

New Republic Giant: This XF-12, huge high-speed, long-range photo reconnaissance plane, was unveiled today at the Republic plant in Farmingdale, N. Y. With a span of 129 ft. 2 in. and a length of 98 ft. 9 in. the XF-12 is powered by Pratt & Whitney Wasp Majors which have been equipped with turbo exhausts through which Republic engineers hope to recover up to one-third of original engine output. The firm's forthcoming Rainbow transport will be based on this ship. (Story on Page 10.)

Research Legislation Changes Please Industry

Looking Back At 1945: A Production Review

N. Y. Feeder Line Will Develop Own Airport

Research Costs Rising As Production Declines

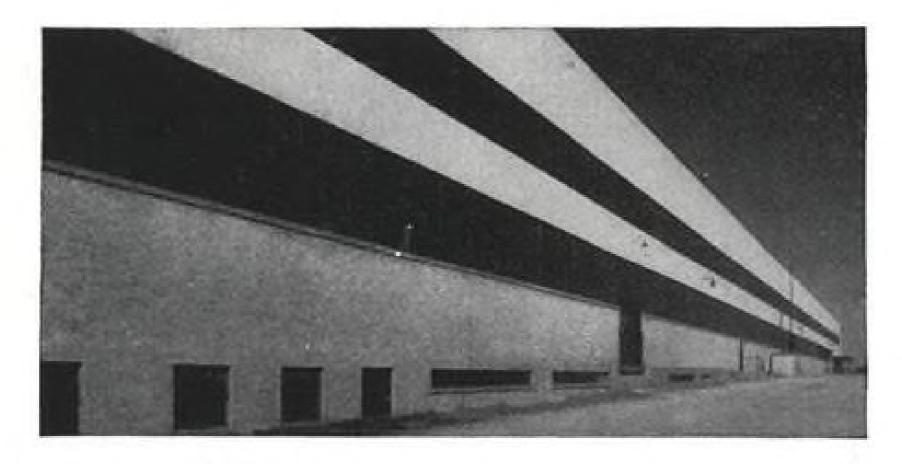
Aircraft stocks Indorsed; Low Valuation Cited

ATA Polishing Air Policy Brief for Congress

Navy's new long-range bomber

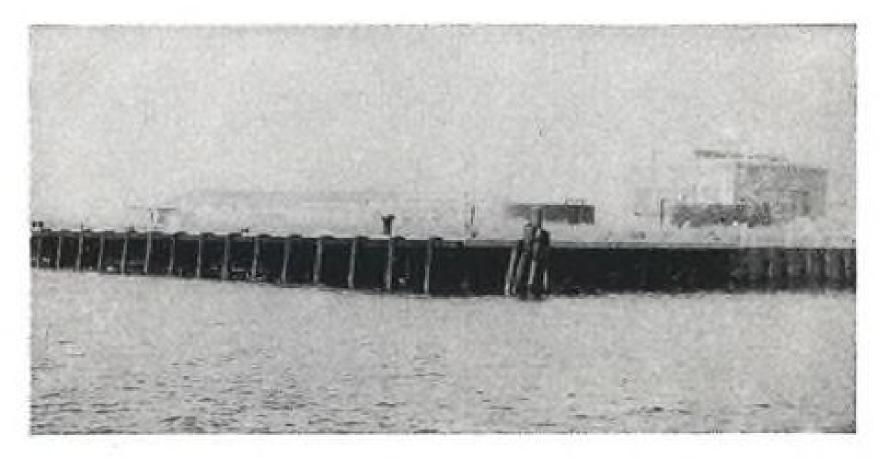


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THE AVIATION NEWS

Washington Observer



LINDBERGH AGAIN—Reports are current in Washington that Charles A. Lindbergh is being backed by certain high AAF officers as Assistant Secretary of War for air. His excellent address at recent Aero Club dinner caused considerable speculation in the capital as to whether it was the first step (Aviation News, Dec. 24). Opposed to Lindbergh for the post are those who contend that his retiring nature would not make him the good contact man on Capitol Hill that the undersecretary would have to be. Even some of his friends hold that he is not a good administrator. Included in the speculation is the amount of pressure which industry will exert on the appointment.

SURPLUS REORGANIZATION — It now seems certain that further, far-reaching changes will be made in the surplus property disposal organization, and very soon. War Assets Corp., which was set up on paper as a subsidiary of the Reconstruction Finance Corp. in November, is expected to make its formal debut this week. Almost immediately thereafter, it is predicted that WAC will be separated from RFC, made an independent agency, and absorb the Surplus Property Administration—putting both policy-making and disposal operations under the same roof.

* * *

PERSONNEL CHANGES—When this happens, SPA Administrator Stuart J. Symington appears slated to be named Federal Loan Administrator, which will make him the RFC boss, but an RFC shorn of surplus disposal operations. Lieut. Gen. Lloyd B. Gregory, now Quartermaster General, is reported in line for the chairmanship of WAC, which would put him in complete charge of all phases of the surplus problem. Sam H. Husbands, an RFC director and original se-

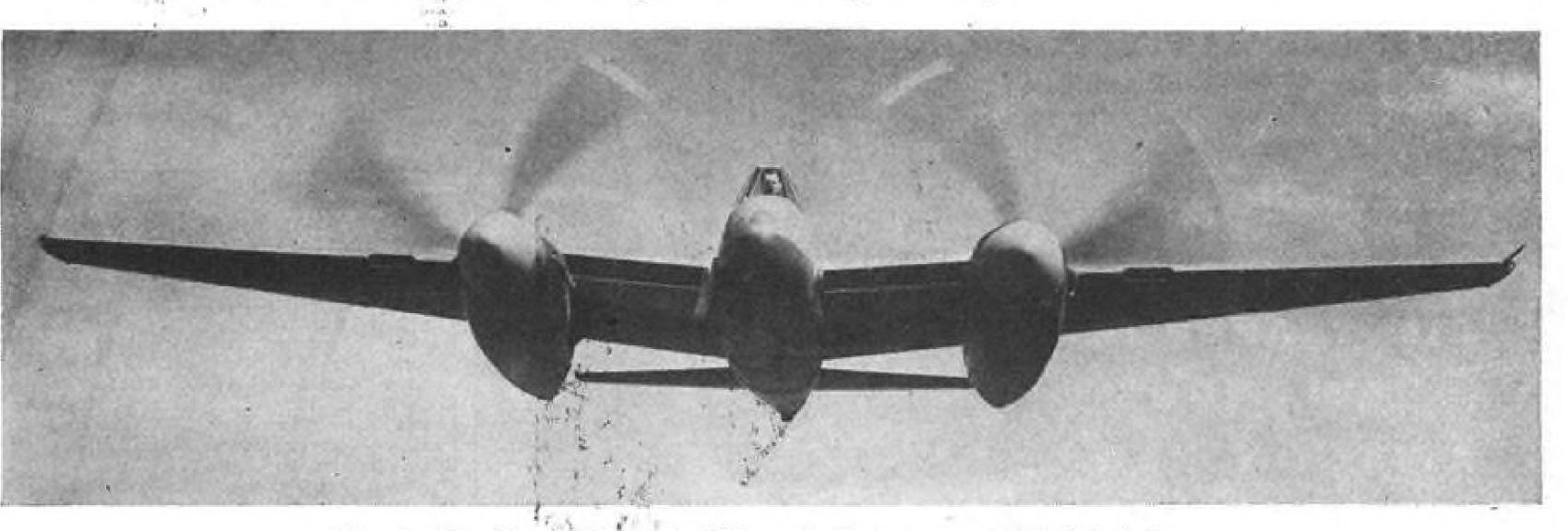
LINDBERGH AGAIN—Reports are current in lection as WAC chairman, is believed to have sublection as WAC chairman, is believed to have submitted his resignation. James A. Garfield, deputy director for aircraft of RFC, turned in his resignation some time ago, to be effective in January.

FLC STRENGTHENED — Foreign disposal will continue outside the control of the WAC, remaining under the Foreign Liquidation Commission of the State Department. However, FLC's hand will be strengthened as it will be sole arbiter of sales procedure. Heretofore it has merely been RFC's agent While given a free rein, FLC will still report back to RFC, presumably because of the connection between its work and the Export-Import Bank and Lend-Lease liquidation.

GOVERNMENT OWNERSHIP—Rep. Oren Harris (D., Ark.), a member of the House Interstate and Foreign Commerce committee has warned that government ownership of transportation "is just around the corner if this country permits self-interest to control its dealing with perplexing transportation problems." The committee is preparing to start an investigation pointing toward revision in national transportation policy.

* * *

AVIATION REPORT—An aviation report of the Senate War Investigating Committee, slated for issuance shortly after Congress convenes next year, will emphasize the necessity of an aggressive aircraft research program during the peacetime years. Sen. Hugh Mitchell (D., Wash.) who heads up the committee's aviation subcommittee, already has introduced legislation to establish a National Air Policy Board to promote the maintenance of air power strength in the post-war period.



The de Havilland Hornet, 470-mph. long-range British fighter.



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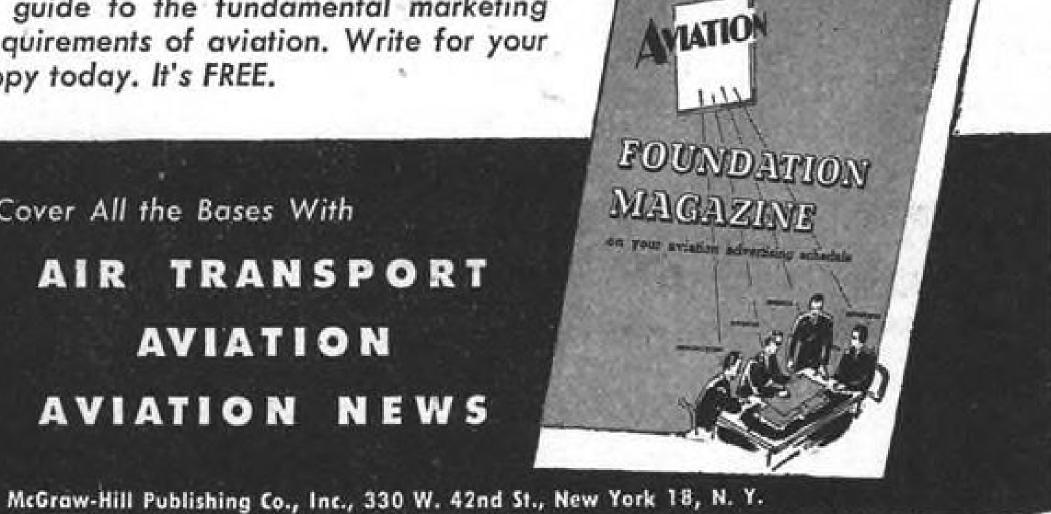
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Deadline

Airworthiness

Prescribing airworthiness requirements for non-transport or personal planes, the new civil air regulation part .03 was issued by CAB late last week following months of conference between technical representatives of industry and the government aviation agencies. Most essential parts of the new regulation were made public in advance by the board last August (Aviation News editorial page, Aug. 6), including liberalization of stalling speed requirements, and revision of rate and angle of climb requirements. Limit load factors required for aircraft are set at 3.5 for non-spinnable planes; 3.8 for normal aircraft; 4.4 for utility aircraft and 6 for acrobatic aircraft. As recommended by industry, part .03 calls for a placard stating performance information about the plane, including stall speed, takeoff distances, landing distance, rate of climb, etc. as well as information on limitations of plane and engine, weight, load distribution, permissible maneuvers and operating procedures.

Revised B-29

Advance models of the B-29 Superfortress will be produced by Boeing in limited quantities for the AAF during the coming year. Official designation of the craft will be the B-50. It will be powered by four Pratt & Whitney Wasp Major engines, driving Curtiss electric reversible thrust propellers. Landing gear will be lighter with ball bearing type retracting equipment. The wing will be lighter and stronger.

10,000 Ercoupes Next Year

Engineering & Research Corp. has set a production goal of 10,000 Ercoupes for 1946, officials of the Riverdale, Md., plant disclosed last week, a figure which may be the top production schedule in the personal plane manufacturing field. Planes already are being produced at the rate of four a day, and the company expects to attain a rate of 40 planes a day by increasing the number of shifts from one to three as soon as maximum efficiency is reached on the production lines.

AVIATION NEWS • December 31, 1945



- Kaiser Cargo, Inc., is angling for a Navy contract for its Hiller-Copter. This is the helicopter developed during the time Stanley Hiller, Jr., was under Kaiser sponsorship, and which was retained by Kaiser when he and Hiller parted. Hiller now heads United Helicopters, Inc.
- Consolidated Vultee is remodeling its Model 110 mockup, and pushing construction of a prototype. The revised mockup will increase the plane capacity from 30 to 40 passengers. The cabin entrance under the tail will be shifted to a side entrance. Round windows (to allow the use of rotating polaroid antiglare glass) will be replaced by conventional square windows. Alterations were suggested by airlines which are prospective buyers.
- Pratt & Whitney's powerful R-4360-4 engine is reported designated for the Lockheed R60.
- Manufacture of the experimental Navy transport XJL-1 at Columbia Aircraft is reported lagging and it probably will be March before it is completed.
- The Glenn L. Martin Co. is doing reconversion work on Douglas C-54 Skymasters for two of the largest South American airlines-Donderro Argonita and Cruzero de Sul of Brazil.
- The Ryan FR program has been cut again by the Navy, further reducing deliveries on this jet-pushed, propeller-pulled fighter.
- Douglas has delivered to the AAF a second XB-42A "Mixmaster." First production model was the victim of an unfortunate accident outside of Washington after having set a speed record of 5 hrs. 17 min, for the California-Washington flight.
- The Navy is expected to get its feet wet in cross-country record flying soon. Recent records hung up by Douglas and Boeing planes manned by Army crews are goading many Navy air officers. It is understood that at a Southern California Navy air field a late model Corsair is being modified drastically for a Los Angeles- or San Diego-Washington flight. All armament is said to have been removed and added fuel tanks installed for a non-stop run.
- Army's projected new speed attempt probably will not be made until after the first of the year and might even be delayed until February or March to take advantage of peak seasonal tail winds-which have been of prime importance, but little publicized in all speed flights made thus far.
- Trans-Canada Airlines has established a Conventions and Meetings Bureau at Winnipeg, with H. D. Harling, formerly Winnipeg traffic manager, as super-
- Alvin P. Adams & Associates, aviation consultants, of Los Angeles, are reported to have completed for Lehman Bros., New York banking firm, a detailed study of United States airlines and a five-year forecast of air transport
- Industry leaders are watching with interest the preliminary moves being made by some baseball men for possible purchase of aircraft for transporting their teams. Several major league heads have expressed interest in the idea and it is understood that a number of minor league teams are studying the proposition. Minors would need transports which could get in and out of small fields.
- As part of the company's information and education program for airline operators and aircraft and engine builders, Standard Oil of New Jersey has published a new booklet on characteristics and tests of Esso Aviation products.
- Seven hundred and eighty-nine veterans of World War II including 321 former employees have been hired or returned to the rolls of the steam and aviation gas turbine divisions of Westinghouse, indicating the emphasis being placed on this work by the company.

MEW WOUGHTS on the way The same engineering genius that produced the CORSAIR, fastest shipboard fighter of World War II, is now developing three new experimental types which will again raise the standards for combat aircraft. These include two radically new fighters as well as another marked advance in the CORSAIR series. This progressive research and development program, typical of Chance Vought Aircraft for more than twenty-five years, will help maintain American security through supremacy in the air. CHANCE VOUGHT AIRCRAFT STRATFORD, CONNECTICUT ONE OF THE FOUR DIVISIONS OF UNITED AIRCRAFT CORPORATION

Revision of Research Legislation Eases Industry's Patent Worries

Drastic changes in pending Senate measure believed to foreshadow speedier enactment of proposal to establish National Science Foundation.

By WILLIAM KROGER

islation pending in the Senate has greatly eased aircraft industry worries over the effects of the proposed law on the present patent arrangements, and is believed to foreshadow much faster enactment of a measure for a national research policy.

Following four weeks of hearings last fall on two research bills, search that eventually all experia subcommittee of the Senate Military Affairs Committee has introduced S. 1720, which is the result of testimony heard on S. 1298, sponsored by Sen. Harley M. Kilgore (D., W. Va.), and S. 1285, by Sen. Warren Magnuson (D., Wash.). No hearings are expected to be held on the new bill, but it will be circulated among eminent scientists who will be asked for comments.

Final Report—It is hoped that a final report to the Senate on the research bill may be made by the end of January and that passage will follow shortly. The Military Affairs Committee still has before it the House-approved HR. 3440, by Rep. Andrew May (D., Ky.) calling for a national security research program. It is expected that the final version of S. 1720 will be presented as a substitute for May's bill.

The new bill is much the same as the original proposals put forth last summer (AVIATION NEWS, July 30), in that it would establish a National Science Foundation to coordinate, supervise and give financial assistance to research. However, great changes have been sults of Federally-financed research "fully and freely available." Title III of S. 1297 actually would three.

Drastic revision of research leg- have revised the patent system. The government would have owned all patents arising from Federally-financed research and these would have been available without charge practically to all comers. Result—It was pointed out at the time that with the Government spending perhaps as high as \$30,000,000 annually to finance rementation would be at Government expense and that, therefore, the Government would own all patents—in effect, the original bill would result in federalization of patents.

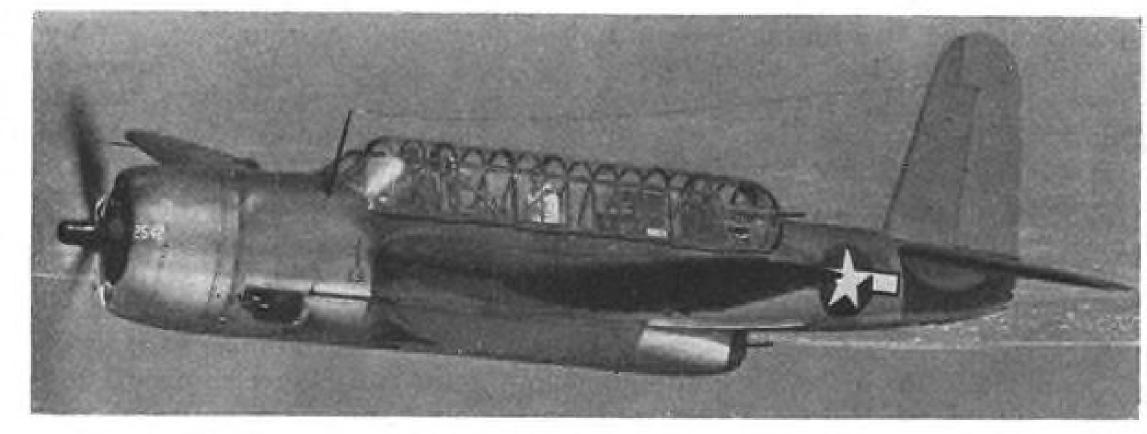
> The revision eliminates the section on patents. Two paragraphs furnish the main replacement. The first declares that all research contracts shall provide that the organization doing the work make available to the Government full data on inventions, patents, etc. The second states that results of Federally-financed research "shall be freely dedicated to the public." Exception—However, there is an

important exception made. This is that the agency financing research and development activities may, in the contract, provide "for the retention by the contractor or by the inventor . . . of such patent rights as the head of such agency deems fair and equitable and consistent with the national interest." This permission is contingent on a finding by the agency that the field in which the contractor is to work has previously been pioneered by the contractor.

