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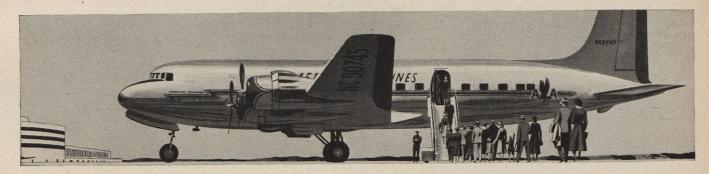
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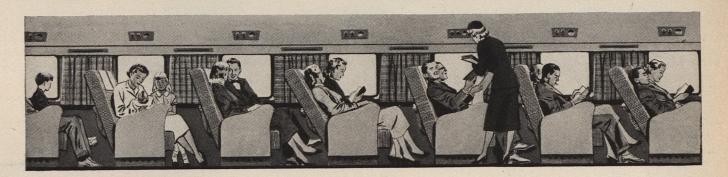
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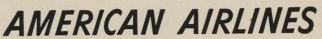
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WHEN THE CHIPS WERE DOWN

AIR FORCE

THE OFFICIAL JOURNAL OF THE AIR FORCE ASSOCIATION

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DEPARTMENTS

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There was plenty of time to day dream on the ride home from Munich

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AIR FORCE IS PUBLISHED BY THE AIR FORCE ASSOCIATION

13th Bombardment Group (M)



Distinctive Insignia

The Distinctive Insignia above illustrated is an adaptation from the Coat of Arms approved 2 January 1942.

SHIELD: Per bend azure and or, a sword point to base with wings displayed and inverted argent, that portion to base fimbriated of the first

CREST: None.

MOTTO: Alert Day or Night.

HISTORY: The 13th Bombardment Group (M) was constituted as a unit of the Regular Army, and activated at Langley Field, Virginia, 15 January 1941. The Group was inactivated 30 November 1942.

BATTLE PARTICIPATION: The Group earned battle credit for the Antisubmarine Campaign.

It is our hope, ultimately, to pay our modest tribute in this column to every Air Force Unit. Even if your outfit has not appeared, we probably carry in stock its approved distinctive insignia. Group and Squadron Commanders are invited to write us whenever they believe we can be helpful to them in the procurement of their organization's Distinctive Insignia.

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"Maintenance of a healthy and expandable aircraft industry is required for national security," concludes a review of our national air policy by the Congressional Aviation Policy Board.

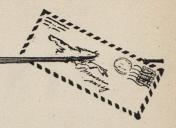
We in the aircraft industry heartily concur with this conclusion, because we realize the value of continuity in this business. And only with Government cooperation can the continuous, large-scale development of aircraft of both combat and transport types be carried on.

We know that continuity of "know-how," when carried from model to model or even on re-orders of the same model, is the largest single factor in the reduction of aircraft costs. And we know there is also pronounced reduction in engineering, development, tooling and manufacturing costs where a program calls for volume production and quantity use of aircraft.

I have always been and continue to be confident about the longer-range prospects for passenger and cargo transportation by air.

In the meantime it would appear sound public policy for the Government to bear a proper share of development and production costs of new air transports and cargo planes, in exchange for the assurance that in an emergency it would instantly have available for defense and military operations, the largest and the most advanced fleets of air transports in the world.

DOUGLAS AIRCRAFT COMPANY, INC. SANTA MONICA, CALIFORNIA



Pay Up Gentlemen: Please settle this argument for us. Was the P-51 Mustang ever called an A-36 Invader? I contend that the P-51 was first, last and always a Mustang.

Clive Castley Halber, Minn.

· Sorry, chum, you lose. The Invader was a P-51 with dive brakes. It was also known as the Apache by the English who were first to use it in combat.

No Sooner Said Dept.

Gentlemen: I find AIR FORCE very interesting, but since there are many weather people in the US Air Force, I wonder if it would be possible to include an article on weather or a related subject.

Russell R. Ratcliff Ypsilanti, Mich.

• Try "Weathermen of Wilmington" (page 28) for size.-ED.

Tonsorial Troubles

Gentlemen: On page 23 of your April issue there is a picture of three recruits at the mercy of three (and I use the world loosely) barbers. The caption under this picture claims that processing at Lackland, which once took many hours, is now done, complete with haircut, in 30 minutes. Surely the time



gained was not in this "barber shop." Nothing could be faster than the shearing barbers gave during the war.

D. E. Files

 Baltimore, Md.
 You haven't been to Lackland, friend.-ED.

Thought for the Day
Gentlemen: As a former member of a fighter control squadron, I have looked in vain for any tangible evidences of plans for an air warning defense of this country. During the last war a good deal of time and money was expended on radar development and training of personnel. Certainly with planes capable of sonic speeds and guided missiles, a threat to our security, some concrete action should be taken regarding the building of a warning and defense network. The lessons learned at Pearl Harbor and Clark Field early in the last war should bring home to our air defense planners the need for a closelycoordinated air warning defense lest our striking Air Force again be caught on the ground.

John G. Nelson Portland, Ore.

 Both the President's Air Policy Commission and the Congressional Aviation Policy Board recognized the importance of this subject, and made complete rec-ommendation to Congress as to the steps deemed necessary. The Air Force has already taken action accordingly, but it is doubtful that much information will be made available to the public because of security considerations involved .- ED.

Mistaken Identity Gentlemen: I notice on page 7 of the April issue that the sergeant is wearing



the same type lapel wings as the officer standing behind him. Is this something new?

> G. W. Fraser Memphis, Tenn.

• Chalk this up as a boner on the USAF Recruiting Office. Or maybe you could get them for impersonating an officer.-ED.

No Sconer Said (Cont'd.) Gentlemen: I would like some information on the 97th Bomb Group which was stationed at Foggia, Italy.

John Paruske

Unionville, Conn.

• The 97th has just returned from an extended winter in Alaska. For further details see "Report from the Far North" on page 12.-ED.

For the Record

Gentlemen: Can you please tell me whether or not General Douglas Mac-Arthur was on General Billy Mitchell's court martial board?

Richard E. Leggee Troy, N. Y. • Yes. But it has never been indicated how the General voted .- ED.

Jet Question

Gentlemen: I would like to get some pertinent information, pictures, draw-



ings and other news on the present-day jet engines and the planes they propel. I was a pilot during the second World War, but have never seen a jet engine nor a jet plane. I am quite anxious to learn all I can about jets and rockets. Can you tell me if such information will be available in the Air Force Reserve Program, of which I am a member? Are there any other sources of such information?

Paul L. Schuebmaier Weston, Pennsylvania

• Material concerning jet and rocket engines is being requisitioned at the present time and will be introduced to the Air Force Reserve Program as soon as possible. This material will include mock-ups, lectures, diagrams, technical manuals, etc. Other material on jet engines and airplanes can be found in aviation publications of all types which are available on newsstands and bookstores.

First Jet

Gentlemen: A couple of us got into an argument as to which country produced the first successful jet type engine—successful to the extent that it flew a full-scale airplane. The writer insists that the Italian, Campini, flew the first successful jet. A buddy of mine insists that the British had a successful jet plane before the Italians. Who is right?

Edmond Basil Elmhurst, L. I.

• Original jet flights came pretty close together. However, the records indicate that the little Heinkel He-178, powered by a HE-S3 gas turbine, actually took off from Rechlin in Germany on August 27th, 1939. It achieved a top speed of only about 250 mph. The Cabroni-Camprini CC-2 flew about a year later in Italy. This ship was a jet type but not a full gas turbine—its



power was provided by a 900 hp Isotta-Fraschini piston engine, driving a three-stage compressor. The first British jet was the Gloster E28/39. Powered by a Whittle engine, it achieved its initial flight on May 15, 1941. Its top speed was well over 300 mph.—ED.





Where the Gang gets together

BFTS CLUE: Am trying to locate Tom. M. Yarbro, T/Sgt at Randolph Field, Texas, during 1942, '43 and '44. He was in the 52nd Basic Flying Training Squadron, Section C-1 and C-2. In 1944, he left for Salt Lake City, en route to the SWP. James A. Schurman, 1824A N. Seventh St., Sheboygan, Wisc.

N'ORLEENS: Can Rendezvous help me find the address of Harold A. Ruth of New Orleans? He was a S/Sgt at Altus Army Air Field, Oklahoma. Bill Sweeting, P.O. Box 963, Homestead, Fla.

JUDGE CALLING: I am desirous of getting in touch with any former combat members of the 834th Sqdn, 486th Bomb Group, 8th Air Force, whom I knew in the States and in Sudbury, England. Especially I would like to hear from "H.H.," Roberts, "Sully" Sullivan, Jim Van Camp, Andy Fuller and any other original members of the B-24 "Gemeni." Ned A. "Judge" Reading, 1115 Woodlawn Ave., Ann Arbor, Mich.

INFO NEEDED: I would like to get in touch with Captain Parks, former engineering officer of the 558th Bomb Sqdn., 387th Bomb Group, Station 162, England. I do not have his initials or serial number. I would appreciate any information which would aid in my locating his address, as he knows the circumstances about a claim that I've filed. Fred W. Lewis, c/o Bolles School, Jacksonville, Fla.

ISLANDER: I would like a little help in locating M/Sgt Charles F. Breisacher. I believe he is located at Mitchel Air Force Base, N.Y. H. W. Ingmire, 215 Beekman Street, Saratoga Springs, N.Y.

SEEKING NAVIGATOR: I

would like to know where Maj. Robert Chapin, former group 'navigator for 384th Bomb Group, ETO, is now. He was the editor of a book on the activities of the 384th, and I would like to see about getting one, because I was a member of the 546th Sq. of that famous group. George J. Littleton, 12 Harmon Drive, Batesville, Min.

FROM "NO-MORALE": I would like to learn the present addresses of a couple of former buddies of mine, Sgts. William Murdock and Monroe Palmer. They were with me at Normoyle AFB, San Antonio, Texas, on VJ-Day. We had just been transferred from Buckley Field, Denver. Shortly thereafter, I was transferred to a new base. Palmer went to a truck company, Murdock's last known address was his home in Logansport, Ind. I would appreciate any information leading me to my pals. Carrol L. Shaffer, 4817 SW 55, Apt G. Will Rogers Field, Oklahoma City.

FROM KADENA, OKIE: I am trying to locate a friend of mine, Larry Doroshenk, who graduated from San Marcos in class 45-6N. I think he went to Lincoln, Nebraska, from there. I believe his home is in Pittsburgh. I am overseas (Kadena, Okinawa) at present, but can be reached at the address listed below. Lt. Rex S. Downey, Route 3, Alston Ave., Durham, N.C.

ALTUS AGAIN: I would like to hear from some of the fellows I knew when I was stationed at Altus Army Air Field, Altus, Okla. Robert D. Williams, 505 S. First St., Champaign, Ill.

SWEET SIOUX: Can anyone help me locate Daniel C. Chisholm. Last time I saw him was at Sioux Falls Army Air base.

Would also like to hear from any of the guys in the 97th Bomb Gp, 341 Bomb Sq. Stan (Jake) Jacobs, Main Street, Milton, Vt.

FROM 'LOXI: I would like to hear from any members of flight X-37, Keesler Field, with whom I am not corresponding. I was there from November, 1945, to March, 1946. I have lost the addresses of a lot of the fellows, and would like to hear from them again. William L. Reeve, 585 Elmdale Ct. Holland, Mich.

SAIPAN MEETING: For over a year I have been trying to locate a buddy of mine, Frank Hoffman of Detroit. We served together at Wheeler and Hickam Fields on Oahu, in 1944. I met him once after that on Saipan, on my way back to the States, Lawrence C. Pfeiffer, 19 Marine Ave., Brooklyn 9, N.Y.

IN AACS: Would John R. Holmquist, John Hall, J. N. Harp and "Rocky" Fiehler, all formerly of Barracks 838, Squad "L", Scott Field, Ill., please write the undersigned. Joe C. Rogers, Box 787 Safford, Ariz.

MET: I would greatly appreciate any help I could get in locating Jack Goldsmith of New York City. We attended Weather School at Chanute Field in June, 1941, and then went to Shaw Field, S.C. After spending a year there, I went to Santa Ana, Cal., as an Aviation Cadet, while he went to OCS somewhere in Virginia. I lost contact with him after I became a prisoner of war. Lt. Lewis I. Vance TD-TRC Scott Field, Ill.

WANTED, HELMET: Ever since I left the Air Force in 1945, I have been trying to get a new US (Continued on page 46)

9

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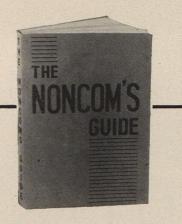
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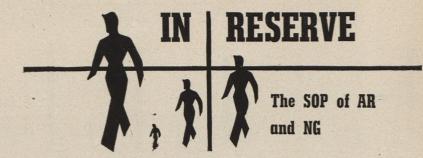
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Gentlemen: I have been wondering if it is possible for me to obtain a Reserve Commission in the USAF. Will you please send me the necessary qualifications? If this is impossible, I would appreciate it if you could let me know where I can get the necessary information. I served three years in the AAF during the last war, and will graduate in June 1948 with a Bachelor of Science degree in Business Administration. Any help you can give me on this matter will be appreciated.

Glen V. Cathey, Jr. Angola, Indiana

• Veterans who held any of the first three grades during wartime service may make application for an Air Force Reserve commission of 2nd Lieutenant, providing they are eligible under the provisions of WD Circular 101, 1947. This requires that they be citizens of the United States, be between the ages of 21 and 28, high school graduates and have an Army General Classification Test score of at least 110.

For further information write to the nearest Air Force Commander in your area. In Mr. Cathey's case—Eleventh Air Force 1612, S. Cameron Street, Harrisburg, Pennsylvania.

Gentlemen: In the March issue of AIR FORCE magazine the statement appears that the present Air Force is badly in need of trained engineering personnel to fill vacancies and to carry on research and development work. I would like to know the policy of the Air Force in offering commissions to college graduates from engineering colleges. During the last war I served for three years as a sergeant working in an engineering office. At the close of hostilities I entered the University of Southern California to take up aeronautical engineering. I have now about finished three years of the four-year engineering course and before I graduate would like information on the subject mentioned. Any information you can forward me pertaining to this subject will be greatly appreciated.

Rock Duitman Santa Maria, California

• You are possibly eligible for a direct commission, similar to Mr. Cathey and the same facts apply in your case. For further information, write to Fourth Air Force, Hamilton Air Force Base, California.

