AIR FORCE

THE AIR-GROUND OPERATION IN KOREA

A NEW EVALUATION OF THE TACTICAL USE OF AIRPOWER

A Special Issue
MARCH, 1951

Commercial airliner, Air Force transport or private carrier; safety, efficiency and economy are vital factors.

ENGINE OVERHAUL *is one of PAC's major operations. We pull 'em down and put 'em back quickly and efficiently.*

AIRFRAME OVERHAUL *is another important PAC function. For example, a large number of F-51's and C-54's are in process at two of our six branch locations.*

MANUFACTURING *accounts for an ever increasing portion of total effort. PAC's pressurization systems for high altitude aircraft are standard equipment on many fighter and transport craft.*

PARTS DISTRIBUTION *for major parts manufacturers is handled by PAC throughout the world. Pratt & Whitney, for example, appointed PAC as their first parts distributor.*

THE STRUCTURE of Pacific Airmotive activity is composed of four basic divisions, Engine Overhaul, Airframe Overhaul, Manufacturing and Parts Distribution. Each division is under the supervision of, and operated by, the most highly skilled and experienced men. Twenty-year service is not unusual among PAC craftsmen. The rapid growth the entire PAC organization has shown during the past years proves that its services and facilities are highly regarded by the entire aircraft industry. Quality of PAC engine overhaul has repeatedly extended the time between overhauls... increasing efficiency and profits for many Pacific Airmotive clients.

And, of course, PAC is the first and largest distributor of Pratt & Whitney Engine parts in the world! Also, scores of other leading parts manufacturers are represented by Pacific Airmotive. PAC activity in the airframe overhaul field over a period of many years has resulted in facilities to handle aircraft from the smallest private ship to the large troop carriers. An example is the vast recon-version and modification program on F-51 fighters and C-54 military cargo carriers undertaken for the Air Force. PAC manufactured pressurization equipment is found as an integral part in 90% of all modern fighters and pressurized commercial transport craft.

★

It's great to work and live in sunny California. Engineers, and many categories of skilled aircraft workers are needed by PAC... drop us a line.

PAC

ESTABLISHED 1928

★ ENGINE OVERHAUL ★ AIRFRAME OVERHAUL
★ MANUFACTURING ★ PARTS & SUPPLIES

KEEPS 'EM FLYING

PACIFIC AIRMOTIVE CORPORATION

Executive Offices: BURBANK, CALIFORNIA

Other Divisions: Oakland and Chino, Calif. • Seattle, Washington
Kansas City, Kansas • Linden, New Jersey

Tough bomber on the "torture rack"

Dotted line on this composite photo shows the up and down extremes of deflection to which the Stratojet wing was subjected under tremendous test loads.

The elements will never give an airplane as severe a beating as Boeing engineers deliberately inflicted on this B-47 Stratojet bomber.

They wanted to learn whether the swept-wing, 600-mile-an-hour Stratojet was as tough as Boeing designers said it was. They found out.

In 90 separate tests, on the most complicated apparatus ever built for such purposes, they pulled, compressed, twisted and strained at the Stratojet's parts – the wing, landing gear, fuselage, control surfaces and other structures. In one test alone, the wing survived what amounted to a gross load of 555,000 pounds!

No punches were pulled. Every structure was tested right up to the ultimate strength required by Boeing's structural design policy and the standards of the Air Force.

Tests like these—in which the airplane is given punishment far beyond anything it will experience under operational conditions – have been applied to all new Boeing airplanes – the B-17, B-29, B-50, Stratocruiser, Stratofreighter, etc. They assure the wide margins of safety, stamina and dependability which the U. S. Air Force and the public have come to expect of Boeing-built planes.

BOEING

Among Boeing's facilities for research and development are Acoustical, Aerodynamic, Armament, Electrical, Electronic, Flight Test, Hydraulic, Mechanical Equipment, Metallurgical, Physical Research, Propulsion, and Structural Test Laboratories, and the great Boeing Wind Tunnel.

Illustrated above — Grumman F9F-3 Panther, Lockheed F-80 Shooting Star, Republic F-84E Thunderjet

Allison Jet Power

"First" in Korea

FROM the very onset of hostilities in Korea, Allison jet-powered fighters have flown more missions, downed more enemy planes and inflicted greater damage to troops and equipment than all other fighter aircraft in the theater.

Starting with the first hours of combat, when they were the only jet fighters available to the Air Force, Lockheed F-80 Shooting Stars have flown 50,000 hours with no aircraft loss due to engine responsibility. They have proved effective in attacks on ground troops and have consistently outfought MIG-15's.

Doing a similar job, Grumman F9F-3 Panthers in one month averaged 97% combat availability from the Navy Carrier, Valley Forge—a record never before equaled.

F-84E Republic "Thunderjets" are also blasting enemy air and ground forces with guns, bombs and rockets. During a two-week period in this activity, only one Allison engine change was made in the entire 27th Fighter Escort Wing.

Pilots and crews agree that it is the experience coming from time in the air which builds confidence. The dependable Allison performance results from a solid background of jet engine experience — more than 500,000 hours in the air.

GM
GENERAL MOTORS

Allison

DIVISION OF GENERAL MOTORS
INDIANAPOLIS, INDIANA

AIR FORCE

THE OFFICIAL JOURNAL OF THE AIR FORCE ASSOCIATION

A SPECIAL ISSUE

MARCH, 1951 VOL. 34, No. 3

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THIS IS AFA

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

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

ITS OBJECTIVES

To preserve and foster the spirit of fellowship among former and present members of the Air Force, and to perpetuate the identity and group solidarity of wartime Air Force units large and small.

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

To keep AFA members and the public at large abreast of developments in the field of aviation, and to stimulate community interest in Air Force activities and installations.

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DOUGLAS GLOBEMASTER II

RUSH BY AIR
ONE DIVISION OF DOUGHFOOTS

ONLY A FLEET OF C-124s COULD AIRLIFT AN ENTIRE INFANTRY DIVISION AND ALL ITS EQUIPMENT

Quickly the giant Globemaster II brakes to a stop. Its clamshell doors fold back. Down comes the self-contained ramp. And seconds later battle-ready troops are pouring out of her monstrous belly. Nearby other C-124s unload such divisional equipment as M-24 tanks, 155 mm. Long Toms, bulldozers, trucks and scrapers.

A fleet of these new Douglas transports could airlift all the personnel and equipment of an entire 16,000-man airborne division from Boston, Mass., to Brest, France, *in a single flight!*

Designed to meet the vital need for aircraft to support global operations, the C-124 has been ordered in quantity by the armed forces. Already a certain number are in active service.

Over five years of careful planning and development work by Douglas and the military have made possible this revolutionary airplane. Such pioneering is typical of Douglas engineers, who are today turning their attention to advance-type combat planes with jet, rocket and turbo-prop propulsion. Douglas Aircraft Company, Inc.

Skilled engineers and technicians find Douglas a good place to work!

Depend on **DOUGLAS**

WORLD'S LARGEST BUILDER OF AIRCRAFT FOR 30 YEARS ✈ MILITARY AND COMMERCIAL TRANSPORTS
FIGHTERS ✈ ATTACK PLANES ✈ BOMBERS ✈ GUIDED MISSILES ✈ ELECTRONIC EQUIPMENT ✈ RESEARCH

Franklin-Powered helicopters now COMBAT PROVED

Actual photo of an Army Field Forces Franklin-powered Bell H 13D helicopter at a forward command post in Korea. Both the Marines and the Army Field Forces are using Bell helicopters in Korea for artillery spotting, ground forces liaison, transport of supplies and personnel, and search and rescue work.

Hiller 360 helicopter, powered by Franklin in both civilian and military versions.

Sikorsky S-52, latest in a long line of Franklin-powered Sikorsky helicopters, holder of world's helicopter altitude record of 21,200 ft. and speed record of 129.616 m.p.h. The S52-2 has just received its A.T.C. and military adaptations are on order for the Army Field Forces and the Marine Corps.

SINCE one of the first Franklin helicopter engines helped Igor Sikorsky break all world's helicopter records back in 1941, military men have realized the vast potential of these rotary-wing aircraft for combat use. Now, with the U. N. forces in Korea, helicopters have finally proved their combat worth beyond question — and Franklin engines have once more demonstrated their stamina and dependability.

Franklin
FINE AIRCRAFT ENGINES

AIRCOOLED MOTORS, INC.
SYRACUSE, N. Y., U.S.A.

AIRPOWER IN THE NEWS

VOL. 34. NO. 3 WASHINGTON, D. C. MARCH, 1951

U.N. PLANE LOSSES IN KOREA up to Jan. 18 total 10 shot down and 213 from other causes in Far East. Only one F-86 has been lost. It went down behind enemy lines a month ago. . . Fighter losses in 49,259 sorties have been 167. . . Navy-Marine losses to Jan. 1, were 131 fighters, 25 bombers, six patrol planes and 20 other type planes. . . USAF Korean battle casualties totaled 353 as of midnight, Jan. 12. . . AF does not plan to place Selective Service calls for April. . . AF has awarded 27 Silver Stars in Korean War to date.

BRIG. GEN. JOHN P. HENEBRY, a Reservist and youngest general in USAF, has taken over command of Korean airlift from General Tunner. . . Maj. Gen. Emmett O'Donnell has been assigned CG of 15th AF at March AF Base, Calif., where he will be responsible for expanion of SAC.

ROTATION FOR OVERSEAS COMMANDS, except FEAF and other command personnel in direct support of operations in Korea, has been initiated by AF.

NO PHYSICALLY RETIRED PERSONNEL will be recalled in present USAF expansion. . . A bill has been introduced by Rep. Elliott (D., Ala.) which calls for payment of $250 uniform allowance to WW II officer vets who served between Oct. 1, 1940 and June 25, 1950 and who are or were ordered to duty after June 25, 1950 for 30 or more days of service, regardless of whether or not they formerly received uniform allowance. . . USAF officers may wear WW II-type uniforms until July 1, 1952 at which time new blues will be mandatory. . . A new type cotton sateen cloth eventually will replace herringbone twill as material for Army fatigue clothing, Dept. of Army has announced.

TO ACHIEVE 20 TO 30 PERCENT LOSS RATIO against attacking planes is U. S. Air Defense system's goal, according to Gen. Vandenberg. Britain at her best never knocked down more than eight percent of raiding bombers.

FIVE ADDITIONAL AF SITES to be demothballed soon are Bryan AFB, Tex., Camp Kohler, Calif., Pinecastle AFB, Fla., Fort Snelling, Minn., and Wichita AFB, Kan. . . AF has announced $327,180,000 construction program at thirteen Z of I bases.

MARINE CORPS is ordering to EAD nine more air reserve squadrons. . . JCS have authorized Marines to operate 21 aviation squadrons during fiscal '52. . . Navy and Marine reservists on active duty may drop the "R" from traditional USNR and USMCR designations according to recent directive issued by Sec'y of Navy in move that "makes suitable recognition" of active duty status of Navy and Marine Corps reserves by requiring "minimum of differentiation" between regular and reserve personnel.

AF ROTC PROGRAM, now operating at 125 colleges and universities in U.S., will be broadened to include 62 additional institutions during school year beginning next fall. . . Authority to call inactive Air Guard to EAD during emergency has been re-delegated to Air Defense commanders.

AF SEC'Y FINLETTER completed a 13-day trip to Turkey last month where he inspected progress of U. S. Military Assistance Program in that country. . .

(Continued on page 8)

Armed Forces Day will again be observed on May 19. . . Negroes in USAF are at present 95 percent integrated after twenty months of non-segregation policy.

USAF COMMITTEE, appointed by Sec'y Finletter to inspect conditions at Lackland AF Base, Tex., reported that general health of airmen at indoctrination center "is good". . . USAF's second indoctrination center at Sampson AF Base, N. Y., has been opened and is commanded by Maj. Gen. Frank A. Armstrong.

A CENTRAL AIR DEFENSE FORCE under ADC is planned by USAF with interim headquarters to be established at Kansas City, Mo., early this month. . . Joint Army-Navy-AF Aircraft Production Resources Agency has been established at Wright-Patterson AF Base to serve both the military services and aircraft industry.

NEW REGULATION (AFR 30-47) has been issued that lists ten airmen careers calling for flight status. S/Sgts. are authorized for eight specialties, T/Sgt. and M/Sgt. for one each. Airmen affected cannot be reduced in grade to remain on flying status.

ELECTRIC DE-ICING WINDSHIELD, that permits all-weather flying, has been disclosed by AF. . . Under Sec'y of AF McCone has replaced Ass't AF Sec'y Stuart as AF civilian member of Dept. of Defense Research and Development Board. . . Defense Dept. has set new minimum ($30,000,000 each fiscal year) for funds used in support of basic research by three services.

SGT. PAUL P. RAMONEDA, Baldwin Park, Calif., has been selected to receive posthumously 1950 Cheney Award given in recognition of humanitarian actions performed in connection with aviation. . . Brig. Gen. Otis O. Benson Jr., commandant of AF School of Aviation Medicine, has been named recipient of John Jeffries Award for 1950 by Institute of Aeronautical Sciences for outstanding contributions to advancement of aeronautics through medical research.

AFA'S C. R. SMITH, American Airlines president, has been recalled for three months AD with AF as aircraft procurement deputy to Under Sec'y McCone and will serve in wartime rank of major general. . . Ned Root, managing editor of AIR FORCE Magazine since October of '46, has resigned to accept position of publicity manager for Lockheed. . . Ken Ellington, public relations director of Republic Aviation, has been named Assistant to President of Republic and will continue PR activities. . . William E. Valk was re-elected President of Manufacturers Aircraft Ass'n at annual meeting.

AN ESTIMATED 18,828,000 REVENUE PASSENGERS used scheduled air carriers during '50, Donald W. Nyrop, Administrator of Civil Aeronautics, has announced. A gain of 13 percent over '49. 460,453,000 revenue miles were flown in scheduled transport with only four fatal accidents, same as in '49.

JULY 25, 1951 is last date that most veterans can begin training under GI Bill, VA has warned. . . Payment of second NSLI special dividend totalling $685,000,000 will begin in April and cover a three year period, from '48 to '51. No application will be required for this dividend.

"R. D. Ezell must be twins!"

So say branch managers about the executive vice president and general manager of the Roy C. Whayne Supply Co. at Louisville. It's because Mr. Ezell really gets around since his company acquired a Beechcraft Bonanza.

The Whayne Supply Co. operates a huge road machinery business, with branches in Evansville, Indiana; Ashland and Paducah, Kentucky, so plenty of field trips are needed. "The Bonanza is a marvelous engineering achievement — completely dependable, rugged, and fast. I make this trip to all three branches and am away from Louisville only one night. By other means of transportation a week would be lost. Thanks to the Bonanza — I can practically do double duty at the office and in the field."

Check these reasons for Beechcraft superiority:

B

C

A ROOM APLENTY for four big men in the spacious cabin. Front seats even more comfortable; new two-position reclining rear seat. Color and upholstery styling all new, too.

B SAFETY—RUGGEDNESS. Low, cross-braced landing gear is wide and long. Rough landings are smoothed. In flight you cruise, using only 65% of the engine's rated take-off power. *Extra* safety margin!

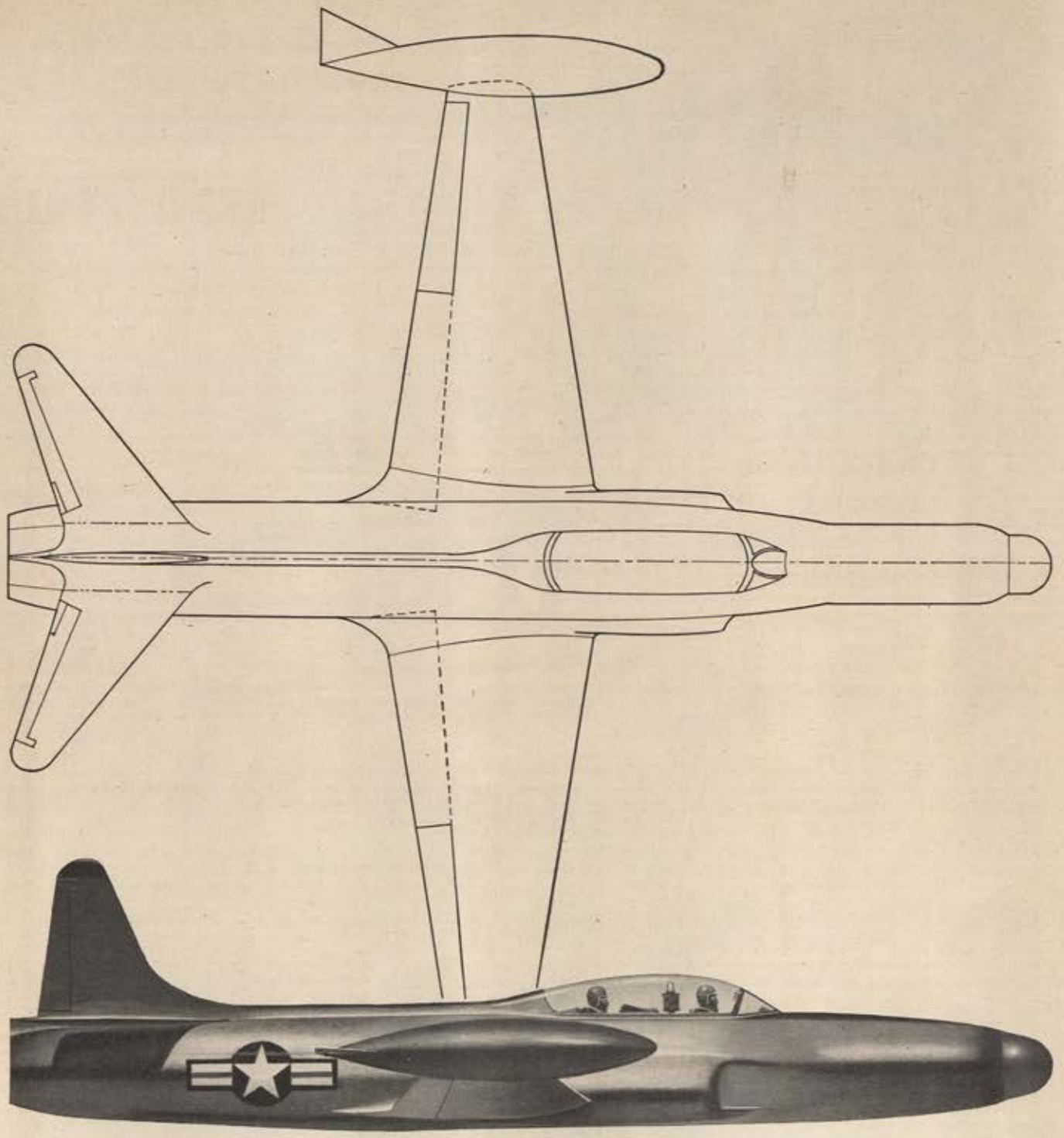
C SPEED and top performance. Take-off horsepower now 205 at 2,600 rpm; new Beechcraft metal propeller has greater aerodynamic efficiency. Short fields no problem! And there's greater economy in fuel consumption, too.

- For full details on the new Model C35 Bonanza, see your Beechcraft distributor, or write Beech Aircraft Corporation, Wichita, Kansas, U.S.A.
- Higher top speed: 190 mph
- Higher cruising speed: 175 mph
- Longer range: 775 miles
- Better fuel economy: 19.9 mpg

Beechcraft

BONANZA

BEECHCRAFTS ARE THE AIR FLEET OF AMERICAN BUSINESS



Lockheed's F-94C...Atomic Age Defender

COME THE WORST, America is prepared to defend itself with the best. Lockheed's F-94C All-Weather Jet Fighter was especially designed to thwart high-altitude aerial atomic attack. Although it is too good to be talked about in detail, you'll hear more and more about the F-94C in the future.

This thin-wing jet with a voice of thunder is loaded with lightning – new electronic intelligence and new firepower. It has more of everything – versatility, maneuverability, stability – but its performance is so good it's secret.

Day or night, whatever the weather, the Lockheed F-94C can destroy the enemy without seeing him. This dynamic invention of the atomic age is another example of "years-ago" planning by Air Force and Lockheed engineers for today's defense.

RENDEZVOUS

Where the Gang gets together

KIA: I would like very much to have any information anyone might have on 2nd Lt. Lyndon Collins, who served with the 1234th Bomb Group in the Pacific. His plane, "The Lemon" was hit over Truk on May 5, 1944. Please write his mother, *Mrs. Floyd Vincent, Kimball, Minnesota.*

303rd BOMB GROUP: Can anyone tell me if there is a 303rd Bomb Group Association? I understand that two years ago there was a reunion of this group in New York, although I found out about it too late to attend. *Morton Luman, 2235 Broadway, Boise, Idaho.*

POSTPONED: Due to the current national emergency, we have decided to postpone until further notice the reunion for World War II members of the 98th Bomb Group which had been scheduled for April 21 and 22 at the Hotel Statler in Boston. *William Butterman, 718 Armistice Blvd., Pawtucket, Rhode Island.*

REUNION: The Armament Section of the 509th Bomb Sqdn., 351st Bomb Group is planning a reunion in New York this summer. Any of the men from the other sections of the 509th who care to attend, please contact *Tom Keegan, 277 Alexander Avenue, New York 54, N. Y.*

PAGING RENO: Would like very much to locate Maj. Edward S. Reno, formerly of the 514th Bomb Sqdn., 376th Bomb Group in Italy. He was leading our formation on March 31, 1945 when we were declared MIA over Linz, Autsria. *Frederick D. Little, Apt. 49, 14 Green Acres Drive, Verona, New Jersey.*

39th BOMB GROUP: I am trying to locate former members of the 39th Bomb Group who were stationed on Guam at North Field during the great air offensive against Japan in the summer of 1945. Does the group or any of its squadrons have an insignia? *Roger Magee, 1317 Stewart Avenue, Wanamassa, New Jersey.*

REUNION: A reunion of all former personnel of the 58th Fighter Squadron, 33rd Fighter Group is planned for the near future. All men desiring to attend please contact me immediately. *Myron Halperin, 1442—47th St., Brooklyn, N. Y.*

UNIT HISTORY: Does anyone know if there has been a unit history published on the 491st Bomb Squadron, and if so, how I may obtain a copy? *Andrew Quinn, 78 Thayer Street, New York 34, N. Y.*

THROUGH BASIC: I am trying to locate Duane McDonald, formerly of Moberly, Missouri and now in the Air Force. We went through basic together at Sheppard Field, Texas in 1948. When last heard from he was at Carswell AFB, Fort Worth, Texas. *Sgt. John Baur, Hq & Hq Sq 5th Air Force, Korea, APO 970, c/o PM, San Francisco, Calif.*

LOST BUDDY: I would like to hear from former Lt. Robert C. Bear of the Quartermaster Company, 19th Air Service Group in Italy. I believe his home was near Cincinnati, Ohio. *Fermond A. Clifton, Beech Grove, Arkansas.*

WHERE'S DAVE? I would like to locate David Renzler, a former Air Force Lt. who was stationed at the Repple Depple in Naples, Italy. *John F. Dersch, 1415 Fifth Ave., Terre Haute, Indiana.*

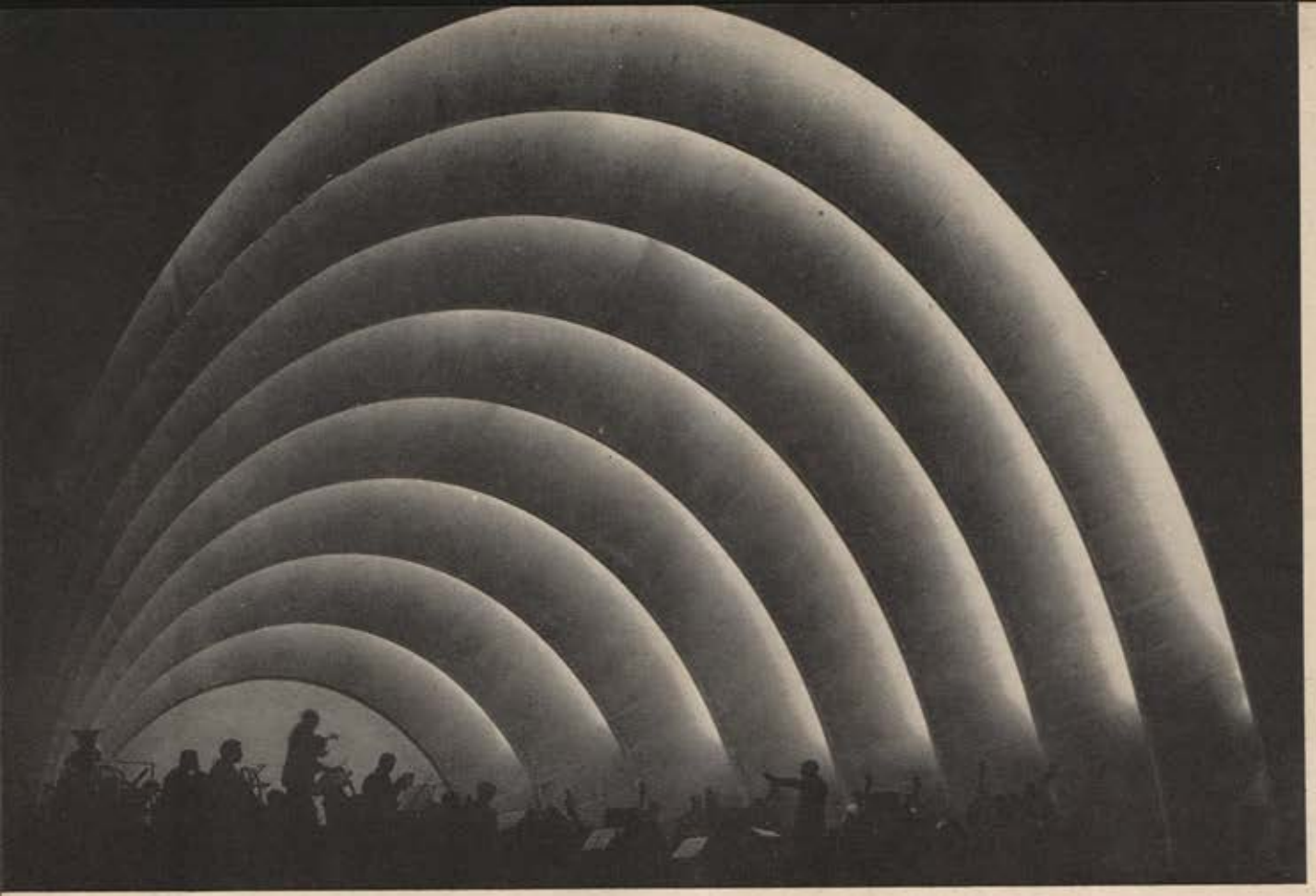
340th BOMB GROUP: Does anyone know if a unit history of the 340th Bomb Group or the 488th Bomb Sqdn. has ever been published, and if so, how I may obtain a copy? *Thomas B. Monroe, 1205 East 33rd St., Savannah, Georgia.*

HEY STUBBY: Anyone who knows the whereabouts of William M. Stubbs of Barnesville, Ohio, please drop me a line or have him write me. *"Porky" R. Stinson, Jr., RR 2, Grant, Michigan.*

LOST: I am very anxious in obtaining the present addresses of former Flight Officer Jene Alexander and former T/Sgt. Robert Sheline. *Herman W. Cain, 2104 Barbee St., Houston 4, Texas.*

WHERE'S BRUCE? I have not been able to locate Bruce Alger who was a Captain in the 6th Bomb Group in Tinian during the war. Does anyone know where he is? *Harry L. Robinson, 440 Baker Building, Minneapolis 2, Minnesota.*

LYRICS WANTED: This is a request for some help through the use of AIR FORCE. It is my desire to contact people who might be willing to send me copies of songs that were sung during the last war by the men of the Air Force. More specifically, I want the words to popular songs in which the original wording was changed to suit situations and personalities. There was a song to the tune of "As Time Goes By" which the 15th Air Force sang kidding the 8th. Then there was one to the tune of "Brazil" which the 8th Air Force changed to "Berlin." These are only two of the many I would like to have. Nearly everyone has a couple of them kicking around somewhere and I would certainly appreciate receiving copies of them. *Robert H. Eads, 827B S. Fedora, Los Angeles 5, Calif.*



WING-DING AT THE BOWL

AFA's Fifth Annual Reunion and Convention scheduled for Los Angeles in August, will feature another great show along with meetings, forums and unit reunions

Hollywood Bowl, largest natural amphitheatre in the world, will be the setting for a star-studded show highlighting AFA's Fifth Annual Convention.

