

# Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

SEPT. 2, 1946



**First Flying Twin-Engine Helicopter:** Built for U. S. Navy by McDonnell Aircraft Corp., XHJD-1, world's first twin-engine helicopter to fly takes to air in test flight at St. Louis. Two 450-hp. P & W Wasp Jr. engines give over 100-mph. cruising speed and lift useful load of up to 4,000 lb. (See story on page 9.)

## **Aircraft Industry Slated To Start Building Houses**

FHA gives initial order for 10,000 prefabs to utilize plane making facilities; two to six companies involved.....Page 7

## **State Dept. Becomes Key To International Routes**

CAB completion of cases shifts burden for securing operating rights essential to world-girdling U. S. lines.....Page 33

## **Nonscheduled Carrier Plans "Coach Type" Service**

Will make bid for passenger business in U. S. and Caribbean with 30-passenger DC-3s giving lower rates.....Page 15

## **NACA Formula To Help Cut Lightplane Prop Noise**

Design criteria, to be available to industry Sept. 15, said to make possible propellers inaudible at 300 ft. ....Page 27



## THE AVIATION NEWS

# Washington Observer

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**CLAYTON URGES MORE ATTACHES**—Undersecretary of State William Clayton will start a quiet campaign shortly to expand the number of U. S. civil air attaches throughout the world. Advance budget estimates for the next fiscal year will be larger for this program, but no figures will be decided upon in the near future. Meanwhile, Clayton and Commerce Department officials, including William A. M. Burden, will seek first to reach full agreement on general policy. Some State Department authorities below the Clayton stratum, however, have been attempting to block further appointments, claiming that other industries will demand a network of special attaches also, such as automotive specialists. Sterling Cottrell, ex-Naval attache, recently left for Bogota, Colombia; Percy Warner from State's Aviation Division has been assigned to Brazil and Frank Jarvis, also from the Division's Washington office, will leave in the near future for China.

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**P. O. HUNTING BAD WEATHER**—Aviation booster Gael Sullivan, Second Assistant Postmaster General, feels the Los Angeles helicopter mail tests may have been too successful, and with Navy cooperation will operate three helicopter routes out of Chicago during the month of October serving 138 small towns. He hopes the Chicago weather will be replete with winds, rain and poor visibility. Los Angeles climatic conditions did not offer enough operational difficulties. Meanwhile, hearings on applications for Los Angeles routes will be held in that city Sept. 18, and Sullivan will be on hand with department statisticians to plead for quick action.

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**CAB WATCHES FREE RIDES**—Civil Aeronautics Board has served notice to the airlines that it is watching for instances of unauthorized reduced rate or free transportation. The Civil Aeronautics Act of 1938 severely restricts such activities by air carriers. The Board has told the lines it will act to enforce the law in the future. Some top airline executives complained that they have been forced to take chances because their competitors were offering certain individuals free trips. ATA President Land, however, followed up the CAB warning with the admonition that this was a matter in which the industry should do its own housecleaning. So don't expect a return to the pre-1938 days when almost any good friend of an airline could win a free ride.

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**CESSNA WRITES PRESIDENT TRUMAN**—A campaign to wipe out some of the red tape involved

in exporting non-combat aircraft is gaining momentum. State Department officials last week were considerably surprised by a letter from an indignant aircraft manufacturer—Cessna—who had written to the President of the United States complaining about the difficulties and delays in shipping lightplanes out of the country. The White House forwarded the complaint to State. Commerce Department sympathizes. Upshot may be elimination of some obstructive regulations by the National Munitions Control Board, but don't expect action overnight. Too many bureaus and boards are involved. However, the long-term trend, as they say in Washington, is improved.

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**STEWARDESSES ARE RECOGNIZED**—National Mediation Board members have seen some unusual unions in the Board's history but the first one for stewardesses popped up the other day, and it was officially certified as the representative of Western and Inland hostesses, under the Railway Labor Act. It's the Air Line Stewardesses Association, with 75 members.

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**NEW AIR TRAVEL CARDS**—Those air travel cards marked 1941-1942 are finally scheduled for retirement Jan. 1, 1947, under an amended air travel plan the Air Transport Association is completing. Holders of some cards will be able to use their card throughout the world, rather than in the U. S. and Canada only. Under present proposals, one type of card will permit travel in Continental North America, Bahamas, West Indies, Bermuda, and Hawaii. Another card would be universal. It is contemplated, of course, that many more foreign airlines will join the present participants in the plan. One proviso is that each member will carry passenger liability insurance of at least \$40,000 per passenger.

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**INTRIGUE IN CHINA**—Fire behind the smoke arising from U. S. surplus disposal of aircraft in China is the Chinese desire to get foreigners to foot the bill for the costly airport rehabilitation program necessary for widespread commercial air operations. Jerry-built wartime fields constructed by both Americans and Japs have deteriorated to the point where commercial operations are unsafe nearly everywhere. According to a few realists in Washington, the Chinese hope to play their approval of landing rights as their ace to win a jackpot of foreign airport funds. On the other hand, stirring up the surplus disposal manner in which China obtained all her commercial aircraft is the way our American diplomats propose to bring counter-pressure and trump the ace.

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## News Digest

### DOMESTIC

AAF accident rate for June was the lowest since V-J day with 108 major AAF accidents within the continental U. S. compared to the wartime peak of 2,045 in August 1943.

All 48 states have accepted their allotment of air National Guard units. Units are now activated in 26 states, the District of Columbia and Hawaii.

Eight persons were killed and more than 20 injured in an explosion of volatile jet fuels at the Azusa, Calif. plant of Aero-Jet Engineering Corp.

AAF will send 600 officers to school in civilian colleges and universities this fall as a supplement to the program of its Air University at Maxwell Field, Ala.

### FINANCIAL

Glenn L. Martin Co. declared a third quarter dividend of 75 cents a share payable Sept. 13 to stockholders of Sept. 3. All officers and directors were re-elected.

Solar Aircraft voted a dividend of 15c a share on common stock, payable Sept. 15 to stockholders of record Aug. 31. Backlog of unfilled orders is about \$10,000,000. Net sales for the fiscal year ended April 30 were \$22,775,833.05.

Douglas Aircraft announced a dividend of \$5 per share on 600,000 shares outstanding, to be paid Sept. 20 to stockholders of record on Sept. 6.

North American sales of \$400,401,514 during 1945 produced a consolidated net income, after all charges, of \$7,820,309 for the fiscal year. Total earnings were equivalent to \$2.28 per share on 3,435,033 shares of outstanding capital stock. Backlog was \$90,000,000.

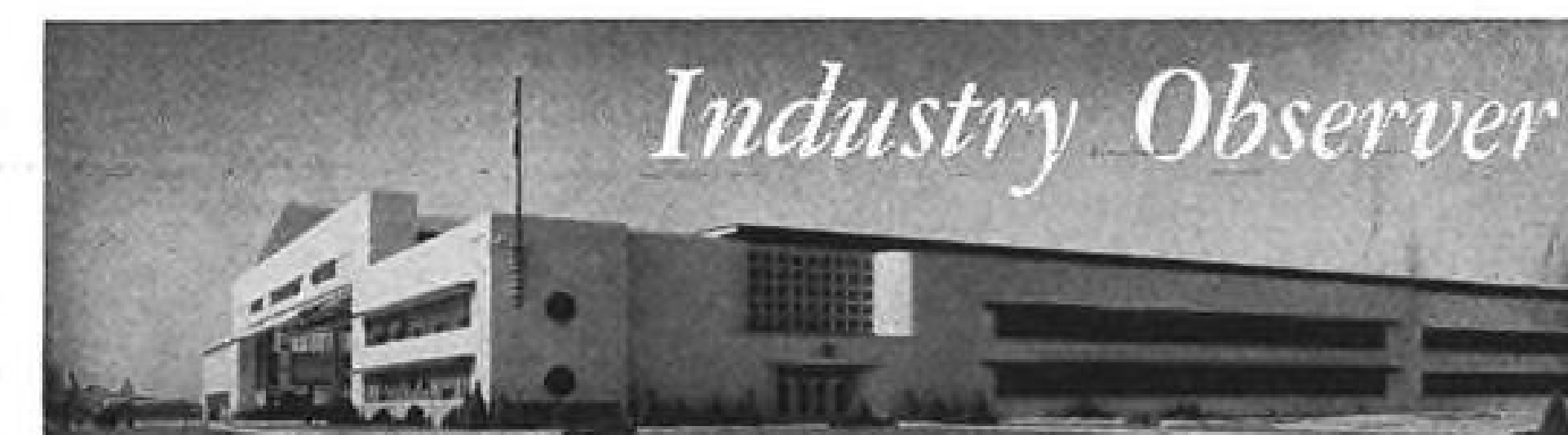
### FOREIGN

Britain's Air Commodore Frank Whittle, inventor of the jet engine, has been named 1946 winner of the Daniel Guggenheim Medal for aeronautical achievement.

Wing Commander Lawrence Egglesfield was named director of civil aviation in the British West Indies.

RAF Lancaster set a new England-New Zealand record of 60 hours.

Work has begun on the site for the British government's \$80,000,000 aeronautical research station near Bedford.



## Industry Observer

Republic Thunderjet (P-84) cracked the world speed record (606 mph.) last week at Muroc, Calif. Because its margin was less than the 626 mph already clocked unofficially by an RAF Gloster Meteor, AAF officials attempted to cloak the P-84 effort in secrecy. Another attempt will be made soon with publicity.

Braniff has begun survey flights on its recently awarded Latin American routes to Rio de Janeiro and Buenos Aires.

Douglas is holding up development of the DC-8, commercial version of the XB-42 Mixmaster, until more powerful jet engines are available.

Convair's Model 240 is still acquiring its skin and is not expected to fly before January.

Argentine government is planning large scale glider purchases for airborne army training and sport purposes. Alfredo L. Finochietti, chief of its civil aeronautics glider bureau, is currently inspecting the U. S. glider industry but does not have authority to make purchases.

Some AAF experts are worried about defense of the B-36 on long range missions. Its proposed parasite fighter will offer little defense against a barrage of target seeking flak rockets and its relatively slow speed and extreme bulk should make it an easy target. These experts predict its chief utility will be as a long range transport of airborne troops.

Shortage of parts will delay test flights of the four-place Wheelair IIIA all-metal personal plane until late October.

Aircraft industry in the Los Angeles area will add 6,500 employees to its payroll before Jan. 1 according to United States Employment Service surveys. Requirements of the industry before Nov. 15 include 4,200 workers in air-frame factories; 200 for engine producers and 900 for parts manufacturers.

Empire Air Lines, Lewiston, Ida., spent approximately \$45,000 on its three year fight for a feederline certificate. Certificated in the West Coast area case, Empire hopes to amortize this amount over a five-year period.

Northwest Airlines reached an agreement with the International Association of Machinists to cover overseas jobs on its newly authorized route to the Orient. Temporary jobs will be opened for 90 days at pay not less than individuals assigned are now making. After 90 days the jobs will be thrown open for permanent assignment and posted for system wide applications on the basis of seniority. Northwest will foot the bill for all basic living expenses of its personnel overseas.

Bekins Van & Storage Co. of California now offers house to house rates on air shipment of household goods at 25 percent more than regular van rates plus a \$3 service charge.

Edo has two new types of lightplane floats scheduled for late fall production. Design changes include a flat bottom on the step and main section instead of the conventional V and a square float deck instead of the usual oval shape. One type will handle planes of the type and weight of the Piper Supercruiser and the other for heavier personal planes.

Southern Arizona Airlines of Tucson will ask for eight intrastate helicopter routes.

Trans-Canada Air Lines officials doubt if the company can start DC-4M service early in 1947, as previously planned. They have submitted a report to the government requesting expenditure of more than \$100,000,000 as soon as possible to improve virtually every airport TCA uses, from coast to coast. Runways must be lengthened and strengthened at each base, and passenger facilities need enlarging. Hardly more than 10 percent of the recommended appropriation is likely to be spent this year, however.





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## Aircraft Industry Will Make Aluminum Houses for Veterans

10,000 unit order already given by FHA in program to utilize plane manufacturing facilities for breaking housing bottleneck; Patman Act 90% guarantee applies.

By BLAINE STUBBLEFIELD

Two to a half dozen aircraft manufacturers are expected soon to announce participation in the government's prefabricated housing program.

Under the Patman Act the Federal Housing Administration guarantees manufacturers 90% of costs through purchase by RFC of houses not sold.

Aircraft companies will concentrate on FHA approved designs in aluminum, and its combination with plywood and insulation, while other companies will build prefabs of steel and other materials. Designs will be furnished to the manufacturers. Plans by the Lincoln Homes Corporation of New York are strongly favored.

**10,000 Unit Deal**—FHA, and aircraft companies in negotiation, declined to talk for publication, but FHA promises an early announcement on the program. Douglas engineers have spent 3 weeks with FHA experts. At least one aircraft company has received a letter of intent from FHA. McDonnell Aircraft, frequently mentioned as a negotiator, is reported to have a design of its own, using panels of aluminum, stressed plywood, and rock wool insulation. FHA spokesmen said one deal already concluded with an aircraft firm was for 10,000 units.

Wilson Wyatt, FHA Administrator, has suggested that surplus airplane plants to house the new enterprise be withheld temporarily from lease or sale to give airplane companies priority on them for this purpose. War Assets spokesmen said this issue was "dynamite" but a decision was imminent.

The aggressive Wyatt, determined that private interests build

a half million houses for vets before 1948, is said to have turned Administration heat on aircraft companies who, because of government orders, taxes and contract settlements, are highly susceptible.

**Martin Drops Out**—Martin, Bell, Fairchild, Curtiss-Wright, Consolidated-Vultee, North American and Higgins, besides Douglas and McDonnell, have been in the discussions. Martin seems definitely out because he has his own house-building program. Boeing say they cannot undertake any job that requires more manpower.

Some observers believe aircraft companies who don't try house production, especially with a guarantee against loss, are short sighted. Many home-seekers don't like the machine-like metal prefabs, but will take them rather than nothing.

The low price—under \$6,000, compared to \$10,000 to \$25,000 for constructed houses—is a strong factor in spurring consumer demand. If millions of relatives and visitors, seeing the houses, are converted later, a sizeable industry might result.

**Shift From Builders**—The metal

prefab project is a potential shift of house building from the construction industry to the factory production line, which can maintain a permanent substantial price advantage. Building contractors are fighting the factory trend.

Major problem of the aircraft companies will be distribution and service. FHA hopes to line up for them such distributors as department stores or materials firms like Johns-Manville. Macy's in New York has already erected over 1,000 prefabs. One authority says 25,000 of the Lincoln type home would sell at once in the Los Angeles area.

Numerous units of the Lincoln design, produced in the company's plant at Marion, Va., have been erected and are in use. The 2-bedroom size will sell at about \$3,000, less lot; 3-bedroom at \$4,500; 4-bedroom at \$6,000—including wiring, water piping, and heating. Panels are aluminum on 2 sides with plastic filler for stress and insulation; are 8 by 4 ft., 2 in. thick for the walls and 3 in. for the flat roof, which is stressed for 7 feet of snow.

**Cement Floors**—Floor is cement poured on metal grill, 2 in. thick. Parts are assembled with screws but adhesion of resin-treated plastic filler holds main load. Door panels are wood veneered. A two-room house weighs 1 ton. There is no basement. Company is also experimenting with multi-story design.

Nearly all war-surplus aluminum sheet has been used up for roofing and siding in urgent build-



**Aluminum Prefab:** Lincoln Homes Corp. prefabricated house, a design favored by Federal Housing Administration officials who have been urging aircraft manufacturers to turn to home production.



ing projects; practically none remains for the prefab program. Civilian Production Administration has received from FHA specifications of aluminum sheet and other materials to be manufactured, presumably under priorities. Most aluminum sheet for prefabs will be 12 to 20 gage—.019 to .051 in.

## Cosmic Ray Probe Will Attack Mesons

AAF and MIT will equip second Superfort to study cosmic energy after rays break up.

Researchers are groping for knowledge of the upper space they hope to penetrate by jet rocket and radio.

The AAF-Bartol-National Geographic survey of cosmic rays at high altitudes in a B-29, across 4,800 miles of latitude between the U. S. and Chile, will be followed by a sea-level shipboard study.

Massachusetts Institute of Technology and AAF will equip a second B-29 for investigation of mesons, energy units released when cosmic rays break up on contact with the atmosphere. The energy of mesons might implement the cracking of atoms other than uranium as a source of power.

► **Equipment Affected**—Dr. W. F. G. Swann, director of the Bartol Research Foundation, Franklin Institute, Philadelphia, reporting his survey with AAF and Geographic, observed that radio and electrical equipment were seriously affected when kept at high altitude more than a few hours. At a Washington press conference he suggested extensive modification of such equipment might be necessary for altitude work.

Authorities in the Bureau of Standards said they were skeptical of results obtained on the AAF B-29 test. So far as they knew, any interference would show at once, not necessarily after a period of exposure. They added that high altitude flights of long duration, over a period of years, have not revealed any definite pattern of interference. Nevertheless they agreed all possible study is desirable.

Very little is known of cosmic rays, except that they exist, approach the earth at various angles, and can penetrate in feet of lead. In breaking up against atmosphere they may release other forms of energy, such as gamma rays. In the tests, three Geiger counter tubes



**Cosmic Ray Recorders:** Cosmic rays found at altitudes ranging from 5,000 to 35,000 ft. are measured on banks of Geiger counters (center) in a converted B-29 bomber which is being used under sponsorship of National Geographic Society, AAF and Bartol Research Foundation. Ed Kurtzner and Peter Morris operate the apparatus.

were superimposed so that any rays penetrating all three had to be vertical. Only the vertical rays were counted.

► **Ship Research**—National Geographic's further shipboard results will be checked against former altitude data. Intensity of cosmic rays varies with localities, and with the intensity of the earth's magnetic field. Thus the run was made to southward to the magnetic equator, median between north and south magnetic poles, which crosses near northern Chile. Maximum intensity at 57,000 feet was established by NGS and Air Corps with Geiger counters in world's biggest balloon, at 72,395 feet, in 1935.

Dr. Swann said that millions of metal meteors, from micro size to big hunks, daily burn themselves up on contact with the outer atmosphere and will menace future high flying. He suggested that radar may detect them and automatically change course to avoid collision.

## BLADES OVERLOADED

Experimental twin-rotor Landgraf helicopter No. 2 was destroyed, at Los Angeles recently, when tips of three blades failed under a pull-out load after the aircraft was in a power glide at 100 ft. altitude. Pilot H. D. Hoatson escaped with minor scratches. The helicopter has been undergoing successful flight tests continuously for a month prior to the crash, which happened during

tests for the AAF. Oscillograph records are being studied to determine the reason for failure. The first Landgraf helicopter crashed when a rotor blade was torn from the hub in flight.

## AVIATION CALENDAR

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.  
Sept. 6—ATA Export Committee meeting, Royal York Hotel, Toronto.  
Sept. 12-13—Society of British Aircraft Constructors exhibit, Radlett, England.  
Sept. 12-20—Richard Ira Bong Memorial Foundation campaign, Croix Hunter, chairman.  
Sept. 14-15—Southern California Air Show, Long Beach.  
Sept. 17—IATA Western Traffic Conference, Rio de Janeiro, Brazil.  
Sept. 19-20—National Association of State Aviation Officials annual meeting, Butte, Mont.  
Sept. 22-24—Western Aviation Conference, Reno, Nev.  
Sept. 22-Oct. 27—Argentine Aeronautical Exhibition, Buenos Aires.  
Oct. 3-5—SAE National Aeronautic (Fall) Meeting and Aircraft Engineering Display, Biltmore Hotel, Los Angeles, Calif.  
Oct. 4-5—New York State Aviation Council annual meeting, Buffalo.  
Oct. 14-17—Fourth Annual National Aviation Clinic, Oklahoma City, Okla.  
Oct. 16-17—SAE National Transportation & Maintenance Meeting, Hotel Knickerbocker, Chicago, Ill.  
Oct. 19-21—Third Annual Avinda, Las Vegas, Nev.  
Oct. 23-25—Second Annual Arizona Aviation Conference, Phoenix.  
Oct. 29—International Air Transport Association meeting, Cairo, Egypt.  
Nov. 7-8—SAE National Fuels & Lubricants Meeting, Mayo Hotel, Tulsa, Okla.  
Nov. 15-24—National Aircraft Show, Cleveland.  
Nov.—International Aeronautic Exhibition, Paris, France.  
Dec. 2-4—SAE National Air Transport Engineering Meeting, Edgewater Beach Hotel, Chicago.  
Dec. 12-15—International Aviation celebration, El Paso, Texas.  
Jan. 10-11-12—All American Air Maneuvers, Miami, Fla.

## McDonnell, Navy Unveil First Twin-engine Helicopter to Fly

XHJD-1 powered by pair of Pratt and Whitney 450 h.p. Wasp Jr. engines will cruise at more than 100 mph. and carry useful load of over 3,000 lbs.; Navy plans experimental use.

McDonnell Aircraft Corp. and the Navy last week took the wraps off the world's first flying twin-engine helicopter, the XHJD-1, which will cruise at more than 100 mph. carrying a useful load of over 3,000 lbs. (On occasion the load has been as much as 4,000 lbs.)

Powered with two 450 hp. Pratt and Whitney Wasp Jr. engines, the XHJD-1 uses twin rotors of 40 ft. diameter attached to the fuselage on either side by long pylons, which carry the engine nacelles midway. The aircraft will fly on either of the two engines, since either engine will drive both rotors through a system of overrunning clutches. The twin-rotor system eliminates need for an anti-torque rotor, at the tail since the large rotors rotate in opposite directions.

The McDonnell helicopter has been making flights for the past several months at Lambert Field, St. Louis. It's nearest rival for the title of first twin engine helicopter to fly, in this country at least, is the Kellett Aviation Corp.'s XR-10 under development for the AAF, and due to begin flight tests soon. (AVIATION NEWS July 22). The German twin-engine Focke-Achgelis 284 helicopter, under devel-

opment at the Breguet factory in occupied France during World War II, is not believed to have reached flight test stage. (AVIATION NEWS Nov. 26, 1945).

