

CIVIL AERONAUTICS JOURNAL



ISSUED TWICE MONTHLY BY THE CIVIL AERONAUTICS AUTHORITY

VOLUME I

WASHINGTON, DECEMBER 15, 1940

NUMBER 24

Civilian Pilot Training Program Offers Three Types of Instruction to Trainees in 1940-41 Phase

Several Courses Included in Each Category; Spring Session to Include All Courses; Pilot Syllabus Flying Also To Be Given

Three distinct categories of ground- and flight-training courses are included in the 1940-41 civilian pilot training program, the fall session of which has been under way since October. The three categories include (1) pilot-training courses to qualify selected trainees for pilots' certificates of competency, (2) instructor-training courses to qualify experienced pilots as flight instructors,

and (3) pilot refresher courses enabling already trained pilots, holding either active or inactive certificates, to "brush up" on their flying and bring their knowledge and technique up to present-day standards.

There are several courses in each of the three categories. Not all of these are being offered in the current session of the program, but according to present plans, all will be in the spring session scheduled to start about February 1, 1941. A fourth category of training, to be known as pilot syllabus flying, will be offered after the first of the year. This will consist of additional ground and flight training for pilots who have completed the controlled private course or the private pilot refresher course.

The pilot-training courses are in two separate phases: college and noncollege. The college phase is conducted by established educational institutions and the noncollege under the sponsorship of selected civic organizations. In all courses—pilot training, instructor training, and refresher—in the Nation-wide program the actual flying instruction is given by a local flight operator.

Since the civilian pilot-training program is now a part of the national-defense program, the age and educational requirements are set up so as to best serve the interests of national defense.

Thus, the pilot-training courses and the private and the solo and amateur refresher courses are open only to applicants within the age limits and possessing the educational requirements acceptable to the military services for flight training, and these courses have as their primary objective the preliminary training of students desirous of entering the Army or Navy flying services.

The commercial refresher and the primary and advanced instructor courses, on the other hand, are open to applicants who exceed the military age limits. They are, however, open only to applicants having considerable flying experience and aeronautical knowledge. These courses are designed to fit into the entire national-defense picture by

(Continued on next page)

Mayo Foundation To Have Aviation Research Project

Completion of arrangements by which the Mayo Foundation, at the request of the Civil Aeronautics Administration, will conduct extensive research into the correlation between physical examinations of civilian airplane pilots and their actual performance in flight was announced on November 20 by Robert H. Hinkley, Assistant Secretary of Commerce.

The Mayo Foundation for Medical Education and Research, long interested in the medical problems of aviation and recently cowinner with the airlines of the Collier Trophy, will conduct the research as a public service and at its own expense, the only cost to the Government being C. A. A. flight courses for several of the doctors conducting the studies, he explained.

(See MAYO, page 527)

Notice

This issue (No. 24) completes volume I of the Civil Aeronautics Journal. The next issue, dated January 1, 1940, will begin volume II.

To facilitate the location of stories, articles, and tabular material which appeared in volume I, there is carried, beginning on page 517 of this issue, a complete index covering the year 1940. This index is grouped alphabetically, by subjects, and is comprehensively cross-indexed, each reference carrying the number and date of the issue in which the item appears, as well as the page number.



PUBLISHED WITH THE APPROVAL OF THE DIRECTOR OF THE BUREAU OF THE BUDGET

Issued on the 1st and 15th of each month. Subscription \$1 (foreign \$1.50) per year. Single copies 5 cents. Sold by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.

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Abstracts of opinions and orders and full texts or abstracts of regulations issued by the Civil Aeronautics Board during the period November 15-30, 1940.

Private Flying

C. P. T. P. Texts Available

The following new editions or revisions of texts being used in the civilian pilot training program now are available, and the remainder in the series of 10 publications will become available shortly:

- CIVIL AERONAUTICS BULLETIN NO. 5, FLIGHT INSTRUCTOR'S MANUAL; 137 pages, illustrated. Price 30 cents.
- CIVIL AERONAUTICS BULLETIN NO. 22, DIGEST OF CIVIL AIR REGULATIONS FOR PILOTS; 71 pages, illustrated. Price 20 cents.
- CIVIL AERONAUTICS BULLETIN NO. 23, CIVIL PILOT TRAINING MANUAL; 257 pages, 95 illustrations. Price 50 cents.
- CIVIL AERONAUTICS BULLETIN NO. 26, AERODYNAMICS FOR PILOTS; 158 pages, illustrated. Price 30 cents.
- CIVIL AERONAUTICS BULLETIN NO. 27, PILOTS' AIRPLANE MANUAL; 150 pages, illustrated. Price 30 cents.
- CIVIL AERONAUTICS BULLETIN NO. 30, GROUND INSTRUCTOR'S MANUAL; 51 pages, illustrated. Price 15 cents.

When ordering these publications, send remittance by postal money order, express order, coupons, or check to the Superintendent of Documents, Government Printing Office, Washington, D. C. Always give title, issuing office, or classification number when listed.

AIR AGENCY CERTIFICATES

Schools Certificated

- Airways, Inc., Airport, Waterville, Maine, approved October 31, 1940, as an advanced flying school (private and commercial).
- Cannon Aircraft Sales & Service, Inc., box 291, Charlotte, N. C., approved November 19, 1940, as an advanced flying school (private and commercial).
- East Coast Airways, Inc., Clark Airport, W. Hanover, Mass., approved November 19, 1940, as a primary flying school (private).
- Greenwood Flying Service, Greenwood Airport, Greenwood, Miss., approved November 20, 1940, as an advanced flying school (private and commercial).
- Herman L. Martin's School of Flying, Municipal Airport, Walla Walla, Wash., approved October 31, 1940, as a primary flying school (private).
- Mauldin Aircraft, Mauldin Airport, Brownsville, Tex., approved November 2, 1940, as an advanced flying school (private and commercial).
- Odessa Flying Service, box 1646, Odessa, Tex., approved November 19, 1940, as a primary flying school (private).
- Stillwater Flying Service, box 466, Stillwater, Okla., approved October 31, 1940, as an advanced flying school (private and commercial).
- Utica Aviation School Incorporated, Utica Airport, Utica, N. Y., approved November 22, 1940, as an advanced flying school (private and commercial).
- Virginia Polytechnic Institute, Blacksburg, Va., approved November 19, 1940, as an advanced flying school (private and commercial).

Repair Stations Certificated

Jersey Flying Service, Inc., North Jersey Airport, Oakland, N. J., approved November 20, 1940, for repair of aircraft welded steel tube structure (not

including fittings); aircraft wooden structure (not including box and laminated spars, wood-covered fuselages, wings, or control surfaces); aircraft fabric covering; aircraft steel fittings; aircraft aluminum alloy structure (not including fittings); aircraft assembly; aircraft engines.

Pan American Airways System—Panair do Brazil, South America, Belem do Para, Brazil, South America, approved October 31, 1940, for repair of aircraft welded steel tube structure (not including fittings); aircraft fabric covering; aircraft steel fittings; aircraft aluminum alloy fittings; aircraft assembly.

Quoddy Regional Project, National Youth Administration, Quoddy Village, Maine, approved November 20, 1940, for repair of aircraft welded steel tube structure (not including fittings); aircraft wooden structure (not including box and laminated spars, wood-covered fuselages, wings, or control surfaces); aircraft fabric covering; aircraft wood-covered fuselages, wings, and control surfaces, and box and laminated spars; aircraft steel fittings; aircraft aluminum alloy structure (not including fittings); aircraft assembly; aircraft engines.

Kenneth William Schuler, Pittsburgh-Butler Airport, R. F. D. No. 6, Butler, Pa., approved November 20, 1940, for repair of aircraft welded steel tube structure (not including fittings); aircraft wooden structure (not including box and laminated spars, wood-covered fuselages, wings, or control surfaces); aircraft fabric covering; aircraft steel fittings; aircraft aluminum alloy structure (not including fittings); aircraft assembly; aircraft engines.

Virginia Polytechnic Institute, Blacksburg, Va., approved November 20, 1940, for repair of aircraft welded steel tube structure (not including fittings); aircraft wooden structure (not including box and laminated spars, wood-covered fuselages, wings, or control surfaces); aircraft fabric covering; aircraft steel fittings; aircraft aluminum alloy structure (not including fittings); aircraft assembly; aircraft engines.

Change in List of Repair Stations

Delete from Transcontinental & Western Air, Inc., LaGuardia Field, N. Y., for repair of aluminum alloy propeller blades and/or steel hubs; engines; instruments.

C. P. T. COURSES

(Continued from preceding page)

providing a reservoir of pilots qualified to serve as instructors. Participants in all C. P. T. courses must be citizens of the United States and must pledge themselves (before taking the training) to make their services available to the United States Government if needed in case of a national emergency.

The various courses now offered or contemplated under the civilian pilot-training program are listed on the page opposite. (The courses proposed for the spring session are subject to changes, should this be found necessary.) Additional information and applications for the training may be obtained from the Civilian Pilot Training Service, Civil Aeronautics Administration, Department of Commerce, Washington, D. C. In writing, applicants should specify the particular course in which they are interested and for which they feel they are qualified.

Instruction Courses of the Civilian Pilot Training Program

PILOT TRAINING COURSES

| | PRIVATE (college) | PRIVATE (noncollege) | RESTRICTED COMMERCIAL (college) | RESTRICTED COMMERCIAL (noncollege) |
|-----------------------------------|---|---|--|---|
| Prerequisites: | | | | |
| Age..... | Applicant must have attained his nineteenth but not his twenty-sixth birthday. | Same as for private (college)..... | Same as for private (college)..... | |
| Citizenship..... | Applicant must be United States citizen. |do..... |do..... | |
| Physical condition..... | Applicant must meet requirements for commercial C. P. T. flight physical examination. |do..... | Same as for private (college); in addition must pass complete eye examination including refraction. | |
| Selection of trainees..... | Selected by sponsoring institution. If enrolled in college, must have completed 1 full year of college work; if not enrolled, 2 full years of college work. | Flight training awards are based on competition in the ground course which precedes flight training. | Must hold active private pilot certificate obtained in the C. P. T. private course. | NOT OFFERED IN FALL SESSION, 1940. DETAILS FOR SPRING SESSION, 1941, WILL BE ANNOUNCED LATER. |
| Cost to student..... | \$10 course fee; \$8 insurance; ¹ \$6 physical examination. | \$6 physical examination; successful competitor awarded flight scholarship must also pay \$10 insurance fee. ¹ | \$10 course fee; \$12 insurance; ¹ \$6 physical examination. ² | |
| Training offered: | | | | |
| Ground..... | 72 classroom hours Civil Air Regulations; Aircraft Operations; Meteorology; and Navigation. | Same as for private (college)..... | 126 hours Civil Air Regulations; Navigation; Powerplants; Aircraft (aerodynamics and structures); Aircraft Operations. | |
| Flight..... | 35 to 45 hours controlled private flying course. |do..... | 40 to 50 hours of controlled Restricted Commercial flying course. | |

¹ Subject to change by underwriters.

² This for complete eye examination, student having already passed commercial C. P. T. physical. (See physical condition prerequisites.)

INSTRUCTOR TRAINING COURSES

| | APPRENTICE INSTRUCTOR | PRIMARY INSTRUCTOR | ADVANCED INSTRUCTOR |
|-----------------------------------|--|--|---|
| Prerequisites: | | | |
| Age..... | Applicant must have attained his nineteenth but not his twenty-seventh birthday. | Applicant must have attained his nineteenth but not his forty-fifth birthday. | Applicant must have attained his nineteenth but not his fortieth birthday. |
| Citizenship..... | Applicant must be United States citizen..... | Same as for apprentice instructor..... | Same as for apprentice instructor. |
| Physical condition..... | Applicant must meet requirements for commercial C. P. T. flight physical examination for the restricted commercial course. | Applicant must meet requirements for commercial physical examination. | Same as for primary instructor. |
| Selection of trainees..... | Applicant must have successfully completed the restricted commercial course, and be recommended by flight operator from whom he received restricted commercial training. | Applicant must hold active commercial pilot certificate. | Applicant must hold active commercial pilot certificate and active primary instructor rating. |
| Cost to student..... | \$9 insurance ¹ | \$6.50 insurance ¹ | \$7.50 insurance. ¹ |
| Training offered: | | | |
| Ground..... | 35 hours on analysis and explanation of flight maneuvers and approved instruction practices. | 20 hours on analysis and explanation of flight maneuvers and approved instruction practices. | None. |
| Flight..... | 30 hours..... | 10 to 15 hours..... | 18 to 25 hours. |

¹ Subject to change by underwriters.

PILOT REFRESHER COURSES

| | COMMERCIAL PILOT REFRESHER | PRIVATE PILOT REFRESHER ¹ | SOLO AND AMATEUR PILOT REFRESHER ¹ |
|-----------------------------------|--|---|--|
| Prerequisites: | | | |
| Age..... | Applicant must have attained his nineteenth but not his forty-fifth birthday. | Applicant must have attained his nineteenth but not his twenty-sixth birthday. | Applicant must have attained his nineteenth but not his twenty-sixth birthday. |
| Citizenship..... | Applicant must be United States citizen. | Same as for commercial pilot refresher..... | Same as for commercial pilot refresher. |
| Physical condition..... | Applicant must meet requirements for commercial flight physical examination. | Applicant must meet requirements for commercial C. P. T. flight physical examination. | Same as for private pilot refresher. |
| Selection of trainees..... | Applicant must have minimum of 175 hours of certified solo time and must pass required ground examination for commercial certificate. ² | Applicant must hold or have held private pilot certificate not obtained in controlled private flight course; must have completed one-half or more of necessary credits leading to a degree in an institution whose credits are accepted by U. S. Army or Navy; must have successfully completed controlled private ground course in approved school to be eligible for flight training. | Applicant must hold active or inactive solo or amateur pilot certificate or possess equivalent in certified aeronautical experience; must have had 2 years college work acceptable by U. S. Army or Navy; must have successfully completed controlled private ground course in approved school to be eligible for flight training. |
| Cost to student..... | \$6.50 insurance; ³ \$6 physical examination. | \$6.50 insurance; ³ \$6 physical examination..... | \$10 insurance; ³ \$6 physical examination. |
| Training offered..... | 15 to 25 hours flight..... | 10 to 15 hours flight..... | 25 to 30 hours flight. |

¹ Not offered in fall session, 1940.

² Examination not required if applicant holds active commercial certificate or inactive commercial which has been lapsed less than 1 year.

³ Subject to change by underwriters.

