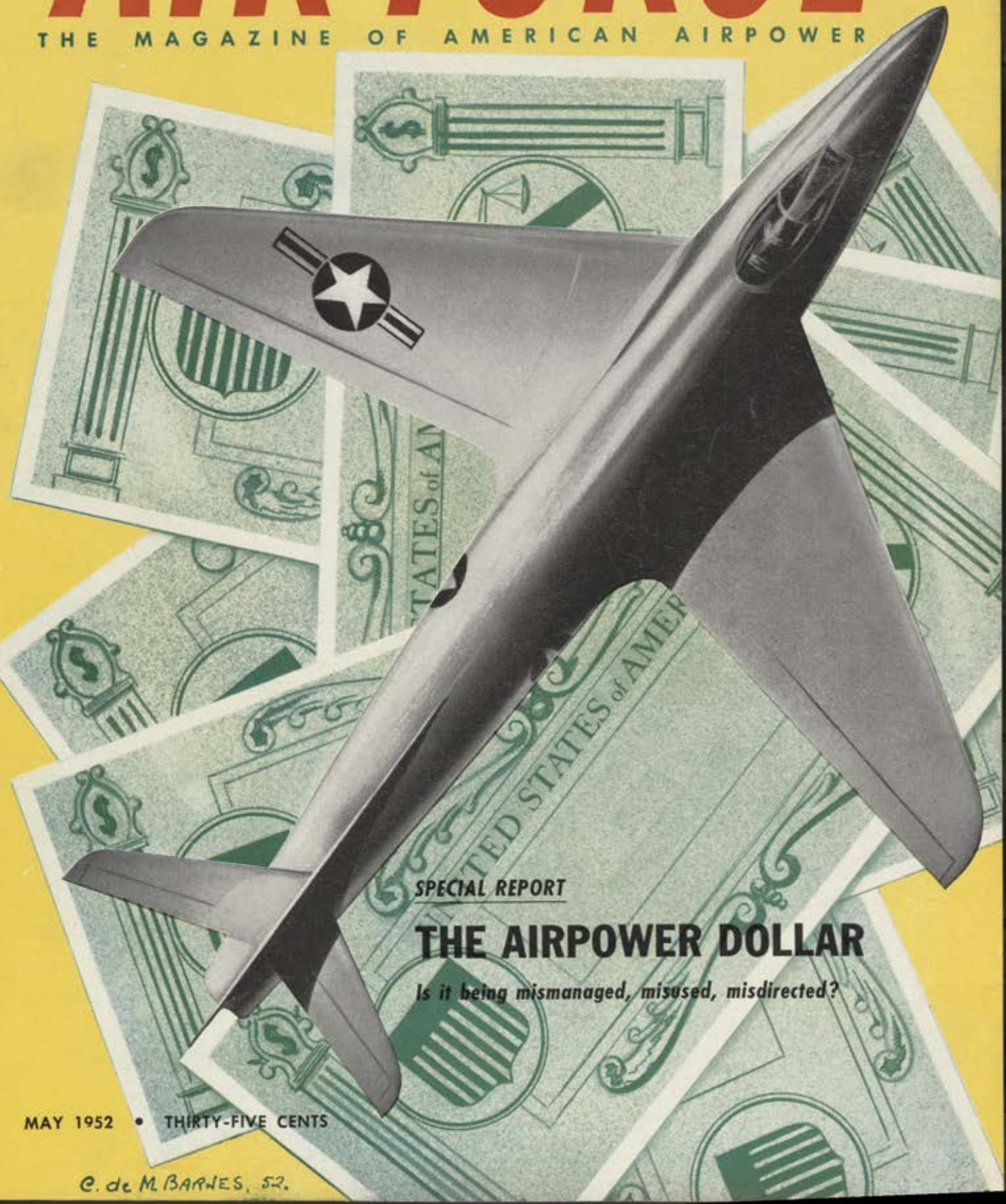
PHOTO GALLERY—PLANES OF TODAY AND TOMORROW

AIR FORCE

THE MAGAZINE OF AMERICAN AIRPOWER



SPECIAL REPORT

THE AIRPOWER DOLLAR

Is it being mismanaged, misused, misdirected?

MAY 1952 • THIRTY-FIVE CENTS

C. de M. BARNES, 52.

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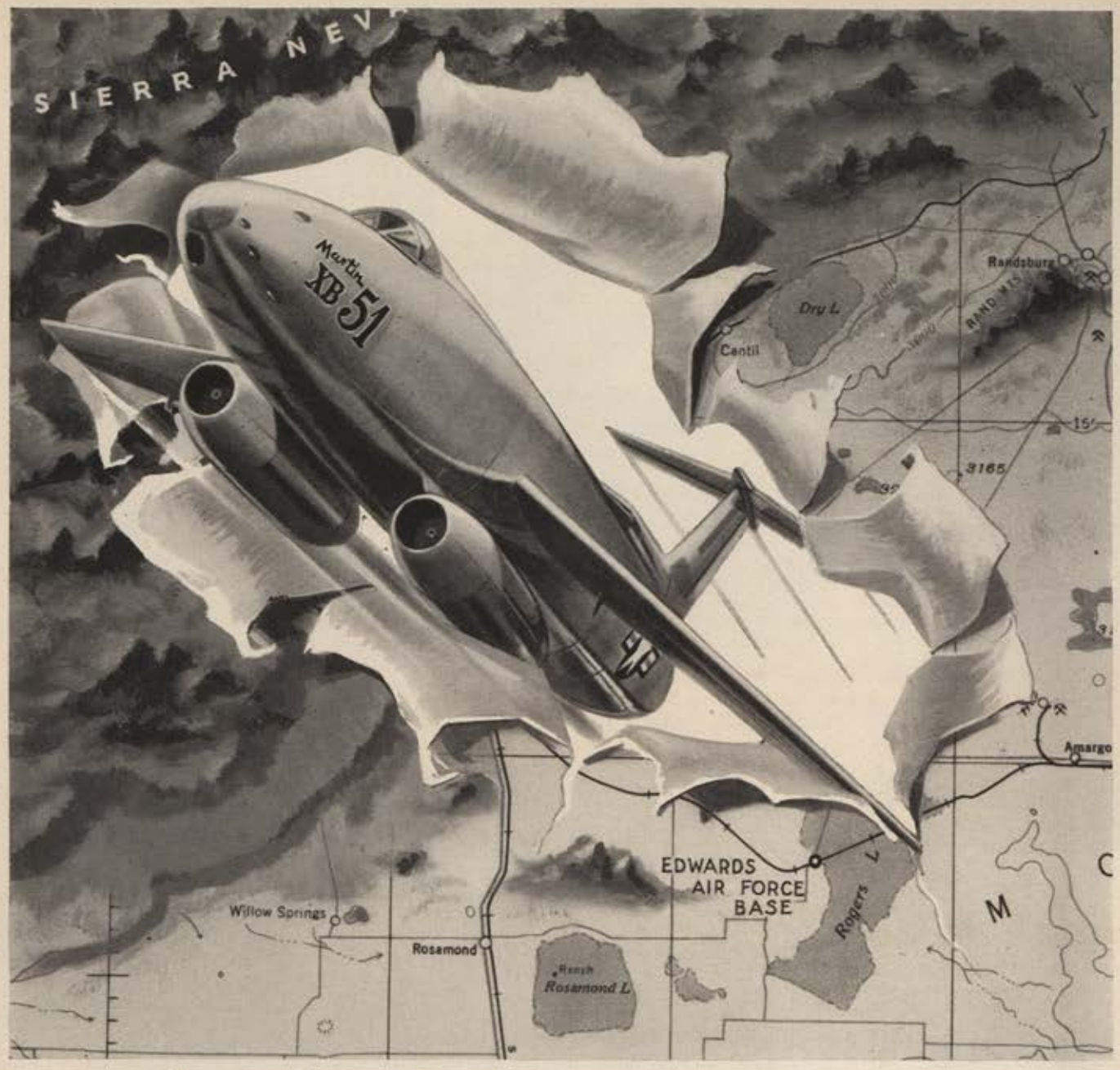

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AIR FORCE

THE OFFICIAL JOURNAL OF THE AIR FORCE ASSOCIATION

VOL. 35, No. 5

MAY 1952

THIS IS AFA

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

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

ITS OBJECTIVES

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

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

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

THE AIRPOWER DOLLAR—A SPECIAL REPORT

DEPARTMENTS

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8A6

AIR MAIL

More About Aces

Gentlemen: I wonder why the 5th and 8th Air Forces (and none of the others) were mentioned so often in your April article "More About Aces." The men you did mention deserve more credit than could be put into one article, but how about the other aces? Don't any of these have as many victories?

Eugene F. Shipley
Kingsport, Tenn.

• *We've nothing against the other wartime Air Forces. It simply turned out that the top sixteen all-time aces, except Capt. Eddie Rickenbacker, flew with either the 5th or the 8th. Likeliest reason why these men became top aces is that there were greater concentrations of enemy fighters against these Air Forces than against some of the others —The Editors.*

Gentlemen: Bong, Johnson, Preddy, Mahurin, Schilling, Meyer, and Gabreski are names that have properly gone down in Air Force history (your April issue), but I wonder what happened to the famed Col. Hubert Zemke of the equally famed 56th Thunderbolt Group? Could it be that he is retired and now living in Montana?

Hertsen H. Heerdt
Whitinsville, Mass.

• *Afraid not. Colonel Zemke is now Chief, Operations and Training Division of 12th AF, Landsberg, Germany, where he's been since 1949—The Editors.*

Wot's "Mach"?

Gentlemen: While reading your April issue, I became puzzled by the word "Mach." Would you please tell me what this word means?

Richard Mcpheter
Ypsilanti, Mich.

• *The word comes from the name of Professor Ernst (or Ernest) Mach, a Viennese who specialized some fifty years ago in the investigation of high speed phenomena. "Mach" is the ratio of an airplane's speed to the speed of sound. But sound varies with altitude, from 760 mph at sea level to 660 mph above 30,000 feet. Thus, a plane flying Mach .5 at sea level would be traveling at 380 mph, while one flying Mach 1 at 30,000 feet would be going about 660 mph. Now you tell us what "Ypsilanti" means—The Editors.*

Short Snort

Gentlemen: Here's a check to renew my subscription to AIR FORCE. I consider your magazine the finest airpower magazine for peace or protection available today. But I wish you would present more articles similar to "Short Snorts from 'Air Force Diary'" which appeared in your April 1950 issue.

Alan B. McLaughlin
Liverpool, N.Y.

"Follow the Leader"

Gentlemen: On my return from Korea, my brother snapped the picture you've been using recently in circulation ads showing my ten-months-old son, Robert Alan, looking at the August issue of AIR FORCE Magazine. I believe my brother Bill (a World War II AF man) caught something exceptional in this photo.

1st Lt. Howard L. La Beau, Jr.
93d Fighter Interceptor Squadron
Albuquerque, N.M.

• *We heartily agree and send thanks to the La Beau men for bolstering our "Follow the Leader" ads—The Editors.*

Sharp-Eyed Reader

Gentlemen: In "Airpower in the News" in your February issue, you refer to Brig. Gen. James E. Briggs. General Briggs was promoted to major general in the fall of 1951.

T/Sgt. J. W. Stoever
APO 328, San Francisco, Calif.

• *We erred. Our thanks to Sergeant Stoever for his sharp eye and our apologies to General Briggs who, at the time of his promotion, was Deputy Commanding General of 15th AF. He previously headed FEAF's Bomber Command—The Editors.*

Airpower Leaflet

Gentlemen: **Congratulations on the splendid article on psychological warfare in your February issue. Recently Eighth Army in Korea produced the only leaflet to date (above) exploiting the psychological impact of airpower. This leaflet tells the Reds that despite their leaders' promises of air support at the front, UN aircraft sweep North Korean skies, searching in vain for the Communist air force. I don't know if your article had anything to do with the appearance of this leaflet, but feel you at least deserve credit for a fine assist.**

Colonel, USAF

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*Belgium ..... OO	Haiti ..... HH	*Paraguay ..... ZP
*Brazil ..... PP, PT	*Iceland ..... TF	*Peru ..... OB
*Burma ..... XZ, XY	*India ..... VT	Poland ..... SP
*Canada ..... CF	*Indonesia ..... PK	*Portugal ..... CS, CR
*Ceylon ..... CY	Iran ..... EP	*Philippine Republic ..... PI
*Chile CC	Iraq ..... YI	*Saudi Arabia ..... HZ
*China ..... B	Ireland ..... EI, EJ	*Sweden ..... SE
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*Denmark ..... OY	Liberia ..... EL	*Thailand ..... HS
*Dominican Republic ..... HI	Luxembourg LX	Turkey ..... TC
*Ecuador ..... HC	*Mexico ..... XA, XB, XC	*Union of South Africa ..... ZS, ZT, ZU
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El Salvador ..... YS	* Netherlands Antilles ..... PJ	*United States ..... N
*Ethiopia ..... ET	* Surinam ..... PZ	*Uruguay CX
*Finland ..... OH	*New Zealand ..... ZK, ZL, ZM	*Venezuela ..... YV

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ENGINEERS AND BUILDERS OF OIL HYDRAULIC EQUIPMENT SINCE 1921

AIRPOWER IN THE NEWS

4,000-MILE non-stop photographic mission was recently flown by a USAF Thunderjet in less than 9½ hours. KC-97 tanker aircraft refueled the F-84G on both legs of the flight. . . AF has ordered a number of medium transport aircraft, designated C-131, from Convair. New plane, an air evacuation transport, will be equipped with litters, rearward-facing seats, and special equipment for patients. . . New maintenance hangars, able to handle largest aircraft produced or now planned by USAF, have been designed under contract with Army Corps of Engineers.

AWARD of HONOR, for an average 5.2 percent reduction in USAF ground accident rate in 1951, was recently presented General Vandenberg by Ned H. Dearborn, National Safety Council president. In 1951, AF, including Air Reserve and Air National Guard, had a major accident rate of thirty-three per 100,000 aircraft flying hours. Previous low record rate of thirty-six accidents per 100,000 hours was set in 1950.

SCHEDULED AIRLINES, Department of Defense and Department of Commerce have agreed on basis for wartime mobilization program. Its purposes are: (a) to provide needed military air transportation capacity in case of war; (b) to continue essential civil air transport service. As part of program, air carriers will assign about 400 of their four-engined airplanes to Civil Reserve Air Fleet. These will not be taken out of civilian service now, but are subject to immediate call for military service in emergency. Planes will be operated by airlines, under contract to AF.

COMMAND AND STAFF: Maj. Gen. Francis H. Griswold, now military director for Production and Requirements, Defense Munitions Board, will become CG, 3d AF, USAFE. He will be succeeded at the Munitions Board by Maj. Gen. Frederick R. Dent, Jr., until recently CG of Wright Air Development Center. . . Brig. Gen. Paul E. Ruestow, assistant for Materiel Program Control, Office of Dep. C/S for Materiel, USAF, has been named CG, Far East Air Materiel Command, replacing Brig. Gen. John P. Doyle. General Doyle will become Director of Transportation, Office of Dep. C/S for Materiel, to replace Maj. Gen. William E. Farthing who is scheduled to retire in August.

NONCOMMISSIONED OFFICER STATUS in USAF is now limited to top three airmen grades of master, technical, and staff sergeant, where supervisory responsibilities and high technical skills are required. This action removes sergeants and corporals from the NCO ranks and reduces number of NCOs to about thirty percent of airman strength. AF sergeants and corporals have been redesignated airmen 1st class and airmen 2d class, respectively. PFCs become airmen 3d class, and privates have been renamed basic airmen. Pay and duties of airmen are not affected by change.

MORE than 25,600 tons of critical cargo, 8,800 tons of mail, and 136,000 high priority personnel have been flown by MATS Pacific Airlift aircraft to the Far East since June '50. . . Evacuations of UN personnel in Korea by 3d Air Rescue Sqdn. as of March 20 totaled 4,117. Of this number, 802 were picked up from behind enemy lines. . . USAF Hq. PIO staff is being cut sixty-five percent.

AF CONTRACT has been awarded Boeing for engineering study of application of nuclear power plants to aircraft. . . AF experiments will begin this month to determine extent to which light commercial type planes can be used in qualifying its pilot selectees for primary training. . . Republic Aviation has established a guided missile division.

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Type B-1 indicator used with type K-4 control.

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These earlier helicopters clearly showed how hours and even whole days could be saved in transporting casualties. Again and again, where shore medical facilities were limited and the weather would have been too rough for the small boats ordinarily used, helicopters transported their human cargoes in comfort and smoothness to these efficient havens afloat. The result of this test—the Navy has adopted this mode of transfer as Standard Operating Procedure.

Thus again, Sikorsky helicopters have helped forge another link in the life-saving chain they pioneered in Korea . . . a chain which has already accounted for the rescue of thousands.

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LEGISLATIVE NOTES

WHAT'S IN H.R. 1168?

4-year-old ROTC Act needs a birth certificate

Army and Air Force ROTC programs would get their first major overhaul since 1920 with passage of the "Reserve Officers Training Corps Act of 1952," H. R. 1168, now awaiting hearings by Congress.

The ROTC, which got its start in 1916 when the Army set up units in about forty colleges, is the military's largest source of officer material. During the current school year, 303 colleges and universities are giving ROTC training to 250,000 students. Per dollar invested, this program has paid handsome dividends through the years. But revision of the ROTC programs is needed to bring them in line with current affairs and to meet today's technical needs.

The basic purpose of ROTC is to turn out Reserve officers, qualified and available for active duty in time of emergency, and to place on active duty each year enough qualified Reserve and Regular officers to meet the demand.

The Navy was the first to sense that its ROTC program needed revising. In 1946 the Navy succeeded in getting Congress to approve the "Holloway Plan," Public Law 729. Under this plan, the Navy is permitted to pay up to $600 annually toward a Cadet's tuition, plus a monthly stipend of $50. In return, the Cadet agrees to serve at least fifteen months on active duty with the Navy or Marine Corps after graduation. However, the "Holloway Plan" doesn't cover the Navy's entire ROTC program.

H. R. 1168, now waiting consideration, consists of five Titles. Title I contains desirable administrative provisions that are missing in existing law. It also authorizes a flight training course that is designed to introduce ROTC Cadets to flying and weed out those who wouldn't be apt to finish the pilot-training course.

Title II is much the same as the present ROTC programs of the Army and Air Force and the "contract" program of the Navy, except that under this Title the monetary allowances received by the Cadet during his last two years of training can be increased to a maximum of $50 per month instead of limited, as at present, to no more than the garrison ration.

Title III is designed to meet specific needs of the military services for non-Regular officers who will obligate themselves for a period of active duty, in peacetime as well as during a national emergency.

Title IV provides the services a means of meeting their requirements for junior officers, and includes the same active duty obligations as Title II. In addition it requires the Cadet to accept a Regular appointment, if offered.

Under Titles III and IV, not counting flight instruction, the services will pay all of the Cadet's expenses including tuition and fees, up to $600 annually for a maximum of four years, and a monthly stipend up to $50 under Title III and $60 under Title IV for four calendar years. This is similar to the provisions of the Navy's "Holloway Plan."

Title V provides for the repeal of existing laws governing ROTC and contains authority for appropriations, savings clauses, and other legislative provisions.

At first glance, it might appear that $600 tuition fees and $50 to $60 monthly stipends are out of the economic question. But to every dollar spent in this way is attached a period of obligated active duty. The services agree that under H. R. 1168 they will be paying more per Cadet than they are with present ROTC programs, but they will be guaranteed an adequate return (active duty officers) on their investment. This has not always been the case in the past.

Under H. R. 1168, the Air Force—which now has 114,000 Cadets enrolled in its 187 units—plans to enroll 54,000 first-year (Basic) Cadets in its ROTC program annually. Of this number, 16,500 will be enrolled under Title III and 37,500 under Title II. Ten thousand of the 16,500 Title III Cadets will take pilot training on active duty after graduation from college, and 6,500 will train as observers, both critical requirements of the Air Force. Officials estimate that when such a program gets into full swing it will cost the Air Force about $125,000,000 each year and will produce around 27,750 graduates, a cost of $4,500 per graduate. Of these 16,500 must serve three years on active duty plus the time spent in pilot or observer training.

Air Force officials claim there are two major advantages to giving flight instruction to ROTC Cadets while they are going to college. First, it makes possible the screening of thousands of would-be pilots to determine their flying aptitude before they go on active duty, thus avoiding enrolling graduate Cadets in pilot-training schools only to find costly months later that they will never become flyers. And second, it will reduce the service's "lead time" in producing qualified rated pilots and observers, since estimates indicate that ROTC flight instruction will cut pilot-training time in service schools by ten flying hours.

Attrition or "wash-out" among aviation Cadets is expensive. A study was made of 27,000 World War II aviation Cadets and the attrition rate was analyzed—forty-nine percent had never flown before entering training, thirty-seven percent had flown only as passengers, twenty-six percent were student pilots, nine percent had soloed, five percent were private pilots, and four percent were commercial pilots. Lack of flying experience among Cadet trainees accounts to a great extent for the fact that today a Cadet graduate costs something like $35,000.

H. R. 1168 has had its share of legislative illnesses. It was first drafted in 1948, then spent a year in the Bureau of the Budget, going to Congress in June of 1950, just one month before that session adjourned. It was re-introduced in Congress in January 1951, but the MacArthur hearings shortly afterward left no time for considering H. R. 1168. Finally word came last November that Congress would consider the Act in January of this year. To date it has not received a hearing.

The Air Force is the "action agency" for the Department of Defense on H. R. 1168, a normal process for one service to follow when proposed legislation relates to all services. No doubt the Air Force is concerned over the uncomfortable position in which it now finds itself. Regardless of how hard it has worked for the enactment of H. R. 1168, it is difficult for college officials and ROTC Cadets to understand why the Air Force has not been able to get Congress to issue a birth certificate to a four-year-old Act.

All this directly affects the building of the 143-Wing Air Force. For, in addition to the basic purpose of ROTC, as defined earlier, the Air Force is looking to its ROTC program to deliver 10,000 pilot Cadets and 6,500 observer Cadets each year. Also, Air Force officials feel that they must have ROTC graduates "on the job" for at least three years to make their investment pay off. Payment for tuition, fees and laboratory expenses, and monthly stipends are necessary to get the Cadet to obligate himself for three years "on the job."

Delegates to AFA's 1951 national convention were concerned enough about H. R. 1168 to pass a resolution calling for Congress to give immediate attention to the "Reserve Officers Training Act." The enlargement of our military forces and commitments to NATO, both of which have boosted officer requirements, dramatize the urgency expressed by the AFA delegates.—END

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Roaming over hostile trenches . . . "calling in" deadly air and ground fire . . . finding and supplying cut-off GI units—it's all in a day's work for the rugged Cessna "Bird Dog." On duty in combat six to ten hours every day, this flexible L-19 observer has proved itself tops for "flushing" enemy troops.

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Strongest of all "Bird Dog" boosters, however, is the typical combat infantryman. He knows the L-19 was specially designed and engineered to provide him with better, more accurate battle information, to make his job easier and keep him safer. We're proud that the "Bird Dog" does its job. And, we're doubly proud it's a Cessna!

