# **JANUARY 7, 1946** McGRAW-HILL PUBLISHING COMPANY, INC.



Convair's New Transport: Cutaway drawing of Consolidated Vultee's new Model 240, of which American Airlines has ordered 100 to cost \$18,000,000, shows 40-passenger seating arrangement. Using jet thrust from the exhaust of its two Pratt & Whitney R-2800's, the ship will cruise at 300 mph. and have a maximum speed of 350 mph. or above. Delivery is expected to start early in 1947. The planes will be used for flights up to 1,000 miles. (See Transport)

## Private Flyers Swarm to Miami Air Maneuvers

Navy combat tactics and Army jet flights over-

#### New CAR Part 03 Seen Setting Engine Standards

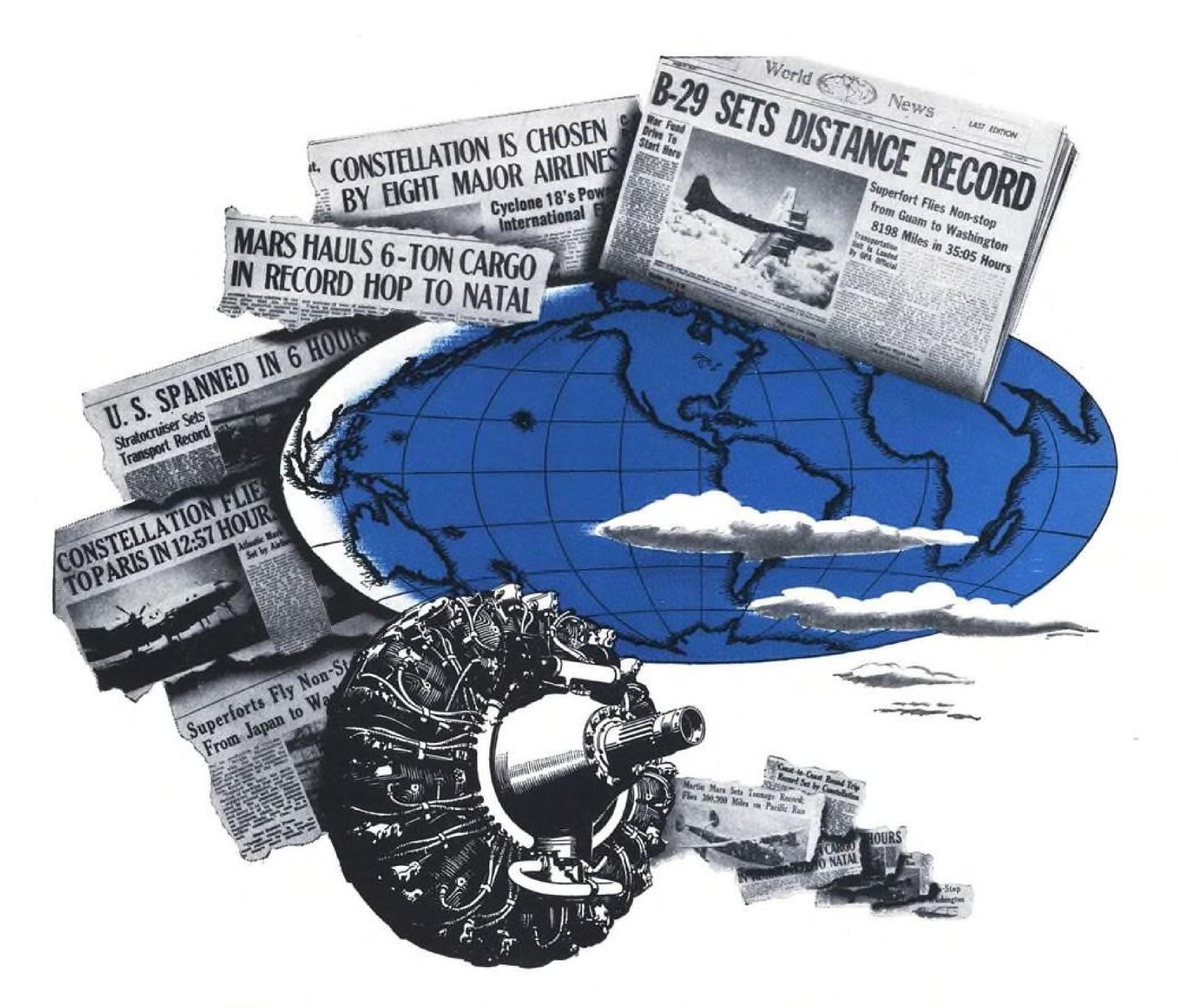
Sec. 0.4 of airworthiness requirements for personal planes hailed by CAA engineers....Page 13

## Airline Equities Now Selling Above Book Values

Existing wide disparities probably will tend to shadow civilian competitions scheduled....Page 7 narrow as industry matures..........Page 18

#### CAB Approval of IATA Agreement Due Tomorrow

Favorable decision expected to support carriers' position in forthcoming meeting......Page 33



## The power behind the HEADLINES

Look at the records for speed, range, load and fleet efficiency. One engine dominates, one engine makes possible the headlines. One engine has the sheer power, low weight and low fuel consumption to make possible these headlines. It is the Wright Cyclone 18.

or Boeing C-97. But now that the Cyclone 18 is fully available for commercial use in Lockheed Constellations and other transports, its power will make new records which will be re-

with military planes-such as the Boeing

B-29, Martin Mars, Consolidated B-32

Many of the headlines tell of records

flected directly in earnings.



THE AVIATION NEWS

## Washington Observer



ARMY DOMINATION—Aviation people are keeping a weather eye on AAF ambitions to have a major finger in the transportation picture. AAF has plumped heavily for cooperation with the air carrier industry, offering research and other facilities, but its plans are being given a wary look-see. This is especially true after CAB Chairman Pogue blasted Gen. Arnold's bid for continuing authority over carriers in his Oklahoma City speech.

\* \* \*

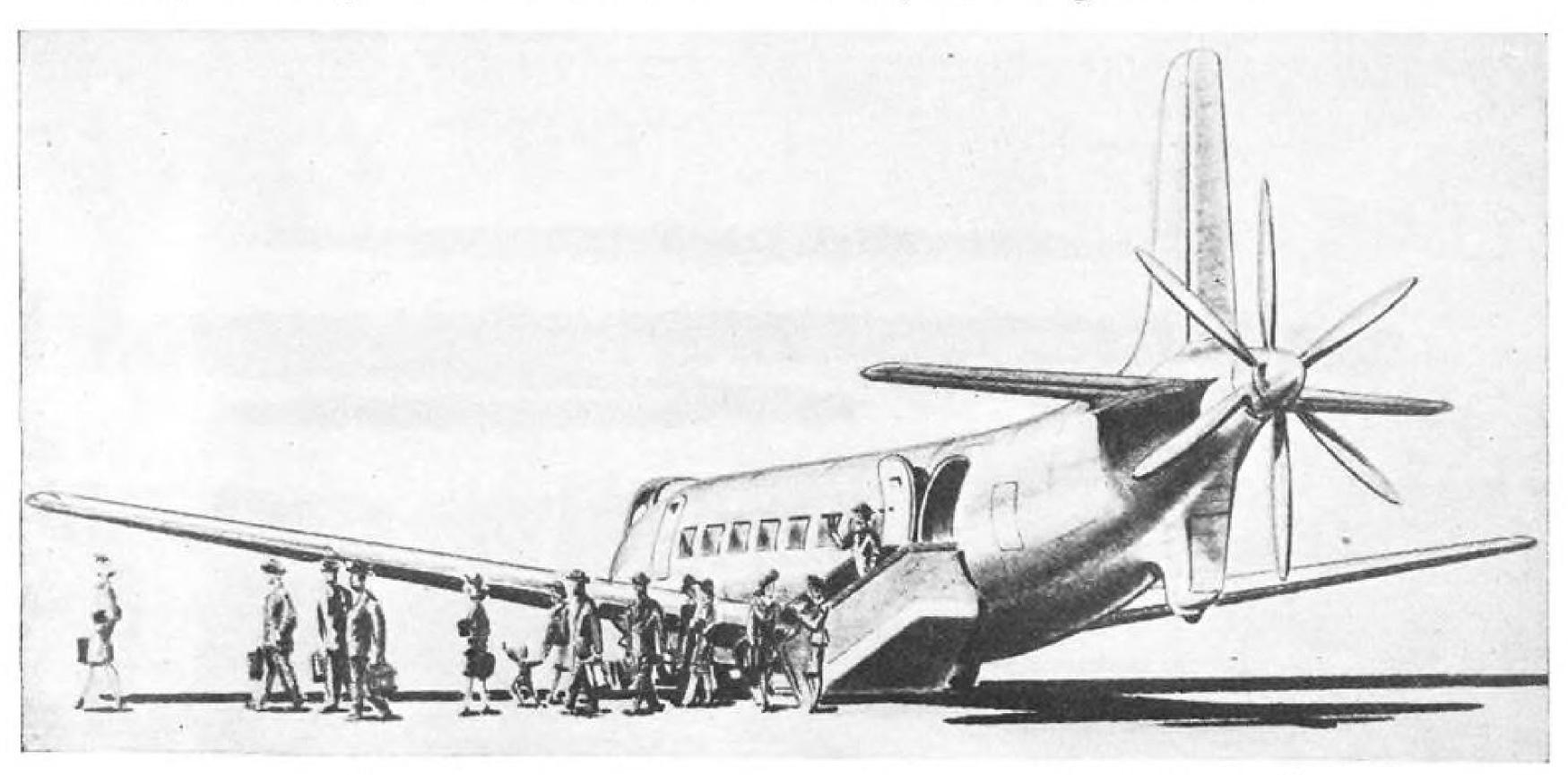
DISPERSAL—The end has not been heard of the controversy over dispersal of aircraft plants. The AAF has not yielded, and neither is the industry ready to back down. The Los Angeles atomic bomb map, shown Congressmen recently, is a cogent argument, however, that is going to require more than conversation to refute.

GERMAN ENGINEERS-Many German aircraft engineers, called upon by Allied missions after V-E Day for technical data, asked for transfer to the United States where they were willing to assist in the aviation program against the Japs. They were told by some, at least, that their aircraft technique was not generally superior and not adaptable to U. S. industry. Nevertheless exceptions were made and several German engineers, especially in the jet field, who obviously had exclusive experience, were recommended for transfers. Whether any were brought over is not ascertainable.

SHOWDOWN-Efforts to break down resistance of the aircraft industry to participation in the Cleveland National Air Show failed, and the industry went on record with Gen. Arnold in no uncertain terms when the General said he'd been told the industry wasn't participating because of his wartime policy against such shows. They made it plain it was their own policy, and a strong one. It seems apparent that Cleveland show backers failed to consult the industry before announcing their plans, counting on persuasion and a long drought to bring in the displays. Fact is the plane makers have nothing ready to show, no personnel or excess funds to devote to a show now.

AIRPORT PROGRAM-The projected airport building program may have many a headache, not the least of which are lawsuits by adjacent property owners who find the roar of motors and propellers and the flight of planes a depressive factor on property values. An appraiser's report shows that within a half-mile of a proposed airport location a loss of 75 percent in assessed valuation is imminent. From this it would appear that airport rights-of-way may be rather expensive.

GUARD AVIATION—Despite talk about National Guard air units, there are indications many states will not want to participate because the cost is high, and because air units won't have the tangible benefits of Infantry and other ground forces.



New sketch shows details of the forthcoming DC-8 transport.

Wright Aeronautical Corporation, Paterson, New Jersey, U.S.A. . A Division of Curtiss-Wright



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#### AVIATION NEWS

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Editorial Headquarters

1357-61 National Press Building.

Washington 4, D. C. Publication and Executive Offices, 330 W. 42nd St., N. Y. 18, N. Y. Pacific Coast Office, 621 So. Hope St., Los Angeles Published weekly by McGraw-Hill Publishing Co., Inc. Price 50c a copy. Allow ten days for change of address. Subscription rates — United States, Mexico and Central and South American countries, \$5 a year, \$8 for two years, \$10 for three years. Canada, \$6 a year, \$10 for two years, \$12 for three years. All other countries \$9 a year, \$14 for two years, \$18 for three years. Entered as second-class matter July 31, 1943, at the Post Office at New York, New York, under the Act of March 3, 1879. Printed in U. S. A. Cable Address "McGrawhill, New York." Please indicate position and company connection on all subscription orders.

JAMES H. McGRAW, Founder and Honorary Chairman; JAMES H. McGRAW, Founder and Treasurer; HOWARD EHRLICH, Vice-President (for business operations), WILLARD CHEVALIER, Vice-President (for editorial operations), JOSEPH A. GERARDI, Secretary, and J. E. BLACKBURN, Jr., Director of Circulation, 330 West 42nd Street, New York 18, N. Y. Branch offices: Chicago, 520 North Michigan Ave.; San Francisco, 68 Post Street; Los Angeles, 621 So. Hope Street; Aldwych House, Aldwych, London, W. C. 2; Washington; Philadelphia; Cieveland; Detroit; St. Louis; Boston; Atlanta, Return Postage Guaranteed. Copyright 1945, All rights reserved by McGraw-Hill Publishing Co., Inc.

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## News at Deadline

#### TWA Training School

TWA plans to begin training all operating personnel of its international division at a school at Reading, Pa., Municipal Airport, starting about Jan. 10. Previously conducted at Washington and other cities, the work will be consolidated into one unit at Reading.

Several hundred students, including pilots, copilots, flight engineers, navigators and radio operators, will be trained. L. P. Wenk, who had charge of the Washington school, will direct the instruction. C-54's and Constellations will be used. Courses for new personnel will extend eight to 10 weeks, and reorientation courses will be given at six-month intervals.

#### Airports in Surplus

Forty-four airports and two port terminals which cost the Government more than \$5,000,000 each, have been or are likely to be declared surplus. The Surplus Property Administration has informed Congress that the total cost of these airports was \$343,000,000 and of the port terminals \$12,000,000. SPA reported that no surplus transportation facilities other than these airports and port terminals were found to have cost \$5,000,000 separately. The unbalanced regional distribution of surplus airports creates a serious disposal problem. Because airports were constructed primarily for their military usefulness, it is necessary to make a study of the postwar needs of each locality to determine the extent to which airport facilities can be adapted to the needs of local communities. Disposal of airports, at the same time, must be adjusted to the needs of the national defense system. SPA has asked the advisory services of the CAA in making this study.

#### Overseas Sales

November sales from overseas surplus of aircraft and aircraft parts, just reported by the FLC aircraft division, realized a total of \$1,200,813 on planes and equipment initially costing \$4,499,819. The disposal sale brought the cumulative sales receipts through November to \$6,535,511, while the cumulative original cost of aircraft and parts sold from overseas surplus to \$19,-390,959.



- ▶ Chicago Electric Manufacturing Co., control of which has been purchased by E. L. Cord (AVIATION NEWS, Dec. 31), manufactures portable washing machines, electric fans, and a line of small devices which include ice cream freezers, juicers, a flatiron, waffle iron, toasters and sandwich grills. During the war the company made fuses. Pre-war volume was about \$2,000,000.
- Reginald Denny's Radioplane Co., Van Nuys, Calif., is continuing research and production of pilotless aircraft, contemplating several new types. Wartime output included thousands of miniature target planes for Army and Navy. Whitley Collins is president, Harold Powell is vice president, and Denny is secretary.
- Special Devices Association, Inc., recently incorporated in New York, will not conduct commercial operations and has no connection with the Special Devices Division of the Navy Bureau of Aeronautics, according to Washington officials, who describe it mainly as an "alumni" association of the division. Navy officials see in the association a means of keeping contact with the scores of specialists who have gone back to civil life.
- Navy has almost 250 24C turbo-jet (Westinghouse) engines on order. This type engine is specified for the new F6U Corsair and the new F2D.
- The armed forces are commencing to earmark considerable numbers of aircraft engines, particularly those of the R-2800 series, for maintenance use in lieu of overhaul. This procedure is considered preferable to that of designating these engines as surplus.
- Surplus property officials tell of Flying Fortress and Liberator bomber engines, declared scrap or surplus, being used to power pumps that are draining some of the lowlands of Holland inundated by the Nazis.
- Martin's military aircraft requirements for the powerful Pratt & Whitney R-4360-4 engine include those for the BTM, XP4M and the JRM.
- The originally declared surplus machinery and equipment at the Pratt & Whitney engine plant at Kansas City, Mo., is still available to purchasers despite the Navy's intention of obtaining title to the plant proper, including the improvements, buildings, utilities and leases. Navy acquisition of the plant depends upon passage of necessary legislation. Regardless of the passage of this legislation, however, the Reconstruction Finance Corp. has authority to dispose of the equipment and machinery originally declared surplus. The Navy has been encouraging disposal and transfer of machine tools adaptable to civilian manufacture as a desirable step in speeding reconversion of industry to normal production.
- Percival Aircraft (Canada) Ltd., has been formed by Percival Aircraft Ltd., London, England, to manufacture and sell in Canada the Percival Proctor and a light twin-engined feeder line transport. A Canadian demonstrator of the Proctor, with de Havilland Gypsy engine and constant speed propeller, is to be assembled at Toronto in February. It will be adapted for use of skis and floats. The twinengined aircraft will have a speed of 170 mph. with a range of 830 mi., and will cost between \$33,000 and \$35,000. First of these aircraft is expected to be ready in June for flight tests, for sale in Canada by September. The new company is temporarily using part of the de Havilland Aircraft of Canada Ltd., plant at Toronto, and is expected to rent one of the government-owned buildings of this plant. John Carroll has been named Canadian general manager of the Percival Aircraft Ltd.
- National Airlines Lodestar flew from New Orleans to Jacksonville in one hour and 56 minutes recently, establishing a new commercial record between the two cities. Scheduled NAL flying time is two hours and 42 minutes.
- North American's Twin Mustang is expected to be an early contender for crosscountry speed flight honors. Army pilots who will fly three Lockheed P-80 jets on a record-breaking attempt may be the first away in a series of 1946 dashes. Navy still is mum on reports that an F4U is being groomed at a Southern California. base. All flights will be made with a prayer for a strong tailwind.

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## Private Flyer Tourists Swarm to First Post-War Miami Air Show

Navy combat tactics and Army jet flights overshadow few civilian competitions scheduled on incomplete program.

The first nationally-promoted air show since war's end, the All-American Air Maneuvers, last week-end drew thousands of aviation enthusiasts to Navy-controlled International Airport, Miami, Fla., for a three-day demonstration.

Most successful part of the affair appeared to be the annual lightplane tour to Florida, sponsored by lightplane manufacturers and the Gulf Oil Co. Nearly a thousand air tourist planes had arrived in Miami as of Thursday morning, and hundreds more were expected.

With opening of the show only a few hours away, as this was written, the program of competitive events still was incomplete. Virtually all contests were to be with light or civil plane types. Flight training exhibition, during which a man and woman would be given flight instruction through solo, was planned for the three-day meet. Events were still being scheduled Thursday as competitors arrived.

Spectacular demonstrations of combat maneuvers and precision formation flying by Navy and Marine fighter pilots, and exhibitions of jet and conventional-powered

fighters, helicopters and bombers, were scheduled highlights of the military side of aeronautics at the show. Fifteen battle-tested carrier planes were to demonstrate the combat tactics of "The Navy's Flying Might," while Naval Air Group 20 and Marine Fighter Squadron 902 were on the program in other exhibitions.

There appeared a question whether the lightplane tourist group would reach its advance registration of more than 2,000 pilots, due to bad flying conditions at some home airports in the north, and to aged condition of many of the remaining private planes in service, but a large representation was already assured.

Wilbur Shaw, three-times winner of the Indianapolis speedway auto race, and a veteran private pilot, was official starter for the racing events, while Col. Mike Murphy, former international aerobatic champion and first pilot to land a glider in the Normandy invasion, was one of the judges.

The racing events were to be sanctioned by the National Aeronautic Association, a chapter of time.

#### FAI Sanction

Post-war resumption of national air meets, with the show at Miami last week, recalled the ruling of the Federation Aeronautique Internationale, world governing body of sporting aviation, still in force, requiring sanction of any such meet. The ruling calls for suspension of the FAI license of any person who "in any manner participates" in an unsanctioned air meet, which would bar him from participation in any sanctioned meet.

Sanctions for air meets in this country are issued by the National Aeronautic Association, as U. S. representative of FAI. It is empowered to issue FAI licenses on the spot, if necessary, to non-license holders.

A revamping of meet and record rules is now in progress and NAA sanction fees likewise are being revised.

These fees cover expenses of timers, clerks and record-keep-

which, the Greater Miami Airport Association, was a sponsor of the show. With NAA timers supervising conduct of the races, any outstanding performances would have the stamp of authenticity and could be put in as claims for national records. Official sanction was obtained by sponsors shortly before opening



#### READY FOR CONVERSION:

Lined up on a ramp at the Glenn L. Martin plant at Middle River, outside Baltimore, are a dozen of the more than 100 C-54's which the company is converting for commercial airline use. Martin has contracts totaling more than \$20,000,000 for conversion of these

ships for 14 airlines, including two South American lines. The company also is converting a number of C-47's for some of the airlines. Pennsylvania-Central was to get the first of the conversion jobs. Delivery at the rate of one per day is slated by mid-January.

Exhibitions of the new baseballtype parachute scheduled included a high speed cargo drop from a Navy fighter, flying at more than 400 mph., and dropping a lightplane from the air by a large parachute.

Beverly (Bevo) Howard, lightplane stunt flyer, Sammy Mason and Woody Edmonson, were among specialty flyers on the program to entertain between racing events.

The Army's Lockheed P-80 Shooting Star, one of the fastest planes in the world, and the twinjet Bell P-59 Airacomet, and a Sikorsky helicopter were to give flight demonstrations. Exhibited on the ground were a B-29 Boeing Superfortress, Douglas A-26 Invader, B-17 Boeing Flying Fortress, North American P-51 Mustang and Republic P-47 Thunderbolt. Other Army ground displays included combat radar equipment, both search and bombing installations, and a B-29 mobile training unit for ground crews.

Carl Fromhagen, contest chairman, reported that virtually every major airplane manufacturer was represented at the meet, as well as a country - wide representation of makers of accessories, aviation fuel, and flight school and aircraft service operators.

#### Linus H. Walker Named Confidential Aide to Lee

A former member of the staff of CAB's General Counsel, Linus H. Walker, has been named confidential assistant to Josh Lee, Board member. Walker succeeds Jay Moul-

## New Approach Indicator Developed

An approach angle indicator utilizing light beams of three colors has been developed by Westinghouse to assist pilots in night landings and will be used for the first time on the first three runways at Idlewild Airport, New York City.

