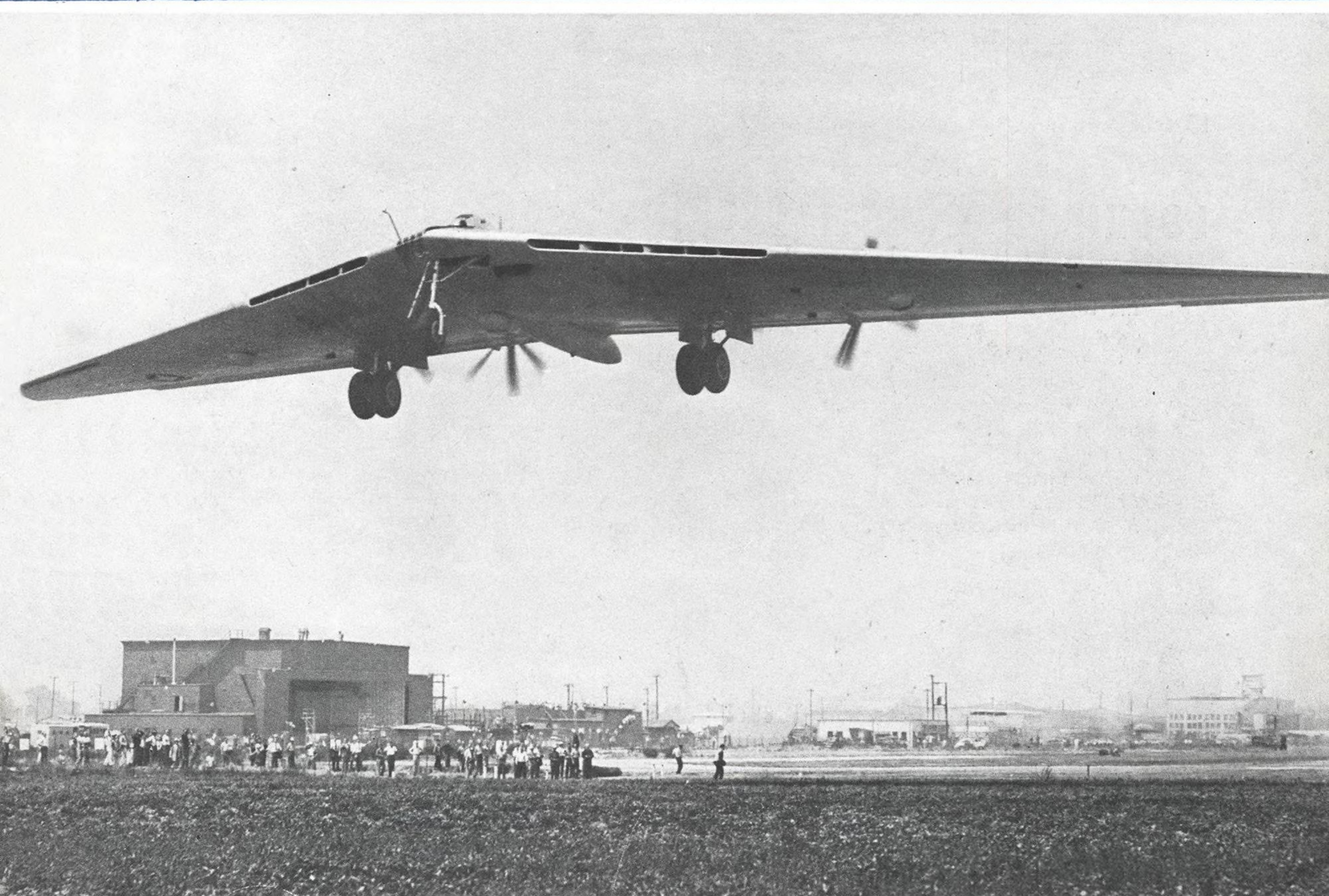


Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

JULY 8, 1946



XB-35 Take-Off: *Successful test flight of the XB-35, shown here leaving the ground, marked culmination of years of development by Northrop Aircraft, Inc., and an expenditure of millions of dollars. On the 44-minute, 85-mile first flight of the Flying Wing from Northrop Field to the AAF's Muroc test base in California, the pilot reported huge plane lived up to pre-flight expectations. Additional photos on page 9. (Schmidt photo)*

Army Ordnance Work Cited to Refute AAF Demands

Appointment of Gen. Aurand to head development program may resolve disputes.....Page 7

United Gets Lucrative San Francisco-Honolulu Run

In separate order, CAB reopens Hawaiian case for re-argument.....Page 10

Damage Toll Mounts as A-Bomb Score is Tabulated

Aviation experts scout hasty judgments supporting present-type naval vessels.....Page 11

Independents Say Subsidy Airlines Stifle Competition

Prescott sees taxpayers footing bill for big lines to crush vet cargo outfits.....Page 17

Latin America is Scene of U.S.-British Export Battle

Our firms back new models after initial campaign by Empire salesmen.....Page 21

Major Airlines File Consolidated Air Freight Tariffs

Move to offer nationwide cargo facilities as non-sched competition grows.....Page 27

PAN AMERICAN WORLD AIRWAYS

Uses

VICKERS

HYDRAULIC EQUIPMENT

ON ITS

LOCKHEED CONSTELLATION CLIPPERS

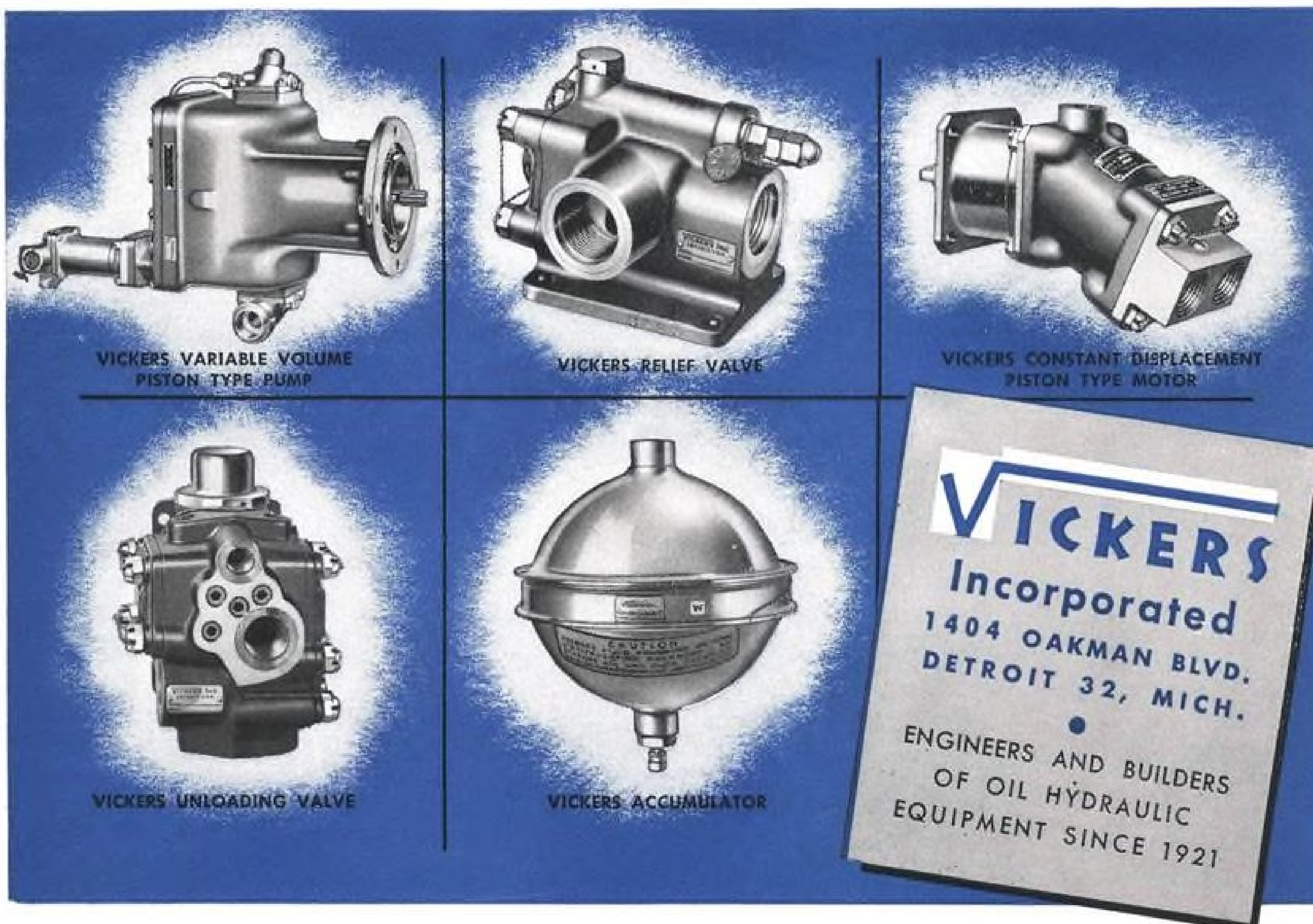


The Lockheed Constellation Clippers recently accepted by Pan American World Airways for its New York to London Service use Vickers Hydraulic Equipment.

The Vickers Variable Volume Piston Type Pump automatically delivers the volume of fluid required by the main hydraulic system . . . at all times with minimum horsepower. Maximum operating pressure of this installation is 1750 psi. Vickers Hydraulic Motors are used for wing flap operation because

of their high starting and running torque. Also, they can be stopped accurately to position, started instantly and stopped instantly due to the very low inertia of their moving parts. Their horsepower weight ratio is exceptionally high. The Vickers Relief Valve, Unloading Valve and Accumulator are used in the auxiliary flight control booster system.

This application is indicative of the many uses for Vickers Hydraulic Equipment on aircraft. We will be glad to help you solve your particular problems.



THE AVIATION NEWS

Washington Observer



AIR SHOWS HELP RECRUITING—AAF and Naval air officials' eyes bulged when they discovered what regional and local air shows are doing to recruiting totals in the areas. Results were unexpected. For example, Birmingham ranked 47th in Navy recruiting lists before the recent air carnival. Following the show, where the Navy staged various exhibitions, the city jumped to second recruiting city nationally. Both services now have special units of "road shows," incidentally, which are appearing throughout the country, but local show sponsors must pay for the gasoline which service planes use.

TAX FIGHT TO GO ON—Although Congress probably will adjourn without legislation to prevent multiple taxation of air carriers, the airlines and their Air Transport Association contemplate no letup in their drive for such a federal statute. Committeemen working to find a program satisfactory to state administrators were encouraged by a resolution of the National Tax Association at its Chicago conference which authorized an NTA committee to continue work on the problem with the airlines, CAB, and others interested. The lines also will have representatives at a meeting of the National Association of Tax Administrators in Seattle in July to discuss multiple taxation.

CAB GETS COUPON SHOWER—Civil Aeronautics Board received hundreds of coupons from the public last week. Now they know how breakfast food makers feel the morning after a box top offer on the radio. The coupons were clipped from a full page *New York Times* ad run by the Institute of Air Transportation, pictured in last week's *News*, protesting CAB's proposed restrictions on non-scheduled airlines. Many coupons were accompanied by stirring letters, aroused by the IAT's plea, "Why Throttle US?" Nevertheless, modification in the Board's proposed exemption order, copies of which have already been distributed to the industry for comment, will depend solely on comment returned by the airlines affected before the July 22 deadline. The IAT's campaign was the first to be taken to the public on a matter before the Board.

ALTITUDE RECORD?—Report of Maj. W. P. Swancutt that bombing has been done at Bikini from 65,000 ft., presumably in a B-29 (*Aviation News*, July 1), is received with skepticism, by experts in Washington. They point out that in recent tests at Kwajalein, timed by National Aeronautic Association representatives, a stripped B-29 carrying only 1,000 lbs. climbed to 45,600 ft., and that the world's altitude record for aircraft is 56,046 ft., made in 1938 by an Italian Caproni biplane.

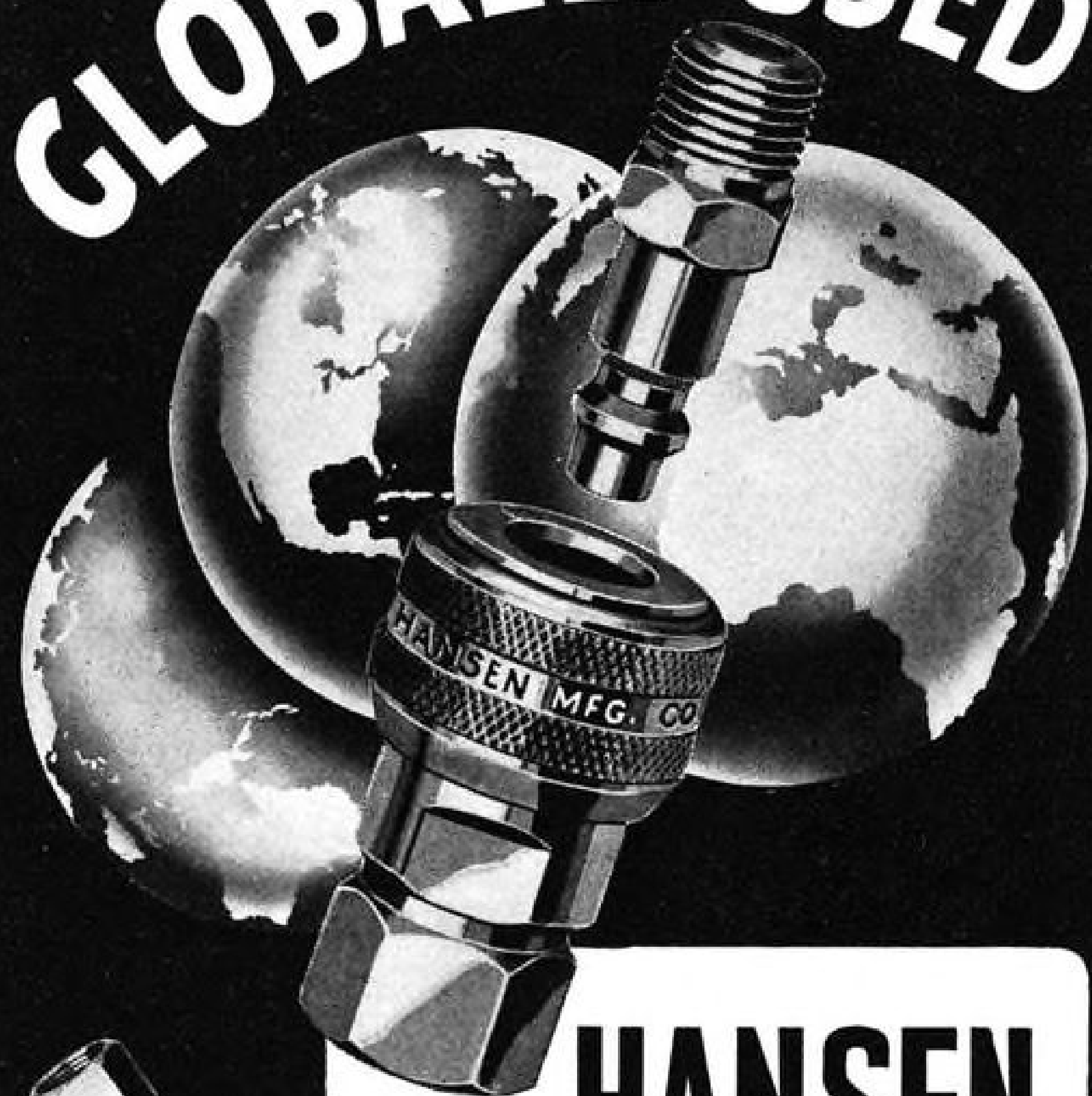
THE SUB'S WORST ENEMY—Conclusive evidence that the plane was more effective against enemy submarines than ships was offered, oddly enough, by the Navy in a little-publicized tabulation of enemy sub losses. In the Atlantic, planes sank 391 U-boats against 264 destroyed by ships. The Pacific score was 71 kills for ships, however, and 58 for planes. Planes in the Mediterranean sank 3 Italian subs; ships got 1. The record also shows that land-based Army planes sank almost twice as many submarines in the Atlantic as did Navy carrier-based aircraft, or 55 against 29.

OLD SALTS SIZZLE—Top Navy brass hats are sputtering at testimony on Capitol Hill by AAF Generals Spaatz and LeMay, who told a Congressional appropriations committee that a B-29 force capable of a 6500-ton bomb drop was ordered to protect Admiral Halsey's carrier task force while it delivered a 500-ton attack on Okinawa. LeMay said the AAF proposal to bomb Jap aircraft factories was vetoed by the Joint Chiefs of Staff at the Navy's request and the 20th Air Force instead was ordered to bomb Kyushu air fields. "We were knocking out 400 planes on the air fields while the Japs were building 1500 more in their factories," LeMay said. Navy rebuttal was that by making several strikes a day the weight of the carrier strikes could be boosted to 1,000 tons.

INDUSTRIAL MOBILIZATION—The stress Army and Navy are giving to planning for industrial mobilization was pointed up by the White House conference attended by LaMotte T. Cohu, president of Aircraft Industries Association, and E. E. Wilson, vice-chairman of United Aircraft Corp. (Wilson attended in his capacity as president of Navy Industrial Association). In a group with several others, they were taken to see President Truman by Richard R. Deupree, chairman of the Army-Navy Munitions Board, which is the planning body for industrial mobilization. The president expressed his personal interest in the subject, and asked industry's cooperation with ANMB on a patriotic basis.

HATCHING STAGE—Actually, industrial mobilization planning is not yet underway, with ideas in the hatching, rather than discussion stage. ANMB is carefully feeling its way, retracing much of the ground of the Air Coordinating Committee, which now appears ready quietly to disappear from the picture. One of ACC's left-overs, a report on expansibility of the aircraft industry by Harvard University, has been tucked away in the files and will not be released, although ANMB members have studied it.

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AVIATION NEWS

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News Digest

DOMESTIC

▶ **The Philippine Mars** has joined its three sister ships in Pacific service for NATS.
▶ **A German V-2 rocket** reached an altitude of 75 miles in firing tests at White Sands, N. M.
▶ **T. P. Wright**, CAA administrator, stated that commercial air routes over the Great Circle routes from Seattle to Tokyo and Point Barrow to Moscow were feasible on completion of his inspection of aviation facilities in Alaska.
▶ **National Airlines** is moving its system headquarters from Jacksonville to Miami.
▶ **The Bell Aircraft Co.** and the **Wright Aeronautical Corp.** will close their plants for two weeks beginning July 29 to give their employees a summer vacation.
▶ **The Glenn L. Martin Co.** has revealed plans to construct a \$1,500,000 chemical plant near Plainville, Ohio to produce its "Marvinol" plastics. Martin expects the plant to turn out 11,000,000 lb. yearly.

FINANCIAL

▶ **Theodore Law**, director of Mid-Continent and Alaska Airlines has purchased interests of an undisclosed size in U. S. Airlines Inc. and Aerovias Latha.
▶ **Aviation Corp.** reports a net income of \$302,790 or 2 cents a common share for the first quarter of 1946.
▶ **Issuance of 370,000 shares** of common stock of the Menasco Co. was approved by the SEC.
▶ **Monthly dollar volume** of the Beech Aircraft Corp. is now higher than the company's pre-war annual dollar output. Currently Beech production is about \$2,250,000 monthly.
▶ **Air Cargo Transport Corp.** offered 435,000 shares of \$1 par value common stock. The company will use \$60,000 of the proceeds to pay off a bank loan; \$500,000 for new equipment and \$250,000 for other improvements.
▶ **Bendix Aviation Corp.** showed a consolidated net loss of \$1,020, 118 for the six months ended March 31, 1946. The corporations operating loss for the first six months of the current fiscal year was \$8,269,749.

FOREIGN

▶ **The Brazilian air line**, Servico Aereos Cruzeiro do Sul, purchased 10 Martin 202 airliners.



Industry Observer

▶ Watch for an attempt to crack the world air speed record (606 mph—British twin-jet *Meteor*) by the AAF *Thunderjet* (P-84) late this summer. A special course is being prepared for the test at Muroc, Calif.
▶ Fairchild has a schedule of 105 *Packets* for 1946 with 39 already completed. Deliveries are mainly to the 3rd Air Force for paratroop transports carrying 48 men. AAF is impressed with the *Packet's* ability to drop men and equipment simultaneously. Men bail out of two small doors in the rear while equipment goes through a hatch in the plane floor.
▶ Consolidated Vultee Aircraft Corp. is seeking to hire 500 veterans at the Stinson division, Wayne, Mich., to meet production schedules on the Stinson *Voyager*.
▶ ATC will contract with the airline that gets the Great Circle route to Japan to haul military mail and cargo to Tokio via Alaska and Seattle. Northwest is currently favored to get CAB certification for the route when the North Pacific decision is made.
▶ Curtiss-Wright's airplane division at Columbus, Ohio, is making sub-assemblies for Aeronca.
▶ A project to hurl artificial meteors into space is one of the jobs Johns Hopkins University is doing for the Navy Bumblebee program. The meteors are to be equipped with recording devices to gather data on conditions at altitudes beyond the vertical range of V-2.
▶ Latest figures on the aircraft industry show a slight increase of employment in aircraft plants with 138,002 employees in 48 plants for March against 136,388 for February.
▶ Northrop already has three more models of the XB-35 approaching completion.
▶ ATC's \$49,000,000 contracts with commercial airlines for international military transport for the next fiscal year were stimulated by the AAF decision to keep ATC's size scaled to the permanent 70 combat group air force rather than to meet the much larger temporary needs of American occupation forces abroad. Commercial contracts for military air mail and passengers are likely to continue as long as substantial occupation forces are maintained abroad.
▶ In the first helicopter air mail delivered last week to Los Angeles from Santa Monica were postcards addressed to Congressmen Ned R. Healy (Dem.-Cal.) and Harold Hagen (R.-Minn.) in support of a bill proposed by the two men for a nationwide postcard air mail service at half present airmail rates.
▶ Ryan Aeronautical Co.'s metal products division is providing the collector rings and exhaust system accessories for Consolidated Vultee's Model 240 transports.
▶ Final demonstration and acceptance tests on the Navy's Ryan *Fireball* have been completed.
▶ After a slow start, traffic on American Overseas' Airlines' weekly trans-Atlantic flight out of Chicago has picked up and every DC-4 has been leaving with capacity load of 32 passengers for England. The first stop is Labrador.
▶ Safety studies by the Navy have included a transport in which all of the passengers faced the rear, to reduce likelihood of injuries in a crash stop.
▶ Chicago & Southern's first survey flight to Havana was scheduled last week, using a DC-3, which was to proceed from New Orleans via Miami, instead of the long over-water hop between the two terminals authorized by CAB in the Latin American decision. Official landing negotiations must be completed by the State Department, but the company hopes to start DC-4 service by early September. The extensions from Havana to Kingston and Caracas will be added later.
▶ United Air Lines' Martin 303 transports, in addition to utilizing cabin supercharging, which differentiates this model from the 202, will use a stubbier wing, with a higher wing loading, according to industry sources.



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THE CAREFREE OWNER of a new Republic Seabee will splash into the water without ever thinking of his brakes. For they're specially made by B. F. Goodrich to withstand the corrosion of water landings. Later, he will appreciate their smooth performance, whether he's landing on a runway or taxiing cross wind.

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solid runways, too. The principle of low-pressure airplane tires, first developed by B. F. Goodrich, permits a larger air volume, lower inflation pressures, and greater footprint.

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FIRST IN RUBBER

VOLUME 6 • NUMBER 2

Aviation News

McGraw-Hill Publishing Co., Inc.

July 8, 1946

Army Ordnance Research Work Cited as Rebuttal to AAF Demands

Appointment of Maj. Gen. Henry Aurand to head General Staff development program may resolve air force-ordnance jurisdictional disputes.

Appeals for public and Congressional approval of the Army Air Forces' outspoken desire for control over research and development of airborne weapons (as distinguished from aircraft) are viewed pessimistically by War Department spokesmen, who characterize the move as a precedent-shattering attack on the 134-year tenure of the Army Ordnance Department as trustee of this phase of warfare.