AIR SAFETY

Don't Ride With Student Pilots, C. A. B. Urges

Bulletin Discusses Risks Involved; Warns of Rigid Enforcement of Regulations, and Asks Cooperation of Airport Managers and Officials

Last year more than 40 percent of the accidents in all civil aviation which resulted in fatalities to passengers occurred when a student pilot was at the controls, according to the Civil Aeronautics Board.

This statement is included in the Board's bulletin on the dangers of riding with student pilots. The Board outlines the hazards involved and warns that it will penalize every detected violator to the full extent of its powers.

Following is the Board's statement, and also included are additional reports by the Board on individual private flying accidents. These reports outline the circumstances leading up to the mishap, list the probable cause, contributing factors, and in many cases include comments as to how future occurrence of similar accidents may be prevented.

« »

"Don't ride with student pilots!!!" was the warning issued to the public on November 16 by the Civil Aeronautics Board.

"First, accepting a ride from a student pilot is accepting one of the greatest risks still connected with aviation," the Board explained. "Last year, more than 40 percent of the accidents in all civil aviation which resulted in fatalities to passengers occurred when a student pilot was at the controls.

"Second, in accepting a ride with a student pilot you will be helping that student to violate a Civil Air Regulation which has been established to protect you and the rest of the public against injury or death. Furthermore, even if you complete your flight in safety, you

will be jeopardizing the whole flying career of the student with whom you fly, for you will expose that student to the certain penalty of having his certificate revoked. With so many fatalities resulting from the violation of this rule, the Civil Aeronautics Board would be derelict in its duty if it did not penalize every detected violator to the full extent of its powers. A few days ago the Board, exercising its quasijudicial function, revoked the certificate of six student pilots for the violation of this rule. Henceforth, any student pilot found to have carried passengers, with or without pay, must expect to suffer a similar revocation of his pilot certificate.

"The inspection staff of the Administrator of Civil Aeronautics has assured us of its fullest cooperation. The Board is using every channel of approach to student pilots to warn them of the severity of its attitude. We hope that airport managers and aviation officials of all kinds will help us decrease this hazard by discouraging students from offering such illegal flights. But the public itself can help too by refusing such flights when they are offered. In case of doubt, ask to see the certificate of the pilot who has offered you a ride. If it says 'Student Pilot,' stay out of his plane!

"Conducted with proper discretion the flying done by a student pilot while training for his private pilot certificate is not dangerous. But a student who offers an illegal ride isn't demonstrating proper discretion. He is trying to show off a new prowess he probably doesn't possess. An unfinished pilot in a show-off mood is a menace which the Civil Aeronautics Board has no intention of tolerating."

ONE DEAD, ONE INJURED AFTER STALL IN GLIDING TURN.—A stall and spin which developed during a gliding turn at low altitude caused the death of Student Pilot Stanley W. Van Fosson and serious injury of Private Pilot Robert W. Wetherald, near Minerva, Ohio, on June 20. Although Pilot Wetherald was not possessed of an instructor's certificate, the two took off from Unkefer Airport at Minerva on a flight prearranged as a student check

flight. With engine throttled the plane stalled in a right turn, entering into a right spin. After a partial recovery it crashed. The aircraft was a Piper J-2, with dual controls operative.

Probable Cause.—Pilot permitted the aircraft to stall and spin while executing a gliding turn at low altitude.

Contributing Factor.—Inexperience of the pilot.

RECKLESS PILOT KILLED AS PLANE SLIPS DURING LOW ALTITUDE TURN.—Loss of control of the aircraft during a steep turn at low altitude caused the accident at Eagle Lake, near Kansasville, Wis., on July 5, in which uncertificated Pilot William M. Whelan was killed and passenger Robert Fortune was seriously injured. Pilot Whelan held a private license which had expired 5 days before the fatal flight. He was flying a Piper J-4-A, which he had rented at Racine, Wis. The owner of the aircraft stated that Whelan was known to be reckless. However, he had promised not to land the plane at any but established airports. The evidence indicates, though, that he stopped at a field shortly after take-off and exchanged passengers, taking on Fortune. He then headed for Eagle Lake, where, witnesses stated, the plane was observed to circle a fishing boat at an estimated altitude of about 50 feet. Then it slipped out of a steep turn and fell into shallow water.

Probable Cause.—Pilot lost control of the aircraft during a steep turn at low altitude.

Contributing Factor.—Recklessness of pilot.

FUEL EXHAUSTION LEADS TO FATAL ACCIDENT.—Loss of control during a landing attempt, necessitated by a lack of fuel, resulted in a fatal accident to Student Pilot Brownie Evick near Newport News, Va., on July 21. Evick had taken off from Newport News Field in his personally owned Aeronca K. About an hour and a half later a pilot investigating a crashing sound near the field sighted the wreckage of Evick's plane about 300 yards beyond the end of a runway. Subsequent inspection indicated engine failure in flight, due to lack of fuel, followed by an attempt to reach the field in too flat a glide.

Probable Cause.—Loss of control during an attempted forced landing following engine failure due to fuel exhaustion.

Contributing Factor.—Negligence of pilot in permitting fuel supply to become exhausted.

Comment.—For safety know your fuel consumption in gallons per hour; know the amount you have in your tanks; carry an accurate watch to tell you when you are nearing the end of

your fuel supply (in case the gages are not accurate). Always plan to land with at least 25 percent of your tank for reserve on cross-country flights.

MID-AIR COLLISION FATAL TO THREE.—When pilots of two aircraft failed to observe and avoid each other's craft in flight near Tulsa, Okla., on June 17, a collision resulted which was fatal to Cadet Pilot Daniel B. Stone, Commercial Pilot John H. Longmaid, and Private Pilot Louis A. Siebel. Cadet Pilot Stone had been aloft for about an hour practicing pylon turns at an altitude below 1,000 feet and had abandoned his practice and climbed above 1,000 feet to return to his base. Instructor Longmaid and Pilot Siebel had taken off for a training flight about 8:20 a. m. The two aircraft, a Spartan C-3, and an Army PT-3, were seen to collide head-on at an altitude of about 1,200 feet about 6 miles east of Tulsa. Both aircraft were destroyed by the collision and ensuing flames. Two Tulsans were injured slightly by falling debris. Good horizontal visibility prevailed at the time.

Probable Cause.—Failure of all concerned to observe and avoid other aircraft in flight.

Comment.—Expect the other fellow to be less alert than you. LOOK for him; do not rely on him to see you.

PLANE STALLS IN TURN, HITS TREE ON PRACTICE FLIGHT.—A stall which developed during a gliding approach for a simulated forced landing caused a crash near Dallas, Tex., on July 16, in which Commercial Pilots Theodore L. McLendon and Curtis Hudson were injured. Hudson and McLendon had been engaged in a practice flight as part of an advanced course of instruction in which they were enrolled at a local flying school. Hudson had closed the throttle to test McLendon's ability at simulated forced landings. McLendon, in his landing approach, stalled the aircraft, a Piper J-3-L, during a turn and it struck a treetop and settled to the ground, where it nosed over receiving major damage.

Probable Cause.—Pilot stalled the aircraft during a gliding approach for a simulated forced landing.

Contributing Factor.—Carelessness of both pilots in not promptly applying power when a stall became imminent.

INSTRUCTOR FATALLY INJURED AS PLANES COLLIDE.—Failure of instructors in two aircraft to observe and avoid each other caused the accident near Detroit, Mich., on July 30, in which Instructor John W. Stevenson was killed and Student Pilot Lowell Bernhardt seriously injured. On the day of the crash, Instructor Stevenson and Student Pilot Bernhardt took off from Detroit City Airport in a Piper J-3-c aircraft for a practice flight. They flew in a northerly direction to an altitude of about 3,000 feet. Shortly before their take-off, Instructor Michael

October Safety Report:

Airlines Fly 10,000,000 Miles Without Fatality or Injury; 23 Fatalities in Private Flying, Down 26% From 1939

During the month of October 1940, scheduled air carriers in the United States transported approximately 300,000 passengers and flew more than 10,000,000 miles without a single fatality or injury, while nonscheduled commercial and private flying together resulted in 23 fatal accidents, the Civil Aeronautics Board reported.

The monthly report on civil aviation accidents shows a drop in fatal nonair carrier accidents from 31 in September to 23, a decrease of 26 percent. The figures comparing fatal accidents which occurred during September and October, 1939 and 1940 follow:

| | Nonair carrier | | Air carrier | | Total |
|-------------------|---------------------|------------|-------------|----------|-------|
| | C.P.T. ¹ | Non-C.P.T. | Foreign | Domestic | |
| October 1940..... | 2 | 21 | 0 | 0 | 23 |
| October 1939..... | 0 | 15 | 0 | 0 | 15 |
| September 1940... | 1 | 30 | 0 | 0 | 31 |
| September 1939... | 0 | 19 | 0 | 0 | 19 |

¹ Denotes Civilian Pilot Training Program of C. A. A.

The Board reported 113,745 persons holding the various types of flying certi-

ificates during October, of which number 60,234 were student pilots. Private, commercial, airline, and glider pilots accounted for 54,638 of the active certificates during the month.

On the basis of the monthly figures, more than 50 percent of the pilots during the month held student certificates, while only six, or 26 percent, of the accidents were charged to instructional flying. However, pilots holding student certificates also accounted for some of the accidents listed under "pleasure flying." The table also shows that the 17,000 C. P. T. students accounted for two of the six instructional accidents.

Revealed by the report is the fact that at least 15 of the fatal accidents might have been avoided had pilots exercised more skill or exhibited better judgement. Nine were caused by spins or stalls, one by an attempt to stretch a glide, one by a collision and four by failure to avoid obstructions near the ground such as trees, power lines, hills, and other aircraft taking off or landing. Ten of these occurred on pleasure flights, four during student flights and one during a flight of undetermined status. One of the pleasure flight accidents occurred to a glider.

Analysis of fatal nonscheduled commercial and private flying accidents during October 1940:

| Cause | Instructional | | Pleasure | | Commercial | | Other | Undetermined status | Total |
|--------------------------------------|---------------|------|----------|---------------|------------|---------------|-------|---------------------|-------|
| | Solo | Dual | Local | Cross-country | Local | Cross-country | | | |
| Spin—stall..... | 2 | 1 | 14 | 1 | | | | 1 | 9 |
| Stretched glide..... | | | 1 | | | | | | 1 |
| Struck tree..... | | | | 1 | | | | | 1 |
| Fire ² | | | | | | 1 | | | 1 |
| Power plant..... | 1 | | 1 | | | | | | 2 |
| Collision with another aircraft..... | | | | | 1 | | | | 1 |
| Propeller accident..... | | 1 | | | | | | | 1 |
| Struck third party on take-off..... | | | | | | | | 1 | 1 |
| Struck power line..... | | | 2 | | | | | | 2 |
| Undetermined..... | | 1 | | | | | | 2 | 3 |
| Total..... | 3 | 3 | 8 | 3 | 1 | 1 | | 4 | 23 |

¹ 1 fatal glider accident.

² Complete information not received.

³ This includes 2 C. P. T. pilots and 5 C. P. T. graduates.

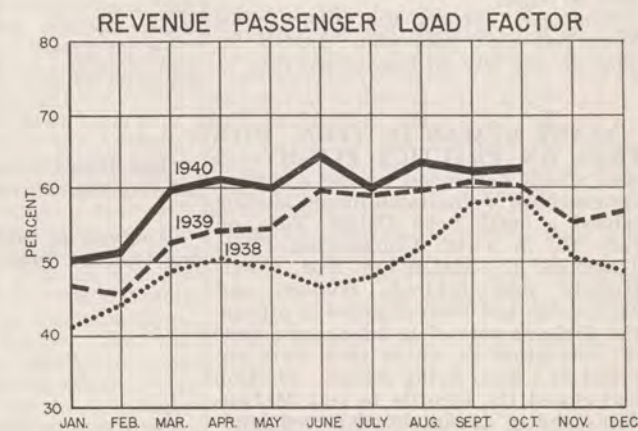
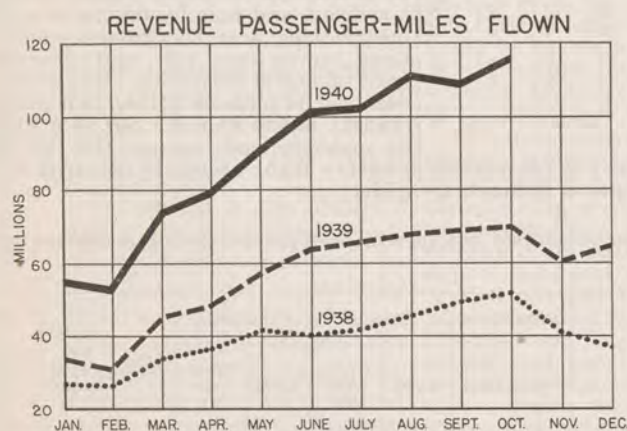
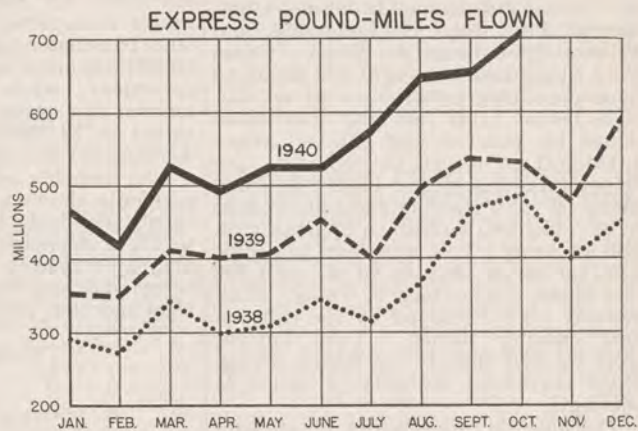
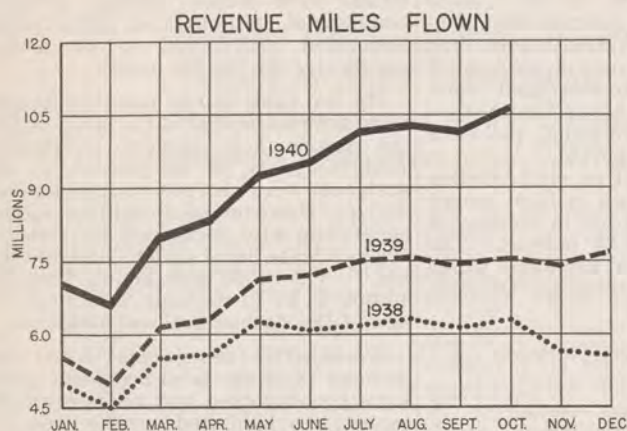
Them and Student Pilot Edward Olbey had taken off from the same airport in an Aeronca 50-C aircraft and proceeded to an altitude of approximately 2,000 feet, southeast of the airport. Both aircraft arrived coincidentally in landing approaches at a point about a mile from the airport, the Piper crossing the flight path of the Aeronca. The Aeronca struck the tail surfaces of the Piper, damaging its own propeller and destroying the

stabilizer and left elevator on the Piper. The Piper dived to the ground and was completely destroyed. Instructor Them cut the engine of the Aeronca and executed a "dead stick" landing on the Detroit City Airport and neither he nor his student was injured.