This compromise over the original bill is satisfactory to the aircraft industry as it, in effect, retains the present arrangement whereby aircraft firms working on contract with the AAF and the Bureau of Aeronautics have written into each contract conditions that will govern the determination of patent ownership.

Publications — The compromise also follows almost precisely the recommendations of the industry as presented at the hearings by R. E. Gillmor, president of Sperry Gyroscope Co., although the report of the subcommittee states that the exceptions to the policy of "dedication" to the public were inserted as a result of the testimony of U.S. Commissioner of Patents Casper W. Ooms.

Being studied with interest also by the industry is the provision in the new bill that "any investigator engaged in such research and development activities may pub-



SEA WOLF TORPEDO BOMBER:

made in what once was Title III. This Chance Vought XTBU-1 Sea Wolf torpedo bomber was being pro-Under the guise of making the re- duced by Consolidated Vultee at Allentown, Penna., under a TBY-2 designation when the war ended. Powered by a Pratt & Whitney R-2800 engine it had a top speed of over 300 mph. and carried a crew of

Air Industry's Job Cited by Woodhead

The aircraft industry, in the opinion of Harry Woodhead, president of Consolidated Vultee, holds three important responsibilities to maintain U. S. leadership in military, commercial and private flying.

He noted in a year-end statement that the first transcends the other two in terms of national security, but that each is interdependent.

▶ Problems—Woodhead pointed out that problems of industry in general have been those of reconversion and labor unrest. Those of the aircraft industry have been more concerned with preserving the nucleus of a manufacturing engineering organization which a year ago produced at a rate of \$16,000,000,000 annually.

In reducing the aircraft industry to approximately 10 per cent of its wartime size, it has been necessary to scrap tools and machinery, discharge skilled workers of all classes and grades, close large plants, drop certain mass production techniques, eliminate much research and technological development.

Convair Plans — Consolidated Vultee, Woodhead said, has taken positive steps to eliminate certain of these handicaps. Recently the company entered into an agreement with The Aviation Corp. to produce durable consumer goods, such as kitchen stoves and farm implements at a company-owned plant in Nashville. It is contemplated that other contracts will be entered into.

Continuation of mass production activities there, Woodhead added, will provide Consolidated with the opportunity to maintain efficiencies applicable in many instances to the manufacture of aircraft.

Confident-"Despite many immediate pressing problems,"

Poor Planes Hindered Nazi 'chutists

Lack of suitable transport aircraft was a major cause of the poor showing of German airborne troops in the latter stages of the war, it is revealed by a survey of German airborne tactics made by officers of the Ninth Troop Carrier Command.

Hitler's lack of confidence in airborne operations also restricted German employment of this mode of warfare. His personal order halted plans for an air invasion of Malta after troops had been assembled, it was learned. The investigating group, headed by Col. Samuel T. Moore, intelligence officer of the Ninth Troop Carrier Command, reported that in transport aircraft, the Germans were "far behind" the Allies. This was laid partly to lack of productive capacity. Two

and four-engine bombers frequently were used to supplement the limited force of transport aircraft in supplying isolated ground

Col. Moore declared German losses in airborne operations were very high, compared with those of the U.S. forces. One-third of all the transports in all German operations throughout the war were lost. Col. Moore laid this to inadequate training. He reported that Col. Gen. Kurt Student, commander of the German parachute army, now believes that the Nazis committed a major error was in having all airborne troops trained and commanded by Luftwaffe officers, rather than by the ground forces, such as was done by the U. S., the report

Woodhead said, "The aircraft industry is looking to the future with confidence. The airplane as a new mode of transportation will continue to have great effect in the explained. "Cold air passing over political, social and economic channels of the world."

Consolidated Vultee is currently building several types of aircraft from the giant XB-36 bomber for the AAF to the small four-place Stinson Voyager 150 for the civilian flyer. The company also plans production of commercial and executive type transports, several new models of personal aircraft, and is engaged in military projects of a restricted nature.

Weatherman Uses Training In Gliders on Forecasts

A knowledge of air patterns stemming from his interest in sailplanes and gliders may have opened a new door to advances in weather forecasting, Bernard L. Wiggin, Buffalo weather bureau chief, believes.

He is working on a theory that air patterns over Lake Erie can be charted and used to predict accurately the extent of a snowstorm and the amounts of snow that may fall. Recent predictions of "heavy snows" that listed with reasonable accuracy the snowfall for the next 12 hours were obtained by application of the new theory, Mr. Wiggin said.

▶ Theory—Formation of a longitudinal Benard cell" over the lake

certain physical laws provides material for observation.

"Unstable air, like any fluid, will develop motion," Mr. Wiggin Lake Erie becomes unstable and active. The motion developed by that air is not haphazard. There is a definite pattern developed. This is the longitudinal cell," he declared. "When a Benard cell is formed it always moves parallel to the wind and it serves to focus or converge all moisture into one narrow band. Movement of the cell and of the wind can be observed and by analyzing the pattern we can predict with greater accuracy the amount of snow."

Vogelback Named Director Of FLC Aviation Division

William Edward Vogelback, Chicago industrialist and engineer, has been appointed director of the Aviation Division of the Office of the Foreign Liquidation Commissioner.

Vogelback's new duties are in addition to his present post as senior consultant to Commissioner Thomas B. McCabe, which he accepted in December. He succeeds William W. Brinckerhoff, who has returned to private industry.

Vogelback, who is on leave as president of the Union Gas & Electric Co. of Chicago, served from 1942-43 on the WPB as a consulting industrial engineer on aircraft production and was in as a result of the combining of charge of glider production.

Reconverting Aircraft Industry Believed Past Low-Water Mark

Falling from world's largest to 15th or 16th in nation in seven months, it has cutback problems behind it and faces program of re-expansion.

The U.S. aircraft industry, after two years of outstanding production achievements, faces 1946 with prospects of being considerably larger than before the war, but still only a fraction of its wartime size when it mushroomed to become the world's largest indus-

Today it is the 15th or 16th ranking industry in the country, the Aircraft Industries Association reports, a rating which indicates that in the seven months since VE-Day it contracted even faster than it had to expand in 1941 and 1942.

> Statistics—Airframe, engine and propeller manufacturers started 1945 employing 1,058,236 persons after reaching a peak of 1,176,500 the year before when 96,369 aircraft were produced. This month AIA figures reveal, the industry employs 150,000, and 1945 production is estimated at 47,000 airplanes.

Cutbacks made possible by reduced German air resistance and decreased Allied losses were already in swing early in 1945. The tempo stepped up after Germany's capitulation, and by mid-year employment was down by 250,000. The industry entered the final two weeks of war with a monthly production rate of less than 5,000 planes, lowest since November,

▶ Slash-In one day, August 14, the aircraft industry lost contracts valued at \$9,000,000,000, calling for 31,000 airplanes, most to have been delivered in 1946. In two weeks, 450,000 persons were dropped from payrolls. then, further readjustments have brought employment to what is believed to be the bottom of a curve that should rise slowly the forthcoming year.

The industry's 1945 production had an estimated value of \$8,320,ceed military aircraft, is expected tive, stated last week.

to have a value of about \$947,-000,000. This will require the employment of approximately 206,500 persons to turn out an expected 23,325 aircraft, of which 3,000 will be military, 325 transports, and 20,000 personal types. These, however, are minimum estimates, with the output of personal planes, in particular, liable to surpass 30,-

In 1939 total production was 5,-855—2,141 military, 160 transports, 3,555 personal—valued at \$280,000,000, and employment was 64,000.

Transports—Situation in 1946 of that segment of industry concerned with transport plane prothe 325 figure would indicate. Real production of post-war transports, with the exception of the Lockheed Constellation, cannot get underway on any great scale much before the summer of 1946. Meanwhile, manufacturers have orders for the reconversion to civilian use of approximately 1,000 military transports. Each four-engine transport will require from four to six weeks' work and the job will cost between \$150,000 and \$200,-000 per plane.

One of the brightest spots in the industry's picture for 1946 is experimental and development work. The AAF and the Navy Bureau of Aeronautics have been granted a total of \$348,000,000 to spend on research and development between now and June 30, 1946. All, of course, will not go to the industry, but the size of the amount indicates that an extensive development program will continue.

Allison Engineers Find No XB-42 Engine Failure

Thorough inspection by company engineers of the two Allison V-1710 engines in the Douglas XB-000. Next year's output, in which 42 bomber showed no signs of enfor the first time since before the gine failure, Guildford C. Pearce, war commercial types will ex- Allison's Washington representa-

Bee in CAA Bonnet

Hawley Bowlus' (Nelson Aircraft Corp.) Bumblebee powered glider described in AVIATION NEWS, Nov. 19, is something of a CAA headache.

CAA inspectors at Santa Monica are puzzled as to how to type it for a certificate. Its 16-hp. pusher engine removes it from certification as a glider. they contend. Bowlus refuses to apply for certification as an airplane, and says:

"To have an airplane certificate would defeat our purpose in offering an aircraft that actually is a sport glider possessing supplemental power. Apparently the Bumblebee is neither fish nor fowl, and CAA has no certificate to cover it. I believe an entirely new type of certificate will have to be drawn to cover the situation."

Pending issuance of the official Army report on the accident, cause had generally been ascribed to failure of the engines as a result of duction will not be as dismal as overheating (AVIATION NEWS, Dec.

> Statement — Pearce declared, "The condition of the spark plugs would indicate that they had been firing up to the time of engine stoppage. Since possibility of four magnetos stopping within five minutes is very remote, we would be of the opinion that there was no complete ignition failure. The power section shows no sign of high temperature or seizure. The rear reduction gear box did not seize or lock, according to the evidence we have obtained after investigation."

N.Y.U. Course Emphasizes Air Education Trend

A course in applied aerodynamics to be offered during the spring term at the Daniel Guggenheim School of Aeronautics at New York University, indicates further the trend among recognized colleges and schools of engineering to increase the emphasis on aviation.

The course will be given by Adjunct Prof. Ralph H. Upson, widely known consulting engineer.

In dealing with this subject it is proposed to apply modern aerodynamic knowledge, in directly usable engineering form, to the fulfillment of immediate performance objectives.

Republic Reconnaissance Craft, Rainbow Prototype, is Unveiled

Four-engine flying photo laboratory, built to match fighter plane performance, uses Wasp Majors with exhaust turbines designed to recover up to one-third of original output.

Republic Aviation's latest military design, the XF-12 long-range, high-speed photo-reconnaissance craft, is being readied for flight testing before delivery to the AAF, the company announced today, adding that it is pushing production development on a commercial derivation, the 4000-mph.-plus Rainbow transport.

Powered by four 28-cyl. 3,000hp. P&W Wasp Major engines turning 16-ft. 2-in. Curtiss fourblade propellers, it is stated that the new plane will be capable of operating at very high altitudes at speeds comparable to wartime fighter planes.

"Compound Engine" - Each engine is fitted with two GE turbosuperchargers, and the nacelles are approximately the size of P-47 Thunderbolt fuselages in order to provide for the installation of "compound engine" exhaust turbines from which Republic engineers hope to garner additional thrust of up to one-third the original horsepower of each engine (AVIATION NEWS, Nov. 12). The company already has given a great deal of study to this principle which has interesting possibilities for commercial operations with

promise of greater fuel economy and higher engine efficiency.

Although performance figures on the XF-12 are not yet available, it has been announced that the RC-2 Rainbow, which will be the commercial version, will cruise at better than 400 mph. at 40,000 ft. and have a range of over 4,000 mi. Span of the new photo plane is given as 129 ft. 2 in. and length is 92 ft. 9 in. Height to the top of the stabilizer is nearly 30 ft.

Equipment—Unique in that it has been designed from the start for highly specialized duties, the XF-12 is virtually a flying photo laboratory, carrying complete radio and radar equipment, armor plate and flash bombs for night photography. Specifications include three camera stations-one split vertical, one tri-metrogron, plus one vertical view finder. Darkroom equipment for loading and storing film also is carried.

▶ Outline—In announcing the proggress of the XF-12 and its nearness to flight status, Alfred Marchev, Republic president, disclosed part of the story behind it.

"The plane represents a stage of development that was not considered possible prior to just a year

Record Order

One hundred 40-passenger Consolidated Vultee Model 240 transports have been ordered by the American Airlines system - probably the largest purchase yet contracted by any airline—at a cost of \$180,000,-

Still on the drafting board, the twin-engine low-wing craft will be powered by Pratt & Whitney 4-2800 engines equipped with auxiliary jet exhausts. Designed to operate most economically over distances of less than 1,000 miles, it will cruise at 300 mph., have a 350-mph, top speed and a gross weight of 34,000 lbs. Payload will be 8,500 lbs. over more than 500 miles, equivalent to 1,000 lbs. with 40 passengers and luggage.

or two ago," he said. "During the war, the AAF relied on modified versions of then existing bomber and fighter type models for its photographic reconnaissance. In October, 1943, the Air Technical Service Command published type specifications for an airplane such as we are now bringing to completion. Republic submitted a proposal in December and the Army gave the 'go ahead' in January, 1944. In June, after a mockup inspection, the plans were completely revised and a new mockup was approved in November, 1944. And even while we've been building the XF-12, both Republic and the AAF made changes to improve the performance of the airplane.

Need Constant—"The important thing to remember about this plane," continued Mr. Marchev, "is that the ending of the war, with weapons never before devised, has

Conservation Patrol To Use Plane

Chesapeake Bay oystermen who violate the conservation laws soon will need to keep a weather eye out for more than clouds and tides, for the State Department of Tidwater Fisheries is buying an airplane for use in enforcement work.

Purchase of the plane, which will be an amphibian capable of landing anywhere in the bay and taxiing alongside oystermen suspected of illegal operations, was approved by the Budget Bureau on recommendation of Gov. O'Connor, Maryland's air-minded chief executive.

Job Difficult-Enforcing the oystering laws by boats is difficult because of the time involved in approaching a suspected violator. According to David H. Wallace, executive secretary of the Tide-

water Fisheries department, tests of the new method were "a great success." He said that with a plane an enforcement agent in a plane flying at several thousand feet over the Bay could scan an area of many square miles and, on seeing an oysterman's boat operating in a protected area could descend, land on the water and taxi alongside, giving the oysterman no opportunity to get out of the area before apprehen-

The State plans to buy a Grumman Widgeon twin-engine amphibian, which will carry a pilot and four passengers and will have a 600-800 mile range. There are several surplus Widgeons at Roosevelt Field, N. Y., and the State currently is negotiating for purchase of one of them.

AVIATION CALENDAR

Jan. 4-5-6-All-American Air Maneuvers. Florida Air Races. Jan. 7-11-SAE Annual Meeting, Book-Cadillac Hotel, Detroit, Mich.

Jan. 11-29-Cleveland (Ohio) Aircraft Show. Jan. 21-22-Northwest Aviation Planning Council, Boise Hotel, Idaho.

Jan. 28-Institute of Aeronautical Sciences Honors Night Dinner, Waldorf-Astoria Hotel, New York. Jan. 29-31-Institute of Aeronautical Sciences, Annual Meeting, tentatively scheduled for Pupin Laboratory, Columbia University,

Feb. 12-IATA European Rate Conference, Feb. 21-IATA Middle East Rate Conference,

Feb. 26-28-Air Transport Association Engineering and Maintenance Conference.

Place not yet set. March 1-5-Pan American Aircraft Exposition, Dallas, Texas, reviving pre-war annual

March 8-16-Southwestern Aviation Exposition, Fort Worth, Tex.

April 3-5—SAE National Aeronautic Spring
Meeting, Hotel New Yorker, New York.



"Flying photo laboratory": The new Republic XF-12, type of the forthcoming Rainbow transport, the XFhigh-speed, photo reconnaissance plane, on the line 12's engine nacelles each are as large as a P-47 fuse-

at the company's plant at Farmingdale, N. Y. Proto- lage to allow installation of "compound engines."

caused many high military officials to state that, while the Air Forces of the future may change the present conception of combat types, there can never be a dwindling of the need for reconnaissance and troop carrier planes. We'll still want to know where the enemy is and what he is doing, and apparently no long-range guided missiles or pilotless craft have been developed that can fill that need.

"The XF-12 is an experimental airplane, right now, and we intend to keep on trying to make better models and designs of it, because in the unfortunate event of another conflict, or in air-policing necessary by United Nations forces, military intelligence will be required in larger degree than ever before has been possible."

Designer—Credit for design of the XF-12 is given to Alexander Kartveli, vice-president in charge of engineering at Republic, who also designed the P-47 Thunderbolt. First of many AAF officers who saw merit in the project was Brig. Gen. Franklin O. Carroll,

who at the time the design was submitted was in charge of engineering of ATSC at Wright

Eisenhower Aide Joins TWA As Vice-President

Brig. Gen. Julius C. Holmes has joined Transcontinental & Western Air, Inc., as a vice-president. Gen. Holmes was deputy assistant chief of staff to Gen. Dwight Eisenhower in Europe.

Blohm & Voss Was Due for Larger Role

The German firm of Blohm & Voss, though it put no production airplanes into the war, established a reputation for bold and progressive design and would have played a strong part had the war continued. Much of the company's data was useful to other firms that were in production.

