircraft he's never even glimpsed.

The fog and darkness that hamper ordinary fighter operations can't stop the pilot of the F-89. Because after an intruder has shown up clearly on his radar screen, automatic tracking equipment takes over and, together with the computers, quickly tells him in which split second to fire—for a direct hit.

Playing an important part in the tracking operations are extremely sensitive rate gyros. Now being mass produced for manufacturers of radar search equipment, this small Honeywell gyro recognizes the

rate of target motion and stabilizes the antenna "on target." It is light enough and compact enough to be mounted on the antenna. And another Honeywell gyro development for radar tracking equipment—the "twin-spin"—soon will be in production for non-antenna mounting.

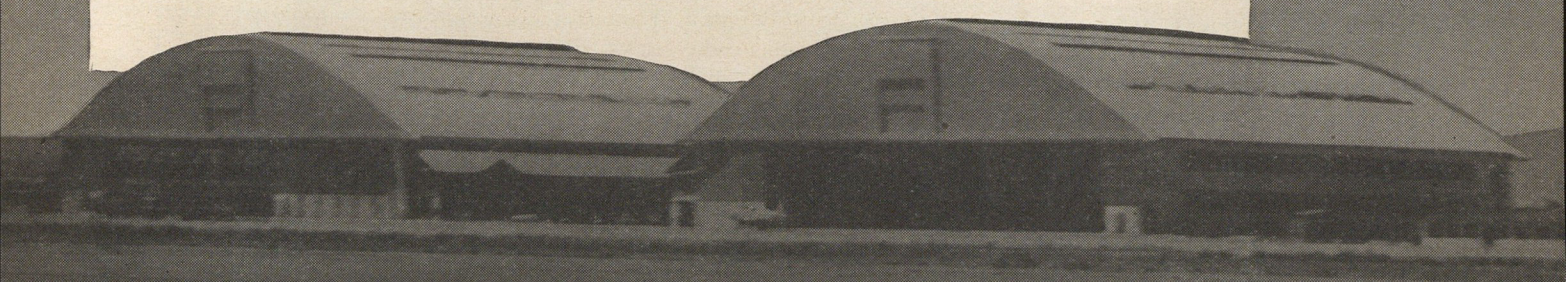
Honeywell, today one of the nation's leading gyro manufacturers, specializes in this important field.

And Honeywell engineers will continue to experiment, improve and find new applications for gyroscopic controls. We plan to broaden our research in this and other fields of control—because *automatic control* is such an important part of aviation progress. And *automatic control* is Honeywell's business.

Aeronautical Division • Minneapolis-Honeywell • Minneapolis 13, Minn.

MINNEAPOLIS  
**Honeywell**

*Aeronautical Controls*





# AIR FORCE

THE OFFICIAL JOURNAL OF THE AIR FORCE ASSOCIATION

VOL. 35, No. 2

FEBRUARY 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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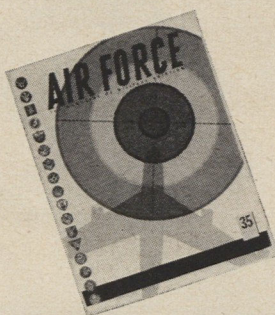
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## THE COVER

This month's cover had its origin when the editors of AIR FORCE Magazine decided to do an article about what the USAF was doing in the realm of psychological warfare. Research quickly turned up the fact that it was doing darned little so we reversed our field and decided to do a story about that. The sad fact is that we have failed miserably to recognize that psychological warfare can help materially in attaining the Air Force objective of making each bullet, each rocket, each bomb, achieve maximum results.

READ "The Gap in Our Air Strategy," page 21

## AIR FORCE STAFF

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# ***New Generation of***





# Global Transports

## **Pratt & Whitney T34 Turboprop Engines to Power Top Air Force and Navy Transports**

**T**RANSPORT AVIATION is soon taking another giant step forward.

Two of the world's biggest air transports will be converted to propeller-turbine power, and when they are flying they will be able to achieve greater speeds and greater economy of operation than ever before possible. These aircraft are the Air Force's huge Douglas C-124B Globemaster, and the Navy's new Lockheed R70 Super Constellation.

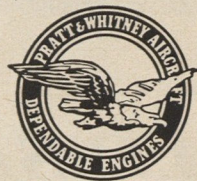
Both will use the Pratt & Whitney T34 axial-flow propeller-turbine engine rated at 5,500 horsepower. With this rating it stands alone today as *the most powerful single turboprop unit*

*known to be in operation in the U. S. or abroad.*

The T34 Turbo-Wasp will boost the payload of both aircraft substantially over piston-powered versions. In the case of the Navy R70 the payload will increase to approximately 35,000 pounds, and in the Air Force C-124B to about 75,000 pounds.

Along with these increases in load-carrying capacity, speeds for both of these big transports will be very substantially increased. And due to the tremendous power of T34 Turbo-Wasps, both aircraft will be able to operate comfortably from 5,000-foot runways common to both commercial and military airfields.

*Pratt & Whitney  
Aircraft*



ONE OF THE FOUR DIVISIONS OF  
UNITED AIRCRAFT CORPORATION  
EAST HARTFORD, CONNECTICUT





*When the steady  
hand of Experience  
is a Must...*

Every cut must be *right* in transforming a diamond such as the fabulous Jonkers from a rough stone into gleaming, perfect jewels. Today, the famous gem cutters of Holland remain unexcelled in this exacting work, for it demands a combination of *skill* and *knowledge* that can only come with long experience. These are the ingredients of greatness, and wherever they are found, in the arts or in industry, the result is much the same. In aviation for example, Eclipse-Pioneer's leadership dates back to the earliest days of the industry. No matter what your problem in the design or production of dependable instruments and accessories for your planes, you will find the answer at Eclipse-Pioneer. Whether it is a problem of pure development, or the mass production of a proven design, you are always backed by the steady hand of experience when you call on Eclipse-Pioneer.

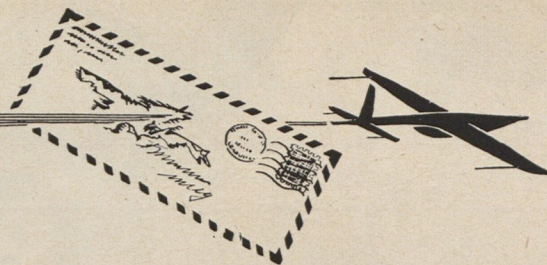
**ECLIPSE-PIONEER** DIVISION OF  
TETERBORO, NEW JERSEY

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# AIR MAIL



## Civilian Employment

*Gentlemen:* I would appreciate your sending me the organizational chart, the base map, and background material reprinted from your Anniversary Issue. Since my discharge from the USAF, I have been continually employed by the Air Force in a civilian capacity. As a result, I find the articles on civilian employment very interesting and hope that more appear in future issues.

Joseph E. Bagwell  
Savannah, Ga.

• Reader Bagwell might watch "Mobilization News" in future issues, where trends and openings in civilian jobs will be aired regularly—The Editors.

## Cost of Living

*Gentlemen:* Here are my dues for 1952. I see the dues were raised at the last convention. Let's not raise them any more. I am just a common farmer and these dollar raises amount to more than some people might realize. Some people read the papers and think the farmers are making all the money, but that



isn't right. We are just making a living, like anyone else.

I guess there are not many rural members of AFA anyway. I enjoy the articles in AIR FORCE very much, but most of the articles are about city veterans that have made good. How about some rural veterans that have done well?

Fermond A. Clifton  
Beech Grove, Ark.

• The question of rural vs urban veterans doesn't really enter into our editorial policy, which is geared more to "where a man goes" than to "where he came from." But for Farmer Clifton's edification, we note that two articles in our Anniversary Issue alone are about boys from rural areas—The Editors.

## Chain of Command

*Gentlemen:* The charts from your September issue are the finest of their type that we have seen published. And we believe many airmen and officers will be better informed on the chain of com-

mand through their use. Our desire is to post one of your fine charts in every orderly room and headquarters office.

We hope that in time we shall receive enough of these charts to accomplish this desire. Congratulations on the fifth anniversary of your publication.

Capt. Robert F. Lawler, Jr.  
APO 61, c/o Postmaster, N. Y.

## Good Neighbor

*Gentlemen:* Enclosed is a money order to cover a six months' subscription to AIR FORCE Magazine. Lt. Col. Donald



H. Ainsworth of the USAF suggested I write you. Also please send me pictures and samples of other magazines and newspapers of the Air Force.

José Villa Barro  
Havana, Cuba

## The Forgotten Men

*Gentlemen:* Why aren't the enlisted men of the early days of the Air Force praised along with some of the generals in the long struggle to make the Air Force what it is today?

When the plane's top speed was only 90 to 100 mph, maybe you don't think it wasn't tiresome to fly all day and not get very far, and then land on just an open field with no brakes or modern instruments to help in bad weather.

So I wish you'd do a story sometime in recognition of the forgotten men of the Old Air Service, some of whom were in organizations with today's generals when they were just lieutenants.

Everett J. Mays  
M/Sgt., AF, Retired  
Brady, Texas

• When and if today's world quiets down a little we'd like to—The Editors.

## We're Sorry

*Gentlemen:* In your Reserve story, January issue, you say that 600 of 2,100 Regular AF second lieutenants are serving in temporary grades. Shouldn't this read 1,600?

F. L. J., Silver Spring, Md.

• F. L. J. is right. Apologies to him and a dozen other sharp-eyed readers—The Editors.

## How About Army Aviation?

*Gentlemen:* I've been an AFA member for a long time, in fact one of the Charter Members.

I'm no longer with the AF but with the Army Field Forces, Light Aviation Section, and much to my disappointment, there is very little or nothing being said about Army Aviation.

If, in the future, you should require information on Army Aviation, I refer you to General Orders (Army) No. 88, paragraph II, 12 October 1951, Hq. Co., 7th Infantry Division. This is good reading and proves the air conflict in Korea is not rationed to AF units alone.

SFC Robert A. Lovece  
Zahn's Airport  
Amityville, N. Y.

• We're working on it—The Editors.

## Gilded Cage

*Gentlemen:* Although a penitentiary is a place shut off from "common" life, AIR FORCE Magazine passes its walls. The times when your journal reaches the population of this institution, it finds an enthusiastic circle of readers. We wish it came more often.

I know the American people have good business heads but I also know they are very idealistic. And isn't it an ideal to bring into a jail what is beauti-



ful, what gives some amusement to those obliged to remain here for years? I hope that you can help us in these circumstances by affording us a gratis subscription. Old issues are also very welcome for our library where AIR FORCE Magazine is greatly sought-after literature.

Rev. Fr. Y. Pfeil, O.P.  
Penitentiary Chaplain  
Leeuwarden (Fri.)  
The Netherlands

• Although AFA policy doesn't permit gratis subscriptions even to such worthy causes as Father Pfeil's, an AIR FORCE Magazine staff member has personally donated a year's subscription to the Dutch priest, and has also sent off a packet of back issues of the magazine—The Editors.





One of the biggest current programs, is an accelerated service test of G-E J47 engines in a North American B-45C, for the Air Force. This B-45 is one of the newest planes to join the Flight Test fleet.

## IN THE NEWS

# G-E FLIGHT TEST CENTER FINDS ANSWERS IN THE SKY

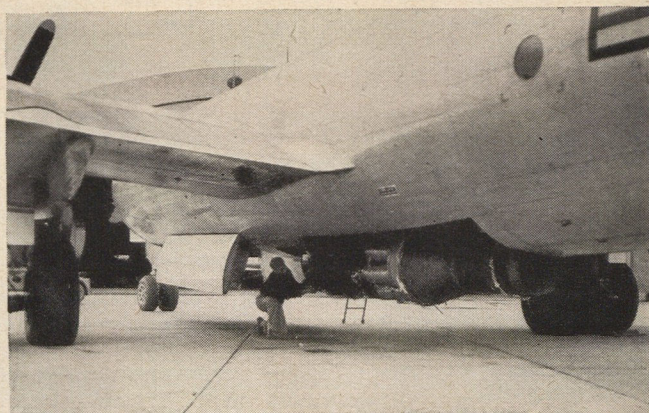
A sure way to test airborne equipment is in the air. So General Electric has established an invisible laboratory that stretches eight miles up into the sky.

At the bottom of this lab is the G-E Flight Test Center at the Schenectady, N. Y. County Airport. Here, a "private air force" is put through its paces with new and improved aircraft equipment. A division of the Company's General Engineering Laboratory, the Flight Test Center is devoted entirely to testing General Electric aviation equipment *in the air*.

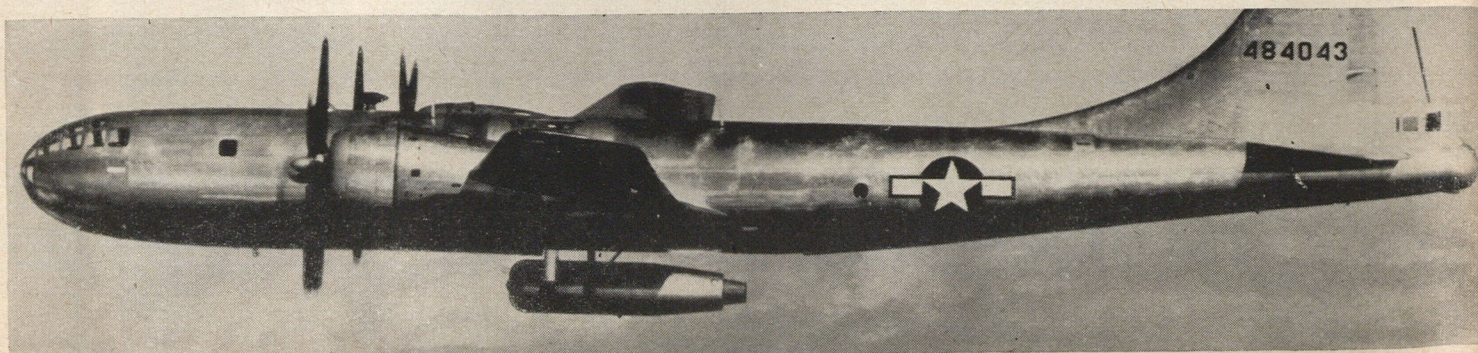
G-E's program of designing, testing, redesigning, retesting means better, more reliable equipment for you.



Ed Haven, left, now manager of G-E's Aviation Divisions, beside G-E's first airplane, back in 1930. Prior to this purchase, equipment was tested in a monoplane rented for a dollar a minute. Foresight of men like Haven made possible the extensive facilities now in use.



New engines and components are tested thoroughly while slung from the bomb bay of a B-29. Here a J47-GE-23, powerful new jet recently placed in production, is made ready in the Flying Test Bed. New engine control, anti-icing, and ignition systems were first proved and improved in this plane.



A B-29 is pushed along by a standard J47, specially instrumented for test work. Many engine features and pilot techniques first checked out here, are now being combat-

proved in Korea. American Airlines crews, under contract to G-E, perform all flight operations.

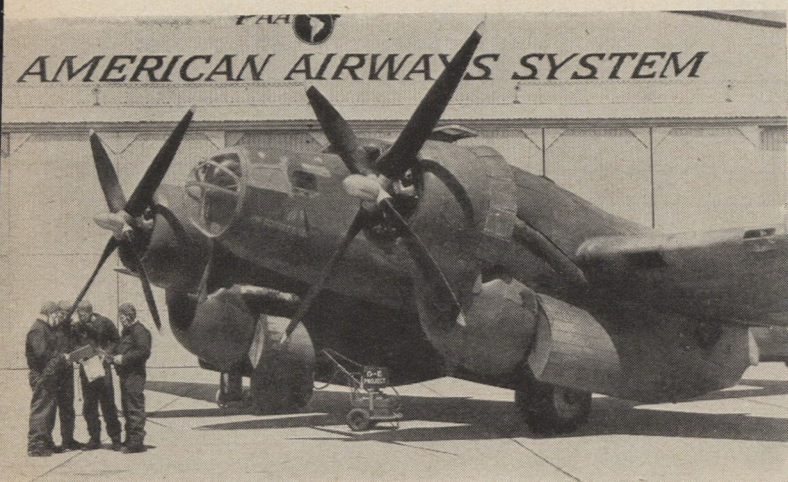




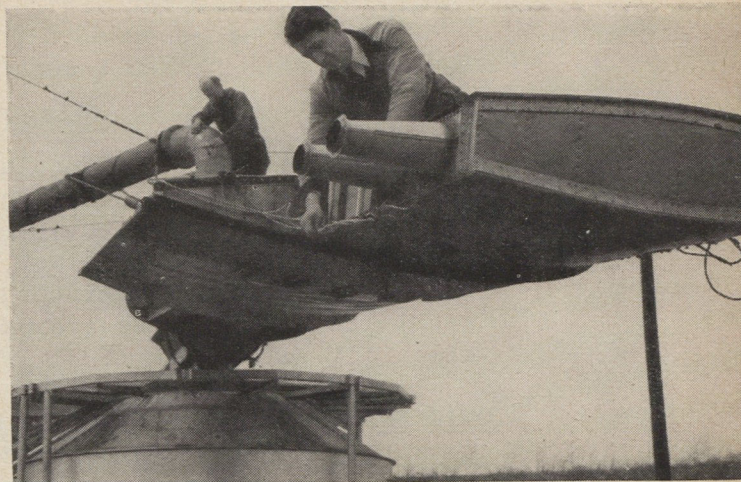
Long distance wires and radio-telephones keep engineers in G-E's Aircraft Gas Turbine Divisions in Lynn, Mass., in contact with the crew in the test plane. Weldon Orme, at the Test Center, talks to Lynn (200 miles east) with the phone in his left hand, and the B-29 (eight miles up) with the phone in his right hand.



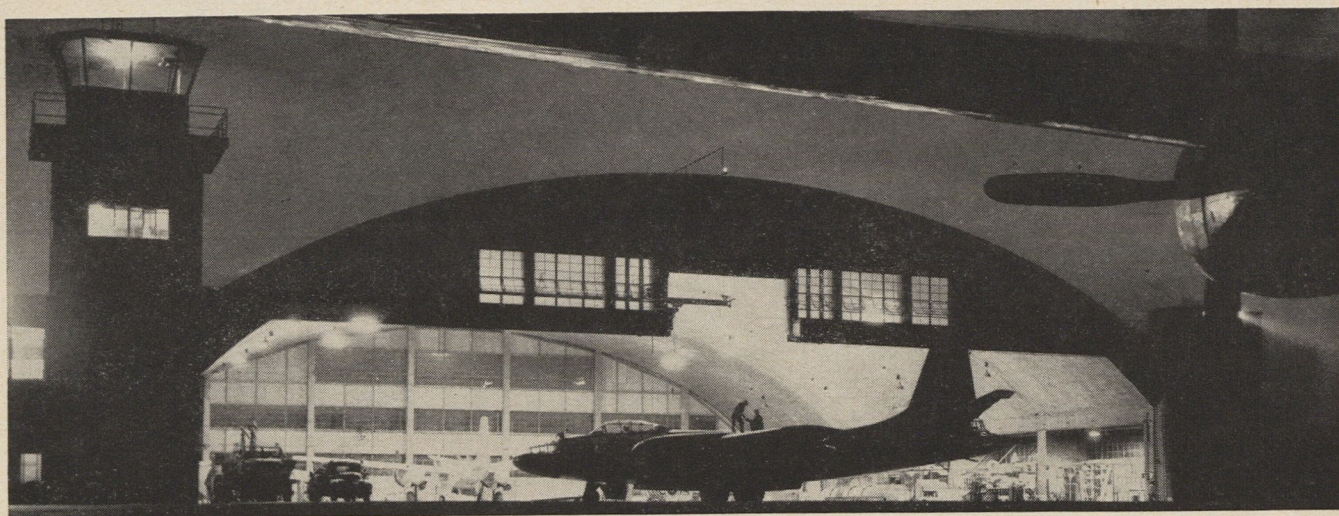
Special instrument panels in test aircraft are photographed four times per second. Cameras and instrument panels were specially designed for this purpose. After each flight the films are studied minutely to gain all possible information on operation of the engines.



Many types of aircraft are used. This B-23 tested high-altitude turbosuperchargers during the war. Cabin pressurizing from turbos, developed on this plane, is now in use on many military craft as well as on some commercial transports.



One of many projects at the Center has been a jet powerplant for a developmental helicopter. A 150-foot bowl served as a test pit for "Operation Skyhook." Ramjet, pulsejet, and turbojet engines are tested here.



The G-E stable of planes includes many loaned by the government as well as Company-owned craft. Closely guarded, the Flight Test Center tests armament, instru-

ments, autopilots, radar, electronics and communications equipment, electrical systems, and other aircraft equipment, in addition to aircraft powerplants.

**GENERAL**  **ELECTRIC**



# AIRPOWER IN THE NEWS

VOL. 35, NO. 2

WASHINGTON, D. C.