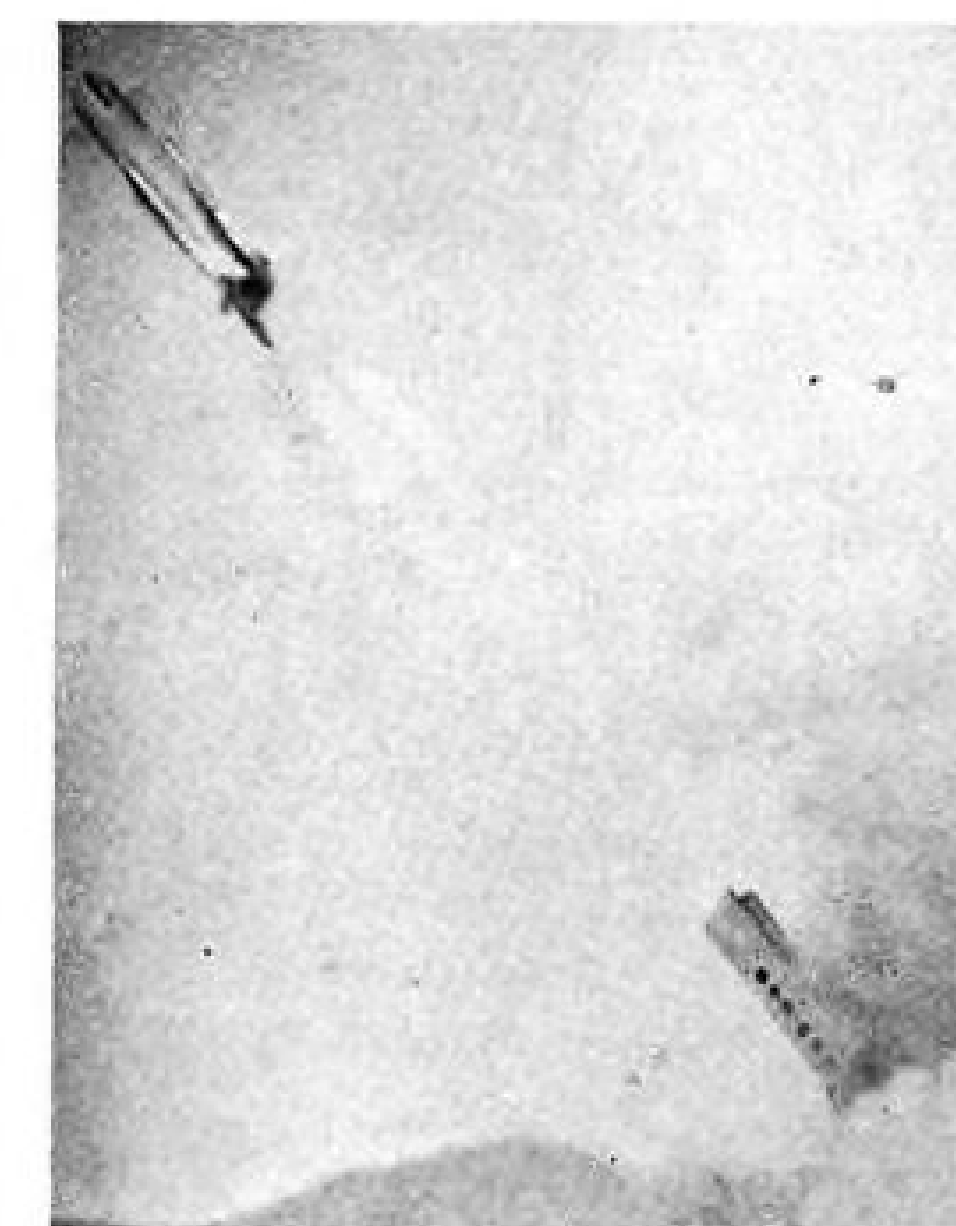
Pointing out that the AAF already has responsibility for the development of winged weapons, a major obligation in itself, critics of the AAF proposals point to two salient facts: (1) The erection of required research facilities (the AAF has intimated the bill might reach \$1,000,000,000), hiring and training of technical personnel and the integration of both into a smooth-working team with the required "know-how" would require enormous expenditures of money and time, and (2) there already exists within the Army Ordnance Department the directive, organization, facilities and the productive results that such a program as the AAF proposes might not produce in less than 5-10 years time.

Aurand Appointed—The appointment of Major General Henry S. Aurand as Chief, Research and Development Division, U. S. Army General Staff, is expected to resolve much of this difference between the AAF and the AOD through clarification of the thin "winged-finned" dividing line between the two potent services which has resulted in such hair-splitting terminology as charging the AAF with the development of "winged" weapons (such as the JB-2, an American version of the Nazi V-1 Flying Bomb) and the Ordnance Department with the development of "finned" weapons (such as the Nazi V-2 rocket). General Aurand, although a former

AOD officer, saw considerable service in all major theaters with the services of supply.

Within the War Department structure, the AOD is classified as a supplying service and has the responsibility of creating and producing all the weapons for all the "using" services (tanks for the cavalry, guns for the artillery, weapons for the infantry); the AAF is designated a "using" service and thereby receives its machine guns, aircraft cannon, ammunition, armor, rockets, pyrotechnics, etc. from the AOD. JATO units, for example, are supplied by AOD to both the AAF and the Navy.

Ritchie Heads Research—How



Jato Missile: One of the newer gadgets in this country's guided missile program is this radio-controlled, solid-fuel anti-aircraft missile that employs jet assisted take-off. Picture was taken at the flight test base in the Mojave Desert. Ordinarily, this KUN-2, dubbed "Little Joe," is launched from shipboard catapult with the aid of four standard rockets. (INP photo)

well equipped the AOD is for the huge task of creating new and radical aerial weapons is seen in its organization created for the purpose. Administration of the program is vested in the AOD's Research and Development Section, headed until recently by Maj. Gen. G. M. Barnes and now directed by Col. Scott B. Ritchie, acting chief, who was Barnes' administrative assistant before the latter's retirement.

Ritchie is advised by an Ordnance Technical Committee, which includes AAF, AGF, Navy and Marine Corps officers, and by an Industry Advisory Committee, which includes Dr. Vannevar Bush. The broadest possible coordination of the program with other services and with industry and universities is planned.

Under this leadership and administration is the Guided Missiles Branch, headed by Lt. Col. James G. Bain and the Rocket Research Division, under the direction of Col. H. W. Toftoy. Under broad policies established by these groups are the manifold projects being carried out by ten ordnance laboratories, two proving grounds and 33 universities and industrial laboratories.

Ballistics Laboratory—Much of the theoretical calculations and fundamental research in supersonics carried out for the AOD, as well as the AAF and the Navy Bureau of Ordnance (AVIATION NEWS, June 24), is done by the Ballistics Research Laboratory at Aberdeen Proving Ground, Maryland. Under the direction of Col. Leslie E. Simon, this laboratory contains the \$2,750,000 supersonic wind-tunnel, the most powerful in the world. This tunnel has a 20-inch throat, the largest now in operation anywhere. It was used during the war for the analysis of projectile flights but is now being used for the calculation of supersonic data on powered missiles.

The recently announced mathematical "brain," the ENIAC (electronic numerical integrator and computer), which weighs 30 tons and contains more than 18,000 vacuum tubes, will soon be in operation at Aberdeen.

The destructive effect of various types of ammunition, charges and missiles on aircraft structures is be-

New 'Buck Rogers' Weapons

Among the Ordnance Department's recent Buck Rogers' creations are:

- ▶ **A countermeasure missile** capable of intercepting enemy guided missiles flying at supersonic speeds.
- ▶ **A 4500 lb. rocket-assisted bomb** and a 22,000 lb. bomb, both of which are now being used by "Project Ruby," an RAF-AAF joint experiment against concrete Nazi U-Boat pens at Farge, near Bremen, Germany.
- ▶ **An automatic aircraft rocket launcher**, the only one of its kind in the world, capable of firing rockets at machine gun speed.
- ▶ **A flying tank** that is airborne to the combat theater and that glides to earth, ready for immediate action with crew aboard and engine running.
- ▶ **A 3,500 miles per hour** guided missile fired from shore against enemy ships at sea.
- ▶ **A recoilless 105 mm. aircraft cannon**.
- ▶ **A metallic jet**, fired by a 75 mm

shaped charge, that produces a blast of disintegrated metal at a velocity of 25,000 feet per second, capable of penetrating four inches of armor plate and designed for installation in a guided missile warhead.

▶ **A .50 caliber aircraft machine gun** that fires 1,500 rounds per minute but that is expected to fire 5,000 rounds per minute within the next few years. Current research is aimed at producing a firing rate of 30,000 rounds per minute.

▶ **A rocket-propelled "Hydrabomb"** that is launched from a low-flying airplane and travels underwater at 70 miles per hour, about twice the speed of a conventional torpedo.

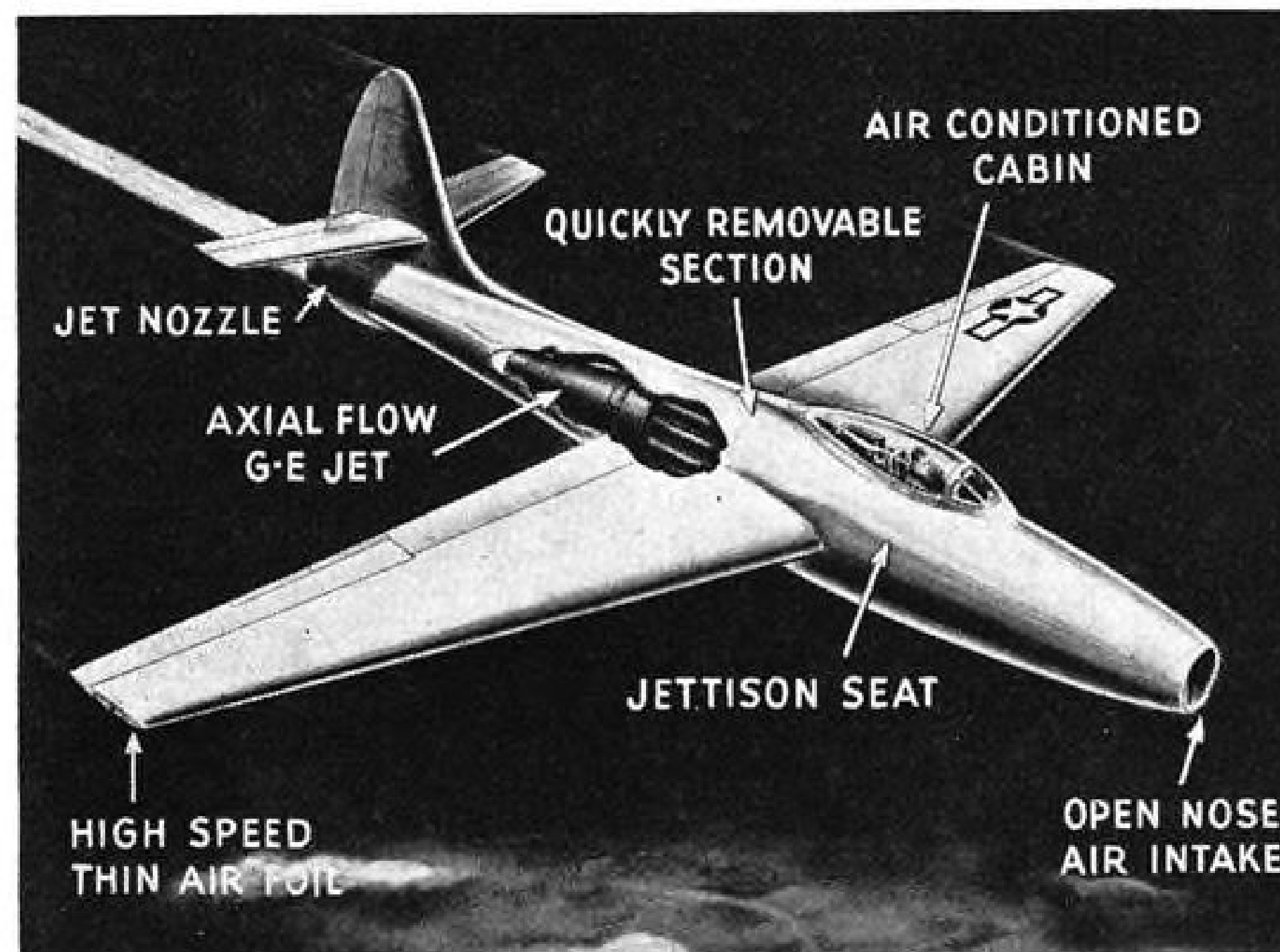
▶ **A research rocket** that has traveled to 230,000 feet and that will reach 500,000 feet shortly.

▶ **A .60 caliber aircraft machine gun** that has the highest velocity up to 600 yards of any weapon or device developed by any nation.

ing studied at Aberdeen for the AOD, AAF, Navy and Marine Corps. A total of 1,000 surplus aircraft have been provided for the purpose to produce actual impact data on physical articles, rather than the small test sections formerly used.

▶ **Test JATO Units**—Tests on more advanced types of JATO units, being developed for the AAF, Navy and Marine Corps; more powerful

5-inch high velocity aircraft rockets; stronger bomb fin assemblies required due to the higher bombing altitudes now possible which bend and shear present fins when the bomb hits the heavier atmosphere at lower altitudes, and new bomb fuzes, rocket propelled bombs, aerodynamic bomb shapes and powders are being conducted at Aberdeen Proving Ground.



THUNDERJET HIGHLIGHTS:

Latest AAF hope to recapture the world's absolute speed record, now held by the British Gloster Meteor, is the Republic XP-84 Thunderjet, shown above in schematic drawing.

Free flight tests are carried out at the White Sands Proving Ground, near Las Cruces, New Mexico, operated for nearly two years by the AOD, and under the direction of Lt. Col. Harold R. Turner. A number of German scientists are assisting in the work of assembly and test of the captured V-2 rockets now being prepared for fully instrumented firings (AVIATION NEWS, June 17).

White Sands is also the scene of tests on a family of rockets being developed by the California Institute of Technology under the direction of Col. B. S. Messick, AOD and Dr. Frank J. Malina, CIT. Enlisted ratings are used as code names for these rockets, the "WAC Private" and "WAC Corporal" (AVIATION NEWS, March 18) being the only publicized models to date. The "WAC Sergeant," now under development, is expected to reach an altitude of 100 miles.

Of the total of 33 universities participating in the AOD's research and development program, the following are the principal contractors for problems associated with aerial warfare:

- ▶ **Ground-to-ground missiles:** General Electric Corp.
- ▶ **Shore-to-ship missiles:** Radio Corp. of America
- ▶ **Countermeasure interceptor missiles:** General Electric Corp., Bell Telephone Co.
- ▶ **Rocket propellants:** California Institute of Technology, Cornell University, Ohio State University
- ▶ **Rocket missile design:** California Institute of Technology, Armour Research Foundation
- ▶ **VT proximity fuze research:** Johns Hopkins University, University of Michigan, University of Florida
- ▶ **Bombs and bomb fuzes:** California Institute of Technology, Massachusetts Institute of Technology
- ▶ **Shaped charge research:** Carnegie Institute of Technology
- ▶ **Aircraft cannon:** Armour Research Foundation
- ▶ **Guided missile tests:** University of New Mexico
- ▶ **Supersonic wind-tunnel models:** California Institute of Technology.

NYC-Area Air Express Walkout is Settled

Air as well as rail express movements went under embargo in the New York City area on Friday June 27, when 10,000 members of the Brotherhood of Railway Clerks, AFL, walked out of local Railway Express Agency terminals. Hopes for settlement of the stoppage were expressed when the new week be-

gan, and these hopes were rewarded on July 1 when the men agreed to return.

The air express embargo was said to have curbed a daily flow of some 3,000 to 4,000 air shipments. Involved were such items as machinery for emergency repairs, electrotypes, flowers, drugs, various style merchandise, and samples of commodities sent for quotations.

Aviation Funds Shift To Commercial Effort

The nosedive in military aviation activities and the upswing in commercial aviation activities in the war-to-peace transition is reflected in government agency supply bills for the 1946 fiscal year, which started running July 1.

Military and naval aviation appropriations for the coming year, totaling around \$2,000,000,000, are only a fraction of wartime appropriations to the two air branches, which reached a peak of \$27,000,000,000 in the 1945 fiscal year.

Expenditures of the Bureau of Aeronautics and the Air Corps during the coming fiscal year will approximate expenditures during the half-war-and-half-peace 1946 fiscal year. The 1947 fiscal year appropriations of the two branches total \$2,005,260,000, compared with estimated 1946 expenditures of \$2,124,864,850.

The peacetime upswing in commercial aviation activities is indicated in the coming-year budgets of the Civil Aeronautics Board and the Civil Aeronautics Administration, both of which anticipate large-scale increases in administrative workloads. CAA and CAB budgets for the coming year are approximately 2.5 times the 1946 budgets of the two agencies.

Following are the funds granted government agencies handling aviation matters in 1947 fiscal year supply bills, together with comparisons with 1946 fiscal year budgets:

Army Air Corps, \$1,199,500,000. Estimated obligations of the Air Corps for the 1946 fiscal year total \$1,193,967,000.

Navy Bureau of Aeronautics, \$805,760,000. BuAer's total expenditure for the past fiscal year is set at \$930,897,850.

Civil Aeronautics Board, \$2,332,000, which compares with a 1946 fiscal year appropriation of \$1,700,000.

Civil Aeronautics Administration, \$121,537,720. CAA's 1946 appropriation was \$51,090,000.



FLIGHT OF THE FLYING WING:

"Before-and-after" photos of Northrop Aircraft's XB-35 Flying Wing show the giant craft being warmed up preliminary to its first flight, and the satisfaction-stamped faces of its crew after the landing at Muroc Army Air Base. Left to right: O. H. Douglas, flight engineer; Fred Charles Bretcher, co-pilot; Max Stanley, Northrop test pilot and pioneer in flying tailless aircraft. The XB-35 took off after a 3,000-ft. run, weighing 110,000 lbs. It landed in somewhat less than the 3,000 ft.



National Advisory Committee for Aeronautics, \$29,673,000, or \$3,658,607 above NACA's 1946 appropriation of \$26,014,393.

AVIATION CALENDAR

- July 18-19—IAS national annual summer meeting, Hotel Hollywood-Roosevelt, Los Angeles.
- July 18-21—Dedication of Mansfield, Ohio, Airport.
- July 19-20—NAA national convention, Omaha.
- July 20-21—Dedication of Mansfield, Ohio, Airport.
- July 26-27—NAA Joint Private Flying Conference, Milwaukee.
- July 29-30—NAA Joint Air Youth Training Conference, Milwaukee.
- Aug. 1-2—National Flying Farmers Association first annual convention and Oklahoma Flying Farmers conference, Oklahoma A & M College, Stillwater, Okla.
- Aug. 3-15—First post-war National Soaring and Gliding Contest, Elmira, N. Y.
- Aug. 17-18—Port Columbus, Ohio, Air Show.
- Aug. 21-28—First world congress on air age education, International House, New York City.
- Aug. 22-24—SAE National West Coast Transportation & Maintenance Meeting, New Washington Hotel, Seattle, Wash.
- Aug. 30-Sept. 2—National Air Races, Cleveland.
- Aug. 30-Sept. 2—National Championship Model Airplane Contest at Wichita, Kan.
- Aug. 30-Sept. 7—First post-war Canadian air show, sponsored by NAA of Canada, De-Havilland Airport, Toronto.
- Sept. 5-15—St. Louis, Mo., Aviation Week.
- Oct. 3-5—SAE National Aeronautic (Fall) Meeting and Aircraft Engineering Display, Biltmore Hotel, Los Angeles, Calif.
- Oct. 14-17—Fourth Annual National Aviation Clinic, Oklahoma City, Okla.
- Oct. 16-17—SAE National Transportation & Maintenance Meeting, Hotel Knickerbocker, Chicago, Ill.
- Oct. 23-25—Second Annual Arizona Aviation Conference, Phoenix.
- Nov. 7-8—SAE National Fuels & Lubricants Meeting, Mayo Hotel, Tulsa, Okla.
- Nov. 15-24—National Air Show, Cleveland.
- Nov. 1946—International Aeronautic Exhibition, Paris, France.
- Dec. 2-4—SAE National Air Transport Engineering Meeting, Edgewater Beach Hotel, Chicago.

Hughes Tool Co. Files Suit Against C. W. Perelle

The Hughes Tool Co., parent organization of Hughes Aircraft, last week entered suit for declaratory judgment and assessment of damages against the aircraft division's former vice-president in charge of manufacturing, C. W. Perelle, declaring that Perelle had made derogatory remarks to outsiders about the company and its officers.

Perelle, former vice-president of Consolidated Vultee Aircraft Corp., was hired by Hughes in September, 1944. In December, 1945, the complaint alleged, he was fired for "insubordination and failure to perform duties assigned to him."

Stating that Perelle "represented himself as a man of outstanding and unusual ability," the suit charged that "the defendant (did not) prove himself to be of any value to this plaintiff as an executive officer or production manager, or as an expert as he had represented himself to be."

The Hughes company stated that remarks made by Perelle "were clearly calculated to injure, damage or destroy the general reputation and good-will which this plaintiff held."

United Gets Hawaii; CAB Reopens Case

United Air Lines last week was certificated for the lucrative San Francisco to Honolulu traffic in a decision signed by President Truman. Because of division within CAB on whether service should be provided from Los Angeles to Honolulu by an additional carrier, the Board in a separate order reopened the Hawaiian case for re-argument and reconsideration.

The decision putting United in competition with Pan American between the mainland and Hawaii was signed by CAB Chairman L. Welch Pogue (prior to his resignation) and Members Oswald Ryan and Harllee Branch. Member Josh Lee filed a concurring and dissenting opinion. Member Clarence Young did not participate.

The Board's opinion, which denied the application of Matson Navigation Co., was one more blow to surface carriers endeavoring to engage in air transportation.

UAL plans to use DC-6's on its new 2,400 mile run, only overseas route for which it has applied. First DC-6's are scheduled to be delivered to United around September. Whether service would be inaugurated before Fall with equipment was considered problematical.

Examiners' report in the case was issued almost a year ago (AVIATION NEWS, July 23, 1945).

Bell Rocket Plane Awaits First Test

Test flight of Bell Aircraft's radical, stub-winged XS-1 is expected shortly now that the rocket motor has been installed. Acceptance tests for the National Advisory Committee for Aeronautics, for which the aircraft has been built, will follow within a few months.

After NACA makes its own tests, it will turn the rocket-powered fighter over to the Army, which is putting up the money for the plane, and on whose behalf NACA has supervised construction.

► **Claim 1,500 mph.**—Lt. Gen. Nathan Twining, chief, Air Materiel Command, claims the motor of the XS-1 has the power to push the aircraft along at 1,500 mph. at 80,000 feet. While NACA states the plane was not designed specifically as a supersonic aircraft, there is little doubt but that the test pilots will

attempt to exceed the speed of sound.

NACA has specified only that the XS-1 must reach Mach number .8 (about 600 mph.), which is faster than any officially-recorded flight of a U. S.-built plane in level flight. While few details on the plane have been released, it is known that it has extremely short wings, somewhat like the German V-1, and tricycle landing gear.

Design of the XS-1 has already been proved, aerodynamically, by flights as a glider. It has been launched from B-29 in flight and in dives from 13,000 feet has attained a speed of 350 mph. Even with the rocket motor, the plane will still be launched from a B-29 in flight, and climb as quickly and as steeply as possible with a burst from its rocket motor.

► **Attempt at 80,000 feet**—At about 80,000 feet, the craft will level off and then make an attempt to crash through the sonic barrier. As the duration of the rocket motor is only two minutes, this will mean a tremendous acceleration in a space of seconds. When the motor cuts out, plane will glide to earth.

Although the outside temperature at the altitude will be 67 degrees below zero, the speed of the plane will generate such friction that the pilot will need refrigeration.

Douglas to Handle Spares For Surplus Transport Fleet

In anticipation that 900 DC-3 and 225 DC-4 type planes will be in use in the U. S. by the end of the year, Douglas Aircraft Co. has announced that it is retaining tooling for the manufacture of spares for those aircraft, and in addition will stock spares for C-47's and C-54's.

As a further step toward meeting the needs of operators of Douglas equipment, the company, on special order, will undertake the manufacture of parts not listed in stock.

Hershey to Newsweek

C. Scott Hershey, formerly managing editor of AVIATION NEWS, has joined the Washington bureau of Newsweek magazine, in the National Press Building. Hershey resigned from the NEWS May 15 and joined Newsweek July 1. In the interim, he has been expert consultant on publicity and press relations problems for the War Department. He is Washington Area governor for the Aviation Writers Association.

Conference Gives CAA \$121,537,720 for Year

Airport development fund clipped to \$47,975,000; get maintenance allowance for 231 planes.

Compromising the \$66,000,000 approved by the House and the \$129,000,000 approved by the Senate, conferees of the two Houses of Congress last week agreed to a coming-year appropriation for the Civil Aeronautics Administration of \$121,537,720.

Conferees clipped the \$55,000,000 recommended by the Senate for airport development to \$47,975,000—\$45,000,000 for airport construction, and \$2,975,000 for airport planning.