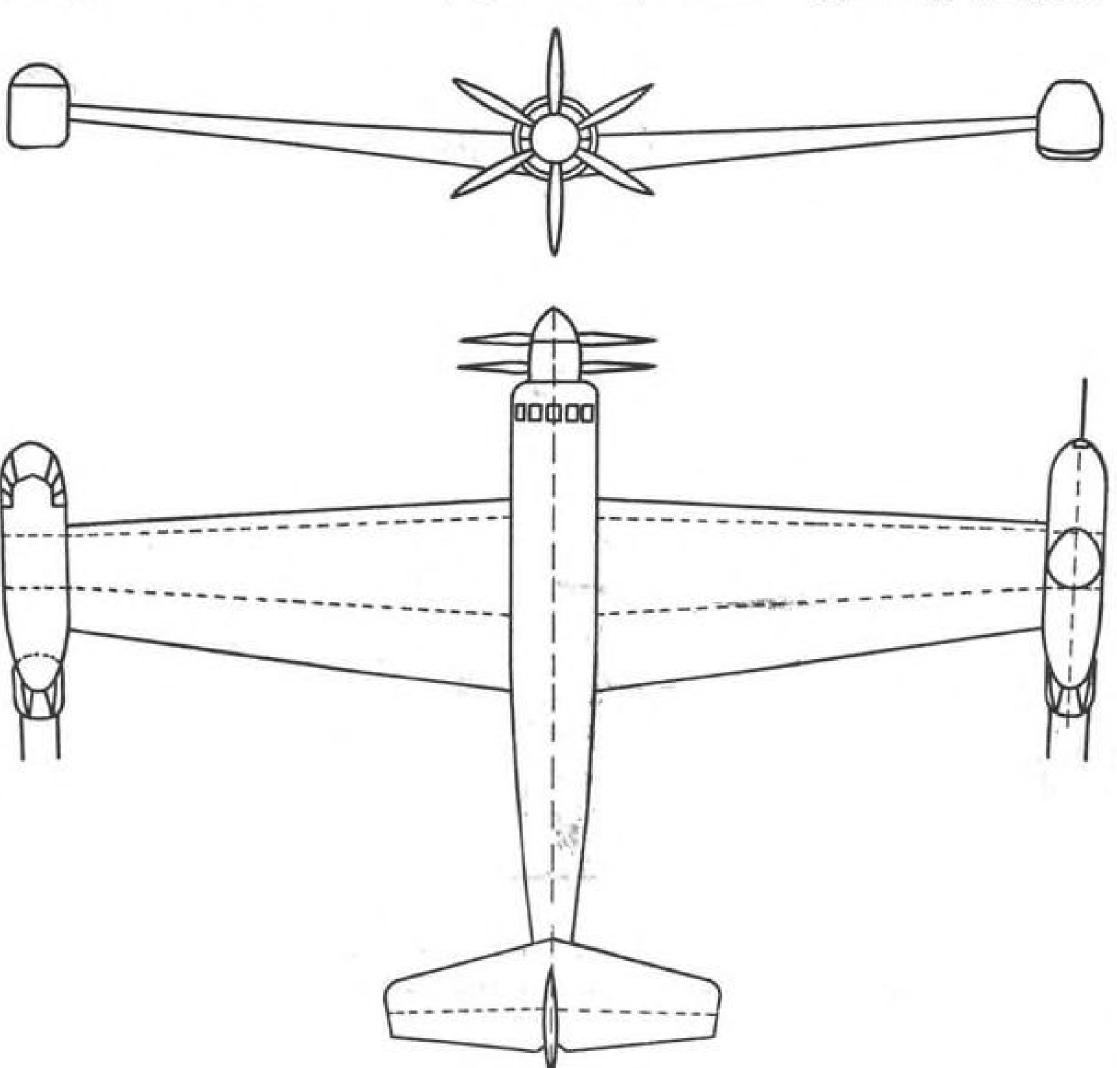
The Blohm & Voss aircraft unit was organized primarily to work out design and development only. Not until near the war's end was it prevailed on to go into production. Its twin-jet 3-place P-215 night fighter was ordered only three weeks before V-E day.

▶ Shipbuilding Firm — American engineers observed that B & V was a shipbuilding concern of long establishment and tradition, yet

is was able to branch quickly and successfully into aircraft laboratory work. Conversion of various industries to aircraft in the United States and Britain was limited almost entirely to the production end.

A three-part report on B & V, by H. E. Weimiller and H. P. Meiners, who served on the Technical Industrial Information Committee (TIIC), ably surveys the company's operations and its re-

▶ Tried Anything—A feature of B & V's program was that they were willing to try almost anything. Some of the projects they tried, like the tri-motored utility plane, with two of the engines on the wing tips, would have been turned down in advance by almost any engineering student. But B & V operated on the theory that since many sound - appearing projects



Flying Dumbbell: This exclusive sketch of a proposed German "unitwin" bomber-observation-supply plane, carrying personnel in nacelles mounted at each wingtip, is another clever example of project design by Germany's Blohm & Voss, versatile aircraft company which tried anything and nearly everything for the Luftwaffe. The P-163 (P for project), developed on paper only, was intended to carry the pilot in the left nacelle; a navigator-radio operator-engineer in the fuselage; and front and rear gunners in the right nacelle. The design was to be powered by one air-cooled engine, or two liquid-cooled engines in the central fuselage, driving contrarotating three-blade propellers. Aim were built of laminated steel plate, was to achieve maximum field of fire. When pilots objected they might covered with plaster of paris moldfeel awkward flying from a wing-tip, B & V installed an additional nacelle on the famous BV-141 "sidecar" plane for tests, and crews reported no unusual reaction. (Another sketch on Page 16.)

don't work, some unsound-looking ones might.

Blohm & Voss could carry on speculative projects, on a vast scale because, their officials told inquiring Americans, they had only to ask for any amount of money to get it; and because of forced labor they had no manpower shortage. The company was building more submarines than any other, and other vessels and marine equipment, and it held such a long whip that it could and did write most of its own program. It was only in desperation that the Nazis finally got B & V to go into production—after Germany was so battered that the railroads no longer could move airplane components from plant to plant.

Huge Flying Boat—Under the accomplished Dr. Richard Vogt, B & V produced a prototype of the world's biggest flying boat, the sixengined BV-238, for long-range assistance to submarines, and to service the distant bases Germany expected to win. This boat was flown, and was later landed in a remote lake and put under camouflage where, unfortunately, Allied strafers found and sank it.

Another flying boat, the BV-200, never built, was to have eight engines, and the commercial version was to carry 120 passengers in staterooms laterally arranged on both sides of the aisle in a fuselage of 17-ft. wide and with a gross weight of 231 tons.

High-altitude Fighter—The BV-155, single-engined high altitude fighter, was found almost intact in a hangar and is now in England. Complete records on this airplane say its service ceiling is 55,500 ft,, gross weight 13,800 lbs. The laminar flow airfoil section seems to have been copied with slight change from the United States P-51.

Officials of B & V told Weimiller and Meiners that the company had built a number of gliding torpedoes for attack on ships, but that they were not successful. One of them had a control arm, extending downward; when this arm touched the water, it actuated the elevators, keeping the torpedo just above the surface. It looks gadgety.

The company also built several gliding bombs with high aspect ratio wings. These wings ing for air contour. Engineers said this type of wing would be too heavy for use on airplanes.

SPECIAL AIR SERVICES

CHARTER NON-SCHEDULED

New York State Feeder Line Will Develope Own Airport

Robinson Airlines, operating from Ithaca to Teterboro, N. J., has two F-24's and two Cessnas with two eight-passenger Beechcrafts on order; Cornell may build at field.

Plans for development of a new Ithaca-Cornell airport at Ithaca, N. Y., to serve as the home base for Robinson Airlines, intrastate carrier operated by C. S. Robinson, Ithaca, have been disclosed. It is believed to be the first case of an airline developing an airport for its own use, since the end of the war.

First stage of development calls for an operations building and hangar, parking lot, taxi strip and ramp and one 2,900-ft. runway on 50 acres now held, with options The study showed that the numon additional land to permit ex- ber of space requests had more pansion to 500 acres as this becomes necessary. The new field will be about five miles from downtown Ithaca, and about 2½ miles from Cornell University which has indicated a strong interest in the establishment of the new field.

▶ University Plans — Currently Ithaca has a small airport about 21/2 miles from downtown, where the intrastate airline is operating until opening of the new field. Dean S. C. Hollister, of the Cornell engineering college, has indicated that the university at a later date contemplates constructing engineering and hangar buildings at the new airport, for use of the university's graduate school of aeronautical engineering.

Robinson, a veteran private flyer, has used a plane extensively in connection with his business, the manufacturing of Vibrashock mounts for aircraft instruments. After a number of years, he decided that his daily commuting from Ithaca to New York, by plane could be expanded into an intrastate airline which would benefit his home town and eventually four-passenger planes. Oct. 8 he its own new airport at Ithaca.

put a Cessna five-passenger twinengine plane in service, and Nov. 15 a second Cessna.

INTRASTATE

Traffic Study—A study of passengers carried during the first seven months, through October, 1945, shows a total of 738 passengers carried, 1,631 requests for space, 595 cancellations (90 percent by company due to weather or other reasons since the airline has been entirely a contact flight operation), and 298 passengers who could not get accommodations. than doubled from 148 in April, the first month, to October. Busiest month thus far from standpoint of passengers carried was August, when 88 passengers originated in

Ithaca, 85 in New York, and 14 in Rochester.

Accommodations will be further improved with the delivery of two 8-passenger Beechcraft twin-engine 18S all-metal planes now on order. With these Robinson expects to maintain a 160-mph. block-to-block speed. With completion of his new facilities at Ithaca he plans to install a VHF communications system between the airport there and his New York base at Teterboro, N. J. to maintain closer plane-to-ground and base-to-base communication.

New Field—The new field is expected to be in operation early next summer, about the time Robinson receives the Beechcrafts. He plans to develop the Ithaca-Cornell airport as a private flyers' terminal as well as the home base for his airline. A temporary wooden, heated hangar and passenger station at the old field will be transferred to the new field to supplement an 80-by-80 ft. concrete and steel administration building and hangar which will be built there.

While Robinson is a consistent advocate of turf fields for light planes, he plans to surface the first runway of his new field with asphalt over gravel, on a center 90-ft. strip, with two turf strips 110-ft. wide adjoining. Taxi strips also will be paved.

Passenger Handling — Robinson



might develop into a profitable en- Robinson Airlines Departure: Passengers board a Robinson Airlines terprise. He began operations last Cessna at Ithaca, N. Y., for New York. By next June the Robinson or-April with two Fairchild F-24 ganization expects to be operating Beechcraft 8-passenger planes from

emphasizes the need for efficiency in loading and off-loading passengers, and has set a requirement of 10 minutes for passenger and baggage off-loading into waiting surface transportation at his terminal points. He believes that efficient handling of passengers and baggage at small close-in airports can offset much of the advantage of higher speed operation by the major airlines, on any except long trips.

Daily Flights Begun by Oregon Line

Using two four-place converted Cessna transports, Oregon Airlines has begun daily flights between Portland, Eugene and Bend, Ore., the company's owner and manager, W. A. Ward, announces.

The 40-minute flight from Portland to Eugene is made twice daily, the second flight continuing over the Cascade Mountains to Bend. Salem and Albany are flag stops. The company uses Troutdale Airport at Portland.

More Planes—Ward reports three more Cessnas will be acquired as soon as possible, with consideration being given to the use of amphibian aircraft along the Willamette River next spring.

Arizona Airways, Inc., Has Extensive Plans

Arizona Airways, Inc., has made extensive plans for a daily air transportation service for intrastate points, according to H. O. Nelson, president.

Founded in 1942 to operate a Navy flight training school at Safford, the company is capitalized at \$1,000,000, of which \$250,000 is fully subscribed. The stock is held by Arizona business and civic leaders, together with a small minority holding by Transcontinental & Western Air, Inc.

Franchise—A franchise has been granted the company to fly passengers, mail and express between Phoenix, Globe, Safford, Clifton, Willcox, and Tucson, and applications are on file with the Arizona Corporation Commission to extend service to Bisbee, and for a franchise to operate between Phoenix and Yuma with an alternate stop at Ajo. Also, TWA has transferred to Arizona Airways an Baton Rouge. The first flight was of such services from the airport, intrastate certificate to operate be- made in mid-December. At Mon- the CATB found that Montreal is tween Phoenix, Prescott, King- roe, tickets are being sold at the sufficiently large to allow another man, Arizona, and Boulder City Union Bus Depot.

and Las Vegas, Nev., subject to approval of CAB.

The corporation owns the stock of Grand Canyon Scenic Tours, Inc., which holds a franchise for air service between Nogales, Ariz., and the state line, leading to Salt Lake City, and serving Tucson, Phoenix, Winslow and Grand Canyon; between Phoenix and Boulder Dam via Prescott and Kingman; and between North Rim, Grand Canyon and Boulder Dam via South Rim, Grand Canyon and Pierces Ferry.

Arizona Airways will use Lockheed Saturn two-engined 14-passenger planes, of which three are now on order at \$85,000 each.

Easton, Md., Airport To Be Licensed Soon

Maryland Airlines, which had to suspend its Washington-Easton flights recently because of the State Aviation Commission's refusal to license the Easton Municipal Airport for commercial operations because of a lack of facilities on the field, will resume flights there soon.

the airline, told the commission it would station an attendant at the field daily except Sunday from 8 a.m. to 6 p.m. and would provide a crash truck, fire extinguisher and first aid kit. In addition, the Cities Service Oil Co., lessees of the field, said fuel pumps, an administration building and hangar, fueling facilities and radio equipment would be installed in the "very near future."

Temporary License - On this basis the commission voted to grant the field a temporary Class II license, effective January 1. If an inspection within a reasonable time shows the promised facilities have not been provided, the license will become void. Edward R. Fenimore, director of the commission, said the Easton field would be qualified for a Class III license when all the facilities listed by the lessee had been installed.

Busline Operating Service in Louisiana

Southern Airlines has been organized as an affiliate of Southern Trailways to operate aircraft between Monroe and New Orleans, with stops at Alexandria and

Baltimore Men Plan Charter Base

Plans to use the former Curtiss-Wright Airport in Northwest Baltimore as a base for a charter cargo airline, as well as to convert surplus military transport planes for cargo and passenger transport have been announced by Howard M. and Frank H. Knipp, new owners of the field.

They purchased it recently from Curtiss-Wright Corp. for a reported \$260,000, and have engaged Col. George R. Hutchinson of the "Flying Hutchinson family" as their technical advisor. The Knipps are partners in John C. Knipp & Sons, Baltimore woodworking company.

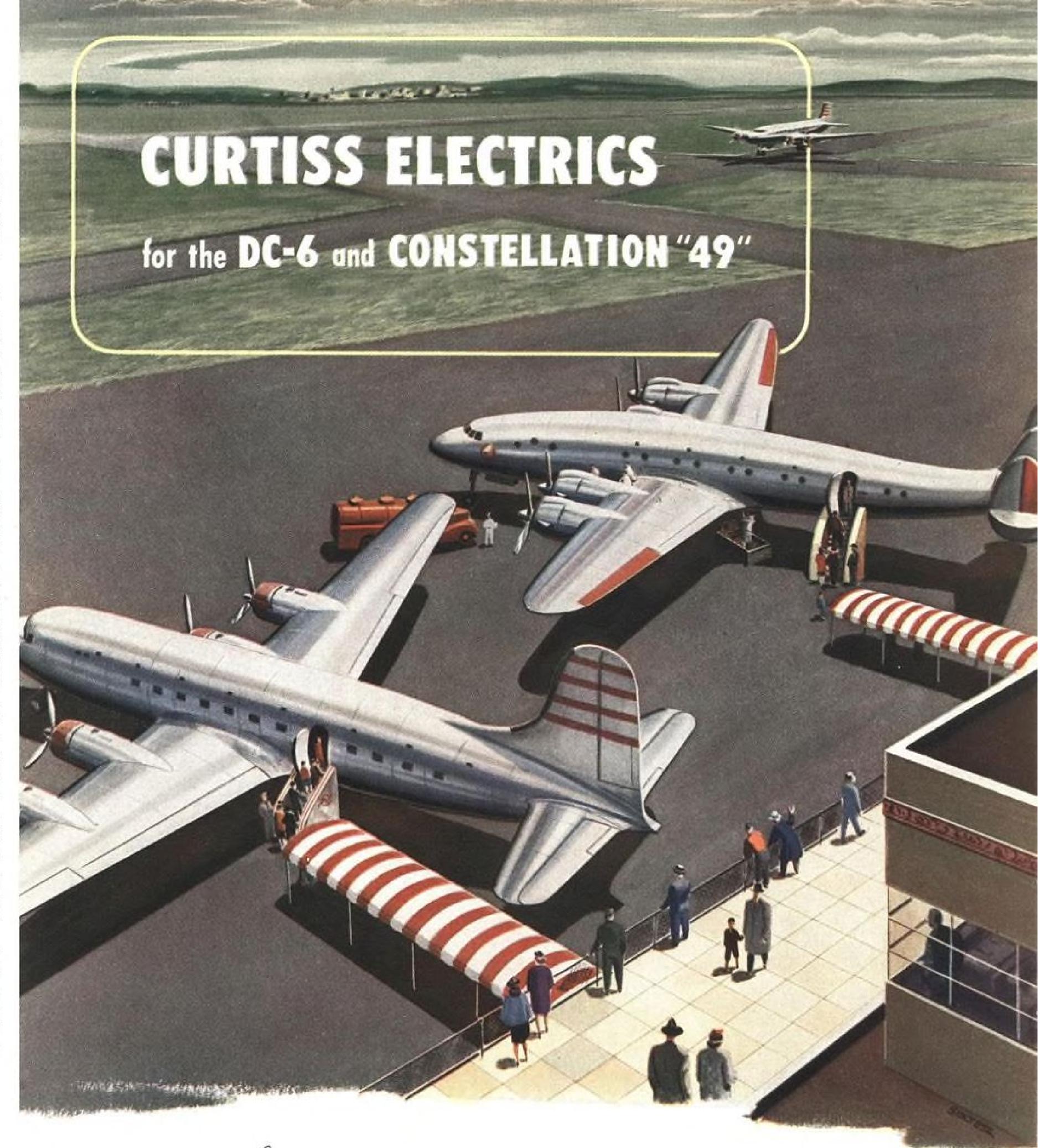
Facilities—The 264-acre all-sod field now has two large hangars. One of these will be used by the Knipps for their conversion and charter work. They plan a number of smaller ones for private planes.

The first conversion job on a C-47 now is nearing completion at Baltimore Municipal Airport and will be used as a demonstrator, to Malcolm Hathaway, president of take orders from feeder airlines and charter operators. A second was flown on Dec. 22, by Col. Hutchinson and his daughter Janet, a former WASP. The company plans to acquire a number of C-47s and four-engined C-54s for conversion, some for the company's own use and some for resale. Interiors will be redesigned to be adaptable for carrying passengers, general cargo, refrigerated cargo or even livestock, and the conversions will be marketed as "Knipp Convertibles."

The Knipps were successful bidders for the field after the recent death of Col. William Tipton, lessee of the field since 1933, who had been given first option to purchase it, when Curtiss-Wright decided to sell it for tax purposes.

Charter Line Licensed To Operate From Montreal

Canadian Aeromotive Ltd., Montreal, has been granted a license by the Canadian Air Transport Board for a non-scheduled commerical charter air service carrying passengers and goods, from Cartierville Airport, Montreal, Despite objections of other operators operator in the field.



the Scene is any large airline terminal. The aircraft are the new

Douglas DC-6 and the Lockheed Constellation "49"—bringing to the commercial airlines new standards in passenger comfort—featuring the Curtiss Automatic Synchronizer for

quieter, simplified engine control and Curtiss Aerodynamic

Braking by reverse thrust for shorter, smoother landings.