FEBRUARY 1952

2,350 MILE NON-STOP F-84G FLIGHT from Edwards AFB, Calif., to Langley AFB, Va., was recently completed by two pilots of 20th Fighter-Bomber Wing with one aerial refueling over Albuquerque.

AIRCRAFT PRODUCTION rate is expected to exceed 1,500-planes-per-month level by late 1952, Adm. DeWitt C. Ramsey, AIA President, has announced. Between 4,500 and 5,000 military aircraft of all types were produced by US in 1951. Industry also turned out 65 airliners, 50 twin-engine executive-type planes, and 2,300 light planes for an over-all total of 6,915 to 7,415 in 1951. Aircraft industry is now employing more than 600,000 people, and total is expected to reach 1,000,000 by end of year. . . Britain's labor force for aircraft industry now stands at over 160,000, 175,000 more are needed. . . Production plans for Britain's Vickers Valiant are unchanged though only prototype crashed last month.

OPS has suspended price controls on civilian airplanes and aircraft parts. . . Scheduled airlines of US do not favor use of government funds to develop commercial jet transport plane, according to Vice Adm. Emory S. Land, ATA President. . . Recently-retired Gen. Elwood R. (Pete) Quesada has joined Olin Industries, Inc., Alton, Ill., as a director and vice president. . . Domestic and international airlines equaled their record of last year with an estimated 1.3 passenger fatalities per 100,000,000 passenger miles, CAA has reported.

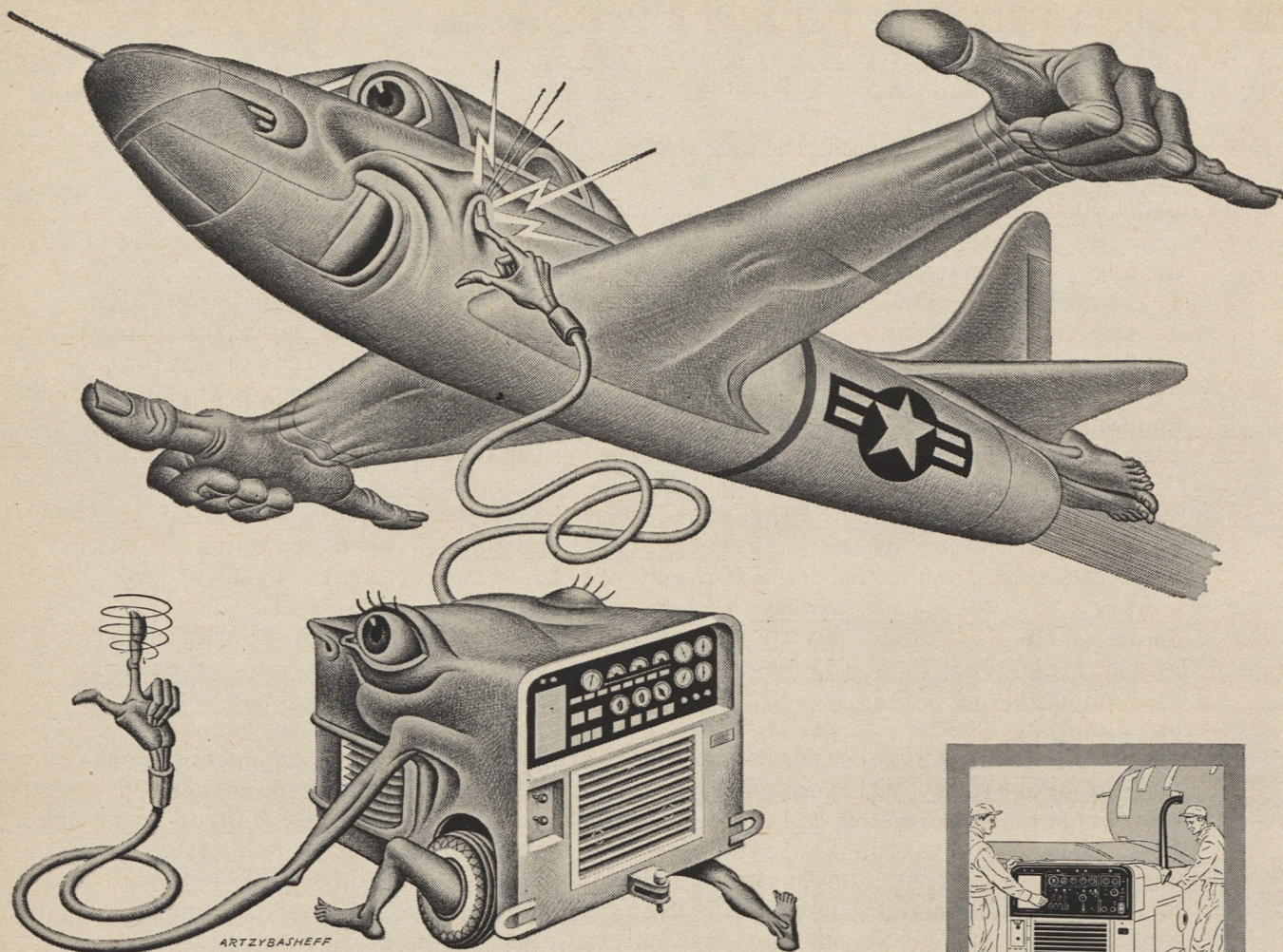
AF ATOMIC ENGINE CONTRACT has been awarded to Pratt & Whitney. . . Dr. Floyd L. Miller, director of research division of Standard Oil, has been appointed vice chairman of Dept. of Defense's Research and Development Board. . . Clay Bedford has been named special assistant to Sec'y Lovett to serve as special expeditor of military production. . . New deputy director of Munitions Board Cataloging Agency is George W. Ritter. . . New director of Munitions Boards Standards Agency is Russell A. Moody, formerly with Navy's Bureau of Supplies and Accounts. . . Max Golden has been appointed as Deputy for Procurement and Materiel programs to Under Sec'y of AF, replacing Mr. Imirie. . . Terrence L. May, Jr., has been named chief of contracts branch in MATS.

PRESENT GOAL, set for USAF by Gen. Vandenberg, is to raise its combat strength "by 50 percent with no more than 20 percent increase in personnel". . . No call for inductees will be made by USAF for March 1952. . . 1,000,000 pounds of scrap metal have already been sold at Tinker AFB, as USAF disposes of its scrap metal pile. . . New AF officer effectiveness report soon to come into use will include a slot for rating cost-consciousness.

USAF COMMAND AND STAFF: Maj. Gen. Frank F. (Hank) Everest, CG of 5th AF in Korea, has received recess appointment as lieutenant general. . . Maj. Gen. Earl S. Hoag has been appointed Chairman of Joint Troop Carrier Board under Chief of Staff, AF. . . Brig. Gen. Harlan C. Parks was designated to succeed Hoag as Regular AF member of Reserve Forces Policy Board. . . Directorate of Air Installations has moved from Deputy C/S for Materiel to Deputy C/S for Operations. . . Maj. Gen. Donald L. Putt, former Acting Deputy Chief of Staff, Development, is now Vice Commander, Air Research and Development Command. New DCSD is Maj. Gen. L. C. Craigie; his assistant, Brig. Gen. James E. Briggs.

(Continued on page 12)





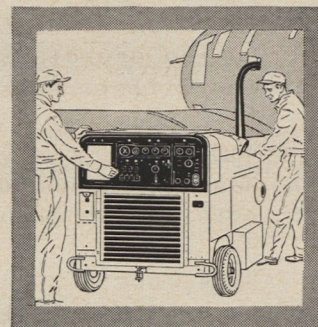
## Hot "juice" for cold jets

One generator for any climate, many uses! *Air-cooled*—to withstand  $-65^{\circ}$  or  $+135^{\circ}\text{F}$ . *Portable*—to wheel along rows of waiting jets. *Light and compact*—to tuck in a B-36 for dependable starting anywhere in the world. That's the power package developed by Lycoming and the United States Air Force.

If your need is power—or precision-machining, product development or high-volume production—Lycoming offers unusually extensive facilities and well-rounded experience. Long famous for aircraft engines, particularly to the military, Lycoming also meets the most exacting requirements of America's leading industries.

*Whatever your problem, look to Lycoming!*

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When the United States Air Force needed a sure-fire power package to start jets blasting in any weather, **they called on Lycoming for research and precision production.**

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FOR PRECISION PRODUCTION

LYCOMING-SPENCER DIVISION  
BRIDGEPORT-LYCOMING DIVISION



WILLIAMSPORT, PA.  
STRATFORD, CONN.



## AIRPOWER IN THE NEWS CONTINUED

AF BASES: Big Springs AFB, Tex., was activated on January 1. . . AF mortuaries will be established at Chateauroux, France, and Pepperell AFB, Nfld., . . . Rehabilitation programs include: \$187,000 for Grenier AFB, N. H., and \$621,000 for Smoky Hill AFB, Kan. . . Damage estimated at \$200,000 to \$300,000 was caused by fire on December 10 at Arnold Engineering Center. . . 389 fires, other than aircraft operational incidents, were reported by AF overseas installations during FY '51, with damage estimated at \$2,110,810. . . PHA has been directed to obtain 2,815 temporary dwelling units (at estimated cost of \$11,500,000) to relieve housing situation at sixteen military bases. . . 484 family housing units will be reactivated at Amarillo AFB, Tex. . . Thomas P. Coogan is new director of Armed Forces Housing Agency. . . Robert H. Richards has been appointed Deputy for Family Housing, Office of Ass't AF Sec'y (Materiel).

117TH TACTICAL RECONNAISSANCE WING will leave US in near future for duty in NATO forces. . . Names of only seventy-six AF personnel were included in list of 3,198 American prisoners turned over to UN negotiators by Reds recently. . . Total of 323 WAF had been assigned to Hq., USAF, as of January 15. . . Total of 10,621 traffic tickets were given Pentagon parkers during 1951. . . 133 Regular warrant officers were on EAD as commissioned officers on Sept. 30, 1951, as compared with 1,186 in same status on June 30, 1950. . . First group of Norwegian AF cadets to complete training as jet pilots in US received wings and diplomas at recent graduation exercises, Williams AFB, Ariz. . . Mail addressed to prisoners of war will be carried by military aircraft to Korea. . . New dental study by AF School of Aviation Medicine promises "plexiglas teeth" for airmen of tomorrow. . . First successful de-icing system for helicopter rotor blades has been announced by Navy. . . Prototype-prefab which doesn't require critical steel and which may fill certain AF needs is now being tested.

JIM JABARA, world's first jet fighter pilot ace, is currently making goodwill tour of Middle East. . . Col. John C. Meyer, one of top American aces, has been appointed deputy commander of Larson AFB, Wash. . . Among America's ten outstanding young men of 1952, named by US Junior Chamber of Commerce, were FEAF's Col. Francis S. Gabreski and Stanley Hiller, Jr., helicopter designer of Atherton, Calif.

NEW Office of Volunteer Manpower has been established by Federal Civil Defense Administration with Baltimore's Mrs. John L. Whitehurst, prominent national affairs women's leader, as assistant administrator. . . Effective civil defense organization for US will require services of one out of every twelve citizens, FCDA has announced. . . Special badge has been designed for issue to civilian members of Ground Observer Corps.

MILITARY PERSONNEL who have been hospitalized as result of wounds, illness, or injury suffered in Korea may be eligible for income tax refunds from Internal Revenue Bureau. . . New procedure for advance payment of mileage allowance to military personnel (changing AFM 173-30) will, in all but exceptional cases, require only one voucher and only one entry on military pay record. . . AF clothing stores are now allowed unrestricted sales to male officers.

NATIONAL AIR COUNCIL suspended operations on December 31. . . Col. Elliott W. Springs has been appointed to CAP's National Executive Board. . . Lt. Col. Joe Crowley has been promoted to colonel and command of Empire State Wing, CAP. . . Fifth Annual Model Plane Exhibit contest will take place in Higbee Company Auditorium in Cleveland, Ohio, February 23.





**Messenger of Mercy**—Carrying doctors and serum, a lone Sikorsky R-5 helicopter of the Air Rescue Service is credited with checking a yellow fever epidemic which was threatening to sweep Costa Rica last fall.

Operating from a makeshift base in the northern part of this Central American republic, the helicopter covered 6,000 square miles of remote territory in a 13-day period in good weather and bad.

During 42 landings, many of them in small tropical

clearings, doctors were able to inoculate 978 natives—and though 31 had perished before the helicopter flew in with medical aid, not a single death from the fever was recorded after its arrival.

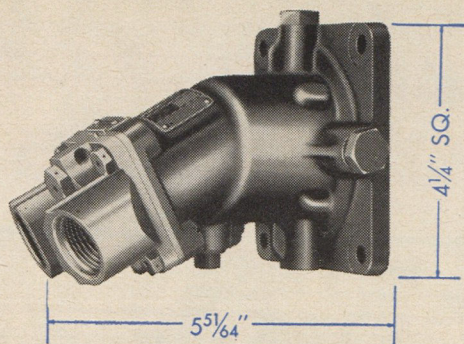
Other peacetime missions performed in recent months by Sikorsky helicopters include the evacuation of 140 flood victims in Argentina . . . food air-drops in the Kansas City flood region . . . and help for flooded-out inhabitants of the Po River Valley in Italy.

# SIKORSKY AIRCRAFT

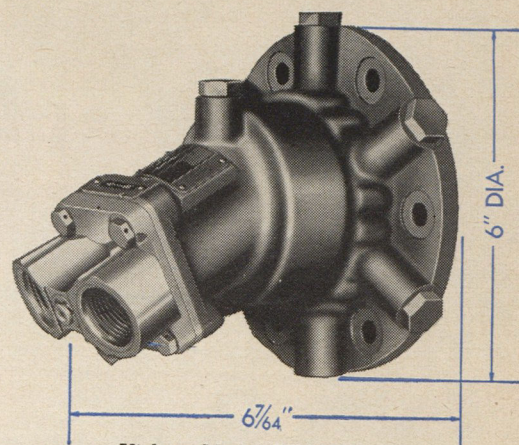
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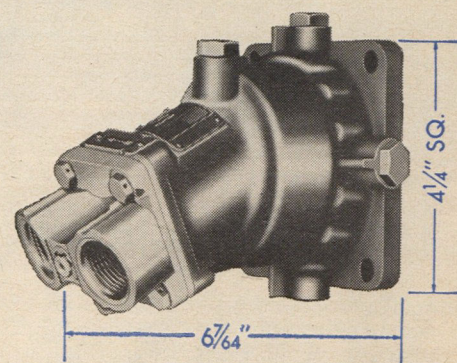
Vickers Model PFA3Y-2  
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displacement is fixed, the delivery is constant at any given speed, and varies directly with the speed. The design includes a metered valve plate feature which results in negligible system pressure pulsations.

We shall welcome an opportunity to supply more detailed information.

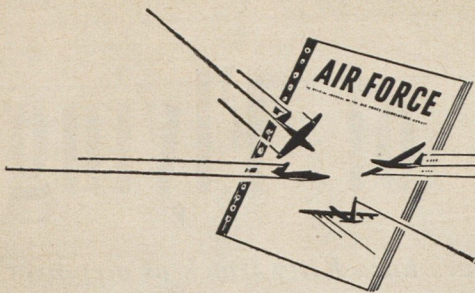
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## RENDEZVOUS

### Where the Gang gets together

**LARRY HILL, COME OUT COME OUT:** I am trying to locate Laurence E. (Larry) Hill, formerly of the 320th Bomb Group, 441st Bomb Squadron. It's very important that he contact me at one of these addresses: Edwin E. Jones, RFD 1, North Stonington, Conn., or 52 East New St., Forestville, Conn.

**FORMER LIEUTENANT ENDLER:** I'd like to hear from former Lieutenant Alfred E. Endler, from Pittsburgh, Pa. I saw him last at basic school in Waco, Texas, in June 1944. We graduated at Brooks Field, Texas, in the class of 44-H in September of that year. Eldon B. Guley, 1212 Third St., Bakersfield, Calif.

• No record in AFA files of Lieutenant Endler, but perhaps a Rendezvous reader knows about him—The Editors.

**WHERE'S CLEOPHUS?:** Me and my buddy went all through school together and then we enlisted in the USAF and went through basic with each other. Since then I have lost him and have tried to contact him by writing to my old basic squadron. But none of the letters have reached him, and I know him well enough to feel sure he would answer if they did get to him. His name is Cleophus Downey, AF 18321726. I wonder if anyone could help me find his whereabouts. S/Sgt. James M. Turner, Hq., 2143rd Air Weather Wing, APO 925, San Francisco, Calif.

**PAGING HEATH WILLIAM:** Can anybody help me locate Heath William, who was stationed at Lowry AFB in 1950 and went to school with me there? Sgt. Jesse D. Lindsey, 1097th Sp. Reporting Squadron, Sandia Base, Albuquerque, N. M.

**18TH AIR DEPOT GROUP REUNION:** The fifth annual reunion of the Hq Hq Sq of the 18th Air Depot Group, held October 26-28 in Chicago, sets some sort of record for consecutive meetings among small groups. We doubt if there are many groups like ours that have been able to hash over old times five consecutive years.

Our first reunion was in Marion, Ohio, with forty-seven former AAF'ers present. Later sessions saw as many as thirty-eight and as few as nineteen men attend. The Chicago gathering brought

twenty-eight to the Windy City, including our former CO and Chaplain. Two men travelled from the east coast just for this three-day event, a fine tribute to the good fellowship shown by our outfit.

To cement the organization even better, we've established annual dues and will publish a quarterly newsletter starting in 1952. Those of us who feel we're old hands at this reunion business strongly recommend it to other small groups as one of the most refreshing of experiences.

Roger M. Porter, Secretary-Treasurer, 18th ADGP Assn., c/o Cummings, Brand & McPherson, Gas-Electric Bldg., Rockford, Ill.

### UNIT HISTORIES

**FIRST AIR COMMANDOS:** I'd like to know if the First Air Commandos ever published a unit history? Several of the old gang I contacted at the Convention were as uninformed as I. John Warren, 1237 East Berks St., Philadelphia 25, Pa.

• We don't know of any such history, but recommend Lowell Thomas's new book "Back to Mandalay" as a possible substitute—The Editors.

**ELEVENTH AIR FORCE:** Can you advise me about several books I've been unable to locate? They are "The History of the Eleventh Air Force" and "Combat Activities of the Eleventh Air Force." Volume IV of "The AAF in World War II" refers to them, but I've been unable to find them for sale anywhere. John A. Nixon, Jr., Nixon and Co., Omaha 7, Neb.

**96TH BOMB GROUP:** I'm trying to discover if the 96th Bomb Group, 8th Air Force, ever published a magazine or pictorial book on its activities. If they have, would you kindly advise me where I could purchase a copy? Ewing M. Johnson, 127 W. 25th, Spokane 41, Wash.

• We can't find such a book but suggest Reader Johnson contact John B. Connell, Jr., 137 E. 2nd St., Weston, W. Va., who was asking about the same book in a recent issue of this magazine—The Editors.

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



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windproof lighter

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Nearly half a century stands between the monument to the Wright Brothers and the trio of Thunderjets overhead.

# 48 Years of Flying

*Jets and bombers buzz Kitty Hawk as airpower pays tribute to the Wright Brothers' feat*

**S**HE beat Orville a bit," said Johnny Moore, only living witness to Orville and Wilbur Wright's history-making flight from the slopes of Kill Devil Hill, North Carolina, on December 17, 1903. Moore had just watched an F-86 Sabre-jet travel  $2\frac{1}{4}$  miles in twelve seconds (625 mph) during the 1951 observance of man's first successful powered flight. The Wright Brothers traveled 120 feet in twelve seconds forty-eight years earlier.

The F-86 speed count climaxed a memorial ceremony at the Wright Memorial Monument, over which forty Air Force, Navy and Marine Corps fighters and bombers swooped low in tribute to a pair of great airmen. A C-119 Fairchild transport, escorted by thirteen F-51 fighters, dropped rose

petals and holly leaves as three wreaths were placed. The holly leaves had been sent by the city of Portland, Ore., and the rose petals were forwarded by the Tournament of Roses Association and the Pacific Rose Society, Pasadena.

An international menu highlighted the Wright Memorial luncheon at the nearby Carolinian Hotel, where Maj. Alexander P. de Seversky, well-known aviation expert, was the principal speaker. Nine scheduled airlines cooperated in flying food from seven foreign countries for the luncheon. The menu included pineapples from Hawaii by United Air Lines; avocados, Cuba, National; salmon steaks, Alaska, Northwest; potatoes, Canada, Colonial; garbanzos, Mexico, American; Camembert cheese, France, TWA; Brussels sprouts, Belgium, Pan American; and coffee, Brazil, Braniff. Capital Airlines flew all of these items from Washington, D. C.