The Senate figure of \$1,593,000 for CAA operation and maintenance of its 231 aircraft was adopted. The House proposed only \$1,200,000.

Following is the breakdown of the \$121,000,000 conference-approved budget for CAA for the coming year:

► **General administration**, \$4,353,102, as proposed by the Senate. The House proposed \$4,000,000.

► **Establishment of air navigation facilities**, \$19,622,200. This compares with the \$18,100,000 recommended by the House and the \$20,812,200 proposed by the Senate.

► **Maintenance of air navigation facilities**, \$36,544,418, as recommended by the Senate. House approved \$35,541,000.

► **Maintenance of foreign air navigation facilities**, \$2,500,000. Senate approved \$2,874,000 for this item, entailing the operation of 23 foreign bases for U. S. international commercial transport operations.

► **Technical development**, \$875,000, compared with \$1,000,000 recommended by the Senate and \$750,000 by the House.

► **Safety regulation and enforcement**, \$7,075,000, as proposed by the Senate, which increased the House-approved allocation of \$6,200,000 to provide CAA with funds for increased nonscheduled activities.

► **Airport advisory service**, \$250,000 as recommended by both House and Senate.

► **Maintennance of aircraft**, \$1,593,000, as proposed by the Senate.

► **Washington National Airport**, \$750,000 as approved by both the House and Senate.

► **Airport planning**, \$2,975,000, compared with \$3,000,000 proposed by the Senate.

► **Airport construction**, \$45,000,000, compared with \$52,000,000 proposed by the Senate.

Damage Toll Mounts In Atom Bomb Blast

Aviation sources in Washington last week saw little in the initial reports on the atom bomb test at Bikini Atoll to justify the hasty judgment of some Navy officers that the results did not indicate the end of present-type naval vessels. Instead, they adopted a "wait-and-see" attitude and pointed to reactions of some on-the-spot observers.

There was widespread feeling that the pre-test build-up had underemphasized the important point that only one bomb was being dropped. A second consideration is that the bomb deliberately was exploded in the air—and in the running fight through the years over the position of bombing planes vs. battleships, no air proponents have claimed ships could be sunk by mid-air explosions.

► **Score Climbs**—It is regarded as significant that as the week grew older, damage reports continued to

Bikini Dispatches Delayed

Special dispatches to AVIATION NEWS from its "Crossroads" correspondent, Scholer Bangs, were delayed by censorship and by transmission difficulties beyond the deadline for this issue. They will appear next week.

mount. First accounts had three ships, two transports, and a destroyer sunk. Two days later, this toll had been increased by the Japanese cruiser *Sakawa* and another destroyer. In addition 6 other ships were wrecked, 25 damaged, out of the total of 73 vessels moored in the test area. Scientists at the scene predicted that when the final assessment is made, it will be found that extensive damage has been done to the hulls of the ships.

While this score was being made by only one bomb, aviation experts were noting with interest that the radio-controlled drone planes had flown in and out of the atomic cloud many times with no evidence of difficulty. The loss of a few drones was blamed on various mechanical and electronic troubles not connected with the bomb blast.

Feeling is that the next test—exploding a bomb in the water—will be far more significant from the standpoint of military aviation. This test will more nearly approximate wartime bombing of ships inasmuch as it will indicate in some

measure the result of skip-bombing with atom bombs, and the effect of near-misses when atom bombs are used.

► **Not Battle Conditions**—But in connection with this forthcoming test, set for later this month or early August, aviation observers caution again that the results must be gauged from the standpoint that only one bomb will be used. Under battle conditions, a squadron or more of bombers would drop many times the weight of bombs being used in these tests.

While great emphasis is being put on the fact that the goats tethered on ships on the outer rim of the target area apparently were unharmed after the blast, it is being stressed in Washington that this gives no indication at all of the possible effect on human crews that would be aboard such ships in wartime. Leveling of the superstructures of the ships nearest the explosion would seem to indicate that casualties would be so heavy as to make successful operation of the vessels impossible even if they did not sustain crippling damage. Another possible effect that must be taken into consideration is the aftermath of having crews exposed to radiation. Radiation sickness did not show prominently in the Japanese of Hiroshima and Nagasaki until, in some instances, weeks after the bomb fell.

CAA Approval is Asked For Constellation Changes

Proposed changes in the *Constellation*, worked out by Lockheed Aircraft Corp. with CAA officials on the West Coast as the result of a recent accident to a Pan American plane, have been submitted to the Civil Aeronautics Administration, Washington, and are now under study.

Details of the proposal were not disclosed, but it dealt with the drive shaft from the Lockheed engine (Wright 3350) to the cabin pressurizer. Breakage of this shaft has been termed the probable cause of the fire that forced down Pan American's *Constellation*.

CAA has forbidden the use of cabin pressurization in *Constellations* until the problem is solved.

CAA Plans for Repair Base Curtailed by Conference

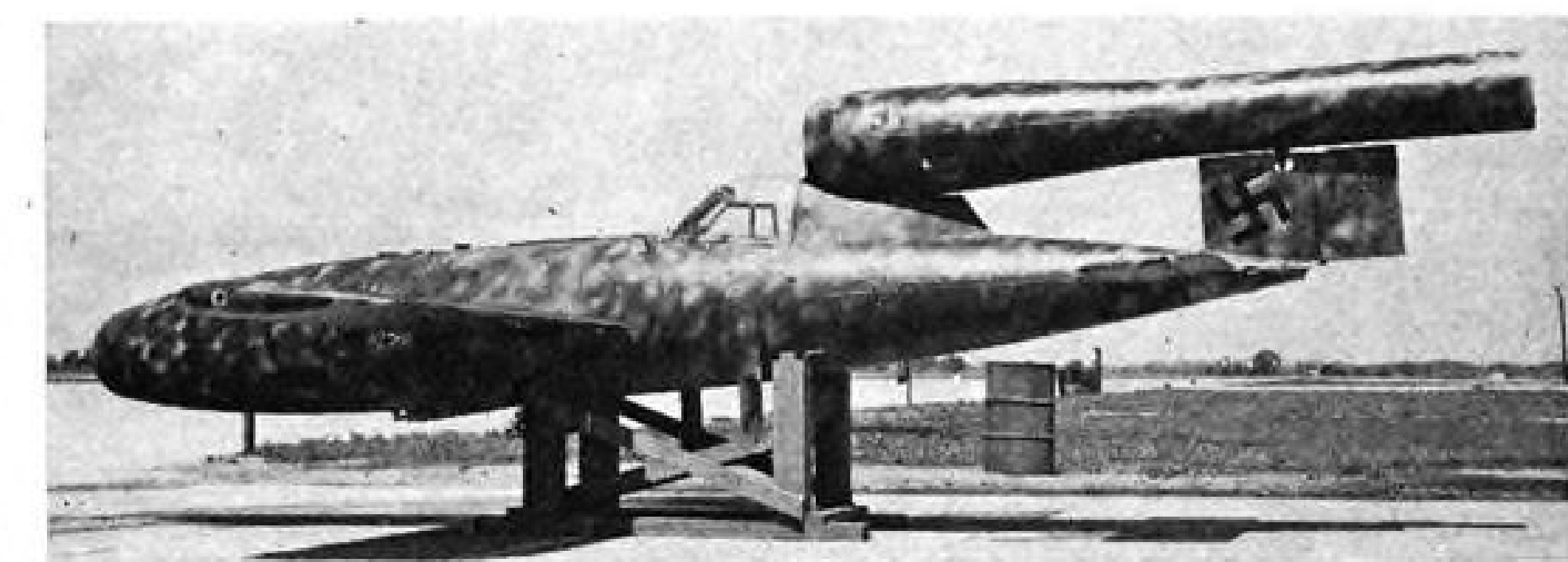
Under a compromise worked out in the House-Senate conference committee on the Commerce Department 1947 appropriation bill, CAA will be restricted in its plans to establish a repair base to service its own aircraft.

The conference committee conformed to the original House proposal of basing the limitation of CAA's expenditures on cost of labor. The limit, however, was raised from \$100 to \$200. The Senate amendment would have forbade CAA to do any work on which cost of materials would exceed \$100. This, in effect, would have shut out private industry as CAA's five-year stockpile of spare parts would have made unnecessary, in most cases, the purchase of any materials costing above the limit.

By basing the limit on labor cost, even though the top figure was doubled, there is a far greater chance of a great deal of CAA's aircraft work going to private aircraft repair stations.

Altschul Joins Airline

Selig Altschul, CAB analyst and secretary of the interdepartmental international air "facilitation" committee, will resign shortly to return to private industry in an executive capacity with an airline.



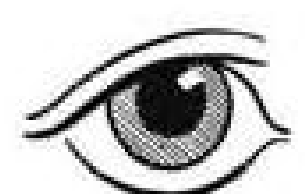
PILOTED MISSILE:

A rare German V-1 which contained cockpit for a pilot, this weapon is the only one of its kind captured by the Allies. Pilot was carried, presumably, only on research and tests flights.

Seating with friendly Greeting



Photo courtesy American Airlines



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PRIVATE FLYING

New-Twin Engine Pusher Is Developed by Baumann Corp.

Brigadier to sell for less than \$10,000, cruise at 150 and emphasize safety in design; powered by Continental 125 h.p. engines.

A new twin-engine pusher four-to-five plane personal or executive plane, the *Brigadier* 250, announced by Baumann Aircraft Corp., Roscoe Calif., is expected to be flying in November.

The plane, designed with emphasis on careful streamlining of nacelles and fuselage, and cabin accessibility beyond that usually found in planes of this size, is being developed by J. B. Baumann, president of the company, former research and design engineer at Lockheed, and founder and chief engineer of the old Mercury Aircraft Corp. He thinks the plane will be priced at "less than \$10,000" on a basis of production of 100 or more units a year.

► **Cruise at 150 mph.**—Powered with twin pusher 125 hp. Continental engines, the *Brigadier* is designed for 150 mph. cruising speed at 65% power, for 600 mile range; 170 mph. top speed, 60 mph. landing speed; 1250 ft./min. rate of climb and 18,000 ft. service ceiling.

The cabin floor level will be only 20 in. above the ground, with the door opening directly to the rear seat which is 50 in. wide. Access to the front seats is gained by a 10 in. aisle separating them.

The *Brigadier* will be of all-metal construction except for fabric covering of rudder and elevator control surfaces. The plane will use a retractable electric tricycle gear of Baumann's design.

► **Safety Aspects**—From the standpoint of the potential buyer greatest interest probably will be shown in the inherent safety aspects indicated by the propellers trailing the wing.

Probably at no time will the user of the airplane be bothered by "propeller hazards." There will be no occasion for either passengers or ground attendants to come within the propeller area while engines are running. Furthermore, Baumann expects to increase this safety aspect by extending radio antennas from wing tip to the horizontal stabilizers. If this is done, anyone

walking carelessly toward the propellers will be stopped or warned by contact with the antenna wires.

The engines will be mounted forward of the main beam of the wing, which is at approximately 30% of the chord. From each engine will extend a 4 ft. chrome molybdenum extension shaft connecting engine and propeller.

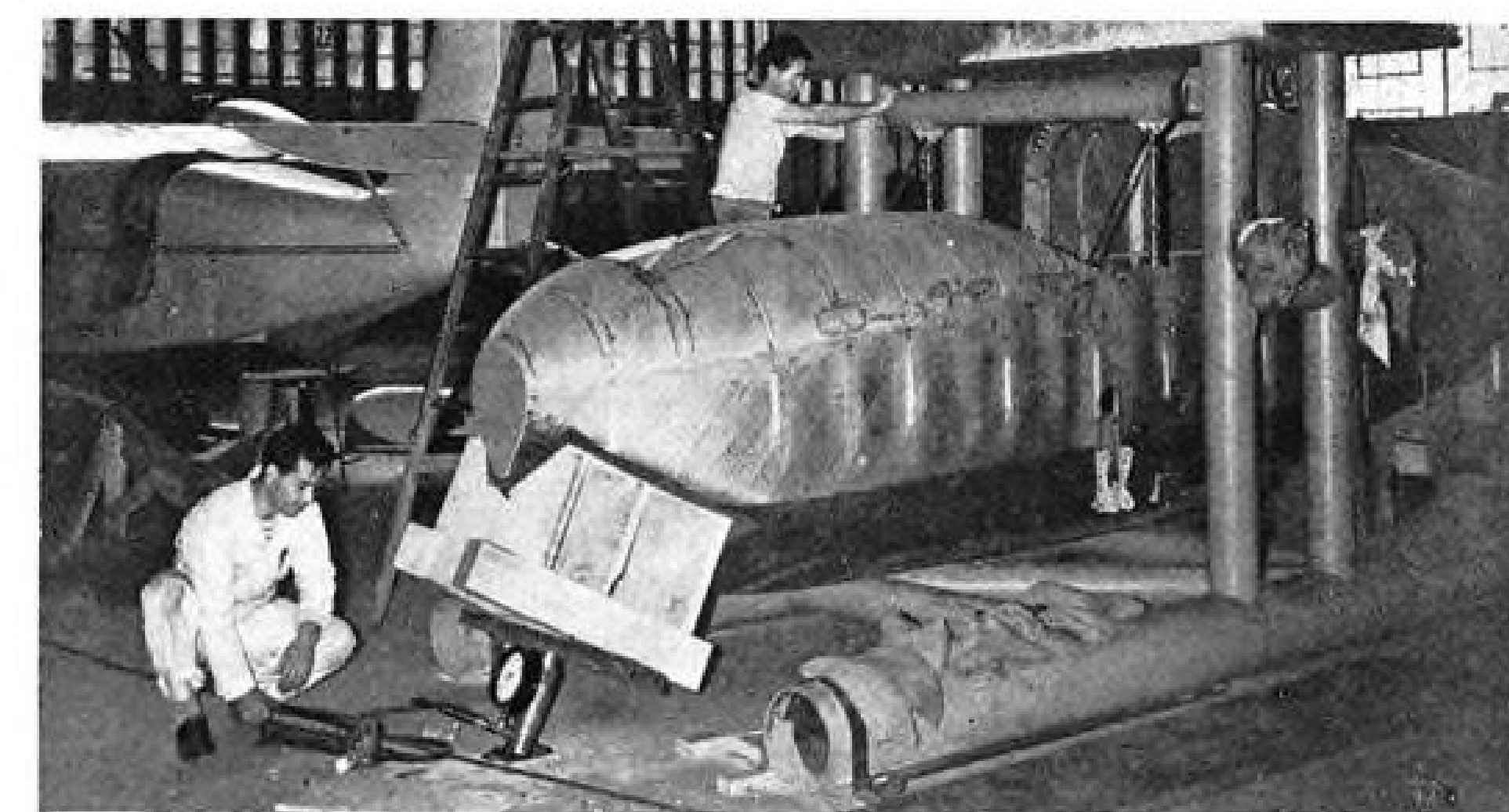
► **Forced Draft Cooling**—Cooling of

the engines on the ground, at idling speeds and during warmup, will be accomplished by forced draft induced by a venturi exhaust jet augmentor. Present plans call for the use of 74 in. hydraulic control variable pitch propellers.

The position of the engines will be ideal for easy access to engine accessories, reached by removal of the engine cowling forward of the wing. This cowling will be held in place by six Dzus fasteners. The exposed engine area will be approximately at shoulder level.

Present plans call for the installation of the fuel tank in the cabin aft of a fire wall which will be immediately behind the luggage compartment at the rear of the seat area. However, the wing design is such that if necessary, fuel tanks can be engineered, but with less accessibility, into the wing root areas.

Structurally the greatest strength of the fuselage is being designed



REDESIGNED TRIMMER:

The redesigned three-place Commonwealth Trimmer amphibian is expected to go into production at Port Washington, Long Island, in July. Main differences in the model chosen for production are reinforced hull construction, larger landing wheels and enlarged window space in cabin. Photos at Commonwealth Aircraft's Port Washington plant show, above: Trimmer hull undergoing stress tests, and below: the production model Trimmer, in final assembly.



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PRIVATE FLYING — 13

into the wing section of the fuselage and forward to the nose wheel region, a heavy main beam at the bottom of the fuselage forward area offering service as an emergency landing skid in event a wheels-up landing is attempted.

Baumann is financed through a small initial stock issue which is expected to carry the project through to completion and test of the prototype.

Commonwealth Offers New Stock Issues

Commonwealth Aviation Corp., 521 Fifth Ave., New York City, registered last week with the Securities and Exchange Commission 150,000 shares of 4½ percent cumulative convertible preferred stock, \$10 par value, and 300,000 shares of \$1 par value common stock. These

shares will be publicly offered at \$12 a share for the preferred and \$7 a share for the common stock. The identity of the underwriters was not disclosed in the prospectus but will be filed by amendment later.

Proceeds of the financing will be used for additional working capital to enable the issuer through its subsidiaries to produce personal and military aircraft.

Organized May 10, 1946, under Delaware law, the company was originally named Columbia-Commonwealth Aviation Corp., and had an authorized capital of 2,500,000 shares of \$1 par value common stock. On June 26 the charter was amended, changing the name to Columbia Aviation Corp., and the authorized capital was changed to 2,500,000 shares of \$1 par value common and 250,000 shares of 4½ percent cumulative convertible pre-

Crop Duster

The crop-dusting Bell Model 47 helicopter is being called into action by a 100 farmer cooperative association in the Willamette Valley, Oregon, following successful field tests at Yakima, Wash. (AVIATION NEWS, June 17, 1946). The co-op which includes owners of approximately 5,000 acres in Polk County, Ore. wants the helicopter to dust its crops of vetch (a species of fodder) which are being menaced by heavy infestations of weevils. A dust incorporating three percent DDT, is to be used at the rate of 25 pounds per acre. If the weevil is stopped, the farmers expect to expand their acreage of vetch, one of the most lucrative seed crops in the Northwest.

ferred stock, \$10 par value. On the following day the name of the company was changed by a charter amendment to Commonwealth Aviation Corp., the authorized capitalization remaining the same.

The corporation, according to the prospectus, was organized for the purpose of acquiring all, or as much as possible, of the outstanding capital stocks of Commonwealth Aircraft Corp., a Kansas corporation; Columbia Aircraft Corp., a New York corporation, and Cairns Corporation, a Delaware corporation, and to produce through these corporations in quantities certain types of small airplanes, particularly the two-place *Skyranger*, also the twin engine, three-place *Trimmer* amphibian, and also to produce experimental and other aircraft for the United States Government.

Cessna Boosts Schedule On Personal Plane Models

Cessna Aircraft Co., Wichita, announced last week that it had stepped up production to 22 planes a day, and was one month ahead of its original production scheduled for its two-place personal planes, Models 120 and 140. The company began retooling for personal plane production shortly after VJ day, and started actual production of Models 120 and 140 in March 1946. At the current rate, the company's production, in dollar volume is now more than \$1,250,000 a month, a rate believed one of the highest in the lightplane industry. The company plans to announce a larger four-place all-metal personal plane later in the year.

Airpark Zoning Plan Set by K. C. Group

Protects residential areas from low flying planes on approach.

An airpark zoning plan, which seeks to answer objections of property owners to construction of airparks in residential areas was announced by the aviation department of the Kansas City (Mo.) chamber of commerce, at a recent Jackson County Aviation day program.

The plan provides for a zone within a radius of one and one half miles of the point of takeoff at the airport. It is assumed that property owners outside this zone are not concerned with the air park. This is based on the assumption that planes using the airpark will climb to a minimum altitude of 400 ft. before leaving the operations zone of 1½ mile radius, under CAA regulations.

► **Planning Technique**—When the operations zone is defined, the airpark planner then must list the assessed valuations of all real estate improvements within the zone from the tax records, considering only valuation of improvements above the ground. He takes an average from this, and submits it to the board of zoning appeals. By applying for a zoning permit for an airpark in this area, he agrees to adhere to minimums in construction and maintenance of his field that will insure the airpark facilities are as attractive as surrounding real estate in the zone.

Among minimum requirements are to keep the buildings in good repair, paint exteriors periodically, spend a predetermined percentage of entire project cost on landscaping and beautification, require that all aircraft be repaired within buildings, and, in higher property value zones, require that all buildings be of rigid (stone, concrete, brick) construction.

Dick Challinor, aviation commissioner of the chamber of commerce, in presenting the plan, suggested that it be used by the next applicant for an airpark in the Kansas City area, to protect property owners against rundown and unsightly airport structures, as well as to make possible opening of landing facilities in residential areas convenient for the utility of potential buyers. Challinor pointed out that future plans for airparks include such things as swimming pools, picnic areas and recreational facilities of many types,



DE HAVILLAND CHIPMUNK:

DeHavilland Aircraft of Canada is test flying the new all-metal long-wing Chipmunk, tandem military trainer at Toronto. Performance figures on the plane have not yet been released. A two-place side-by-side version of the plane is now being designed, may have possibilities as a private aircraft. The plane is powered by a Gypsy 1C engine. It is shown in one of its first flights with DeHavilland Test Pilot Pat Fillingham at the controls.

which would make the landing strips community assets even to the non-flyers.

► **Demonstration at Grandview**—The plan was presented following a demonstration at Grandview airports of takeoffs of a DC-3 airline transport, in a flight pattern for a CAA Class IV airport, a Navy fighter, a Navy observation plane, a BT-13 with propeller in low pitch in a Class IV pattern, compared with other takeoffs of lightplanes such as Cubs and Ercoupes, Luscombes and Taylorcraft, in a Class I pattern of takeoffs and landings.

Witnessing the demonstration were members of the board of zoning adjustments, and other public officials and press representatives.

Speakers at a program on Airparks following the demonstration included L. B. Littrell, on "Private Aviation," Herbert Howell, on "Kansas City's Airport Situation," Oliver L. Parks, E. St. Louis, Ill., on "The Airpark of Tomorrow," and Challinor.

\$1,000 for Research

Aircraft Owners and Pilots Association has contributed \$1,000 to a research project on personal aircraft injuries, for continuing a study conducted by Hugh De Haven, of Cornell University Medical College. The study was started during the war with public funds, to improve cockpit safety factors for military planes. Since war's end, financing of the project has been provided by sponsors including AOPA, the military

services and aircraft manufacturers. Research involves study of safety factors in the human body, and improved aircraft structures, with emphasis on equipment in the plane—control wheels, instruments, etc.

Greater St. Louis Operators Organize Trade Association

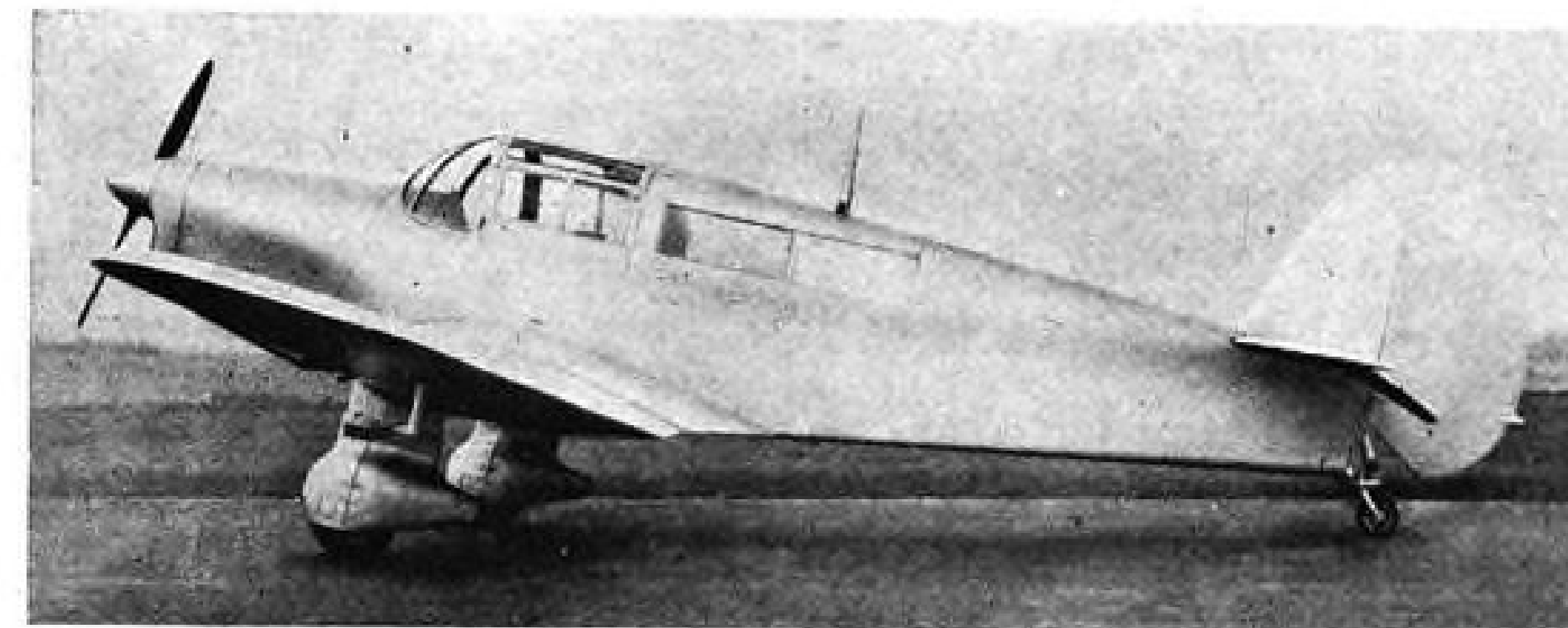
Operators of flight schools, airports, charter services and aircraft sales organizations recently banded together in St. Louis, to form the Greater St. Louis Aviation Operators' Association, including all phases of aircraft operations except the scheduled airlines.