Gentlemen: I am very much interested in enlisting in the Air Corps Enlisted Reserves, but I understand that anyone drawing any disability compensation from the Veterans Administration is not eligible to be accepted into the Reserve.

Elmer E. Hensen, S/Sgt. Fort Dodge, Iowa

• Policy regarding enlistment of partially disabled veterans was recently changed. You may apply and enlist in the Air Force Reserve at any Recruiting Station.

Gentlemen: I am a sergeant in the reserves and my records are held at the reserve squadron at Chanute Field, Illinois. Several months ago I received a letter from them listing a series of meetings occurring on Wednesday nights. Appended to the bottom was the note: "Failure to attend 12 meetings during the year will result in losing your reserve status. "I am attending school now, and Wednesday night is always an extremely busy one for me. I usually don't get through until 0400. So far I have been able to attend only one meeting, which I enjoyed very much. What I would like to know is: does the above quoted statement represent national policy; can it represent local policy, or is it merely a threat; is there any way I can maintain my reserve status without attending these meetings. I am very anxious to maintain my reserve status, and would like to attend these meetings but so far it has been physically impossible. With the possibility of war many of us are looking to our status. I realize that three stripes are not so much to worry over, but just the same I would hate to start from scratch again.

William C. Deem Champaign, Illinois

• This is not a national policy, and your reserve status may be retained. You are bound by this policy only if assigned to a T/O₺E or Composite unit and have signified in writing the desire to receive training. If so, there (Continued on page 42)

HAVE YOU AN AIR RESERVE OR AIR NATIONAL GUARD QUESTION? WRITE AIR FORCE
ANSWERS PREPARED BY HEADQUARTERS, AIR DEFENSE COMMAND



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Fire-fighting studies of these earthbound B-26 engines are but a part of Kidde's continuing research directed toward safer flying. Out of this research has come a fund of information unmatched by any other private organization. Of course, this information is always at the disposal of government agencies, aircraft manufacturers and transport companies.

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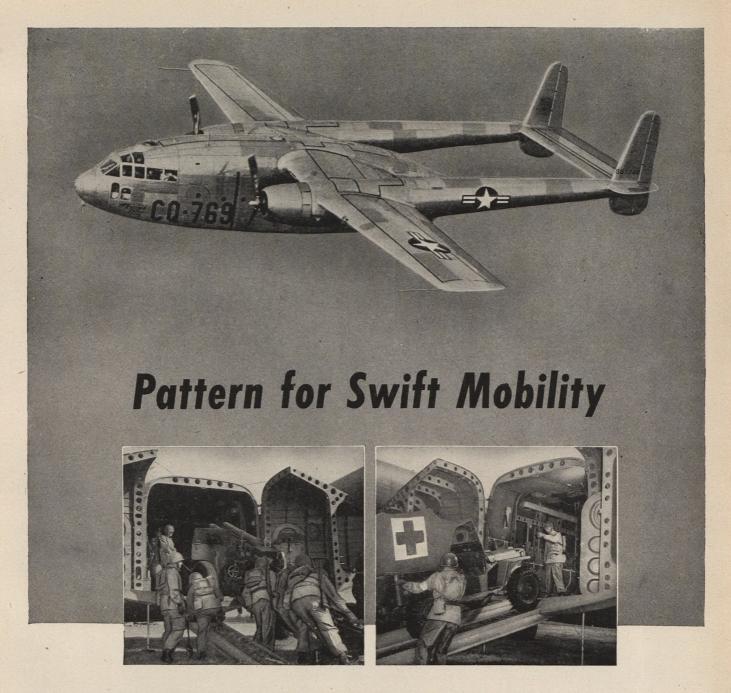
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In these two airplanes our military minds have found new answers to old problems, and around them have built a new pattern for swift mobility.









When the Chips Were Down

"Public support is as essential to effective airpower as industries, airplanes and airmen,"

General Carl Spaatz made the statement at AFA's national convention last year in recalling the "famine years" between the two wars when the Air Force needed all the support it could get, when its backers, including Air Force veterans, were helpless to spread the doctrine except by "individualistic efforts"-helpless because they were not organized.

"From that experience between the two wars," General Spaatz explained, "we learned the value of organization of true believers within a democracy, in which public opinion is the final term of reference. Hence the formation of the Air Force Association."

Then he added, "The Air Force Association has a major responsibility to the people of the country. They will depend on you for the proper expression of the doctrine of airpower. No other organization can more appropriately assume this function."

Airpower had come a long way since the old days, but in the first five months of 1948 the US-in relation to the world situation-was hungry for airpower, and famine itself hung over the aircraft industry like a bird of prey.

We are thankful and proud that this time airpower supporters were organized, that as veterans of the Air Force and members of the Air Force Association they were ready-and equipped-to meet their responsibility to the people.

There were many contributing factors in the successful fight for a 70-group Air Force, and we in no way mean to underemphasize them, but we would be guilty of gross negligence if we did not report back to members of the Association on their unprecedented support of airpower during this crucial period just passed.

It was back in September of last year, before the issues had crystallized, that AFA men, in convention, had presented their Statement of Policy. Speaking "not as military men laying strategic plans but as citizens from all walks of life" they expressed "a steadfast belief in a strong United States as the best insurance for world peace and in airpower as the key to our strength." They had recommended immediate action to strengthen the aircraft industry, research and development, air transport, the reserve. Specifically, they had urged the allocation of sufficient funds to maintain an Air Force of "70 combat groups with supporting establishments and services."

When the President's Air Policy Commission, which had incorporated the AFA Statement in its records, issued its now famous Report, the Association seized it as the blueprint for the national aviation policy which it championed. In the March issue we set aside regular features and devoted the entire magazine to the Finletter Report, the only publication in the country to do so-a fact in which we have taken some pride.

The basic plan was a simple one: Use the magazine, with its "Survival in the Air Age"

(Continued on page 29)



Transportation and supply lines between Alaska's "air islands" are grossly inadequate. Advance bases are almost entirely dependent on air shipments such as above for needed provisions.

One of the 15 B-29s of the 97th Bomb Group which flew 60 missions over the north pole without a major mishap during the winter. Without hangars planes had only cowling hoods for cover.



Report From The Far North

Exercise Yukon proves that General Weather isn't the arctic bogey he was cracked up to be. Alaskan geography and logistics are a bigger worry

By Ben Pearse

Any doubts that winter warfare could be conducted effectively in the Far North have been dispelled by five rugged months of maneuvers recently completed by ground and air forces in the coldest, most impassable part of Alaska, the Yukon River Valley.

There has been considerable speculation on this subject. The skeptics have suggested that perhaps the US was wasting its time in developing an "arctic concept." Perhaps men stationed in the Far North would find it necessary have proved by effective operations in extreme cold and deep snow that troops can maneuver and operate in Alaska. Tactical operations in the arctic are essentially no different than elsewhere, although living in the arctic does require special training. And the General adds significantly, "Since we have proved these operations feasible, we must assume that they can be accomplished by others."

In warfare, no nation can allow itself the privilege of choosing where it will or won't fight. The enemy is too apt to make the choice himself. Undoubtedly hour; annual snowfall of more than 600 inches; rainfall up to 269 inches; temperature ranges as great as 171 degrees between winter and summer. These are only a hint of what can and does happen in the Far North.

Added to Alaska's weather problem is its lack of transportation, housing and communications facilities. Ladd and Eielson Fields in the Fairbanks area, for example, have more flying days year-round than most fields in the US. Yet the highways feeding into Fairbanks would be classed as secondary country roads in the States. As arteries of supply, they are totally inadequate. In all of Alaska, as a matter of fact, there are only two miles of concrete roadway. Rail lines offer only partial relief. In an area that spreads across nearly as much of the earth's surface as the US, there are only 470 miles of standard gauge railroad. To supply enough oil and gas, a new pipe line is also needed. In addition, Alaskan forces are lacking in port facilities, warehouses, permanent quarters. The list of shortages is long and full of meaning. But from an operational standpoint Alaska's peculiar geography must be given first consideration.

For all practical military purposes Alaska is a cluster of "islands" surrounded by an impassable "sea" of muskeg and tundra.

In summer the ground thaws to a depth of about two feet, but the permanently frozen earth below prevents normal seepage and converts the "sea," especially in the central plateau region, into a treacherous swamp. In winter it is frozen into a rutted surface difficult to cover on foot, more difficult in a vehicle. Much of the interior region is characterized by fine, light snow. Here snow shoes and skis sink into it as much as twelve inches instead of the normal six. A deployed unit can move only about half a mile an hour in snow of this type, and can keep it up for only a few hours at best.

Standing like islands in this "sea" of tundra and muskeg are the airfields—at places like Nome, Galena, Bethel, McGrath. They form a screen for the hub of operations in the Fairbanks area, are accessible only by air for most of the year. Air units can operate from them; ground forces with mechanized equipment can operate on them. Separating these "islands" like the waters of the South Pacific, or the jungles of Burma, or the desert of North Africa, is the untraversable no-man's land.

Exercise Yukon was designed prima-



The new look in foxholes. In spite of cold, Exercise Yukon proved that soldiers can operate as efficiently in arctic as in tropics if they adhere to training.

to expend so much time and energy in just keeping alive that they would lose their efficiency as soldiers. Perhaps planes and other mechanized equipment would freeze up and refuse to function properly. It was the old-story of General Weather being a more formidable foe than an enemy with guns.

Exercise Yukon, which would up in March, has put an irrefutable end to such theorizing. This is the way Lt. Gen. Nathan F. Twining, head of the Alaskan Command, summarizes it: "We

any war fought from arctic bases would be disagreeable and beset by many hazards, but as long as there remains any prospect whatsoever of the enemy selecting these regions as bases of attack we must be ready to meet him here and defeat him. Discovering means of doing just this, was the purpose of Exercise Yukon.

In a region where variations in climate are as wide as they are in Alaska, the difficulties have to be seen to be appreciated. Winds up to 150 miles an



Pre-heating the engines of one of the 97th Bomb Group B-29s. During exercise several engines changes were made effectively in -35 weather without any protection save flimsy portable engine shelters.

Report From The Far North

(Continued)

rily to test the practicability of lifting ground combat teams by air to secure and defend these "air islands," to determine the extent to which air operations could be conducted from them. Though a small scale maneuver, it was an exhaustive test of ground-air operations under unusual and rigorous conditions.

The 7th Troop Carrier Squadron, McChord Field, flew selected units of the Second Division, first to Big Delta, Alaska, for a brief period of special training, and then to McGrath, Galena, or Nome, three sites chosen for their varying climatic conditions, for a month's operations on their own.

Meanwhile, the 94th Fighter Squadron moved from March Field, Calif., to Ladd Field at Fairbanks, and the 97th Bombardment Group from Salina, Kan., took over partially completed Eielson Field, 26 miles south of Fairbanks. It was the first time that jet aircraft or B-29s have operated in Alaska in tactical units.

Although the mercury consistently stayed at the -30 degree level, ground forces operated effectively, including 105 mm artillery and mechanized equipment, to dispel the "bogey" of the

Northland. Maj. Gen. S. L. Scott, Army commander in Alaska, summed it up:

"Cold weather slows operations in Alaska, just as do hot weather in the desert and rough terrain in the jungle. The arctic is like the desert and the jungle in that there are certain things peculiar to it the soldier must know. But a soldier will die as quickly in the desert or jungle as in the arctic if he neglects his training and care of himself and equipment."

Maj. Gen. J. H. Atkinson, Alaskan

air commander, was no less emphatic about the air operations. Despite the grounding of the P-80s, following a power plant failure resulting in a fatal accident, he pointed out that the lessons learned had contributed materially to the value of jet fighters in the Air Force.

"The 94th Squadron," he said, "established an enviable record for operating under adverse conditions and proved conclusively that jet fighter units can and will operate in the arctic

Participants in Exercise Yukon found that when a man is lost in Alaska's sea of muskeg, it is often much better to send a helicopter after him than a dog sled.



at maximum efficiency in the future."

No official explanation for the grounding order has been given, but it can be said that difficulties are largely due to the fact that kerosene absorbs moisture more readily than gasoline and that special measures are necessary for its use in cold weather operations. That this hazard is expected to be eliminated before another winter was indicated when the 94th left its jet equipment behind on returning Stateside, and by the arrival of additional jet aircraft for the permanent fighter units in Alaska.

During its six months' tour at Eielson the 97th Group, commanded by Col. George Robinson, actually averaged more flying time than many similar groups in the States. Two highlights of the tour were mass flights to the pole and back, and the changing of a B-29 engine out of doors at -35 degrees in a total of 32 hours, which compares not unfavorably with indoors change time.

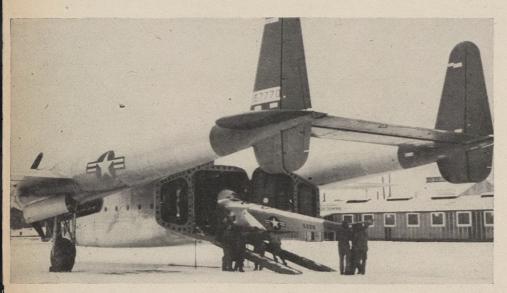
The starting difficulties for both B-29s and jet aircraft have been greatly reduced. It was demonstrated that the 29s can operate without hangars except for maintenance. Starting time for the jets has been cut to somewhat over 60 minutes, but it is generally agreed that for instant alert jets or reciprocating-type engines will require heated hangars.

Richardson together form the largest military establishment in Alaska, and are under the command of Col. Thomas L. Mosley.

The 57th, commanded by Col. Morton D. Magoffin, formerly stationed out on the Aleutian chain, was brought in to Elmendorf about a year ago. Its three squadrons have operated not only from Elmendorf, but from Eielson and from Marks Field at Nome in order to gain experience under varying climatic conditions. This group is developing the fighter techniques for future tactical units in the Far North. Its P-51s are rapidly being replaced by late model P-80s.

The 54th TC Squadron, in command of Lt. Col. James N. Sammons, operates to a large extent as a transport unit connecting the mainland with stations on the Aleutians. It flies what is probably the toughest route in the world, not excluding the Hump route in the CBI during the last war, according to some who have flown both. Yet its safety record compares favorably with similar units in the States. Instrument letdowns and ground control approach are SOP for the 54th. One pilot flew in and out of Adak for eighty-nine days before he saw a mountain peak less than three miles from the runway.