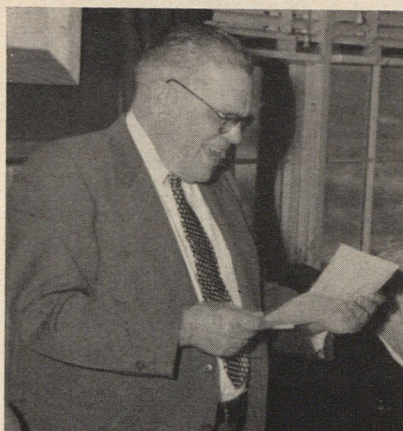
Harold Stuart, AFA President, paid tribute to the Wright Brothers in his remarks.

Maj. Gen. Vernon E. Megee, CG of the Cherry Point Marine Air Station, was the senior liaison officer for military operations of the observance. The USAF's 507th Tactical Control Group, TAC, directed the aircraft.

The Kill Devil Hills Memorial Society began a new year of operations with a new president. A pupil of Orville Wright, Brig. Gen. Frank P. Lahm, now a retired Air Force pilot, took over from Miles L. Clark.—END



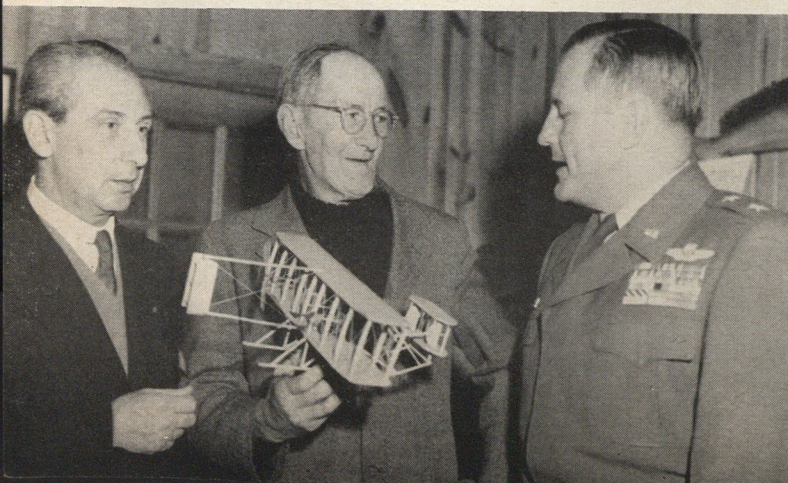
AFA and the Kill Devil Hills Memorial Society teamed up to honor the Wright Brothers. Here's Harold Stuart.



Retiring president of the Memorial Society, Miles L. Clark pioneered national recognition of the anniversary.

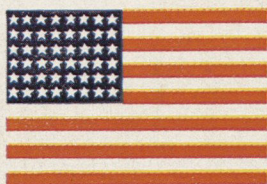
Johnny Moore, the only living witness to the Wright Brothers' Kitty Hawk flight, tells Alexander P. de Seversky and General Timberlake just how things went that December day in 1903. A model of the plane enlivens the story.

AFA member Norman Miller of Dayton and Lt. Charles Miller of the Ohio CAP flew a special wreath from Dayton to Kitty Hawk for the ceremony. Elizabeth City majorettes warmed up the day somewhat, though the wind was raw.



**By Ralph Whitener**





UNITED STATES



U. S. AIR FORCE



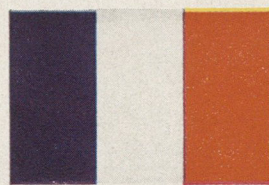
U. S. NAVY



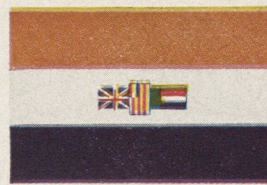
U. S. MARINE CORPS



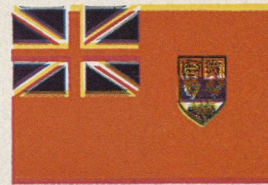
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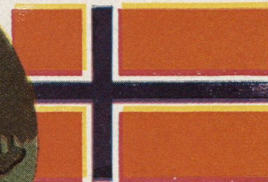
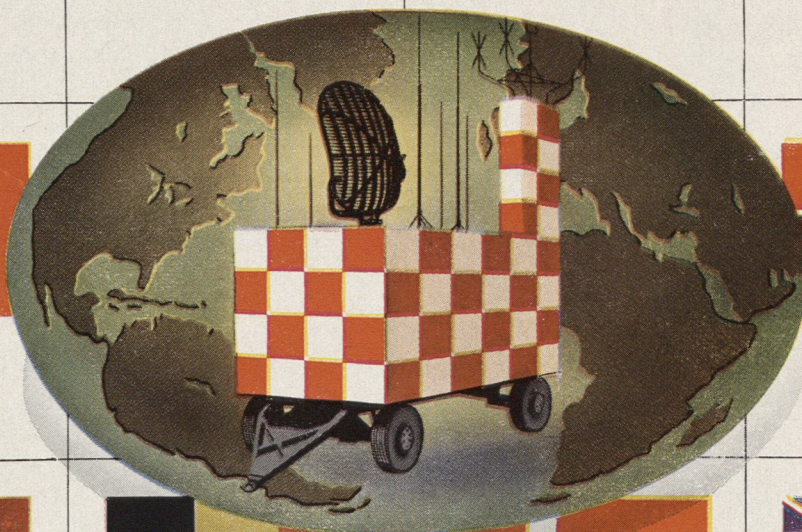
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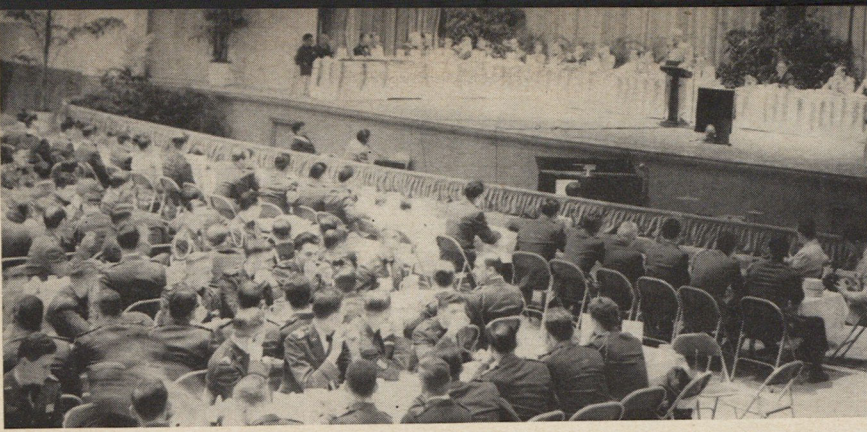
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A banquet in the newly opened Miami Beach Auditorium capped the two-day meeting. AFA President Harold Stuart addressed the 800 AAS cadet-delegates.



An honorary membership scroll goes to Maj. Charles Yeager, center, an AF test pilot. The West Virginia University AAS Squadron is named in honor of this supersonic native son.

# Arnold Air Society Meets

*AFA President Harold Stuart addresses 800 Air Force ROTC cadets at national conclave in Miami Beach*

**F**LORIDA'S Miami Beach was host to the Arnold Air Society on Thanksgiving weekend, for the campus Air Force ROTC Cadet organization's third national conclave. More than 800 cadets, traveling by airline, military plane, and auto, packed the Cadillac Hotel, conclave headquarters, to discuss the ROTC program now offered by 187 colleges and universities. They also planned the expansion of the Society, crowned their Queen, and listened to Harold Stuart, president of AFA, as he made his first public speech following his return from a seven weeks' tour of Japan and Korea.

Cadet Col. Paul Mitchell, Society president, University of Cincinnati, reported at the opening business session that ninety-one AAS Squadrons had been chartered to date. This emphasized the enthusiasm and determination of the Society's members, since it was only on March 4, 1950, that the Arnold Society of Air Cadets, Prop and Wing, and the Billy Mitchell Society were amalgamated to form the Arnold Air Society.

The University of Miami Squadron, host unit, did itself proud by arranging a program for the delegates and guests.

Patrick Miller, commander of the host unit, received the keys to Miami Beach and Coral Gables on behalf of the Society from the mayors of both cities. Laurels went to Cadets John Marshal and Bob Kaplin for handling the reception and program so expertly. Capt. W. S. Sherman, AF advisor to the host unit, wore a proud smile for the manner in which his cadets ran the conclave.

A formal banquet in the new Miami Beach Auditorium climaxed the two-day meeting. Interesting highlights of this event were the presentation and crowning of Queen Carolyn Irwin and her court, and the cutting of a 100-pound five-tier cake.

Among the many dignitaries attending the conclave was Maj. Robert Crawford, composer of "The Air Force Song," who sang his now famous tune. Maj. Gen. Ralph Royce, USAF Retired, and Lt. Gen. Richard K. Sutherland, US Army Retired, and wartime Chief of Staff to General MacArthur, gave short talks to the cadets at the banquet.

The Society's 1952 conclave will be held in Los Angeles the weekend of Thanksgiving.

AFA President Harold Stuart reported to the cadets on what he saw while touring bases in Japan and the fighting fronts in Korea during his seven-week trip.

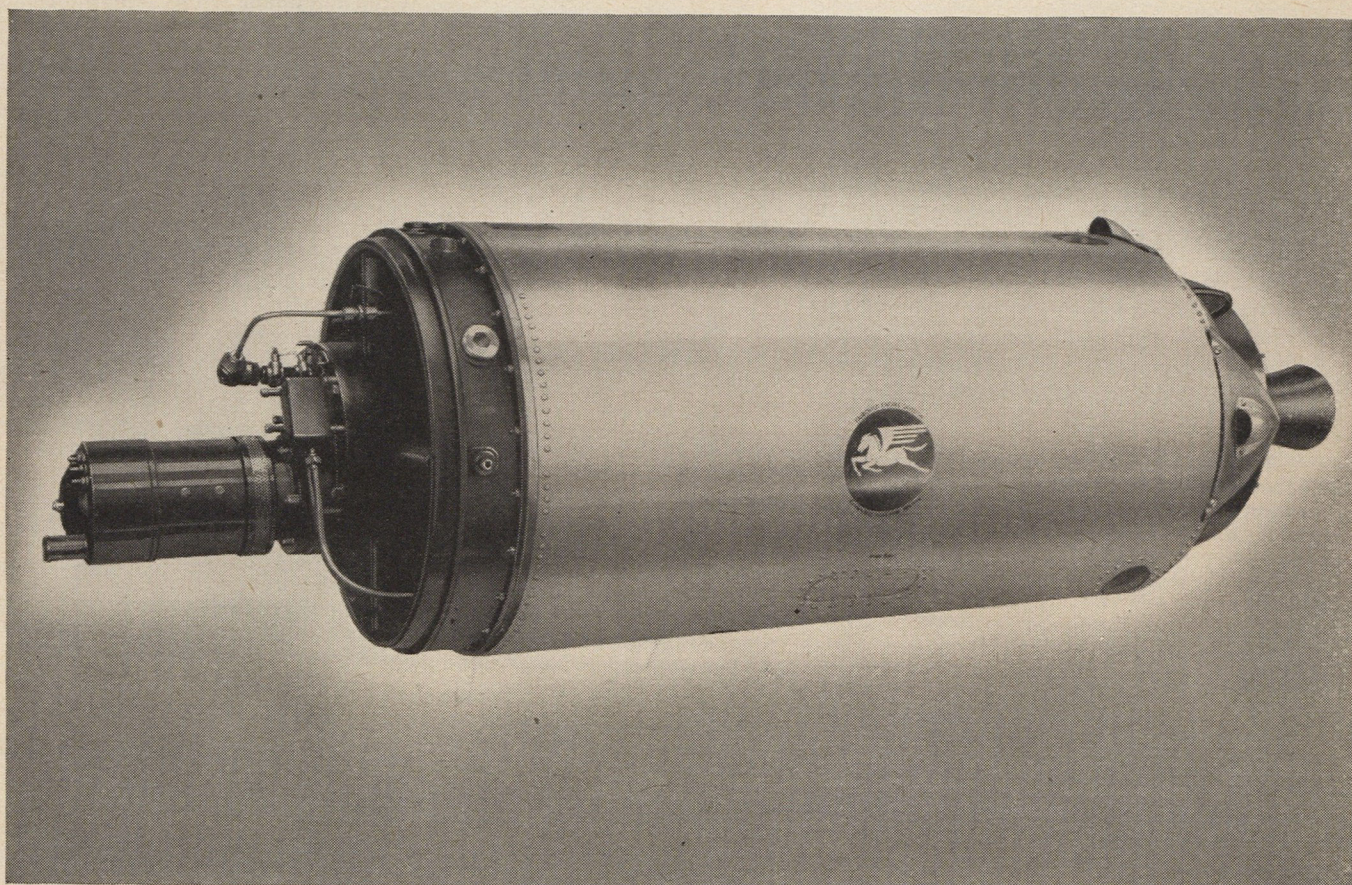


Colonels get prettier every day. Here coed Gloria Dunham (above) receives her honorary commission in the Tulsa University Air Force ROTC unit from Cadet Leon Webber between halves of the Texas Tech football game. And at Kansas University, members of the Gen. Ennis C. Whitehead AAS Squadron hold a reception for the retired AF general during his latest visit to the cadet unit.





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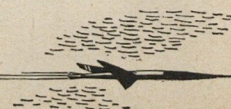
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# THE GAP IN OUR AIR STRATEGY

Granting that our lack of national aims and our military inadequacies make psychological warfare difficult, we are not making the best of what we have.

- Airpower diplomatically is on a hit or miss basis.
- The Voice of America fails to mention airpower.
- No AF agency has psych war as primary duty.
- Our airpower is ignored as psychological tool.
- Interdiction in Korea is not being exploited.
- Tac Air is not used for psychological gains.
- AF has no real voice in psych war policy in Korea.
- No airpower leaflets have been dropped in Korea.
- AF has only two psych war officers in Europe.
- We are missing the boat in psychological war.

**By James H. Straubel**



# How Airpower Can Fight the PSYCHOLOGICAL WAR



FOR all its dependence on new technologies, our Air Force capability can be increased materially by an invention as old as Hannibal and his troop-carrying elephants, as old as Genghis Khan and the rumors he used as weapons, as old as the Trojan Horse—as old, in other words, as psychological warfare.

That the ancients exploited the psychological power of their arms with more telling effect than do the modern warriors of the Western World is by now an obvious and disturbing fact, especially with the existence of an air weapon which lends itself to psychological exploitation as has no other weapon in history.

Of course, it must be recognized that psychological warfare, for all its importance, is dependent for success upon powerful physical forces preceding or following its employment. The problem is not “bullets or words,” though an official pamphlet on the subject carries that title, but rather, the concurrent use of military hardware and sales appeal. When the hardware is not adequate to support the sales pitch, the psychological appeal can be empty indeed. So our current military inadequacies, especially in the airpower realm, rob us of much of our psychological capability. Further, our government so far has failed to define clearly its long-range aims in the struggle against Communist aggression—aims which must be the backbone of any psychological warfare program.

However, after a survey of the situation here and analysis of re-

ports from Korea, these conclusions may be drawn:

- We are not making the most of what we have to work with in psychological warfare.

- In Korea, where we can back up our sales talk with military action, we are ignoring the psychological capability of airpower in battle.

- We are not integrating psychological warfare into our air strategy to assure full exploitation of this factor in either limited or all-out war.

- We have yet to recognize airpower as the prime military instrument of national policy and, as a result, continue to employ it diplomatically on a hit or miss basis.

The airplane, unlike any other weapon known to date, has the inherent ability, apart from its destructive power, to win friends and influence enemies. It can reach out and make its presence known to both, long before friend and foe become conscious of our surface action. This was amply demonstrated during the first few years of World War II in Europe, and again in the early days of the war in Korea. On the latter occasion the South Koreans, standing alone against the aggressor, found in friendly planes the only tangible evidence that they were being supported in the struggle. Our airpower inspired some of them, as it had other allies in Europe several years before, to begin a determined underground resistance.

The airplane also has demonstrated beyond all question (and there is a wealth of documentary proof available) that it has unique powers to breed fear in the enemy soldier, create confusion in the enemy's administration of war, inspire desertion and surrender along the battle line, and foster active and passive resistance behind the front.

All this and more the airplane can do, by the very nature of the beast, without anyone planning it that way. And, by and large, that's what has happened—the plane has become a major psychological weapon *in spite of* our apparent disregard for its psychological importance.

Today, more than ever before, we must make full use of every psychological instrument at our command. We are confronted by a nation actively and expertly engaged in ideological world revolution, a nation which accords psychological warfare equal billing with military power in both planning and operations. In this situation we can no longer afford to underestimate and abuse airpower's psychological potential.

We did, to be sure, apply some psychology to our airpower activities during World War II, though it is hardly a proud chapter in our conduct of the war. Our strategic bombing was, for the most part, unaccompanied by a pre-planned and sustained psychological offensive, though it was rich in opportunities for exploitation. And we racked up a number of unbelievable blunders. After the mass bombing raids on Munich in 1944, for example, we explained via radio broadcasts it was in retaliation for the V-2 offensive on

## An AIR FORCE Special Report



London. But this word was sent out only after the damage had been done, and to the citizens of Berlin, not Munich. Since Berlin didn't pass the word along, the people of Munich were left in the dark as to the reason for the destruction. Where we might have motivated fear and inspired organized evacuation, revolt, and sabotage through advance warning, we motivated, instead, unity under crisis and hatred for the attackers, as the survivors of Munich have since testified.

While the criticism of strategic bombardment on the grounds of morality, both at home and abroad, especially during the B-36 hearings of a few years ago, has for the most part been stupidly partisan and of obvious comfort to the enemy, it is also true that we have a grave responsibility with the atomic air weapon and must—for military as well as diplomatic and morale reasons—supplement it with effective psychological warfare—a factor sadly missing in our airpower arsenal of today.

We have hardly begun to grasp, much less exploit, the psychological impact of our aerial operations, despite an abundance of wartime experience to show us the light.

Perhaps the best example to come out of World War II, and even it was a makeshift effort, occurred when General LeMay called his fire-bombing strikes on Japan in advance and warned the target population of the consequences. This effort, however, was an isolated case, and was generally considered something of a stunt, like Babe Ruth pointing out the spot for his next home run, rather than a necessary counterpart of strategic air operations.

In World War II we went through the motions of conventional psychological warfare—leaflet dropping and radio broadcasts—and the airplane,



Berliners saw airpower diplomacy when Operation Vittles kept the city alive.

on its own, had its psychological innings. When it was all over, General Eisenhower could rightfully say, "We have seen a great many changes in military science. It seems to me that not the least of these was the development of psychological warfare as a specific and effective weapon . . . . Without doubt, psychological warfare has proven its right to a place of dignity in our military arsenal."

General Ike, however, was a better analyst than prophet. In the immediate postwar years, psychological warfare barely achieved existence, much less dignity, in the military structure. In the Army, which by squatters' rights has assumed the major role in this field, psychological warfare became little more than a paper organization. In the Air Force even the paper was missing.

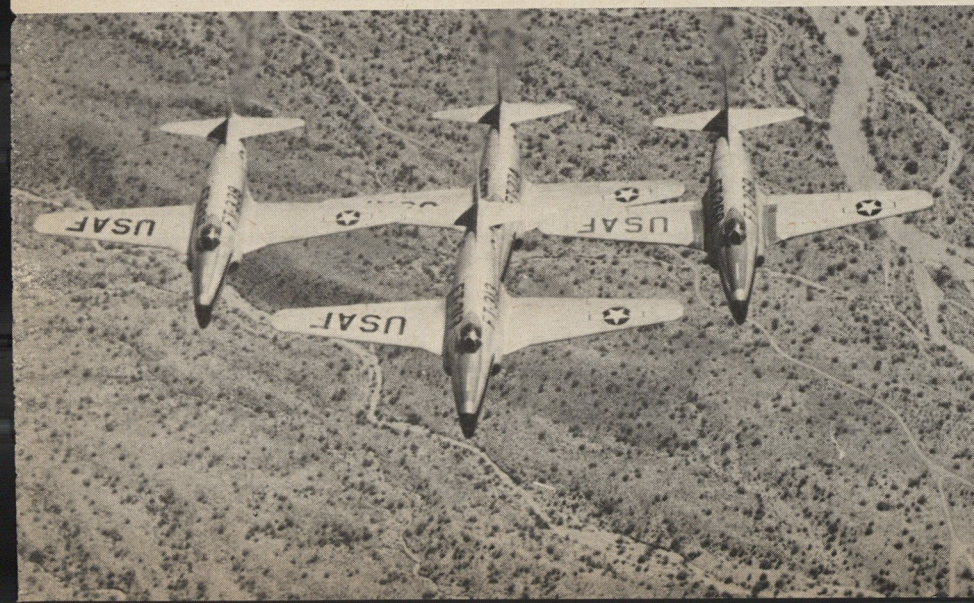
As the Air Force struggled for survival as a striking force, there were far too many internal and inter-service problems to become con-

cerned over psychological warfare, although not long after autonomy was achieved in 1948, an Air Force officer hung out his shingle in the Pentagon and the Air Force had its first "Psychological Warfare Division."

