

CIVIL AERONAUTICS JOURNAL



303/25
C. A. A.

ISSUED TWICE MONTHLY BY THE CIVIL AERONAUTICS AUTHORITY

VOL. 1

WASHINGTON, JANUARY 1, 1940.

NO. 1

NATIONAL AIRPORT AHEAD OF SCHEDULE

Hydraulic Fill Finished 79 Days Before Date Set

With the completion of the hydraulic fill for the Washington National Airport at Gravelly Point, on the west bank of the Potomac River 3½ miles south of the city of Washington, early in December, the way was cleared for actual construction of runways and terminal buildings in time to inaugurate service next July 4.

Oswald Ryan, Member of the Civil Aeronautics Authority, addressing the Washington Board of Trade on December 14, hailed the swift progress on the big new model air terminal as a timely solution to the long-standing and difficult airport problem of the Nation's Capital.

Col. Sumpter Smith, Chairman of the Interdepartmental Engineering Commission for the Washington National Airport, addressing the same meeting, attributed the completion of the labor of raising the landing field out of the bed of the Potomac River 2 months and 19 days ahead of schedule to the

work of Col. R. S. Thomas and his staff, of the Army Corps of Engineers. This accomplishment, Colonel Smith declared, gave added assurance that the flying surface would be ready by July 4 and the whole project by Labor Day.

"No one," Mr. Ryan said, "familiar with the rapid expansion of aviation activities in this city, especially transport operations, and no one familiar with the increasingly high standards of safety required by this expansion, will have any doubt about the need for more adequate airport facilities in Washington. There are 106 arrivals and departures at the Washington Airport every 24 hours. Only Cleveland with 122, Chicago with 116, and New York with 202 operations, exceed Washington in the volume of airline service. The increase in transport operations at the present Washington Airport has been 30 percent above that of a year ago; but even this is a much smaller increase than that shown by the cities of New York, Chicago, Cleveland, Pittsburgh, and Atlanta—the centers whose volume controls the volume of operations at the Washington Airport. But while the volume of business at our Washington Airport, that is, the number of planes in and out, has increased 30 percent, the volume of business of these other airports which I have mentioned has increased 52 percent over last year and has increased 70 percent over the year before last.

"Thus Washington has not kept pace with the other cities with which it is linked in air commerce. The primary reason for this is that the present Washington Airport has reached its saturation point and the common carriers of the air have not been able to schedule the regular services and extra sections required by the increasing demands of air traffic. It is estimated that some 400,000 passengers a year now enter or leave Washington by transport plane. With the new National Airport ready for service on the 4th of next July, it is safe to pre-

(Continued on next page)

IN THIS ISSUE

Warner speaks on rotor aircraft
Construction of National Airport ahead of schedule

PRIVATE FLYING

The Civilian Pilot Training Program . . . 9,350 college students being trained . . . 700 noncollege trainees to start on January 1 . . . 90 to take advanced training

MANUFACTURING AND PRODUCTION

Civil aircraft production doubled . . . Domestic civil aircraft built January-September up 105.5 percent.

AIR TRANSPORTATION

Civil Aeronautics Authority holds round-table discussion with operators . . . Branch addresses A. L. P. A. Convention . . . Mail-rate reviews for five airlines ordered . . . Statistical summary

AIRWAYS AND AIRPORTS

The Washington National Airport . . . Description of building plans . . . Approved by President . . . Sketch of completed terminal . . . Directory of Airports and Seaplane Bases ready

OFFICIAL ACTIONS

Opinions and abstracts

NOTICE

Due to the fact that the CIVIL AERONAUTICS JOURNAL is larger than its predecessor, the AIR COMMERCE BULLETIN, and will be issued twice each month instead of monthly, as was the case with the BULLETIN, it has been necessary to increase the yearly subscription price to \$1. Subscribers to the old BULLETIN will be retained on the JOURNAL mailing list until they have received 12 issues of the combination of the 2 publications. Thus an original subscriber, whose first issue of the AIR COMMERCE BULLETIN was dated July 1939, will be forwarded the first 6 issues of the CIVIL AERONAUTICS JOURNAL, and his present subscription will end with the March 15, 1940, issue.

23-11-40
8



Published with the approval of the Director of the Bureau of the Budget by the

CIVIL AERONAUTICS AUTHORITY:

ROBERT H. HINCKLEY, *Chairman*
 HARLEE BRANCH, *Vice Chairman*
 OSWALD RYAN, *Member*
 G. GRANT MASON, Jr., *Member*
 EDWARD WARNER, *Member*
 CLINTON M. HESTER, *Administrator*
 PAUL J. FRIZZELL, *Secretary*

Issued on the 1st and 15th of each month. Subscription \$1 per year. Single copies 5 cents. Sold by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.

National Airport*(Continued from page 1)*

dict that the air traffic into and out of this city will reach a much larger volume and our National Capital will be able to take her rightful place alongside the other great traffic centers of the country and will realize a more equitable participation in the benefits of the rapidly expanding air commerce of this Nation.

"This region is bearing its share in the expansion of private flying activities. In the District, Maryland, and Virginia, there has been a 20 percent increase in certificated pilots and a 25 percent increase in airplanes since January 1, 1939. On the basis of the anticipated national increase it is estimated that within a couple of years there will be three times the number of licensed pilots in this area and five times the number of planes now licensed. The new national airport, remember, will be accessible to all private flyers entering Washington from the rest of the country if their planes are properly equipped with radio."

Models and drawings of the airport and its buildings were exhibited at the meeting and were explained in detail by Colonel Smith. He stated that the building and general plans were developed by the Public Buildings Administration under the supervision of W. E. Reynolds and his staff of engineers and architects, and mentioned the invaluable assistance rendered by F. E. Schnepfe and his staff of the Public Works Administration, Maj. B. M. Harloe and his staff of the Works Progress Administration and by the technical experts of the Airport Section and other units of the Authority.

He also paid tribute to the air carriers and, among others, to representatives of the Public Roads Administration, Federal Works Agency, the National Capital Parks and Planning Commission, National Parks Service, Fine Arts Commission, War Department, Post Office Department, Navy Department, Department of Justice, District of Columbia,

the State of Virginia and Arlington County, and various individuals who likewise had important parts in the planning and designing of the airport.

A detailed description of final plans for the landing field and terminal buildings is carried on page 8 of this issue of the CIVIL AERONAUTICS JOURNAL. Also, on page 9, there appears a full-page illustration depicting an artist's conception of the Gravelly Point Air Terminal as it will appear when completed.

Procedure Instructions on Foreign Flights Available

A memorandum setting forth the information needed by the Authority to act upon applications for authorization to fly United States registered aircraft in foreign countries is now available and should be obtained in all instances prior to departure from the United States, except when the aircraft is operated in overseas or foreign air transportation pursuant to the terms of a certificate of public convenience and necessity.

Interested persons may obtain copies of this procedure outline by addressing the Correspondence Unit, Civil Aeronautics Authority, Washington, D. C. Actual applications for authorization to make foreign flights, however, should be addressed to the International Division of the Authority.

The title of the pamphlet is "Procedure for Obtaining Permission To Fly American Registered Aircraft in Foreign Countries." The information it contains will be particularly valuable in the preparation of plans by persons contemplating such flights. Helpful advice is offered regarding ways of expediting clearance, as well as an outline of the principal regulations affecting aircraft of other departments of the United States Government.

The Authority in this memorandum calls attention to and explains the special procedure established for entering Canada during the war period.

Ross Named Chief of Reference and Research Section

The Authority in December appointed Cecil A. Ross as Chief of the Reference and Research Section under the Director of Statistics and Information. As such, Mr. Ross assumes active charge of the Authority's aeronautical library.

Mr. Ross brings to his new position a background of many years' experience in aeronautical research and library work. From 1929 to 1935 he was Assistant Chief of the Division of Aeronautics in the Library of Congress. During 1936 and 1937 he directed production of the bibliography of aeronautics which was prepared under the sponsorship of the Institute of the Aeronautical Sciences. Immediately before coming to the Authority he was engaged in planning library projects for the Works Progress Administration in Chicago.

Mr. Ross holds an A. B. degree from the University of Michigan.

Warner Speaks on Rotor Aircraft**Finds Research First Need**

Edward Warner, Member of the Civil Aeronautics Authority, in an address to the Rotor Aircraft Meeting of the Institute of the Aeronautical Sciences at Philadelphia, Pa., on December 1, told the assembled proponents of rotary-wing type aircraft that once the vehicle is improved to the point where it is ready for practical use on a large scale, and on economic terms that are permanently tenable, there will be no want of those seeking to make applications.

Mr. Warner also stressed the possibilities of wide utilization of rotary-wing type aircraft in private flying.

"If you can meet a high enough standard of ease of operation and freedom from trouble, and a reasonably high standard in reduction of first cost," he said, "there will be no doubt of the demand for rotor aircraft for private use."

However, he cautioned against premature attempts to utilize rotor aircraft for unduly heavy tasks until their further development permits sound economic applications.

Touching on the regulatory functions of the Authority, Mr. Warner said the problems of establishing the bounds of regulation are particularly acute in dealing with a new type. It is important that regulation in such a field should be restrained rather than restrictive, he concluded.

"The prospects of rotor aircraft for 10 years hence," said Mr. Warner, "are going to be much more dependent upon the kind and amount of research work, and of real basic design development, that is done in the next 2 or 3 years than upon the number of machines that are built within that period, or the extent of the practical employment that they find."

Although some impatience to see the introduction of rotary-wing type aircraft into commercial employments on an enlarged scale would be natural, he said, the money appropriated by Congress will be better spent in the laboratories, in extending the existing body of knowledge on the fundamental laws of rotor aircraft behavior and on the factors that govern the efficiency of the type; and in making experimental purchases for the demonstration of performance and flying qualities.