PLAN NOW to be one of the 20,000 lucky people who will jam the fabulous Hollywood Bowl when the Air Force Association stages its greatest Wing-Ding since the Madison Square Garden event of 1948. And this is only one of the many highlights of AFA's Fifth Annual Convention and Reunion to be held in Los Angeles, Calif., over the weekend of August 24, 25 and 26. Many of the stars who make their home in the Hollywood Hills will be Bowl-bound in August. Take your cue from them.

AFA's Convention Committee, keenly aware of the troubled days in which we live, realizes that some of us may have to cancel out at the last minute. But the need for a national Air Force meeting is greater than ever, and, in or out of uniform, the gang must get together—not only for the convention's lighter side, but for the very important meetings, forums and unit reunions.

Convention Headquarters will be the Ambassador Hotel. Watch AIR FORCE Magazine for future announcements, and plan your attendance *now*.

Ignition Headquarters

...for HIGH TENSION, LOW TENSION, HIGH FREQUENCY...JET or TURBO JET!

Bendix approaches each new ignition problem with an open mind. The particular type of ignition system to be recommended is decided upon solely on the basis of meeting individual requirements for economy, performance and dependability. Because of this completely objective and unbiased viewpoint, the aviation industry recognizes Bendix as the one source *uniquely qualified* to plan and produce ignition equipment to meet every operating condition.

No single type of ignition equipment is the final solution to every operating problem. Let Bendix experience help you determine the type of ignition equipment best fitted for your specific purposes.

Bendix

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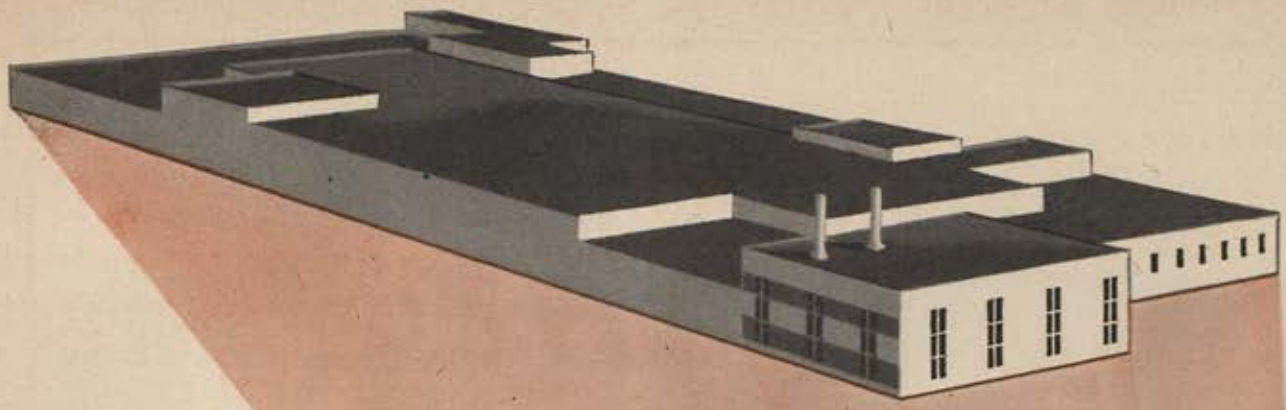
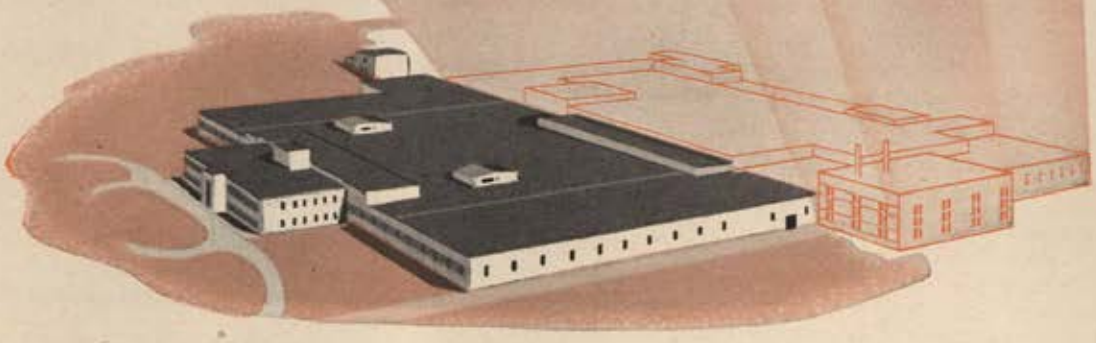


MORE PRODUCTION!

new Aeroproducts plant will double capacity!



Aeroproducts' huge expansion program is on its way. Ground has been broken for the new plant and *by the end of this year, present production capacity will be more than doubled!*

This rapid expansion of facilities will *more* than enable Aeroproducts to meet Air Force demands for Aeroprops on the giant Fairchild C-119 . . . *more* than meet the Navy's needs for turbine propellers on the Douglas A2D, the Consolidated Vultee R3Y and others. For Aeroproducts is planning for tomorrow . . . looking forward to a constantly increasing demand for its products. And whatever the future may hold, Aeroproducts will be ready—fully prepared to build propellers for giant new airliners . . . or for the swift-moving bombers, fighters and transports of our armed forces.

Yes, Aeroproducts, backed by the full facilities of General Motors, is ready to meet the demands of today... and is well on the way to meeting the accelerated demands tomorrow may bring.

GM
GENERAL MOTORS

AEROPRODUCTS DIVISION
GENERAL MOTORS CORPORATION
DAYTON, OHIO

Building for today
Designing for tomorrow

AEROPRODUCTS GM

Aeroproducts

From the President:-

AIR FORCE RESERVISTS and AIR NATIONAL GUARDSMEN

The headlines continue to call our attention to the gravity of the world situation. The new quotas for our military services bring mobilization very close to all of us. For the first time since the formation of AFA in 1946, the country is getting a strong preparedness program—the kind of program for which we in AFA have long fought. Even though this program has ironic overtones to those of us who, only five years ago, fought a war which was to bring peace to the world, we who possess some of the skills needed in modern warfare have an obligation to fulfill in our mobilization program.

With this step-up in mobilization, many AF Reserve and Air National Guard members of AFA have already been recalled to active duty, and many more will return in the near future. In the last-minute rush before reporting, it will be easy to overlook such things as change-of-address notices. We need your support and affiliation now more than ever before, and we know you will want to continue to receive your copies of AIR FORCE Magazine regularly. Therefore, I urge you to send us your new address just as soon as you get settled.

Also, a few Reservists and Guardsmen wrote us when they received their recall notice and asked that we cancel their membership because, as they put it, "I am returning to active duty." Obviously, these members did not think this through carefully. Our membership has always consisted of a percentage of active duty personnel. The need for and value of an "outside" organization, to which one on active duty can turn in time of need, is most important.

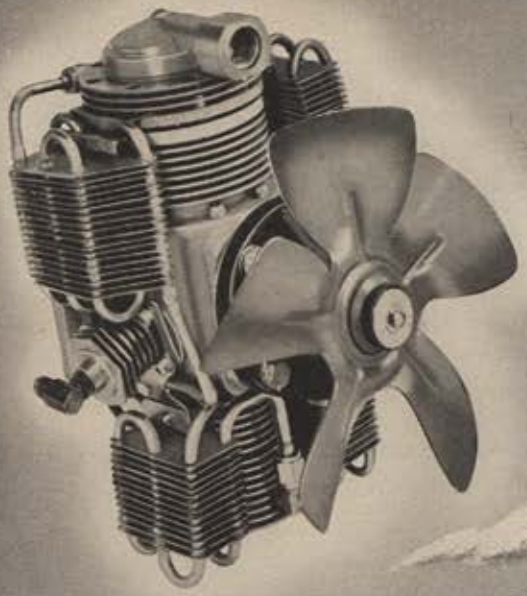
I urge those of you returning to active duty to take the following action to assure your continued affiliation with AFA:

a. Resolve that you *will* continue your membership in AFA when recalled.
b. Clip out the change-of-address coupon on *PAGE 68*, put it in your billfold, and use it to send us your new address.
c. Accept every opportunity to inform those with whom you are serving of the existence and objectives of AFA, and invite them to join us in our support of a strong Air Force.

I commend each of you returning to active duty for your faithful service to our nation, and wish you a speedy and safe return to civilian life. We in AFA stand ready to be of service to you—call on us.

Robert S. Johnson

PRESIDENT



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"For good or ill," said Winston Churchill, "air mastery today is the supreme expression of military power."

Air mastery is broad in meaning. It stands for many things. It includes the airman's support of the doughboy in combat and, at home, the public's support of the airman.

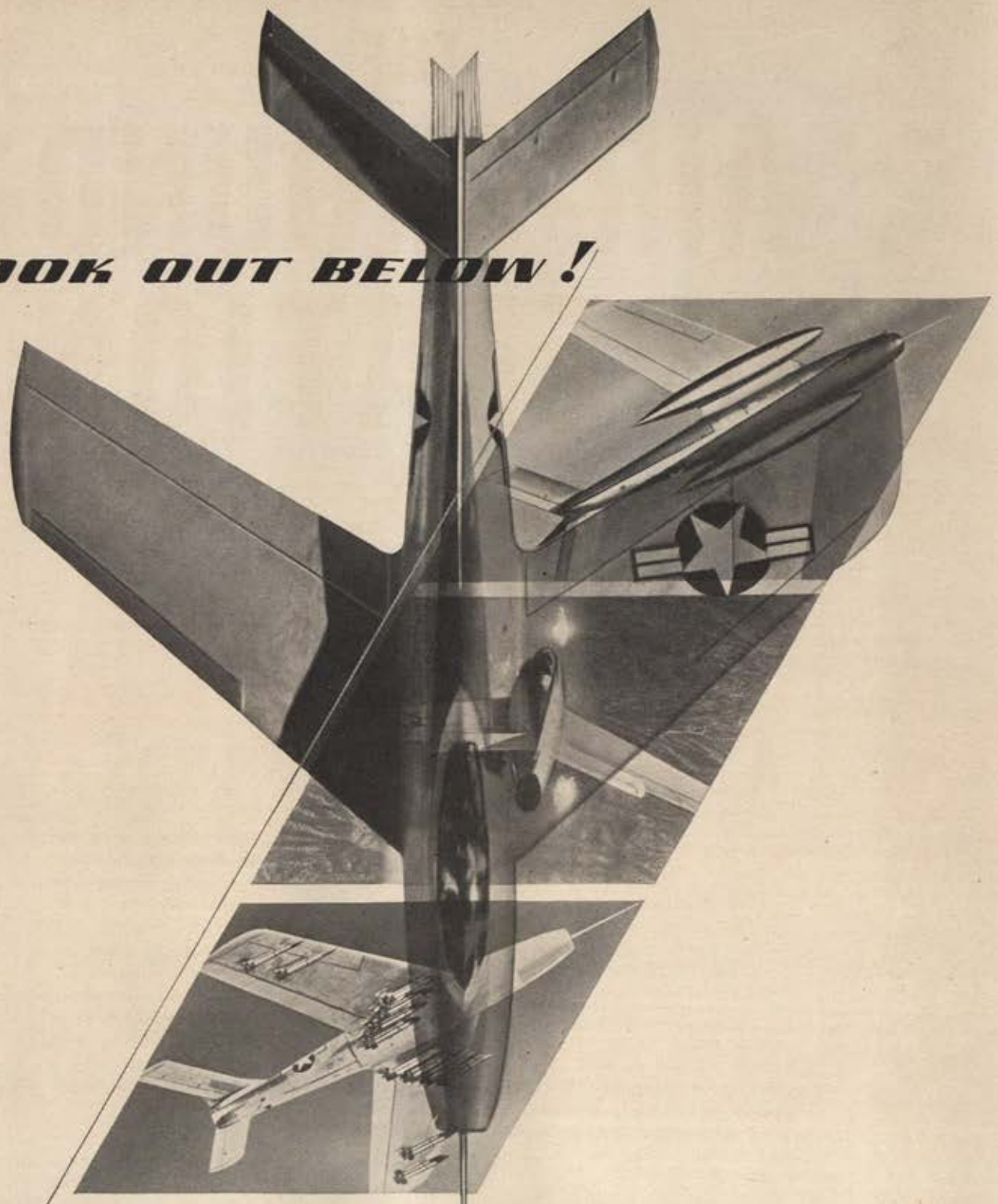
With the war in Korea, both have been brought to question.

The airman must stand on the facts of the case. The public must be given those facts.

To that end this issue is dedicated.

THE EDITORS

LOOK OUT BELOW!



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THE AIR-GROUND OPERATION IN KOREA

As this is written, war in the Far East is still very much with us. Events of this moment or the next, in this country or the next, might change with startling suddenness our whole outlook on the Korean war. In attempting to evaluate with some comprehensiveness a war that is still going on, The Editors are well aware of the risk involved.

And yet the gamble is not quite as great as it appears to be. For one thing, this is in no way an effort to cover the war *as such*. That must be left to the historians. Nor is it a complete report on airpower in Korea. Important elements of that airpower, such as combat cargo, troop carrier, air evacuation and air-sea rescue are not mentioned. This is, pure and simple, an evaluation of tactical airpower and the air-ground team, in doctrine and in Korea up to Jan. 1, 1951.

For this we have chosen not to wait for the historians because we believe that material is now available to permit a realistic appraisal of the Army-Air Force effort. This material, as it appears on the following pages, has been gathered the past several months from a wide variety of sources in this country and in the Far East, including members of civilian and military evaluation groups returning from on-the-spot observations in Korea. The information presented reflects countless interviews with senior Army, Navy, Marine and Air Force commanders, junior officers, infantrymen and airmen. The statements of facts as presented are based on objective studies and investigations. The general observations are ours.

And there is another reason why we have jumped the gun on the historians. We believe the public deserves the information *now* before the issues grow cold, before the erroneous first impressions on the air-ground team become misinterpreted for the facts themselves.

AIR FORCE
MARCH, 1951

"Out of Millions of Words . . .

"Jet-propelled fighters have proved absolutely worthless in Korea." (Newspaper item, July 10, 1950)

"In Korea the F-80 jets proved they could provide ground support and also defend themselves." (A Congressman, December 7, 1950)

"I think if we didn't have Navy air power out there we would be off the peninsula right now." (A U. S. Congressman, quoted Sept. 8, 1950)

"Had it not been for the Far Eastern Air Force, there would not be an American in Korea today." (The late Lt. Gen. Walton F. Walker, July 13, 1950)

"The concensus among military-minded correspondents is that aviation hardly counted prior to the establishment of continuous front lines by American ground troops." (War correspondent, September 25, 1950)

"There has never been anything like this in my experience. Without air support we simply would have been pushed into the water." (Maj. Gen. Hobart Gay, Aug. 11, 1950)

"Where is victory through airpower?" (Commentator, July 27, 1950)

"The Air Force sent jet planes to fight in Korea . . . it became apparent that the Korean fighting called for a different type of plane . . . we are replacing the jets." (A radio commentator, July 7, 1950)

"Rockets and machine gun fire from F-80s have blown up more tanks, trucks and other equipment than all other types of air attack combined." (General George C. Stratemeyer, news item, July 16, 1950)

"The record in Korea shows USAF in the remarkable position of having absolute air superiority, but unable to give its own troops adequate support." (Newspaper item, July 13, 1950)

"In Korea the props have been better close support planes than the jets." (Aviation magazine writer, Feb. 1951)

The average American, reading the papers and listening to the radio these past months, has good cause to wonder.

Out of the millions of words that have come his way on the Korean War, he has been left with confusion, doubt and concern over the role and usefulness of airpower.

As a citizen and taxpayer, he has a right to know all the facts of the case. We ask that the quotes on these pages and thousands of others like them be weighed against the airpower facts presented in this issue.

This is the least that the average American deserves. May his free press not let him down.

"U.S. jets turned out to be too fast to be useful against the slow propeller driven Yaks of World War II design." (News Magazine, July 14, 1950)

"The fundamental lesson of Korea is the need for balanced forces . . ." (Newsletter, Oct. 15, 1950)

"Korea taught the same old, old lesson of war: the military factor of ultimate importance which finally subdues the enemy is the man on the ground." (Newsletter, October 15, 1950)

"Air saved the day here as it has so many times before." (Maj. Gen. W. B. Kean, news item, Sept. 11, 1950)

"Our Air Force has been attempting to bomb roads, bridges, tanks and everything else the enemy has behind their lines but still down the line come the heathen in their trucks and tanks and the wonder of it all is how do they do it." (Radio commentator, July 27, 1950)

Confusion, Doubt and Concern"

"We want no more of these jet jockeys. They don't have enough fuel to stay in our areas long enough to find out where we are having trouble. And they don't have enough fire power to do any real good. Give us those Marines . . ." (Newspaper columnist quoting ground troop feelings, Aug. 19, 1950)

"A lot of GIs in Korea are wishing for a big 'umbrella' like the one 'issued' the Marines when they go out in a storm." (Columnist, Nov. 26, 1950)

"What was needed, of course, was a couple of old-fashioned Marine Divisions with their integrated Air Force." (Newspaperman, July 1950)

"The standard fighter planes, all of them jets, were not designed for troop-support jobs . . . there was a lack of communications equipment." (News magazine, Nov. 3, 1950)

"As a member of a division which fought through encirclement . . . it is my very definite opinion that had it not been for the closest cooperation and all out help given us by your close air support we would not have gotten through that block . . ." (Brig. Gen. Sladen S. Bradley, Asst. CO, 2nd Inf. Div. in letter to Gen. Stratemeyer quoted Jan. 9, 1951)

"My company commanders are so enthusiastic about the ability, courage and daring of your pilots that they requested that you be informed of the superb performance of the flights that supported our attack." (Battalion CO Lt. Col. H. K. Johnson in letter to Air Force General Earle Partridge, December 20, 1950)

"The Korean war clearly shows the Air Force was unable to fill the Army's need for air support." (News item, Oct. 31, 1950)

"These estimates, coming from pilots traveling over 400 miles an hour, are completely valueless, because they are almost always false." (Newspaper item, Jan. 6, 1951)

"For the second consecutive day, ground force evaluation credits Air Force planes with double the number of enemy casualties reported by pilots." (GHQ Communique 782, Jan. 2, 1951)

"Jet fighters proved too fast for ground strafing." (News item, July 10, 1950)

"The Marines, with close air support, moved 27 miles in four days with light casualties. The Army, which had just the usual air coverage, bogged down after suffering heavy casualties." (War Correspondent, Aug. 15, 1950)

"None of the Air Force or Army officers here know how to go about setting up a system for close support of ground troops . . . there were no trained officers who knew how to direct airplanes that were supposed to provide close support." (News magazine, Nov. 3, 1950)

"The campaign has demonstrated that full control of the air is no path to quick, cheap victory and also has showed the Air Force is far behind the Marine Corps in ground-air teamwork." (News item, Oct. 3, 1950)

"The truth was exactly the opposite. Army units, fighting side by side with the Marines, had lighter casualties and actually had to wait for the Marines to catch up." (Columnist, commenting on same action, Sept. 30, 1950)

"The Korean war is teaching American fighter pilots the new concept of aerial warfare—that the fastest is not always the bestest . . . high speed jet fighters . . . are proving ineffective against slow-moving but highly maneuverable Russian Yaks flown by North Koreans." (Foreign correspondent, July 5, 1950)

"The F-80s would be indispensable if jets showed up on the other side, but they are not fitted for the job over Korea." (Washington correspondent, July 6, 1950)

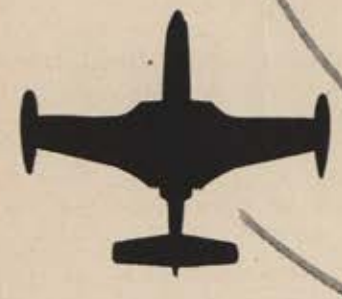
"Failure to plan for close support of ground forces has been a chronic complaint against Air Force leaders. It took too long . . . for the Air Force . . . to find the right enemy targets." (A Military Analyst, July 31, 1950)

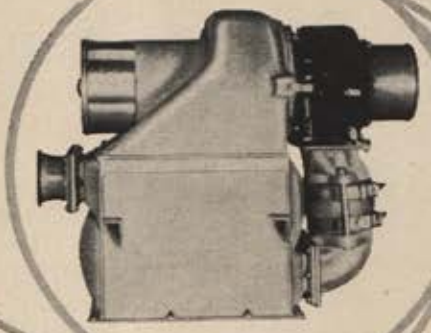
"In Korea, the props have been better close support planes than the jets." (Magazine writer, February 1951)

"The jets have also demonstrated that they are more rugged and even harder-hitting than the piston-engine fighters of World War II and as versatile." (Magazine writer, January 1951)

"Heavy thinking by Air Force planners during the past four years is being shown up in the Korean war as bad guessing." (News columnist, July 10, 1950)

"The contribution of the Far East Air Force in the Korean conflict has been magnificent. They have performed their mission beyond all expectations." (General Douglas MacArthur, news item, July 25, 1950)





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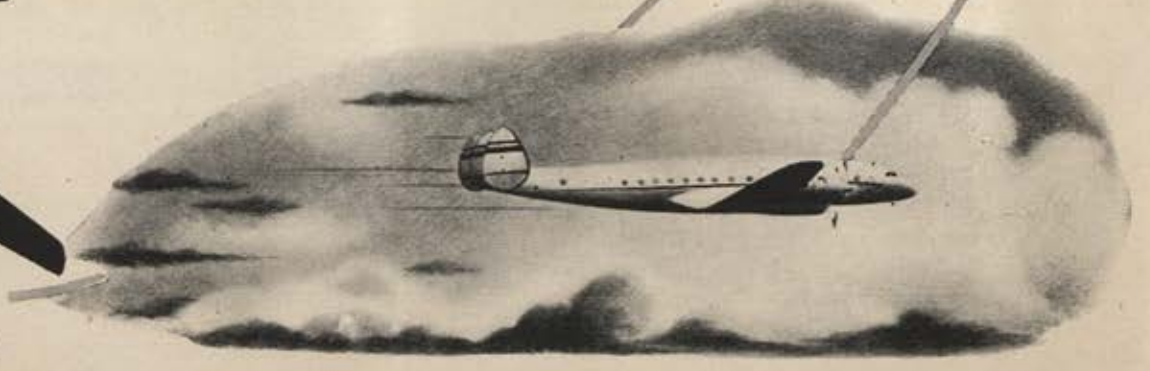


What IS Tactical Airpower?

Our basic air-ground operational doctrine was hammered out jointly by Army and Air Force on the anvil of a major war. These are the fundamentals of the doctrine essential to a true understanding of tactical airpower and its role in the battle for Korea. This is the starting point for a new evaluation

Some weeks ago in the House of Representatives a Congressman engaged in debate on the Korean War gave the definition which probably comes close to the average man's understanding of the subject. "Tactical airpower," the Congressman said, "is nothing more than close support for ground troops." Unfortunately it is not so simple.

The situation plainly calls for a few basic definitions and a re-statement of certain basic facts. To begin with, the term "tactical airpower," while commonly used, actually is a misnomer. Airpower, as General Vandenberg has put it, is "indivisible." It cannot be cut up into segments. So let us use the term tactical airpower, or Tac Air, as abbreviations solely.

In any definition of a "type" of airpower, the only possible determining factor is the objective against which airpower is directed. In any consideration of "tactical airpower," therefore, the key to understanding is its objective or targets—in this case, military forces, both troops and equipment. Strategic airpower, on the other hand, is directed against the sources of national strength itself (industries, sources of raw materials, etc.). Even so, the functions of these two "types" of airpower often overlap.