PEOPLE
In The Air News

Col. Francis S. Gabreski has brought his total of MIGs destroyed to 6¾, becoming jet ace number 8. America's top living ace, with 31 World War II victories, "Gabby" commands the 51st Fighter-Interceptor Wing in Korea. A pre-med student at Notre Dame before joining the AF in July 1940, he spent two years after the war with Douglas Aircraft before returning to active dut in April 1947. He is now 32 years old.

Capt. Robert H. Moore, Houston, Tex., a member of Gabreski's Sabrejet outfit, got his 4th MIG the day his CO became a jet ace, and then caught his own MIG number five the next day to become America's ninth jet ace. This veteran F-86 pilot of the 51st Fighter-Interceptor Wing, got his first MIG Oct. 28, also has 3 probables and 2 damaged.

Lt. Gen. Howard A. Craig has been appointed next commandant of the National War College, succeeding the Army's Lt. Gen. Harold R. Bull. Replacing General Craig as AF Inspector General is Maj. Gen. Bryant L. Boatner, commander of the Air Proving Ground. The War College, at Fort McNair, Washington, D. C., directed by the Joint Chiefs, trains selected personnel in high policy.

Charles W. Purcell, AFA Maryland Wing Commander and chairman of the Baltimore County Aviation Commission, was named "outstanding pilot" recently by the Aviation Safety district office of the CAA. A past commander of the Baltimore Squadron of AFA, Purcell is production manager of a Baltimore radio station and a private pilot. He served in the AF 5½ years.

Equipped to Deliver for National Defense

Delco Radio

Regardless of what type of radio equipment is needed . . . when it's needed . . . where it's needed . . . Delco Radio delivers the goods! Delco Radio has fine manufacturing facilities . . . long and varied production experience. Delco Radio is—*right now*—building an impressive variety of advance-type radio equipment for America's fighting forces. You can depend on Delco Radio for *uniform* product quality and *on-time* delivery.

DELCO RADIO
Division of General Motors
Kokomo, Indiana

FIRST

IN PRODUCTION

Delco Radio is the world's largest builder of vehicular radios—the leader in production and assembly of component parts.

FIRST

IN ENGINEERING

Delco Radio developed many of the most important advances in vehicular radio . . . has outstanding experience in this field.

FIRST

IN QUALITY

Each and every step in the manufacturing of Delco Radio products is closely supervised to maintain high, uniform product quality.

FIRST

IN MANUFACTURING

Completely integrated for efficient production from raw material to finished product, Delco Radio meets any customer need.

Military cities are built of Quonsets, tents, field hospitals, radar detectors, guns, supply units and countless other items of food, shelter and warfare. Thanks to the "Flying Boxcar," military cities spring up overnight wherever troops dig in—though no roads and no bridges exist. Fairchild's C-119 all-purpose transport *delivers* anything needed from the air!

CITIES THAT ARE *Built in a Day*

Speed, stamina, versatility—the "Flying Boxcar" has demonstrated them all over tough battle-torn Korea. Backbone of the airlift, the Fairchild C-119 is number one all-purpose transport for military operations of UN forces in Korea, in Europe and in the United States.

ENGINE AND AIRPLANE CORPORATION

FAIRCHILD *Aircraft Division*

Hagerstown, Md.

Other Divisions: Engine, Guided Missiles and Stratos Divisions, Farmingdale, N.Y.

AIR FORCE
MAY 1952

The AIRPOWER DOLLAR

A WORD TO THE TAXPAYER

THE INVESTIGATING bodies of Congress are to be commended for their inquiries into military waste. The huge cost of defense demands that it be given the closest scrutiny to assure the taxpayer full measure for his defense dollar.

At the same time, it is discouraging to observe that, as a by-product of the many investigations, airpower once again has been placed on the defensive.

The airpower stretch-out provided in the defense budget submitted to Congress was, in the opinion of Air Force Association, unwarranted by production facts and the military requirement. Now it appears that Congress, largely in revolt against military waste, will cause a further stretch-out of our airpower capability.

Waste in the military always is a discouraging fact. Those of us who left civilian pursuits for military duty know of this waste from personal experience. We deplore it. And we have seen waste in the best run business organizations.

This we also know: that some of the nation's most capable and successful business men have served the Air Force in key civilian positions during recent years—men such as Stuart Symington, Arthur Barrows, Eugene Zuckert, C. V. Whitney, and John McCone, in addition to the members of the present Secretariat.

As a former member of the "official family," I am familiar with the ceaseless efforts being exerted to improve the efficiency and economy of the Air Force on the part of General Vandenberg, his staff and commanders, and civilian leaders.

However, the fact remains that public trust in our Air Force has been shaken. The man on the street is asking whether his tax dollar is being mismanaged, misused, and misdirected. He has a right to know the answers. He also deserves to know more about the size and scope of the Air Force establishment, the nature of the military system within which it operates, and the start-and-stop, up-and-down economic structure which plagues the military and serves as a barrier to a more orderly and business-like operation.

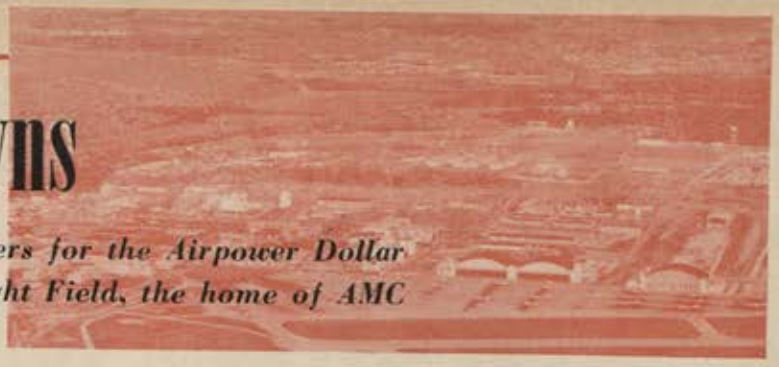
We believe the situation calls for clarification of the major issues. With this in mind, our editorial staff has prepared this special report on "The Airpower Dollar." We commend it to your attention.

Harold C. Stuart

President
Air Force Association

AIRPOWER DOLLAR

The Ups and Downs



Operational headquarters for the Airpower Dollar is sprawling Wright Field, the home of AMC

THE SIGN ON the main hangar at old McCook Field was explicit. "This field is small, use it all," the sign said, and every pilot coming into McCook heeded the warning.

In its first thirty years the Air Force lived with short budgets as well as short runways. Its pilots, out of sheer necessity, used all of the Airpower Dollar.

This year McCook Field would have been thirty-five years old and its successor in the Dayton area, Wright Air Force Base, observes its silver anniversary. Like McCook, Wright Field reflects the Air Force it serves. Its 1,000 buildings are sprawled over nearly 8,000 acres, and its working population numbers nearly 35,000.

Here is the headquarters of the Air Materiel Command, which buys, stores, distributes, maintains, and repairs all equipment and supplies for the Air Force. And here is the operational headquarters for the Airpower Dollar. This year some fifteen billion of these dollars will be spent by the procurement specialists at Wright Field.

With ample runway space on its two complete flying fields, Wright long since has forgotten the old hangar sign at McCook. Today, under the heat of investigations into military waste, the sign might read "This business is big, use it well." Today the Airpower Dollar is on another up-cycle in its roller coaster existence.

In 1939, only a year before the buildup began for World War II, the direct cash appropriation to the Army Air Corps totaled $71 million. By 1944 the comparable appropriation figure for the Air Force was $23.7 *billion*, 334 times the figure of five years earlier. In that period of world-wide combat the Air Force grew in frantic haste. The dollar cost of airpower was crowded off the priority lists by more important items relating directly to destruction and survival.

In the postwar years, surrounded by huge inventories of equipment and facilities, the Air Force settled down to a straight business operation. Its leaders began to close out their bases, sell their surplus items, and do what they could to reconstruct the semblance of an airpower establishment.

This was a sizable assignment under normal conditions, and the times were far from normal. A revolution had begun in the art of air warfare. Germany had introduced the jet fighter and the guided missile to combat. The race for new weapons was on and the goal was nothing less than national security. The Air Force was obsolescent. The problem was not one of rebuilding an old force, but of building a new one. At the same time, national policy dictated that, despite the need for new weapons, an even greater need existed for a long range bomber force in being to maintain world balance of power. The bulk of the Air Force effort had to be channeled toward this objective. Meanwhile, the budget was tight. In two years military aircraft production had dropped from its all-time high of 100,000 planes a year in 1945 to about 1,000 planes in 1947. The Airpower Dollar, though squeezed by its responsibilities, was in another down-cycle.

When the Korean war introduced limited conflict, big military money suddenly became available again. Another violent Air Force expansion had begun. With it came the problems of an up-and-down military economy.

Within the course of comparatively few months, the dollar value of Air Force procurement jumped to $13 billion, a 650 percent increase. The Air Force had asked Congress for approximately $15.9 billion for fiscal year 1951. By the end of the year, Air Materiel Command had started conversion of approximately two-thirds of this amount into airplanes and other equipment, and had committed $10.8 billion to industry.

This increase was not merely a stepping-up of bulk quantities of materiel. It was a substantial increase in the actual number of separate inventory items required. In 1941, at the beginning of World War II, separate items of Air Force supply numbered 90,000. By the beginning of the Korean war the comparable figure was 407,983. By July of this year it will be well over a million (Sears-Roebuck normally stocks about 200,000 items).

All this activity presented personnel problems. On June 30, 1950, the Command's personnel strength, military and civilian, was 103,651. A year later, when procurement actions alone had increased sixty-six percent, its personnel strength was 165,560. Today it is more than 200,000. Thousands of those hired were raw personnel whose average experience in military work was six months. In the ranks of competent supervisors, administrators and executives, skilled workers and technicians, Air Materiel Command never has been able to fill its requirements.

The Air Force just wasn't prepared to handle the stepped-up requirements, and for good reason. Before Korea, for example, certain parts for the F-86 were purchased in quantities sufficient only to support the normal peacetime operation then projected for the Air Force and all the services. Operating and reserve stocks in these parts were held to a minimum. When the 86s were ordered into combat, these stocks were almost immediately exhausted. Production levels were geared to provide these spare parts on this same peacetime basis. Though procurement was initiated immediately in an effort to meet the increased demand, industrial "lead time" complicated the problem. Because of these factors, the Air Force now is just beginning to meet these added F-86 requirements.

In Korea several factors have increased requirements for spares and replacement parts. First, our aircraft are having to do many jobs, peculiar to the situation, for which they

LARGEST CLOTHING ESTABLISHMENT?

In supplying a million individuals, the Air Materiel Command runs one of the largest clothing establishments in the world. The Command stocks 239 different sizes and types of shoes, 129 different sizes and types of coats, thirteen different sizes and types of caps. Its procurement specialists have been confident they could meet any requirement. But they admitted defeat recently when a special requisition came their way. It called for a uniform to fit a 246-pound WAF. No one explained how it happened—this much WAF, we mean—except that the recruiting people are especially eager these days.

PRODUCTION FLOW—FROM PLANS TO PLANES

THE WHITE HOUSE . . . The President, as Commander-in-Chief of the Armed Forces, is responsible for the national welfare and security. He works with military planners in determining over-all strategy and deciding the requirements of the various services.

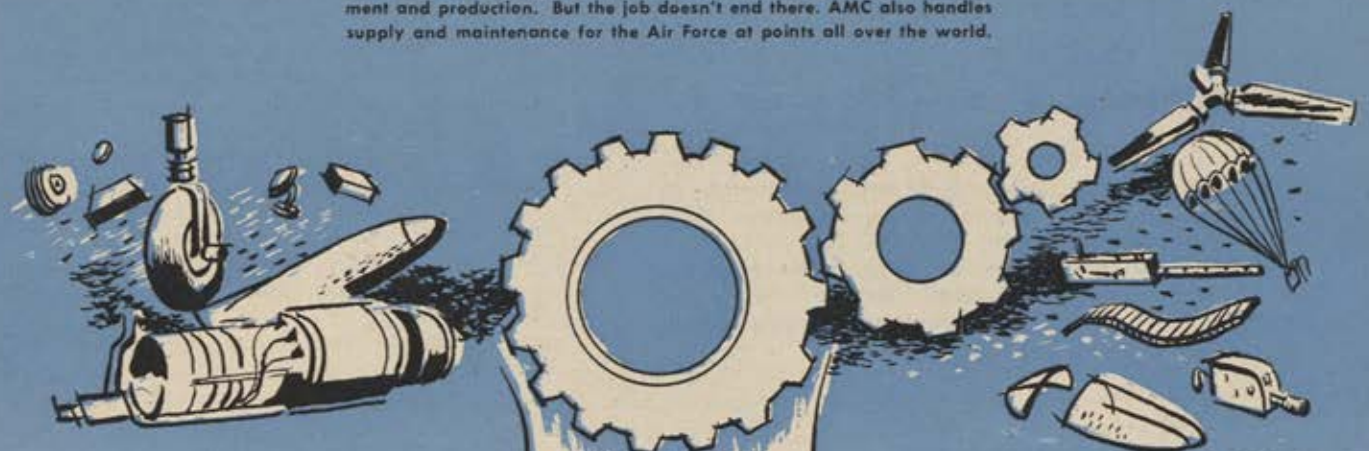
CONGRESS . . . The guardian of the public purse carefully sifts the recommendations of the Joint Chiefs before furnishing the money needed to turn ideas into aircraft. When an appropriation is voted, the airpower dollar is weighed to be sure the nation is getting its money's worth.

DEFENSE DEPARTMENT . . . The Joint Chiefs of Staff advise the Joint Secretaries (AF, Army, and Navy, headed by the Defense Secretary) in establishing over-all National Defense Policies. The responsibility for the AF's phase then rests with the AF Secretary.

AF CHIEF OF STAFF . . . and his five deputy chiefs (for Development, Materiel, Personnel, Budget, and Operations) next determine the requirements for equipment, research and development, resources and materiel, manpower and training, and for purchasing.

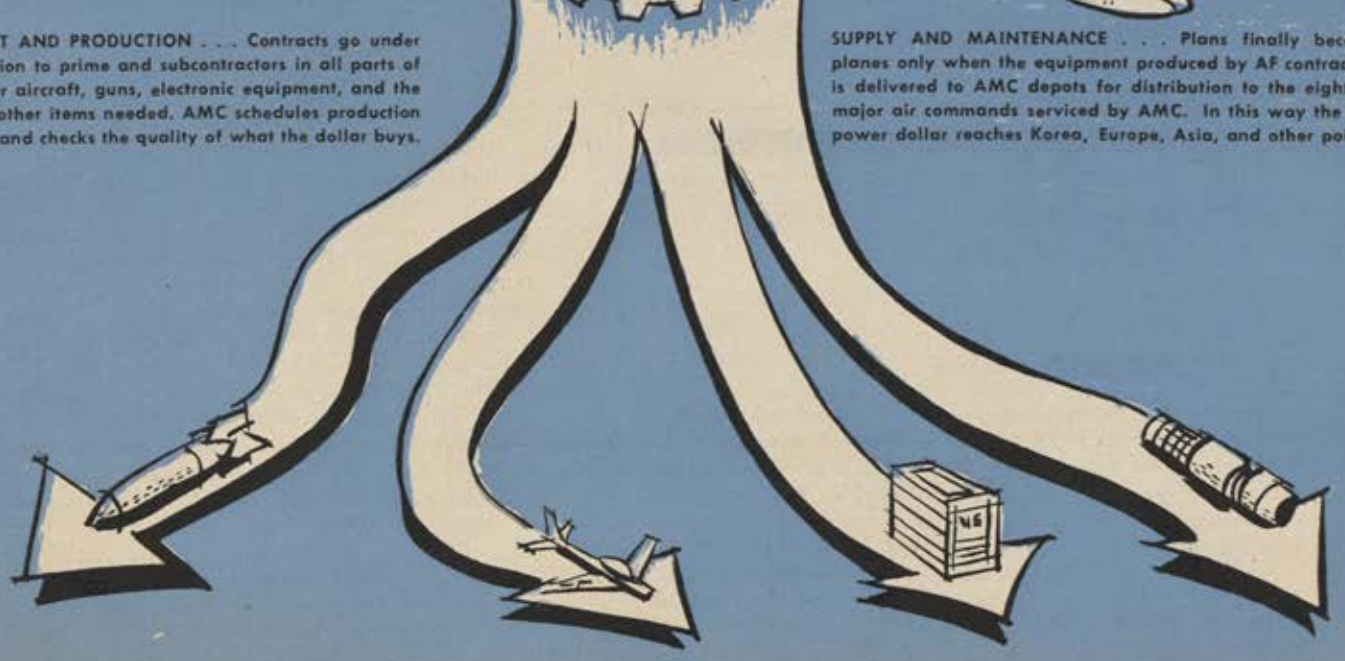
AIR MATERIEL COMMAND

AMC puts the airpower dollar to work, translating plans into procurement and production. But the job doesn't end there. AMC also handles supply and maintenance for the Air Force at points all over the world.



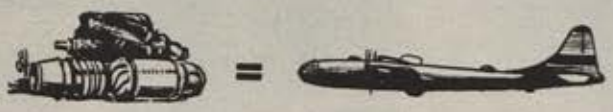
PROCUREMENT AND PRODUCTION . . . Contracts go under AMC supervision to prime and subcontractors in all parts of the country for aircraft, guns, electronic equipment, and the thousands of other items needed. AMC schedules production and delivery, and checks the quality of what the dollar buys.

SUPPLY AND MAINTENANCE . . . Plans finally become planes only when the equipment produced by AF contractors is delivered to AMC depots for distribution to the eighteen major air commands serviced by AMC. In this way the airpower dollar reaches Korea, Europe, Asia, and other points.

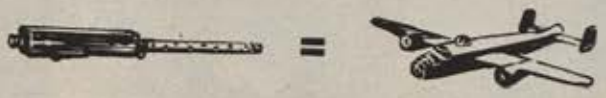


The High Cost of *Living*

The Airpower Dollar, like the dollar of the man on the street, isn't buying what it used to buy. Inflation alone has more than doubled the cost of our air weapons. But unlike the man on the street, the Air Force has had to deal with at least three other perplexing problems: the increased complexity of the items it must buy, the lack of quantity production to permit minimum unit costs, and "forced buying" regardless of the normal processes of supply and demand. The size and weight of aircraft have increased to meet increased performance demands in speed, altitude and all-weather operations. And the cost per pound of aircraft has gone up to meet these same requirements. It all adds up to a fantastic cost structure and, in terms of security in the air-atomic age, what this magazine referred to several years ago as "The High Cost of *Living*." Here are some samples:

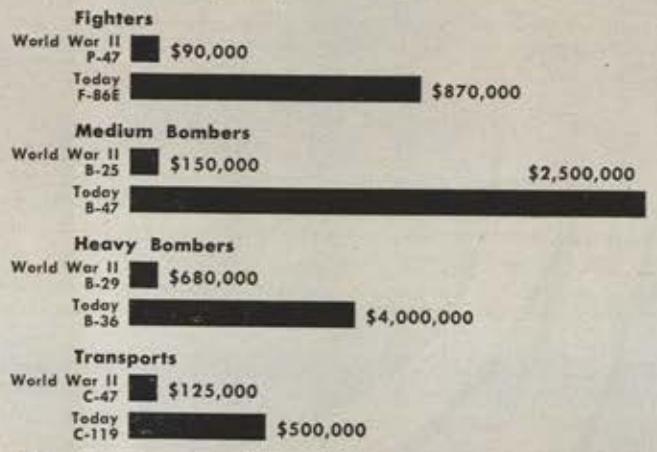


• In the B-36, our only operational heavy bomber, the power plants alone cost as much as did an *entire* B-29, the former "very heavy bomber."
• It costs more to power the F-89 all-weather fighter than it did to buy a complete P-47 fighter in World War II.



• The armament in today's B-47 medium bomber is more than twice as expensive as an entire B-25 medium bomber of World War II.
• It cost about fifty times as much to develop the XB-52, one of our latest heavy bombers, as it did to develop the XB-17 heavy bomber of World War II.

Here are some comparable costs:



• Engineering man-hours have increased from 140,000 for the first B-17 to 3,500,000 for the B-47.
• The Norden bombsight of World War II weighed about 125 pounds and cost $5,000. The K-1 bombing system with which our B-29s in Korea are equipped weighs about 2,000 pounds and costs $200,000.
• As for the advantages of quantity production, the first fifty B-47s cost $3,800,000 each, the next 500 B-47s cost $2,300,000 each.—END

were not designed. We are using the F-84, for instance, as a dive bomber. The F-86, designed primarily as a bomber interceptor, is taking the brunt of fighter air combat against the MIG-15. Designed for 5 G, it is constantly being operated at forces up to 8 G. F-86 droppable wing tanks, which in normal peacetime operations might never have to be jettisoned in a plane's lifetime, in Korea's dogfights are dropped practically every trip out to free the aircraft for combat. Requirements for the tanks, vital to range extension of the planes, have created a critical shortage. Yet, had the Air Force bought and stored a great surplus of these in advance, and had not the Korean emergency arisen, the tanks probably would have rotted in warehouses until the aircraft became obsolete, and incidentally, would have become fair game for waste investigators.

Consistent use of any equipment beyond its designed capabilities wears it out faster. The high pressure tires for F-84s and F-86s are a case in point. Pre-Korean experience indicated to the Air Force that it could expect about twelve landings from a tire. In Korea, with planes overloaded with armament, working from emergency steel strip landing fields not originally designed for the weights and landing speeds to which they are subjected, the F-84 tires are good for only about three to five landings, the F-86 tires for from four to six landings.

In Korea, too, battle damage from ground fire, greatly concentrated to check our interdiction effort, has taken a heavy toll of equipment, and has created unexpected requirements for replacement wings, ailerons, elevators, rudders, and aft fuselage sections. Moreover, as communist airpower in Korea steadily increases, the damage toll from air-to-air combat inevitably climbs with it. In the last three months such battle damage to our aircraft has increased ten percent. These are requirements which can be estimated, but never can be economically programmed until actual combat has afforded an opportunity to measure the resources and capabilities of the enemy in a battle area.

The modification headaches are many; 1,000 modifications, major and minor, have been made on the F-86 alone since it first entered combat. One of the most complete overhaul lines in the country, at Tinker AFB, Oklahoma City, works full time at only one specialty: service and repair of the heating equipment that keeps men and material from freezing in air operations.

Even the Air Force clothing requirements creates sizable difficulties in an economy still essentially geared to peacetime. For $17 million worth of critically needed clothing, mess equipment, blankets, etc., Air Materiel Command had to canvass the ranks of wholesalers, jobbers, and retailers of World War II surplus supplies, and establish special local emergency purchase procedures. Meanwhile, wholesale prices had risen an average of fourteen percent since the beginning of the Korean war.

Now, all these problems, by wartime standards, are merely routine. But except to the men fighting in Korea, this is not wartime. Butter is flowing faster than guns. Right or wrong, the sense of urgency is lacking. It must start at the top, and it has not been forthcoming. Indeed, the airpower stretch-out threatens to destroy any sense of urgency that might have developed.