Probable Cause.—Failure of Instructor Stevenson and Instructor Them to exercise such diligence while approaching for a landing that would have avoided a collision.

Air Transportation

Domestic Air Carrier Traffic Statistics for 1938, 1939, and the First 10 Months of 1940



Domestic Air Carrier Traffic Statistics for October 1940

| Operator | Revenue-miles flown | | Revenue passengers carried | | Revenue passenger-miles flown | | Express pound-miles flown | | Revenue passenger load factor (percent) | |
|---|---------------------|--------------------------|----------------------------|--------------------------|-------------------------------|--------------------------|---------------------------|--------------------------|---|--------------|
| | October 1940 | Percent change over 1939 | October 1940 | Percent change over 1939 | October 1940 | Percent change over 1939 | October 1940 | Percent change over 1939 | October 1940 | October 1939 |
| American Airlines, Inc. | 2,712,169 | 49.27 | 104,158 | 76.16 | 35,398,139 | 58.47 | 207,636,114 | 41.58 | 71.46 | 72.11 |
| Boston-Maine Airways, Inc. | 91,056 | 54.51 | 3,089 | 103.89 | 452,046 | 88.37 | 513,964 | 72.10 | 50.51 | 40.70 |
| Braniff Airways, Inc. | 434,503 | 36.73 | 12,966 | 96.07 | 3,920,015 | 87.09 | 20,883,261 | 77.40 | 47.98 | 66.88 |
| Chicago & Southern Air Lines, Inc. | 209,352 | 28.00 | 5,740 | 139.07 | 2,115,085 | 125.95 | 8,690,690 | 41.17 | 50.77 | 57.23 |
| Continental Air Lines, Inc. | 125,203 | 23.06 | 1,521 | 92.78 | 462,853 | 95.55 | 838,948 | 86.59 | 36.88 | 33.65 |
| Delta Air Corporation | 210,744 | 39.49 | 5,851 | 84.98 | 1,491,032 | 82.75 | 2,862,132 | 27.39 | 58.80 | 54.00 |
| Eastern Air Lines, Inc. | 1,461,469 | 53.06 | 39,904 | 67.97 | 14,821,387 | 62.61 | 85,879,105 | 52.67 | 55.08 | 54.27 |
| Inland Air Lines, Inc. | 103,320 | 23.69 | 1,166 | 42.72 | 300,521 | 37.45 | 590,574 | 56.53 | 29.09 | 26.17 |
| Mid-Continent Airlines, Inc. | 141,417 | 28.82 | 2,711 | 45.75 | 760,441 | 58.02 | 1,347,189 | 38.22 | 42.17 | 45.27 |
| National Airlines, Inc. | 102,191 | 73.35 | 1,858 | 120.93 | 423,527 | 120.18 | 996,416 | 69.17 | 41.44 | 32.66 |
| Northwest Airlines, Inc. | 542,514 | 17.04 | 14,026 | 60.70 | 5,365,844 | 50.89 | 24,591,811 | 22.41 | 49.70 | 45.95 |
| Pennsylvania-Central Airlines Corporation | 391,338 | 21.42 | 24,603 | 103.45 | 4,276,395 | 106.25 | 17,531,093 | 48.94 | 56.62 | 64.34 |
| Transcontinental & Western Air, Inc. | 1,599,475 | 38.49 | 37,293 | 65.42 | 18,712,597 | 70.15 | 112,936,303 | 49.15 | 66.65 | 56.67 |
| United Air Lines Transport Corporation | 2,267,712 | 37.14 | 50,118 | 67.37 | 25,125,432 | 58.92 | 230,803,420 | 28.11 | 66.43 | 63.00 |
| Western Air Express Corporation | 235,397 | 29.79 | 4,993 | 91.60 | 1,695,111 | 82.60 | 17,387,309 | 5.97 | 49.37 | 41.67 |
| Wilmington-Catalina Airlines, Ltd. | 7,350 | -7.90 | 1,409 | -1.61 | 42,270 | -1.61 | 346,650 | 14.52 | 56.18 | 51.92 |
| Total | 10,635,210 | 39.46 | 311,406 | 74.53 | 115,362,695 | 64.52 | 733,834,979 | 38.46 | 62.33 | 60.58 |

Statistical Summary



The domestic scheduled air carriers in October continued to show sharp increases in traffic operations over the corresponding month of 1939, according to figures filed with the Civil Aeronautics Administration.

Sharpest gain shown was in revenue passengers carried, the October total being 311,406, a 74.53 percent increase over the total for October last year. Revenue passenger miles flown totaled 115,362,695, a gain of 64.52 percent over October 1939. Revenue miles flown reached 10,635,210, up 39.46 percent over the comparable month last year, while express pound-miles flown totaled 733,834,979, a 38.46 percent increase over the same month last year.

The revenue passenger load factor for October this year was 62.33 percent compared with 60.58 percent for October 1939.

Air Lines Fly 30.47% More Miles, Carry 63.96% More Passengers in First Half

United States domestic, foreign, and territorial air carriers during the first 6 months of this year flew 30.47 percent more revenue-miles and carried 63.96 percent more revenue passengers than during the comparable months of 1939, according to reports filed with the Civil Aeronautics Administration.

During the period of this year under review, the reporting lines flew 53,661,018 miles and carried 1,262,179 passengers. The corresponding totals for the first 6 months of 1939 were 41,128,792 and 769,806, respectively.

Traffic statistics for the domestic air carriers alone show increases in these categories slightly over the gains recorded by the domestic plus the foreign and territorial routes. During the January-June period of this year, revenue passenger-miles flown by the domestic carriers totaled 49,021,661, a 31.84-percent increase over the 37,182,929 flown in the January-June period of 1939. Revenue passengers carried totaled 1,151,458, a 66.46-

percent gain over the 691,745 carried in the 1939 months.

During the first 6 months of this year, the lines had in operation on all routes, including domestic, foreign, and territorial, a total of 405 aircraft, flew 53,661,018 revenue-hours, and consumed 863,221,077 gallons of gasoline. Employment was furnished to 966 pilots, 1,109 copilots, 211 dispatchers, 4,769 mechanics and riggers, and 3,854 other hangar and field personnel; 204 stewards, 676 stewardesses, and 7,738 office personnel were employed. Total airline employees, including 395 in miscellaneous categories, numbered 19,922.

In the following tabulations, table A shows operations statistics for all air carriers, divided as to domestic and foreign routes, and combined totals for domestic and foreign and territorial routes together. Table B shows domestic, and foreign and territorial operations by companies, and table C shows carrier results, divided by months:

(Tables B and C on following pages)

TABLE A.—Air Carrier Operations Statistics for the Periods January-June 1940 and 1939

Domestic

| | January-June 1940 | January-June 1939 | Percent of increase over 1939 |
|--|-------------------|-------------------|-------------------------------|
| Revenue-miles flown..... | 49,021,661 | 37,182,929 | 31.84 |
| Revenue passengers carried..... | 1,151,458 | 691,745 | 66.46 |
| Revenue passenger-miles flown..... | 453,455,729 | 278,639,196 | 62.74 |
| Express carried (pounds)..... | 5,204,610 | 4,041,759 | 28.77 |
| Express pound-miles flown..... | 2,948,425,961 | 2,387,187,546 | 23.51 |
| Mail pound-miles flown..... | 19,621,633,188 | 18,128,512,388 | 18.37 |
| Available passenger seat-miles flown..... | 776,594,069 | 526,725,673 | 47.44 |
| Revenue passenger load factor (percent)..... | 58.39 | 52.90 | 10.38 |

Foreign and Territorial

| | | | |
|--|------------|------------|-------|
| Revenue-miles flown..... | 4,639,357 | 3,945,863 | 17.58 |
| Revenue passengers carried..... | 110,721 | 78,061 | 41.84 |
| Revenue passenger-miles flown..... | 51,744,113 | 33,631,403 | 53.86 |
| Express carried (pounds)..... | 836,809 | 599,585 | 39.56 |
| Express pound-miles flown..... | (2) | (2) | ..... |
| Mail carried (pounds)..... | 437,957 | 295,705 | 48.11 |
| Available passenger seat-miles flown..... | 86,627,028 | 65,417,734 | 32.42 |
| Revenue passenger load factor (percent)..... | 59.73 | 51.41 | 16.18 |

Domestic, Foreign, and Territorial

| | | | |
|--|-------------|-------------|-------|
| Revenue-miles flown..... | 53,661,018 | 41,128,792 | 30.47 |
| Revenue passengers carried..... | 1,262,179 | 769,806 | 63.96 |
| Revenue passenger-miles flown..... | 505,199,842 | 312,270,599 | 61.78 |
| Express carried (pounds)..... | 6,041,419 | 4,641,344 | 30.16 |
| Express pound-miles flown..... | (2) | (2) | ..... |
| Mail pound-miles flown..... | (2) | (2) | ..... |
| Mail carried (pounds)..... | (2) | (2) | ..... |
| Available passenger seat-miles flown..... | 863,221,097 | 592,143,407 | 45.78 |
| Revenue passenger load factor (percent)..... | 58.52 | 52.74 | 10.96 |

¹ Includes mail pound-miles flown by Inter-Island Airways, Ltd., of Hawaii, which operates under a domestic air-mail contract with the United States Post Office Department, but does not include mail pound-miles flown by All American Aviation Co. in pick-up mail service and by Eastern Air Lines autogiro service between Philadelphia and Camden.

² Not available.

Pan American-Grace Airways To Make New Stops in S. A.

Pan American-Grace Airways, Inc., has been awarded an amendment to its certificate of convenience and necessity which includes abandonment of four stops, addition of six stops, and addition of two mail services, the Civil Aeronautics Board has announced.

The amendment authorizes stops at Quito, Esmeraldas, Manta, and Salinas, Ecuador; and service from Guayaquil to Cuenca and Loja, Ecuador; transportation of mail to and from Chiclayo, Peru, and to and from Arica, Chile, on the line's route between Arequipa, Peru, LaPaz, Bolivia; and the abandonment of stops at Tumaco, Colombia; Trujillo, Peru; Villazon, Bolivia; and Jujuy, Argentina.

As amended, the certificate for the route now carries authorization to engage in air transportation with respect to persons, property, and mail between the terminal point Cristobal, C. Z.; the intermediate points Cali, Colombia; Quito, Esmeraldas, Manta, Salinas, and Guayaquil, Ecuador; Talara, Chiclayo, Lima, and Arequipa, Peru; Arica, Antofagasta, and Santiago, Chile; Mendoza and Cordoba, Argentina; and the terminal point, Buenos Aires, Argentina; and also between the intermediate point Arequipa, Peru, and the terminal point Buenos Aires, Argentina, via the intermediate points Arica, Chile; LaPaz, Oruro, and Uyuni, Bolivia; Salta, Tucuman, and Cordoba, Argentina, and also between the intermediate point Guayaquil and the terminal point Loja via the intermediate point Cuenca, Ecuador.