It is a rather common fallacy, in labeling "types" of airpower, to think in terms of types of aircraft. This is a sure way of going wrong. The *principal* weapons of tactical airpower, for example, are fighter aircraft, fighter-bombers and light bombers, but *all* types of aircraft can be and have been employed tactically.

In our re-evaluation of the tactical use of airpower, it becomes important, first, to list, in careful coordination with the ground forces, the *kinds* of targets against which Tac Air can be employed to best purposes. This has been done by the Army and Air Force in their joint Field Manual 31-35 (Air-Ground Operations) which is, in effect, the official "bible" on this whole complex subject.

On the following pages we identify the three main categories of targets set forth in the manual, examine them with respect to basic doctrine, and then evaluate them in terms of Korean War experience. Before proceeding, we must consider two more basic factors.

First, the present doctrine on the proper tactical employment of airpower grew out of the common experience of our leading Army and Air Force commanders in World War II It is based on hard won experience—not theory. It was hammered out on the anvil of war in the successful air-ground campaigns in Europe from 1943 through 1945, and has been battle tested in every theater in the world. Nor is it an airman's dream child. Field Manual 31-35 and its counterpart, FM 100-20, bear the signatures, respectively, of ground generals Marshall and Eisenhower.

Second, it is worth noting that in cataloguing the airplane's major tactical targets, we also identify, simultaneously and automatically, the targets best dealt with by *ground* weapons. This very division of responsibility makes it obvious, therefore, that *both forces have a single end.*

There are *not* two wars as some imagine: one in the air and one on the ground. It is *one war* with *one objective* fought by two different instruments in two different elements. Neither force can be subordinate to the other, for they have separate tasks. There are occasions when the Air Force is called upon by the ground for direct "support." And there are other instances when ground units "support" the air forces.

Usually such support missions (ground or air) come in time of crisis, and, however urgent at the moment, cannot be considered the continuing primary function of either force. At any rate, a *supporting force* is not necessarily subordinate to the force being supported. The point to keep clearly in mind is that ground and air forces are two very distinct weapons working in two very dissimilar elements toward one very common purpose—the accomplishment of the theater commander's mission.

The Tactical Airman's Most Profitable Targets

AIR-GROUND

Target Priorities . . .

I—THE ENEMY'S AIR FORCE

There are three good reasons for placing the enemy's air force at the top of the list of Tac Air targets:

► **It has an immense capacity** to concentrate on and destroy any program undertaken by our own surface forces.

► **No weapon available** to our surface forces can be used against it with equal efficiency.

► **Until the enemy's air strength is reduced,** our own air forces cannot move on in maximum force to their other assignments.

The United States Strategic Bombing Survey, in its summary analysis of the Pacific War, explains: "Control of the air was essential to the success of every major military operation. Control of the air enabled surface vessels to sail the seas as far as that control extended, even within range of enemy land-based airplanes. Control of the air permitted amphibious landings at any point where that control could be assured. Control of the air permitted close air support to ground forces, the effectiveness of which was decisive wherever fully employed. Control of the air over lines of communications prevented effective interdiction of them to the enemy and preserved them to ourselves. Control of the air over the Japanese home islands permitted the destruction by long-range bombing of such of her industries and cities as we chose to attack. The first objective of all commanders in the Pacific war, whether ground, sea or air, whether American, Allied, or Japanese, was to assure control of the air."

Both Army and Air Force have established "air superiority" as a prime mission. And yet, the phrase is not completely satisfactory. It doesn't describe its point-blank assistance to the ground soldier. There is no connotation of the supply, communications and reinforcement lines that would be broken by the enemy if he held the upper hand in the air. There is nothing to indicate that, lacking air superiority, our ground troops could not operate without casualties unacceptable to a democracy; and necessitate the kind of fighting, incidentally, which would show off to poorest advantage one of our most valuable assets—technological superiority.

Better to say that the first objective of our tactical air forces is the "destruction of enemy weapons that fire from air to ground."

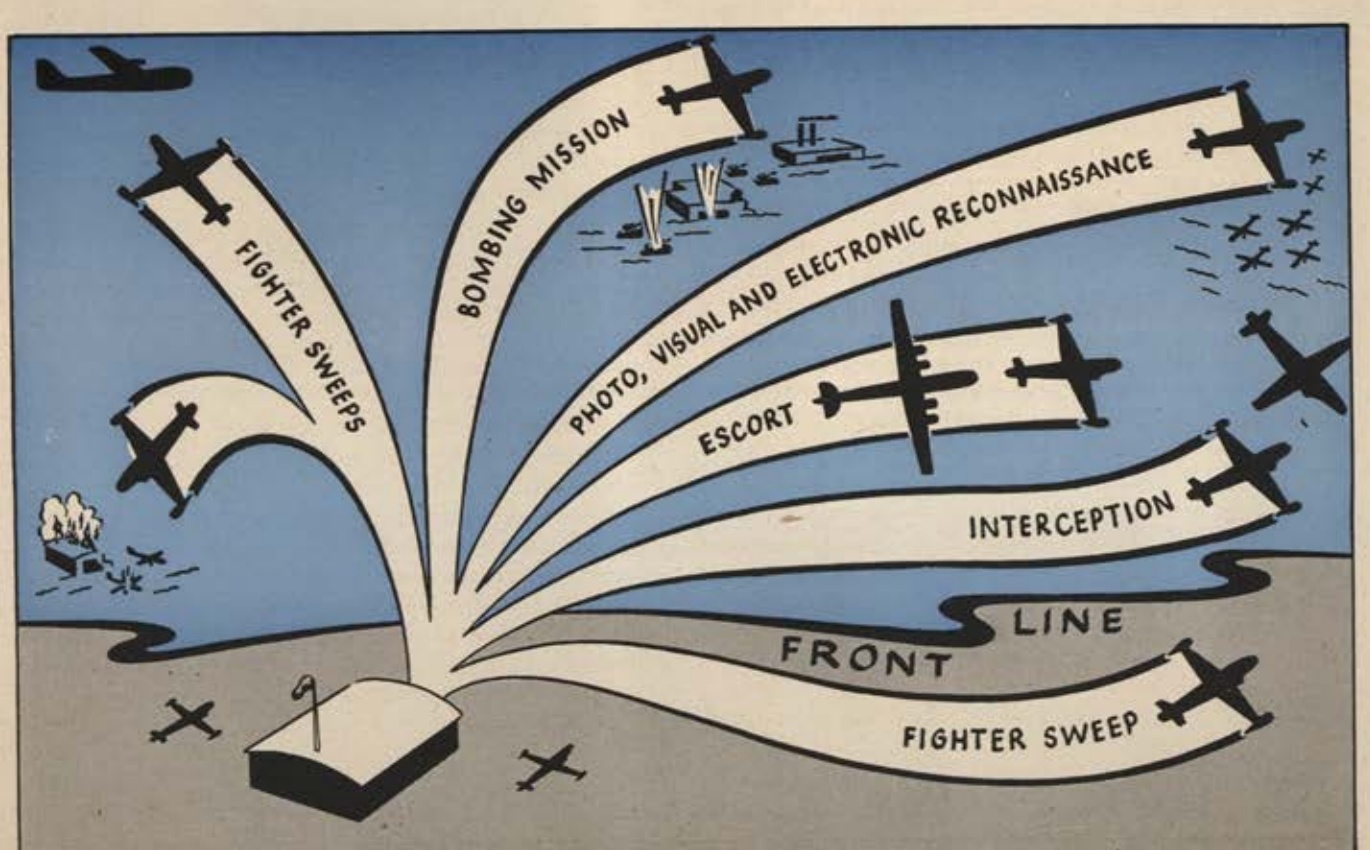
As indicated, these types of missions are used to gain and maintain air superiority:

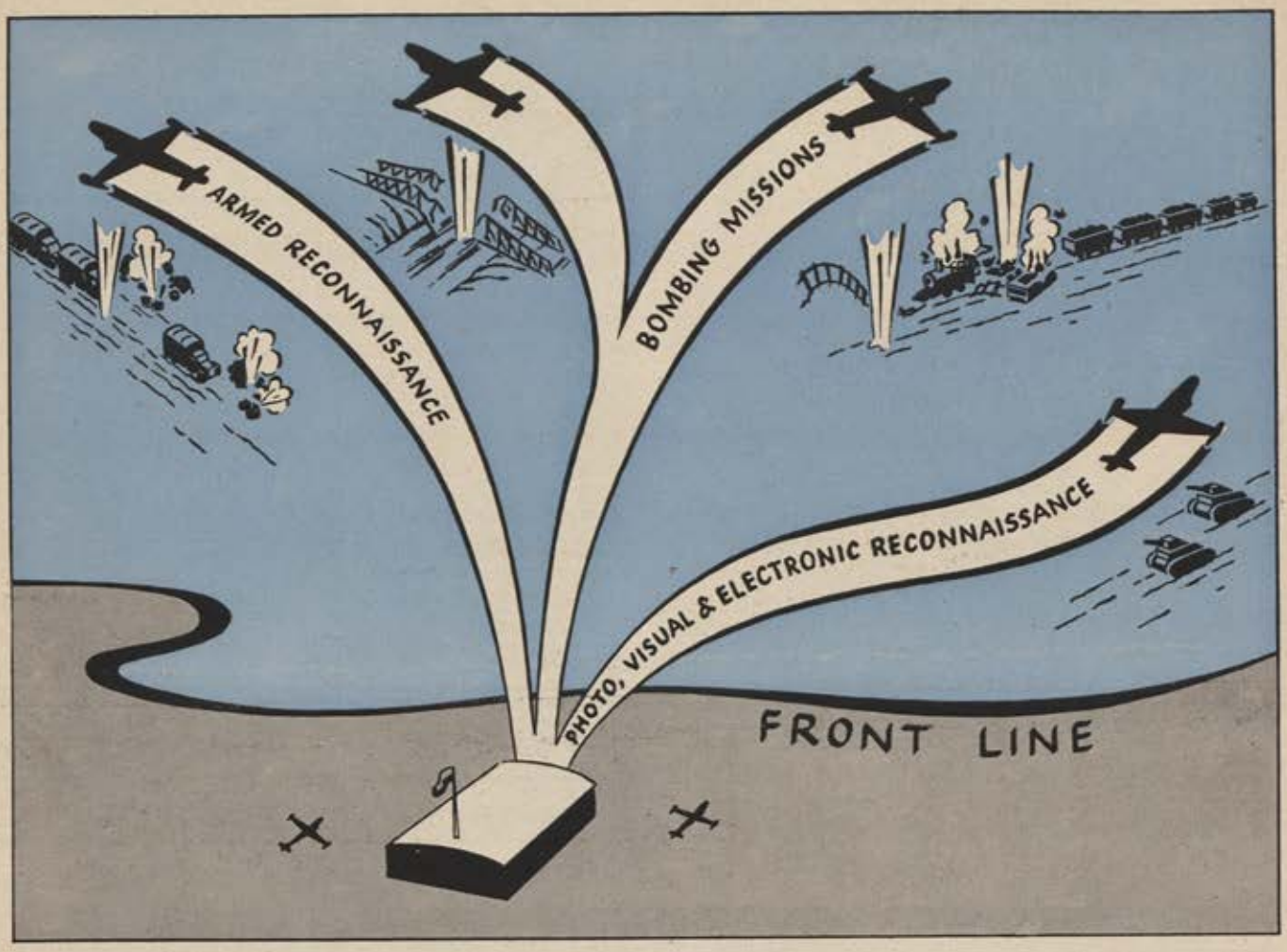
► **Fighter sweeps, escort missions, and interception** help destroy enemy aircraft in the air or on the ground.

► **Bombing** missions hit grounded aircraft and the airfields and installations necessary for their support.

► **Photo and visual reconnaissance** help provide the necessary information to carry out these missions.

In addition, air superiority receives long-range contributions from strategic air strikes.





Target Priorities . . .
II. ENEMY REINFORCEMENTS AND SUPPLY LINES

There is no more lucrative way of lessening the bulk and mass of ground forces (troops and equipment) an enemy can bring to bear against friendly troops than to destroy those forces in the concentration usually attendant to their transport, and/or to destroy the *means* of their transport.

Moreover, there are few situations more demoralizing to enemy troops already deployed in battle than to be cut off without hope of reinforcement. Every military force is tied to its supply tail.

Thus the job of busting bridges, bombing marshalling yards and ammunition dumps, attacking convoys —the job of isolating the enemy from the battlefield— is the most productive role of Tac Air. It is a job assigned to the Air Force rather than the Army simply because here again there are no weapons available to the Army that can do the job as well. Most of the targets of *interdiction,* as the Air Force calls it, are well beyond the range of any artillery piece, but within easy reach of aircraft. It hardly seems necessary to reiterate that this in no way implies generally that the airplane is a "good" weapon, and that ground instruments are "inadequate." This is a job the airplane is peculiarly adapted to by virtue of its comparatively great range and flexibility.

As indicated in the chart, the following are the types of missions performed in accomplishing the interdiction program:

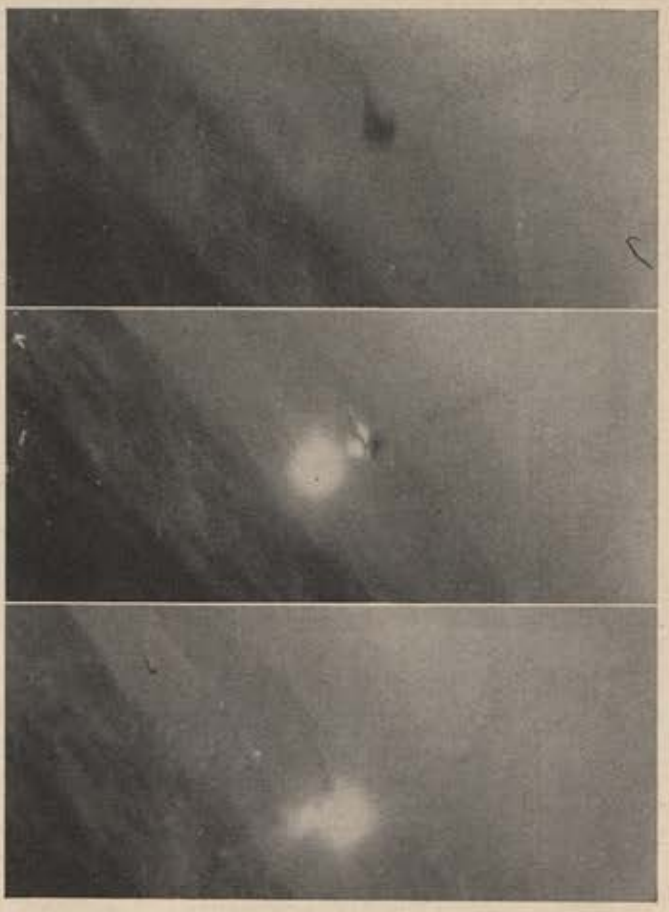
► **Armed reconnaissance** by fighter-bombers search an enemy area to attack whatever targets it finds. The so-called targets of opportunity—truck convoys, locomotives, etc.—are often highly lucrative.

► **Bombing** missions strike at bridges, highway junctions, supply dumps and troop concentrations.

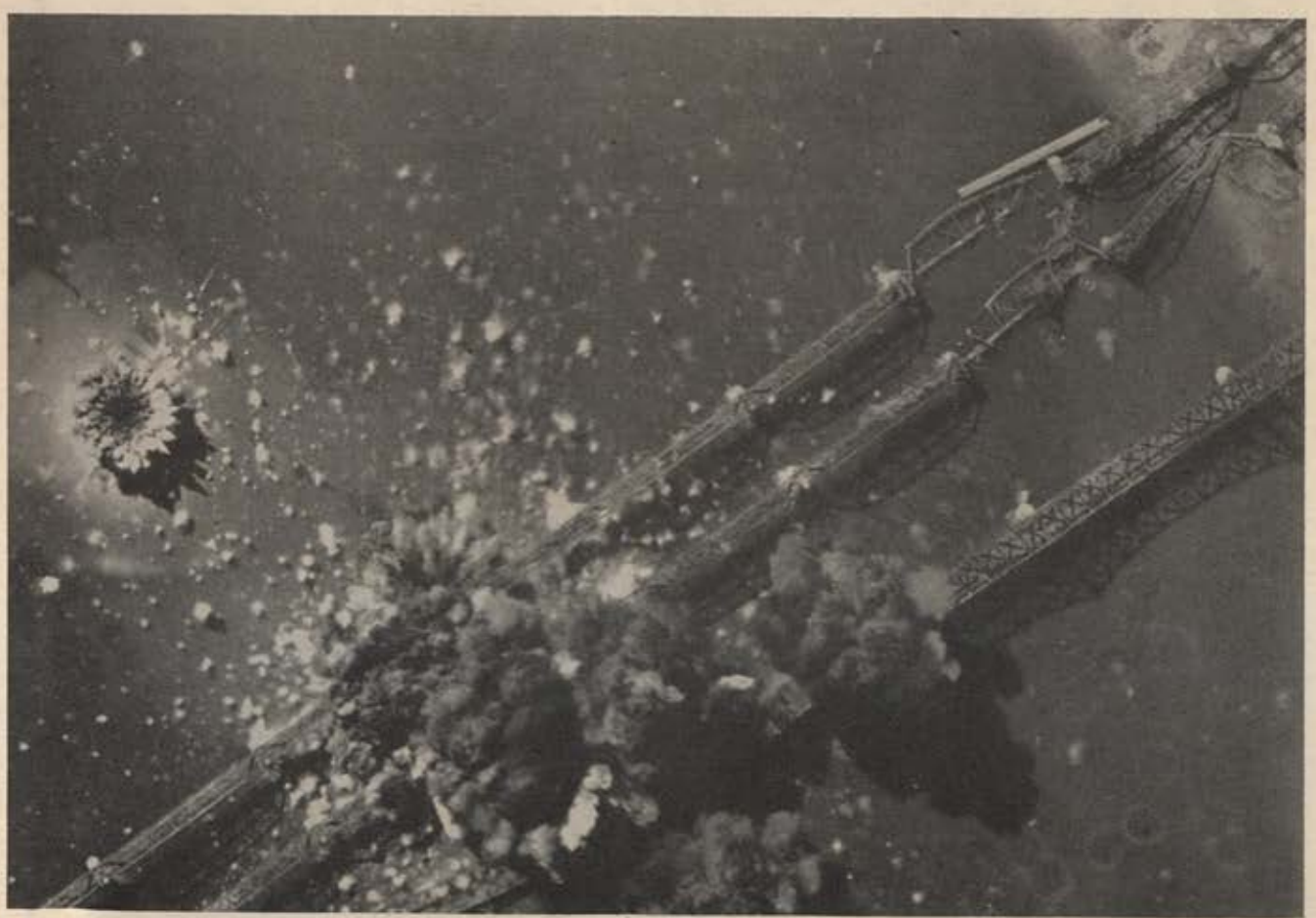
► **Photo, visual and electronic reconnaissance** provide much of the information vital to these jobs and also evaluate the effects of the attacks.

Out of World War II emerges the example of the interdiction campaign conducted as a prelude to the Normandy invasion and as a continuous part of that operation. The Overlord force commanded by General Eisenhower was necessarily smaller than the forces which the Germans could have brought against him—had the railways, highways and bridges of France been available to the enemy. But the 8th and 9th Air Forces threw a ring of steel around the selected battlefields in Normandy. Just for good measure, they threw another ring around a fake battlefield to avoid tipping off the German High Command.

Napalm attack on enemy stronghold helps advancing troops.



F-86 gun camera shots show MIG-15 bursting into flames.



This remarkably clear photo shows a perfect example of successful interdiction. This bridge will carry no more trains.

Target Priorities . . . (Continued)

III—BATTLEFIELD TARGETS

When enemy troops and weapons are spread out upon the battlefield, taking advantage of cover and camouflage, it is obvious that fewer men can be killed and fewer weapons destroyed by a given number of air missions than can be reached where the troops and weapons are concentrated in cantonments, supply depots, trains or truck convoys.

Thus the *quantitative* rewards for the *close support* mission, as this assignment is called, are normally less than those of interdiction strikes. But the quantitative consideration is not all that counts. When enemy troops and weapons are facing our own men on the battlefield they must be destroyed by one means or another.

As to the means employed for this task, the Army has explained in its official publication *Officers Call:* "We always use the most economical means to do the job. If mortars can handle a target, we spare the artillery; if only light artillery is needed, we hold back the medium artillery; and so on. We try not to waste our resources by using a sledge hammer to break eggs."

Of all the weapons available for direct battlefield support, the airplane is hardly the most economical; it is, quite frankly, a sledge hammer, and battlefield targets the eggs. Nor is it necessarily the most accurate. Artillery zeroing in on a target until it is leveled usually can achieve a higher degree of accuracy than the fighter-bomber.

While direct battlefield support does not exploit the plane's chief assets—speed and range—to maximum advantage, ground weapons often are not available at the right place at the right time, fixed defenses may be too much for these weapons to handle, and terrain features may prohibit effective results.

Thus, the airplane has its place in direct support of action on the battlefield. When the air situation permits, the airplane can become a prime protector of the ground troops, as doughboys in Korea will attest.

The *target* of close air support is anything on the battlefield that cannot be hit more effectively or more economically by ground weapons. Targets may include tanks, road blocks, machine gun nests, artillery and the enemy troops themselves.

The *weapons* of close support vary widely according to the target—machine guns for strafing, rockets and napalm for tanks, GP bombs and frags; according to need, these weapons are delivered by many types of aircraft though the fighter-bomber is the standard close support plane.

As indicated in the chart, close support missions operate in many ways to protect our own ground troops and destroy the enemy and his weapons:

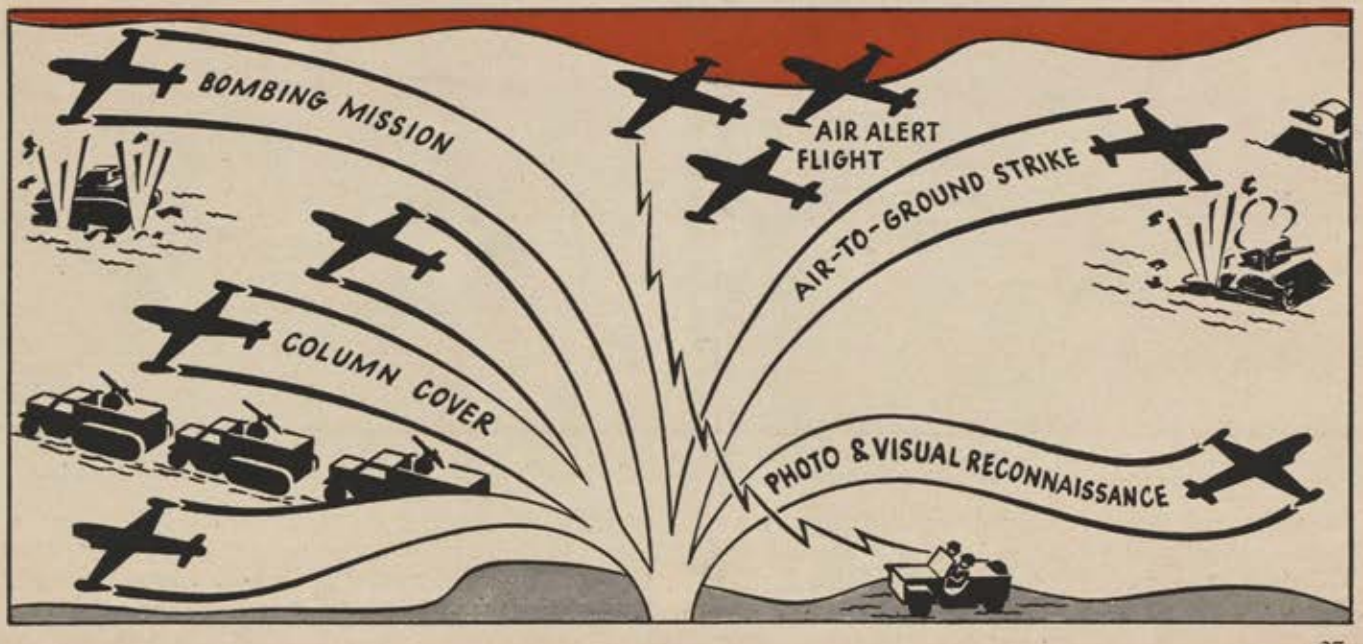
► **Air alert strikes** from orbiting aircraft can be whistled in by a forward controller in a matter of minutes. This promptness is bought at the cost of non-specialized weapons selection and relatively uneconomical use of available resources in aircraft sorties.

► **Column cover** is designed for the protection of an armored thrust advancing rapidly.

► **Ground alert strikes** are produced by ground-briefed pilots and specially selected weapons.

► **Reconnaissance**—Photo and visual—must do its work of locating targets and evaluating strikes.

Perhaps the most dramatic close support operation, conducted in the type of continental war that may again have to be fought in Europe, was the column-cover flank protection given to Patton's Third Army in its "Right Hook" across France after the break-out at St. Lo. This particular episode is worthy of special attention because the restricted terrain of Korea has tended to focus attention on operations in limited areas and with minimum mobility.



AIR-GROUND

The Truth About "Target Priorities"

Airpower critics too often fail to recognize the relative values of close air support and interdiction. Airpower adherents too often wrap Tac Air into a neat package of fixed priorities. Both stand equally guilty before the facts of war.