The 10th Rescue Squadron, com-



During the five month "game" the Fairchild C-82 Packet performed nobly in keeping the Alaskan "air islands" supplied with food, clothing and even helicopters.

But Alaska is not exclusively a training ground. Several units permanently stationed there contributed greatly to the success of the winter program of the Alaskan Air Command.

At Elmendorf Field (Anchorage), the 57th Fighter Group, the 54th Troop Carrier Squadron, 10th Rescue Squadron and the 7th Weather Group have headquarters, in addition to the base service units. Elmendorf Field and Fort manded by Lt. Col. Beverly E. Carmack, has detachments and aircraft permanently stationed at Adak, Cold Bay, Nome and Ladd Field as well as at Elmendorf. Its varied equipment includes eight helicopters, two C-54s equipped for glider snatch, thirty other types from L-5s to B-17s, nine gliders and fifty-six dogs for land rescue operations. During the past winter, glider tow and snatch operations have been

developed. One drop and snatch was staged successfully on the ice cap north of Point Barrow, and it raised morale no end among the B-29 crews operating there.

The 7th Weather Group, in command of Col. Carl Carlmark, maintains 21 stations of its own, and coordinates data received from more than 100 stations operated by the US Weather Bureau, Civil Aeronautics Administration, Navy and Coast Guard. It has two ground squadrons, the 11th covering the stations from Elmendorf to Shemya (Attu is a Navy station), and the 16th, which covers the interior area from Nome to Edmonton, Alberta, in western Canada.

In addition, the 7th includes the 375th Weather Reconnaissance Squadron equipped with B-29s. Flight "B" carries out the Stork-Baker mission between Fairfield-Suisun Air Depot, near Sacramento, Calif., and Elmendorf Field, where it is stationed. Flight "A" flies the Ptarmigan mission from Ladd Field, where it is stationed, to the north pole.

The principal station on the Aleutian chain now is Davis Field on Adak, headquarters of the Aleutian Air Div., which includes airways detachments at Cold Bay, Umnak, Amchitka and Shemya. The division and base commander is Brig. Gen. F. V. H. Kimble, while Capt. T. O. Dahl commands naval force units and installations.

The only tactical unit on the chain during the past winter was the 449th All Weather Fighter Squadron at Davis Field, in command of Lt. Col. Leon G. Lewis, and equipped with P-61s. The "All Weather" is not excess verbiage, as any one who has flown the chain knows. High winds and continuous fog make GCA normal. As General Kimble said, "Except for the number of hours, every pilot in the 449th could qualify for a green card in the States, a very dark green card."

Marks Air Force Base at Nome, commanded by Col. H. N. Burkhalter, is the site of the Arctic Indoctrination School, where air crews are given a sixday course in how to survive in the arctic. Under the tutelege of Capt. H. L. Strong, an old Alaska hand, the trainees live out on the tundra and on the ice with only the equipment and food from the standard survival kit to maintain them. "Never leave the ship" is the first principle drummed into trainees from the day they arrive. They are taught how to build snow shelters on the tundra and the ice to protect them while awaiting rescue. Use of survival equipment and such niceties as fishing through the ice without getting the hands wet-and frozen-are part of the curriculum.

Ladd Field, second largest installation in Alaska, is headquarters for the Yukon Sector, until recently commanded by Maj. Gen. F. F. Everest, who was succeeded June 1 by Brig. Gen. D. V. Gaffney. The sector includes all stations



In some parts of Alaska bad flying weather isn't nearly as much of a problem as bad housing conditions. Above, three e. m. gaze wistfully at new barracks going up at Hqs. AAC, Fort Richardson.



In shirt sleeves and unbuttoned jackets, officers and men of the 97th Bomb Group serenade residents of Fairbanks in heartfelt choral recital broadcast over KFAR, local radio station.



Temperature and rough air did not hamper accurate placing of supplies from 18,000 feet altitudes. Note safety ropes tied to chute harnesses.

Report From The Far North

(Continued)

from Fairbanks to Nome and to the north. There also are stationed the 72nd Reconnaissance Squadron, headquarters and Flight "A" of the 375th Weather Squadron, Cold Weather Test Detachment, and the First Arctic Aeromedical Laboratory. The field is in command of Col. Lloyd H. Watnee.

The 72nd, commanded by Maj. Maynard E. White, equipped with B-29s, is working on some 30 projects, among which are photo mapping of the Alaska mainland, photo reconnaissance of the Navy petroleum project south of Point Barrow, photo projects for geological purposes and perma frost studies for construction work. It also carried on much of the pioneering in the polar navigation so essential to the Ptarmigan missions.

Flight "A" of the 375th, which is in command of Lt. Col. Karl T. Rauk, has made more than 50 flights over the north pole since Ptarmigan was initiated in March, 1947. As the magnetic compass is next to useless in the polar area, an entirely new system of navigation had to be devised in which radar plays an important part. Loran stations now being set up will help greatly.

The route is usually from Ladd over

Aklavik in Yukon Territory and Prince Patrick Island to the pole, and back by way of Point Barrow. The round trip, about 3,760 statute miles, takes about 17 hours and is seldom flown above 10,000 feet, although it has been necessary to climb to 20,000 feet to keep above the clouds where celestial navigation is possible.

The B-29s carry a crew of 14 usually, including two navigators. Between navigating and making and transmitting weather observations every half hour, everybody is busy. With a full load of 8,500 gallons of gas, the planes weigh 134,000 pounds, including 2,000 pounds of rescue equipment. The flight has turned back short of the pole only a few times, but the long over-ice hop keeps it from being routine.

The First Aeromedical Laboratory is the first establishment of its kind designed to make an exhaustive study of the effects of a cold weather climate on military personnel. Under the direction of Col. Jack Ballerud, the staff conducts both basic and field research on acclimatization, cold exposure, clothing, rations and survival equipment. While its findings are based as yet on tests among relatively small groups, some observations have been noted. For example, indications are that geographic origin has little bearing on the ability of per-



Despite temporary operational difficulties, the 94th Fighter Squadron proved that jets can fly efficiently in extreme cold. After Exercise, jets were left behind while crews came home.

sonnel to withstand cold, that mental and nervous factors are most important. Whiskey will not warm you up in cold weather, and your blood does not thicken, except temporarily, in a cold climate. Exploding such popular misconceptions is part of the aeromed lab's function of replacing folklore with scientific fact.

The organizations and establishments outlined above form the Alaskan Air Command, one of three components of the Alaska Command, headed by General Twining. The US Army, Alaska, is commanded by General Scott, with headquarters at Fort Richardson, and the Alaskan Sea Frontier, with headquarters at Kodiak, is under the command of Rear Admiral A. E. Montgomery. The Alaska Command is fully integrated, Admiral Montgomery serving as deputy commander, and Army Colonel H. M. Monroe as chief of staff.

Last winter's maneuvers showed that Alaska winters are no barrier to active military operations. Its defenses are by no means adequate, but if Congress will provide the money for port, highway, railroad, pipe line, housing, and storage facilities, the conditions which made it an easy target for the Japs in the last war can be eliminated, and it can be converted into the bastion of our polar frontier.



Officially it was known as a "mild winter," but to many GIs it was colder than a pawn-broker's heart as this picture will well attest. At left is a Beech C-45 on skis. At right the omnipresent C-47 stirs up a cloud of powdery top snow.



For 18 months the C-74 above and nine others have been making quiet test flights to and from all corners of the earth.



Proving The Globemaster

After 18 months of grueling test operations, the C-74 is ready to take its place in the USAF transport string

The bug-eyed Douglas C-74 is not a new plane. It made its first successful test fight at the Douglas plant in California in September, 1945. Yet for some strange reason, news of its operations since that date has been so scant that it is still being thought of as hot off the line.

Perhaps this is partly due to the fact that in the interim, larger and more spectacular ships have been introduced. It might also be that the general public has come to accept successful new Douglas transports as a matter of course, for certainly no company has had a longer string of them.

But whatever the reason, the truth is that today the C-74 is a tried and proven ship. In the past 18 months the Air Transport Command has subjected it to almost every kind of service test imaginable. Starting with three planes and expanding gradually to a present day fleet of ten, the 3rd Air Transport Group under Col. George S. Cassady, has logged a total of over 4000 hours.

During its testing period, the huge plane has been used for the most part in emergency non-scheduled runs to reduce snowballing backlogs of priority military cargo. When it became necessary to move by air an entire air depot from California to Oklahoma, for instance, the C-74 in the short period of six months, airlifted over a million and a quarter pounds.

Illustrations of the Globemaster's distinguished achievements are myriad. Not so long ago it moved an entire radio range station from Maywood, Calif., to Westover Field, Mass., in one trip. At Westover the 29,000 pound load had to be broken down into 5 smaller loads before it could be flown in C-54s to its final destination in Europe.

One of the ship's most phenomenal accomplishments occurred on a "classified" mission into the arctic last winter when it was forced to land on nine-foot thick clear ice. By reversing his props instead of using his brakes, the pilot accomplished the landing without incident.

Briefly, the 74's specs are as follows: It has a range of 7800 miles, a speed of more than 300 mph, and a useful load of 30 tons. From wing tip to wing tip it spans 174 feet; the built-in platform freight elevator lifts 8800 pounds 12 feet 8 inches from the ground to the cabin floor; the front loading crane, hoists at one lift 4500 pounds into the cavernous interior whose barnlike capacity easily accommodates 10 jeeps. She can lift more than she weighs empty.

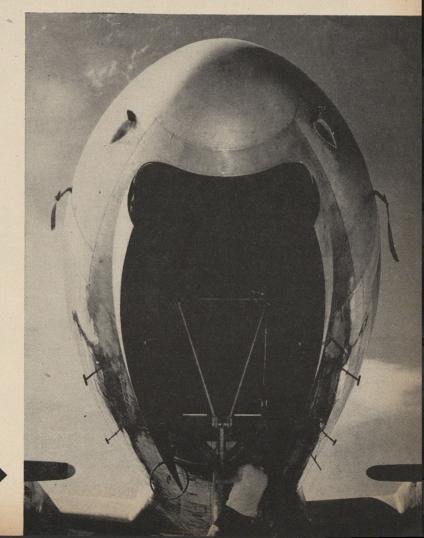
As is the case with any new plane, the Globemaster came off the original assembly line with its share of bugs. To date a total of 240 minor modification recommendations have been made, most of them by crew members. At present Douglas has proposed a model with a lower landing gear assembly and with a clamshell loading arrangement.

In the meantime, the Globemaster will probably continue in its own quiet way to establish new records in Air Force logistics. As Maj. Gen. William Tunner, CG of ATC's Atlantic Division remarked recently, "The huge plane has such tremendous possibilities that even after a year and a half of testing operations we are still finding new and unexpected ways of using it."

A Douglas mechanic looks into the cavernous nose wheel well. For ground handling wheel has own hydraulic steering system.



Family characteristics of predecessor Douglas ships are evident above in the C-74's smooth and graceful body lines.



Proving the Globemaster (Continued)



This will give you an idea of what 6500 cubic feet of air freight space looks like. Another compartment in the belly of the ship has a 615 cubic foot capacity. Overload gross weight of Globemaster is 155,000 pounds.



During recent revolution in Bogota, Columbia, the C-74 was Johnny-on-the-spot with rations for conference delegates.



In an office of his own, Flight Engineer Lt. William Boyd of Nashville inspects the engineer's master control panel.



of a guy thinking about an island

On the long way home from Munich it often seemed as though England had sunk into the sea and France had stretched north to the pole

By Lt. Bert Stiles

Illustrated by Louis S. Glanzman

June, 1944: This was the biggest month of all. In Italy Rome fell. In the Balkans the 12th's incessant pounding of oil and aircraft sources reached new peaks—especially in Hungary. In Russia plans were completed for triangle shuttle-bombing between Italian, Russian and English bases. In the Pacific US forces captured an airfield at Makmen in New Guinea (Biak), putting them back within striking distance of the Philippines. But all these events momentous as they were, were overshadowed by D-Day and the air campaign to seal off the Normandy peninsula. . . .

The Fortresses took off in the late afternoon and flew by wings to the west of England and turned south. Out of sight to the northeast there was fighting on the beaches, and many dead men lay in the surf. But the Forts were high above all that. Since the first day, the sixth of June, their job had been easy. Today the target was an airfield on the Brest Peninsula, not so far from Lorient, where the Forts used to go in the old days.

He flew it when it was his turn, and watched the sun slide down through the soft blue toward the sea. When it was time to bomb, the field was already a smoky mess from the wings up ahead. The flak started shortly after bombs

away. The first four puffs were just outside the window. He could see the dull flash as the shells burst. The formation leader banked steeply right. The flak tracked along easily.

There was an ugly clank underneath somewhere. He knew they were hit. Engines OK. Instruments reading true. Everything OK. The helpless fear of those soft black puffs tightened inside him. It was always the same. Nothing to do but sit there and pray the luck holds. And then they were out of it, turning toward home. "Ball turret to pilot," came over the interphone. "We got holes in the gut."

Once you're out of it, flak never seems quite real, till the next time. The formations churn through the quiet sky, and the earth is a million miles below.

The formation let down into the darkening east. He leaned forward, waiting for England.

England. He said it in his mind, and then slowly in his mouth, without moving his lips.

When he was eight years old he read

AIR FORCE DIARY

Robin Hood the first time. After that he must have read it twenty more. Sherwood Forest and Nottingham Town in the days of Richard the Lionhearted. He'd dreamed of it then, waiting for the day when he would stand at the rail of a ship, waiting for England to come out of the sea, out of the haze. Almost like now.

But it wasn't the same. Because now, for a little while, England was home, more home than Colorado. More home than the house on York Street could ever be.

After the ride to Munich he thought that the island had sunk into the sea and France had somehow stretched and spread on north to the pole.

After Kiel, letting down over the North Sea, he had said a funny knockedout prayer. Be there, island. Please be there. Be there soon. After Berlin, after the soft acres of death above the shattered town, nothing had ever looked so good as the dim line of surf a half-hour ahead.

It slipped in gently, as always, clean and friendly and far off. That would be Lands End, Cornwall, and Devon. The names ring. He could sit with a map and say the names out loud, and never get tired of the sound of them . . . Torquay, Nutt Corner, Coventry, and Charing Cross.

The Forts hit the coast at 8,000 feet. A flight of Spitfires was playing in the clouds at three o'clock low.