Mr. Warner pointed out that the problems of the Army and Navy with respect to innovations are entirely different from those of civil aeronautics, in which the economic test looms large. He said the foremost apparent possibilities of employment of rotor aircraft in civil aeronautics, aside from a mere duplication of what the airplane is already doing, lie in local service between the outlying airport and the center of the city, and in intercity flights so short that the surface transportation to and from the airport is a major factor in determining the average speed. Many special uses, he pointed out, such as photography and crop dusting, have been found already and more will doubtless be developed.

PRIVATE FLYING

The Civilian Pilot Training Program

9,350 College Students Being Trained—700 Noncollege Trainees To Start on January 1—90 To Take Advanced Training

As the year 1939 came to an end, 9,350 young men and women students at 435 universities and colleges in every State of the Union, Alaska, Hawaii, and Puerto Rico were undergoing aviation training to qualify them for private pilots' certificates of competency under the Civil Aeronautics Authority's Civilian Pilot Training Program. At the same time, the Authority had completed arrangements whereby, starting on January 1, 1940, noncollege citizens, between 18 and 25 years of age, will have a chance to compete for 700 similar flight scholarships in some 70 communities throughout the Nation.

The college phase of the program, which was authorized by the Civilian Pilot Training Act of 1939, got under way at the beginning of the 1939-40 school year. Instruction material and study manuals were made available to the chosen students, and the 72-hour course of ground school work began promptly.¹

By the first week in November the first student had actually started flight training and by the end of the month several hundred more had taken to the air and a number had reached the solo stage. The end of the year found flying instruction under way at most of the schools, with a good proportion of the students in the solo stage.

NONCOLLEGE PARTICIPANTS

The Civilian Pilot Training Act provided that at least 5 percent of the private pilots trained be noncollege students. Under the Authority's plan, by which approximately 7 percent of the total students trained will be in this category, ground school courses will be established at about 70 communities selected, wherever possible, where there is no activity under the college phase of the program.

In choosing these communities first consideration was given to the availability of airport facilities for training. At each such community a local sponsor was named.

The local sponsors will choose the evening college extension classes, technical high schools or trade schools in which the 72-hour ground school course will be given under instructors who must possess a State teacher's certificate or its equivalent or the Civil Aeronautics Authority's ground school instructor's ratings to teach the Civil Air Regulations, meteorology and aerial navigation. The classes are not limited

in size but there must be 1 instructor for each 50 students, teaching 6 hours a week for 12 weeks, or 72 hours in all.

At the end of the 12-week ground school course 10 students in each community will be chosen for flight training. The selection of these students will be on a strictly competitive basis as the result of an examination on the ground school course. The ground school instructor will prepare the examination on all subjects but the Civil Air Regulations, meteorology, and navigation, which latter will be the standard examinations of the Civil Aeronautics Authority. Wherever there is more than one unit of 50 students in the ground course, the instructors will collaborate in preparing and grading the same examination for all. A winning list of 10, with 5 alternates, will be submitted for final approval to a local board consisting of a representative of the sponsor, of the ground course institution, the flight operator, the local private flying specialist, and the State director where there is one.

Any candidate to be considered for the flying course must attain a passing mark of 70 in each separate ground course subject. The students selected for flying training must be between 18 and 25 years of age and must pass the same strict physical examination required of the college participants. It is left to the discretion of the student whether to submit himself for the medical examination at the beginning or during the ground course or whether to await final selection for the flying

course. The fee for the medical examination, which is given by a C. A. A. authorized medical examiner, is \$6.

While women will be admitted without restriction to the ground course, only 1 woman will be permitted in each flying class of 10, which is the proportion of women to men allowed in coeducational colleges. Women selected for the flight training must, of course, pass the required physical examination.

It should be emphasized that although any American citizen, irregardless of age or sex, may take the ground instruction course, only those between the ages of 18 and 25 who successfully complete the course and satisfy the other requirements, including the physical examination, are eligible for flying training. Thus an opportunity will be afforded to many, who are not necessarily interested in learning to fly but who do desire to add to their knowledge of aviation, to take a comprehensive and complete course of study on the subject. The cost of the course to the student will not be over \$10, and the necessary textbooks are included in this fee.

The total cost to the students winning the flight instruction, \$30 each, includes everything, such as the medical examination, ground course expenses, and insurance. All other costs are paid for by the Authority.

When the 10 students are thus selected in each community—and this selection should be completed early in April—they will begin flying instruction. As in the college course there must be one airplane and one flight instructor for each 10 students. The course, which is in every respect the same as that given the college student, consists of from 35 to 50 hours and must be completed before September 1.

(Continued on next page)

Noncollege Phase of Pilot Training Program

[Locations, sponsors, and quotas by C. A. A. regions]

Region 1

State	Location	Quota	Sponsor
Connecticut.....	New Haven.....	10	Oscar Monrad, executive secretary, chamber of commerce.
Delaware.....	Wilmington.....	10	Gerish Gassaway, manager, chamber of commerce.
District of Columbia.....	Washington.....	10	John Delafield, junior board of commerce.
Maine.....	Augusta.....	10	Mrs. Marjorie Walker, executive secretary, chamber of commerce.
Maryland.....	Baltimore.....	10	William Swope, Junior Association of Commerce.
Massachusetts (total quota 20).....	Lawrence.....	10	
	Greenfield.....	10	Wesley Boss, manager, chamber of commerce.
New Hampshire.....	Concord.....	10	Joseph Loucier, secretary, chamber of commerce.
New Jersey.....	Red Bank.....	10	Edward Walder, executive secretary, chamber of commerce.
New York (total quota 60).....	Dansville.....	10	W. J. Maloney, president, board of trades.
	Endicott-Binghamton.....	10	Fred Thomas, chambers of commerce.
	Glens Falls.....	10	George Cless, executive secretary, chamber of commerce.
	Rochester.....	10	Walter Rogers, representing all civic clubs.
	Syracuse.....	10	Harold Cobb, representing Syracuse Aero Club.
	Utica.....	10	Horace Griffith, assistant superintendent of schools.

(Continued on next page)

¹ See AIR COMMERCE BULLETIN, Vol. 11, No. 4, October 15, 1939.

Noncollege Phase of Pilot Training Program

[Region 1 (continued)]

State	Location	Quota	Sponsor
Pennsylvania (total quota 40).	Connellsville.....	10	I. B. Coldren, representing county school system.
	Erie.....	10	James Shields, secretary, chamber of commerce.
	Sunbury.....	10	Edward Gill, secretary, chamber of commerce.
	Wilkes-Barre.....	10	Cleon Hanson, chamber of commerce.
Rhode Island.....	Providence.....	10	
Vermont.....	Springfield.....	10	
Virginia.....	Lynchburg.....	10	Chamber of commerce.
West Virginia.....	Clarksburg.....	10	Lawrence Lynch, chamber of commerce.

Region 2

Alabama (total quota 20).	Montgomery.....	10	Montgomery Extension Service of the University of Alabama.
	Dothan.....	10	Dothan Chamber of Commerce.
Florida.....	Jacksonville.....	10	Jacksonville Exchange Club.
Georgia.....	Brunswick.....	10	Brunswick Board of Trade.
Mississippi.....	Gulfport.....	10	Gulfport Chamber of Commerce.
North Carolina.....	Charlotte.....	10	Charlotte, Carolina Aero Club.
South Carolina.....	Orangeburg.....	10	Orangeburg Chamber of Commerce.
Tennessee.....	Nashville.....	10	Nashville Chamber of Commerce.

Region 3

Illinois.....	Joliet.....	10	C. J. Kellem, secretary, association of commerce.
	Bloomington.....	10	George F. Reeder, secretary, association of commerce.
Indiana (total quota 20).	South Bend.....	10	E. L. Bach, secretary, association of commerce.
	Marion.....	10	Omer Collins, secretary, Greater Marion Association.
Kentucky.....	Paducah.....	10	F. D. Sperry, secretary, Greater Paducah Association.
Michigan (total quota 20).	Battle Creek.....	10	Rudy Haberman, secretary, chamber of commerce.
	Saginaw.....	10	Arthur Weadock, secretary, chamber of commerce.
Minnesota.....	St. Paul.....	10	Fred Fellos, secretary, association of commerce.
North Dakota.....	Jamestown.....	10	I. H. Schoonover, secretary, chamber of commerce.
Ohio (total quota 30) ..	Mansfield.....	10	Dr. Bonar, president, National Aeronautical Association.
	Toledo.....	10	Milton Knight, president, Toledo Civil Air Reserve Association.
	Cleveland.....	10	Walter Beam, secretary, chamber of commerce.
Wisconsin.....	Oshkosh.....	10	James B. Cudlip, secretary, chamber of commerce.

Region 4

Arkansas.....	Texarkana.....	10	Willard B. Simmons, junior chamber of commerce.
Louisiana.....	New Orleans.....	10	H. G. Martin, Delgado Trade School.
New Mexico.....	Santa Fe.....	10	Col. Harlee Townsend, Jr., 29-30 Club.
Oklahoma.....	Ponca City.....	10	
Texas (total quota 20).	Big Spring.....	10	Chamber of commerce.
	Austin.....	10	

Region 5

Colorado.....	Fort Morgan.....	10	
Iowa.....	Waterloo.....	10	E. A. Warner, chamber of commerce.
Kansas.....	Wichita.....	10	Arch Booth, chamber of commerce.
Missouri.....	Kansas City.....	10	Edward E. Tappe, chamber of commerce.
Nebraska.....	Alliance.....	10	E. V. Black, chamber of commerce.
South Dakota.....	Pierre.....	10	Ernest Lower, chamber of commerce.
Wyoming.....	Cheyenne.....	10	Robert D. Hanesworth, chamber of commerce.