The McDonnell helicopter and also the Kellett, are expected to be manufactured commercially as passenger transports, each carrying 10 passengers and a crew of two and as cargo carriers, each carrying a one-ton cargo load.

Navy Bureau of Aeronautics officials in announcing the XHJD-1, said that an extensive program of flight research was scheduled for the aircraft. Variations of rotor diameter, blade chord, rotor-engine gear ratio, gross weight, and control sensitivity will be tested on the helicopter in "every worthwhile arrangement."

C. L. Zakhartchenko, McDonnell Helicopter division chief engineer, is credited with the leading role in development of the aircraft, working in cooperation with the Navy Bureau of Aeronautics.

With its present 40 ft. rotors, which do not intermesh, the helicopter has an overall span from rotor tip to rotor tip of 81 ft. Later this month it is planned to install 46 ft. diameter rotors with inter-



## FAIRCHILD HUSKY CERTIFICATED:

Canadian Department of Transport has certificated the Fairchild Husky Freighter, made by Fairchild Aircraft Ltd., Montreal, as airworthy following flight trials. Designed following a survey of Canadian bush pilots (AVIATION NEWS, April 15), the freighter is shown here on floats during the trials. An all metal craft powered by a Pratt & Whitney Wasp engine, it reached a maximum speed of 141.5 mph., has a cruising speed at 10,000 ft. of 122 mph., can carry a 2,200-lb. useful load and has a gross weight loaded of 6,400 lb. Wing span is 54 ft. 9 in. and overall length 37 ft. 5 in.

meshing blades, with 87-ft. span. Greater reliability of the twin-engine installation with single engine performance, gives the XHJD-1 an important advantage in operations over rough terrain, populated areas or water.

One of the helicopter's principal uses for the Navy will be as an air-sea rescue vehicle, where this feature is particularly important. With a capacity of 10 passengers in addition to crew, a hovering McDonnell helicopter could easily pick up the entire crew of a disabled small vessel, or plane that had been forced down, through the air-to-ground pickup method already used by the Coast Guard, Navy and Army.

In the unlikely event to that both engines fail, the helicopter's rotors are designed to go into autorotation to bring the aircraft down in a slow descent.

Aside from its distinctive helicopter features, including the ability to hover motionless in midair, ascend and descend vertically, fly sideways and backwards as well as forward, the XHJD-1 appears as a rather conventional aircraft. The fuselage resembles closely that of the ordinary transport plane of similar size except for the absence of any horizontal tail surfaces. The aircraft does have a tall single tailfin, presumably for stability.

The two main landing gear wheels are attached to the pylons,



## FREIGHT HATCH:

To accommodate long and awkward cargo destined for northern Canada mining plants, the Fairchild Husky freighter has this lower fuselage freight loading hatch. The ship has extra wide fuselage freight doors on both sides of the cabin, as well as separate pilot doors.



- larger profits
- lower sales costs
- better customers



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BARTLETT HAYWARD DIVISION



just inboard of the motors, and also are attached to the sides of the fuselage, near the bottom. A conventional tailwheel completes the assembly. Virtually the entire nose of the aircraft is transparent plastic, giving excellent visibility.

The engine nacelles have large front air intakes for cooling the engines which give the aircraft the appearance of a jet-engined helicopter, and have caused some inaccurate reports. The fact that McDonnell is also manufacturing another helicopter with jet power, still restricted by the Navy, has also added to industry confusion.

### Eastern Streamlines Management in Field

A streamlined management plan to speed up administrative procedures was announced by Eastern Airlines president, E. V. Rickenbacker, following a four-day company conference in Miami. The plan includes appointment of an advisory board of directors and a field board of directors to function with regular officers and directors. The newly formed boards will meet monthly in one of the 66 cities on Eastern's routes.

C. W. France, Miami, vice-president—maintenance and engineering and S. deJ. Osborne, New York, vice-president—traffic and sales will head the two boards. L. P. Arnold and M. M. Frost, vice-presidents in

New York are co-chairmen of the boards.

Paul E. Reinhold, Jacksonville, Fla., president of Foremost Dairies was elected to Eastern's regular board of directors. W. L. Morristte, Jr., formerly New England district traffic manager, was appointed director of traffic procedures for the entire system.

Other industry personnel changes are:

► **TWA**—Hugh Herndon, round the world pilot and veteran of the RAF

### Surplus Transport Sales

War Assets Administration has announced sales of 30 Douglas twin-engine cargo planes at three locations, starting Sept. 16. Following are locations of WAA storage depots at which the sales will be made:

► **Ontario, Calif.:** five C-47s, with prices ranging from \$15,000 to \$22,500;

► **Walnut Ridge, Ark.:** nine C-47s, with prices ranging from \$15,000 to \$20,000;

► **Augusta, Ga.:** six R4Ds, with prices ranging from \$15,000 to \$30,000, and ten C-47s, with prices ranging from sum of \$20,000 up to \$27,500.

WAA has also invited bids on three C-47 and one R4D Douglas cargo planes, seven AT-11s, two AT-7s and two F-2Bs, all twin-engine Beechcraft monoplanes, and

eight R4B Sikorsky helicopters. Bids will be opened Sept. 16, and the planes will be available for inspection from Sept. 9 through Sept. 13, at the following locations:

► **C-47s.** One, each, at Patterson Field, Ohio; Sedalia base, Mo.; and Tinker Field, Okla.

► **R4D.** One at Quonset Point Naval Station, R. I.

► **AT-11s.** Three at Keesler Army Air Field, Miss.; two at Chanute Field, Ill.; and one, each, at Patterson Field, Ohio, and Olmstead Field, Pa.

► **AT-7s.** One at Kelly Field, Texas, and one at Tinker Field, Okla.

► **F-2Bs.** Two at Buckley Field, Colorado.

► **R4B helicopters.** Eight at Sheppard Field, Tex.

Ferry Command, has been named chief pilot of the Africa-Middle East region.

► **Wiggins Airways**—Harry Kent has been named operations manager. He was formerly with Pan American Airways as a pilot in South America and has been in aviation for 23 years.

► **Aviation Maintenance Corp.**—E. S. Steel, formerly executive vice-president of Aircraft Components, has been appointed secretary treasurer.

► **Northrop**—Col. Stewart W. Towle, Jr., former chief of staff of the 8th Fighter Command, has been named Washington representative.

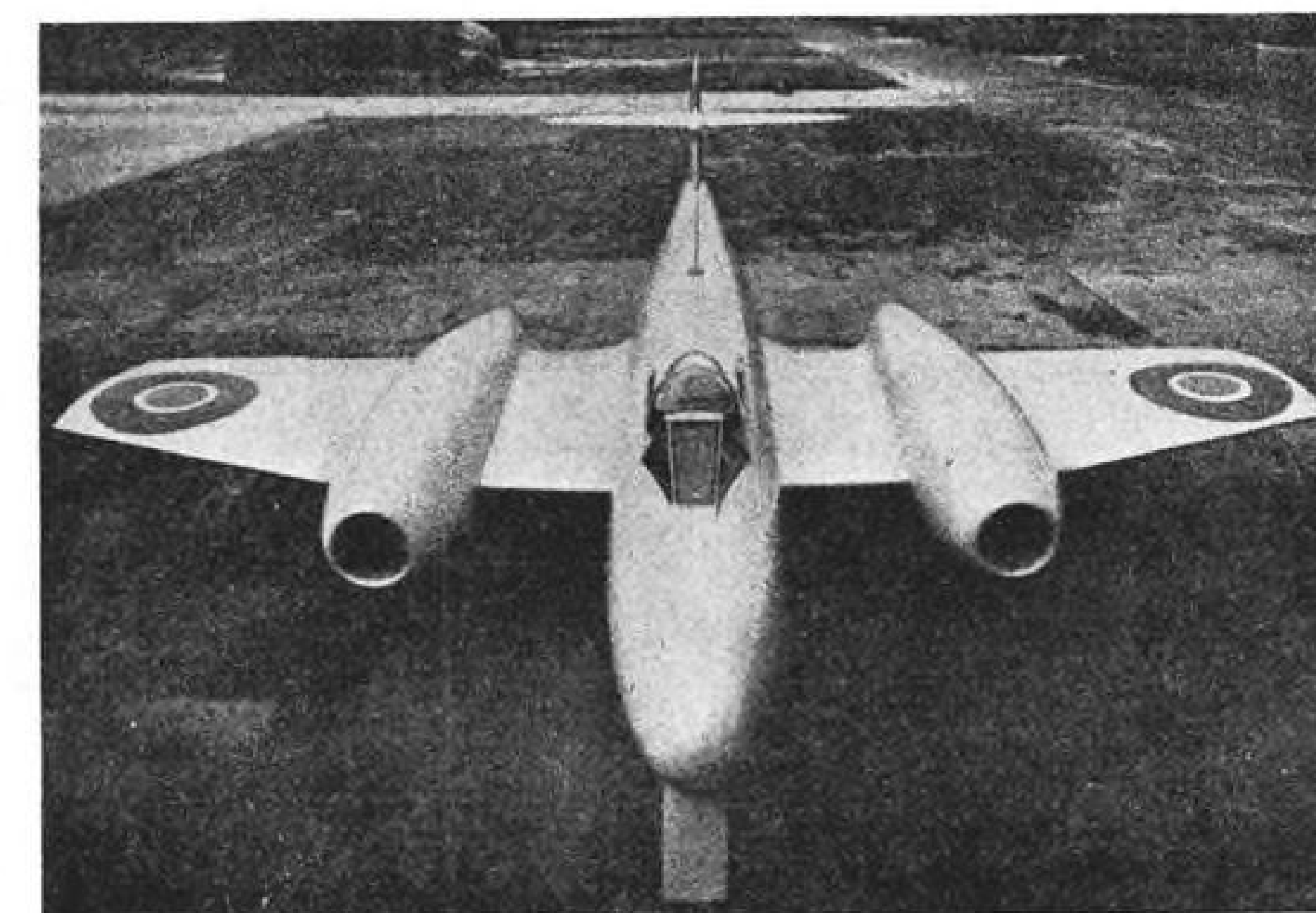
► **Norwegian Airlines**—Capt. Gert Meidell has been appointed North American representative with headquarters in New York. He has been with the line since 1934 and served with the Norwegian Air Force during the war.

► **Scandinavian Airlines System**—Mark J. Maidel, formerly an AAF engineering officer in the Middle East and the Pacific, has been appointed U. S. regional operations manager.

► **United Aircraft Products, Inc.**—Samuel F. Baker has been elected president and director to succeed Frank Sorensens who retired due to illness.

### Airline Radar Tests Show Flaws for Commercial Use

While military use of radar has proved successful, American Airlines experiments have proved it



### NEW METEOR:

Standard version of the Gloster Meteor, British jet-propelled fighter, now has clipped wings, reducing the span from 43 to 39 ft. The aileron stretches out to the tip of the wing. Despite the decreased parasitic drag, it is not expected that the aircraft's performance will be much changed due to other factors. (The Aeroplane photo.)



unsuitable for airline use. Capt. Sam P. Saint, manager of AA's development section, said the military services could bear heavily on the law of probability and take calculated risks in the use of radar, but the airlines must have an instrument perfect enough to gain the faith of pilots and the assurance the pilots would use it.

Disadvantages to airline use of radar:

The present scope does not glow brightly enough in the cockpit with light coming in the windows, but is effective only in a darkened cabin. To increase the glow enough for airline use, the voltage would have to be increased 20,000 times.

The image on the scope is not three-dimensional.

## U. S. Aircraft Exports Soar to \$100,000,000

Sales near 1939 level despite State Department ban on military exports; surplus big factor.

Exports of U. S. aviation equipment are expected to exceed \$100,000,000 this year, a figure nearly equal to that of 1939, despite a prohibition on export of military aircraft, which in prewar years accounted for a sizeable amount of the United States export trade in aircraft.

The expected figure for this year is reported by C. M. Cook, recently named head of foreign aircraft trade promotion of the Office of International Trade of the Department of Commerce. Cook asserts that export of aircraft products is on the upgrade with the June total of \$15,174,374 being nearly one-third of the total for the first six months of the year.

► **Sell 842 Planes**—Total exports for the first six months of 1946 were \$54,917,349, included in which were 842 complete aircraft. About 70% of total exports went to ten countries:

France .....	\$7,438,501
Canada .....	5,821,873
United Kingdom .....	4,775,403
Sweden .....	3,703,131
Brazil .....	3,700,902
Netherlands .....	3,086,261
Mexico .....	3,015,671
Australia .....	2,812,315
Belgium .....	2,546,240
South Africa .....	2,414,382

These countries are the same markets that predominated in our aircraft export trade before the war, Cook states. The figures for the first half of this year include sur-



### NEW FRENCH PLANE:

Designed particularly for postal service, SO-93 has a gross weight of about 10,000 lb., although powered by relatively small engines, two Renaults of 400 hp. each. Span is 53 ft., length 39 ft., cruising speed 240 mph. at 4,500 ft. Range is about 750 mi.

plus aircraft sold from domestic stocks by the Office of the Foreign Liquidation Commissioner, and so not a true guide of the industry's participation in the overseas trade market.

How much of the total export figures constitute surplus sales is not definitely known, although it has been estimated as high as forty or fifty percent. Cook expects that surplus sales in export will decline rapidly for the balance of this year to a point where they will be probably not more than five percent of the total by beginning of 1947.

► **State Is Bottleneck**—During the decade prior to the war, aviation exports accounted, in most years, for about 30% of the industry's total output. Cook doubts if that ratio can be maintained, at least not for some time while the domestic market for aircraft continues to be so strong.

Other sources point out that the main difficulty in regaining the prewar ratio is the current ban by the State Department on export of military aircraft which constituted such a large part of the prewar export sales.

The State Department had some time ago entered into an agreement with the British Government whereby each government undertook to assure that the manufacturers of neither country would export military aircraft.

While the State Department has been rigid in rejecting export permits—even in some instance for surplus military trainers which are intended to be converted to light transports—the British have exported Vampire jet-propelled fighter planes to Sweden, has granted a manufacturing license to Sweden for the Vampire and a jet engine, has undertaken to re-equip the French air force, and has entered into similar agreements with other European nations.

## Constellation Back In Foreign Service

Prospects are good that a sizeable fleet of Lockheed Constellations will be back in overseas airline service by mid-month.

Pan American already had the first of the modified planes in operation last week across the Atlantic, where it plans to use 13, and expected to start them in Pacific service in a few days. Others are to become available in rapid succession. Panair do Brasil, PAA affiliate, also had two Constellations in service and was to receive a third soon.

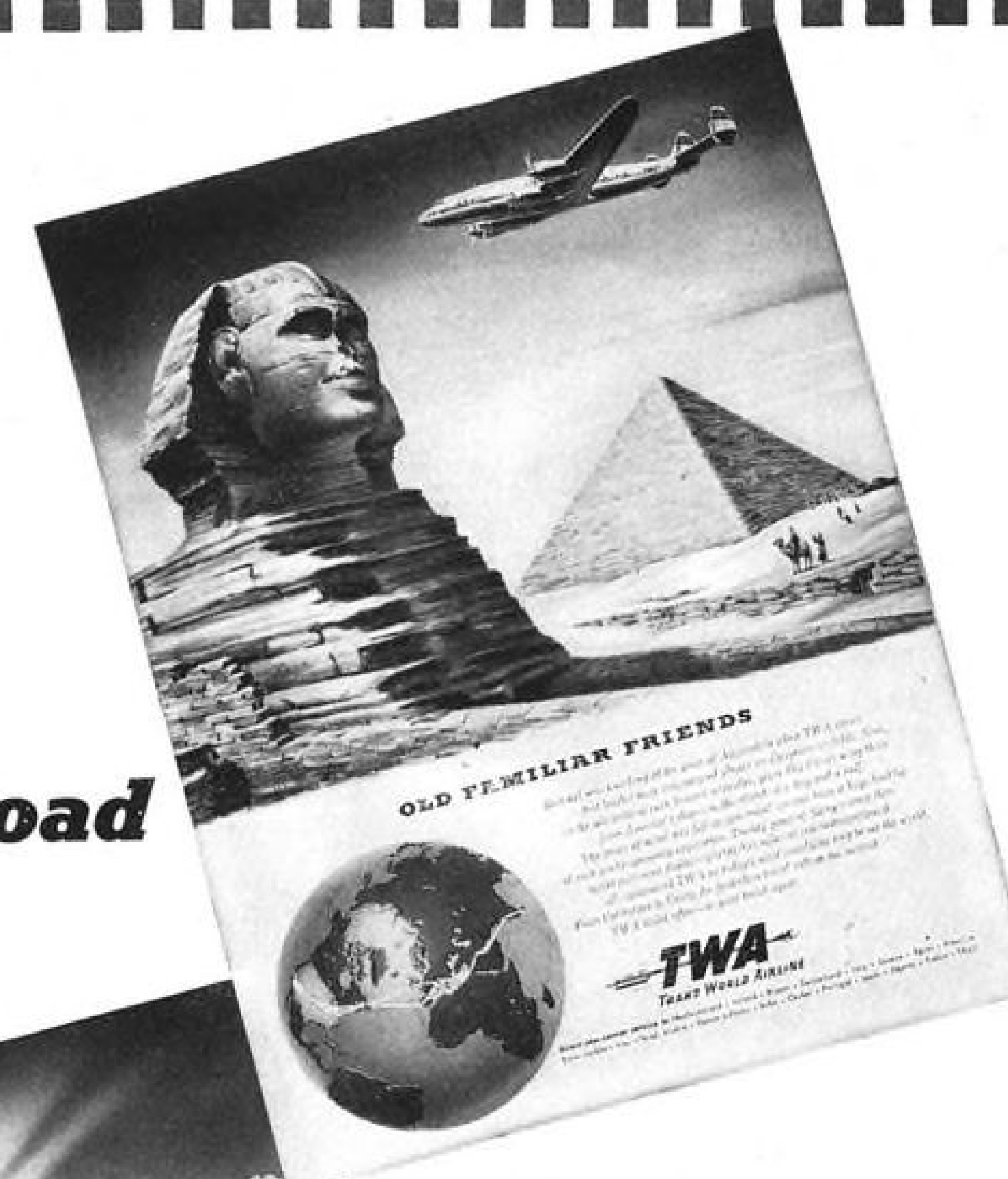
These aircraft, like those BOAC planned to place in limited service to London Aug. 31, were the model 49-51 with carburetor engines, modified in conformity with changes required by CAA on electrical, hydraulic, fire-fighting and fire-warning systems. BOAC will start with one or two trans-Atlantic flights a week, gradually increasing the number to seven.

TWA, meanwhile, was running the first 100-hr proving run on the model 49-46 with fuel injection with expectation it would have two or more of the craft in service not later than Sept. 15. TWA's Constellation fleet eventually will consist of 30 model 49s and 18 model 649s with sleeper facilities.

American Overseas Airlines, when all Constellations were grounded in Mid-July had two newly in service, two others on the ground and one in Chicago on the way to delivery, doubts that the first of its fleet of 12 will be back in service before Oct. 1. Like TWA, AOA will not use the modified-51s, but will await the 46s.

KLM, the Royal Dutch Line, and Air France also were reported to be installing fuel injection engines.

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## Nonscheduled Carrier Planning Air Coach Passenger Service

American Air Export & Import Co. aiming at variety of operations in U. S. and Caribbean with converted 30-passenger C-47s.

By CHARLES ADAMS

Bucking a trend which has channeled the energies of most important nonscheduled operators into the cargo field, American Air Export and Import Co., New York and Miami, has become one of the nation's largest uncertificated passenger airlines and intends to maintain its position long after artificial post-war business has vanished.

AAXICO is already fitting its nine DC-3s to the needs of normal times by converting them into "air coaches" accommodating 30 passengers and a hostess. Three of the planes, with double seats on both sides of the aisle, are now in operation.

► **Flamingo Fleet** — Objective of AAXICO's president, Charles A. Carroll, who designed the seats, is to increase the passenger-carrying capacity of the "Flamingo Fleet" sufficiently to permit rate reductions up to one-third. The low-cost transportation thus made available is to be used in commuter service between Puerto Rico and New York and in seasonal short haul operations—principally intrastate vacation trips.

Carroll believes the low-income population in Puerto Rico cannot be reached by the de luxe service furnished by certificated airlines and that a flexible nonscheduled operation would tap a large group not now served by any carrier—either air or surface. If successful on this route, AAXICO proposes to extend similar service to other countries in the Caribbean or bordering the Gulf of Mexico.

AAXICO's recent operations have been mainly between New York and San Juan and New York and Atlantic City. During July the carrier flew an average of about two daily round trips on the

former run and five daily round-trips on the latter.

► **Offer Seasonal Trips**—If permitted by CAB regulations, AAXICO will continue to offer seasonal nonscheduled trips from New York to Atlantic City; Camden, N. J. (horse racing); Miami and Caribbean points and may extend its operations to other Atlantic seaboard cities, to the Midwest and to Canada. Strictly charter or contract flights would also be flown from the company's fixed bases at Miami and New York.