A guy named Mitchell lay on a cliff above the sea and watched the gulls, (Continued on page 48)

The Army Adds a Scout

Out of World War II experience comes the newest sky-jeep with better vision, portability and general utility

The story of Boeing's new XL-15 "Scout" goes back into World War II. During the war, as the use of liaison aircraft became an important part of ground operations, various types of commercial light planes were hastily adapted to the Army's liaison assignments. Though these planes were not designed for the military missions required of them, they performed remarkably well under prevailing conditions.

But the need for a modern truly military airplane was always evident. After V-J Day when time was available, the Army Field Forces, collaborating with the US Air Force called for up-to-date military design studies of the liaison

spent two months with an Air Force operation in Alaska studying winterization requirements for the new craft.

The Scout is designed for operation in either tropical or Arctic weather conditions, in temperatures ranging from 65 degrees below zero to 160 degrees above. A winterization kit supplies the necessary equipment for winter or arctic use, and gasoline heaters maintain a cabin heat differential of 86 degrees.

Skis, floats or Brodie gear for cable landings can be quickly and easily attached, increasing versatility.

Using floats, the Scout will take off from smooth seas in 760 feet, with the necessary take-off run decreasing as the skis, although a small bomb or supplies can be carried in its place providing the auxiliary fuel is not needed.

The Brodie gear system for cable landings and take-offs can either be used on land or alongside Naval vessels. Standard cable length for the Brodie gear is 500 feet. Under "no wind" conditions, the Scout is expected to use only slightly more than one-half this length for take-off, and less than two-fifths for landings.

A pilot's airplane, the Scout can make "flat" turns and "square" corners. It is spin resistive and if forced into a spin will recove by itself within one and one-half turns. Unlimited visibility in nearly all directions and extremely slow speeds which can be maintained at altitude make the plane ideal for truck convoy and similar operations.

Since the Scout is designed primarily for observation, communication, and photographic assignments, particular attention was given to the observer's section of the "gondola" type fuselage. Seated directly behind the pilot, the observer is provided a full-swivel seat to facilitate vision in all directions. Large windows which slant inward at the bottom permit observation directly downward; a transparent section in the top of the "gondola" gives a clear view upward; and a curved, transparent double door which forms the rear section of the "gondola" permits unobstructed visibility rearward. Due to the full cantilever wing and raised tail surfaces, there are no wing struts or other structures to obstruct the observer's view. The observer is also provided basic flight controls for emergency use.

The swivel seat has the added advantage of enabling the observer to operate an aerial camera effectively. The doors at the rear of the compartment, which provide unobstructed vision to the rear, can be opened in flight (or removed entirely) for dropping supplies or communication equipment.

In the interest of crew safety, the Scout contains such advantages as a full complement of flight instruments including gyro indicators, radio compass and a new type flight altitude indicator, self-sealing gas tanks, a dual cable control system, a complete 2-way radio installation, and provisions for crew protection armor plate. These and numerous other safety features give the pilot and observer aerial protection comparable to that afforded crews of tactical aircraft.

Anticipating that elaborate equip-



Flight view of the L-15. Note the unexcelled rear vision offered by the single boom tail arrangement. Full-span underslung flaps permit phenomenal take-off.

problem. Months of planning, development and research were required before a contract was awarded to Boeing.

Results of both air and ground tactical experience were studied by Boeing engineers and much time was spent in coordinating design and performance requirements with engineering and technical representatives of the Air Material Command at Wright-Patterson Air Force Base in order to produce the desired type of liaison plane for the Field Forces. Also, a Boeing service engineer

water becomes more choppy. Tests on the L-15 model show that the added drag from the floats is negligible, and that the useful load remains at 534.4 pounds. Attachments for an auxiliary gas tank under the fuselage are standard JATO equipment and, if required, a jet unit for emergency take-offs from small ponds or lakes can be easily affixed.

Performance of the Scout on skis is expected to be identical to that of floats. The JATO unit cannot be used with

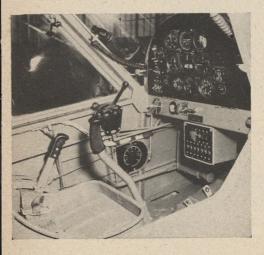


Knocked down and packaged, the L-15 can be towed at 40 mph on its own wheels by a jeep. Prop removed, it can be snatched off ground and towed, glider fashion.

ment for maintenance of the Scout will not always be on hand during Field Forces operations, Boeing engineers have designed the plane so as to eliminate the need for all special tools and equipment. The entire airplane can be maintained with only a standard set of sockets, box end and open end wrenches, socket extensions and universals, a screw driver and a pair of pliers.

In preliminary tests, the complete power pack was removed in only nine minutes, while another was installed in

The Scout has complete blind flying instrumentation unlike wartime Ls. Cockpit comfort has been improved.



twenty-four minutes. It has been estimated that an experienced crew will be able to cut the over-all time of the operation by at least four minutes.

The transportation by air feature of the Scout was successfully demonstrated recently when the second experimental airplane, still at the Boeing Airplane Company plants in Wichita for testing, was disassembled and loaded into a Boeing C-97 Stratofreighter.

Completed with unexpected ease, the experiment revealed that the entire dismantling and loading operation can be carried out in less than one hour, while the unloading and reassembly of the Scout can be accomplished in approximately the same length of time.

With the Scout loaded at the forward end of the upper cargo compartment in the C-97, measurements showed that ample space remained for three more of the new liaison planes, leaving the entire lower deck area of the huge transport available for Scout crews, troops or cargo.

In addition to this "knock-down" feature, which also allows it to be carried on any standard 2½ ton Army cargo truck, the Scout is designed for aerial tow, glider fashion, at speeds up to 165 miles per hour. For this purpose, the propeller can be locked before take-off. It can later be unlocked in the air and the engine started, enabling the pilot to make a normal landing.

With its 125 hp Lycoming engine, the all-metal, high-wing monoplane will take off and clear a 50-foot object in

less than 600 feet, climb at 628 feet per minute, cruise at 95 mph (75% power) and land at less than 35 mph. A recent report of the Air Materiel Command, where the first Scout delivered has been undergoing a series of tests, indicates that the airplane stalls with full flaps and full power at less than 13 miles per hour. It will hover at a constant altitude at less than 40 mph.

The Scout is equipped with full span, fully extended flaps of the external airfoil type. Spoiler type ailerons located in each wing are linked to the flaps to provide the lateral control required at low flying speeds.

Length of the plane is 26 feet, wingspan, 40 feet, and height, 7 feet, 10 inches. Gross weight is 2,090 pounds, and useful load is 534.4 pounds.

Two Scouts called for on the experimental contract have now been completed and are currently undergoing an exacting testing program. The first plane was delivered to the AMC in March for static tests, while the second is still at the Boeing-Wichita plants where it is being given structural integrity tests, including dives and spins.

Following routine procurement procedure for the development of military aircraft, the USAF has ordered a service test quantity of the Scouts. These planes, now being built under the service test contract, will be known as YL-15s, and will be delivered to the Army Field Forces for testing under rigid service conditions with operating units.

COMPANY-OWNED PLANE

PHONE 4III BASS BLOG.

ENID, OKLAHOMA

MARCH 1, 1948

MR. WALTER H. BEECH BEECH AIRCRAFT CORPORATION WICHITA, KANSAS

I THOUGHT YOU MIGHT BE INTERESTED IN THE WAY I AM PUTTING DEAR SIR: MY NEW BONANZA TO BUSINESSLIKE USE.

I HAVE ALREADY MADE SEVERAL LONG CROSS-COUNTRY TRIPS IN IT AND HAVE FLOWN IT OFF HIGH ALTITUDE FIELDS IN PRACTICALLY ALL WEATHER CONDITIONS. I AM MORE THAN PLEASED WITH ITS PERFORMANCE AND FLIGHT CHARACTERISTICS.

FOR SEVERAL YEARS I HAVE COVERED QUITE A TERRITORY IN THE SELLING OF INSURANCE AND ADJUSTMENT OF INSURANCE CLAIMS. I AM NOW COVERING ABOUT THREE TIMES THE TERRITORY | DID FOR-MERLY AND I AM NEVER AWAY FROM HOME OVERNIGHT. I USED TO BE GONE TEN DAYS OR TWO WEEKS AT A TIME. I FIND I CAN GET INTO ANY FIELD THAT ANY OTHER AIRPLANE CAN, AND IN SMALL TOWNS WHERE THEY HAVE NO FIELDS, I USE A SMALL PASTURE, AC-COMPLISH MY BUSINESS AND LEAVE WITHOUT ANY LOSS OF TIME.

I ALSO OPERATE RANCHES IN COLORADO AND NEW MEXICO AND USE THE PLANE TO COMMUTE BETWEEN THEM, MAKING THE TRIP EACH WAY IN ABOUT TWO HOURS WHEREAS IT TAKES TEN OR TWELVE HOURS OF HARD DRIVING IN AN AUTOMOBILE.

THE BONANZA IS CERTAINLY MY IDEA OF EFFICIENT TRANSPORTA-TION, AND IT IS ONE OF THE BEST BUSINESS INVESTMENTS I HAVE MADE FOR A LONG WHILE. IT IS SO FAST AND ECONOMICAL THAT IT ACTUALLY PAYS ME A PROFIT ON ITS OPERATION.

YOURS VERY TRULY,

om At Illin TOM G. DILLINGHAM

Top speed, 184 mph Cruising speed, 172 mph Range, 750 miles

BEECHCRAFT

BRINGS HOME THE BUSINESS

The 4-place Bonanza has boosters like Tom Dillingham in practically every field of business. They'll echo his statement that it's an investment that pays! The revolutionary Beechcraft Bonanza operates at a cost as low as 1¢ per passenger mile.

At the airport, talk with any Bonanza owner. You'll know him by that proud, almost parentlike gleam in his eye! Ask him about the remarkable quietness of the cabin, and its economy, and all the claims that have been made for this new plane.



A note on your company letterhead will bring an informative brochure on "The Air Fleet of American Business." Write today to Beech Aircraft Corporation, Wichita, Kansas, U.S.A.



Thunderstorm planes rush to the scene whenever the anvil head of a thunderstorm pokes its nose above the horizon.



Crew members stand by gaily painted P-61 Black Widow. Red and yellow colors warn other planes to keep their distance.

The Weathermen of Wilmington

At Clinton County Air Base, planes are grounded only by sunshine

By Herbert Shaw

Down at Wilmington, Ohio, where the USAF maintains its All-Weather Flying Center, a group of Air Force men and civilian observers are probing the mysteries of thunderheads, lightning strikes and other storm front peculiarities to help keep our expanding Air Forces one jump ahead of the weather. What they have learned in the specially-equipped P-61 aircraft fitted with a great many instruments that take the temperature of thunderstorms, has given us data which may some day permit operation in all kinds of weather, anytime to anywhere—the goal and operational MUST for modern airpower.

Known as "Project Thunderstorm" the object of this whole research program is briefly this: To learn as much as possible about thunderstorms; to learn what happens to aircraft in extreme turbulent flight conditions; to see how much stress and strain is brought about by severe updrafts and gusts in the heart of a thunderhead; to diagnose thunderheads and apply this data to weather forecasting; and finally to see what the storms might do to guided missiles, jet planes and rockets.

In more than one year of operation the pilots and observers have made some important discoveries. For example, they have determined that the most hazardous part of flying through a thunderhead is the psychological effect on the pilot and crew. Next to the mental hazard is the tossing about effect of downdrafts and updrafts in a thunderstorm's turbulence. Lightning strikes burn holes in airplanes, make a lot of noise, scare hell out of personnel but don't stop an aircraft's flight or mission. Hailstones, it has been amply proved, can really wreck havoc with a plane. Not only does hail seriously impare vision, but it also batters and dents an aircraft to an almost unbelievable extent.

The job of evaluating findings such as these and determining what remedial action to take—both in crew training and in airplane construction—is a slow one. Reports made a year ago are only now being completed. This year's work probably won't be completed until next summer. But the material, once compiled, will answer many important questions. On the strength of information now being accumulated at Wilmington, the Air Force—and commercial aviation as well—can look forward with confidence to the day when weather will have little more effect on operations in the air than it does today on the movement of ground vehicles.

In the meantime, USAF officials at Wilmington are anticipating a new problem that promises to tax their ingenuity and resourcefulness to the limit. Unhappy with the number of days they have been "grounded" because of too much sunshine and too few thunderstorms, the weathermen have taken to making their own rain and snow with dry ice and other "mechanical" devices. The problem here though, is coordination with nearby farmers. Rain in the late spring can raise hell with plowing or sowing. Later in the summer a heavy storm could ruin an entire crop. In brief, the Air Force's rainfall might easily prove to be the farmers' downfall. Liaison between farmer and soldier has been established, however, and it is probable that at an early date a program can be worked out to the satisfaction of both parties.



To furnish weather data for Thunderstormers, the Weather Bureau has set up a network of 63 stations in Clinton area. Above, a section of the giant V-Beam capable of covering 200 mile radius.

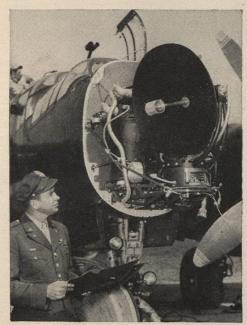


Captain Robert Lewallen, assistant operations officer for Project Thunderstorm, briefs pilots and crew prior to flight. Most hazardous part of operation is psychological effect on men.

The Weathermen of Wilmington (Continued)



A rough idea of how rough the weather can get is shown by Fred White of Weather Bureau who points to dents in propeller hub of P-61 which was pelted for just a few seconds by hail slightly smaller than golf balls.



Plastic nose of P-61 is removed to show great amount of radar used in collecting storm data.



Unification in action, Front row, Thunderstorm officers from USAF, Navy, NACA, Weather Bureau. In rear, crew, technician and mechanics.

When the Chips Were Down (Continued from page 11)

Report, to help mobilize public support for adequate airpower as expressed in the 70-group program. That was all. No Washington lobby. No complicated public relations program. Let AFA leaders throughout the country press the fight in their own way. Say it in their own words. And AFA leaders needed only the suggestion. It was a grass roots movement all the way.