Region 6

Arizona.....	Douglas.....	10	Caleb O. Rice, chairman, aviation committee of the Douglas, Arizona, Chamber of Commerce.
California (total quota 30).	Los Angeles.....	10	H. Q. Dillehunt, president, Los Angeles Junior Chamber of Commerce.
	Oakland.....	10	Junior chamber of commerce.
	Sacramento.....	10	Arthur Dudley, secretary, Sacramento Chamber of Commerce.
Nevada (total quota 20).	Las Vegas.....	10	C. D. Baker, president, Las Vegas, Nev., Chamber of Commerce.
	Ely.....	10	Fred Walts, chamber of commerce.
Utah.....	Salt Lake City.....	10	Gus Bachman, secretary, Salt Lake Chamber of Commerce.

Region 7

Washington.....	Wenatchee.....	10	Chamber of commerce.
Oregon.....	Salem.....	10	Do.
Idaho.....	Twin Falls.....	10	Do.
Montana.....	Great Falls.....	10	Do.

(Continued from p. 3)

The Authority will pay the standard fee of \$290 for each student to the flight operators and a lump sum of \$200 to each institution giving the ground course.

The communities chosen and the sponsors to whom all inquiries concerning the courses should be addressed, are shown in the accompanying table.

ADVANCED TRAINING

Last spring, to make a thorough test of its then proposed program to extend vocational training in airplane piloting to students in American colleges, the Civil Aeronautics Authority tried out the plan on a minor scale. In 13 representative colleges 330 students were chosen and arrangements made for them to take the same ground course of 72 hours and the same flying course of from 35 to 50 hours as are now being offered on a national scale. The 330 young men so selected came up to every expectation. Ninety-five percent of them were able at the end of the course to pass their test for the private pilot certificate with flying colors. Their safety record was several times better than the average. It is largely as a result of their success that the 9,350 of their fellow students are now going through similar courses at 435 universities and colleges.

Meanwhile many of the original 330 pioneers still in college are to get a chance once more to break new ground. According to plans announced in mid-December by the Authority, 90 of them are being selected to test out an advanced course of training which may next year be offered on a Nation-wide basis to many of the students taking primary work this year. The 72-hour ground school course which they completed is to be supplemented by a second calling for 146 hours of classes, and their primary flying course of 35 to 50 hours is to be supplemented with 50 additional hours of training in somewhat larger types of civilian aircraft.

The supplementary courses will include advanced work on engines and aircraft, navigation, radio, night flying, cross-country practice, and instruction in the maneuvers useful in the handling of aircraft with engines of 125 to 165 horsepower.

With many applications already on file from students of the experimental course, it is expected that the courses will begin early in January. In view of the more expensive type of plane required for training, the Authority will pay flying school operators \$750 per student for the flight courses and \$50 to each institution involved for the further ground school work. The institutions are: Purdue University; University of Alabama; University of Minnesota; University of Washington; Massachusetts Institute of Technology; Texas A & M College (Arlington, Tex., branch); Pomona Junior College; Georgia School of Technology; New York University; University of Michigan; University of North Carolina (State College at Raleigh); University of Kansas; San Jose State College.

MANUFACTURING AND PRODUCTION

CIVIL AIRCRAFT PRODUCTION DOUBLES

Domestic Civil Aircraft Production for January-September up 105.5 Percent

Production of aircraft for civil use in the United States during the period from January through September of 1939, increased 105.5 percent above the production for the same period of 1938, according to figures compiled by the Civil Aeronautics Authority. While the total number of such aircraft produced during the first 9 months of 1938 totaled only 1,313, the total produced during the first 9 months of 1939 reached 2,698.

TABLE A.—Domestic civil aircraft production by types for the period January-September 1939 with comparative figures for 1938

	January-September	
	1939	1938
Landplanes:		
1-2 place:		
Single engine.....	2,268	1,044
Multiengine.....	4	1
3-5 place:		
Single engine.....	314	184
Multiengine.....	9	1
6-20 place:		
Single engine.....	0	18
Multiengine.....	14	20
22 place and over:		
Single engine.....	0	0
Multiengine.....	46	17
Seaplanes:		
Single engine.....	33	20
Multiengine.....	8	1
Amphibians:		
Single engine.....	0	2
Multiengine.....	2	5
Total single engine.....	2,615	1,268
Total multiengine.....	83	45
Grand total.....	2,698	1,313

Growing preference by the flying public for small landplanes is markedly in evidence. In comparison with the increase of 105.5 percent for all types over the same period of the preceding year, the number of 1-2 place landplanes manufactured during the first 9 months of 1939 increased by 117.2 percent. Landplanes with seats for 3 to 5 passengers, however, increased by only 78.3 percent. Single engine landplanes with more than 5 seats, of which 18 were manufactured during the corresponding period of 1938, are completely missing from the 1939 nine-months period. Additional evidence, if any is needed, that the rapid increase in civilian plane production for other than airline use is preponderantly in the so-called "light plane" class is readily available in break-downs of the production record by gross weight and by horsepower.

Light planes weighing not more than 1,300 pounds accounted for a large part of the gain in production during this 9-month period. Production of planes above this weight increased from 356 in 1938 to 509 in 1939, while production of the light planes increased from 957 to 2,189.

TABLE B.—Domestic civil aircraft production by weight classification for January-September 1939 as compared with 1938

	January-September		Percentage of increase or decrease
	1939	1938	
Class I (not more than 1,300 pounds).....	2,189	957	+128.7
Class IIS (1,300-4,000 pounds single engine).....	389	275	+41.4
Class IIM (1,300-4,000 pounds multiengine).....	4
Class IIS (4,000-10,000 pounds single engine).....	29	34	-14.7
Class IIM (4,000-10,000 pounds multiengine).....	15	17	-11.8
Class IVS (10,000-25,000 pounds single engine).....	8	2	+300
Class IVM (10,000-25,000 pounds, multiengine).....	52	26	+100
Class V (in excess of 25,000 pounds).....	12	2	+500
Total.....	2,698	1,313	+105.5

Distribution by engine horsepower showed similar wide increases in the lower range. During the 9-month period of 1938, 946 planes were produced with engines of 50 horsepower or less.

During the corresponding period of 1939 there were 1,232 planes turned out with engines in this category. Production of planes with engines from 51 through 70 horsepower increased from 14 to 960.

TABLE C.—Domestic civil aircraft production by engine horsepower for January-September 1939 as compared with 1938

	January-September	
	1939	1938
50 H. P. and under:		
Single engine.....	1,232	946
Multiengine.....	2	0
51-70 H. P.:		
Single engine.....	960	14
Multiengine.....	0	0
71-100 H. P.:		
Single engine.....	214	44
Multiengine.....	0	0
101-165 H. P.:		
Single engine.....	100	125
Multiengine.....	1	0
166-225 H. P.:		
Single engine.....	7	16
Multiengine.....	1	0
226-300 H. P.:		
Single engine.....	65	76
Multiengine.....	1	7
301-600 H. P.:		
Single engine.....	32	35
Multiengine.....	14	11
601-1,800 H. P.:		
Single engine.....	5	12
Multiengine.....	64	27
Total single engine.....	2,615	1,268
Total multiengine.....	83	45
Grand total.....	2,698	1,313

Planes with engines from 71 to 100 horsepower increased from 44 to 214.

Multi-engine airplanes produced largely for airline use, showed an increase of 84 percent, rising from 45 to 83. For detailed figures refer to accompanying tables.

Aircraft Radio Equipment Approved for Scheduled Air Carrier Use

During the month of November 1939 the following units of aircraft radio equipment were approved by the Authority for scheduled air carrier use and issued type certificates.

Certificate No.	Manufacturer	Unit	Date
336	Lear Developments, Inc.....	G-30-AB transmitter and receiver power supply unit.....	Nov. 2
337	do.....	R-3-AB receiver tuning unit.....	Do.
338	do.....	G-3-AB receiver power supply and I. F. unit.....	Do.
339	do.....	R-3-AC receiver tuning unit.....	Do.
344	do.....	ADF-7 automatic direction finder.....	Nov. 29
410	American Airlines, Inc.....	ATR receiver mount.....	Nov. 6
374	Bendix Aviation, Ltd.....	Model 3915 7-G receiver mount.....	Nov. 8
375	do.....	Model 3914 14-A receiver mount.....	Do.
376	do.....	Model 3910 buzzer unit.....	Do.
377	do.....	Model 3917 sensitivity control unit.....	Do.
378	do.....	Model 3405-R copilot's jack box.....	Do.
379	do.....	Model 3405-L pilot jack box.....	Do.
420	do.....	Model 3912 dynamotor base.....	Do.
421	do.....	Model 3909 antenna coupling unit.....	Do.
422	do.....	Model 3707 control panel.....	Do.

AIR TRANSPORTATION

Mail-Rate Reviews for Five Airlines Ordered

Under the economic regulatory powers set forth in the Civil Aeronautics Act of 1938, the Authority on its own initiative instituted inquiries on December 1 to determine whether the amounts currently being paid for the transportation of air mail to American Airlines, Inc., Chicago and Southern Air Lines, Continental Air Lines, Inc., Delta Air Corporation, and Eastern Air Lines, Inc., are fair and reasonable in accordance with the rate-making elements prescribed by law.

The full text of the orders (serial Nos. 280 to 284, inclusive) appears on page 11 of this issue of the CIVIL AERONAUTICS JOURNAL in the section devoted to official actions.