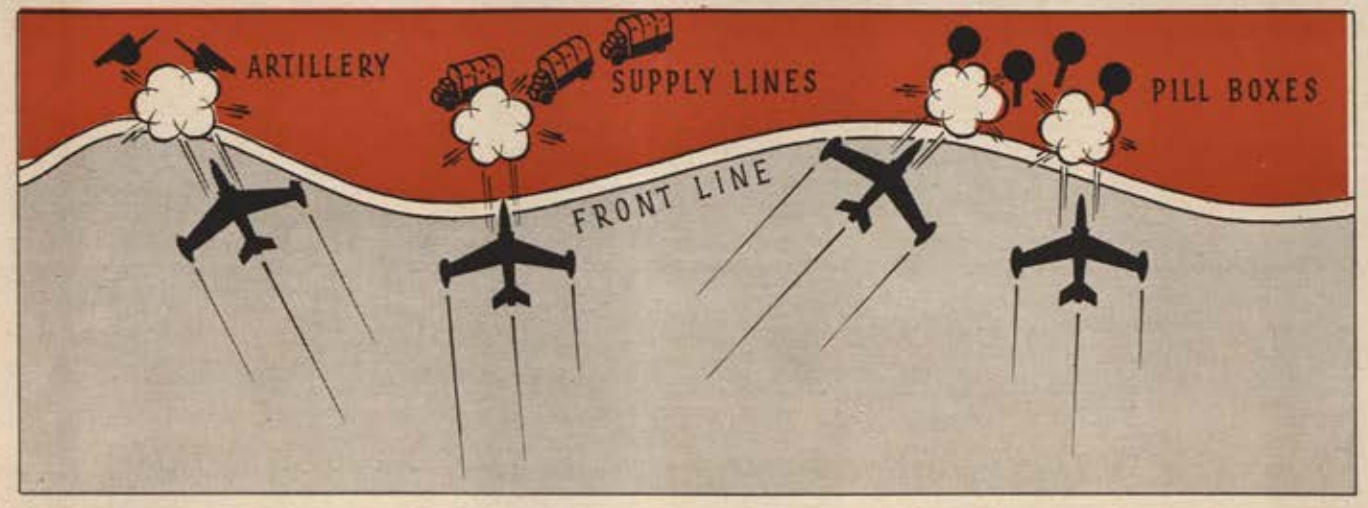
Air superiority, of course, is a necessary evil which cannot be subjugated to other types of air attack for the sake of both the individual doughboy and the overall tide of battle.

When the air situation permits, as it has in Korea, target priority for aircraft must be determined by the situation on the ground. If it imposes no restrictions, the plane's prime targets are those with the greatest destruction potential. This calls for interdiction.

When the ground demands direct air effort on behalf of the doughboy, interdiction must give precedence to close support. The decisions must be made *jointly* by the responsible ground and air commanders. Often all three Tac Air assignments are pursued simultaneously with emphasis shifting from one to the other.

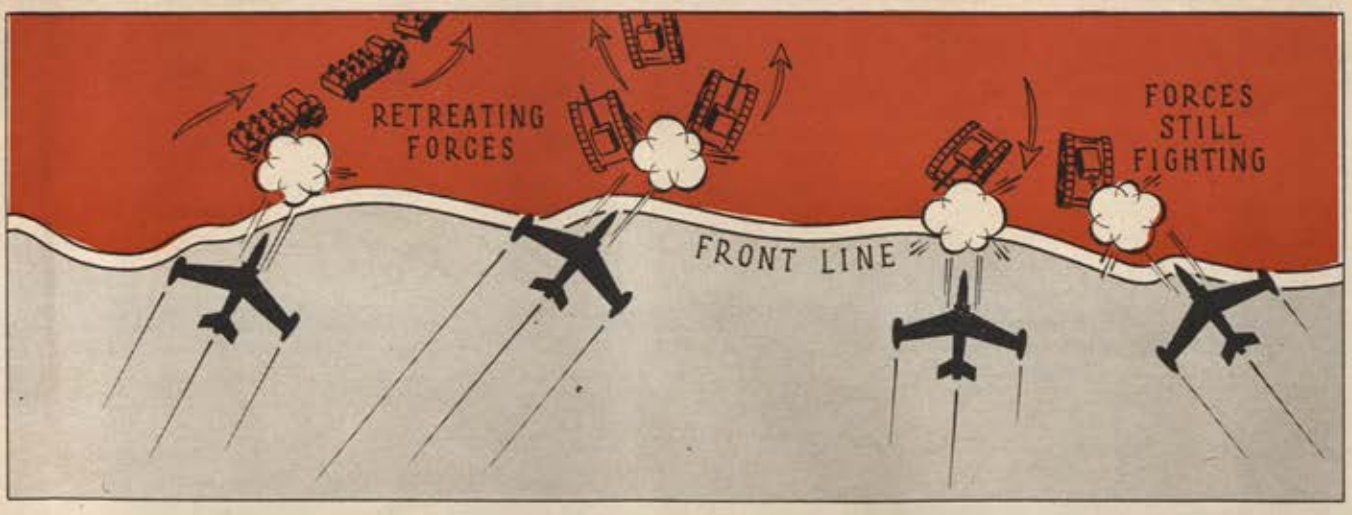
Charted on these pages are four of the major ground situations which condition Tac Air targets:

Tac Air During Preparation of a Ground Offensive:



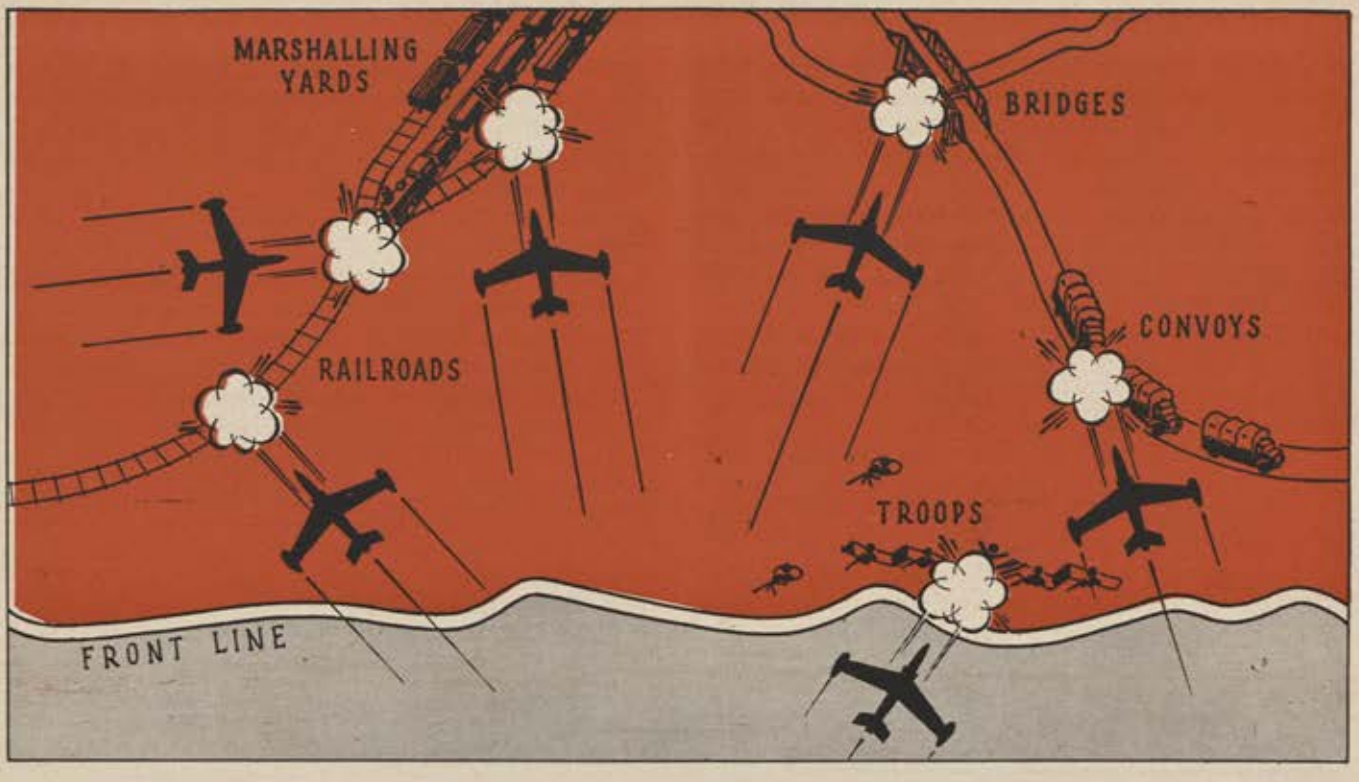
Objective: soften enemy positions before our ground forces move out. **Example:** between August 1 and September 15, when B-29s concentrated on interdiction in North Korea; the 5th AF on close support along the Naktong perimeter, and interdiction in South Korea. Airpower helped prevent the enemy from (1) breaking through the Naktong perimeter, and (2) moving troops and supplies into the area.

Tac Air in the Breakout and Advance:



Objective: break up organized resistance to our advance and pick off the enemy's withdrawing convoys. **Example:** between September 15 and October 1, when the Tenth Corps' Inchon landings took place concurrecently with the Eighth Army's breakout and advance from the Naktong perimeter to the 38th Parallel. Our air power was concentrated, first, on enemy positions facing the Eighth Army, then on disorganized forces.

Tac Air in a Static Defense:



Objective: assist in preparing for our ground offensive; break the enemy's attempt to launch one. **Example:** between August 15 and September 15, after the ground situation had become "stabilized" at the Naktong River and an offensive build-up was in progress. Interdiction was stressed to prevent enemy build-up.

Tac Air in a Withdrawal:

Objective: apply all available airpower to deter enemy movement. **Example:** during the first 51 days of the Korean War, when the ground situation was critical, air emphasis was placed on battlefield targets.

AIR-GROUND FLEXIBILITY and CONCENTRATION . . .

In any military organization—land, sea or air—the greater the range, firepower and flexibility of a weapon, the higher up in the command system is its control retained. The reason for this universal policy lies in the fact that no military force is ever able to achieve superior strength everywhere at the same time; consequently, the top level commander must shift his forces so as to achieve decisive strength at the decisive place at the decisive time, the old story of "fustest with the mostest."

It is self-evident that the more flexible a weapon may be, the more it lends itself to attainment of this ideal of quickly concentrating decisive strength at the decisive place at the decisive time.

Range, speed and firepower make the military airplane the most flexible of weapons. Hence, control of military airpower must be retained at that level of command which can best exploit this asset.

In a theater of operations, the ground and air commanders are given corresponding positions of authority directly under the theater commander. So far as command itself is concerned, each controls his own force; but in *planning* they operate in close unity.

Subordinate to the theater ground force commander are the *army groups* and the *numbered armies*. Their air opposites, subordinate to the theater air commander, are the *tactical air commands* and the *numbered air forces*.

Under this organizational set-up, the theater air commander can move at his will the *entire* force of aircraft assigned to the theater. For example, in a ground emergency, such as an enemy penetration, he can quickly concentrate airpower to help plug the gap; or, in preparation for an offensive by our own forces, he can concentrate airpower to pave the way for break-through. Or should there be an air emergency —hostile air attack which threatens our local air superiority—the theater air commander can quickly shift to counter-air operations, to the extent necessary to defeat the hostile air effort.

Advantages of a Coordinated Air-Ground Effort:

Varied Deployment Facilitated

Maximum Concentration Offered at a Given Point in a Minimum Time

. . . vs THE "SMALL PACKET" CONCEPT

There has been some press agitation in recent months to eliminate the flexible air-ground control pattern described on the previous page, and revert to a system that would give each ground division commander a fixed number of airplanes of his own, to use when, where and how he saw fit.

Britain's great ground force commander, Field Marshal Montgomery, has said, "Nothing could be more fatal to successful results than to dissipate the air resources into small packets placed under the command of army formation commanders, with each packet working on its own plan."

For the Army and Air Force, the "small packet" concept would turn back the clock to a system which resulted in near disaster in North Africa in 1942 and was then discarded by the War Department as well as the British Services. Its disadvantages are apparent:

► **Concentration and flexibility,** perhaps *the* most valuable characteristics of the Tac Air weapon, would be lost. There would be no efficient way of promptly shifting the weight of the air effort from one place on the battle line to another, as needed, or from one type of mission to the other as desired.

► **Economy** of the coordinated system would likewise be lost, including economy in the management of the combat resources available to the theater commander.

For the Marine Corps ground mission, the "small packet" air support system may be excellent, but we must not overlook these factors:

► **The Marines** rarely fight over extended battlelines. Normally they operate on a limited front, a lesser requirement for flexibility and the concomitant concentration of air effort. The Army's battleline may extend the length or breadth of a continent.

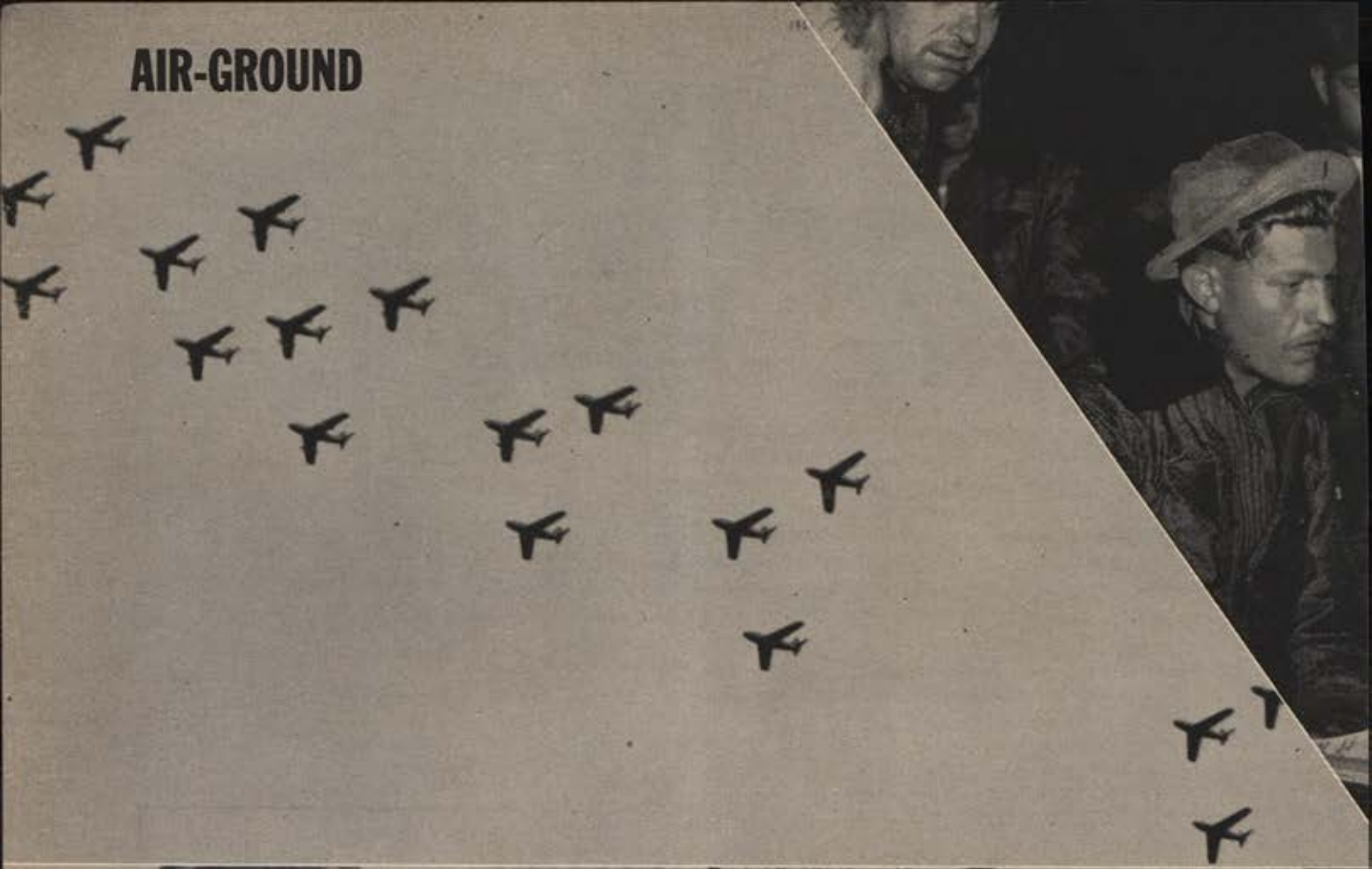
► **Air Force** Tac units are responsible for interdiction and air superiority targets *as well as* close support. The Marine air arm concerns itself primarily with the one assignment—close support.

Disadvantages of the "Integrated" System:

No Appreciable Concentration Possible—No Centralized Control

Emphasizes Close Support at the Expense of Air Superiority and Interdiction

AIR-GROUND



All textbooks aside . . .

HAS THE AIR FORCE DONE its JOB IN KOREA?

In any evaluation of Tactical Air doctrine in terms of the Korean experience, we must get this one fact straight right at the beginning:

Full American airpower hasn't yet entered the Korean war.

That is to say: Airpower in the full sense, as it was applied in World War II and as it has evolved since, has not been permitted to function against the *source* of the aggression in Korea.

This is a vital consideration, for the airpower concept is premised on airpower's proven ability to reach and destroy the *source* of trouble. And this raises a question:

Is the doughboy in Korea receiving all of the support airpower can give him?

The answer must be—No!

He is not receiving even a measure of that support, or of the support that airpower gave his predecessors on the beaches of Normandy and in the hills of the Philippines.

The doughboy in Korea must somehow learn to live —and die—in the face of that grim fact. His relatives at home and his representatives in Congress must learn to respect it.

This is not to question the diplomatic decision which has brought the fact to life. That is outside the field of this analysis. We merely state the issue in the belief that it cannot be avoided, that it is pertinent to our discussion, that the facts should be known and remembered.

In terms of the doughboy on the front line in Korea, his *support* from the air goes far beyond the immediate battle area and beyond the adjacent supply lines, to the source of *his* trouble—to the factories and the people who make the guns and the bullets being used

(Continued on page 34)

AIR-GROUND

The skeptics ask: "If airpower is so decisive, why haven't we won the war in Korea?" And the question is reduced to absurdity by the facts of the case . . . facts which demand more attention

against him on the battlefield.

The big punch of airpower is its long range employment against these threats to the doughboy—these sources of the enemy's war-making capacity. And these sources lie in Manchuria and in the homeland of Communism.

The Yalu River line which separates North Korea from Manchuria forms a diplomatic boundary beyond which Allied aircraft, by United Nations decree, cannot trespass. Thus the enemy's guns and bullets in the process of manufacture remain immune from our strategic airpower.

Tactical airpower is likewise "under wraps." For as General Vandenberg has explained:

"Isolating the battlefield from reinforcements is the prime function of tactical air. Airpower was rendered practically inoperative when the United Nations, in an effort to avoid a diplomatic rupture with the Chinese Communists, halted offensive action at the Yalu River."

This means, simply, that the Air Force in Korea has been unable—due to diplomatic restrictions—to interdict the enemy at vulnerable points, especially during periods when the battleline was close to the Manchurian boundary; that the Air Force has not been able to conduct full-scale counter-air operations, since our planes have not been allowed to cross the diplomatic boundary line, even in the air; and finally, that the Air Force has not been able to eliminate enemy airfields over the boundary, airfields which have posed a constant threat of hostile air action.

For airpower, Korea is an "off limits" war, and this must be our first consideration in evaluating airpower doctrine against airpower results.

It is a fact which helps reduce to absurdity the question that has arisen so many times these last eight months: "If airpower is so decisive, why haven't we won the war in Korea?"

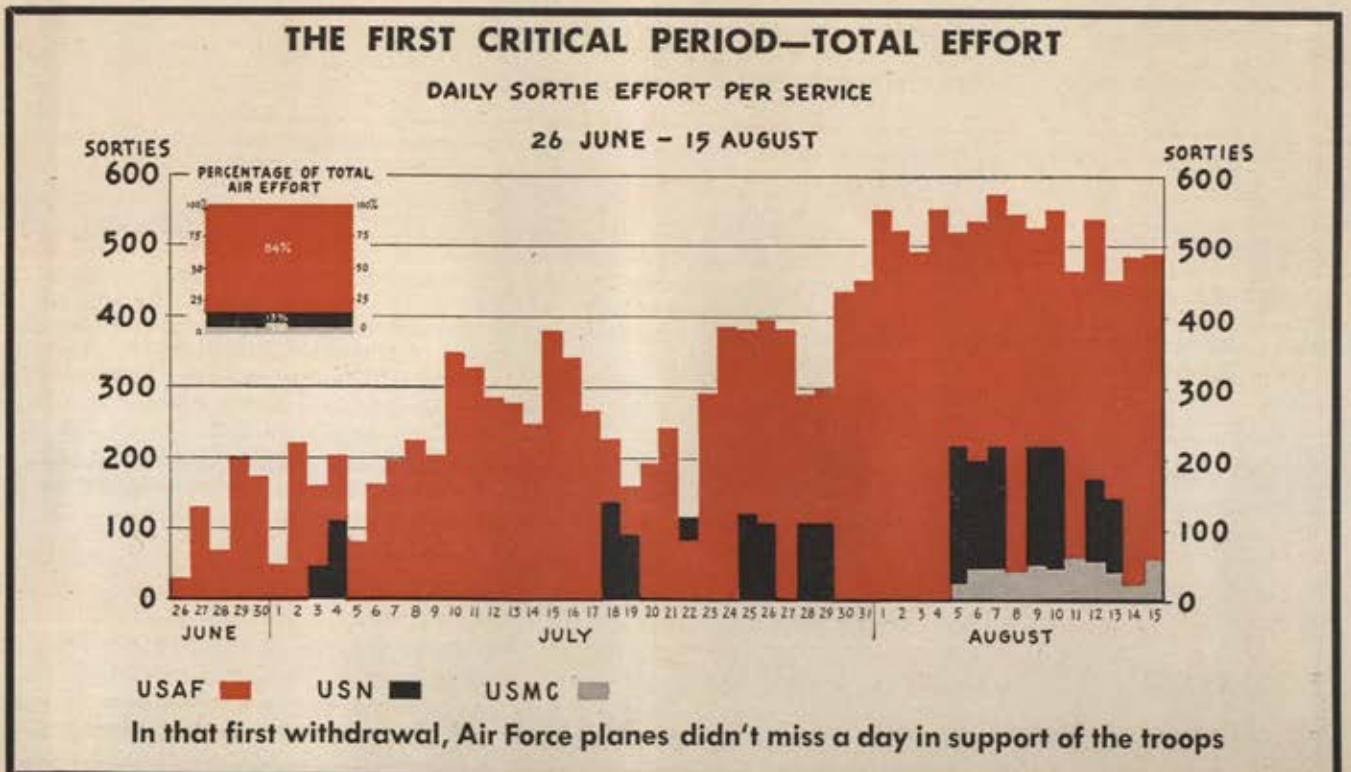
This question has been asked by honest observers who admittedly don't understand the problem, and it has also been asked by less honest ones who should and do know better.

Beyond the fact that the question is false in its premise—inasmuch as no responsible airman has ever claimed airpower could win a war alone—it ignores these "off limit" factors, and, even more serious, it implies a discouraging lack of perspective regarding airpower's capabilities and limitations.

Weighed against the diplomatic barriers to airpower employment in the Korean War—at least from the standpoint of our doctrine evaluation—is the additional fact that the enemy has failed (up to this writing) to commit his own airpower in strength. General Vandenberg commenting on this point, has said: "Trying to evaluate the lessons of airpower in Korea in the utter absence of enemy air opposition is a waste of time." This blunt truth must also be understood.

The lack of enemy air strength has permitted our Air Force, in unprecedented degree, to divert men and planes usually employed in air defense and counter-air missions to the job of direct support for the man on the battlefield. Thus, while the airplane has proved to be—as figures published elsewhere in this issue will attest—an anti-tank, anti-artillery, anti-truck and anti-personnel weapon of massive strength, with a record quite beyond all previous experience, it is also true that in Korea the Air Force has enjoyed the unusual luxury of having relatively no air opposition. We must weigh results against doctrine in that light.

One more basic consideration deserves our attention. That concerns the *readiness* of our Air Force to meet the challenge of the Korean War, and the challenge of tactical doctrine as well. This obviously is a vital point, for no doctrine can be proved or disproved unless the means at hand are in line with those



In that first withdrawal, Air Force planes didn't miss a day in support of the troops

on which the doctrine was based.

It behooves us to recall, with the advantage of hindsight, that up through the first half of 1950, our military interests in the Far East were not at the top of the priority list of our Defense Establishment, and therefore in substantially the same position within the Air Force itself. By June 24 of 1950, in support of United Nations policy, both Army and Air Force had withdrawn all of their personnel from Korea. The United States had left the defense of the Republic of Korea to its own forces, except for a military advisory group and limited backing in terms of weapons, munitions and money—strength designed only to meet internal uprisings.

Back in Japan, Army and Air Force units tended their occupation duties, their only combat responsibility the defense of Japan. On June 24 the ground member of our air-ground team, the Eighth Army, was a four-division occupation force which had only been relieved of garrison duty in late 1949, and which was widely dispersed throughout the Japanese islands. The air member, the Fifth Air Force, had been given as its primary role the defense of the islands against possible seaborne or airborne attack. The potential threat to the military security of Japan was quite obviously an air threat. Thus, the F-80 groups of the Fifth Air Force were equipped and trained for air defense, with weapons for air-to-air combat based upon fixed communications and the radar equipment of a normal air defense system.

Although air-ground activity was included among the responsibilities of both the Eighth Army and the Fifth Air Force, this joint endeavor was far down on the mission list and was not expected to be in readiness for "putting out fires" on the Asiatic mainland. With a rigid military economy program in effect, our ground and air units in Japan had little choice but to take first things first.