Clyde E. Brayton, Brayton Flying Service, was elected president. Other officers are: William F. Remmert, Remmert-Werner Air Service, and Ray Branson, Meramec Airport, vice-presidents; Harry Usselman, Usselman Aero Service, secretary; Robert A. Bandentisle, St. Charles airport, treasurer.

The following were named committee chairmen: David Kratz, Aviation Underwriters, safety; Harry Crane, attorney, legal; Frank C. Struif, Parks Aircraft Sales and Service, membership.

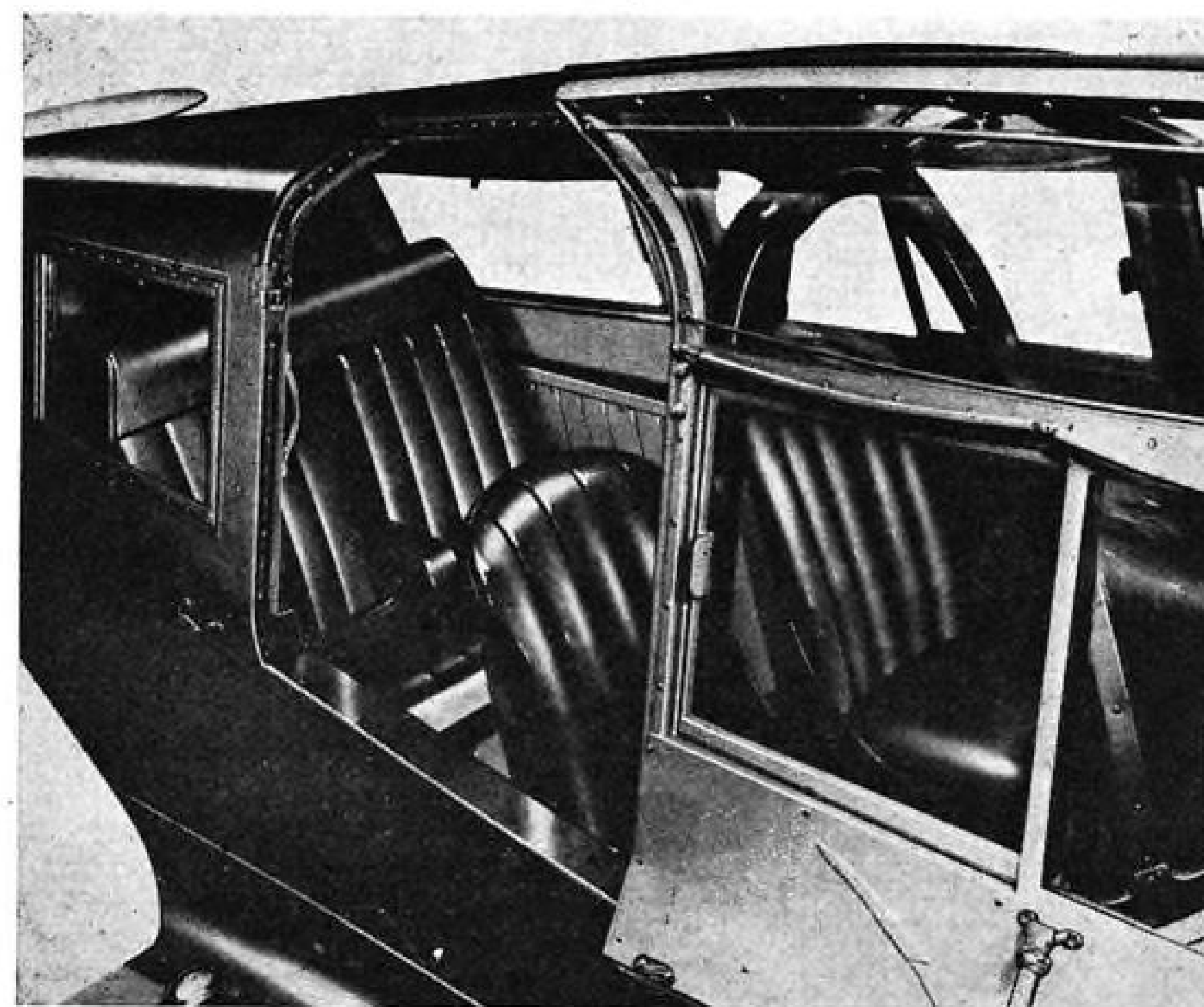
106 Idaho Airports

Idaho had 106 serviceable airports as of May 1, according to a recent tabulation by the state department of aeronautics. The list included six state emergency and CAA auxiliary fields and 28 U. S. Forest Service fields. Eleven of the Forest Service fields were listed as being in the "primitive" area.



PERCIVAL PROCTOR V:

New views of Percival Aircraft Co.'s four-place "family plane," built both for the British home market and for export. Gray is the standard color for the leather seats, with other colors extra.



Plant at Cleveland Taken by Taylorcraft

Taylorcraft Aviation Corp., Alliance, Ohio, last week purchased the Cleveland plant of Detroit Aircraft Products, Inc., at a figure said to be more than \$500,000. The one-story brick and steel plant provides more than 50,000 square ft. of floor-space in addition to the main Taylorcraft facilities at Alliance. The Cleveland plant will be used for manufacture of landing gear, fuel tanks, ailerons and other components, in a program which will triple production of these items.

The purchase was announced following a stockholders meeting at which amendment of the company's certificate of incorporation was approved, to increase authorized capital stock to 2,500,000 shares of common stock at \$1 par. Stockholders also voted a distribution of three shares of \$1 par value common stock to each of the 279,745 shares of common stock outstanding as of June 20.

Nash Russ was re-elected president and treasurer. Other officers named were: Joseph S. Rodd, secretary, O. M. Bell, vice-president in charge of sales; Bernard Russ, vice-president in charge of production. Nash Russ, and William J. Murray of Detroit, were re-elected to the board of directors, while Rodd, Bell and Bernard Russ, were newly elected to the board.

Three-Place Seat Feature of New Dansaire Plane

A new three-place personal plane featuring a seat claimed to be wide enough for pilot and two passengers, is being developed by Dansaire Corp., Dansville, N. Y. Design calls for a cruising speed of at least 100 mph.

Announced to have been planned with the idea of pleasing women, the Dansair Coupe is to have a sound-proofed cabin, instrument panel with instruments centered, and the panel containing the radio, speaker, and a glove compartment. Also featured is 300-degree visibility in the air and visibility of 360 degrees on the ground.

Fuselage structure will be of aluminum alloy. Flaps, ailerons, elevators and rudder will be built of straight, untapered sections, thus permitting right and left hand units to be interchangeable. Plane will have hydraulic brakes and cabin heater.

Briefing For Private Flying

NEAREST APPROACH—Probably the nearest approach in appearance yet to a family helicopter design, is the four-place G & A Aircraft Inc. Model GA-50, just announced. Apparently a development from the tiny XR-9, built by the same manufacturers for the AAF, the Model GA-50, still in early stages, will be entered by low-auto-type doors, has twin tail rotors, which permit shortening of the fuselage and elimination of high tail boom. The fuselage is trimly streamlined, and the craft has two main landing wheels with wide tread, and a third small tailwheel, similar to that on conventional light aircraft.

FARM MARKET POTENTIAL—Department of Commerce figures show that the nation's farmers have piled up a backlog of \$10,000,000,000 in cash and government securities during the war, when they enjoyed their most prosperous years in history. Net income of farmers increased, during that period (1940-45), from \$5,600,000,000 to \$14,800,000,000. In 1940, expenditures of farmers for consumer goods were probably more than 10 percent of the national total. All of which should be of particular interest to the personal plane manufacturers, distributors and dealers, who expect the farmers to offer their best market, at least in the next few years, because of the greater utility which a lightplane has in rural areas.

AMATEUR WEATHERMEN—Formation of the Amateur Weathermen of America, whose initials will probably become confused with those of Aviation Writers Association, has been announced from Philadelphia, under the sponsorship of Franklin Institute and the University of Pennsylvania. The association expects to stimulate amateur study and observation of weather by schools, clubs and individuals, and provide training material and proficiency tests for issuance of certificates to qualified observers and forecasters. The association plans to cooperate with the AAF, Navy Bureau of Aeronautics, CAP, the Weather Service, and other organizations, through exchange of information. Formal activities are expected to begin in September, after suitable material is prepared and weather clubs and stations are established in various localities. AVIATION NEWS readers interested in membership may write David Ludlum, Franklin Institute, Philadelphia 3, Penna.

SAFETY RECORD—In four years that the Army Ground Forces liaison pilot training school has been operating at Ft. Sill, Okla., the school has flown Piper "Cub" L-4 Grasshoppers a total of 214,000 hours (approximately 17,500,000 miles) with only one fatality, and has trained over 2500 mechanics and 2900 liaison plane pilots. The safety record is the more remarkable, considering that training involves short takeoffs and landings at small landing areas, and much treetop flying. Piper Aircraft Corp. recently presented the school with a safety certificate of achievement, which will later be replaced by a bronze plaque, in recognition of the record. —Alexander McSurely

Hockaday Comet Is Set For August Production

The experimental Hockaday Comet, two-place 125 hp. personal plane, is expected to go into production by Aug. 1, at Hayward, Calif., at a plant for which the Hockaday Manufacturing Co., Burbank, Calif., is now negotiating.

Price of \$3,350 has been set for the plane with a 125 hp. Franklin engine, and \$3,425 with a 125 hp. Continental.

Noel R. Hockaday, president and designer, has designed the high-wing monoplane for better-than-usual performance in the two-place lightplane class. It is designed to cruise at 125 mph. for 500 miles, has a 140 mph. top speed and 50

mph. landing speed. Useful load, including 100 lbs. baggage or equipment, is 564 lbs. The prototype has been flying over two years.

CAA Approves Seabee

The four-place all-metal Seabee amphibian of Republic Aviation Corp., last week won its CAA approval and NC license, a necessary prerequisite to beginning deliveries to customers. With a backlog of orders last reported around the \$10,000,000 mark, and a large production capacity at the Farmingdale, N. Y. plant, the \$3,995 Seabee is a formidable competitor in the personal plane field.

SPECIAL AIR SERVICES

CHARTER

NON-SCHEDULED

INTRASTATE

Air Freighters Charge Subsidy Airlines Are Stifling Competition

Prescott claims taxpayers footing bill for major carriers to crush new veterans cargo companies; challenge mail pay figures.

American Airlines has drawn sharp criticism from the newly-organized Independent Airfreight Association (AVIATION NEWS, July 1) and other industry groups which are attempting to stave off the CAB "axe" aimed at non-scheduled carriers.

IAA has challenged American to justify one set of figures presented to the government in asking for mail pay and entirely different estimates on air cargo. The first set, IAA declared, supposedly proved that mail could not be hauled for less than 45 cents a ton mile with a reasonable profit. The latter, according to IAA, will have to prove airfreight can be handled for 10½ to 11 cents a ton mile with the company staying on the black side of the ledger.

Prescott Hits Subsidy—Robert W. Prescott, president of National Skyway Freight Corp. and trustee of IAA, said the major airlines were, in effect, subsidized by the government and could, therefore, afford cut-throat competition, with the taxpayer footing the bill.

Prescott said his Flying Tiger line was denied the right to purchase C-54's on the ground that they were needed for passenger travel. "Yet," he concluded, "American put 13 of those C-54's into freight hauling in direct competition with me while today this same passenger travel is in such a condition the public is required to wait three to five weeks for reservations."

Malcolm L. Eno, Jr., secretary-treasurer of the Air Transport Operators, Inc., association of western-based non-scheduled carriers, agreeing with IAA's views, has demanded that CAB bring the problem of non-scheduled versus scheduled airlines into the open by examining American's mail and freight rates. "We do not desire nor will we permit a reign of terror

by any governmental agency under which threats and counter threats are allowed to cloud the issues at stake," Eno declared.

Challenge 11-Cent Rate—Echoing the sentiments of other spokesmen for non-scheduled groups, S. O. Samuelson, executive vice-president of the Institute of Air Transportation, last week characterized American's proposed 11 cents a ton mile rate as completely unrealistic and one which might permanently harm the air freight business. As for mail, Samuelson declared the non-scheduled operators were prepared to carry it for approximately half the present rates, or about 22½ cents a ton mile. IAT now claims to represent 76 independent airlines.

Other industry developments were reported as follows:

Kansas City Southern Railway Co. has filed a certificate for incorporation in Delaware of a subsidiary, Kansas City Southern Skyways, to carry contract air freight. The new company will first seek customers between Kansas City and New Orleans, according to W. N. Deramus, president of the railroad. He said the subsidiary will shortly acquire twin-engine planes.

Resort Airlines, Pinehurst, N. C., has started scheduled service between Westchester County Airport, N. Y., and Saranac Lake, N. Y., with 24-passenger DC-3's.

Flying Tiger Line is advertising new low rates down to 14 cents a lb. on its coast to coast contract air freight service. Greater load allowances by CAA make the new tariffs possible, the advertisement states.

Atlantic Central Airlines (formerly Otto Airlines, Inc.) has begun thrice daily Lockheed Lodestar flights to Camden, N. J., connecting that community with Atlantic City and Newark.

Air Cargo Transport Corp. has contracted to fly 250,000 crates of avocados from Cuba to the U. S. Six plane loads daily are leaving Havana for Miami and shipments will continue through the summer.

Dal-Air, Inc., Dallas, intrastate operator serving seven Texas cities, has suspended operations pending CAB action on its application.

Interurban Airlines, Inc., New York City, has been chartered by the New York Secretary of State with capital of \$24,000. Chester W. Dudley, Jr., is largest stockholder.

Three Unscheduled Carriers File Reports

First three non-scheduled air carriers of an expected 300 have filed reports with CAB under amended Section 292.1 of the Board's Economic Regulations (AVIATION NEWS, June 10). All reports will be due July 15 for non-scheduled lines operating before June 15 and within 30 days after new carriers inaugurate service.

First three companies, all relatively small, to file data with the Operations Division of CAB's Economic Bureau are:

Viking Air Transport Co., Inc., Grand Central Air-Terminal, Glendale, Cal. Officers: R. R. Hart, president; R. W. Reed, Jr., vice president and treasurer; E. Willingham, secretary. Company hauls contract cargo to any point in the U. S. Most of its customers are fruit and vegetable growers and food brokers, but planes are also provided for passenger service under contract. Now operating three DC-3C's, Viking was incorporated in January, and, since March 1, has flown 112,500 plane miles, carried 91,988 lbs. of cargo 234,049,200 pound miles, and 267 passengers 534,000 passenger miles. Total 52,000 gross revenue reported, with \$14,563 operating loss. Employs 26 full time personnel including pilots.

Southern Commercial Air Transport, Inc., 302 Balter Bldg., New Orleans. Officers: Paul R. Davis, president; William J. Simmons, vice president; George C. Darr, secretary and general counsel; Frank S. Kelley, treasurer. Conducts non-scheduled charter operations to build up organization and experience to support its feeder application in CAB's Mississippi Valley area case. Has one C-47A, and another on order. Service began Jan. 1. 35,084 revenue plane miles have been flown. Company has carried 11.69 tons of cargo 11,830 ton miles and 307 revenue passengers 352,169 revenue passenger miles. Loss has been \$12,157. SCAT has 11 full-time employees.

Air Facilities Corp., 53 Broadway, New York, (operating base temporarily at Roosevelt Field, Mineola, L. I., N. Y.). President, James Starr, III. Company has straight passenger charter service conducted with one Lockheed 12A. Service inaugurated May 1, 1946, and four flights monthly are operated.

Texas Air Lines Hits Million Mile Mark

Texas Air Lines last month rounded out a million plane miles in its scheduled intrastate passenger operations and during May flew 247,780 miles out of a possible 255,600, according to C. P. Erwin, president. TAL's 19 twin-engine Cessna T-50's currently are flying a total of 32 flights daily.

First two of 10 eight-passenger Beech D-18C's have been delivered, and TAL hopes to have all the new planes in service and its Cessnas retired by August. Delay in receipt of the Beechcrafts has been attributed to propeller production tieups.

Only Bona Fide N-S's Eligible for Exemption

Some of the questions causing most concern among uncertificated airline operators as a result of CAB's opinion in the non-scheduled case (AVIATION NEWS, June 10), have been answered by the Board in further clarification of its stand.

In explaining the changes it proposes to make in the exemption under which non-scheduled air carriers operate without certificates of convenience and necessity, the Board emphasized that the exemption applies only to "bona fide" non-scheduled, or fixed base, activities. **Legal Effect Unchanged**—The legal effect of its economic regulation (section 292.1) under which such operations are permitted without certification and have been since Dec. 7, 1938, has not been changed substantially, the Board said, except for the requirement that non-scheduled carriers register and provide information on their services by July 15. Part 42 of the Civil Air Regulations, as has been pointed out (AVIATION NEWS, June 24), is a separate measure setting the stage for issuance of operating certificates for safety purposes.

The Board declared that the Civil Aeronautics Act prevents it from authorizing air transport operations "simulating, approximating or approaching the services of scheduled certificated air carriers" until public hearing demonstrates that the public convenience and necessity requires such services and they therefore are entitled to that type of certificate.

In the single exception to the certificate requirement CAB is permitted to exempt any air carrier or class of air carriers on which it finds enforcement of the requirement would be an undue burden because of the limited extent of, or unusual circumstances affecting the operations.

Outline Exemptions—"In its regulation of non-scheduled services," the statement said, "the Board, originally and recently, has been able to find the required 'limited extent,' 'unusual circumstances,' and 'public interest,' justifying the Board's temporarily dispensing with certification, only in connection with operations of a bona fide non-scheduled, or 'fixed base,' character; those in which there is such rarity and infrequency as to preclude any implication of a uniform or normal consistency of operation."

CAB Non-scheduled Quiz

Because of the wide interest in the Civil Aeronautics Board's expressions on non-scheduled aviation, and its proposed amendment of the exemption regulation (Sec. 292.1 of the Economic Regulations) under which non-scheduled carriers are permitted to operate without certificates of convenience and necessity, the Board's answers to some of the questions that have arisen are presented below in full:

Q. What is the status of "contract carriers"?

A. Whether scheduled or non-scheduled, they are not subject to the Board's economic regulatory powers. Except for aircraft and airman safety requirements and air traffic rules, relevant provisions of the Act apply only to common carrier operations. Contract or other non-common carriers are not affected by Part 42 of the Civil Air Regulations or by the Exemption Regulation. Contract carriers, however, should fully inform themselves as to the circumstances whereby common carriage may evolve from what initially is a contract operation.

Q. Are intrastate carriers regulated?

A. If the operations, whether scheduled or non-scheduled, are solely within a single state and do not involve carriage of interstate traffic, they are not subject to the Board's economic jurisdiction. Such intrastate carriers must observe aircraft and airman safety requirements and air traffic rules but are not required to obtain air carriers operating certificates.

Q. How is "charter service" regulated?

A. The term is too loosely used to have significant legal meaning. The tests are whether the operations are (a) interstate, (b) common carriage, and (c) scheduled. Most operations described as "charter service" appear to involve interstate common carriage but may be scheduled or non-scheduled depending upon the scope and regularity of operations between any two given points.

Q. Is there any special authority for services between two points not served by regularly scheduled airlines?

A. No. Under the Exemption Regulation, non-scheduled service may be performed between any two points whether or not such points are served by a certificated air carrier. Scheduled service may not be performed until the operator has been issued a certificate of public convenience and necessity authorizing such service.

Q. Will the proposed new exemption regulation put non-scheduled operators out of business?

A. No. The proposed amendment No. 3 of section 292.1 does not materially differ from the existing Exemption Regulation insofar as it relieves non-scheduled operators from obtaining certificates of public convenience and necessity. It is proposed, however, that larger non-scheduled operators be required to comply with certain other provisions of TITLE IV of the Act concerning tariffs, rates, carrier relationships, etc. This proposed regulation is in tentative form. Comments are invited from all interested persons and will be considered in drafting the regulation for final adoption. Extensive regular services, even though represented to be "non-scheduled," have never

been authorized by the Board in any manner other than by issuance of a certificate of public convenience and necessity as required by the Act.

Q. What is the 10-trips-per-month rule?

A. The proposed regulation would regard a service involving more than 10 round-trips per month between the same two points for a period of two consecutive months as a scheduled operation, unless due to unusual, emergency, or non-recurring conditions. However, the 10 trips is not the exclusive test. A lesser number of trips establishing a pattern of service involving reasonable regularity would also, as it now does, constitute scheduled service requiring certification.

Q. Is the Board authorizing establishment of any new scheduled airlines?

A. Yes, whenever the requirements of public convenience and necessity are demonstrated in a public hearing. The suspension of all such proceedings required during the war has been terminated. Since March 28, 1946, the Board has granted certificates (for 3-year trial periods) to seven air carriers not previously certificated. In addition, there are pending seven unfinished "area" cases, each involving numerous applications covering a large section of the United States, which are under active consideration with prospects of additional authorizations to new carriers. In addition, a consolidated proceeding, involving applications for exclusively air cargo services throughout the United States, is soon to be heard.

Q. How are the Exemption Regulation and Part 42 of the Civil Air Regulations related?

A. They are of equal applicability except for effective dates.

- (a) They neither apply to nor authorize scheduled air transportation.
- (b) Intrastate carriage is not affected.
- (c) Contract carriage is not affected.
- (d) Non-scheduled operators are required to file registration statements with the Board by July 15, and applications for safety operating certificates with the Administrator by August 1, 1946.

Q. What is the status of express companies, forwarders, and travel agencies?

A. Persons who undertake generally to arrange for interstate common carriage by air for others, but do not operate aircraft, are termed "indirect air carriers" by the Act. The Exemption Regulation does not apply to indirect air carriers. Their activities can be conducted only after they have obtained a certificate of public convenience and necessity, or an exemption order supported by a showing of the requisite "limited extent," "unusual circumstances," and "public interest."

Q. What was the decision of the Board in Docket 1501, Investigation of Non-scheduled Air Services?

- A. (a) That the principles of the existing Exemption Regulation should temporarily be continued in effect;
- (b) That non-scheduled operators should be required to file registration statements; and
- (c) That further regulation of non-scheduled operators should be deferred until additional data had been accumulated and comments received after public circulation of the proposed new regulation.

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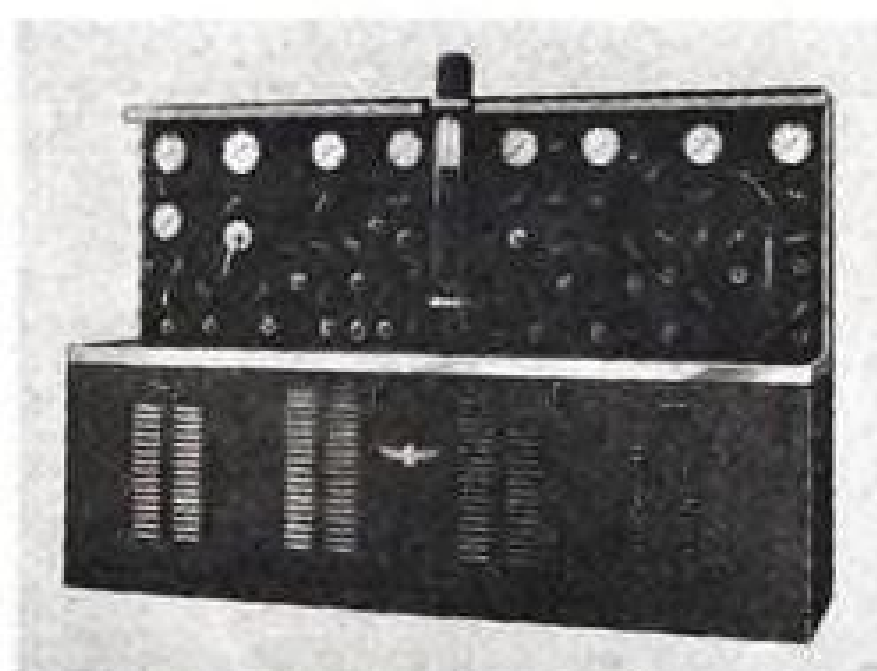
MODEL FVHP20-1H — Combination fuel, vacuum, and hydraulic pump test machine

MODEL FPS5-2 — Combination engine-driven fuel pump, and both submerged and external fuel booster pump test machine

Various other types and sizes of test machines (gas or electric powered) including portable and stationary models for pressures up to 4,000 psi, flows up to 30 gpm, and static pressures to 20,000 psi. Special testing equipment for gas turbine (jet propulsion) engines.