General traffic office: 510 W. 6th Street, Los Angeles 14

PRODUCTION

Industry Faces Rise in Cost Of Research As Output Drops

Breech, Bendix president, warns that continued U. S. aviation progress depends largely on careful control of all financial factors to meet reconversion and development problems.

The aviation industry, going into the new year, faces the fact that while production is coming down research costs will be going up.

Ernest R. Breech, president of Bendix Aviation Corp., points out that the necessity for exploring entirely new phases of aerodynamics, together with jet, gas turbine and rocket propulsion and guided missiles will entail greatly increased financial appropriations for research.

Production Cutback — The aviation industry in 1946 will be realigning its resources to place more emphasis on research, development and sales on the scale necessary to maintain our national air power leadership, broaden the utility and economy of commercial aviation and spur the already promising growth of private flying.

Breech points out that total 1946 aircraft production is expected to fall below \$1,000,000,000—or to approximately six percent of peak annual output of \$16,000,000,000 during wartime.

This estimated volume of the industry's first full peacetime year, while about three times the prewar annual volume of \$225,000,000 in 1939, will not be sufficient, Breech says, to support the extensive and continuing research program that will be needed to uphold America's supremacy in the air, which should be a prime objective in overall national plans for aviation's future.

Costs—"The extent of American progress in military aviation development will be determined to a considerable degree by our ability to keep all costs under reasonable control," Breech said. "If the pressure of labor demands for sweeping wage increases forces aviation costs beyond justifiable bounds, our future air supremacy will be in grave danger.

"The American public is prepared to pay for our air superiority as a 'must' peacetime insurance policy, but government, industry and labor must give the taxpayer value received to keep our air forces up to date, and to preserve a strong, developing and growing American aircraft industry."

▶ Bendix Plans — Breech empha-

'Take Home' Pay Cut

V-J day resulted in a 9.4 percent drop in average "take home" wages in the airframe industry, bringing total average earnings of aircraft workers in September to \$44.02 weekly, or 19.1 percent the same month last year, according to a report issued by the Bureau of Labor Statistics.

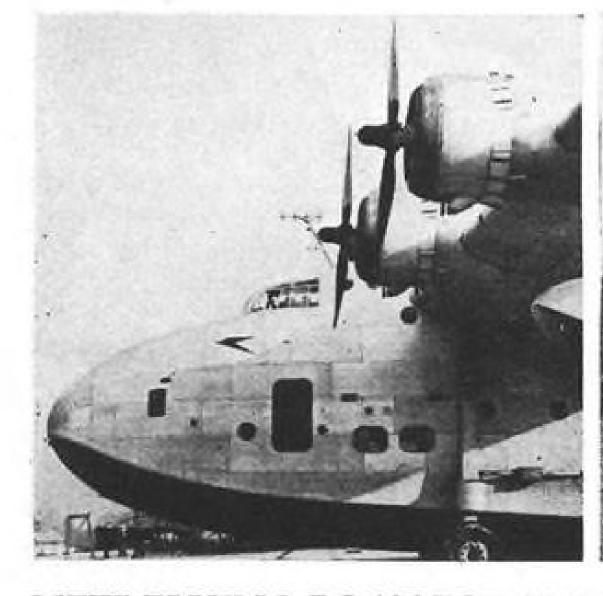
"Take home" pay in aircraft engine manufacturing dropped 9.5 percent following V-J day to an average of \$44.05 weekly in September, or 28.3 percent below average "take home" earnings of workers in Sep-

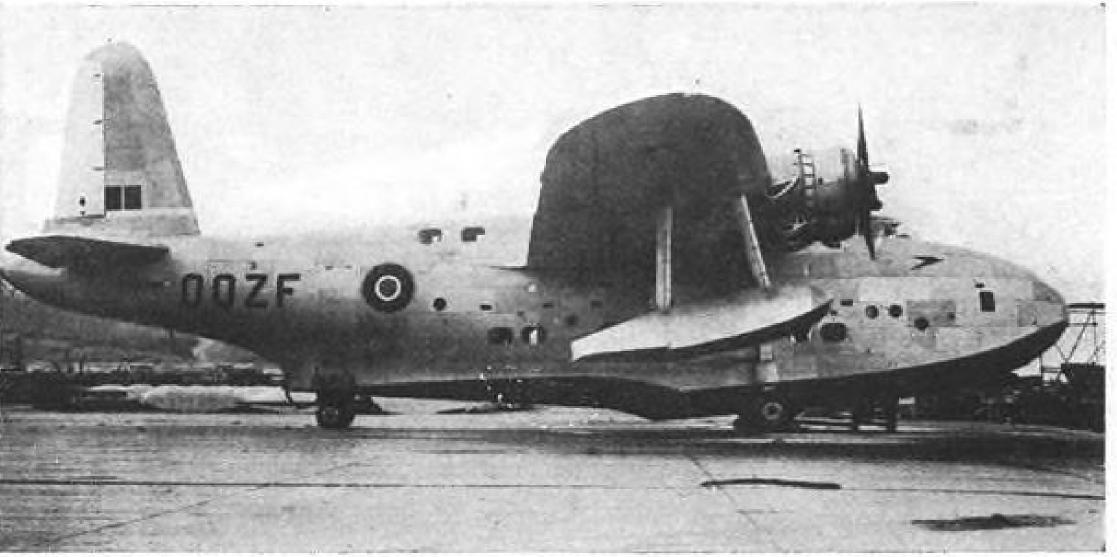
tember, 1944.

Hourly earnings of workers in the airframe industry in September were slightly (0.1 percent) above September, 1944, rates, while hourly wages in the aircraft engine industry during September were 10.5 percent below September, 1944, hourly wages.

sized that in the wake of terminations and cutbacks, all companies comprising the aviation industry face new demands on their capital, capabilities and resourcefulness.

Reconversion costs in themselves will be enormous. According to present estimates, Bendix Aviation, for example, will spend approximately \$25,000,000 for purchase and modernization of facilities needed to carry out present plans for peacetime operations. The company is re-arranging plant facilities for greatly increased production of automotive equipment, including numerous new and improved starter, brake and carbure-





NEW FLYING BOAT FOR EMPIRE ROUTES:

ocean transport immediately. A civil version of the cruises at 199 mph. at 4,750 ft.

The new four-engine Sandringham, built at Short firm's Sunderland patrol plane, the Sandringham will Bros.' works at Rochester, England, is British pro- accommodate 24 day passengers and 16 at night. duction's attempt to meet the requirements of over- Powered by four Bristol Pegasus engines, the ship

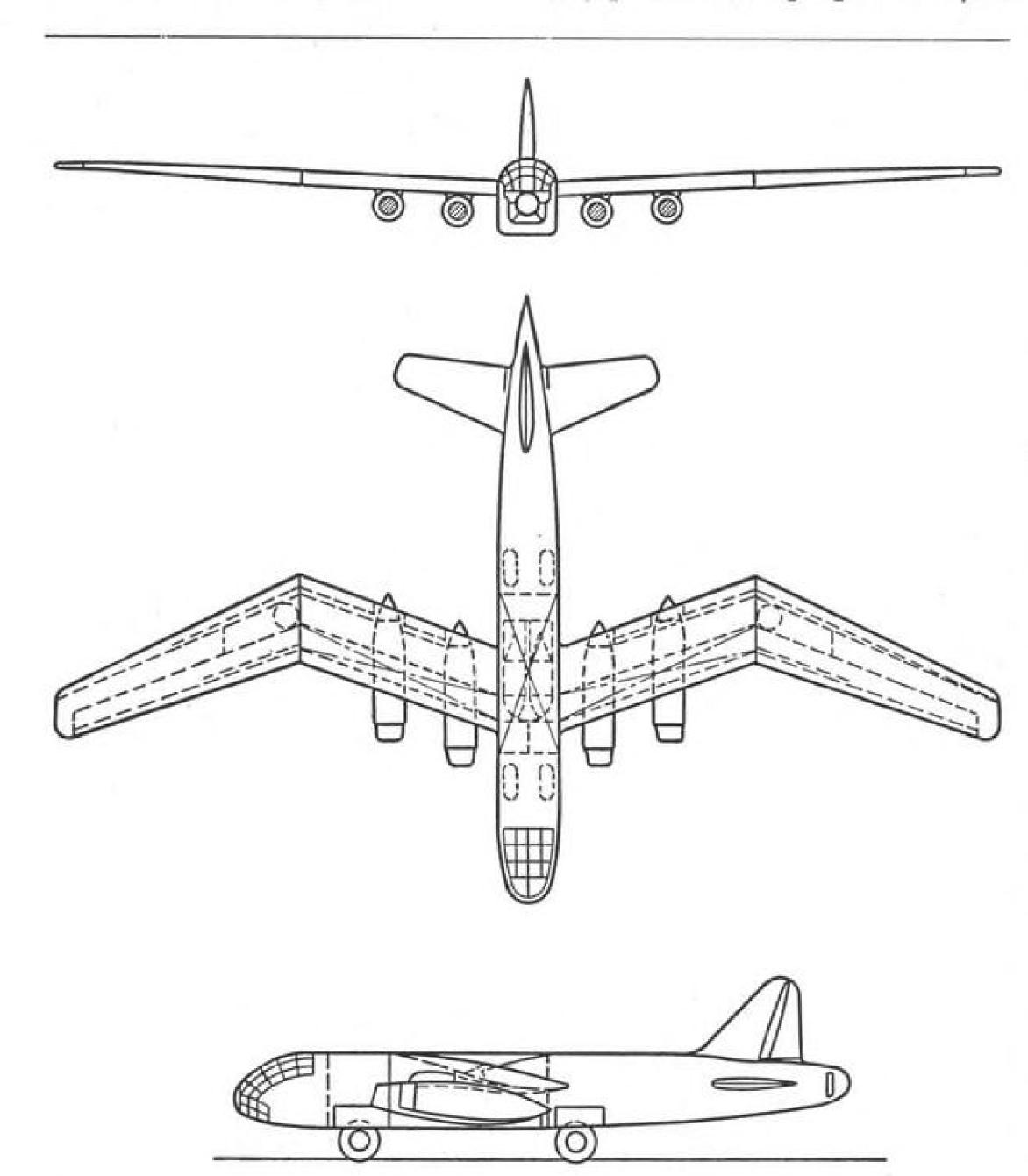
Wider Field—At the same time, Breech said, they are broadening activities in the consumer field to apply engineering and production knowledge of the radio division in the development and manufacture of radio and radar equipment for aircraft.

Bendix also is committed to extensive research and development to speed the progress of private flying with plans for production of more efficient and economical flight and navigation instruments and low-cost engine components for the personal airplane.

SPA Report Details Magnesium Cut

Consumption of magnesium in aircraft manufacturing rose from a pre-war 1,000 tons annually to 54,000 tons during the war, and will slide back to between 4,000 to 14,000 tons during the post-war period, according to the Surplus Property Administration's report to Congress on magnesium plant disposal.

The estimate of post-war consumption is predicated on a military procurement program of 5,000



SUPERSONIC WING EXPERIMENT:

This exclusive sketch shows the German four-jet P-188, in which Blohm & Voss proposed a combination sweep-back and sweep-forward wing to minimize loss of lift due to shock wave at supersonic speeds. On the accepted theory that shock waves pass over the wing at large angles to the longitudinal axis of the airplane, B & V assumed that if the wing itself were angled, either forward or backward, in conformity with the shock wave angle, the desired result might be achieved or approached. The project apparently was not carried beyond the drawing board stage. Whether the company was able to prove any merit for the project is not known, but American engineers, investigating the B & V program for the U. S. Technical Industrial Intelligence Committee (TIIC), considered it highly interesting. These reports were made by H. E. Weimiller and H. P. Meiners.

planes a year, SPA said. It probably will be nearer the lower figure in view of the challenge of cheaper aluminum alloys and the application of alloy steel, wood and plastics to aircraft construction, it added.

▶ Recommendation—SPA recommended that six governmentowned plants be maintained as magnesium producers, to feed aircraft manufacturers in the event of another war emergency. The six plants, which would insure a capacity of 127,000 tons annually, are located at Spokane, Wash.; Velasco and Freeport, Tex.; Plainsville and Luckey, Ohio, and Canaan, Conn. They would be sold or leased with the stipulation that they be kept wholly or partially in production of magnesium, and that the other-than-magnesium production be kept convertible to magnesium on 90-day notice.

Although, with aggressive research and market development, consumption of magnesium will mount to an estimated 26,000 to 30,000 tons annually, there is no possibility—in view of the drastic curtailment in aircraft output—that demand will even remotely approach present output capacity of 293,000 tons, SPA said.

This necessitates the disposal of a large segment of war-built government magnesium facilities for other types of manufacturing, and SPA recommended that seven magnesium plants should be disposed of as quickly as possible for other purposes. These plants, with a total capacity of 166,000 tons annually, are located at Ludlington, Dearborn, and Marysville, Mich.; Las Vegas and Gibbs, Nev.; Austin, Tex.; Carlsbad, N. Mex.; Manteca, Calif.; Wingdale, N. Y.; and Lake Charles, La.

5-Year Aircraft Supply Kept On Hand By RCAF

The Royal Canadian Air Force is keeping five years supply of aircraft on hand it was disclosed in Parliament by Air Minister Colin Gibson.

He also said the RCAF is experimenting with jet planes, which he termed the aircraft of the future. In dealing with RCAF estimates, the Air Minister stated it would cost \$80,000,000 a year to keep up the post-war air force of 20,000 men operating in ten squadrons—three bomber, three fighter, three transport and one photographic squadron. In addition, Canada would have an auxiliary air force of 10,000 men.

Division of Robot Research Scored

Division of guided missile research between AAF and Army Ordnance was the reason the U. S. lagged in this field, according to James B. Riddle, one of the civilian experts who appraised German research work after VE-Day.

Riddle, president of the National Aeronautical Corp., Camden, N. J., told the Aviation Distributors and Manufacturers Association recently that the public should demand increased appropriations for research in countermissiles.

Nazi Models—In Germany, he said, he saw a missile designed to travel to the U. S. in 17 minutes and electronically controlled so that it would land within an area the size of New York. The mis-

sile he said, would have been ready for use against New York in six months, and had already been tried experimentally against Antwerp, with devastating results.

Summarizing other electronic developments he predicted an electronic automatic pilot weighing not more than 25 lbs. and costing between \$100 and \$200 would be ready for small plane use within two years. He forecast that within five years, through combined use of ground television and electronic control devices, a plane could use a single receiver, weighing not more than 25 lbs., to serve every function of instrument landing, anticollision indication, traffic control, and navigation.

Cord Buys Control of Chicago Firm

A voice out of aviation's past appeared recently with disclosure that E. L. Cord has purchased control of the Chicago Electric Manufacturing Co., indicating he may be emerging from virtual business retirement.

Cord was the stormy petrel around which much of American Airlines' formative history revolved. In conjunction with this activity, he acquired control of the predecessor units now comprising the Aviation Corp. In 1934, motivated by Securities & Exchange Commission action, he was forced to divest ownership of the holding company and his financial interests then were acquired by Victor Emanuel. It was then reported that cord moved West for reasons of his health and the safety of his children, retiring from active participation in the aviation industry. Agent—Cord, however, was continuously represented on the American Airlines directorate by Harold T. Ames of Chicago. The latter has just been named president of Chicago Electric. Ames and another early Cord associate, Raymond S. Pruitt, previously were on the Chicago Electric board. Pruitt has continued as general counsel for American Airlines and the Aviation Corp. despite Cord's

controlled American Airlines. Nevertheless, the CAB ordered the Aviation Corp. to sell the bulk of such airline holdings.

It is known that Cord continued as the largest individual stock-holder of American Airlines. Last reports showed him as owning about 9,400 shares of this carrier's common stock.

Cord also remained a substantial stockholder in Colonial Airlines. His interests in this smaller airline are above 11,000 shares or better than 4 percent of the total stock outstanding. Colonial originally was part of the American system but its stock ownership was distributed to the holders of American as a stock dividend. Aviation Corp's present ownership of American Airlines' stock is a direct outgrowth of Cord's early activity.

Unused Aircraft Plywood Put on Sale by RFC

A total of 1,250,000 sq. ft. of surplus aircraft hardwood ply-wood, unused and in good condition, is being offered for sale by the Reconstruction Finance Corp. Standard range of width and lengths is available in thicknesses varying from 1/64 inch to 1½ inches.

Pruitt has continued as general counsel for American Airlines and the Aviation Corp. despite Cord's departure from the active scene. In a recent Civil Aeronautics mitted by that date. Minimum stock. Board action, the Aviation Corp. quantity of the material that will disclaimed the contention that it be sold is one crate.

Ryan Surveying Civilian Markets

Military program will be carried over, affording expanding basis for new operations.

Ryan Aeronautical officials are studying the commercial and private airplane markets with a view to reentering this manufacturing field.

Earl D. Prudden, vice-president, pointed out that Ryan is continuing its military airplane program into peace-time. New developments for the Navy have been in progress for some time and will be carried along on what is expected to be an expanding basis. Other Products—Manufacture of specialized stainless steel products, principally exhaust manifolds and allied aircraft engine accessories in which Ryan has been a pioneer, is continuing on a sizeable scale though on not as high a level as in war-time.

While looking toward the commercial and private airplane markets, Ryan was one of the few warplane production units in the country which continued on an accelerating manufacturing scale right up to V-J Day, and the transition to peace-time production in this field will be somewhat slower than some other companies.

Justed its total personnel and production to the demands of peacetime requirements, but now has 1700 employees, which is substantial compared with pre-war years and represents about the staff the company feels can be maintained in the immediate future.

Ryan went through a progressive development during the war, having gone from building small numbers of relatively simple primary training planes to design, engineering and volume production of Navy Fireball jet-pushed, propeller-pulled fighters of extremely advanced design.

Convair Announces Dividend

Consolidated - Vultee Aircraft Corp. will pay a dividend of 50 cents per share on February 15 to holders of its common stock of record Feb. 1, President Harry Woodhead has announced. Action on preferred dividend has been deferred pending decision on a plan for retirement of the preferred stock

In fiscal 1945, Consolidated paid a total of \$2 per common share.



THE greatest all-purpose snow and ice tire built for aircraft is the Goodyear Ice-Grip tire. So pilots report after thousands of war and postwar flights under Arctic conditions.

There's better control on ice, or on snowpacked runways when your plane is equipped with Ice-Grips. Thousands of strong claws bite into the ice as the Ice-Grip tire makes its landing - for embedded in the rubber tread are thousands of tiny, high-tensile steel springs

(10,000 in a large-size tire). There's no lumpiness, no bumpiness; the tires roll smoothly on concrete or other pavement, because the coil springs are solidly molded into the rubber. They won't tear out and bullet through your wings or fuselage.

Further, Ice-Grip tires give added traction on slippery turf runways.

These multiple advantages make Goodyear Ice-Grips the choice for airliners whose flights

cover several climate zones. They contribute importantly to safety and confidence.