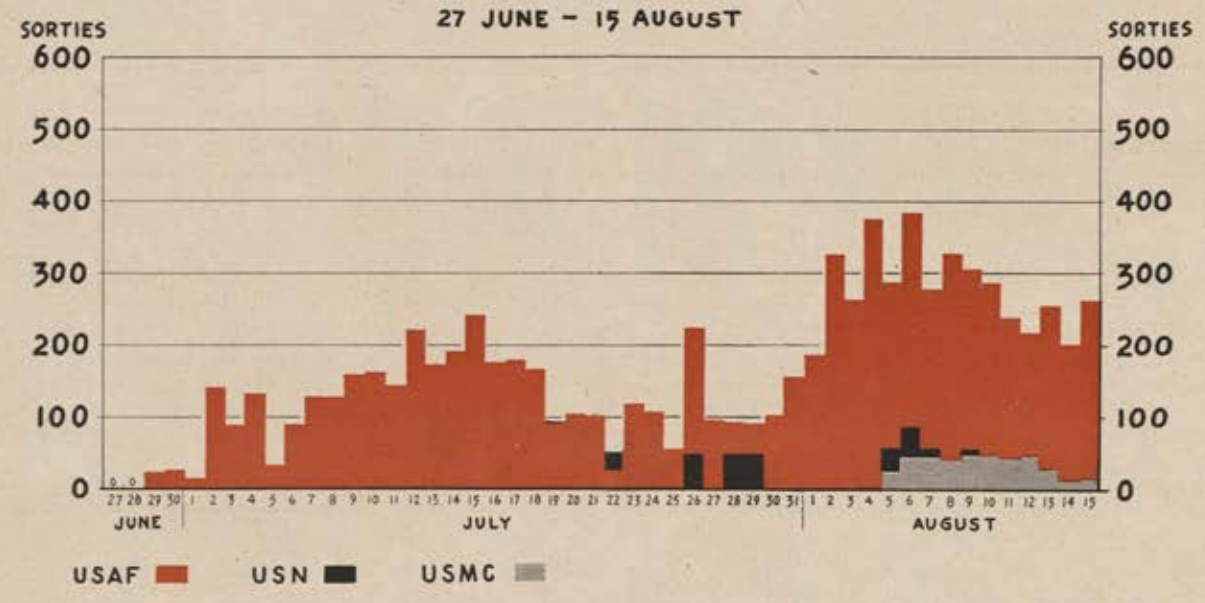
As a consequence, neither the Army nor the Air Force in the Far East were fully equipped or adequately trained to switch overnight from defense and occupation roles to intensive air-ground operations in a mainland battle. On the crowded Japanese islands, there had been little room for realistic *combat* training. The Eighth Army had had practically no training whatever with air units, and possessed almost none of the communications equipment or specially trained personnel to fulfill the requirements of an air-ground team under established Army-Air Force doctrine. Air Force personnel had been given general training in the use of their aircraft weapons, but there had been no air-ground exercises worth mentioning. In the spring, Army and Air Force had discussed air-ground exercises for their units in Japan, but the requirements of occupation duties and the limitations of maneuver areas made the training impracticable. As a result of economy cuts, the Army had *only one* Signal Company Air-Ground Operations and the Air Force *only one* Tactical Air Control Group *in the entire world*. Both are vital to successful air-ground operations. Yet, neither of these units was in the Far East. Both were "stateside," being used for training and held in readiness for emergency use in any part of the world. Military appropriations had not permitted any of the services to maintain their units at more than a fraction of their combat strength.

Then came the dawn—June 25, 1950—and with it in Washington a 180 degree shift in foreign policy. It was an historic move, and it could be met militarily in the Far East only by the waving of a magic wand. Only magic could transform our occupation air and ground forces into combat air and ground forces ready for instantly-effective operations against a victorious enemy fighting on his own time schedule and on his home ground. Suffice to say that our Far Eastern defenders, short on many items, were also short on magic.

"Tactical air support," explains General Vandenberg, "was inadequate during the early days of the fighting in Korea, for the identical reason that there were not enough soldiers, Marines, tanks and guns to stop the Communists. America was not prepared to fight."

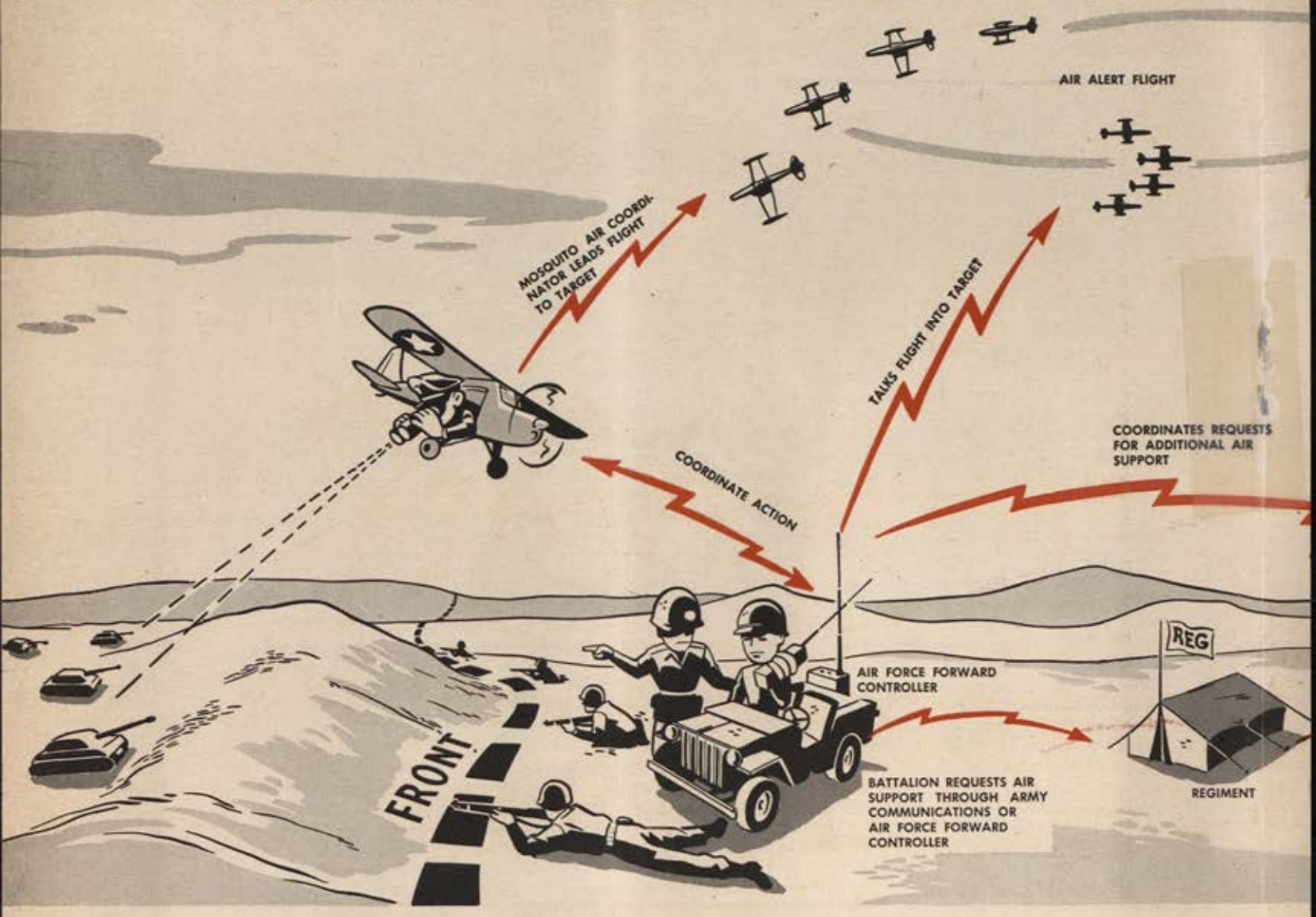
In this perspective we examine the air-ground operation in Korea.

THE FIRST CRITICAL PERIOD—CLOSE SUPPORT



During this period, the Air Force racked up 89.5% of all close support sorties flown

HOW THE AIR-GROUND TEAM OPERATES IN KOREA



Electronics, key to close support, links doughboy to Air Force planes through joint control network.

Jagged colored lines in drawing represent major communication channels of the air-ground system.

AIR SUPERIORITY

All responsible commanders in the theater have agreed with the established doctrine that Tac Air's first priority target should be the enemy's Air Force. There was no way of knowing whether that force would appear in strength.

Up to this writing, air superiority has been no problem. The weak and ill-equipped North Korean Air Force was destroyed in the air or on the ground by the Fifth Air Force in the first few days of operations. The few Russian-made MiG 15's that have ventured across the Yalu River since, have been kept under easy control. Whenever a United Nations soldier has heard an airplane above him, he has known that it was "friendly."

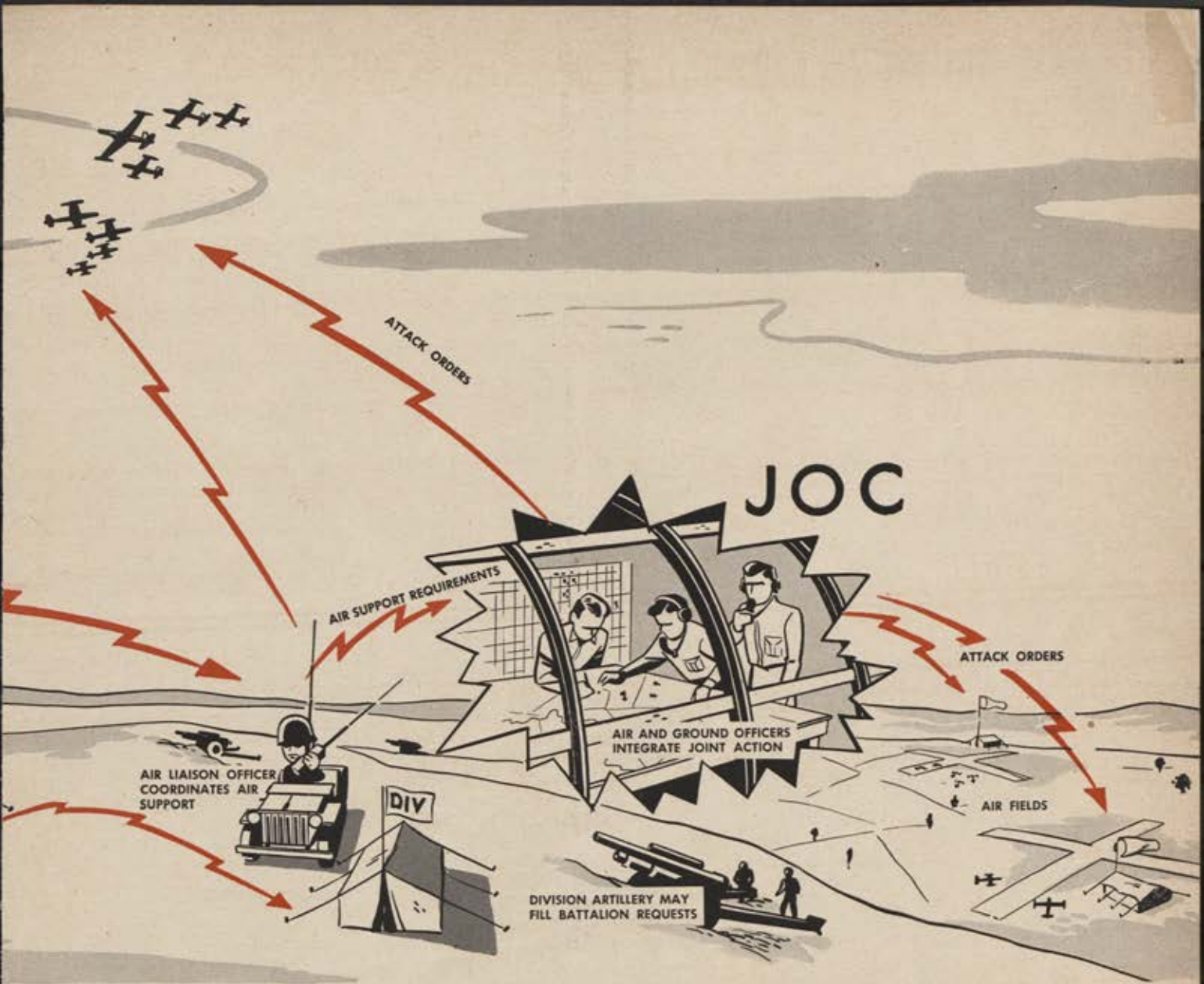
The rapidity with which the American Air Force rose to meet any possible threat of enemy air attack was marred only by the fact that the fixed nature of air defense facilities in Japan did not permit ready deployment to Korea. Thus, US airmen had to work without Ground Controlled Intercept or radar at the beginning of the campaign.

The main point is that no UN ground troops have yet been on the receiving end of substantial air attack—either close support or interdiction—a rare circumstance in modern war.

This fact has its own dangers. For it may lead to the false assumption that in a larger war, friendly air dominance will exist without having to be fought for. A moment's thought will indicate that the first tactical air task in a war with Russia would be the protection of the ground soldier and his lines of communication from attacks of the Soviet Air Force. Stated in other terms, this would obviously mean that close support missions against enemy ground formations could be given far less *proportionate* attention than they have had in Korea—*until* (and if) the Red Air Force was rendered ineffective.

INTERDICTION

Ground personnel have been amazed at the destruction of equipment in the North Korean rear areas by USAF aircraft. Major General Kim Paik, II commanding the First



Emergency air support strikes are controlled at the front, the others at JOC (Joint Operations Center).

Operational partnership features air officers with ground units, ground officers with air units.

Republic of Korea Corps, made a statement which can be accepted in spirit without taking too seriously his percentage figures: "This is big surprise to me. We go from Pohang line. Many burned out enemy trucks, enemy guns, enemy tanks. That why I think about 50, or maybe 75 percent of the war is done by American Air Force . . ."

A new technical phrase should be found which will help the doughboy to realize that this is what a real "interdiction" campaign can do *for him*. If he understands this, there will be a gain, not a loss, of morale when he sees a weapon-laden fighter-bomber winging across the horizon with apparent unconcern at the strongpoint the GI is immediately facing.

In Korea the interdiction program must be considered in four separate and distinct phases.

From 26 June to 3 August, theater policy dictated that substantially the entire effort of the FEAF fighter-bombers be thrown into the close support of General Walker's Eighth Army. Even the B-29's were given the priority mission of close support as late as 18 July, the 24th day of the war. There is no question that the desperate plight of the UN ground troops, engaged in a retrograde action against heavy numerical superiority, presented repeated emergencies demanding all possible air fire power in the zone of contact.

Yet, however desperate today's battle, tomorrow's battle still had to be fought. It was a question of judgment how many close support missions should be allocated to today's battle at the expense of having to face tomorrow the enemy weapons and reinforcements now especially vulnerable while concentrated on railroad and highway. General MacArthur, the theater commander charged with this policy decision, listened to all views. It is no secret that the air commanders, including General Vandenberg when in the theater, urged the importance of a substantial interdiction effort. But the decision favored a heavy preponderance of close support missions. Consequently, in this initial defensive phase, North Korean supplies and reinforcements kept coming down the road unchecked. The interdiction sorties available after satisfaction of the close-support pri-

ority were simply not enough for the job.

The second phase covered the period from 3 August to 15 September. On the first of these dates a methodically planned interdiction program was finally adopted against the enemy's main lines of communication in North Korea. General MacArthur, being informed that air reconnaissance had reported several enemy convoys and three long trains moving south toward Seoul, stated that he desired "a line cut across Korea, north of Seoul to stop all enemy movement south."

The soundness of the air-ground doctrine with respect to interdiction is spelled out in the figures of enemy materiel and communication facilities destroyed by aircraft. These would have been higher were it not for the artificially-imposed Yalu line

September 15 was D-day for the Inchon landing of the Tenth Corps and the simultaneous Eighth Army breakout from the Naktong Perimeter. Between these dates target policy was in the hands of a GHQ Target Selection Committee (General Hickey, GHQ Deputy Chief of Staff; General Willoughby, GHQ G-2; and General O. P. Weyland, FEAF Vice Commander for Operations). Seventy-five percent of the B-29 effort, well over half of the Fifth Air Force fighter-bombers, and sorties from the Seventh Fleet and First Marine Air Wing operated against rolling stock, bridges, truck convoys and other lines of communication targets.

Despite its tardy inception, this six-weeks interdiction campaign, begun during the first week in August, contributed heavily to the swift, complete success of the twin ground offensive launched in mid-September. Shortly after the Tenth Corps assault at Inchon, concurrently with the Eighth Army breakout from the Naktong Perimeter, the major elements of the North Korean army dissolved in space; and the remnants, fleeing toward the 38th Parallel, were pounded to bits by relentless ground and air attack—a classic example of the "exploration phase" of a joint air-ground offensive.

As the Eighth Army and Tenth Corps moved into North Korea and approached the Yalu, the Far East Air Force faced an interdiction problem unprecendented in air warfare. Its area of operation was gradually squeezed out between the forbidden Manchurian border and the advancing front of the UN ground forces. The southern ends of the Yalu bridges were bombed, but the freezing of the Yalu provided a continuous ice-bridge to replace twisted steel. Fighter-bombers and B-29s faced progressive frustration due to the artificial restriction of attack to a trifling southernmost segment of the enemy lines of communication. As UN lines came within one to three nights' march of the Yalu, interruption of reinforcement and backpacked supply became impossible—with consequences which history is now recording. This may be considered phase three of the interdiction effort.

Phase four was still in progress as this report was being written. The massive Chinese Communist attacks of November and December pushed back the UN forces. As our troops withdrew they shortened their own lines of communication and lengthened the enemy's; and this in turn again opened the way to a limited interdiction campaign—limited because Korean bridges would not again be required for north-south transport until the spring thaws had melted the frozen rivers.

Usually a peninsula such as Korea, with its rugged terrain and scarcity of communications facilities, is ideally suited to interdiction operations, for the enemy has no means of skirting the cut-off line. But in Korea these advantages were considerably nullified not only by the handicap of diplomatic boundary lines but also the fact of the North Koreans' highly developed capability of moving their forces off pre-established routes and relying on native transport. A force of the kind the US is more likely to meet in a major conflict would have this capability to a far less degree; it would, therefore, be far more vulnerable to interdiction.

But let's look at the interdiction record.

The advance of UN forces after the Naktong break-through revealed that bridges and transportation facilities behind the enemy's lines had been so destroyed that it was difficult even for our own forces to move forward.

Over half the total tonnage of enemy equipment destined for his front line forces was destroyed enroute. An estimated 81% of all his trucks were destroyed by air attack.

The most effective Air Force interdiction was against the enemy's means of transport. As of 30 November, 236 locomotives had been destroyed and 268 damaged. A total of 2297 trucks were wrecked and 1602 were damaged. The enemy lost 3151 railroad cars while 4300 others were damaged. In one B-29 raid on Seoul marshalling yards, 65 locomotives were destroyed.

There is good argument for the contention that the program of interdiction might have been undertaken earlier than was the case. In such an event the phenomenal figures quoted above would undoubtedly have been even higher. More important, a great deal of the enemy's firepower—eventually leveled against UN troops—would have been eliminated far behind the lines. But the repeated daily crises of the ground soldier demanded battlefield help. None the less, in interdiction as in air superiority, the air-ground doctrine was proved sound.

CLOSE SUPPORT

During the first 75 days of operations in Korea, close air support of ground forces enjoyed an extraordinarily high degree of emphasis, and consumed two-thirds of the total sortie capability of the Far East Air Forces. This pre-occupation with the close support mission stemmed chiefly from our having to piecemeal our ground forces into battle under very unfavorable circumstances, and without the benefit of prior isolation of the battlefield by a sustained air interdiction campaign.

The heart of the close support operation is its communications system. It is an Army responsibility to provide communication lines from forward areas, through artillery coordination centers (where artillery targets are filtered out for ground-weapon attack) to a Joint Operations Center. It is an Air Force responsibility to provide communications circuits for vectoring fighter-bombers into the target area, and directing their fire onto the specific target. Air Liaison Officers with ground units, Ground Liaison Officers with air units, and Operations and Intelligence personnel of both services in the JOC—all must have a full understanding of mutual responsibilities,

ground force needs, Air Force capabilities, and the complex of communications designed to translate Army requests into air strikes. Above all, partnership effort in a common endeavor must be engrained through the habit of cooperation.

As was indicated earlier, the Army's principal responsibility had been the occupation and defense of Japan, and the Air Force's principal responsibility the air defense of Japan. As a result, the lack of equipment and training vital to effective close support operations was critical.

Nonetheless, the Air Force moved into close support operation of Republic of Korea forces on June 26 and has stayed on the job ever since.

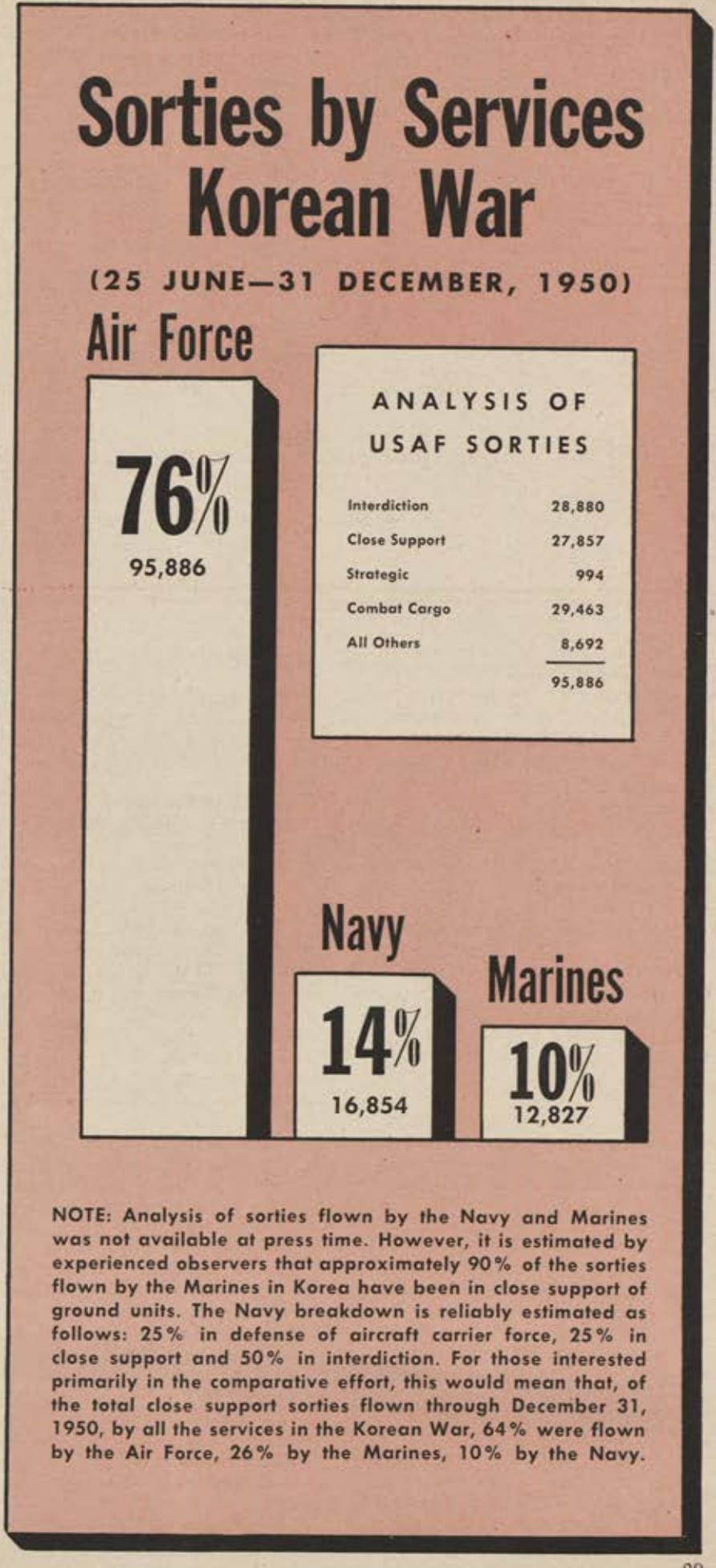
On 3 July General Partridge established his first Joint Operations Center, scarcely more than an expanded Tactical Air Control Party. He assumed the Army responsibility for strike request communications and jerry-built a system out of the artillery network, miscellaneous USAF radio sets, and adaptable, if half-trained personnel. By 19 July he had a fully operative JOC functioning in Korea.

Most important of all, from an early date the Walker-Partridge team developed into a working partnership worthy of a noble lineage of similar air-ground command relationships in World War II: Bradley and Vandenberg, Patton and Weyland, Patch and Quesada, Clark and Saville, Montgomery and Conyngham, MacArthur and Kenney, to mention a few. They established a pattern of evening conferences, usually attended by the commanders in person, to allocate air effort for the following day—so much to air-alert missions available for instant call from front-line unit commander, so much to ground-alert for special situations requiring pre-briefing of pilots and specialized weapons, and something for interdiction. Then, throughout the following day, the Joint Operations Center—receiving and processing Army requests—ordered ground-alert missions, while the TACPs in jeeps and the forward controllers in T-6 Mosquitos directed all types of missions onto the pin-point targets characteristic of close support. To quote General J. Lawton Collins, Army Chief of Staff, "Now the system works."

Army demands for close support were unusually heavy due to other characteristics of the initial operations: ground units did not have anything approaching their normal complement of artillery, and even as late as the turn of the year there was still some shortage; also each division was over-extended. Thus,

Sorties by Services Korean War

(25 JUNE—31 DECEMBER, 1950)



NOTE: Analysis of sorties flown by the Navy and Marines was not available at press time. However, it is estimated by experienced observers that approximately 90% of the sorties flown by the Marines in Korea have been in close support of ground units. The Navy breakdown is reliably estimated as follows: 25% in defense of aircraft carrier force, 25% in close support and 50% in interdiction. For those interested primarily in the comparative effort, this would mean that, of the total close support sorties flown through December 31, 1950, by all the services in the Korean War, 64% were flown by the Air Force, 26% by the Marines, 10% by the Navy.

"If you see a pilot . . ."

5431 39th St., N.W.
Washington, D. C.,
October 24, 1950

General Hoyt Vandenberg, USAF
Pentagon Bldg., Washington

My dear General:

I thought the following would be of some interest to you. It is the extracts of two letters received by two of my sons here from their brother in Korea. This boy graduated from West Point this June and was ordered to Korea with the Twenty-fourth Division.