Two units are placed at each end of a runway and project light at an angle toward approaching aircraft. A top yellow beam indicates the plane is above the proper angle of approach, a green middle beam is the correct approach, and a red bottom beam warns of a too-low angle.

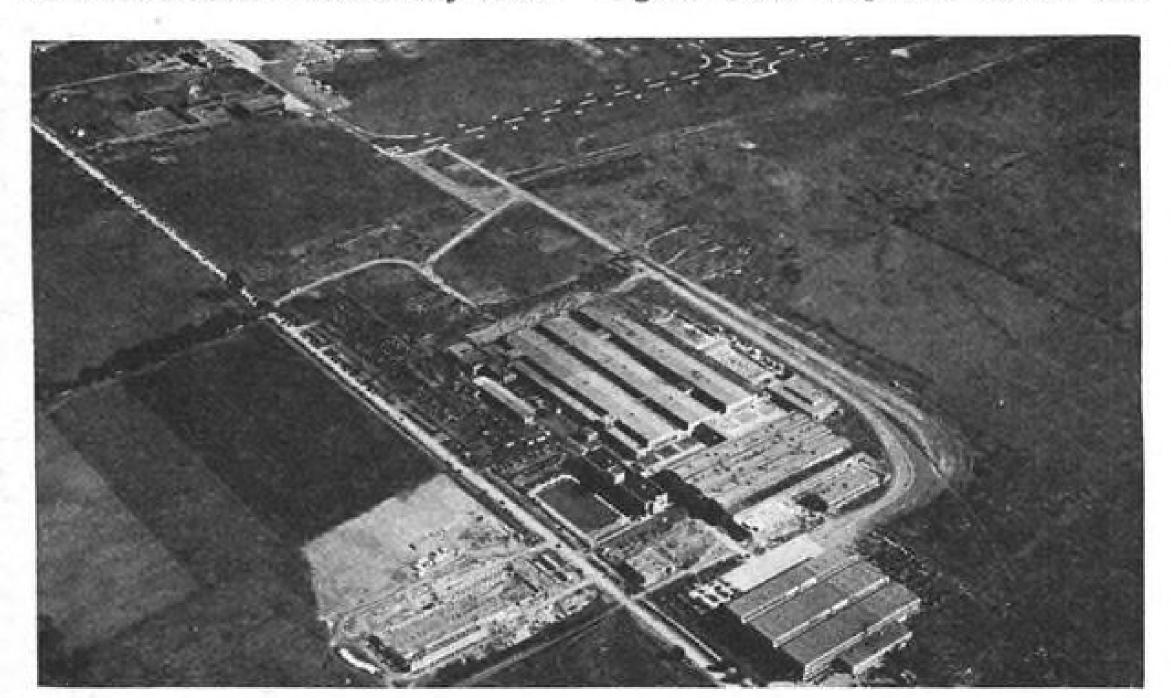
British Development — Reported

to be an adaptation of a system developed by the British during the war, the Westinghouse indicator employs filters to obtain the three colored beams. In that respect it differs from the CAA experimental approach indicator light system in which the middle white beam is obtained by synthesizing the top green beam and bottom red beam.

The Westinghouse device also uses the three colors set up as standard during the war. The colors in the CAA indicator can not be altered and for that reason it is not expected that the indicator will be installed at airports.

ton, who resigned recently to join the Provisional International Civil Aviation Organization where he is now acting as assistant secretary of PICAO's Air Transport Bureau.

Prior to joining CAB in October, 1944, Walker spent slightly over a year as a student in CAA's war training service program, obtaining a commercial pilot's license and an instructor's rating. He then attended AAF's Central Instructors School at Brooks and Randolph Fields, Tex., receiving an Army primary flying instructor's certificate which he later used as an instructor at the Army's Primary Contract School at Ryan Field, Tucson, Ariz. A graduate of Whitman College and University of Washington Law School, Walker once served as assistant law librarian of the Washington State Supreme Court and



#### CANADIAN TUDOR PLANT:

Home of A. V. Roe (Canada), Ltd., at Toronto's Malton Airport, where the Canadian subsidiary of the British firm is to build military aircraft and is expected to produce the Tudor transport. Lancaster and Lincoln bombers were built in the government-constructed plant during the war.

practiced in his home town of Ellenburg, Wash.

Other Changes - Recent changes in CAB's Office of Trial Examiners bring to 20 its total membership. Herbert K. Bryan and Ralph L. Wiser have returned from service in the Navy. Both were with CAB for three years prior to entering the service. Frank J. Trelease, Jr., has left his position as examiner and returned to teaching duties at the University of Wyoming, from which he has been on leave of absence. Return of at least two more examiners is anticipated.

#### AiResearch Holds Contracts Exceeding \$4,000,000

AiResearch Manufacturing Co. of Los Angales has received contracts in excess of \$4,000,000, for cabin supercharging and air conditioning equipment to be installed in the Lockheed Constellation.

Outstanding among this equipment is the company's "Tornado in a Teapot," a lightweight midget air expansion refrigeration turbine of high performance for aircraft air conditioning. Units now on order from AiResearch range from one about the size of a man's fist to one approximately 18 in. in diameter. The smallest, weighing only 3 lbs. is said to create a 140-degree temperature drop at 7 lbs. airflow per minute.

The "Tornado in a Teapot," result of nearly five years engineering development, introduces a new development in lubrication for control of friction at extreme speeds, and the perfection of high precision manufacturing techniques. Its turbine rotor revolves 100,000 times per minute and creates air velocities as high as 800 mph.

## Esso Takes Lead in Campaign To Bolster Aircraft Servicing

Advocates of wider use of personal planes worried over high rate of service operator failures, fear hindrance to private flying unless trend is checked.

Worried because the record of aircraft service operators has shown a high rate of business failures, advocates of wider use of personal aircraft are studying carefully the problems of the business.

Their concern lies chiefly in the belief that private flying cannot flourish without a strong servicing system. An increased number of airports is not sufficient in itself, the thinking runs. Operators on the fields must have modern equipment, give high-type service, and yet prosper.

> Campaign—One of the leaders in the campaign to strengthen the aircraft service operator's position is the Standard Oil Co. of New Jersey, which has more than 100 aviation products dealers in 14 states. Robb C. Oertel, manager of the aviation sales division, repeatedly emphasizes the operators' difficulties in obtaining financing, which he sees as one of the most critical aspects of the aircraft servicing picture.

He points out that public funds for airport construction will not be used for hangars, shop equipment, restaurant and other facilities, all of which are necessary properly to serve the private flyer. On the other hand, landing agencies do not finance airport operators. Oertel suggests that the operators' suppliers might alleviate this situation by extending long-term credit.

Report-While unconfirmed by company officials, there are seemingly reliable reports that Standard has granted that kind of aid and in one instance, at least, has made a straight loan to a new operator. For the most part, the company's assistance is promotional and educational. Currently, Standard is offering a cooperative advertising campaign to dealers, under which the company assumes the greatest proportion of the cost of a dealer's local advertising.

Standard's aviation credit card is believed to be unique. Distributed through dealers, it enables the holder to charge to his account not only gas and oil, but accessories, hangar storage, repairs, landing charges or any other bill incurred with a dealer.

▶ Service Aids—To aid operators in providing better service, Standard claims to have originated lubrication charts explaining the type of oil or grease used on every mechanical part of an aircraft. A special slide film, "It's Good Business at Your Airport" is being shown to operators to give helpful hints on other phases of serving the public. Esso salesmen have instructions to stress accurate bookkeeping to operators, and furnish information on bookkeeping services available.

#### Barr Named Chairman of AIA Export Committee

United Aircraft Corp., has been named chairman of the Aircraft Industries Association's Export Committee. Robert Kinkead, Washington representative for Boeing, is vice-chairman. Barr succeeds Irving H. Taylor, of Douglas.

New members of the committee include W. D. St. John sales manager of Piper Aircraft Corp. and K. S. Lindsay, sales manager of The B. G. Corp. Twenty companies are represented on the committee.

With the explanation that "no government agency has in hand, or is currently gathering, anything approaching adequate transportation statistics," Sen. Pat McCarran (D., Nev.) has introduced legislation directing the Census Bureau to compile complete statistics on air, highway, and waterway transportation. Rail statistics were eliminated

McCarran Seeking

Full Transport Data

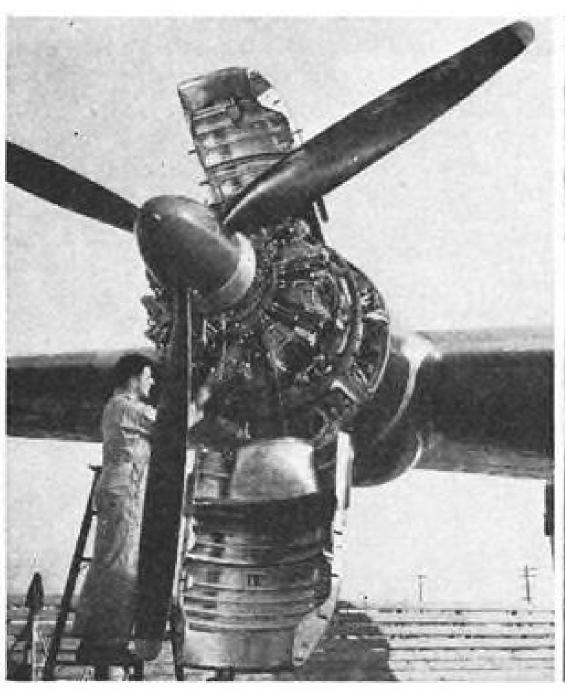
from the proposed study, since these are now being adequately compiled by the Interstate Commerce Commission.

Need-"There is no need to argue that the problems involved in seeing to it that the true public interest is preserved in our national transportation policy are both complex and serious," McCarran commented "The solution of these problems is going to require a lot of straight, hard thinking.

"To be realistic, this thinking must be based on the most adequate body of factual data which it is pos-J. M. Barr, export manager for sible for the Congress and the executive branch of the government to assemble."

> For example, McCarran suggested, there should be data available as to the relative use which manufacturers in different lines make of railways, highways, waterways, and air transportation facilities, in assembling of materials and in the shipment of products.

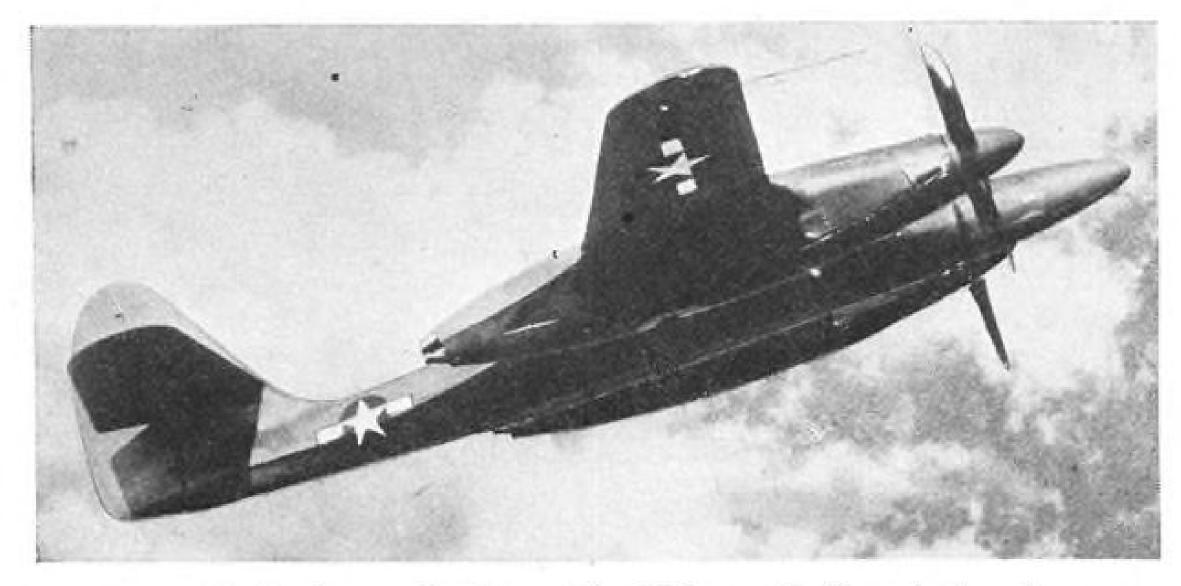
> ▶ McCarran's bill is pending before the Senate Commerce Committee, of which he is a member.





#### INSTANTANEOUS ACCESSIBILITY:

Only two man-minutes are required to open the cowl on the Constellation's 2,500-hp. Wright motor for inspection. Standard equipment of all Constellations, the new arrangement has no supporting members forward of the firewall to interfere with work, Lockheed says.



Experimental Engine and Plane: The McDonnell Aircraft Corp.'s experimental fighter, the XP-67, was powered by the 2,100-hp. liquid-cooled engine of Continental Aviation & Engineering Corp. The engine developed high power at an exceptionally low pound-per-horsepower ratio.

#### Experimental Engine Sets New Records

Continental *Hyper* produced 1.5 hp. per cubic inch of displacement and weighed only .78 lbs. per horsepower.

A high-powered, liquid-cooled engine that proved many engineering developments that were incorporated in other power plants was built during the war by Continental Aviation & Engineering Corp., it has been revealed with the lifting of security restrictions.

While only 23 of the 2100-hp. I-1430 Hyper engines were delivered, unique features were put into engines of other manufacturers which were being produced in volume and had greater power. This course was adopted, rather than the construction of a new factory and retooling to mass produce a new engine of higher horsepower.

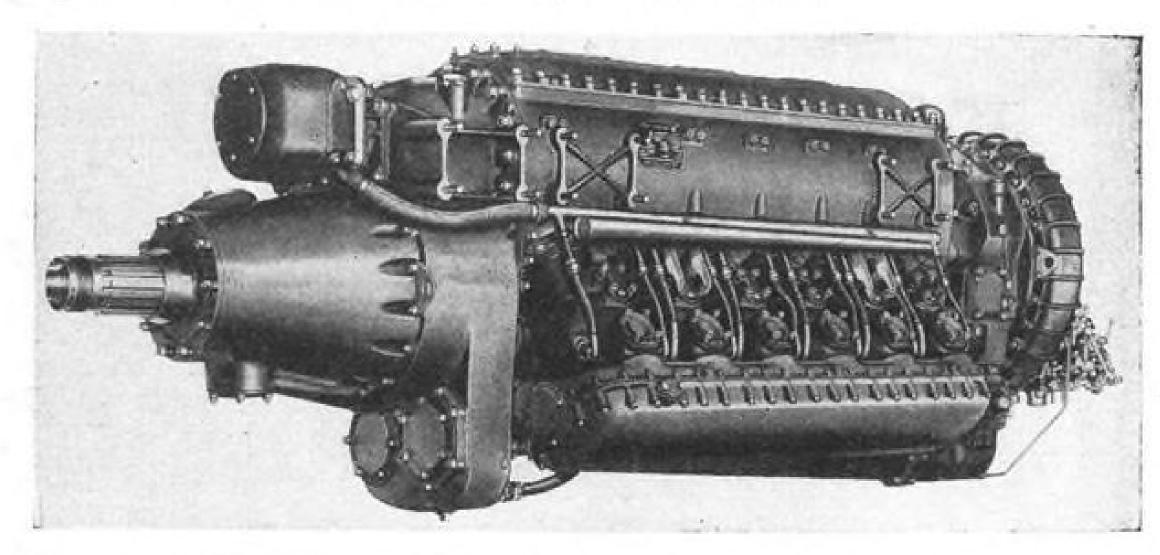
Flight Tested—The Hyper was flight tested in the Lockheed XP-49,

and the McDonnell XP-67.

The manufacturer claims three world records for it—a power output of 1.5 hp. per cubic inch of displacement; a weight of .78 lbs. per hp.; and a 32-in. diameter. A 12-cylinder, inverted V-type, the *Hyper* weighs 1,645 lbs. It was developed especially for use with a turbosupercharger.

High Output—Among the pioneering features in the *Hyper* was the exploitation of high brake horse-power per cubic inch displacement. Continental declares, "the engine project's success clearly demonstrated that reliable engines could be built for maximum pressures of 1,600 lbs. per square inch, compared with approximately 800 lbs. per square inch for diesels."

After the engine passed its tests in August, 1944, information on it was made available to other manufacturers. This is reported to have resulted in fundamental improvements in nearly all liquid-cooled engines both in this country and in Great Britain.



**Pioneer Engine:** This 2,100-hp. liquid-cooled engine developed by Continental Aviation & Engineering Corp. during the war had such a low ratio of power output to weight that its outstanding features were adapted to the liquid-cooled engines of other manufacturers.

### Radford Named Aide On Service Merger

Appointment to assist committee is viewed as shrewd Navy move to protect its aviation branch.

Selection of Rear Admiral Arthur Radford to be the Navy's representative on a special task committee to assist the Senate Military Affairs Committee in drafting a bill for a single department of defense is seen as a shrewd and important move by the Navy to protect its aviation in Congressional action on unification.

Admiral Radford, a ranking officer in the Bureau of Aeronautics
and new deputy chief of naval
operations (air), is a strong advocate of naval air power. He was
head of the ultra-secret and powerful Radford Board which made a
continuing study of fleet aircraft
performance throughout the war.
Members of this board were with
the fleet, aboard carriers during all
combat operations and their reports
were credited with making naval
aviation so flexible.

Protection — Admiral Radford's record and well-known views on aviation are expected to win the respect of the committee. At the same time, because of his strong Navy viewpoint his presence will have a tendency to protect the independence and integrity of naval aviation as a specialized branch.

His appointment was the second important official recognition of airpower in the Navy. Previously, Secretary Forrestal named Admiral John H. Towers, pioneer naval aviator, as commander-in-chief of the Pacific Fleet and Pacific Ocean areas. He succeeds Admiral Raymond A. Spruance who was appointed president of the Naval War College at Newport, R. I.

Another top fleet assignment went to a veteran naval airman when Vice Admiral Marc A. Mitscher, whom Radford succeeded as DCNO (air), was assigned to command the Eighth Fleet.

#### Wilson to Speak

Eugene E. Wilson, vice-chairman of United Aircraft Corp. and chairman of the board of governors of the Aircraft Industries Association, was scheduled to address the National Agricultural Cooperative Transportation Committee at a banquet in Chicago today. He will speak on "The Two A's—Agriculture and Aviation."

#### Brig. Gen. Arnold Takes ATA Position

Acting chief of staff of ATC to be vice president of operations and engineering.

An addition to top personnel of the Air Transport Association was announced last week along with plans for expansion of the organization's work and emphasis on allweather flying studies.

New man is Brig. Gen. Milton W. Arnold, acting chief of staff of the Air Transport Command, who was to step out of that job before the week was out to become ATA's vice president in charge of operations and engineering.

Plans—He and Robert Ramspeck, former congressman who became ATA's executive vice president Jan. 1, will work with the association's new president and Stuart G. Tipton, who has been acting head of ATA, to carry out the expanded program. The presidency has been offered to Vice Admiral Emory S. Land, chairman of the Maritime Commission.

Stress will be placed on study of commercial application of radar and other war-developed electronic devices. Arnold will direct the technical work with the assistance of John Groves, director of operations, and A. W. Dallas, director of engineering. Four experts are to be added to the operations staff to work with air traffic control and other problems. ATA proposes to use an aeronautical radio laboratory at Mineola, Long Island, for its traffic control studies.

Also planned is a conference of airline specialists on engineering and maintenance problems, with subcommittees on aircraft requirements, equipment standardization, cargo handling, fuels, servicing, and domestic and international air regulations.

### UAL Broadens Air Freight Service

System-wide plan begins next month; other changes reported to CAB.

United Air Lines will inaugurate a system-wide air freight service Feb. 1. Rates, based on minimum shipments of 25 lbs., will run as low as 27 cents a pound. On shipments of 3,000 lbs. from coast to coast. Douglas DC-3 Cargoliners will be used pending study of C-54's and new types designed chiefly for cargo.

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UAL last week began service into Detroit with two daily westbound flights to Chicago and Pacific coast cities and two eastbound transcontinental flights. Non-stop service between Detroit and Philadelphia and between Detroit and Akron-Canton is provided. West Coast schedules of UAL have been stepped up with the addition of two round trips daily between Portland and Seattle and three daily between Los Angeles and San Francisco.

▶ Other Changes — Other service changes reported to CAB:

Eastern — Started service at Huntsville, Ala., and Brunswick, Ga., effective Jan. 1 and 5, respectively.

Inland—Added one round trip daily between Denver and Cheyenne and between Cheyenne and Huron, effective Jan. 1.

Western—Added one round trip daily between Salt Lake City and Pocatello and between Los Angeles and San Francisco, effective Jan. 1.

## Stratocruiser Deliveries To Start Late This Year

Wiliam M. Allen, president of Boeing, has announced that deliveries of the Model 377 Stratocruiser, commercial version of the B-29 Superfortress, will start the latter part of this year.

Allen said Boeing also has two new smaller transports in the design stage, but gave no details.

▶ Production of the Model 377 and also parts for the B-29 is scheduled to begin next month.