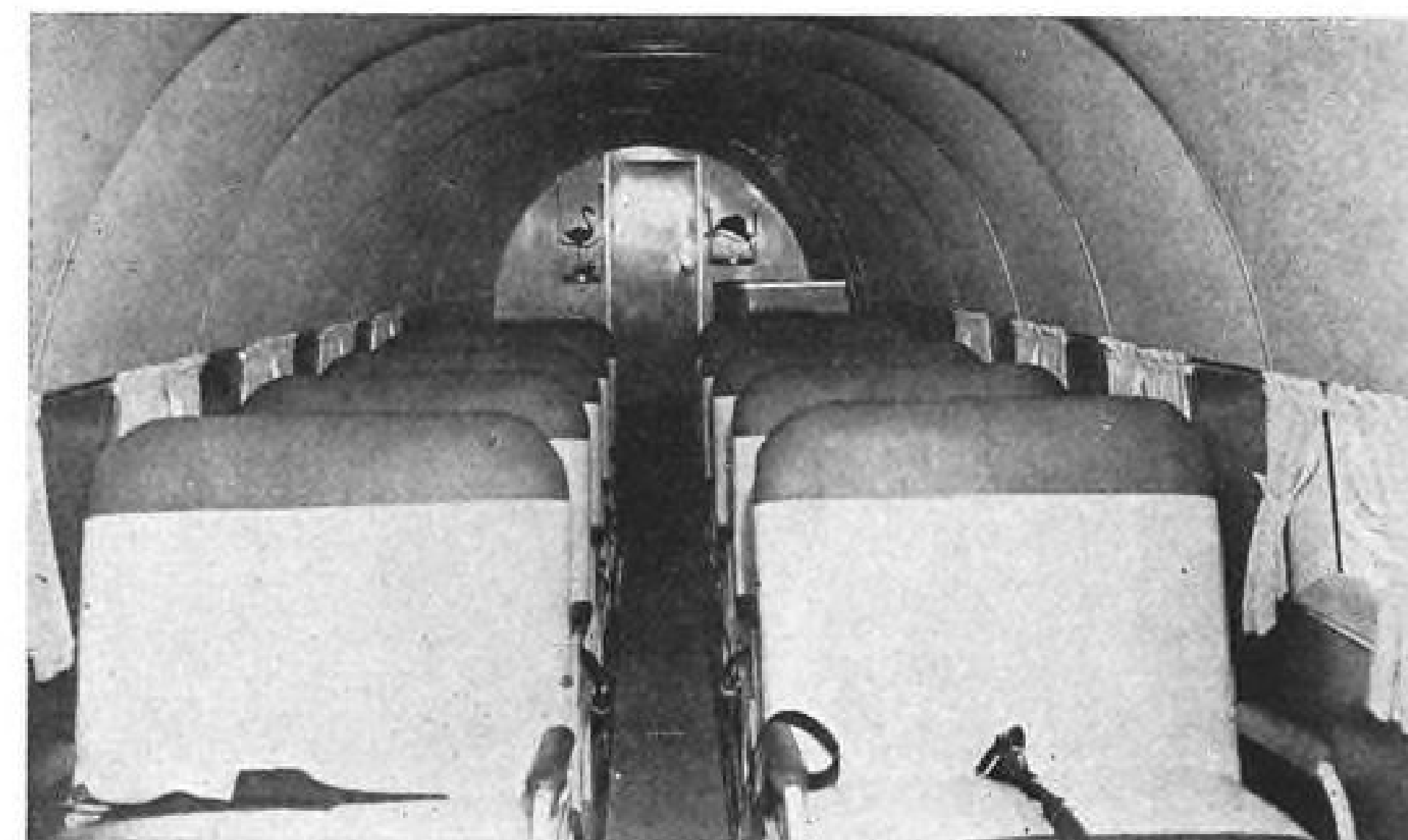
The carrier holds a permit from the Cuban government authorizing discharge and pickup of passengers and property at Havana. This permit is limited to the capital city, but AAXICO officials be-

lieve it will soon be amended to include all of Cuba. With this in mind, studies are being conducted on the feasibility of either scheduled or nonscheduled flights radiating from Havana to Caribbean and Central American points. Seasonal operations from Havana to the U. S. would also be included in the plans.

► **Grew Since November** — AAXICO's spectacular growth has taken place since November, 1945, when it started business with one plane, twelve employees and an original investment of \$14,000. The company now has nine planes and expects to acquire two more; has 170 employees and an assessed valuation of over \$1,000,000. Approximately 100 flights are made weekly, and considerably over 12,000,000 passenger miles flown without mishap.

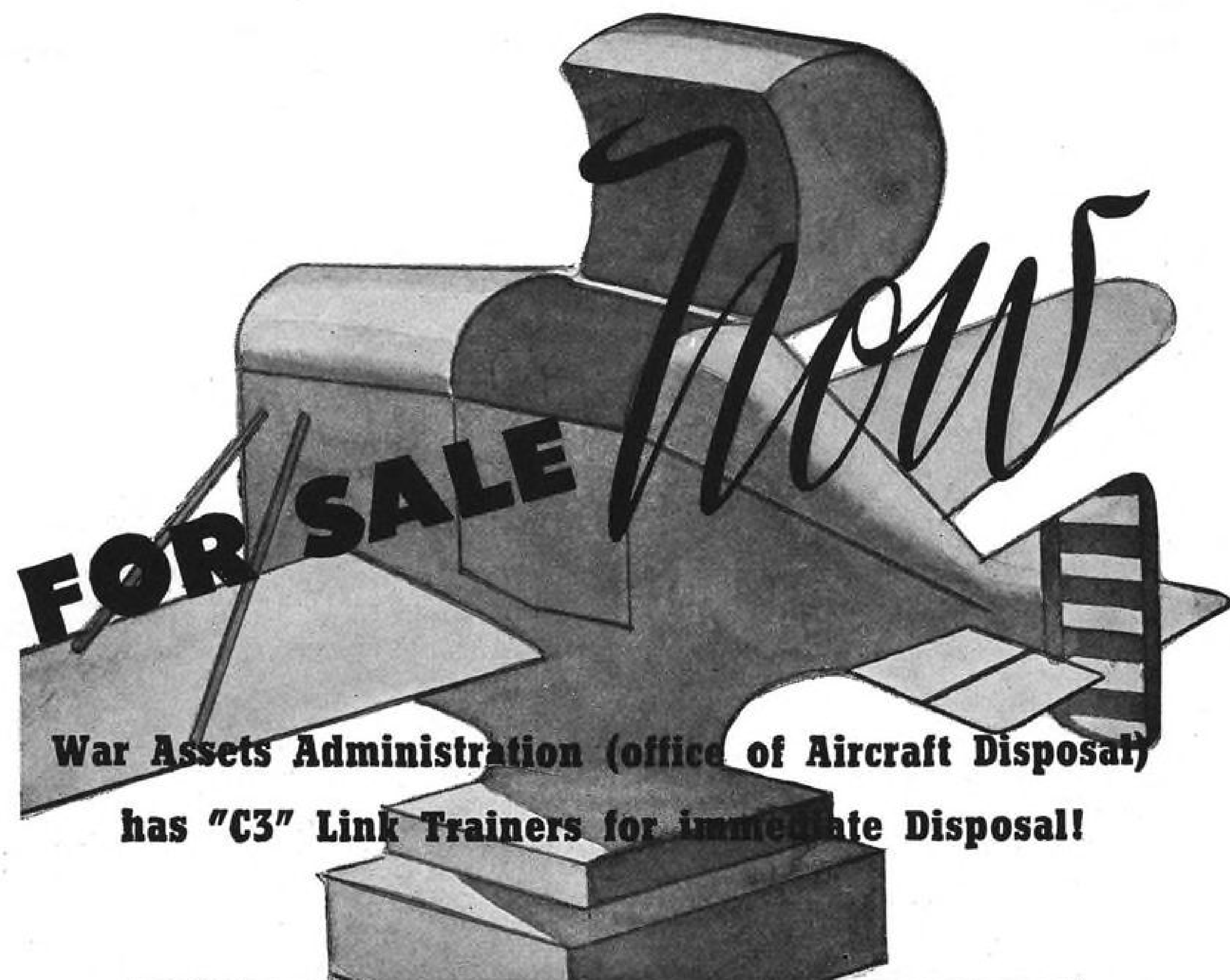
During May and June the Flamingo Fleet flew 401,000 revenue plane miles, carrying 6,310 lbs. of cargo 8,825,000 pound miles and 5,495 revenue passengers 4,706,300 revenue passenger miles. Total traffic revenue was \$276,040 and net loss for the two months was \$2,710. From Nov. 21, 1945, to May 31, sales had totaled \$371,466 and profits \$60,191.

Company officers, in addition to Carroll, include Howard J. Korth, vice-president and general manager; Thomas J. Carroll, vice-president, New York Division; Glen H. McNew, secretary; and William J. Korth, treasurer.



► **"Air Coach" Interior:** American Air Export and Import Co.'s nine DC-3s are being converted to accommodate 30 passengers in lightweight double seats down both sides of the planes' aisles. Designed by AAXICO's president, Charles A. Carroll, the seats are upholstered in foam rubber; covered with postwar plastic material and constructed to utilize space previously wasted. Tests show the seat can carry more than a ton and that two adults weighing more than 200 lb. each can be accommodated with comfort, AAXICO states.





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The famous Link Trainer (Type C3) that helped train the airmen of our Armed Forces is now available in almost every state in the union. Naturally they are used but are attractively priced accordingly—far below their actual cost to the government!

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## POA Seeking Route From L. A. to Hawaii

Pacific Overseas Airlines, Ontario, Cal. (AVIATION NEWS, Aug. 12), asked CAB for a permanent certificate to carry passengers, property and mail between Los Angeles and Honolulu on a scheduled basis; petitioned the Board to reopen the record of the Hawaiian route case; and requested that its application be consolidated in the proceeding.

In its Hawaiian decision two months ago, CAB granted a San Francisco-Honolulu route to United Air Lines. However, because of division within the Board, the case was reopened for reargument and reconsideration on whether additional service also is necessary from Los Angeles to Honolulu. Pacific Overseas does not contest the San Francisco-Honolulu award to UAL.

Extensive experience in trans-Pacific operations with C-54s both for the Army Air Transport Command under subcontract from United and on its own under contract with UNRRA have qualified POA for the Los Angeles-Honolulu link, according to President J. Edwin Jones. He declared his company would operate the route with three C-54s now owned or leased and that the passenger fare would be 5 cents a mile. POA, Jones said, is willing to accept a certificate limited to carriage of persons and property only, or, if mail is included, to carry it at a "service rate."

Other industry developments:

► **Flamingo Air Service, Inc.**, New York and Avon Park, Fla., has joined the Independent Airfreight Association. Company operates east of the Mississippi and to Canada and Cuba with six C-47s. Officers of FAS, which was incorporated Jan. 2, include George W. Green, president; Robert W. Bowen, executive vice-president; B. C. McMahon, Jr., vice-president, sales; and John L. Stenbeck, secretary-treasurer.

► **Columbia Airlines**, Baltimore, grounded both of its Boeing 247-Ds last month. The line's plane-limousine service to Ocean City is being halted under a state Public Service Commission order and the daily schedule to Hagerstown being suspended voluntarily and without explanation.

► **Pan-Maryland Airways** has asked the PSC for authorization to make the Baltimore-Hagerstown run since Columbia "apparently has ceased operating."

► **Empire Airlines**, New York City, states it will not be a party to a price war in New York State. **Leading Airways**, Syracuse, recently undercut Empire's fares between New York City and Watertown (AVIATION NEWS, Aug. 26).

► **Universal Airline, Inc.**, Miami, has asked CAB for a certificate to carry passengers and cargo on a scheduled



## OVERNIGHT SERVICE:

**Slick Airways**, San Antonio, and **Lyon Van and Storage Co.** are now offering overnight coast-to-coast air shipment of household goods. The new door-to-door service costs little more than regular all-surface shipments, Lyon declares. A Slick C-46E (Commando) is shown taking a load from one of the moving company's vans at Los Angeles Airport.

basis between Miami and New York. Miami and Chicago, New York and Chicago, and San Juan and Miami. Company now owns three DC-3s and two Lockheed Lodestars and recently purchased seven surplus 88-passenger Boeing 314 flying boats. Some of these craft will be used by Universal's affiliate, Universal Airlines of Puerto Rico, Inc., which has filed for a scheduled New York-San Juan service.

► **Consumers Air Freight Corp.**, Champaign, Ill., carried 148 passengers and 35,500 lbs. of freight between May 9 and June 30. Plane miles totaled 12,830; revenue was \$5,040; and loss was \$958. One DC-3 and one Stinson are on hand. Company president is Frederick E. Price; executive vice-president is William K. McConnell, Jr.

► **Pacific National Airline, Inc.**, San Francisco, has applied for a CAB certificate to carry persons, property and mail between the general western areas of San Francisco, Los Angeles and Seattle, and the general eastern areas of Chicago, Philadelphia, New York and Boston. Application for scheduled service between San Francisco and Seattle has also been made (AVIATION NEWS, Aug. 12).

► **Intercontinental Air Transport Co.**, Miami, (AVIATION NEWS, Aug. 19) flew 452,400 revenue plane miles between December, 1945, (when operations began) and June 30 using DC-3s and Lodestars.

► **NATS Air Transportation Service**, Oakland, Cal., has asked CAB for a certificate authorizing scheduled passenger-cargo-mail operations between Oakland and Newark, N. J., via two transcontinental routes, and from Los Angeles to Juneau, Alaska. Capitalized at \$500,000, NATS has been engaged in fixed base air carrier operations since April 26 of this year, according to Clarence R. V. Abernathy, secretary. Two C-47s are on hand and the company is seeking C-54s and additional C-47s.

► **Fleetwood Airways International, Inc.**, Brownsville, Tex., recently began cargo/passenger operations in continental U. S. with two DC-3s and two Noorduyn C-64s. Extensions to Mexico and other Central American countries are proposed. Officers in-

clude A. G. Williams, III, president; John J. Lipco and William V. Wood, executive vice-presidents; and Bill Dobbins, secretary-treasurer.

► **Veterans' Air Express Co.**, Newark, has applied for a CAB certificate authorizing scheduled mail/passenger service on ten routes from Newark to London, Helsinki, Moscow, Vienna, Ankara, Cairo, around the world from Newark to San Francisco, New Orleans to Valparaiso, Chile; Miami to Valparaiso, and Miami to Mexico City. VAE also filed for a certificate to carry cargo only over the same routes. Company now operates nonscheduled and charter with DC-3s and DC-4s.

► **Nova Scotia Air Tours** has started daily nonscheduled passenger service between Boston and Yarmouth, N. S., using a 26-passenger DC-3 leased from Maritime Central Airways. Fare is \$30 one way and \$54 roundtrip.

► **National Air Cargo Corp.**, Los Angeles, has asked CAB for a certificate to carry cargo and mail on a scheduled basis over seven east and west coast and transcontinental routes. Company operates five DC-3s (AVIATION NEWS, July 22).

► **Page Airways**, Rochester, offered roundtrips to the Cleveland Air Races at \$47.50 per person.

## Trans-Luxury Crash

Pilot and co-pilot were killed and several of 23 passengers injured slightly when a Trans-Luxury Airlines DC-3 bound from New York to San Francisco crashed at the Moline, Ill., Airport recently. The accident occurred during an attempted emergency landing after a fire in one engine. Owned by International Airlines, Chicago, the plane was chartered by TLA and operated with a Trans-Luxury crew.

## College Approval

A certificate of public convenience has been granted by the Pennsylvania Public Utility Commission to State College Air Depot, Inc., State College, Pa., authorizing the company to operate as a common carrier on call or demand between State College and other Pennsylvania points.

## Business Booms

Fourteen Miami-based non-scheduled operators during the first seven months of 1946 flew 5,338,250 plane miles, carrying 47,018 passengers and 1,497,345 lbs. of cargo without accident to personnel or aircraft, according to the Contract Air Carriers Association.

The 14 lines, which have 701 employees, 63 aircraft and a monthly payroll of \$250,000, have headquarters at Miami's International Airport where they occupy hangar and office space in former AAF buildings.



## FINANCIAL

### Airlines Facing Prospects Of Narrowing Profits for 1946

Real test of earning power yet to come as operating costs mount and revenue rate structure declines; higher mail pay seen as possible solution.

Narrowing profit margins, if continued, may lead the domestic airlines to petition the Civil Aeronautics Board for higher mail compensation within the next twelve or eighteen months.

Lower profits are visualized for 1946 as compared to 1945. Largely responsible is the heavy development expense peculiar to the extensive expansion programs undertaken. The delay in delivering new and converted planes was particularly costly, as personnel were trained and available but immobilized while on the payroll.

► **Test To Come**—The real test of airline earning-power is yet to come. Operating expenses have been steadily mounting while on the other hand the revenue rate structure has been declining. During 1945, in May and August, passenger fares were reduced from approximately five cents per mile to four and a half cents. Air mail rates, on the whole, were reduced from 60 cents per ton mile to 45 cents effective January 1, 1945.

The mail rate reduction was instituted on order of the CAB. The passenger fare cut was adopted "voluntarily" by the airlines. A number of carriers believed that this reduction would solicit the good will of the public while removing potential excess profits tax liabilities. Not all carriers, however, were in favor of this reduction.

► **Need Big Loads**—The fact remains that at the four and a half cents a mile rate, the DC-3 probably operates at a loss with a load factor of sixty percent. Operating experiences of the DC-4 are not yet sufficient to determine its break-even point.

An analysis of airline "profit margins," i.e., operating income per revenue mile indicates this has been cut by an average of about forty percent. Increased operating expenses and declining

revenues will be more fully reflected in the 1946 reports. For example, the larger carriers have reported operating expenses per revenue mile ranging from about \$1.00 to \$1.10 for the earlier months. At the same time, revenues appear to range anywhere from 85 to about 95 cents per mile. With certain expansion and development programs completed, operating expenses may be reduced and stabilized at lower levels later this year.

Accordingly, the industry will experience a still greater narrowing of profit margins for the calendar year 1946. Whether increased volumes will be a substantial offsetting factor remains to be seen.

► **Income Declined**—The full import of these influences can be found in the final accounting for 1945. Despite an increase of about 35 percent in total operating revenues to \$214,600,000, the domestic carriers, as a group, experienced a decline of about 10 percent in net operating income, to \$16,900,000.

Reference is also made to the credit standing and capital requirements of the industry. Although the nation's airlines are passing through one of their greatest transitory periods, they have had little difficulty filling their capital requirements. This was reflected by the ability of a major airline, which suffered a loss of \$1,500,000 in the first quarter of 1946, to obtain an unsecured credit of \$10,000,000 at a 2½ percent interest rate from a fiduciary institution.

About \$625 million is now estimated as the new capital requirements of the domestic airlines for the five-year period through 1950. As of the 1945 year-end, the invested capital of these same carriers aggregated some \$170 million. This consisted of about \$146 million represented by stockhold-

ers' equity and the balance by bank loans and other funded debt. This projected four-fold increase in capital demands is a measure of the expansion plans anticipated by the airlines and the major role they are expected to play in our transportation scheme."

The basis of the high credit standing of the certificated airlines is attributed to two factors: air transportation has become firmly entrenched in our economy and the established air carriers have a priceless asset—a franchise. This franchise—a certificate of public convenience and necessity and issued by the Civil Aeronautics Board,—makes an unsecured credit to an air line a good risk in the eyes of a fiduciary institution, regardless of past or present earnings.

### Aircraft Stocks High In Investment Folios

The year-end market value of aviation securities held by the 35 leading closed-end investment trusts came within 12% of equaling the value of the trusts' automotive security holdings, Arthur Wiesenberger, head of the New York Stock Exchange firm bearing his name, reported.

According to an analysis of portfolios in the 1946 edition of the Wiesenberger 320-page reference book, "Investment Companies," closed-end trusts on Dec. 31, 1945, owned \$15,605,400 worth of air transport securities and \$11,012,000 of aircraft manufacturing securities, a total of \$26,617,400. Value of holdings in the automotive industry on the same date was \$30,105,000.

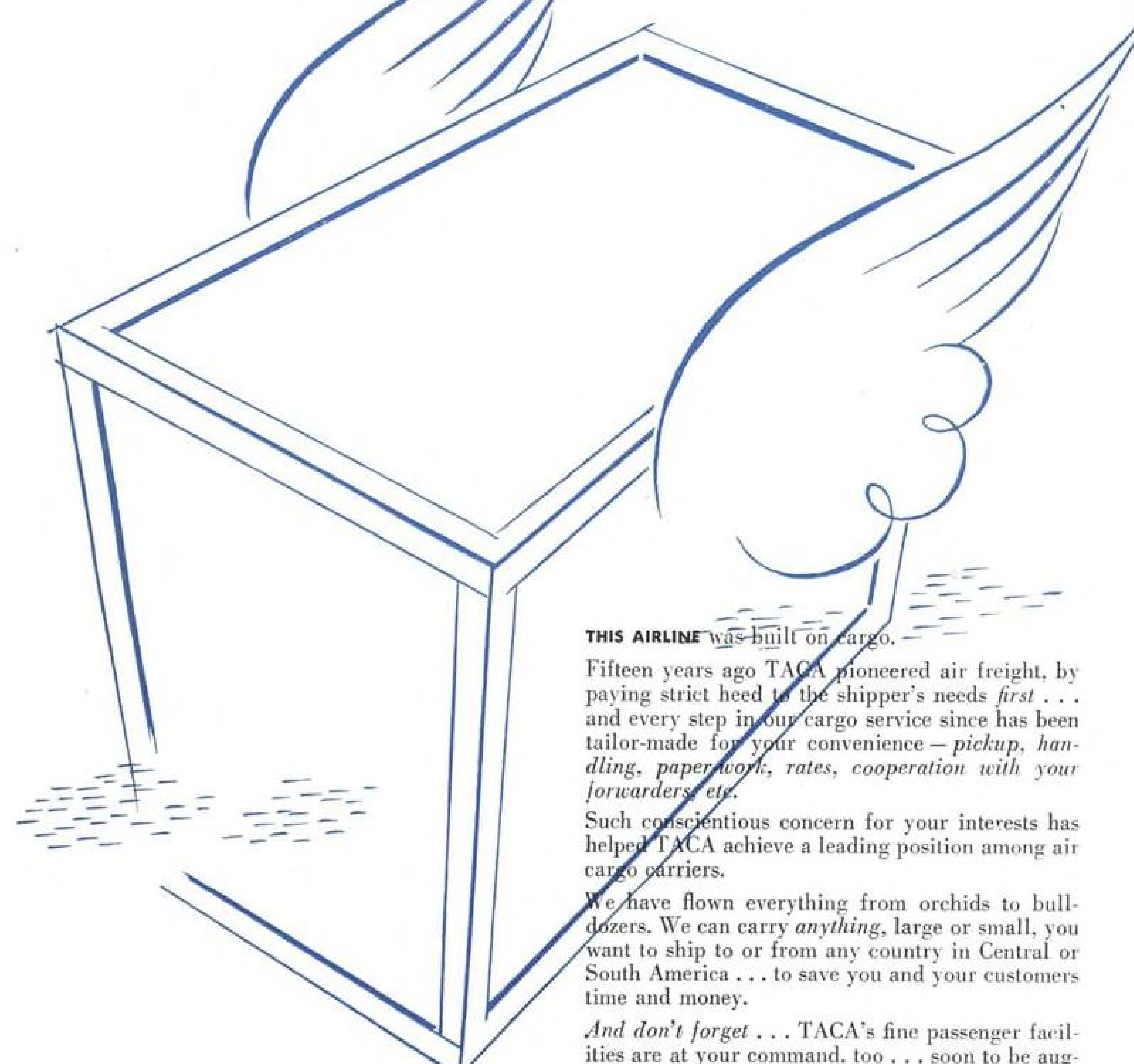
Comparable holdings a year earlier were: air transport, \$7,198,600; aircraft manufacturing, \$8,925,400; total, \$16,124,000; automotive \$23,607,000.