" I have only one more comment to make before I get off the subject of Korea. If you ever run across any pilot in the Air Force who fought over here, then take him home to dinner, let him sleep in my bed, and give him anything he wants as these boys are doing the greatest job I have ever seen or heard of and I, plus several other divisions really appreciate it. Within five minutes after you call for an air strike, planes are going overhead."

"From the time you set foot in Pusan you see nothing but mountains, and the man who holds the high hills is the one who wins the war. I think I am turning into a billy goat, and I know I should be getting flight pay, which reminds me, if you ever see any Air Force Pilot who flew over here at any time, please take him home or buy him a drink. These boys are doing a great job and have saved my life already."

Very truly yours,
J.Y. Dreisonstok, Captain, US Navy
(Retired)

J.Y. Dreisonstok

Pilot and doughboy of the air-ground team share a strange relationship. Each has the greatest regard for the other, yet they seldom come within 400 mph of meeting. This letter tells one half of the story.

targets that would normally have been handled by ground weapons were assigned for air strikes, a factor which increased the quantity of strike requests and often put air attack on inappropriate targets. Yet, as reinforcements poured into the theater, it became possible to provide close support in such quantity that it rarely happened that air strikes were denied through lack of available aircraft.

Does this mean that every time a front-line unit commander requested a strike he got it? Certainly not. Obviously, there will always be times when it is impossible to meet all requests for air support, just as there will be times when artillery commanders cannot meet all requests for artillery fire. But no one was better qualified to answer the question than the late Lt. Gen. Walton Walker, Commanding General of the Eighth Army. And General Walker has answered in these words: "No request for air support that could possibly be furnished has ever been refused."

Survey teams in Korea have insistently questioned to discover whether, at the JOC where ultimate authority rests on a basis of coordinate command, there arose situations where ground operations said, "We demand a strike," and Air Operations said, "We won't do it." No such instance, or anything like it, has been found. Common problems were met at the JOC with common understanding, consultation and good will on the basis of policies directed by the Supreme Commander and day-to-day allocation of effort by the Walker-Partridge team at the evening conferences.

How long did it take to get an air strike when a ground unit was in trouble? As previously stated, air-alert missions were established each day—fighter-bombers vectored over a segment of the front at twenty-minute or forty-minute intervals for target designation by the TACP or Mosquito at immediate request of the ground commander. This type of mission, expensive as it is in sorties and demanding as it is in numbers of close support groups, produced weapons on the target in ten minutes. Next, aircraft assigned to interdiction missions were normally, vectored over the front where they could be diverted to emergency targets if needed; and this type of strike was available, if at all, without time lag. "Column cover" also, when available by direction of the commanders' conference, was practically instantaneous. "Call missions" requested and directed through the JOC produced attacks in force, ground-briefed pilots and weapon-loading—designed for the individual target. The price paid for the tailor-made attacks was a time-span of one to four hours between request and strike.

Close support in the main forced the enemy to abandon day operations. A captured North Korean operations order is eloquent:

"Our experience in night combat up to now shows that we can operate only four to five hours in the dark, since we start night attacks between 2300 and 2400 hours. Therefore, if the battle continues after the break of dawn, we are likely to suffer losses. From now on, use daylight hours for full combat preparations and commence the attack soon after sunset. Concentrate your battle actions mostly at night and thereby capture enemy base positions. From midnight on, engage the enemy in close combat by approaching to within 100 to 150 meters of him. Then, even with the break of dawn, the enemy planes will not be able to distinguish friend from foe, which will enable you to prevent great losses. This is the most valuable battle experience we have gained from the Chinju operation."

In truth it must be reported that the Korean experience has brought to painful relief the fact of Tactical airpower's limited night capability. Perhaps the difficulties of close support at night are insuperable. Certainly no tactical air units of any service or nation are really effective in close support operations at night. But equally, the USAF should give it a good try.

Other deficiencies are evident. Radio equipment of the jeep-borne TACPs proved so fragile that it had to be carried on blankets on the laps of the radio operators to prevent jolt damage; and even then continuity of operation could not be guaranteed without 100% reserve equipment. Probably the four radio channels of current equipment is too few. Difficulties of marking front-line positions, particularly at night, have not been wholly solved, although army personnel have recounted extremely close attacks delivered with safety to the supported units. And finally, for ever and a day, the need appeared and will always appear for training, training, and yet more training in the delicate teamwork of air-ground operations.

The facts of the Korean war have provided nothing thus far to indicate that it is necessary to restyle the basic Army-Air Force doctrine of coordinated air-ground effort. The general conclusion is clear and it cannot be better stated than in the words of "Officers' Call", an official Army publication:

"In Korea, air power has supported ground troops in virtually every way possible. Because of our immediate air supremacy, the Air Force assumed a close support role almost from the start. Air support was especially welcomed by those ground units whose normal artillery had not yet arrived . . . Many of our doughboys fighting in Korea have never met a pilot . . . unless one was shot down and landed in their lines . . . But they have gained a real appreciation for what our fliers have done and are doing. Day and night—sometimes actually around the clock—Allied air power has blasted the Communist army. Korea is today dotted with the wreckage of Red trucks, tanks, and guns. Against heavy odds, many Allied ground attacks have succeeded largely because of air support . . . Our top military leaders share the front-line soldiers' enthusiasm about what the airmen have done in Korea . . ."

As the late General Walker said, "No Commander ever had better air support than has been furnished the Eighth Army by the Fifth Air Force . . . if it had not been for the air support that we received from the Fifth Air Force, we would not have been able to stay in Korea."

For the success of the coordinated Air-Ground effort, common problems were met with common understanding, consultation and good will. Air support was given when humanly possible

WHAT ABOUT THE JETS?

Early last summer a groaners' chorus moaned long and loud that the Lockheed F-80—the USAF's only jet in combat for the first phase of the war—was an inadequate airplane. In so doing, the groaners questioned the Air Force's jet program in general. The jet's speed, it was said, deprived the pilot of time to locate the

In the Korean War Airpower Has Accounted for...

81% of all enemy trucks destroyed

75% of all enemy tanks destroyed

72% of all enemy artillery destroyed

47% of all enemy troop casualties

These figures represent GHQ's evaluation, independent of the Air Force, of 2,000 POW reports, and are substantiated by field investigation teams using accepted on-the-spot analysis techniques.

Most unusual finding concerns tank destruction from the air, since the rule emerging from World War II had that "the only answer to a tank is another tank."

The personnel casualty figure is also abnormal, since planes were not made as anti-personnel weapons.

target. Accurate delivery of attack was impossible from a jet in flight. Duration of flight was so short due to high fuel consumption and remoteness of bases that the F-80 could not stay in the target area long enough to be as useful as the F-51 or Navy and Marine equivalents. So the groaners had it.

The last criticism, and only the last, had any validity, and soon this was corrected by the installation of enlarged wing tip tanks which gave the F-80 all usable flight duration. It was capable of all the deceleration it needed. It carried (and still carries) large armament loads and it provided a weapon platform of great stability.

The groaners' chorus has been weaker ever since the Air Force's more modern jets—the Republic F-84 and North American F-86—began operating in the Korean war. Both have met the Russian MIG-15 with success. And it's rather difficult for the anti-jet set to question the range of an Air Force fighter like the F-84E, which also fills an air escort mission with our Strategic Air Command.

Moreover, the jets' high speed has greatly reduced our fighter vulnerability to enemy jet aircraft and to enemy ground fire. In fact, F-80 losses per sortie have been one-third those of the F-51. And, as many a North Korean can testify, the jet's speed also permits surprise approach which has often caught the enemy before he could take cover.

The jet fighter has these additional advantages over propeller driven planes: It can carry greater fire power, it has much better pilot visibility and most important, it is easier to maintain in the field. This last characteristic has made it possible for jet units constantly to maintain a higher rate of availability than the conventional squadrons.

General Vandenberg sums it up this way: "Jets are superior for every conceivable job demanded of a fighter plane, including flying at treetop level to silence one machine gun."

But don't the Navy and Marines adhere to propeller-driven aircraft for close support? Yes, they do, and for a very good reason: current types of jet cannot take off from short carrier decks if they are combat loaded for close support. Thus carrier-borne jets are used for air defense missions requiring small ammunition loads; bomb, rocket and napalm loads for interdiction and close support are lifted by propeller-driven attack planes. It is a safe prediction, confirmed by Navy and Marine fliers, that they will convert to jets as soon as R&D people can solve the technical difficulties of operating heavy-laden jets from carriers.

EFFECTIVENESS OF WEAPONS

Napalm—The Korean campaign has re-emphasized that Napalm is an excellent interdiction weapon, as well as a highly favored instrument of close support. Its use was restricted at first because of personnel shortages in Air Force armament sections, as well as shortages of tank casings. Its primary advantage is that it spreads burning destruction over large areas of a 100 x 150 or 200 feet. Napalm will destroy the insulation in the electrical wiring of a tank, burn the rubber off the boogie wheels, set off the ammunition that is in the tank, and it will destroy the steel, making the tank worthless except as scrap iron.

Rockets—The aerial rocket has proved to be a good weapon against materiel but due to limited fragmentation is not especially effective against personnel. Two types of rockets (the 5 inch high velocity and the 6¾ inch shaped charge) have been used most extensively. The 5 incher is essentially an anti-tank weapon. In the early days of the fighting, it was thought to be inadequate against the Russian-built T-34 tank. More recent experience has shown, however, that it *can* kill the 34 if properly fired. The 6¾ inch rocket was designed in great haste at the time the "inadequacy" of the 5 inch missile against the tank was first reported. It was built to concentrate the explosive force forward, blowing a hole in the enemy's armor. It is powered by the same motor as the 5 inch, which, experience to date indicates, is not enough. Observers report that generally the rocket is not as accurate as it should be.

Bombs—General purpose and fragmentation bombs have not lost their effectiveness. More research is needed on the use of proximity fuses on frag bombs to make it most efficient as an anti-personnel weapon.

Machine Guns—One of the earliest of the Tactical Air weapons, it is still one of the most reliable. In Korea it has been effective against vehicles, trains, personnel, and even tanks.

SUMMING UP

As was said at the beginning of this report, it is next to impossible to draw definite conclusions from a war that is still very much in progress, especially a war that twists and turns in emphasis with the daily headlines, but this much can be said—and must be said if the people are to under-

(Continued on page 56)

Glossary of Terms

air alert mission—An air cooperative mission which starts with airborne aircraft awaiting the designation of a target.

air-ground control radio station—An aeronautical tele-communication station through which communications pertaining to the operation and control of aircraft are handled.

air-ground operations system—A system operated by the ground forces to provide the ground commander with the means for receiving and processing the requests of subordinate ground commanders for air missions and for the rapid and continuous exchange of battle information and intelligence.

area bombing—Bombing a target which is in effect a general area rather than a small or pinpoint target.

area of responsibility—A defined area in which responsibility is specifically assigned for development and maintenance of installations, control of personnel, or conduct of defense or attack.

attack, diversionary—An action wherein a force actually attacks, or threatens to attack, a target other than the main target for the purpose of drawing enemy defenses away from the main effort.

attack, holding—An attack designed to hold the enemy in position, to deceive him as to where the main attack is being made, to prevent him from reinforcing the elements opposing the main attack, and to cause him to commit his reserves prematurely and at an indecisive location.

attack, main—Principal attack; attack into which the commander throws the full weight of the offensive power at his disposal; attack directed against the chief objective of the campaign or battle; main effort.

bomb release line—Imaginary line around a defended area or objective over which an aircraft should release its bomb or bombs in order to obtain a hit or hits on an area or objective.

bombing, carpet—To distribute progressively, as a creeping barrage, a massive bomb load upon an area defined by designated boundaries, in such a manner as to inflict damage to all portions thereof.

bombing, pattern—The systematic covering of a target area with aerial bombs uniformly distributed according to a plan. Pattern bombing differs from area bombing, which is bombing of a general area according to no special plan, and from precision bombing, which is directed at a specific target.

bombing, saturation—A maximum bombing effort against a limited area which it is desired to obliterate.

center, joint operation—A central joint agency at senior ground forces and air forces levels organized for the purpose of exchanging air and ground battle information, and for the organization of the combat effort of the air forces in tactical air support of ground forces operations.

center, tactical air direction—A subordinate air operations installation (land or ship-based) from which aircraft and airwarning operations within an assigned area are directed. The tactical air direction center is the operational component of a tactical air control group operating at corps or amphibious attack force level.

close tactical air support—Air action against hostile surface targets which are so close to friendly forces as to require detailed integration of each air mission with the fire and movement of these forces.

column cover—An air mission consisting of fighter aircraft on air alert over or in the vicinity of the head of a column, in constant radio contact with the column, with mission of aerial reconnaissance to the front and flanks and attacks on call of enemy targets which threaten the column.

combat air patrol—An aircraft patrol provided over an objective area, over the force protected, over the critical areas of a combat zone, or over an air defense area, for the purpose of intercepting and destroying hostile aircraft before they reach their target.

combat air support operations—Aerial application of force in direct support of land, naval, and air operations.

control, operational—Control exercised over the combat or service operation of subordinate or other organizations. Operational control comprises those functions of command involving the composition of subordinate forces, the assignment of tasks, the designation of objectives and the authoritative direction necessary to accomplish the mission.

director, tactical air—The officer-in-charge of all operations of the tactical air direction center. He is responsible to the tactical air controller for the direction of all aircraft and air warning facilities assigned to his area of responsibility. When operating independently of a tactical air control center, the tactical air director assumes the functions of the tactical air controller.

fighter controller—In air operations (tactical) the officer of the staff of a tactical air controller charged with the coordination and evaluation of air warning reports and the operational control of aircraft assigned to him.

fighter cover—The maintenance of a number of fighter airplanes over a specified area or force for the purpose of repelling hostile air activities.

fighter director—In air operations (tactical) the officer (in Army and Air Force on the staff of a tactical air director) responsible for the direction of such aircraft and airwarning facilities as may be allotted to him for the defense of his area.

fire direction center—The element of a command post consisting of gunnery and communication personnel and equipment by means of which the commander exercises fire direction and/or fire control. The fire direction center translates target intelligence, and requests for fire into the appropriate fire commands.

fire, interdiction—Fire placed on an area or point to inhibit the enemy in the use of the area or point.

flight—The basic tactical unit in the Air Force, consisting of four or more aircraft in two or more elements.

front—1. The lateral space occupied by an element measured from the extremity of one flank to the extremity of the other flank. 2. The direction of the enemy. 3. The line of contact of two opposing forces. 4. When a combat situation does not exist or is not assumed, the direction toward which the command is faced.

general tactical air support—That phase of tactical air operations against enemy air activities, ground elements, installations and lines of communications in the immediate or projected battle area, which assists the supported ground force as a whole to gain its objectives and does not require integration with the fire and movement of the supported forces.

ground alert—That status in which aircraft on the ground are fully serviced, armed, and with combat crews in readiness to take off within a specified short period of time (usually 15 minutes) after receipt of a mission order.

These are definitions of the chief Air-Ground terms used in this Special Issue

line, bomb—A line established by appropriate troop commanders as a precautionary measure to guard against accidental air attacks on friendly ground forces.

line, forward bomb—A bomb line which delineates the rear limits of a zone of general air action beyond which missions may be ordered by the tactical (or strategical) air commander, but beyond which air units assigned to close support of troops will not operate unless specifically directed.

line, bomb safety—A line, normally designated by ground forces, beyond which air attacks may be executed without clearances from the ground forces. This line is a precautionary measure to guard against accidental air attacks on friendly ground forces.

line, front—A line formed by the most advanced units in any given tactical situation. Also called LINE OF BATTLE.

marshalling yard—A network of railroad tracks which may include a classification yard and appropriate receiving and dispatching tracks, an engine, terminal and repair facilities.

observer, air tactical—An officer trained as an air observer whose primary function is to observe from aircraft in flight and report on the movement and disposition of friendly and enemy forces.

observer, forward—An observer who operates with front-line troops and is trained to adjust gunfire.

operation, air tactical—An air operation involving the employment of air power in coordination with ground or naval forces: a. to gain and maintain air superiority in localized sectors to the degree that ground or naval forces can operate freely without effective opposition from the enemy's air power; b. to prevent movement of enemy forces into and within the objective area and to seek out and destroy these forces and their supporting installations and c. to join with ground or naval forces in operations within the objective area, in order to assist directly in attainment of their immediate objective.

operational control—Comprises those functions of command, involving the composition of subordinate forces, the assignment of tasks, the designation of objectives and the authoritative direction necessary to accomplish the mission.

tactical air command—1. a general term applied to an air organization designed to conduct offensive and defensive air operations in conjunction with land or sea forces; 2. a designation of one of the subordinate commands of the Air Force.

tactical air-control center—The principal air operations installation (land or ship-based) from which all aircraft and airwarning functions of tactical air operations are controlled.

tactical air control party—A subordinate operational component of the land-based tactical air control group designed for the control of aircraft from forward observation posts. The tactical air control party operates at division regimental, or battalion level.

tactical air control squadron—A flexible administrative and tactical component of a tactical air control group which provides the control mechanism for a tactical air control center, or a tactical air direction center, or tactical air control parties.

tactical air controller—The officer in charge of all operations of the tactical control center. He is responsible to the tactical air commander for the control of all aircraft and airwarning facilities within his area of responsibility.

tactical air coordinator (airborne)—An air officer who coordinates, from an airplane, the action of combat aircraft engaged in close support of ground or sea forces.

target information center—An intelligence center set up for assembly, evaluation, interpretation, dissemination, and coordination of target information for supporting weapons.

unified command—That command organization in which a unified force composed of significant elements of two or more Services operates under an officer specifically assigned to the command thereof by the Joint Chiefs of Staff, in Washington.

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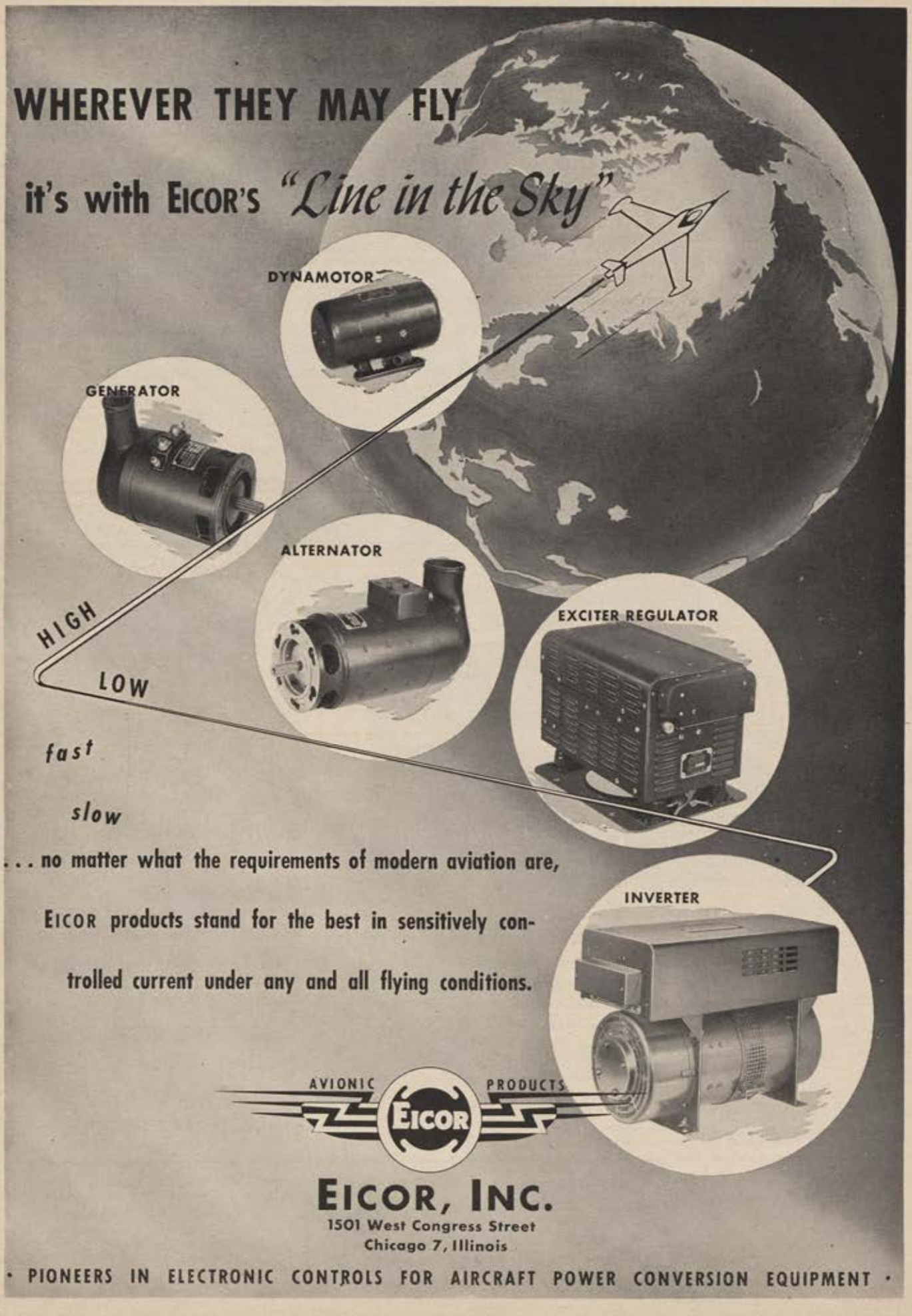

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AF Suspends Involuntary Recall of 18,000 Airmen

Suspension does not affect the recall of USAF Organized Reserve units or their members. Specialists are still scheduled to go

By Jake Culpepper

Involuntary return to active duty of certain airmen of the Volunteer Air Reserve has been suspended by USAF Headquarters. The suspension, which does not affect the recall into active service of members and units of USAF's Organized Reserve, has been made possible by "the response of voluntary enlistments and re-enlistment of prior service personnel."

Approximately 18,000 airmen of the Volunteer Air Reserve (VARTU personnel and unassigned Reservists) had previously received orders directing them to report to one of the Air Force's processing centers.

Specifically the suspension applies as follows:

No further orders will be issued at this time to effect the involuntary entry into active military service of airmen of the Volunteer Air Reserve.

Those Reserve airmen of the Volunteer Air Reserve upon whom involuntary active duty orders have been issued ordering them to temporary duty for processing will be advised that:

(1) The AF Reserve orders directing them to report to a processing squadron are revoked; they will not be required to report in compliance with such orders, or

(2) They may elect to volunteer for extended active military service and if qualified will be accepted.

Those reserve airmen of the Volunteer Air Reserve who are now at or who report to Air Force processing squadron in compliance with orders already issued, who were in transit and could not be contacted, will be advised that:

(1) Their processing will be completed in order that the Air Force may have a better inventory of its Volunteer Reserve.

(2) Upon completion of processing they will return home and revert to inactive status, or

(3) They may elect to volunteer for active military service and if qualified will be accepted.

The suspension does not apply to critical airmen specialists for whom orders already have been issued directing them to report for extended active duty.

These men, plus such other Reservists, both officer and enlisted, who are recalled to EAD as units or as individuals will be called up for a period of three to five days, during which time they will be processed, classified, examined physically, have their records brought up to date and appear before a deferment board.

Upon completion of processing, the Reservists will be returned to his home and will revert to an inactive status to await further orders within approximately 30 days ordering him to active service for a period of 21 months and directing him to report to a duty station, or await further orders which may follow any extended delay granted by the processing squadron delay board, or be advised that he did not meet current physical standards and will not again be called to active service until his physical limitations are corrected or existing physical criteria are lowered to include personnel of his physical limitations.

Reservists are advised to take no definite steps to close out their personal business obligations until his processing has been completed and subsequent orders to active military service are received.

The following maximum age-in-grade scale will be used as a guide in the current recall program:

Officers

Colonel	55
Lt. Col.	53
Major	46
Captain	39
Lieutenant	32

No age criteria will be established for airmen who are to be recalled.

Retired officers will not be considered under the current program. Retired personnel who wish to return to active duty should request same through Director of Military personnel, Headquarters, USAF.

Personnel should normally plan to return home following processing to await further orders. However, if that procedure would cause hardship, they may choose to remain on active service and be reassigned immediately to a duty station when the processing has been completed.

Reservists are requested to bring to the processing station the following and any additional data he may have in his possession to assist in accomplishing his processing:

a. Personal 201 file, to include officers' qualification Form 66 or 66-2, enlisted qualification card AFO Form 20, AFO Form 100, his report of separation and any orders relating to award of a military occupational specialty (MOS).
b. Complete information on civilian experience and/or schooling he has accomplished since last military service.
c. Air Force Form 5 (Flight Record).
d. Personnel orders pertaining to aeronautical rating or flight status.
e. If he has a dependent wife, children, or parents, he should bring with him his marriage certificate and/or birth certificate of children and evidence to prove dependency of his parents upon him for support.
f. Any data to prove the existence and nature of a physical disability for which Veterans Administration or other federal government compensation is received.

Personnel ordered to active military service, whether on a voluntary or non-voluntary basis, are entitled to full re-employment rights under the provisions of Selective Service Act of 1948, as amended.

Current AF policy authorizes the granting of delays to five categories of Reservists. The following paragraphs set forth the scope of each category and the essential information required to be submitted to the delay board to support the request:

Category A

a. Eligibility: A Reservist principally employed or engaged in a critical occupation in an essential activity.
b. Supporting Information:
   (1) Complete description of occupation must be furnished. it must be shown that the occupation is one listed on the Department of Labor List of Critical Occupations. It must be shown also that the Reservist is employed in an activity listed on the Department of Commerce List of Essential Activities, or in one which is in furtherance of the military effort, production, services, or research necessary to the national health, safety, or interest.
   (2) It must be shown that there are unique circumstances surrounding his employment or work which give him essential knowledge or experience not possessed by any available replacement possessing the same skill.