TABLE B.—Air Carrier Operations Statistics for the Period January to June 1940

| Operator | Months operated | Revenue-miles flown | Revenue passengers carried | Revenue passenger-miles flown | Express carried (pounds) | Express pound-miles flown | Mail pound-miles flown | Revenue passenger-load factor |
|--|-----------------|---------------------|----------------------------|-------------------------------|--------------------------|---------------------------|------------------------|-------------------------------|
| DOMESTIC ROUTES OPERATED | | | | | | | | |
| American Airlines, Inc. | | | | | | | | Percent |
| Dallas to Los Angeles | 6 | 1,951,828 | 23,456 | 20,955,885 | 139,137 | 160,791,736 | 686,437,332 | ..... |
| New York to Chicago | 6 | 3,324,968 | 100,758 | 41,086,404 | 602,820 | 313,485,778 | 544,500,469 | ..... |
| Boston to New York | 6 | 1,082,606 | 94,794 | 16,386,460 | 182,536 | 30,676,413 | 66,071,659 | ..... |
| Boston to Cleveland | 6 | 384,154 | 14,103 | 2,534,696 | 41,214 | 5,590,503 | 9,539,804 | ..... |
| Cleveland to Nashville | 6 | 382,302 | 19,836 | 3,856,716 | 50,103 | 12,018,469 | 25,538,622 | ..... |
| New York to Fort Worth | 6 | 3,020,244 | 56,818 | 29,977,919 | 206,842 | 182,280,972 | 691,220,789 | ..... |
| Washington to Chicago | 6 | 833,341 | 27,640 | 9,979,942 | 57,556 | 19,582,265 | 57,681,942 | ..... |
| Chicago to Fort Worth | 6 | 839,106 | 25,679 | 10,778,231 | 95,403 | 55,375,197 | 155,952,046 | ..... |
| Total | | 11,818,549 | 363,084 | 135,556,253 | 1,375,611 | 779,801,333 | 2,236,892,663 | 67.77 |
| Boston-Maine Airways, Inc. | | | | | | | | |
| Boston to Caribou via Bangor | 6 | 217,569 | 6,462 | 925,721 | 9,375 | 1,344,773 | 6,008,763 | ..... |
| Boston to Montreal | 6 | 167,422 | 3,887 | 665,244 | 5,143 | 500,197 | (1) | ..... |
| Total | | 384,991 | 10,349 | 1,590,965 | 14,518 | 1,844,970 | 6,008,763 | 41.27 |
| Braniff Airways, Inc. | | | | | | | | |
| Chicago to Dallas | 6 | 864,969 | 16,329 | 7,811,722 | 69,656 | 46,753,518 | 161,558,092 | ..... |
| Amarillo to Brownsville | 6 | 1,161,671 | 30,784 | 7,830,962 | 84,935 | 27,063,495 | 95,415,921 | ..... |
| Houston to Corpus Christi and San Antonio | 6 | 121,866 | 3,063 | 579,003 | 740 | 138,812 | 0 | ..... |
| Total | | 2,148,506 | 50,176 | 16,221,687 | 155,331 | 73,955,825 | 256,974,013 | 51.42 |
| Chicago & Southern Airlines, Inc. | | | | | | | | |
| Chicago to New Orleans | 6 | 887,252 | 16,791 | 6,516,059 | 62,232 | 29,513,963 | 125,384,561 | 57.26 |
| Continental Air Lines, Inc. | | | | | | | | |
| Denver to El Paso | 6 | 478,373 | 5,246 | 1,500,551 | 8,620 | 2,153,247 | 19,847,809 | ..... |
| Pueblo to Wichita | 6 | 131,543 | 1,197 | 460,049 | 1,753 | 685,196 | 6,860,720 | ..... |
| Total | | 609,916 | 6,443 | 1,960,600 | 10,373 | 2,838,443 | 26,708,529 | 44.80 |
| Delta Air Corporation | | | | | | | | |
| Charleston to Fort Worth | 6 | 956,167 | 22,036 | 5,709,425 | 38,698 | 11,748,470 | 78,178,544 | 53.88 |
| Eastern Air Lines, Inc. | | | | | | | | |
| New York to New Orleans | 6 | 1,626,010 | 33,068 | 17,604,518 | 181,636 | 104,192,718 | 325,305,652 | ..... |
| New York to Miami | 6 | 3,243,124 | 82,443 | 38,369,145 | 330,165 | 241,806,237 | 700,126,710 | ..... |
| Chicago to Miami | 6 | 1,356,109 | 31,320 | 17,127,404 | 96,449 | 49,442,228 | 185,059,492 | ..... |
| New Orleans to Houston | 6 | 357,714 | 8,939 | 2,973,239 | 36,502 | 13,142,884 | 43,196,234 | ..... |
| Atlanta to Tampa; Tallahassee to Memphis | 6 | 414,581 | 5,943 | 1,908,922 | 34,369 | 4,417,683 | 21,438,083 | ..... |
| Houston to Brownsville and San Antonio | 6 | 355,597 | 5,822 | 1,356,639 | 13,890 | 3,765,793 | 15,094,203 | ..... |
| Total | | 7,353,135 | 167,535 | 79,339,867 | 693,011 | 416,767,543 | 1,290,220,374 | 59.60 |
| Inland Air Lines, Inc. | | | | | | | | |
| Cheyenne to Great Falls | 6 | 340,520 | 3,676 | 953,220 | 4,390 | 1,048,216 | 7,501,706 | ..... |
| Cheyenne to Huron | 6 | 161,474 | 1,226 | 316,755 | 1,743 | 433,819 | 4,881,728 | ..... |
| Total | | 501,994 | 4,902 | 1,269,975 | 6,133 | 1,482,035 | 12,383,434 | 25.30 |
| Marquette Airlines, Inc. | | | | | | | | |
| St. Louis to Detroit | 6 | 76,625 | 554 | 131,087 | 0 | 0 | 0 | 28.51 |
| Mid-Continent Airlines, Inc. | | | | | | | | |
| Minneapolis-Sioux City-Bismarck to Kansas City-Tulsa | 6 | 690,509 | 9,722 | 2,552,261 | 25,717 | 6,124,846 | 34,963,886 | 36.95 |
| National Airlines, Inc. | | | | | | | | |
| Jacksonville to Miami | 6 | 280,269 | 6,526 | 1,114,801 | 11,560 | 1,890,027 | 18,485,680 | ..... |
| Jacksonville to New Orleans | 6 | 184,748 | 3,585 | 1,209,350 | 5,724 | 1,325,916 | 17,712,986 | ..... |
| Total | | 465,017 | 10,111 | 2,324,151 | 17,284 | 3,215,943 | 36,198,666 | 49.98 |
| Northwest Airlines, Inc. | | | | | | | | |
| Chicago to Winnipeg | 6 | 1,125,606 | 34,503 | 11,710,064 | 161,782 | 54,081,976 | 361,016,370 | ..... |
| Fargo to Seattle | 6 | 1,635,398 | 19,648 | 9,352,340 | 66,753 | 53,603,653 | 264,069,113 | ..... |
| Minneapolis to Duluth | 1 | 14,913 | 611 | 87,373 | 1,084 | 155,012 | 248,675 | ..... |
| Total | | 2,775,917 | 54,762 | 21,149,777 | 229,619 | 107,840,641 | 625,334,158 | 39.40 |
| Pennsylvania-Central Airlines Corporation | | | | | | | | |
| Norfolk to Detroit | 6 | 1,057,742 | 63,369 | 11,745,720 | 257,979 | 47,935,906 | 117,630,694 | ..... |
| Detroit to Milwaukee | 6 | 380,539 | 16,461 | 2,534,359 | 43,403 | 6,735,510 | 9,917,663 | ..... |
| Washington to Buffalo | 6 | 116,684 | 1,738 | 418,941 | 8,803 | 1,101,778 | 2,646,968 | ..... |
| Pittsburgh to Buffalo | 6 | 97,006 | 1,759 | 383,472 | 2,763 | 647,024 | 0 | ..... |
| Pittsburgh to Baltimore | 6 | 78,720 | 2,450 | 423,064 | 4,578 | 721,208 | 0 | ..... |
| Detroit to Sault Ste. Marie | 6 | 116,287 | 2,037 | 345,503 | 6,121 | 709,381 | 2,002,863 | ..... |
| Total | | 1,846,978 | 87,814 | 15,851,659 | 323,647 | 57,850,807 | 132,198,188 | 54.65 |
| Transcontinental & Western Air, Inc. | | | | | | | | |
| New York to Los Angeles | 6 | 4,988,156 | 90,282 | 45,362,090 | 479,094 | 334,417,666 | 1,572,651,746 | ..... |
| Dayton to Chicago | 6 | 230,859 | 7,350 | 1,716,860 | 58,351 | 14,762,125 | 20,432,038 | ..... |
| Las Vegas to San Francisco | 6 | 174,419 | 1,831 | 744,155 | 2,533 | 1,061,833 | 7,517,965 | ..... |
| Phoenix to Las Vegas | 6 | 101,257 | 1,661 | 239,812 | 1,517 | 122,080 | 1,134,990 | ..... |
| Kansas City to New York | 6 | 1,488,217 | 30,500 | 14,441,308 | 136,913 | 69,979,907 | 224,472,491 | ..... |
| Total | | 6,982,908 | 131,624 | 62,504,225 | 678,408 | 420,343,611 | 1,826,209,230 | 54.45 |
| United Air Lines Transport Corporation | | | | | | | | |
| New York to Oakland | 6 | 7,079,232 | 101,799 | 63,956,661 | 882,059 | 814,169,551 | 2,272,916,079 | ..... |
| San Diego to Seattle | 6 | 2,443,481 | 67,897 | 24,494,945 | 333,457 | 110,474,471 | 355,206,517 | ..... |
| Salt Lake City to Seattle | 6 | 746,730 | 12,733 | 5,017,646 | 40,973 | 24,228,142 | 99,679,139 | ..... |
| Cheyenne to Denver | 6 | 108,094 | 2,785 | 268,047 | 12,477 | 1,222,746 | 4,099,830 | ..... |
| Total | | 10,377,537 | 185,164 | 93,737,299 | 1,268,966 | 950,094,910 | 2,731,901,565 | 61.23 |
| Western Air Express Corporation | | | | | | | | |
| San Diego to Salt Lake City | 6 | 734,438 | 15,301 | 5,622,340 | 216,324 | 78,946,325 | 176,186,913 | ..... |
| Salt Lake City to Great Falls | 6 | 354,575 | 4,223 | 1,092,089 | 15,510 | 3,859,456 | 23,602,327 | ..... |
| Total | | 1,089,013 | 19,524 | 6,714,429 | 231,834 | 82,805,781 | 199,789,240 | 49.19 |
| Wilmington-Catalina Airline, Ltd. | | | | | | | | |
| Wilmington to Avalon | 6 | 56,647 | 10,867 | 326,010 | 73,228 | 2,196,840 | 0 | 57.66 |
| Total domestic routes | | 49,021,061 | 1,151,458 | 453,455,729 | 5,204,610 | 2,948,425,961 | 23,921,633,188 | 58.39 |

TABLE B.—Air Carrier Operations Statistics for the Period January to June 1940—Continued

| Operator | | Months operated | Revenue-miles flown | Revenue passengers carried | Revenue passenger-miles flown | Express carried (pounds) | Express pound-miles flown | Mail pound-miles flown | Revenue passenger load factor | | | | | | | |
|--|--|-----------------|---------------------|----------------------------|-------------------------------|--------------------------|---------------------------|------------------------|-------------------------------|-----------|------------|------------|------------------|------------------|------------------|-------|
| FOREIGN AND TERRITORIAL | | | | | | | | | | | | | | | | |
| Canadian Colonial Airways, Inc. ⁴ | New York to Montreal | 6 | 255,007 | 9,137 | 2,907,324 | 4,455 | (⁵) | (⁵) | Percent 51.31 | | | | | | | |
| Inter-Island Airways, Ltd. | Honolulu to Hilo | 6 | 167,192 | 11,300 | 1,639,471 | 47,545 | 8,039,068 | 2,287,374 | (¹) | | | | | | | |
| | Honolulu to Port Allen | 6 | 38,160 | 2,568 | 294,720 | 11,791 | 1,414,920 | (¹) | (¹) | | | | | | | |
| Marine Airways, Inc. | Total | | 205,352 | 13,868 | 1,934,191 | 59,336 | 9,453,988 | 2,287,374 | 66.75 | | | | | | | |
| | Juneau to Sitka and Chichagof | 6 | 40,259 | 781 | 80,518 | 3,672 | 319,990 | 0 | 45.90 | | | | | | | |
| Pan American Airways System. ⁶ | New York to Lisbon | 6 | 314,336 | 2,604 | 4,269,505 | 1,539 | (⁵) | (⁵) | | | | | | | | |
| | Baltimore to New York to Bermuda | 6 | | | | | | | | | | | | | | |
| | San Francisco to Hong Kong via Hawaii and Philippine Islands | 6 | 409,149 | 1,299 | 3,880,213 | 22,383 | (⁵) | (⁵) | | | | | | | | |
| | Juneau to Fairbanks via Whitehorse | 6 | 191,870 | 1,068 | 686,273 | 11,153 | (⁵) | (⁵) | | | | | | | | |
| | Fairbanks to Nome and Bethel | 6 | | | | | | | | | | | | | | |
| | Seattle to Juneau via Ketchikan | 1 | | | | | | | | | | | | | | |
| | Miami to Buenos Aires | 6 | 2,576,804 | 74,867 | 31,621,604 | 659,395 | (⁵) | (⁵) | | | | | | | | |
| | Miami to Nassau | 6 | | | | | | | | | | | | | | |
| | Miami to Barranquilla | 6 | | | | | | | | | | | | | | |
| | Miami to Merida | 6 | | | | | | | | | | | | | | |
| | Brownsville to Cristobal | 6 | | | | | | | | | | | | | | |
| | Cristobal to Balboa | 6 | | | | | | | | | | | | | | |
| | Cristobal to Port of Spain | 6 | | | | | | | | | | | | | | |
| | Cristobal to Medellin | 6 | | | | | | | | | | | | | | |
| San Juan via Kingston to Cristobal | 6 | | | | | | | | | | | | | | | |
| Port au Prince to Maricaoibo | 6 | | | | | | | | | | | | | | | |
| Rio de Janeiro via Asuncion to Buenos Aires | 6 | | | | | | | | | | | | | | | |
| Total | | 3,492,159 | | | | | | | | 79,838 | 40,457,595 | 694,470 | (⁵) | (⁵) | 59.48 | |
| Pan American-Grace Airways, Inc. | Cristobal, Canal Zone to Buenos Aires, Argentina via Santiago, Chile and Bolivia | 6 | | | | | | | | 646,544 | 7,097 | 6,364,485 | 74,876 | (⁵) | (⁵) | 64.46 |
| | Total foreign and territorial routes | | | | | | | | | 4,639,357 | 110,721 | 51,744,113 | 836,809 | (⁵) | 7,437,957 | 59.73 |
| Grand total | | | 53,661,018 | 1,262,179 | 505,199,842 | 6,041,419 | (⁵) | (⁵) | 58.52 | | | | | | | |

¹ Included in total above.

² Mail pound-miles flown by Inter-Island Airways Ltd., have been added to the total for domestic mail pound-miles flown as the mail carried by this company is under a domestic mail contract.

³ Mail pound-miles flown does not include 3,306,384 miles flown by All American Aviation Co. for mail "pick-up" services and 277,284 miles flown by Eastern Air Lines autogiro service between Philadelphia and Camden.

⁴ Does not include the operations of Canadian Colonial Airways, Ltd.

⁵ Not available.

⁶ Does not include the operations of 3 subsidiary operating companies of Pan American System.

⁷ Pounds carried.