## C-W Seen Stressing Guided Missiles

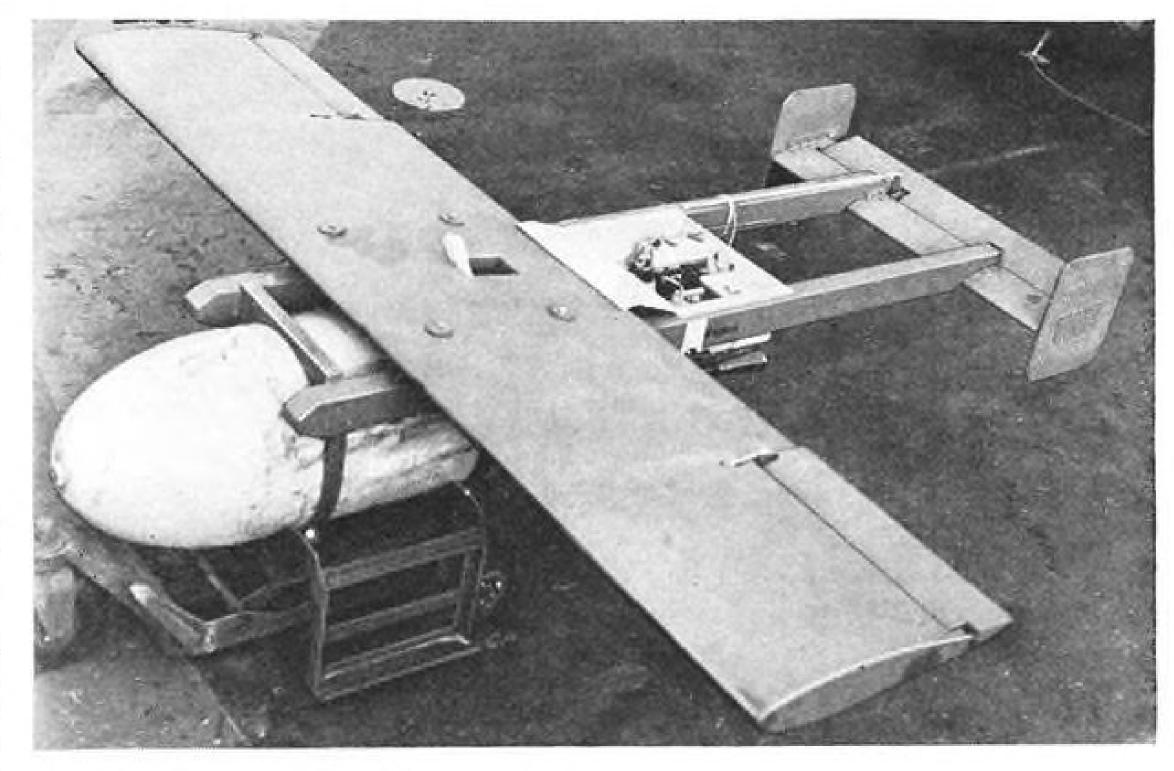
Guided missile—pilotless aircraft
—may be one of the principal postwar activities of Curtiss-Wright
Corp., one of the industry's biggest
aeronautical producers.

Development of guided missiles is reported as spectacular in the company's wind tunnel and laboratory at Buffalo which recently was presented to Cornell University (See *Production*) as a gift to be used for joint development work among eastern aircraft manufacturers. Prospects are for some substantial production orders for this type of weapon.

New Gas Turbine—Another new Curtiss-Wright product is its gas turbine engine which may be ready for test flights late this year or early in 1947.

The company emerged from its record war business with approximately \$100,000,000 in net working capital. Termination of contracts, most of them on a fixed fee basis, has been rapid. Deliveries in 1945 were approximately \$1,000,000,000 and in 1944 \$1,700,000,000. The company is not saddled with plant expansion since it used governmentowned facilities in its expansion for war work.

Navy Scout—Most promising production military plane appears to be the Navy scout, the SC-2. Biggest commercial business appears to be production of engines.



#### ARMY GLIDE BOMB:

Described by the AAF as a "present glide bomb," this 1,000-lb. bomb equipped with wing and tail surfaces carries a battery in the compartment aft of the wing and has adjustable control surfaces. It is designated the GB-1

#### New Synthetic Oils Described to SAE

Advantages, outlined at Detroit meeting, include better performance in cold weather operations.

New synthetic lubricants which contain no petroleum oil, but which have some advantages over natural oils were reported to the Society of Automotive Engineers, meeting today in Detroit.

Developed by research extending over 25 years in laboratories of the Mellon Institute of Industrial Research, and of Linde Air Products Co., National Carbon Co., and Carbide and Carbon Chemicals Corp., one of the new lubricants is insoluble in water and adapted to use in internal combustion engines. The other, soluble in water, can be used as brake fluid, a cutting oil, or for lubricating rubber or metal.

While more expensive than petroleum oils, the engine lubricant in tests has shown better performance in cold weather for starting and operation, and greater freedom from sludge.

▶ Atomic Power — Utilization of atomic power in jet-propelled planes and in rockets was predicted by Dr. John R. Dunning, of Columbia University. Current limits to such application are heat transfer problems and high temperature properties of available alloys.

Although admitting that prophecy is dangerous, Dr. Dunning declared it unlikely that atomic power ever will replace common fuel in most applications. Common concept of the cost of atomic fuel will

Martin Gives \$800,000 More for School

to the University of Maryland by Glenn L. Martin for developing an aeronautical engineering college. This is the second gift made to the University by Mr. Martin. He previously contributed \$1,700,000 for this purpose. The state appropriated \$750,000 to bring the total to \$3,250,000.

Dr. H. C. Byrd, president of the university, in a joint announcement with Gov. O'Conor, said plans were under way to begin construction of buildings to house the aeronautical

A gift of \$800,000 has been made research and aeronautical engineering activities before May 1.

> Program - Mr. Martin said he hoped to help create "an educational and research organization in aeronautical engineering that would be permanently helpful to industry and at the same time be of lasting value to humanity."

> The new college will be known as the Glenn L. Martin College of Engineering and Aeronautical Sciences. Plans call for the use of \$2,250,000 for plant and facilities and \$1,000,000 for research.

have to be revised on the basis of Dr. Dunning's paper, as he stated that cheaper methods of producing U-235 are in sight.

Auto Industry—What the aircraft industry can contribute from a construction standpoint to the automotive industry was outlined to the engineers by Mac Short of Lockheed Aircraft Corp., and W. E. Miller, consulting engineer, of Burbank, Calif. The suggested better use of metals, and employment of lighter metals. The opinion was expressed that the auto manufacturers' practice of mounting a heavy body on a heavy chassis is not efficient utilization of materials and struc-

#### Nova Scotia Buys Field

A wartime built airfield used in training the RCAF at Waterville, N. S., has been sold by the Canadian War Assets Corp., to the province

of Nova Scotia for approximately \$6,000. It is reported it originally cost \$189,885 to build the airport and buildings for the RCAF. The airport will be used for non-scheduled commercial air service by Pulsifer Brothers Ltd., Halifax, who have been licensed by the Canadian Air Transport Board to give service out of Waterville.

#### Canadian Surplus Sales Exceed \$2,000,000

The Canadian War Assets Corp., surplus disposal agency, sold more than \$2,000,000 worth of aircraft and components in the first eight months of fiscal year 1945-46. Aircraft sales totaled \$947,570; engine, \$60,695; aircraft components, \$209,-913; aircraft instruments, \$34,623; raw materials, \$717,350; and engine components, \$57,927.

The disposal corporation has also announced it is placing on sale the government-owned plant at Vancouver leased during the war by Boeing Aircraft. The plant covers two acres and the main building contains 38,400 sq. ft.

Jan. 8-JATA North Atlantic traffic conference,

Jan. 7-11-SAE Annual Meeting, Book-Cadillac Hotel, Detroit, Mich.

cil, Boise Hotel, Idaho.

Jan. 29-31-Institute of Aeronautical Sciences. New York.

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

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

#### AVIATION CALENDAR

Jan. 11-20-Cleveland (Ohio) Aircraft Show. Jan. 21-22-Northwest Aviation Planning Coun-

Jan. 28-Institute of Aeronautical Sciences Honors Night Dinner, Waldorf-Astoria Hotel, New York.

Annual Meeting, tentatively scheduled for Pupin Laboratory, Columbia University. Feb. 12-IATA European Rate Conference.

Feb. 21-IATA Middle East Rate Conference.

March 1-5-Pan American Aircraft Exposition, Dallas, Texas, reviving pre-war annual ex-

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

#### PRIVATE FLYING

## New CAR Part 03 Held First Effort To Set Up Full Engine Requirements

Sec. 0.4 of airworthiness requirements for personal planes hailed by CAA engineers; industry reported to have agreed to most provisions after conferences.

In the opinion of CAA engineers, 20 pages of regulations governing the powerplants of personal airplanes, part of the new CAR Part 03, (airworthiness requirements for personal planes), form the first attempt to set-up comprehensive powerplant requirements for the personal airplane.

Industry engineers who at first protested the requirements are said to have given approval later to most provisions relating to powerplants, in conferences before the section > Provision that multi-engine airwas finally submitted to the Civil Aeronautics Board for final study and adoption.

Covered—Contained in Section 0.4 of Part 03, the powerplant regulations set up requirements for propellers, fuel and oil systems, tanks, pumps, valves, lines, fittings, radiators, cooling tests, liquid coolants, de-icing and anti-icing, exhaust systems, manifolds, heat exchangers, fire walls and cowling as well as controls and accessories.

Except for minor changes and elimination of some repetition, the much the same as the first proposal of CAA. Industry engineers are understood to be reserving comments on it, and on Part 03 generally, until they have a longer time to work under its provisions and determine how they affect the manufacture of personal planes.

▶ Other Provisions—Other principal provisions of Part 03 include:

▶ Revision of stalling speed requirements to limit maximum allowable stalling speed to 70 mph. for singleengine aircraft, and for twin-engine aircraft of 6,000 lbs. or less gross weight which fail to meet singleengine climb requirement.

craft of above 6,000 lbs. gross weight must have a rate of climb with one engine out, of at least 0.02 multiplied by the plane's stalling speed in normal landing condition, using wing flaps if the plane has them, at the height of 5,000 ft., with cowl flaps set for cooling on a hot

Provision that angle of climb must be at least one to 12 and rate of climb must be at least 300 fpm.

Requirement of the following limit load factors for various nontransport planes: Non-spinnable, final powerplant section stands very '3.5; normal, 3.8; utility, 4.4; acrobatic, 6.

It is significant that the regulations do not require a stall speed limit for twin-engine planes of over

#### Swift Approved

Globe Aircraft's all-metal two-place Swift, last week received its approved type-certificate from CAA. The all-metal plane was a development of the pre-war experimental Globe Swift GCA-1 which used a plywood wing in combination with all-metal fuselage. The manufacturer reports that the allmetal Swift is believed to be the first post-war designed personal airplane to receive its NC.

6,000 lbs. which can meet the rate of climb requirement with one engine out. For example: a twin-engine plane with 70-mph. stall speed would have a required rate of climb of 98 fpm. with one engine out. But the plane could have a stall speed of 80 or 90 or 100 mph. or even more, provided it had correspondingly higher rate of climb with one engine out.

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#### Skyranger Approved; 12 Are Delivered

Two months after the first test flight of the first Commonwealth Aircraft Skyranger, the plane has received its CAA approved type certificate, and 12 of them have been delivered to distributors, the company announced last week at Kansas City.

The two-place high-wing monoplane is selling at \$2,750 complete with starter, generator and battery. Production is expected to reach 100 a month within a few weeks, with further production increases scheduled as more materials and parts become available.

▶ Backlog — Commonwealth has a



"Skyrangers" Leave Plant: Twelve new Skyrangers, Commonwealth Aircraft's new post-war two-place side-by-side personal plane were delivered recently

to distributors at the Kansas City Fairfax Airport. It was the first delivery of the new planes which have been type certificated by CAA.

veloped by the Army.

TELEVISION CONTROL:

Designated the GB-4, this is a radio-television controlled glide bomb de-



"Skyranger" Gets NC: Equipped with interior cabin fittings designed to appeal to the woman pilot, the new Commonwealth Skyranger has just received its approved type certificate. Production is expected to reach 100-a-month soon.

backlog of more than 2,400 orders with cash deposits for the Skyranger and the three-place twinengine Trimmer amphibian, which is due to go into production soon.

The Skyranger is described as having a 103-mph. cruising speed, 115-mph. top speed, and is said to be "unusually" stable in flight. Use of slots in the wings makes the plane virtually non-spinnable, the manufacturer says.

Flyaway — Distributors who flew away the first 12 Skyrangers from the plant include: Allied Aviation Corp., Cockeysville, Md.; American Flyers, Ft. Worth; Max K. Aulick, Orlando, Fla.; Coastal Aviation Corp., Washington, D. C.; Commonwealth Aircraft Sales, Ft. Smith, Ark.; Cowan Aviation Enterprises, Lumberton, N. C.; Mercury Flying Service, Phoenix, Ariz.; Northwest Aviation Corp., Milwaukee; Page Airways, Inc., Rochester, N. Y.; Sky-Tech, Inc., Cleveland, and Wells Aviation Co., Detroit.

#### Seaplane Base Planned

A seaplane base will be constructed on the Williamette River at Portland, Ore., if the city's Bureau of Building allows Rainbow Airways to use a 5,000-ft. strip in the center of the river between two bridges for landings and take-offs. The company, of which T. P. Hannan is president and R. C. Sturges base with hangars, offices and other facilities at the foot of Montgomery St. Instruction and student practice would be carried on outside the city limits.

#### Tennessee Field Plans **Expanded Activities**

A 20-room hotel and a combined auto-airplane service and repair station are planned for construction at Gill-Dove Field, between Martin and Union City, Tenn. The field is owned and operated by Gill Staulcup, has provided flight training for more than 2,000 persons since its opening in 1939.

A dining room with seating capacity for 500 is now being completed, while Staulcup also plans to have a large dance pavilion in the hotel with dances three nights a week. The field was originally purchased by Staulcup for operation as a "dude ranch" but when he became interested in private flying, he converted it to a private flyer's airport.

#### Hopewell, Va., Organization Plans \$100,000 Airport.

A modern airport, costing more than \$100,000, and capable of handling commercial planes and seaplanes, will be built at Hopewell, Va., by Hummel Aviation, Inc., Fred H. Hummel, president, announced. It is expected the project will be completed by April 1.

Hummel says he plans to make the airport one of the best of its type in the country. Other officers in the company are Burton P. Shortt, vice chief pilot, proposes to establish a president; Maria Hummel, secretary-treasurer, and M. P. Hanscom, operations manager. Plans call for four runways, an administration building, shop, private hangars and a seaplane hangar.

### Culver's Simplifly Control Explained

More detailed information about the Simplifly control on the Culver Model V two-place personal plane is revealed in a recent report on the control operation by Al Mooney, Culver vice-president in charge of engineering.

The slotted flap used extends over 70 percent of the wingspan, continuing, across under the fuselage and has the effect of straightening out the airflow at the points where the wings join the fuselage. The · flap, Mooney reports, has an optimum setting for any desired flight condition, instead of just two settings which has been all the ordinary lightplane flap provided: "up" and "down."

Dial Setting-As previously reported, the plane is trimmed to the best attitude for any phase of flight, by setting a flight control dial in the cockpit, which operates the flap and simultaneously moves the stabilizer. The combination of the two surfaces results in the degree of longitudinal control required for any desired flight attitude.

For example, the "approach" setting trims the plane for "the flattest possible glide for the greatest distance at a speed of about 75 mph. with gear up," Mooney reports. "It is not necessary to flare the plane as you land, although a good pilot probably will, as the landing will be a little smoother." ▶ Elevator—The elevator is reduced in size, in comparison with the stabilizer, and will only moderately change the attitude of the airplane, becoming a stabilizing factor when fighting rough air.

Power is not a determining factor as far as speed is concerned on the Model V, Mooney reports, but merely determines whether the plane goes up or down. Speed is governed primarily by the flight control dial settings.

▶ Stability—Substantially the plane is a two-control plane in the air, flown by wheel alone, but the rudder is provided for additional control in cross-wind takeoffs and landings. The airplane can be slipped "moderately," he reports. Approach and landing speed is about 55 mph. and the control dial may be set for this speed with power or without power. The plane has more stability at low speed than at high speed, the engineer says.

The control system is a result of the company's development of military radio-controlled target planes.

## Los Angeles Airport Hearing This Week May Set Precedent

Belligerent minority of property owners, opposing new fields, strong political pressure, makes adoption of master plan unlikely in its present form.

The Los Angeles County Board of Supervisors hearing this week on proposed adoption of a revised master airport plan seeking approval for 26 existing airports and 36 proposed terminals, airparks and emergency fields, within the county, probably will set an important precedent for other communities throughout the nation.

Adoption of the plan as presented will mean the board is ignoring protests of a belligerent minority of property owners who have made it clear they want no airports in their local areas. Opposition is based on the noise-nuisance of low-flying unmuffled planes in residential areas; disturbance to herds and flocks of adjacent dairies and chicken ranches and the menace of crash landings. Strong political pressure makes outlook for adoption of the plan not too bright.

▶ Problem—Peculiar to Los Angeles County, with its population of close to 3,500,000, is the opposition of "old residents." These are the home owners and owners of small citrus and livestock ranches who have settled in the area in semi-retirement to round out their lives in the slowpaced tranquility offered by chambers of commerce.

Somewhat belatedly the aviation industry, airplane owners, aviation associations, and airport planners of Los Angeles County have been aroused to the fact that planning for future airports is not enough. The "old residents" must be mollified.

They have begun talking to people, to airport opponents and politicians, but possibly too late to exert immediate influence for the Master Plan.

Arguments—They are pointing out to County Supervisors and members of planning commissions that an airplane which made a forced landing in the street of a subdivision, and which might have struck a house or killed children, had no airport to which the pilot could have glided in the emergency.

They are gathering property value statistics to show that property surrounding existing airports, large and small, has not depreciated but actually has tended to increase.

AVIATION NEWS - T- - - -

The have taken the members of the Los Angeles County Regional Planning Commission to airports to witness that the noise of pre-war airplanes taking off and flying low overhead has been drowned out by a passing train and even by a diesel highway truck half a mile distant. They have shown commission members that cows, horses and chickens are unconcerned over airplanes purposely flown low in approaches to adjacent airports.

CAA Statistics Cited—CAA records are being cited to show that residences far removed from airports have the highest incidence of damage from crash landings, and that well-placed airports are insurance against property damage.

Apparently uppermost in the minds of many West Coast airport opponents is the recollection of four war years of military flying attended by disastrous accidents in residen-



#### CAA MEN GET MEDALS:

British Empire Medals, Civilian Division, have been awarded by the Canadian Government to CAA men Charles R. Marchant, Lorne E. Sasseen and Jack R. Bassett, for gallant service in rescue of the crew of a crashed RCAF bomber at Metlakatla, Alaska, in September, 1942. Awarded in absentia, the medals were accepted by T. P. Wright, Civil Aeronautics Administrator (left) from L. B. Pearson, Canadian Ambassador to the U.S. (center). They has been connected with the Curtiss are shown with Thomas A. Stone, organization since 1928, first at Gar-Counsellor of the Canadian Embassy. Sasseen and Marchant are still with CAA, both stationed at Ketchikan, Alaska. Bassett is no longer with CAA.

tial areas, and by the ear-splitting engine and propeller noise.

Air Groups Ready—There is indication that organized aviation groups will be ready at the hearing to welcome local government policing of irresponsible flying, and the adoption of ordinances requiring the muffling of engines.

Presentation by the National Aeronautic Association's Southern California Chapter of petitions bearing signatures of thousands of property owners urging adoption of the Master Plan is scheduled for the hearing.

Also, as an indication of the trend of airport planning, the Los Angeles Supervisors will have for consideration sketches of a variety of proposed private airparks and airports which are intended to substitute for yesterday's "eyesore" airfields attractive as well as utilitarian bases for pleasure and commercial

### Advisory Committee To Meet Jan. 23-24

First 1946 meeting of the CAA Non - scheduled Flying Advisory Committee, Jan. 23-24 in Washington, will introduce the committee's new executive secretary, Henry Lloyd Childs, former Curtiss-Wright test pilot, and will call for consideration of an agenda including: aviation insurance, accidents, further needed revisions of Civil Air Regulations, civilian pilot training, radio equipment for private pilots, and success of the designations of flight examiners and inspectors to augment the small staff of CAAemployed inspectors.

Arthur Boreman, Des Moines, chairman of the committee will preside, and W. L. Jack Nelson, former executive secretary, now president of Servair Aviation Corp., Washington, D. C., will sit with the committee in ex-officio capacity.

Childs, one of the country's bestknown test pilots, resigned as manager of Curtiss-Wright Corp. flight test division, to fill a vacancy left by resignation in October of Nelson. Long Career—Childs was born in Philadelphia in May, 1904, and has a Mechanical Engineer degree from the University of Pennsylvania. He den City, as project engineer on several early personal plane developments, and later as chief engineer of the Curtiss-Robertson Corp., at St. Louis.

When the Curtiss-Wright Corp. was formed in 1931 Childs was named chief of design, and five years later was named chief of flight test. In 1940 he held an unofficial world's speed record for a 560 mph. dive in a Curtiss fighter.

While Childs' experience in recent years has been mainly with high performance aircraft, his early experiences in design of personal aircraft, and his long association with the aircraft industry are regarded as very useful qualifications in his new post.

#### Lockheed Pusher Passes First Test

Lockheed's model 34 experimental two-seater pusher-type lightplane, which may become the company's first small commercial personal aircraft, flew successfully and secretly Dec. 29.

The plane is powered by an experimental 100-hp. Continental four-cylinder engine, designated XC-100 by the manufacturer.

Flight Hailed-Performance secrecy was assured by making the test flight at the Army's Palmdale Airbase on the Mojave Desert. Pilot was Prentiss Cleaves, chief pilot of Mac Short's special projects division of Lockheed, which also developed the single-place model 33 Little Dipper. Observers were jubilant over results.

Lockheed officials have given no indication that at this date a decision has been reached to attempt commercial production of the plane. It is understood that patents on the design will be taken out under the names of Robert E. Gross, Lockheed president, and Robert Reedy, project engineer.

Lockheed will continue demonstration flights of the Little Dipper, built in less than four months in 1944.

#### 1,000th Private Plane Registered in Michigan

Michigan Department of Aeronautics reports registration of the 1,000th non-military airplane in the state. Registration fees, based on net empty weight of the plane, average about \$3.50, payment of which exempts the owner from personal property tax payments on the plane to counties and municipalities. While no arrests for non-registration have been made, the department is placing warning tags on a few planes which have not yet been registered.

## Briefing For Private Flying

A national expenditure of \$1,000,000,000 per year within 10 years for private flying is a conservative estimate, if the manufacturing, sales and service organizations of industry make sufficient investments and do intelligent planning to develop the market, John H. Geisse, assistant to CAA Administrator T. P. Wright, and personal flying analyst, forecasts. Geisse says that the general pattern in marketing personal planes thus far has been one of drastic limitation of expenditures to stay within income, a method which never has been very successful in developing other volume markets. He calls for more attention to design of planes for easy operation and safety; additional, and more convenient, airports; more attention to convenience and desires of the private pilot and the consumer, and more aggressive merchandising.

FLIGHT TRAINING OFF?—Despite a CAA report of 70,000 student pilot certificates for 1945, the largest number ever issued, a plane manufacturers' representative who has just completed a swing around the country visiting dealers, reports his observation that student flight training is down about 25 percent below wartime levels, having dropped off sharply soon after VJ-day. The drop, coupled with a decrease in repair and overhaul occasioned by the imminence of the first new planes since 1941, is causing some severe retrenchment among many of the operators who are anxiously waiting new planes to sell in order to get back on a profitable basis. Part of the slack in training is seasonal, much of it may be attributed to the transition between jobs, and the general unrest in the country in the immediate post-war months. It is a warning that must be recognized, however, by the industry. Many student pilots consider flight training as something they can get along without, if need be. Until the industry does the things John Geisse is talking about for the private flyer, private flying doesn't have utility, and still is for the average American, only a luxury.