Under these circumstances, the Air Force problem has been acute. In World War II the answer to all of the problems cited above might have been "Order twice what you need and get it done, regardless of cost." That's how you fight a shooting war. But in World War II no one demanded that you meet the requirements of a combat emergency such as Korea and also meet the requirements of a peacetime economy, or suffer the consequences of investigations into wast and inefficiency.

Any objective appraisal of waste in the military establishment—of which there is plenty under any circumstances—must be weighed in this light.—END

The AIR MATERIEL COMMAND

Commanding General
Lt. Gen. E. W. Rawlings

Deputy Commanding General
Maj. Gen. W. H. Tunner

Assistant Deputy Commanding General
Maj. Gen. W. D. Eckert

Executive
Col. L. J. Anderson

Assistant for Production
Maj. Gen. C. S. Irvine

Assistant for Plans, Programs and Requirements
Brig. Gen. W. T. Hefley

Comptroller
Brig. Gen. D. H. Baker

Judge Advocate
Col. M. R. Tidwell

Public Information Officer
Col. E. G. Morrison

Air Surgeon
Brig. Gen. O. B. Schroeder

Inspector General
Brig. Gen. M. F. Schneider

Director of Personnel and Training
Brig. Gen. W. J. Clineh

Director of Command Support
Col. Howard Moore (actg)

Director of Supply, Services and Maintenance Engineering
Maj. Gen. G. W. Mundy

Special Assistant, Electronics
Brig. Gen. Clyde Mitchell

Director of Procurement and Production
Maj. Gen. M. E. Bradley, Jr.

Deputy Director
Col. Louis Guenther

Deputy Director
Brig. Gen. M. E. Tillery

Deputy Director
Brig. Gen. Nelson Talbot

Military Personnel Division
Col. G. P. Overing

Administration Office
Capt. W. S. Hammond

Maintenance Engineering Division
Maj. Gen. T. H. Chapman

Deputy for Operations
Col. D. W. Walther (actg)

Field Operations Office
Col. L. W. Fulton

Administration and Operations Office
Lt. Col. B. S. Rosenbaum

An ***AIR FORCE*** Magazine Chart
(Corrected as of April 15, 1952)

**assumes command in June*

The BIGGEST Business in the WORLD

The United States Air Force is the biggest business in the world. Its buying and spending organization is the Air Materiel Command. In managing Air Force business, the Command . . .

- Spends about *$16½ billion* annually (current fiscal year).

- Deals directly with some *18,000 different companies.*

- *Purchases more* (in dollar value) annually than General Motors, Standard Oil of New Jersey, American Telephone and Telegraph, U. S. Steel, and du Pont *combined.*

- Employs more than *200,000 people,* with

civilian employees outnumbering military personnel about seven to one.

- Inventories *more than 1,000,000 different items.*

- *Stores and distributes* more than 4,000,000 tons of supplies annually.

- Provides maintenance for aircraft and equipment on a scale *ten times greater* than all U.S. commercial airlines combined.

- Stocks 239 different sizes and types of shoes, 129 different coats, thirteen different caps.

- Controls more than 30,000,000 sq. ft. of covered warehouse space.

- Publishes each year more than 12,000 separate technical publications.

Plans and Programs Office
Mr. W. W. Wood

Military Training Division
Col. W. K. Kincaid

Civilian Personnel Division
Col. W. E. Buck, Jr.

Air Chaplain
Chaplain (Col.)
L. C. Habetz

Air Installations Division
Col. Lebbeus B. Woods

Air Adjutant General
Col. W. B. Riley

Base Administration Division
Col. S. C. Lombard

Midcentral APD
Col. R. L. Finkenstaedt
165 No. Canal St.
Chicago, Illinois

Western APD
Maj. Gen. W. M. Morgan
155 W. Washington Blvd.
P.O. Box 3849, Terminal Annex
Los Angeles, Calif.

Eastern APD
Maj. Gen. A. Thomas
655 Madison Ave.
New York, New York

Ogden AMA
Brig. Gen. A. J. Gilkeson
Hill AFB
Ogden, Utah

Southern APD
Col. W. S. McDuffee
3309 Winthrop
P.O. Box 9083
Fort Worth, Texas

Central APD
Col. R. Keillor
W. Warren Ave. and
Lonyo Blvd.
Detroit, Mich.

Northeastern APD
Col. W. P. Farnsworth
14 Court Square
Boston, Mass.

Supply Division
Brig. Gen. L. R. Parker

Mutual Defense Materiel Division
Col. L. P. Dahl

Traffic Division
Col. L. B. Deitrickson

Air Forces Services Division
Col. D. L. Knoll

Command Packaging Office
Col. R. Fink

Administration Office
Lt. Col. D. W. Carlson

Deputy for Special Weapons
Col. H. C. Porter

Equipment Authorization Office
Col. C. O. Moffett

Plans and Programs Office
Col. R. H. McCutcheon

Quality Control Division
Brig. Gen. W. G. Bain

Production and Resources Division
Brig. Gen. K. D. Metzger

Office of the Procurement Committee
Mr. J. W. Schwinn

Procurement Division
Brig. Gen. P. W. Smith

Office of Inspection
Col. W. R. Graalman

Oklahoma City AMA
Maj. Gen. F. S. Borum
Tinker AFB
Oklahoma City, Okla.

San Antonio AMA
Maj. Gen. C. McMullen
Kelly AFB
San Antonio, Tex.

Mobile AMA
Brig. Gen. A. W. Martenstein
Brookley AFB
Mobile, Ala.

Warner Robins AMA
Brig. Gen. R. V. Ignico
Robins AFB
Warner Robins, Ga.

Middletown AMA
Maj. Gen. L. P. Whitten
Olmstead AFB
Middletown, Pa.

Wright-Patterson AFB
Col. C. Pratt Brown
Dayton, Ohio

San Bernardino AMA
Brig. Gen. E. C. Langmead
Norton AFB
San Bernardino, Calif.

Sacramento AMA
Maj. Gen. Arthur W. Vanaman
McClellan AFB
Sacramento, Calif.

The AIR FORCE BUYER

THIS YEAR I will spend one hundred million dollars of your tax money.

I am one of your civil servants, and proud to be one. I am equally proud of my qualifications for my job as a Buyer for the US Air Force. My investment in education has been considerable, and I have had several years of experience in this work. I am poor and honest and, as my employer will attest, I am competent. I know the importance of my job and I am impressed with its responsibility.

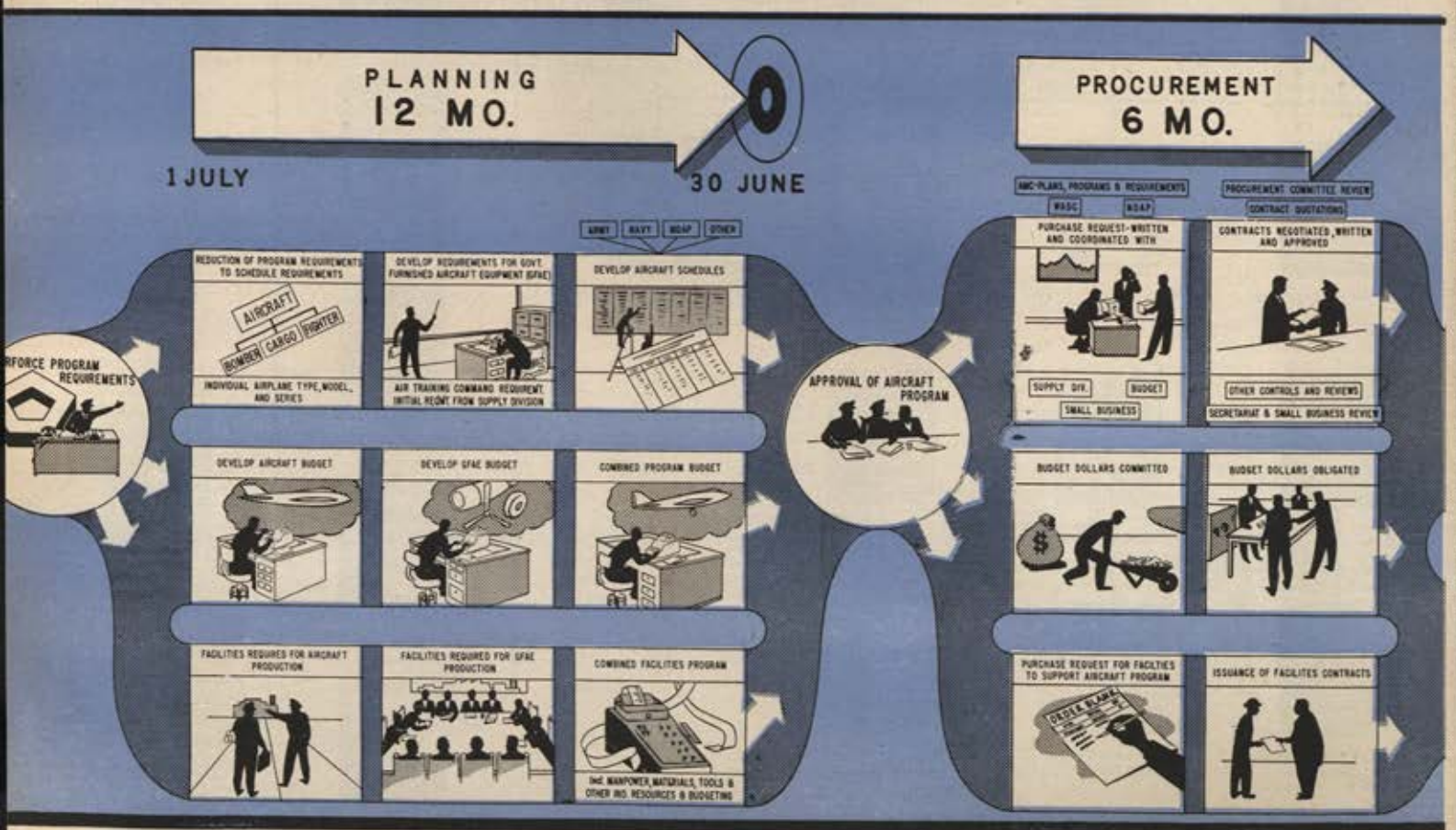
The Civil Service Commission, I must admit, is not nearly so impressed. Air Force Buyers receive, under Civil Service, annual salaries of from $5,000 to $8,000. In civil life if you employed someone to pass judgment on spending $100 million of your money in a year, you would employ a competent man and pay him according to the responsibility you delegated to him. In the government, salary limitations do not always permit that. The Air Force, I am sure, is willing to raise the grade and the compensation for its Buyers, but has not been able to convince Civil Service that this should be done.

The net result of this limitation is that the government cannot compete with industry for competent men, and the annual turnover in Air Force Buyers is high. Some have been lured away from their desks at Wright Field by offers of double their salaries. I am not arguing that the government should be expected to meet the salary scales of industry, but I do suggest that the discrepancy is far too great, and that the taxpayer is the loser.

In civil life the Buyer usually is known as a "purchasing agent." There are several basic differences in the two jobs. If you are a buyer in civilian industry you have two fundamental standards which require your attention: the quality of a product, and its cost to you. There is no requirement that you seriously consider the lowest bid if you doubt either quality or ability to deliver. If you believe that the higher priced article will give a better value for your requirement, you choose the best combination of quality and price and the contract is concluded. You are expected to do that, for it is your judgment about relative values which entitles you to your salary.

The responsibility of a buyer for the government is not nearly so clear-cut or simple. We live in a goldfish bowl, with the near certainty that any decision we make will be challenged by someone. We must, of course, give due consideration to price, quality, over-all value, and ability to deliver. At the same time, by the intent of various directives from the legislative and executive branches of government, we must

HOW THE AIRPOWER DOLLAR IS SPENT



The story of a guy who can't win, as an Air Force Buyer might tell it, regulations permitting

also consider the effect of our purchases on big business and small business, on distressed industries and distressed areas, on fair labor standards, and on potential renegotiation.

During World War II there usually were a number of sources from which we could obtain the product we required. After the war most of these suppliers reverted to other lines of business. When Korea brought unusual procurement demands, and unusual requirements for prompt delivery, we found that many of our wartime sources were unavailable or had to "tool up" again before they could undertake military production. But the Air Force needed certain products in a hurry, even if it had to bear overtime labor costs to get them, and in some instances this substantially increased prices. We often got less for our procurement dollar than we had anticipated.

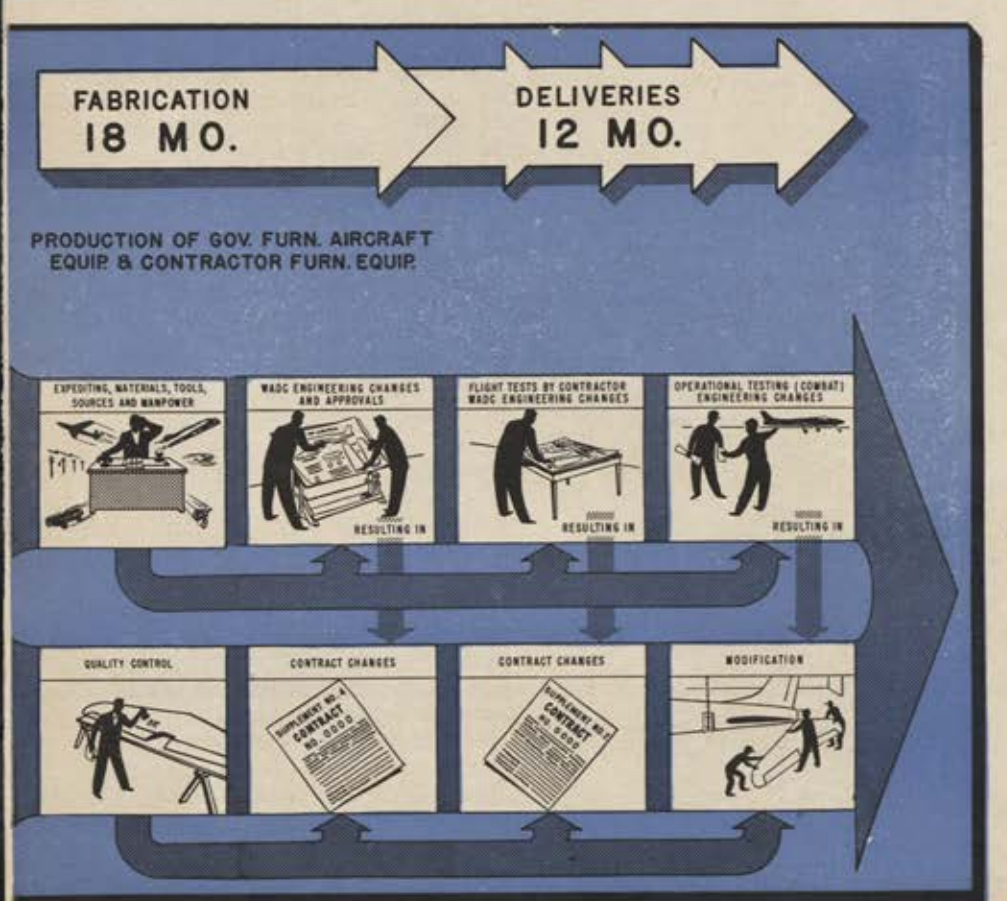
The channeling of procurement to distressed industries and distressed areas and to small business inevitably will increase the cost of certain military products. It is not my responsibility to determine whether or not these are worthy objectives; I assume they are, and I am prepared to live with them. But those who propose such conditions also should be willing to bear responsibility for their added cost.

Now, I'm for small business. Buyers like to deal with the small business man. He's inclined to be less demanding than the big business representative, and usually he can say "yes" or "no" without going through a lot of red tape with his company. Unfortunately, it is sometimes very doubtful if he has the facilities or know-how to make the item required. When a product we are buying is one which small business may be able to make, we must prepare special purchase requests which are circulated to small business firms by the field offices of the Department of Commerce and by our own field officers. This activity makes sure everyone interested gets a chance to bid, and it is a worthy endeavor. It also takes time and adds to administrative costs.

A new directive, I understand, will prescribe that a share of some procurements must be "set aside" for small business and critical labor areas. After a Buyer has made arrangements to purchase a portion of the total procurement of an item at the best price he can get, wherever the contractor may be, he then will negotiate a contract for the "set aside" portion and deal only with small business contractors or contractors in critical labor areas. (I am curious as to which will come first: small business in a crowded labor area, or big business in a critical labor area.) The price of the items purchased on the "set aside" portion of the procurement, I am told, must not be higher than the basic negotiated price. Even so, it will mean extra delay and extra cost. For one thing, it will mean drawing two or more contracts instead of one. And when you arbitrarily split your business between two contractors, it is almost sure to be more expensive; one contractor capable of doing the entire job obviously can produce the larger quantity more efficiently and at less cost.

Come what may in old or new directives, the Buyer usually is in the middle. Contractors complain about added delays, and investigators complain about added costs, though both are inevitable when so many factors must be considered. Under the present set of rules there is no way for the Buyer to award a contract without someone being unhappy about it, and saying so. It is hard to win in this business.

The Buyer's "bible," the Armed Forces Procurement Act of 1947 (Public Law 413), says that we must open the field to as many prospective producers as possible. In civilian purchasing the buyer probably would be acquainted with a relatively small number of firms which he knew to be experienced in producing and delivering a product of good quality. He would obtain prices from several of these firms and let a contract on the basis of best value. In our busi-



ness we must make sure that all "qualified" bidders have a chance at the business, regardless of whether they are presently equipped to produce and deliver. This requirement substantially widens the field we must cover, increases the number of discussions, increases the necessary paper work, and generally slows up the purchase. I have no complaint about the government's policy, for I did not establish it, but the policy does result in delay. And that's the sort of thing I do complain about—the fact that the Buyer gets blamed for the delay.

As a matter of fact, the Buyer gets blamed for any number of things. If a contractor does not get paid promptly, ours is the first shoulder he will cry on. It is quite useless to explain that I don't write the checks. To the contractor I am the guy who did the business with him, and to him I am the guy who should see that he gets his check.

Another familiar complaint goes like this: "Why did you buy so much? It is more than we need. We are catching hell about the surplus." The facts are that the Buyer has nothing to do with the specifications of the material or the quantity to be provided. We buy exactly the number of units we are told to buy and no more. And we are told in writing.

Sounds simple, doesn't it? You get a written order and you buy what it prescribes. Ever hear of the Facilities Capability Report? This is our equivalent of industry's Dunn and Bradstreet, and it must be completed before we can complete a contract. The report tells whether or not a firm has the necessary facilities and financial ability and can deliver the goods. Formerly these reports were required when judgment dictated that they were needed. Now, as a result of the investigations into buying practices, we must have a report for each and all contracts.

Assume that we have been buying airplanes from a firm like Boeing or Douglas and have been doing business with this firm for fifteen years. Certainly we have a fair idea of its capability, based on long experience. But under the current rules of our trade that is not sufficient. We must have Facilities Capabilities Reports on the company. So we send a survey team to the plant to determine once again whether or not its facilities, financial capability, and ability to deliver are sufficient. We could provide the answers in advance, but that would not satisfy the regulations. And so there are more delays in the procurement process. And there are more headaches for the Buyer. It is difficult to convince a firm like Boeing or Douglas of the necessity to survey their capabilities again and again.

It used to be that an Air Force Buyer could award a contract up to $100,000 on his own responsibility. Now the limit is $10,000. Contracts above that figure and up to $100,000 must have the approval of our immediate superior, the Section Chief; contracts from $100,000 to $250,000 must be approved by the Branch Chief. All contracts over $250,000 are reviewed by a Procurement Committee. Up to $1,000,000 the approval rests with the Chief of the Procurement Division. Above that amount, the decision is made by the Director of Procurement and Production. Then when all approvals have been received, and our files have been completed, they are reviewed by a new agency called The Secretariat, which double checks to see that all the paperwork is as it should be.

All of these procedures are worthy safeguards for the taxpayer. They also consume time and money. The people responsible for these safeguards should not be surprised at the increased delays and increased costs involved in the Air Force's procurement.

(Continued on page 57)

Into the RED TAPE Yonder!

A LARGE Air Force prime contractor, in a special study of aircraft procurement procedures, made the following comments regarding the red tape involved in the Air Force procurement program:

"It is important to note that, while a binding commitment has been awarded the contractor, such authorization is usually in the form of a letter contract. This is done in order to permit work to start immediately pending negotiation and execution of the final definitive contract. This letter contract may or may not include tentative prices or specific amounts to be covered. Containing basic terms authorizing both work and costs, this letter contract obligates the Air Force to make a final contract within a specified time or to reimburse the contractor for costs incurred.

"While regulations dictate that letter contracts be superseded as soon as possible by a final definitive contract, such is rarely the case. For example, it is known that one contractor received a letter contract dated January 5, 1951, requiring a definitive contract by March 15, 1951. Nevertheless, this document has now been amended ten times up to October 15, 1951, and a definitive contract is nowhere in sight. These continued and lengthy delays in themselves compound the paperwork imposed on the Air Materiel Command in the process of issuing, distributing, recording and filing.

"This is to say nothing of the duplicating paperwork burden placed on the contractor. Of greater import, is the strain this whole process imposes on the financial resources of the company. Letter contracts normally provide for partial payments up to seventy-five percent and in some instances as high as ninety percent. The contractor is therefore forced to finance the twenty-five percent or ten percent balance. With orders, in some cases, aggregating more than $1 billion, this can develop into a major financial headache.

"What is even more ironic, after a definitive contract is finally signed, the billing work necessary to obtain the partial payments must be repeated once more to obtain final payment.