TABLE C.—Air Carrier Operations Statistics, by Months, for the Period January-June 1940, Divided as to Domestic and Foreign and Territorial Operations

| | January | February | March | April | May | June | Total |
|--------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Number of operating carriers: | | | | | | | |
| Domestic | 17 | 17 | 17 | 17 | 17 | 17 | |
| Foreign and territorial | 5 | 5 | 5 | 5 | 5 | 5 | |
| Total | 22 | 22 | 22 | 22 | 22 | 22 | |
| Revenue-miles flown: | | | | | | | |
| Domestic | 7,271,154 | 6,672,914 | 7,930,038 | 8,331,759 | 9,266,687 | 9,549,109 | 49,021,661 |
| Foreign and territorial | 716,132 | 739,835 | 810,382 | 747,109 | 816,261 | 809,638 | 4,639,357 |
| Total | 7,987,286 | 7,412,749 | 8,740,420 | 9,078,868 | 10,082,948 | 10,358,747 | 53,661,018 |
| Revenue passengers carried: | | | | | | | |
| Domestic | 136,282 | 126,840 | 178,332 | 206,407 | 238,300 | 265,297 | 1,151,458 |
| Foreign and territorial | 17,194 | 21,532 | 22,620 | 17,615 | 15,574 | 16,186 | 110,721 |
| Total | 153,476 | 148,372 | 200,952 | 224,022 | 253,874 | 281,483 | 1,262,179 |
| Revenue passenger-miles flown: | | | | | | | |
| Domestic | 55,231,952 | 53,033,612 | 73,047,662 | 79,775,304 | 91,186,304 | 101,180,895 | 453,455,729 |
| Foreign and territorial | 7,126,340 | 8,653,245 | 9,789,802 | 8,532,343 | 8,520,106 | 9,122,277 | 51,744,113 |
| Total | 62,358,292 | 61,686,857 | 82,837,464 | 88,307,647 | 99,706,410 | 110,303,172 | 505,199,842 |
| Express carried (pounds): | | | | | | | |
| Domestic | 817,633 | 697,385 | 894,581 | 871,317 | 941,810 | 981,884 | 5,204,610 |
| Foreign and territorial | 136,268 | 125,689 | 136,153 | 157,245 | 138,030 | 143,424 | 836,809 |
| Total | 953,901 | 823,074 | 1,030,734 | 1,028,562 | 1,079,840 | 1,125,308 | 6,041,419 |
| Express pound-miles flown: | | | | | | | |
| Domestic | 463,898,988 | 422,394,234 | 525,401,290 | 491,114,049 | 522,817,135 | 522,800,265 | 2,948,425,961 |
| Foreign and territorial | (¹) | (¹) | (¹) | (¹) | (¹) | (¹) | (¹) |
| Total | (¹) | (¹) | (¹) | (¹) | (¹) | (¹) | (¹) |

TABLE C.—Air Carrier Operations Statistics—Continued

| | January | February | March | April | May | June | Total |
|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Mail carried (pounds): | | | | | | | |
| Domestic..... | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Foreign and territorial..... | 66,622 | 66,610 | 75,576 | 71,899 | 76,357 | 80,893 | 437,957 |
| Total | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Mail pound-miles flown: | | | | | | | |
| Domestic..... | ² 1,534,408,814 | ² 1,499,673,303 | ² 1,680,965,576 | ² 1,627,442,686 | ² 1,682,136,183 | ² 1,597,006,626 | ² 9,621,633,188 |
| Foreign and territorial..... | (1) | (1) | (1) | (1) | (1) | (1) | - (1) |
| Total | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Available passenger-seat-miles flown: | | | | | | | |
| Domestic..... | 110,166,337 | 103,266,684 | 123,232,597 | 129,981,923 | 151,875,201 | 158,071,327 | 776,594,069 |
| Foreign and territorial..... | 12,247,908 | 13,575,040 | 15,113,464 | 13,080,207 | 16,568,489 | 16,041,920 | 86,627,028 |
| Total | 122,414,245 | 116,831,724 | 138,346,061 | 143,062,130 | 168,443,690 | 174,113,247 | 863,221,097 |
| Revenue passenger load factor (percent): | | | | | | | |
| Domestic..... | 50.14 | 51.36 | 59.28 | 61.37 | 60.04 | 64.01 | 58.39 |
| Foreign and territorial..... | 58.18 | 63.74 | 64.78 | 65.23 | 51.43 | 56.87 | 59.73 |
| Total | 50.94 | 52.80 | 59.88 | 61.73 | 59.19 | 63.35 | 58.52 |

¹ Not available.

² Includes mail pound-miles flown by Inter-Island Airways, Ltd., of Hawaii, which operates under a domestic air-mail contract with the U. S. Post Office Department, but does not include mail pound-miles flown by All American Aviation Co. in mail "pick-up" service and Eastern Air Lines in autogiro service.

Board Denies Applications for Mid-western Route

Basing its opinion on the fact that a new route between Kansas City, Mo., and Memphis, Tenn., with an intermediate stop at Springfield, Mo., would not afford a material saving of time for either passengers or mail, nor develop sufficient business to justify the cost to the Government, the Civil Aeronautics Board has denied the application of Braniff Airways, Inc., Eastern Airlines, Inc., and Chicago & Southern Airlines, Inc., for the route. Missouri Central Airlines, Inc., had also made application, but had later withdrawn its request.

Springfield, Mo., is now an authorized stop on American Airlines, Inc.'s, east-west route but has not been served since 1934 because its airport is not in condition for large plane operation.

Service is at present available between Kansas City and Memphis via Transcontinental & Western Air, Inc., and via Chicago & Southern. On the existing schedules, good connections are provided at St. Louis and mail delivery is said to be adequate. The air lines contended that the necessity of a change at this point cuts down the number of passengers who would otherwise fly, and that local traffic between the two cities is hindered, due to the difficulties of obtaining local reservations on transcontinental lines.

The Board stated in its decision: "As we have heretofore pointed out, a small saving in transit time for even a considerable number of travelers and a considerable amount of mail, would not justify a large outlay of Government funds, nor would such an outlay be justified if the number of prospective travelers and the amount of mail were to be extremely small, even though the saving of time were large. In our opinion the number of persons who

would benefit by the establishment of a direct route between Kansas City and Memphis involving only a saving of 100 flight miles representing only 40 minutes flight time and a maximum of \$7 in fare are not sufficient to warrant the substantial Government expenditures which would be involved."

Boston-Maine Gets International Route

National defense considerations, joined with the value of potential local traffic and feeder service on long-haul passenger business, led the Civil Aeronautics Board on November 25 to amend Boston-Maine Airways, Inc.'s route 27 certificate to include operation between Bangor, Maine, and Moncton, New Brunswick, Canada.

In accordance with the provisions of the Civil Aeronautics Act, concerning international air service, the Board's decision was sent to the President and has received his approval.

Ground transportation between Maine and the Maritime Provinces, New Brunswick, Nova Scotia, and Prince Edward Island, is at present slow and inconvenient, although a community of interest exists. The Board stated that there is a considerable traffic flow to the Provinces from both New York and New England and that both such traffic and air mail would be stimulated by establishment of air service. Vacation travel plays an important part in the year's totals.

Route 27 of Boston-Maine operates at present between the terminal points Boston, Mass., and Montreal, and Boston and Caribou, Maine, with intermediate stops at Portland, Lewiston-Auburn, Millinocket, Augusta, Waterville, Bangor, Houlton, and Presque Isle, Maine. The Board stated that

"the proposed route should constitute a valuable feeder to the applicant's present line between Boston and Bangor. Any increase in passenger revenue on that segment of the applicant's system would, of course, reduce the need for Government aid."

No additional radio facilities would be required for the proposed operation since radio range stations and teletype weather reporting stations are operated by the United States Government at Bangor and Millinocket and the Canadian Government maintains radio range stations at Blissville and Moncton. Facilities for night flying are not now available, but the Board included estimates of the cost of installation in its decision.

C. A. B. Approves Lockheed Purchase of United Airports

Acquisition of the outstanding capital stock of United Airports Co. of California, Ltd., from United Air Lines Transport Corporation by the Lockheed Aircraft Corporation has been approved by the Civil Aeronautics Board. The Board stated that the acquisition, which means the transfer to Lockheed of ownership of the Union Air Terminal at Burbank, Calif., now used as a terminal for Los Angeles, was in the interest of national defense and would not interfere with present commercial operation.

Lockheed, which has large orders for military as well as transport planes, will use the field for test flying. The airlines now using the terminal, United, American, Transcontinental & Western Air, and Western Air Express, will, by the Board's order, continue their operations at Burbank until the Los Angeles Municipal Airport, at present in process of construction, is ready for operations.

The purchase price was listed as \$1,500,000.

Airways and Airports

Recognized Dealer

The Coast and Geodetic Survey has announced the addition of the following name to the list of dealers authorized to sell aeronautical charts:

Pacific Airmotive, Roosevelt Field, Garden City, Long Island, N. Y.

Temporary Airports of Entry

Designation of *Clallum County Airport*, Port Angeles, Wash., as an airport of entry has been revoked as of October 30.

Airport Projects Approved

In accordance with the provisions of section 303 of the Civil Aeronautics Act, the Administrator of Civil Aeronautics has issued certificates of air navigation facility necessity, authorizing the expenditure of Federal funds in the operation of the following projects:

ARIZONA

Tucson.—\$786,151 for W. P. A. project, including clearing, leveling, grading and providing drainage facilities for landing area. Construction of runways, taxi-strips, and aprons. Installation of lighting facilities, and construction of boundary fence at municipal airport.

CALIFORNIA

Stockton.—\$10,645 for W. P. A. project for general demolition, but preserving one of two hangars, erected with Federal funds, for possible Army and future civil use at municipal airport.

COLORADO

Denver.—\$99,643 for W. P. A. project, calling for erection of additional hangar space, additional concrete and oiled aprons, oiling seeding, and landscaping adjacent ground for dust prevention at municipal airport.

Denver.—\$487,192 for W. P. A. project, including heavy grading of north half of east half of section 33, filling low ground adjacent to all runways, grading entire field, french drains, macadam base and oil pavement on N.W.-S.E. runway raising intersection of the N.-S. and E.-W. runways, macadam base and oil pavement on new taxiways at municipal airport.

CONNECTICUT

Willimantic.—\$157,646 for W. P. A. project, work consisting of cutting, filling and grading, constructing landing strip and road and appurtenant work at municipal airport.

FLORIDA

Cocoa.—\$21,931 for W. P. A. project, including clearing and grubbing, plowing, discing, leveling, excavating, and appurtenant work at municipal airport.

Melbourne.—\$212,375 for W. P. A. project, including clearing, grubbing, grading, ditching, paving runways, taxi-strips and road, constructing administration building, and incidental work at Melbourne-Eau Gallie Airport.

Orlando.—\$277,990 for W. P. A. project, including clearing, filling, and grading additional grounds; constructing addition to and surfacing existing runways; constructing new runways; revamping boundary light system; and installing drainage facilities at municipal airport.

Tallahassee.—\$134,416 for W. P. A. project, including grading, surfacing, runway and roads, constructing aprons at hangar, clearing, grubbing, seeding, and fertilizing at municipal airport.

Tampa.—\$171,437 for W. P. A. project, including construction of N.E.-S.W. runway, S.E.-N.W. runway, construction of road approach to administration building, clearing, grubbing, grading, and sprigging, construction of drains, extension of field lighting system, and other incidental work at Peter O. Knight Municipal Airport.

GEORGIA

Atlanta.—\$29,190 for W. P. A. project, including the construction of an administration building at municipal airport.

Air Navigation Facilities on Dec. 1, 1940

Airports

| | |
|---|--------------|
| Municipal airports ¹ | 708 |
| Commercial airports ² | 493 |
| Civil Aeronautics Administration intermediate fields ³ | 284 |
| Army airdromes ⁴ | 68 |
| Naval air stations ⁵ | 22 |
| Marked auxiliary fields ⁶ | 634 |
| Private fields ⁷ | 127 |
| Total | 2,336 |

Airports and landing fields having any night-lighting equipment:

| | |
|--------------------|------------|
| Municipal..... | 306 |
| Commercial..... | 92 |
| Intermediate..... | 284 |
| Army..... | 36 |
| Navy..... | 14 |
| Auxiliary..... | 31 |
| Private..... | 9 |
| Total | 772 |

Seaplane Bases

| | |
|--|------------|
| Army, Navy, Coast Guard..... | 29 |
| Other seaplane bases and anchorages..... | 294 |
| Total | 323 |

Seaplane bases having any night-lighting equipment:

| | |
|---------------------------------|-----------|
| Navy and Coast Guard..... | 5 |
| Other bases and anchorages..... | 10 |
| Total | 15 |

Radio Aids

| | | |
|--|-----|--------------------------------|
| Ranges..... | 280 | (2 in Hawaii) (4 in Alaska) |
| Range stations simultaneous, with voice..... | 182 | (4 in Alaska) |
| Range stations non-simultaneous, with voice..... | 81 | |
| Range stations, no voice..... | 17 | (2 in Hawaii) |
| Broadcast stations..... | 112 | (7 in Alaska) |
| Broadcast stations, simultaneous..... | 107 | (4 in Alaska) |
| Broadcast stations, non-simultaneous..... | 5 | (3 in Alaska) |
| Marker stations..... | 42 | |
| Fan markers..... | 105 | (8 in Alaska) |
| Voice (only) stations..... | 14 | |

¹ Municipally operated, servicing available.

² Privately operated, servicing available.

³ Operated by C. A. A., no servicing available.

⁴ Army operated, open to service planes only.

⁵ Navy operated, open to service planes only.

⁶ Limited area, no servicing.

⁷ Privately operated, no servicing.

IDAHO

Boise.—\$46,670 for W. P. A. project, work to be performed includes construction of taxi-strips, roads, concrete apron in front of administration building, concrete drain valley, installation of drain pipe at Boise Bench Municipal Airport.

LOUISIANA

Baton Rouge.—\$749,752 for W. P. A. project, calling for construction of a complete publicly owned airport and landing field, 800 acres; clearing and grubbing field; approaches and turning zones; excavating and dressing drainage canals; construction of concrete box culverts and appurtenant structures in connection with adequate handling of subsurface drainage; excavating, grading, and filling field area; construction of four directional runways, taxi-strips, turn-around aprons, hangar aprons, and terminal aprons, and driveways of a compact sand-clay-gravel-base course; installation of complete water supply system; fencing, lighting and marking field area and runways at municipal airport.

MAINE

Auburn.—\$187,182 for W. P. A. project, including clearing and grubbing, excavating, construct runways, installing safety bands and lighting facilities, repaving runways at Auburn-Lewiston Airport.

Presque Isle.—\$388,529 for W. P. A. project, including clearing, grubbing, grading, surfacing, drainage, constructing runways and safety bands, and performing other incidental work at municipal airport.

MASSACHUSETTS

Westfield.—\$147,743 for W. P. A. project, including cuts and fills, grading, drainage, catch basins, range, boundary and flood lights, and construction of hard-surfaced runway at Barnes Airport.

MICHIGAN

Bay City.—\$42,666 for W. P. A. project, calling for grading and leveling landing field, removing top soil and vegetation, grading, shaping and surfacing runways, and appurtenant work at municipal airport.

Munising.—\$1,200 for C. C. C. and Forest Service project, including extension of present field by clearing, grubbing, and grading landing strips, and a check of 102 acres for minor conditioning at Hanley Field.

MINNESOTA

Minneapolis.—\$379,887 for W. P. A. project, the aeronautical features to be developed include construction of a new E.-W. runway 3,300 by 150 feet, widening the present N.W.-S.E. runway from 150 to 200 feet, lengthening the N.E.-S.W. runway 700 feet, lengthening the N.-S. runway 250 feet, building approximately 8,000 lineal feet of apron and taxi-way from 100 to 225 feet in width, relocation of lighting facilities, and general landing area improvement at municipal airport.

St. Paul.—\$350,144 for W. P. A. project providing for extension and improvement of municipal airport. Work includes filling; constructing extensions to the N.-S. runway; construct taxi-ways and extend the drainage and lighting facilities, and seeding and sodding.

MISSISSIPPI

Moorhead.—\$20,986 for W. P. A. project, including construction of air field, landing field, hangar, entrance roads, and performing incidental work at Sunflower Junior College Airport.

MISSOURI

St. Joseph.—\$301,378 for W. P. A. project, including construction of a N.-S. concrete runway, installation of a lighting system, rearrangement of present boundary lights, construction of a pump house, installation of pumping equipment, drainage system at municipal airport.