Category B

a. Eligibility: Employment of Reservist.
   (1) In a key managerial job in an activity, the duties of which are critically essential to the overall effectiveness of

(Continued on page 48)

CONTINUED

the operations of that activity.
(2) In a key job in an activity, the duties of which are critically essential to that activity, or
(3) As a key technician.

b. Supporting Information:
(1) Complete description of occupation must be furnished.
(2) It must be shown that Reservist is engaged or employed in an activity listed on the Department of Commerce List of Essential Activities; or in one which is in furtherance of the military effort, production, services, or research necessary to the national health, safety, or interest; or in a government agency which is in furtherance of the military effort, production, or services; or in research necessary to national health, safety, or interest. Documentary evidence required.

Category C

a. Eligibility: Enrollment in an educational institution or engaged in essential research, scientific or educational activities.

b. Supporting Information for Students: (By statement from Institution).
(1) Name and location of institution.
(2) Date of enrollment, date current school term or semester ends, whether or not Reservist is in good standing.
(3) Grade in which enrolled: if graduate student, state year of graduate work.
(4) Type and length of course. Duties for which course will qualify Reservist to perform. Will Reservist be eligible for a commission as a Reserve officer in any branch of service upon or prior to completion of course?

c. Supporting Information for Those Engaging in Research or Scientific Activities: (By statement from Institution).
(1) Applicable information of paragraph 3b above.
(2) Specifically describe field of research or scientific work.

d. Supporting Information for Those Engaging in Educational Activities, Including Teaching: (By statement from Institution).
(1) Applicable information of paragraph 3b above.
(2) Subjects taught, and number of teaching hours per week.
(3) Are students full-time students? Are they workers employed in essential activities as described in the Department of Commerce List of Essential Activities? If neither, who are they?
(4) Will subjects qualify students to perform critical occupations: If so, list occupations.

Category D

a. Eligibility: Compassionate reasons.

b. Supporting Information:
(1) Detailed information regarding the circumstances necessitating request on this basis.
(2) If request based on community hardship, complete written justification must be submitted to show that Reservist's withdrawal from community will jeopardize the health, safety, and welfare of the community.
(3) Documentary evidence in support of such requests must be signed by responsible citizens of the community in a position to know the facts.

Category E

a. Eligibility: Certain elected officials of government as specified in Section 6 (f) of the Selective Service Act of 1948, as amended.

b. Supporting Information: Information to indicate exact position held and term for which elected.

A delay under categories A, B or C will be granted only where the urgency of the civilian work appears to outweigh the need of the Air Force for the service of the Reservist.

Requests for delay or appeals may be submitted by either the Reservist or his employer, but no request or appeal submitted by an employer will be granted unless the Reservist acquiesces in writing. Such requests for delay must be adequately supported by documentary evidence signed by the employer or a responsible official of the company.

A request for delay or an appeal may be in any form, but it must be in writing and signed by the person initiating the request or appeal. It should also set forth a complete identification of the Reservist concerned, including full name, rank, serial number, present address, headquarters issuing active military service orders, and the paragraph and number of such orders. Where possible, a copy of the active military service orders should be inclosed with the request or appeal.

Requests for delay with supporting information shall be submitted to the Delay Board at the processing station to which the Reservist has been ordered to report.

A request for delay may be submitted only after a Reservist has received notification of intent to order him into active military service or actual orders so ordering him into active military service. The request must be presented in person upon arrival at the processing station. Upon receiving notice of the action of the Delay Board a Reservist who desires to appeal from the decision of the board must, prior to departing from the processing station, file his appeal with the Delay Board. The decision will advise the Reservist the time limit within which he may submit additional information to the Appeals Board in the event he desires to appeal. Upon receipt of the decision the Reservist must notify the Delay Board immediately if he desires to appeal. In every case of an appeal the Delay Board will forward the appeal and the original request for delay and supporting information to the Appeal Board. The appealing Reservist may forward such additional information as he desires directly to the Appeal Board at the numbered Air Force Headquarters. However, to be considered, such additional information must reach the Appeal Board within the period of time determined by the Delay Board.

Appeals may be taken only from decisions of the Delay Board at the Processing Station concerning delay in being ordered into active military service. They will not be taken from decisions of the Delay Board concerning postponement of initial reporting to the Processing Squadron.

Pending notification of the granting of a delay or an appeal, the Reservists will comply with his orders. In no instance will the mere submission of a request for delay or the filing of an appeal be considered as relieving the Reservist from responsibility for reporting as directed in his orders.

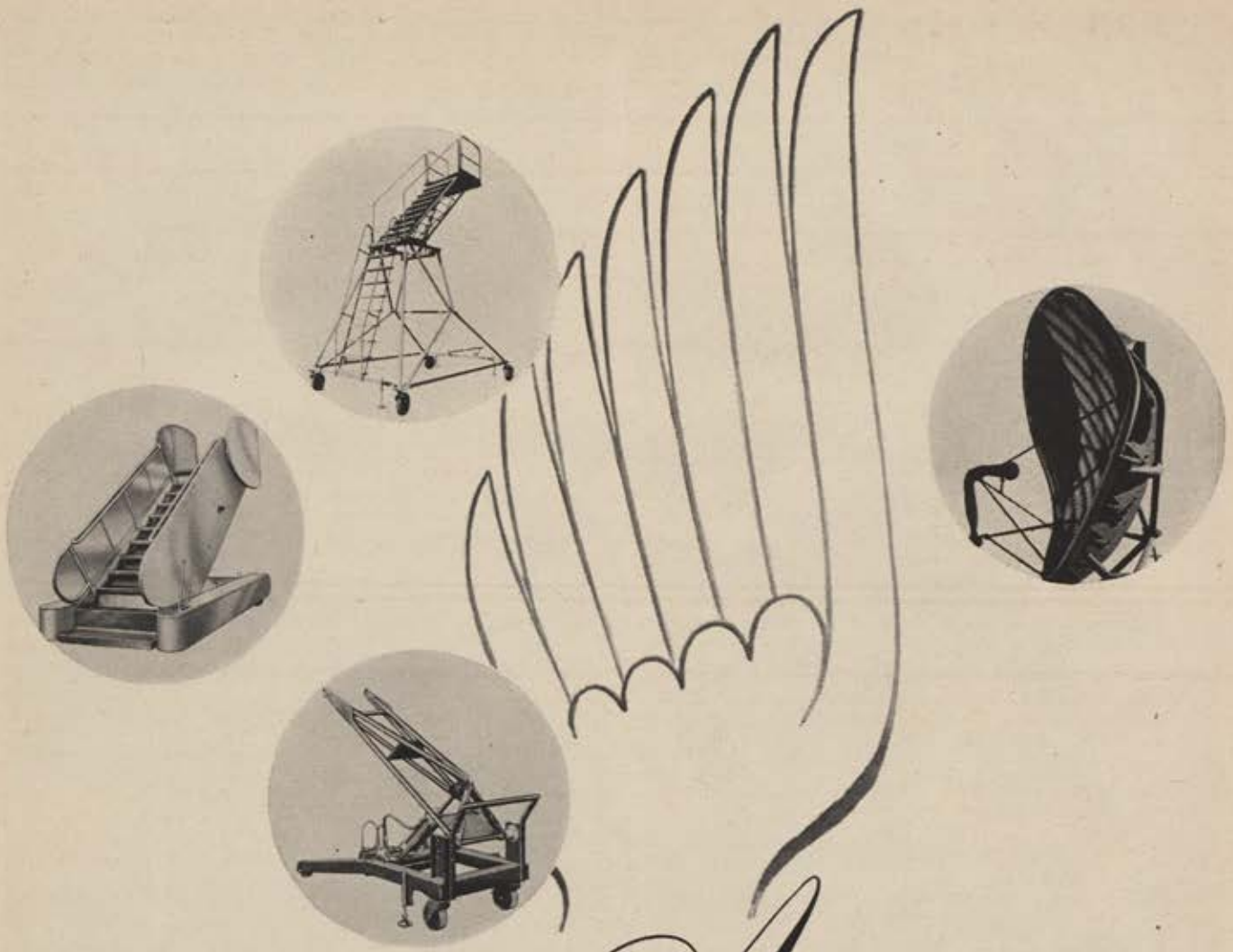
If a Reservist has been granted a delay in recall to active duty by a Delay Board or by the Appeals Board and desires further delay or an extension, his request for such an extension of his delay will be submitted with supporting information first to the Delay Board at the processing station, unless he has already been advised that an extension will not be granted. Appeals from all decisions of Delay Boards on requests for extensions may be made in writing to the Appeals Board and the Appeals Board must justify the additional delay requested.

Appointment of Officers Outlined in New Manual

A combined manual (AFM 36-5) governing the appointment of officers in AF Reserve or Air Force of the U. S. was issued by USAF last month. The new manual, which supersedes previous regulations relative to appointment of specialists, chaplains and JAG personnel and appointments from other services in AF Reserves, spells out three basic criteria for appointments: age, education and experience, and requirements of the AF.

The Commanding General, Continental Air Command, is responsible for the implementation of 36-5. Final selections in grades above captain, as well as all selections for appointments in Medical Service of USAFR where active duty is desired, and all selections of chaplains will be made by Chief of Staff, USAF.

(Continued on page 62)



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WORKERS FOR AIRPOWER

President Johnson Announces appointments for 15 national AFA committees for new year

The present world situation and the step-up in our mobilization program place special significance on the responsibilities of the Air Force Association during the current year. To meet these responsibilities, Bob Johnson announces the appointments for 7 standing and 8 special national committees. Much hard work lies ahead and the success of this work will depend largely upon the efforts of these committees. It will be the responsibility of each chairman to maintain contact with the members of his committee and to call meetings whenever necessary. Reports on committee action are to be forwarded to National Headquarters for dissemination to the national membership. The chairman, members, and mission of each committee are as follows:

STANDING COMMITTEES

POLICY COMMITTEE

MISSION: To examine all matters involving AFA policies; recommend action.
CHAIRMAN: C. R. Smith, New York, N. Y.; former Deputy Commander of ATC.
MEMBERS: James H. Doolittle, Thomas G. Lanphier, Jr., Robert Proctor, Carl A. Spaatz.

FINANCE COMMITTEE

MISSION: Examine all matters concerning financing of AFA and its activities; recommend action.
CHAIRMAN: Benjamin Brinton, New Kent, Va.; wartime contract specialist with Air Materiel Command.
MEMBERS: Thomas D. Campbell, Rex V. Lentz, Dr. W. Randolph Lovelace, II, Jack Gross.

MEMBERSHIP COMMITTEE

MISSION: To examine all phases of AFA membership policies, costs and procedures; recommend corrective action and new membership sources.
CHAIRMAN: Carl A. Spaatz, Washington, D. C.; former chief of Staff, USAF.
MEMBERS: Jacqueline Cochran, James H. Doolittle, C. R. Smith, James Stewart.

PUBLIC RELATIONS COMMITTEE

MISSION: Serve as an advisory group on public relations matters pertaining to AFA; recommend action.
CHAIRMAN: Bert D. Lynn, Los Angeles, Calif.; former Sergeant with the 41st Air Depot Group.
MEMBERS Tex McCrary, Albert Harting, Larry G. Hastings, George Haddock.

CONSTITUTION COMMITTEE

MISSION: Examine constitutions and by-laws at National, Division, Wing and Squadron levels; recommend amendments.
CHAIRMAN: Julian Rosenthal, New York, N. Y.; contract specialist with Air Materiel Command.
MEMBERS: E. Perry Campbell, Meryll Frost.

RESOLUTIONS COMMITTEE

MISSION: Receive, review and prepare for presentation at the national AFA convention, all resolutions which pertain to AFA.
CHAIRMAN: Thomas F. Stack, San Francisco, Calif.; former navigator with the 8th Air Force.
MEMBERS: George D. Hardy, John Kirk, Earle P. Ribero, Julian Rosenthal.

SPECIAL COMMITTEES

RESERVE FORCES COMMITTEE

MISSION: To examine all matters pertaining to the Air Force Reserve, Air National Guard and AF ROTC; recommend action.
CHAIRMAN: J. M. Harper, Washington, D. C.; former staff officer with ATC.
MEMBERS: Walter P. Budd, Jr., Arthur Kelly, Harry J. Johnson, Jr., D. Arthur Walker, Hamilton Wilcox.

NATIONAL CHARTER COMMITTEE

MISSION: Study the advantages and disadvantages of a Congressional Charter for AFA; recommend suitable action.
CHAIRMAN: George Haddock, Washington, D. C.; former AAF public information officer.
MEMBERS: Julian Rosenthal and Sam Clammer.

AWARDS COMMITTEE

MISSION: To recommend to the Board of Directors, for consideration as recipients of AFA's annual airpower awards, those persons who have made outstanding contributions to airpower.
CHAIRMAN: Thomas G. Lanphier, Jr., Arlington, Va.; fighter ace in the South Pacific.
MEMBERS: James H. Doolittle, C. R. Smith, Carl Spaatz, Gill Robb Wilson.

LADIES AUXILIARY COMMITTEE

MISSION: Prepare and submit to the Board of Directors for approval a plan setting forth the membership, dues, and all things pertinent to an AFA Ladies Auxiliary, and recommend the adoption of a national charter to authorize this.
CHAIRMAN: W. Lee Birch, Cleveland, Ohio; former T/Sgt. radio operator with 8th AF.
MEMBERS: Harry J. Fahringer, William P. Hall, Jr., Prestie M. Headings, Jr., Mike Pisani.

FIELD ACTIVITIES COMMITTEE

MISSION: Assemble, review and disseminate special activities of AFA units; recommend action.
CHAIRMAN: Charles Stebbings, Chicago, Ill.; former air operations technician.
MEMBERS: John G. Beard, Jr., Mike Kavanaugh, David Levison, Dr. Raymond A. Michaud, Charles Purcell and Stephen A. Torrock.

MODEL PLANE COMMITTEE

MISSION: Recommend action for the establishment in 1951, and thereafter maintain, annual AFA model plane building contests.
CHAIRMAN: Kenneth G. Vetter, Cleveland, Ohio; former AF statistical control officer.
MEMBERS: Charles C. Huppert, George Mantel, John Myers, Martin J. Weigler.

AFA CREED COMMITTEE

MISSION: Prepare and submit to the next national convention, an AFA creed which will be appropriate for use in opening meetings, special functions, etc.
CHAIRMAN: Irving B. Zeichner, Atlantic Highlands, N. J.; served with the 13th AF in South Pacific.
MEMBERS: Clarence Case, Robert Upton.

NATIONAL HEADGEAR COMMITTEE

MISSION: Inquire fully into the advisability of adopting a national headgear to be worn by all AFA members; recommend action.
CHAIRMAN: Earle P. Ribero, Albany, N. Y.; former Sgt. in ETO.
MEMBERS: James S. Cavanaugh, John F. Devney, Maynard H. Smith.

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Spaatz Named "Aviation's Man of the Year"

University of Denver School of Aeronautics presents Chairman of AFA's Board with plaque at a dinner held in his honor recently

Gen. Carl A. Spaatz, Chairman Board of Directors of AFA, is presented a plaque by Palmer Hoyt, owner and publisher of the Denver Post. Left to right, A. W. McLaughlin, Director School of Aero.; Albert W. Jacobs, Chancellor; Spaatz; Hoyt.

AFA's Board Chairman Carl A. Spaatz was presented with a plaque naming him "Aviation's Man of the Year" at a dinner held recently in his honor by University of Denver School of Aeronautics. General Spaatz was selected by University officials and aeronautical leaders of the Denver area.

The presentation was made by Palmer Hoyt, owner and publisher of the Denver Post, following a laudatory introduction by Albert W. Jacobs, Chancellor of Denver University. The highlight of General Spaatz' acceptance speech was his declaration that "no nation in the world can lick the United States in any shape or form."

AFA was represented at the speakers' table by Brig. Gen. Stanford H. Gregory, Chief of Staff, Air Section, Colorado National Guard, and James A. McCusker, AFA Regional V.P.

Denver University's School of Aeronautics is a unique and productive venture into the proper training of qualified young men in the field of airline and airport management. Under the direction of Mr. A. W. McLaughlin, present chairman of the International Aviation Committee, UNESCO, the School offers BBA degrees in Air Transportation and primary and ATR training on a contractual agreement with Colorado airports.

Air Society Notes

The University of Miami will be host to the third annual conclave of Arnold Air Society to be held in Miami, Florida, on November 23 and 24.

Frank T. McCoy, Deputy for Civilian Components to assist Secretary of Air Force, and Colonel Daniel S. Campbell of USAF Headquarters, recently met Lt. Col. Carl T. Taylor, 14th Air Force Headquarters, at Texas Tech, where all three were on a tour to become more familiar with the ROTC program.

Mr. McCoy stated that he was greatly impressed with the fine attitude and spirit of the cadets and instructors as well as the Arnold Air Society.

Mrs. James H. Doolittle discusses the woman's side of the Air Force with the Director of the WAF, Colonel Geraldine P. May, while Emma A. Meister, who succeeds Allison C. Smith as Commander of the New York City AFA WAC Squadron, looks on. Colonel May and Mrs. Doolittle were special guests at the Squadron's fourth anniversary dinner, recently held at the Hotel Beverly in N. Y. C.

AFA Plans Recall Forums

In keeping with AFA President Bob Johnson's program of keeping Association squadrons supplied with special public relations material, National Headquarters has requested each AFA unit throughout the country to appoint a mobilization service officer whose duty will be to arrange meetings of AF veterans for purpose of disseminating up-to-date information on regulations and policies pertaining to mobilization and recall to active duty.

AFA maintains a staff in Washington which meets with mobilization and defense officials daily, obtaining the latest information which is sent in the form of special bulletins to each squadron.

The squadron mobilization officers have a two-phase duty. One consists of answering any individual inquiries concerning mobilization matters; the other is the coordination of special meetings which will be called from time to time.

AFA STATE ROUNDUP

CALIFORNIA

San Francisco: February 15 marked the fourth anniversary of the founding of the San Francisco Squadron, AFA. The unit celebrated the occasion with another of their famous parties at the War Memorial Veterans Building, Ed Russell, newly-elected squadron commander, has reported.

Ed Gable, chairman of the Squadron Blood Bank Committee, has reported the first month of the 1951 Blood Bank Drive to be beyond expectations. Gable set the drive in motion at the January meeting, and designates contributors for each month.

Instead of there now being five pints of blood in the Squadron Fund at the Irwin Memorial Blood Bank for their January contribution, they now have nine pints.

Miss Lace watches over her boys as they "shoot the breeze" in bar of Squadron 41 Hangar, 4003 No. Broadway, Chicago.

Miss Lace uses her charms in theatre lobby during recent membership drive sponsored by Chicago Squadron 41.

Squadron 41, Chicago, Ill. "beauties" at party in Squadron Hangar. Their first attempt in dramatic field was well received. Players in "Regina's Cocktail Party" l to r. R. Leidig, C. Bess, G. Wilson, L. Kwiatt, N. Lauer, M. Worshill, seated.

Capt. Souders, 104th Fighter Sqdn., Md. ANG, presents a Longine watch as door prize to Mr. Peck at recent joint AFA-104th Fighter Sqdn. warm-up dance. Mrs. Peck and John Warner, Sec'y. Baltimore AFA Sqdn. No. 1, look on.

San Francisco, being one of the principal ports of arrival of the "evacs by air" from the battlefields in Korea, and the base of one of the most concentrated Veterans Hospital operations in the nation, has prompted the formation by the Squadron of a special "Hospitalized Veterans Benefit Program," to be carried out unceasingly by Squadron members to aid and assist the many thousands of vets confined to the many hospitals in the Bay Area.

Early in February, Commander Howard Halla, and vice-commanders Ed Russell and Stew Reed made a survey trip through a dozen wards of Letterman General Hospital in the Presidio to talk with bed-ridden vets and patients and to appraise and determine the best methods of assisting them. Halla revealed after the trip that some of the patients have been at Letterman since the last war, that their needs are many, that the men were keenly appreciative of the visits by fellow vets, and were happy to receive copies of Air Force Magazine. More than 300 copies of the magazine were distributed on the initial trip.

Dr. John R. Upton, the Squadron's delegate to the Bay Area Aviation Committee, was just elected 1st vice-chairman of the BAAC, and Tom Stack, Squadron alternate to the committee, was elected secretary-treasurer of BAAC for 1951.

The Squadron meets every third Thursday in Room 213, Veterans' War

(Continued on page 65)

stand the great issues now before them, and place airpower in proper perspective:

The evaluations of experienced observers, gained through on the spot investigation in Korea and cross-checked one against the other, bear out the conclusion that through January 1, 1951, at least—the cutoff date for statistics in this report—tactical air operations in Korea as engaged in by the Air Force and Army have been generally satisfactory and adequate in quantity and quality.

There is no remaining doubt that, without this air support, our ground forces could not have remained in Korea. With it, they have had an aerial partner in battle that has taken a toll of tanks, trucks, artillery and personnel out of all proportion to what was expected of him, and perhaps out of all proportion to what might be expected of the Air in any future satellite engagement in which it may find itself.

There are obvious deficiencies: for example, requirements for greater tactical air capability at night; for more extensive air-ground training and greater air-ground understanding on the part of both air and ground personnel; for improving the equipment, standardizing the operating procedures and intensifying and training of Tactical Air Control Parties.

But there is no evidence from on-the-spot evaluations that the deficiencies have significantly affected progress of the war. They relate, rather, to efficiency and economy of operations. Moreover, the major deficiencies which appeared early in the war have, for the most part, been corrected. And some of the deficiencies which still exist, notably the lack of adequate night capability, have long held priority positions in the Air Force's research and development program. Late reports from Korea indicate substantial improvements in this phase of operation.

These same evaluations support the fact that our air weapons have held up. The jet, in its first combat test by this nation, has proved to be superior in virtually every respect to conventional type aircraft for tactical operations. The Korean war, with its display of massed manpower sufficient in numbers to compensate in great measure for their technological inferiority, suggests the need for new emphasis on the development of anti-personnel weapons. But there is nothing to indicate that the Air

(Continued on page 58)

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Force policy of building high-performance aircraft for multiple purposes is unsound.

Most important to this particular evaluation of the Korean War, the evidence from the front substantiates conclusively that joint Army-Air Force doctrine on air-ground operations, as contained in Field Manual 31-35, is sound in its major principles and equally applicable to satellite war as to the major type of conflict which gave it birth. The doctrine's inherent flexibility appeared equal to a situation in which air superiority, usually and by necessity the first consideration, was relatively uncontested from the beginning of the conflict, and the immediate needs of battle prompted disproportionate emphasis on close support at the expense of interdiction.

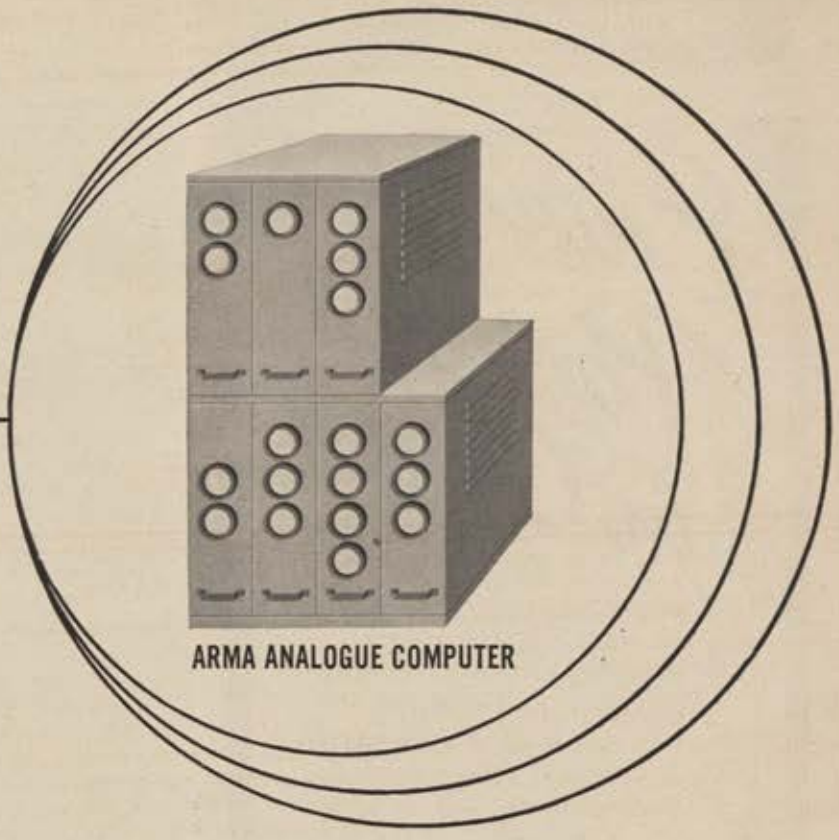
There is evidence, however, that the men called upon to carry out the doctrine—both Air Force and Army—were not always capable of the flexibility which the doctrine demanded. And there is no question that both Air Force and Army personnel are lacking in familiarity with and understanding of this doctrine. Both services show a need for "boning up" on their fundamentals.

There is a vital need for caution, by both leaders and public, in evaluating the lessons of the Korean War. Not only does the tremendous contribution of airpower in Korea illustrate the massive force of the air weapon; it also cautions us *not* to establish these results as the norm for future "brush fire" wars when air opposition may not always be lacking, when other fires burning simultaneously may demand some of the firepower that it has been possible to concentrate upon the enemy in Korea. And even more important is the need for caution in projecting the Korean experience to war against a first-rate power. The relative magnitude and sequence of a military undertaking against a major land-sea-air power would differ materially from that of the Korean conflict. Somehow our people must learn to make the distinction between lessons pertinent to a limited military operation against a Communist satellite such as Korea, whose war-making capacity is nourished from external sources immune to attack, and the lessons pertinent to military operations against the hard core of that capacity which is Russia itself. And somehow the people who can make the distinction must make it known to others. To that end this issue of AIR FORCE is dedicated.

IN THE AIR

ON THE SEA

YES, AND EVEN UNDER THE SEA



ARMA ANALOGUE COMPUTER

The *Analogue Computer* has long held a high place in Arma's work in such specialized fields as automatic gun-laying and torpedo-data computing for the U.S. Navy. Its present wider application to the needs of the other Services stems largely from accelerated post-war engineering at Arma, which resulted in miniaturizing its components and at the same time making them interchangeable and more accurate.