We supplied a few extra copies of the special issue to local AFA units. Orders for more magazines came immediately by mail and wire from all sections of the country. Before it was over fully 10,000 extra copies of the March issue had been supplied to AFA members in every state. Then the magazines were distributed, one by one, in a very personalized manner. They went to governors and mayors and city managers, to industrialists and bankers and ministers, to state legislators and city councilmen and local political party leaders, to county executives, publishers, editors, educators, lawyers, service clubs, women's groups, parent-teachers associations. And from every section of the country they went to Congressmen in Washington, the men who ultimately would have to carry the fight for adequate airpower, who would respond to the mandate of the people. "Survival in the Air Age" really got around.

With each copy went a personal letter from the sender, from the Air Force veteran and AFA leader who contributed hours of his time doing what he hoped would help obtain the airpower he believed essential to national security. We have seen copies of those letters. We have paged through hundreds of them in the overall AFA report now being compiled on this effort. Letters on official squadron stationery, on business letterheads, on personal stationery. Hand typed, neatly done by secretaries, written in long hand. Long letters and short letters. Each telling the same

story a different way. And not a professional letter-writer in a basket full of letters,

We have been stopped short by the effectiveness of airpower appeals from AFA members who have seen airpower from so close up it hurts. From an AFA member representing the Calumet district of Indiana, an ex-GI who flew bombing missions over Germany, was shot down near one of his targets and held as a prisoner of war, and who now could write: "I have bombed Germany from the air and I have seen Germany bombed from the ground. I know what it is to sweat out 600 bombers attacking a city, and helpless to defend yourself from the falling bombs. It is not an experience that I want repeated." And who now could ask his Congressman to read the Finletter Report in AIR FORCE "and at the same time visualize the Calumet district under air attack. I then believe that you will put forth your greatest effort to push its recommendations through Congress." Most of the letter writers stressed, as did an AFA member from Texas, that the Finletter Report was drawn up "not by military men or airpower fanatics, but by five distinguished and impartial citizens who weighed the evidence during months of study." Always there was the personal touch. To a Congressman from an AFA member in the Bronx: "You are our neighbor and friend, but you are more than that. You have a direct voice in the administration of national affairs, and we respectfully ask you to endorse the necessary legislation that will insure the needed airpower for the American people." Some of the writers linked their appeals to local aviation needs-an airport in North Carolina, a national guard unit in Rhode Island, reserve training facilities in Nebraska. All of the letters packed a punch.

And we have read the replies to those letters, have noted the respect which

they have been accorded. We have filled a Congressman's request for 15 extra copies of the special issue for his colleagues on the House Appropriations Committee. We have filled the request from national headquarters of the American Legion for 35 extra copies of the special issue for distribution to members of the Legion's National Security Commission and National Aeronautics Committee. We have seen how AFA letters and the AFA's magazine have prompted the passage of airpower resolutions by city councils, Chambers of Commerce and civic organizations. Paging through hundreds of the replies received by local AFA members, we have become impressed by the grass roots support of airpower in all sections of the country, and have better understood why Congress translated this support into action in its overwhelming approval of the 70-group program.

All this was just a start to the AFA program. Letters by AFA leaders and resolutions by AFA units were reprinted in newspapers-as news stories, as guest editorials, as letters to the editor. One AFA squadron made a formal presentation of the special issue of the magazine to its mayor (with appropriate newspaper picture coverage) to arouse public interest. Another initiated its local program by a mass appearance of squadron members at the blood bank (also with appropriate newspaper coverage). Replies to the airpower letters were read at squadron meetings. Airpower forums were held. AFA members made personal calls on local leaders to press home the airpower story. AFA speakers appeared before local service groups, at business men's luncheons, at public meetings, on radio programs.

All this effort was climaxed by a series of airpower rallies in widely separated sections of the country, all initiated at the local level, all featuring the need for 70-group air strength. They included



Some of the 40 squadron leaders of the California wing who met in Los Angeles to attend California Air Policy conclave. Seated in center from left are Brig. Gen. Bryant Boatner, USAF, Wing Commander Art Kelly, Vice Commander T. Stack.



John Caldwell, left, Commander of the Westchester, N. Y., AFA Squadron No. 1, welcomes AFA President Tom Lanphier to recent squadron-sponsored town meeting to rally support for 70-group Air Force. 1000 AFAers and residents attended.

programs in big cities and small, such as:

White Plains, N. Y., where a crowd of 1,000 gathered for a National Air Defense Rally that supplanted the regular monthly meeting of the Westchester County Squadron No. 1.

Harrisburg, Pa., where delegates from each of Pennsylvania's 15 active squadrons gathered for the first state convention of the Pennsylvania Wing.

▶ Los Angeles, Calif., where airpower policy was formulated at a state meeting of the California Wing, and a presentation made to the California Air Policy Conference.

Dallas, Texas, where the squadron was host to business and professional leaders at a luncheon meeting.

Durham, N. C., where delegates met for the first annual state meeting of the North Carolina Wing.

▶ Beckley, W. Va., where members and guests celebrated the first anniversary of the founding of the Squadron.

▶ San Antonio, Texas, where 1,000 people gathered for an open meeting of the San Antonio Squadron.

The Westchester, N. Y., Squadron rally on April 14 was keyed to the latest airpower developments in Washington. After hearing AFA President Tom Lanphier as the main speaker, and Brig. Gen. Clifford C. Nutt, Deputy Commander of the 1st Air Force, the audience by unanimous vote adopted a resolution calling upon Congress to vote immediately for a 70-group Air Force.

The Pennsylvania convention's fastmoving one-day schedule on April 12 included a noon luncheon meeting, an afternoon business session and a banquet attended by many business and professional leaders in the Harrisburg area. The speakers were John R. Allison, Assistant Secretary of Commerce for Air, AFA President Tom Lanphier, Carl H. Norcross, who was Chief Editor of the Finletter Report, and Pennsylvania Governor James H. Duff.

At the mid-April California Air Policy Conference, one of the most successful of its kind, the California Wing met concurrently and held air policy meetings. Art Kelly, Wing Commander, was on the Conference committee.

In Dallas on March 8 the local squadron brought 53 top level business and professional leaders together at a luncheon meeting to hear Gen. George C. Kenney, Commanding General of the Strategic Air Command. Copies of the March issue of AIR FORCE were sent to the men who attended.

In the first of the airpower rallies, on January 22, the San Antonio Squadron held an open meeting that also had General Kenney as main speaker. The General was interviewed on the local radio station, held a press conference, was honor guest at a dinner.

All over the nation AFA members had proved that airpower at last had an organization that could take its case to the people, could mobilize public support at the grass roots, could produce when the chips were down.



At Durham, North Carolina, 150 delegates to the Dogwood State's first annual AFA convention recently elected W. P. Budd, Jr. of Durham their new State Commander. Above, Budd (at microphone) recognizes other newly elected officers at a banquet at the Washington Duke Hotel which concluded the whirl-wind single day session.



In Harrisburg, Pennsylvania, John Whittaker, left, welcomes John Allison, head of Aeronautics for the Department of Commerce, to recent State meet. Others on hand included Robert Gross, past Squadron Commander in Harrisburg, and William Anderson of CAA. Later in meeting Whittaker was elected State Wing Commander.



In San Antonio, Texas, William Hensley, left, head of local AFA unit, recently conducted a 15 minute radio interview with General George C. Kenny, CG of the Strategic Air Command, on the subject of air preparedness. Later Kenny spoke before 1000 people in an open AFA meeting. Center above is Bob Holleran, local announcer.



tech topics

Jet and light transports lead month's progress

Light Transport

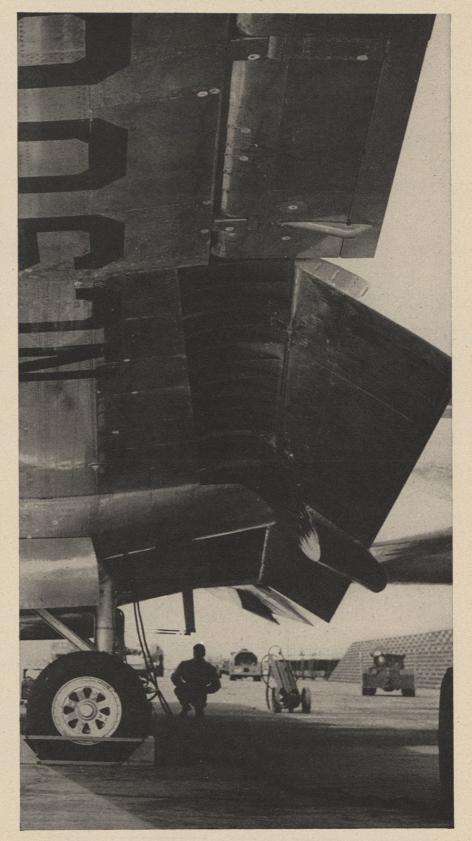
Initial flight testing has been completed on the Aero Commander, a seven-place twin-engined light transport built by the Aero Design and Engineering Corp. of Culver City, Cal. The new craft is an all-metal high-wing monoplane, equipped with tricycle landing gear and powered by two 190 hp six-opposed Lycoming engines. 250 hp units can be used in the same air-frame to step up performance.

The Commander has a wingspan of 43 feet 10 inches and an overall length of 32 feet 4 inches. Its gross weight is 4800 pounds, 2600 empty. In actual test, its top speed exceeded 200 mph, compared to the 181 mph top speed originally forecast. Cruising speed is over 165 mph, while range exceeds 1000 miles. Full production of the Commander is planned for 1949, at a price not to exceed \$25,000.

Take-off Gauge

C-54 pilots who have to do a lot of reference work before attempting takeoff with heavy loads can now have their work simplified by a circular calculator recently produced by Luttrell & Senior in New York. The gauge is the conventional concentric disc type designed to enable the pilot to figure quickly the amount of runway required for take-off and landing in line with the minimums allowed by the Civil Air Regulations transport category rules.

The calculator consists of a center opaque disc, with a smaller disc on either side. The center disc is inscribed with curves representing different runway lengths. The outer two discs are inscribed with the data required for calculating take-off and landing requirements. By means of "windows" cut in the outer discs the calculations can be made by stacking



Close-up of the "retractable flap" on the new Convair-Liner which recently went into regular airline service on domestic routes. The system of high-lift devices used on this new 40-place twin-engined unit gives it a stalling speed of only 85 mph despite a maximum speed of 336 mph. This ship is the first commercial airplane to use its engine and exhaust heat, applied through thrust vents to achieve additional power, a sort of jet propulsion. Powered by two 2400 hp Pratt & Whitney engines, the Convair-Liner can be operated from runways under 4200 feet in length, a characteristic attributed partly to its effective flap system.



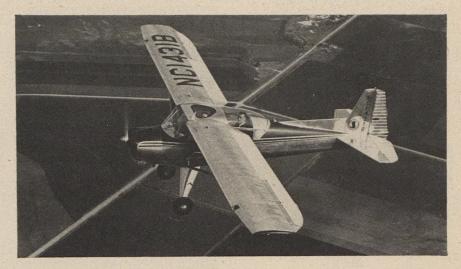
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the runway length against the load, with allowances for other factors. This permits instant read-off of the gross allowable take-off on the peripheral scale. Landing calculations are made by a similar process on the reverse face of the calculator.

British Notes

The world's first all-jet airliner, the Vickers Viking, powered by Rolls-Royce Nene turbojets, was test flown in England in May. This plane was built to explore the possibilities of high-speed medium-range transport planes for continental use. The Viking was extensively redesigned to accommodate the 5000 lb thrust turbojets in place of the Bristol piston engines on which the plane has been operated successfully for over a year. While top speeds have not been announced to date, the jet transport is supposed to operate well over 400 mph.

The RAF's first jet transition trainer, the Gloster Meteor Seven, was recently test flown by Sq. Ldr. Waterton, noted Gloster chief test pilot. The Seven is a two-place dual-controlled version of the standard Meteor fighter, equipped with two Rolls Royce Der-



Flight view of the new Luscombe Observer-90, the first tandem-seating type in the Dallas company's line. Generally similar in airframe to the standard Silvaire, the plane uses 30 square feet of plexiglas windshield in order to achieve maximum vision. Powered by two Continental-90 engines, it tops 125 mph. See Observer.

went engines. Top speed on this trainer clocked 585 mph according to the British release.

One of the most radical post-war designs for personal planes, the Planet Satellite, a four-place ship, powered by a 250 hp DH Gypsy, has been announced as ready for initial test flight. In this plane, the power plant is installed at the center of gravity, the thrust being delivered to a pusher propeller located aft of the tail by a shaft. The airframe is built chiefly of magnesium alloy, embodying novel construction which, according to its designer, Dundas Heenan, produces the optimum in strength-per-weight

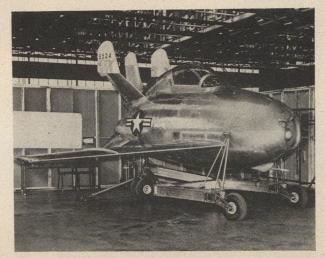
and cleanliness of line. The cabin is in the nose.

Observer

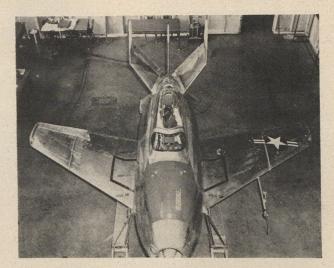
An all-metal tandem light plane has been added to the Luscombe Airplane Co.'s line. It is called the Observer-90, and has been designed primarily as a utility trainer, but has sufficient performance flexibility to be used as a farm-sport vehicle.

The Observer is generally similar to the standard side-by-side seating Silvaire in configuration and construction, but the seats have been placed in tandem and surrounded by 30 square feet of plexiglas windshielding for

THE McDONNELL PARASITE XF-85



First official photos released of the McDonnell X-F-85 parasite fighter, built to be carried in bomb bay of B-36.



Top view of the XF-85, which will be test-flown from a modified B-29 this summer. Span is 21 feet, length, 15.



Ground view of the recently test-flown Aero Commander seven-place light transport. Powered by two 190 hp Lycomings, the new design topped 200 plus mph on its initial speed runs. A simplified all-metal structure is used for ease of maintenance. Production of the \$25,000 ship is scheduled for early 1949. See Light Transport.

maximum vision. The side windows are openable in flight. The Obeserver's fuselage is the same width as the Silvaire's which offers an unusual amount of cabin elbow room. The Observer is powered by a 90 hp Continental engine. Its top speed is 125 mph, cruising speed is 112. Range is 500 miles.