Meanwhile, the airplane was doing a significant job on its own in the uneasy postwar world. In occupied South Korea in 1946, troop carrier planes of the Air Force helped the natives fight a cholera epidemic by transporting doctors and cholera vaccine to infested areas, and sprayed DDT over a number of cities. And a year or so later, airpower demonstrated its unique abilities in more dramatic fashion.

In the South Korean town of Kwangui the American ground commander had learned, at the eleventh hour, that a leftist riot was scheduled to break up the approaching V-J Day anniversary celebration. The riot was to be followed by an armed march on the local jail to release Communist political prisoners. Advance intelligence indicated that the handful of American troops in the town would be unable to handle the coup. The ground commander sent an SOS by scribbled note and liaison plane to the 475th Fighter Group of the 5th Air Force at Kimpo AFB, and the group laid on a mission. Next morning in Kwangui the mob began its march on the jail. The streets filled with angry rioters, and our ground troops began to realize the hopelessness of their position. Then screaming P-38s of the 475th appeared. As the ground CO reported later, the timing was psychologically perfect. The planes swooped down and buzzed the crowds. Without a shot being fired from the planes, the mob dispersed,

The psychological impact of acrobatic teams vanished in an economy wave.





and the riot ceased as suddenly as it had started.

Across the world in Germany, a year later, far bigger events were taking place. Here the United States was using its Air Force for the first time as a major diplomatic weapon. As John G. Norris, military writer for *The Washington Post* and a Navy veteran, documented the event for this magazine from Berlin:

"Heretofore, diplomatic missions involving the military were a virtual monopoly of the Navy. Whenever a show of force was required, or aid needed abroad, the State Department sent a cruiser or a squadron of war ships . . . Both in the Admiralty in London and the US Navy library in Washington there are whole sections devoted to the 'Navy's role in diplomacy,' including volumes which trace such functions back to the dawn of civilization. The first chapters of the 'role of air-power in diplomacy' are being written here."

Mr. Norris referred to the now historic Berlin Airlift, and to the arrival of the first B-29s in England—two key moves in the cold war. Both, by their very nature, were of great psychological impact.

However, this first chapter in air-power diplomacy, though a significant "best seller," is gathering dust on the shelf. Somewhere along the line the authors apparently threw away the script and reverted to the hackneyed diplomatic themes of by-gone days.

Appreciation of the airplane as a psychological weapon has gone wanting since the airlift. To cite a small case in point: the military economy regime of former Secretary of Defense Johnson wiped out, along with more important things, the Air Force's crack acrobatic team from Williams AFB, a four-man F-80 outfit known as the Acrojets. It was disbanded in the effort to show that



Psychological follow-ups to air attack would increase the prisoner bag in Korea.

the Johnson administration would not put up with public relations "luxuries." Now another acrobatic team, known as the Sky-Blazers, from the 36th Fighter Bomber Wing in Germany, has been flying its F-84s in exhibitions all over Europe. To the people living in the shadow of Russia's military might, this jet team has become an inspiring symbol that in an emergency Free Europe will not be totally forgotten in the air. But here again we find an isolated, makeshift, unplanned program. The military establishment has yet to learn where public relations ends and psychological warfare begins.

Our appalling national weakness in psychological warfare begins, however, at levels above the military. It begins, as do so many of our military problems, at the top policy-making levels. Here development of a long-range psychological warfare policy is sadly lagging. Under present thinking, such a policy probably cannot be expected

until the economic and military power of the free world has become adequate to challenge any Russian move.

This was the conclusion reached recently by Anthony Leviero, staff writer for *The New York Times*, whose brilliant six-part report on the psychological war between East and West is the kind of reporting job that certainly deserves consideration for a Pulitzer prize.

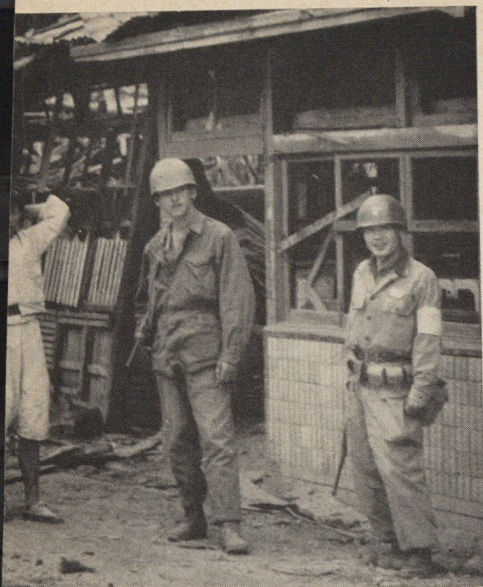
Mr. Leviero, after exhaustive investigation, found that our top officials finally have become aware of the vast and complex ideological struggle in which we are engaged, but that relatively little is being done about it. He found that our highest policy-making body in psychological warfare, the Psychological Strategy Board, is a part-time panel beset by internal struggles for power and by bureaucratic impotency, while Russia places psychological warfare on a par with its military effort and conducts it directly from the Kremlin; that we are spending less than one-seventh what Russia and her satellites spend annually (\$1,400,000) on psychological warfare; that our current "campaign of truth," though nobly conceived, is recognized as inadequate in government circles; that Russia has concluded that psychological warfare can be most effective through concentration on a few major propaganda themes, while our efforts in the field have been "extremely diffused"; that the critical objective remains, "to weigh the balance of ideological force on the side of the democracies."

It must be acknowledged that, in a struggle of this scope and with diplomatic barriers forbidding direct psychological effort by the Air Force beyond the Iron Curtain, the use of

## WHO'S NEEDED IN THE AF FOR PSYCH WAR?

To fill gaps in its psych warfare program, the AF is looking for officers with education or experience, or both, in psychology, sociology, anthropology, history, languages, economics, political science and international relations, journalism, advertising, and public relations. The need is especially great for qualified linguists and artists. To help meet these officer needs the AF's Psychological Warfare Division has instigated a three-month course at Georgetown University, Washington, D. C. It includes language refresher work, studies in comparative world cultures, aspects of US foreign policy, and the historical, sociological, and technical phases of psychological warfare. Some trainees get on-the-job assignments with the Voice of America.

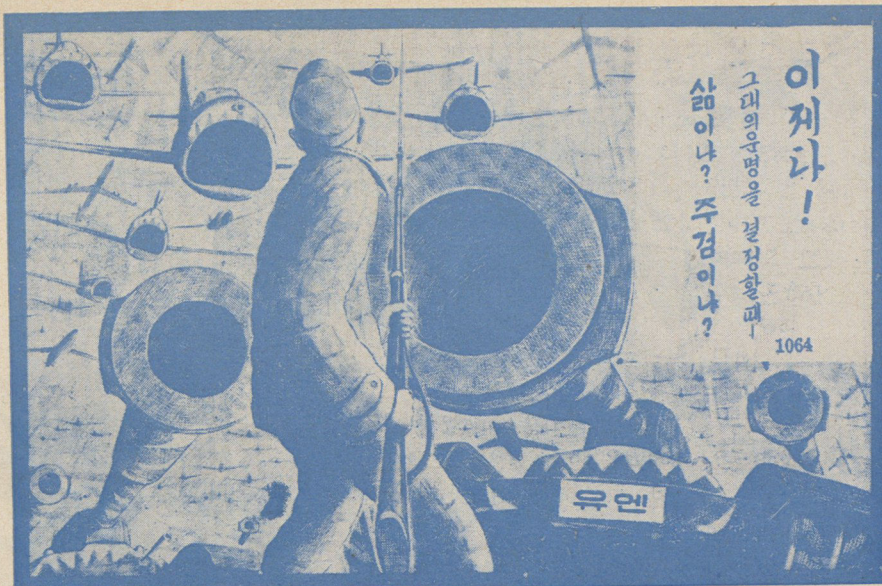




The Reds aren't told about interdiction.

airpower as a psychological weapon is limited on the cold war side of the globe. And yet, by virtue of her geographical position and huge standing army, Russia obviously has most to fear and our allies most to gain from the airpower capability of America. And while this capability is far from what it should be, we are not, from a psychological warfare standpoint, making the most of what we've got, not exploiting our strong points, not adequately preparing to exact maximum psychological benefit from airpower employment in all-out war.

For one thing, the national message we are transmitting to the world through the Voice of America, our only official medium of open psychological warfare, is completely lacking



Underplaying airpower is failure to exploit the psychological potential of the airplane. The closest thing to an airpower leaflet used in Korea shows planes, guns, and tanks as examples of UN materiel superiority. But airpower alone has been sadly neglected. The accompanying text, telling North Koreans the "Choice Is Yours—Life or Death?" also misses the psychological boat. Text on the reverse says, "You have now been committed to a suicidal attack by your Communist leaders. . . . The UN forces are waiting to destroy you if you blindly allow Communist leaders to commit your flesh to the steel jaws of UN guns and tanks and planes. The fire and confusion of this attack give you the opportunity to escape and come over to the UN side."

in its references to American airpower. This hardly can be excused on any premise but ignorance of the airpower potential. Nor can the military services explain their own deficiencies solely with the excuse that top-level policy is lacking, though that argument admittedly is a strong one.

At Air Force Headquarters in the Pentagon a few pioneers are making a valiant effort to insert psychological warfare into the Air Force mission and build an effective organization for its employment. They form the Psychological Warfare Division of the Directorate of Plans, which fits into the Air Staff under the Deputy Chief of Staff for Operations. Chief of the Division is Col. Orrin L. Grover, a wartime fighter commander who has been the prime factor in putting the Air Force into the psychological warfare business. As pioneers, Colonel Grover and his staff are filled with a zeal that reminds one of other small groups of officers pushing for recognition of such programs as air-sea rescue in 1941 and guided missiles in 1946. All faced the same problems and the same barriers now confronting the Air Force's psychological warfare unit.

The Division has made some significant progress. Two operating

units, known as Air Resupply and Communications Wings, have been activated and trained (under MATS at Mountain Home, Idaho) since last April, and soon will be ready for overseas duty. With a TO/E calling for B-29s, SA-16s, C-119s, and helicopters, and 3,000 officers and men, each ARC unit is prepared to prepare, reproduce, and disseminate leaflets, conduct "air-speak" operations with loud speakers attached to aircraft, and perform other kinds of conventional psychological warfare operations, such as radio broadcasting.

To help educate people to the Air Force's participation in this field, the Division has developed a psychological warfare exhibit, and a few months ago sent it on a tour of military installations in Europe.

But the fact remains that within the Air Force there are major weaknesses in the psychological warfare program. Some of them can be summed up as follows:

- The Air Force does not have a staff agency with psychological warfare as its primary mission. The so-called Psychological Warfare Division of Headquarters USAF is charged first with the aerial resupply of special military units and guerrilla forces. It is the policy-making body for a specialized form of air transport. Psychological warfare is its secondary mission.

(Continued on page 40)

Airpower delivers the leaflets but ground strategists dream them up.





# The Atomic Illusion

- **Illusion:** Russia's atomic development parallels our own experience.

**More Likely:** Russia is using new atomic techniques more compatible with her resources.

- **Illusion:** The Politburo forbids adequate freedom for new scientific research.

**Fact:** Russia's leading physicist has won autonomy in his scientific pursuits.

- **Illusion:** Russian dictatorship hampers development of scientific brainpower.

**Fact:** Russia is training 400 percent more scientists than the United States.

- **Illusion:** Russia's A-bomb program is seriously crippled by lack of uranium.

**More Likely:** Russia has successfully tapped her vast mineral resources for fissionable materials.

- **Illusion:** A shortage of electric power hampers Russia's A-bomb development.

**Fact:** Russia has enough electric power to support two Oak Ridges and five Hanford-type atomic plants.

- **Illusion:** Our bigger atomic stockpile is security against the Russian atomic threat.

**More Likely:** Russia needs only enough atomic weapons to destroy our target systems.

- **Illusion:** We are relatively safe from Russia's atomic attack through 1955.

**More Likely:** Between now and 1955 Russia will have enough atomic bombs to destroy us.

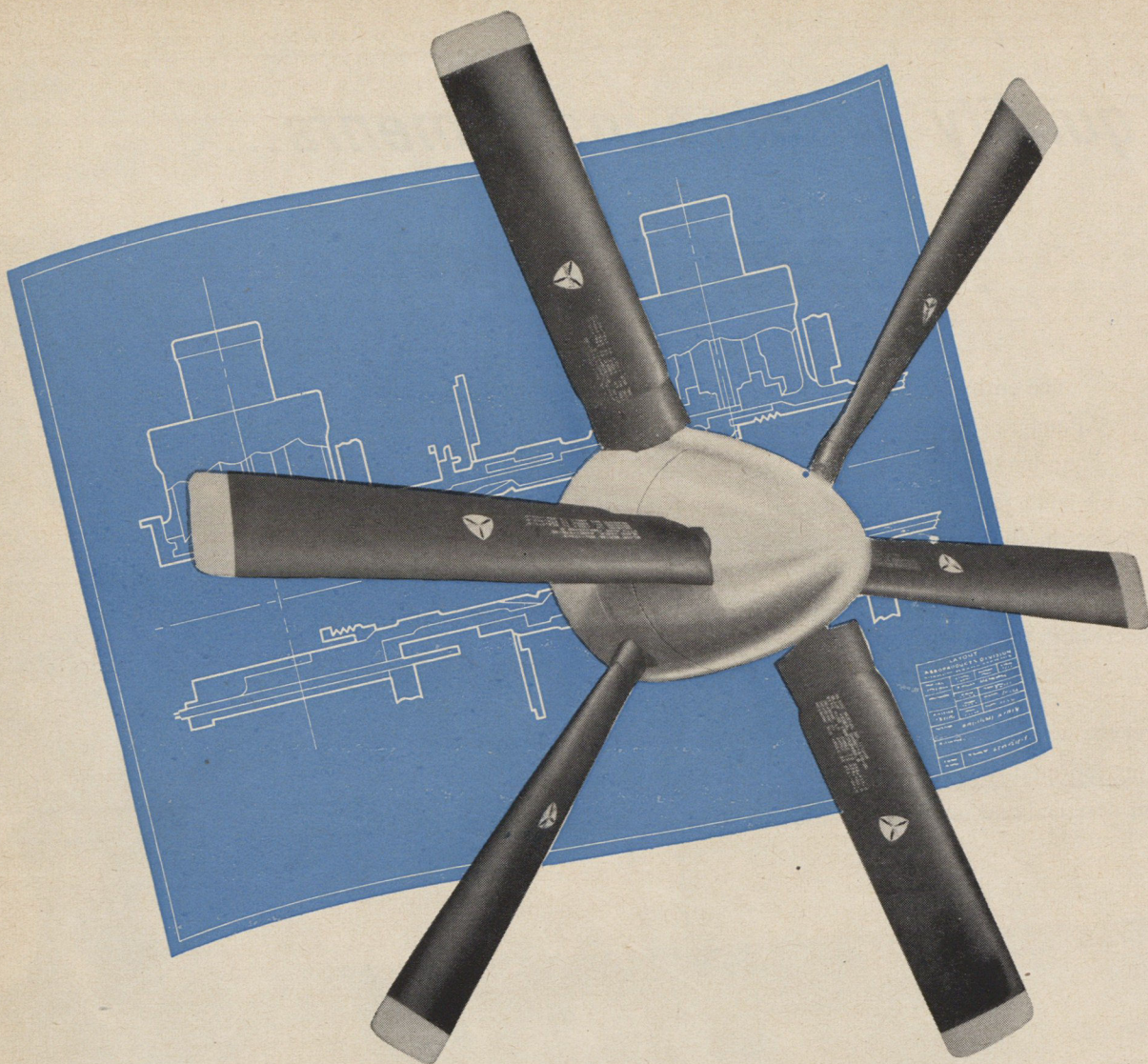
**T**HE fall of 1943 was a dark and dismal time during the operations of the Eighth Air Force. The morale of bomber crews had sunk to a dangerous low as a result of heavy losses suffered on missions deep into enemy-held territory. In the middle of November, the bomber group for which I was operations officer had just returned to England from a special mission to North Africa. With two other Eighth Air Force B-24 groups we had participated in an attack on the Messerschmidt aircraft factory at Wiener-Neustadt, near Vienna. This had been a deep penetration, made without fighter escort, and the *Luftwaffe*, alerted to our coming, had destroyed more than half of one of our groups and inflicted considerable damage on the other two. Several missions of this nature had had a dampening effect on our spirits and we were ready for any respite from difficult operations.

In this mood we welcomed the field order we received the evening of November 15, 1943. It directed us to attack the next day the Vemork power station and electrolysis plant at Rjukan, Norway. This is almost directly west of Oslo about halfway between Oslo and the Atlantic coast. This looked like the break we were waiting for, for it obviously involved only a shallow penetration and few prospects of fighter opposition. At the same time, we were puzzled by the target. Why were we attacking a power plant in Norway when there were so many critical targets in Germany itself?

In the lower echelons we never

**Second of two articles  
By Ramsay D. Potts, Jr.**





# Aeroprop!

## Performance starts with a Blueprint

As far back as 1945, an idea was born and put into blueprint form at Aeroproducts.

It was a blueprint for performance—for greater range, greater climb and greater flexibility of operation for planes with near-sonic speed. For this Aeroprop was the first propeller to handle successfully the enormous thrust of turbo-prop engines.

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unannounced. Today, this great Aeroprop is reversible, to cut landing runs smoothly and safely. It has electronic governing and synchronizing circuits to control engine speeds automatically and provide steady, accurate and rapid response of plane to throttle. *And Aeroprop's self-contained hydraulic system simplifies both installation and maintenance.*

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Designing for tomorrow*

# Aeroproducts



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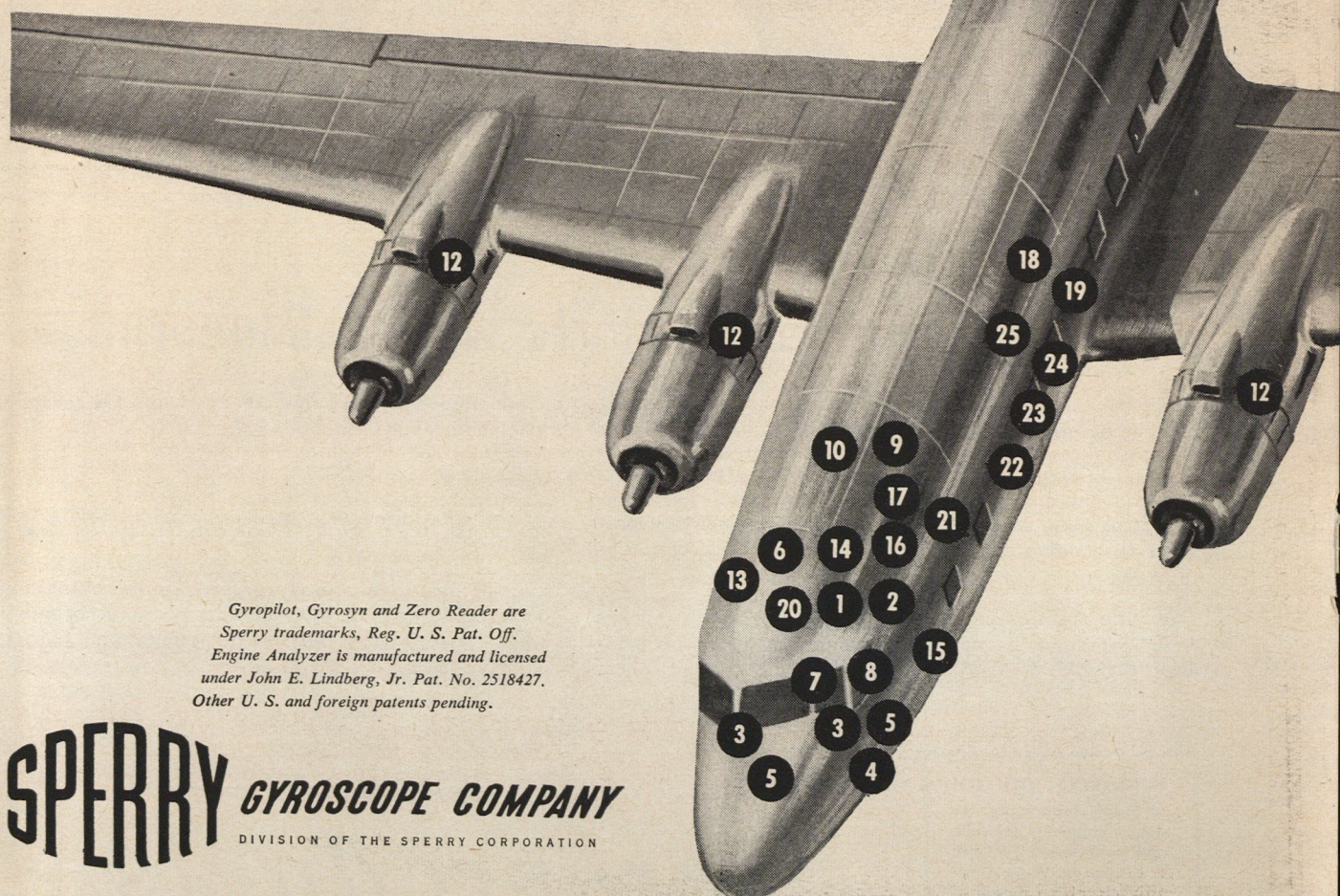
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1. *A-12 Gyropilot Pedestal Controller.* The A-12 Gyropilot automatic flight controller provides complete automatically-stabilized control of the aircraft through all weather. The Pedestal Controller enables the human pilot to make coordinated turns and altitude changes by slight finger motion while the aircraft is completely gyro-stabilized even in rough air. Rates of turn, climb or descent are automatically maintained.