(See AIRPORTS, page 527.)

Manufacturing and Production

New Type Approvals

[Approval numbers and dates of assignment in parenthesis]

Type Certificates

Propellers

Flottorp, 78, wood, 6 feet 6 inches diameter, 5 feet 1 inch pitch, 125 horsepower, 2,350 revolutions per minute. (754, Nov. 4, 1940).

New Models Added to Old Type Approvals

[Approval numbers and dates of approval of new models in parenthesis]

Aircraft

Waco, HRE, 5 place closed land biplane. Engine, Lycoming R-680E-3 (type certificate No. 714, Nov. 1, 1940).

Aerona, S-65-CA, 2 place closed sea monoplane. Engine, Continental A-65-8 (type certificate No. 675, Nov. 15, 1940).

Engines

Lycoming, R-680B-4D, 9-cylinder radial air cooled, 225 horsepower at 2,100 revolutions per minute at sea level pressure altitude (approved type certificate No. 108, Nov. 9, 1940).

Warner, Super Scarab 165-E, 7-cylinder radial air cooled, 165 horsepower at 2,100 revolutions per minute at sea-level-pressure altitude (type certificate No. 214, Nov. 14, 1940).

Propellers

Sensenich, 82RS, wood, 6 feet 10 inches diameter; 6 feet 0 inch pitch, 200 horsepower, 2,450 revolutions per minute (approved type certificate No. 538, Nov. 2, 1940).

Hartzell, 675-C, wood, 7 feet 0 inch diameter, 4 feet 9 inches pitch, 120 horsepower, 2,100 revolutions per minute (approved type certificate No. 635, Nov. 4, 1940).

Hartzell, 850, wood, 6 feet 4 inches diameter, 3 feet 10 inches pitch, 65 horsepower, 2,530 revolutions per minute (type certificate No. 722, Nov. 4, 1940).

Marshall-Fahlin D-565, wood, 5 feet 9 inches diameter, 4 feet 0 inch pitch, 65 horsepower, 2,200 revolutions per minute (type certificate No. 681, Nov. 4, 1940).

Sensenich, 96T, wood, 8 feet, 0 inch diameter, 5 feet 9 inches pitch, 115 horsepower, 1,650 revolutions per minute (approved type certificate No. 586, Nov. 15, 1940).

Hamilton Standard, 23E propeller, model 23E50 steel hub with model 6243A aluminum alloy blades, 15 feet, 0 inch to 11 feet 6 inches diameter, hydraulically controllable pitch with 80° range, 1,350 horsepower, 1,295 revolutions per minute (approved type certificate No. 603, Nov. 5, 1940).

Appliances

Pioneer, parachutes, models P3-B-24 and P4-B-24, back type, flat canopy 24 feet diameter, white silk (type certificate No. 119, Nov. 13, 1940).

Aeronautic Exports Total \$22,939,697 in September

United States exports of aeronautic products in September totaled \$22,939,697, the Motive Products Division, Commerce Department reported.

The September shipments brought

Aircraft Radio Equipment Approved for Scheduled Air Carrier Use

During the month of October the following units of aircraft radio equipment were approved by the Civil Aeronautics Administration for scheduled air carrier use and issued type certificates:

| Certificate No. | Manufacturer | Unit | Date |
|-----------------|--------------------------|------------------------------|--------|
| 554 | Bendix Radio Corporation | MT-61A. Antenna loading unit | Oct. 8 |
| 555 | do | MT-59A. Keying unit | Do. |
| 556 | do | MS-14AA. Fuse box | Do. |

The following authorized modifications to type certificates approving aircraft radio equipment for scheduled air carrier use were issued during October:

BENDIX RADIO CORPORATION

| Type certificate | Data sheet | Unit and modification | Modification authorized |
|------------------|------------|---|-------------------------|
| 382 | 196-A | MT-11B. TRANSMITTER KEY. Add a metallic strap to the key assembly to permit clamping of the key to the operator's leg for convenience of operation in the cockpit of an aircraft. | Oct. 9 |
| 86 | 248-B | TA-2J. AIRCRAFT TRANSMITTER. Electrical changes of certain circuit constants to permit operation of the transmitter on 333 and 500 kilocycles in connection with Bendix type MT-61A Antenna loading unit. | Do. |
| 104 | 120-B | MT-34c. REMOTE CONTROL UNIT. Addition of switches and minor modification of circuit to permit simultaneous control of type MT-61A Antenna loading unit when used with modified type TA-2J transmitter. | Do. |

RCA MANUFACTURING CO. INC.

| | | | |
|-----|-------|---|---------|
| 440 | 306-A | AVR-7H. RECEIVER. Modification of circuits to provide (a) elimination of the broadcast (A) band, (b) fixed tuning in the communications band using either self-excited or crystal-controlled oscillator on either of two predetermined frequencies in the range of 2800 to 3200 kilocycles, (c) dual audio output, (d) corrected dial scale on tuning unit necessitated by above changes. | Oct. 12 |
| 443 | 326-A | AVA-56. LOOP ANTENNA ADAPTOR KIT. Adds components necessary to extend the operation of the unit to the broadcast (A) band of the receiver with which the unit is designed to be used. | Oct. 21 |

WESTERN ELECTRIC CO.

| | | | |
|-----|-------|---|---------|
| 256 | 299-A | 27B. RECEIVER. Changes the mounting of neon lamp (LP-1) to provide increased accessibility for ease of maintenance. | Oct. 29 |
| 141 | 121-E | 27A. RECEIVER. Changes the mounting of the neon lamp (LP-1) to provide increased accessibility for ease of maintenance. | Do. |

UNITED AIRLINES TRANSPORT CORPORATION

| | | | |
|-----|-------|---|---------|
| 164 | 283-A | ES-295G. AMPLIFIER. Minor circuit modifications to permit operation of the transmitter control relay directly through the switch contacts in the microphone instead of by a relay actuated by the microphone current. | Oct. 17 |
| 165 | 282-A | ES-295H. RADIO CONTROL PANEL. Minor circuit modifications necessitated by revision of ES-295G circuit as noted above. | Do. |
| 166 | 281-A | ES-295H-4. PILOT'S JACK BOX. Replace Western Electric 238-B jack with Jones 5-96 terminal strip and modify wiring in connection with revision of ES-295G Amplifier as noted above. | Oct. 18 |

the 9 months' total value of exports to \$221,479,961 or 183 percent above the value of shipments in the corresponding 9 months of 1939.

The United Kingdom was by far the largest purchaser of aeronautic prod-

ucts during September, taking \$15,164,825 worth of products. This increased Great Britain's purchases for the 9-month period from \$62,091,906 at the end of August to \$77,256,731.

(See *Exports*, page 527.)

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| Cenoga Park, Calif., Nov. 18, 1939 | 10 | Oct. 15 | 449 | Aeronautics bulletins. (See Civil Aeronautics Authority—Publications.) | | | |
| Dallas, Tex., July 16, 1940 | 24 | do | 508 | Aerovias Nacionales, Inc., violation referred to Attorney General. | 8 | Apr. 15 | 165 |
| Detroit, Mich., July 30, 1940 | 24 | do | 509 | Air carriers: | | | |
| Ely, Nev., Feb. 26, 1940 | 19 | Oct. 1 | 435 | Accidents. (See Accidents.) | | | |
| Faribault, Minn., July 1, 1940 | 22 | Nov. 15 | 481 | Aircraft radio equipment approved by Authority (list). | 1 | Jan. 1 | 5 |
| Fort Ripley, Minn., Apr. 22, 1940 | 19 | Oct. 1 | 435 | Do | 3 | Feb. 1 | 41 |
| Frankfort, Mich., Oct. 14, 1940 | 20 | Oct. 15 | 448 | Do | 5 | Mar. 1 | 70 |
| Frederick, Okla., Apr. 25, 1940 | 24 | Dec. 15 | 508 | Do | 7 | Apr. 1 | 112 |
| Gardena, Calif., Apr. 13, 19 | 22 | Nov. 15 | 481 | Do | 9 | May 1 | 201 |
| Graham, Tez, Dec. 18, 1939 | 20 | Oct. 15 | 448 | Do | 11 | June 1 | 234 |
| Hayti, Mo., Apr. 21, 1940 | 19 | Oct. 1 | 448 | Do | 12 | July 1 | 262 |
| Henderson, Ky., Apr. 17, 1940 | 19 | do | 435 | Do | 17 | Sept. 1 | 417 |
| Honolulu, T. H., Feb. 4, 1940 | 19 | do | 436 | Do | 22 | Nov. 15 | 484 |
| Kansasville, Wis., July 5, 1940 | 24 | Dec. 15 | 508 | Do | 24 | Dec. 15 | 516 |
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| Medford, Wis., July 21, 1940 | 23 | Dec. 1 | 493 | Airplanes in service and reserve, 1929-June 1940. (Annual summary). | | | |
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| Newport News, Va., July 21, 1940 | 24 | Dec. 15 | 508 | Certificates of convenience and necessity. (See Civil Aeronautics Authority—Official actions.) | | | |
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| Robertson, Mo., July 16, 1940 | 23 | Dec. 1 | 493 | Fuel consumed, 1929-June 1940 (annual summary). | 20 | do | 455 |
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| Spokane, Wash., May 12, 1940 | 22 | Nov. 15 | 480 | Free transportation. (See Regulations, economic.) | | | |
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| 1936-39 | 10 | May 15 | 224 | Safety record, one year without fatal or serious injury accident. | 8 | Apr. 15 | 157 |
| Do | 22 | Nov. 15 | 476 | Traffic statistics | | | |
| 1939 | 10 | May 15 | 222 | Do | 1 | Jan. 1 | 6 |
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| 1929-39 | 20 | do | 456 | Do | 10 | May 15 | 218 |
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| 1939 | 13 | July 1 | 259 | Do | 14 | July 15 | 299 |
| Monthly: | | | | Do | 16 | Aug. 15 | 400 |
| September 1940 | 22 | Nov. 15 | 481 | Do | 17 | Sept. 1 | 414 |
| September, October, 1939, 1940 | 24 | Dec. 15 | 509 | Do | 18 | Sept. 15 | 424 |
| Semiannual, January-June 1939 | 4 | Feb. 15 | 55 | Do | 20 | Oct. 15 | 454 |
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| Adel, Ga., airport project approved | 7 | Apr. 1 | 113 | Do | 24 | Dec. 1 | 510 |
| Aeronautical Advisory Council | 23 | Dec. 1 | 489 | Do | 10 | May 15 | 213 |
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| Do | 23 | Dec. 1 | 501 | | | | |
| Do | 24 | Dec. 15 | 515 | | | | |
| List | 3 | Feb. 1 | 46 | | | | |
| Additions | 5 | Mar. 1 | 71 | | | | |
| Do | 7 | Apr. 1 | 114 | | | | |
| Do | 9 | May 1 | 201 | | | | |
| Do | 10 | May 15 | 224 | | | | |