Ice-Grips are an outstanding type in the great Goodyear line of airplane tires.

FOR ADDITIONAL ASSURANCE, insist on Goodyear Multiple or Single Disc Brakes. They give long service, sure and smooth action.

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PERSONNEL

Harwood Named Head Of Gillies Aviation Corp.

O. P. Harwood (photo) has been named president of Gillies Aviation



Corp., Bethpage,
L. I. Harwood,
who recently resigned as regional administrator of the
Civil Aeronautics Administration in Region 1,
is well known in
the industry.
Gillies Aviation

has represented Grumman Aircraft Engineering Corp. for the past several years as sales representative and consultants. Harwood was in the Air Corps in World War I.

Three Washington men, all formerely with the War Production Board, have joined the staff of the Foreign Liquidation Commissioner.

Alfred W. Lewis, Allen C. Rankin and John H. Evans all were formerly with the aircraft division of WPB and are now in the aircraft division of FLC.

Charles C. Martin has been appointed a vice president of Rheem Research Products, Inc., Baltimore. John S. Gorby, formerly Naval Air Traffic Coordinator in the Pacific forward area, has returned to Railway Express Agency to be superintendent of public relations.

J. D. Fressio has been appointed traffic manager for Pan American Airways' Alaska region, replacing S. D. Smith who has been transferred to San Francisco as division sales manager. Fressio has been serving in Naval Air Transport Service as a lieutenant commander.

Major J. Keith Davis (photo) has been named sales manager of the



airplane sales division of Robinson Aviation, Inc., at the Teterboro, N. J. Air Terminal. The division will handle products of the Stinson division of Consolidated Aircraft

Corp., and Aeronca Aircraft Corp.

Maj. Louis Miller of Lock Haven, Pa., has been appointed engineerinspector of airports for the Pennsylvania State Aeronautics commission. He was recently discharged

20 — PERSONNEL

from the AAF where he served as an airport engineer and had charge of the construction of the field at Casablanca. Before the war he was associated with the Pennsylvania state highway department.

Col. Mike Murphy has returned to Findlay, Ohio, where he will head the aviation department of the Ohio Oil Co. He has been released from active duty with the glider section of the Air Forces. Before he entered the AAF Murphy was the national and international stunt flying champion. He operated airfields at Kokomo, Ind., and Findlay.

Capt. Ray W. Wells has been assigned to handle special phases of TWA's operations in Europe, with headquarters in Dublin. Capt. Clifford V. Abbott, until recently a major in the Flying Training Command of the AAF, has assumed Wells' former duties in Kansas City.

Raymond W. Tewksbury (photo), formerly associated with Winston,



Strawn & Shaw, Chicago law firm, has been appointed a regional director of properties for TWA. He will have charge of real estate nego tiations in TWA's central region, suc-

ceeding A. R. Thompson, who recently was assigned to TWA's contract section at Kansas City.

C. L. Johnson, chief research engineer for Lockheed Aircraft Corp., became the new president of the Los Angeles aviation chapter of the Society of Automotive Engineers. The outgoing president was Arthur E. Raymond, chief engineer of Douglas Aircraft Co.

Frank Brunton has been named chief of the public relations special projects section of American Airlines System. Brunton was in the public relations section of American before going on active duty during the war.

E. O. Morgan has been named Los Angeles sales supervisor for American Airlines. He has been with American seven years in both operations and traffic. Morgan has just been released by the Navy.

V. K. Stephens has been named el priority
Washington regional traffic manager as co-ordi
for PCA. Stephens has been with and ATC.

PCA since 1937 and formerly was station manager in Washington and district traffic manager in Norfolk and New York.



V. C. Schorlemmer

Two Plane Firms Make Appointments

Appointment of a new vice president and a new treasurer were announced last week by aircraft firms.

V. C. Schorlemmer becomes vicepresident in charge of finance for Consolidated Vultee Aircraft Corp., succeeding Francis A. Callery, who resigned recently. Schorlemmer, controller for the company since 1943, was vice-president in charge of finance for Vultee Aircraft, Inc., prior to the merger of the two companies.

pointed treasurer of the Luscombe Airplane Corp. of Dallas and Trenton, N. J. Prior to joining Luscombe, Grubbs was with United States Steel Corp. as audit supervisor. He conducted audits of all records of subsidiary companies as well as directing the internal audit functions of such companies.

Edward S. Sullivan (photo) has joined the TWA staff as manager of



the agency and interline department. With PCA for 11 years, Sullivan was a representative of the Air Transport Association during the war and aided in establishing the original air trav-

el priority system. He later served as co-ordinator between the airlines and ATC.



FINANCIAL

Survey Indorses Aircraft Stocks, Citing Undervalued Position

Moody's analyzes nine companies on basis of current orders and future possibilities; preference for Lockheed and Douglas indicated in consideration of large backlogs.

The undervalued position of aircraft equities was outlined recently by Moody's Stock Survey with the recommendation that selected aircraft shares be purchased for speculation not merely in expectation of a recovery from the "seemingly unimaginative conservatism" of existing market prices, but rather in the belief that the industry does have a future in earnings, "and that present prices are low in relation thereto."

Since Moody's report was released, aircraft prices have exrecalled that on October 9, AVIA-TION NEWS, in an exclusive analysis, pointed out the disparities between then existing market prices and working capital balances of many of the aircraft companies. Moody's approach is similar but in addition projects earnings potentialities for 1946.

Analysis—The advisory service analyzes nine aircraft companies and estimates that this group has military contracts of about \$900,-

000,000. It is estimated that this business will be spread over the two years 1946 and 1947, and it is stressed that this is not advanced as the limit. Annual business from the airlines is placed at about \$132,000,000 to be delivered yearly for 1946 and 1947. Replacements are estimated at \$100,000,000 annually for the 1947-1950 period. ▶ Assumptions—With this assumed estimate of future volume, Moody's, with understandable qualifications, projects 1946 earnings, on a conservative basis for perienced a sharp rally. It will be the nine companies which it expects to comprise the group which will handle the available military and commercial business.

> ▶ Preference—Among the companies presented, preference was indicated for Lockheed and Douglas, primarily because of the large backlog of commercial and military orders. Boeing was considered attractive, too, because of the company's successful war record Grumman, because of its prestige as a supplier of naval aircraft, also

was favored. Martin was placed on the list since its "202" may prove very popular with the airlines. Republic was accorded speculative attraction because of the orders it has received for its "Rainbow" luxury transport. Moody's has indicated its recommendations for the above companies in the order named with the qualification that each issue will remain in the speculative cat-

Individual statistics and discussions are presented for all nine companies. The most pertinent comments in each instance are:

▶ Bell—"The stock has elements of speculative attraction for those able to follow carefully the manufacturing progress and public acceptance of the helicopter."

▶ Boeing—"Although Boeing had the poorest pre-war earnings record of any company in this group, we do not believe that will be the case henceforth. Boeing should remain one of the most prominent suppliers of military aircraft."

Consolidated Vultee—"Although we do not advise commitments in the shares at this time . . ., we believe, nevertheless, that the stock will respond to any favorable developments concerning airline orders or new military models."

Douglas—"In future markets we anticipate that these shares will be valued at a higher price earnings ratio, more in keeping with the company's excellent record and promising future."

Grumman—"We regard the company highly and believe the stock of this moderately capitalized and financially sound aircraft producer has better-than-average attraction."

Lockheed—"The prestige of the company is growing and its extensive sales and promotional efforts add strength to its industrial position."

Martin—"Martin occupies a better-than-average position in the industry but this has been discounted partially by its unusual strength in recent markets."

North American — "Although North American had a good war record, its commercial prospects are not now very clearly defined. Capitalization (3,435,033 shares) is much larger than other companies in this group."

Republic-". . . Rounding out of Republic's activities definitely improves the company's position. Consequently, we feel this issue has attraction among the lower priced aircraft speculations."

Aircraft Share Statistics Working Assumptions for 1946

	*Equities 1944				Earnings	
Company	In Net Assets	Net Current Assets	Average 1 +5 Years 1940-44	Earnings 5 years 1935-39	(Potential) For 1946	**Recent Approx. Price
Bell	\$38.43	\$32.83	\$6.69	\$0.06	\$0.63	25
Boeing	40.34	30.43	7.10	d0.68	1.79	31
Cons. Vultee	43.53	17.26	9.15	0.44	2.78	31
Douglas	122.40	94.43	22.80	2.78	11.16	96
Grumman	40.52	28.67	8.70	0.74	2.73	52
Lockheed	48.49	27.47	8.59	0.75	6.22	40
Martin	48.75	23.15	8.94	1.33	2.59	39
North Amer.	12.14	11.19	2.91	0.55	0.43	13
Republic	11.27	11.41	2.56	d0.51	1.39	17

Key: *Per share equity in net current assets includes post-war EPT refund credit; debt and preferred stocks were subtracted.

+Includes special reserves, i.e., for contingencies, etc. No allowances made in any case for carry-back of (1) unused excess

profits tax credit or (2) net operating losses.

**Market as of December 17, 1945.

Source: Moody's Stock Survey

PRIVATE FLYING

New Lightplane Radio Equipment Will Embody Many Advantages

Forthcoming sets will provide better communications with lighter weight and lower cost; one firm has one-package 50watt transmitter for use at small airports.

By ALEXANDER McSURELY

Personal aviation radio equipment just going into production in the plants of several well-known manufacturers may be expected to provide private pilots with far better communications equipment than previously, with the added advantages of lighter weight and lower cost.

Typical of the new plane radio equipment which is forthcoming are products of Lear, Bendix, and a newcomer in aviation radio, Hallicrafters Co., Chicago. Meanwhile, the Aireon Manufacturing Corp. has announced a 50watt ground radio station for use on small airports, which is offered as a complete one-purchase package except for antenna poles.

Details-The new equipment includes:

The Lear PXer, a transceiver about six inches square, and weighing less than 15 lbs. complete with all accessories will sell for approximately \$125. The transmitter operates on 3105 kc. with approximately 5-watt output. The set receives all range stations and control towers from 195 to 405 kc. It is designed for operation from a 12-volt ship's battery. A small powerpack weighing 7 lbs. 6 oz. can be installed anywhere there is space, and to best advantages of center of gravity conditions in the plane. The powerpack operates from the aircraft battery supply, eliminating necessity for renewing dry batteries.

The set operates efficiently on a fixed antenna although trailing antenna is recommended for crosscountry operation. It is equipped with a simultaneous range filter so that range signals can be reduced when listening to voice broadcasts. With an AML loop the set can be used as an aural null direction finder. Another feature of the set cited by the manufacturer is an interphone with which pilot and Penna.

passengers can talk to each other. The Bendix Flightweight line previously described (AVIATION News, Nov. 5) will be designed for very high frequency transmission. A new VHF transmitter is designed for use in conjunction with low-frequency (200-400 kc) receivers already installed in many planes. This will permit the pilot to transmit on VHF and hear replies and range on the low frequency receiver, which may later be replaced by a VHF receiver and ment. The transmitter includes crystals for the two VHF channels now assigned for non-scheduled

operation (131.9 meg. for CAA airport control towers and 131.7 meg. for CAA airway ground stations) with provision for addition of three more crystals for other VHF channels which may be designated in the future when the increased number of flyers causes congestion on the two channels. A transceiver in the Flightweight line is a combination of the VHF transmitter and a low frequency receiver, although presumably this will later be replaced by a VHF receiver.

▶ The Hallicrafters, CA-2 Skyfone weighs less than 10 lbs., complete with power supply, antenna and all other accessories, and is expected to sell for around \$125. The company, known before the war for its amateur radio equipment and for military radio, has taken two aircraft radio engineers from the industry, James Riddle, formerly of RCA, and Rudy Garfield. formerly of Stinson, and Capt. A. R. Applegarth, formerly of Wright Field aircraft radio laboratory, to head up its aircraft radio sales and engineering organization.

Special features of the Skyfone, an omni-directional range attach- which includes a five-tube receiver and a 10- to 12-watt transmitter are: all switching done by electronic means actuated by a push-



DRUG STORE SELLS CUBS:

Cosmetics, sodas, prescriptions and now—airplanes. Webb's drug store, St. Petersburg, Fla., has added Piper Cubs to its other lines of merchandise. Picture shows G. Fred Haslinger, Sebring, Fla., left of sign, buying first Cub sold in store. Harry Playford, Piper distributor, in white hat, is at right. Sign quotes price of \$2,135 delivered, plus flying instruction presumably to solo, or \$2,010 flyaway from Lock Haven,

to-talk button on microphone; antenna is connected through a matching unit at the point where it enters plane; a fully shielded cable between the matching unit and the receiver greatly reduces noise in receiver and is expected to eliminate need for special bonding and shielding of ignition systems of most planes; seven-position switch permits pilot to select 200- to 400-kc. aircraft band, standard broadcast band will transfer receiver from regular antenna to direction finding loop and place voice-range filter in operation. One switch position automatically tunes receiver to tower frequency without changing the setting of tuning dial, for convenience when coming in for a landing.

Normal transmitter operation is on 3105 kc. but a dual antenna matching unit can be provided to permit operation on 6210 kc. in addition. The microphone uses a differential unit developed for the Signal Corps, which permits full



EXPANDS ACTIVITIES:

J. G. "Tex" Rankin, undefeated world aerobatic champion and head of Rankin Aviation Industries Co., Tulare, Calif., is sole West Coast distributor of the Republic Seabee amphibian, and also holds the Ercoupe distributorship in Oregon, Washington and northern Idaho. His company has opened a branch office at Boeing Field, Seattle, with Ray B. Howard in charge, and expects to open additional branch offices in Portland, Ore., the San Francisco Bay area, and Los Angeles. Rankin is shown at the controls of a Seabee, accompanied by his business associate, Robert S. Norswing.

transmitter modulation without introducing background noise from the plane motor. Two other units following the CA-2 use into production will use miniature tubes and operate from dry batteries, for planes not equipped with an electrical system. They are a receiver, and a two-way radio. ▶ The Aireon Manufacturing Corp., at Kansas City, is building a twochannel push-button control 50watt ground station which may be used either for point-to-point, ground-to-plane communication or as a tower control station. It can be operated by a third-class radio operator, since the push buttons and a hand or foot push-to-talk switch are the only operation controls required. The station has frequency ranges for both day and night operation in the 2- to 8-meg. band, and channels for operation from 200 to 410 kc. and 118 to 132 megs, are also available. It is designed so that it may be installed with either transmitter or receiver or both in remote locations from

the operator if desired. Conversion—Outlook appears favorable for early conversion of ground equipment to VHF by CAA, it is reported, with most of the control towers ready for VHF some time in January, and many ground stations expected to be ready by March. As a result it is expected that many of the radio manufacturers will soon join Bendix in the offering of VHF transmitters because of the non-static advantages of the high frequencies. Virtually all of the manufacturers are understood to be developing such transmitters.

3 Crashes Blamed On Misjudgment

Misjudgment and foolhardiness on the part of pilots was blamed for three of five aircraft accidents investigated by the Civil Aeronautics Board. Failure of the elevator control system rendered another aircraft partially uncontrollable. The origin of the fifth accident was undetermined.

Summaries of the mishaps and Board findings follow:

EL PASO, TEX.: Commercial Pilot Raymond Franklin Darwin, 34, San Diego, (4,000 hours), was killed when he undershot the El Paso Municipal Airport during a night landing, crashing about three-quarters of a mile northeast of the field, June 9, 1945. Passengers Diane Greenstone, Frederick Smith and Leonard Ostrow were injured and a Lockheed Vega 5C demolished. With his three passengers, Darwin took off from Glendale, Calif., on his first flight in the type aircraft involved. Arriving over El Paso one hour after sunset, he was given landing instructions by the tower. Darwin entered the base

leg at 1000 ft. about two miles southeast of the field. The final approach, started a mile from the field, was low and at an excessively high air speed. Three-quarters of a mile short of the field the aircraft, in a straight-in approach with the wings level, struck a brush-covered sand dune about 40 ft. higher than the airport, tearing off the landing gear. Passengers stated the cabin airspeed indicator read 160 m.p.h. during the approach, which is about twice the normal approach

CAB FINDING: Probable cause of the accident was misjudgment of a night landing approach. The pilot's unfamiliarity with the aircraft was a contributing factor.

NORTH AUGUSTA, S. C.: Commercial Pilot Christopher Kelmer Barton, 29, Warrenville, (2,000 flight hours), and his passenger, Weaver Edgar Johnson, Aiken, were fatally injured and a Ryan ST-3KR was demolished when they crashed while doing low altitude acrobatics Dec. 24, 1944. Following a series of acrobatics executed at low altitude over North Augusta Airport, Barton flew across the field at an altitude of about 30 ft. When the aircraft was half way across the field, the left wing went down as if a slow roll were being attempted. When the wings reached a more or less vertical attitude, the aircraft slipped to the ground, and the plane cartwheeled. No indication of aircraft failure

CAB FINDING: Probable cause of this accident was failure to complete successfully an acrobatic maneuver begun at a critically low altitude. Probable contributing factors were the pilot's foolhardiness in attempting acrobatic maneuvers at such a dangerously low altitude and his unfamiliarity with the aircraft.

COLUMBUS, OHIO: Commercial Pilot Herbert Stump, 32, Columbus, (6,352 flight hours), and his revenue passenger, Emerson Rasor, Piqua, lost their lives when they attempted to continue a cross-country contact flight after encountering adverse weather and darkness, Jan. 12, 1945. Prior to starting a cross-country trip from Waynesboro, Pa., to Columbus and Dayton, Stump was advised that the weather was closing in and that icing conditions were prevalent in the vicinity of his destination. Stump took off despite this warning. His burned Waco ZGC-7 was located in the area of Reynoldsburg, the following morning.

CAB FINDING: Probable cause of this accident was icing. A contributing factor was poor judgment in failing to check the weather prior to take-off.

BELEN, N. MEX.: Private Pilot Harvey E. Caldwell, 35, (79 hours' flying time), and Student Pilot Oscar Orville Sloan, (33 hours' flying time), were fatally injured and an Aeronca 65-C destroyed in an accident at the Belen Municipal Airport, July 20, 1945. There were no witnesses to the accident which occurred during a practice flight. Examination of the wreckage indicated the upper elevator control cable broke in flight and the plane dived to the ground out of control.

CAB FINDING: Probable cause of this accident was failure of the elevator control system which rendered the aircraft partially uncontrollable. A contributing factor was negligence of mechanics during major overhaul and inspection.

CARLSBAD, N. MEX.: Commerical Pilot William Charles Calsing, 27, Dallas, Tex., was injured fatally and a Fairchild M-62A demolished in a crash during a cross-country ferry flight, Apr. 22, 1945. Calsing was one of several pilots ferrying aircraft from Vernon, Tex., to Tucson, Ariz. No one saw the accident. An air searching party found the crashed plane about 27 miles from Carlsbad and approximately on course. Examination of the wreckage did not reveal any malfunctioning of the aircraft or its components. Calsing had acquired a reputation for being a reckless pilot and had stated that he intended to "play" and "hedge-hop" during the flight.