By this Arma development, the *Analogue Computer* has reached a new level of importance as a contributing factor in the high accuracy of American arms. It is typical of many things developed by Arma engineers to aid in making America safe against those who wish to destroy it.

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The Airman's Bookshelf

THE HELL BOMB.
by William L. Laurence
Alfred A. Knopf. 198 pp. $2.75

This book by the noted New York Times science reporter, William L. Laurence, gives his views of the "hydrogen," "fusion," or "super" bomb, as it is variously called. It is of especial interest at this time, since the President has directed that work should continue on it, and Americans must take stock of all their strength in our current time of troubles. The book contains three separate, essentially distinct sections. The first four chapters are devoted to a description of the "hydrogen" bomb and its implications; the fifth is a primer of atomic energy, written for the layman; and an appendix lists the history of discussion and negotiation for the international control of atomic energy.

Mr. Laurence is well qualified to write about atomic energy, since he was selected by the War Department to be the only reporter to visit secret war plants and write a series of reports about the A-bomb, to be released after the first one was dropped at Hiroshima. He was the only reporter at the A-bomb tests at Alamagordo, New Mexico in May, 1945, and was selected as the only civilian to go on the mission to bomb Nagasaki. Mr. Laurence states in the beginning that he has had no access to secret documents or programs concerning the "hydrogen" bomb, and that the fact that the Atomic Energy Commission had "no objection to publication" on grounds of security in no way vouches for the accuracy of the book's contents.

His description of the bomb has been aimed at the complete layman and has hit the mark very well. He shows how the fusion or hydrogen bomb differs from the fission or A-bomb in one very important particular—it does not have a "critical mass," so there is no limit to how large a bomb one could build. It is this difference that allows conjecture of a hydrogen bomb 1,000 times more powerful than the A-bomb. The only catch is that the hydrogen bomb will not detonate until a temperature of 50,000,000 degrees centigrade has been reached, and the only way that temperature can be generated by man is by exploding an A-bomb. The hydrogen used in Mr. Laurence's hypothetical H-bomb is actually deuterium, or hydrogen of mass number two; and a small amount of tritium, or hydrogen of mass number three is also required as "kindling." The H-bomb then, consists of an ordinary A-bomb "match," with an undetermined amount of tritium "kindling," to light the H-bomb "fire." Unfortunately, tritium is not found in nature, and must be made in the same atomic piles in which plutonium is made. Mr. Laurence alleges this to be an advantage for the United States, since we already have an A-bomb stockpile, while he believes that Russia, which is committed to plutonium bombs would have to stop building A-bombs in order to make H-bombs.

While describing the H-bomb and how it works the author is beyond reproach in his logic; but when he begins to give his personal views of the military worth of such a bomb he is less rigorous. He makes use of many unsupported assumptions in developing these views. For example, he states that since the United States built only three A-bombs during the first six months our plants were in operation, that Russia could make only six bombs a year. This stretches the process of inductive reasoning possibly as far as anyone has ever stretched it before.

In some of his statements about military operations, the author is not on firm ground. He states that for Russian

bombers approaching the United States "with modern radar devices, which are constantly being improved, and fleets of fast interceptors, far in advance of anything Russia could develop, we would destroy them long before they would do us any harm." This is simply not true, and it is hoped that no American will be bullied into false security because of such statements. Although we do have radar equipment and interceptors far superior to those used in World War II, we also have an entirely different problem in air defense, because any single bomber carrying an A-bomb has a destructive capacity 25,000 times as great as one bomber of the last war.

He also foresees the passage of strategic bombing as a technique of war, reasoning that strategic bombing is conducted in order to deprive the opposing army of weapons and supplies, and that "if you had a superweapon that could wipe out an entire army in the field or on the march at one blow, there would be no further need of depriving an army that was no longer in being." This is, of course, a very big "if," and the author's assertion that the H-bomb is the "tactical weapon par excellence" hardly supports the contention that the strategic bombing of industrial capacity is no longer necessary. —J. R. Dempsey

SOUTH KOREA: UN wounded are loaded on a Bell H-13D helicopter near Mun-mang-ni for evacuation to a rear hospital. (Acme Photo)

Mercy HAS ROTARY WINGS

The helicopter has "come into its own" in Korea. Only the most glowing reports of achievements have been attributed to military helicopters and their crews. One of the most commendable "mercy mission" performances won the Distinguished Flying Cross for the U. S. Army's Second Helicopter Detachment on January 14, 1951.

The award was made in recognition of the successful evacuation of 23 wounded men from the battlefield to a hospital 25 miles in the rear. Using four Bell H-13D helicopters, U. S. Army pilots completed the assignment in 2½ hours. One helicopter suffered 18 bullet holes during its flights.

In addition to the Army's H-13D, Bell HTL-4s are also serving in Korea. One Marine helicopter pilot made the most of his HTL-4 by evacuating four wounded (two in the cockpit and one each in litters) on one trip.

MOBILIZATION CONTINUED

Appointments under the new program will be made in such numbers, grades and MOSs as may be authorized from time to time by USAF Headquarters. Changes in requirements and qualifications from time to time will be issued as lettered changes to the Manual. Only those persons who are best qualified will be appointed. Appointment is not assured by reason of meeting established requirements.

Outstanding persons in business, scientific, professional or technical fields who do not meet eligibility criteria but who have demonstrated through their civilian occupation that they are outstanding in their respective fields may be appointed upon approval of Chief of Staff, USAF.

Qualified personnel with or without prior military service are eligible to apply for Reserve commissions, including members of AF Reserve seeking appointment in grade higher than the one currently held except commissioned officer of USAF, USAFR, ANGUS and AF of U. S. on extended active duty.

Persons rejected for any reason when applying under this manual must wait one year from date of rejection before they are eligible to reapply.

Former Regular AF officers upon application, submitted within six months subsequent to discharge, who were separated honorably by reason of unqualified resignation, will be appointed in USAFR in highest grade, either temporary or permanent, in which they had served at any time. Appearance before an examining board and possession of qualifications in a specialty covered by this manual are not required.

Former AMG of U. S. officers who apply within six months subsequent to discharge will be appointed in highest grade served satisfactorily in AFUS, USAFR, ANGUS. No examination of specialty qualifications are required.

Among those persons ineligible to apply for appointments are: commissioned officers of USAF, USAFR, ANGUS, AFUS on extended active duty; officers or enlisted men in Reserve forces of Army of U. S., Navy, Marine Corps, Coast Guard, Coast and Geodetic Survey and Public Health Service, unless they have obtained a conditional release from appointments or enlistments and are not on active duty; enlisted men and warrant officers of Army, Navy, Marine Corps, Coast Guard in active service of U. S.; females with dependents under 18; persons, during period of war or emergency who are not available for active duty within 30 days from date of appointment; persons ordered to report for preinduction physical exam under Selective Service Act of 1948; and persons eliminated from OCS or Aviation Cadets, or Service Academies for disciplinary reasons.

Applicants must be physically qualified for general service. The physical report that accompanies the application must be made not later than 90 days prior to application.

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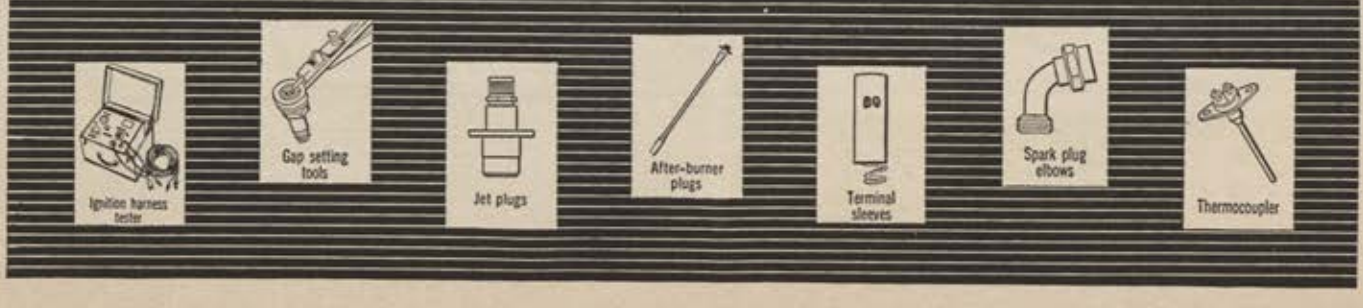

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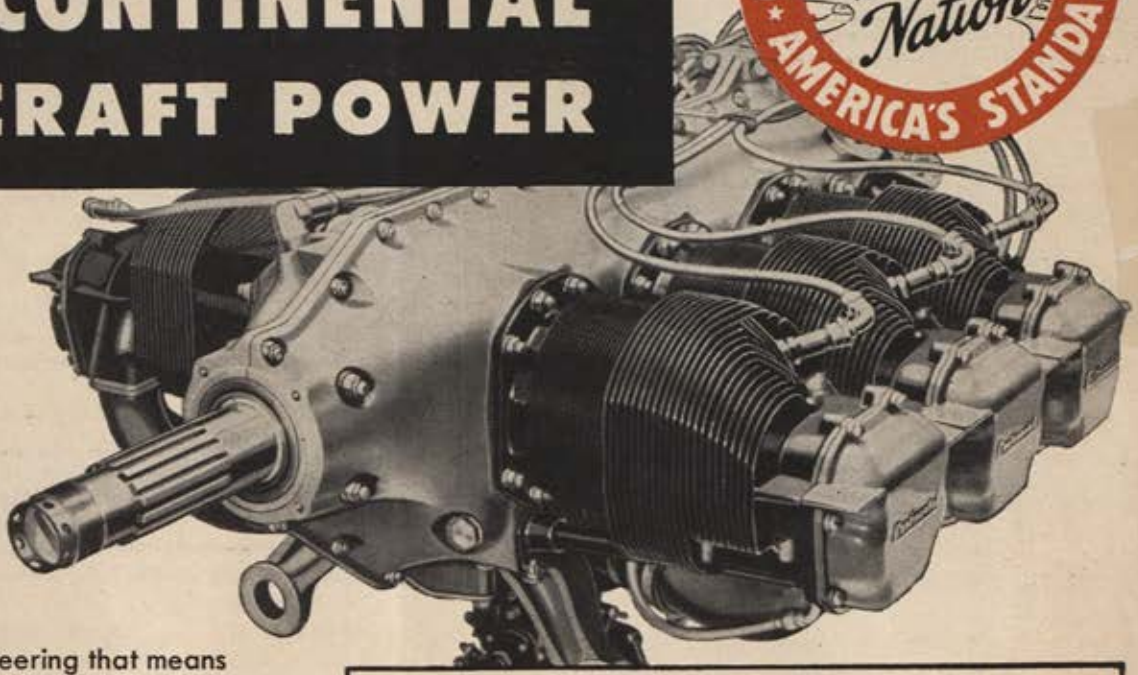

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C75-12	233	75 @ 2275	4	188
C85-8F	233	85 @ 2575	4	188
C90-8F	252	90 @ 2475	4	201
C125-2	236	125 @ 2550	6	282
C145-2	253	145 @ 2700	6	301
E165	246	165 @ 2050	6	471
E185	246	185 @ 2300	6	471
GE240-1*	Pending	240 @ 2900	6	471
E225-B	267	225 @ 2650	6	471
D470-11	Pending	190 @ 2300	6	471
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ILLINOIS

Chicago: A Directory listing all AFA members in the Chicago area is being compiled by the Chicago Squadron No. 41, AFA, Will H. Bergstrom, commander of the Squadron and Directory Editor, has announced.

The first step in the process was to print cards requesting information to be published in the Directory. Approximately 1500 cards were mailed to members in the area.

This book will be published with proceeds of advertising space sold by the squadrons. Each AFA unit will receive a pro-rated share of the profits based on the amount of advertising turned in.

This project was initiated to interest the members-at-large in local activity, stimulate activity in the Chicago Group and obtain new members, Mr. Bergstrom said.

Members in the Chicago area who desire their names listed in the Directory should contact Mr. Bergstrom at 4003 North Broadway, Chicago, Illinois.

Chicago: Chicago AFA Squadron No. 101 has started a new membership drive with hopes that the present emergency will not affect the final goal the Squadron has set, George A. Anderi, 412 North Humphrey Ave., has announced.

Plans are also under study for organizing an Auxiliary in the near future.

The AFA unit is searching for a lot so that they may build their own Hangar soon. Equipment, materials, money and trained labor has been offered by members of the Squadron toward achieving this goal.

MARYLAND

Baltimore: Air Force jet aircraft and the acrobatic team of the 104th Fighter Squadron, Maryland Air National Guard, will participate in a spring air show, plans for which were drawn up at a recent meeting of the Baltimore Squadron, AFA, according to Charles Purcell, commander.

Acrobatics by the fighter squadron team will last for 45 minutes. Arrangements are being made to obtain an airline transport for short local passenger flights. Air Force ground displays will also be at Harbor Field, where the air show will take place.

Mr. Purcell also stated that the Squadron is planning to buy a small airplane for use by the members, rather than lease one from a private operator.

A joint AFA-104th Fighter Squadron warm-up dance was held recently in the National Guard hangar.

Correspondence to the Squadron should be addressed to John S. Warner, secretary-treasurer, 19 Cedar Avenue, Towson 4, Md.

NEW JERSEY

Montclair: The Montclair-Essex Skuadron, AFA, meets the third Monday of

(Continued on page 68)

NED ROOT, MANAGING EDITOR, LEAVES AFA FOR LA

If Ned Root were on hand to put this issue of AIR FORCE to "bed," as he has been doing for Air Force Association these many years, since he and the magazine joined the organization together back in 1946, he'd probably scream that we had "screwed the page up" something awful. Ned always engaged a page layout in hand-to-hand combat.

As Managing Editor of AIR FORCE, Ned has been a prime mover in the development of this magazine as AFA's official journal. As a writer of top ability, he has produced many of its best articles.

In recognition of his contributions to AFA, Ned received the airpower award at the last national convention. In recognition of a swell guy as well as an outstanding magazine man, the editors must report that they hate to see Ned go, but wish him the best of luck in "industry."

Last month, Ned Root accepted the position of Publicity Manager of Lockheed Aircraft Corporation in his home state of California.

American offers new Nonstop Flagship service

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The Finest Service Available

• Demonstrating again American's policy to provide the best in air transportation, a new nonstop service has been inaugurated between New York and Toronto. Fast quiet Convair Flagships make this service the most dependable as well as the most luxurious available.

DAILY MORNING AND EVENING DEPARTURES FOR BUSINESSMEN

In addition to the regular one-stop service, nonstop Convairs will depart from New York at 7:40 AM and 8:00 PM and arrive at Toronto at 9:40 AM and 10:00 PM respectively. Returning, 9:00 AM and 6:30 PM flights will arrive at LaGuardia Airport at 10:45 AM and 8:15 PM respectively.

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Get on Top... Stay on Top... in the U. S. Air Force!

ROUNDUP CONTINUED

alternate months at the home of one of the Squadron members. The February Squadron "Newsletter" announced dates of meetings for the coming year as follows: Feb. 19, April 16, June 18, Sept. 17, Nov. 19, and Jan. 21. "Newsletter" will carry announcements of time and place for the meetings.

Items for publication in the "letter" should be mailed to P. O. Box 226, Montclair.

The Squadron, despite a lull in its own activities with masses of Reserve recalls staring it in the face, is getting into the Boy Scout business in a big way, the "Newsletter" has reported. During the coming couple of weeks, a second Air Explorer Squadron will be chartered in the Squadron's name in Montclair—to be known as Air Squadron No. 2 under the Eagle Rock Council.

Dick Schieler has been recalled to USAF and is stationed at Bolling AF Base, D. C.

Mickey Cochran recently conducted a mobilization forum for Squadron members.

Patterson: Charles Liske of the Central Bergen Chapter House, Hackensack, American Red Cross, spoke about atomic first aid and its importance in event of an A-Bomb attack at a recent meeting of the Passaic-Bergen Squadron, AFA, at Odom's Restaurant, Route Six, Teterboro.

Mr. Liske's appearance was made possible through the efforts of Leo Sweeney, vice-commander of the Squadron.

NEW YORK

Syracuse: The 1951 New York AFA Wing Convention will be held on the weekend of May 19 and 20 at the Syracuse Hotel in Syracuse, New York.

Albany: In an effort to increase the membership and arouse interest in AFA, it was unanimously agreed at a recent meeting of the Albany Squadron to discontinue the yearly squadron dues of $1.00. National members may now join the Albany AFA Squadron at no extra charge.

Walter B. Stephens, P. O. Box 1591, Albany, is secretary of the Squadron.

New York City: Colonel Robert Krummel, assistant director of civil defense for New York City, was guest speaker at the February 7 meeting of the New York City Squadron No. 1 (WAC). The program also included a film, "Pattern for Survival," which concerned the atom bomb.

The meeting, which was held at the Consolidated Edison Company Auditorium, was a joint affair with the other AFA squadrons in the area invited. A good crowd was on hand.

New York City: Colonel George M. Rogers, 1st Air Force, was guest speaker at a recent meeting of the Bronx Squadron AFA.

Thomas Cosgrove, 1555 Odell Street, is commander of the unit.

New York City: Manhattan Squadron No. 1, AFA, will hold its annual banquet on Thursday, March 8 at the Hotel Rus-

(Continued on page 70)

Martin Staffed for Systems Engineering

Guided missiles experience aids company in implementing this airplane design concept

Guided missiles were the first aircraft to attain supersonic speeds—to acquire fully automatic control—to require the close design integration of components which The Glenn L. Martin Company calls *Systems Engineering*. Today, supersonic speeds and increasingly difficult missions demand that piloted airplanes, too, be designed as integrated airborne systems.

That's why Martin engineering is staffed by representatives of all three elements in the production of modern airplanes—airframe and power plant—electronic flight and navigational controls—and military armament or passenger facilities.

Complete Development Coordinated

No longer is aerial-weapons engineering concerned solely with the development of flying vehicles whose only goal is speed. And the complete development of an aerial weapon must be so scheduled that the end product represent a completely coordinated system.

Radar, servo-mechanism, automatic control, automatic computer and antenna experts—as well as aerodynamicists, structural engineers and electrical, hydraulic, armament and power plant installation specialists—are all part of the well-integrated engineering team Martin offers its customers today.

Martin Ads Tell Air Power Story

Reaching millions of informed, alert American magazine readers, Martin advertisements like this highlight air power's important role in our country's preparedness program.

Survey after survey has demonstrated that their story-style appearance attracts an extremely high readership and a worthy audience for the facts on this vital question.

New Navy Sub-Hunter Turns on a Dime!

A TRAIL OF DYE *marks the quick turn of a Navy Marlin—in one-third the radius normally required.*

A CLOSE-UP *sketch of the hydroflaps developed by Martin engineers.*

Hydroflaps allow advanced base flights from restricted bodies of water—permit safer operation from seaplane tenders—improve maneuverability in air-sea rescue

A pair of hinged, underwater flaps on the stern of the Navy's big, new Martin P5M-1 Marlins—serving as brakes for fast taxiing stops and as stern rudders for increased maneuverability—have diminished two problems common to all seaplanes. They permit operations from rivers and restricted inlets. Give added safety when landing near a seaplane tender with other planes staked out in its area. Provide faster turns essential to air-sea rescue work.

Hydroflaps are just one of the advanced features of this modern, sub-hunting successor to the famous Martin PBM Mariner seaplane series. The Marlin will be equipped with latest electronic devices for detecting submarines, as well as armament for destroying them. Its clean, streamlined profile gives it more speed than its older brothers. Its long, extended hull diminishes the conventional "step," gives it much greater stability on the water. The sub-hunting Marlin is another example of the result-producing teamwork between our military services and advanced Martin aircraft-weapons engineering. THE GLENN L. MARTIN COMPANY, Baltimore 3, Md.

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ROUNDUP CONTINUED

sell, 45 Park Avenue at 38th, NYC, at 7:30 p. m.

Harold Glasser was elected commander of the unit at the February 8 meeting.

Julian Eisner, 175 Riverside Drive, New York City, has been named Mobilization Service Officer.

New York City: The First Brooklyn Squadron, AFA, held its annual dance last month at the Hotel Pierrepont. John Favorita was dance chairman.

OHIO

Toledo: The following is an excerpt from a letter to Ralph V. Whitener, AFA's Organizational Director, from Larry Hastings, commander of the Toledo (Joe E. Brown) AFA Squadron: "As you know, I have been active in Civil Defense here in Toledo. Through these activities, I learned of a 'Veterans' Civil Defense Meeting' which was to be held with Maj. Gen. Leo Kreber, Adj. Gen. of Ohio, and Gov. Frank Lausche. A few days later, I received an invitation to attend this meeting as a result of my CD work. When I got there, I found it to be primarily a meeting of State Commanders of Vets' and some Reserve organizations. There were eleven organizations represented, with a total of eleven commanders and eight other men present. I was much surprised that the CD officials in Columbus, our state capital, hadn't invited (or even known about) AFA. I had in my briefcase all issues of AF Magazine dealing with CD and the section of Airability dealing with it. Other than the organization which had drawn up the resolution, ours was the only one which had done anything concrete in the way of public education in Civil Defense. I am referring to the fine articles in Air Force Magazine and Airability. The issues of AF and Airability's section on Civil Defense took the spotlight."

Bob Cranston's name has been submitted to Mayor Ollie Czelusta to represent AFA on the Vets' Advisory Committee of Civil Defense and John Anderson has been listed for AFA with the Lucas County Civil Defense Unit, according to Mr. Hastings.

Mr. Hastings also announced that there will be plenty of openings in CD for those who wish to serve.

Ed Sullivan, M. C. of the television show "Toast of the Town" will be contacted by the Toledo (Joe E. Brown) Squadron, AFA, on his current promotional tour for the Lincoln-Mercury dealers. Paul Bolinger, Squadron secretary, has announced that it is definite that he will devote some of his time for AFA while in Toledo.

Mr. Sullivan has been an honorary member of the Joe E. Brown Squadron since last March.

The Squadron will have at least two members run a display booth each evening at the Home and Sports Show during its showing in Toledo. Mr. Bolinger has stated that the idea is not only to promote the Association but to sign new members.

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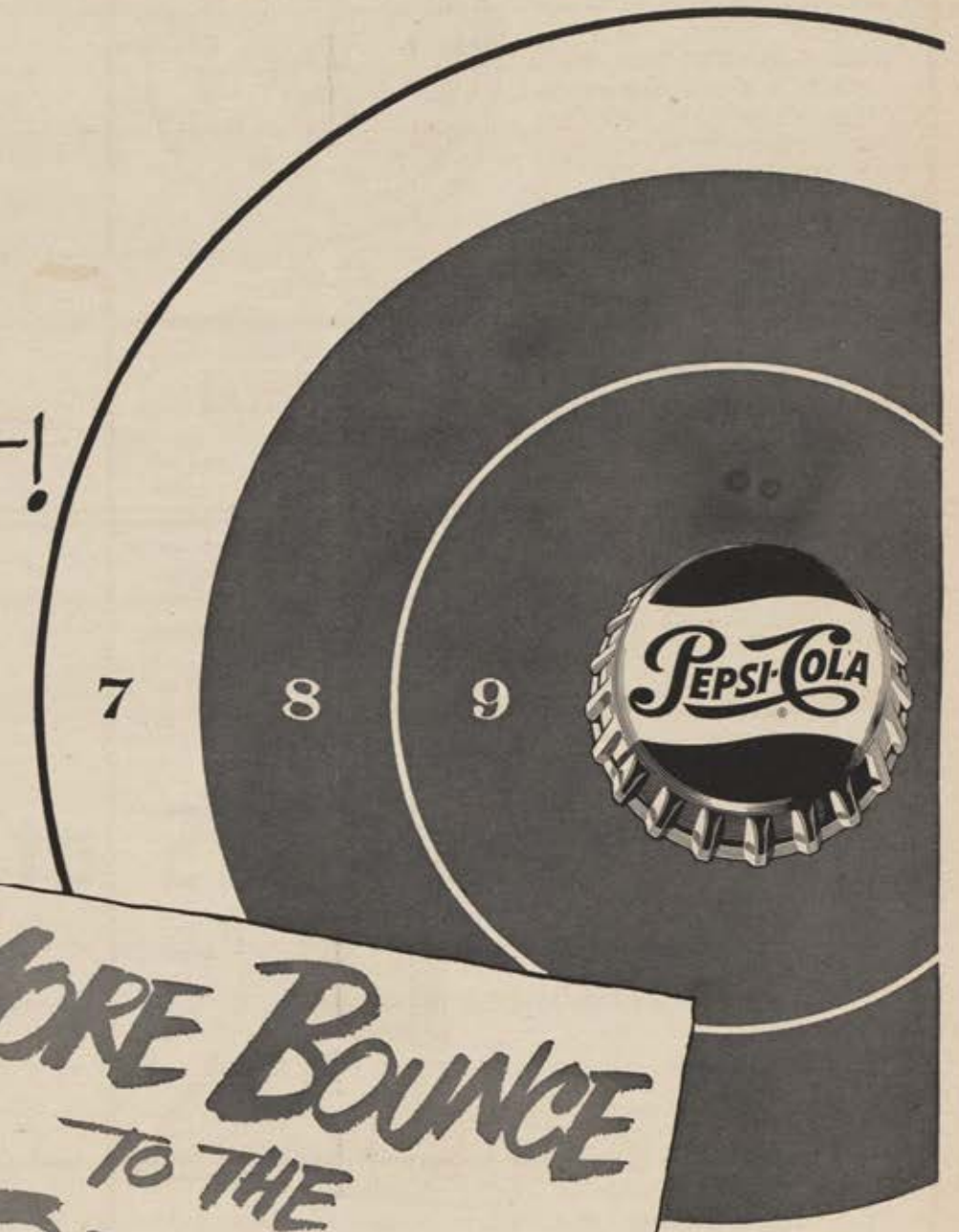

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Commitments by the United Nations to stop aggression throughout the world emphasize the desperate need for high-capacity, long-range air-cargo-carriers that can transport vast amounts of materiel where and when they are needed.

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