2. *A-12 Automatic Approach Controller.* With this standard accessory the A-12 Gyropilot automatically guides the aircraft to the runway with signals received from the instrument landing system.

3. *Zero Reader.* The Zero Reader is a simplified gyroscopic indicator which pieces together attitude, altitude, heading and radio path information. It shows the pilot instantly and continuously whether he should steer left or right, or go up or down . . . relieves him of complex mental calculations on approaches or landings.

4. *C-2 Gyrosyn Compass.* The C-2 Gyrosyn Compass is a Directional Gyro synchronized with the earth's magnetic field by means of a Flux Valve. This instrument . . . a gyro-stabilized compass in effect . . . gives accurate magnetic heading, requires no resetting and provides stable directional indication under all conditions of air turbulence.

5. *H-5 Gyro Horizons.* By means of a miniature airplane and gyro-activated horizon bar, this flight instrument shows the pilot what he would see if he had good visibility outside—whether the plane is banking, climbing, gliding or flying level. The H-5 Gyro-Horizon is non-tumbling and requires no caging.

6. *Engine Analyzer Indicator.* Its graph-like patterns give the flight engineer a continuous visual analysis of each engine during flight . . . instantly detect, locate and identify irregularities in engine operation. Upon landing, the flight engineer hands ground crew complete data on parts in need of servicing, thus making possible frequently spectacular savings in maintenance time.

7. Zero Reader Heading Selector.

8. Zero Reader Selector Switch.

9. Zero Reader Control.

10. C-2 Gyrosyn Compass Amplifier.

11. C-2 Gyrosyn Compass Flux Valve.

12. Engine Analyzer Synchronizing Generators.

13. Engine Analyzer Cycle Switch.

14. Engine Analyzer Condition Switch.

15. Engine Analyzer Power Supply-Amplifier.

16. A-12 Amplifier.

17. A-12 Automatic Approach Amplifier.

18. A-12 Vertical Gyro Control.

19. A-12 Gyrosyn Compass Control.

20. A-12 Pilot Engaging Control.

21. A-12 Servo Control.

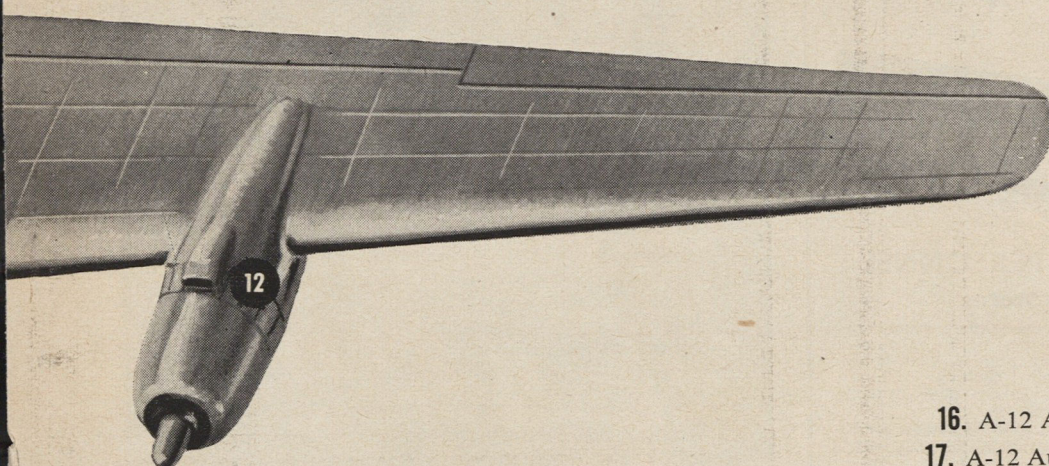
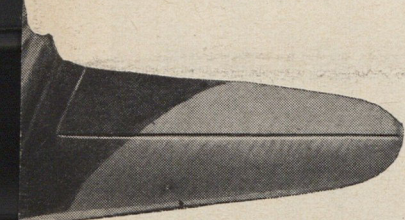
22. A-12 Rudder Servo.

23. A-12 Aileron Servo.

24. A-12 Elevator Servo.

25. A-12 Elevator Trim Tab Servo.

26. A-12 Flux Valve.







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# TECH TALK

By Helena Redmond

Taking advantage of the fraction of a second delay between the time a fuel tank catches fire and the explosion, British inventors have devised a "bomb" that will explode faster than the gasoline. It sprays the inside of the tank with fire-extinguishing fluid and prevents aircraft from blowing up in combat. The bomb, about half the size of a grapefruit, fits neatly inside gas tanks. It contains carbon tetrachloride which is released when a highly sensitive diaphragm detects the beginning of an explosion. Beside snuffing out high-octane explosions, the device may also be adapted to prevent dust and gas blasts in coal mines.

The best way to test jet engines is by observing their behavior in flight. Using a North American B-45 bomber as a flying test-bed, General Electric plans to see how its latest turbojet, the J-73, performs in the air. The four-jet B-45 will carry the test engine in a specially designed nacelle under the bomb bay. The nacelle, which may be partially retracted into the bomb bay when not in use, will also accommodate jets larger than any yet announced. Hundreds of special instruments will record all phases of the test engine's flight performance.

An inexpensive gadget developed by Temco whittles by half the time required to swing compasses on fighter aircraft. Previously a two-man operation, compass swinging now becomes simple for one technician, and it's all done with mirrors. The timesaver consists of a mirror on an arm, attached with spring clamps to the pitot mast. Using this arrangement, one man can check headings on the compass rose on the wingtip without moving from the cockpit where he reads the compass.

Protection against the common dangers to aircraft generators is gained in a 28-volt DC control system perfected by Jack & Heintz. Designated the GC34-1, the compact system can be installed on many types of planes and requires only one external cable connection. It protects generators against selective over-voltage, feeder and generator ground faults, reverse polarity, reverse current, and pull-down current in extremes of altitude and temperature.

Taxiing fast figure eights on an airport ramp, zig-zagging down the runway on takeoffs, and making severe side slip landings without straightening out first are all in a day's work for the Geisse cross wind landing gear. Recently certified airworthy by the CAA after demonstrations on a Cessna 140, the Geisse gear allows the wheels to caster outward. Braking the taxiing plane tends to increase the amount of caster, and ground looping is practically impossible. Previous cross wind gear either had no effect on the degree of caster or else tended to decrease instead of increasing it. The Geisse unit also diminishes landing jolts. Lightweight (only about four pounds), the Geisse gear was designed for speedy, easy replacement. Only one wrench is needed on such single-strut craft as the Cessna demonstrator. The gear promises safe landings in 90 degree crosswinds. It hasn't been used on tricycle undercarriages yet but is applicable.

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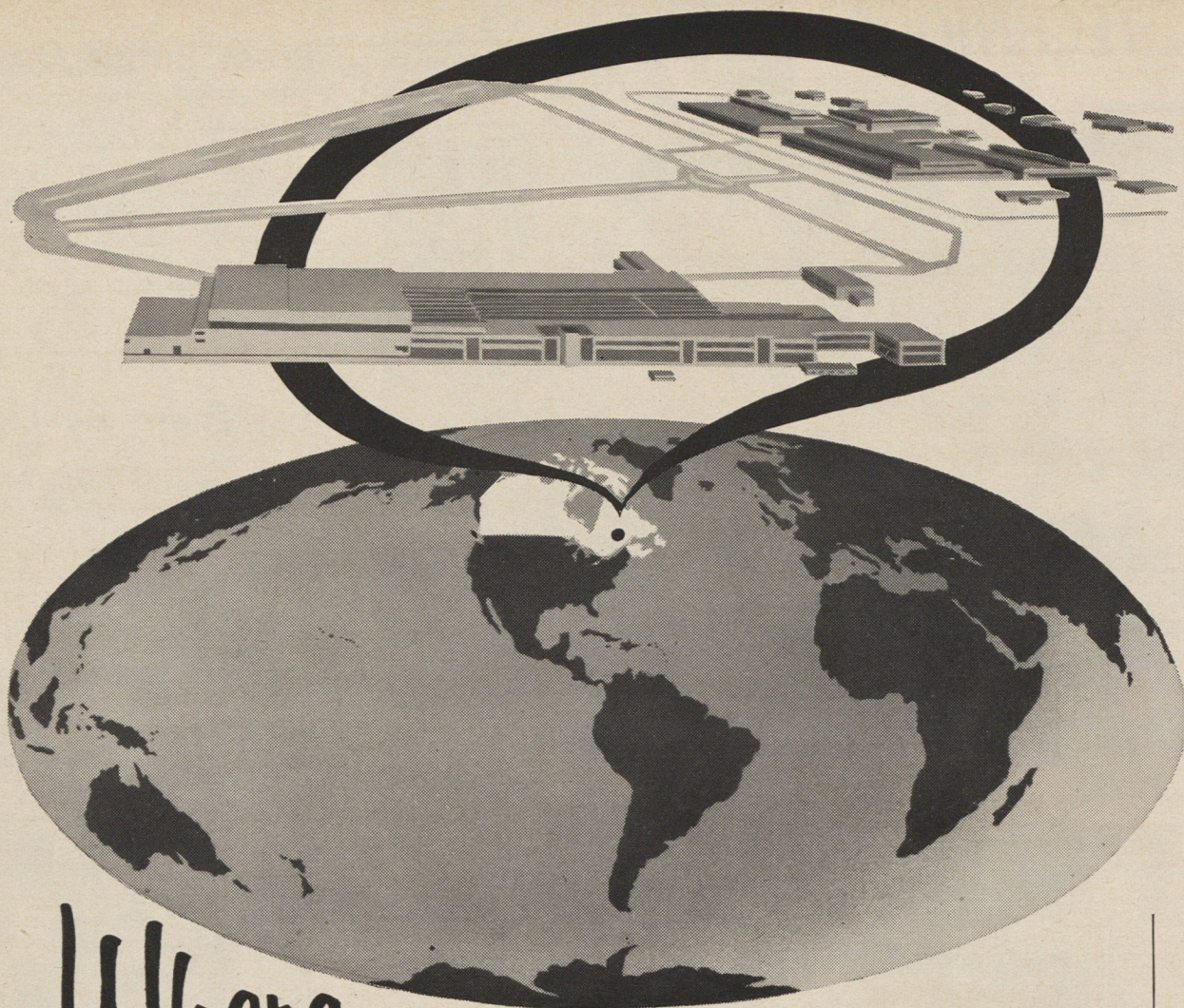


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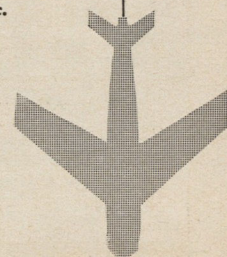
In this setting Canadair is now mass producing F-86\* Sabres, one of the world's best jet fighters . . . is soon to follow with jet and conventional engine trainers for the Royal Canadian and the United States Air Forces.

\*Made under license from North American Aviation Inc.

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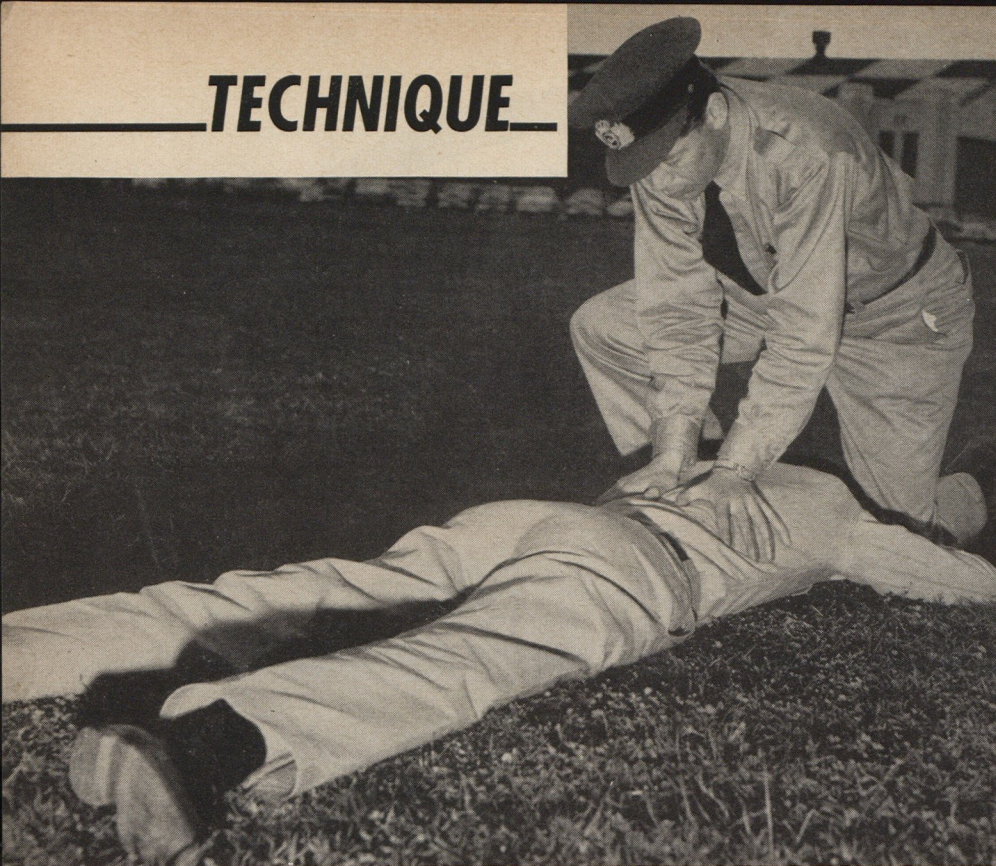
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CA52-3UST



# TECHNIQUE

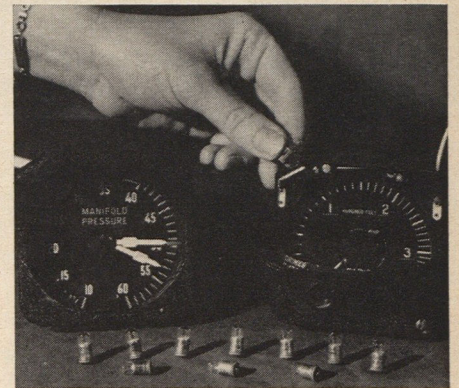


## Press Palms Down

Scuttling the Schaefer method of artificial respiration, in use here since 1910, a medical officer of the Danish AF demonstrates the Holger Nielson technique at the School of Aviation Medicine, Tex. The lieutenant's uncle originated this stance, now taught by the Red Cross and the Armed Forces. The lifesaver straddles the patient's spine with his hands, thumbs in, palms over the lungs, in twelve pressure cycles a minute.

## Let There Be Light

If you bother to count, you'll find sixteen times as many lights (550) on a B-36 bomber as on the average Christmas tree. One reason is because "ring" lighting now calls for a fixture around each instrument instead of one light for the whole panel. GE bulbs behind red filters do the trick.



## Like Christmas

There'll be more horseshoes pitched in the boondocks when isolated radar posts get ADC's new recreation kits, chock full of all kinds of indoor and outdoor athletic gear and equipment for day-rooms. Designed to brighten the lives of as many as 250 men, each special services kit contains (beside horseshoes) balls, bats, and gloves for a full softball team, and equipment for football, badminton, and volleyball. For evenings at home, airmen will find card games, books, musical instruments, and table tennis equipment.



## Ready for Action

With F-89 Scorpions now delivered to operational units at Hamilton AFB, Calif., and to combat crew training units at Tyndall AFB, Fla., the Northrop planes are ready to begin beefing up the sagging air defense of the continental US. The sleek, twin-jet interceptors, like these being readied for flight at Ontario International Airport, Calif., are packed with radar search gear and operate over 40,000 feet. The all-weather Scorpion is armed with six 20mm cannon in the nose. A late model is armed with rockets. Wide-area dive brakes, "decelerons," help the pilot control the plane during maneuvers. The plane can dive almost straight down from nearly eight miles up under complete speed control. A pair of J-35 turbojets, with afterburners for added bursts of speed, fire the F-89 and place it in the 600 mph class. The crew of two—pilot and radarman—sit in tandem in a pressurized cockpit equipped with ejection seats.

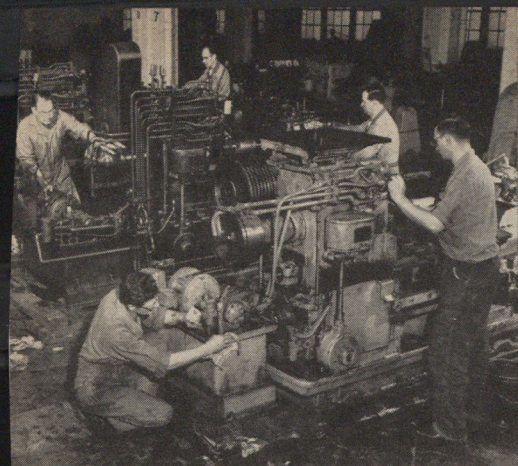


## Under Pressure

Improvements in spot welding techniques are showing up in jet engine components being assembled at Ryan Aeronautical Co. The headless, invisible nuggets of metal, fused by a force of 9,100 pounds and "fired" by 120,000 amperes across a short circuit, add no weight to combustion chambers like these for J-47 powerplants. The spot welds replace common rivets.

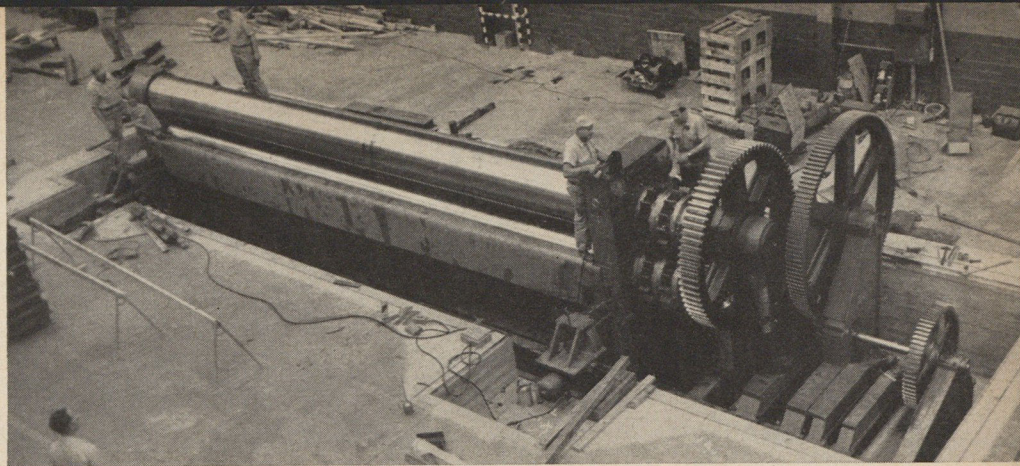






## Reconditioning Tools

Aircraft machine tools, in mothballs since World War II, come out of their cocoons as Buick tools up for production of J-65 Sapphire jets. With about 500 of these machines now on hand, Buick needs 2,700 more for its new jet plants.