Individual stocks held in largest amounts among air transport companies were Pan American, Eastern, American and United; among manufacturing companies, Lockheed, Boeing, Douglas and Bendix; among automotive companies, Chrysler, General Motors, Willys-Overland and Libbey-Owens-Ford.

### Douglas First-Half Net

Sales of Douglas company produced \$2,610,261 net income after taxes for the first half of 1946. This was \$4.35 per share of common stock.

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## PRODUCTION

### Prospects of Billion Dollar Year Seen For Reconverted Aircraft Industry

Recovery well advanced despite parts and material shortages and labor difficulties; some companies already showing profits; military business still 50 percent of total.

By WILLIAM KROGER

The aircraft industry, despite a reconversion problem greater than that of any other industry, despite material and parts shortages, and labor difficulties in both its own and suppliers' plants, will do a business this year of just about \$1,000,000,000. This estimate, formulated by industry sources on the best information available, means that in this first peacetime year, the aircraft industry will sell more than three times as much as it did in 1939, last year before it was touched by the war.

It was expected during the war that the industry would emerge far stronger, financially, than it was before. But the big question, which only peace could answer, was whether the world's largest industry could be torn apart, and rebuilt quickly enough to avoid complete deterioration of even the much-improved financial structure.

**Working Capital High** — With Two-thirds of the first post-war year gone, the answer to that question apparently is yes, with reservations. At the end of 1945, working capital of the industry was at the highest point in its history, judging from Securities & Exchange Commission reports of 23 companies which showed working capital of \$612,000,000. Due to the slowness of deliveries of aircraft, that figure undoubtedly has decreased, but how much is almost impossible to determine. On the other hand, some of the major companies, such as Martin and Douglas, made satisfactory profits for the first half of the year.

Even though the industry is now on a "peacetime" basis, the military business (using the term to include naval, as well) remains as both the strength and weakness of the industry. Of the billion dollars' worth of business expected

this year, military, including experimental projects, will be just about one-half. Complete civilian aircraft to number more than 35,000, will constitute about \$250,000,000 worth of business, with engines, propellers, instruments and parts accounting for the balance of the billion.

**Economy Threat**—The weak feature of the military business is the unsettled question of governmental economy moves. National defense expenditures for fiscal 1947 total about \$18,000,000,000, of which AAF and Navy's Bureau of Aeronautics get a comparatively small part, less than \$2,000,000,000. There is no present disposition in the highest government circles to cutback or cancel contracts.

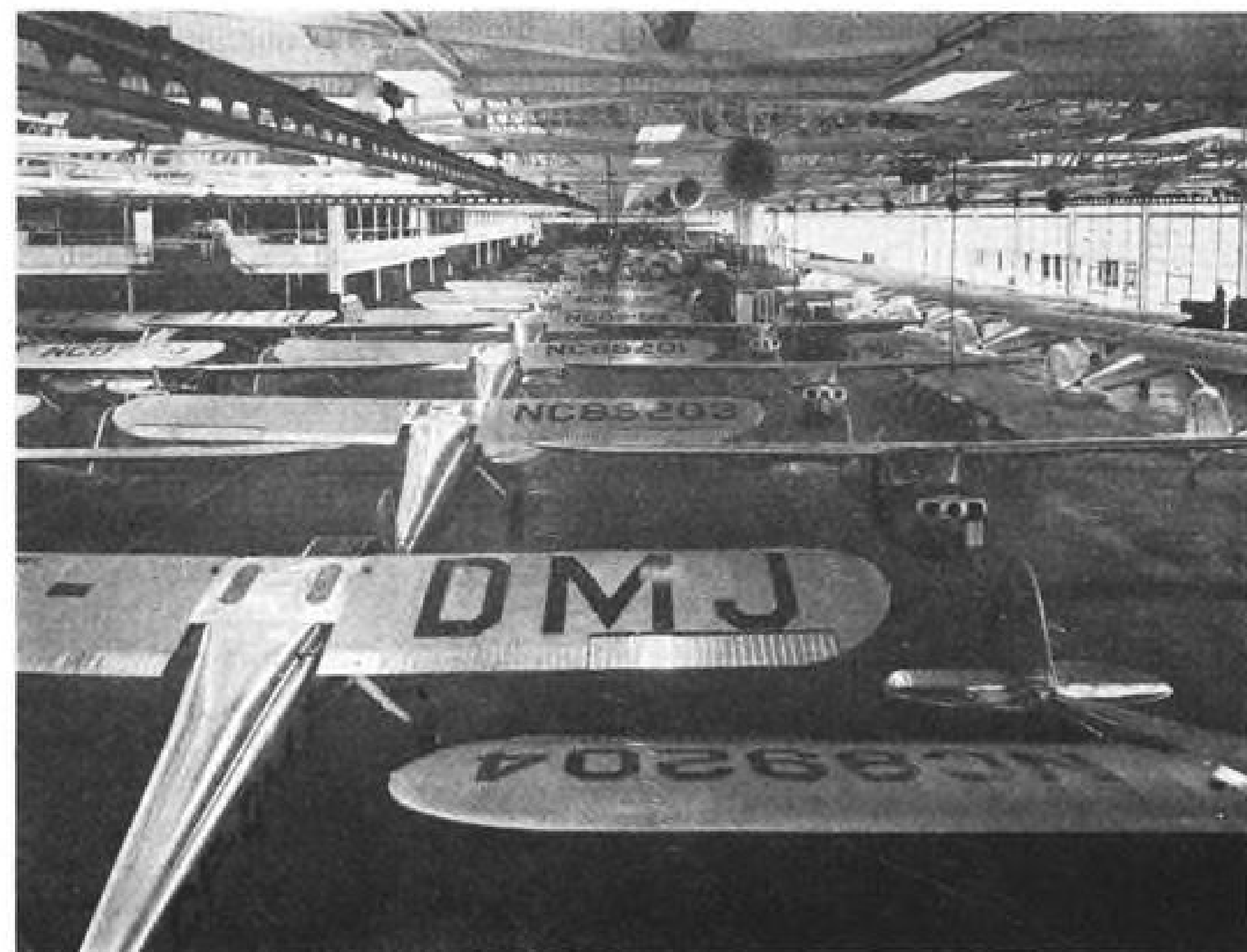
Research contracts are a large part of the industry's military

work. Here is where there might be some curtailment, both from a standpoint of economy, and by a shaking-down in the area of guided missile research to eliminate duplication among the various arms of the services.

The degree to which military orders can affect the future state of health of the industry can be gauged by the backlog figure, which was \$1,054,927,503 at the end of June. While no breakdown into military and commercial classifications is available, it is known that military orders are roughly two-to-one to commercial orders in most of the large companies. And, significantly, military orders dropped some \$2,000,000 during May and June.

**Backlog Deceptive**—The military portion of the backlog assumes even larger importance in view of the fact that the backlog for commercial planes is deceptive. Disregarding the argument — on which there are many views — that the airlines have "over-ordered," it is still true that the two largest backlogs are for types of planes that have not yet flown. And in the case of one of these planes, it is an open secret that some announced "orders" for it are nothing more than expressions of interest.

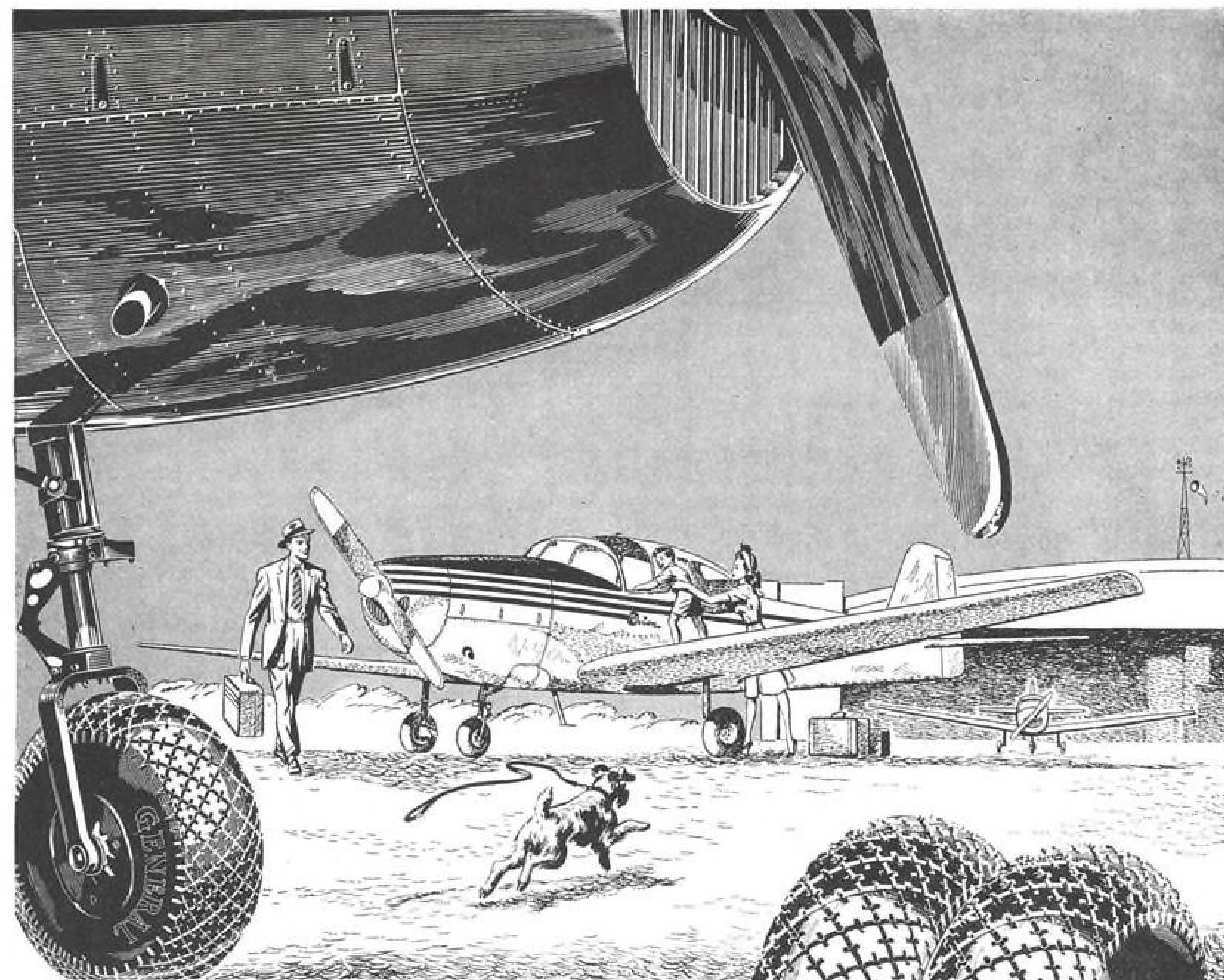
It is a natural desire on the part of airplane users to, in effect, "cover all bets," as ordinary citizens have been doing for consumers goods. It remains to be seen how many "customers," par-



#### CESSNA PRODUCTION LINE:

With production scheduled to have passed the 25-per-day mark in July, Cessna Aircraft Co. is in volume output of its Model 140 at Wichita.

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ticularly those of lightplane manufacturers, will accept delivery when the planes are ready.

With the exception of certain companies engaged almost entirely in experimental work, such as Menasco (AVIATION NEWS, July 29), profits for this year should be higher than could have reasonably been expected a year ago. But the fulfillment of this promise rests, of course, with deliveries.

**Material Shortages** — Material shortages still persist. Fabric is, however, loosening a bit. Aluminum remains the sore spot, and despite all the efforts of the industry, and the manufacturers of aluminum, there is little prospect of any but gradual movement. The only reason seems to be that there just isn't enough production capacity in the aluminum industry to meet all demands and won't be for a long time. Another worrying shortage is in fractional horsepower electric motors. There has been no alleviation of the shortage that persisted all through the war.

Employment of production workers is on the upswing and there is apparently no shortage of workers in this category. The extreme shortage of engineering and technical personnel continues, with little prospect of relief for some time, although the amended draft regulations recently announced should keep the shortage from becoming worse.

In spite of these harassments, there is good grounds for the belief that deliveries for the rest of the year will show great gains over the 13,950 delivered in the first six months of the year. The numbers, of course, will come from the lightplane manufacturers. Their reconversion problem, while perhaps no more difficult nor complicated than that of the large transport manufacturers, involved for most a new element. This was the institution of mass production "line" techniques, the market being too limited to accommodate this before the war. And for the most part those production lines were not expected to be in full blast until this month.

### Bristol Gets Orders

LONDON—The Argentine Aeronautical Purchasing Commission, which is on a visit to this country, has signed a contract with the Bristol Aeroplane Company for the purchase of 15 Bristol Type 170 aircraft valued at some \$2,000,000.

The Norwegian Airways Corporation has agreed to purchase from



### FLAMEPROOF WIRE:

*Demonstrating a new flameproof insulation for electrical wire developed by U. S. Rubber Co. is E. S. McConnell of the company. The insulation, 30% lighter than conventional wire covering, consists of a layer of glass fiber and a fire-resistant synthetic rubber. The new wire is known as Neolay.*

Short Brothers three large four-engined flying-boats of the Sandringham Mark VI class.

### Supersonic Skeptic Urges Speed Caution

With recognition that his own profession is going to take the rap from the public if airplane speeds don't live up to their current Buck Rogers ballyhoo, E. H. Heinemann, Douglas' chief engineer at the El Segundo plant, has tried to put a damper on some of the predictions.

He declares that since the Wright Brothers first flew 28 mph. 34 years ago, aircraft speeds have moved up only 14 mph. a year. "Never has the level flight of the fastest, stripped-down test airplane exceeded this orderly rate of speed advancement," he says. Further, commercial aircraft usually fly but one-half as fast as the record-making planes.

Heinemann admits that the historic rate of progress might be accelerated for the next few years, having been given a boost by wartime expenditures on research. After that, the rate will depend on the amount spent on research. It is possible, he says, to build a transport to fly 500-600 mph. and even achieve the speed of sound within a few years, but the cost to develop such a plane would make it competitively impossible.

### Avionic Group Will Probe Air Frontier

As an industry that has owed its progress to research, aircraft manufacturers long ago sired a subsidiary profession, consulting aeronautical engineering. With the emphasis now on supersonic flight which brings into play another science, electronics, there is a definite indication that this, too, will father a new profession.

Perhaps first in the field is the recently-formed Avionic, Inc., consisting of a group of aeronautic and electronic engineers whose aim is to pool their experience and knowledge to counsel an industry still admittedly groping around the edge of a new world of guided missiles, pilotless aircraft and speeds at which human reactions are obsolete.

Avionic, with offices at 274 Madison Avenue, New York City, has as its objective, in the words of President John A. O'Mara, "the solution of specific research and development problems of aviation" in the realm of "high-speed, high-altitude aircraft and their accessories, as well as electronic means to obtain long-range navigation and all-weather flying."

To accomplish this, O'Mara and his associates, John O. Gette and A. H. Sullivan, Jr., have brought together a staff with from 10 to 25 years' experience in aviation and electronics, and with first-hand knowledge of developments in their fields in Britain, France and Germany.

At the present time, according to O'Mara, the group is engaged in basic improvements on an engine through the re-design of the fuel system; design of a line of small precision pressure gauges; development of improved ultra-high frequency vacuum tubes; and work on radio altimeters and other airborne radio instruments.

### Rolls to China

Rolls-Royce, Ltd. has concluded an agreement with the Chinese Government under which Rolls' jet engines will be manufactured in China. Chinese engineers are now being trained at Rolls' plant in England, while British engineers are supervising the construction of a plant in China. This is the second notable foreign licensing agreement in which Rolls-Royce has figured recently, having previously licensed a private U. S. firm, Taylor Turbines.



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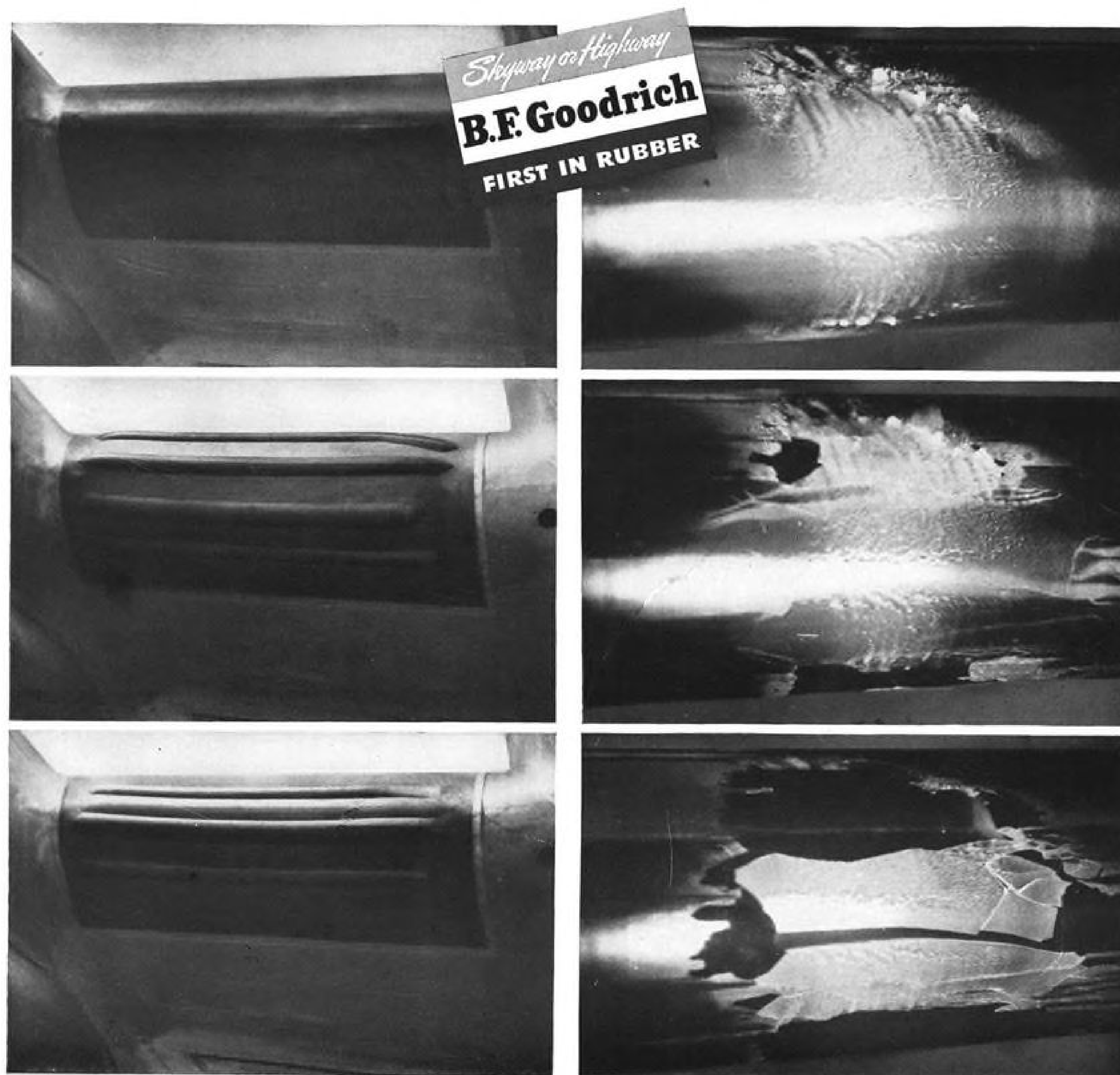
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## Here goes the De-Icer...there goes the ice

**Y**OU'RE watching a B. F. Goodrich De-Icer at work. The pictures on the left show what happens under the ice that's being removed from a wing. Pictures on the right show what happens to the ice.

Chances are you've demonstrated the De-Icer principle when you took ice cubes from a rubber refrigerator ice-tray. When the ice-tray was flexed, the ice cubes cracked loose from the rubber and were easily removed. De-Icers are long rubber and fabric strips with tubes inside. Tubes are inflated and deflated, flexing the rubber, cracking the ice. The windstream carries it away, as it is about to do in the bottom right-hand picture.

The B. F. Goodrich De-Icer has many advantages that make it the best ice-elimination device ever developed for aircraft. De-Icers protect *all critical areas*. They afford full spanwise and chordwise coverage of wing and tail leading edges . . . where most ice forms. Weight is minimized. De-Icers represent only a fractional percentage of a commercial plane's

gross weight, and this is negligible, considering the protection afforded plane and passengers.

De-Icers are still the object of study and research by B. F. Goodrich laboratory and field technicians to keep designs and types abreast of flight and plane developments. *The B. F. Goodrich Company, Aeronautical Division, Akron, Ohio.*

# B.F. Goodrich

FIRST IN RUBBER

## Ryan Adds 'Copters To Diversified Line

Metal Products division is brightest spot in company picture with orders from major aircraft plants.

Announcement by T. Claude Ryan that his Ryan Aeronautical Co. is engaged in helicopter development rounds out the list of the latest aeronautical work for one of the West Coast's oldest aircraft firms.

About the only thing lacking, at least not yet released by Ryan, is any mention of guided missile or supersonic research. But Ryan's diversified activities leaves small room for doubt that those phases, too, may be under exploration at the San Diego plant.

► **Builds Fireball**—At the moment, Ryan is building the Navy combination jet and reciprocating fighter, the FR-1 Fireball. It has also recently installed a test cell for jet engines. It has a new Navy contract for research in metallurgy in connection with development of high-temperature metals so necessary in increasing the power of jet engines. The company recently took on another sideline for the Navy, giving a stepped-up advanced course in aeronautical engineering to 20 Naval officers.