Simplified 'Copter Control

A system for simplification of controls for the co-axial type of helicopter has been announced by Wayne University of Detroit. The invention of Prof. Arthur A. Locke of the school's Department of Aeronautical

Engineering. The new system appears to have achieved centralized control over the complex motions of cyclic pitch control by means of a bridle and linkage to a single wheel.

In the Locke system, if the pilot wishes to balance all blade pitches, he turns the control wheel clockwise. If the craft is on ground with the engine turning the discs over at proper rpm, this will cause it to rise. Power output is matched to the load by connection of the control wheel to the engine throttle. To warp the disc for forward motion, the control column is raised. To achieve motion in any direction, the control wheel is lifted

in the direction desired for the ship. Simultaneous combinations of motions can be achieved and a device is added to the rotor head to adjust the load between all rotor blades.

Castering Transport

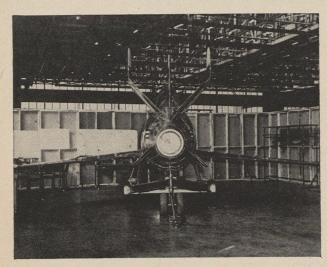
Climaxing a year's development by the Civil Aeronautics Authority, Goodyear Aircraft has demonstrated the application of the cross-wind castering landing gear on a DC-3 transport at Washington, D. C. Thus is culminated a development program wherein the castoring type wheel will permit the use of single-runway airports for many types of equipment. Similar wheels were previously demonstrated on Piper Cubs, Stinsons, Cessnas, Ercoupes, Fairchild PT-19s, Goodyear Amphibians and twin-engined Beechcrafts.

The DC-3 wheel is similar in operation to the one used on the Stinson and Cessna, except that the transport uses a hub device within a 17.00-16 wheel instead of the 6.00-6 type as in the lighter planes. In the small wheel, 25 degrees of castering were allowed, while the DC-3 wheel needed only 15 degrees, because of the faster landing speed and additional weight.

New Jet Engine

New facts have been announced on the Air Force's latest jet power plant, the General Electric J-47A, which is the same general size as the J-35. It embodies many structural and dynamic improvements which have increased the thrust available from 4000 to 5000 pounds. General Electric engineers predict that they will be able to raise that figure another thousand pounds.

The new power plant will power the North American P-86A whose top speed is estimated at over 650 mph.



Stern view of the XF-85, showing the complex control system. Note the negative dihedral used on the wings.



Top-side view of the tiny jet. The XB-85 has no landing gear. It is dropped and recovered by a trapeze device.

CROSS COUNTRY

AFA National Convention

The Air Force Association will hold its national convention in New York City on September 24, 25 and 26, it has been announced by AFA President Tom Lanphier. Convention headquarters will be the Commodore Hotel, in the heart of the city at Lexington Avenue and 42nd Street.

The convention program now taking shape calls for several unique events to augment the regular business sessions, and the three-day affair promises to be a huge rally of Air Force veterans climaxing an historic airpower year in this country.

Complete convention information will be presented in the next two issues of AIR FORCE. Meanwhile, AFA members are urged to make their convention reservations immediately since an unusually large attendance is expected. Until further notice, all convention correspondence should be directed to AFA National Headquarters, 1616 K Street N.W., Washington 6, D. C., attention: Convention Bureau.

Unit Reserve Training

Summertime unit training for USAF reserve personnel, a long-cherished goal of USAF headquarters, has gotten under way this summer with 26 USAF Reserve units scheduled to receive 15-day active duty training at 7 stations of the Tactical, Strategic and Air Defense Commands. A total of 1450 reservists are expected to participate. By June 1, ten units will already have completed their training.

Heretofore, due for the most part to lack of sufficient training funds, USAF Reservists have been kept up to date in the latest techniques of their particular military occupational specialties through individual on-the-job training assignments at USAF bases nearest their homes. Commencement of unit training is a result of the new USAF Reserve training program policy of having all the USAF's major commands participate in unit and individual active duty training, formerly shouldered solely by the Air Defense Command.

According to present estimates, Strategic Air Command will assist the Air Defense Command's USAF Reserve unit training program this summer by undertaking training of 12 Very Heavy Bombardment units. Current plans also call for Tactical Air Command to train eight Troop Carrier units and three Light Bombardment units. The Air Defense Command's



New Vice-Commander

Maj. Gen. Muir S. Fairchild, former Commanding General of the Air University at Maxwell Field, who has been named Vice-Commander of the USAF succeeding General Hoyt Vandenberg. A native of Bellingham, Washington, Gen. Fairchild started his military career as an enlisted man in 1916. During World War I he won a commission and served in Europe as a night bomber pilot. In 1941, when the AAF was created, he became the first Secretary of the Air Staff. He has been Commandant of the Air University since its inception in 1946. He is rated as a Command Pilot and a Command Observer.

1st Air Force is scheduled to conduct training of three Light Bombardment units.

Units which haven't completed training as of June 1, are as follows:

Training at MacDill Air Force Base, Tampa, Fla., between June 6 and June 20 will be the 49th Bomb Wing (VH), the 100th Bomb Group (VH), the 334th Bomb Squadron (VH) and the 528th Bomb Squadron (VH).

Training at Tucson Air Force Base, Tucson, Ariz., sometime between June 1 and June 30 will be the 304th Bomb Wing (VH), the 448th Bomb Group (VH), the 712th Bomb Squadron (VH) and the 713th Bomb Squadron (VH).

At Greenville Air Force Base, Greenville, S. C., the 69th Troop Carrier Wing and the 433rd Troop Carrier Group will train between June 1 and June 12.

At Bergstrom Air Force Base, Austin, Texas, the 440th Troop Carrier Group will have an encampment between June 1 and June 12, followed by the 322nd Troop Carrier Wing which will meet between June 15 and June 26.

The 90th Bomb Wing (L) will meet at Biggs Air Force Base, El Paso, Texas, between June 1 and June 12.

Finally, the 319th Bomb Group (L) and the 442nd and 59th Bomb Squadrons (L) will meet at Stewart Field, Newburgh, N. Y., sometime between June 1 and June 30.

Wright Skyway Opens

Skyway One, the first of a proposed network of marked airways connecting the major cities of the nation, was considered officially opened when singer Dick Haymes flew his Ryan Navion across it from Los Angeles to Washington, D. C. The Wright Skyway, as the route was officially subtitled, is supposed to be a continuous series of plainly airmarked sites, by which personal plane owners could fly in clear weather by pilotage alone. However, current surveys indicate that there are still gaps in even the initial leg of the network.

Soaring Entries Mount

During the first week of entry acceptance for the National Soaring Contest to be held at Elmira, N. Y., from June 30 to July 11, some of the nation's top motorless pilots signified intention to compete. Jack Robinson, three-time national title winner, indicated that he was competing with his already famous Zanonia sailplane. Paul MacReady entered a Polish-built Orlik, while Bill Coverdale registered with his Germanbuilt Minimoa.

Air Regatta

Directors of the Philadelphia Aviation Country Club announced that they will run the First National Air Regatta at Wings Field, Ambler, Pa., during October of this year. This meet will be operated on the basis of experience gathered at last fall's Ambler competition for speed and efficiency among personal aircraft owners.

This race harkens back to the efficiency contests which were famous two decades ago. Aircraft of similar types and powers competed against each



In April General Jimmy Doolittle and 41 of the 61 survivors of the famed Tokyo B-25 raid met in Minneapolis to mark the sixth anniversary of their flight. Five of group above are F. Braemar, Seattle; G. Barr, Ashland, Wis.; Gen. Doolittle; H. Sessler, Los Angeles; R. Bougeois, New Orleans.



AFA Director E. P. Curtis, left, accepts one of England's highest awards from Lord Inverchapel, former Ambassador to the US, at ceremonies in Washington, DC. The award, the Honorary Companion of the Military Division of the Most Honourable Order of the Bath, was made in recognition of Curtis' work as Chief of Staff of US Strategic Air Forces in Europe during the war.



other, flying a triangular course announced a short time before take-off. The contestants were judged on a point system, credit being given not only for the best time elapsed but for fuel economy, etc.

The Philadelphia Club has solicited local communities and flying clubs all over the country hold elimination contests and send winners on to Ambler for the national meet. So far, several encouraging responses have been received; Flying Farmers clubs showing the most interest.

Thousandth Shooting Star

The Air Force recently took delivery on the thousandth P-80 jet fighter, making the famed Lockheed Shooting Star numerically the top jet plane in the US if not in the world. Of the 24 fighter groups in the USAF, eight are jet equipped. Six of these are P-80 groups, the remaining two being P-84s. All overseas jet units fly P-80s.

Square Deal

There has always been some hard feelings caused by the fact that some of the former AAF officers who enlisted as flying cadets under the agreement that they would receive Air Corps reserve commissions went in the Army of the United States. They were, therefore ineligible for the bonus of \$500 for each year of active duty served or an alternate offer of a regular commission.

Senator Johnson (Dem., Colo.), has introduced a resolution, Senate bill No. 2559, which, if it is enacted into law, will extend the benefits of Section 2 of the Act to Increase the Efficiency of the Air Corps, passed on June 16, 1936. This amendment will extend the benefits to cover those officers who were erroneously commissioned in the AUS instead of the Air Corps Reserve.

Cargoplane Speed Record

A new unofficial speed record for cargo-class aircraft from Hawaii to the mainland was set when an Air Force C-97 flew the 2491 miles from Hickam AFB to Fairfield-Suisan AFB in 8 hours and 30 minutes. This was a routine hop for the Stratofreighter, It carried its normal 17,983 lbs of cargo. However, favorable conditions allowed the ship to make the transfer at a point-to-point average of 293 mph.

The crew on the record flight consisted of Lt. J. R. Bilby, Capt. J. H. Martin, Lt. M. C. Bell, T/Sgt. E. E. Chase, M/Sgt. W. G. Warburton and

S/Sgt. L. Talley.



CALIFORNIA

East Bay Squadron is supporting activation of the 61st Fighter Wing, Air National Guard, with headquarters at the Oakland airport. On the staff of Brig. Gen. Lawrence C. Ames, Wing CO, are John Felton Turner, former commander of AFA's California Wing, as Chief of Staff, and Charles W. Kruck of the East Bay Squadron, who is Air Inspector. The Squadron now publishes what is probably AFA's snappiest local publication, a slick paper newsletter distributed monthly to all members of the East Bay organization.

Altadena Squadron No. 1 has been chartered with John W. Hansen as Commander; Edwin E. McCreery, Vice-Commander; Walter M. Drake, Secretary, and James Gilmore, Treasurer. Council members are Harold F. Dunton, Dana P. Fogg, Jr., and Erwin L. Buxton. The mailing address is 2302 North Lake Ave., Altadena, California.

ILLINOIS

Three new squadrons have been chartered in the Chicago area, as follows:

Robert I. Block Squadron 41; Commander, Marcus G. Arlott; Vice-Commander, William M. Hyme; Secretary, William A. Matt; Treasurer, Edward P. Dann; Council Members, Paul T. Hutchison, Richard B. Bosley, Jay J. G. Schatz and William M. Johnson. Mailing address: William A. Matt, 2538 N. Nordica, Chicago, Ill.

Hyde Park YMCA Squadron; Commander, Charles Alexander; Vice-Commander and Secretary, Bernard H. Shelley; Treasurer, William J. Kerrins; Council Members, Robert H. Hanson, William A. Sears and Morton L. Braun. Mailing address: Charles Alexander, 1655 E. 55th St., Chicago 15, Ill.

Participating Squadron 54; Commander, William Paul Bunnell; Vice Commander, E. R. Humphrey; Secretary, Robert T. Quirk; Treasurer, C. G. Bachmann; Assistant Treasurer, Ralph B. Jones; Council Members, Michael Z. Diedling and Roy H. Boroughf. Mailing address: William Paul Bunnell, P.O. Box 126, Fox River Grove, Ill.

LOUISIANA

New Orleans Squadron No. 1 has been chartered with Alvin R. Christovich, Jr., as Commander. Other officers are: Walter M. Seidel, Jr., Vice Commander; Louis G. Dutel, Jr., Secretary, and Malcolm W. Monroe, Treasurer. Council members are Julian S. Richards, Alfred J. Bonomo, Jr., Eugene F. Wallace and Bob Sullivan, Jr. The squadron, which meets the first Monday of each

month, got together for the second time on May 3, received its charter at formal presentation ceremonies, heard a talk by Lt. Col. Frank Woods of the Tulane University Air ROTC unit, and planned a membership drive. squadron mailing address is Louis G. Dutel, Jr., 823 Perdido St., New Orleans, La.

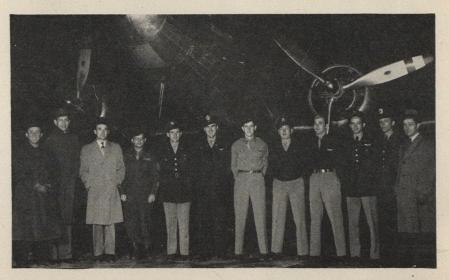
MARYLAND

Greater Cumberland Squadron is cosponsor of the annual Air Show to be held June 20 at the Cumberland airport. The meet will feature "local tal-ent," and all AFAers of the tri-state area are invited to participate. The tentative schedule of flying events includes a five-lap pylon race limited to planes

(Continued on page 38)



Brig. Gen. C. C. Nutt, Commandant at Fort Slocum, N. Y., and a member of AFA's Manhattan Squadron No. 1, pins victory medal on past Squadron Commander J. Matthews. First Sergeant Robert Demars, of US Army Recruiting Service, gives smiling OK.



So determined are some of the members of the Durham, N. C., AFA squadron to get in their reserve flying time that a group of them (above) has started making semimonthly pilgrimages to Marietta, Georgia, the nearest base with reserve planes.



Here's why so many business men are buying and flying

America's No. 1 Utility Plane

Many a middle-aged business man has told us, "I'm too old to learn how to fly"—only to find himself, flying on his own, soloing a Stinson, after about 10 hours' easy flying time!

That's not hard to understand. Almost anyone who can drive a car can learn to fly the new spin-resistant Stinson, quickly, easily and safely. This is just one of the reasons why Stinson has become America's biggest-selling 4-place personal plane—especially with

"over-40" owners who use it for year-round business and pleasure.

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For literature, write Stinson Division, Dept. T, Consolidated Vultee Aircraft Corp., Wayne, Michigan.



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his Stinson work
his Stinson wing!
for a living!