Procedures to be followed, including submission by the carriers of exhibits setting forth their economic positions and factors affecting their operations, the analysis of this material, and hearings before the Authority, will be identical with procedures established in thirteen domestic air mail rate cases during the past 15 months, all of which were initiated by the air carriers themselves.

Commenting on these orders, Chairman Hinckley pointed out that the Authority is required to keep itself constantly informed of the status and development of all United States air carriers and declared that the substantial increase in passenger and express traffic which has taken place this year may soon justify a reduction in rates paid for the transportation of mail in some cases.

Branch Addresses A. L. P. A. Convention

"You have done and are doing a splendid job, and I have every confidence that you will continue your fine record," Vice Chairman Harlee Branch declared in addressing the Annual Convention of the Air Line Pilots' Association in Chicago, on December 4.

"You pilots of the scheduled air lines here in the United States during the last 12 months," the Vice Chairman told the fliers, "have made records from 3 to 3½ times more safe than any such records ever scored before. During that period there have been only two accidents involving fatalities. 80,000,000 passenger-miles were flown per passenger fatality and approximately 40,000,000 plane-miles per fatal accident."

In his talk, Branch recounted the work the Authority has done and is now engaged in which will bring to pilots additional aids in the piloting and navigation of transport aircraft. He expressed the conviction that the economic success of air transportation was

almost wholly dependent upon safety of operations, and showed how the safeguarding of the health of pilots through beneficial regulations governing hours of work and the assistance rendered by the Federal Airways System further insured the continuance of safe air transportation. The latter, he added, also assures the professional flier of a higher degree of financial security.

Mr. Branch thanked the pilots for the valuable suggestions they transmit to the Authority. He commended the pilots for their efforts to make their proposals specific and within the limitations of the present state of the art.

In conclusion, he assured the pilots that the Authority, the Administrator, and the representatives of the Air Safety Board, were glad to meet with them for their mutual benefit.

Authority Holds Round-Table Discussion With Operators

Problems arising out of swiftly expanding traffic were discussed informally by representatives of the principal air lines before the Civil Aeronautics Authority, the Administrator, and the Air Safety Board at a meeting held in Washington, December 8. All participants at the meeting expressed gratification over the fine safety record attained last winter and continued throughout the year. They were equally emphatic in expressing conviction that the maintenance of this safety record was of paramount importance.

"The air transport industry," Chairman Robert H. Hinckley told the meeting, "possesses today and in this country the greatest opportunity for useful growth that I know of anywhere in the world. It has been the policy of the Civil Aeronautics Authority throughout the 17 months of its existence to try to get along with the minimum of regulation, despite the very extensive powers given us under the act. I trust that the air lines, in these problems of schedules and the use of the airways and the airports, will not bring about any situation in which a regulation made now may come to plague them later. I am sure that all of your problems can be successfully solved."

Among those present at the meeting were:

American Airlines.—C. R. Smith, president; Ralph S. Damon and Charles A. Rheinstrom, vice presidents in charge of operations and sales; and Captains Brasnell, Deeter, Hughen, and Cutrell.

Eastern Air Lines.—Capt. E. V. Rickenbacker, president; Paul H. Brattain, vice president and general traffic manager.

Transcontinental and Western Air.—Paul Richter, vice president; and Clarence Fleming, assistant to the president.

United Air Lines.—W. A. Patterson, president; J. A. Herlihy, R. W. Schroeder, and Harold Crary, vice presidents; Walter Addems, chief pilot; Emery Martin, assistant chief pilot; and R. W. Ireland, general traffic manager.

Braniff Airways.—Robert J. Smith, vice president; and Roger J. Whiteford, counsel.

United States Aviation Underwriters.—Reed Chambers.

STATISTICAL SUMMARY

● For the sixth consecutive month (October) passenger traffic on the domestic air lines broke all records, with an all-time high of 70,122,138 revenue passenger-miles flown by 17 reporting companies. This was an increase of 36.15 percent over October 1938.

● Figures for the first 10 months of 1939 compared with figures for the corresponding period of 1938, showed passenger traffic 38.83 percent ahead of last year and express traffic ahead by 24.14 percent. (See graphs on opposite page for comparisons with the years 1938 and 1937.)

● Preliminary reports for November indicate that the volume of traffic on domestic air lines is holding up about 40 percent ahead of 1938, although the usual seasonal decline caused a falling off from the October peak.

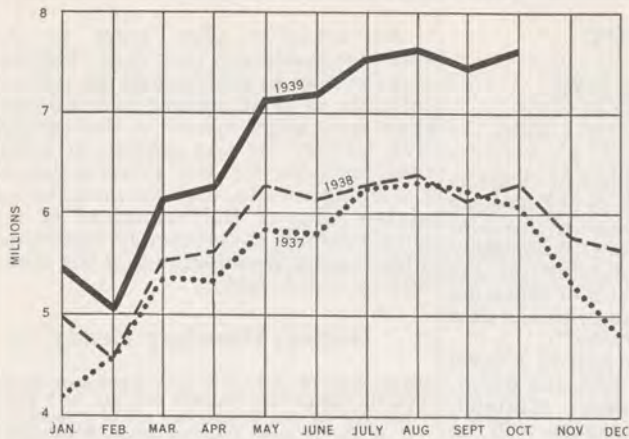
● Preliminary reports covering foreign operations of American flag air carriers for the third quarter of 1939 reflect continued substantial increases in traffic. Passenger and express volume was approximately 30 percent greater than in the corresponding period of 1938 and total passenger-miles flown was over 50 percent ahead of the third quarter of 1938.

● As of December 15, 1939, the domestic air carriers had achieved an unprecedented safety record with the transportation of 1,510,900 passengers a total of 598,350,000 passenger-miles, without a single accident serious enough to cause an injury.

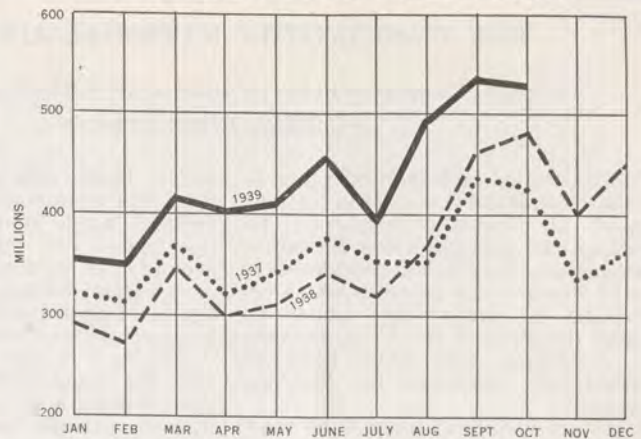
● Personnel employed by domestic airlines and American flag air carriers operating outside the United States as of October 31, reached 15,045, an increase of 12.72 percent over the corresponding date of the previous year. Gains were greatest in foreign operations, although domestic air lines showed an increase of 10 percent in employment over the year interval.

Domestic Air Carrier Operations Statistics for 1937, 1938, and First 10 Months of 1939