"While the contractor has received his award and even obtained a definitive contract, he is by no means out of the maze of documents. He has yet to be confronted with price redeterminations and renegotiations. His world of paperwork is a never-ending one."—END

Tightening the MANPOWER Belt

Growing from eighty to 126 combat wings is a big job

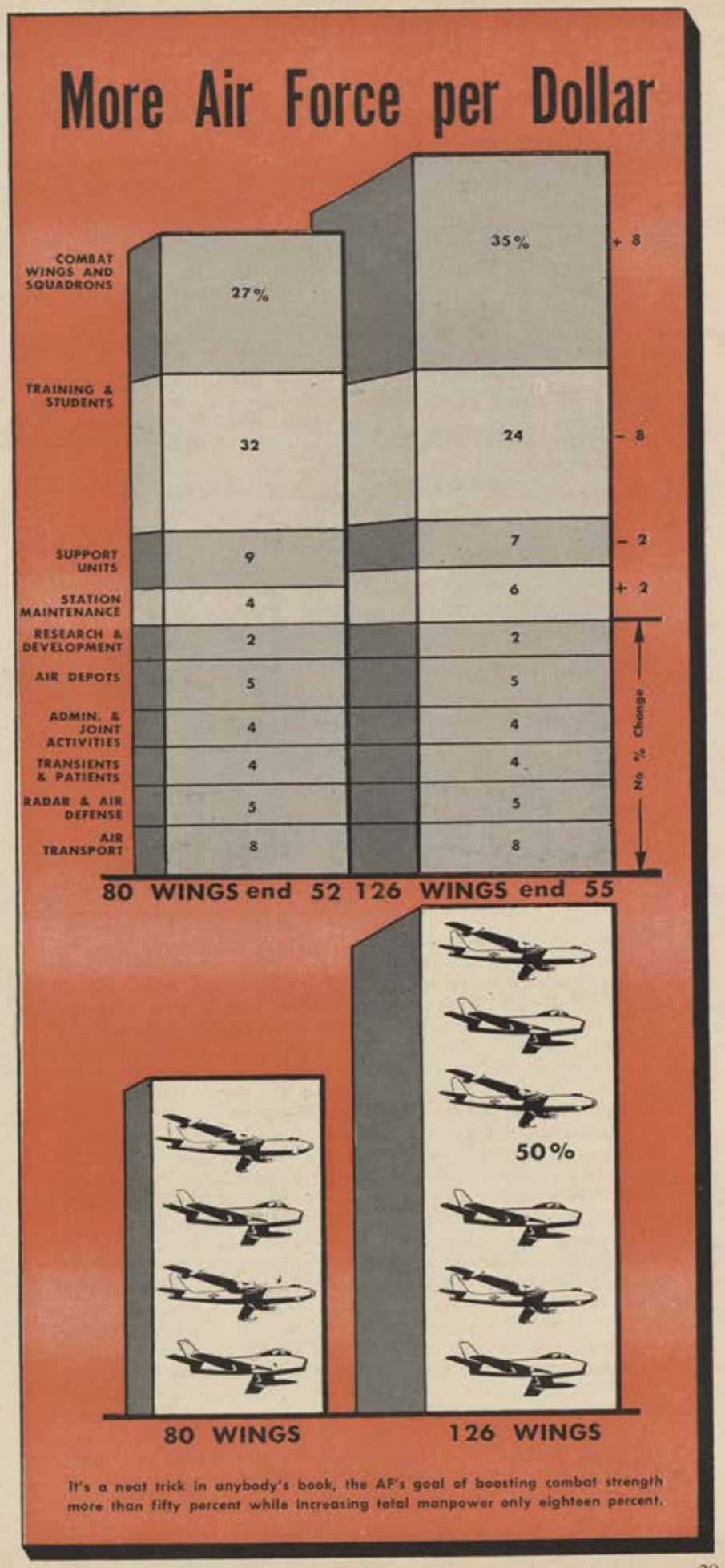
EVERY man eliminated from required military strength is a man the taxpayer does not have to pay, feed, house, clothe, train, and equip. It is essential, therefore, that the services be prudent in their use of manpower and hold military strength to a minimum.

Many civilian soldiers, basing their judgments on World War II experience or recent recalls to active duty, will swear the military system demands the use of three men for every one that is needed. An impartial survey probably wouldn't find the ratio that high, but it is by now well established that the military services are not inclined to minimize their manpower requirements.

Last summer when the Air Force began to plan its increase in combat potential from eighty to 126 combat wings, a jump of more than fifty percent, it was recognized that, in a period of limited mobilization, it would have to minimize its drain upon the military manpower pool.

The 80-combat wing program, in vogue at the time, called for a level-off military strength of 1,061,000 by July 1, 1952. The Air Staff, in its initial estimate for the expansion of 126 combat wings, asked for an increase to 1,700,000 personnel. Both the Secretary of the Air Force and the Chief of Staff, balking at this figure, asked the Air Staff to reduce it. The Staff came back with a requirement for 1,490,000 personnel. This also was unsatisfactory to the front office, and the Staff went to work on a further reduction.

At this point, according to recent Air Force testimony before Congress, the Air Staff "made certain new as-



sumptions and definitely took some risks." Eliminating a straight line expansion of all functions as unsound, the Staff limited the personnel build-up to combat and flying units. It decided to operate all commands except Strategic Air Command, Air Defense Command, and a portion of MATS on a peacetime rather than wartime basis. This reduced the over-all requirement for aircrews. And it reduced the required number of students, instructors, and support personnel for the Training Command. The result was a reduction of 100,000 personnel.

"These actions," the Air Force has told Congress, "resulted in increasing the striking power but they also reduced our capacity to sustain the striking power of that force. Nevertheless, the Secretary of the Air Force and the Chief of Staff wished to have the Staff take one more look to determine if further numbers of men could be saved."

As a result, in July of last year a special Air Staff manpower group was created under the leadership of Dr. E. P. Learned of Harvard. The group began to re-examine every function and unit in the troop or manpower program of the Air Force. Manpower requirements were built from the bottom up, rather than cutting from the top down. For example, in a Heavy Troop Carrier Wing extra units were squeezed out by putting the unit on a peacetime operating basis.

"In addition," Dr. Learned told a Congressional committee, "we took full advantage of the trend of enlistments in the Air Force. It now looks as if the Air Force may be able to build up to 126 combat wings on volunteer rather than Selective Service personnel. This introduces an economy in manpower because the Training Command establishment does not have to be so large to handle four-year enlistees as it would be if we were to rely entirely, or even partially, on two-year draftees."

This manpower study group cut the revised figure of 1,390,000 to 1,210,000, a reduction of an additional 180,000 personnel. Under the stretch-out program imposed by Administration planning, this figure would be reached by July 1, 1955.

"There was considerable opposition in the Air Staff on military grounds to such low figures," Dr. Learned has explained to Congressmen. "It is only fair to state that I could identify 70,000 military spaces not provided for which some staff officer or commander considered desirable, but which the Chief of Staff was unwilling to accept in the austerity approach that he and the Secretary of the Air Force had determined essential in building this force."

Dr. Learned explained further that the Air Force will economize in military manpower whenever possible "because we know that the cost of an airman, when his pay, maintenance, clothing, training and housing are taken into account, is greater than the wage we have to pay the average civilian who helps us."

The end result has been this: under the 126-combat wing program, which increases combat units more than fifty percent, the manpower increase is only eighteen percent.

"This brings the total dollar savings derived from this austere manpower approach to a minimum conservative figure of $854,000,000 annually," Dr. Learned told Congress.

And he added that, with all these savings, a price had been paid—a price in terms of the nation's airpower strength. To effect the manpower reductions in the Air Force, said Dr. Learned, "the mobilization potential has been eliminated. Similarly, the sustaining power of our units has been reduced."—END

LOOKING AHEAD

THE Industrial College of the Armed Forces, in one of its economic mobilization studies, looks ahead at the manpower problem during another war in these terms:

The United States fell down badly in the handling of manpower in World War II. Each fellow at his own level tried to solve the problem. There was no complete over-all manpower program. In the next emergency, there should be a program with some concept of what is going to be needed for agriculture, for industry, for transportation, for technological research, for the armed forces in their various branches, and for general administration.

A future war will test the planning and performance of industrial mobilization far more severely than have the past wars. Plans must be made for a faster mobilization and a stronger finish. Technology will facilitate enemy aggression. An enemy of an economic stature comparable to that of the United States may attack this country. The armed forces must cooperate with government and civilian agencies in working out an over-all coordination of the war effort which will be capable of meeting the manpower requirements of a total war.

The supply of manpower will fall short of requirements in a future war if the wasteful procedures of World War II are followed.

Manpower needs in the event of another war will depend on factors difficult to predict. Some of these are critical. For example: What kind of war will it be—an old fashioned one or an atomic war? How large will the armed forces have to be—twelve, fifteen, or twenty million? What kind of military equipment will be required, and how much? How much time will there be to reach peak strength? What standard of living will be possible?—END

Squeezing the Airpower Pipeline . . .

How the AF cuts delivery time of aircraft engines by 45 days

THE SUPPLY pipeline between the manufacturers and the users of military aircraft functions in somewhat the same manner as the familiar coke machine. With the beverage dispenser you push a bottle in one end and force a bottle out another end. Between these two points the pipeline is filled with bottles, and each bottle must move a notch before the end item is delivered to the consumer. In the airpower pipeline an operating unit receives a piece of equipment only after a producer has fed the pipeline with a similar item, and, like the coke bottles, each piece of equipment moves step by step toward the delivery point.

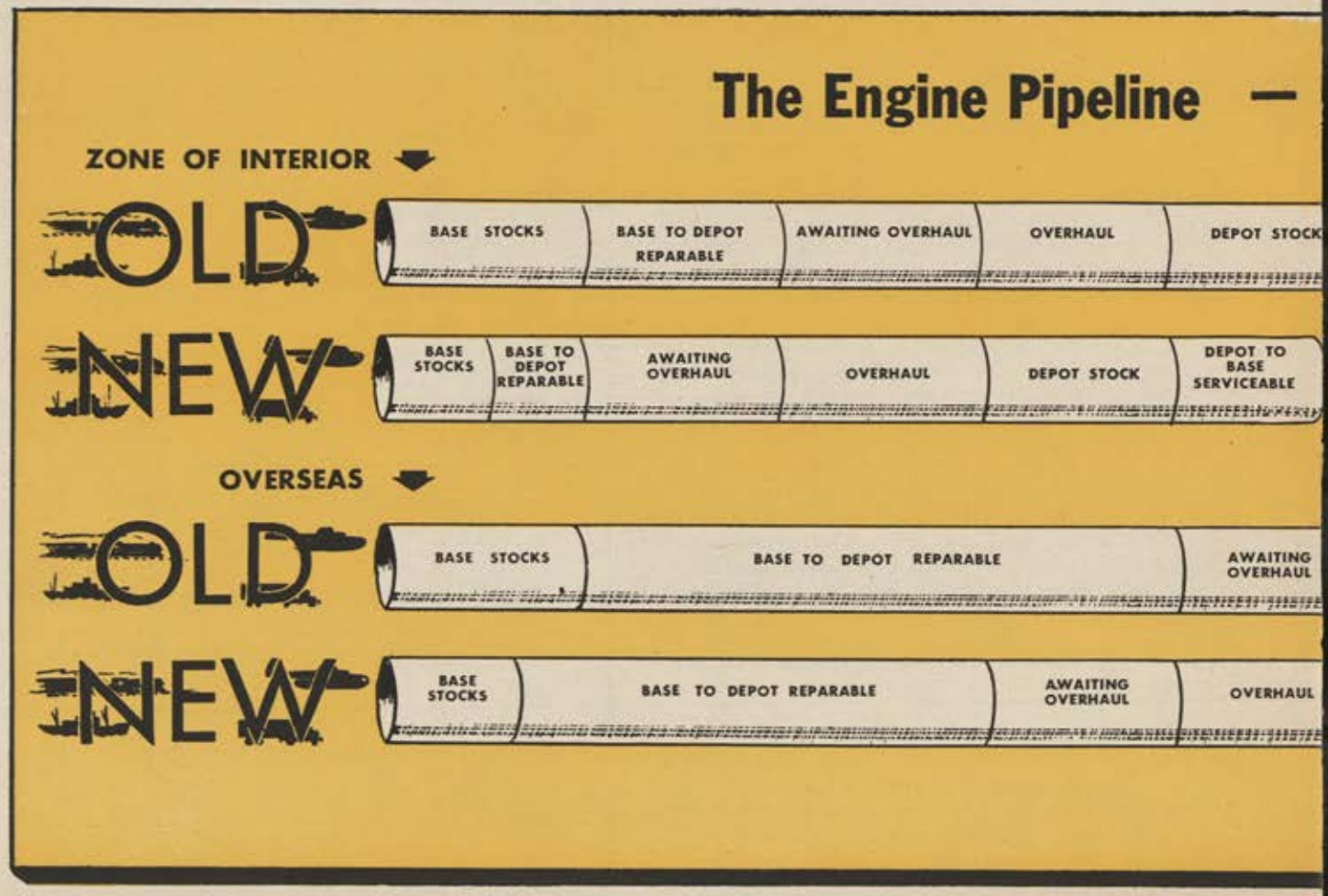
Here the resemblance ends. The airpower pipeline extends thousands of miles across the globe and depends for its movement on surface transportation systems which, in relation to the high speed end product they serve, are tediously slow. Unlike the coke machine, items in the airpower pipeline are not forced into the hands of the consumer in one simple movement. They are pushed, crated, and hauled in hundreds of separate movements by hundreds of workers and with hundreds of possible delays enroute.

Unlike the products in the coke machine, the items in the airpower pipeline are worth many millions of dollars—so much, in fact, that the pipeline investment in the distribution of military goods is a problem of major concern to the Air Force. Aircraft engines are a case in point.

Aircraft engines in the supply pipeline at any given moment, for example, generally exceed the number of installation engines available for the planes of the Air Force around the world. For one type of engine alone the dollar investment in a pipeline of 180 days was determined to be $126,000,000. Thus, each day saved in pipeline time meant $700,000 to the taxpayer.

The Air Force has been wrestling with its distribution problems, especially in engines, since the end of World War II. With its pipeline system a carryover from a wartime operation which had only one objective—delivering the goods regardless of cost—the need for economy of operation has demanded improvements in stock control procedures, control of requisitions, identification of property, utilization of stock, and efficient storage. And it has called for even broader attacks on the dilemma.

As a result of war experience, the Air Materiel Command in 1948 established a two-zone specialized supply system. It divided the United States into an eastern and western zone, and concentrated bulk stocks of



NEW DEAL for USAF OFFICERS

MOSs are scrapped in favor of AFSC classification system

MOST OF THE loopholes in the AF officer classification program have been plugged with the appearance of a new specialty code system, which replaces the old MOSs and SSNs and promises to relieve some of the present skill shortages in the expanding Air Force.

With an August target date for the reclassification of all officers, the AF-wide program is expected to do three things. It should improve personnel management, assure better utilization of manpower, and provide a sound framework for career planning.

The old classification system fell short in many ways. The MOSs (Military Occupational Specialties, which were coded numerically by SSNs) contained only a minimum of specific qualification standards. MOSs were not arranged or developed according to occupational fields or areas, and had no particular bearing on an officer's grade. Also, the AF had outgrown many MOSs, but the obsolete ones hadn't been weeded out or brought in line with new AF equipment and functions. And finally there had been complaints of lack of integrity in the awarding of MOSs.

The new system (see chart at the right) changes all this. It was developed functionally—that is, jobs were analyzed and those requiring the same basic knowledge or skills were grouped into specialties. The theory is that any officer with the knowledge or skill called for by any one of the some 180 specialties should be able to step in and take over in any job or position identified by his specialty.

These 180 specialties, requiring similar educational backgrounds, training and experience, are further grouped into twenty-six occupational fields. These fields provide, for the first time, a framework for career planning.

Each of the new specialties is now associated with a grade range, which spells out the ranks that can be expected to perform in it. For instance, some specialties call for lieutenants, captains, or majors, while others specify majors through colonels. This requirement can be determined at a glance by the ASFC code number in each case, where the last number shows the *top* officer grade called for by that specialty. In ASFC 4355, the last "5" shows this specialty calls for officers up to lieutenant colonenls.

There's also a special grouping of key specialties for Air Commanders, Organization Commanders, Comptrollers, and Directors of Personnel, Operations, and Materiel. These have a suffix to show organizational level. For example, Air Commander is 0066; a squadron commander is 0066A, a group commander 0066B.

New classification policies and procedures have been developed too. An annual classification interview now replaces the old semi-annual check of personnel records. Specialties may be awarded at either a full qualified level or at an entry level, indicating partial qualification. Officers not on active duty will be identified by the specialties they possess, but their qualification will not be recorded until entry on active duty.—END

AFSC	AIR FORCE SPECIALTY	FIELD	CODE
1024	Pilot, Helicopter	Combat & Operations	10
1034	Pilot, Amphibian		11
1044	Pilot, Transport		12
1054	Pilot, Troop Carrier		13
1124	Pilot, Fighter		14
1224	Pilot, Light Bombardment		15
1234	Pilot, Bombardment		16
1244	Pilot, AOB		
1324	Pilot, Reconnaissance		
1416	Operations Staff Officer		
1435	Air Operations Officer		
1444	Flying Safety Officer		
1524	Aircraft Observer, Navigator-Bombardier		
1534	Aircraft Observer, Navigator		
1544	Aircraft Observer, Bombardier		
1554	Aircraft Observer, Radar Operator		
1564	Aircraft Observer, Radar Intercept		
1635	Aircraft Controller		
2016	Intelligence Staff Officer	Intelligence & Psychological Warfare	20
2024	Intelligence Cryptanalytic Officer		21
2034	Intelligence Communications Officer		
2044	Intelligence Photo-Radar Officer		
2054	Intelligence Officer		
2064	Intelligence Technical Officer		
2074	Intelligence Language Officer		
2116	Psychological Warfare Staff Officer		
2124	Psychological Warfare Officer		
2316	Photographic & Cartographic Staff Officer	Photography & Cartography	23
2324	Cartographic Officer		
2334	Still Photographic Officer		
2346	Photographic & Motion Picture Staff Officer		
2354	Motion Picture Officer		
2516	Weather Staff Officer	Weather	25
2524	Weather Officer		
2534	Aerial Reconnaissance Weather Officer		
2546	Advanced Weather Officer		
3016	Communications-Electronics Staff Officer	Communications—Electronics	30
3024	Electronic Countermeasures Officer		
3034	Communications Officer		
3044	Ground Electronics Officer		
3054	Air Electronics Officer		
3216	Armament Staff Officer	Armament	32
3224	Missile Guidance Systems Officer		
3234	Armament Systems Officer		
3244	Weapons Officer		
3254	Munitions Officer		
3264	Guided Missile Officer		
4316	Aircraft Maintenance Staff Officer	Maintenance Engineering	43
4324	Aircraft Performance Engineer		
4334	Flight Test Maintenance Officer		
4344	Aircraft Maintenance Officer		
4355	Production Control Officer		
4364	Fabrication and Repair Officer		
4376	Ground Equipment Maintenance Staff Officer		
4384	Ground Equipment Maintenance Officer		
5516	Installations Engineer Staff Officer	Installations Engineer	55
5524	Installations Engineer		
6016	Transportation Staff Officer	Transportation	60
6024	Air Transportation Officer		
6034	Surface Transportation Officer		
6416	Supply Staff Officer	Supply	64
6424	Supply Officer		
6434	Supply Services Officer		
6516	Production Procurement Staff Officer	Production Procurement	65
6525	Production Procurement Officer		
6536	Industrial Planning Officer		
6736	Budget Officer	Comptroller	67
6746	Management Analysis Officer		68
6766	Finance Staff Officer		
6774	Disbursing Officer		
6816	Statistical Services Staff Officer		
6834	Statistical Services Officer		
6866	Accountant-Auditor, Staff		
6874	Auditor		
6884	Accountant		
7016	Administrative Staff Officer	Administrative Services	70
7024	Administrative Officer		
7216	Public Information Staff Officer	Public Information	72
7224	Public Information Officer		
7234	Historical Officer		
7316	Personnel Staff Officer	Personnel	73
7324	Personnel Officer		
7336	Manpower Management Officer		
7344	Personnel Services Officer		
7354	Ground Safety Officer		
7516	Education & Training Staff Officer	Education & Training	75
7524	Educational Specialist		
7535	Instructor		
7716	Air Provost Marshal	Security, Investigation & Law Enforcement	77
7724	Air Police Officer		
7736	Special Investigations Staff Officer		
7744	Special Investigations Officer		
7816	Legal Staff Officer	Legal	78
7824	Legal Officer		
7916	Staff Chaplain	Chaplain	79
7924	Chaplain		
8416	Research & Development Director	Research & Development	84
8446	Research & Development Administrator		85
8464	Research & Development Staff Assistant		86
8516	Nuclear Research Officer		87
8526	Mathematician		88
8556	Physicist		
8566	Chemist		
8576	Metallurgist		
8616	Aeronautical Engineer		
8626	Electronics Engineer		
8636	Mechanical Engineer		
8696	Research & Development Officer, Special		
8744	Experimental Flight Test Officer		
8816	Human Resources Staff Officer		
8836	Human Resources Research Officer		
8854	Human Resources Staff Assistant		
	See AFM 36-1 For Specialties In These Fields	Veterinary, Dental, Nurse, Medical Professional, Women's Medical Specialist, Medical Services	90 thru 99

its 168 property classifications into two depot locations, one in each zone, as opposed to the former method of having these stocks spread around in depots throughout the country. By thus tightening up the control of its supply operation, the Command estimates it has reduced normal stock levels by about two and one-half months supply, and reduced the cost of the old system by hundreds of millions of dollars.

About two years ago the Command began looking into the possibility of doing limited top overhaul of jet engines at air bases rather than at air depots, as was customary. It was found that limited overhaul at bases could be accomplished efficiently, and with a relatively modest investment in special hand tools and engine test sets. Base overhaul would end costly shipping expenses and permit longer operating time for engines. And this, in turn, would help reduce the Air Force's spare engine requirement.

In addition, various streamlining procedures were introduced. Pipeline time has been reduced by improved policing action against transportation holdups. Overhaul time has been speeded by improved overhaul shop mechanization and organization. Authorized air base stock levels have been halved. Improvements in engine structures have led to longer engine life. Greater attention has been paid to peculiarities of jet operation, such as the swallowing up of nuts and bolts off runways. New pilot and crew operating techniques have increased engine life. More precise methods of calculating requirements have been introduced.

The cumulative effect of these actions has been to reduce the number of spare engines required by the Air Force, and to reflect a total reduction of one and a half billion dollars in spare engine procurement requirements. And the Air Force considers that it has effected additional savings in production facilities which would have been required had not these refinements been made; it calls attention to a consolidation of projected engine plants for a net saving of about $65 million.

Some Air Force personnel feel, it is claimed, that the Air Force has gone too far in effecting such large reductions in spare engine requirements. These critics point out that no cushion exists for disruption of transportation, that the Air Force cannot afford losses at sea, and is too sanguine about the sturdiness of its engines. The Air Staff, however, in view of the huge costs of engine spares, has accepted such risks as warranted.

The Air Staff, in fact, feels that it has had little choice in the matter. When it received estimates, a year or so ago, on long range engine requirements, it labeled them unacceptable, if not fantastic. The Air Staff promptly and arbitrarily reduced its budget estimates, and began studying the pipeline problem.

Air Force engine requirements, which are based primarily on the over-all flying time consumed, were reviewed in terms of numbers of aircraft and installation engines in the AF program; the amount of flying time between overhauls; stock levels, and delivery speed.