CAB FINDING: Probable cause of this ac-

'Packaged' Instruction

cident is undetermined.

A \$298 "packaged" private pilots license flight training course is offered by Sacramento Sky Ranch, Sacramento, Calif., in most respects similar to that of Wiggins Airways, Boston. (AVIATION NEWS,

Inspection Backlog To Be Broken Soon

CAA appointment of 2,000 agents from industry expected to bring early relief in certification jam.

Appointment of approximately 2,000 manufacturing inspection representatives and aircraft maintenance inspectors from the aviation industry to supplement the small force of CAA inspectors is expected to relieve in large measure the backlog of unfinished aircraft inspections which has been building up steadily in recent months.

Civil Aeronautics Administrator T. P. Wright has announced that the "Designated Aircraft Maintenance Inspectors" will be named from among A & E mechanics and approved repair station operators. Under the new setup the designated men will be qualified to give any private or non-scheduled commercial airplane its annual inspection or its inspection after major repair, without requiring the services of a CAA inspector. The tion load. CAA points out that there are only 124 aircraft inspectors employed by CAA, "a number too small to give prompt service to today's 30,-000 civil aircraft and obviously inadequate for the more than 100,000 planes expected by 1950."

Appointments—It is understood that the CAA inspectors will recommend qualified persons in their respective regions for these appointments, which will be made as fast as the CAA inspectors make recommendations. Failure of any area in the U. S. to have an adequate number of maintenance inspectors within a reasonable period presumably will place the responsibility squarely on the shoulders of the CAA inspector for the neglected territory.

The manufacturing inspection representatives will be nominated likewise by the 50 CAA factory inspectors from among the employees of the various aircraft manufacturers who hold CAA production certificates. The representative will be authorized to issue NC airworthiness certificates for new airplanes coming off the line, indicating that each plane complies with plans and specifications previously approved by CAA enmanufacturer must carry an individually numbered airworthiness certificate, with the number paint-

New Personal Plane

The revised prototype of American Aviation's North personal plane will seat four persons with ample baggage room, and will have a speed well in excess of 150 mph. It is reported without company confirmation that the plane will have a 580-mile range, will be powered with a 190-hp. engine, and will sell for between \$6,000 and \$8,000. However since North American is understood to be aiming at a market which will approach mass production, the rumored price may be too high.

Load Heavy—Burden of new air-craft certification is beginning to be felt increasingly by the small number of CAA inspectors as many of the plants are stepping up their production toward goals of several times their pre-war production. In addition many new manufacturers have entered the field, creating an additional inspection load.

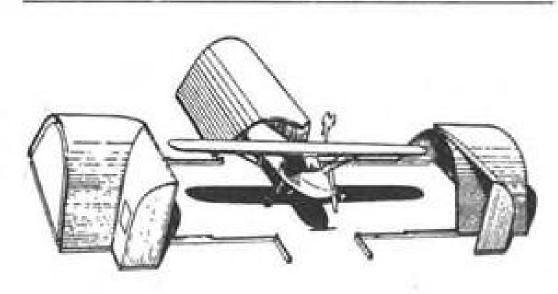
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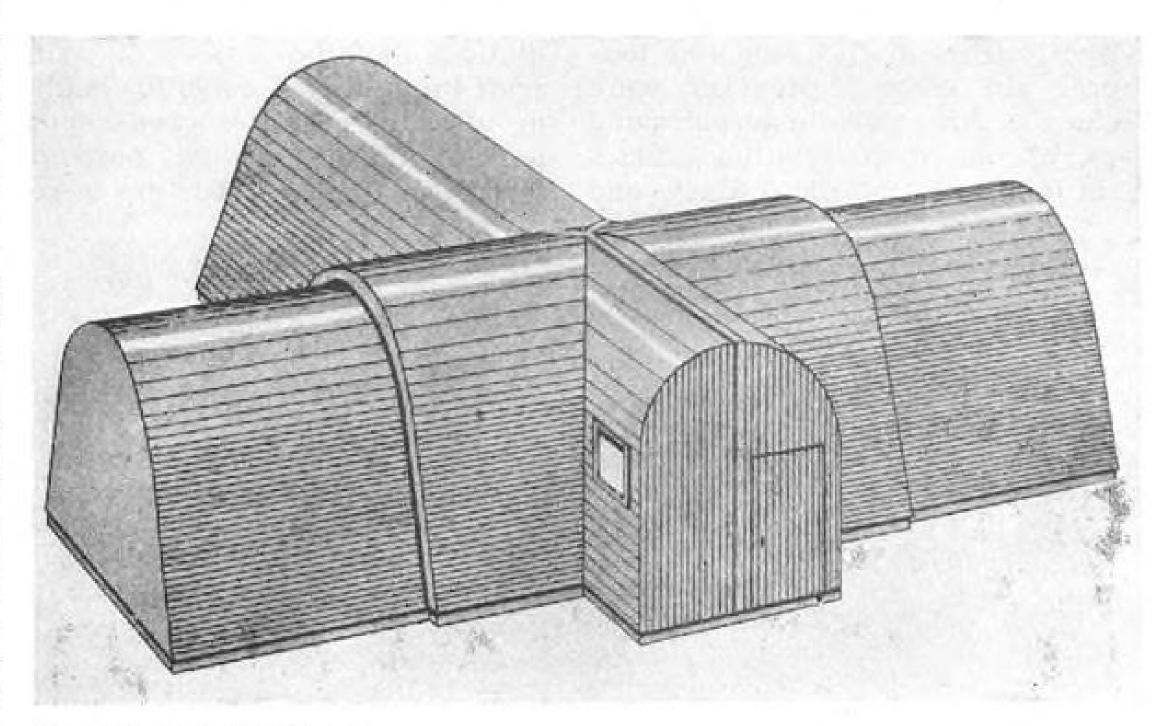
The new procedure will give some advantage to the established manufacturer who has been producing planes long enough to obtain a CAA production certificate indicating that facilities, materials and quality control methods followed are satisfactory. Hereafter these will be issued to new plants

only on submission of a detailed written report by management showing how it meets CAA requirements. Present holders of production certificates, however, also will be required to file such a report before any of their employees can be named as factory inspection representatives.

▶ Early Action — It is understood that a detailed program on appointment of the representatives will be forwarded to the manufacturers some time during the week of Jan. 1. The new program is assured of an enthusiastic reception by the personal plane manufacturers, many of whom have customers waiting to fly away finished planes which have not yet received their airworthiness certificates from the CAA. Having their own inspection representatives will make it possible to complete inspection details as soon as the plane is finished, without waiting for the arrival of a CAA representative.

In the future CAA factory and maintenance inspectors will perform largely a spot-checking job to insure compliance with CAA requirements.





#### NOVEL HANGAR:

plies with plans and specifications one novel solution to the personal plane hangar problem is the "Silver previously approved by CAA engineers. Each plane sold by the manufacturer must carry an individually numbered airworthiness certificate, with the number paint—

One novel solution to the personal plane hangar problem is the "Silver T-hangar" design of the Airport Facilities Co., Chicago. The stream—lined structure, built of aluminum throughout, has no doors, but slides apart as shown in the sketch. The wing sections of the hangar travel on ballbearing fiber wheels moving out to a point where the opening will permit the plane to be taken out or hangared.

### Pent-Up Interest Cited By Wright

Keen pent-up national interest in personal aviation is evidenced by the fact that student pilot certificates issued by CAA in 1945 totalled 70,000 as compared with 51,000 in 1044, and only 30,000 in 1939 the last normal pre-war year.

Statistics showing that civil aviation is on the threshold of a tremendous expansion were made public in the year-end review of the nation's aeronautical developments made by Civil Aeronautics Administrator T. P. Wright. Manufacture - Manufacturers of personal planes have indicated to CAA they have orders for 40,000 planes as against 6,844 in 1941, the best production year previously for civil aircraft. The number of registered civil aircraft jumped from 22,000 to 30,000 in 1945 as the result of sale of surplus military planes to civilian owners.

Wright pointed to the increased emphasis placed on personal flying development by CAA, through appointment of special assistants to the administrator and through the work of the Non-scheduled Advisory Committee for CAA. He reviewed the work done thus far in liberalizing regulations affecting the private pilot, including physical and written examinations.

Progress—The fostering of airmarking and the emphasis on the large number of small personal flying fields in the proposed federal aid airport program were cited. CAA's part in encouraging establishment of aviation courses in thousands of elementary and

high schools, including flight experience programs in a number of the schools, providing an average of four hours flight instruction to participating students, was described. Wright also pointed to the aid given by CAA to thousands of discharged Army and Navy airmen in facilitating issuance of civil pilot certificates, and sponsoring refresher courses for applicants for A & E licenses, and in issuing booklets explainrequirements for starting small airports, flying schools or obtaining licenses.

### Canada Separates Medical Set-Up

Plans to appoint a medical officer to handle civil aero-medical requirements entirely divorced from the medical section of the Royal Canadian Air Force, announced recently by the Canadian Department of Transport, are regarded as a victory for all types of civilian flying in Canada.

The separation has been advocated by the Canadian Air Transport and Industries Association, and has been pointed up by complaints of some veteran bush pilots (Aviation News, Sept. 17 and 24) that they would be forced to give up flying if they had to comply with RCAF medical regulations.

▶ Visitors—Other changes in regulations, covering foreign aircraft, affect private flying. Pre-war regulations have been eased and aircraft brought to Canada for health or pleasure purposes need report only at the first customs port entered. No further reporting is re-

### New Lockheed

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Lockheed Aircraft Corp. is expected to flight test its new two-place experimental pusher personal-type plane soon, perhaps by the time this is read. The plane which is said to have performance comparable to the very slow-flying oneplace Little Dipper, is to be tested on the Mojave Desert away from the public eye. Top Lockheed officials still are uncertain whether the company will begin lightplane production at this time, gambling on an undetermined market, or delay until markets are more clearly defined.

quired until leaving Canada when visiting permit is surrendered at port of exit. Previously, a visiting foreign aircraft had to report at every customs port on its route.

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There are now eight airports in the Dominion where customs officers are in attendance during scheduled hours and some 45 to 50 where customs and immigration officers are within reasonable distance. While the 10-day prior notification of arrival at Canadian customs airports also has been cancelled it is expected that some prior notification will be required at points where customs and immigration men are not regularly in attendance.

### National Flying Farmers Name McGill President

Officers of the National Flying Farmers association were elected at Stillwater, Okla., recently as Oklahoma members announced plans for completing incorporation immediately, and extending the organization to other states.

New officers are Gene McGill, Aiva, Okla., president; Arvid Temule, Buffalo, Okla., vice-president; and R. M. Irvin, Woodward, Okla., secretary-treasurer. Mrs. Todd Davis, Minco, Okla.; Cecil Neville, Chickasha, Okla., and Forrest Watson, Thomas, Okla., president of the Oklahoma Flying Farmers were named directors.

Three places on the board of directors are left vacant to be filled from other states as soon as the organization is extended beyond Oklahoma.

▶ Convention—The association will hold its first national convention in Stillwater the first week in August.



#### ROUTES FOR TOUR:

Stops on the various routes to Miami for the first post-war private flying tour sponsored by Gulf Oil Corp., Dec. 26 to Jan. 20, where participants are to receive free gas and oil, are shown above.

### Wiggins Airways Offers Flight Training Scholarship

A flight scholarship of eight hours dual instruction and a solo flight, will be awarded each month, to members of the Massachusetts Civil Air Patrol, by Wiggins Airways, operator of bases at Norwood, Boston and Westfield. Joseph Garside, president of Wiggins, said the scholarships would be given once a month for an unlimited period in appreciation for the work CAP is doing to develop aviation.

Lt. Col. John E. Shennett, state CAP wing commander, said the scholarships would be awarded on the basis of a monthly written examination to be conducted by CAP officers. Flights will be in Piper Cub trainers.

### City Council to Oppose Gearhart, Ore., Field

Protest against proposed operation of an air strip on a golf course property at Gearhart, Ore., will be filled by members of the Gearhart City Council, with CAA, on the ground that the strip is adjacent to a beach and will menace public safety. Jens Lerback, of Seaside, has proposed to purchase the land necessary for the strip, largely outside the city limits. A flying service at the proposed strip would be managed by his son, Jens Lerback, Jr., veteran Army pilot. Gearhart officials are suggesting an alternative development of an airpark with a 1,400-ft. runway near the north city limits.

### Briefing For Private Flying

Possibility of buying the trim little Culver-built PQ14 target planes for use as one-place personal planes if they are put into surplus is interesting a number of pilots. The planes cost the Army over \$8,000 apiece, and were powered with 150-hp. Franklin engines, essentially the same engine now used in the Stinson Voyager 150. The target planes were built of plastic-plywood, had electrically-operated tricycle landing gear, and each plane was test flown by a pilot before delivery for radio-controlled work. Under radio control the PQ-14 would cruise at 160 mph., had a ceiling of about 17,000 ft. and carried a threehour fuel supply. Whether the CAA would certificate the plane without considerable change, and how many of them might be declared surplus and when, are questions still to be answered. Possibly the stripping of the remote-control radio equipment would present a problem in redistribution of weight which could only be met at great expense, but the removal of that installation would result in an increase in useful load capacity. The plane would be chiefly of interest to the lone-wolf pilot who wished to travel at speeds approaching airline speed, and is willing to pay the operating cost of the 150 hp. engine.

SAFETY IN PLANE DESIGN—Aircraft Owners and Pilots Association speaks out in a recent bulletin to its membership about "What manufacturers have not done" to improve the safety of personal plane design. Admitting many manufacturers are moving toward improved safety in future designs the bulletin calls for immediate action on planes now in production specifically to improve cockpit visibility and to minimize injury possibilities within the cockpit in the event of forced landing. Quoting insurance statistics that three out of every 10 airplanes are involved in some sort of accident each year, AOPA declares that "the first step toward real safety in flying, we believe, is for all manufacturers to build safety into their airplanes." The bulletin suggests employment of a safety expert by the personal plane manufacturer, to aid in plane design.

1,000TH POST-WAR CUB—Ferry Pilot William T. Piper, Sr., 64, who also happens to be president of Piper Aircraft Corp., Lock Haven, Penna., was to take off from his home airport last week, accompanied by his wife, to deliver a new plane to Wallace Aircraft Co., Miami, Fla. The plane, the 1,000th post-war built Piper Cub Special, bore registration No. NC87700, which Piper believes is the highest NC number yet issued. Incidentally the plane was the 18,000th Cub to be built since 1930, a production record certainly unequalled by any other light-plane maker.

COLUMBUS BASE FOR PARKS—Oliver Parks' Aircraft Sales & Service organization has arranged to lease a large hangar at Port Columbus, municipal airport for Columbus, Ohio, as soon as it is vacated by the Navy and will set up another in its chain of five operations in midwestern states. Accommodations will include: plane storage in a heated hangar 120 by 160 ft., all grades of fuel, daily mechanical service from 8 a.m. to 5 p.m., and fuel, oil and hangar service 24 hours a day. Shops, display room and plane storage will be arranged in the main hangar, with recreation rooms, lounge and offices in adjoining structures. Other Parks operations are at East St. Louis, Ill., Chicago, Indianapolis, and Kansas City.

EXPANDS AIR CENTER—Mandel Brothers' department store, Chicago, has expanded seventh floor its Air Center, where it sells Piper Cubs, to include a line of flight clothing aviation books, navigation equipment and plane accessories. Airport operators may take notice of the merchandising of aviation accessories, and related equipment by downtown department stores and display and sell their own similar lines more effectively.

SKYWAYS INN—At Tiffin, Ohio, airport, John Harriman has announced opening of Skyways Inn, providing meals and rooms at the airport for cross-country pilots who do not wish to leave the field. Establishment of small inns or tourist cabin facilities is regarded by aviation research experts as a valuable sideline revenue for any airport operator in the next few years.

—Alexander McSurely



#### PILGRIMAGE TO REPUBLIC:

Twenty-five Michigan distributors and dealers, and purchasers of Republic four-place Seabee amphibians, recently made an aerial "shopping tour" to the Farmingdale, L. I., plant to inspect the production of the Seabees, now getting started. The group is shown above in front of one of the five Cessnas in which they made the trip, together with a group of Republic officials.

### TRANSPORT

### ATA Polishing Up Strong Brief On Air Policy for Congress

Delineation of association's stand outlines reasons for specialized federal supervisory agency and retention of barriers to surface carrier participation.

#### By MERLIN MICKEL

The airlines' stand for continued regulation of air transport by a specialized and separate Federal agency, and retention of barriers to surface carrier participation, is presented strongly in a delineation of policy being polished into final draft by the Air Transport Association for submission to Congress.

The statement will be the air carriers' answer to the transportation inquiry launched by Chairman Lea of the House Interstate and Foreign Commerce Committee as the forerunner to possible revisions in Federal transportation law (AVIATION NEWS, Aug. 27).

Argument — ATA contends that the basic theory of the Civil Aeronautics Act of 1938 in putting air transport under its own regulatory agency-the Civil Aeronautics Board—is as good now as it was then. One authority, it feels, should have control over private flyers and commercial operators and foreign and domestic airline

operations. Furthermore, the Civil Aeronautics Authority has had seven years of experience and is charged with the development of aviation, as well as its regulation. Assuming that an over-all regulatory body would be based on the Interstate Commerce Commission, the shift would put that agency into foreign fields in which it was inexperienced, and give it the job of regulating all forms of transportation and promoting some. ATA says loss from uncertainty that would result from a consolidation of regulating authorities would far offset any public gain that might be attributed thereto. > Integration — Integration of air transportation with surface car-

riers, the airlines declare, would

result in few if any economies. The

public has benefited from the

growth of new forms of transportation during the last 30 years, and their feeling is that competition between forms of transportation has more incentive value than that between like types of carriers with the same technology.

Common ownership, control or operation of air and surface carriers would have little bearing on coordination of their service, and ATA sees integration as a poor method of obtaining joint service agreements when they cannot be by voluntary action.

Overseas Transport—The airlines see no peril to the merchant marine from overseas air transport, nor do they believe the country's position in marine transportation would improve if the steamship companies are allowed to engage

in air transportation. They say growth of air transport would be hampered by a policy of integration, and definition of the limit to which surface carriers can get into the air is up to Congress rather than a regulatory agency. The present restriction in the Civil Aeronautics Act is seen as better than any other yet suggested.

Considerable attention in the

preliminary draft of the statement is devoted to the question of federal aid to transportation, ATA pointing out that government aid to scheduled air transport has been far less than that to other main forms of transportation, except pipe-lines, and has been far exceeded by the benefits to the public. The scheduled airlines are hopeful they will become independent of government support as soon as possible, but they feel that all costs of maintaining public airports and airways cannot rightfully be charged to the airlines, which do not use them all. Example is the great number of ports that will serve only private flyers. Financing — On the question of airline financing, ATA points out that rates affect earnings and their regulation is reflected in encouragement of private capital investment. CAB's regulatory authority here is seen as adequate, and the air transport industry sees no need for changes in the Civil Aeronautics Act on this score.