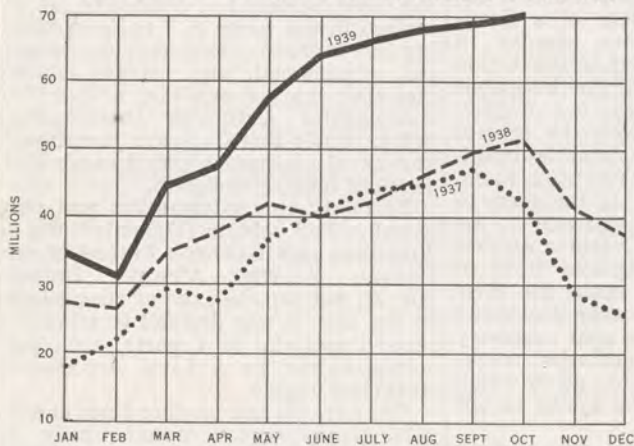
REVENUE MILES FLOWN



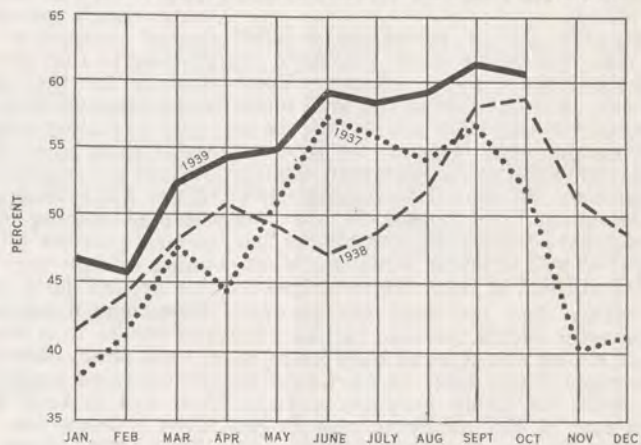
EXPRESS POUND MILES FLOWN



REVENUE PASSENGER-MILES FLOWN



REVENUE PASSENGER LOAD FACTOR



Domestic Air Carrier Operations Statistics for October 1939

Operator	Revenue miles flown		Revenue passengers carried		Revenue passenger-miles flown		Express pound-miles flown		Revenue passenger load factor (percent)	
	October 1939	Percent change over 1938	October 1939	Percent change over 1938	October 1939	Percent change over 1938	October 1939	Percent change over 1938	October 1939	October 1938
American Airlines, Inc.	1,816,937	26.25	59,128	28.71	22,336,971	33.06	146,655,782	-2.94	72.11	68.85
Boston-Maine Airways, Inc.	58,933	-6.34	1,515	-10.99	239,975	-9.12	298,641	-48.09	40.70	44.25
Braniff Airways, Inc.	317,792	20.71	6,613	34.33	2,095,218	23.60	11,771,851	4.56	66.88	67.36
Chicago & Southern Airlines, Inc.	163,556	24.14	2,401	16.61	936,082	26.59	6,156,394	35.99	57.23	57.42
Continental Air Lines, Inc.	101,741	64.71	789	117.36	236,098	75.09	449,616	30.79	33.65	36.47
Delta Air Corporation.	151,084	22.39	3,163	68.20	815,864	38.96	2,246,782	33.88	54.00	47.56
Eastern Air Lines, Inc.	954,943	36.16	23,756	42.02	9,114,726	38.74	56,251,993	23.68	54.27	56.35
Inland Air Lines, Inc.	83,531	-1.38	817	87.39	218,636	100.12	377,282	-14.19	26.17	12.91
Marquette Air Lines, Inc.	24,990	14.26	189	2.16	45,521	.24	0	-----	30.36	27.84
Mid-Continent Airlines, Inc.	109,779	8.99	1,860	33.43	481,237	44.55	974,697	-30.79	45.27	38.92
National Airlines, Inc.	58,900	108.08	841	146.63	192,357	304.43	351,694	149.69	32.66	17.02
Northwest Airlines, Inc.	463,539	-1.84	8,728	74.66	3,556,180	69.16	20,089,285	22.13	45.95	46.27
Pennsylvania Central Airlines Corporation.	322,299	8.65	12,093	21.72	2,073,544	16.13	11,770,837	62.38	64.34	61.90
Transcontinental & Western Air, Inc.	1,154,953	37.61	22,545	49.19	10,998,025	43.18	75,720,911	21.90	56.67	55.71
United Airlines Transport Corporation.	1,653,556	12.18	29,945	32.86	15,809,840	34.37	180,162,319	8.84	63.00	58.37
Western Air Express Corporation.	181,367	-7.16	2,606	23.21	938,304	13.00	16,408,164	15.45	41.67	34.36
Wilmington-Catalina Airlines, Ltd.	7,980	66.25	1,432	85.73	42,360	85.73	302,700	3.34	51.92	43.81
Total	7,625,880	21.01	178,421	35.49	70,122,138	36.16	529,988,948	9.78	60.58	58.50

AIRWAYS AND AIRPORTS

THE WASHINGTON NATIONAL AIRPORT

President Approves Plans for Buildings—Model Terminal To Be Completed Next Summer

Final detailed architectural plans for the buildings at the Washington National Airport at Gravelly Point, on the Potomac, 10 minutes from downtown Washington, have been completed by the 11 Government agencies which collaborated on the project under the general direction of the Civil Aeronautics Authority, and have been enthusiastically approved by President Roosevelt.

Contract specifications will be ready by February 1 and, with the necessary 30 days for advertising, contracts should be let and construction will commence on the buildings before the first of March.

By the use of accurately finished models the plans were presented in extraordinary visual detail. These models gave rise during the final meetings of the engineers and architects to the opinion that the new air terminal will be what Col. Sumpter Smith, Chairman of the Interdepartmental Commission for the project, has long contended it should be, namely, an "air park" as well as an air terminal. Colonel Smith said of these completed plans:

"These fine buildings are grouped compactly within the area in line with the 200-foot elevation at Fort Scott, to the west of the field, which would be unusable for flying purposes anyway. The rest of the nonflying area is developed in a truly parklike fashion for the enjoyment of that portion of the public which likes to watch flying, and in conformity with the general character of the Mount Vernon Boulevard along which it lies.

"On the shoulder of the rising ground north and west of the airport proper are terraced parking spaces in three levels each 4 feet above the other and capable of accommodating 5,000 cars. Along the west edge of the flying area will be elevated benches capable of accommodating 3,000 spectators. There will be further emergency parking space for another 3,000 cars, all of which can enter and leave the airport area to and from the Boulevard, without crossing traffic, by means of the clover-leafed separations of grade near the north and south limits of the development.

"And while the airport terminal itself provides primarily for the handling of passengers, mail and express to and from planes, its observation terraces, restaurant, coffee shop, lunchroom, lounging and dressing rooms afford all of the facilities in connection with an air terminal which have proved so popular and so fruitful in the development of patronage for air transportation at such foreign air terminals as Temple-

hof in Berlin and Schiphol at Amsterdam in a more compact, useful, and, we believe, much more beautiful fashion. Spectators can circulate completely around the terminal building on the observation terraces without entering the building or interfering with the flow of passenger and mail traffic."

The floor of the terminal on a level with the flying field is, with one exception, strictly a service floor. Through it, mail, express, and baggage will be handled in and out without interference with the flow of passengers on the level above. The one exception to this is the provision at the southern end of the south wing's ground floor of a Presidential Reception Room, similar in purpose to that provided at the Union Station, for the use of the President and distinguished guests.

By a graded road from the central traffic circle back of the terminal building cars can come to this reception room, to the flying field, and, in the rear, to the mail and express rooms and to the service quarters of the various airlines which occupy the flying-field front of this ground floor with space for their dispatchers, flying and mechanical crews and service men and the gear necessary for refueling, charging batteries, trucking mail and baggage, etc., all of which gear will be kept off the apron except when in actual use.

Ten feet above this ground-floor level is the passenger concourse, with a terrace along the flying-field side and access to the traffic circle on the other side. It will be necessary for passengers to descend from this level for access to airplanes of the present type, but Colonel Smith points out that with the probable early adoption of transport planes with tricycle landing gears, in which the plane door is approximately 10 feet above the ground at all times, movable gangways may be used for access to such planes direct from the terrace and concourse on the passenger level.

Runway lengths are: N.-S., 6,875 ft.; NW.-SE., 5,300 ft.; NE.-SW., 4,820 ft.; and E.-W., 4,200 ft.

The entire flying area of 750 acres will lie at least a foot and a half above the highest flood level ever recorded in the Potomac at this point. As much of the hydraulic fill has been taken from the channel of the river, the cross section of the channel has been increased and the consequent greater flow-off through the channel is expected to diminish the possibility of flooding the airport site as well as to lessen the necessity for further periodic dredging of the channel itself.

All available office space in the terminal building is now under negotiation for lease to airlines and other flying interests as is all hangar and adjacent shop and office space in that group. The lay-out for any additional buildings provides for the preservation of the Abingdon site, with the preservation of the ruins of the homestead of the Custis family so intimately associated with George Washington and the entire history of this region.

Airport Directory Ready

[DIRECTORY OF AIRPORTS AND SEAPLANE BASES (Civil Aeronautics Bulletin No. 11), in 7 parts. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. Price 10 cents for each part.]

All airports and established landing fields and seaplane bases of record with the Civil Aeronautics Authority are described in the series of 7 parts comprising this bulletin. Included are municipal, commercial, and private landing facilities; marked auxiliary fields; Civil Aeronautics Authority intermediate fields; State fields; Army aerodromes and naval air stations; and other Government landing facilities.

Formerly this information was published in one volume (DESCRIPTIONS OF AIRPORTS AND LANDING FIELDS IN THE UNITED STATES, Airways Bulletin No. 2), but for the sake of convenience to the user it was decided to issue this revised material in 7 parts, each part corresponding to a Civil Aeronautics Authority region.

The airports and landing fields in each part are presented alphabetically by States, with descriptions of seaplane facilities following. The descriptions have been systematized to facilitate reference and use and while they do not include all details, they were prepared with the thought of furnishing the outstanding essential facts desired by airmen contemplating flights to airports or seaplane bases with which they may be wholly or partially unfamiliar.

The States covered in each part are: Part I. Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, and the District of Columbia.

Part II. Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee.

Part III. Illinois, Indiana, Kentucky, Michigan, Minnesota, Ohio, North Dakota, and Wisconsin.

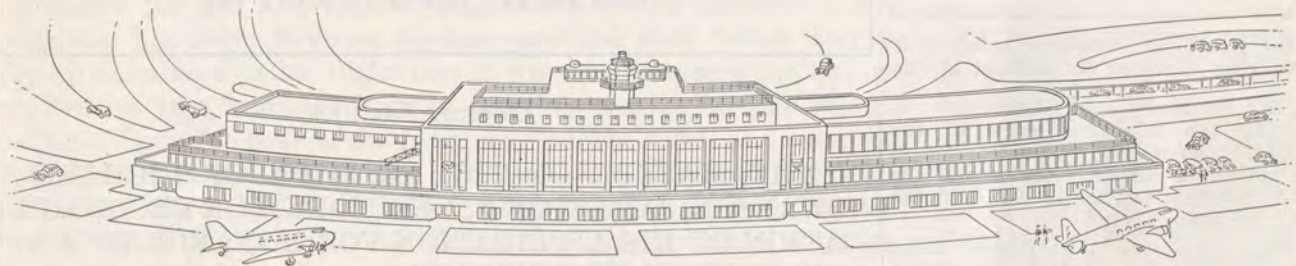
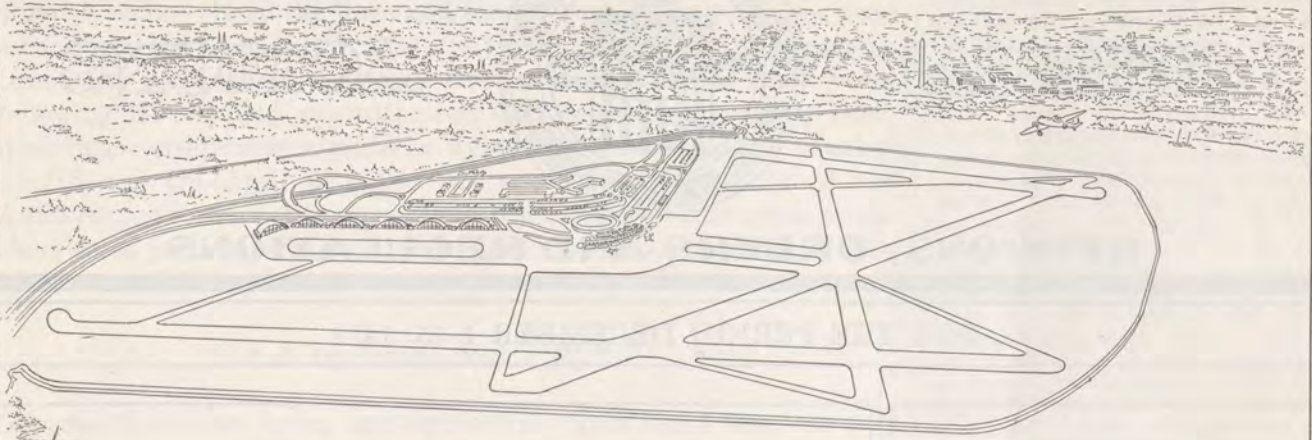
Part IV. Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

Part V. Colorado, Iowa, Kansas, Missouri, Nebraska, South Dakota, and Wyoming.