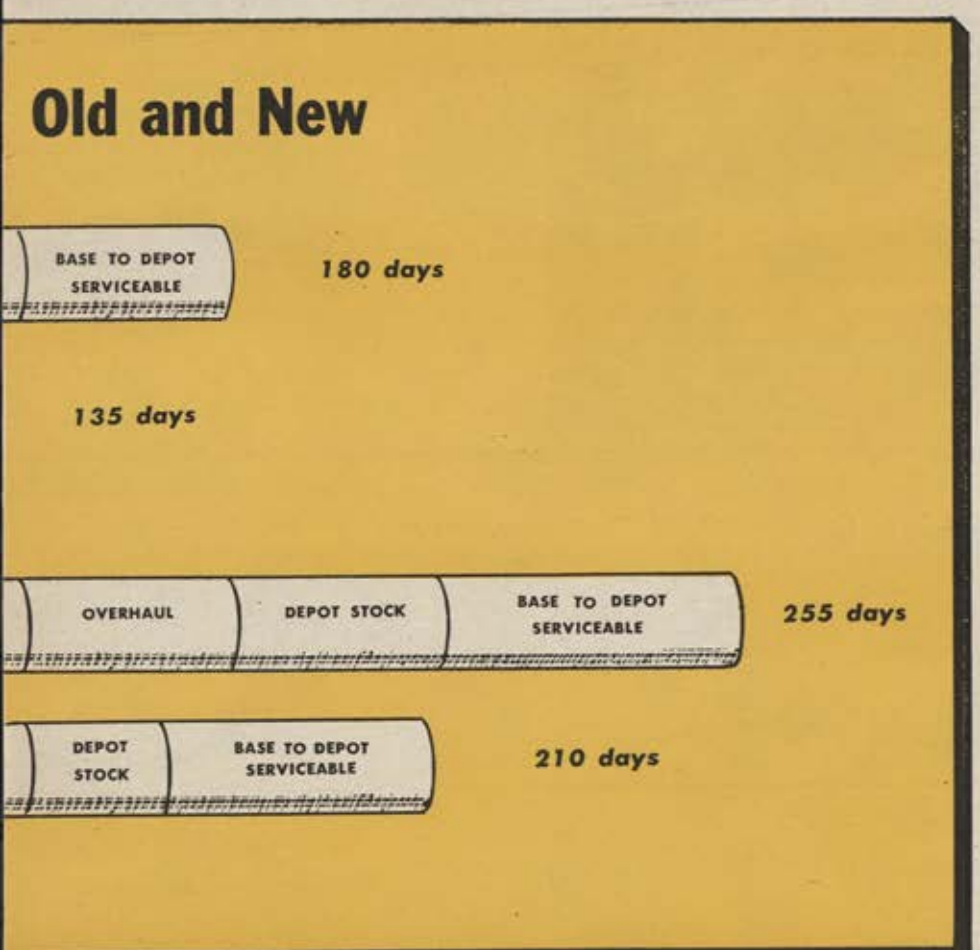
Basic assumptions on which engine procurement had been based, including aircraft attrition and flight time programming, were re-examined and in some instances revised as the study progressed. Long range general planning was replaced by more precise planning. Improved methods were devised both for programming engine requirements at the Pentagon and for handling engine shipments at distant ports. Always the emphasis was on improved methods—speedier routings, more efficient handling, better followup of movements, and stricter discipline.

As a result the AF has been able to squeeze the pipeline in its programming for engine procurement. In the case of an engine for one aircraft, for example, under the old method two and a half spares were in the pipeline for every installation engine; under the new method, one and seven-tenths spares are needed, a saving of thirty-two percent in spare engines for one aircraft type alone.

In its planning for complete engine overhaul, the Air Force formerly allowed 180 days for an engine to move through the pipeline in this country from base stock back to base stock. Overseas the allowance was 255 days. Now the AF is budgeting to move its engines through the Z1 pipeline in 135 days and through the overseas pipeline in 210, saving forty-five days in each case.

There is every reason to believe that, as the streamlining progresses, further squeezing of the pipeline can be achieved, especially in the time and money consumed in engine overhaul and engines awaiting overhaul.

Moreover, the progress made does not reflect, except in minor degree, the vast savings which can be accrued, according to evidence at hand, from the mass movement of engines by air—a whole new approach to squeezing the pipeline, and one crying for development.—END



North American F-86D

North American F-100

Republic F-84F

THE AIR FORCE GALLERY OF PLANES

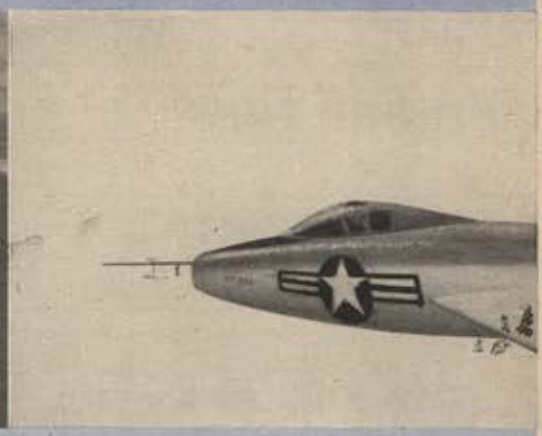
McDonnell F-101

North American F-82

MISSION	NOW OPERATIONAL
DAY FIGHTER	F-86A, B, E
ESCORT FIGHTER	F-84E
ALL-WEATHER FIGHTER	F-82, F-89C, F-94C
FIGHTER-BOMBER	F-51, F-80, F-84E
LIGHT BOMBER	B-26, B-45
NIGHT INTRUDER	B-26
MEDIUM BOMBER	B-29A, B; B-50A, D
HEAVY BOMBER	B-36D, F, H

Northrop F-89

Lockheed F-94C



Convair F-102

North American F-51

Republic F-84E

Lockheed F-80

Douglas B-26

Martin B-57A

FOR TODAY AND TOMORROW...

NOW IN PRODUCTION	NOW IN DEVELOPMENT (unclassified)
F-86-E, F	F-86H, F-100
F-84F, G	F-101
Adv F-89, F-86D	F-102
F-84F, G	classified
B-57A	
B-57A	
B-47B	B-47C
B-36F, H	B-52, B-60

(Continued on page 36)

Boeing B-29

Boeing B-50D

Boeing B-47B

Boeing B-52

Convair B-36D

Convair B-60

North American RB-45 Douglas RB-66

Convair RB-36

Douglas C-47

THE AIR FORCE OF PLANES AND FOR

Here's what happens to the Airpower

MISSION	NOW OPERATIONAL
TACTICAL RECON	RF-51, RF-80, RB-26, RB-45
STRATEGIC RECON	RB-36E, F; RB-50
MEDIUM TRANSPORT AND ASSAULT AIRCRAFT	C-46, C-47, C-82, C-119
HEAVY TRANSPORT AND TANKERS	C-54, C-97, C-118A, C-121, C-124, KB-29
RESCUE	H-5, H-19A, SA-16, SB-17, SB-29, C-47, C-82
TRAINING	T-6, TB-25, T-28, T-29, T-33
TACTICAL CONTROL	T-6

Curtiss-Wright C-46

Fairchild C-82

Fairchild C-119

Chase C-123

Convair C-131

Boeing C-97

Lockheed C-121

Douglas C-54

Boeing KC-97

Douglas C-124

Douglas C-118B

Beech T-36A

Sikorsky H-5H

Sikorsky H-19A

GALLERY FOR TODAY TOMORROW

Dollar when plans become planes

NOW IN PRODUCTION	NOW IN DEVELOPMENT (unclassified)
RF-84F, RB-57	RB-66
RB-36H, RB-47B	classified
C-123, C-131	C-130
C-124, KC-97	classified
H-19A, H-21	
T-28	T-34, T-36A

Grumman SA-16

Piasecki H-21

Boeing SB-17

Convair T-29

North American T-28

North American TB-25

Lockheed T-33

Beech T-34

North American T-6

Are We Wasting Our Airpower Investment?

Yesterday's calculated risk can become the wasted effort of tomorrow. Is history repeating itself in the R&D budget?

WASTE IS WHERE you find it, and the spectacle of an Air Force sergeant sweeping the floor with coffee instead of compound (see page 42) is disgusting, to say the least.

The sergeant, if guilty, wasted a few hundred dollars of the taxpayers' money, and provoked a few hundred headlines in the press. Less deliberately, and without fanfare, hundreds of millions of airpower dollars can be wasted through misjudgment at the top levels of government.

Realizing this, Air Materiel Command has concentrated its anti-waste campaign on the "big money" areas, on crucial items like aircraft engines. It has determined, for example, that eighty percent of the airpower dollar goes to the purchase of some 3,500 items. Emphasis on economy and efficiency in these areas is nothing more than good common sense.

Even more basic, however, would be an attack on waste at the very core of airpower development, on the qualitative level. It is too easy to think "by the numbers" in measuring waste and economy. Yet, no matter how many planes are added to or subtracted from the Air Force program, we always are faced with the prospect that these planes will not measure up to the combat requirement. When that happens, when we fail to provide for the future in a qualitative sense, we create waste in huge proportions—waste in time, materials, money—and human life.

In the market place, adequate quality is protection against bankruptcy. In war it is protection against defeat. In both, against waste.

Moreover, wise investment in new products can bring a higher return from our inventory of older items. In Korea today, for example, our World War II type fighter-bombers and light bombers, long obsolescent by normal standards, are proving to be effective instruments of war because a newer product, the F-86, prevents the equally new MIG-15 from keeping these piston-driven fighters on the shelf as unsalable items.

In turn, the F-86, from an investment standpoint, would carry a marked-down price tag the minute the enemy produced a fighter capable of outclassing it, which is always a realistic possibility. It is expected that Russia's next move will be to send into combat a superior version of the MIG. To meet the challenge, and at least stabilize competition, we are readying a superior version of the F-86. In both instances, these are efforts to protect the current airpower investment in Korea. Both are moves—in big money areas—against waste.

It is a discouraging fact, however, that there is little we can do in the qualitative area today which will have a noticeable effect on the consumer for another five or six years. Such is the nature of the R and D war. By the same token, to understand why we do not have more to work with today, we must recall what we did not do six years ago.

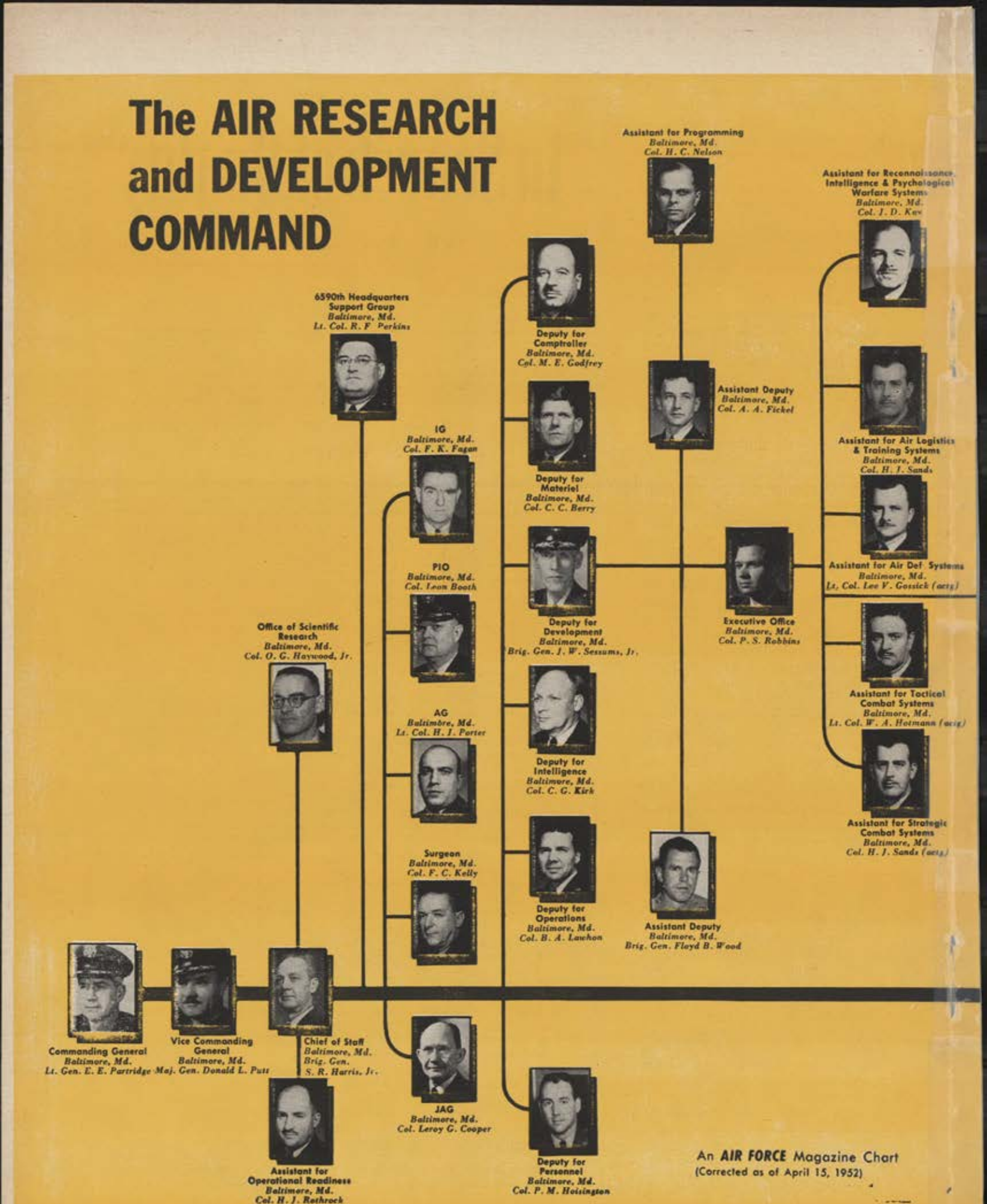
There is no longer any question, for example, that we squeezed through World War II with an air victory based largely on sheer weight of numbers. If there was any question about it at the time, it disappeared when Germany introduced the jet fighter to combat, and we learned through experience that in the ME-262 the enemy had a plane some 100 mph faster than our best fighters and twice as fast as our best bombers. Hitler's blundering insistence that the ME-262 be committed to a ground support role was, for us, a rare fortune of war.

It is not enough to recognize that when the war ended we were years behind Germany in jet propulsion, guided missiles, and supersonic research. It also must be understood that Germany had begun basic research in jet propulsion during the early 1930s, and had achieved jet flight in 1939, the year the Air Corps got less than $5 million to develop aeronautical equipment and had to depend on the commercial airlines for much of its development work.

Nor is it enough to note that Russia, capitalizing on the German effort, established at the end of World War II a vast technological program to improve the quality of her air weapons. It also must be realized that at the same time the U. S., taking refuge in its atomic stockpile, failed to exploit, through adequate air research and development, the obvious fact that a revolution had begun in the art of delivering bombs.

During the period from 1947 to 1949, for example, the Air Force was required to eliminate, for lack of money, fully half of its existing research and development projects, and was unable to start new projects. In those years not a single new aircraft or guided missile program was initiated. Forced to make the choice, the Air Force began to develop new bombsights and gunsights (both are paying dividends in Korea today) but could not afford the development

The AIR RESEARCH and DEVELOPMENT COMMAND



An **AIR FORCE** Magazine Chart
(Corrected as of April 15, 1952)

of new guns. Making another choice, the AF dropped turbo-prop development to make funds available for higher priority turbojet projects.

These sacrifices, it was explained at the time, were "calculated risks," not an uncommon term today. An Air Force spokesman has explained:

"If our fighter development had not suffered in the lean budget years for air research and development after World War II, there is little doubt but that we would have met the challenge of the Korean war with a better version of the F-86. Against the MIG-15 as we now know it, there would be no question of maintaining air superiority over Korea. Without those lean years we wouldn't have been forced to use obsolescent F-51s in Korea. Our F-84 jet fighter bombers would have been better qualified for their support role. Our reconnaissance capability would have been much improved."

The calculated risk of yesterday can become the wasted effort of tomorrow. In our frantic hurry to buy back time when a crisis rears its head, we invariably spend millions more than we should to achieve a desired result. If yesterday's calculated risk involved an obviously heavy drain on the national economy, it can be justified. But with research and development expenditures representing only a small fraction of the Air Force budget in any year, that justification hardly can be sustained.

Investigators of military waste could well afford to ask whether history is repeating itself. Congress, with its expressed interest in the duel between the F-86 and the MIG, could afford to question whether our pilots over another MIG Alley some few years hence would have the equipment to match the supersonic, automatically-controlled jet fighters we have every reason to believe the Russians now are developing.

The Air Force research and development budget now before Congress is twenty-eight percent less than the sum Air Force planners believe to be a minimum requirement for the next fiscal year. The difference, in a $52 billion budget proposal, is some $200 million. With an Air Force now eighty percent equipped with obsolescent aircraft, is this the place to save? Would the $200 million be sound spending to protect the airpower investment? Will the "calculated risk" of today again become the uncalculated waste tomorrow?

No appraisal of waste in the military establishment is complete without such ominous considerations. And yet, they are lost in the shuffle before the sergeant and a few hundred dollars worth of coffee.—End

In Search of Quality

A brief on Air Research and Development Command

UNDER the pressure to maintain, with limited budgets, a postwar organization capable of immediate and powerful action, the US Air Force by 1949 had begun to drift away from the requirement for a future capability embracing the many new technologies in the art of air warfare.

That year, to counteract the trend, the Chief of Staff called upon the Scientific Advisory Board and the Air University to study the problem. Independently the two groups agreed on these major points:

- Air research and development was being given a priority that was too low.
- Research and developments was diffused throughout the Air Force, both staff-wise and command-wise.
- Too few Air Force officers and civilian employees had adequate technical qualifications.
- Existing facilities and resources available to the Air Force were inadequate for the required research and development effort.

To implement these findings the Chief of Staff on January 23, 1950, placed research and development on a parity with other Air Force functions both at the policy-making and command level. The former was achieved at Headquarters with the establishment of the office of the Deputy Chief of Staff for Development, and the latter with the establishment of the Air Research and Development Command. The new command had the following "concepts for guidance":

- All existing US Air Force research and development field activities eventually should be consolidated under the over-all management and guidance of this command.
- This over-all consolidation should be accomplished in phases so that work in process would not be delayed and to permit an evolutionary rather than revolutionary solution of the many associated problems.
- Proper consideration should be given to the requirements for and the relations between military and civilian scientific personnel.
- Consideration should be given to maximum utilization of existing research and development facilities in the determination of new facilities which might be required.
- Provision should be made for adequate control and accounting of research and development financing.

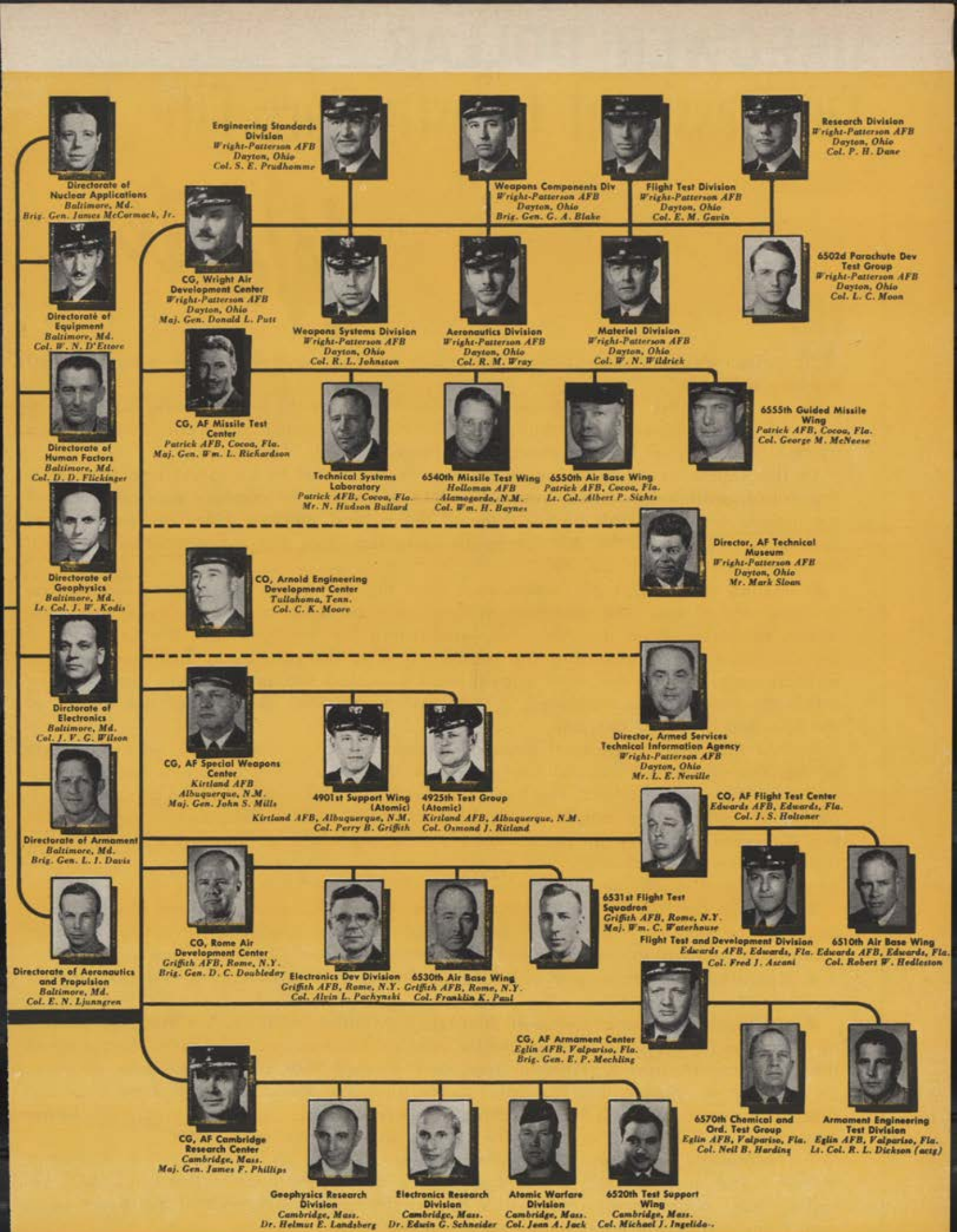
Inasmuch as the Air Force's research and development effort, for the most part, had been under the Air Materiel Command, it was natural for the new research and development organization to be assigned to AMC during its formative stage. On April 2, 1951, ARDC became a major independent command of the Air Force, and in June of last year established its own headquarters in Baltimore.

The mission adopted for the Air Research and Development Command is as follows:

- To attain and maintain qualitative superiority of materiel and to conduct or supervise scientific and technical studies required for the accomplishment of the Air Force mission.
- To seek new basic knowledge from which improved aeronautical equipment, materiel, weapons, and techniques can be developed.
- To undertake the development and recommend the adoption of appropriate new and improved devices and systems for the conduct and support of air warfare, including aircraft, missiles, weapons, techniques and procedures applicable to Air Force purposes.