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| Air lines. (See Air carriers.) | | | | Names of 2 control airports changed. | 3 | Feb. 1 | 52 |
| Air mail, Postmaster General cites growth of. | 3 | Feb. 1 | 40 | National development program: | | | |
| Air mail. (See Air carriers) | | | | Excerpts from address of Robert Hinckley | 20 | Oct. 15 | 450 |
| Air navigation facilities. (See Civil Aeronautics Authority—Airways system.) | | | | Do | 23 | Dec. 1 | 489 |
| Air safety (see also Accidents): | | | | First phase completed | 20 | Oct. 15 | 452 |
| Air lines fly entire year without accident | 8 | Apr. 15 | 157 | Long range program nearing completion | 16 | Aug. 15 | 403 |
| "Avoid loose control sticks" | 22 | Nov. 15 | 480 | Works Progress Administration report. | 8 | Apr. 15 | 160 |
| Crop-dusting airplane precautions | 9 | May 1 | 200 | Projects approved | 3 | Feb. 1 | 47 |
| "Don't fly a 'sick' airplane" | 23 | Dec. 1 | 492 | Do | 4 | Feb. 15 | 58 |
| Hazards of riding with student pilots | 24 | Dec. 15 | 508 | Do | 5 | Mar. 1 | 71 |
| Maintenance of position lights on aircraft urged | 12 | June 15 | 244 | Do | 7 | Apr. 1 | 113 |
| Air Safety Board: | | | | Do | 9 | May 1 | 201 |
| Final accident report | 16 | Aug. 15 | 402 | Do | 10 | May 15 | 224 |
| Reports on 203 accidents | 4 | Feb. 15 | 54 | Do | 12 | June 15 | 245 |
| Air Traffic Conference of America, resolution re foreign reservations approved, order 711. | 23 | Dec. 1 | 502 | Do | 13 | July 1 | 262 |
| Air Transport Association of America, endorses airways development program | 7 | Apr. 1 | 109 | Do | 16 | Aug. 15 | 403 |
| Air transportation. (See Air carriers, and/or Private flying operations.) | | | | Do | 17 | Sept. 1 | 418 |
| Aircraft subject to seizure for satisfaction of penalties. | 11 | June 1 | 233 | Do | 18 | Sept. 15 | 427 |
| Airmen: | | | | Do | 19 | Oct. 1 | 437 |
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| Certificates: | | | | Do | 24 | Dec. 15 | 515 |
| Summary. (See Certificates, approvals, and ratings.) | | | | Publications. (See Civil Aeronautics Authority—Publications.) | | | |
| Suspensions and revocations. (See Civil Aeronautics Authority—Official actions.) | | | | Seaplane directory being prepared | 11 | June 1 | 232 |
| Number as of Jan. 1, 1940 | 3 | Feb. 1 | 39 | Status by States, Jan. 1, 1940 | 2 | Jan. 15 | 22 |
| Regulations. (See Regulations, civil air.) | | | | Summary (by types): | | | |
| Special flight tests for physically handicapped pilots authorized. | 18 | Sept. 15 | 429 | 1929-June 1940 | 20 | Oct. 15 | 456 |
| Status by States, as of— | | | | Feb. 1, 1940 | 5 | Mar. 1 | 71 |
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| Airplane cockpit visibility studied | 3 | Feb. 1 | 43 | May 1, 1940 | 10 | May 15 | 224 |
| Airplane equipment manufactured from 1929-37 (value) | 20 | Oct. 15 | 457 | Aug. 1, 1940 | 16 | Aug. 15 | 403 |
| Airplane maintenance suggestions for air safety | 23 | Dec. 1 | 491 | Oct. 1, 1940 | 20 | Oct. 15 | 452 |
| Airplane manufacture: | | | | Sept. 1, 1940 | 18 | Sept. 15 | 427 |
| Flight load factors | 23 | do | 495 | Nov. 1, 1940 | 22 | Nov. 15 | 483 |
| Do | 19 | Oct. 1 | 438 | St. Petersburg Airport leased by Authority for standardization center. | 19 | Oct. 1 | 434 |
| Gust load factor principles | 17 | Sept. 1 | 410 | Santa Monica (Clover Field) designated control airport. | 14 | July 15 | 306 |
| Machinery "toughness testing" approved by Authority. | 18 | Sept. 15 | 428 | Traffic control, definition | 6 | Mar. 15 | 80 |
| Manufacturers, number, 1929-38 | 20 | Oct. 15 | 457 | Washington National: | | | |
| Materials, report discusses spruce, etc. | 3 | Feb. 1 | 43 | Ahead of schedule | 1 | Jan. 1 | 1 |
| Personnel employed (summary by years) 1932-38. | 20 | Oct. 15 | 457 | Plans for buildings approved by President Roosevelt. | 1 | do | 8 |
| Production statistics (by types, etc.): | | | | President Roosevelt lays cornerstone. | 20 | Oct. 15 | 446 |
| 1929-June 1940 (number and value) | 20 | do | 457 | Zoning, State cooperation sought in protection for approaches. | 23 | Dec. 1 | 494 |
| January-September 1938, 1939 | 1 | Jan. 1 | 5 | Airway map. (See Civil Aeronautics Authority: Publications.) | | | |
| January-December 1938, 1939 | 5 | Mar. 1 | 70 | Airway traffic control: | | | |
| January-March 1939, 1940 | 10 | May 15 | 217 | Control-tower operators, amendment adopted providing for new method of certification and rating. | 13 | July 1 | 268 |
| January-June, 1940 (summary) | 17 | Sept. 1 | 409 | Outline of difference, Airport Traffic Control | 6 | Mar. 15 | 80 |
| January-June, 1940 | 17 | do | 413 | Redesignation of control zones in certain areas, text of amendment No. 77 to Civil Air Regulations. | 22 | Nov. 15 | 487 |
| January-September 1939, 1940 | 22 | Nov. 15 | 473 | Airways. (See Civil Aeronautics Authority.) | | | |
| Airplane parts, production, 1929-37 (value) | 20 | Oct. 15 | 457 | Airways Communications. (See Civil Aeronautics Authority.) | | | |
| Airplane position lights, pilots urged to keep in proper condition. | 23 | Dec. 1 | 491 | Airworthiness maintenance bulletin. (See Civil Aeronautics Authority—Publications.) | | | |
| Airplanes: | | | | Alaska: | | | |
| Air carrier. (See Air carriers.) | | | | Air service authorized | 13 | July 1 | 257 |
| Air line. (See Air carriers.) | | | | Aircraft traffic statistics, 1930-39 | 6 | Mar. 15 | 78 |
| Certificates. (See Certificates, approvals and ratings.) | | | | Progress of civil aviation | 6 | do | 77 |
| Experimental, temporary certificate to pilot to be issued by Safety Bureau | 13 | July 1 | 266 | Albrecht, Charles William, offer accepted in compromise of civil penalty for violation. | 2 | Jan. 15 | 24 |
| Exports, 1929-June 1940 (number and value) | 20 | Oct. 15 | 457 | Albuquerque, N. Mex., airport project approved. | 12 | June 15 | 245 |
| Exports, September 1940 (value) | 24 | Dec. 15 | 516 | Aldrin, Edwin E., appointed special consultant to Administrator of Civil Aeronautics. | 17 | Sept. 1 | 409 |
| Identification marks. (See Regulations) | | | | Alexander, D. W., denial of application for renewal of pilot certificate confirmed. | 22 | Nov. 15 | 486 |
| Rotar, address by Edward Warner | 1 | Jan. 1 | 2 | Alexander, Wallace M., interlocking relationship approved. | 5 | Mar. 1 | 75 |
| Status by States: | | | | Aldredge, David A., pilot certificate suspended. | 16 | Aug. 15 | 407 |
| Jan. 1, 1940 | 2 | Jan. 15 | 21 | Allen, Edmund T., named on executive committee of Aeronautical Advisory Council. | 23 | Dec. 1 | 489 |
| Apr. 1, 1940 | 8 | Apr. 15 | 159 | Alley, Robert, directed to show cause | 24 | Dec. 15 | 526 |
| Unconventional types, pilot training research started | 11 | June 1 | 229 | Allman, Robert: | | | |
| Airport Approval Board, Maj. Lucius D. Clay appointed Secretary. | 22 | Nov. 15 | 482 | Order to show cause | 7 | Apr. 1 | 121 |
| Airport directory. (See Civil Aeronautics Authority—Publications.) | | | | Dismissed | 18 | Sept. 15 | 430 |
| Airport Section. (See Civil Aeronautics Authority.) | | | | Alves, Gordon J., offer accepted in compromise of civil penalty for violation | 14 | July 15 | 304 |
| Airport traffic control: | | | | Alpine, Tex., airport project approved | 5 | Mar. 1 | 71 |
| Defined for field personnel | 18 | Sept. 15 | 427 | Do | 3 | Feb. 1 | 47 |
| Outline of difference, airport and airway service | 6 | Mar. 15 | 80 | Amendments. (See Regulations.) | | | |
| Airports and seaplane bases: | | | | Ames, Lawrence, interlocking relationships denied. | 1 | Jan. 1 | 12 |
| Alaskan, number and condition (by types) | 6 | do | 88 | Anderson, Carl G., violation referred to Attorney General. | 7 | Apr. 1 | 120 |
| Camden, N. J., Central Airport discontinued by amendment 64 to Civil Air Regulations. | 16 | Aug. 15 | 408 | Anderson, Harold, solo pilot certificate suspended. | 9 | May 1 | 204 |
| Entry, changes in list of | 4 | Feb. 15 | 58 | Anding, Elbert B., offer accepted in compromise for violation. | 11 | June 1 | 238 |
| Do | 11 | June 1 | 232 | Angel, William Edward, instructor's rating revoked. | 18 | Sept. 15 | 431 |
| Do | 13 | July 1 | 262 | Annual report. (See Civil Aeronautics Authority.) | | | |
| Do | 19 | Oct. 1 | 437 | Appropriation laws, C. A. A. (list) | 23 | Dec. 1 | 490 |
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| Do | 24 | Dec. 15 | 489 | | | | |
| Hinckley, Assistant Secretary, address on national program. | 23 | Dec. 1 | 489 | | | | |

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| Archbald, A. M., interlocking relationship approved. | 9 | May 1 | 208 | Brandenburg, Ellsworth, offer accepted in compromise of civil penalty. | 8 | Apr. 15 | 166 |
| Do | 5 | Mar. 1 | 75 | Brazilian airplane authorized to navigate and land in Panama Canal Zone enroute to United States. | 18 | Sept. 15 | 471 |
| Argentine plane flight over Canal Zone authorized. | 4 | Feb. 15 | 62 | Brazilian pilot granted permission to fly in United States. | 23 | Dec. 1 | 503 |
| Armbrust, Gene, violation referred to Attorney General. | 1 | Jan. 1 | 19 | Bridgeport, Conn., airport project approved. | 3 | Feb. 1 | 47 |
| Army and Navy absorbing CPT trainees. | 23 | Dec. 1 | 489 | Bright, Frank S., pilot certificate revoked. | 5 | Mar. 1 | 74 |
| Army Air Corps expansion program, certificates to instructors. | 12 | June 15 | 249 | Brooke, George D., interlocking relationship approved. | 3 | Feb. 1 | 51 |
| Asiatic Petroleum Co. granted permission for flight of Venezuelan plane to United States (C. A. A. order 287) | 1 | Jan. 1 | 13 | Brotz, Anton F., Sr., airman certificate suspended. | 12 | June 15 | 247 |
| Atlanta, Ga., airport project approved. | 24 | Dec. 15 | 515 | Brown, Theodore T., pilot certificate suspended. | 11 | June 1 | 236 |
| Atlantic City granted intervention in applications of several air carriers for amendments to certificates. | 16 | Aug. 15 | 406 | Bruce, David K. E., interlocking relationship approved. | 5 | Mar. 1 | 75 |
| Auburn, Ala., airport project approved. | 12 | June 15 | 245 | Buffalo, N. Y., airport project approved. | 4 | Dec. 15 | 527 |
| Auburn, Maine, airport project approved. | 24 | Dec. 15 | 515 | Burchett, Vance, offer accepted in compromise of civil penalty. | 26 | Mar. 15 | 85 |
| Do | 3 | Feb. 1 | 47 | Burden, William, named on executive committee, Aeronautical Advisory Council. | 23 | Dec. 1 | 489 |
| Augusta, Ga., airport project approved. | 5 | Mar. 1 | 71 | Burkhard, Carroll, offer accepted in compromise of civil penalty. | 7 | Apr. 1 | 118 |
| Australian aircraft authorized to fly over United States. | 11 | June 1 | 239 | C | | | |
| Aviation weather service, Government to train 100 student pilots for. | 17 | Sept. 1 | 409 | Camden, N. J., airport discontinued. | 16 | Aug. 15 | 408 |
| Avon Park, Fla., airport project approved. | 13 | July 1 | 262 | Campaign against crashes. (See Air safety.) | | | |
| B | | | | Canada: | | | |
| Baker, George P., appointed as Member of Civil Aeronautics Board. | 14 | July 15 | 297 | Prohibited flying areas. | 5 | Mar. 1 | 73 |
| Baldwin, L. Warring, interlocking relationship approved. | 3 | Feb. 1 | 51 | Regulations. (See Regulations, foreign.) | | | |
| Balluder, Erwin, interlocking relationship approved. | 5 | Mar. 1 | 75 | Canadian aircraft, authorized to fly over United States. | 3 | Feb. 1 | 49 |
| Barnett, Charles, student pilot certificate revoked. | 1 | Jan. 1 | 10 | Do | 3 | do | 51 |
| Barry, offer accept in compromise of civil penalty for violation. | 9 | May 1 | 205 | Do | 8 | Apr. 15 | 166 |
| Barthule, Aleck, violation referred to Attorney General. | 4 | Feb. 15 | 61 | Canal Zone, flight of Argentine plane authorized. | 4 | Feb. 15 | 62 |
| Barwasser, Norbeth C., offer accept in compromise of civil penalty. | 3 | Feb. 1 | 50 | Carburetor air intake icing prevention discussed. | 18 | Sept. 15 | 428 |
| Baton Rouge, La., airport project approved. | 24 | Dec. 15 | 515 | Carson, Harry A., interlocking directorship approved. | 3 | Feb. 1 | 48 |
| Bay City, Mich., airport project approved. | 24 | Do | 515 | Carte, Kermit A., violation referred to Attorney General. | 10 | May 15 | 226 |
| Beacons, Federal. (See Civil Aeronautics Authority—Airways system.) | | | | Casey, Richard G., authorized to fly Australian aircraft over United States. | 11 | June 1 | 239 |
| Beacons, manual prescribes standards for "true light" operation. | 22 | Nov. 15 | 483 | Cashen, James, pilot certificate revoked. | 7 | Apr. 1 | 116 |
| Belleville, Ill., aircraft accident Apr. 21, 1940. | 23 | Dec. 1 | 492 | Catheart, Norman, offer accepted in compromise of civil penalty. | 9 | May 1 | 208 |
| Benner, Noel C., student pilot certificate revoked. | 13 | July 1 | 265 | Certificates, approvals and ratings: | | | |
| Beverly, Mass., aircraft accident Feb. 25, 1940. | 19 | Oct. 1 | 435 | Do | 2 | Jan. 15 | 21 |
| Beale, Frank, interlocking relationships approved. | 24 | Dec. 15 | 515 | Do | 3 | Feb. 1 | 39 |
| Bennett Field, name changed. | 3 | Feb. 1 | 52 | Do | 5 | Mar. 1 | 69 |
| Berdean, Ray W., offer accepted in compromise of civil penalty. | 10 | May 15 | 228 | Do | 7 | Apr. 1 | 112 |
| Berger, Marcus, student pilot certificate revoked. | 23 | Dec. 1 | 503 | Do | 8 | Apr. 15 | 162 |
| Berry, Arthur W., offer accepted in compromise of civil penalty. | 11 | June 1 | 238 | Do | 9 | May 1 | 201 |
| Biberman, Almer W., offer accepted in compromise of civil penalty. | 6 | Mar. 15 | 86 | Do | 10 | May 15 | 217 |
| Bibliography, load factors for airplanes. | 19 | Oct. 1 | 444 | Do | 11 | June 1 | 233 |
| Bickell, J. P., authorized to fly Canadian aircraft over United States. | 8 | Apr. 15 | 166 | Do | 12 | June 15 | 244 |
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| Binkley, Biven, offer accepted in compromise of civil penalty for violation. | 24 | Dec. 15 | 527 | Do | 16 | Aug. 15 | 403 |
| Biographies: | 1 | Jan. 1 | 15 | Do | 19 | Oct. 1 | 438 |
| Aldrin, Edwin E. | 17 | Sept. 1 | 410 | Do | 20 | Oct. 15 | 457 |
| Baker, George P. | 14 | July 15 | 297 | Do | 22 | Nov. 15 | 482 |
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| Connolly, Col. Donald H. | 14 | do | 297 | Do | 24 | Dec. 15 | 516 |
| Early, Thomas G. | 14 | do | 298 | Certificates of convenience and necessity. (See Civil Aeronautics Authority—Official actions.) | | | |
| Hinckley, Robert H. | 14 | do | 297 | Cetti, Leo August, pilot certificate revoked. | 18 | Sept. | 431 |
| Lederer, Jerome | 14 | do | 307 | Chamberlain, Kneale, offer accepted in compromise of civil penalty. | 3 | Feb. 1 | 50 |
| Ross, Cecil A. | 1 | Jan. 1 | 2 | Chamberlain, S. Dak., aircraft accident Mar. 19, 1940. | 24 | Dec. 15 | ... |
| Stanton, Charles I. | 22 | Nov. 15 | 473 | Chamblin, Lee, offer accepted in compromise of civil penalty. | 4 | Feb. 15 | 64 |
| Warner, Edward P. | 14 | July 14 | 297 | Charlottesville, Va., airport project approved. | 24 | Dec. 15 | ... |
| Bismarck, N. Dak., airport project approved. | 24 | Dec. 15 | 527 | Cheneva, Virgil, interlocking relationship approved. | 20 | May 15 | 227 |
| Bixby, Harold M., interlocking relationship approved. | 5 | Mar. 1 | 75 | Chicago, airport project approved. | 5 | Mar. 1 | 71 |
| Blacksburg, Va., airport project approved. | 7 | Apr. 1 | 113 | Church, T. N., violation referred to Attorney General. | 3 | Feb. 1 | 48 |
| Blanc, Josef, parachute rigger's certificate revoked. | 16 | Aug. 15 | 408 | Civil Aeronautics, radio address by Messrs. Hinckley and Branch. | 18 | Sept. 15 | 421 |
| Blanchard, Alexander C., and William C., interlocking relationships approved. | 9 | May 1 | 209 | Civil Aeronautics Authority: | | | |
| Blaske, C. M., interlocking relationship approved. | 5 | Mar. 1 | 75 | Airport section to act as independent unit. | 22 | Nov. 15 | 482 |
| Blytheville, Ark., aircraft accident, Sept 27, 1939. | 23 | Dec. 1 | 493 | Airports. (See Airports and seaplane bases.) | | | |
| Boise, Idaho, airport project approved. | 24 | Dec. 15 | 515 | Airway system: | | | |
| Boone, Daniel L., pilot certificate suspended. | 12 | June 15 | 246 | Airports. (See Airports and seaplane bases.) | | | |
| Borden, Milam, Jr., private pilot certificate revoked. | 19 | Oct. 1 | 443 | Alaska—progress on construction program. | 6 | Mar. 15 | 88 |
| Boschma, Theodore, pilot certificate revoked. | 8 | Apr. 15 | 166 | Communications instrumental in saving girl's life. | 17 | Sept. 1 | 411 |
| Boston, Mass., airport project approved. | 3 | Feb. 1 | 47 | Construction program completed, 1940. | 16 | Aug. 15 | 397 |
| Boulder City, Nev., airport project approved. | 9 | May 1 | 201 | Designation of seven new lanes. | 18 | Sept. 15 | 427 |
| Bradley, Paul M., offer accepted in compromise of civil penalty. | 9 | do | 207 | Instrument landing system: | | | |
| Brainerd, Minn., airport project approved. | 10 | May 15 | 224 | Description | 7 | Apr. 1 | 110 |
| Branch, Harlee: | | | | Indianapolis. | 7 | do | 109 |
| Addresses A. L. P. A. convention. | 1 | Jan. 1 | 6 | Improvements made in broadcast stations. | 2 | Jan. 15 | 22 |
| Appointed new chairman of Civil Aeronautics Board. | 14 | July 15 | 297 | Map revised and available. | 6 | Mar. 15 | 92 |
| Radio address on civil aeronautics. | 18 | Sept. 15 | 421 | Plans cleared for ten landing beams. | 3 | Feb. 1 | 37 |
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| Seaplane base directory in course of preparation | 11 | June 1 | 232 | | | | |
| Standard system of marking and numbering airways, (sketches only) | 11 | do | 232 | | | | |
| Station to station air-line traffic survey | 10 | May 15 | 213 | | | | |
| Take-off weight and fuel dumping regulations | 3 | Feb. 1 | 41 | | | | |
| Training manuals | 20 | Oct. 15 | 451 | | | | |
| Reference and Research Section, Cecil A. Ross appointed chief | 1 | Jan. 1 | 2 | | | | |