Perhaps the brightest spot in Ryan is its Metals Products Division. It stems from work begun originally in 1938 on stainless steel and exhaust manifolds. The manifold business probably contributes its greatest source of income today. Taking advantage of wartime experience in metal work, Ryan has gone out after general stainless steel fabricating contracts, and even garnered one from manufacturers of caskets.

► **Making Exhaust Manifolds**—In the bread-and-butter line, Ryan's Metal Products Division is making exhaust manifolds for such large aircraft producers as Lockheed, Douglas, Boeing, Consolidated Vultee, and Fairchild.

Other exhaust manifold equipment orders have recently been added from the Allison division of General Motors which, scheduled to become AAF's largest source of engines, can be expected to increase Ryan's backlog considerably in the metal products line.

On the basis of what would seem from the orders to be a solid knowledge and production technique in metals, Ryan's prospects should continue to be bright as the use of jet and gas turbine engines widens. According to AAF and Navy re-

search officers, the problem of obtaining metals able to withstand high temperature is by no means licked. Thus, the Navy contract for metallurgical research assumes added importance. Linked to this is another recent Ryan order from Menasco Mfg. Co. for jet components for Menasco's gas turbine engine (AVIATION NEWS, July 29).

Founded by Ryan in 1927, the company struggled through the early 30's, in 1936 showed a loss. By 1940, last full peace year, it was growing with sales that year of more than \$3,000,000, and a net of \$358,000. In common with other aircraft companies, it mushroomed during the war, in 1944, last full war year, having sales of more than \$35,500,000, and a net of \$703,000. It came out of the war with reserves of better than \$2,500,000.

Nothing on the record would indicate Ryan's growth will not continue. With its wide and varied orders to fill, the company expects to have reached an employment mark of 2,000 this Fall.

In the year ending Oct. 31, 1945, Ryan's sales were \$55,745,096, from which it realized a net of \$349,710.

While sales for the current year won't come anywhere near the wartime high, the net proportionately is better. For the first half of the fiscal year, through Apr. 31, Ryan reports sales of \$6,405,109, and a net of \$277,868. The shape of Ryan's future perhaps is best sketched in its backlog: A total of \$6,264,355, of which \$3,637,022 is for aircraft and engineering and \$2,295,813 for exhaust systems and jet engine parts.

## New Company to Convert Commandos at Niagara

A new company formed specifically to convert surplus Curtiss-Wright C-46 Commandos for commercial use has leased the Bell Modification Hangar at Niagara Falls, N. Y., where it expects 500 will be employed when full production has been achieved.

Named United States Services for Air, Inc., the company is headed by Albert H. Nisita. Plans involve approximately six months' experimental work in readying a model that can be approved by CAA for commercial use.

Nisita declares that his company's "offer to undertake the necessary modification and type-testing of these aircraft has been received enthusiastically by Government agencies which have extended full cooperation. Once the type-testing has been completed, the company will modify and license these aircraft for cargo and passenger use."

## Saturn Production

Peak production on the Saturn, Lockheed Aircraft's feederliner, is expected to be attained next summer, A. E. Whatley, superintendent of the airplane's assembly, reports. Basic engineering and planning for production is about complete and more than 3,000 shop orders have been released.

Jigs for wing beams and cab tops already are in operation and 15 additional subassemblies were



## TAYLORCRAFT SHORTCUT:

In place of old method of spraying primer on tubular metal aircraft frame, Taylorcraft Aviation Corp. has constructed this large tank into which an entire fuselage frame is dipped into zinc chromate primer which prevents rust and prepares frame for covering. Tank holds 2,000 gal. This method is claimed to cut 30 min. from manufacturing time of Taylorcraft BC12-D.



expected to be in production by last week. At its peak, Saturn production is expected to require about 2,200 employees.

## PanAm Converting Planes for Affiliates

To meet the needs of its affiliated airlines in Latin America, Pan American Airways has undertaken a heavy reconversion schedule of various types of aircraft at its Brownsville, Tex., maintenance base.

Doing conversion work for some ten Latin American carriers, PanAm has turned out civilian versions of DC-3s, DC-4s, Cessnas, Beechcrafts and PBV Catalinas. The size of the program is indicated by the 40,000-50,000 production manhours put in monthly.

Some features of PanAm's conversion work differ greatly from the usual conversion job. For Panagra planes, for example, oxygen lines must be installed to each seat for the runs over the Andes. Large cargo hatches must be cut into the amphibians for the freight traffic in the interior.

## Aviation Maintenance Corp. Will Service ATC Planes

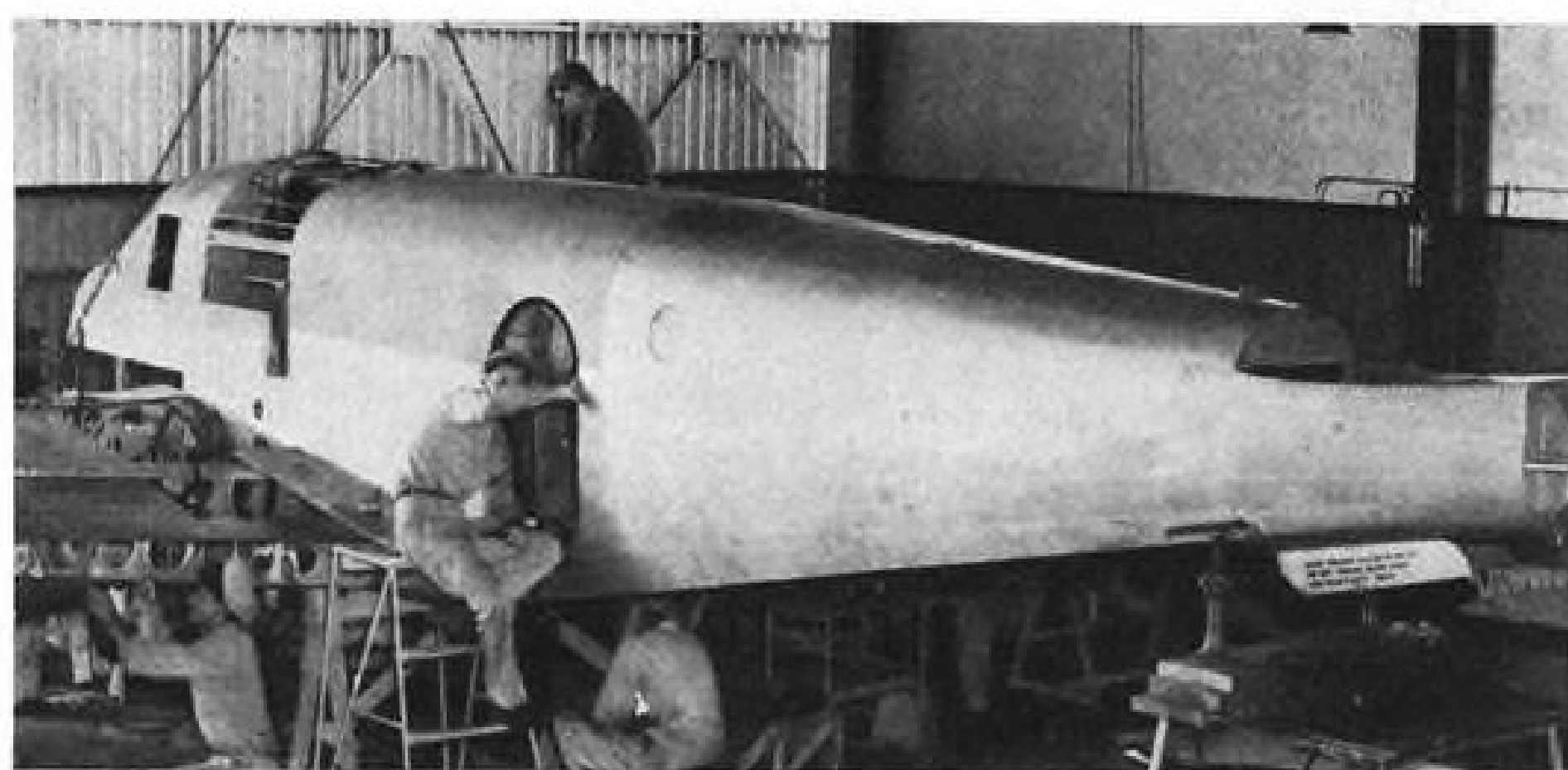
Aviation Maintenance Corp. of Van Nuys, Calif. has been awarded a \$1,700,000 contract by the Air Materiel Command of the AAF to maintain and service aircraft of the ATC's Pacific fleet. It is the first such peacetime contract awarded by the AAF to an aircraft service organization.

Brig. Gen. Robert E. Nowland, ATC Pacific Division commander, explained the Army's discharge policy has left Air Force installations without sufficient manpower to handle the ground crew work.

Contract terms specify that AMC will staff the Fairfield-Suisun air base with 350 technicians to handle line maintenance, 100-hr. and 300-hr. inspections, engine changes, minor repairs and turnabout maintenance. The new contract brings the company's backlog to better than \$7,000,000.

## Square-tipped Prop

A two-bladed Hydromatic propeller with square tips, made by Hamilton Standard division of United Aircraft, will be used on Boeing Aircraft's Model 417 feederliner. This is believed to be the first use of square-tipped



**Beechcraft Conversion:** Maintenance crews of Pan American Airways' base at Brownsville, Tex., work on the fuselage of a Beech transport that is being converted for one of PanAm's Latin American affiliates.

blades on a modern transport. Twelve feet in diameter, the propeller is the largest two-bladed Hydromatic ever made.

## Miami Modification Firm Will Move to Avon Park

The Miami Aeronautical Corp.'s modification center, located at the Ocala municipal airport for several months, has been moved to Avon Park, Fla.

"We have been unable to negotiate a satisfactory lease here (Ocala)," said Al Zaebst, general manager of the aviation concern, which has been engaged in converting surplus military planes into passenger and freight carriers.

Zaebst added that his concern had leased a large hangar at Avon Park for \$1 a year. In addition to converting aircraft, the firm has been handling maintenance for airlines. A repair shop, instrument laboratory and other departments are maintained by the firm.

## Fleet Merger Widens Scope Of Manufacturing Interest

Fleet Aircraft Ltd., Fort Erie, Ont., has been renamed Fleet Manufacturing Co., following approval by stockholders of the merger with Vincent Mining Corp. of Toronto (AVIATION NEWS, Aug. 5).

Contrary to initial belief as to the effects of the merger, Fleet aircraft production apparently will increase, along with a widening of other manufacturing interests. Norman Vincent, president of the mining concern, states that Fleet will push output of the Canuck, two-place lightplane, from two to

four a day, and plans envision a four-place model.

In addition, the company has manufacturing and sales rights in British countries to all current Consolidated Vultee training planes and Fleet trainers, and Canadian distribution rights to Waco aircraft.

The new company will also manufacture a plywood trailer, the CabinCar, to sell for \$695. It is understood that an order for 10,000 of these trailers has been placed by R. S. Evans Motors, New York. Another manufacturing item will be aircraft floats. Fleet Aircraft was founded in 1930 and was closely connected with Consolidated Aircraft, then located in Buffalo.

## Martin Pays 75 Cent Dividend on Sept. 13

The Glenn L. Martin Co. announced last week a third quarter dividend of 75 cents a share, payable Sept. 13 to stockholders of record Sept. 3. The same amount was paid in both the first and second quarters.

Revising the backlog figure made public a month ago, Martin stated that new orders in July, less \$4,358,712 worth of deliveries leaves a current backlog of \$185,641,288, as against a June 30 figure of \$175,000,000.

At the company's annual meeting, president Glenn L. Martin also announced establishment of a master planning department which will formulate a plan for the company's operation for the next five years. All design and research will be laid down within the scope of this plan.

All present officers and directors were re-elected.

## PRIVATE FLYING

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## NACA Propeller Formula May Throttle Lightplane Noise

Theodorsen report to industry cites prop blade tips as worst noise offender and offers design factors to make their sound inaudible at 300 ft.

By ALEXANDER MCSURELY

A formula for predicting accurately the noise of lightplane propellers, with design factors which can reduce the propeller noise to make it inaudible at 300 ft. has been developed by the National Advisory Committee for Aeronautics, and may well be a major factor in reducing the noise of lightplanes, if the industry elects to use it.

The formula is contained in a report to be issued about Sept. 15 by NACA to the industry, for Dr. Theodore Theodorsen, head physicist and chief of physical research at NACA's Langley Field (Va.) laboratory, who wrote it.

The noise factor in personal planes has been a major objection of property owners to establishment of close-in airports and airstrips near their real estate. If greater utility of the close-in landing facilities can be obtained through reduction of noise principally caused by the propeller, the personal plane industry will have taken a long step toward much wider public acceptance and utilization of the personal plane.

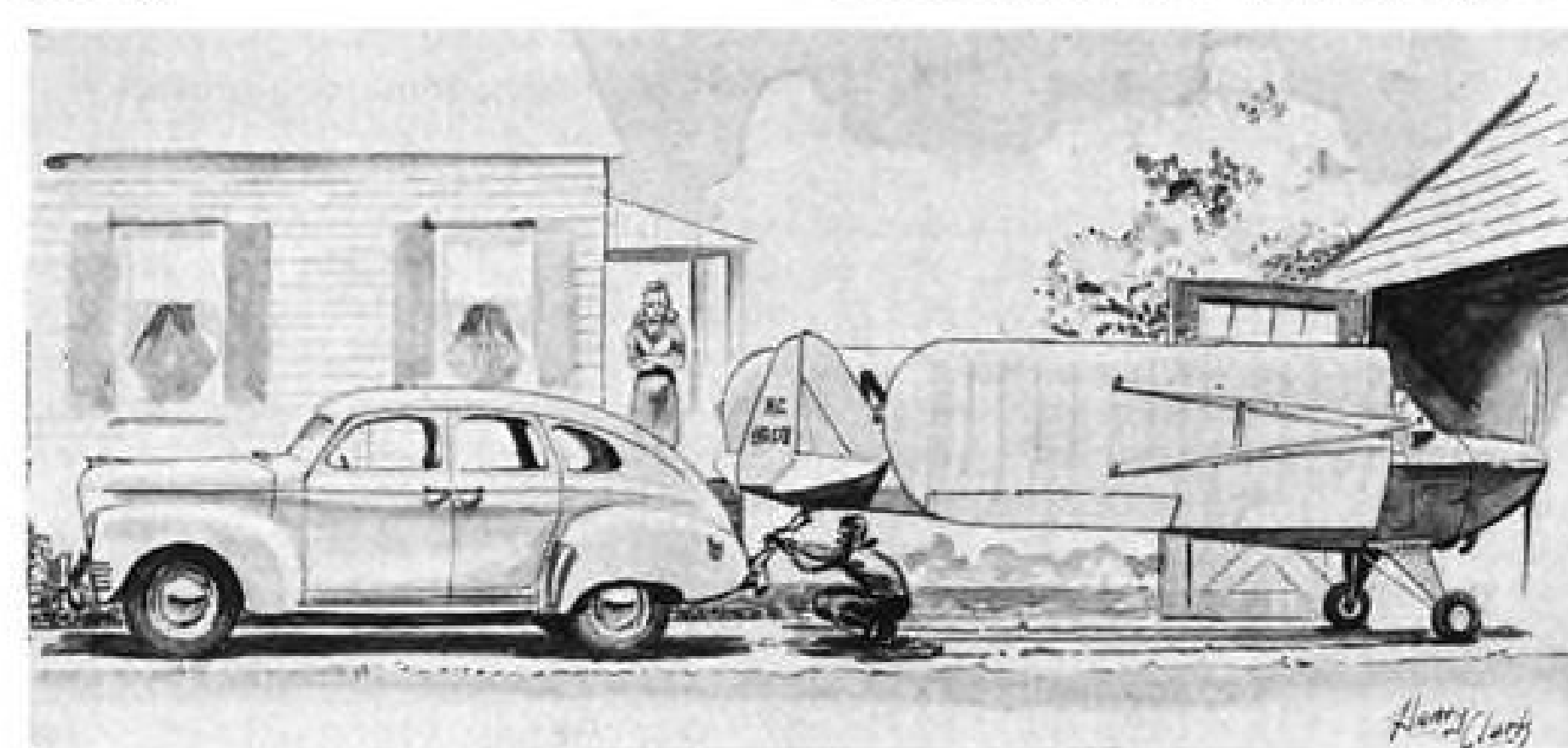
► **Gauges Noise Factor**—The Theodorsen report is an expansion of an informal discussion which he gave last June at the Detroit Light Plane meeting of the Institute of the Aeronautical Sciences (AVIATION NEWS, July 1).

One advantage of the formula lies in the fact that it will eliminate necessity for laborious and frequently inaccurate noisemeter readings on completed airplanes. Theodorsen cites propeller tip speed and its accompanying compressibility effects as the largest single source of noise in the entire airplane-engine-propeller combination, and contends that efforts to muffle engines are well nigh pointless, unless the major offender, the propeller is quieted.

The ideal lightplane propeller, in Theodorsen's opinion, is a wide-blade fan-type airscrew of multi-blade design, turning at slow speeds. He maintains that a properly designed propeller of this type used in combination with an effective engine muffler such as are now used on automobiles, could reduce total plane noise so that no noise could be heard at a distance of 300 ft. or more. With conventional two-blade propeller a noise "threshold" may be established above which the sound of the engine and other plane noises are lost in the propeller noise.

Dr. Theodorsen cites as factors affecting propeller noise:

- Number of blades
- Speed of revolution
- Speed of sound
- Propeller thrust
- Moment
- Propeller radius
- Velocity of one of the blade elements.



## DESIGN FOR FOLDING WINGS:

Henry Clark, Jamaica, N. Y. aviation artist, sketches this roadable solution to the hangar shortage, which offers possibilities to manufacturers if they make their lightplanes with folding wings. Designed for greater utility, the arrangement provides for a trailer hitch at the tailwheel of the plane, which can be attached to the rear of the plane-owner's car. This combined with an arrangement to fold and pivot the wings, so they lie flat against the fuselage, makes it possible to tow the plane tail first, between garage at home, and airport.

His formula establishes the relationships between these various factors, including various harmonic and sound co-efficients which make up the noise level produced by a given propeller design.

Starting with the noise level of a typical two-blade propeller with a tip speed 85 percent of the speed of sound, the NACA physicist reports the noise level could be reduced 25 percent by using a four-blade prop turning at 50 percent of the speed of sound, while the noise would be cut 90 percent from the original level, by using an eight-blade propeller turning at 25 percent of sonic speed. These calculations were based on an airplane speed of 75 mph.

► **Enthusiasm Temperate**—Preliminary inquiries in the industry, and discussion following the NACA physicist's remarks at the Detroit meeting, indicate that his proposals are being received with temperate enthusiasm, in several quarters. Largest deterrent is the manufacturing cost of a multi-blade design, and the additional expense added to personal plane prices.

Dr. Theodorsen does not expect much vibration trouble with the multiple blade propellers of thin section when low powers are used. Over 100 hp. he is not so sure.

The sound-reducing effect of a ring around the propeller tip, advocated by some engineers, is not significant in the NACA scientist's opinion.

There is a difference of opinion about the effective use of engine mufflers on lightplanes even when conventional two-blade propellers



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are used. An appreciable reduction in noise level is reported by manufacturers on several planes which have installed mufflers, but Dr. Theodorsen contends that the engine muffling is a minor factor compared to the propeller in the overall noise.

Experience indicates that a high-wing airplane transmits more noise to the ground than a comparable low-wing plane, presumably as a result of the sounding board effect of the high wing, Walter Jamoneau, Piper chief engineer, reported recently.

### CAA Orders Faulty Engine Piston Check

6,000 Continental A-65 engines require part replacements as soon as possible with 50 hour deadline.

A CAA order requiring replacement of faulty piston pins in more than 6,000 Continental A-65 engines, in light airplanes scattered throughout the country, last week created a large-sized disturbance among private flyers and flying service operators.

Meanwhile Continental Motors Corp., Muskegon, Mich., which had discovered the faulty piston pins through service failure reports, was endeavoring to get replacements out, and to notify owners whose A-65 engines had serial numbers between 3,456,658 and 4,109,568 inclusive that their piston pins had to be replaced.

► **Engines Affected**—The order also affects any A-65, A-75 or A-80 engines which have had overhauls and have had A-21422 piston pins or new three-ring pistons installed, since Sept. 25, 1945.

The CAA order provided that the pins be replaced "as soon as possible, or in any event within 50 hours of engine operation after Aug. 27."

J. B. Hartranft, Jr., general manager of Aircraft Owners & Pilots Association, Washington, estimated that the order affected approximately 2,000 to 3,000 of his association's members, and requested that all AOPA members with Continental engines in this category communicate with AOPA headquarters relative to the replacement.

► **Schools Hit**—It was pointed out that probably the first to be hit by the 50 hour limitation would be aircraft service operators, and flying schools, using 65 hp. train-



### MODEL V OVER HUDSON:

Unusual closeup photograph of the new Culver Model V production airplane shows the two-place plastic-plywood construction ship flying over the Hudson river. (Martin & Kelman photo.)

ers, which put in as much as 50 hours in a week. At the rate flown by most private flyers, the 50 hours of engine time would give them probably two months time in which to obtain replacement parts.

James Kinnucan, Continental chief engineer, said that the company was providing two types of replacement. The company will either provide new piston pins, or a piston replacement kit, including a new-type tighter fitting piston, larger pin and rod. It is understood that most of the engine owners thus far contacted have indicated preference to buy the kit, which Kinnucan said would be offered at a "nominal figure" rather than to get the pin replacement alone. He reported that the company had already shipped out 1,000 kits, and was moving rapidly to make and ship the balance.

"We see no reason why any plane should have to sit on the ground for want of replacement parts," he said. "We have instructed our dealers and distributors to set up a priority system on the replacements, on the basis of greatest need. If any plane is actually grounded, our company will do its best to take care of it promptly."

► **New Inspection** — The minute flaws in the pins which have caused a number of engine failures, were confined to the block of engines named, when normal

methods of inspection did not catch them. Since that time however the company has installed new electronic inspection equipment, which detects faulty parts.

Kinnucan said he expected the situation to be completely taken care of in 90 days. It is understood however that flyers organizations and individual owners are calling for larger production of the replacements at the Continental plant, so that the parts will be provided more quickly.