Part VI. Arizona, California, Nevada, and Utah.

Part VII. Idaho, Montana, Oregon, and Washington.

PLANS FOR THE WASHINGTON NATIONAL AIRPORT



TERMINAL BUILDING FROM FIELD SIDE



TERMINAL BUILDING FROM PUBLIC APPROACH SIDE



HANGARS
ELEVATION FROM FIELD SIDE

C.R. MCGRAW

CIVIL AERONAUTICS AUTHORITY

OFFICIAL



ACTIONS

OPINIONS, ORDERS AND REGULATIONS

FOR THE PERIOD DECEMBER 1-15, 1939

ABSTRACTS

Order No. 275: Violations referred to Attorney General for judicial action.

The Authority on December 1, referred the following cases to the Attorney General for judicial action in the matter of certain violations of the Civil Aeronautics Act of 1938 and the Civil Air Regulations:

Gene Armbrust, Washington Court House, Ohio.—For piloting an aircraft on a civil airway without having any grade of pilot certificate and other violations; and

Albert Leo Morrison, Wichita, Kans.—For piloting an aircraft on a civil airway outside a 25-mile radius of the point of take-off while possessed of a student pilot certificate and other violations.

Order No. 276: Student pilot certificate of Charles Barnett revoked.

The Authority on December 1, revoked student pilot certificate No. 63087, held by Charles Barnett, Van Nuys, Calif., for piloting an aircraft acrobatically over Metropolitan Airport, Van Nuys, Calif., at a height of less than 1,000 feet and other violations of the Civil Air Regulations.

Order No. 277: Private pilot certificate of Russell E. Wilson revoked.

The Authority on December 1, revoked private pilot certificate No. 53038, held by Russell E. Wilson, Van Nuys, Calif., for piloting an aircraft acrobatically over Metropolitan Airport, Van Nuys, Calif., at a height of less than 1,000 feet and other violations of the Civil Air Regulations.

Order No. 278: Stanley H. Woodward denied rehearing on revocation of certificate.

The Authority on December 1 denied the application of Stanley H. Woodward, Kingsland, Ga., for a rehearing in connection with the revocation of private pilot certificate No. 27362.

C.A.A. OPINIONS

DOCKET No. 218

IN THE MATTER OF THE PETITION OF RICHARD W. SWANSON, JAMESTOWN, NEW YORK, FOR RECONSIDERATION OF HIS APPLICATION FOR ISSUANCE OF A STUDENT PILOT CERTIFICATE

Decided December 5, 1939

OPINION

BY THE AUTHORITY:

On November 9, 1938, the application of Richard W. Swanson, hereinafter called the petitioner, for a student pilot certificate, was denied by the Authority due to his failure to meet the minimum physical requirements prescribed for holders of such certificates by the Civil Air Regulations. On April 10, 1939, petitioner requested the Authority to reconsider his application. Thereafter, on August 11, 1939, pursuant to notice and in accordance with the provisions of section 602 of the Civil Aeronautics Act of 1938, the matter came on for hearing before a trial examiner designated by the Authority.

The trial examiner on September 7, 1939, filed with the Authority his report in which he found that petitioner's right leg has been amputated approximately 9 inches above the knee, but that evidence submitted by the petitioner at the hearing established that he possessed sufficient aeronautical skill and experience to compensate for this structural defect. The examiner recommended that the denial of the petitioner's application be vacated and that he be issued a student pilot certificate limiting his operation to class 1 aircraft not equipped with foot brakes.

No exceptions were taken by the petitioner to the trial examiner's report, nor was any request made that the Authority receive written or oral argument with regard to the case. Upon the entire record in the proceeding the Authority finds the following facts:

During the year 1924 the petitioner's right leg was amputated about 9 inches above the knee and for the past 10 years he has used an artificial leg. On July 9, 1934, the former Bureau of Air Commerce issued the petitioner a restricted student permit and in the 4 years following he acquired approximately 100 hours of solo flying time, including considerable experience flying solo under adverse weather conditions. On April 29, 1939, an aeronautical inspector of the Authority gave the petitioner a flight test similar to that given applicants for a private certificate, which included two-turn spins in both directions, 360° and 180° turns, two-turn spirals, vertical turns,

C.A.A. Opinions—Vol. I ^{Temporary} _{Page No. II}

S turns, S reverse turns, and figure 8's. This flight test was performed in a Taylor Cub not equipped with brakes and the petitioner completed the test in a manner satisfactory to the inspector. The petitioner has never flown an airplane provided with brakes and in the airplane used in his flight test it was not necessary for him to remove his feet from the floor in order to manipulate the rudder pedals. Upon the basis of the foregoing findings of fact and upon the entire record in the proceeding, the Authority finds that while the petitioner has a structural defect within the meaning of section 20.1042 (c) of the Civil Air Regulations, his experience and aeronautical skill compensate for such structural defect within the meaning of section 20.104 of the regulations, so that the petitioner may safely pilot class 1 aircraft, which have no foot brakes and in which the rudder pedals may be operated without raising the feet from the floor.

Under section 602 (b) of the act, the Authority may issue an airman certificate to an applicant if, after investigation, it appears that the applicant possesses proper qualifications for, and is physically able to, perform the duties pertaining to the position for which the airman certificate is sought. By reason of the findings and conclusions contained herein, it is the opinion of the Authority that the petitioner is physically able to perform the duties required of a student pilot, subject to the limitations and restrictions set out in the attached order.

ORDER

Now, therefore, pursuant to sections 205 (a) and 602 of the Civil Aeronautics Act of 1938, it is ordered that—

(1) The application of Richard W. Swanson of Jamestown, N. Y., for a student pilot certificate be, and the same is, granted.

(2) The petitioner be restricted to the navigation of class 1 aircraft which have no foot brakes and in which the rudder may be effectively operated without raising the feet and such other makes or models as may be designated on petitioner's student pilot certificate by an aeronautical inspector of the Authority.

Hinckley, Branch, Mason, Members of the Authority, concurred in the above opinion and order. Ryan and Warner, Members, did not take part in the decision.

Note on the Arrangement of These Pages.

This part of the CIVIL AERONAUTICS JOURNAL will be devoted in each issue to presenting a record of the official actions taken by the Civil Aeronautics Authority. Digests of all orders and regulations will be carried in outer columns under the title "Abstracts." Persons having specific interest in any of these orders may obtain complete verbatim copies by writing to the Director of Statistics and Information, Civil Aeronautics Authority, Washington, D. C.

In the inner columns will be carried verbatim copies of all opinions accompanying Authority actions. They are set in exactly the same type and format as will be used in bound volumes of such opinions to be issued in the future. The first part of Volume I of C. A. A. Opinions, which will include all opinions of the Authority from its organization to the date upon which it is ready for the presses, is now being prepared. After that date opinions as printed in the JOURNAL will be organized into divisions equivalent to pages in the ultimate bound volume and will carry at the head of each such division the actual page number it will bear in that volume. Thus reference to opinions by volume and page can be made within a few weeks after the opinion has been issued.

Until enough progress has been made on the first part of Volume I, finally to determine the volume page numbers of current opinions, opinions will be organized in the JOURNAL by pages but will carry mere temporary numbers in Roman numerals.

ABSTRACTS
(Continued)

Order No. 279: Private pilot certificate of Emil D. Hampel suspended for 30 days.

The Authority on December 1 suspended private pilot certificate No. 44971, held by Emil D. Hampel, Thornton, Ill., for a period of 30 days for piloting an aircraft on a civil airway over a congested area at an altitude not sufficient to permit at all times an emergency landing outside of such area in the event of complete power failure, and other violations of the Civil Air Regulations.

Order No. 280: Authority institutes investigation of mail pay of five airlines.

The Authority (December 1) finds that an inquiry is necessary to enable the Authority to determine whether the rates of compensation being paid to Delta Air Corporation for the trans-

ABSTRACTS*(Continued)*

portation of mail by aircraft, the facilities used and useful therefor, and the services connected therewith, as aforesaid, are fair and reasonable, and whether the total revenues received by said air carrier are greater or less than the revenues required to enable such air carrier, under honest, economical, and efficient management, to maintain and to continue the development of air transportation to the extent and of the character and quality required for the commerce of the United States, the Postal Service, and the national defense; and that it is necessary in order to carry out the provision of, and to exercise and perform its powers and duties under, said act to inquire into the aforesaid matters; and

Acting upon its own initiative and pursuant to the powers and duties vested in it under titles II, IV, and X of the Civil Aeronautics Act of 1938, particularly section 406 thereof:

Now, THEREFORE, IT IS ORDERED, That a proceeding be instituted (1) to determine whether the rates of compensation being paid to the aforesaid air carrier for the transportation of mail by aircraft, the facilities used and useful therefor, and the services connected therewith, are fair and reasonable in accordance with the rate-making elements set forth in the Civil Aeronautics Act of 1938, and particularly section 406 (b) thereof; and (2) to fix and determine the fair and reasonable rate or rates of compensation for the transportation of mail by aircraft over said routes by the aforesaid air carrier, the facilities used and useful therefor, and the services connected therewith.