NATIONAL SOARING CONTEST-Officers of the Soaring Society of America are receiving a number of bids from various cities in the East, Midwest and Rocky Mountain areas for the first post-war National Soaring Contest, to be held sometime next summer. The competition is expected to attract the largest number of competitors in its history, due to heightened interest in soaring as a result of the war. Time and place of the contest will be determined within a few months, when all the bids are in, at the society's Elmira, N. Y., headquarters.

REVISED SPECIFICATIONS—Specifications for the new Fairchild F-24, which is being built in Dallas by Texas Engineering & Manufacturing Co., for the Fairchild personal plane division, vary in some details from those of the pre-war F-24, particularly as to length, height and gross weight. The Dallas-built F-24 is 25 ft. 101/4 inches long, as against a 23 ft. 9 in. length quoted for the pre-war F-24. The revised version has a gross weight of 2562 lbs. as compared to 2550 lbs. pre-war, and the height is 7 ft. 71/2 in. as against 8 ft. pre-war. Oddly, there is only one mph. difference between the 175-hp. Ranger-powered F-24 and the 165-hp. Warner-powered F-24 in either top speeds or cruising speeds. The Ranger-powered plane has 620-mi. range and the Warner engine steps the range up to 639 mi. For the color-conscious pilots-and this factor will be more important post-war than heretofore—the F-24 is offered in standard colors of maroon trimmed in buff, yellow trimmed in green, or red trimmed in gray. The Warner-powered version costs \$8,500 with the Ranger-powered plane selling for \$375 more.

FLYING IN BRITAIN-As of Jan. 1, British private flyers were permitted to resume private flying, which had been under government ban since 1938 because of military restrictions. The U.S. National Aeronautic Association, through its president, William Enyart, sent a cablegram of congratulation to Lord Brabazon of Tara, president of the Royal Aero Club of Great Britain, wishing the British private flyers "fair weather and unlimited ceiling." Serious-minded President Enyart probably didn't think of it, but he wished for the British flyers two things which are very much at a premium in the United Kingdom.

—Alexander McSurely

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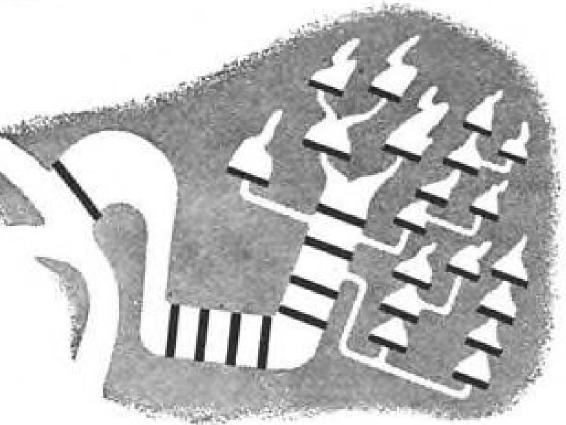


## Dams of the Nation Create "READY-MADE" Bases for Flight

They cost high in the millions, they are built for power, flood control or irrigation, but the mighty dams constructed to harness rivers form free and "ready-made" airports for float flying. For the plane equipped with floats, they are ideal bases for sport or commercial flying.

These dams make vast landing areas

available to well-populated regions formerly lacking in all types of airports. They are sport and recreation areas, and they offer thousands of new opportunities for flight schools, sales agencies or charter flights. New projects, to tame other river systems, are now planned. More "ready-made" airports are in the making.



Take the Tennessee River, for example:

On this river system alone, the Tennessee Valley Authority has built 28 dams. Behind the largest dam is a lake 184 miles long, with hundreds of square miles for float flying. Throughout the nation, other chains of dams offer new opportunities for flight with floats.



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#### FINANCIAL

## Airline Equities Now Selling At Many Times Book Values

Existing wide disparities will have tendency to narrow as industry becomes more seasoned; United has most conservative valuation, Colonial the most extreme.

Airline equities are currently selling at substantial premiums to book values. An Aviation News analysis discloses that market prices range from 21/2 to almost 14 times indicated book valuations. Viewing airline market prices in relation to equity positions helps to place values in proper perspective and is frequently a reliable guide to seasoned investors.

Airline stock prices have been unusually strong and have been the most spectacular group in sparking the general market rise of 1945 (AVIATION NEWS-Nov. 12, 1945). Going back over a longer period of time, air transport prices are up on an average of 150 percent from the December 31, 1943, level and represents a gain of almost 100 percent better than the general market has been able to attain.

Basis—In this upward course of airline prices, little attention has been paid to basic asset positions. Instead, emphasis has always been placed on future prospects—potential earnings. As a new industry, the air carriers were surrounded

with considerable speculative appeal and as long as growth prospects continued bright it mattered little stable earnings on envisioned high levels were slow in materializing. For this reason, the existing wide disparities between market and book values have developed in airline prices. As the industry becomes more seasoned, this spread will have a tendency to narrow. This is the pattern assumed in the market development of other new industries as they moved into solid, entrenched positions in the nation's economy.

The accompanying table presents the relative market and book value positions for each of the airlines.

It can be seen that United has the most conservative market evaluation, selling at only 21/2 times its estimated book value. In a large measure this is probably due to the large supply of stock constantly available and which has minimized thin markets causing sharp runups. It will also be noted that United has by far the largest book valuation among the carriers shown.

▶ Highest—At the other extreme is Colonial Airlines selling at approximately 13.9 times its book value. This company, incidentally has the smallest book value of all. The small number of shares outstanding in this instance has been believed to be primarily responsible for the high market price reached. In active markets, with little stock available, it is not uncommon for an issue in short supply to experience sharp run-ups. Certainly the earnings record of Colonial does not begin to support its present market levels. Current prices appear to place an extremely high premium on the earnings potentialities of its new routes not yet in operation.

While National and Delta have market-book value ratios of 7.8 and 7.0 times, respectively, it is possible to justify these relationships. Both carriers have been awarded new routes which makes them trunk lines. The growth prospects, therefore, for these companies is bound to be much greater than for most of the domestic airlines.

Comparison—It is interesting to note that Mid-Continent has a higher ratio than American—5.6 compared to 3.7. This again probably is due to the short supply of stock available. Further, even at current prices, Mid-Continent is selling lower than the indicated 4-1 trade with American. Is it possible that some doubt is now being expressed as to CAB approval of the proposed merger?

The relative market positions of the airlines frequently provides a helpful guide in evaluating companies.

▶ Example—For example, Braniff and Northwest are estimated to have the same book values but the former is accorded the higher market price. On the basis of past earnings and future growth prospects, some airline analysts would conclude that this relationship may be reversed in due time. Similarly, American and United have approximately the same market value although differing widely as to book values. This particular relationship has prevailed in recent years and it is believed may continue.

#### AIRLINE MARKET PRICES AND BOOK VALUES

Company	Common Shares Outstanding	Approx. Market Price		Total Market Value	Estimated Book Value Dec. 31, 1945	Ratio Market to Book Value
American	1,290,568	\$87		\$99,373,736	\$27,000,000	3.7
Braniff	1,000,000	34		34,000,000	7,500,000	4.5
Chic. Sou.	291,687	30		5,750,610	1,750,000	3.3
Colonial	274,200	38		10,419,600	750,000	13.9
Continental	271,756	20		5,435,120	1,500,000	3.6
Delta	400,000	61		24,400,000	3,500,000	7.0
Eastern	590,244	126		74,370,745	19,500,000	3.8
Mid-Continent	389,399	18		7,009,182	1,250,000	5.6
National	500,000	39		19,500,000	2,500,000	7.8
Northeast	500,000	22	12	11,000,000	1,950,000	5.6
Northwest	539,070	56		30,187,920	7,500,000	4.1
PCA	477,006	46		21,942,275	5,000,000	4.4
TWA	975,586	70		68,291,020	18,000,000	3.8
United	1,850,525*	54		99,928,350	40,000,000	2.5
Western	550,238#	38		20,909,044	6,500,000	3.2

Notes:

\*Assuming complete conversion of preferred stock. #Giving effect to recent sale of additional stock and assuming exercise by employees of warrants to purchase a total of 31,825 shares of stock.

#### U. S.—Canadian Study

A joint committee to study easing of border restrictions has been set up by the U.S. and Canada. Specifically included are customs arrangements relating to joint use of airports near the border, entry of tourist aircraft and in-transit movements of foreign aircraft.

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#### SEAMLESS TUBE COMPANY

BRANCHES: 20 N. Wacker Drive, Chicago; 1328 Citizens' Bldg., Cleveland; 2857 E. Grand Blvd., Detroit; 927a M&M Bldg., Houston; 170 S. Beverly Drive, Beverly Hills (Los Angeles); 225 5th Ave. Bldg., Moline; 3735 St. James St., Montreal; 70 E. 45th St., New York; 123 S. Broad St., Philadelphia; 1230 N. Main St., St. Louis; 1911 Smith Tower, Seattle; 501 Roberts Ave., Syracuse; 604 Tulsa Loan Bldg., Tulsa; 1016 Mainland St., Vancouver.

Plant and Main Office SHELBY, OHIO

MANUFACTURERS OF SEAMLESS AND ELECTRIC-WELD STEEL TUBING

# the Birdmen's Perch

By Major Al Williams, ALIAS, "TATTERED WING TIPS," Gulf Aviation Products Manager, Gulf Bldg., Pittsburgh 30, Pa.



Suppose you're doing an engine overhaul.

First, you take off the cowl, get the engine off, and take it apart. But you don't stop there. In fact, that's where you really begin. Because then you proceed with cleaning the engine . . . getting rid of any unsatisfactory parts . . . putting it back together again.

The steps followed in refining Gulfpride Oil are very much the same as those in an engine overhaul.

First, we get a top-quality crude. Then we take it apart—that is, refine it into lubricating oil (and all its by-products).

And right there is where Gulf's famous Alchlor Process really begins. For this



extra step cleans the already-refined lubricating oil, and gets rid of more of the unsatisfactory parts-the carbon-forming, sludge-making hydrocarbons.

And you have Gulfpride Oil!

Well-what are you waiting for? Get

#### LITTLE KNOWN FACTS DEPT.

Another month, and still no qualifier for our first Senior Perch Pilot's commission.

The field's still wide-open, and all it takes is 5 "Facts" that we can use—with proof! Meanwhile, you can still get a commission as Perch Pilot (bottom rung) with 1 "Fact."

Like these:

"No formation of American Air Force planes has ever been turned back from its objective by enemy action!"



That gets Anthony Kurriger, of Muscatine, Iowa, a commission.

And here's the kind of a deal we especially like. AMM3/c Robert L. Gray, Jr., VC 75, USS Ommaney Bay CVE 79, sent two "Facts" in the same letter-both good ones. So he is hereby commissioned and, what's more, has only 3 "Facts" to go for his promotion to Senior Perch

- 1. "The TBF is the largest, singleengine, stick-flown aircraft in the world!"
- 2. "TBF's have been used for torpedoing, glide-bombing, skip-bombing, rocket-launching, and just plain scaring - and with one exception the TBF holds the record for the highest amount of enemy shipping destroyed!"

How about it-have you any Little Known Facts?

Send 'em in, then! Address above.

Gulf Oil Corporation and Gulf Refining Company.::makers of



#### FLUTTER'S DITTY BOX\*



Said a star in the strat-e-o-sphere, "It's getting darned crowded up here! First, the rockets galore,

And now-planes by the score! Gassed with Gulf's G. A. G., so I hear!"

\*If you can do better—DO . . . and send it in. T. W.T.

#### PRODUCTION

## Industry Reported Disappointed By Work of Technical Missions

Participants reveal accomplishments were below expectations due to muddling and lack of careful coverage of German plants; majority of reports considered worthless.

Expecting a great mass of helpful information on German engineering, production and advanced aircraft models after the end of the war in Europe, the U.S. aircraft industry has been sorely disappointed because the work of technical missions was badly muddled, it is now being said by participants in the investigations.

At least half a dozen different U. S. groups, plus some from the British, invaded Germany on the heels of the armies, seeking German scientific secrets. Some of the experts took their assignments seriously, but too many others, it is reported, treated the job like a tourist trip. The result is a few reports of excellence, but the great majority are worthless.

Missions - Chief among the missions were TIIC—Technical Industrial Intelligence Committee of the Foreign Economic Administration; NAVTEC-Navy Technical Mission; the von Karman group, dispatched by Gen. Arnold, chief of AAF; USSTAF-United States Strategic Air Forces; NACA-National Advisory Committee for Aeronautics; USSBS—United States Strategic Bombing Survey; and two or three British groups.

These missions, according to participants, ranged unscheduled through Germany, descending one after another on the same plants. In some cases they found all evidence and data on a given phase of design and production had already been removed by a preceding mission. The German plant chiefs, some of whom were completely cooperative, were dismayed, and frequently expressed surprise that the Americans had been able to win the war. Visits Spotty - Many of the air investigators picked out aircraft plants that had glamorous reputations, such as Messerschmitt, which was overrun as by a swarm of locusts, and passed up others that were either out of the way, or unpublicized.

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British and American missions worked in each other's zones of occupation, but in cases where there was only one document, or only one prototype airplane, for example, it was taken to and kept in the technical center at London, though the Americans were permitted to take away copies and photographs. This arrangement apparently was agreed to by the Combined Chiefs of Staff. ▶ Much Destroyed—Beyond doubt a great volume of data was not available to the British and Americans. During final stages of the war, Allied bombardment destroyed many documents and prototypes, and killed many persons who could have given information. The Germans themselves, during that same period, moved many of their aircraft and other facilities westward in an effort to escape air attack.

Then, before any investigators arrived, came the ground forces of the Allies, battering down whatever seemed necessary in their search for information, concealed weapons and belligerent persons. Many German plant chiefs, willing to give information, said they could not find their records and equipment in the shambles of buildings that had not been bombed.

Russian Record-In the Berlin area, which was first occupied by the Russians and later by a joint Allied force and which included many important aircraft and other plants, the technical missions found mostly bare buildings. The Russians had taken everything not anchored to the ground, such as plumbing and lighting fixtures. One investigator said they had even pulled the wiring out of electrical conduits.

#### X-ray Booklet Available

A booklet describing X-ray | University divisions participating equipment used in industry for the detection of internal flaws in finished parts is being issued by the East 42nd Street, New York City. college of liberal arts.

#### C-W Wind Tunnel Given to Cornell

The Curtiss-Wright Corp. has presented its \$4,000,000 research laboratory and wind tunnel at Buffalo to Cornell University for a research educational program cooperatively sponsored by a group of Eastern aircraft manufacturers. Although C-W has removed its activities to Columbus, Dr. C. C. Furnas, its director of research, will remain at Buffalo to superintend work at the laboratory.

Guy W. Vaughan, president of the company, declaring the plan would permit wider use of the laboratory,

"We devoted considerable study to the use of our research facilities at Buffalo," he said in announcing the decision, "and became convinced that under present conditions their continued use by one company could not be justified."

▶ Plant — The three-year-old research laboratory contains modern scientific and testing devices, the most outstanding of which is the wind tunnel where models can be tested in air velocities approximating the speed of sound. A smaller tunnel gives velocities of supersonic

The deed to the property has been given to Cornell, and the laboratory will be financed by eight big aircraft companies in the East which will contribute \$100,000 annually. C-W is one of the companies.

#### Institute of Aeronautics Planned at Northwestern

Northwestern University is planning the establishment of a new Institute of Aeronautics for the purpose of conducting research on the fundamental problems of the aviation industry.

Dr. Franklyn Bliss Snyder, university president, said the new institute will require an ultimate endowment of \$10,000,000 and will be directed by Fred D. Fagg, Jr., vicepresident and dean of faculties. It will represent a pooling of all the aeronautical resources of the school in plant, equipment and manpower for the purpose of developing a coordinated program of research, Dr. Snyder said.

in the work of the institute will include the technological institute, the school of commerce, the school of North American Philips Co., 100 law, the medical school, and the

JANUARY, EH?

low altitude.

and CAA Inspectors.

using Gulfpride Oil.

Known Planes.

pursuit plane."

Comes the resolutions!

paste it beside the throttle:

Here's the Postwar line of completely

remodeled Al-Flutter Prefabricated New

Year Resolutions. Just check each box,

tear out this section of the Perch, and

1. I will not make steep turns at

I will be kind to orphans, widows,

3. I will be kind to my engine—by

4. I will always submit proof with

my Little Known Facts About Well

5. I will use Gulf Aviation Gasoline

so that my putt-putt can "make like a

## AIA Veto of Export Advertising May Bring Even Stronger Drive

At least three firms now are discussing cooperative campaign; likely to stress present and future products rather than purely wartime advances as was proposed.

Despite the rejection by the board of governors of the Aircraft Industries Association of a proposal for an industry-wide advertising campaign to attract export business, the industry's efforts in the export field are seen as likely to increase, with the Export-Import Bank's work, although separate, contributing powerful support.

AIA's veto at the recent Los Angeles meeting (AVIATION NEWS, Dec. 17), rather than indicating indifference to the export market, actually paved the way for a stronger export campaign than the one contemplated. The original plan called for general advertising stressing the overall excellence of U.S. equipment on the strength of wartime performance. This was looked on with misgivings by some familiar with export trade who believed a better approach would be "selling" the production of the present and future, rather than that of the past. New Proposal—In essence that is

what it is now proposed to do. AIA governors turned down the original plan for four main reasons: the association has never undertaken advertising campaigns; there would be a financing problem; consensus was that any advertising done by the industry should be on specific products, a project outside the ken of AIA; and some companies, those engaged in purely military work, quite naturally cannot be interested in the export field. Net result is that advertising abroad will be undertaken either by individual companies or by several companies in a joint campaign. It is understood that at least three firms now are discussing such a cooperative effort with an advertising agency. The emphasis in any such activity will be on types of products either in use or projected, and will be designed to meet efforts of foreign manufacturers, notably those of Great Britain, who are displaying great vigor in seeking export busi-

Federal Assistance—Although the U. S. Government has never as actively promoted export sales as have some foreign governments, the aircraft industry is encouraged by the

attitude and work of both the Export-Import Bank and the State Department, the latter through its civil air attaches abroad. The Bank officials say frankly that they regard the aiding of export sales of U. S. aircraft as one of their "most important activities," and there are indications that applications from foreign sources to use the Bank's funds for aviation purchases here will generally be looked on with favor.

authorized to lend up to \$3,250,000,-000. Its procedure is not to make outright loans, but rather to extend lines of credit to foreign governments, foreign business houses, or U. S. companies operating abroad, for the purchase in this country of specific items or commodities. The borrower must obtain the Bank's approval for the purchase of each separate item. That is why the attitude of the Bank's officials toward aircraft purchases is considered a helpful sign.



#### AIRESEARCH CITATION:

One of four Southern California companies to receive such recognition, Airesearch Manufacturing Co. recently received from Army Air Forces a special Service Award for technical training given AAF mechanics in the use of high altitude equipment. Walker Brownlee, Airesearch general manager, received the award scroll from Brig. Gen. C. D. "Casey" Vincent.

which have recently been extended lines of credit are Norway, Denmark, France, The Netherlands, and Belgium. Although the first essential of all of these is food and clothing, most of them were prewar customers of the U. S. aviation industry, and their return to their former sources of supply is expected in the not-too-distant future.

Before the war, industry sources state, U. S. aircraft, engine and accessories manufacturers constantly suffered from the lack of full information as to the state of the market abroad. This situation has been greatly improved by the appointment of the civil air attaches, most of whom are pilots and have good basic knowledge of aviation. The reports of these men repeatedly have been made available by the State Department to the industry and have given the industry a far broader and detailed knowledge of foreign markets than ever before.

## CPA Authorizes ANMB To Detail Preference Ratings

The Civilian Production Administration has amended Directive 41 to shift to CPA authority to authorize the Army and Navy Munitions Board to issue instructions governing the assignment of preference ratings within limits prescribed by CPA priorities policy decisions.

This applies to contracts, purchase orders and other procurement documents to the account of the Army, Navy and National Advisory Committee on Aeronautics and certain other government agencies.

ANMB also is authorized to rate deliveries on contracts to such procurement agencies and for command construction which includes military and naval airport projects.

#### Mach Meters Offered Wind Tunnel Operators

The Mach Meter originally designed for the Air Technical Service Command by Taller & Cooper, Inc., now is available for other operators of wind tunnels, the company announces. The instrument determines the compressibility factor in wind tunnel testing.

Computation of Mach numbers, which are the ratios of airplane speeds to speeds of sound at different altitudes, entails lengthy mathematical calculations. The Taller & Cooper meter eliminates this task in wind tunnel work.



## The '46 model has a <u>real</u> heat problem

Grandmother shivered with the kerosene stove going full blast. The newest, fastest jet propulsion aircraft burns the same familiar fuel—but what a difference in heat! The flaming gases of jet propulsion range upward from 2000°F!

Handling these gases was a

problem for specialists in stainless steel—for specialists in heat and corrosion—for the specialists at Solar!

Now . . . the engineering and fabrication skills that produced exhaust systems for jet aircraft . . . are ready and waiting to tackle your problems. See Solar

for cost-cutting engineering and designing with high temperature alloys. See Solar for advanced forming techniques from deep drawing to precision casting. For quick action — write, wire or phone: Solar, San Diego 12, California. Factories in San Diego and Des Moines, Iowa.