In accomplishing its mission, ARDC is streamlining its relationship with industry under these basic objectives:

- Establishing joint project offices at Wright Field, manned by both ARDC project engineers and AMC project officers, to form one central place where industry and Air Force operational commands can present their problems and get their questions answered promptly.
- Giving to industry progressively greater responsibilities for the development of complete weapons systems.
- Contracting out even more of the Air Force research and development job (before Korea, sixty-five percent; now about eighty-five percent) to industry, universities and other research laboratories.—End


Directorate of Nuclear Applications
Baltimore, Md.
Brig. Gen. James McCormack, Jr.
Directorate of Equipment
Baltimore, Md.
Col. W. N. D'Ettore
Directorate of Human Factors
Baltimore, Md.
Col. D. D. Flickinger
Directorate of Geophysics
Baltimore, Md.
Lt. Col. J. W. Kodis
Directorate of Electronics
Baltimore, Md.
Col. J. V. G. Wilson
Directorate of Armament
Baltimore, Md.
Brig. Gen. L. I. Davis
Directorate of Aeronautics and Propulsion
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Col. E. M. Gavin
Research Division
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Col. P. H. Dane
CG, Wright Air Development Center
Wright-Patterson AFB
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Maj. Gen. Donald L. Putt
6502d Parachute Dev Test Group
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Col. L. C. Moon
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Col. R. M. Wray
Materiel Division
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CG, AF Missile Test Center
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Maj. Gen. Wm. L. Richardson
6555th Guided Missile Wing
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6550th Air Base Wing
Patrick AFB, Cocoa, Fla.
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Dayton, Ohio
Mr. Mark Sloan
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Tullahoma, Tenn.
Col. C. K. Moore
Director, Armed Services Technical Information Agency
Wright-Patterson AFB
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CG, AF Special Weapons Center
Kirtland AFB
Albuquerque, N.M.
Maj. Gen. John S. Mills
4901st Support Wing (Atomic)
Kirtland AFB, Albuquerque, N.M.
Col. Perry B. Griffith
4925th Test Group (Atomic)
Kirtland AFB, Albuquerque, N.M.
Col. Osmond J. Ritland
CO, AF Flight Test Center
Edwards AFB, Edwards, Fla.
Col. J. S. Holtoner
6531st Flight Test Squadron
Griffith AFB, Rome, N.Y.
Maj. Wm. C. Waterhouse
Flight Test and Development Division
Edwards AFB, Edwards, Fla.
Col. Fred J. Ascani
6510th Air Base Wing
Edwards AFB, Edwards, Fla.
Col. Robert W. Hedleston
CG, Rome Air Development Center
Griffith AFB, Rome, N.Y.
Brig. Gen. D. C. Doubleday
Electronics Dev Division
Griffith AFB, Rome, N.Y.
Col. Alvin L. Pachynski
6530th Air Base Wing
Griffith AFB, Rome, N.Y.
Col. Franklin K. Paul
CG, AF Armament Center
Eglin AFB, Valparaiso, Fla.
Brig. Gen. E. P. Mechling
6570th Chemical and Ord. Test Group
Eglin AFB, Valparaiso, Fla.
Col. Neil B. Harding
Armament Engineering Test Division
Eglin AFB, Valparaiso, Fla.
Lt. Col. R. L. Dickson (actg)
CG, AF Cambridge Research Center
Cambridge, Mass.
Maj. Gen. James F. Phillips
Geophysics Research Division
Cambridge, Mass.
Dr. Helmut E. Landsberg
Electronics Research Division
Cambridge, Mass.
Dr. Edwin G. Schneider
Atomic Warfare Division
Cambridge, Mass.
Col. Jean A. Jack
6520th Test Support Wing
Cambridge, Mass.
Col. Michael J. Ingelido

AIRPOWER DOLLAR

Congressional Investigators Cite *Waste!*

WASTE, INCOMPETENCE and dishonesty are the inevitable hangers-on of a vast military program."

So concludes the Senate Armed Services Preparedness Investigating Subcommittee, the "Congressional watchdog" of the current defense program, chairmanned by the able Senator Lyndon Johnson of Texas.

In the course of thirty-six separate reports submitted to Congress and the press, the subcommittee has cited example after example of "careless squandering" of manpower and materials by all three of the armed services. Here are five typical examples relating to the Air Force, all extracted from the subcommittee's annual report released March 20, 1952.

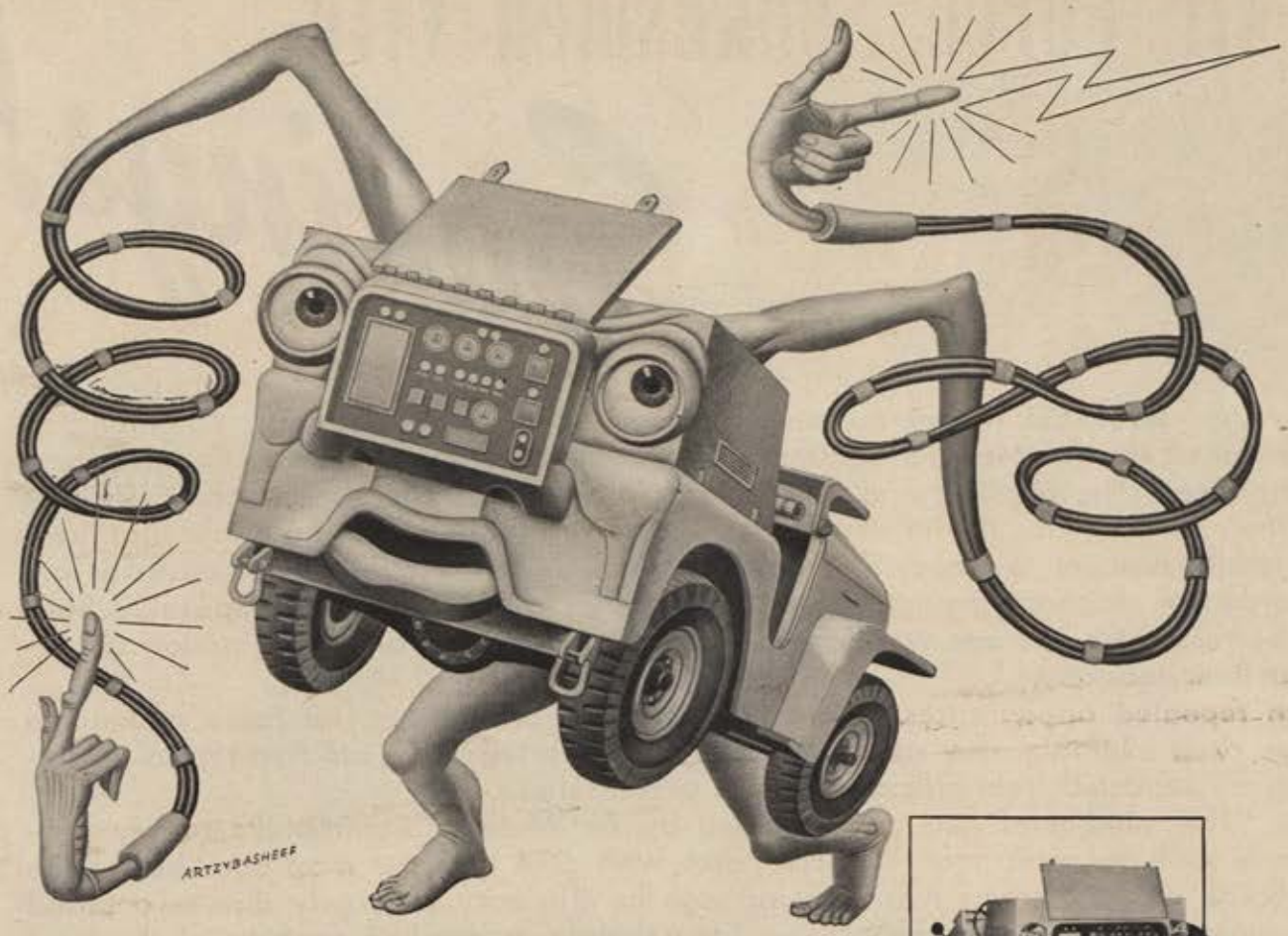
- "Upon the receipt of information that the Air Force was contemplating the procurement of one and one-half million pairs of dress-uniform gloves, the committee requested from the Air Force justification for the purchase. The Secretary of the Air Force, after reviewing the matter, came to the conclusion that there was no military requirement for such gloves and canceled the procurement action. As a result the taxpayers were saved at the least $1,650,000, the cost of the gloves at the low bid of $1.10 per pair."
- "At the time when steel generally, and steel pipe specifically, was extremely scarce, the committee learned that at Robins AFB, Ga., steel pipe was being cut up and used for road markers. The base had on hand 300 lengths of the pipe, accountability for which had not been established. As a result of the committee's action, the Air Force promptly instructed Robins AFB to prohibit further use of the pipe for that purpose. Accountability has been established, the remaining pipe has been inventoried, and it will be put to more appropriate use."
- "At six Air Force installations (Langley, Carswell, Lowry, Mather, March, Keesler) . . . the investigators found evidence of wasteful practices, including improper manpower utilization, replacement of serviceable dining-hall furniture with expensive plasticized-top tables and upholstered chairs, and overstocking of food supplies with resultant spoilage."
- "A mess sergeant at Carswell AFB told committee investigators that 200 pounds of coffee had gone stale and would be used as floor-sweep compound. Secretary of the Air Force Thomas K. Finletter has since denied that any coffee was so used. However, it is notable that the Joint Army-Air Force Menu Board in June 1951 authorized approximately a twenty-five percent reduction in coffee allowance to begin January 1, 1952, 'due to relatively greater use of other beverages.' "
- "Although food, health and morale were in general satisfactory . . . the committee found an inexcusable waste of money and manpower at Lackland (AFB) resulting from a deliberate attempt by the Air Force to enlist more of our best young men than it had the capacity to train."—END

Air Force Spokesmen Cite *Savings!*

"EVERY BUSINESS makes mistakes," said Lt. Gen. E. W. Rawlings, Commanding General of the Air Materiel Command, in recent testimony before a Congressional committee. "The retailers and wholesalers in private business record their mistakes in their markdowns. In the department store field, for example, I am told that these generally amount to about five percent of sales. In the military our mistakes are recorded in stagnant inventories, in materiel left idle at depots. Our mistakes have embarrassed us. We are working with all of our strength and imagination to prevent their recurrence."

In repeated appearances before Congressional committees, Air Force spokesmen have cited example after example of savings effected. Here are five typical examples, all extracted from official Air Force presentations.

- "The number of tons now handled by Air Materiel Command's supply division is .084 per man hour. This compares with .074 tons per man hour before the outbreak of the Korean war. The increase in efficiency is largely due to a broad management analysis program. . . . For example, a detailed analysis of the local purchases within supply depots throughout Air Materiel Command resulted in an annual savings of 47,000 man hours—the equivalent of $75,000—through work simplification.
- "Air Materiel Command put approximately 1,000,000 gallons of used aircraft engine oil back to work in the fiscal year 1951. Actual dollar savings, figured by subtracting the cost of re-refined oil recovered from the cost of a like amount of new oil, totaled approximately $196,800."
- "In place of old type administrative headquarters, Air Defense Command has created a specially tailored number of small administrative headquarters which take care of more fighter-interceptor squadrons than the old combat wing headquarters used to do. Thus a manpower saving was achieved by reducing personnel engaged in administrative and housekeeping duties. This reorganization is expected to save more than $2,000,000 annually through rearrangement and better use of manpower."
- "An emergency field program expected to at least double the service life of jet engines has been put into operation by Air Materiel Command's maintenance division. . . . Before the jet was untouchable. Every small ailment meant that the engine was removed and returned to a maintenance depot in the United States. Now small repairs are made on the spot . . . for an average saving of $13,403 per engine."
- "Air Materiel Command has instituted one of the broadest management improvement programs ever attempted by a major industry. The program touches each of the more than 200,000 military and civilian employees of AMC from the commanding general on down. Through detailed analysis of each individual job in the command, the program is breaking bottlenecks, eliminating duplication, stepping up efficiency, and reducing costs."—END



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HOW COST CONSCIOUS CAN THEY GET?

The Air Force has made notable strides in attacking waste, but the military system is a tough opponent

WHEN GENERAL Hap Arnold was confronted with charges of waste in his Air Force, he had a stock answer for his critics. "War itself is wasteful," he said, and that seemed to handle the situation.

There were few who could dispute the General, and for good reason. World War II was at its height, and victory still hung in the balance. Economizing in weapons, in view of the risks involved, could have been considered a military liability, if not an unpatriotic act.

For cold war, limited war, and what is referred to as the "long pull" against communist aggression, military economy becomes a national asset. "A wise strategy, the only possible strategy for this country," as Secretary Finletter has said, "is one based upon a wise and economical use of our total resources." On these same terms, military waste becomes a liability the country cannot afford.

The question remains, of course, as to what is wise and economical in these matters, and therefore, what constitutes waste in the area of military operations. So far in the many investigations relating to this subject, military waste has been related to the procurement and use of an item. It deserves broader definition.

For example, we continue to support and up-and-down military economy, devoid for the most part of long range production planning, programming, and financing. We still invest billions in military goods without assigning them priorities commensurate with the priority tasks of the services. We invariably think "by the numbers" (see page 38) and neglect to protect our military investment in old weapons by the adequate development of new ones. All these, to mention only a few, also result in the unnecessary expenditure of materiel, manpower, and money; in fact, they dwarf by far anything you have read in the papers to date about military waste.

Nor can we expect Congressional investigators to pursue these problems. As the Johnson Committee of the Senate (see page 42) has stated in its annual report, "In every investigation, however, the committee has recognized one well-established boundary over which it will not step. It has constantly refused to question battlefield strategy or the conduct of the war as such." This policy, generally observed by all investigating bodies of Congress, is an understandable one. And yet, military waste can be linked so closely with over-all strategy, roles and missions, and the conduct of war, that it becomes difficult to see how Congress, through its investigations, ever will do more than scratch around the edges of waste in the military establishment. This is not meant to belittle in any way the valuable contributions of the current investigations, but rather, it is an attempt to give some perspective to this vast and confusing subject. In this same vein, other matters deserve clarification.

Civilians looking at the military, whether they are investigators for Congress or reservists on temporary active duty, are inclined to match the military establishment against the business establishments with which they are familiar, and compare the two in the utilization of men and equipment. Of late the military, and especially the Air Force, has been encouraging this comparison. The Air Materiel Command, for example, is likened by its leaders to "an American business institution."

Military spokesmen are careful to point out certain basic differences in the two, as General Vandenberg did recently when he said, "Whether at peace or at war, a military establishment is inevitably a heavy consumer rather than a producer of national wealth. And whereas the function of business is fundamentally creative and productive, warfare by its very nature involves death and destruction." And there are other differences, not so generally understood.

There is, for example, what for want of a better term can be referred to as the "military system." It includes a vast, sprawling organization, so much larger than anything known to the business world that, even if it achieved the minimum of waste according to the highest business standards, the sum total of that waste, by simple multiplication, would still be extensive. It includes an end product —striking power—which does not conform to the normal laws of supply and demand; a product which is a more valuable asset when, as a preventive to war, it is a surplus commodity than when it is an item being consumed in combat. It includes the fact that military leaders, for the most part, have been educated and trained for war rather than business. It includes personnel procedures which prohibit hiring and firing in the sense that business knows the terms. It includes, at the airman level, a higher turnover rate and a lower experience level than are common among comparable employees in industry. It includes at higher personnel levels a marked discrepancy in salary compensation (General Vandenberg, for example, holds down a job which by industry standards would bring him from five to ten times the salary he now receives from the taxpayers), and on the ci-

WATCHDOG OF THE DOLLAR

AF spot checks result in savings.

Keeping track of the billions being spent is a full time job for the Auditor General

THIS YEAR, with a recognizable chunk of your tax dollar going toward the expanding Air Force, billions are being spent for new aircraft and equipment, servicing and maintaining Air Force bases, and operating planes in all parts of the world. An important but little known group under the AF Auditor General plays a vital role in this worldwide drama, acting as watchdog of the airpower dollar. With headquarters in Washington, D. C., and Philadelphia, Pa., Brig. Gen. T. R. Rampy's group stretches its long arm wherever the Air Force operates, keeping tabs on these billions of tax dollars.

Air Force auditing generally takes one of two forms. The first includes records of financial and property transactions within the Air Force. The other keeps track of AF procurement contracts.

Transactions with AF-owned property, the operation of commissaries, records of cash sales, accounts covering appropriated funds, and money used in welfare and recreational activities all come under internal accounts —the first type of AF audit.

The operation at MacDill AFB, Fla., is typical. There an eight-man staff tallies accounts for base supply, laundry, the commissary, library, disposal salvage, and the like, as well as food, gasoline, clubs, theaters, and welfare funds. Each of the sixty-nine accounts takes from six hours to several weeks to audit. And in addition, this staff also takes care of six other auxiliary fields and civilian contract schools in the area.

The taxpayer gets even greater dividends from the second type of AF audit, covering procurement contracts. By analyzing the cost records and operations of contractors, AF auditors help procurement officers establish fair prices. The watchdogs also study the internal control systems of the contractors and come up with ways of avoiding waste brought on by spoilage and inefficiency.

Another example of the work done by AF auditors can be seen at Boeing's Wichita Division, where contractors' claims totalling $1,600,000 a day are audited. Just about everything going into the B-47 there comes under the auditor's eagle eye.

The Auditor General's staff includes about 1,600 civilians, 750 officers, and 150 airmen. Of the total, many are CPAs or members of the American Institute of Accountants. The staff is far flung, with district offices in New York, Detroit, Chicago, Los Angeles, Fort Worth, Atlanta and around the world.

But wherever located, at bases or at plants, the auditor uses tried and proved business methods in his role as independent expert advisor to top management of the Air Force.—END

Boeing employees come under the watchful eye of an AF auditor.

vilian side, it includes a continual change of personnel in top management positions. It includes an economic structure which compromises long range planning and prevents taking advantage of various market factors governing cost and delivery; in fact, unlike commercial practice, much of the purchasing must be done when conditions are least favorable to the buyer. And the "military system" includes an operational structure often attuned, in part by necessity, to effective but relatively uneconomical wartime procedures.

All these factors—some superimposed on the system, others inherent to it—can be formidable barriers to good business, and must be given full consideration in any appraisal of waste in the military establishment.

This is not to say that the military, especially the Air Force, hasn't made every effort to apply business practices to its operation. Nor is it meant to detract from the validity of this statement by General Vandenberg:

"We have made a habit of adapting to our military organization the techniques and methodologies of American business. The first Secretary of the Air Force was himself a business man. The Air Force was the first military organization to establish a Comptroller system, closely patterned upon the most modern corporation procedures. It was the first military establishment to adopt the now standard Performance or Program Budget which relates expenditures specifically to the type of activity for which funds are appropriated. Even before the Air Force became a separate establishment, it went to business for a model around which to construct its crucial planning and programming activities, borrowing from the Harvard Business School a distinguished authority, Dr. Edmund Learned, to devise the necessary organization. And, for that matter, our existing procurement establishment which conducts more transactions than any business in the world was closely patterned upon one of the most successful large-scale buying operations in American industry. It was adapted to the Air Force by a high-ranking executive of the corporation that had developed the system."

Moreover, the Air Force has gone to great lengths to train its military personnel in business practices. Its officers, for example, have been trained in advanced business techniques at Harvard, and at the advanced Air Force management course

(Continued on page 58)

Look what's new in AIR VALVES

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Today, International Harvester is engaged in building equipment that becomes an integral part of military aircraft.

A basic factor in our ability to meet the requirements of the aviation industry is Harvester's reputation as a leader in Statistical Quality Control.

The precision products we manufacture must meet tolerances measured in ten-thousandths of an inch. Every piece of equipment is constantly inspected and re-inspected by finely gauged tools and checked against statistical charts.

The effective use of Statistical Quality Control calls for cooperation from many people . . . top management, the planning department, tool design, production and inspection supervisors . . . above all the men in the shop.

Quality Control—as practiced by International Harvester—means higher quality and lower costs. It authenticates our contribution to Air Power.

INTERNATIONAL IH HARVESTER

The confidence in IH products comes from the quality built into them.

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Advantageous location . . . intelligent labor . . . material resources . . . top aircraft engineering knowledge . . . a demanding air force: these are the component parts . . . the factors that have contributed to making Canadair a major aircraft manufacturer.

Canadair benefits, too, from being in a country now a world military and civil aviation power . . . gains importance from the calibre of designers and engineers carefully chosen from many countries.

And Canadair has that all-important asset, experience: an established production record embracing airliners, military aircraft and training planes: *experience that counts with those buying aircraft.*

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CA52-9UST

New, More Powerful Allison Jet Engines Put Added Sting in the Scorpions

THE NORTHROP SCORPION F-89C—newest all-weather jet interceptor for the Air Force—gets a big power boost from two new Allison J35 engines.

With take-off thrust in the new J35-A-33 engines greatly increased over previous models in the F-89 series, the Scorpion remains the highest-powered interceptor in production in the world today.

This increased power from the improved Allison engines gives the aircraft faster take-off—higher rate of climb—even with heavier fire power and radar equipment.

Pilots now pack a special Sunday punch in their round-the-clock patrol for any intruders approaching our shores.

Today, Allison engines are depended upon *exclusively* to power the interceptors which guard our shores—a demonstration of confidence based on the unequalled experience of more than 1,300,000 hours in the air—*more time, under all conditions, than all other jet engines combined.*

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DIVISION OF GENERAL MOTORS
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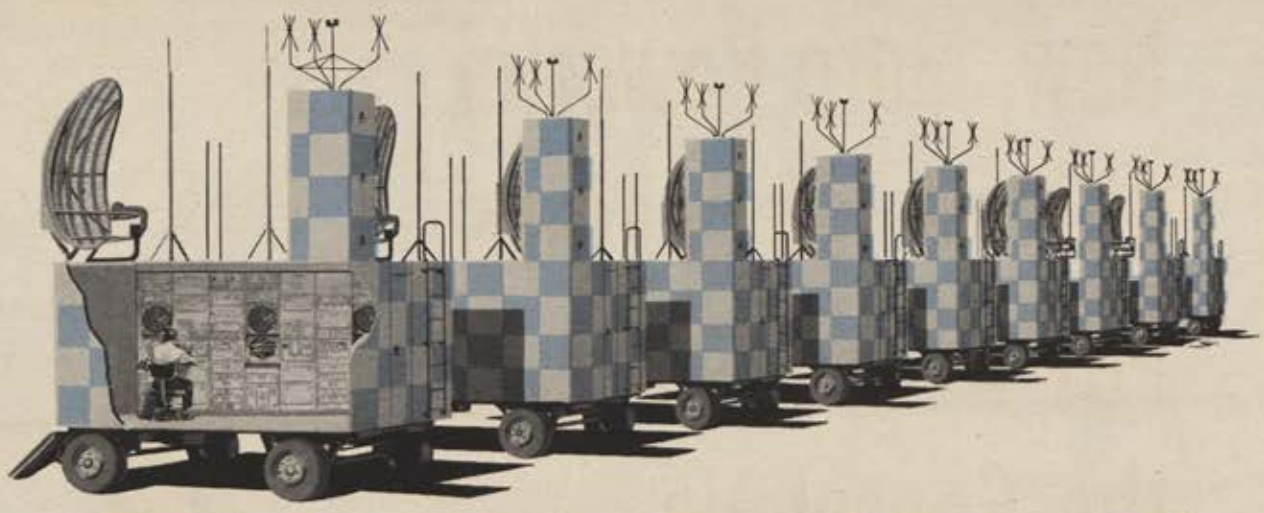
Builders of J35 Axial, J33 Centrifugal Flow Turbo-Jet Engines, T38 and T40 Turbo-Prop Engines.



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Experience . . . *Gilfillan has it*

40 years of pioneering radio, television and electronic research and development • Development and production of GCA landing system and other radar equipment for USAF in World War II.