Order No. 281: Similar action taken in connection with services rendered by Continental Air Lines, Inc.

Order No. 282: Similar action taken in connection with services rendered by Chicago & Southern Air Lines, Inc.

Order No. 283: Similar action taken in connection with services rendered by American Airlines, Inc.

Order No. 284: Similar action taken in connection with services rendered by Eastern Air Lines, Inc.

Order No. 285: Richard W. Swanson granted student pilot certificate. (For full text of opinion and order, see Docket No. 218, page 10.)

Order No. 286: Delta authorized to intervene in P. C. A. application.

The Authority on December 5 granted Delta Air Corporation per-

LAWRENCE C. AMES—INTERLOCKING RELATIONSHIP

In the matter of the application of Lawrence C. Ames and Continental Air Lines, Inc., filed pursuant to section 409 (a) of the Civil Aeronautics Act, for permission for Lawrence C. Ames to serve as a director of Continental Air Lines, Inc., while continuing to hold the position of director of the Lockheed Aircraft Corporation.

Decided December 11, 1939

Application of Lawrence C. Ames and Continental Air Lines, Inc., for approval of the holding by Lawrence C. Ames of the position of director of Continental Air Lines, Inc., an air carrier, while holding the position of director of Lockheed Aircraft Corporation, a manufacturer of aircraft, denied.

APPEARANCES:

Sheldon G. Cooper, for Lawrence C. Ames and Continental Air Lines, Inc.

Hubert A. Schneider, for Civil Aeronautics Authority.

OPINION**BY THE AUTHORITY:**

By an application filed May 19, 1939, pursuant to section 409 (a) of the Civil Aeronautics Act of 1938, hereinafter referred to as the "act," Lawrence C. Ames and Continental Air Lines, Inc., hereinafter referred to as "Continental," seek the approval of the Authority for applicant Ames to serve as a director of Continental while holding the position of director of the Lockheed Aircraft Corporation, hereafter referred to as "Lockheed."

After due notice to the public and interested parties, a public hearing on this application was held on August 12, 1939, before Examiner C. E. Leasure of the Authority. After the conclusion of the hearing—the examiner's report was duly filed and served, and, under the Authority's procedure, an opportunity was given for taking exceptions to this report. No exceptions were filed.

Applicant Ames, a citizen of the United States, resides at Oakland, Calif. He is a member and general partner of the firm of Irving Lundborg & Co., investment bankers and members of the San Francisco, Calif., Stock Exchange; a director and stockholder of Lockheed; and treasurer of the Compressed Steel Corporation.

The air carrier applicant, Continental, was incorporated in Nevada and has its general offices in Denver, Colo. It is the holder of certificates of public convenience and necessity issued by the Authority on March 9, 1939,¹ and April 28, 1939,² authorizing it to engage in

¹ Continental Air Lines, Inc., Docket No. 2-401-E-1, certificate of public convenience and necessity.

² Continental Air Lines, Inc., Docket No. 2-401-E-2, certificate of public convenience and necessity.

C.A.A. Opinions—Vol. I *Temporary
Page No. IV*

air transportation with respect to persons, property, and mail over Route No. 29 between Denver, Colo., and El Paso, Tex., and Route No. 43 between Wichita, Kans., and Pueblo, Colo., respectively. Continental's president testified that all of its officers, directors, and stockholders are citizens of the United States. Its outstanding

capital stock as of August 3, 1939, consisted of 19,540 shares distributed among 19 stockholders. Applicant Ames owned 1,600 shares and his wife 400 shares, a total of 2,000 shares, or slightly more than 10 percent of the total outstanding.

Lockheed, a corporation of the State of California, with its plant located at Burbank, manufactures private, commercial transport, and military aircraft. It had 775,000 shares of capital stock outstanding as of July 20, 1939, of which applicant Ames owned 6,400 shares and his wife 500 shares, or a combined holding of less than 1 percent of the total outstanding. Lockheed owns the controlling interest, 62 percent of the outstanding capital stock, in the Vega Airplane Co. The record shows that Lockheed itself is not financially interested in any other persons who are engaged in any phase of aeronautics but that some of its officers and directors are connected with such persons.

Ames first became interested in Lockheed in 1932, when Robert E. Gross, now president of Lockheed, sought his assistance in raising funds to reorganize that corporation, which was then in receivership. Thereafter Ames attended meetings of the board of directors as an observer and adviser. In April 1936 he was elected to the board as one of nine directors. The board meets monthly at Burbank, Calif. Ames testified that he has attended all meetings since becoming a director when matters of importance are considered and has spent considerable time in connection with the corporation's business other than at meetings of the board. His only compensation has been the regular director's fee, plus traveling expenses for attending meetings.

Continental's president testified that Ames had been invited to become a director of that company because of his wide experience in the field of aviation and investment banking and his ownership of a substantial block of the company's stock. If elected, Ames would fill one of two vacancies in an authorized board of seven members.

Meetings of Continental's board are held approximately once each month, either in Denver or San Francisco. Applicant Ames testified that if his application is approved by the Authority, he intends to be present at every regular meeting. The directors of Continental do not receive any compensation for attending directors' meetings. The record discloses that both Lockheed and the investment house with which Ames is associated have consented to his serving as a director of Continental.

Continental and its predecessor have used aircraft manufactured by Lockheed since 1934, and its use of this equipment was inaugurated

C.A.A. Opinions—Vol. I Temporary
Page No. V

prior to the time that the president of Continental became acquainted with Ames. Varney Air Transport Co., Continental's predecessor, purchased aircraft from Lockheed in April 1937, and since that date Continental has purchased two aircraft from Lockheed, and is now negotiating for the purchase of two additional aircraft. It was indicated by Continental's president that it is possible that Continental in the near future will be in the market for still additional aircraft. The president of Continental stated that applicant Ames did not participate in any of the negotiations between Continental and Lockheed with respect to the purchase of aircraft by Continental.

ABSTRACTS

(Continued)

mission to intervene in the application of Pennsylvania-Central Airlines Corporation for a certificate of public convenience and necessity, authorizing air transportation of persons, mail, and property between Norfolk, Va., and Cincinnati, Ohio, via Knoxville, Tenn.

Order No. 287: Venezuelan plane authorized to make United States trip.

The Authority on December 5 granted permission to the Asiatic Petroleum Co. for R. S. Enslow to pilot a Grumman Amphibian aircraft, bearing Venezuelan identification marks, in the continental United States from Miami, Fla., to Roosevelt Field, Long Island, and return, subject to certain terms and conditions.

Order No. 288: Walter E. Dicke ordered to show cause.

The Authority on December 5 directed Walter E. Dicke, Carthage, Mo., whose private pilot certificate No. 49591 was suspended on November 17 (order No. 265), to appear before an examiner of the Authority to show cause why this certificate should not be revoked in whole or in part, or further suspended in whole or in part.

Order No. 289: Lawrence C. Ames denied permission to serve on Continental Board. *(For full text of opinion and order, see Docket No. 246, page 12.)*

Order No. 290: flight of Venezuelan plane from United States authorized.

The Authority on December 7, granted permission to the Venezuelan Government for La Pierre Cavender and William C. Sanders to pilot two Lockheed aircraft bearing Venezuelan identification marks and owned by the Venezuelan Government, in the continental United States and the Canal Zone on a flight from Burbank, Calif., to Venezuela, subject to certain terms and conditions.

Order No. 291: Continental application consolidated with similar cases.

The Authority on December 7 consolidated the application of Continental Air Lines, Inc., to amend its existing certificate to authorize air transportation between Wichita, Kans., Bartlesville, Okla., and Tulsa, Okla., with applications of Braniff Airways, Inc., Kansas City Southern Transport Co., Inc., and Mid-Continent Air Lines, Inc.

ABSTRACTS
(Continued)

Order No. 292: Eastern authorized to intervene in P. C. A. application.

The Authority on December 8 granted Eastern Air Lines, Inc., permission to intervene in the application of Pennsylvania-Central Airlines Corporation for a certificate of public convenience and necessity, authorizing air transportation of persons, mail, and property between Norfolk, Va., and Cincinnati, Ohio, via Knoxville, Tenn.

Order No. 293: Pilot certificate of Charles P. Loring suspended.

The Authority on December 12 suspended for a period of 30 days from November 25, solo pilot certificate No. 50183, held by Charles P. Loring, Auburn, Maine, for piloting an aircraft carrying a person other than a certificated instructor actually giving instruction; and other violations of the Civil Air Regulations.

Order No. 294: special traffic rule C. A. A. No. 4 repealed.

The Authority on December 12, repealed special traffic rule C. A. A. No. 4 (April 18, 1939) which prohibited the navigation of aircraft in the immediate vicinity of the New York World's Fair.

Order No. 295: Braniff granted rehearing on air mail rate order.

The Authority on December 12, granted the petition and amended petition of Braniff Airways, Inc., for rehearing and reconsideration of the order and opinion of the Authority (Order No. 130), determining fair and reasonable rates of compensation to be paid said company for transportation of mail by aircraft, facilities used and useful therefor, and services connected therewith.

Order No. 296: Pan American exemption of New York-Baltimore operations extended.