Wants your tough problems in engineering and fabricating high temperature alloy products

22 PRODUCTION

AVIATION NEWS . January 7, 1946

#### New Model Helldiver Delivered To Navy

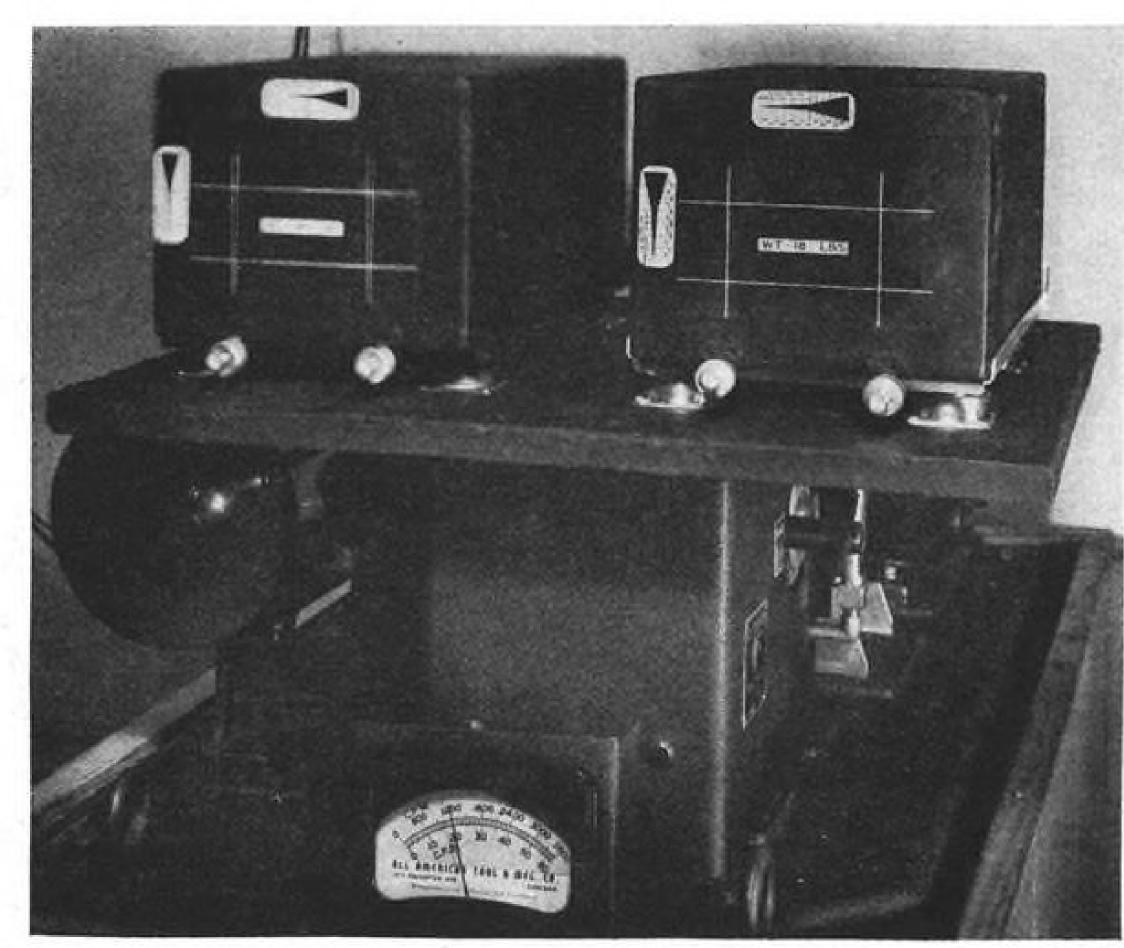
Another Curtiss Helldiver modification has been delivered to the Navy without public mention. It was an experimental model, the XSB2C-6, which never was mass produced.

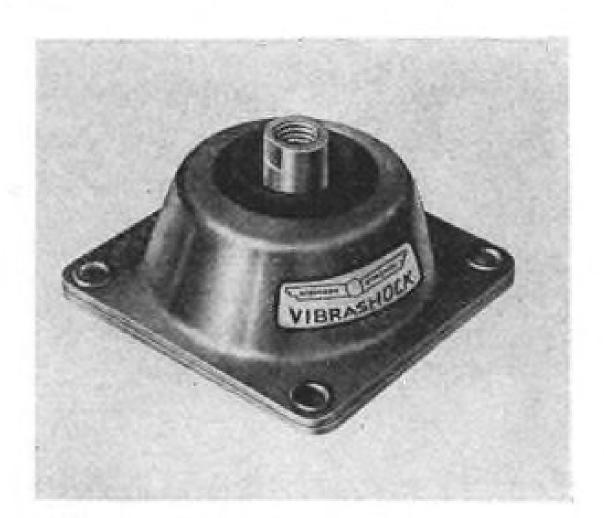
The plane originally was intended to be an improved *Helldiver*, the plan being to produce it as the successor to the SB2C-5. Rapid developments in dive and torpedo bombers, however, made it undesirable to place the "dash six" in the service type category, and it therefore was used experimentally to test cer-

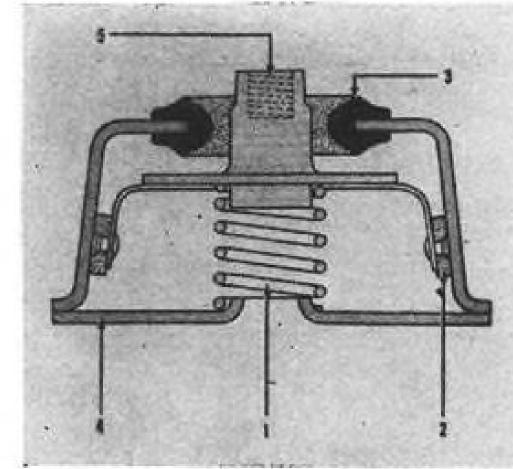
tain new features of a subsequent design airplane.

NSB2C-6 were produced, the first being delivered in May. Both had Pratt & Whitney engines and Curtiss constant-speed electric propellers. The second of the two planes had a special 13-ft. 8-in. propeller. The fuselage of the "dash six" was 20 in. longer than that of the earlier SB2C's, and the landing gear was more than 9 in. longer to allow the extra-size propellers but took up no more room.

Metal covered control surfaces and square-cut wing tips changed the familiar outline of the older Helldivers.







#### VIBRATIONLESS:

New Vibrashock units, anti-vibration devices developed by Robinson Aviation, Inc., support the instrument on the right in the above photo, while that on the right is mounted on an older type of unit during tests on a vibrating stand. The difference in clarity is the result of the Vibrashock mount which is claimed to absorb 90 percent of both lateral and vertical vibration. Chief innovation in the new unit is the stainless steel spring, shown in the cutaway, which bears the principal load. The device is made in three sizes, to bear loads ranging from one-half pound to 45 lbs.

#### G. T. Waite Elected Chairman of NASC

Gordon T. Waite, engineering representative, Consolidated Vultee Aircraft Corp., has been elected national chairman of the National Aircraft Standards Committee.

The Aircraft Industries Association announced that Waite, former Air Corps officer and Navy engineer, will direct the aircraft industries' efforts to extend its program of standardizing aircraft equipment to facilitate the interchangeability of parts among varying aircraft types. A Consolidated Vultee engineer for the past eight years, Waite has specialized in materials standardization for that company.

b Other Officials—The Eastern division of the NASC will be guided during the coming year by Chairman James F. Hammond, Standards Unit chief, Wichita division, Boeing. L. J. Catlin, Douglas Aircraft standards engineer, has been elected western chairman. T. P. Hearns, Ryan Aeronautical Corp., was named western vice-chairman and H. R. Leader, Bell Aircraft, eastern vice-chairman.

#### Salsbury Motors Taken Over By Northrop Aircraft

Northrop Aircraft has further diversified its peacetime business with the acquisition of Salsbury Motors, formerly Avion, Inc., of Los Angeles.

The acquisition gives Northrop a variety of Salsbury products including 6-hp. air-cooled engines, a new automatic clutch and transmission, and a streamlined motor scooter. Due for early production is a package delivery car.

Heads of Salsbury are Richard W. Millar, Board Chairman, and Don I. Carroll, president and general manager. The acquisition will be effected by an exchange of stock.

## Full Meeting Schedule Is Resumed by ASME

The American Society of Mechanical Engineers has announced resumption of its full schedule of national and regional meetings which was interrupted by the war.

The regional aviation meeting, sponsored by the pioneer Aviation Division of the ASME will be held at the University of California in Los Angeles, June 3-6. Dr. John E. Younger, of the University of Maryland, is secretary of the division.

## The Navy's Newest Homesick Angel"



High speed, mile-a-minute rate of climb, exceptional maneuverability and long cruising radius — the Ryan Fireball with its combination power plant is a top performer in every way. Here is the answer to the Navy's request for a fighter which could operate from carriers and yet out-perform the enemy at all altitudes.

And for added power in an emergency or on take-offs, the big Wright Cyclone engine is equipped with a water injection system using a CECO water injection pump. This steps up the forward engine power from 1425 h.p. to 1550 h.p. — a real boost when it is needed most.

Chandler-Evans is particularly proud to have played a part in this newest addition to the great Navy team. For whether it concerns planes for war or peace, Chandler-Evans' engineering skill and knowledge always stand ready to serve America's aviation industry as new developments enter the ever-changing picture in the air.

CARBURETORS

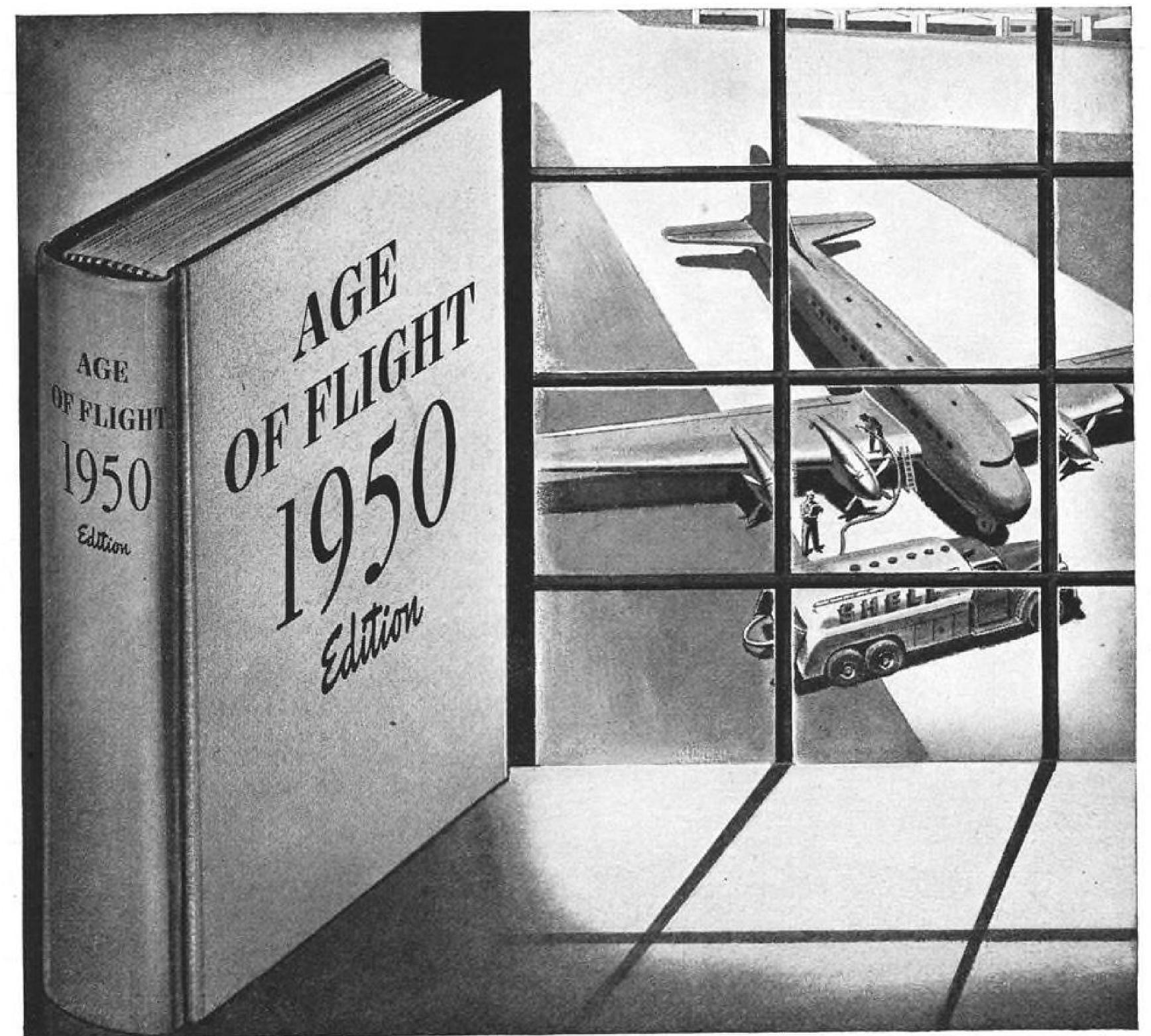
**FUEL PUMPS** 

PROTEK-PLUGS

## CHANDLER-EVANS CORPORATION

WEST HARTFORD 1, CONNECTICUT, U. S. A.





If the "Age of Flight-1950 Edition"-the complete history of Aviation-were ever written, the name Shell would appear consistently as a leader in Aviation Fuel Development.

## Let historical facts be Your windsock in the field of aviation fuel...

**D**ROOF of tomorrow's puddin' ■ is in the eatin'—short o' that, it's in today's puddin' made by the same cook.

Yes, history repeats itself! Shell's many well-known "firsts" today in improving fuels and lubricants will be your best bet to tell prevailing winds over the field of aviation fuel tomorrow.

Look at the Shell record: First to supply the Army with

100-octane fuel in commercial quantities.

First in U.S. to install and operate a commercial plant for Butane Isomerization, a process which made possible new increases in volume of 100-octane.

First to establish a commercial plant using sulphuric acid alkylation—a process which increased 100-octane

aviation fuel production tenfold.

You will find this brand of advanced thinking - backed by the full force of Shell Research facilities-reflected in the quality of AeroShell lubricating oils and greases, and Shell Aviation Fuel.



#### SPECIAL AIR SERVICES

CHARTER

NON-SCHEDULED

INTRASTATE

## Michigan Central Airlines Seeks To Enter Interstate Operations

Peninsular state company finds largest demand there is for pointto-point transportation rather than for feederline service to nearest major trunkline terminal.

Founded on the premise that smaller communities must have access to major gateways, rather than to the nearest major airline connection, Michigan Central Airlines, Inc., with headquarters at Bishop Airport, Flint, Mich., is doing much to remove the state's handicap of being surrounded on three sides by water.

A pioneer intrastate carrier, Michigan Central has rounded out two years of continuous operation over a route extending from Detroit to Cadillac, via such industrial centers as Flint, Saginaw, Bay City, Midland and Mt. Pleasant, with an extension beyond Cadillac to Traverse City during the summer vacation period. Two additional routes have been applied for and the application was heard as a part of the CAB Great Lakes Area hearing before CAB.

Plans—The routes applied for, which would bring the line into the interstate carrier category, call for Douglas DC-3, equipment "as an interim airplane," according to company officials. The first route would extend from Sault Ste. Marie to Cincinnati, via Pellston, Charlevoix, Traverse City, Ludington, Muskegon, Grand Rapids, Kalamazoo, South Bend, Kokomo and Indianapolis. The other route would originate at Tri-Cities Airport, serving Saginaw, Bay City and Midland, and would extend to Chicago via Flint, Lansing and Kalamazoo.

Started in response to requests from industries in the Saginaw Valley for faster service to Detroit, Michigan Central has "reached its peak" as far as intrastate operations are concerned, in the opinion of D. T. Dort of Flint, its president. who points to figures showing that during the period from Jan. 1 to Nov. 30, 1945, it ran up 460,204 revenue passenger miles and now is ready for bigger things.

▶ Background — Michigan Central has the usual fixed base background. Founded by R. S. Bishop, Jr., in 1936, the company brought and sold aircraft and conducted a flight instruction as well as a mechanics' school until the advent of CPTP. Contracts then became the main business until CPTP's demise. Bishop was joined in 1941 by Dort, who had been active in other aviation pursuits prior to that time.

The operation began with a single-engine Beechcraft which made two trips daily between Detroit and Bay City. At the time trips were made only when there were passengers. When experience showed it was possible to secure business, trips were made as scheduled, and two more Beechcrafts were acquired. Traffice grew rapidly and Stinson Reliants were placed in service. On Sept. 1, 1945, the line shifted to twin-engine Cessnas in an effort to offer additional safety and reliability, since instrument flights had not been considered feasible with single-engine craft.

Growth—With present fares averaging 8.5 cents per seat mile, business has grown enormously. Over a representative period from Oct. 12 to Dec. 14, 1945, 2.2 passengers were carried per trip, based on ticket-miles being divided into schedule-miles.

The fact that Michigan, owing to its unusual geography is on a "Spur line" so far as surface carriers are concerned, has provided additional business on the firm's north-south run. From Detroit to Flint, a ground distance of 74 miles, rail time is 2 hrs. 5 min. Michigan Central makes it in 25 minutes. The trip from Detroit to Midland, 128

#### Kaiser Seeks C-54's

Henry J. Kaiser's proposed San Francisco-New York air freight service may be expected to start by March 1.

Agents now in the East are seeking C-54 allocations. If successful in obtaining C-54's, the company will be in a position to lower an originally estimated rate of approximately 25 cents per ton mile (for C-47's) to close to 15 cents per ton mile.

Original announcement of the Kaiser project was made in AVIATION NEWS Nov. 12, but Kaiser officers have not yet released any announcements of their plans.

trains take seven hours and 22 minutes. Plane time is 1 hr. 30 min. Traffic Flow-Ninety-five percent of the line's business is to or from Detroit. The average figure of 2.2 passengers per trip is remarkably high in view of this factor, since it means that if every plane leaves Detroit with four passengers, some of them debark before the end of the run. It is proof, too, of the fact that skip stops and small airplane non-stops are required along a route of this sort.

Additional stops have been added from time to time, and, in conjunction with the Star Route mail contract with the Post Office Department for service from Charlevoix to Beaver Island during winter months, service was inaugurated into Charlevoix on Jan. 1, 1945. During the summer months this tourist resort was the source of an extremely heavy flow of traffic.

New Concept—The experience of Michigan Central leads it to believe that growth of so-called feeder routes as an entirely new type of operation will be hindered by the concept of "circular" and "starshaped" routes. The failure of one such feeder system in Michigan about a year ago adds proof. Dort also feels that further limiting of such service to the no-skip stop limitation "imposes the same hardship upon smaller communities that it does on larger communities now served by large carriers.

"It's our experience that skip stops are definitely even more required for feeder line operation miles ground distance, requires no than for long-haul, since only thus less than seven hours and 20 min- can the terminals have adequate utes by rail, while the airline's schedules offered for service to the Cessnas make it in 55 minutes. For smaller towns, and only thus can the entire route, Detroit to Cadillac, the traffic potential of a given town a distance of 217 ground miles, the be thoroughly exploited for the

benefit of the carrier as well as the public," Dort points out, illustrating with an occurrence of last summer, when it was found necessary to have every trip out of Detroit for a period of one week a non-stop to one town only, since, otherwise, each trip would have had a very low average load factor. Passengers, he states, were "well pleased" with the service.

"It points to a method of operation entirely feasible where stable traffic demands are well-known," he said.

#### Miami-Based Line Serves South America

A non-scheduled air express airline, Skyways International Trading Transport Co., has flown more than 150,000 air miles and \$500,000 worth of drugs, mostly penicillin to the West Indies, Central and South America in six months of operations that began last July with a flight from Miami to Rio de Janeiro.

Currently operating only under contract basis with drug firms, the Miami-based line expects within six months to offer express service to the public on a "pay per load" basis. Equipped with four Lockheed Lodestars, the line is operated by Robert J. Bergeron, once associated in a flying school associate in Cleveland.

▶ Plans—"At present," Bergeron said, "we are making a survey flight down the west coast of South America in advance of extended operations that will carry express cargo to the West Indies and points along both the east and west coast of South America. Although only land and facilities for airports, and drugs and medical supplies are now carried, future plans call for the adjacent to such airports; expanded hauling of all types of freight, including aircraft equipment and parts."

The line will remain only a cargo carrier and passenger operations are not planned, he said, adding that it will operate only south of Miami.

In his first attempt at airline operations since 1929 when he left the small flying school and charter service to join a maritime exporting firm, Bergeron hopes to add more planes to his airline as soon as he is able to purchase new cargo built planes.

▶ Established—With offices already established in Buenos Aires, Montevideo and Rio de Janeiro, the airline has arranged for representing agents in every principle city in Latin America to contract for exportable material.

On return trips to the United States the Lodestars bring in South American drugs.

The airline was formed in November 1944 to facilitate military contract transport operations in the Caribbean area, but by the time operations began war ended and the operations were extended to commercial contract cargo work to South America. Base operations for Skyways International are located at the military extension of Miami's 36th Street international airport but will be moved to an exclusively all cargo airport being planned by Miami authorities.

Market-Bergeron recently returned from a two month South American trip to look into the air transportable export market. "Latin markets are very favorable" he said, "especially for American built light planes. Latins are very much enthused over our small planes for private operation," he said.

#### Aviation Gasoline Tax Proposed in Virginia

Revenues from a proposed 5cents-a-gallon tax on aviation fuel would go to finance a state aviation program, under the recommendations of the Virginia Advisory Legislative Council, reported last week. The state now imposes a similar 5cent tax on all gasoline but refunds 2 cents per gallon on aviation fuel.

Other proposals of the council asked for: creation of a seven-man committee, appointed by the Governor, to advise the state aviation division on problems and policies; legislation enabling local governments to acquire, singly or jointly, easements for flight over property aviation education in high schools.

#### Veteran Operators Form 2 New Lines

Companies being organized in California will have commercially-trained officials at the helm.

While some of the newly-born non-scheduled companies obviously will have much to learn in the actual operation of their services, two now being organized should have an appreciable advantage in their possession of operational know-

One is Transairways, under development by a group of Army pilots, among them former officials of All American Aviation, Inc., and Pennsylvania Central Airlines. The company probably will operate out of Los Angeles Airport.

Consairway Offshoot-The other is Industrial Air Transport Corp., with a directorate of seven former officers and employes of Consairway, recently disbanded after establishing an excellent record as a contract carrier for Air Transport Command between Fairfield, Calif. and the Orient.

IAT. has a \$100,000 capitalization, with no public stock offering, and will sign an operating base lease at Ontario, Calif., Airport. Immediate purchase of one surplus C-54B is planned, and members of the company hope to establish service to Honolulu in addition to continental shipments of perishables.

Directors and officers are: J. Edwin Jones, president, former Consairway chief of flight operations; Leo Dorney, vice-president, former Consairway captain; Don Larsen, secretary, former Consairway station manager; Quentin Cudney, George Messinger, C. G. Brown, and Simeon Baldwin, Jr.