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Models 10SE3V-20V — Tests performance of aircraft hydraulic devices up to 3,400 psi and 20 gpm. Infinite variable pressure regulation 500 to 3,400 psi. Infinite variable volume control, 0-20 gpm. Optional static pressures up to 20,000 psi with booster cylinder (intensifier).



Model OR3-1 — Checks all equivalent oil temperature regulator valves on C-54 and C-69 airplanes.



Model PE3-8 — An electric motor-driven portable hydraulic test machine for line testing the performance and operation of complete airplane hydraulic systems up to 3,400 psi at 8 gpm flow. Also supplied with flows up to 20 gpm at 3,400 psi (Model PE3V-20V). Both are supplied also as gasoline-engine driven.

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Patents pending on all machines



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PRODUCTION

Latin America Scene of Major U. S.-British Export Battle

American firms back new models after initial campaigns by Empire salesmen with surplus planes.

The struggle between U. S. and British aircraft manufacturers for markets abroad is making Latin America the chief battleground. The remaining summer months and early fall will be the showdown period for new equipment, judging by developments.

In the middle of next month, the Bristol Aeroplane Co. will send its *Freighter* across the Atlantic on a 22,000-mile tour through North and South America. Although the 35,000-lb. *Freighter* will land in Canada, it will bring the battle to the home field by being displayed in New York, Chicago, Minneapolis, Portland, Seattle, San Francisco and Los Angeles.

Not caught napping, however, Fairchild Engine and Airplane Corp., one of the U. S. firms most active in export, has arranged with the AAF for a *Packet* to tag along with a B-29 and P-80 cavalcade being sent through Latin America by the AAF either shortly before or shortly after the *Freighter* begins its Latin American showing in Mexico in September.

British Ahead—Up to now, the Latin American market has admittedly been going by default to the British, although the results of the British head-start are not particularly worrying U. S. companies. In an attempt to lock up the market, the British rushed skilled negotiators and a horde of air representatives to South America in the months following the end of the war. They followed this promptly with shipments of surplus aircraft. For instance, 150 Miles *Magisters*, wartime trainer, have been sent to Argentina.

These are now being assembled, but the reaction is not quite what was expected. One report, from an Argentina test pilot who has had wide experience with U. S. plane types, is that "these are the best advertisements for U. S. aircraft."

In addition, there have been several crashes of British surplus planes in other South American countries.

Demand 2,000 Planes—The importance of the Latin American market is indicated by a recent market research report which estimates that there are approximately 2,000 aircraft of various types in immediate demand in the 20 countries south of the Rio Grande. The kind of pressure U. S. manufacturers are up against is highlighted by a recent "news" story in the Brazil Herald, published in Rio de Janeiro, which bears a London dateline and says in part:

"An unprecedented U. S. demand for British-made goods is reported by the Daily Mail correspondent from New York. . . . The single announcement by a New York store that a new consignment of goods has just arrived from Britain jams the aisle with thousands of Americans clamoring to buy. This in spite of the fact that American manufacturers are turning out quantities of similar types of articles. The reason . . . lies in the U. S. appreciation of superb British craftsmanship. . . . British cars are a sales riot . . . not because it is hard to get new American cars these days, but because the Ameri-

cans have seen that the British cars on the whole last longer."

The export battle to date has been waged chiefly with surplus aircraft. There are two distinct opinions on the value of that strategy. Some claim the foreign consumers will become accustomed to a certain make of aircraft through using the surplus products of that manufacturer. Others take the view that the inferior performance of surplus planes—compared with what can be expected from new aircraft—plus the uncertain condition of many of them, creates more ill feeling than good. They find support for this assertion in the British experience to date in South America.

Orders Major Battle—The major competition, however, is not in surplus, but in the obtaining of orders for planes, most of which are still on the drawing boards or in the earlier construction stage. On the U. S. side, Fairchild and Piper, among the lightplane makers, have acknowledged export orders, while a newcomer, Eshelman, in Baltimore, claims receipt of a \$700,000 order for 250 *Winglets* for South America. Glenn L. Martin Co. has received an order from the Dodero airline in Argentina for four Model 202's, and Boeing has announced plans to go after foreign business on the Model 417. Douglas and Lockheed, of course, are already delivering *Constellations* and DC-4's.

In the forefront in Britain are Auster, with its *Arrow*, 95 percent of the total production go into the export market; de Havilland, with the *Dove*, for which export orders amounting to more than \$8,000,000 are claimed; and Percival which has already delivered 16 *Proctors*, with orders for 66 more on file. These orders have come in from all over the world.



Export Threat: Great Britain's strongest-running entry in the export field at the moment probably is the DeHavilland *Dove* which is a new design and already in quantity production. It carries eight passengers, cruises between 160 and 200 mph, and was built especially for feeder or short-haul operations.

New Draft Worsens Air Engineer Shortage

One-third of already shrunken industry force will be hit by non-father clause; one plant needs 400 technicians.

Already harassed by a critical shortage of engineers, the aircraft industry this week is increasingly worried about the effects of the new draft law. Its provision for the inducting of non-fathers between the ages of 19 and 45 hits perhaps one-third of the woefully small force of engineers now employed, even those who were exempt during the war.

Work on Army and Navy research and experimental contracts is bound to suffer most seriously from the effects of the new law. It is on this type of work that most engineers are employed, and this work also constitutes the greater part of the aircraft industry's present production.

► **Men Are Irreplaceable**—One company's estimate is that about 15 percent of its engineers between the ages of 19-30 employed on such jobs are now subject to call, and about 20 percent of those between the ages of 19 and 44. These men are virtually irreplaceable, as college graduates are also liable to the draft.

For months, the industry has been endeavoring to build up its en-

gineering staffs with little result. The shortage stems from three main causes, none of which indicates a solution. First, the industry is about three times as large as pre-war, so even if every pre-war engineer returned to his job there would still be a great deficiency. Second, many of the industry's wartime engineers were recruited from other industries. Most of these have now returned to their former jobs. Third, the need for engineers is disproportionate to the relation between the pre-war and post-war industry, due to the greater volume of research work which requires a higher proportion of engineers.

► **Many Shortages**—The shortage exists all down the line: aerodynamic engineers, supervising engineers, assistant project engineers, design specialists, engineering designers, etc. One company needs close to 400 engineers; another more than 300. One manufacturer reports that he is at present about 20 percent below his complement of engineers and that his firm will be about 50 percent below should all his engineers subject to the draft be called.

The industry is stumped for a corrective to the situation. At one point during the legislative action on the new draft law there was a provision exempting scientific and technical personnel classed as essential. This was, however, dropped when it was pointed out that selec-

tive service boards already have authority to make such exemptions.

But pressed by quotas, local boards have shown little inclination to exempt aeronautical engineers. Some plants already have lost engineers to the draft, others report that some of their key men have been re-classified 1A or ordered to report for physical examinations.

Beech Gets \$4,000,000 Loan From Bank Group

The Fourth National Bank in Wichita has completed an agreement between a syndicate of banks in the Middlewest and Beech Aircraft Corporation on a \$4,000,000 loan to provide working funds for the company.

Beech officials said the new credit was similar to a \$50,000,000 revolving fund established by a similar syndicate of banks headed by Fourth National in Wichita during the war.

Beech will reveal details of its model 35, all-metal, four-place, personal and charter plane. In addition Beech officials admitted they are working on a 20-passenger airplane of "very advanced design" for feederline operations out of small airports. (AVIATION NEWS, June 3, 1946.) The latter plane is "especially designed to solve the problem of municipalities which desire high grade airline service without making large expenditures for elaborate airports."

Beech to Europe

Walter H. Beech, president, Beech Aircraft Corp., has revealed plans for a European trip to study the foreign aircraft industry and possibly initiate discussions for an exchange of manufacturing rights with some European aircraft companies. Beech has already opened preliminary negotiations with the Fokker Aircraft Works of The Netherlands, but indicated that reports Beech has a definite agreement with Fokker are premature.

Whittle Status Clarified

The British Minister of Supply has cleared up the status of Air Commodore Frank Whittle, inventor of the jet engine, with an announcement that Whittle will continue to serve the Ministry as a technical adviser on engine design and production to the Controller of Air Supplies. Whittle resigned several months ago from Power Jets Ltd., the firm he founded to pursue jet development.



JET-AIDED HELICOPTER:

In place of the usual torque-correcting rotor at the tail, this British helicopter utilizes jet thrust from an orifice in the tail to accomplish the same end. A 330 hp. engine drives rotor, and its exhaust is expelled through the jet. The craft was built by Weir Ltd. and Cierva Autogyro Co. (Press Alliance photo.)



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Republic Leases WAA Plant at Farmingdale

Republic Aviation Corp. has leased for five years from War Assets Administration the Farmingdale, L. I., plant it used during wartime, with annual rentals based on net sales. Over the full period of the lease, the minimum rental would be two percent of sales.

Republic is taking over the entire facility, including more than 30 buildings with floor area of 1,400,000 sq. ft., and a 260-acre airport with operations buildings, paved runways and taxi strips. With the company's old plant, this will give Republic approximately 1,620,000 sq. ft.

Under the lease, there are minimum and maximum rentals for each year, as well as the actual base, the net sales. These are: first year, four percent of net sales, or a minimum of \$314,000 and maximum of \$629,000; second year, five percent of sales, minimum of \$393,000, maximum of \$629,000; third year, six percent of sales, minimum of \$472,000, maximum of \$629,000; fourth and fifth years, eight percent of sales, minimum of \$629,000, maximum of \$787,000.

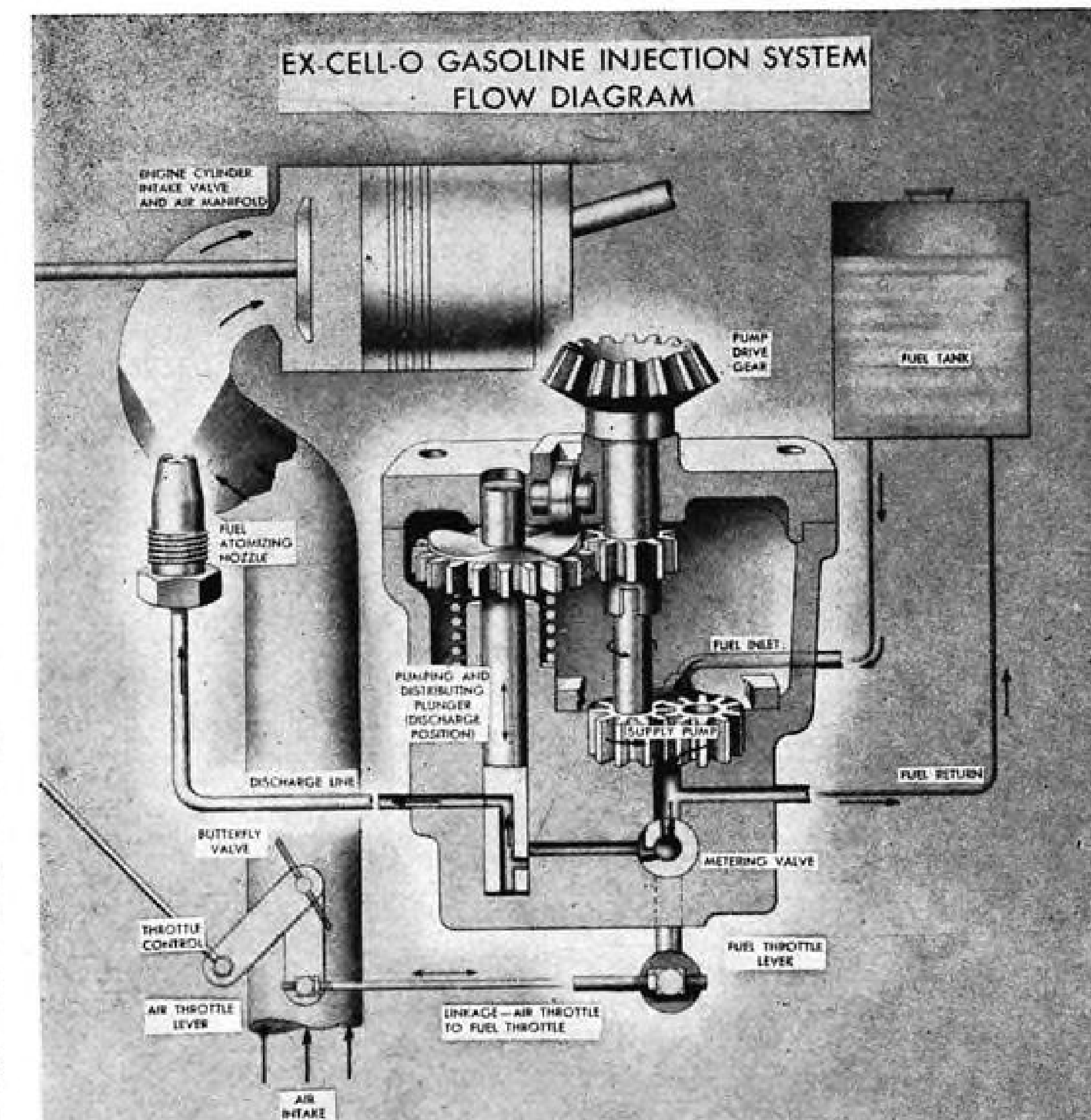
Republic is now negotiating with WAA to purchase all the machinery and equipment installed in the plant. It has an option to buy the plant itself, with part of the rental applying toward the purchase price.

The plant leased from WAA will continue to be Republic's main facility for the production of XF-12 photo-reconnaissance planes; P-84's; Rainbows; and Seabees, and for its C-54 reconversion program. The company also is engaged on research and development projects.

Fixed Pitch Aluminum Prop Made for Lightplanes

Tests are being conducted at Dayton, Ohio, on a new fixed-pitch aluminum propeller made by McCauley Corp. for lightplanes. So far, tests have been made with the propeller on a Piper Cub and Ercole. Later experiments will be with a Luscombe, Taylorcraft and Aeronca.

Although the McCauley propeller will be more expensive than the usual wooden types used on lightplanes, it is said to have greater serviceability and longevity. The company is headed by a former Wright Field engineer, and during the war it made propellers for Army training planes.



Direct Fuel Injection: This diagrammatic drawing shows the operation of Ex-Cell-O Corp's direct fuel injection system.

Fuel Injection System For Light Airplanes

A new form of fuel injection for lightplane engines that does not use a carburetor and promises better performance, greater safety and less maintenance has been announced by the Ex-Cell-O Corp., Detroit, Mich.

Ex-Cell-O's direct fuel injection system meters mechanically the amount of fuel to each cylinder, and the fuel is sprayed into the airstream entering the cylinder from atomizing nozzles. The system consists of only four parts: injection pump, air throttle and linkage, discharge lines and atomizing nozzles.

The key to the system is the injection pump which contains the metering valve. This furnishes just the right amount of fuel, at properly timed intervals and under constant pressure, to the atomizing nozzles. This metering valve is linked to the air throttle lever on the air intake manifold.

Both the metering valve and the air throttle lever are calibrated for best engine performance and are operated by the throttle control lever in the cockpit. This system is

claimed to result in better combustion and greater fuel efficiency.

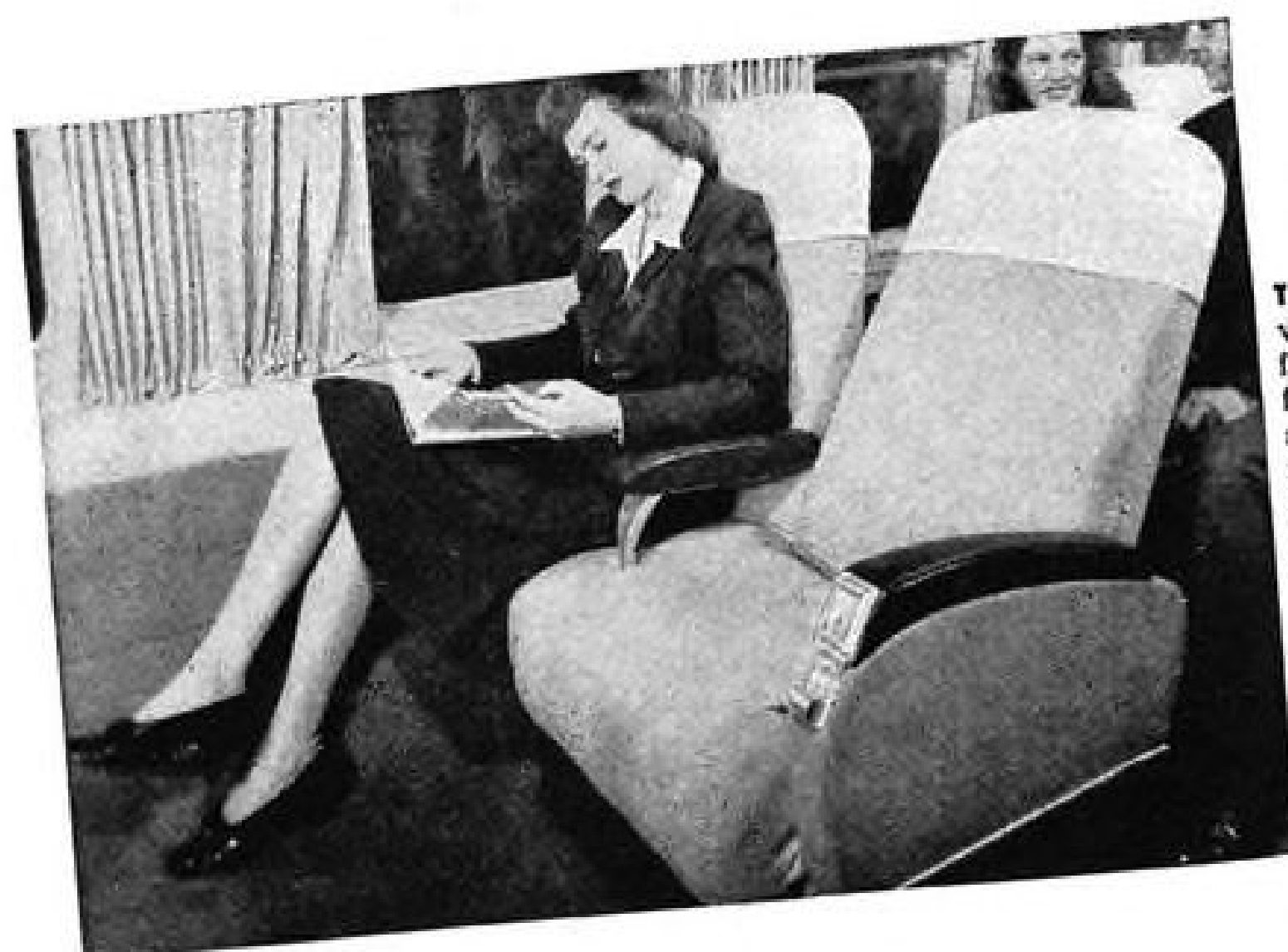
Another great advantage of the Ex-Cell-O system is its total elimination of carburetor ice danger.

Ex-Cell-O first applied the system to four-cylinder engines, but is now producing it also for six-cylinder engines developing up to 250 hp.

10 Percent of War Contracts Still Unsettled by May 31

Unsettled claims on terminated war contracts amounted to \$15,200,000,000, involving 14,283 contracts, as of May 31, the Office of Contract Settlement has reported. This is about one-tenth of the number of contracts and about one-third of the dollar value of terminations pending at VJ-Day or terminated since.

During May, claims amounting to \$5,100,000,000 were settled, an increase of \$400,000,000 over April, and a new high for a single month. The May contracts settled included 4,852 fixed-price terminations totaling \$2,900,000,000, and 62 cost-plus-a-fixed-fee terminations involving 2,200,000,000.

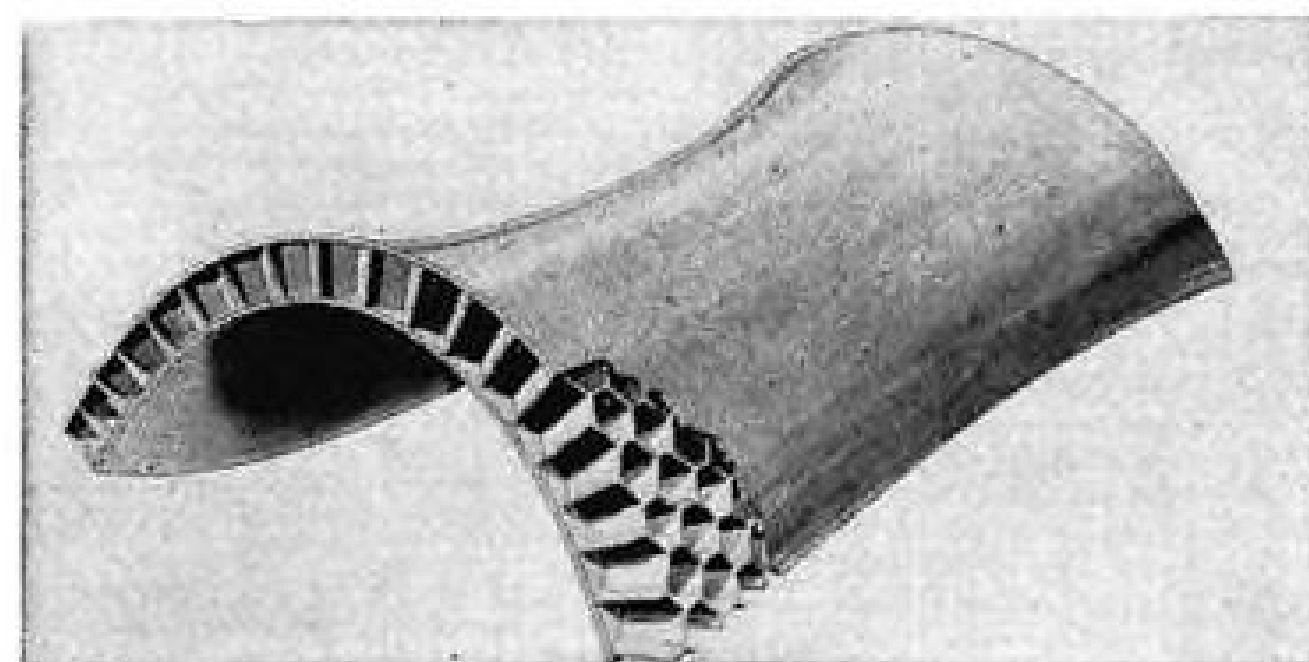


Tough Stuff! Marvynol, new plastic fabric, provides colorful, scuff-proof, washable interior finish for new Martin planes. Other types of Marvynol may supplant rubber in many fields.



In the Bag! Mareng fuel cells, big elastic "bags," increase safety and, because of their bladder-like construction, reduce maintenance. Another exclusive Martin development!

New Developments Pay Big Dividends



Super-Sandwich! Aluminum honeycomb, sandwiched between aluminum sheets, saves weight. Years of Martin plastic research have developed a new bond of amazing strength.

TO AIRLINES THAT BUY MARTIN

Pictured on this page are just a few of the many new Martin developments that will boost performance and production of Martin airliners. Scores of other developments, individually minor but collectively important, will cut costs and increase efficiency of the new Martin airliners.