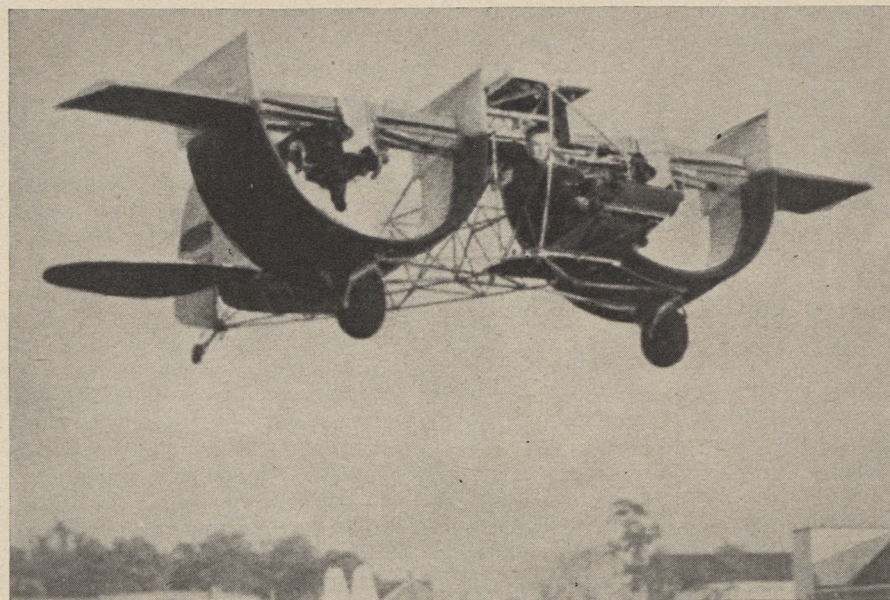
## 200-Ton Juggernaut Shapes B-36 Wings

The wing skins of B-36 intercontinental bombers snap into shape in about twenty-eight seconds when this rolling machine does the job. Just installed at Consolidated's Fort Worth division, the

400,000-lb. pinch-type bending roller is the second of its type in the Southwest. The giant is fifty-one feet long. Three rollers, each thirty-one feet in length, give wing surfaces the proper contours.

## Channel Wing Design

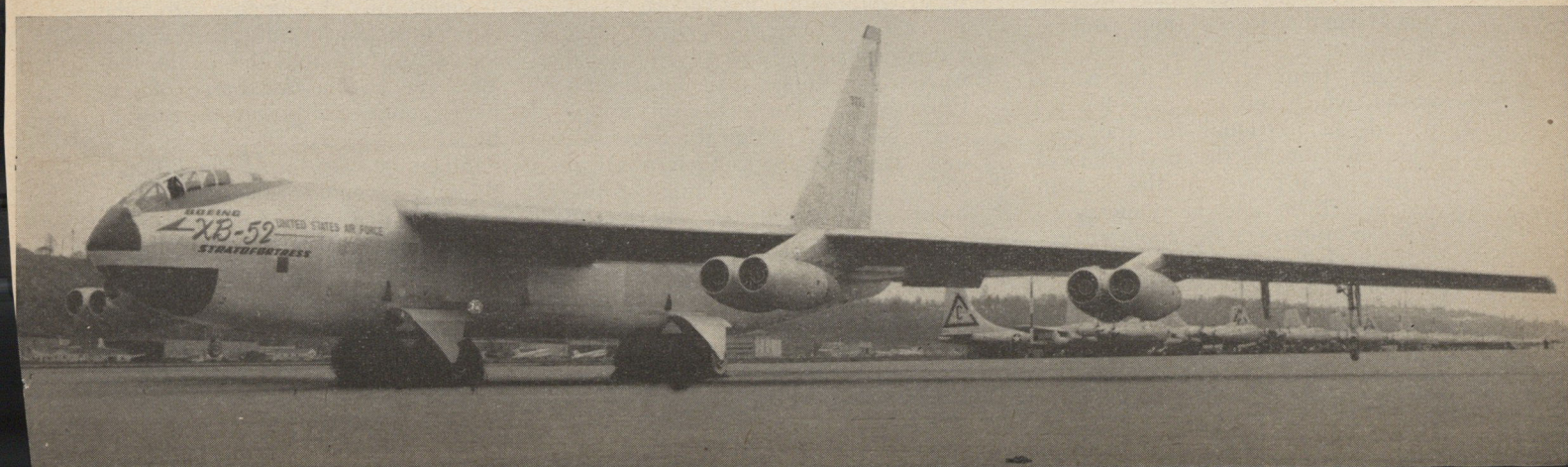
Pulling air over or through the semi-circular wing surfaces of the Custer Channel Wing aircraft gives the plane lift without forward motion for takeoffs or landings. The unconventional-looking rig, guaranteed to stop any aircraft observer cold, is the brainchild of Willard R. Custer, who designed the ship and built this experimental model from salvage parts. Taylorcraft is licensed to construct one of the Custer planes to AF specs for an experimental liaison aircraft. According to C. Gilbert Taylor of that company, the Custer plane is "the first change in basic design since the Wright Brothers, and a complete new formula for aerodynamics may have to be developed." The Custer Channel Wing, combining the lift characteristics of helicopters with the forward speed capability of conventional planes, is said to have a theoretical lift coefficient of infinity. The first model can takeoff in forty-five feet at thirty mph. Other models will be able to hover in mid-air.



## B-52 Stratofortress Stretches Its Wings for the First Time

The giant, all-jet B-52 Stratofortress has come out from under top secret wraps for its first public bow at Boeing Field, Seattle. Under camouflage since rolling out of the Boeing factory November 29, the new long-range heavy—which according to "Jane's All the World's Aircraft" weighs 350,000 pounds—is now going through engine run-up tests. Powered by eight Pratt & Whitney J-57 turbo-

jets, unofficially termed the world's most powerful, the bomber is cut along the lines of the B-47 but on a bigger scale. This picture, the only official one to date, obscures most details of design but does show the outrigger wheels mounted near the wingtips. The AF, short-cutting the usual long test programs, has ordered Boeing to go into limited production on the new bomber.





- The Air Force does not have an operating unit with psychological warfare as its primary mission. As their name implies, the Air Resupply and Communications Wings are the operating units for the specialized air transport function mentioned above.

- Within the Air Staff, the Psychological Warfare Division does not channel directly to the Chief of Staff as does the Army's counterpart. The office of Brig. Gen. Robert A. McClure, chief of the Army's psychological warfare activity, is part of the special staff division of the Army General Staff and has direct access to the Chief of Staff. In the Air Force, psychological warfare is several links down in the command chain.

- The Air Force has only two psychological warfare officers in all of Europe.

- In the Air Force there is no provision for psychological warfare officers at overseas air bases or in overseas units, even those nearest the Iron Curtain.

- In the major Air Force commands, even SAC, psychological warfare is an extra-duty, secondary mission activity for officers assigned to Plans.

- In the Far East, with a war going on, there are only two AF officers engaged in psychological warfare activity, one a liaison officer attached to General Ridgway's office, the other a plans officer at FEAFF headquarters who has psychological warfare as an extra-duty, secondary mission.

Discrepancies in exploitation of airpower as a psychological weapon are even more apparent, however, outside the Air Force, especially in the Far East, where the Army controls all psychological warfare activity. Here the Air Force has little or nothing to do with the theme of the material being sent to the enemy, or with the policies governing this operation. Here the Air Force serves merely as a "milk-run" carrier of psychological warfare items, whether they be loudspeakers or leaflets.

Apart from its vast destructive power, which this magazine has reported on in detail for the past eighteen months, the psychological impact of airpower in the Korean war has been and is tremendous. Prisoner interrogation reports provide ample testimony to this fact.

From the very beginning of the conflict, the relative silence and high speed of the jet fighter-bomber have

become an awesome psychological opponent to the enemy soldier. The psychological impact of these "whoosh" planes which "make no noise until they are gone," as one captive described them, has been cited over and over again by enemy prisoners. The mere threat of strafing has, on occasion, persuaded enemy troops to lay down their arms.

Even the slow, noisy, and harmless T-6 Mosquito planes have become psychological weapons. Enemy prisoners have testified that a Mosquito circling overhead generally means that strafers are coming and that's always bad news. Some prisoners have become convinced that the T-6s carry mysterious listening devices permitting the pilots to listen to what is being said on the ground.

The T-6, in fact, has had some big psychological moments in Korea. Mosquito planes have dropped messages to enemy groups under heavy fire, persuading them to give up, then have led them to UN troops. And Mosquitoes have flushed enemy tanks, and called for fighter planes. The fighters then forced the tanks toward UN lines and capture.

Since early in the war our airpower has forced the enemy to move only at night or in bad weather, with few exceptions. This in itself has had an important and sustained psychological effect, and prisoners have told how prolonged loss of sleep, accompanied by harassment from the air, can wreak havoc with morale.

The demoralizing effect of our airpower on the enemy's efforts to rebuild communications lines has also contributed its psychological impact. Prisoners tell how they eventually gave up the fight because every time they patched up a bridge or rail line our planes came back to knock them out.

Our most important single weapon, from a psychological standpoint, has been the fire bomb. Napalm promotes a high degree of fear as well as physical damage.

As W. Phillips Davison of the Rand Corporation has reported (*Air University Quarterly Review*) after an extensive study of psychological warfare in Korea: "Air attacks on Chinese and North Korean troops have had psychological effects almost as important as their physical effects. Planes have caused Communist units to scatter, and in the course of dispersal many of the men have deserted. These attacks have delayed, terrorized and disorganized units on the move to a point where their schedules have been seriously

interfered with and their fighting qualities impaired. After air attacks, many Chinese and Korean soldiers have surrendered rather than face another such attack."

Once again, however, we have an instance where the airplane's inherent psychological capabilities, plus some on-the-spot ingenuity by our aircrews, have been almost solely responsible for the psychological effect achieved. For in the Korean war the plane has been given little help through pre-planning, organization or supervision of psychological warfare activities. Here, as in the past, the plane has done the job virtually alone. Thus, we cannot analyze the tremendous psychological impact of airpower in Korea without concerning ourselves about the added impact which might have been achieved, and its effect on both sides of the battle line, had airpower been placed in its true psychological perspective.

The success of psychological warfare, as we have indicated earlier, is dependent upon strong physical forces. Thus our military inadequacies have seriously compromised our psychological capability. But when we have almost unlimited superiority in a weapon, it is nothing short of stupidity not to make full psychological use of the advantage. In Korea, as we have reported in previous issues, our airpower has proved to be the predominate destructive force against enemy ground forces, and the predominate destroyer of enemy trucks, tanks, and artillery pieces. Thus, it could back up—by force—an all-out psychological warfare campaign. Here a unique opportunity has presented itself. Here, with only normal effort, we could have increased airpower's area of influence many-fold, and with it the over-all influence of the United Nations.

Instead we have found the psychological potential of airpower in the war virtually ignored by the State Department and our military planners in Washington, by the Army officers who control all psychological warfare activities in the theater, and by the Air Force officers who control airpower operations there.

Since the war started, the ground-thinking psychological warfare leaders in Korea have produced hundreds of different types of leaflets and have disseminated about a billion copies of them to enemy soldiers and North Korean civilians. The leaflets

(Continued on page 43)



# SKILLED HANDS for AIR SUPREMACY

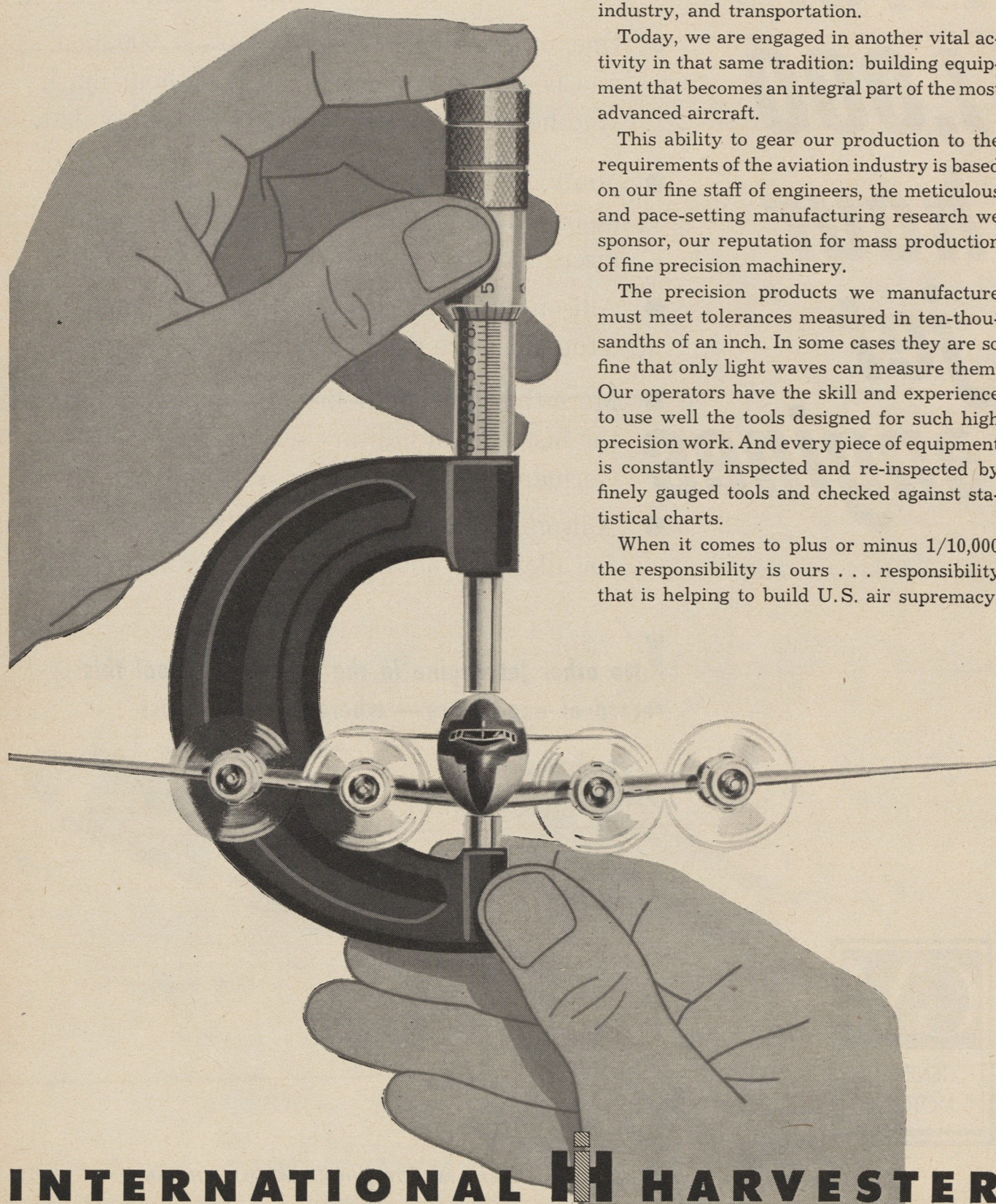
For well over a century International Harvester has built an ever-increasing variety of machines and equipment to serve agriculture, industry, and transportation.

Today, we are engaged in another vital activity in that same tradition: building equipment that becomes an integral part of the most advanced aircraft.

This ability to gear our production to the requirements of the aviation industry is based on our fine staff of engineers, the meticulous and pace-setting manufacturing research we sponsor, our reputation for mass production of fine precision machinery.

The precision products we manufacture must meet tolerances measured in ten-thousandths of an inch. In some cases they are so fine that only light waves can measure them. Our operators have the skill and experience to use well the tools designed for such high precision work. And every piece of equipment is constantly inspected and re-inspected by finely gauged tools and checked against statistical charts.

When it comes to plus or minus  $1/10,000$  the responsibility is ours . . . responsibility that is helping to build U.S. air supremacy.



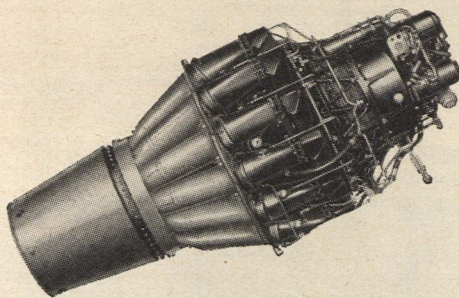
# INTERNATIONAL HARVESTER



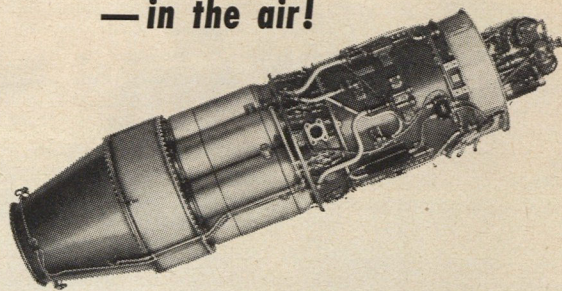
# ***First 1,000 hour jet engines***

- The only jet engines which our armed services have actually operated 1,000 hours without a major overhaul are an Allison J33 and an Allison J35. They were finally removed only for routine inspection.
- One other Allison J33 has passed 900 hours and is fast approaching the 1,000-hour mark. Another J33 has exceeded 750 hours in combat.
- Many Allison jet engines have exceeded 500 hours without ever being removed from the aircraft.
- Allison jet engines were first to accumulate a total of more than 1,200,000 hours in the air.
- More than 700,000 hours were piled up during the last year in military service from Korea to Germany.
- Allison jet engines have always set the pace for allowable hours before overhaul.

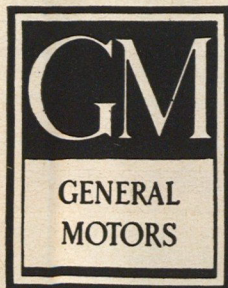
✓ **No other jet engine in the world can equal this record of experience — where it counts most — in the air!**



Allison J33 engine powering Lockheed Shooting Stars, F-94's and Grumman Panthers.



Allison J35 engine powering Republic Thunderjets and Northrop Scorpions.



## ***Allison***

**DIVISION OF GENERAL MOTORS, INDIANAPOLIS, INDIANA**

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



have covered a vast array of subjects, among them promises of good treatment after surrender, warnings to civilians of UN attacks, safe conduct passes, the Soviet exploitation of China, world solidarity, character of the UN, escape maps, Sino-American friendships and Communist prolongation of the war. And there have been several leaflets on UN artillery power.

Yet, despite the established destructive power of the airplane in the war and the enemy's avowed fear of it, not one airpower leaflet—that is, a leaflet devoted to exploiting UN air attack—has been printed to date in the Korean war.

A review of 220 types of leaflets, representing a cross-section of those dropped in the war up to now, has revealed that only twenty-two, or ten percent of the leaflets, contained airplanes in their illustrations, and in most of these the planes were submerged in the background.

When airpower is mentioned in the written material on the leaflets it is seldom, if ever, mentioned by name or by itself; usually it is combined with artillery as a part of "UN firepower."

A few months ago a Chinese Communist officer, after surrendering, revealed that Chinese leaders are indoctrinating their troops with considerable propaganda designed to play down the importance of our current atomic superiority. Chinese soldiers, he said, were being taught why they should not fear our atomic bombs—an obvious confession that they fear them greatly. Also it was an obvious opportunity to exploit this fear of atomic weapons and our own ability to deliver them. Yet, our psychological warfare leaders in Korea have seen in this experience only the need to continue their propaganda on the general "UN firepower" theme.

One of the workhorse leaflets is called "Three Choices." It tells enemy soldiers that death will come to them in one of three ways: exhaustion or starvation or that old favorite, "UN firepower." As long ago as last March, this magazine reported that GHQ in Tokyo had discovered from prisoner of war reports that forty-seven percent of all enemy troop casualties had resulted from air attack. Surveys by our representatives in the Far East have since revealed that the figure is now substantially higher. With GHQ well aware of airpower's troop casualty capability, but refusing to mention it in its propaganda, the Army's psycholog-

ical warfare effort in Korea has all the earmarks of an ordinary public relations campaign as it might be conducted in the States.

The whole problem is compounded by the nature of the UN effort in Korea these last four or five months. Since late fall, as AFA President Harold Stuart reported in the December issue of this magazine, the ground war has been stalemated, at our own choice, and the only continuing offensive has been our war of attrition from the air against enemy lines of communications and rear areas. Aerial interdiction, by direction of Army leaders themselves, is the priority effort of the day. General Bradley and others have testified to the success of this effort.

Under these circumstances, enemy soldiers obviously lack food, clothing, medical supplies, and the like—items which strike deeply at the roots of morale. All in all, the situation is ripe for exploitation by psychological warfare, and Army leaders in this field of endeavor seem to recognize it. That is, they are dropping leaflets on "winter food shortages," "lack of medical care," and the like.

Yet, not one UN leaflet in Korea to date has told the enemy *why* he is short of certain staples, and how the campaign is being waged relentlessly by our interdicting aircraft—both the "whoosh" type he cannot hear and others he can hear but cannot see because they operate at night.

The interdiction story, a natural for psychological exploitation, is not being exploited in Korea. The officers responsible for this seem entirely unable, by virtue of the results to date, to adjust themselves to Air Force elements of attack. As a result, the psychological potential of the airplane in Korea has been ignored in favor of horse-and-buggy appeals. That thirty to fifty percent of the enemy surrendering to date have been influenced by psychological warfare activity, as claimed, only indicates what we might have done had we exploited the airpower potential.