#### Pan-Maryland to Use Cruisairs

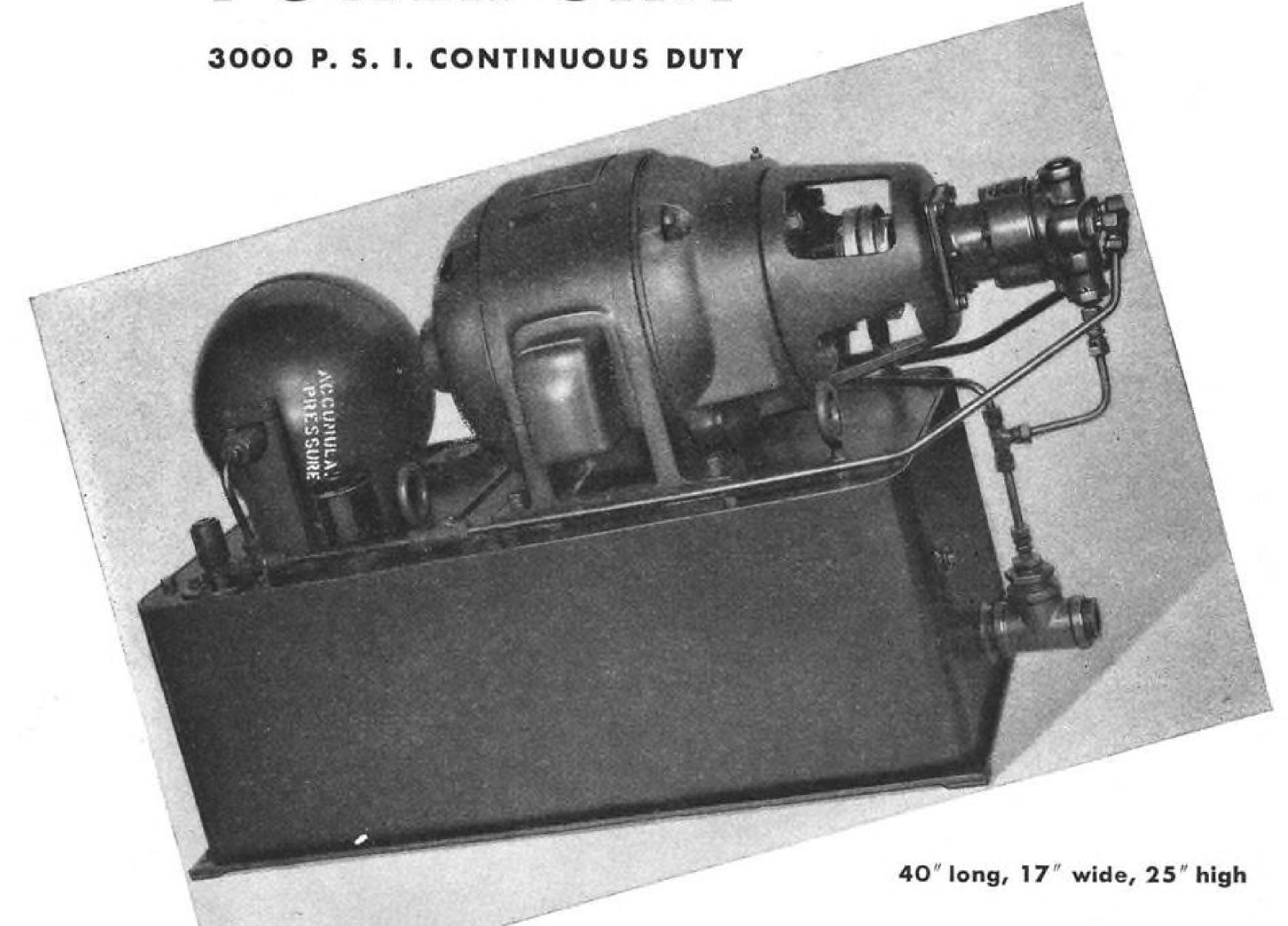
Bernard Fenwick has advised the Maryland Public Service Commisfor delivery February 10. Deliveries of the other four he estimates will be needed will follow An important factor in the equipin March and April.

erating costs and offset the price 100 lbs. of gross weight.

Pan-Maryland Airways will use differential. Having secured a disfour-place Bellanca Cruisairs in its tributorship franchise for the intrastate operations, President G. Cruisair as well as for the Taylorcraft, Fenwick said, the company will have the price advantage sion. The first plane is scheduled initially contemplated when plans for the service were built around the use of Taylorcrafts.

ment switch was a delay in de-Originally, Pan-Maryland had livery of the Taylorcrafts ordered.

planned to use Taylorcraft Model Powered by a 150-hp. Franklin 15's. While the Bellancas are high- engine, the Cruisair cruises at 155 er priced, their greater speed will mph., has the same landing speed make possible lower per-mile op- as the Taylorcraft, and is within POWER UNIT



2.25 GPM 3000 P.S.I. Pump on Motor 10½" OD Accumulator Mounted and Piped on 20 Gal. Reservoir. Micronic Filter

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#### Facts of Special Interest to the Aviation Industry:

Survey shows 60% of personal planes will be sold to residents of rural areas.

In Kansas 455 out of 10,000 farm families intend to buy planes as against only 196 out of 10,000 city families.

Rural families-even in normal times-purchase and consume 40% of all America produces!

Farmers' incomes have doubled in the last five years!

Country Gentleman's readers are concentrated among the top-half farm families.

# COUNTRY GENTLEMAN National Spokesman for Agriculture

#### PERSONNEL

#### AOS Traffic Department Headed by J. S. Robbins

J. Stanton Robbins has been named vice-president in charge of traffic of American Overseas Airlines. Robbins served as special assistant to Nelson Rockefeller, Coordinator of Inter-American Affairs during the war and has had extensive travel experience.

He formed Europe on Wheels, Inc., to build the drive-yourself system in Europe before the war. He was director of the educational travel department of the Grace Line from 1939 to 1942.

Peter J. McDonnell (photo), regional director of public relations of Ameri-



can Airlines, has resigned to become associate director of public relations of Abbott Kimball Co., Inc., New York cy. McDonnell has served in the traffic, communications, operations

and public relations departments of Eastern Airlines, Pan American Airways and American. He now becomes assistant to Thomas J. Deegan, recently named vice-president of the agency.

Alyce Smythe (left) has been named administrative assistant to PCA president C. Bedell Monro. Miss Smythe has been secretary to Monro for the past seven years. Mart I. Fowler (right) becomes coordinator of train-





ing for PCA and Charles DeWitt personnel analyst in the department of personnel administration. Fowler was formerly with Carnegie Illinois Steel Co., while DeWitt was staff assistant to the personnel director of Glenn L. Martin Co.

following personnel appointments. Maj. Allen Aldridge, AAF veteran, has been named district traffic man-

Tulsa as district traffic manager. Maj. Douglass Wood, Dallas district traffic manager for five years before joining the ATC, has returned to his former position.

John D. Weaver, who started with Douglas Aircraft Co., Inc., 20 years ago and became plant manager of the Chicago factory, has resigned to enter private business in the manufacture of food machinery. He has been a technical assistant to Donald W. Douglas since 1944. Prior to taking over the Chicago plant Weaver was in charge of the Oklahoma City plant.

W. G. Tuttle, former director of industrial relations for Consolidated Vultee Aircraft Corp., at San Diego, has been appointed permanent chairman of the Southern California Aircraft Industry group. He has resigned from Convair to accept his new position. Tuttle was director of industrial relations for Vultee Aircraft, Inc., from 1936 until the merger when he tering the Army, Naugle was presiadvertising agen- was transferred to San Diego.

> Robert E. Johnson (photo) has returned to his post as director of ad-

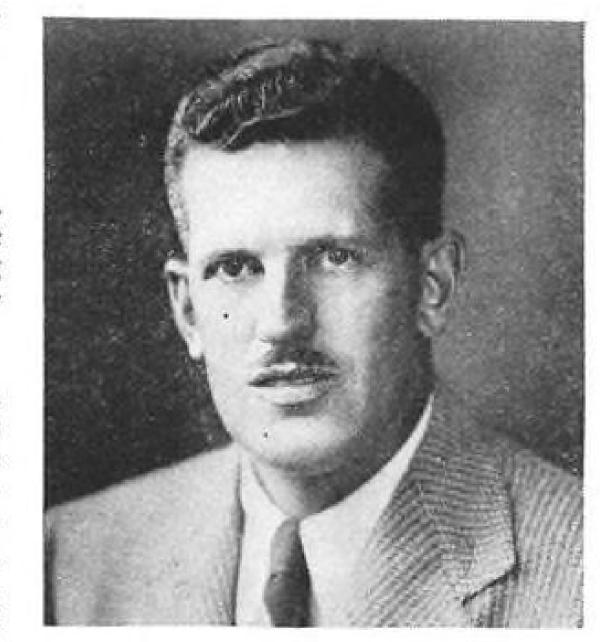
vertising and publicity for United Air Lines at the Chicago headquarters after more than two years as an air combat intelligence officer with the Navy. Johnson began his aviation career in



Seattle with the Boeing Airplane Co., in 1929 and moved to Chicago in 1932 when the Boeing System and other companies were formed into United Air Lines.

Walter H. "Bob" Neff, who was in Pan American Airways' public relations for four years before the war, has returned to the company as public relations manager of the Atlantic division. Neff recently was head of the aviation section of the Navy's public relations. While still with Pan Am, he was loaned for a short period to the Air Transport Association for public relations and advertising programs. Chauncey D. Pippinger has been appointed assistant operations superintendent of Pan Am's Latin American Division. He has been with the airline since 1927.

Braniff Airways has announced the Harry C. Naugle, recently released from the Army Air Forces, has been appointed superintendent of maintenance at Hoosier-Parks Airport, the ager in Memphis replacing E. G. Indianapolis, Ind., base of Parks Air-Fawcett, who has been transferred to craft Sales & Service, Inc. Before en-



#### PCA EXECUTIVE:

James H. Carmichael who was recently elected executive vice-president of PCA. A widely known airman, he has been vice-president in charge of operations. He has been with PCA since the merger of Central Airlines into PCA.

dent of the Naugle Aircraft Corp. of Latrobe, Pa., a lightplane manufacturing concern.

Transcontinental and Western Air, Inc., announces appointment of Walter Brown, Jr., as director of passenger traffic of the international division. He has been with the American President Lines since 1926. Peter H. Redpath, a technical executive of TWA, has been granted a leave of absence to serve as operations manager for SILA, Swedish airline. He will make headquarters in Stockholm.

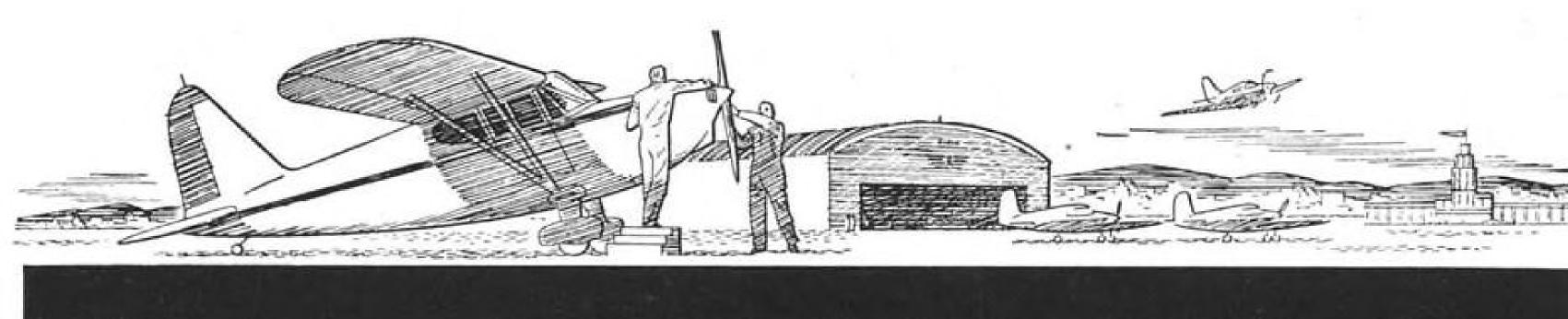
George S. Starke, assistant general sales manager of the Sperry Gyroscope Co., has been appointed general sales manager, succeeding Hugh H. Willis, who has resigned as vice-president and general sales manager. Formerly with Ludlum Steel, Starke joined Ford Instrument Co., a division of Sperry, in 1941 as procurement manager. He has been naval ordnance manager also.

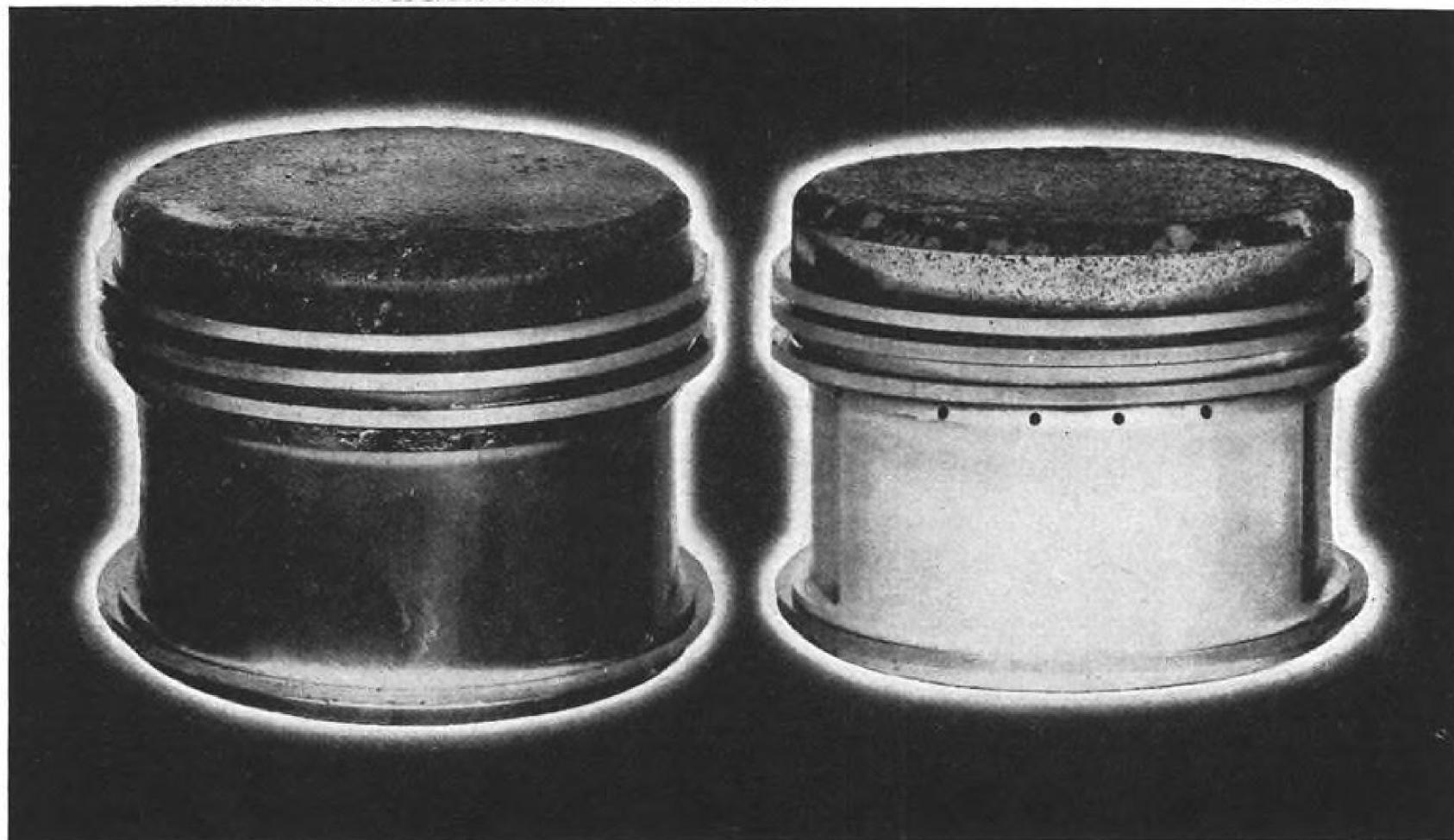
Marc Thompson (photo) has joined the Walter Dorwin Teague Co., industrial designers,



to advise on airport terminal facilities and act as consultant to communities and others planning airports. Thompson was formerly chief of building design service of the Civil Aero-

nautics Administration and wrote the manual "Airport Buildings" which will be published soon.





## Which piston was used longer?

If you guessed the one on the left, try again.

Actually, the cleaner of the two pistons was in use twice as long as the carbon-coated one. The difference was simply that the carbon-coated piston came from a test engine lubricated with a *straight*, high-quality mineral oil.

The clean piston came from an engine lubricated with Standard of California's IMPROVED RPM Compounded Aviation Oil.

RPM Aviation Oil contains a detergent (which means cleansing agent) that "washes" carbon, gum and varnish deposits off pistons... keeps them clean. Another compound makes RPM oil cling to hot spots that other oils leave bare . . . another prevents foaming, assures better circulation . . . still another is an oxidation inhibitor.

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TRANSPORT

## CAB Approval of IATA Agreement Looked for Before Tomorrow

Government circles expect favorable decision by then, pointing out carriers need to enter North Atlantic meeting sure of their legal grounds.

Official quarters expected last week that a Civil Aeronautics Board decision on approval of the International Air Transport Association agreement on traffic conferences would be announced by tomorrow, the date the North Atlantic conference is scheduled to meet.

The traffic conference agreement, framed at Montreal in October, was filed with the Board by American carriers desiring to participate in these regional groups, which will consider rates and other matters of interest to the airlines. CAB must approve all carrier agreements.

was deadlocked for several days on the matter of approval, two members for and two against. But officials elsewhere in Government were confident that a decision would be reached by tomorrow. They observed that it would be unwise for the carriers to be allowed to go into the North Atlantic meeting ignorant of whether the Board considered their action legal.

It was known that a decision to disapprove the IATA agreement would be considered a severe setback for the State Department, which feels that the carriers themselves should consult and agree on rates.

PAttitude—The State Department reportedly feels its hand would be strengthened greatly in bilateral negotiations for civil aviation agreements if it could point to CAB approval of rate conferences as indication that this government desires as much as any to avert rate wars.

Lack of such assurances, according to some authorities, causes the French government to hesitate in framing a formal air accord with the United States.

▶ Interim Plan—The French, meanwhile, have joined in an interim arrangement to expand the services provided for in the bilateral agreement of 1939 under which Pan American Airways flew two weekly flights to Marseille.

The interim measure provides that the French government will "consider favorably" American requests for additional flights on the guarantee that reciprocal benefits will be granted France. American officials said such requests will be made when Transcontinental & Western Air and Pan American decide the number of trips they would like to operate. France accepts the Fifth Freedom of the air, which she opposed at the Chicago conference, and thereby grants TWA the right to pick up traffic in France and carry it on to third countries. reversing her position, France drew away from Britain, whom she supported ardently at Chicago.

▶ Two Routes—The arrangement, to be in effect until a formal agreement is concluded "soon," provides for two U. S. routes and two French. The U. S. routes are those certificated by the CAB to TWA and Pan American in the North Atlantic de-

Colonial Application

Colonial Airlines, in an application recently filed with CAB, is seeking designation as the single airline to operate the New York- or Boston-Quebec route authorized under the existing air transport agreement with Canada.

Granting of this application, together with a New York-Reading, Pa., extension sought in the Middle Atlantic case, Colonial says, would enable it to offer Washington-Quebec service via alternate routings.

cision. The French obtain rights to one route across the North Atlantic to New York and Washington and one to Montreal and Chicago.

Announcement that bilateral air agreements had been effected with Czechoslovakia and Turkey was expected from the State Department over the weekend.

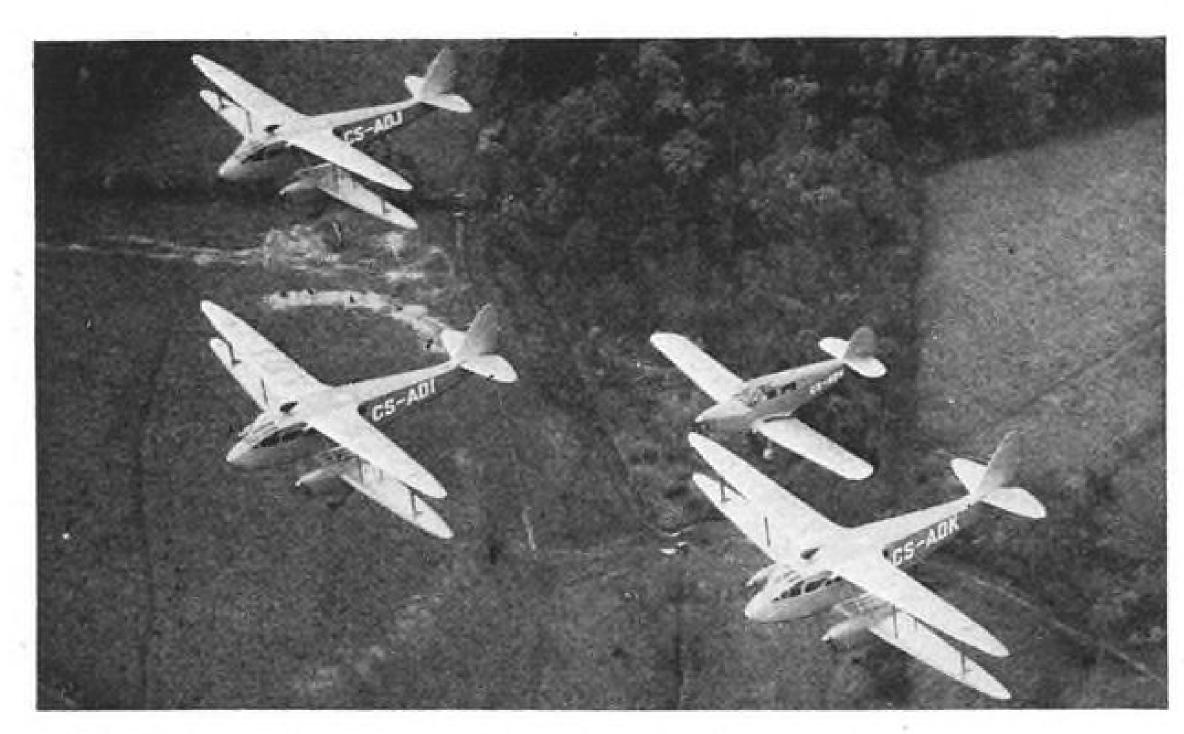
Truman Order—Another official act affecting international air transport last week was President Truman's order shifting control of airports and facilities in Iran from the War Department to the Civil Aeronautics Administrator. CAA obtained control of "all... facilities necessary to the operation of civil aircraft of the United States in international air commerce at Tehran, Abadan and Jask, Iran."