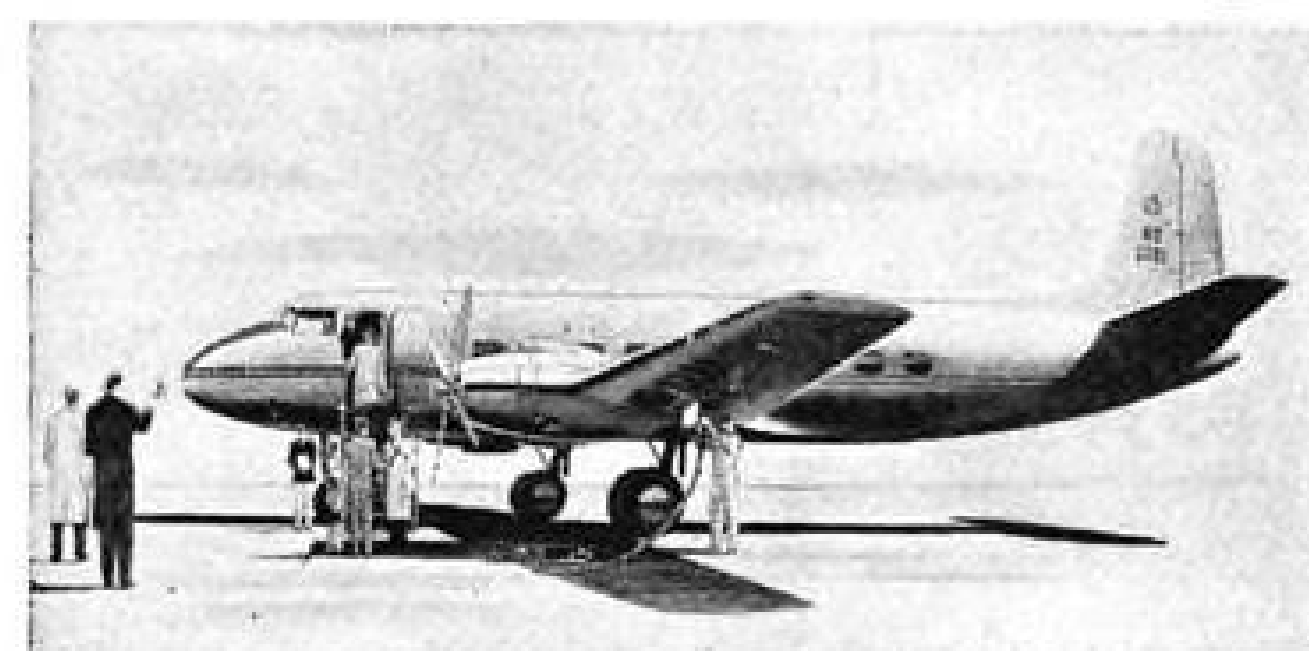
Martin research pays dividends to lines that BUY MARTIN! THE GLENN L. MARTIN COMPANY, BALTIMORE 3, MARYLAND.

FIRST AIRLINES TO ORDER NEW MARTIN TRANSPORTS!
 Pennsylvania-Central
 Eastern • Braniff
 Chicago & Southern
 United • Northwest
 Delta

Martin
 AIRCRAFT
 Builders of Dependable Aircraft Since 1929



Big Boost! Jet exhaust thrust, optional on new Martin airliners, gives extra speed and power. Jet exhaust was pioneered by Martin in 1939 on famed B-26 (shown above).



In Front! Forward entrance door, first developed by Martin, is a typical example of how Martin pioneering keeps Martin aircraft well ahead of the field at all times.



Photo-Finish! Smart interior of Martin airliners may be finished off with photo-murals, thanks to Martin Multi-Mulsion—a photographic emulsion developed by Martin.



Colossal Camera! Photo-lifting process, which saves time and money for purchasers of Martin aircraft, was developed by Martin.

TRANSPORT

Major Airlines File Consolidated Air Freight Tariff With CAB

Move to offer nationwide cargo facilities to U. S. shippers as nonscheduled competition grows; Northwest not in agreement.

By MERLIN MICKEL

Twelve airlines have agreed to consolidate their air freight tariffs in the first major cooperative move by the scheduled carriers to offer nation-wide interline cargo facilities to U. S. shippers.

CAB has been asked to approve an interim agreement governing publication and maintenance of the consolidated tariffs, which airline spokesmen say will mark the first time any transportation industry has been able to achieve such coordination on a national basis. The motor freight and rail carriers have regional tariff consolidations.

Passenger Pact Similar—The agreement on file is similar to the airline passenger agreement approved by CAB several years ago. It sets up procedures, and allocation of expenses, and provides that participants shall notify each other of tariff changes 15 days in advance. But each party "reserves the right to determine ultimately, in its own discretion, the classifications, rules, regulations, practices, and services in connection with the transportation of air freight over its own lines." The agreement also states that its signers will do their best to establish and maintain "just and reasonable" joint rates where circumstances permit. The agreement would function through the Air Traffic Conference of the Air Transport Association.

The fact that the freight pact is similar to that already in effect in regard to passengers led to the prediction by CAB sources, as well as at ATA, that the newer agreement would be approved.

Bond Studies Pact—At the Board it was said that the agreement would be studied carefully to determine whether it offered some method of rate stabilization at an uneconomic level, but airline spokesmen pointed out that the agreement does not

establish rates themselves, but merely provides for their publication "in one cover."

The step means elimination of unnecessary variations in freight tariffs, and is expected to reduce tariff filing costs to the individual airlines, as well as the ultimate cost to the shipper of air freight.

PCA filed the agreement. Other signatories were American, Braniff, Chicago and Southern, Continental, Eastern, Inland, Mid-Continent, National, United and Western. TWA, one of the principal supporters of the arrangement, which has been under consideration since 1944, signed later. Delta was expected to join soon. Northeast and Colonial were undecided last week, but Pioneer (Essair) probably will sign.

Conspicuous by its absence was Northwest Airlines, which has filed a separate air freight agreement with Railway Express Agency. The Board has initiated an investigation of this agreement (AVIATION NEWS, May 6) to determine whether it is adverse to the public interest and is in violation of the Civil Aeronautics Act, and to find whether further Board action is required.

The Board feels that the exemption order under which Railway Express is allowed to carry on its air express activities without a CAB certificate of convenience and necessity is not broad enough to cover air freight, and has suggested that it would be appropriate for REA to file application for certification in both the air express and air freight fields.

Catalina Route Opened By United Air Lines

United Air Lines last week reopened the war-suspended route of Catalina Air Transport between Los Angeles and Santa Catalina Island under an agreement approved by the Civil Aeronautics Board. DC-3's will fly seven round trips daily along the 61-mile route between the mainland and the resort off the southern California coast.

UAL will carry out all provisions of Catalina's certificate and provide the equipment and personnel



GREYHOUND PROVING BUS-COPTER TEAM:

Three passengers transfer from a bus to a Sikorsky S-51 helicopter during an experiment recently conducted in Detroit by Greyhound Lines to determine practicability of this type of service. It's stated that Greyhound plans nation-wide integrated bus-copter service to go into effect as soon as equipment can be purchased. (Acme photo)

Serving Alaska

WITH
TOP TRAVEL STANDARDS

ALASKA AIRLINES
INC.
ANCHORAGE, ALASKA

★ "Alaska is a grand place to live, work and play. We have more than 40 aircraft in our fleet, seven of them DC-3's. Two DC-4's are on the way. When you come to Alaska, fly with me!"

Route of the Starliners

necessary to conduct the operation. The transportation will be furnished under the name of United, and UAL will assume all profits and losses. The agreement will continue in effect until Dec. 31, 1946, and on a year to year basis thereafter, but may be terminated at the end of this year or any subsequent year after three months' notice by either party.

Globe Presents Air Freight Case to CAB

Cargo carrier president scores "reckless" policy on non-scheduled companies.

Globe Freight Airline, Inc., Hartford, Conn., became the first exclusively air freight carrier to present its case in a CAB hearing when company witnesses took the stand during recent sessions of the Boston-New Orleans route proceeding.

James N. Laneri, president, said his line, in marked contrast to many of his non-scheduled competitors, stood for conservatism and rigid economy in developing a sound air freight business. He decried the "reckless" philosophy which has led some non-scheduled freight companies to float stock issues involving millions of dollars and to embark on "world-girdling plans."

► **Overhead High**—These airlines, Laneri declared, are now operating with tremendous overhead and at an equally tremendous loss. "They have purchased surplus equipment with what appears to be reckless haste," he said, "and are now scrambling for business and holding themselves out to the public as willing to haul anything, at any time and at a rate obviously lower than operating costs."

Globe is now flying a C-47 over the Boston-New Orleans route with

stops at Hartford, New York, Philadelphia, Baltimore, Richmond, Charlotte, Atlanta and Birmingham where freight offices have been established. Laneri told examiners that his company's experience in this operation has demonstrated that an air freight service must fly over a specific route with some semblance of regularity to develop maximum business. He asserted that operations between so-called freight areas are attempts to take the cream off the air freight business without serving the intermediate points.

► **Cost Figures Challenged**—Attorneys for certificated airlines in cross-examination attempted to disprove Globe's contention that exclusively air freight carriers can haul cargo more cheaply than companies which also fly passengers and mail. Globe's cost figures, especially salaries and ground expenses of the proposed scheduled service, were sharply challenged.

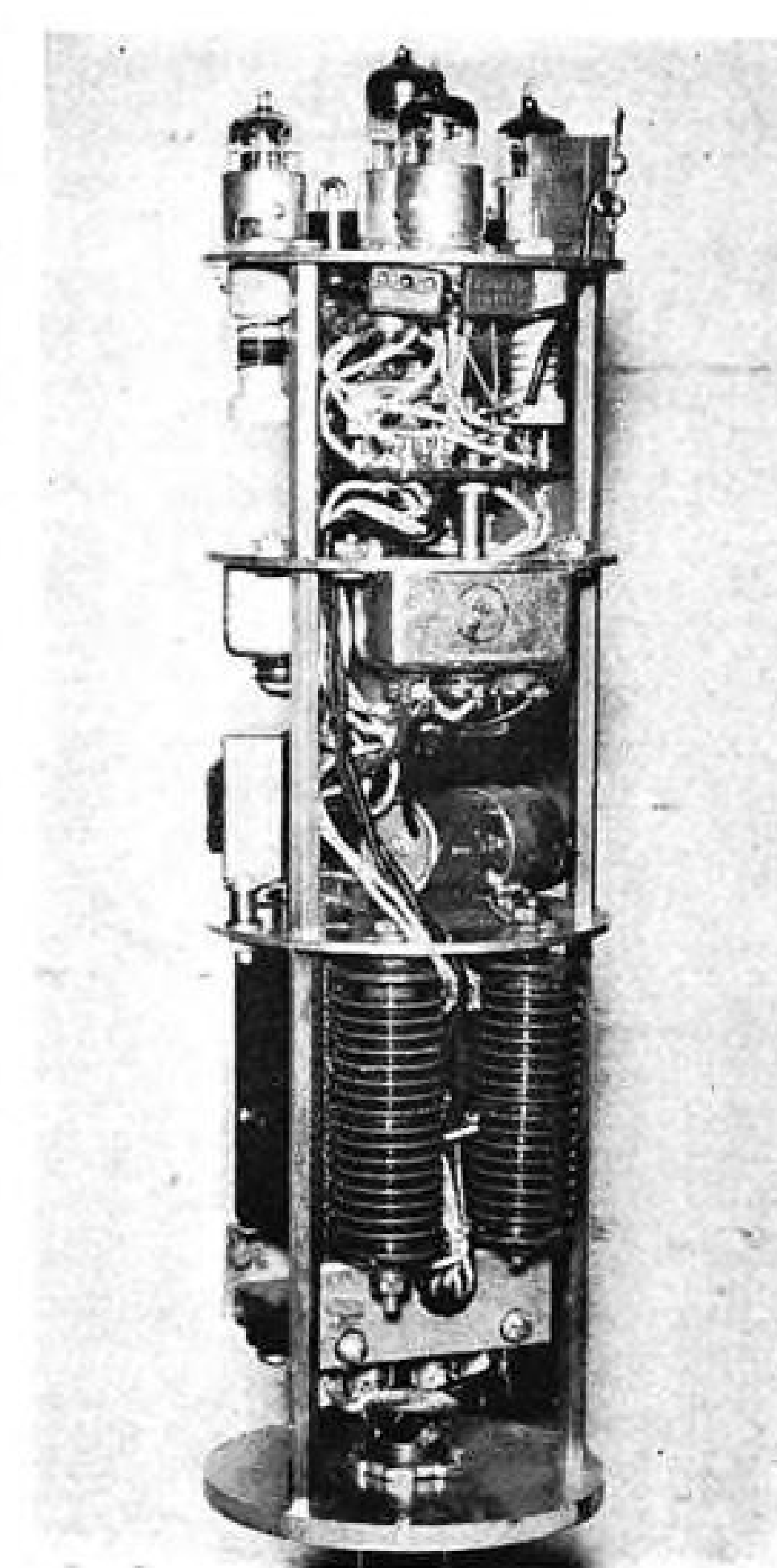
Previously, executives of certificated airlines had testified that receipt of additional equipment would enable them to satisfy every demand for domestic air freight service in the near future. They said the four-engine planes increasingly available for airline operations can carry large amounts of cargo in addition to a capacity passenger load, thus reducing to a minimum the need for exclusively freight flights.

CAB Plans Liaison

CAB has placed each of its bureaus and offices under the specific surveillance of two Board members in an effort to achieve closer liaison. Assigned to the Office of the Secretary, Public Information Section and General Counsel's Office are Chairman James M. Landis and Vice Chairman Oswald Ryan; Economic Bureau and Alaska Office, Members



Profit Every Flight: Globe Freight Airline, Inc., which operates this C-47 between Boston and New Orleans, regards itself as one of the few "un-glamorous" non-scheduled cargo carriers. Through conservative expansion, line boasts that every flight it has made has been profitable.



PRE-TAKEOFF TESTER:

This miniature VHF transmitter was designed by PCA to test radio equipment in its planes before take-off. The 1/4-watt transmitter, housed in a case 15 in. long and 4 in. in diameter, is connected with the normal transmitter 11 miles away. Line-of-sight beam of the latter does not reach a plane until it is airborne.

Harlee Branch and Clarence M. Young; Office of Trial Examiners, Members Branch and Josh Lee; Safety Bureau, Members Young and Lee.

CAA Council Changed

Hardy K. Maclay has been appointed assistant general counsel of CAB's Finance-Legal Division to succeed Emory T. Nunneley, Jr., who was recently made general counsel of the Board. Maclay joined the general counsel's staff in 1942. Prior to that time he was employed by the Department of Justice and OPA.

National Asks Detroit

National Airlines has requested CAB permission to extend AM 31 from Norfolk to Chicago via Washington, Pittsburgh, Cleveland and Detroit.

Arizona Route Deal Opposed by Examiner

Undesirable precedent would be set in acquiring TWA route, is view

A panacea would be made available to all certificated airlines desiring to be rid of unprofitable routes if CAB approves Arizona Airways' proposed acquisition of TWA's AM 38, a Board examiner has indicated. Recommending disapproval of the deal, Examiner J. Earl Cox asserted it would create another "need" carrier and would add nothing to the existing air service pattern.

Under the agreement submitted for Board approval, Arizona would receive in exchange for \$100,000 of its common and preferred stock TWA's AM 38 certificate and three certificates for intrastate operations which TWA has the exclusive right to serve under a contract with the holder, Grand Canyon Scenic Tours, Inc.

Service Suspended—AM 38 runs from Phoenix to Las Vegas, Nev., via Prescott and Kingman, Ariz. It was operated by TWA between November, 1938, and May, 1942, when service was suspended for reasons of national defense. Arizona Airways now operates intrastate from Phoenix to Tucson, Yuma, Kingman, Grand Canyon and other Arizona points with converted C-47's.

Sanction of the contract would establish a precedent because heretofore no interstate carrier has been created through acquisition of a certificate by purchase or transfer.

Cox said approval of the proposed transfer would permit TWA to divest itself of a marginal route not by abandoning it and surrendering the certificate, but by selling it at a profit to a new carrier in which TWA expects to retain a substantial interest. Thus, he pointed out, TWA would relieve itself of an obligation and in exchange would

acquire a large share of any subsidized profits earned by Arizona Airways.

See TWA Harvest—Through future additions to Arizona's system, TWA would have a subservient feeder service and would reap the benefits of an expansion it could not hope to get itself, Cox declared. The examiner also found that the purchase price of the route—never a money-maker—is excessive and that TWA would provide better service at less cost to the public and government than could Arizona Airways.

CAB SCHEDULE

July 8. Hearing on route consolidation applications of Eastern Air Lines and Delta Air Lines. Postponed from June 24. (Dockets 1971 and 2288.)

July 9. Oral argument in American-Mid-Continent merger case. Postponed from July 8. (Docket 2068.)

July 16. Briefs due in Southeastern States area case. Postponed from July 9. (Docket 501 et al.)

July 17. Briefs due in Arizona Airways' case for acquisition of TWA's AM 38. (Docket 2005.)

July 19. Briefs due in route consolidation cases of Braniff Airways and Chicago and Southern Air Lines. (Docket 1154 et al.)

July 22. Exchange of rebuttal exhibits in Arizona-New Mexico area case. Extended from July 5. (Docket 968 et al.)

July 22. Written comment due on proposed amendment of section 292.1 of economic regulation, affecting non-scheduled air carriers.

Aug. 12. Hearing in Arizona-New Mexico area case. Postponed from July 22. (Docket 968 et al.)

Sept. 9. Hearing in Los Angeles helicopter service case. Postponed from July 10. (Dockets 896 and 1821.)

CAB ACTION

The Civil Aeronautics Board:

• Granted TWA temporary exemption to serve Madrid, Spain, as an intermediate point between authorized stops in Portugal and Algeria.

• Permitted Air France to serve New York City through La Guardia Field; Trans-Canada Air Lines to serve Chicago through Chicago Municipal Airport; and Pan American Airways to serve Sao Paulo, Brazil, through Cumbica Field.

• Denied Colonial Airlines' petition for dismissal of PCA's application for merger with Northeast Airlines.

• Denied Gulf Airlines' petition to reopen record in Texas-Oklahoma area case.

• Dismissed application of Federal Airlines Co. (Docket 2232) from Arizona-New Mexico case at applicant's request.

• Permitted United Air Lines to inaugurate non-stop service between Los Angeles and Avalon, Santa Catalina Island, Cal.

• Ordered Pacific Northern Airlines (formerly Woodley Airways) and Alaska Airlines to resume operations between Anchorage and Seward, Alaska. Granted Christensen Air Service temporary exemption to operate between same two points.



Interstate Candidate: One of two C-47's converted by Arizona Airways, this plane is now operating intrastate between Phoenix, Yuma, Tucson and other Arizona points. The craft will go in interstate service if CAB approves Arizona Airways' proposed acquisition of TWA's AM 38.

Post Office Aide Will Learn to Fly Helicopter



The Post Office Department set out last week to gain technical knowledge about helicopters when Stephen W. O'Donnell (photo), aide to Second Assistant Postmaster General Gael Sullivan, began a course in helicopter operation at the Bell Aircraft Corp., Wheatfield, N. Y.

O'Donnell was assigned by Sullivan to participate in the course in flying and maintenance with a class of eight commercial pilots, with the assurance that "he will have immediate opportunity to employ in the Postal Service the helicopter training he receives." Sullivan expects to see helicopter mail service "in the very near future" in the New York, Philadelphia and Chicago metropolitan areas, and says it may extend to others before '47.

Domestic Airline Mileage Is Up 51 % for Quarter

Revenue miles flown by the nation's 20 domestic airlines in the first quarter of 1946 increased 51.55 percent over the same 1945 period, according to complete CAB figures. Revenue passenger miles were up 69.27 percent, but mail ton miles dropped 38.62 percent, express ton miles fell off 0.50 percent and average load factor was down from 85.04 to 84.85.

Totals for first three months of 1946 against like 1945 period are: revenue miles flown, 64,030,442 and 42,249,379; revenue passenger miles, 1,056,501,983 and 624,162,972; mail ton miles, 9,653,392 and 15,726,688; express ton miles, 5,556,896 and 5,584,997.

Southwest to Use DC-3's

Southwest Airways Co., Beverly Hills, Cal., which was awarded a three-year certificate in CAB's West Coast decision (AVIATION NEWS, June 3), will initiate operations with eight DC-3's. Lockheed Saturns, with which the carrier had hoped to begin service, probably will not be available for delivery before 1947. Definite dates for first flights along Southwest's routes between Los Angeles and Medford, Ore., have not been announced.

4 big reasons for selling AEROMATIC PROPELLERS



Latest 4-place personal planes on the market, North American Navions are equipped with Aeromatics . . . cruise at 150 m. p. h. . . . have a range of 700 miles.

1 Larger Profits

An Aeromatic Propeller has a high market value . . . makes more money for you . . . because it does so much to improve a light plane's performance.

2 Lower Sales Cost

Aeromatic Propellers are easier to sell than most high quality equipment . . . because their advantages are so basic, so simple to demonstrate to a prospect.

3 Build Better Customers

Aeromatic owners are better buyers of your other goods and services. They buy more . . . because they fly more . . . because they get more fun out of flying their Aeromatic-equipped planes.

4 Customers Sell Their Friends

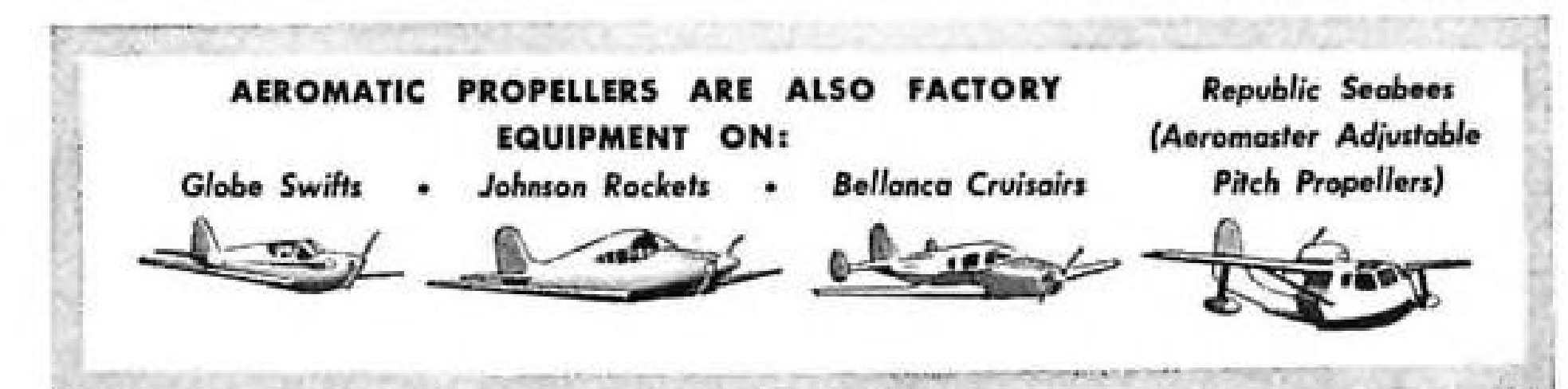
Better take-offs, climbing, cruising and landings make enthusiastic Aeromatic owners eager to convince their fellow pilots of these benefits.

BETTER TAKE-OFF, CLIMBING, CRUISING, LANDING MAKE MANY PRIVATE FLIERS AEROMATIC PROSPECTS

Aeromatic Propellers have that ideal combination of yielding a profitable return on the initial sale . . . and helping bring *more business* your way thereafter. And there's the further advantage of selling an exclusive item, too . . . since Aeromatic is the *only* fully automatic variable pitch propeller!

Without any controls or gadgets, the Aeromatic Propeller varies its own pitch in response to natural forces . . . utilizes full engine power at rated speed . . . insures maximum performance under all flight conditions. That means up to 33% shorter take-off runs . . . up to 25% faster climbing . . . top cruising performance on minimum fuel consumption . . . long, flat glides for landing with a quick pick-up if pilot overshoots his field.

Performance like that makes Aeromatic Propellers easier to sell . . . insures satisfied customers. If the planes you are now selling do not already include Aeromatic Propellers as standard or optional equipment . . . write today to your distributor or manufacturer. Point out how Aeromatic can do the double job of improving flight efficiency and boosting profits for the planes you sell! Aeromatic, 677 Scott Street, Baltimore 3, Maryland.



THE PROPELLER WITH A BRAIN FOR EVERYMAN'S PLANE
Air-controlled automatic propeller





HORSES ACROSS THE BORDER:

First horses carried by air from Mexico to race in the U. S. were flown from Brownsville, Texas, to Chicago recently in a Braniff Airways C-47. Equipped with padded plywood stalls, the ship carried four horses and six handlers. They came from stables at Mexico City, whence they were flown to Brownsville by National Skyway Freight Corp. to Brownsville.

BOAC Connies Set For Atlantic Service

BOAC was planned to reopen its trans-Atlantic service to the U. S. last week with the first westbound flight leaving London July 1 and the initial eastbound trip starting from New York July 3.

Five *Constellations* will be used in the operation, which will include two round trips weekly at the outset and is expected to reach a daily basis by August. Although La Guardia Field has been chosen for the U. S. terminal pending completion of Idlewild, other less crowded airports on the Atlantic seaboard are being given consideration as alternates.

Coincident with the start of BOAC's new operation, American Overseas Airlines increased its trans-Atlantic service to 11 round trips weekly by adding one flight to Stockholm and one to Amsterdam. The schedule made effective last week provides two round trips between the U. S. and Europe on Sundays, Mondays, Tuesdays and Thursdays and one on Wednesdays, Fridays and Saturdays.