The Authority on December 12, exempted Pan American Airways Co. (of Delaware), effective January 1, 1940, from the provisions of section 401 (a) of the Civil Aeronautics Act of 1938, with regard to the transportation by air between Baltimore and New York of persons and property (other than United States mail) destined to or originating in Bermuda, until June 1, 1940, or until such time prior thereto as adequate facilities become available in or near New York City.

It was testified that it was customary for the president of Continental to consult with its board of directors concerning his recommendations as to the purchase of equipment, but that members of the board had not participated in such transactions in any other manner. It was also testified that except in those cases where large sales contracts were involved, sales transactions of Lockheed were handled by its sales department without the necessity of action on the part of the board of directors.

Under the provisions of section 409 (a) ³ of the act, interlocking relationships between air carriers, or between an air carrier and any other person engaged in any phase of aeronautics are declared to be unlawful, unless such relationships are approved by the Authority upon due showing that the public interest will not be adversely affected thereby. The act furnishes no express standards to guide the Authority in passing upon applications under this section, other than the broad test of "public interest" and the partial definition of that term found in section 2 of the act. Accordingly, the Authority should proceed with caution, within the relatively broad limits of its discretionary power, in granting what amount to exceptions from the statutory prohibition. An applicant bears the burden of establishing by an affirmative showing that the public interest will not be adversely affected by the existence of a particular interlocking relationship. These conclusions are in accord with those reached by other agencies of the Government in administering statutes containing analogous provisions.⁴

³ Section 409 (a) provides, in part, as follows:

"After one hundred and eighty days after the effective date of this section, it shall be unlawful, unless such relationship shall have been approved by order of the Authority upon due showing, in the form and manner prescribed by the Authority, that the public interest will not be adversely affected thereby—

"(1) For any air carrier to have and retain an officer or director who is an officer, director, or member, or who as a stockholder holds a controlling interest, in any person who is a common carrier or is engaged in any phase of aeronautics. * * *

"(3) For any person who is an officer or director of an air carrier to hold the position of officer, director, or member, or to be a stockholder holding a controlling interest, or to have a representative or nominee who represents such person as an officer, director, or member, or as a stockholder holding a controlling interest, in any other person who is a common carrier or is engaged in any phase of aeronautics."

⁴ *In re Astor*, 193 I. C. C. 528. *In re Gifford and others*, 2 F. C. C. 741. *In re Cheadle and others*, 3 F. C. C. 694.

C.A.A. Opinions—Vol. I ^{Temporary}
_{Page No. VI}

In the instant case, evidence was introduced which indicates that Ames, in the opinion of Continental's president, is well-qualified by his experience in the field of aeronautics and finance to render valuable service as a member of the board of Continental. It has also been shown that although Continental uses Lockheed aircraft exclusively, that policy was inaugurated by Continental's predecessor before Ames became interested in Continental; that the transactions between Continental and Lockheed have been of such a nature as not to require action on such transactions by Lockheed's board of directors; and that there is no financial relationship between Lockheed and Continental.

However, an interlocking relationship such as is here proposed between an air carrier and a manufacturer of aircraft used or useful in air transportation necessarily involves a potential conflict of interest. Not only is the payment of excessive prices for equipment a hazard potentially involved in the existence of such a relationship, but the freedom of the carrier in choosing the type of equipment best

suited to its operations may be affected. A person common to the boards of directors of air carrier and manufacturer would find it difficult to act to the best interests of both in connection with negotiations by the air carrier relative to the purchase of equipment. These considerations may not be significant to the point of exercising a controlling effect upon the public interest where the purchases potentially affected by the proposed interlocking relationship are relatively small to the air carrier, but they become significant when, as in the present case, major business transactions of the air carrier, and equipment which may be purchased from competing manufacturers, may be involved.

Proof that the individual applicant did not as a director of the manufacturer influence purchases of aircraft, or that the recommendations of the officers of the companies as to purchases and sales of aircraft are not ordinarily reviewed or changed by the boards of directors, is not an affirmative showing sufficient to overcome the inherent danger involved in an interlocking relationship of this nature. That no presently existing actual harm or unethical purpose is found is not conclusive. The fact remains that the type of relationship here sought to be created is such as to furnish a medium through which the desirable arms-length relationship between buyer and seller may be materially altered.

Under the circumstances and upon consideration of the entire record, it is concluded that the applicants herein have not met the burden of proof placed upon them to show that the public interest will not be adversely affected by applicant Ames serving as a director of Continental while holding the position of director of Lockheed.

C.A.A. Opinions Vol. I Temporary
Page No. VII

Upon consideration of the record in this proceeding, the Authority finds:

(1) That Lockheed Aircraft Corporation is a person engaged in a phase of aeronautics, namely, the manufacture of aircraft used in air transportation, and that Lawrence C. Ames is a director thereof;

(2) That Continental Air Lines, Inc., is an air carrier;

(3) That service as a director of Continental Air Lines, Inc., and as a director of Lockheed Aircraft Corporation would potentially involve a substantial conflict of interest; and

(4) That Continental Air Lines, Inc., and Lawrence C. Ames have not made a due showing that the public interest will not be adversely affected by the holding by said Lawrence C. Ames of the position of director of Continental Air Lines, Inc., while holding the position of director of Lockheed Aircraft Corporation.

The application will be denied and an appropriate order will be entered.

Hinckley, Branch, Ryan, Mason, Warner, Members of the Authority, concurred in the above opinion.

ORDER

Lawrence C. Ames and Continental Air Lines, Inc., having filed application with the Authority on May 19, 1939, pursuant to section 409 (a) of the act for approval of the holding by said Lawrence C.

ABSTRACTS

(Continued)

Order No. 297: Offers accepted in compromise of civil penalties for violations.

The Authority on December 15 accepted certain offers in compromise of civil penalties incurred for violations of the Civil Aeronautics Act of 1938 and the Civil Air Regulations as follows:

Buren Binkley, Norfolk, Va.—For piloting an aircraft on a civil airway without possessing a valid pilot certificate, and other violations—\$75;

William S. Duncan, Long Beach, Calif.—For piloting an aircraft on a civil airway acrobatically at a height less than 1,500 feet, without being equipped with a proper parachute, and other violations—\$50;

Harland B. Tyler, Port Angeles, Wash.—For piloting an aircraft on a civil airway carrying a person other than a properly certificated instructor in an aircraft of a weight and engine classification other than as specified in his pilot certificate, and other violations—\$50;

John Edgar Umphress, Great Falls, Mont.—For piloting an aircraft in solo flight on and across various civil airways while holding a temporary student pilot certificate, and other violations—\$50;

Nicholas Wasil, Harvey Essy, Nick Kirda, and Alvin Kapper, Akron, Ohio.—For failure to prepare required repair and alteration forms following an accident involving an aircraft which they jointly owned, and other violations—\$25; and

Arnold Earl Zahnd, Livermore, Calif.—For piloting on a civil airway, while possessed of a student pilot certificate, an aircraft not having a valid aircraft registration or airworthiness certificate—\$50.

Order No. 298: Violations referred to the Attorney General for judicial action.

The Authority on December 15 referred the following cases to the Attorney General for judicial action for violations of the Civil Aeronautics Act of 1938 and the Civil Air Regulations:

Roy Allen Clifford Hill, Minneapolis, Minn.—For piloting on a civil airway without having any type of pilot certificate, an aircraft not possessed of a valid airworthiness certificate;

J. W. Harmon Lane, Albany, Ga.—For failure to present an aircraft to a certificated mechanic for inspection for each 100 hours of flight, and other violations; and

Sadi Fajardo, New York City.—For piloting an aircraft acrobatically on a civil airway while not possessed of a valid pilot certificate.

ABSTRACTS

(Continued)

Order No. 299: Alfred Charles Fox, pilot certificate suspended for 60 days.

The Authority on December 15 suspended private pilot certificate No. 65693, held by Alfred Charles Fox, Mason City, Wash., for a period of 60 days for piloting an aircraft carrying a person other than a certificated instructor in an aircraft of a weight and engine classification other than specified in his pilot certificate, and other violations of the Civil Air Regulations.

Order No. 300: Student pilot certificate of Fred J. Marsh, Jr., revoked.

The Authority on December 15, revoked student pilot certificate No. 43073, held by Fred Joseph Marsh, Jr., Half Moon Bay, Calif., for piloting an aircraft on a civil airway without having a valid pilot certificate, and other violations of the Civil Air Regulations.

Order No. 301: Private pilot certificate of Lowell Rackham revoked.

The Authority on December 15 revoked private pilot certificate No. 68959, held by Lowell Rackham, Ogden, Utah, for piloting an aircraft carrying passengers for hire, and other violations of the Civil Air Regulations.

Order No. 302: Commercial pilot certificate of Beauford R. Dake revoked.

The Authority on December 15 revoked commercial pilot certificate No. 27116, held by Beauford, R. Dake, Turners Falls, Mass., for piloting an aircraft on a civil airway acrobatically over a congested area, and other violations of the Civil Air Regulations.

REGULATIONS

Regulation No. 51: Pan American authorized to issue free transportation to Civil Aeronautics Administrator.

The Authority on December 15, authorized Pan American Airways, Inc., and Pan American-Grace Airways, Inc., to issue free transportation, not subject to space available, to the Administrator of the Civil Aeronautics Authority over their respective routes in the Caribbean, Central, and South America and Mexico, and return.

Ames of the position of director of Continental Air Lines, Inc., and the position of director of Lockheed Aircraft Corporation; and

A full hearing thereon having been held, and the Authority upon full consideration of the record of such proceedings having issued its opinion containing its findings of fact, conclusions and decision, which is attached hereto and made a part hereof, and finding that its action in this matter is necessary pursuant to said opinion;

Now, THEREFORE, IT IS ORDERED, That said application be and it is denied.