CAA sources said this action fol-



#### AMERICAN OVERSEAS AIRLINE EXECUTIVES:

Three top officials of American Overseas Airlines, returning recently from business trips to Europe, (left to right) James G. Flynn, vice-president—operations; Sumner Sewall, president; Lestrade Brown, European Director, were met by Harold R. Harris, vice-president and general manager; Terrell V. Drinkwater, vice-president; John E. Slater, chairman of the board, and J. Stanton Robbins, vice-president—traffic. Flynn had been on a survey of ground installations overseas. Sewall was in Europe to make agreements with foreign governments and effect organization along AOA's routes.



#### PORTUGUESE GET BRITISH PLANES:

In what was described as Britain's first export post-war commercial planes, three de Havilland Dragon Rapides and one Percival Proctor recently were sold to Compania de Transportes Aereos (CTA), privately-financed Portuguese firm with headquarters at Lisbon Airport. The planes are shown in flight to Lisbon. De Havilland says the Dragon Rapide, while of pre-war design, is the most economical transport available for light and variable traffic. CTA will open its first route between Lisbon and Oporto, carrying passengers, freight and newspapers.

lowed departure of American forces from Iran and that the CAA would operate the bases pending future disposition either through direct negotiations with Iran or through proposals of the Provisional International Civil Aviation Organization.

On another front, it was announced that the recent British White Paper on civil aviation, containing little information in additon to that already announced, will be debated in Commons, January 24, on Government motion for approval.

### TWA Seeks to Break Ocean Pay Deadlock

Asks pilots to fly at average monthly figure pending retroactive settlement of controversy with ALPA.

#### By MERLIN MICKEL

Transcontinental & Western Air has asked its pilots to fly its international routes at a salary equal to their average monthly pay for the last six months, pending solution of a salary controversy that has blocked its international operation.

The carrier, one of three certificated to fly the Atlantic, has stood by with its Constellations and DC-4's grounded while differences over pilot pay have stymied an agreement with the Air Line Pilots

Association. Pan American Airways and American Airlines meanwhile have stepped up their trans-Atlantic service to a daily flight basis.

Demands—Demands for pilot salaries in excess of those paid by either Pan American or American have been made of TWA by ALPA and discussed at length by the airline and the association. The National Mediation Board has been asked to help find a solution.

Senior pilot members of the organization receive \$1,065 a month from Pan American and \$1,075 from American Overseas Airlines for flying DC-4's. Both have been operating internationally for some time. Pan American flew during the war and so did American Export, which was acquired by American Airlines and became American Overseas.

▶ Offer—TWA has been confronted with a new operation and necessity therefore for negotiating a new contract. Last fall it offered senior first pilots \$1,065 a month to fly on its International Division. ALPA countered with a request for increases in base for DC-4 piloting on the division, and asked shorter hours and a limit on mileage. These requests would bring the monthly pay for an eight-year first pilot flying 75 hours, evenly divided between day and night operation, to \$1,342.50 a month.

The carrier thinks this excessive, and hence has asked the pilots to work on its International Division at a monthly rate equal to their av-

erage monthly salary for the last six months. When pay for the operation finally has been decided on, adjustments will be made retroactive.

Discussion Limited—Thus far the negotiations have not involved salaries to be paid for flying the Constellation, the Association not having indicated what its request will be in this regard.

TWA has received eight of these, and expects several more before this month is out. Since it was the first line to order the Constellation, it desires to use them in inaugurating scheduled flights to Paris, to which one flew last week on a proving flight. It also has C-54's, however, and presumably would start its ocean service with them if a pilot agreement for their operation is worked out before one is reached on the Constellations.

### North Atlantic Routes Assailed by Trippe

Pan American Airways contended last week that CAB had failed to apply its area concept of international routes and thereby relegated PAA to a "still more uncompetitive position" with other U. S. and foreign flag carriers.

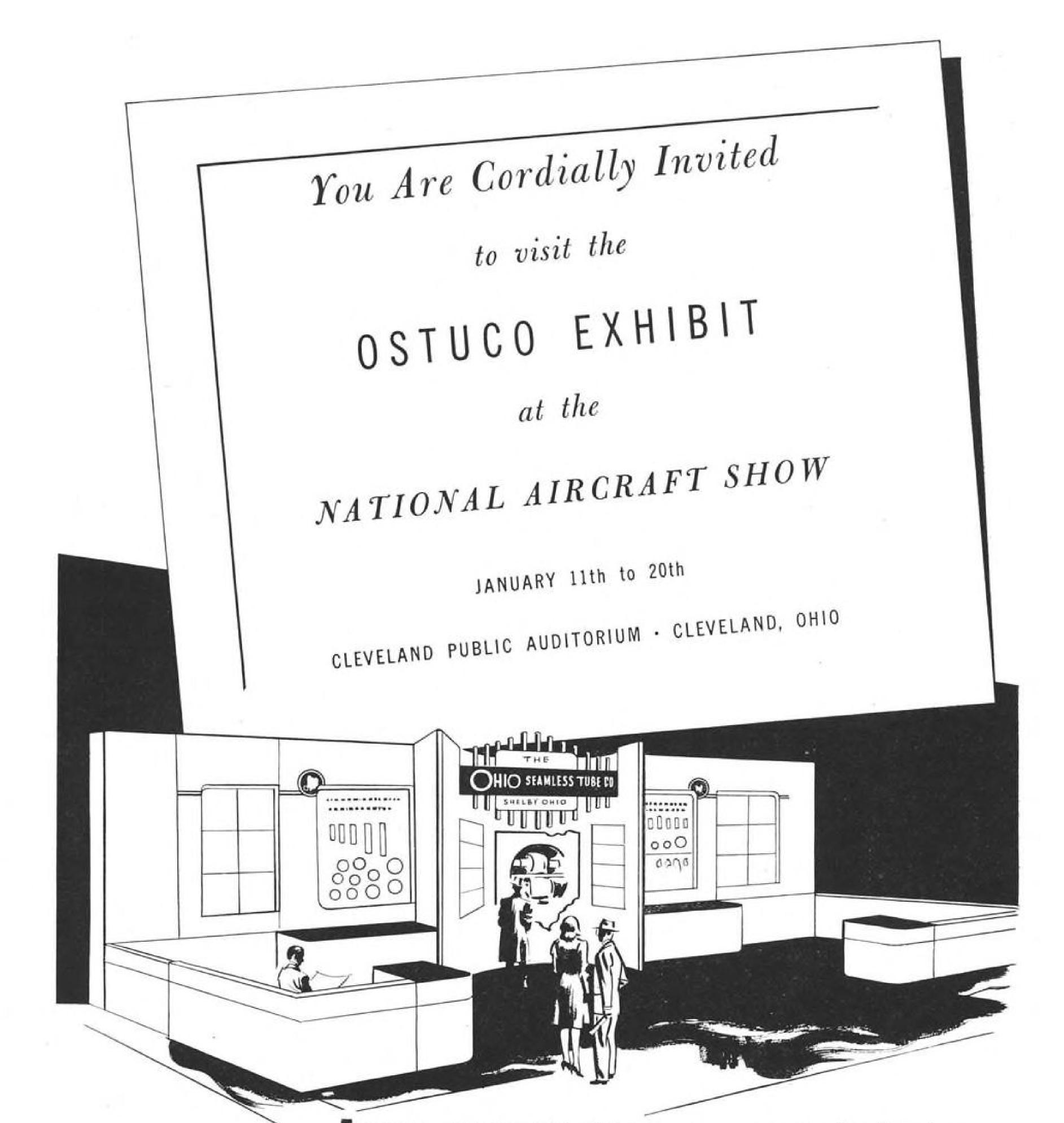
Seeking amendment of the board's North Atlantic decision—Pan American is the only one of the three international U. S. carriers asking such action—PAA President Juan T. Trippe urged removal of what he called "pin point restrictions."

Argument—International developments on tariffs and landing rights, Trippe told Examiner Ross I. Newman, combine with lack of an effective area policy to keep Pan American from furnishing its share of the competition held desirable by the Board.

He said there are indications that the United Kingdom, France, and Belgium may not grant unrestricted Fifth Freedom traffic to U. S. flag carriers, and that they will retain frequency or tariff control through the International Air Transport Association, thereby limiting trans-Atlantic traffic. He expressed doubt that U. S. flag commercial rights can be secured in all countries certificated to PAA, explaining that to be on a competitive basis with foreign flag carriers, his company must be able to utilize the same ports of entry.

John C. Leslie, vice president of PAA's Atlantic Division, assailed lack of "flexibility" in PAA's certificate, which he said awarded the least attractive route from a tourist standpoint.

AVIATION NEWS . January 7 10/6



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AVIATION NEWS • January 7, 1946

#### Model 240 Delivery Expected by 1947

New Consolidated Vultee transport ordered by American is a faster revision of its Model 110.

Consolidated Vultee's Model 240, of which American Airlines has ordered 100 at a cost of about \$18,000,000, is expected to be flying this fall and ready for delivery early in 1947, if not before.

Using conventional power plus exhaust jet-propulsion, it will be a new, faster, version of the Model 110 (AVIATION NEWS, July 23, 1945), which Convair has about ready to fly. It will have less wing area and slightly higher wing loading, and the fuselage will be of slightly smaller diameter than the 110, but will carry 40 passengers where the 110 was arranged for 30.

Competition—This, says a spokesman for the manufacturer, is the result of changes made by American, which chose the plane for flights of less than 1,000 miles in the U. S., Mexico and Canada from gine 40-passenger plane with a 400 gave several aircraft companies specifications for a plane for short- order.) of DC-4's and DC-6's. Responses in the 240, which will have a low

came from Consolidated Vultee with the Model 110, Boeing with its Model 431-16, Curtiss-Wright with its Model CW-28, Douglas with the DC-8, and Martin with the Model 202 (Aviation News, Sept. 17, 1945). American asked cost and delivery estimates on 5, 25 or 100

The order for 100 of the 240's the designation derives from their two engines and 40 seats—is the largest single order, in number of planes, yet announced by an airline. Construction work will start at once, and will have a headstart due to the fact that the 110 was almost ready to fly. Work on the 110 has ceased.

▶ Jet Assist — Like the Republic Rainbow, announced September 3, Convair's 240 will use a jet thrust from the exhaust to supplement conventional power, adding an estimated 20 mph. Where the 110's cruising speed was 275 mph. and top in excess of 300 mph., cruising speed of the 240 is expected to be about 300 mph., and maximum 350.

(The Rainbow will be a four-enfive designs submitted by as many mph. cruising speed and 450-mph. bidders. Last summer American maximum. Pan American Airways has an unspecified number on

range flights, to supplement its fleet Details of 240—Main loading door



Variation on Model 110: Consolidated Vultee Aircraft Corp. has called this twin-engine 40-passenger transport, of which it will build 100 for American Airlines, the Model 240. Actually the ship is a new version of the Model 110. One of the most notable changes is in the main entrance, which in the 110 was at rear, with passengers using a collapsible stairway under the tail. Now it will be just back of the pilot's compartment. Passengers will put their baggage in a rack as they enter. This gives more space for seats in the rear of the fuselage next to the stewardess' buffet. The drawing above shows passengers boarding under an airport canopy.

#### Patterson Critical

Use of 70 percent of airline space on eastbound transcontinental flights from the West Coast is a "suitable solution" to the problem of moving military personnel, but the problem "might have been anticipated" before key men were released from the Air Transport Command, W. A. Patterson, president of United Air Lines, said recently in an interview at Bos-

Patterson said he was sympathetic with the need for airline seats for Army and Navy men, and asserted that "it might be catastrophic to permit the inexperienced men left in ATC to handle such a transport prob-

wing, will be at the front of the cabin. Hinged at the bottom, it will open outward and downward. Built-in steps will make the usual airport ramp unnecessary. A sliding canopy probably will be used to protect passengers from the weather and guide them directly to the en-

Reversible pitch propellers will permit the plane to be taxied under an airport canopy, then backed away to operating position when loaded. Landing gear will be dualtricycle, with steerable nose wheel. Elimination of exhaust noises and vibration will be sought in the powerplant installations. Engines will be Pratt and Whitney R-2800's of over 2,000 hp. each. Nacelles have been moved down in the low wing. Windows will be larger and placed in relation to the wings to give best visibility. A baggage rack just inside the door will permit passengers to handle their own luggage.

Gross weight of the plane will be about 34,000 lbs. It will carry a pay load of 8,500 lbs.—representing 1,000 lbs. in addition to 40 passengers and their luggage-more than 500 miles.

#### Landing Rights Sought

Taca de Venezuela last week became the first Venezuelan airline to ask for landing rights in the U.S. Regular service is planned between Caracas and Miami. The company made its first international flight a few days ago between Caracas and Bogota, Colombia. Regular service between the two points will be furnished by Taca de Venezuela and Taca de Colombia.

#### TCA, BOAC Carry 1,400 Each Week

Trans-Atlantic air traffic between Canada and Great Britain has been established for the time being at 350 passengers each way weekly by each of the two government airlines, Trans-Canada Airlines and British Overseas Airways Corp.—a total of 1,400 seats.

TCA will use converted Lancaster bombers until its DC-4M transports, powered by Rolls-Royce Merlin engines, come off the production line at the government's Canadair Ltd., Montreal. BOAC is using converted Liberators until its six-motored Brabazons are ready. Both lines expect to cut the present flying time of 12 hours between Montreal and London to 10 hours with the new aircraft.

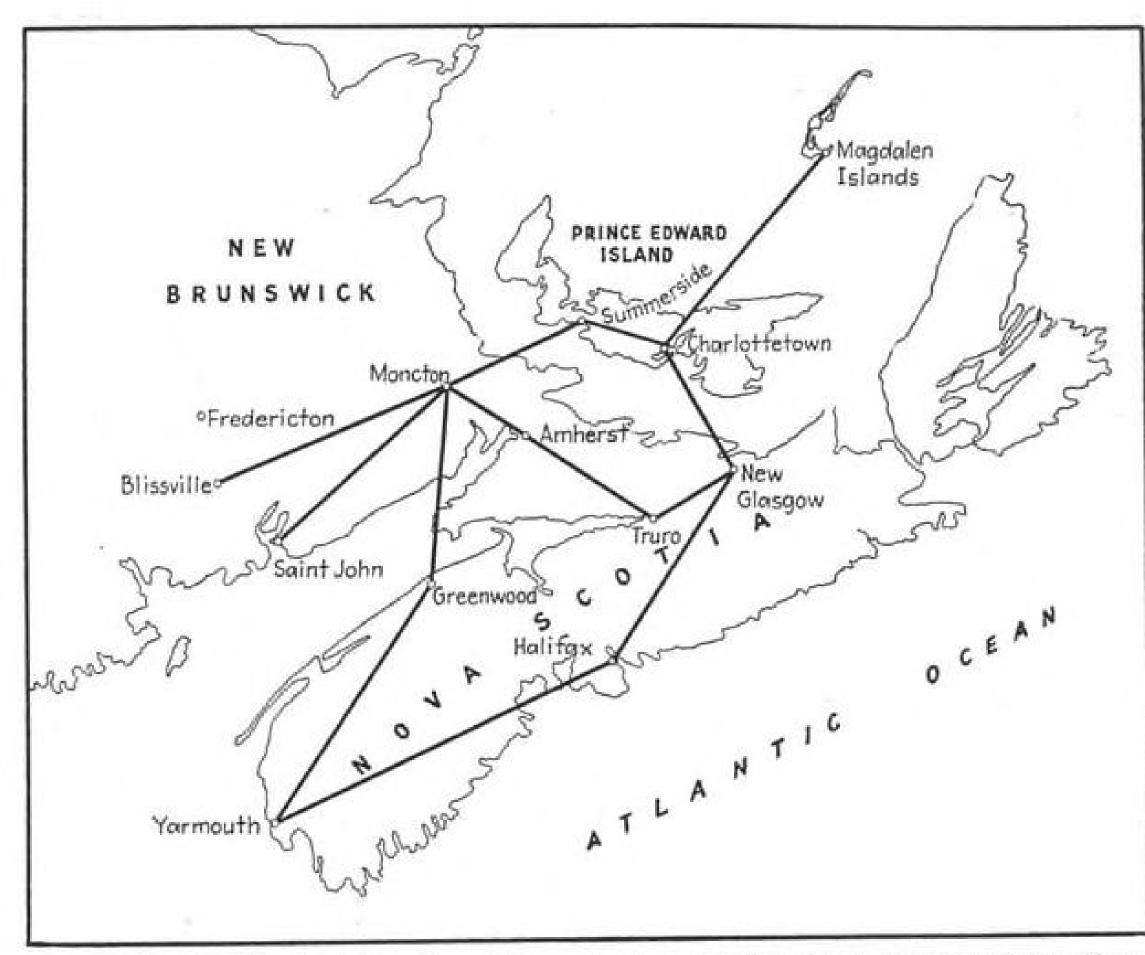
▶ Routes—The agreement was completed late in December at Hamilton. Bermuda, at a meeting attended by Canada, Great Britain and Newfoundland. Gander, Newfoundland, was designated as a stopover airfield. The North Atlantic flights will be made via Goose Bay, Labrador, to Prestwick, Scotland, until Heathrow Airport (London) is ready. BOAC will supply a shuttle service from Prestwick to London. Fares are set at \$375 each way. Alternate bad weather routes in the north go via Iceland, in the south via Bermuda and the Azores.

Canada also discussed with Bermuda authorities and officials of other British West Indian islands operation of TCA's proposed service to Brazil via the British West Indies.

#### CAB Designates Newark

CAB has designated Newark a co-terminal with New York on National Airlines' AM 31 and Northwest Airlines' AM 69. The Board found that "the exceptional size of the metropolitan area that will be served through the two airports tural divisions be given stability by the designation of both points as co-terminals."

The Board also cited advantages through division of schedules bedue to airport congestion at New York, and the fact that Newark will be closer to the greater part of metropolitan New York than Idlewild Airport, soon to become new base for NAL and NWA.



New Air Service in Canada: Map shows service now rendered in Canada's three Atlantic Coast provinces by Maritime Central Airways, as result of recent action by Canadian Air Transport Board. New routes, and those in operation by the line since December, 1941, are: Charlottetown-Summerside-Moncton-Fredericton (Blissville Airport); Charlottetown-Magdalen Islands; Moncton-St. John; Moncton-Greenwood-Yarmouth-Halifax; Charlottetown-New Glasgow-Halifax; Moncton-Amherst-Truro-New Glasgow.

#### Eastern Canadian Line is Licensed

First new license to operate scheduled commercial air service in Canada has been granted Maritime Central Airways Ltd., St. John, N. B., by Canadian Air Transport Board. Maritime Central has been operating since 1941 in Canada's three Atlantic coast provinces, and CATB confirmed its existing five routes and granted six additional, all serving that area.

Hearings at St. John showed that air travel, necessary there due to geographic conditions, brings a vast time saving over surface transrequires that service to its two na- portation. For example, 111/2 hours are required to make a rail and boat trip from Charlottetown to New Glasgow that can be made by 35 minutes by air. Flying saves 8 that would accrue to the carriers hrs. and 40 min. between St. John and Halifax.

tween the terminals, such as elimi- > Charges - The Board felt that nation of air traffic control delays Maritime Central's approximate charge of 8 cents a mile was not excessive when compared with surface transport rates, considering the savings in time and distance.

Lake Erie Service-The Board later granted Leavens Bros. Air

Services Ltd. of Toronto a license for scheduled air service between Leamington, Ont., and Pelee Island in Lake Erie. Actually the service has been in operation more than five years, and is especially needed in the winter to bring mail and supplies to the island when ice cuts off

water communication. CATB reported in a year-end review that of 22 applicants for regular scheduled routes, two licenses had been issued, one is ready to be issued, and 19 are pending. Hearings will be held in mid-January at Vancouver for three applications.

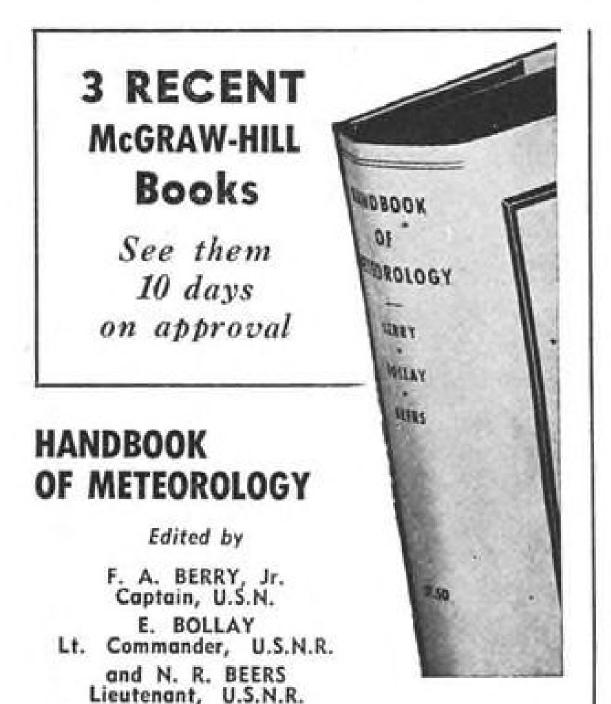
Survey-The Board shortly will issue a survey of Canada's economic potential as it relates to air transportation.

#### Albany, N. Y., Expansion

The Albany, N. Y., Common Council has authorized expenditure of \$27,500 to buy land and \$9,500 to clear it in preparation for Albany's \$1,000,000 proposed airport expansion program. The city proposes to raise \$26,000 of the \$27,500 by bond issue, making up the rest from current revenue. Of the other amount. \$9,000 would be obtained by bond

TRANSPORT - 37

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In Canada: Mail to Embassy Book Co.,

#### Denver Wants to Use Modification Center

Denver, Colo., seeking to enhance its position as an aviation center, has requested the government to transfer to the city the \$1,500,000 worth of buildings and facilities at the modification center built at Municipal (Stapleton) Airport with government funds on city-owned land, and operated during the war by Continental Air Lines.

This request follows the pattern under which the city of Cheyenne, Wyo., recently acquired the modification facilities there for \$1 a year with the understanding that the Government may use the facilities and that they will be turned back to the Army in case of emergency.

Need Cited-Mayor Stapleton of Denver told RFC, owner of the failities, that the Denver municipal buildings now are taxed to the limit, that new routes soon to start, such as that to Los Angeles, will overtax them, and that no new construction can be expected for at least a year because of difficulty in obtaining materials, etc. The facilities cover 89.4 acres and include a huge concrete apron, two hangars, and six other buildings.