Other new services:
PAA—Daily service over the newly-opened New York-San Juan route probably will be increased to three round trips daily by August, and the DC-4 schedules may go as high as seven daily by the end of the year. Inauguration of the San Juan flights is part of an expansion program which PAA expects to swell Latin American services 500

percent this year. Fifty-six new four-engine planes are being placed in operation on the company's Latin American Division this summer, sharply cutting previous flying times and almost tripling passenger capacity over key trunk routes. Ten DC-4's were delivered to the Latin American Division during the last two weeks in June, and at least 10 more will be placed in service during July.

► **Trans-Canada**—Inauguration of TCA's



PAA ENDS WAR SERVICE:

Pan American Airways terminated its wartime activities recently at LaGuardia Field when the final flight of its Africa-Orient Division brought home the last 25 PAA personnel handling Air Transport Command work. Maj. Gen. L. S. Kuter (left), commanding general of ATC's Atlantic Division, is shown congratulating John Steele, former manager of the Division, one of six PAA officials cited for their part in Division operations.

Two-Way Phone

Two-way radiophone communication has been installed in six trucks of the Willet Co., Chicago, to facilitate pick-up and delivery of air freight for United Air Lines. Shippers having air freight call UAL, which phones the Willet dispatcher. The latter gets in communication with the truck driver and his itinerary is rerouted to pick up the shipment.

new route linking Montreal and Toronto with Chicago was scheduled last week. and Toronto-Cleveland service is slated to begin August 1. Operations between Port Arthur, Ont., and Duluth; Halifax, Nova Scotia, and Boston; and Victoria, British Columbia, and Seattle are planned later this year. CAB granted TCA foreign air carrier-permits for the five routes last month.

► **Eastern**—Cut DC-4 flying times on AM 5 from New York-Newark and Washington to Atlanta, Birmingham, New Orleans, Houston and Brownsville by an average of 15 min. July 1.

► **Western**—Plans to start service to Cedar City, Utah, hub of a scenic area including Zion, Bryce Canyon and Grand Canyon National Parks, July 15.

SHORTLINES

► **Alaska Airlines** recently carried to Washington and returned with an Alaska delegation headed by Gov. Ernest Gruening. The trip, made via Chicago and Minneapolis, was made to bring to attention of government officials the potentials of Alaska's future, including aviation.

► **American's** contract air cargo division carried its first international shipment when 17,000 lbs. of fresh fruits went from Newark Airport to Gander, Newfoundland. A load of 17,000 lbs. of fresh salmon consigned to Boston was flown on the return trip. . . . AA issued a special cachet in connection with New England Air-mail Week July 1-6.

► **Braniff** plans to begin flights to Monterrey and Mexico City from the co-terminals of San Antonio and Laredo as soon as an air agreement between the U. S. and Mexico has been completed.

► **Colonial** reports that May exceeded the line's previous records for passenger travel and mail and express carried.

► **Eastern** has arranged with American Express and Thomas Cook & Sons to issue Eastern tickets instead of their own exchange orders in several major cities on the carrier's system.

► **Mid-Continent's** operating revenue for May was \$439,582, an 80 percent increase over the same month last year. Net profit was \$69,452, against \$24,783 for May, 1945.

► **National** has five DC-4's in service. Sixth is to be delivered in October. . . . Company profit for May was \$201,891, bringing earnings for 11 months of the fiscal year ended June 30 to \$170,127. May was the third

(Turn to page 40)

The Airlines step up to VHF



with the famous
"ARC-ONE"

When the Very High Frequency network for communications between planes and ground is in full operation, the voice of the Nation's airlines will be clearer than ever before.

By early 1947 the country's airlines will have received approximately 1700 Western Electric "ARC-ONE" transmitter-receivers. This set is the Navy AN/ARC-1 of wartime fame. It is the direct result of Bell Telephone Laboratories-Western Electric pioneering in VHF aviation communications which started back in 1937.

The VHF "ARC-ONE" is another example of Western Electric's ability to furnish outstanding equipments for a world on wings.



Western Electric

QUALITY COUNTS



AIRCRAFT OWNERS

**PARTS FOR YOUR SURPLUS PLANE NOW ARE
AVAILABLE NEAR YOU!**

Fifty-nine aviation firms have been appointed by the War Assets Administration as agents for the "package" sale of surplus aircraft parts, components, and hardware. They now can supply you with many of the parts that you need to keep flying.

Chosen for their experience and technical "know-how", they are located at strategic points throughout the country to make it convenient for you to fill your needs, and to see what you buy. Many of these are firms with whom you usually deal.

Large quantities of parts have been shipped to WAA agents and new supplies are going out daily.

**SEE THEM FOR YOUR NEEDS. THE PRICE
IS THE SAME...WHETHER YOU BUY FROM
AN AGENT OR DIRECT FROM WAA**

If the agents do not yet have what you want, write direct to the Office of Aircraft Disposal, War Assets Administration, Washington 25, D.C. Your order will be given prompt attention.

**This is a complete list of WAA Authorized
Agents for the sale of aircraft parts:**

COMPONENTS:

Aircraft Components Corp.
213 King Street
Alexandria, Virginia

Brayton Flying Service, Inc.
Lambert-St. Louis Airport
St. Louis 21, Missouri

Dothan Aviation Company
Municipal Airport
Dothan, Alabama

Florida Aviation Corp.
CAA Station No. 385
Municipal Airport
St. Petersburg, Florida

Grand Central Airport Company
P.O. Box 1315
Glendale 5, California

The Kratz Corporation
Kratz Airport
St. Louis 21, Missouri

Resort Airlines, Inc.
Box 1301 (Southern Pines Airport)
Southern Pines, North Carolina

Southport Aero Service
Rosemount, Minnesota

Thompson Aircraft Products Co. Inc.
23555 Euclid Avenue
2196 Clarkwood Road
Cleveland 17, Ohio

Lynchburg Air Transport & Sales Co.
Preston Glean Airport
Lynchburg, Virginia

Maxwell Associates, Inc.
15 Moore Street
New York 4, New York

New Mexico Aircraft Sales, Inc.
West Mesa Airport
P.O. Box 157
Old Albuquerque, New Mexico

Northwestern Aeronautical Corp.
1902 W. Minnehaha
St. Paul 4, Minnesota

Piedmont Aviation, Inc.
Smith Reynolds Airport
Winston-Salem 1, North Carolina

Pyrometer Service Company
228 River Road
North Arlington, New Jersey

Briggs Weaver Machinery Co.
309 N. Market Street
Dallas 2, Texas

Simsbury Flying Service
Simsbury, Connecticut

Spartan Aircraft Company
6900 East Apache
Tulsa, Oklahoma

Toth Aircraft & Accessories Co.
220 Richards Road
Municipal Airport
Kansas City, Missouri

AIRFRAME PARTS:

Aircraft Steel & Supply Co.
415-425 N. Water Street
Wichita 1, Kansas

Douglas Aircraft Company, Inc.
Santa Monica, California

Piper Aircraft Corporation
Lock Haven, Pennsylvania

The Ryan Aeronautical Company
Lindbergh Field
San Diego 12, California

HARDWARE:

Aero Bolt & Screw Co.
1815 Webster Avenue
New York 57, New York

Air Accessories, LTD.
100 East Lancaster Street
P.O. Box 1326
Fort Worth 1, Texas

Aircraft Hardware Mfg. Co.
810-812 Edgewater Road
New York 59, New York
also 2344 East 38th Street
Los Angeles, California

Air-Parts, Inc.
723 Sonora Avenue
Glendale 1, California

Clary Multiplier Corp.
1524 90 North Main Street
Los Angeles 12, California

Collins Engineering Company
9050 Washington Blvd.
Culver City, California

Durham Aircraft Service, Inc.
Northern Blvd. at Prince Street
Flushing, New York
also Building No. 3
Douglas Plant
Municipal Airport
Tulsa, Oklahoma

General Aviation Equipment Co.
69 Public Square
Wilkes-Barre, Pennsylvania

Globe Aircraft Corp.
North Side Station
Fort Worth 6, Texas

The S. A. Long Company
232 N. Market Street
Wichita 1, Kansas

Parker Service Agency, Div.
The Parker Appliance Co.
17325 Euclid Avenue
Cleveland 12, Ohio
also 6506 Stanford Avenue
Los Angeles, California

Schuster Electric Co.
321 Sycamore Street
Cincinnati, Ohio

The Stanco Company
1914 Canton Street
Dallas 1, Texas

Snyder Aircraft Corp.
5036 W. 63rd Street
Chicago, Illinois

Supply Division, Inc.
Lambert Airport
Robertson, Missouri

Van Dusen Aircraft Supplies, Inc.
2004 Lyndale Ave., South
Minneapolis 5, Minnesota

The Weatherhead Company
300 East 131st Street
Cleveland 8, Ohio

ENGINE PARTS:

Aviation Activities, Inc.
612 Wholesale Merchants Bldg.
Dallas, Texas

Continental Motors Corp.
c/o Continental Aviation &
Engine Corporation
76 North Getty Street
Muskegon, Michigan

General Wire & Electric Co.
Dodge Building
53 Park Place (Room 409)
New York 7, New York

Pacific Airmotive Corp.
1628 McGee Street
Kansas City 8, Missouri
also 6265 San Fernando Road
Glendale, California

Ranger Aircraft Engines
Division of Fairchild
Engine & Airplane Corp.
Farmingdale, New York

Solar Aircraft Company
2200 Pacific Highway
San Diego 12, California

INSTRUMENTS:

Abrams Instrument Corp.
606 East Shiawassee Street
Lansing 3, Michigan

Eclipse-Pioneer Division
Bendix Aviation Corporation
Teterboro, New Jersey
Jack & Heintz, Inc.
Cleveland 1, Ohio

Kollsman Instrument
Division of Square D Company
80-08 45th Avenue
Elmhurst, New York

Link Aviation Devices, Inc.
Binghamton, New York

Sperry Gyroscope Company, Inc.
Great Neck, Long Island, New York

MISCELLANEOUS:

The G. W. Holmes Company
196-208 East Gay Street
Columbus 15, Ohio

Aero Corporation
Municipal Airport
Atlanta, Georgia

United Aero Service, Inc.
P.O. Box 1028
Delta Air Base
Charlotte, North Carolina

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WAR ASSETS ADMINISTRATION
WASHINGTON, D. C.



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This enormous stock of government-owned surplus represents both unused and used tires and tubes. They are offered in a broad range of sizes, treads and cords for both landing and auxiliary (tail and nose) equipment.

These tires and tubes are suitable for use on airlines, cargo carriers or privately owned planes. Every order will receive careful attention regardless of its size.

These tires and tubes are *low priced* for immediate disposal. Check your needs *now!* Then place your order detailing complete specifications so that price and delivery can be quoted.



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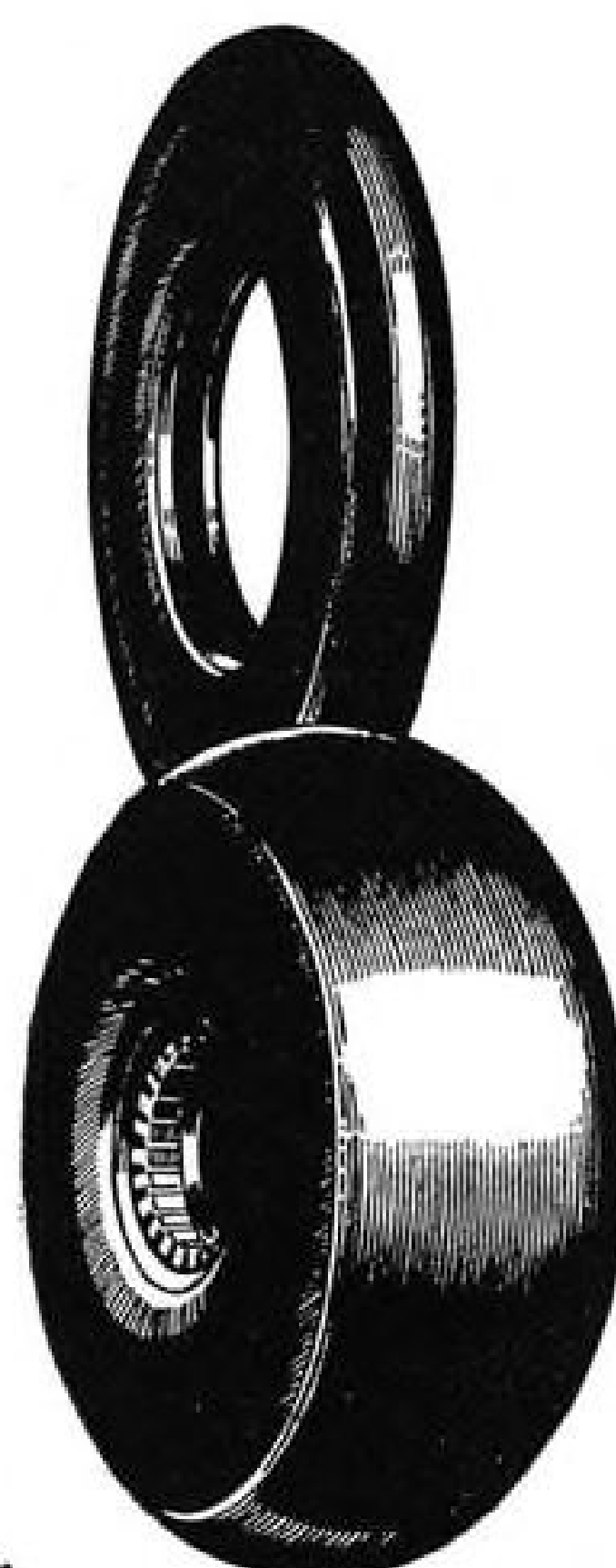
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155 W. Washington Boulevard
Los Angeles 15, California

If you are located east of the Rockies,
address your inquiry to:

WAR ASSETS ADMINISTRATION
National Aircraft Components Sales Center
6200 Riverside Drive
Municipal Airport
Cleveland 32, Ohio

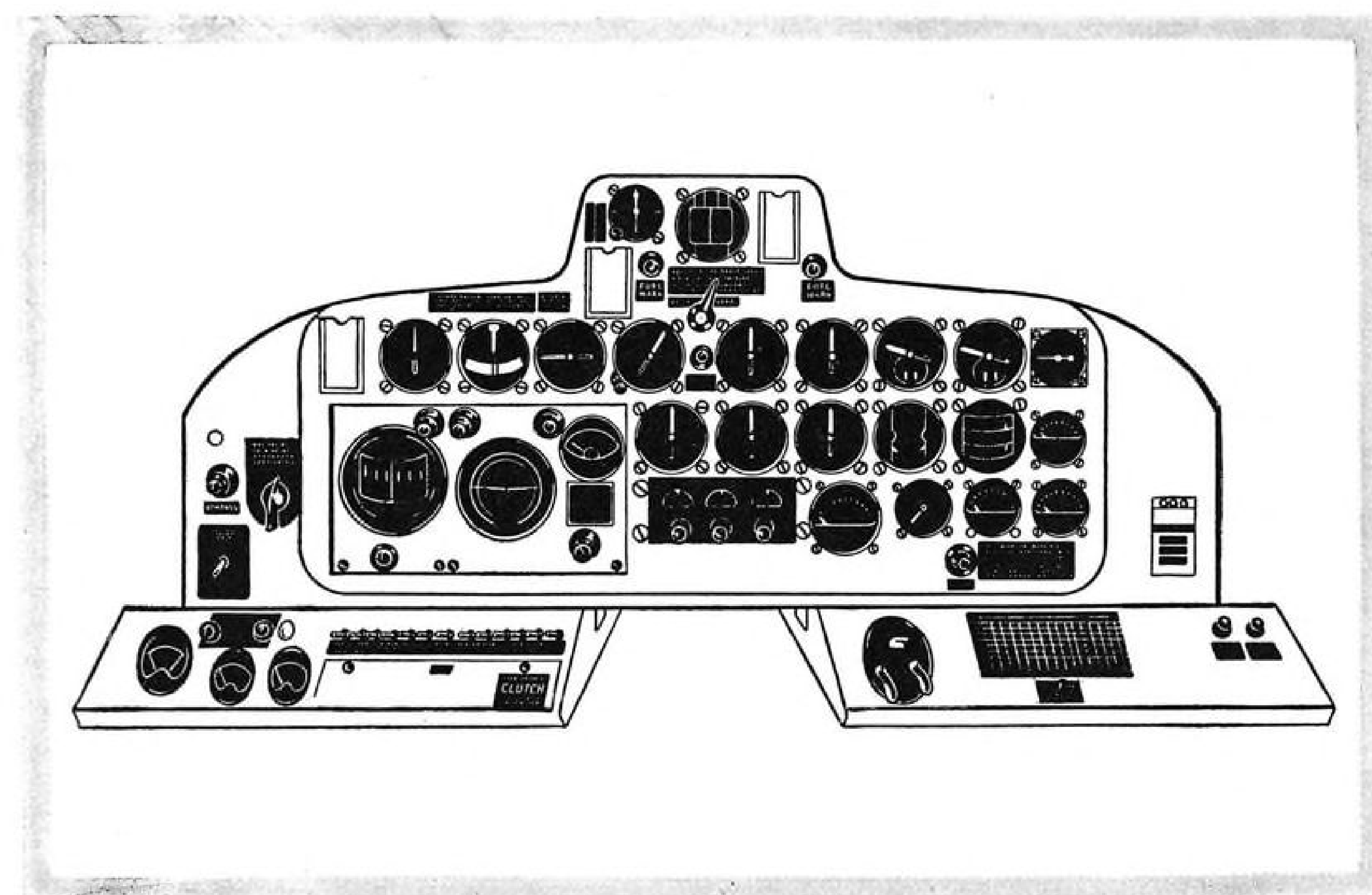
OR

WAR ASSETS ADMINISTRATION
Office of Aircraft Disposal
425 Second Street, N. W.
Washington 25, D. C.



Veterans of World War II:

Veterans may use their priorities in buying these tires and tubes.



AIRCRAFT INSTRUMENTS

Plane owners, Airline and Fixed Base Operators—if you are interested in purchasing aircraft instruments, the War Assets Administration has a quantity of precision equipment for sale.

This inventory consists of turn and bank indicators, altimeters, gyro horizons, rate of climb indicators, gyro and magnetic compasses and airspeed indicators. There is also a considerable number of engine instruments available.

Designed to attract the prudent buyers, these units are

price-scaled according to condition. Many are usable without repairs—others are usable after repairs.

A large supply of type C-3 Link-Trainers in usable and repairable condition are also for sale at attractive prices.

You are invited to detail your requirements so that prices and delivery information may be quoted.

You are urged to contact the WAA Authorized Agent nearest to you. However, if this is not convenient the following WAA offices will be glad to serve you.

If you are located west of the Rockies, address your inquiry to:

WAR ASSETS ADMINISTRATION
155 W. Washington Boulevard
Los Angeles 15, California

If you are located east of the Rockies, address your inquiry to:

WAR ASSETS ADMINISTRATION
National Aircraft Components Sales Center
6200 Riverside Drive, Municipal Airport,
Cleveland 32, Ohio OR

WAR ASSETS ADMINISTRATION

OFFICE OF AIRCRAFT DISPOSAL

425 Second Street, N. W., Washington 25, D. C.

Veterans of World War II: Veterans may use their priorities in buying these aircraft instruments



PROPELLERS



The War Assets Administration has available government-owned surplus aircraft propellers in various models and specifications. These propellers were built by well-known manufacturers of aircraft components to the specifications of the Armed Forces. They are adaptable to planes ranging from light planes to large transports and are eligible for CAA Certification.

Attractively priced for immediate sale, it will pay you to check your requirements *now!*

If you will send your inquiry stating model and detail specifications, prices and delivery information will be forwarded promptly.

You are urged to contact the WAA Authorized Agent nearest to you. However, if this is not convenient the following WAA offices will be glad to serve you.

If you are located west of the Rockies, address your inquiry to:

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155 W. Washington Blvd.
Los Angeles 15, California

If you are located east of the Rockies, address your inquiry to:

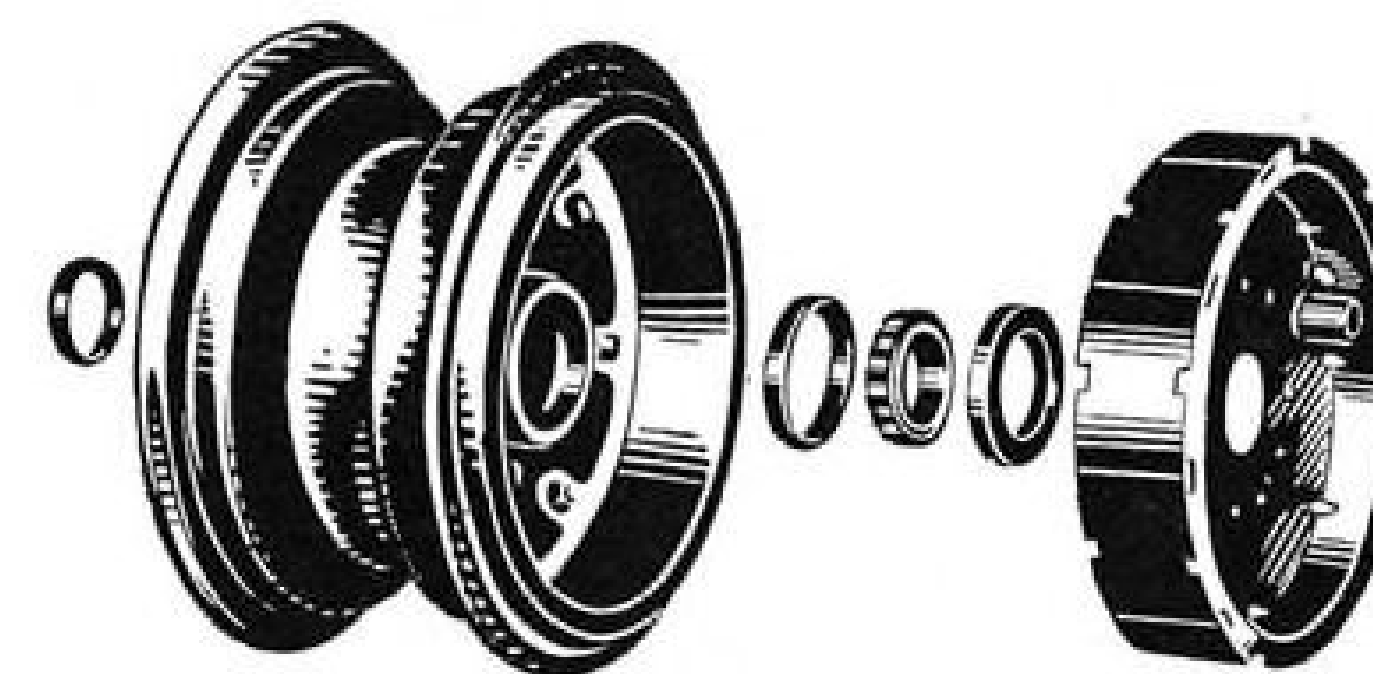
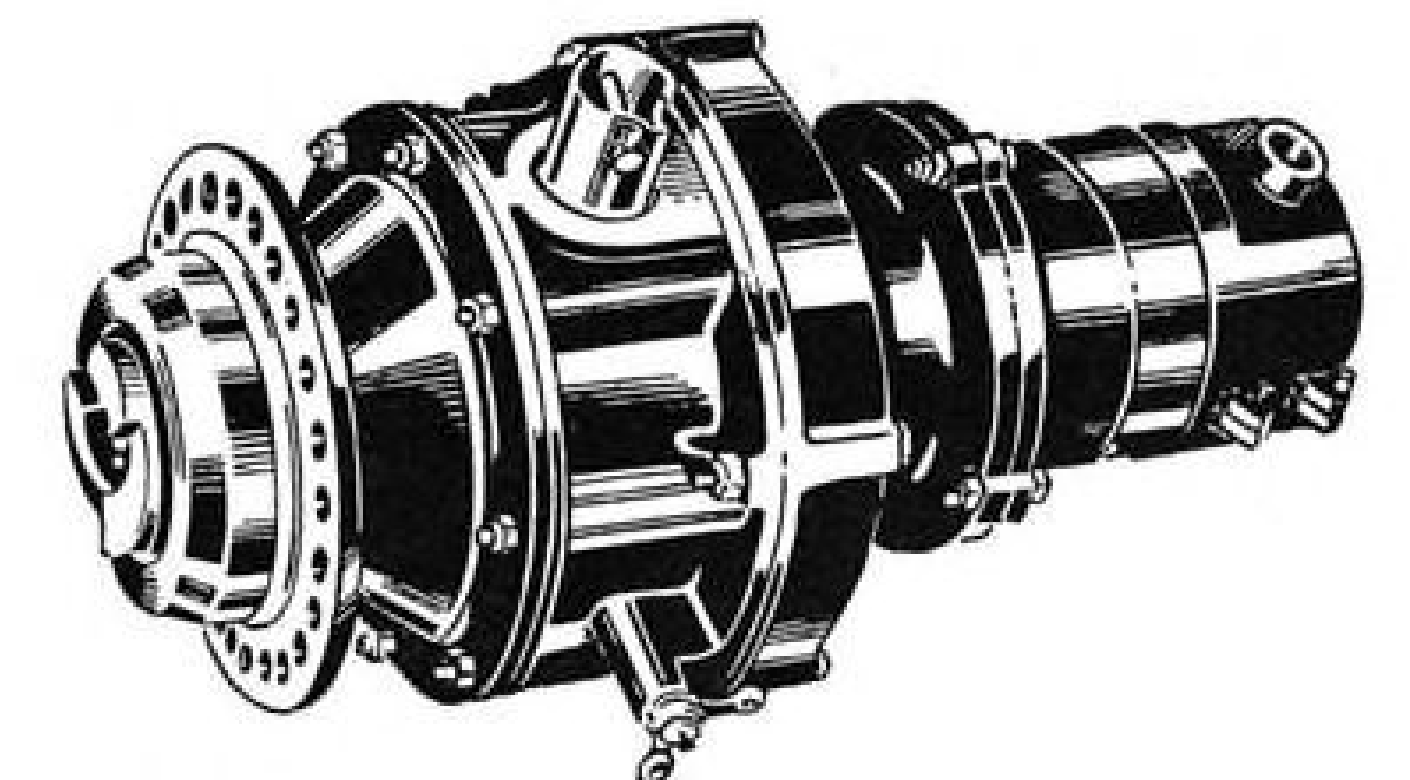
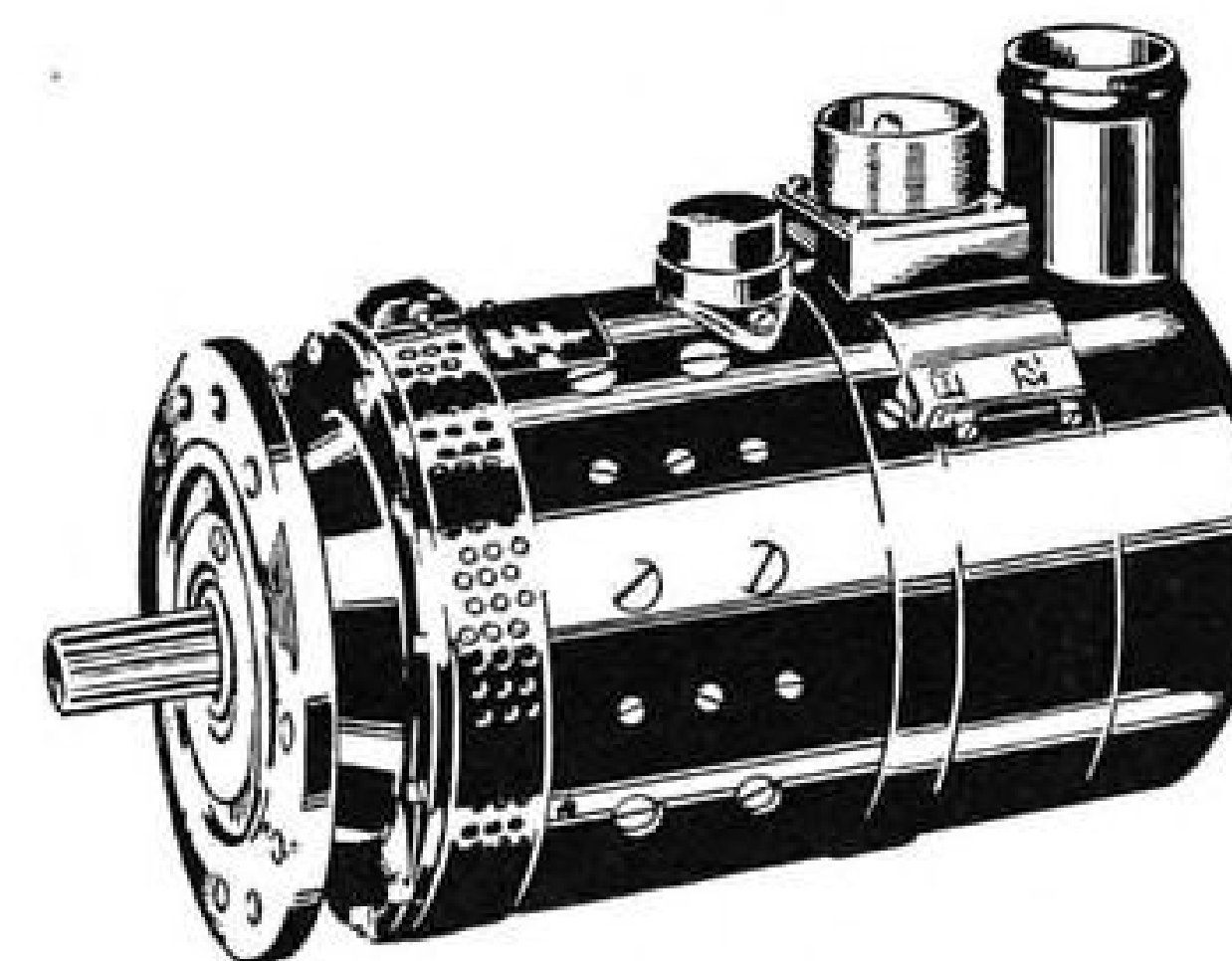
WAR ASSETS ADMINISTRATION
National Aircraft Components Sales Center
6200 Riverside Drive
Municipal Airport
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WAR ASSETS ADMINISTRATION
Office of Aircraft Disposal
425 Second Street, N. W.
Washington 25, D. C.

Veterans of World War II: Veterans may use their priorities in buying these propellers.

MISCELLANEOUS PARTS AND EQUIPMENT

Government-owned surplus in aircraft has produced a quantity of spare parts and equipment both unused and usable with repairs.



In this inventory are listed such items as: magnetos, motors, generators and other electrical accessories. Various types of wheels and brakes, carburetors and carburetor parts, fuel, oil and hydraulic equipment, miscellaneous engine accessories.

From this store of material you will probably find the things you need to keep you flying. Send your inquiry including specifications on just what you want. Prices and delivery information will be sent to you as speedily as possible.

You are urged to contact the WAA Authorized Agent nearest to you. However, if this is not convenient the following WAA offices will be glad to serve you.

If you are located west of the Rockies, address your inquiry to:

WAR ASSETS ADMINISTRATION
155 W. Washington Boulevard
Los Angeles 15, California

If you are located east of the Rockies, address your inquiry to:

WAR ASSETS ADMINISTRATION
National Aircraft Components Sales Center
6200 Riverside Drive, Municipal Airport
Cleveland 32, Ohio
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43 acres with 40 additional acres available for extending runways...

Main runway 2200 ft. long; 300 ft. wide...

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An established California company has unusual opportunities for highly qualified engineers.

CHIEF PROJECT ENGINEER \$12,000 to \$20,000

Responsible for administration, planning and control of series of gas turbine power plant projects. Qualifications include administrative, organizing and technical abilities; knowledge of production, as well as engineering phases of engine projects and experience in both; knowledge of technical and procurement procedures of government agencies and commercial companies.

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Responsible for satisfactory administration of the technical functioning and planning of all design, testing and manufacturing liaison engineering on his assigned engine project. Must have experience in above duties, knowledge of engine development, research and testing techniques, and knowledge of fabricating and tooling techniques.

Please state fully education, experience and references

P-190, AVIATION NEWS
68 Post Street San Francisco 4, Calif.

(Continued from page 32)

month for which gains were shown, losses of \$316,261 having been reported at the end of February.

► **Northeast** is flying all schedules on daylight saving time as a convenience to its public.

► **Northwest** set records for passengers, passenger miles, express and express pound miles. . . . Company plans to use frozen food dinners on its *Stratocruisers* and Martin transports.

► **Panagra** carried 27,747 passengers in the first quarter of 1946, a 25 percent increase over the same period a year ago. Increases also were shown in express, freight and mail carried.

► **Pan American** is doubling its passenger capacity over routes from New Orleans and Miami to Panama, as new equipment goes into operation.

. . . First half of 1946 saw more passengers carried through Miami airport by PAA than were flown in and out of the city during all of last year. . . . Company estimates its commissions to travel agents will be approximately \$500,000 in 1946, with total ticket sales through district offices around \$25,000,000. . . . Meteor-

FOR SALE

2 Lockheed Hudson Flying Laboratories

Completely equipped with test benches, radio, Sperry ADF, plastic noses, bomb bays, full instrumentation. Now flying on experimental test work. To be replaced by larger aircraft. 2 spare engines, factory majored. Sufficient spares of all kinds to maintain these aircraft for a long period.

For further details contact:

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Box 516, St. Louis (21) Mo.

AIRCRAFT PRODUCTION MANAGER

Ability to assume complete charge of all planning, scheduling, and control functions. Minimum of 10 years aircraft experience. An executive position in rapidly growing company.

Write detailed qualifications with small picture to:

McDonnell Aircraft Corporation
Lambert-St. Louis Municipal Airport
Box 516, St. Louis (21) Missouri

ologists in PAA's Pacific-Alaska Division now are forecasting the weather up to 15 days in advance, compared with 24 hrs. in advance previously.

► **PCA** carried a record of 117,520 passengers in May, 8,000 more than in April, with virtually every city on its system showing passenger increases. . . . The line will add a chef to the crew of all its DC-4's by late summer when it inaugurates inflight cooking of frozen meals. . . . Veterans Administration has approved adoption by PCA of a veterans training program to cover airline operations.

► **TWA** added six new flights through Albuquerque last month, for a total of 36 arrivals and departures daily. . . . Thunderstorm detection tests will be made by TWA research pilot Robert Buck in a P-61, an AAF "Black Widow," loaned TWA by the Air Materiel Command at Wright Field.

► **United**, in conjunction with the International Association of Machinists, will start 35 trainees this month in its newly established four-year program training apprentice mechanics at Cheyenne. . . . Revenue passenger miles in May totaled 98,953,800, a 93 percent increase over the same month a year ago. . . . UAL recently flew a plane load of furniture from Buffalo to Des Moines.

► **Western's** passenger miles in May were 71 percent higher than May, 1945, for a total of 16,549,967.

ENGINEERS WANTED

One of largest engine companies located in midwest, engaged in extensive and continuing development program on non-rotating aircraft propulsion engines, has openings for the following personnel:

DEVELOPMENT ENGINEER

An idea man with good theoretical and practical background to direct activities of engineering group devoted to preliminary design and analysis.

AERODYNAMICIST

PHYSICIST

THERMODYNAMICIST

Research-minded with good theoretical background, advanced degrees preferred.

VIBRATIONS AND STRUCTURES ENGINEER

A man with aircraft and aircraft engine design experience with an interest in analytical vibration problems.

INSTRUMENTATION ENGINEER

A man with a good understanding of wind tunnel instrumentation, familiar with electronic, optical, and other instrumentation mens suitable for use in studying aerodynamic and thermodynamic problems.

MECHANICAL OR AERO ENGINEERS

Up to 5 years experience, interested in research and development activity in a rapidly expanding program.

Address reply to:

P-200, AVIATION NEWS
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**HIGHER PRESSURE
LOWER WEIGHT**

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POWER DRIVEN FUEL PUMP

Write for
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With its higher pressure range of from 6 to 35 lbs., its 400 gallon per hour capacity at 2500 rpm. and its low weight of only 2 3/4 lbs.—this war-tested pump is ideal for civilian planes.

Built with a balanced type relief valve with shaft seals that are dependable through extreme temperature ranges. This pump is now in production.

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PRIVATE AIRPLANES

FOR BETTER—SAFER
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TRANSPORTATION



for non-slip surfaces on steps and platforms

MELFLEX Specially-Molded Step Treads prevent slips and falls wherever they're used. These treads are easy to apply—require no metal fasteners. Ideal for work-stands and shop stairs where gas or oil is frequently spilled. Prompt deliveries on Melflex long wearing, non-slip Step Treads, Mats and Runners. Write

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The Traffic Generating Power of Air Transport

FOR YEARS, advocates of air transportation have fought the stubborn use of railroad statistics to prove that new air links will not generate enough passenger traffic to justify certification. The statisticians, however, had their figures to back them up; the airlines were forced to depend mainly on their earnest faith that the public would come to realize the commercial and personal importance of high speed transportation over ground means.

The air transport industry has begun to accumulate impressive figures which prove not only that superior service attracts some traffic from slower transport, but that it creates much new traffic which never existed before. The prophets of air, of course, have so contended for years.

Delta Air Lines and Chicago & Southern have produced the most interesting figures we have seen compiled on the subject of air and rail comparisons, which would appear to put to shame the pre-war skeptics with their bibles of past railroad travel data.

Delta considers as most indicative of the results that follow establishment of one-carrier (air) service—such as between major northern and southern cities—the experience of C. & S. since it began service to Detroit. The comparison between rail traffic and air traffic in the following table is eloquent testimony to the business generating power of air transportation:

Between	Air Traffic Year to June 30, 1945	Rail 1933
Detroit-Indianapolis	11,100	9,934
Detroit-Evansville	4,164	375
Detroit-Memphis	7,992	467
Detroit-Jackson	780	54
Detroit-New Orleans	2,196	548
Detroit-Little Rock	744	118
Detroit-Shreveport	672	42
Detroit-Houston	1,716	120

Thus, the 1933 rail traffic showed 11,659 passengers between Detroit and key cities in Indiana, Tennessee, Mississippi, Arkansas, Louisiana, and Texas, at a time when air travel was negligible. Yet, in the twelve months to June 30, 1945, there were 29,634 passengers by air between these points, with sharpest increases

A Good Appointment

CREATION recently by the Civil Aeronautics Board of Assistant General Counsel for Safety is an encouraging development, and the caliber of the first appointee, Merrill Armour, should assure both the Board and the public that the maximum results possible will be forthcoming. Previously, the CAB Safety Bureau's lawyer had been relegated in the Civil Service classification as a section chief. In Government, as elsewhere, title carries authority and entree into councils where representation is important. By setting up the new position the Board has given timely recognition to the increasing importance of safety and safety enforcement, and has thus corrected its action of some time ago when it abolished the position of Assistant General Counsel, Safety Legal Division, and replaced it with an Assistant General Council, Finance Division. That move somehow was tinged with the dollar sign at the expense of safety.

over the longest hops. Nevertheless, every city showed an air travel gain of from ten to several hundred per cent over rail traffic.

The year 1933 was considered typical for the railroads by the Federal Coordinator of Transportation in a comprehensive passenger traffic report, and air traffic has increased continuously since the end of the war so that even the air figures shown above are now considered conservative.

In studies of traffic flow between Dallas-Fort Worth and Charleston, Delta reported that air transportation has developed from three to ten times more travel than formerly moved by rail between these points.

Delta reports the further significant development that the cities it serves in general, even in 1940, held a higher rank nationally for generating air traffic than they did formerly for generating rail traffic. The age of these air figures, over 5 years, probably compensates for the fact that more cities were served by rail than air in 1940, which would lower the relative rank of rail cities.

Atlanta was 20th among all U. S. cities for its 1933 rail traffic. In air traffic for September of 1940 it was 17th. Jackson was 78th in rail, 53rd in air. Shreveport moved up from 99th in rail to 61st in air. Dallas advanced from 45th by rail to 15th by air. Fort Worth was 77th in rail and 46th in air. New York, of course, held first place in both categories, but Washington, which was 8th in rail traffic, moved to 3rd in air traffic.

Elsewhere throughout the country, and even on the international routes, the country's airlines are building traffic which is already, or soon will be, exceeding pre-war passenger business of competing ground transport. By judicious management, maintenance and improvement of service, and the intelligent cooperation and leadership of the Civil Aeronautics Board in granting new routes and stifling over-regulation, there is no reason to believe that even our major airlines are yet near the passenger traffic saturation point. Further, the whole supplementary feeder airline network now in its infancy offers an entirely new field of public service.

The Safety Section, primarily responsible for insuring fair hearings and sound decisions on safety disciplinary cases, was relegated to an inferior position in the Board's organization. The very important field of federal-state relations in safety matters likewise suffered. In his new position, Mr. Armour will be able to continue to discourage state duplication of regulations and restrictions, and to achieve more cooperation between the state and federal agencies without adding any burdens to aviation.

Further, Mr. Armour is a private pilot, a member of a Washington flying club, and as far from being the short-sighted, red-tape-bound type of bureaucrat we have written so much about on this page as one could find anywhere. He is a friend of private flying, and will not misuse his power. The airlines will likewise find him a valuable ally, and we congratulate the Board on his appointment. It is to be hoped that further expansion of the Board's accident investigation work may be expected, with a closer similarity to the excellent work of the old independent Air Safety Board.

ROBERT H. WOOD


AVIATION NEWS • July 8, 1946

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 minus weight

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segmented
ROTOR
BRAKE



Whether the ship is a transport giant or a small plane for the private flyer, there is a size and adaptation of the Bendix Segmented Rotor Brake that is sure to add to brake performance and subtract from overall weight. In addition, lower hydraulic displacement and higher heat-absorbing capacity without distortion simplify the plane designers problems and add to operating safety. The design of the Bendix Segmented Rotor Brake is simple and compact; the brake being usually contained entirely within the wheel. Developed in sizes that range from 5 inches to 31 inches in diameter; thickness in proportion to capacity, whether one or several segmented rotors are used. When you think of brakes, think of Bendix. Write for details of the Bendix Segmented Rotor Brake including an interesting illustrated folder.


DESIGN FEATURES • Fixed discs are faced with friction lining; lining is segmented to scavenge lining dust and provide air circulation. Eliminates fading and gives greater braking force with less contact pressure. Rotating members, keyed to the wheels, provide large heat-absorbing capacity. Rotors are made in segments instead of a continuous ring; this allows for heat expansion without warping or cracking.

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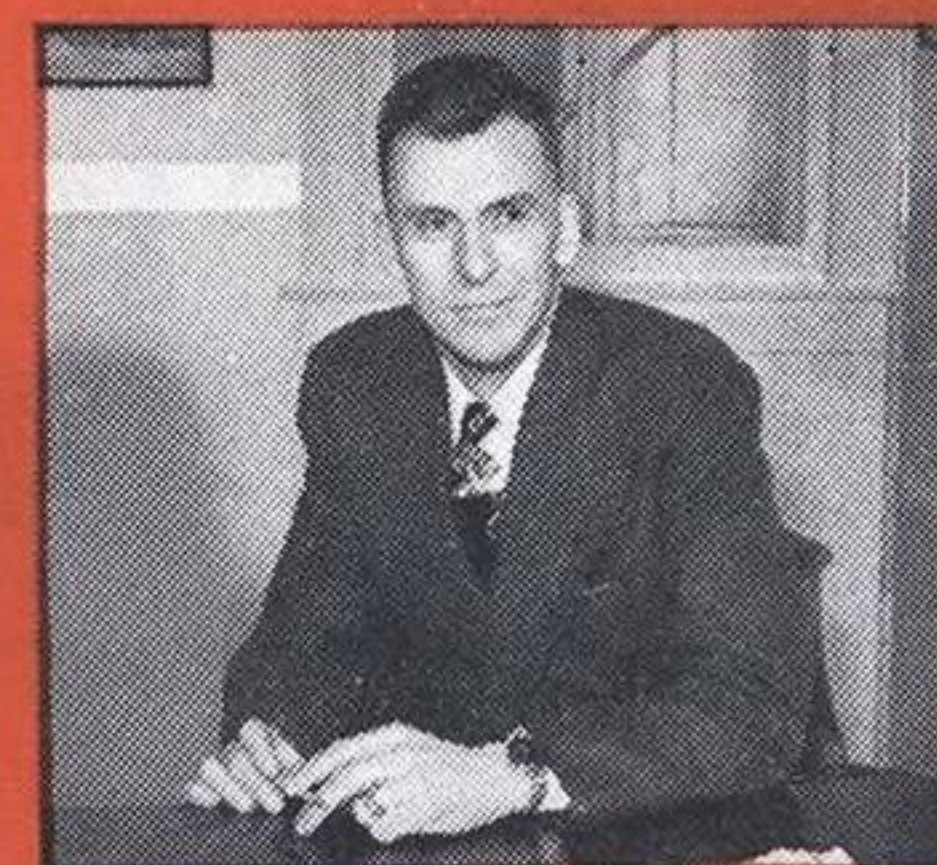
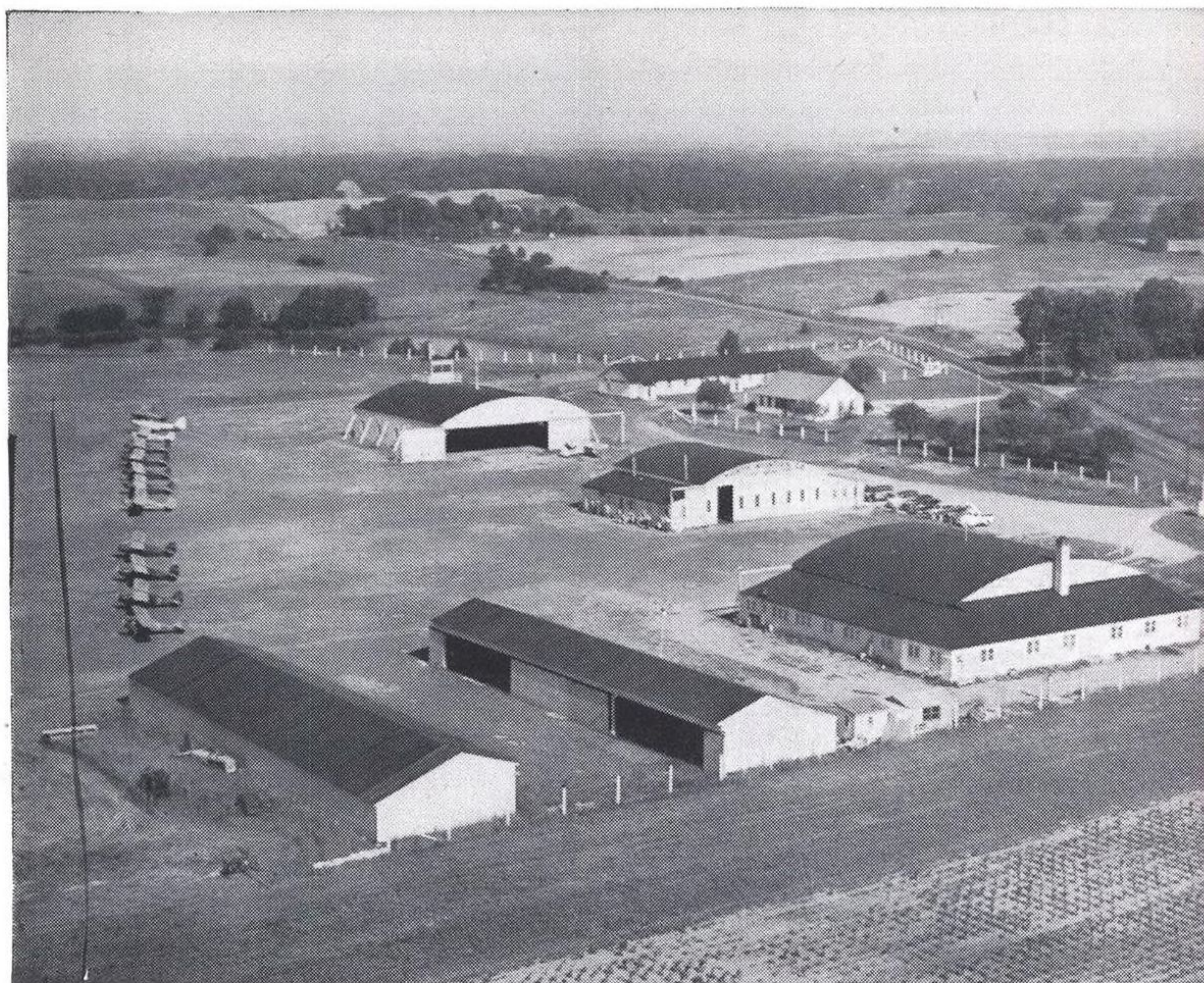
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EXECUTIVES flying in company planes to St. Paul or Minneapolis, or private fliers piloting their own ships towards the Minnesota and Wisconsin vacationlands, find Northport, at White Bear Lake, Minn., one of the country's finest privately owned airports — and only 20 minutes by car from the Twin Cities.

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