It was reported that a number of private flyer owners of planes with affected engines, had voluntarily grounded them as a safety measure, until they could get replacement parts.

CAA officials said that the 50 hour deadline had been set in order to give Continental time to supply the replacements, so that at least most of the planes would not have to be grounded.

### \$200 Buzz Job

The chairman of the Colorado Aeronautics Commission, Marvin R. Jackson, was fined \$200 last week in municipal court at Grand Junction, Colorado for low flying and "buzzing" the town and airport. The commission has been conducting a campaign for safety in private flying, and opposing low flying and buzzing.



## Jacksonville, FLORIDA



## Ideal Location.. FOR MANUFACTURERS OF AVIATION PARTS

The year-round good weather that permits continuous testing, more working days, lower plant construction and maintenance costs, is only one of the reasons why Jacksonville is an advantageous site for manufacturers of aviation parts and specialties.

**LOCATION**—Southeastern corner of the United States, strategically situated to serve economically the rapidly growing industrial Southeast, interior markets, Gulf and Pacific Coasts, South America and world ports.

**LABOR**—Ample supply of skilled and unskilled labor, largely native born, co-operative and easily taught. Many workers have special skills born of Jacksonville's heavy volume of war industry, especially in metal fabrication and electrical specialties.

**DISTRIBUTION FACILITIES**—A major Atlantic port and highway center, served by four trunkline railroads, and Intracoastal Barge Canal providing a sheltered waterway from New Jersey to Miami. Three major airlines, and numerous bus and truck lines.

**MARKET**—Jacksonville's non-competitive distribution area embraces a population of 3,420,770 with an effective buying income of \$2,626,291,000. The local wholesale trade area includes a population of 1,194,891 with an effective buying income of \$1,045,792,000.

A specific industrial and market survey will be prepared at your request. Write us and outline your needs. Correspondence will be strictly confidential.

Dept. B., Aviation Division,  
Chamber of Commerce,

**Jacksonville  
FLORIDA**

## Pimlico Airport Barometer Of Baltimore Flying Boom

Private pilots' base registers 250 to 300 landings and takeoffs daily; flight school, repair base add to activities.

Barometer of the growth of private flying in the Baltimore area is Pimlico airport, in northwest Baltimore (formerly Curtiss-Wright airport) operated by Frank and Howard Knipp since they purchased it for approximately \$260,000 last December.

AVIATION NEWS' Baltimore correspondent reports that the airport is probably the busiest in Maryland except for Baltimore Municipal Airport. Operating only in daylight hours, and not equipped for night flying, Pimlico is registering 250 to 300 landings and takeoffs per day, and has 41 personal type planes based in its two hangars, including Aeroncas, Commonwealth Sky-rangers, Ercoupes, Fairchild PT-19s, Grumman Widgeon, Piper Cubs, Taylorcrafts, and Stear-mans. Except for six planes owned by flying clubs, virtually all of these are owned individually. Additional private planes are expected to be based at Pimlico as soon as a number of individual prefabricated T-hangars now on order, are erected.

► **Flight School**—Besides private flying activities, the field is operating a flight school with 10 Cub trainers, two PT-19s and two Cessna 140s, and could use more equipment if it could get it. There are 90 veterans enrolled in the private pilots course and nine others in the flight instructor's course. In addition, there are 25 non-veteran flight students, and additional enrollments are expected as soon as additional planes are available.

Eight full-time instructors plus two part-time Sunday instructors are used, under leadership of Robert Benson, chief flight instructor, and William McK. Reber, Jr., ground school director. Evening ground school courses and a Link trainer, provide supplemental instruction to the flight training.

The maintenance and repair base at Pimlico has a staff of 11, including three A. & E. mechanics. As soon as additional equipment can be obtained, the training division expects to add an approved mechanics' course to the flight training courses now given.

► **Conversion Base**—The Knipps originally bought the field as a base for conversion of surplus warplanes, but abandoned this project in favor of the airport and school operation, under the name Knipp Aviation Industries, Inc.

William H. Mellon, general manager, reports that since the 260-acre field was taken over nine months ago, hangars have been renovated and repainted, asphalt tile floors have been laid; ground and flight school and office rooms have been provided; an attractive snack bar overlooking the field has been added, foundations have been poured for the additional expected T-hangars, the landing field has been rolled and scraped with one runway extended to 3800 ft. and a second runway to be similarly extended.

A project still in the future, is construction of a small hotel at the airport. The Knipps expect that many racing fans may fly to their airport during the track season at nearby Pimlico track, as private flying expands, and would like accommodations at the airport.

## Taylorcraft Cuts Price Of Three New Models

Taylorcraft Aviation Corp., Alliance, Ohio, last week figured in two important news developments which may affect vitally the highly competitive personal plane industry.

In the face of a general upward trend in personal plane prices in recent months, Taylorcraft last week announced price reductions of \$250, \$275 and \$295 for the three versions of its two-place side-by-side 65 hp. Model BC12D. The prices (all flyway from Alliance) were announced as \$2,600 for the custom model, a \$250 reduction; \$2,500 for the deluxe model, a reduction of \$275, while the standard model is now priced at \$2,400, a reduction of \$295. No changes have been made in equipment or prices, according to O. M. Bell, vice-president in charge of sales.

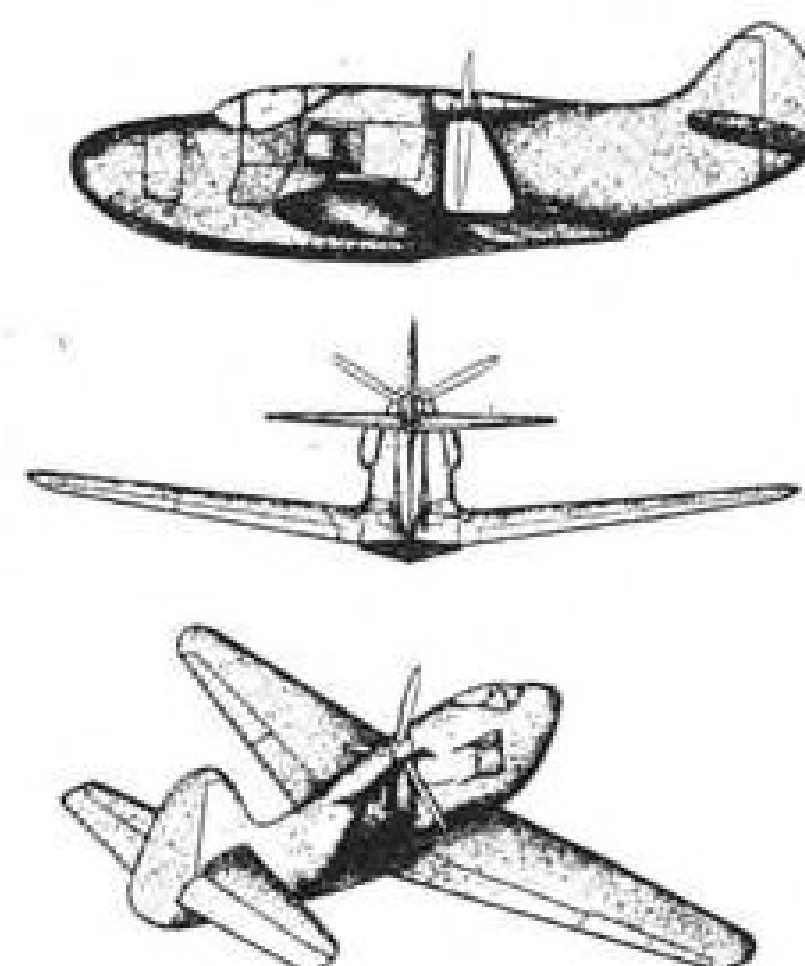
Meanwhile it was disclosed that an option for approximately 75 per cent of Taylorcraft stock, the

holdings of Nash Russ, Taylorcraft president, had been taken by Transamerica Corp., San Francisco. The option expires Sept. 12, and whether it would be exercised, had not been determined, Wilfred L. Andrews, vice-president and treasurer of Transamerica Corp., said. The west coast corporation already controls one aircraft parts manufacturer, Adel Precision Products Corp.

## Southern Airways Opens Seventh in Chain of Airports

Southern Airways Company of Birmingham has opened the seventh in its chain of aircraft sales and service bases, at Mobile, Ala., at Bates Field municipal airport. The new operation is being managed by Julius L. Boggs, former marine flyer, and W. T. Anderson is superintendent of maintenance. Both men were formerly associated with Southern Airways and have returned to the company after service in the armed forces.

Arrangements are now being completed for opening the eighth of the Southern Airways bases at a location to be announced soon.



## SEAPLANE PATENT:

Patent for a single-engine low-wing seaplane design of personal plane size with a three-blade pusher propeller installation behind the cabin, submerged in the fuselage in an unusual arrangement, has been issued to Theodore C. Bennett, and Mark Morton of Philadelphia, and Frederick M. Gloecker, Upper Darby, Pa., the Aug. 20 U. S. Patent Gazette announces. The same gazette also announces issue of patent for what appears to be the Piper Skycycle one-place plane design, to Walter Jamoneau, Piper chief engineer, and assignment to Piper Aircraft Corp., Lockhaven, Pa.

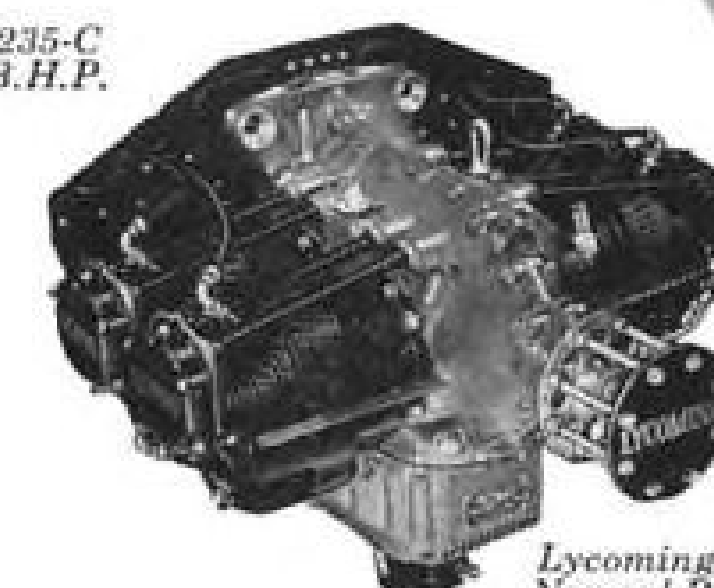
ANY PRIVATE PLANE IS A BETTER  
PLANE WHEN IT'S POWERED BY  
"LYCOMING"



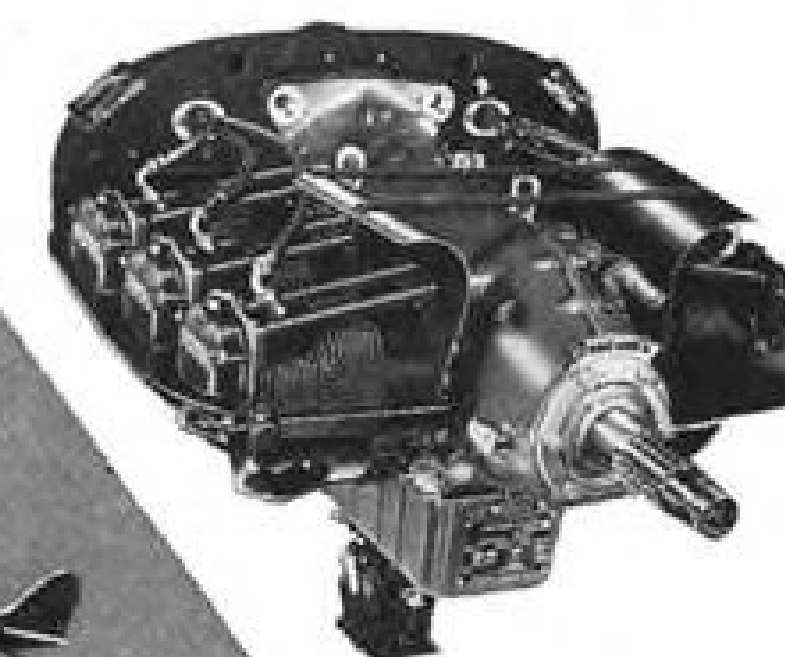
Lycoming Model  
0-145-B-2, Normal  
Rated 65 B.H.P.



Lycoming Model 0-235-C  
Normal Rated 100 B.H.P.



Lycoming Model 0-290-A  
Normal Rated 125 B.H.P.



Lycoming Model 0-435-A  
Normal Rated 190 B.H.P.

**LYCOMING**  
AN **Avco** **AIRCRAFT ENGINES**  
PRODUCT

Lycoming Division, Dept. C-6, The Aviation Corporation, Williamsport, Pa.



The Bates Field operation occupies the municipal hangar, and includes besides usual maintenance and repair facilities, flight training, charter flying, aerial photography and other services. Frank W. Hulse, Birmingham, is president of Southern Airways, which is distributor for Beech, Piper and Republic planes, Cities Service products and Bendix aircraft products.

## Arkansas Flying Farmers Organized at Little Rock

Ninety-five farmers registered for the organization meeting of the Arkansas Flying Farmers Association, at Adams Field, Little Rock, recently. Thirty-nine of them came from Arkansas county, center of the state's rice-growing industry. About 45 of the registrants came in their own planes. A canvas showed the membership averaged about 300 flying hours.

Charles Rose, Roseland, was elected president. Other officers: Leon J. Garot, DeWitt, vice-president; Miss Cleve Burks, Little Rock, secretary-treasurer. G. R. Jones, Almyra, was cited as head of the largest flying farmer family in the group. Jones, his wife, his son and his son-in-law are all licensed pilots, and own three planes in the family.

The Arkansas group, like other state associations which have been formed recently, is affiliating with the National Flying Farmers Association, Stillwater, Okla. The University of Arkansas agricultural extension service is a sponsor of the state group.

## Scooter Tests

Thorp Aircraft Co.'s two-place low-cost "sky scooter," which has much of the appearance of the Lockheed "Little Dipper," which John Thorp designed before leaving to set up his own company, received successful test flights recently at Metropolitan airport, Van Nuys, Calif.

Designed originally for a 50-hp. engine, the new plane has been modified to accept a 75-hp. Lycoming 0145. With this power plant it is expected to produce a sea-level cruising speed of 110 mph, 120 mph at 10,000 ft., and a minimum flying speed of 45 mph. In preparation for continuing flight tests and commercial production, the Thorp company has moved from Burbank to 8000 Woodley Ave., Van Nuys, Calif.

## Briefing For Private Flying

**INTERNATIONAL BREAKFAST**—Sea Island airport, Vancouver, B. C., was the rendezvous point for 128 Seattle, Wash., private planes and 20 Canadian planes, for an international breakfast, demonstrating the already existing use of private aviation in the area. The flight sponsored by the Seattle Aircraft Owners & Pilots association, required the full time of a stenographer for three days, to fill out the necessary forms required of U. S. planes when they crossed the border.

**JUMPERS, RIGGERS INCORPORATE**—Affairs of the National Parachute Jumpers Association will be taken over by the newly organized National Parachute Jumpers-Riggers, Inc., Mineola, N. Y., chartered by the Secretary of State of New York. The organization will seek to provide registry for jumpers and riggers, sanction and encourage competitions and exhibitions, and to advance research and development and cooperate with other air groups.

**ACTION DEMANDED**—A Minneapolis clinic of operators, private pilots and plane owners recently brought criticism of the Minneapolis metropolitan airports commission for delay in providing additional facilities for private flyers. Robert Aldrich, director for the commission, said work would start next spring on three fields for private flyers, in Golden Valley and Crystal areas of Minneapolis, and at Bloomington. Recommendations for three other private flyers fields, with "lots of hangars and shops" were presented. The clinic, sponsored by the Junior Association of Commerce plans to develop a coordinated program of private flying airport needs, to be recommended to the commission for prompt action.

**\$115,000 EXECUTIVE PLANE**—Companies interested in deluxe executive planes for their own transportation uses, will be interested in Douglas Aircraft Company's Executive plane, a completely rebuilt war surplus C-47, sold with a new plane guarantee at \$115,000, and demonstrated last week at Washington National airport. The one we saw had seats for eighteen, including two couches, while another version has four couches. Built-in desks, radio, and complete galley and restroom facilities are provided. Even the seats of the pilot and copilot are red leather upholstered. The passenger compartment is sound-proofed double thick. Bob McRae, Washington Douglas representative, alleges it makes the cabin so quiet you can hear the coat hangers rattle on the racks when the plane is in flight.

**SCHOOLS DOUBLED**—In the first seven months of 1946 the number of CAA-approved ground and flying schools has more than doubled, climbing from 405 as of Jan. 1, to 1,021 on Aug. 1. In July alone, 188 new schools were given approval, and 70 were re-approved. The rapid increase is credited to two factors: a steady increase in private flying, and the GI bill of rights which provides government sponsorship of flight training of veterans. A number of the schools which have sought CAA approval, operated before the veterans' programs started, without approval, but the Veterans' Administration and states administering the educational work for veterans have almost uniformly required that schools with such programs have CAA approval. This has brought in a few older schools desiring the veteran programs, as applicants for CAA approval, but largely the increase has consisted of new schools which have been opened since Jan. 1.

**275 GI TRAINEES AT BALTIMORE**—An AVIATION NEWS survey at Baltimore's six flying schools, recently showed that approximately 275 veterans are learning to fly as civilians under the privilege of the GI Bill of Rights. About one-third of the group served in non-pilot aviation assignments such as mechanics, gunners, radiomen or navigators, while in the army, navy or marine corps. A large majority of those taking training are seeking only a private pilot's license. Largest of the Baltimore GI groups was at Knipp Aviation school, Pimlico airport, where 89 were enrolled in the primary course, and several in a commercial pilot course.

—Alexander McSurely

## TRANSPORT

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## State Department Seeking Pacts To Weave U.S. Global Air Network

India is critical missing link in present picture as conversations begin with China over landing rights and efforts for agreements in Latin America are renewed.

Main burden of welding the global network of U.S. international airlines has shifted to the State Department following CAB's recent disposal (AVIATION NEWS, Aug. 26) of the the last international case pending since the Board's projection of world wide commercial air pattern in 1944.

Thus far, the Department has procured operating rights in 19 foreign countries for American air carriers, under bilateral agreements authorizing 18 foreign nations to fly to the U. S. and tap U. S. traffic—estimated at approximately 80 percent of the world's air commerce—at lucrative points. **12 Foreign Carriers** — These points of entry, most of them in the high traffic generating centers of the Eastern seaboard have been awarded the carriers of 12 foreign nations. Six others — Spain, Greece, Ireland, Turkey, Lebanon, Egypt—with whom agreements have been effected have no specific gateways to this country yet, largely because their overseas air carrier systems have not been organized.

In one instance—Saudi Arabia—the Department has negotiated operating rights for a U. S. carrier without authorizing reciprocal operating privileges to America.

The ports of entry at which foreign airlines from the remaining 12 countries have been authorized to bid against U. S. carriers for international commerce: **Great Britain**—New York, Chicago, Detroit, Philadelphia, Washington, Baltimore, Boston, New Orleans, Miami, Palm Beach, San Francisco.

**Canada** — Boston, New York, Cleveland, Chicago, Duluth, Seattle.

**France** — New York, Boston, Washington, Chicago, United Nations location when established.

**Denmark**, Iceland, Norway, Sweden—New York and Chicago.

**Czechoslovakia**, Portugal, Belgium, Switzerland, The Netherlands—New York.

Still to be completed by the Department, before operations under CAB awards can begin, are arrangements for air rights in some 25 countries.

Efforts to negotiate with Russia, the Balkans, Mexico and India have been unavailing. The Department has abandoned attempts to obtain rights in Russia and the



## SURF RESCUE:

Helicopter Air Transport, Inc., Philadelphia, whose Sikorsky S-51 is shown towing a "drowning man" to shore at a recent Ocean City, N. J., demonstration, has set its sights on helicopter networks in four areas. HAT has applied to CAB for a certificate authorizing scheduled transportation of mail, persons and property over extensive local and feeder routes radiating from New York City, Philadelphia and Chicago and in New York state. Company now has two S-51s, with another to be delivered this month. One Bell 47B is due this month, another in October, and two each in November and December. (Press Association photo.)

Russian-dominated Balkans, which apparently will remain walled off from international air commerce for some time to come. It plans a second attempt to negotiate with Mexico at an indefinite future date, and has dispatched George Brownell, former brigadier general and assistant to the Assistant Secretary of War for Air, to expedite an arrangement with India.

**India Critical Link**—Failure to obtain operating rights in India would leave a critical hole in the globe-circling U. S. routes certificated by CAB, since North Atlantic operations of Pan American and TWA funnel through India to connect with PAA's and Northwest's Pacific operations to the Orient.

Other bilateral air agreements are to be negotiated with New Zealand; Australia; Newfoundland; China; the Philippines; virtually every South and Central American country — Colombia, Ecuador, Peru, Chile, Paraguay, Uruguay, Venezuela, Argentina, Brazil, Haiti, Guatemala, San Salvador, Cuba, Haiti; and the Union of South Africa.

Stop-gap arrangements under which U. S. carriers are authorized to operate into New Zealand and Newfoundland will be supplanted by formal bilateral agreements in the immediate future, according to officials in the Department's Aviation Division. Negotiations on a U. S.-Australian bilateral agreement also are well advanced.

**Powell in China**—In China, Col. Bolling Powell is representing the U. S. in conversations looking to an air agreement. China's net of wartime airports are deteriorating rapidly and the Chinese are eager for foreign aid to repair them in return for landing rights.

In South and Central America, the State Department plans ultimately to replace with bilateral agreements on the government level all agreements entered into by Pan American Airways before the war. U. S. policy is not to permit individual lines to make agreements with foreign countries. Pan American agreements do not allow for South American operations by Braniff, certificated by CAB, and several South American countries have indicated that they now want operating rights into the U. S.—a concession Pan American obviously could not grant.

Negotiations with Central American countries are at the bottom of the Department's agenda while Pan American, only U. S. operator



to this area, carries on under its private agreements.