Meanwhile, the city and the Chamber of Commerce have united in support of a new and enlarged aviation development program, based on impartiality to competing air lines but calling for teamwork with other cities and states with whose aid the aviation resources of the general region might best be developed.

- ▶ Program—Denver's program calls for one-carrier service:
- ▶ Between New York City, Chicago, Denver and Los Angeles. (Some have construed this as indirect support of United Air Lines in its battle with Western Air Lines for the coveted direct Los Angeles-Denver "over the hump" route which Western intends to open in January.)
- ▶ Between Denver, Kansas City and St. Louis (Continental now goes between Denver and Kansas City), looking ultimately to one-carrier service between San Francisco, Denver, St. Louis and New York.
- From the tropics to Alaska and Russia over the so-called "Sunshine Air Route" (AVIATION NEWS, April 16, 1945) which enters Canada had enjoyed a week's monopoly of through Lethbridge.
- Between New Orleans, Oklahoma flying boats. Pan American ceased City and Denver.
- Between Atlanta and Denver, equipment Dec. 27.

Minneapolis and Denver, Phoenix and Denver, Chicago and Denver via Kansas City, and others.

To further the program, Denver civic authorities have moved to acquire land southeast of the city for a new private plane and charter service terminal. This has been delayed by a series of law-suits resulting in condemnation awards for part of the needed land which Denver City authorities say are far above its value. However, the city now has more than 400 acres, and may go ahead with this though it hoped originally to acquire about

▶ Bonds Refunded—As a second step, Denver has refunded, at a saving, bonds issued to construct facilities for airlines, at Municipal Airport with consent of the carriers. The money saved, about \$25,000 yearly, will go into Denver's "kitty" for ultimate construction of a modern terminal building at the airport.

#### Baltimore Budget Cut Seen Threat to Airport

Possibility that Baltimore Municipal Airport may have to close for part of next year was seen in a City Council slash of nearly a fourth in the Baltimore Aviation Commission's budget for the airport. The figure was trimmed from \$234,840 to \$181,150.

Robert O. Bonnell, Commission chairman, said the cut-roughly \$27,000 from the appropriation for labor and \$23,000 from that for maintenance-would handicap port operation to the point that service would be inadequate throughout the year or it will be necessary to close for a portion of the year.

Revenue-He forecast that the reduction would increase the rate of deterioration of airport facilities and cause the loss of substantial revenues which would accrue to the city from its efficient operation.

#### PAA Bermuda Service

An interim agreement between the U.S. and Britain for use of Kindley Field, ATC-built land base on Bermuda, last week permitted inauguration of Pan American Airways of landplane service to that

First DC-4 flight was made Thursday, after British Overseas Airways Bermuda-U. S. traffic on its Boeing operation with the same type of

#### Lack of Foresight Laid to AAF, Airlines

Missed opportunity to show flexibility by failure to meet soaring post-war travel demands.

#### By BLAINE STUBBLEFIELD

Both the Air Forces and the airlines missed an opportunity to demonstrate the capacity and flexibility of aviation when they did not anticipate and provide against the post-war demand for air transport. This opinion is held by many persons connected with the present effort to carry servicemen home.

The Army is being accused in some quarters of declining to fly its men home because it fears accidents and bitter criticism, and of passing that risk to the airlines through ODT Order 58, which commandeers 70 percent of seats eastbound from the west coast, and through its Transcon contracts. This time the Air Forces say they are not equipped or trained to fly on CAA have had a large volume of equipair routes. The other time, after ment operating at near capacity, cancellation of the air mail contracts, they willingly tried it.

▶ Excuse—The Air Forces say they lost so many pilots and mechanics by discharge that they were unable to operate sizable transport services. But their critics say that the Army, including AAF, yielded too easily to public and Congressional clamor for release of personnel, many of whom now wish they were back in.

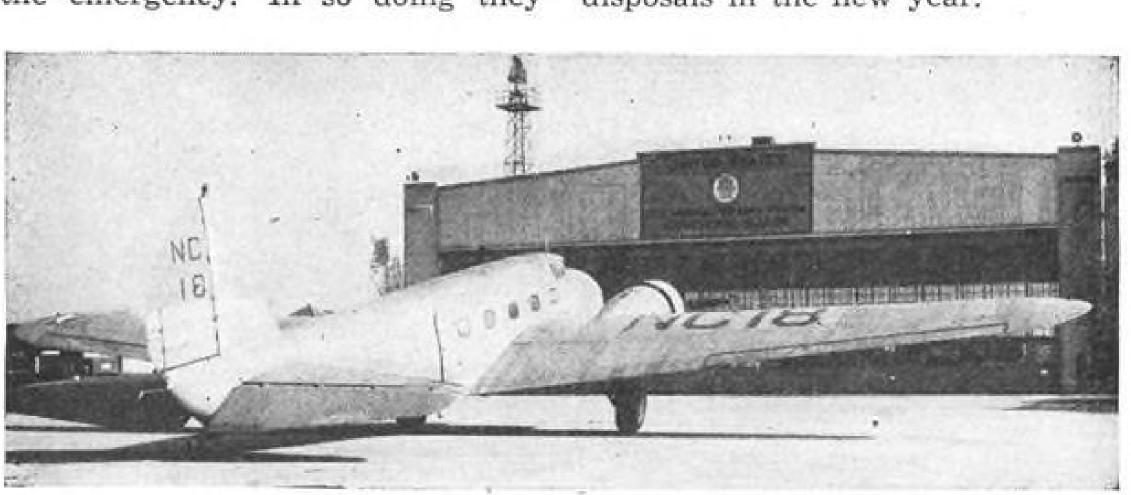
Airline operators likewise missed their big opportunity, in the opinion of critics, in not grabbing such airplanes as C-46s, C-54s, and C-47s, immediately after VJ-Day and barnstorming them through the emergency. In so doing they

would have given an effective demonstration of their potentialities and their flexibility, which would have gone far in selling both commercial and military air transport to the public.

Railroads—As it is, the railroads are hauling the bulk of servicemen and the post-war flood of goods and travel, while the airlines turn away customers to comply with Order 58 and to carry on contract operations which nobody hears about. Comair, under the 70 percent order, is carrying about 4,700 men eastward per week while Transcon flies about 3,500—all told an inconsequential portion of the total being moved.

It is admitted that the airlines were obstructed in procurement of surplus planes by months of bickering with RFC over high prices, conversion allowances, and lease vs. purchase terms. But dissenters contend that if operators had made up their minds to take the plunge, and had gone after the airplanes with determination, they now would with profit both in money and in institutional advertising.

DOT Stand—There is not much criticism of the airlines on their troop operations with equipment at hand. ODT accepted the airline technical committee's report that a certain amount could be done, immediately. The airlines said that, with three months to train air and ground crews, and for minimum conversion of airplanes, they could greatly expand their troop deployment capacity. But ODT figured it would be clearing all coast landings by that time, and still feels it was right. The pre-Christmas rush will result in a large decrease in coast disposals in the new year.



#### OUT OF CIRCULATION:

This Civil Aeronautics Administration utility plane terminated a long career recently at CAA's experimental station at Indianapolis, where it will be broken up into parts. Carry NC 18, it flew thousands of hours with all types of cargo. Nearly 20 years old, the ship formerly flew for United Airlines, PCA, and the Celanese Corp.



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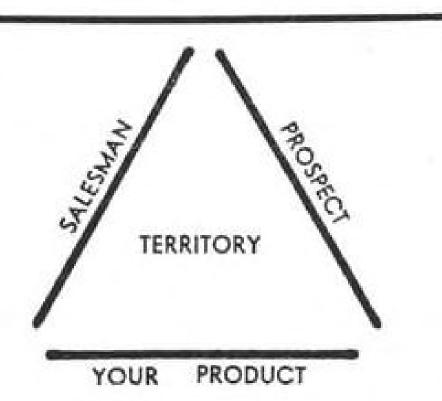
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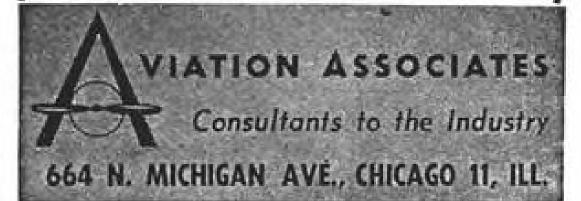


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#### PAA Latin American Discount Cut Barred

Pan American Airways System, attempting to reduce from 25 to 15 percent the discount available to U. S. and foreign government travellers in overseas and foreign air transportation over its Latin American routes, has been handed a prohibitive order by CAB.

Specifically, the order:

Permanently suspends and cancels the revised tariff as it applies to overseas air transportation in Latin American operations;

Requires, within 30 days from Dec. 27 and on not less than four days notice, alteration of the tariffpresumably an upward revision to 25 percent—as applicable to foreign air transportation in order to correct "unjust and unlawful discrimination" between the two distinct effective discount rates;

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Sets Jan. 31 as deadline for discontinuance of PAA's 15 percent discount for foreign air transportation over Latin American routes. Dismisses the case with respect to tariffs of Pan American-Grace Airways; Uraba, Medellin and Central Airways; and Cia Mexicana de Aviacion, S. A.

The Board's action results from an investigation ordered last June 25 to determine the "lawfulness of the . . . revised rules insofar as they affect the rates, fares and charges of the . . . carriers." Simultaneously, the Board suspended, for 90 days, the new tariff, to have taken effect July 1, as applicable to overseas air transportation only. Protests against increase in rates resulting from reduction of the discount had been filed by the National Office of Price Adminitration and the Panama Canal Zone Central Labor Union and Metal Trades Council of the Panama Canal Zone, OPA contending that such increased rates would be "inconsistent with the stabilization program."

▶ Sustained—The Board now has so found. In addition, CAB states that the record shows no need for the additional revenue resulting from the reduced discount to enable PAA "under honest, economical, and efficient management, to provide adequate and efficient air carrier service."

#### Crashed Plane Salvaged

An Eastern Air Lines plane which overshot a La Guardia field runway and crashed into Flushing Bay has been taken from the water and placed in the carrier's hangar. One person was killed and 13 injured in the accident, which occurred the night of Dec. 30.

Photographs of the plane, which went through a localizer glide path installation at the end of the runway, were taken after cranes pulled it out of the bay.

#### RAF Quits Heathrow

With one main runway completed, London's Heathrow airport, which will be Britain's main air terminal. has been turned over by the Royal Air Force to the Civil Aviation Ministry. The field is about 15 miles from London.

Main runway is 9,000 ft. long. Another 6,000-ft runway is near completion, and a third, also 6,000 ft., is about 25 percent finished. Control towers are built but not equipped. Total cost of the 1,500acre airport is expected to be in the neighborhood of \$100,000,000.

#### SHORTLINES

▶ Braniff expects to put converted C-54's into service March 1. Its fleet now numbers 17 DC-3's, five of which came back from the Army last year, two C-47's used as air freighters, and five C-54's being converted. . . . Revenue passengers carried in 1945 exceeded 388,000, a 58 percent increase over 1944. Revenue passenger miles were up 57.7 percent and revenue miles 54 percent. . . . Braniff employes n'imbered 1,800 at the end of the year, Laif again as many as at the begin-

Chicago & Southern's work-week dropped from 48 hours to 40 with the start of this year. . . . The carrier reports these increases for 1945 over 1944: Revenue passenger miles, 78 percent; revenue passengers carried,

▶ Eastern flew more than 2,504,000 revenue miles in November, 41 percent more than the same month in 1944. Revenue passengers and passenger miles were up 55 percent, with passenger revenue 27 percent above November, 1944.

▶ Mid-Continent reports a net income for November, after taxes, for \$29,014, compared to a loss of \$6,705 in November, 1944. Revenue passengers were up 169 percent and operating revenue increased 98 percent over November, 1944.

Pan American's affiliate in Colombia -Avianca (Aerovias Nacionales de Colombia)—expects delivery this year of three C-54's for use on proposed Bogota-Miami and Bogota-Balboa routes. Avianca says it would be the first four-motor commercial operation by a Latin American company.

▶ United's president, W. A. Patterson, has been named member of the Air Transport Committee of the International Chamber of Commerce, Inc.

#### Parker on Leave

Harry S. Parker, Jr., senior vicepresident of National Airlines, started a six months leave of absence Jan. 1 because of his health. He will remain in Florida

#### CAB SCHEDULE

Jan. 7. Exchange of exhibits in Colonial Airlines' case for designation of Newark as a co-terminal with New York on AM 72. (Docket 2144.)

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

89 percent. Delta has established an average weight estimate of 165 lbs. per passenger, to save time, and has stopped asking individual weights. Baggage still is weighed. . . . Gains showed for 1945 over 1944: revenue passenger miles, 59 percent; number of passengers, 69 percent; express pounds, 41 percent; air mail pounds, 29 percent. Number of employees more than doubled during the year, to 1,600. . . . Six C-54's are being converted for Delta and a seventh has been purchased. First is expected to go into service about March 1.

Jan. 10. Hearing in American Airlines non-

stop services case. (Docket 2136.) Jan 10. Exchange of exhibits in Pan American 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

Jan. 10. Hearing in Western-Inland release of flying equipment case. (Docket 1936.)

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-terminat 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 2068.) Jan. 24. Briefs due in Page Airways investiga-

tion case. (Docket 1896. Jan. 28. Exchange of exhibits in Arizona Airways' case for acquisition of TWA's AM 38. Postponed from Jan. 21. (Docket 2005.)

Jan. 28. Exchange of exhibits in Universal Air Travel Plan case. Postponed from Dec. 3. (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 acqusition 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 Kansas City-Memphis-Florida case. Postponed

Jan. 21. (Docket 1051 et al.)

Feb. 11. Hearing in Pan American AirwaysPanair do Brasil, S. A. agreement case.

Feb. 14. Hearing in Arizona Airways' case for acquisition of TWA's AM 38. (Docket 2005.) Feb. 18. Exchange of exhibits in Boston-New York-Atlanta-New Orleans case, (Docket

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. Feb. 18. Hearing in Universal Air Travel Plan

case. Postponed from Dec. 17. (Docket Mar. 1. Exchange of rebuttal exhibits in Bos-

ton-New York-Atlanta-New Orleans case. (Docket 730 et al.) Mar. 11. Hearing in All American Aviation's case for acquisition of control of Equip-

amento 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.)

#### CAB ACTION

The Civil Aeronautics Board: · Rescinded temporary exemption order to require Pan American Airways to resume service

at Cat Cay, Bahama Islands. Denied Pan American-Grace Airways exemy tion from the Civil Aeronautics Act that would have permitted service at Riobamba, Ecuador.

Designated Newark a co-terminal with New York on Northwest Airlines' AM 69 and National Airlines' AM 31.

 Authorized Pan American to suspend service between New York and Hamilton, Bermuda, until a suitable landplane landing area in Bermuda is available

 Granted American Airlines permission to serve Springfield, Mo., on AM 30 through Springfield-Green County Airport; Colonial Airlines to serve Ottawa, Canada, on AM 72-F through Uplands Municipal Airport; PCA to serve Newark on AM 55 through Newark Municipal Airport; and TWA to serve Chicago and Madrid, Spain, through Chicago Municipal Airport and Barajas Airport, respectively,

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## State and Federal Regulation

THE NATIONAL ASSOCIATION OF RAILROAD AND L UTILITIES COMMISSIONERS, which at one time appeared ready to compromise its contention that the states should have full right to regulate all intrastate commerce within their borders, whether on an intrastate carrier or a segment of an interstate route, has reaffirmed and strengthened its original stand.

Nevertheless, the airlines are confident that as the year starts they are closer than ever to their goal of exclusive Federal control of common air carriers in interstate commerce.

Little known is the fact that the executive committee of the Commissioners' association last March adopted a resolution favoring legislation reserving to the states exclusive economic regulation of intrastate air carriers only, "leaving to exclusive Federal regulation all other air carriage."

Subsequent developments in Congress led to reconsideration, and the committee last July voted in favor of a return by the Association to its earlier position.

This was done at an Association meeting last month at Miami, through expression of "unalterable opposition" to any Federal legislation destroying or interfering with state rights to regulate "rates and services of air carriers operating in intrastate commerce."

In what is regarded in aviation circles as a new move the organization voted in favor of legislation "to preserve to the states the right to provide economic regulation of local air commerce."

The Commissioners also directed their committee on legislation to continue its study of uniform state legislation providing for economic regulation of intrastate air commerce.

The committee does not consider as a setback the fact that the uniform state regulatory bill passed in only three states last year, with exemptions of interstate air carriers in each.

And with only a few legislatures convening this year, the airlines can have no doubt that the Association will press to the limit for action in the states in 1947. The railroads' entire legislative history shows that such is their method.

## Air Transportation's New Era

O Pennsylvania-Central Airlines goes the L distinction of starting commercial air transportation's new era, in which four-engine equipment will largely supplant twin-engine on longhaul domestic routes. Foreword to this chapter was written by Transcontinental and Western Air's Stratoliners, but PCA on January 15 will place in service the first fully converted C-54 of a large number to be flying the nation's airways on most lines before the year is out.

The first plane, due for delivery by the Glenn L. Martin Co. today, will go into regular service on the Norfolk-Washington-Chicago flight after a checkover in the airline's maintenance shop and "courtesy hops" at Washington, Pittsburgh, Cleveland and Chicago, and possibly New York and Detroit. PCA expects it to shorten flight

time between Chicago and Washington from the present four hours and twenty minutes to three hours and twenty-five minutes.

Other lines will follow closely. Next Martinconverted C-54 probably will go either to TWA or Eastern Air Lines. Fourteen carriers have conversion orders at the Martin plant, where the delivery schedule is to reach one a day by the end of this month. Martin officials estimate that the company has enough conversion business to last through the year.

This ambitious program, augmented by similar though not as extensive work at Douglas and Republic, will speed the day when the public will find four-engine air travel the rule, rather than the exception, on long distance routes in, as well as out of the country.

AVIATION NEWS . January 7 1046

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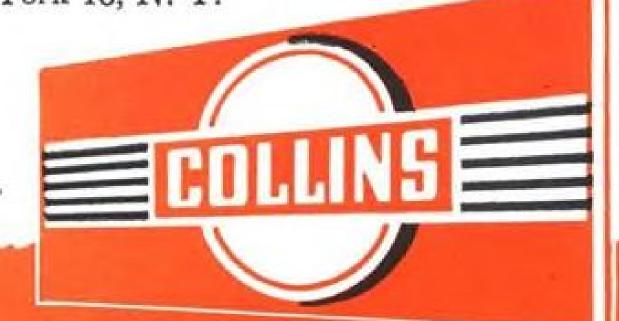
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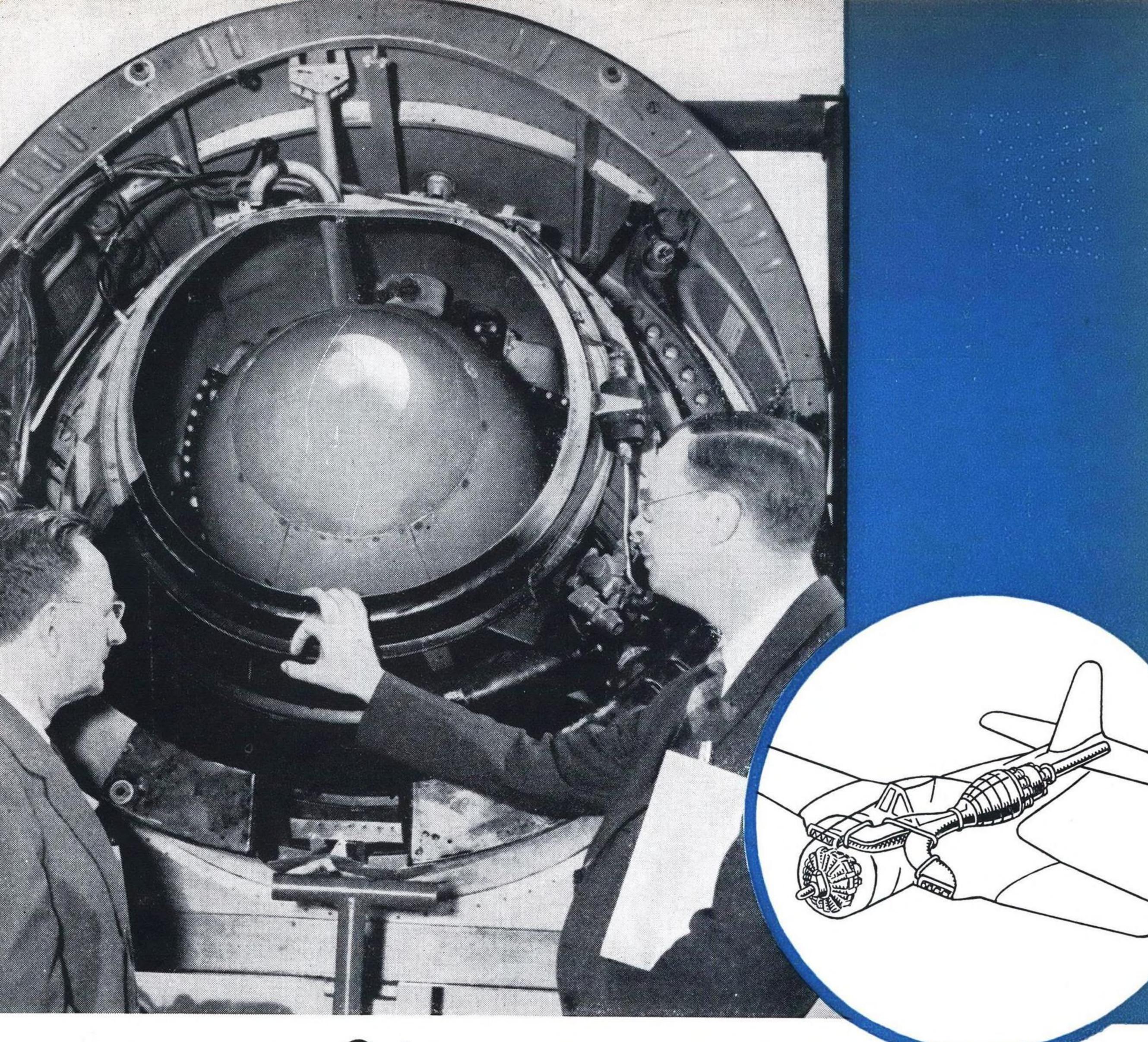
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Apparatus Department, General Electric Company, Schenectady 5, N.Y.