1. "I learned to fly at 47," says manufacturer Howard M. Smith of Holly, Michigan. "Now I use my Stinson constantly, to contact customers in every part of a 400-mile area."



2. "One rush delivery of the small springs we manufacture kept a customer's plant from closing down, and resulted in doubling our business with that firm," he adds. "That one flight alone more than paid the cost of my plane."



3. "I have more time with my family, too," Mr. Smith concludes. "The four of us take many pleasant trips in the Stinson. We feel it's safer than traveling by highway. There's nothing like a Stinson for fast, comfortable family travel!"

Stinson is one of the famous quality products of Consolidated Vultee, builders of the B-36 long-range bomber; the XC-99 400 passenger cargo-transport; the L-13 versatile new liaison plane; and the pressurized, 300 m.p.h. Convair-Liner commercial transport.



(Continued from page 36)

of 100 hp or less, aerobatics, spot bombing, quickest takeoff event, with suitable awards. Further information can be obtained from Lt. George J. Gocke or George J. Dunlap, both at P.O. Box 584, Cumberland, Md.

The Baltimore WAC Squadron has decided on the fourth Wednesday of each month as the regular meeting date and on the VFW Dugout in Baltimore as its Headquarters and meeting place. The Squadron has assisted in the award of the WAAC medal to all eligible members. A Squadron bowling team is planned for the fall.

NEW JERSEY

New Brunswick Squadron reports continued progress. Now one of the largest and most active squadrons in the state, it has boasted the largest attendance at the state Wing meetings held recently. At the last Squadron meeting, attended by 100 persons, motion pictures on air power subjects were featured.

NEW YORK-NEW JERSEY

The First Division, Air Force Association, has been organized and is holding monthly meetings in New York City. The Division comprises squadron commanders, or their designated representatives, from squadrons of the New York and New Jersey Wings located in the area surrounding New York City.

Division Chairman is John Caldwell of the Westchester County (N. Y.) Squadron; Vice Chairman is Mary Donovan of the Hudson County (N.J.) Squadron No. 1, and the Secretary is Mary Gill of New York City's WAC Squadron No. 1. Purpose of the group is to coordinate AFA activities in this area. The Division is destined to play an important role at three AFA events in New York City this fall: Air Force Day at the International Air Exposition on August 1, National Air Force Day on September 18 and the AFA National Convention a week later.

NEW YORK

Tri-Cities Squadron has been chartered at Binghamton with Karl E. Gould as Commander. Other officers are Harold Read, Vice Commander; Benjamin F. Wood, Secretary, and Clifford Erikson, Treasurer. Council members are Harold D. Gillett, Harold N. Elliott, Robert G. Spring and Robert W. Lewis. The mailing address is Benjamin F. Wood, 1112 Press Building, Binghamton, N. Y. On June 19 the Squadron will hold a banquet to commemorate the activation of an Air Reserve unit in this area.

Yonkers Squadron has been chartered with Edward Alexay as Commander; Edward Sullivan, Jr., as Vice Commander, William Kettler as Secretary and Henry Hirsh as Treasurer. Council members are John W. Matheson, Edward L. Kohn, Russ Anderson and James D. MacIntyre, Jr. The mailing address is Edward Alexay, 42 Wellesley Ave., Yonkers 5, N. Y.

Buffalo Squadron has elected R. E. Davidson as Commander for the coming year. Other new officers: Herbert Forbes, Vice Commander; Carl Proctor, Secretary; Carlton Messinger, Treasurer. In the first of a series of program meetings, the Squadron met April 13 to hear Col. Allen Greer, military analyst, present his estimate of the current world situation, Soviet capabilities, the possibilities of war and possible assignments in any future military service.

New York City's colorful Show Business Squadron, commanded by theatrical attorney Bill Roach, is employing a new and effective twist in support of airpower and AFA. The unit is providing free entertainment to the US Army and Air Force for their half-hour recruiting program emanating from New York City. First Show Business Squadron personality to appear in this series of broadcasts was orchestra leader Bobby Byrne, who briefed radio listeners on the AFA program.

AFA member Tex McCrary and wife Jinx Falkenburg celebrated Army Day on their popular radio program by interviewing several celebrities, among them screen star Jimmy Stewart, AFA's First Vice President. Jimmy pushed home the point that Air Force veterans have been inclined not to follow world events and military aviation events as closely as they might, and stressed membership in AFA as the best way to "keep in touch a little better."

OHIO

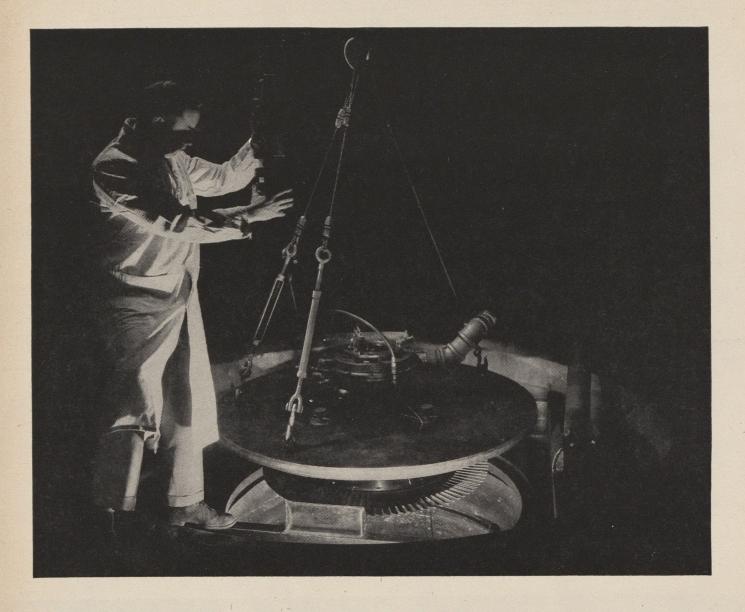
Cincinnati Squadron at its March meeting heard Col. James M. Gillespie, Chief of the USAF's All-Weather Flying Division, outline the main problems connected with the operation of aircraft under varied weather conditions.



AFA's Los Angeles Squadron No. 1 unveils its new official banner. Grouped from left are Sol Dolgin who procured flag, Col. Theron Coulter, Deputy, Commander of the Long Beach Air Force Base, and Leo Coutt, Squadron's proud Commander.



In simple ceremonies in Washington, DC, AFA president Tom Lanphier, left, accepts friendship plaque from Air Vice Marshal T. M. Williams, official of British Royal Air Force Association. Lt. Gen. George Stratemeyer of ADC looks on.



GOING UNDERGROUND FOR A "WHIRL"

- ▶ This aircraft turbine wheel is about to undergo a"whirl test" -a test to prove its ability to survive the tremendous centrifugal forces present while it spins at supersonic blade tip speeds.
- ▶ The test is conducted in an underground chamber from which the air is evacuated. This permits the wheel to whirl at higher speeds than required in service . . . for if the blades had to push air around at such speeds, enormous power would be required to drive the wheel. To detect any slight irregularity that might occur during the run, the test rig has an electronic indicator.
- ▶ Because some experimental parts are whirled to destruction to determine how much overspeed they can endure, the chamber is lined with laminated boiler plate-12 inches thick.
- ▶ Each newly designed turbine wheel, compressor, and supercharger impeller must prove its ruggedness in similar tests in the Wright Aeronautical research laboratories before being released for production.
- ▶ Another example of the painstaking research behind the development of Wright aircraft turbine and reciprocating engines.



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At Fayetteville, 1500 paratroopers bailed out over North Carolina's sand hills in largest mass parachute drop in US peacetime history. Seventy Fairchild C-82 Packets were employed. Drop, reminiscent of Normandy invasion in size, was part of joint Army-Air Force "Operation Assembly."

RECONSHOTS

Random camera records of the events of the month in the air from the four corners of the globe



In California, Lockheed Aircraft introduced the new two-place jet trainer, the TF-80C, a modified Shooting Star with the fuselage lenghtened by 38 inches. Here test pilot Tony LeVier tries out the front cockpit while F. E. Gaiser, Lockheed engineer, smiles from rear. Canopy is 7 feet long.



Maj. Gen. Laurence S. Kuter has assumed command of new Military Air Transport Service which unifies old ATC and NATS. Hqs.for MATS will be in Washington, D. C.



A sixteen-plane formation of P-84 Republic Thunderjets scores the sky with exhaust trails over Dow Field, Maine, during a public demonstration put on by the Fourteenth Fighter Group. This is the first group to have three squadrons completely equipped with these newest 600 mph-class turbojet fighter planes.



Chinese and foreign newsmen prepare to board a C-46 at Lanchow, China, for a flight over the uncharted Amne Machin mountain range. The expedition, sponsored by Central Air Transport Corporation, proved in a two-day survey that there were no peaks in that range higher than the 29,000 foot Mt. Everest.

will not be any loss in Reserve status or rank, but your name would be dropped from the active roll.

Gentlemen: I am writing to request any information you may be able to give me regarding opportunities to admission to Air Force Officer Candidate Schools (Administrative). I am 25 years of age, in my first year at college, and believe I would like to make the Air Force my career should I be able to earn a commission. I understand that should I gain admission to, and successfully graduate from an OCS, my commission would be in the AF Reserves. If so, is a reserve officer entitled to retire at the end of a specified number of years as is an enlisted man? And what is the pay of a 2nd lieutenant in the Air Force? Any information or advice you can render on this particular matter will be greatly appreciated. At the present time I hold the rating of staff sergeant in the inactive AF Reserve. Is there any way to request active duty and assignment to an OCS through the reserves?

Samuel B. Ferris, Jr. Annandale-on-Huson, N. Y.

• You are eligible to make application for a direct commission as a 2nd Lieutenant in the Air Force Reserve, provided you were a Staff Sergeant for six months or longer. After receiving a commission, you may request extended active duty. At present there is no provision for the retirement of Reserve officers on length of service, but such action is now being studied by Congress. Base pay for a 2nd Lieutenant is \$180 per month, plus \$21 ration allowance and \$45 rental allowance if single. Apply to the First Air Force, Fort Slocum, New York.

Gentlemen: I would like to get information about joining the Air Force Reserve. I was discharged as Captain, Air Corps (AUS) on December 16, 1945. My specification number is 9300 (Intelligence Officer). I was S-2 of a photo reconnaissance outfit. Naturally, I would like to enter the Reserve with my former rank. Would you please tell me how to make application, etc.?

John P. Schwede New York, New York

• Apply to the Air Adjutant General in accordance with Section III, AR 149-5. Obtain WD AGO Form 170 from the 113th Air Force Base Unit, Mitchel Air Force Base, New York (downtown address—67 Broad Street, New York, New York).

Gentlemen: Request information regarding promotion in Air Corps Reserve from 1st Lieutenant to Captain. I have

been in the Air Corps Reserve for nineteen months and am 42 years of age. Any information you can give me will be greatly appreciated.

Harry J. Michaud Taft, California

• No promotion policy has been established for the Air Force Reserve; this policy should be forthcoming in the not too distant future. For additional information, contact Long Beach AFBU(RT), Long Beach, California.

Gentlemen: I am a Reserve Officer and a pilot and am engaged in that occupation at the present. I read an article somewhere, with regard to the Air Transport Command having a reserve of its own, or a reserve organization for ATC personnel only.

James R. Irwin 1635 Cumberland St. Pittsburgh, Penna.

● No separate ATC reserve organization or program has been established. It has been planned to organize composite units for ATC specialized personnel not assigned to Air Force Reserve TO&E units. No such unit has yet been organized. Contact the 444th AFBU(RT), Greater Pittsburgh Airport, for information on assignments for which you may be qualified.



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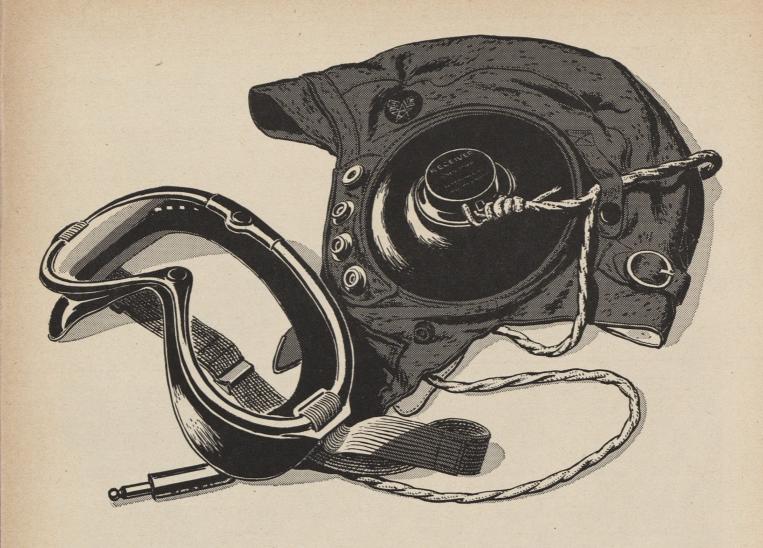
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- 3 Veterans of the armed forces who are qualified in one of 300 skills and trades may re-enter service in advanced non-commissioned Air Force grades depending upon their previous training and experience.
- **4** They can win their wings with the Aviation Cadets. The world's finest pilot training is open to men who are single, 20 to $26\frac{1}{2}$ years old, who have completed at least half the credits for a college degree, or pass an equivalent examination.

Every qualified young man in your community should know about these great programs. Will you help by discussing these choices with them? Complete details on each opportunity are available at U. S. Army and U. S. Air Force Recruiting Stations.

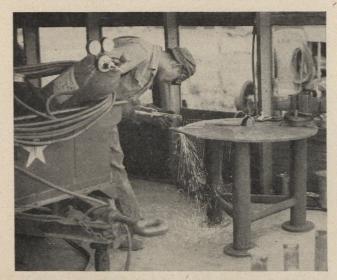
U. S. ARMY AND U. S. AIR FORCE RECRUITING SERVICE

URGE THE FINEST YOUNG MEN YOU KNOW TO ENLIST IN THE U.S. AIR FORCE



Pfc Frank Sajdlowski, of Milford, Connecticut, pulls back on the control column of his D-8 and ten square feet of jungle move aside. To the boys in the Aviation Engineer

Battalion the "Cat" is the glamour girl of a floradora sextet of heavy vehicles. Sajdlowski, who is ending his sixth year with the engineers, plans to buy one of his own soon.