Taxation, however, is a different matter, and ATA is hopeful

### ICC Opposes McCarran Bill Proposal

The Interstate Commerce Commission believes that transportation history indicates railroad investment in other-than-railroad enterprises would be contrary to public interest.

The position is stated in ICC's observations to the Senate Commerce Committee on Sen. McCarran's revised "All American Flag McCarran's first measure for a community U.S. company in international aviation would have allowed only airlines to participate in such an enterprise. The revision, however, would carry out recommendations to the committee by Juan Trippe, president of Pan American Airways, and permit all domestic carriers and steamship lines to invest in such a company.

Comment—"We see no close connection," ICC commented, road interests in the contem-

by land or water within the U.S. and international air transporta-

"We doubt whether common carriers by rail would have any object in acquiring a minority. stock interest in the proposed community company. Insofar as the (McCarran) bill would give qualified approval to such acquisitions, on principles, we question whether the public interest would be served."

The Commission recalled in its one-page letter that for the past several years it has recommended legislation to impose restrictions on expenditure of railroad funds for outside activities. It proposed that the McCarran measure be amended to require approval of ICC—as well as CAB —on stock subscriptions by rail-"between domestic transportation plated "All American Flag Line."

### Contract Data Sought

While believing that for the present there should be a minimum of regulation of contract carrying by air, the Air Transport Association feels that CAB should be gathering information on this activity as it has on the industry's expected rapid growth.

Attention was called to this phase of air transport in the airlines' statement of policy on federal regulation now being put in final draft in answer to the transportation inquiry conducted by the House Interstate and Foreign Commerce Committee.

that Congress will act soon to eliminate the possibility of multiple taxation and provide for tax base apportionment among the states in which the airlines operate. The hope also is expressed that the states abandon taxation of aviation gasoline. The Association, pointing to the predominately interstate characteristic of air transportation, repeats its well-known stand for economic as well as safety regulation of for-hire air transport by a federal regulatory agency rather than the states.

### Page Airways Given O.K. by Examiner

A CAB examiner, reporting in the Board's first investigation of a non-scheduled air carrier, has found that Page Airways, Inc., of Rochester, N. Y., while a common carrier within the meaning of the Civil Aeronautics Act, did not operate in violation of certification requirements.

Examiner William F. Cusick recommended that the Board dismiss its investigation, started May 17 to determine whether the Page operations were beyond the scope of CAB's exemption of non-scheduled operators. Page operated an interstate service between Rochester and Miami, on what it claimed was a charter basis.

▶ Interpretation — Cusick's report to the Board gave a liberal interpretation to the regularity-ofservice clause in CAB's nonscheduled exemption regulation, on the basis of unanimous testimony that Page flight departures were irregular. By pointing out that Page's service was "rapidly

approaching" the status of a scheduled carrier, he cautioned Page about resuming, on an uncertificated basis, the service it ceased to render April 27 after crash of a Page plane at Washington National Airport.

Discussing regularity of service, the examiner cited several Board decisions that continuous operation is a relative term, and commented that Page's service "conceivably" could be construed as "regular" in the Board view. Cusick felt, however, that while in some respects Page offered features similar to conventional airline service, it lacked "many of the outstanding attractions of an air transportation service as generally conceived by the public," among them a schedule time-

Derations—In finding Page a common carrier, he cited the substantial number of schedules operated, the relatively few contract passengers carried compared with those from the general public, and other factors. Page's contract operations, he said, "appear to have served no purpose other than to cushion the new venture against a possible financial loss."

Although the first investigation of its nature directed by the Board, the Page case is the second in which an examiner's report has

been made. A similar study of Trans-Marine Airlines, of New York, was called July 17, and an examiner's report, also now before the Board, subsequently recommended that the Board find that Trans-Marine had not failed to comply with the sections of the Act involved (Aviation News, Oct. 15).

### New Mexican Line Set To Commence Service

Financed by Alberto R. Pani, son of Mexico's former minister of Finance and secretary of Foreign Affairs the southern republic's newest airline, Aerovias Internacionales de Mexico, is expected to begin operations this

According to Alvin P. Adams & Associates, Los Angeles aviation consultants and advisors to AIM, initial service will be between Mexico City and Ensenada, adjacent to the U.S. border at San Diego.

Franchise — The company's Mexican franchise authorizes it to fly from Mexico City via Guadalajara, Ouliacan, and Guaymas, with a spur line from Guadalajara to Acapulco, West Coast resort and seaport. The airline's principal backer, Pani, is owner of a hotel in Mexico City.



### TACA'S COLOMBIAN HEADQUARTERS:

This building at Bogota is headquarters for TACA de Colombia, which flies main routes in Colombia and international routes to Venezuela and Ecuador.

### CAB Review Stresses International Flying

New emphasis on the international phase of commercial aviation appeared in the Civil Aeronautics Administration's year-end review by Administrator T. P. Wright.

Both technical and policy matters were included. In the former category, tests were completed by CAA technicians on surplus military planes that the airlines can use on over-ocean flights, and proving runs were made on newly authorized international routes. In the latter, CAA reported progress toward establishment of worldwide airways facilities "of a uniformly high standard," through work with the Provisional International Civil Aviation Organization at Montreal and direct talks with foreign government representatives.

Schedule—On schedule for execution before next June 30 were expansion of CAA offices at Lima and Rio de Janeiro and establishment of offices at Stockholm, Madrid and San Juan.

Approach control for instrument landings, agreement with the airlines to place direction-finding equipment at key airports pending completion of VHF ranges and instrument landing systems, and experiments with radar for civil use were listed among technical ad-

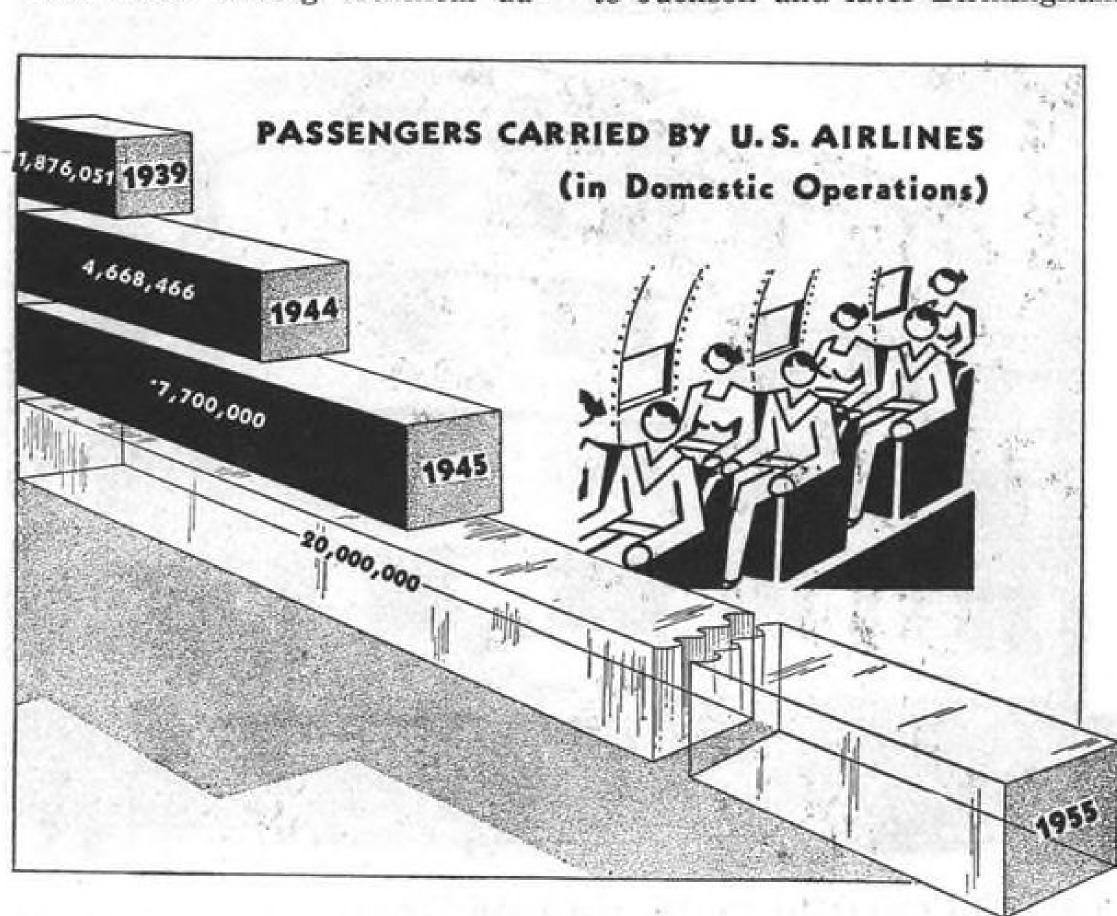
vances designed to expedite domestic and international airline operations.

pointed out that the airlines had ordered some 500 new transport planes to increase their total fleet more than 100 percent, and said need for the equipment was demonstrated by the increase in number of air passengers carried domestically, which rose from 4,668,000 in 1944 to 7,700,000 in 1945, compared with 1,876,000 in pre-war 1939.

### C.E. Woolman Named President of Delta

Delta has a new president and new name as the result of action by the board of directors. Formerly Delta Air Corp., the corporate name of the carrier was changed to Delta Air Lines, Inc., and Collett Everman ("C. E.") Woolman, vice-president and general manager, was advanced to the presidency. The directors also created a new position of chairman of the board, a post which will be occupied by C. E. Faulk, president since 1935.

A widely known aviation figure, Woolman organized the first commercial airplane crop dusting company in 1925 at Monroe, La. In 1929 he organized Delta Air Service to carry passengers from Dallas to Jackson and later Birmingham



Air Passenger Traffic Forecast: Graph shows that Civil Aeronautics Administration expects 20,000,000 passengers annually to be flying the domestic airways by 1955.



Delta President: C. E. Woolman, vice-president and general manager of Delta for the past ten years, has been named president of the airline by its board of directors. He succeeds C. E. Faulk, who becomes board chairman.

and Atlanta. The company, of which a crop dusting department still is an important unit, reorganized as Delta Air Corp. in 1935, with Woolman continuing as vicepresident and general manager. Expansion — Delta now flies as many passenger miles in 10 days as it did in all of 1936. On Dec. it inaugurated service over the 1,280-mile route from Miami to Chicago. Company assets are \$5,-000,000 where in 1935 they were \$125,000. Employees have grown from 60 a decade ago to 1,600. The airline expects to be using C-54's soon.

## Great Expansion Of Services Due

International and domestic air transport operations will expand greatly in the early months of 1946 if present plans of several carriers materialize on schedule.

American Overseas Airlines intends to extend its trans-Atlantic service to the Netherlands and Germany by Jan. 15 and to Sweden and Denmark by Feb. 1. Service to London attained daily status last week with a sixth schedule added Dec. 26 and a seventh—the maximum allowed weekly under the agreement with the United Kingdom—added Dec. 30.

Manila Service—Resumption of service to Manila by February,

with four flights weekly by Mar. 1, is the goal of Pan American Airways. PAA recently made an initial survey flight to arrange for reestablishment of passenger facilities along the pre-war route—San Francisco or Los Angeles to Honolulu to Midway to Wake to Guam to Manila—it will operate.

Domestic service extensions are highlighted by PCA's announcement that, effective Jan. 1, new schedules will provide an immediate 20 percent increase in seats available. Number of PCA arrivals and departures at major terminals will be stepped up, Detroit having 96 daily, Pittsburgh and Washington 66 daily, Cleveland 44 daily, Norfolk 26 daily. PCA also will originate 18 flights daily at Chicago, and give "daily commuter express service" between Detroit and Milwaukee by adding two flights.

▶ National — National Airlines is seeking CAB approval of revised schedules to make possible, about mid-January, daily round-trip service between Daytona Beach, Fla. and Miami, Tampa, Jackson-ville, New Orleans, Charleston, New York and other intermediate points along its routes. Lockheed Lodestars will be used at the start of this service, with Douglas DC-4s in use later between Miami and New York.

Meanwhile, PCA and TWA, planning to resume service into Newark on Jan. 1, will be delayed by postponement of the opening by city authorities until Feb. 3.

### Passenger Handling Speeded By United

United Air Lines' tussle with the passenger-handling problem facing all air carriers has resulted in a system that has cut handling time per passenger from almost five minutes to two.

The method deviates from established practice principally in elimination of passenger manifest and simplification of ticketing and flight check-in. First tried at Washington and Chicago, it was extended to Boston, Cleveland, Omaha, Denver and Cheyenne, and will be in operation over UAL's entire system by Jan. 1, under present plans.

▶ Method—The plan is described by D. F. Magarrell, vice president in charge of passenger service, as part of a program to speed handling of both passengers and cargo.

Under the new method, a mul-

### 500 Crossings

The Royal Canadian Air Force 168th Transport Squadron completed its 500th Atlantic crossing this month, when an RCAF Liberator arrived at Ottawa from England. First crossing by the squadron was made two years ago to the day.

tiple check-in operation at terminals permits passengers to report at any counter for any flight. The manifest system designates specific counters for specific flights and results in queueing of passengers at time for departure. United's tickets will contain passenger's name, weight and destination and other information that previously went on the manifest. The passenger is also checked in by number, not by name, the number being entered on the ticket as a gate pass after the passenger agent has checked the reservation and received validation from a departure control clerk.

▶ Late Seating — "Go-shows" can be substituted for "no-shows" easily, United says, by assigning them optional validation numbers.

A new type reservation card does duty as departure control record, manifest for revenue accounting and permanent trip record. When the day ends, cards for all flights are mailed to the line's central accounting office at Chicago. Accounting records are completed in 10 days after the end of the month, instead of up to three months as previously.

### Area Route Cases Yet To Be Decided

CAB action on recommendations may set experimental pattern for future expansion

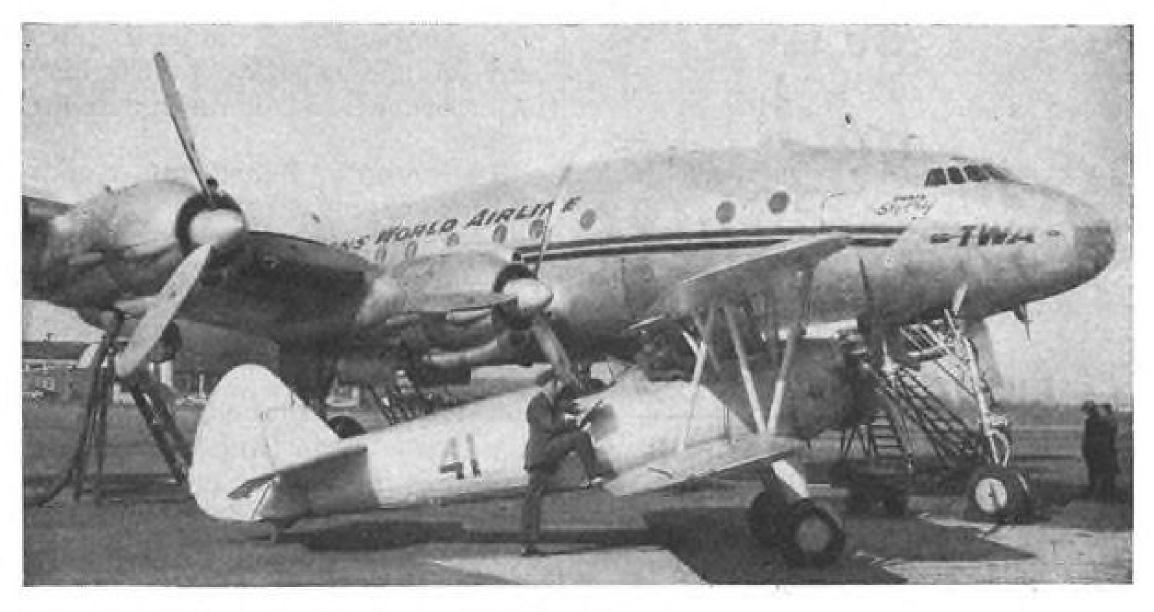
With none of the 11 area route cases decided at the end of the year, CAB has before it numerous recommendations which if adopted not only will substantially increase existing air service but may set a pattern, on an experimental basis, for future expansion.

Board examiners to date have recommended establisment of several feederline systems on a trial basis. Decisions in these regional cases are awaited with keen interest for disclosure of Board policy. Should CAB temporarily certificate a number of feederlines in various sections of the country and their operation prove sufficiently successful to warrant permanent certification, foundation would be laid for a domestic air transport system of a relatively few trunkline carriers augmented by feeder services.

▶ Combination — Also of interest will be CAB'S decision in the West Coast case on a recommendation for combined passenger-pickup service yet to be tested in actual operation.

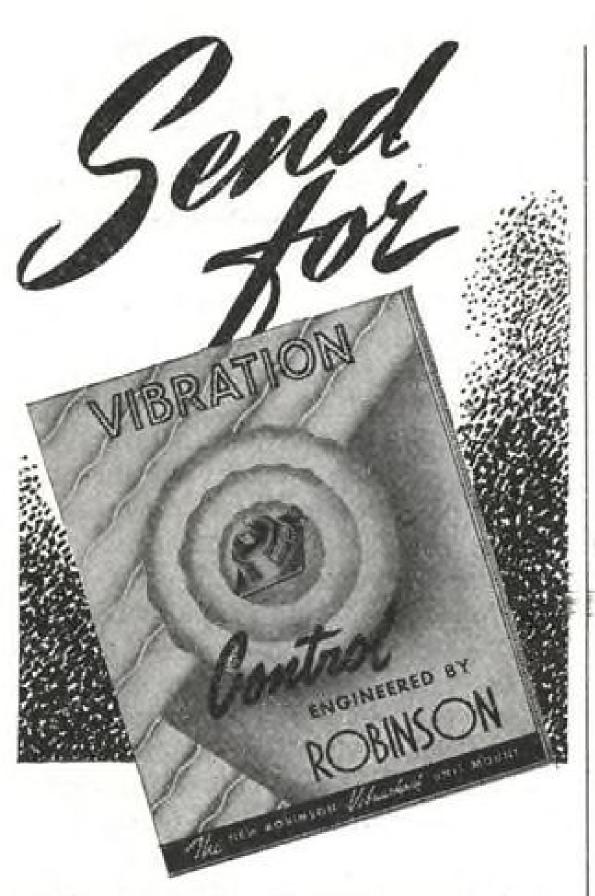
Complexity of the area cases is well illustrated by figures showing that each averages about 20 applicants, proposing service to more than 350 communities.