CAB's route certifications set up 11 U. S. air carriers as operators in the international field: American, Braniff, Chicago and Southern, Colonial, Eastern, National, Northwest, Panagra, Pan American, TWA and Western.

## Four Airlines Oppose Panagra Agreement

Lively opposition to the 99-year charter agreement reached last month by Pan American Airways and Panagra (AVIATION NEWS, Aug. 12) has developed among four U. S. airlines, and the Department of Justice is scrutinizing the pact in the light of antitrust laws.

Eastern Air Lines, Chicago and Southern Air Lines, National Airlines and Braniff Airways have expressed concern over the effect of the contract on competing services. Department of Justice representatives said the facts and circumstances surrounding the agreement, together with the terms and conditions of the contract, pose questions with respect to the maintenance of sound conditions and practices in air transportation.

It was suggested that the agreement, if allowed to stand, might establish a dangerous precedent for upsetting CAB's entire route concept and circumventing the Board's authority by establishing new services through inter-carrier contracts instead of through new certifications.

EAL President E. V. Rickenbacker sharply attacked the contract, under which PAA would charter Panagra aircraft to operate nonstop over PAA's certificated routes between the Canal Zone and the U. S. He said PAA and Panagra, after years of shadow-boxing, were trying to establish a united front to reenforce their U. S. flag monopoly in the Caribbean and Latin American areas.

## Commercial Landing Fee Set for Cleveland Field

A facility fee and landing charge, ranging up to \$24 depending on plane weight, has been applied to commercial carriers using Cleveland, Ohio, Municipal Airport. An average of 25 arrivals and departures a day are affected.

The schedule calls for payment of \$9 for commercial ships with a gross weight not over 15,000 lbs.,



### CAL BUYS 240s:

Present when Continental Air Lines contracted recently for 15 Convair-240 transport planes were these CAL and Consolidated Vultee officials. Left to right: Sheldon G. Cooper, Continental's general counsel and director; Robert F. Six, CAL president; I. M. Laddon, Convair executive vice president, and William A. Blees, Convair vice president in charge of sales.

\$10.50 to 20,000 lbs., \$12 to 25,000 lbs., and the same scale until, in the case of DC-4 and Constellation types with a gross of 80,000 lbs. or over the charge will be \$24. No charge is made or contemplated on privately owned planes, nor is one made on privately owned commercial planes owned and based in Cleveland.

Institution of the landing charge rounds out the program of Maj. John Berry, airport manager, on landing fees, inaugurated in January when a graduated scale for use of the field was agreed on be-

## CAB Swamped

After two months in which CAB whittled down its backlog of pending dockets from 994 to 908, an unprecedented flood of applications developed during July which wiped out more than half of the reduction achieved in May and June. Proceedings pending July 31 totaled 965.

New applications are continuing to pour in, with about 118 dockets opened between July 1 and Aug. 20, compared to 410 during the entire year ending June 30, 1946. Non-scheduled carriers and freight forwarders have filed for certificates in large numbers during recent weeks, and helicopter route applications are also on the increase.

tween airport management and the four scheduled airlines (United, Eastern, American and PCA) using the field.

Under the arrangement, each airline is charged \$150 per month for the first four scheduled arrivals per day, \$100 for the fifth through the eighth, \$50 for the ninth through the 15th, with a flat \$25 per month for all additional.

## UAL Will Begin Hawaii Flights Dec. 1

United Air Lines expects to start flying its new San Francisco-Honolulu run on a regular schedule Dec. 1, and Northwest Airlines plans to begin service between Seattle and Anchorage, Alaska, early this month, officials of the two carriers announced recently.

UAL's Hawaii operations probably will open with twice-daily roundtrips using DC-4s. DC-6s will be substituted later, and Boeing Stratocruisers will be used in the fall of 1947. Northwest's Anchorage run initially will be flown with DC-4s making one roundtrip daily.

### Other new services:

- **Trans-Canada**—On Sept. 15 will open a daily service between Fort William, Ont., and Duluth, Minn.
- **Eastern**—This week inaugurates regular service to Providence, R. I.
- **Western**—Was scheduled to begin flying 12 instead of 10 roundtrips daily between Los Angeles and San Francisco on Sept. 1.
- **Braniff**—Has started its first survey flight over its new Latin American routes.
- **Mid-Continent**—On Sept. 1 reinstated service to Aberdeen, S. D., Bismarck and Minot, N. D., and St. Joseph, Mo.

## Monarch Airlines Plans Early Operations of Route

Monarch Air Lines, Denver, plans to begin operations about Sept. 15 on three of the Rocky Mountain feeder routes for which it was certificated last March, and proving flights are scheduled to begin shortly. Activation of two other routes has been delayed because of inadequate airport facilities at some of the towns to be served.

At the outset, one round-trip daily will be flown in daylight contact operations from Denver and Salt Lake City to Farmington and Albuquerque, N. M., with five converted C-47s. As a concession partly to the altitudes involved and partly to Monarch's plan to provide large cargo space, three planes will seat 15 passengers and two will accommodate 18.

## Speed Opening of Floyd Bennett To Ease N. Y. Airline Traffic Jam

President approves commercial use of former Navy field and survey rushed in attempt to open airport for commercial use by Oct. 1.

Efforts to speed the day when the airlines can use Floyd Bennett Field in Brooklyn to supplement crowded LaGuardia Field are being made by New York officials, who expect a survey of Floyd Bennett to be completed this month, after which final arrangements will be completed with the Navy.

Presidential approval has been received for commercial use of the field, which was purchased from the city by the Navy four years ago for \$9,250,000 and has been vastly improved since that time. Some hope was expressed that the airlines, to which it has been available for emergency landings, might begin regular operation Oct. 1.

Any considerable use of the field, it was said, would nearly double New York's municipal airport facilities. Floyd Bennett, like LaGuardia, has four runways. Each is 5,000 ft. long, while the length at LaGuardia varies. Bennett handles an average of 300 landings and takeoffs daily, LaGuardia about 400.

### Other airport developments:

- **Watertown, N. Y.**—Operation of the \$2,000,000 municipal airport was taken over by officials of Benson Watertown Airways, Inc., from Northern Air Service, Inc., which has moved to its own field.
- **Buffalo, N. Y.**—Commercial planes under 35,000 lb. gross standard weight will pay less for scheduled flights at Buffalo Airport under a new rate structure, which establishes a charge of \$2 per scheduled flight per month for each 1,000 lb. gross standard weight of such planes, but not to exceed \$50.
- **Baltimore, Md.**—C. V. Hopkins of National Airmotive, Inc., aircraft repair and overhaul firm, proposes \$138,000 to \$150,000 construction of a privately-financed hangar. Hopkins said Dodero Airlines, Argentine company which bought 24 Douglas DC-4s for passenger and freight service between the U. S. and South America, seeks to make Baltimore its overhaul and turnaround base in this country and wants to contract with Airmotive to work on its planes. . . . Municipal airport had 18,497 landings and takeoffs in July; 2,973 scheduled airline; 13,830 local private flyers, charter operators and flight instructors, and 1,744 itinerant.
- **Atlanta, Ga.**—Georgia expects to receive about \$8,000,000 in federal airport funds in the next few years.
- **Pittsburgh**—Allegheny County's \$10,000,000 improvement of Greater Pittsburgh airport has started with a \$2,499,000 grading project. Grading will not be finished before November. Construction of a \$1,000,000 terminal

- building project is next on the agenda.
- **Akron, Ohio**—Plans of American, Eastern, PCA and United to transfer operations from Akron Municipal airport to the Canton Memorial airport, 16 miles from Akron, about Oct. 15, have brought official protest to CAB from the City of Akron, which claims discrimination and asks a CAB investigation.
- **Detroit**—In one of an anticipated series of moves to attract major airlines from Detroit City and Willow Run airports, Leroy C. Smith, Wayne County (Romulus) airport manager, has disclosed that American Airlines has taken a five-year lease on his site as terminal for European service.
- **Kansas City**—Two actions by city council are regarded as major steps in development of the city's air facilities improvement plan: introduction of an ordinance to authorize a \$15,000 survey of airport facilities and future needs, and a recommendation that a separate aviation department be established in the city government. . . . A 20-yr. lease of ground at Grandview airport has been taken by Security Aviation Sales and Service Co. (Joel W. Baldwin and Clifford Sheeley), which plans to erect a \$35,000 hangar and shop building.
- **Jefferson City, Mo.**—This state capital—one of the few without airline service—will continue to lease its 227-acre airfield tract for a wheat field, delaying development until federal aid becomes available.
- **New Orleans**—Airline passengers moving through International Airport average 2,000 to 2,500 a day, compared to 1,000 and 1,200 at New Orleans Air-

port a few months ago. Daily flights at the field have increased from 48 to 92. . . . Moise W. Dennery, New Orleans attorney, has been appointed to the New Orleans Airport Commission to succeed George S. Clarke, resigned.

► **Little Rock, Ark.**—Construction on a \$1,500,000 improvement program at Adams Field will not begin before Jan. 1. Engineering plans have been submitted to CAA.

► **Oklahoma City**—Landings and takeoffs in July numbered nearly 2,000 more than June, and included 2,158 by scheduled lines, 2,039 by itinerant civilian planes, and 5,356 by local civilian planes.

► **Galveston, Tex.**—The city won a six-month fight to keep maintenance, fire fighting and other equipment at municipal airport when the War Department cancelled commitments which would have turned it over to others.

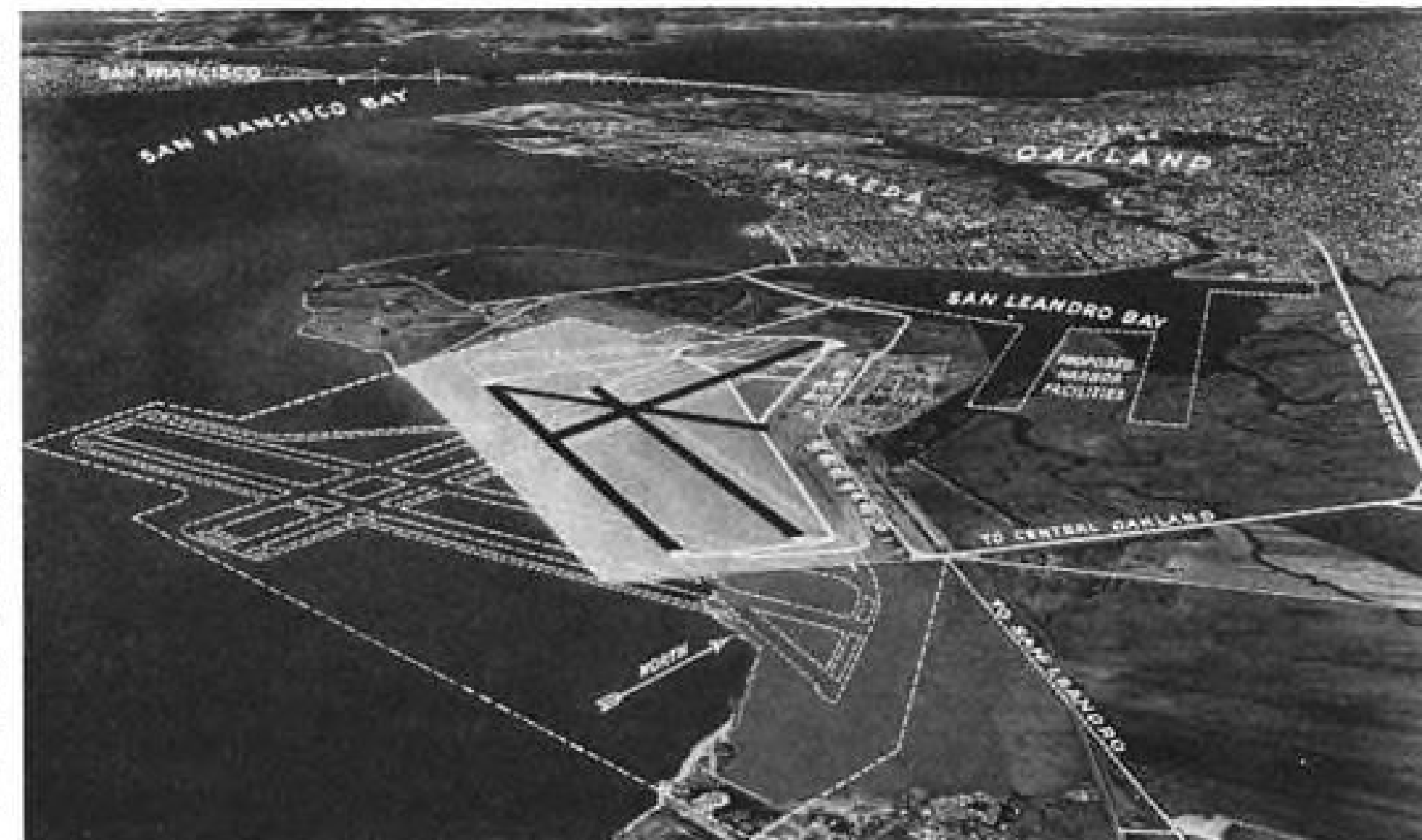
► **Houston, Tex.**—Work has started on a \$60,000 addition to the airport administration for use by international traffic personnel.

► **Denver**—City authorities have decided to enlarge Denver Municipal (Stapleton) airport from its present 1,500 acres to 2,000, permitting extension of east-west runways from 7,000 to 10,000 ft. The field's VHF landing system was commissioned recently after a CAA flight check.

► **Tucumcari, N. M.**—City has leased its municipal airport to Charles Toth of Toth Aircraft and Accessories Co. of Kansas City. The lease, under which the city expects to realize about \$8,200 a year, provides for Toth's erection of a \$10,000 administration building and \$1,500 repair shop.

► **Lewiston, Idaho**—Possibility that Lewiston may be dropped from Empire Air Lines' new interstate route has brought violent protests from civic groups, who urge CAA to reconsider a decision against establishment there of radio range and air weather service stations.

► **Oakland, Cal.**—Oakland Board of Port Commissioners will advertise for bids for construction of two nose hangars to provide space for heavy aircraft maintenance at Municipal airport. . . . Joint protests by the Com-



**Oakland Airport Expansion Contemplated:** Expansion of Oakland Municipal Airport, already a major air terminal, is under consideration as one of the several major air terminal developments being discussed for the San Francisco Bay area. The present conception of the Oakland Board of Port Commissioners indicates that the cost might equal the \$20,000,000 voted recently by the City of San Francisco for expansion of San Francisco Municipal Airport. The photo-diagram above shows the present 1,000-acre airport and (dash lines) future 1,700-acre extension now being considered.



missioners and Oakland Chamber of Commerce resulted in a decision by the AAF to hold activation of the proposed Army Reserve Air Base at Oakland airport in abeyance pending survey for another site, and action by the Navy to confine Naval reserve operations to the Navy-owned portion of the field and limit flying activity to initial takeoffs and final landings.

► **Siskiyou County, Cal.** — Supervisors have budgeted funds for hangar and administration building construction on a \$1,500,000 former Army airport near Montague.

► **San Diego, Cal.** — San Diego County's airport advisory commission has approved plans for inclusion in the county's master airport plan of 15 new airports from which planes may operate in forest fire control.

► **Clallam County, Wash.** — Quillayute naval air base, believed to be the only one offered for public use while still fully equipped for operation, has been turned over to Clallam County.

► **Bellingham, Wash.** — Washington state airport managers met here last week to discuss revision of existing state laws covering aircraft.

► **Amsterdam, The Netherlands** — Schiphol Airfield, where civilian air transportation was resumed last year, now averages 1,400 domestic and international passengers daily, compared with 55 for the month of July, 1945.

► **Buenos Aires** — Proposed improvements to Ezeiza airport at an approximate cost of \$8,640,000 have been approved by the president of the works and study commission.

## Italy Hearing Delayed

CAB hearings on TWA's agreement with the Italian government involving the carrier's participation in operating Italy's civil airlines have been postponed indefinitely.

## PCA Wants Nonstop

PCA has asked CAB for an exemption order authorizing it to operate nonstop between Washington and Chicago, bypassing Detroit, terminal on the carrier's AM 14 and 32. Washington-Chicago passengers on PCA's DC-4 flights now lose about one hour as

a result of the longer mileage via Detroit and the time wasted stopping there, the carrier said, adding that unnecessary direct flight costs of \$540 daily are involved. About 14.5 percent of PCA's total traffic is from Washington to Chicago.

## TCA Handles Radio For North Atlantic

All operational air-ground-air and point-to-point communications in the Northwest Atlantic Area are being handled by Trans-Canada Airlines, as a government-owned operation, presently for TCA and BOAC only, but eventually for Pan American, TWA, American Overseas, KLM, Swedish and French airlines operating the northern route to Canada and the U. S.

TCA has set up communication services at Dorval (Montreal), Goose Bay (Labrador) and Moncton, N. B., airports to handle the North Atlantic traffic region. Air traffic control activities for the area center at Moncton, where TCA will have one of the largest airline communications offices on the continent when the installation is completed.

To handle efficiently the seven trans-Atlantic communication circuits required there, the carrier has installed high frequency transmitting equipment of radical design, using 5 kw transmitters made by the Canadian Marconi Co. especially for operation in the northern region. Three of these, used at Moncton, will give a frequency coverage from 35 transmitting channels in the 2900 kc to 28,000

kc frequencies range. With six operating positions workable at the same time, frequency changes will be operated from a telephone dial, facilitating control of all aircraft of all countries using the route, each of which may employ a different frequency.

The seven communication circuits include three air-to-ground circuits, three point-to-point manual code circuits, and one radio teletype circuit. The three air-to-ground circuits will give control of the New York-Great Britain route via Gander, Newfoundland; Montreal-Great Britain route via Goose Bay; New York-Great Britain route via Azores. Point-to-point circuits give service between Montreal, Moncton, Goose Bay, Gander, Greenland and Iceland; between Moncton, Gander, Prestwick, and Shannon (Eire); and one between Moncton and Goose Bay. The radio teletype circuit operates between Moncton and Prestwick.

## SHORTLINES

► **American's** July passenger total from the New York metropolitan area was 63,070, against 28,434 in July last year. Of the total, only exceeded by 64,339, in June, 1,550 went to European destinations.

► **Colonial** carried 16,814 passengers 4,820,773 revenue miles in July for a new high, and indications were that record would be broken in August. Passengers carried the first seven months of this year was 85 percent higher than the same period in 1945.

► **Continental** will designate its 15 planes "Skystreamers" as the outcome of a slogan contest that brought in more than 100,000 suggestions.

► **Northwest's** passenger total for July reached 56,298, compared with 32,254 in July last year. Passenger miles increased from 21,276,256 a year ago to 35,500,114.

► **Pan American** has designated Southern California and southwestern states as its Southwestern region. Regional manager is Arthur Ayres, for the past 3 yrs. Los Angeles representative of the company. Los Angeles is headquarters for PAA's Pacific-Alaska Division, which includes the new region and Alaska, Central Pacific and South Pacific regions.

► **Panagra** has cut time on its Lima-Los Angeles run by 5 hrs.

► **PCA** will open a Newark city ticket office (19 Commerce St.) in anticipation of inauguration of 6-day-a-week service there.

► **Philippine Air Lines** has chartered a plane from Transocean Air Lines for eight Oakland-Manila flights,

pending PAL's acquisition of planes capable of flying the Pacific. The carrier operates in the Islands under authority of the Philippine Government.

► **TWA** has acquired space in a San Francisco office building (240 Stockton St.) as a step toward ultimate centralization of all its office facilities in that city. The structure will be called the "TWA Building." Twenty-five year lease on three lower floors and basement involves annual rental of \$46,000. . . . Carrier's airfreight revenue was up 25 percent in July over June for a new high of \$62,000. Indications are that this type of revenue will exceed \$750,000 for 1946.

► **United** air cargo operations in July reached an estimated 707,000 ton-miles, 55 percent over the same month a year ago. New highs were registered in revenue passenger miles (111,570,000) and revenue plane miles (nearly 4,970,000). . . . Company officials flew to Honolulu last month to survey facilities and arrangements for the recently authorized service from the mainland to Hawaii. No date has been set for start of service. . . . UAL is cutting ticketing time on 36 most frequently traveled local flights with a new card-type ticket pre-printed with origin and destination.

► **West Coast Airlines**, recently certificated Washington-Oregon feeder line, has started trial flights on its air "bus service."

## CAB ACTION

The Civil Aeronautics Board:

- Permitted Eastern Air Lines to inaugurate nonstop service between Charlotte, N. C., and Charleston, S. C., on AM 6 and permitted PCA to inaugurate nonstop service between Elmira-Corning, N. Y., and Harrisburg, Pa., and between Baltimore and Rochester, N. Y., on AM 34.
- Approved interlocking relationships of Robert J. Smith as president and director of Pioneer Air Lines (formerly Essair, Inc.) and president and director of Aviation Activities, Inc.

## AVIATION SALESMEN WANTED

for aviation products, aircraft and shop service in growing concern operating in New York and northern New Jersey area. Commercial pilots license required but DO NOT apply unless genuine experience in sales work of some description can be shown.