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2500 carefully selected and highly skilled specialists • 100 special factory-trained tech reps. Men who provide around-the-world service and maintenance of Gilfillan GCA and other complex radar systems.

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7 separate modern plants, containing the very finest precision equipment, spread throughout Southern California • Over 2000 suppliers.

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10 years devoted *exclusively* to years-ahead research for the United States Armed Forces. And—since its formation—for NATO.

Gilfillan Has What It Takes!

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Los Angeles

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Aircraft!

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Rapid growth always has been characteristic of the aviation industry. TEMCO has matched this growth—building steadily, soundly on the foundation stones of aviation . . . aircraft engineering, production and experience to reach recognition as a front line aircraft company.

Today, with its $120,000,000 backlog of orders, TEMCO is big business—big aircraft business.

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AIRCRAFT CORPORATION

DALLAS, TEXAS

MOBILIZATION NEWS

5,000 graduates of AF-ROTC will be ordered into active military service within 120 days after graduation this spring. Those to be called include all newly-commissioned graduates without prior service who receive their degrees before June 30, '52. Another 1,800 students will have completed AF-ROTC instruction by then but will not be commissioned in AF Reserve until completing educational requirements. Most of those will be ordered to active duty before May 1, '53. There are no plans at present to call the 3,000 students with prior service who will complete AF-ROTC training this spring. . . USAF urgently needs Regular lieutenant colonels and rated Negro officers to fill 300 instructor vacancies in AF-ROTC program.

300 new second lieutenants, qualified for meteorological training, are currently needed by USAF. These officers, selected from applicants with previous education, will be ordered to EAD on or about Sept. 1, '52.

RESERVE OFFICERS who receive their appointments from AF-ROTC in '52 and afterward will not be given mobilization assignments or designations. Exceptions are those Reservists who are draft exempt under certain established criteria.

RESERVISTS voluntarily serving on EAD under AF Service Statements at time of Korean war may return to civilian life on expiration of these contracts. These officers may remain on active duty by signing voluntary indefinite statements. Reservists who already have completed tours under Service Statements and are currently serving under involuntary extended tours may separate or: (a) volunteer to continue AF for indefinite period, (b) volunteer to continue AD until completion of present extended period (twenty-one months). This ruling affects about 7,500 officers.

5,020 ANG officers were on EAD, as of Jan. 31, '52. Forty-two percent were serving on voluntary indefinite statements. Current Service Statements of the other fifty-eight percent expire as follows: Feb.-June '52, one percent; July-Dec. '52, thirty-four percent; Jan.-June '53, eight percent; July-Dec. '53, fifteen percent.

330 tactical ANG units called to active service during present mobilization are scheduled to return to State control during July, November, and December '52, and January '53. About 80 percent of ANG is now on EAD. AF will activate new units to replace those returning to States. These new units will take over aircraft and equipment of returning Guard units.

AIRMEN who hold valid AF Reserve commission in grade of captain or below and hold primary or secondary SSN of 0520, 1028, 1031, 1034, 1035, 1037, or 7888, and aeronautical rating as observer are eligible for entry into EAD on Voluntary-indefinite basis for duty in observer specialty if they are physically and professionally qualified. Those who volunteer for AD will be utilized within their present command of enlistment assignment or with AIR Crew Training.

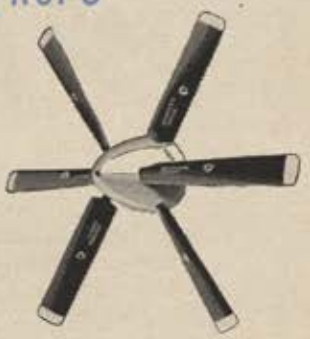
SCARWAF units in ZI are being reorganized at reduced strength in program to eliminate present ten percent overage authorized with Engineer Aviation battalions and certain other units.

PLANS are being made for proposed Reserve surveys in Oklahoma and Florida, using personnel and resources available to 14th AF units, backed up by Reservists volunteering for short tours.

The U.S. Navy's newest and mightiest

BATTLESHIP OF THE SKY

another turboprop assignment for AEROPROPS



The Navy's newest turboprop powered airplane, the North American XA2J-1 is equipped with two Aeroproducts dual rotation turbine-propellers. This airplane of undisclosed range and bomb load capacity is one of the Navy's most formidable weapons. And again the Navy has selected Aeroprops for the largest and most powerful carrier-based aircraft in the world today.

These Aeroproducts turbo propellers convert the tremendous horsepower of the two Allison T-40 engines into the thrust which carries this A-bomber to its target.

Aeroproducts engineers—the same men who developed the propellers for this giant Navy plane—are ready to help you with any propeller problem.

Building for today
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What it takes to send one jet into action!

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515,000 Separate and Distinct Parts

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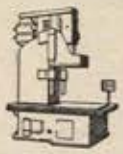

13,500 Separate and Distinct Tools

+

20,000 Skilled Man Hours

A giant jig-saw puzzle, yes, but it's solved *every day* by American industry. Thousands upon thousands of intricate parts are produced, assembled and fitted into a perfect finished product. Each part fits and functions smoothly because in America *skill* and *speed* pay off.

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

Owing to security restrictions all figures are approximate

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FOR INDUSTRY: Tobacco processing equipment, cigarette and cigar machinery • AMF and Union bakery equipment • automatic pinspotters, bowling equipment and supplies • DeWalt power saws • Lowerator dispensers • Oakes continuous mixers • stitching machines • Wahlstrom chucks • Roadmaster bicycles • Cleve-Weld tire rims • Junior velocipedes.

American business has been successful, and it is probable that many of the policies that have contributed to its success could be adapted to government procurement. One of these policies is to select competent individuals, give them responsibility and judge them by the result of their work. Industry does not spend a great deal of money hiring individuals to check individuals, and departments to check departments. There are no periodic or annual investigations, unless there is reasonable evidence that they are required. The man who issues the order to the employee is willing to take responsibility for the result of his policy. I suppose you could not expect that measure of simplicity in government procurement, but if it could be attained I believe you would get a good product at a lower price, and perhaps your taxes would not be as high as they are now.

Government buyers are far from perfect. Being human, we make our share of mistakes. But I believe the record will show that, by and large, ours are honest mistakes. All the investigations have uncovered only a very few instances of irregularities among us. And all the regulations in the world won't change human nature.

As it stands today, a Buyer must not only be honest, he must also avoid the vicinity of sin. We get very lonesome at times. In the old days when we made a business trip we spent useful evenings discussing manufacturing processes and better products with the people responsible for them. Now we are shunned like social pariahs and dubbed with suspicion if we are seen in the presence of company representatives. Perhaps some people have been "influenced" by such discussions, I do not know, but it seems to me that the pendulum has swung rather far in the other direction. For example, I cannot be found doing my work with a pencil bearing the name of a manufacturing company on it. A regulation prohibits it. And the same regulation states that my office wall cannot be adorned with a calendar presented to me by a manufacturer. I didn't realize that the leggy girls on those calendars could do so much harm to an Air Force Buyer.

I like my job and I intend to stay with it, but sometimes after a hard day of directives I come to the conclusion that the most appealing government document is the one which sets forth the government retirement plan.—END

COST CONSCIOUS—CONTINUED

at the University of Pittsburgh. To date, some 700 Air Force officers have graduated from civilian institutions in business administration. At the Industrial War College in Washington, the Air University at Maxwell Field, and through the Air Force Industrial Mobilization Training Program, other officers have taken courses designed to provide them with a better insight into industry problems. Still others have received on-the-job training with industry. In addition, the Air Force has been able to persuade business men of wide experience to assist it on particular problems. The trend toward civilian consultants is on the up-grade. And the Air Force has research and development contracts with 143 educational and other nonprofit organizations, many of which deal with projects involving business techniques.

At the operating level the Air Force has broken from the "system" on many occasions. Traditionally, to cite one small example, the Air Force has used Army-type military vehicles designed for combat conditions but no better than commercial carriers in terms of the Air Force requirement. It now buys commercial-type vehicles, and will save many thousands of dollars in the process.

Savings of this type, and there are many others that could be cited, are primarily savings against the "military system." Welcome as they should be to the taxpayer, it does not necessarily follow that savings have been effected against normal business practices.

There is good evidence that the Air Force has adopted sound business methods from industry to a degree unknown to the military, and that this commendable trend already has resulted in substantial dollar savings—over and above costs which have been normal to the military operation. But this should not lead to the conclusion that the Air Force is operating on a par with the large corporations.

Air Force procurement people report they have "produced actual savings aggregating millions of dollars" by virtue of such procedures as prompt payment of bills, mechanization of property accounting, improved transportation and storage, conservation, reclamation, etc. All of which is most commendable, but all of which is common to commercial practice.

Waste, as business houses know from experience, must be attacked at the grass roots of an organization. So

(Continued on page 61)

Aircraft engine 1894 version

Model of the plane designed by Sir Hiram Stevens Maxim and powered by two of the engines shown above.

Sir Hiram Stevens Maxim could have left posterity a more accurate record of engine weight, but hardly a more dramatic one than the photograph shown above showing him holding one of the two 150 H. P. *steam engines* with which he powered his airplane. The airplane actually was airborne briefly on July 31, 1894. A copy of this rare engine photograph (without any advertising message) is yours for the asking.

His grandson, Hiram Hamilton Maxim, continues the family interest in aviation as head of the Company which designed and manufactured the Maxim Silencer, shown below, quieting the roar of a jet engine during run-up tests at the Lockheed plant in Burbank, California.

With 40 years of leadership in the silencing field (9 of them in the development of jet engine silencing) Maxim offers top flight research and engineering departments to solve your silencing problems, whatever they are.

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Gentlemen: ☐ Please send me more information on jet engine silencing.
☐ Please send me a copy of the steam aircraft engine photo.

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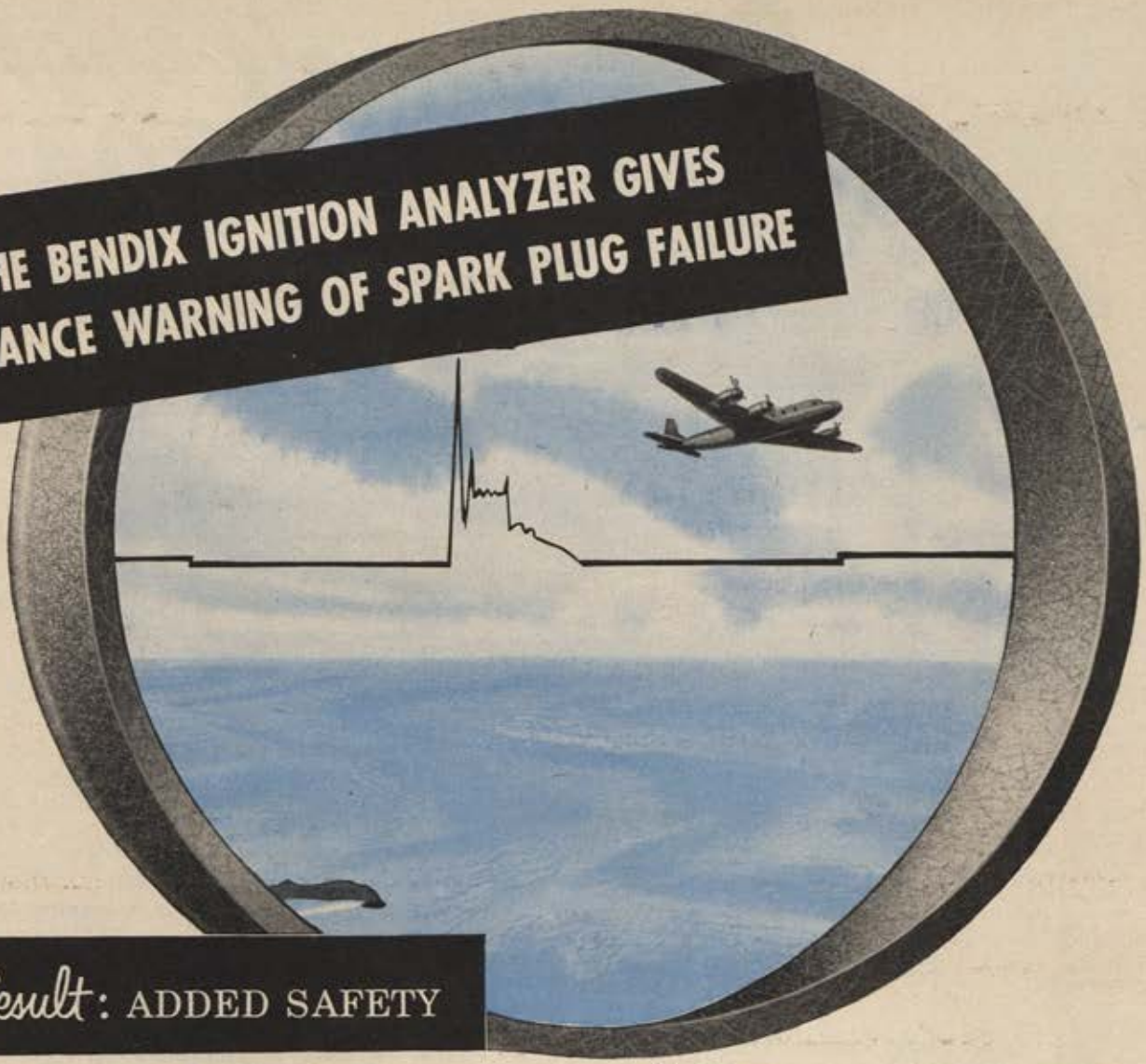
THE BENDIX IGNITION ANALYZER GIVES ADVANCE WARNING OF SPARK PLUG FAILURE



Result: ADDED SAFETY

THE POINT OF NO RETURN BECOMES A POINT OF ASSURANCE

The Bendix Ignition Analyzer actually *foresees the future* by predicting the remaining life of spark plugs. With the Ignition Voltage Control the operator can determine the present efficiency of all spark plugs and put the finger on any weakness in the system—even though it has not yet affected the operation. If the control reveals impending trouble, corrective action may be taken *before* material harm takes place. With an airborne installation of the Ignition Analyzer, the test can be made before an over-water flight reaches the point of no return. By viewing the wave forms on the face of the 'scope and comparing with known patterns, the operator can quickly make the *right* choice . . . to return without mishap, to operate at reduced power and prevent complete engine failure or to continue safely at cruising speed.

So, for maximum safety and operating efficiency it pays to make provisions for installation of a Bendix Ignition Analyzer on all your aircraft.

Detailed information available on request.

Costs Less—Does More

The Bendix Ignition Analyzer is available for either airborne or portable-airborne installations. It can be used with either high or low tension magneto or battery ignition. It is the ignition analyzer that can predict spark plug failure before it occurs . . . make an efficient check of more than one spark plug at a time and do so on a large, easy to read screen . . . yet it costs less than comparable analyzers.

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COST CONSCIOUS——CONTINUED

it is encouraging to note Air Materiel Command's "cost consciousness" program with its slogan, "More Air Force per Dollar," and these two main objectives: 1. To make constructive economy so instinctive with all military and civilian personnel that savings in money, manpower and materiel can be effected; and, 2. To provide every possible assistance to Air Force contractors and subcontractors in accomplishing this same end. Enlightened AMC officers are basing their program on "performance" rather than "intent." A system of Economy Boards, comprised of high-level officers, and subordinate Economy Officers, who accept "savings" as an extra-duty assignment, has been established, and reports on economy matters are being rendered on a monthly basis. This effort will, of course, run directly into the stiffest barriers to economy presented by the military system.

These barriers, it should be understood, are ingrained in the military structure, like those common to other old and venerable organizations such as Congress, as the findings of the Hoover Commission will attest. Neither Congress nor the military can be changed overnight. Only long range educational effort—and the rewriting of more than a few laws—can do that. Meanwhile, it is improbable that waste can be squeezed out of either organization by sheer force.

It is very doubtful, for example, if much of the waste would be squeezed out of the Congressional structure merely by the sudden application of a ten percent across-the-board cut in Congressional expenses. Chances are that most Congressmen would continue to operate in the same old way.

Similarly, across-the-board cuts against the military budget would not necessarily mean that comparable efficiency and economy would result. Chances are that the equipment, and some of the striking power would be sacrificed, that much of the waste would continue, and that the taxpayer would be the greatest loser. The attack against military waste must be a continuing program, pin-pointed for effectiveness against specific targets.

The Air Force has made notable inroads against the military system in the saving of tax dollars. But this system, it must be realized, presents some insurmountable barriers to sound business procedures. Neither the Air Force nor the other military services can, for this reason, be compared to business in matters of efficiency and economy. The current charges against military waste must, in all honesty, be weighed in these terms.—END

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RENDEZVOUS

Where the Gang gets together

DOWNED AIRMAN: In February 1944 an elderly German saved the life of an American airman who had parachuted from a burning plane shot down by anti-aircraft over Koblenz, Germany. The American, it is believed, was taken to a hospital in a Dominican nunnery in Arenberg. His benefactor would like to know the flier's identity, and if he recovered and got home safely. He was about five feet, six inches tall and had black, curly hair. Anyone having a clue, please get in touch with *Johann Wiesbrod, Simmern/U.W. Wald, ueber Koblenz, Schlosstrasse 56, Koblenz, Germany.*

HISTORIES AVAILABLE: A few copies are still available of a pictorial history of the 401st Bomb Group, part of the 8th AAF during the last war. The 214-page book, containing the complete story of the unit and hundreds of pictures, was paid for with money from the 410th's Officers' Club Fund and distributed free to all officers and airmen of the group. Further information from the author, *Gordon R. Closway, Executive Editor, The Winona Republican-Herald, Winona, Minn.*

11TH AIR DEPOT GROUP: Anyone know if a history of the 11th Air Depot Gp. has ever been published? *Charles Abramson, 229 S. Patterson St., State College, Pa.*

91ST GROUP GUNNER: I am writing in behalf of the parents of Starr A. Tucker, killed in action Aug. 1943 over Schweinfurt, Germany. He was a gunner in the 322d Sqdn., 91st Bomb Gp. Has a group unit history been published, or does anyone have any information about the squadron, especially when it was stationed in England? *Mrs. Elizabeth Cushing, 20 South Main Street, Baldwinville, Mass.*

346TH: Would like to get in touch with anyone connected with the 346th at Memphis, Tenn. *Morris Starr, 1796 Columbia Rd., N.W., Washington, D.C.*

MEN OF THE 447TH: I'd like to hear from crew members and friends who served with me in the 447th Bomb Gp. (H), 710th Sqdn., 8th Air Force, in 1944. *John H. Moran, 667 Mill St., Watertown, N.Y.*

PAGING CAPT. CURTIS P. BOAS: Looking for Captain Boas, assistant Post Technical Inspector, who was formerly at Foster Field, Victoria, Tex. *Dorothy Jacobi, (ex 1st Lt., ANC), 409½ S. Taylor, Gainesville, Tex.*

WANTED—PEN PALS: Four French girls, preparing for an English examination at the end of this school year, would like to correspond with American aviators. *Miss Y. Ripert, 1 Place Carnot 1, Hussein-Dey, Alger, North Africa.*

"NOLA" ENGINEER: Would be grateful to hear from anyone who knew my brother, S/Sgt. Raymond H. Dampman, 75th Bomb Sqdn. He was engineer on the B-25 "Nola," last seen over Rabaul, New Britain. *Edwin Dampman, 16 Broadway, West Chester, Pa.*

HEY, TONY: Anybody know present whereabouts of Anthony J. Wojick, originally from near Buffalo, N. Y? *Wilbur Stephen Hatch, R.F.D. #3, Glens Falls, N. Y.*

FIFTH ARMY VETS: All former EM, officers, and civilian members of Fifth Army are invited to join a month-long Reunion Pilgrimage to the scenes of their North African and Italian victories. Special travel and accommodations rates have been arranged. Will sail from New York Sept. 12. For detailed information, contact *Reunion Committee, Fifth Army Pilgrimage, 38 E. 57th St., New York, N. Y.*

RETREADS GATHERING: There'll be a reunion of all retreads (vets of World Wars I and II) in Boston, Mass., Aug. 1-3, 1952. Contact *Chairman Ross H. Currier, 108 Massachusetts Ave., Boston 15, Mass.*

SEE YOU IN DETROIT: All members of Sqdn. K, Lowry Field Finance School (and particularly Barracks 912 men) from January to April 1946, interested in a reunion at AFA's Detroit Convention, Aug. 28-31, 1952, please contact *Kenneth R. Simmons, 3949 West Dunbar Rd., R.R. #1, Monroe, Mich.*

TROOP CARRIER COMMAND: Has a book ever been written on the activities of the Troop Carrier Command? *Paul Ames, Rt. 1, Box 100, Coachella, Calif.*

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

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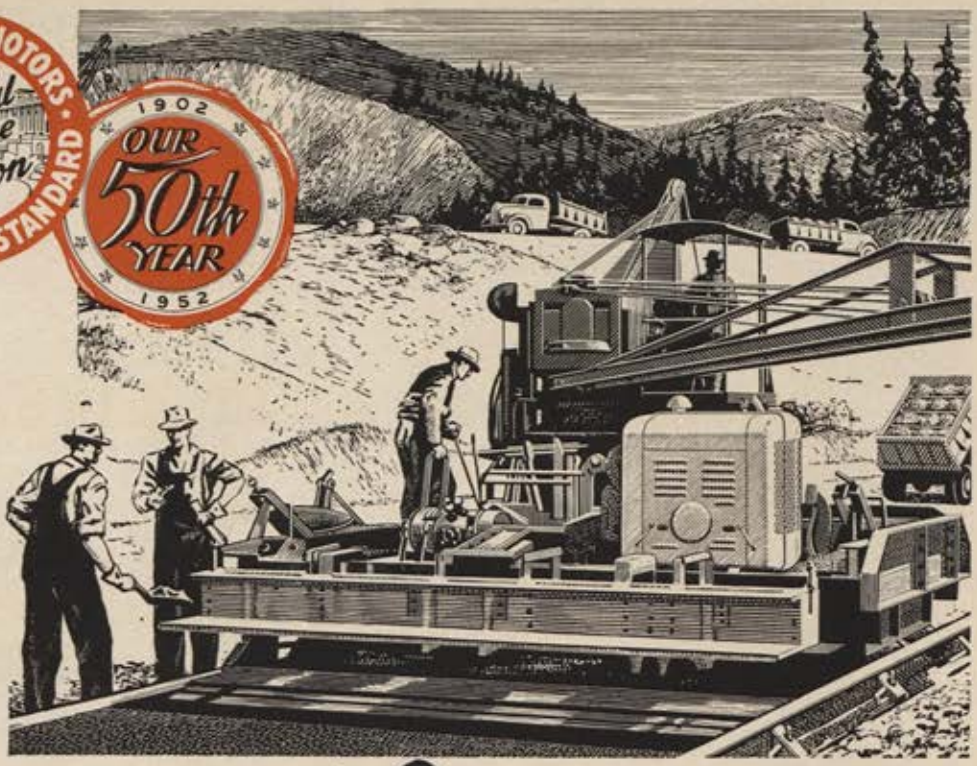

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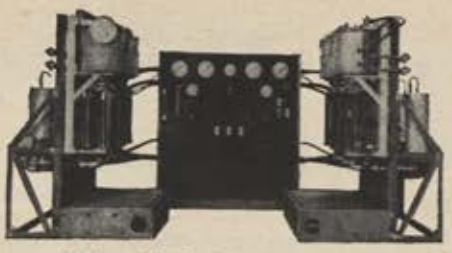
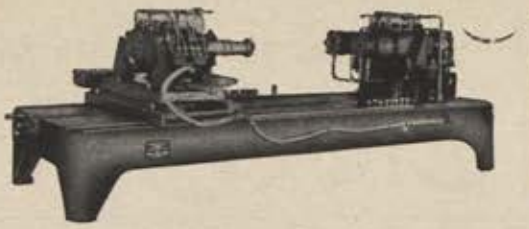
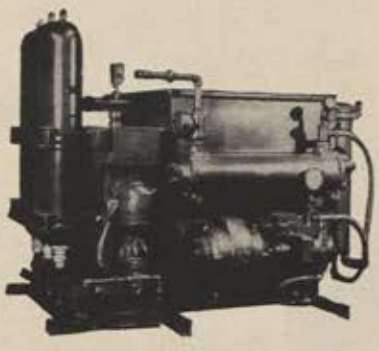


Universal Jet Fuel Nozzle Test Stand



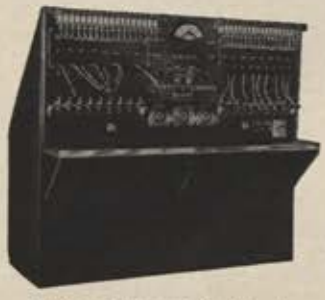
Universal Torsional Shaft Tester

Universal Propeller Governor Tester



Rock Crusher Hydraulic Power Pack

Jet Engine Lube Pump Test Stand



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CONVENTION AND REUNION

AIRPOWER ACTION AFA PROGRAMMING WARTIME REUNIONS WILL HIGHLIGHT 1952 CONVENTION

Cass Hough Named Convention Host Richard Hodges Is Chairman

WASHINGTON—Today's headlines dramatize the significance of AFA's 1952 Convention as the Association goes to Detroit to call nation-wide attention to American airpower.