The consequence of all this is that in the Korean war so far the airplane, as far as the organized psychological warfare effort is concerned, has been solely a carrier of psychological material. And there is evidence that even in this role it hasn't had much help. Mr. Davison of Rand Corporation has reported that, up to a few months ago at least, our leaflet bombs were unreliable, and that over one-third of them failed to open. He has

called the leaflet dropping procedure inefficient, wasteful, dangerous, and unreliable. Further, he adds that the Air Force failed to develop psychological warfare aircraft before the Korean war, and that the C-47s modified for the task (one by Navy personnel with a loudspeaker scrounged from a battleship) were relatively inefficient until almost a year after the start of the conflict. The new Air Supply and Communications Wings of the Air Force will, we presume, improve the situation.

But the Air Force responsibility in psychological warfare should extend far beyond mere leaflet dropping and aerial loudspeakers. An Air Force objective in war must be to make each bullet, each rocket, each bomb achieve maximum results, and there is abounding evidence that psychological warfare can help materially in the task.

Reports from Korea indicate, however, that tactical air missions rarely have been exploited for psychological warfare purposes. Notably missing are psychological followups to air attack (by leaflet and loudspeaker) to bag the maximum number of prisoners influenced by the attacks. Nor are there enough threats of air attack by the same media. In short, there is a lack of coordination between leaflet drops, loudspeaker missions, and tactical missions. A further need is reported for briefing pilots and crews on how to achieve desirable effects on tactical missions. Psychological warfare officers should be able to advise operational leaders of the probable psychological effects of the mission, suggest ways to increase desired effects, and minimize undesirable ones—an academic recommendation, for there are no psychological warfare officers with operational units of the Air Force in Korea.

Looking at the problem on a broader scale, it seems evident that the day will come, and perhaps it is already here, when the Air Force must recognize—all down the line—that imposing one's will on an enemy involves psychological as well as physical factors, and must work as hard at the former as it does at the latter.

We have developed airpower to a fine art for destruction. We haven't even begun to develop it as a psychological weapon.

While money is not the basic barrier at the moment—for much progress could be made in this area without extra dollars—it also is true that we are spending billions to maximize the physical effects of our airpower



and only thousands to maximize its diplomatic and psychological effects.

Meanwhile, the Soviet, under the guise of being a big army nation, is outproducing the free world in airpower and—as a basic tenet of her psychological warfare campaign—is pouring out worldwide propaganda to the effect that airpower and atomic weapons are threats to peace, that airpower is irresponsible and immoral and, when the occasion calls for it, that airpower is ineffective. As Mr. Leviero of *The New York Times* has observed, "The overriding objective (of Soviet propaganda) is to persuade people to think about problems as the Soviet Union would like them to, and to do things that will promote Soviet aims." On that basis, the intense anti-airpower campaign in this country during the last few years (which still continues in some quarters) no doubt has given the masters of the Kremlin some happy moments.

Certainly there is a crying need, in behalf of the national interest, to overcome service prejudices and traditional ties and reply in concert to Russian propaganda by explaining to all the world that United States airpower is being developed to resist aggression and preserve freedom.

Meanwhile, our air strategy must symbolize the nature of those aims—to enemy, allies, neutrals, and our citizens alike. It must guard against solidifying target populations and their rulers by adequate advance warning so these populations can disperse and, if possible, hamper the enemy's war effort. It must encompass strategic target selection procedure which considers all the factors involved in every mission—economic, sociological, and historical as well as physical. It must be designed and equipped to maximize all of the psychological capabilities with which airpower is so richly endowed. Only then will the United States Air Force rise to the full stature of the weapon it employs as the prime military instrument of national policy.—END

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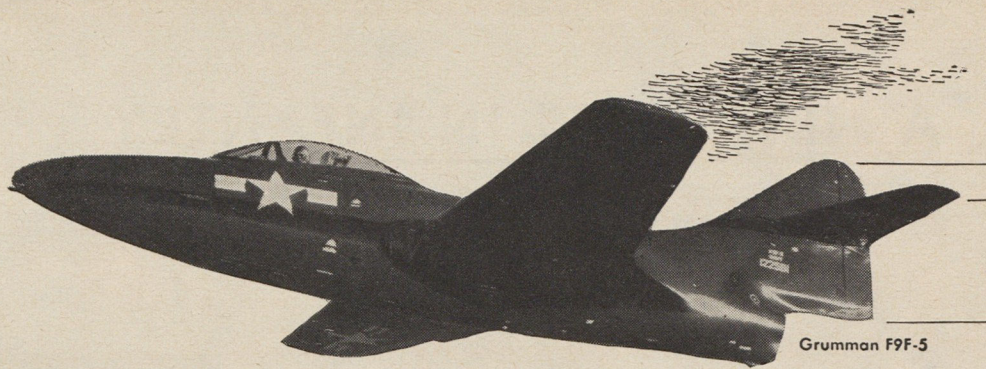
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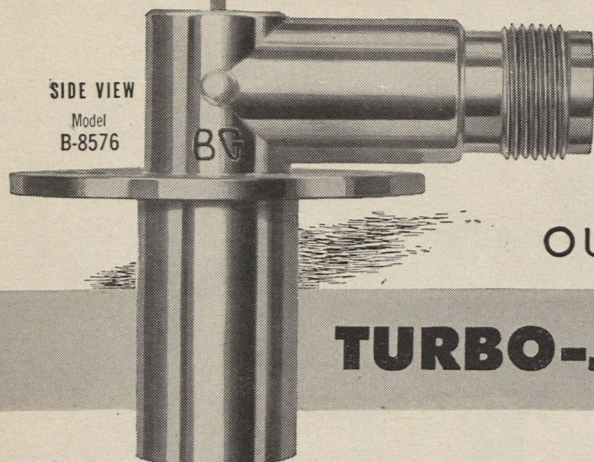
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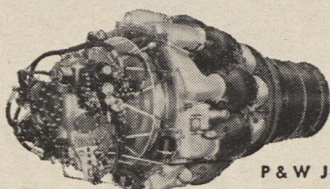
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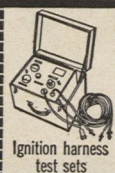
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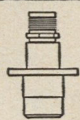
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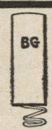
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## A NEW "EYE" IN INFANTRY



# IT'S A *Cessna L-19* "BIRD DOG"

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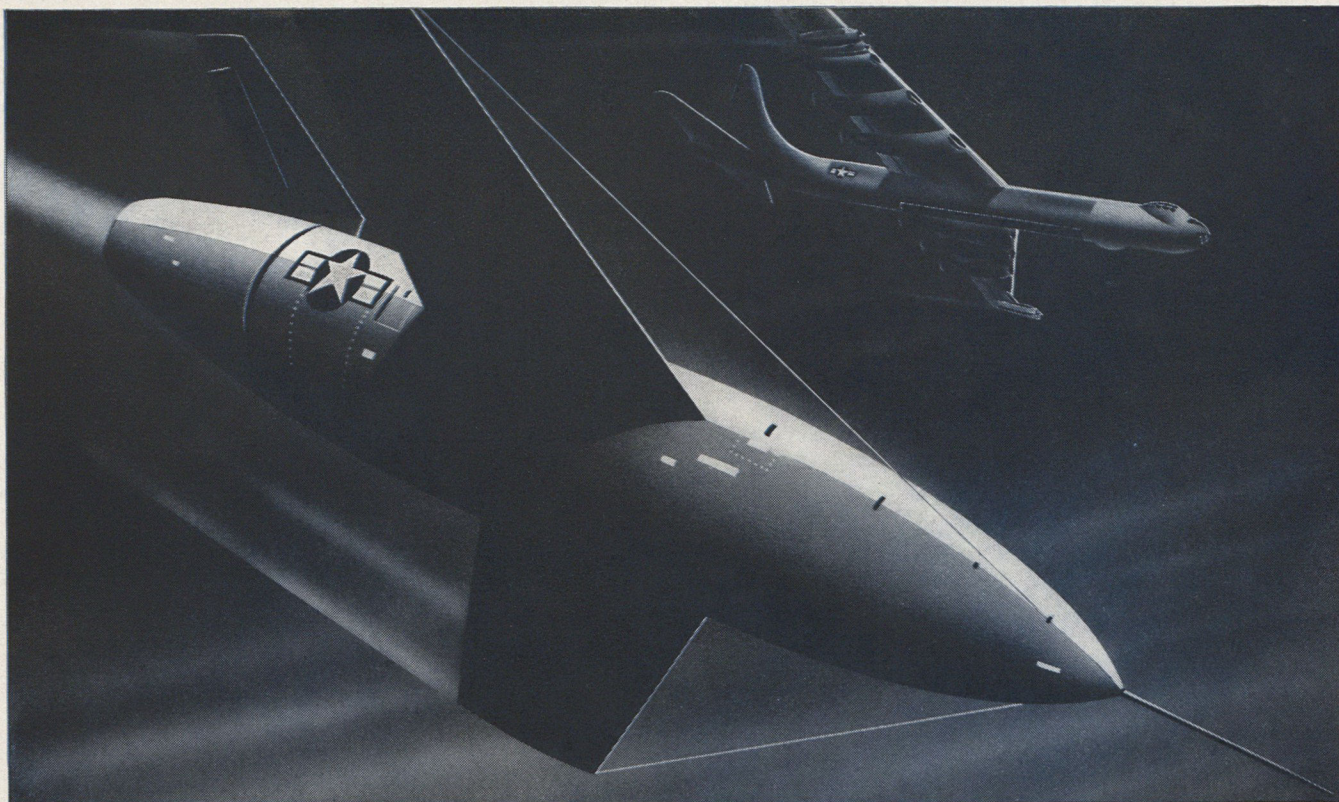
Here, you and your Cessna L-19 go to work. Look down. Red troops at chow, a truck convoy . . . *Call it in!* On the hillside, Commie ammo dump . . . *Call it in!* Beyond, heavy guns. Knock 'em out, *Call it in!* Soon friendly jets and artillery streak in on the target. Both guided, made deadly effective by the eyes of the Infantry . . . your Cessna L-19 "Bird Dog."

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**T**HIS GUIDED MISSILE may go through some mighty tight turns to stay on target... and that means G loads go up, *fast*. But the Greer Accumulator in the circuit will take it.

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There's a Greer guided missile accumulator for almost every requirement, or Greer will build to your exact specifications.

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Developing accumulators for guided missiles is just one interest of the *Greer Special Products Division*. If you are confronted with a problem relating to the field of aviation, call Greer engineers for a consultation. There is no cost, no obligation.

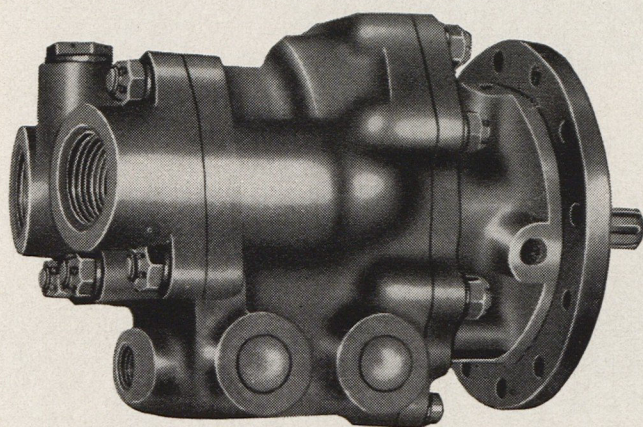


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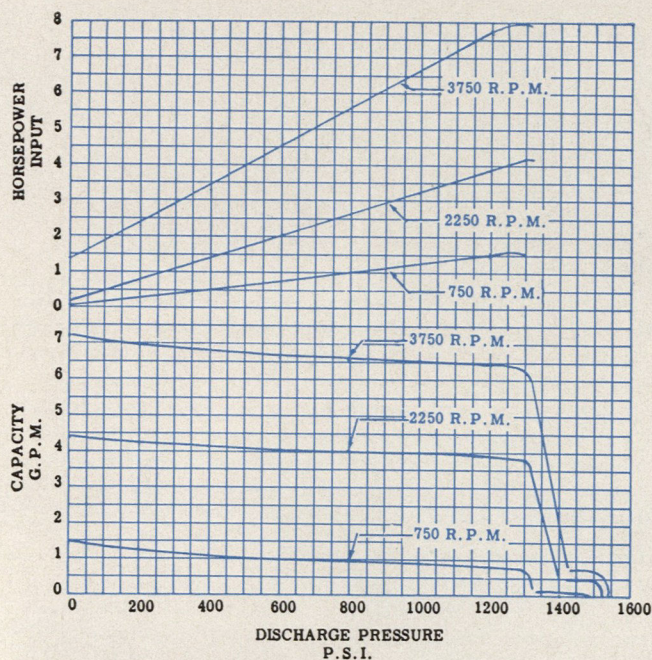
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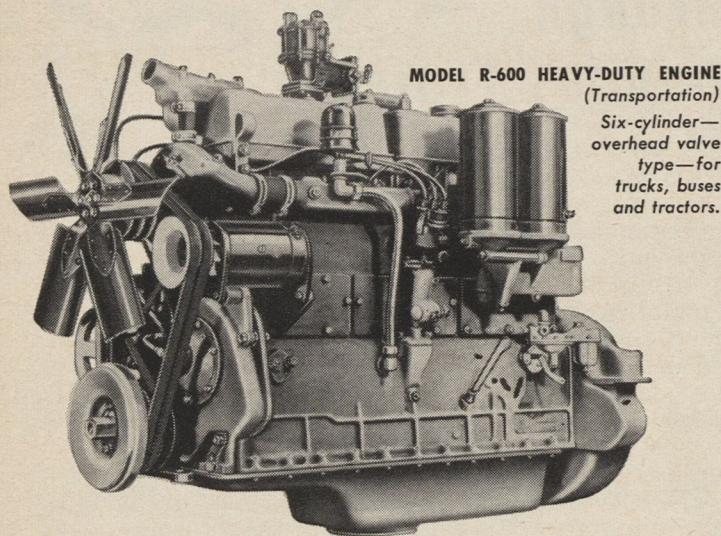
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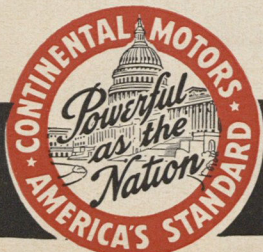
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## TEMCO T-35's At Goodfellow Air Force Base

TEMCO T-35 Buckaroos now are undergoing trainer evaluation at Goodfellow AFB. After several months of rugged service testing at San Marcos AFB, officers and instructors were in accord that the T-35 was truly a military aircraft. It has all the flight and performance characteristics of the big ships.

*It proved to be an ideal basic instrument trainer because it has good stability, and due to its quick control response, the student can correlate movement of the controls with his instrument readings.*

Another version of the T-35 Buckaroo has been equipped with two internally mounted 30-caliber wing machine guns and ten 2.75-inch rockets. It is being demonstrated as a light highly-maneuverable ground support aircraft. The machine guns are far more accurate than on many heavier aircraft because the guns are mounted on the torsional axis of the wing. The rocket installation is complete with intervalometer fire control, permitting the automatic firing of any single rocket, or any series of rockets in sequence.

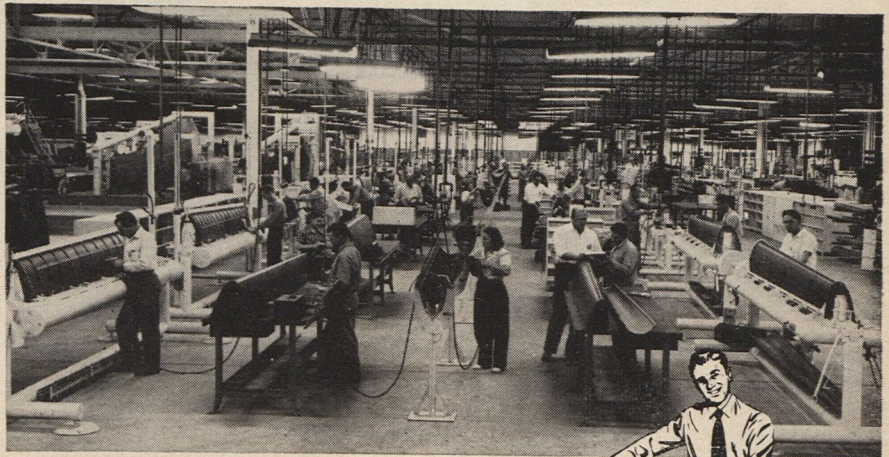
## C-54's Rolling Off Overhaul Line At Majors Field

TEMCO's overhaul operation at Majors Field, Greenville, Texas, is in full swing. This part of TEMCO's activity was recently moved from the main Dallas plant to make way for increased manufacturing operations at Dallas on four leading military aircraft.

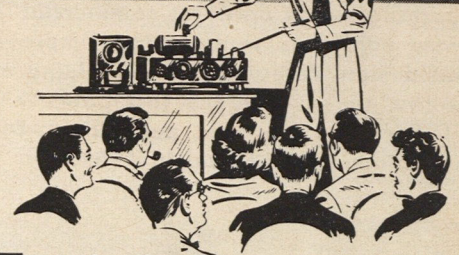
TEMCO's overhaul activity has always been a big business. Since May, 1948, TEMCO has overhauled approximately 500 C-54's for the U. S. Air Force. Now with complete overhaul shops at Majors Field, C-54's are being flown in from bases in the United States as well as overseas and are rolling off the line with scheduled regularity after their cycle reconditioning.

# TEMCO

## *experience..*



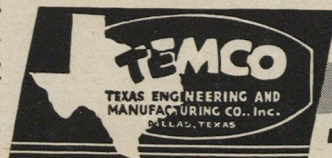
## .. Builds Experience through Continuous Training



TEMCO Aircraft Experience did not just happen. It has been built by men of long experience through an intelligent, systematic, and continuous training program. Training begins as soon as an employee enters TEMCO and continues for the duration. New methods and techniques are under constant study and are introduced in training when proved able to better production and the high standard of TEMCO quality.

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TEMCO craftsmanship as recognized throughout the aircraft industry... craftsmanship that is being used to build major assemblies for four of the nation's largest aircraft manufacturers.



**Texas Engineering and Manufacturing Co., Inc.**

**DALLAS, TEXAS**



# AFA NEWS

## California Has Busy AFA Month

Christmas festivities, forming a new squadron, and giving airpower awards highlight Far West activities in December

AFA enthusiasm and activity throughout the California Wing continue at the all-time high seen there since the 1951 convention in Los Angeles. Joining forces, the Greater Los Angeles and Santa Monica Squadrons recently came up with a Christmas dance, tagged "Operation Holiday." The Pasadena Area Squadron, working with the Tournament of Roses Association and the Pacific Rose Society, helped AFA Headquarters observe the forty-eighth anniversary of flight at Kitty Hawk. The west coast groups provided the rose petals that were dropped from a C-119 over the Wright Brothers Memorial monument at Kill Devil Hills, N. C. And, back in California, the San Diego Squadron—the state's newest—got a helping hand from California national, wing, and squadron leaders during its formation.

Highlight of "Operation Holiday" was the presentation of airpower awards, miniature B-36s that went to three AF-ROTC cadets, from Loyola University, the University of Southern California, and the University of California at Los Angeles. The awards were based on scholastic achievement, military leadership qualifications, and individual contributions to the ROTC units and to the AF-ROTC program in general. The miniature planes were donated by AFA Board Chairman Tom Lanphier, who is also vice president of Convair.

After several weeks of preliminary meetings, Robert Overly, AFA South Coast Group Commander, presided at the organizational meeting of the San Diego Squadron in early December at

the U. S. Grant Hotel. Tom Lanphier was the principal speaker. Santa Monica Squadron Commander Bill Walker, Greater LA Squadron CO Bernard Peters, and James McDivitt, LA Group Commander, all attended the meeting and participated in the discussions. Arthur Kelly, past Far West Regional Vice President of AFA and vice president of Western Air Lines, outlined the aims and purposes of the Association.

A luncheon in the hotel's Riviera Room opened the meeting.

Acting officers of the San Diego Squadron were chosen at this meeting. Edward Kranch of La Mesa was elected to head the unit. Others chosen to assist Kranch were Bert Betts, Vice Commander; Howard Jennings, Treasurer; and Jack Couthen, Secretary.

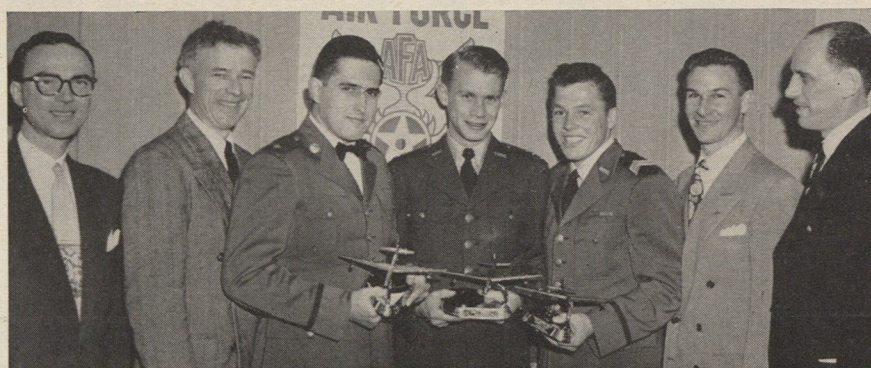
(More AFA News on page 64)



Bernard Peters (left) and Bill Walker found dance tickets sell better when actress Joyce MacKenzie does the job.