SW-206, AVIATION NEWS

330 West 42nd Street, New York 18, N. Y.

A leading eastern light aircraft accessory manufacturer desires to augment its engineering division with a young aeronautical engineer. The following qualifications desired: Knowledge of aircraft structures; hydraulic and electrical systems; mechanics of gases; imaginative and inquiring mind with the ability to solve current problems in light aircraft accessory design. \$4500.00 starting salary. Recent photo and background in first letter. All information held in strictest confidence. Reply

P-207, AVIATION NEWS

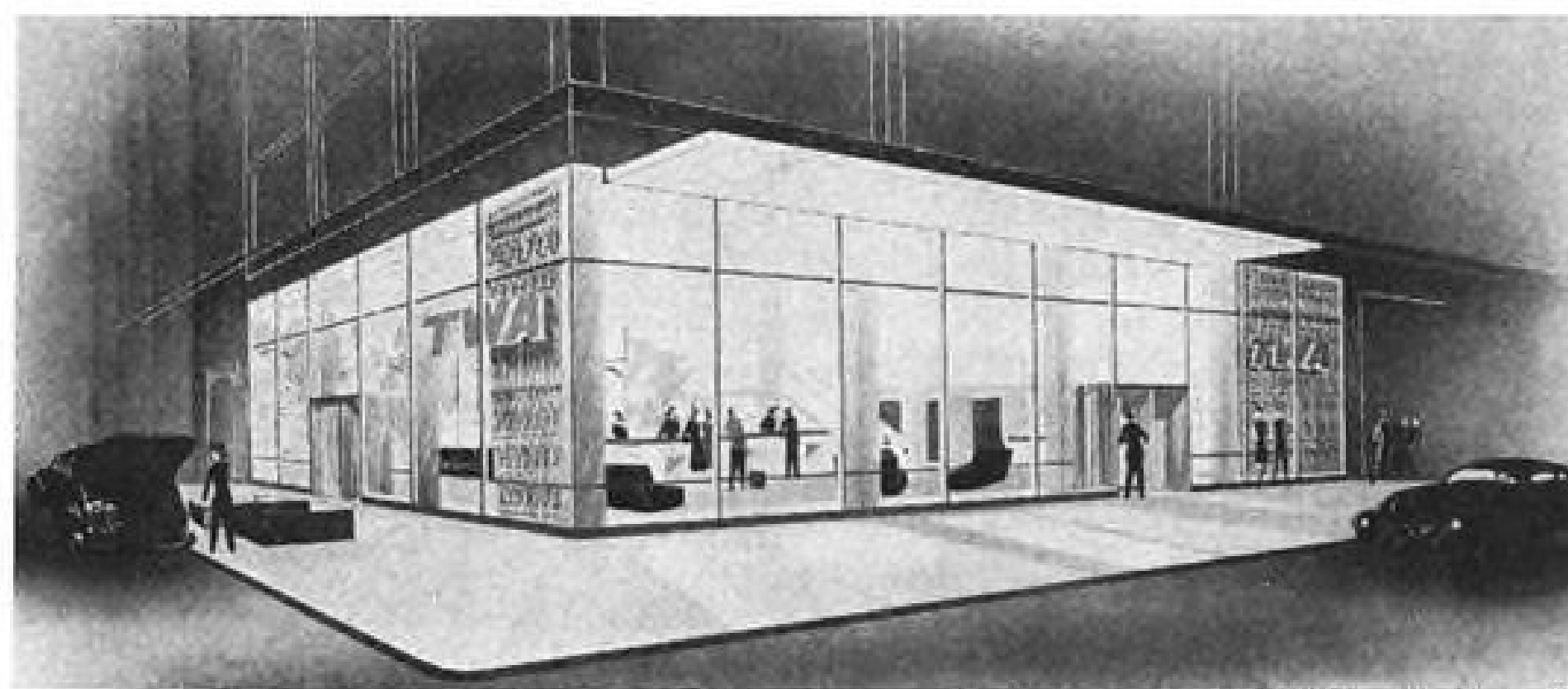
330 W. 42nd St., New York 18, N. Y.

- Permitted Delta Air Lines to intervene in Middle Atlantic area case (Docket 674 et al.) and permitted Key Airlines to intervene in Southeastern states case (Docket 501 et al.).
- Dismissed applications of Colorado Airways (Docket 1079) Globe Freight Airline, Inc. (Dockets 2363 and 2364), and E. A. Johnson and P. D. Grossnickle (Docket 2275) at applicants' request. Also severed application of Yellow Cab Co., Philadelphia (Docket 1349), from Middle Atlantic area case and dismissed the application at Yellow Cab's request after refusing continuance.
- Dismissed on public counsel's motion proceeding (Docket 850) against Braniff, Chicago and Southern, Delta, National and PCA involving show cause order of Feb. 27, 1943, which proposed ten percent fare reductions.
- Permitted Eastern Air Lines and Island Air Ferries to intervene in Air Commuting route case (Docket 1642); denied EAL's request to reopen record and delay filing of briefs; and denied Island Air Ferries' request to stay and defer proceedings. Board also refused to consider its order denying severance of Island Air Ferries' application (Docket 2029) from Middle Atlantic area case.

## CAB SCHEDULE

- Sept. 3. Briefs due in PCA-Northeast merger case. (Docket 2168.)
- Sept. 3. Written comment due on proposed amendment of Section 292.1 of the Economic Regulations, affecting nonscheduled air carriers. Extended from July 22.
- Sept. 4. Briefs due in route consolidation applications of TWA, American and United. Extended from Aug. 25. (Docket 2142 et al.)
- Sept. 9. Reargument on portion of Hawaiian route case. (Docket 851 et al.)
- Sept. 10. Exchange of exhibits in Pan American Airways domestic route case. (Docket 1803.)
- Sept. 11. Oral argument on question whether CAB should grant petition by steamship lines for study of competitive effect of recent international air agreements and review of Board policy on steamship company participation in air transportation. (Docket 2411.)
- Sept. 16. Exchange of exhibits in air freight case. Extended from Aug. 30. (Docket 810 et al.)

- Sept. 16. Exhibits due on TWA's Italian agreement. Postponed from Aug. 16. (Docket 2337.)
- Sept. 16. Exchange of exhibits in Royal Dutch Air Lines' (KLM) application for foreign air carrier permit. Extended from Sept. 9. (Docket 2324.)
- Sept. 16. Reargument on portion of Latin American route case. (Docket 525 et al.)
- Sept. 18. Hearing in Los Angeles helicopter service case. Postponed from Sept. 16. (Docket 896 et al.)
- Sept. 20. Comments due on Board's pilot hour investigation. (Docket 2241.)
- Sept. 20. Hearing in Board's investigation of TWA's trans-Atlantic rates. (Docket 2375.)
- Sept. 23. Exchange of rebuttal exhibits in Royal Dutch Air Lines' (KLM) application for foreign air carrier permit. Extended from Sept. 16. (Docket 2324.)
- Sept. 26. Hearing in Royal Dutch Air Lines' (KLM) application for foreign air carrier permit. Postponed from Sept. 19. (Docket 2324.)
- Sept. 26. Rebuttal exhibits due on TWA's Italian agreement. Postponed from Aug. 26. (Docket 2337.)
- Sept. 30. Exchange of exhibits in Continental Air Lines' San Antonio-Hobbs certificate amendment case. (Docket 2087.)
- Sept. 30. Briefs due in Boston-New York-Atlanta-New Orleans route case. Extended from Sept. 16. (Docket 730 et al.)
- Oct. 8. Exchange of rebuttal exhibits in Detroit-Washington route case. Extended from Sept. 15. (Docket 679 et al.)
- Oct. 14. Exchange of rebuttal exhibits in air freight case. Postponed from Sept. 28. (Docket 810 et al.)
- Oct. 14. Exchange of rebuttal exhibits in Pan American Airways' domestic route case. (Docket 1803.)
- Oct. 15. Hearing in Detroit-Washington route case. Postponed from Sept. 23. (Docket 679 et al.)
- Oct. 21. Hearing in air freight case. Postponed from Oct. 14. (Docket 810 et al.)
- Oct. 21. Exchange of rebuttal exhibits in Continental Air Lines' San Antonio-Hobbs certificate amendment case. (Docket 2087.)
- Oct. 28. Hearing in Continental Air Lines' San Antonio-Hobbs certificate amendment case. (Docket 2087.)
- Oct. 29. Hearing in Pan American Airways' domestic route case. (Docket 1803.)



## TWA OPENS CHICAGO TICKET OFFICE:

Architect's drawing shows new \$300,000 ticket office opened in Chicago's downtown shopping district (Wabash Ave. and Monroe St.) last week by TWA. Other TWA ticket offices throughout the nation will follow the basic design. The Chicago office covers 5,000 sq. ft. of floor space, and contains counters for checking in passengers, information service, and reservations. Central region and Chicago district offices are on the second and third floor of the building.

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### PRIMARY TRAINER PLANES

These aircraft are adaptable to private-plane ownership and many have long hours of pleasure or business flying still at the command of the buyer.



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Individuals and companies engaged in air freight or passenger transportation have purchased a number of surplus planes which they have found suitable to their purposes.



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These are generally twin-engine aircraft which can be converted to 5-place planes. They have great possibilities for executive or feeder-line transportation.



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Tax-supported and non-profit institutions may acquire surplus aeronautical property at nominal prices for use in instruction and research from the Director, Educational Aircraft Division, Room 319, Annex 2, 425—Second Street, N. W., Washington 25, D. C.

In order to obtain the widest availability possible in the sale of aircraft component parts, War Assets Administration has designated 59 dealers as approved W.A.A. representatives.

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## PROPELLERS

Airplane propellers in certain sizes and specifications can be purchased now. They are adaptable to aircraft ranging from light planes to transports.



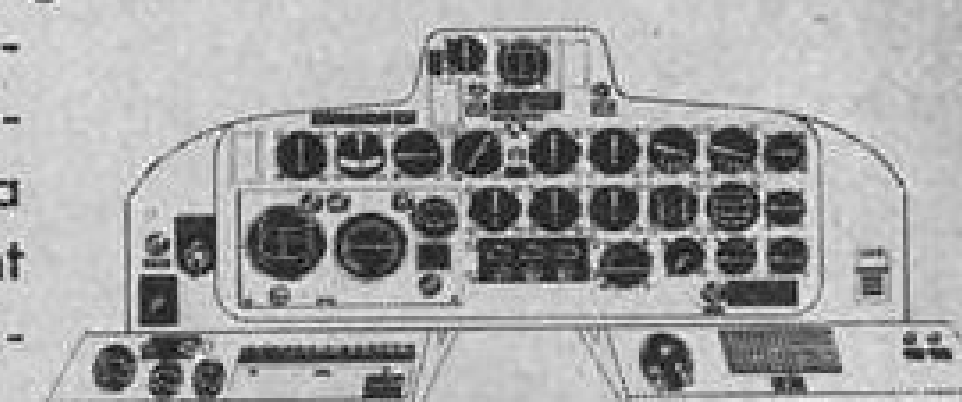
Any W.A.A. dealer will be happy to serve you in any item except tires. If, however, it is more convenient, please contact your nearest War Assets Administration Office:

If you are located west of the Rockies:  
155 W. Washington Blvd.  
Los Angeles 15, Cal.

If you are located east of the Rockies:  
6200 Riverside Drive  
Municipal Airport  
Cleveland 32, Ohio OR

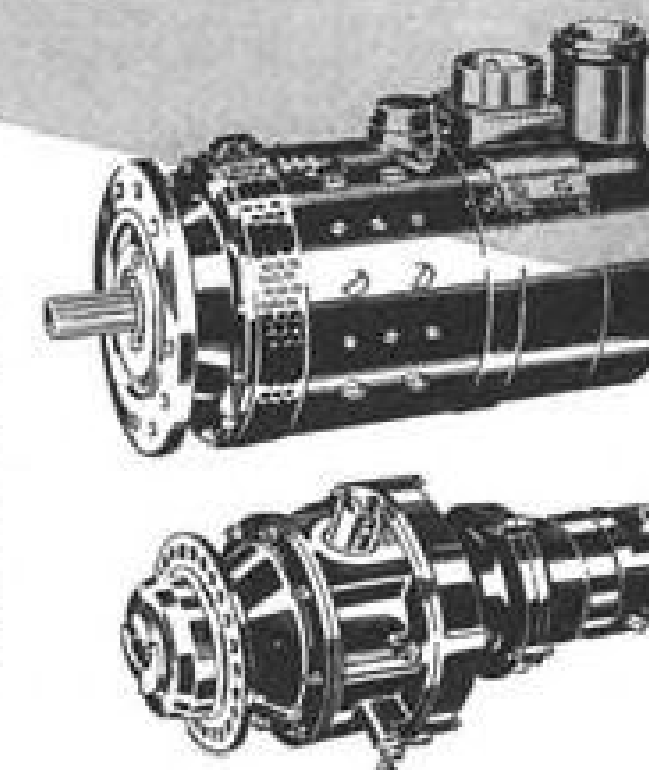
## INSTRUMENTS

W.A.A. has a quantity of precision aircraft instruments including altimeters, airspeed indicators, gyro horizons, etc., and a choice of different types of engine instruments.



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## Simple Seaplane Regulations

RECENT AGITATION by the Ohio River Division of the Corps of Engineers to initiate separate regulations for seaplane traffic on navigable inland waterways has been met by the Civil Aeronautics Board. This threat by the Engineers to add to the red tape aviation already must contend with was the subject of a recent editorial on this page.

Informal requests sent by the Ohio Engineers to their Washington headquarters not only sought an entirely separate set of requirements aimed at preventing float and seaplanes from landing or taking off within sight of a river towboat; the action would have injected one more government authority into air traffic rule making.

Fortunately, Civil Aeronautics Board is already well along in rewriting Part 60 of the Civil Air Regulations to include certain basic "rules of the water." Several conferences between government and industry have been held, and Washington officials believe that few new requirements will be introduced. The Coast Guard already has agreed tentatively to about four simple rules.

The Corps of Engineers should have no right to set up its own rule book for airmen, although it possesses authority to supervise placement and location of wharves, seaplane ramps, and other facilities bordering or entering upon navigable waterways.

The draft of the new Part 60 will be circulated soon for industry comment. Prompt attention by all interested parties, and immediate reporting to the Board of all complaints and suggested revisions, will insure fairer regulation for the rapidly developing floatplane activities.

## Rugged Roads to Airports

THERE ARE FEW more accurate indices of the abilities of airport operators as local public relations men than the roads which lead to their fields. Frederick W. Hiller of Worcester County, Massachusetts,

tackles the subject in the New England Aviation Trades Association newsletter, inadvertently revealing his progressive attitude toward winning new customers for his airport and keeping those he has:

"I do not know what percentage of airports in this commonwealth or in New England have poor roads leading to them, but I do know that in central Massachusetts there are at least 20 airports where the towns have failed to take into consideration the value of the airport to the town, and who are doing nothing about fixing up the roads.

"Some of these hardboiled oldtimers who are selectmen need to be publicized in some way for their utter lack of progressive thought. Instead of appreciating what a private owner of a commercial field is doing, in saving the taxpayer money, most of these selectmen only think of the little bit of tax revenue that will have to be raised to blacktop a road. I am personally blacktopping over half a mile of public highway leading into my airport. I don't know what we must do to shame the town fathers, but as past president of the Worcester County Selectmen's Association, I bring this matter up at every meeting, and I think it would be well if this could be publicized and sent to all the selectmen's associations in the state."

Massachusetts has no monopoly on bad roads to small airports and airfields. Mr. Hiller has set an example for several thousand other operators in the other 47 states. He is doing something about it.

## A Good Friend Leaves

PROMOTION OF PETER MASEFIELD to the new post of director of planning and projects for the British Ministry of Civil Aviation is welcome evidence that London appreciates his outstanding public relations accomplishments in the United States as British civil air attache. We know of no other Englishman in aviation who has made so many friends here. They regret that his new duties will take him back to Britain. We shall miss him.

ROBERT H. WOOD

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on **all** sizes of planes

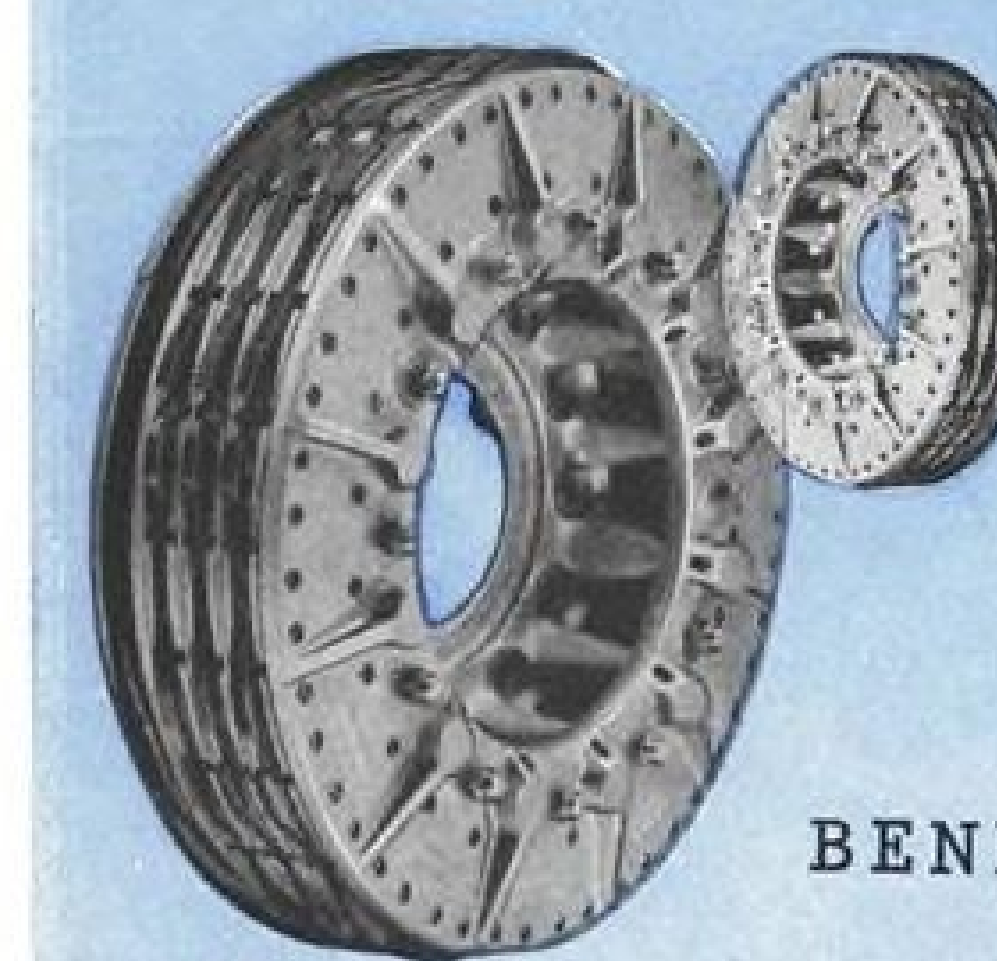
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Whether the ship is a transport giant or a small plane for the private flyer, there is a size and adaptation of the Bendix Segmented Rotor Brake that is sure to add to brake performance and subtract from overall weight. In addition, lower hydraulic 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.

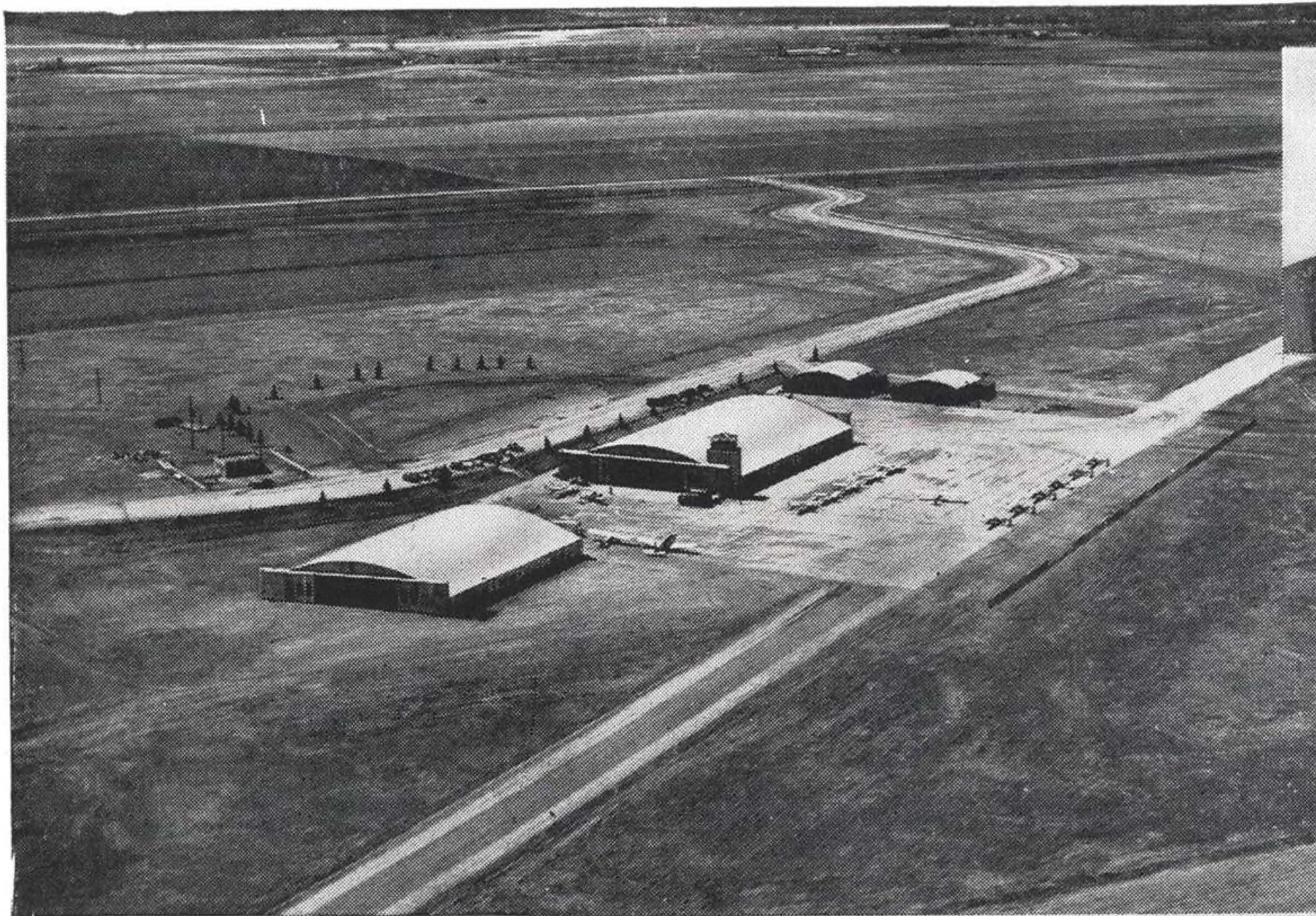
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Main hangars (200' x 140' each) and service facilities at Sky Ranch.



Aero Enterprises' General Manager, C. Hall McKay (left) and Executive Vice President Louis W. Mack, Jr.

Control tower at Sky Ranch Airport. Texaco Aviation Gasoline and Aircraft Engine Oil are used and sold exclusively.



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FOR THE AVIATION INDUSTRY

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