Welding a bright future for himself is Pfc William Barkley, of Smuter, SC. At the conclusion of his USAF hitch Barkley will be qualified for any type of civilian welding job.



M/Sgt. John Billmyer (left) watches closely as Pfc Cecil Osborne, a newcomer with the AE's, turns down rough piece of stock on lathe in the 806ths handy mobile machine shop.

Airmen

of the soil

Aviation Engineers can hack "cities" out of wilderness. Here on Trinidad the 806th was doing just that

By Capt. Robert J. Hennessy

When I joined this crew of site layout men they were sprawled in the shade of the giant earth carrier just off the end of the runway—taking "five." This was Waller Field, Trinidad, and these were the men of the 806th Aviation Engineer Battalion, currently engaged in constructing an Instrument Landing Site.

Here was Staff Sergeant John Tinsley, who held MOS numbers corresponding to Topographical Surveyor, Air Base Engineer and Draftsman, and who might pass for a professor fresh off the campus. He was a University of Texas graduate who had exercised his skilled eyes and hands on construction projects in the Lake Charles area of Louisiana before climbing into a uniform back in 1943. Since that time he had assisted in the layout of full-scale engineering jobs for the Air Force all the way across the Isthmus of Panama and throughout much of the Caribbean.

In the 806th these were men representing more than 50 specialized trades and crafts, all with high-salaried counterparts in the civilian construction market. Water and electric power, sewerage and drainage facilities, heating and cooling systems. These were a few of the many activities with which they were familiar.

The tangled undergrowth of the landing site had already been torn and removed from one section of the runway. In its place stretched an area about four city blocks square and as smooth as a billiard table. On this area the landing equipment was being mounted. Every semblance of wilderness was gone. It had not only been cleared, leveled and graded, but facilities had already been provided for drainage during the impending wet season. Over at the other end of the airdrome a second space was being laid waste. Here a clearing team was driving a deep wedge into the jungle area bordering the Base in preparation for the construction of a radio marker beacon site. A closeup view revealed a "floradora sextet" of heavies pushing, pulling, clanging and clashing their way about.

The completed airdrome would be the counterpart of an American city. Its builders were soldiers adept in the defense of an airdrome, at heavy construction and a thousand other tasks. This one outfit could move into a city the size of Zanesville, Ohio, and without outside aid carry on the complete functions of public utilities and public works. They could probably build a city of that same size all by themselves.



S/Sgt. John Tinsley is one of the 806ths most capable topographical survey specialists. He is a graduate of Texas U, and a "veteran" of many big civilian construction projects.



Chief of maintenance for all of the 806ths light equipment motors is Cpl. Charles Young of Phillipsburg, New Jersey, shown above inspecting the engine of an army "six-by-six".



STATE

RENDEZVOUS (Continued from page 6)

steel helmet with liner as a war souvenir for my private library. The various branches of the Army and Air Force and the WAA do not seem to be able to help me. I wonder if any of the AFA members have any idea where I can acquire one? Roy W. Oppegard, 1617 Woodland Ave., Eau Claire, Wisc.

CLAIM AID: In order to establish a claim for service connected disabilities, I would like to contact any of the ward officers, nurses, enlisted ward personnel of patients who were in ward 23, station hospital, Keesler Field, Mississippi, between March 4, 1943, and May 30, 1943. Hospital records are missing, and this kind of information is necessary. Joseph F. Crowley, 30 Green Street, Charlestown 29, Mass.

REUNION: Former members of Hdqrs. Sq. 58th Air Service Group 5th Air Force are requested to contact the undersigned, who are interested in planning a reunion of former members of the Hq. Sq. Thomas F. Fitzgerald, 63 Pegs Lane, Riverhead, N.Y., and Roy Wilkins, 1389 University Ave., Morgantown, W.Va.

FROM SAN MARCOS: I would appreciate your helping me locate Wilson A. Herrmann of Los Angeles, Cal. He graduated in class 41-F, Kelly Field, Texas. He was later stationed at Hamilton Field, Cal., and Westover Field, Mass. He was sent from there to England in 1942, and I have not heard of him since. Capt. William P. Riddling, Sq. B-3 Air Force Sub-base, San Marcos, Texas.

HEY FITZ!! I am trying to locate former Flight officer Myrle Fitzgerald, serial number unknown, who was a B-25 pilot in the SWP. Our old outfit was the 17th Recon Bomb. Sq., better known as the "Wreckoneers" of the Fifth Air Force. I lost track of him when I left Japan to come stateside. His home town was Oklahoma City. Sure would like to get in touch with ole "Fitz." Allen W. Hoag, 6209 So. Major Ave., Chicago 38, Ill.

MISSING SERGEANT: I would appreciate hearing from anyone who knows the present address of

Vernon L. Rhoda, ASN 37216868, former 8th Air Force T/Sgt. Sgt. Rhoda was with the 388th Bomb Group in England for his first tour. On his second, he flew with the 97th Bomb Group, 340th Bomb Sq, in Italy. Was last heard from on April 5, 1945, at which time he stated that he was wounded. Past this point, all mail sent to him was returned marked "no forwarding address." H. D. McGaity, 50 Hooker Place, Port Richmond 2, Staten Island, N.Y.

"GABBY": As a member of the Air Force Ass'n, I wonder if any of the members could help me with some information I have been seeking for the last three years. It is in reference to my brother who was assumed killed in action over New Guinea in July, 1944, when a bomb exploded prematurely in his plane. I would be grateful for any aid in contacting anyone who knew my brother. He was Lt. Gabriel J. Eggud, 110 Recon (F) Squadron, 71 Recon (F) Squadron, 71 Recon (F) group. His nickname was "Gabby." Wilhelmina Eggud, 565 Oakland Ave., Staten Island 10, N.Y.

BALL PLAYER: I would like very much to get in touch with Joseph W. Baker who hails from somewhere around Baltimore. He was a very good ball hawk when I played with the 322 Air Engineers Sqdn 11th Air Force at Fairbanks, Alaska. Sam "Tex" Wallendal R.R.I. Sunset Point, Beaver Dam, Wis.

INSIGNIA WANTED: I would like to hear from members of the 18th Mapping Squadron, when it was based in Munda, New Georgia. I would like to get a sample of their old insignia. Lt. H. J. Coleman, 18th Recon Sq. Air Reserve, Newark, N.J.

CHINESE CADET: I'm trying to locate Anthony Han, formerly of the Chinese Aviation Detachment, Thunderbird Field, Chandler, Ariz. I met him at Williams Field in 1942. Jack L. Kerr, 1281 Sunset Road, Albuquerque, New Moxico.

MORE BOOKS: In July, 1947, a history of the 445th Bombardment Group was published for former members of the unit. The edition was exhausted so quickly that many were unable to secure copies. A second edition was recently produced, and copies are now available. Further information can be gotten from the undersigned. R. J. Birsic, 1040 Rosedale Ave., Glendale, Calif.

BEST MAN: For the last two years, I've been trying to contact Master Sergeant L. P. McPherson of West Virginia. He was my best man in London on June 23rd, 1945. He was stationed at Valley No. Wales on September 1, 1945. T. K. Weaving, 235 So. Main St., Naugatuck, Conn.

ATT'N ALBUQUERQUE: I wonder if anyone knows the whereabouts of Nell J. McReynolds, former AF WAC corporal, stationed at Shaw Field, Sumter, S. C.? She is an Albuquerque resident, A. R. Yeatts, Jr., 5524 Upland St., Philadelphia, Pa.

ATT-ISLANDERS: I am trying to locate Capt. Eastman K. Gordon, formerly a pilot with the 3rd Photo Squadron on Guam and 1st Lt. William D. Alton, former navigator with the 73rd Wing on Saipan. John S. Arend, 140 Burlingame, Detroit 2, Mich.

BULLETIN: I would like to hear from any old friends who were with me in the following organizations: Aviation Cadet Class 41-5, Chanute Field, Ill., 301st Bomb Group (h) in the US and England, North Africa and Italy, Pinecastle Army Air Base, Orlando, Fla.; Command and General Staff School, Ft. Leavenworth, Kansas, from January to April, 1945, and any others that I have met. Maj. Irwin C. Katz AFR, 0-441193, 969 Linn Drive, Cleveland, Ohio.

TCC BUDDIES: I am trying to contact any of my former buddies from Troop Carrier Command; among them Sgts Mike Sabella, Charlie Jennings and Guy Spinosa. We were last stationed together in Sq. A, 811th AAFBU, Lawson Field, Ft. Benning, Ga. I would enjoy hearing from them or from anyone knowing their whereabouts. Anthony Lagueros 39-21 108th St., Corona, N. Y.



YESTERDAY ... Army's first multiengine bomber, the MB, was built by Martin in 1918. So advanced was the design that it remained the Army standard until the mid-twenties. Sensational in its day, the MB was also used for mail, night flying and passenger service experiments. With these Martin bombers in 1921 General "Billy" Mitchell sank the captured German battleship Ostfriesland, proving the potency of airpower.

TODAY... Martin continues to planeer in advanced designs. Martin XB-48 is first six-jet bomber ever flown . . . pioneered the tandem-type landing gear developed by Martin and now used on other madern high-speed bombers . . . has 20,000 lb. bomb load. The Martin XB-48 is now undergoing exhaustive Air Force tests.

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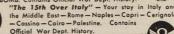
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PORTRAIT OF A GUY THINK-ING ABOUT AN ISLAND

(Continued from page 21)

and dreamed the Spitfire. And a guy named Leslie Howard, who was Mitchell for a couple of hours' worth of movie, crashed back there somewhere coming back from Lisbon, probably leaning forward, waiting for England to show through the dusk.

Strange, how any land could be so many shades of green, with the lazy netting of the lanes that wandered everywhere to nowhere. When he looked down there, war was just a word, without meaning. It looked so peacefully lovely, yet the people who lived there had fought since the beginning of time, since long before the Romans. And they were still fighting.

He flew his turn for a while, taking it easy, not trying to squeeze the lead ship any. He was glad when the pilot took over again. It was better just to

Airfields and towns and churches and hedges, more airfields and ponds and brooks, and cows. More airfields and roads and train tracks and radio towers.

He tried to imagine it as it must have been once, long before William the Conqueror, when King Lear was wandering mad on the heath. He couldn't bring it through. He couldn't believe it had ever been wild. Everything looked permanent, steady till the end of time.

He was so tired of sitting, he wanted to bail out. Yet he would have liked to fly on for hours, up to the lands of the Scotsmen. Stormoway, Inverness, and the Isle of Skye.

Two Lancasters were landing on the east-west runway. A flight of P-51s came over the top from nine o'clock. Night was slipping over the world from the east, but there was still day back at six o'clock.

Though it was not his land, and although he had only lived there a little while, he thought he knew why these quiet Englishmen raised so much hell with anyone who tried to take over.

He was tired, saggy tired, starting at the knees on up to the eyes. But he felt good, just glad to be there, just so goddam good to be there, there were no words to tell it.

It was almost dark then, and the stars were coming through.

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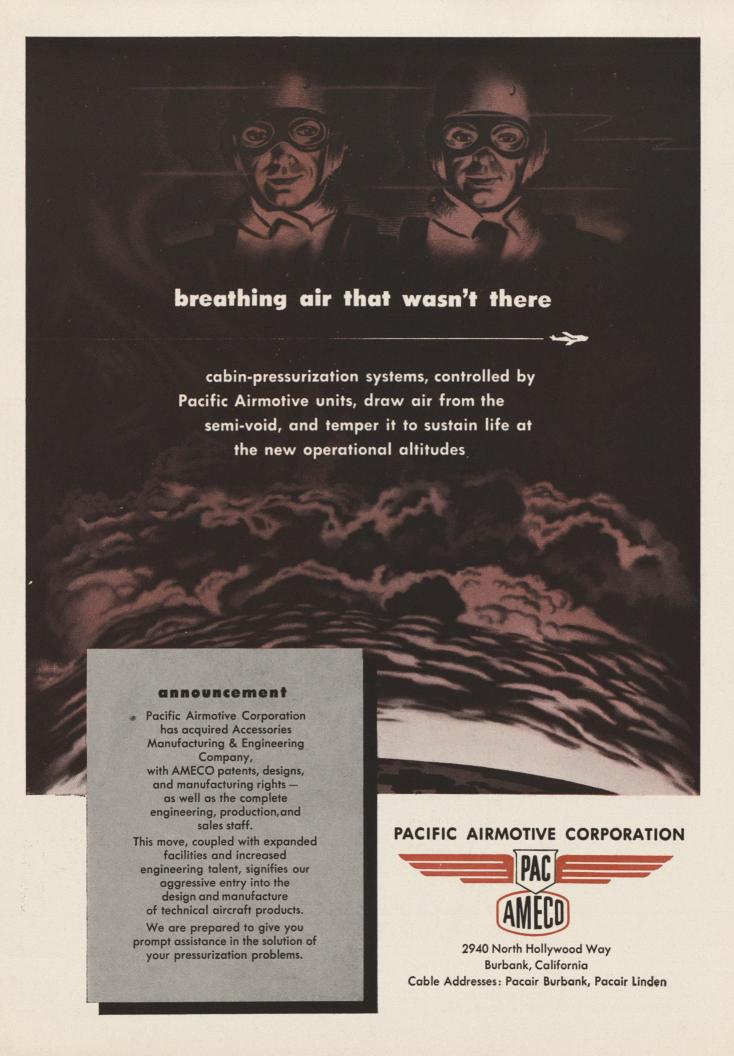
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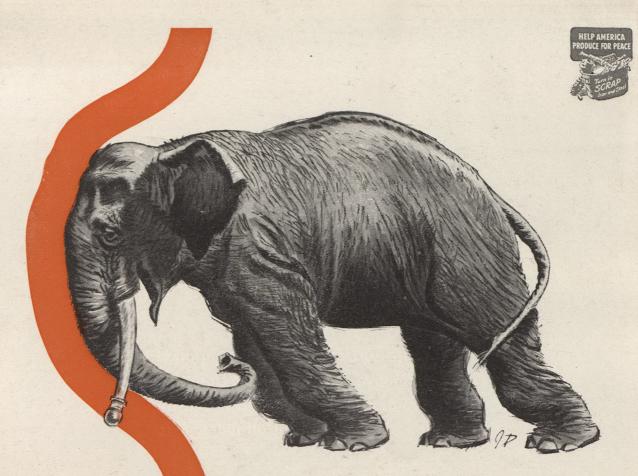
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