▶ Year-end Status—Cases awaiting decision are: West Coast, Rocky Mountain, and Florida; awaiting



#### THE "CONNIE" AND THE CAP:

To show the size of the Constellations it will use on its international route, TWA recently used the ship in which a group of notables made a preview flight to Paris as backdrop for a Civil Air Patrol trainer. The two-place ship is used by a CAP squadron that has classroom space in a TWA office building. The Lockheed can carry 47 passengers in ocean service or 51 domestically.



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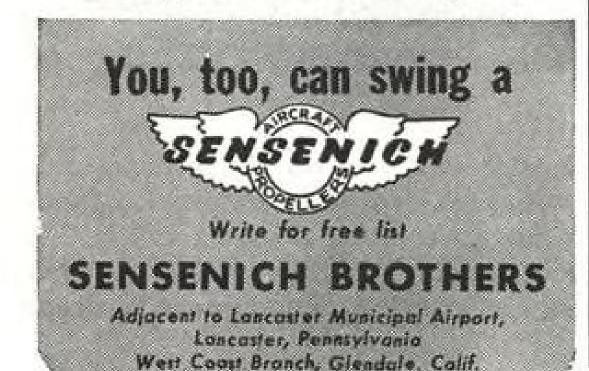
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oral argument assigned for Jan. 7-New England; awaiting examiners' reports - North Central States, Texas-Oklahoma, Southeastern States, Great Lakes, and Mississippi Valley; awaiting hearing assigned for Jan. 28-Middle Atlantic; and one unassigned.

### Signal Corps to Continue Research on "Spherics"

The War Department's "Spherics" program — electronic determination of the location of fardistant storm centers-will continue as a Signal Corps peacetime research and development project, the Department says.

Of interest to airline meteorologists, the device is based on a static detector using directional antennae. Triangulation discloses the location of the static source. Since this may be thousands of miles away, the Department feels that a few spherics stations strategically located may give data that will increase he accuracy of weather forecasting throughout the world.

▶ Used Secretly—Spherics (short for "atmospherics") networks have covered the western portion of the North Atlantic, the Mediterranean and the western Pacific, but operated secretly hitherto because of the war.

### Standard Oil Again Blocks Richmond, Calif., Airport

Establishment of an airport at Richmond, Calif., has been checked temporarily by Standard Oil Co. on contention it would be near the company's Richmond plant and endanger safety of Standard Oil workers and company investments.

Richmond's Board of Supervisors postponed further action on airport construction until mid-January, although sponsors of the project have the backing of Civil Aeronautics Administration.

Defore the war, the Richmond board refused development of a city airport after Standard Oil presented similar objections. However, according to E. G. Heaton, county planning commission technician, approval was given this time on the grounds that civilan aviation in Contra Costa county, just north of San Francisco and Oakland, now should be encouraged. Heaton favors development of a master airport plan for the entire county before commitment on the Richmond location.

### Knoxville Tower Expected To Go On 24-Hr. Basis

Increasing air traffic at Knoxville, Tenn., Municipal Airport soon is expected to require 24-hr. operation of the traffic control tower there, hitherto in service 16 hrs. a day.

The three interstate carriers using the field—American, Delta and PCA—schedule 42 flights through there a day, but the total often runs as high as 50. The airlines' local offices are making intensive plans to increase air freight service, using Knoxville as a point of trans-shipment. Night flying by private planes also is expected to account for a considerable increase in traffic.

▶ Operation—The tower is manned and operated by CAA, the airlines directing their own landings and takeoffs when it is not in operation. The tower equipment is CAA's, although the city furnishes the building and finances the tower's operation. Since Jan. 1, 1944, the tower has been operating daily from 7 a.m. to 11 p.m. Early morning traffic has been

Cost to the city, now an estimated \$15,000 to \$18,000 a year, will go up \$6,000 to \$7,000 if the change is made to round-the-clock service. The tower's peak load was last August, when 13,406 flights were handled by tower direction. Bulk of the work comes from private traffic, most of it from two flying schools at the air-

### Buffalo Studies Purchase of Airport Surplus Property

Steps preliminary to acquisition of more than \$4,000,000 worth of federal surplus property at Buffalo Airport were taken at a joint meeting of the Airport Advisory Board and the Common Council's Special Airport Committee recently. Russell M. Leech, council member and Airport Committee chairman, directed immediate survey of physical condition of the structures and an estimate of present value of surplus buildings and land to determine how much the city would be required to pay.

Most valuable of the surplus property are two large flight hangars, for which there already are four prospective tenants. American Airlines and PCA will need larger plane accommodations next year, and RFC is considering

using space in each hangar for storage of surplus Curtiss-Wright equipment. Curtiss-Wright Corp. wants space to continue its research laboratory which, according to company representatives, "definitely is staying in Buffalo."

#### SHORTLINES

 Chicago & Southern's board of directors has authorized payment of a 25-cent dividend on each outstanding share of common stock to holders of record as of Dec. 24.

 Pan American, utilizing suggestions by two Miami employees, has eliminated a duplicate bank of switches in the master switch assembly of the DC-3 and revised the screening unit on S1C3G engines to facilitate new screen installations used on DC-3 type aircraft. PAA says the former will save 5-7 lbs. of operational weight and latter, 506 manhours a year . . . PAA decorated its trans-Atlantic Clippers with trees and holly for Christmas day travelers and served turkey dinners on board.

 TWA has filed with CAB a tariff schedule to reduce air freight rates from San Francisco to New York and other cities from \$37.95 to \$33.36 for a 100-pound cross-country shipment, effective Jan. 1. . . . TWA served roast young capon dinners to its Christmas-day passengers and specially decorated its airliners.

 United soon will open a downtown ticket office in the Plains Hotel, Cheyenne, Wyo., to handle the city's soaring local traffic volume. This will be in addition to UAL's facilities at the Cheyenne Municipal Airport. . . . Christmas volume of air express carried by UAL during the week ended Dec. 21, totaled 240,193,-000 ton-miles, an all-time record. About 31,816,000 air mail letters were carried during that week. . . . An estimated 384,201 ton-miles of air express and 1,564,385 tonmiles of air mail were flown by UAL in November.

#### CAB ACTION

The Civil Aeronautics Board:

· Granted TWA an exemption order to permit substitution of Geneva for Berne, Switzerland, in its approved service plan, because of airport conditions.

• Granted Eastern Air Lines permission to inaugurate non-stop service between Akron, Ohio, and Greensboro, N. C., on AM 6.

Granted Pan American Airways permission

to serve Cheyenne, French Guiana, through Rochambeau Field. Granted permission to intervene in Middle

Atlantic case (Docket 674 et al.) to cities of Binghamton, N. Y.; Akron, Ohio; Harrisburg, Pa.; Cumberland, Md.; Reading, Pa.; village of Endicott N. Y.; and county of Mercer, N. J. · Granted city of Cambridge, Ohio, permission to intervene in Great Lakes Area case (Docket 535 et al.)

Dismissed from Mississippi Valley case (Docket 548 et al.), at applicant's request application of Mid-Southern Air Lines (Docket

· Granted TWA permission to intervene in American Airlines non-stop services case (Docket 2136).

 Granted Eastern Air Lines permission to serve Columbia, S. C., on Jan. 1, through Lexington County Airport (Columbia Army

• Granted American Overseas Airlines and TWA permission to intervene in Pan American Airways trans-Atlantic route amendment case

 Dismissed, at applicants' requests, applications of Northeast Airlines (Docket 682) and James Walker Case (Dockets 1822 and

#### CAB SCHEDULE

Jan. 2. Exchange of exhibits in Aerovias Braniff, S. A., temporary foreign air car-

rier permit case. (Docket 2107.)

Jan. 2. Hearing in Pan American Airways'
trans-Atlantic route amendments case. (Docket 2076.)

Jan. 3. Exchange of exhibits in American Airlines non-stop services case. (Docket

Jan. 4. Prehearing conference on Braniff Air-ways' application to consolidate AM 9, AM 15, and AM 50 and TWA's application to consolidate AM 2 and AM 44. (Dockets 1154 and 2142.)

Jan. 7. Exchange of exhibits in Colonial Airlines' case for designation of Newark as a co-terminal with New York on AM 72.

Jan. 7. Oral argument in New England case. (Docket 399 et al.)

Jan. 10. Hearing in American Airlines nonstop services case. (Docket 2136.) Jan. 10. Exchange of exhibits in Pan Ameri-

ican Airways-Panair do Brasil, S. A. agreement case. (Docket 2032.)

Jan. 10. Exchange of exhibits in Pan American Airways Latin-American and Miami-

Leopoldville mail rate cases. (Dockets 1593 and 1909.) Jan. 14. Hearing in route consolidation case. Postponed from Dec. 17. (Docket 932 et al.)

Jan. 14. Hearing in Colonial Airlines' case for designation of Newark as a co-terminal with New York on AM 72. (Docket 2144.) Jan. 14. Exchange of rebuttal exhibits in

Middle Atlantic case. Postponed from Dec. 28. (Docket 674 et al.) Jan. 14. Exchange of rebuttal exhibits in Mid-Continent-American merger case. (Docket

Jan. 21. Exchange of exhibits in Kansas City-Memphis-Florida case. Postponed from Jan. 4. (Docket 1051 et al.)

Jan. 21. Hearing in Mid-Continent-American merger case. (Docket 2968.)

Jan. 28. Exchange of exhibits in Arizona Airways' case for acquisition of TWA's AM 38. Postponed from Jan. 21. (Docket

Jan. 28. Exchange of exhibits in Universal Air Travel Plan case. Postponed from Dec. (Docket 1939.)

Jan. 28. Hearing in Middle Atlantic case.
Postponed from Jan. 14. (Docket 674 et al.)
Jan. 31. Comments due on proposed new
Part 42, Civil Air Regulations, non-scheduled air carrier certification and operation rules. Extended from Oct. 1.

Feb. 1. Briefs due in Great Lakes Area case. Postponed from Jan. 2. (Docket 535 et al.) Feb. 4. Exchange of rebuttal exhibits in Arizona Airways' case for acquisition of TWA's AM 38. (Docket 2005.)

Feb. 4. Hearing in Pan American Airways Latin-American and Miami-Leopoldville mail rate cases. (Dockets 1593 and 1909.) Feb. 5. Exchange of rebuttal exhibits in Kan-sas City-Memphis-Florida case. Postponed Jan. 21. (Docket 1051 et al.)

Feb. 11. Hearing in Pan American Airways-Panair do Brasil, S. A. agreement case.

Feb. 14. Hearing in Arizona Airways' case for acquisition of TWA's AM 38. (Docket Feb. 18. Exchange of exhibits in Boston-New York-Atlanta-New Orleans case. (Docket

730 et al.) Feb. 18. Hearing in Kansas City-Memphis-Florida case. Postponed from Feb. 5.

(Docket 1051 et al.) Feb. 18. Exchange of exhibits in Pan American Airways application for domestic routes. (Docket 1803.)

Feb. 18. Hearing in Universal Air Travel Plan case. Postponed from Dec. 17 (Docket 1939.)

Mar. 1. Exchange of rebuttal exhibits in Boston-New York-Atlanta-New Orleans case. (Docket 730 et al.) Mar. 11. Hearing in All American Aviation's

case for acquisition of control of Equipamento All American Aviation, S. A. (Docket 1969. Mar. 11. Hearing in Boston-New York-

Atlanta-New Orleans case. (Docket 730 et al.)

Mar. 18. Rebuttal exhibits due in Pan American Airways application for domestic routes. (Docket 1803.) Apr. 1. Hearing on Pan American application

for domestic routes. (Docket 1803.)

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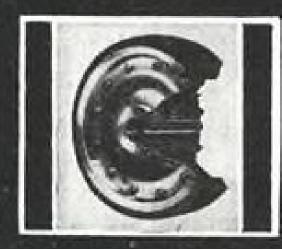
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EDITORIAL \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### The Vital Need For Air Marking

There is ample evidence for the belief that to support an expansion of safe private flying, it will not be enough to obtain simplified regulations, better aircraft, more airports, and the other things on which government and industry have been lavishing most of their efforts.

When seasoned and skilled private flyers in a radio-equipped plane can become lost, as has happened, there is a demonstrable need for a nation-wide, coordinated program of air marking—the lettering of roofs of buildings with the names of towns and the direction of the distance to the nearest airport.

In the face of that need, here is the present situation:

For understandable reasons, air markers were obliterated or permitted to become unrecognizable when this country went to war. Although the information is admittedly sketchy, CAA now has reports on only 202 air markers in the entire country:

The only state with an official, organized program is Connecticut, yet it has only 37 markers:

The best marked state is North Carolina, with 111—thanks to the Civil Air Patrol, headed by Lt. Col. Frank E. Dawson:

Few other states, among which are Alabama and Pennsylvania, seem to be showing any great interest in air marking programs:

The CAP is, and for sometime has been, the most active organization in pushing air marking programs, with large petroleum companies apparently second, six of these now working on plans for programs, some in conjunction with the CAP:

CAA, the organization charged by law with promoting aviation—and safety in aviation—has an air marking section which consists of Mrs. Blanche Noyes and one assistant, and no funds.

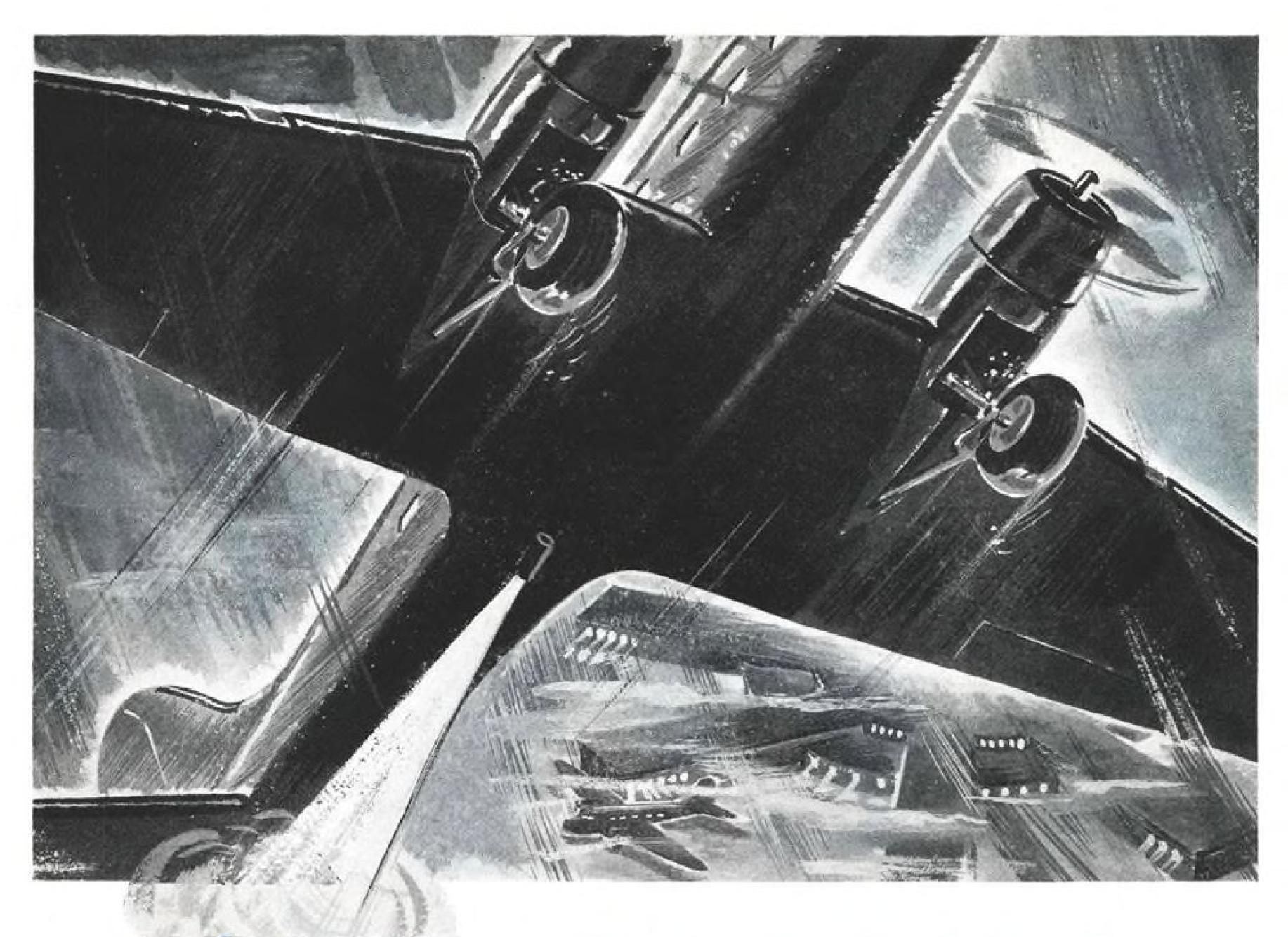
This is not the fault of CAA. It has in the past asked for funds for air marking activities, and been refused. CAA's belief, for which a good case might be made, is that air marking should be a cooperatively financed program of the federal government and the states, such as it proposes to do with airports. With that in view, CAA in its budget estimates for the fiscal year 1947 requested \$570,100 for air marking.

The Budget Bureau is of the opinion that air marking should be the exclusive concern of the states. It trimmed the amount requested to \$25,000 which, if approved by Congress, will enable CAA to mark the roofs of some of its own radio buildings.

Despite that basic conflict in views—which should, however, be resolved in public debate in Congress and not in private sessions between CAA and Budget Bureau officials—there seems to be no quarrel with the thesis that air markers are a vital need in private flying. It would seem pertinent to suggest that government, the industry, and private flying organizations give more consideration to plans to fulfill that need.

Mrs. Noyes has done a magnificent job, which no paucity of facts or markers can belittle. Most of her time is spent flying about the country, enlisting the aid of governors, state commissions, civic organizations and others—to many of which she has to explain air markers and sell their need.

But neither Mrs. Noyes, the CAP, the oil companies, nor a few states can do the job unaided. Perhaps CAA eventually will obtain sufficient funds to launch the nation-wide campaign it has long desired. Pending that time, the work will have to be done in the states. This is an enterprise well worthy of intensified attention of aviation organizations with community branches.



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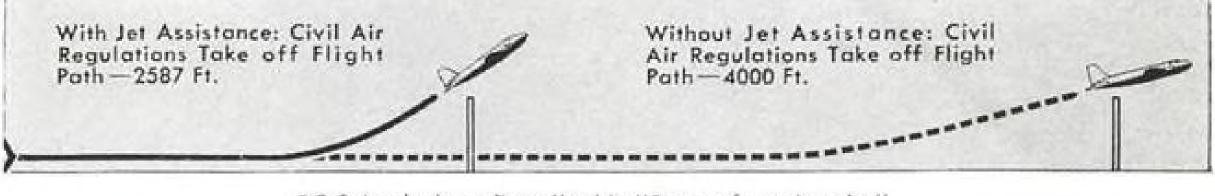
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