Two charter members of the Association have been named by AFA President Harold Stuart to head the top convention committees. Cass Hough, president of the Daisy Manufacturing Company at Plymouth, Michigan, will head the Host Committee. Richard C. "Dick" Hodges, president of the Michigan Hotel Association and Manager of the Abington Hotel in Detroit, is Convention Chairman.

A joint Convention Headquarters will be set up at the Sheraton-Cadillac Hotel (formerly the Book-Cadillac) and the Hotel Statler. Delegates will be registered at both hotels and the functions will be divided between them. Business sessions will be held at the Sheraton-Cadillac. Only two short blocks separate the two headquarters hotels. The remaining five hotels scheduled for use by AFA lie within four adjoining blocks, with the exception of the Detroiter (seven short blocks away).

One of the purposes of the Convention is to pass resolutions on vital airpower matters. This will be done in the four scheduled business sessions. AFA members and units are urged to send their resolutions as soon as possible to Julian B. Rosenthal, National Secretary, 630 Fifth Avenue, New York City.

(Continued in Detroit)

BIGGEST REUNION OF THE YEAR

Two Air Force buddies meet for the first time since the war at AFA National Convention, biggest AF Reunion of the year.

AIR RACES AIR EXHIBITS

DETROIT—Labor Day weekend in Detroit will offer AFA Convention delegates and guests a double feature program. The Aero Club of Michigan will sponsor an air show at the Wayne County Airport the same weekend—August 30-31 and September 1. The show will feature aerial demonstrations and aviation exhibits, plus some air racing.

Arrangements have been made with air show officials for registered AFA Convention delegates and guests to attend the show on opening day, Saturday, Aug. 30. Of course, delegates and guests may attend on Sunday and Monday by paying the regular admission price. Labor Day weekend in Detroit is a must for airmen.

(Continued in Detroit)

UNIT REUNIONS

WASHINGTON—Reunions of wartime Air Force units will again highlight AFA's Annual National Convention, biggest Air Force Reunion of the year.

As many as thirty wartime outfits have held their "little conventions" at AFA's annual get-together. Among these were ATC, 9th AF, 13th AF, WACs, Medics, AMC, Kreigies, and Night Fighters. Programs of these individual reunions include luncheons, dinners, dancing, and elbow bending. The telling of tales goes on and on.

Most of the unit reunions at this year's AFA Convention will be held Friday and Saturday, August 29 and 30. With the AFA Convention and air races and air exhibits being held on Labor Day weekend, the reunion of Air Force buddies in Detroit should be the greatest ever.

Anyone interested in a reunion, write AFA Hq.

(Continued in Detroit)

THE PROGRAM

THURSDAY—AUGUST 28

Registration begins
National committee meetings
First business session

FRIDAY—AUGUST 29

Business sessions
Unit reunion luncheons
Reunion Cocktail Party
Annual Airpower Ball

SATURDAY—AUGUST 30

Final business session
Unit reunion parties
Aero Club air show
Annual Airpower Banquet

SUNDAY—AUGUST 31

Dawn Patrol Breakfast
Installation of officers

(Aero Club air show continued on Sunday and Monday.)

RESERVATIONS

DETROIT—Arrangements have been made at the following seven hotels to house AFA Convention delegates and guests. All but the Detroiter (seven blocks) are located in four adjoining blocks. Reservation requests must be sent directly to the hotel selected.

★ ★ ★

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T: $12.50

DETROIT-LELAND HOTEL
S: $6.00 D: $8.50 T: $9.00

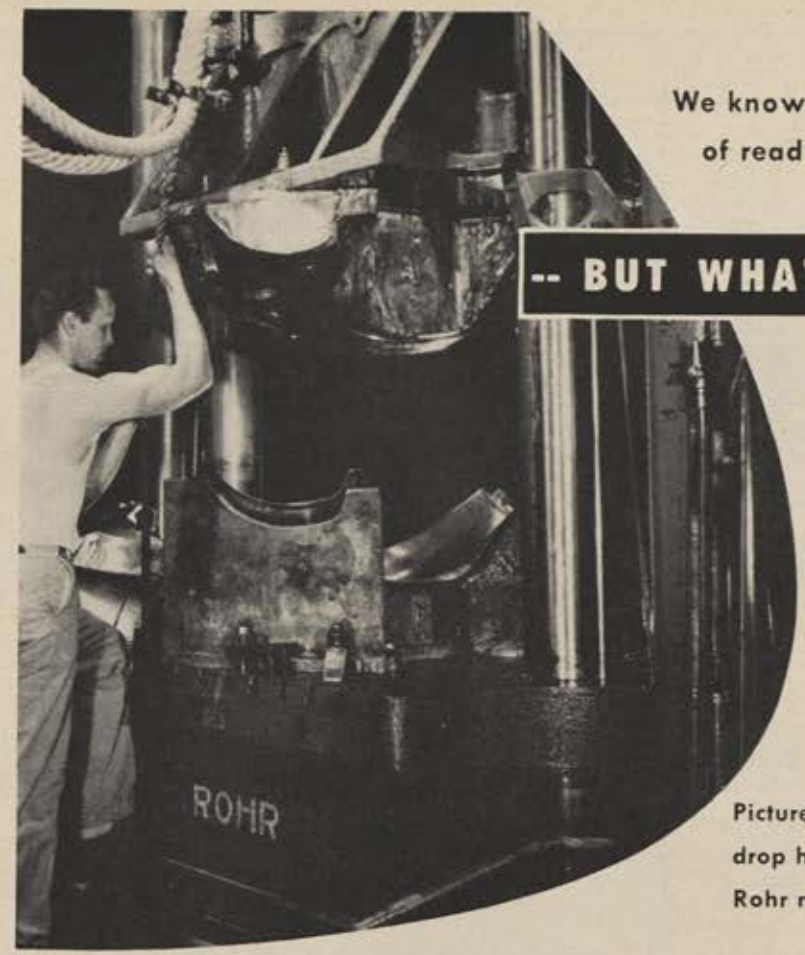
FORT SHELBY HOTEL
S: $5.50 D: $8.00 T: $9.00

TULLER HOTEL
S: $4.50 D: $7.00 T: $9.00

WOLVERINE HOTEL
S: $4.25 D: $6.50 T: $8.75

DETROITER HOTEL
S: $4.00 D: $6.50 T: $8.25

*Average rates per day for Singles, Doubles and Twins.



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TECHNIQUE

Everything Under Control

The winter wind that whips across the runways in South Korea is the worst the Manchurian weatherman has to offer, and it's no fun for runway control operators to battle the icy blasts while guiding inbound "Strangle" planes to safe landings. But now a weapons carrier becomes a comfortable and efficient runway control vehicle at this Fifth AF airstrip. The boxed-in sides and plastic blister protect the radio operator and his equipment and also allow unrestricted visibility. Power for the rig comes from the attached trailer. The value of the self-contained unit was demonstrated recently when the vehicle was introduced at the home base of the 452d Light Bomb Wing, a veteran tactical outfit.

TECH TALK

By Richard Skinner

Tomorrow's fighter pilots, like the classic armies of yesterday, may travel on their stomachs. That prediction was made recently at the 23d annual International Convention of the Aero-Medical Association in Washington, D.C. The scientists were told that the prone position is theoretically the best for fighter pilots, since it cuts down blackout during sharp pull-outs and other body-slamming maneuvers. One of the drawbacks is poor outside visibility which may be solved by using prisms, mirrors, and periscopes.

Tests of primaquine, the new anti-malaria drug, will continue in the US until October. The drug, which has been field tested in Korea, has been given to all returning troops since December. Now a thousand men, exposed to malaria in the Far East and who returned before December, have volunteered as test subjects.

A speed-up in the machining of close tolerance airplane parts is the outcome of Boeing's research in a new cutting tool design. The new method forms carbide cutters so they can be set on helical (spiral) tool bodies which had previously been limited to steel cutter tool use. With the new cutter, machinists can make a seventy-six foot cut on an aluminum alloy wing stiffener in seven minutes, with the roughest spot only 1/30 the thickness of a human hair.

The AF's Small Purchases Branch, newly established at AMC Hq., is reducing from four months to twenty days the time needed to buy "off the shelf" items priced under $10,000. This is done by processing contracts at Wright-Patterson AFB instead of at various procurement districts, and by reducing the number of standard conditions in the contracts. Maj. Oscar L. Maier, head of the new branch, says the shortcuts now make it possible to issue a contract within five days after quotations are received, or within three weeks if invitations for bids are needed.

A servo "muscle," designed to move control surfaces on supersonic and other high-speed planes, is being shown by Minneapolis-Honeywell. The mechanism, no larger than a man's fist, can take an electrical impulse "barely strong enough to tickle a mosquito" and turn it into enough power to move a streetcar. This SS Hydraulic Servo, which weighs about a pound, can also respond to more than 100 signals a second, according to engineers at the regulator company.

The AF has an eye cocked toward rubberized paving for runways, but not to make landings smoother. At the AF's request the Army Corps of Engineers is conducting tests to find a surfacing that won't disintegrate when jet fuel is spilled on it, as certain types now in use do. The tests will determine if rubberized pavement is more resistant.

A device resembling a ten-inch TV screen that will show a pilot exactly where he is at all times is the Arma "pictorial computer." Circular charts projected on the screen from 35-mm. film pinpoint the area the plane is flying over. A moving, airplane-shaped shadow shows the aircraft's position and direction. A new chart can be "tuned in" when the pilot enters a new area. Each chart is centered on one of the 219 omni stations across the country. The computer is claimed accurate within .4 mile for position and within one degree for heading.

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ARMA ADVANCED ELECTRONICS FOR CONTROL

Elections, Installations Top Activities of AFA Across the Nation During March

Three-day convention of the California Wing at Fresno is one of more than a score of annual meetings of units

Seventy-three delegates from all parts of California assembled in the Hotel Californian at Fresno recently for the three-day annual convention of the California Wing. The first day of the convention, devoted to USAF and aviation displays, was climaxed by an airpower ball in the Rainbow Room. Members of AFA and the Arnold Air Society joined forces to help make the dance a successful affair. Business sessions got underway Saturday, with the annual election of officers receiving spotlight attention. Retiring Wing Commander Mike Kavanaugh of San Francisco was succeeded by James McDivitt of San Gabriel.

In his annual report, Kavanaugh stated that two new Squadrons—at Pasadena and San Diego—had been added to the Wing since the previous convention. The new Wing officers announced plans to organize at least five additional Squadrons during the forthcoming year. Areas under consideration for new Squadrons are Long Beach, San Pedro, Santa Barbara, Bakersfield, Visalia, and Tulare.

Arthur Kelly, former Regional Vice President and 1951 national convention chairman was honored by the Wing for his contributions to airpower and the Association. Kelly was presented the Wing's "Man of the Year" award. The Wing's award for promoting the ideals of airpower went to "American Aviation Publications." Roy Hunter accepted the award in behalf of Wayne W. Parrish, editor and publisher. Also at the convention Regional Vice President Bert D. Lynn presented AFA's ROTC Silver Medal to Cadet Lawrence Johnson of Fresno State College.

Principal speaker at the airpower banquet, which climaxed Saturday's activities, was AFA Board Chairman Thomas G. Lanphier, Jr. Lanphier was president of AFA in 1947-48, and headed the 1951 National Reunion Committee.

The installation of new officers at the Dawn Patrol Breakfast on Sunday morning ended the three-day meeting. Retiring Commander Kavanaugh stated that he thought this was one of the most successful and enjoyable Wing conventions held to date.

Stuart Reviews Air War for Capital Squadron

Harold C. Stuart, AFA President, addressed more than 100 AFA members and guests recently at the annual installation dinner of the Capital Squadron, Washington, D. C. Stuart's remarks, covering many aspects of the Korean air war, were based on personal observations from his recent tour of the Far Eastern theater. Stuart also called on the Squadron to go all out in making the public aware of the "airpower scandal," as reported in the April issue of AIR FORCE Magazine.

George D. Hardy, Central East Regional Vice President, was toastmaster. Ralph Whitener, AFA Organizational Director, reported on the status of the Association and the importance of the Squadrons. Chaplain (Lt. Col.) Constantine Zielinski of the Chief of Air Force Chaplains and Commander of the Chaplains Division of AFA, delivered the invocation.

Hardy presented retiring Commander Joseph Bates a Past Commander's pin and lauded him for his untiring efforts during the year. All American Airways received the Squadron's Safety Scroll

Arthur Kelly (left), former Reg. VP and 1951 nat'l convention chairman, receives California Wing's "Man of the Year" award from Mike Kavanaugh.

George D. Hardy (right), AFA Reg. VP, presents Capital Squadron scroll to Charles W. Wendt of All American Airways for line's 3-year safety record.

Bert D. Lynn, Far West Reg. VP, presents AFA's Silver Medal to Lawrence Johnson, outstanding AF-ROTC Cadet at Fresno State College for 1951-52.

New Wing officers for California's 1952-53 season are (from left) S. Samuel Boghosian, Bernard Peters, and Robert Overly, Group Commanders; William W. Walker, Treasurer; James McDivitt, Wing Cmdr.; Michael Pisani, Sec'y; Howard Halla and Geo. D. Mantell, Gp. Cmdrs.; and Bernard Dolin, Sgt.-at-Arms.

for three years of accident-free operations. Charles W. Wendt, vice president of All American, accepted the scroll on behalf of his airline.

Highlight of the evening was the drawing for the winner of an all-expense-paid weekend at Atlantic City's famed Ritz-Carlton Hotel. Winner of the trip was John Warner, Commander of the Baltimore Squadron. All American Airways presented him with a pair of round-trip tickets to the New Jersey resort center.

Bates was succeeded as Commander of the Capital Squadron by Maynard Smith, holder of the Congressional Medal of Honor. His address is 416 Lornard Road, Falls Church, Virginia.

Mayor Lauds AFA Unit

In addressing members and guests attending the recent Installation Dinner of the Taunton, Mass., Squadron, Mayor John F. Parker said the AFA Squadron was "a real down-to-earth organization." He reported that he had received a letter from the mayor of Taunton, England, saying that the bronze plaque which the Squadron recently sent the British city had been given a place of permanent display in the Town Offices. The plaque was presented as a goodwill gesture for that city's hospitality to American airmen during World War II.

Col. Leon W. Gray, Commanding Officer of the 4707th Defense Wing at Otis AFB and one of the dinner speakers, declared that airpower is the most important single modern achievement in peace and is today's primary weapon of war. He went on to say that so important was airpower that he would "willingly volunteer his own son for jet plane service in the United States Air Force."

Attending the dinner with Colonel Gray was Lt. Col. Edgar S. Beam, also assigned at Otis, who recently returned from a 190-mission tour of duty in the Korean war. Colonel Beam said, "Although the war in Korea may seem like a small thing here in the United States, to the men fighting there it looks like the biggest war they've been in."

William H. Hadley, Jr., Vice President of the New England Region of AFA, administered the oath of office to the Squadron's new officers. A Past Commander's pin went to retiring Commander Edwin A. Tomawski, who had headed the Squadron for the past two years. Edward T. Morrell of 41 Grove Street was elected Commander for 1952-53. His telephone is 80039M.

Squadron Spotlight

Beginning with this issue, the Air Force Association will salute the one Squadron each month which, in the opinion of National Headquarters and on the basis of reports from the field,

(Continued on page 76)

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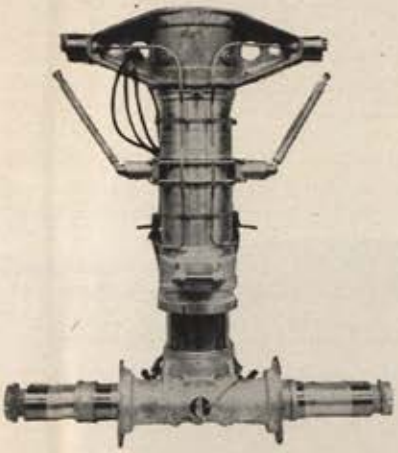

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Anthony J. Stonina (2d from left) receives AFA Associate card from Stanley Zamachaj, Commander of the Chicopee, Mass., Squadron. Flanking the pair are Vice Cmdr. Stanley Partyka (left) and Sec'y Ray Tomchik.

has performed the most outstanding service to AFA. This Squadron will be designated the "Squadron of the Month." Squadrons so honored will naturally be given a lot of consideration when AFA awards its annual airpower plaques for outstanding achievement. It is hoped that the selection of the top Squadron each month will create a healthy spirit of competition.

SQUADRON OF THE MONTH

Cuyahoga Founders Squadron
Cleveland, Ohio

CITED FOR

outstanding participation in the membership program of the Association which resulted in signing up more AFA members than any other Squadron during the first quarter of 1952. The 51 members enrolled included eight new members, 38 renewals, three reinstatements and three new associates.

Arnold Air Society

The Arnold Air Society recently held its annual Southwest Regional Conclave at Southern Methodist University in Dallas, Tex. Forty delegates, representing AAS Squadrons of eleven colleges and universities in Texas, Oklahoma, New Mexico, and Louisiana, attended the meeting. Resolutions acted on by the delegates included the printing of a Southwest Regional AAS Air Letter, the wearing of shoulder braid, and the naming of an area sweetheart.

John H. Crawford, AFA Southwest Regional representative, spoke briefly to the delegates about AF-ROTC Cadet eligibility for membership in AFA. Crawford also led a panel discussion on AFA's relationship with the Arnold Air Society. The Cadets suggested that AFA offer some type of trophy or plaque to the AAS Squadron or college signing up the greatest number of Cadet members in AFA.

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William H. Hadley (right) New England Reg. VP, administers oath of office to new officers of the Taunton, Mass., Squadron. Front row (from left), Robert Ramsey and John Mansfield, Vice Cmdrs.; Edwin T. Morrell, Cmdr.; back, Charles Sunderland, Sec'y; and William L. White, Treas.

Four AFA Conventions

There are four important AFA conventions coming up. AFA members throughout the following states should make every effort to attend their Wing convention. Here are full details on these conventions:

ILLINOIS

Date:	Sunday, May 18
Place:	Hotel Sheraton, Chicago
Time:	Convention opens—9:30 AM Luncheon—12:30 PM Cocktail Party—5:30 PM
Contact:	Morry Worshill 2054 Hood Avenue, Chicago Phone: Edgewater 4-1137

OHIO

Date:	Sunday, May 18
Place:	D.A.V. Hall, Ontario St., Toledo
Time:	Convention opens—10:00 AM Cocktail Party—4:30 PM Dinner—5:15 PM
Contact:	Dean Huffman 511 Congress St., Toledo

NEW YORK

Date:	Saturday & Sunday, May 24-25
Place:	Ten Eyck Hotel, Albany
Time:	Convention opens—10:30 AM Cocktail Party—6:00 PM Banquet—7:00 PM Sunday Dawn Patrol Breakfast—10:00 AM
Contact:	Earle P. Ribero 416 Delaware Ave., Delmar Phone: 9-2316

PENNSYLVANIA

Date:	Sunday, June 7
Place:	Lido Hotel, Philadelphia
Time:	Convention opens—10:00 AM
Contact:	I. E. Brodsky 1133 Arch Street Phone: Locust 4-1094

PLAN TO ATTEND YOUR WING CONVENTION

ARTIST CREDITS

Charles deM. Barnes—front cover, pages 19, 24, 25, 28, 34, 35, 36, 38, 40, and 41; John de Grasse—pages 21 and 29; Arlo Greer—pages 22, 23, 30, and 32.

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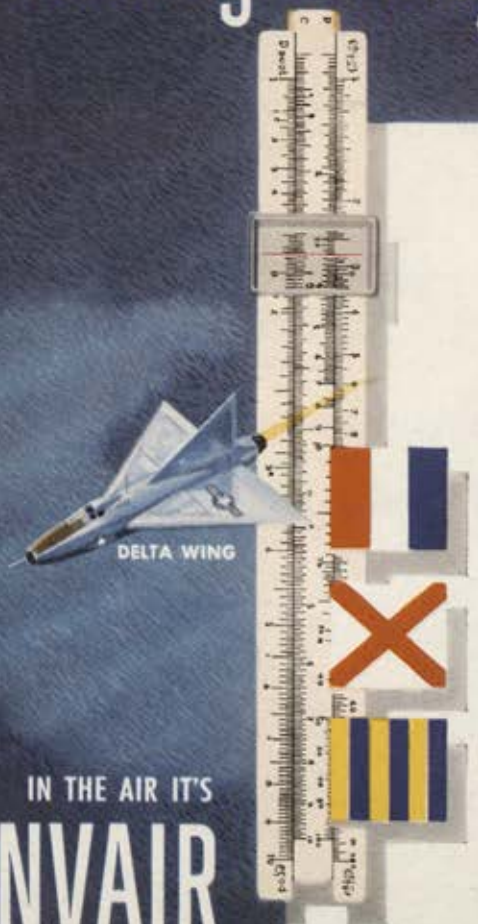

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