Edward Christianson (left) gets an honorary membership scroll from Bernard Peters, CO of LA Sqdn.



ROTC cadets show off their airpower awards. From left are Bert Lynn, National Regional VP; James McDivitt, LA Group CO; Ernest Sanchez, Loyola; John Bradley, Southern Calif.; Richard Pilmer, UCLA; Bernard Peters, LA Squadron CO; and William Walker, Santa Monica Squadron CO.



The San Diego Squadron organization meeting brought together, from left, Edward Kranch, CO; Thomas Lanphier, Board Chairman; Bert Betts, Vice CO. Standing are Howard Jennings, Treasurer; Jack Couthen, Secretary; Arthur Kelly, past Regional VP; David Shawe, west coast representative.



At the San Diego organizational meeting, presided over by Robert Overly, AFA South Coast Group Commander, Tom Lanphier was the principal speaker. Seated on the left above are Bernard Peters and Howard Jennings. James McDivitt, LA Group Commander, chats with Bert Betts.





Future airpower boosters. Santa Claus was also a guest at this Christmas party given by the Ladies Auxiliary of the Pennsylvania Mifflin County AFA Squadron. He had a package for each one of these youngsters at the AFA party.



The international guest list for Chicago Squadron 41's third Fall Rendezvous included, from left, Frank Hughes, Chicago branch, RAFA; Morry Worshill, Ill. Wing CO; Eric Ingeborg, Norwegian AF; and George Wilson, Chicago CO.

## Units Sponsor Movie

AFA units throughout the country are sponsoring showings of Republic Pictures' latest Air Force movie, "Wild Blue Yonder," starring Wendell Corey. The picture is about B-29 Superfortresses during World War II, with the most dramatic scene showing the flight during which "Red" Erwin earned the Medal of Honor. Erwin was one of the eight Medal of Honor guests at AFA's 1951 national convention in Los Angeles.

In the nation's Capital, AFA leaders and more than one hundred members and friends were guests of the Warner Theater on opening night.

AFA's Northwest Regional Vice President, T. Edward O'Connell, with only nine days' notice of the playing date, hurried from his hometown of Spokane, Washington, to Seattle, and arranged one of the most colorful opening night programs Seattle has witnessed. A full B-29 crew flew to the city and appeared on stage. McChord AFB's band provided music for the opening. The showing was a salute to Boeing Aircraft, makers of the B-29s.

The Michigan Wing of AFA and its Detroit Squadron joined forces for the opening night of the movie in Detroit. With the opening set for December 7, Pearl Harbor Day, the program took on special significance. Col. Rutledge M. Lawson presented the Distinguished Service Cross to Cpl. Ray B. Gonzales, a Detroit paratroop veteran of the Korean war. Selfridge Field's Tenth Air Force band gave a concert in front of the United Artists Theater before curtain time. A color guard accompanied the band during the street concert and on stage during the program. WAF S/Sgt Anne Flick was chosen "Miss B-29," and was given a toast salute by William Amos, Michigan Wing CO, and Jerome Greene, Detroit Squadron CO, who both spearheaded arrangements for the showing.

The Toledo (Joe E. Brown) Squadron handled arrangements for the showing in that city, including special exhibits in the Paramount Theater lobby. The newly formed San Diego Squadron made its first public appearance during the opening night of the movie in its city.


## Christmas in AFA Around the Nation

Many AFA units took advantage of the Christmas season to get their members together.

The Chicago Group gave its party at the Hines Veterans Hospital. Chicago AFA members donated small gifts and entertainment for the patients. George Anderl, CO of the Group, coordinated arrangements.

The Beckley, W. Va., Squadron joined with its Auxiliary to observe Christmas at the home of Ike and Ann  
(Continued on page 66)





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**IN ANY WEATHER...**

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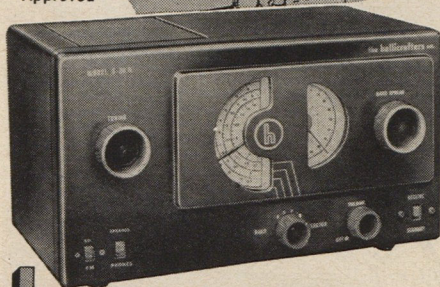
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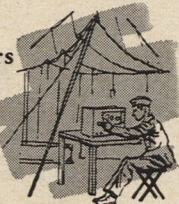
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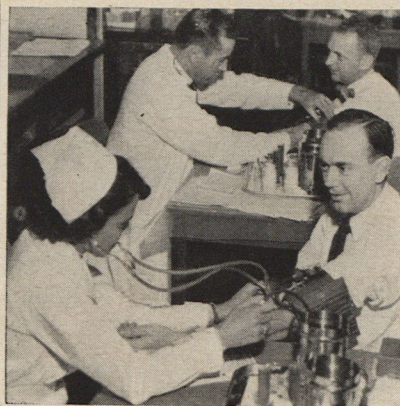
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## AFA NEWS CONTINUED



Edward Morrell, foreground, and Roland Potvin of Taunton, Mass., Sqdn., have their blood pressure checked during blood drive the unit backed.

Devasher. A midnight snack climaxed the evening, with each couple bringing sandwiches. Food was contributed for a basket for a needy family.

Chicago's Squadron 41 had its party in the form of its Third Fall Rendezvous at the Logan Square Masonic Temple. AF personnel at nearby O'Hare Field were invited to attend the party, for which a topnotch orchestra provided dance music. Among the guests were Frank Hughes, Secretary of the Chicago Branch of the Royal Air Force Association; and Eric Ingeborg, a member of the Royal Norwegian Air Force, on leave from training at a USAF base in Texas.

Squadron 41's Ladies Auxiliary brightened the Christmas season for patients at Marine Hospital in Chicago with gifts of magazines and books which the Auxiliary had been collecting for five weeks, under the direction of Beulah Carr, president of the group. Vice President Mary Wilson and Edith Lauer assisted with the presentation. Members of Squadron 41 provided the trucking service.

California's Greater Los Angeles and Santa Monica Squadrons joined forces to observe Christmas with "Operation Holiday."

New York City's All-WAC Squadron selected the Veterans Hospital at Menlo Park, N. J., for its annual Christmas party. Christmas food and fancies, and gifts for each patient, were obtained and served by the girls.

The Cleveland, Ohio, Cuyahoga Founder Squadron gave its Christmas party for the children of AFA members and Auxiliary members. The party was held at the Squadron's new clubhouse at 2006 Denison Avenue and was jointly sponsored by the Squadron and the Auxiliary. Santa Claus and motion pictures highlighted the party for the children.

## Unit Backs Mod-Aeros

Being firm believers in aviation and the importance of youth interest and

participation in this field, the Taunton, Mass., AFA Squadron is making quite a name for itself and is contributing to the aviation education of Taunton youth through the Mod-Aeros Club, which it sponsors. A four-column photograph and a full two-column story in the Taunton newspaper recently called public attention to the important job the Taunton AFA unit is doing through this club, which designs, builds, and flies model planes.

Model building and designing has become so popular in the Taunton area that the club has now started classes for both children and adults.

## Toledo Forms Auxiliary

The Toledo (Joe E. Brown) AFA Squadron recently announced the formation of its Ladies Auxiliary, with Rita Hastings, wife of Squadron Commander Larry Hastings, as President. The air-minded ladies got off to a flying start with the selection of council members, standing committee members, and the establishment of a regular meeting date and place.

Other officers elected to assist Mrs. Hastings were Mary Bolinger, Vice President; Helen Huffman, Second Vice President; Elizabeth Vogan, Treasurer; and Patricia Cranston, Secretary. Address of the Auxiliary is 3855 Lockwood Avenue, Toledo 12, Ohio.

## Spaatz Visits Tampa

General Carl A. Spaatz, retired Air Force Chief of Staff and Past Board Chairman of the Air Force Association, stopped off in Tampa during a recent tour of the Florida West Coast to discuss AFA membership and activities with Southeast Regional Vice President Jerome A. Waterman. Spaatz, Waterman, and Maj. Gen. Frank A. Armstrong, CG of the Sixth Air Division at MacDill AFB, discussed at length an AFA membership drive for the area.

## Big Plans from Detroit

A wiener roast in Chandler Park got the Detroit Squadron's winter program underway. This group will sponsor a vigorous cooperative effort with nearby Air Force ROTC units, to include spirited competition among the units. Details on this contest will be announced soon.

At a recent meeting, a combat Korean war veteran was the first of the many top speakers in line for winter meetings at Detroit.

Now with quarters in Detroit's ultra-modern Veterans' Memorial Building, the Squadron is planning an extensive membership campaign and a St. Patrick's Day dance.

Jerry Greene, 2948 Richton Ave., recently succeeded Andy Nichols as commander. Irving H. Kempner was elected vice commander.—END





## BIRD HOUSES FOR DEFENSE

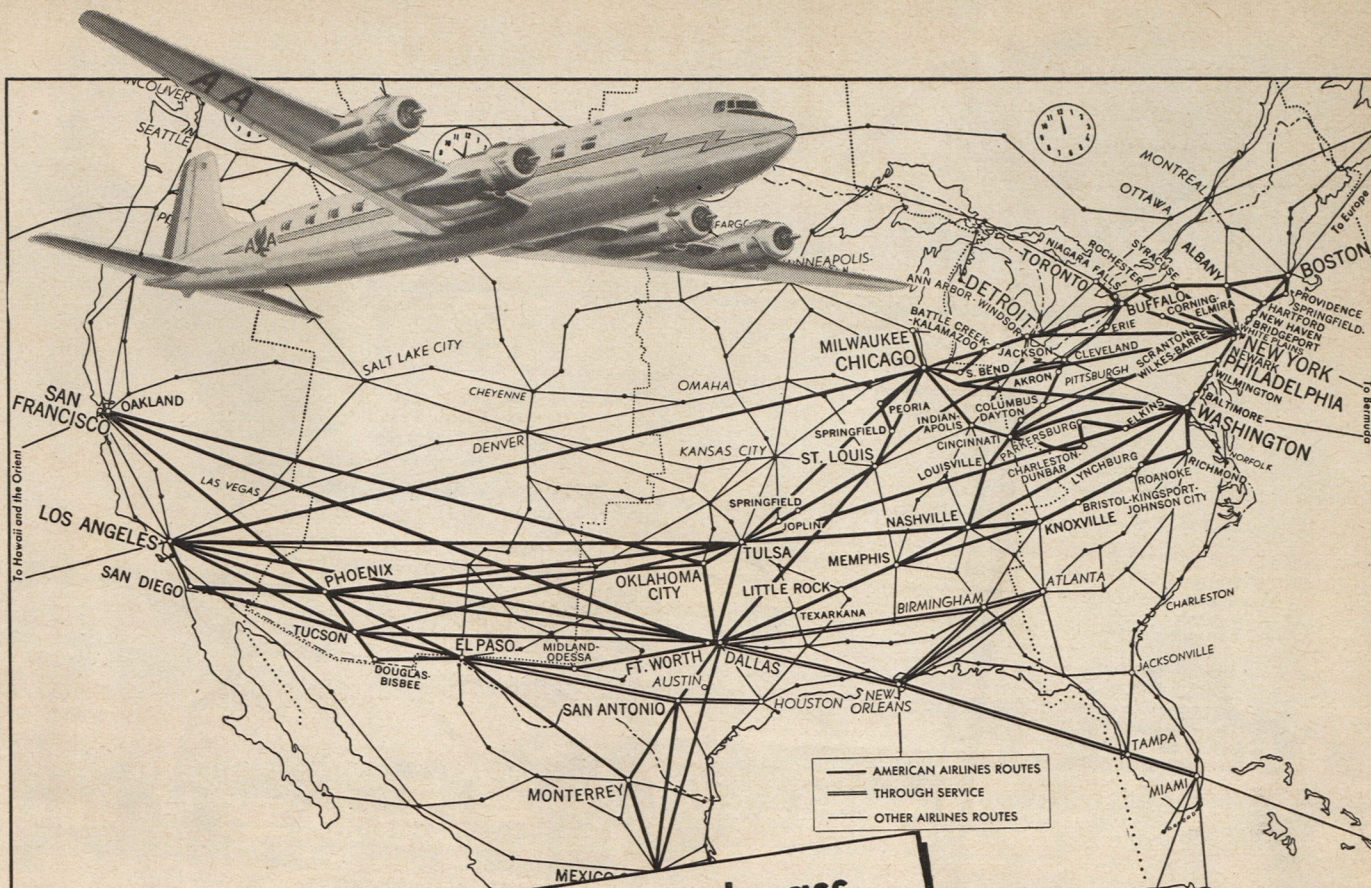
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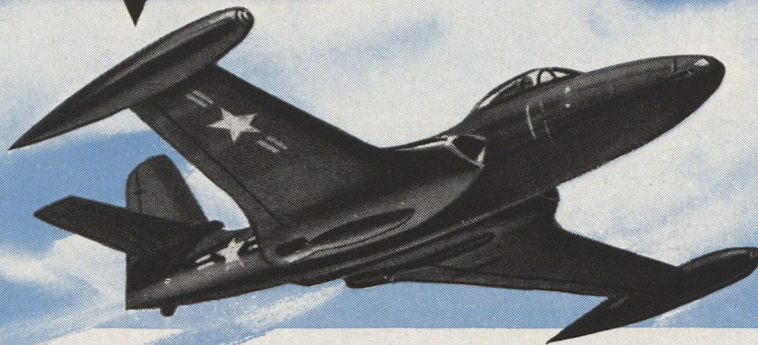
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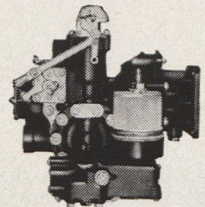
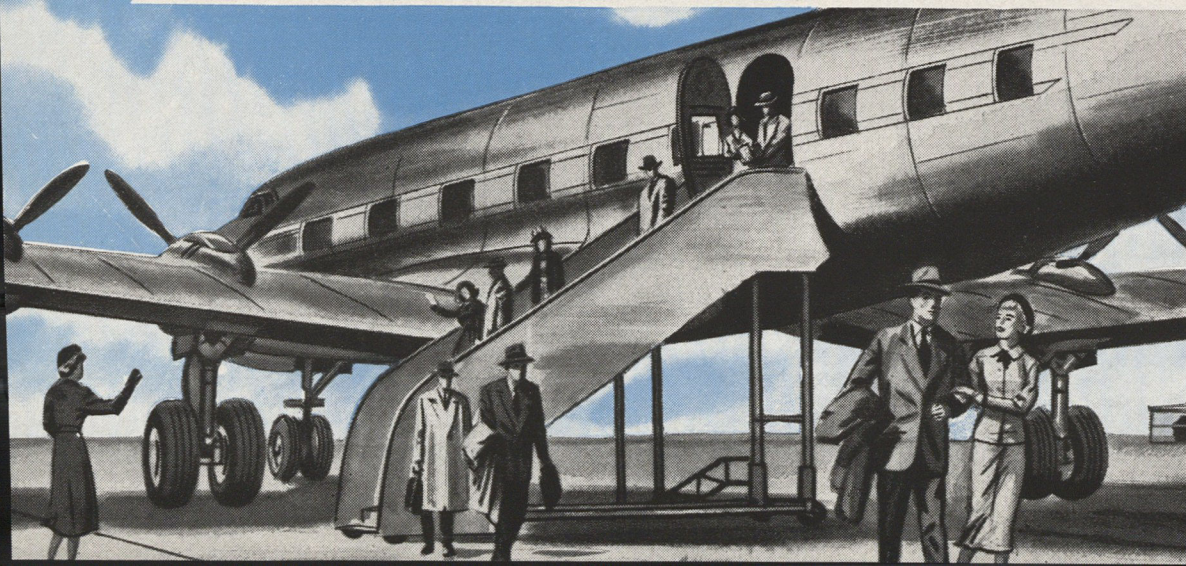
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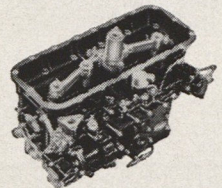


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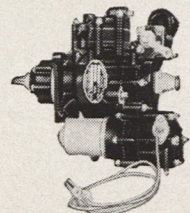
## LEADER IN LANDING GEAR



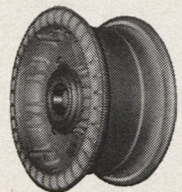
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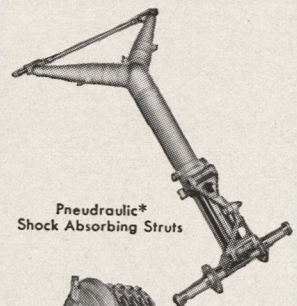
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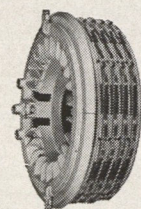
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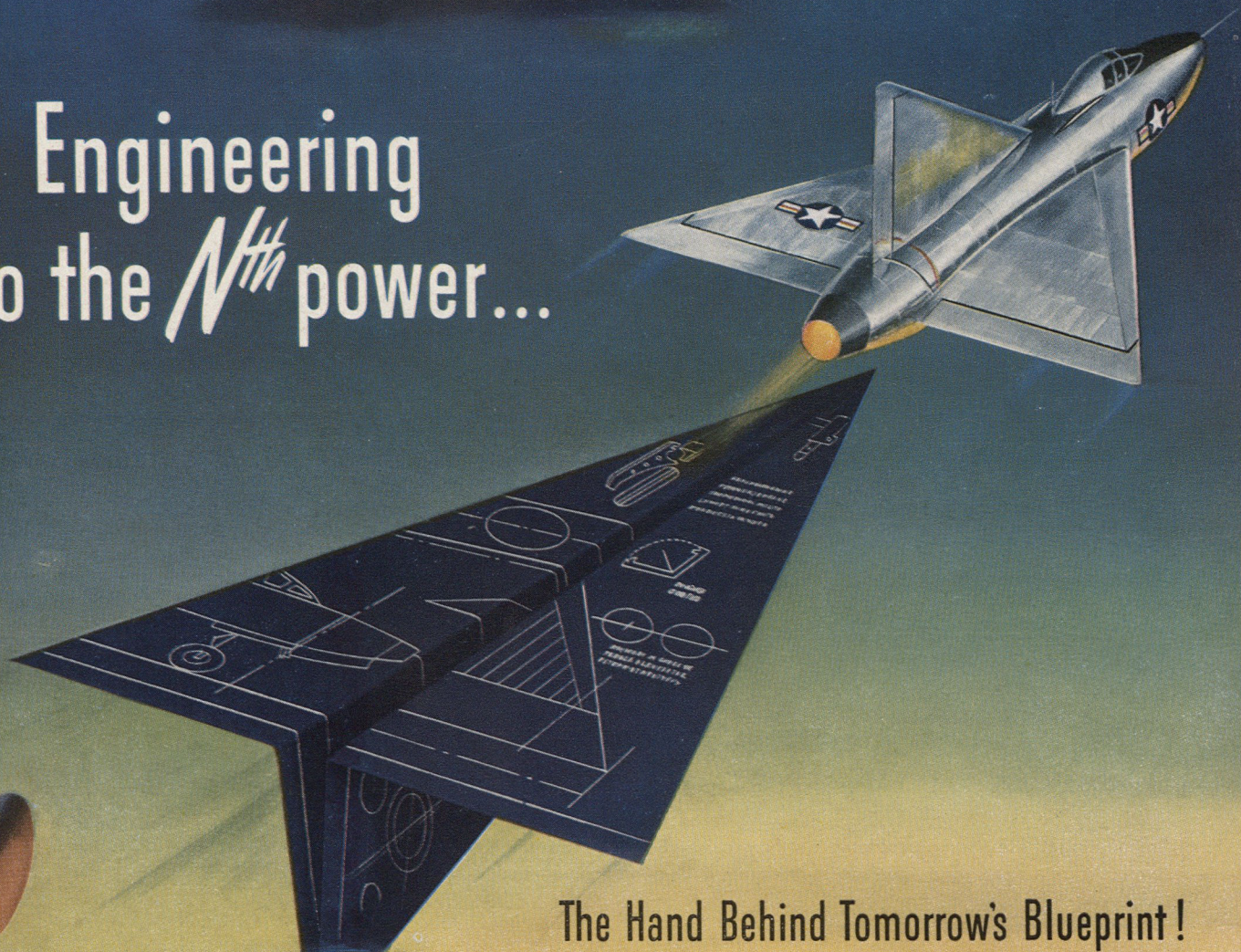


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