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| D | | | | | | | |
| Dahmus, Theodore, violation referred to Attorney General. | 4 | Feb. 15 | 64 | Flight level indicator developed by Authority | 11 | June 1 | 231 |
| Dake, Beauford R., pilot certificate revoked | 1 | Jan. 1 | 16 | Flight load factors | 23 | Dec. 1 | 495 |
| Dallas, Tex., aircraft accident July 16, 1940 | 24 | Dec. 15 | 509 | Flight load factors for large airplanes | 19 | Oct. 19 | 438 |
| Dansville, N. Y., airport project approved | 12 | June 15 | 245 | Fogg, Capt. Robt. S., report on C. A. A.—N. Y. A. seaplane base program. | 9 | May 1 | 197 |
| Darling, O. Coburn, interlocking relationships approved and disapproved. | 8 | Apr. 15 | 166 | Foreign flights procedure instruction available | 1 | Jan. 1 | 2 |
| Davis, Arthur, interlocking relationships temporarily approved. | 17 | Sept. 1 | 419 | Fort, Van Dyke, interlocking relationship approved. | 6 | Mar. 15 | 87 |
| Davis, Paul M., interlocking relationship approved. | 9 | May 1 | 208 | Fort Myers, Fla., airport project approved | 9 | May 1 | 201 |
| Defects in spruce, etc. (See Civil Aeronautics Authority—Publications.) | | | | Fort Ripley, Minn., aircraft accident Apr. 22, 1940 | 19 | Oct. 1 | 435 |
| DeLand, Fla., airport project approved | 10 | May 15 | 224 | Fort Smith, Ark., airport project approved | 4 | Feb. 15 | 58 |
| Delano, Lyman, interlocking relationship approved. | 9 | May 1 | 208 | Fox, Alfred Charles, pilot certificate suspended for 60 days. | 1 | Jan. 1 | 16 |
| DeMorest, John N., student pilot certificate suspended. | 16 | Aug. 15 | 408 | Frahm, Donald, solo pilot certificate suspended for 60 days. | 6 | Mar. 15 | 82 |
| Denison, Jack, offer accepted in compromise of civil penalty. | 13 | July 1 | 264 | Frederick, Okla., aircraft accident Apr. 25, 1940 | 24 | Dec. 15 | |
| Denver, Colo.: | | | | Fremont, Nebr., airport project approved | 10 | May 15 | 224 |
| Airport project approved | 24 | do | 515 | Do | 24 | Dec. 15 | |
| Des Marais, Robert, offer accepted in compromise of civil penalty. | 7 | Apr. 1 | 118 | French air line to make experimental transatlantic flights. | 11 | June 1 | 230 |
| Designation of civil airways. (See Civil Aeronautics Authority—Airways system.) | | | | Frizzell, Paul J., resigns post with Authority | 14 | July 15 | 208 |
| Dethloff, Lester, offer accepted in compromise of civil penalty. | 11 | June 1 | 239 | Fuel consumed 1929-39 (gallons) | 20 | Oct. 15 | 455 |
| Detroit, Mich.: | | | | Fuel dumping regulations, interpretation of | 3 | Feb. 1 | 41 |
| Aircraft accident near, July 30, 1940 | 24 | Dec. 15 | 509 | G | | | |
| Airport project approved | 3 | Feb. 1 | 47 | Galloway, Charles W., interlocking relationship approved. | 6 | Mar. 15 | 87 |
| Dicke, Walter E.: | | | | Gammon, Ernest L., violation referred to Attorney General. | 12 | June 15 | 248 |
| Additional suspension of pilot certificate | 2 | Jan. 15 | 24 | Gardena, Calif., aircraft accident | 22 | Nov. 15 | 481 |
| Ordered to show cause | 1 | Jan. 1 | 13 | Garni, A., interlocking relationships approved | 16 | Aug. 15 | 407 |
| Additional suspension of pilot certificate | 5 | Mar. 1 | 74 | Garrett, Delmont B., pilot certificate revoked | 5 | Mar. 1 | 74 |
| Revoked | 3 | Feb. 1 | 50 | Garrett, Gene C., violation | 13 | July 1 | 264 |
| Directory of airports ready | 1 | Jan. 1 | 8 | Gatschet, Charles W., violation referred to Attorney General. | 12 | June 15 | 250 |
| Dodge City, Kans., airport project approved | 7 | Apr. 1 | 113 | Gavin, Frank J., interlocking relationships authorized. | 13 | July 1 | 264 |
| Donley, Roy, offer accepted in compromise of civil penalty. | 9 | May 1 | 207 | Geagin, James A., authorized to take depositions in Watson case. | 8 | Apr. 15 | 167 |
| Dunagan, Alfred W., violation referred to Attorney General. | 14 | July 15 | 303 | Gentry, Hurst Smith—solo pilot certificate revoked | 6 | Mar. 15 | 62 |
| Dunbar, Bruce L., application for reconsideration of certificate. | 7 | Apr. 1 | 115 | Gilbert, Charles O., offer accepted in compromise of civil penalty. | 3 | Feb. 1 | 50 |
| Do | 4 | Feb. 15 | 60 | Glacy, George F., interlocking relationships approved. | 2 | Jan. 15 | 26 |
| Duncan, William S., offer accepted in compromise of civil penalties. | 1 | Jan. 1 | 15 | Gledhill, Franklin, interlocking relationship approved. | 9 | May 1 | 208 |
| du Pont, Richard, interlocking relationships approved. | 23 | Dec. 1 | 502 | Gliders, status by States, as of: | | | |
| Do | 17 | Sept. 1 | 419 | Jan. 1, 1940 | 2 | Jan. 15 | 21 |
| Dusenbury, Jack Harold, student pilot certificate revoked. | 19 | Oct. 1 | 444 | Apr. 1, 1940 | 8 | Apr. 15 | 159 |
| Dutton, Howard F., commercial pilot certificate suspended. | 7 | Apr. 1 | 116 | Government to train 100 student pilots for aviation weather service. | 17 | Sept. 1 | 409 |
| E | | | | Grand Rapids, Mich., airport project approved | 13 | July 1 | 262 |
| Early, Thomas G., named acting secretary of Board. | 14 | July 15 | 298 | Do | 5 | Mar. 1 | 71 |
| Eckels, William F. | | | | Gravelly Point. (See Airports—Washington National.) | | | |
| Offer accepted in compromise of civil penalties. | 9 | May 1 | 205 | Gray, David L., interlocking relationship approved. | 6 | Mar. 15 | 87 |
| Student pilot certificate revoked | 9 | do | 210 | Green, Arthur, solo pilot certificate revoked | 18 | Sept. 15 | 430 |
| Economic regulations. (See Regulations.) | | | | Griffith, Edward S., student pilot certificate revoked. | 23 | Dec. 1 | 502 |
| Edwards, Ennis E., offer accepted in compromise of civil penalties. | 3 | Feb. 1 | 50 | Ground instructor ratings. (See Certificates, approvals, and ratings.) | | | |
| Eichhammer, Hubert, pilot certificate revoked | 18 | Sept. 15 | 430 | Grow, Otto E., offer accepted in compromise of civil penalty. | 6 | Mar. 15 | 86 |
| Ellis, Alfred R., student pilot certificate revoked | 9 | May 1 | 206 | Grumman Aircraft Engineering: | | | |
| Ely, Nev., aircraft accident Feb. 26, 1940 | 19 | Oct. 1 | 435 | Additional time granted for return flight of Canadian airplane. | 3 | Feb. 1 | 49 |
| Emergency landing, American Airlines plane, Louisville, Ky., Sept. 13, 1940. | 20 | Oct. 15 | 449 | Permitted to fly Canadian aircraft in United States. | 2 | Jan. 15 | 25 |
| Engine certificates. (See Certificates, approvals and ratings.) | | | | Gust load factor principles reported by Aircraft Airworthiness Section (text). | 17 | Sept. 1 | 410 |
| Engine production. (See Airplane manufacture—Production statistics.) | | | | Gutermuth, Chester R., pilot certificate revoked | 10 | May 15 | 225 |
| Eugene, Oreg., airport project approved | 12 | June 15 | 245 | H | | | |
| Exports. (See Airplane manufacture.) | | | | Hager, Herbert G., violation of regulations | 13 | July 1 | 264 |
| F | | | | Hahn, Victor I., interlocking relationship approved. | 9 | May 1 | 209 |
| Fabian, Harold, interlocking relationships approved. | 22 | Nov. 15 | 486 | Halle, French R., offer accepted in compromise of civil penalty. | 7 | Apr. 1 | 116 |
| Fairbury, Nebr., airport project approved | 13 | July 1 | 262 | Hampel Emil D., pilot certificate suspended | 1 | Jan. 1 | 11 |
| Fairchild, Shennan Mills, interlocking relationships approved. | 17 | Sept. 1 | 420 | Hanley, Robert J., student pilot certificate revoked | 3 | Feb. 1 | 50 |
| Fajardo, Sadi, violation referred to Attorney General. | 1 | Jan. 1 | 15 | Hardin, Thomas O., expresses appreciation for air carrier safety record. | 8 | Apr. 15 | 158 |
| Faribault, Minn., aircraft accident, July 1, 1940 | 22 | Nov. 15 | 481 | Hardin, Thomas O., Pan American authorized to issue free transportation to (Regulation 52). | 2 | Jan. 15 | 26 |
| Farmville, Va., airport project approved | 12 | June 15 | 245 | Harrison, Lt. Charles F., offer accepted in compromise of civil penalty. | 6 | Mar. 15 | 76 |
| Federal airways system. (See Civil Aeronautics Authority.) | | | | Harwell, James M., violation referred to Attorney General. | 11 | June 1 | 237 |
| Federal Communications Commission, radio frequencies and their allocations. | 6 | Mar. 15 | 80 | Hatland, Conrad, student pilot certificate revoked. | 13 | July 1 | 265 |
| Ferguson, William S., directed to show cause | 24 | Dec. 15 | 526 | Hatzfeld, Louis S., pilot certificate revoked | 14 | July 15 | 303 |
| Fitch, Walter, J. Jr., prohibited from carrying passengers for 60 days. | 3 | Feb. 1 | 49 | Hayti, Mo., aircraft accident Apr. 21, 1940 | 19 | Oct. 1 | 435 |
| Flathead National Forest, Mont., airport project approved. | 7 | Apr. 1 | 113 | Henderson, Ky., aircraft accident near, Apr. 17, 1940 | 19 | do | 435 |
| Fleishhacker, Herbert, interlocking relationship application dismissed. | 6 | Mar. 15 | 83 | Hester, Clinton M., expresses appreciation for air carrier safety record. | 8 | Apr. 15 | 159 |
| | | | | Hill, Roy Allen Clifford, violation referred to Attorney General. | 1 | Jan. 1 | 15 |

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| Appointed Assistant Secretary of Commerce | 14 | July 15 | 297 | Klingel, Gerald R., offer accepted in compromise of civil penalty. | 4 | Feb. 15 | 64 |
| Discusses airport program | 23 | Dec. 1 | 489 | Knight, Edward F., offer accepted in compromise of civil penalty. | 14 | July 14 | 304 |
| Radio addresses: | | | | Knight, Milton, named on executive committee of Aeronautical Advisory Council. | 23 | Dec. 1 | 489 |
| Air carrier safety record | 8 | Apr. 15 | 158 | Knight, Robert W., report on flight level indicator. | 11 | July 1 | 231 |
| Civil aeronautics | 18 | Sept. 15 | 421 | Knox, Ind., accident Mar. 17, 1940 | 19 | Oct. 1 | 436 |
| Hincks, Lyle R., offer accepted in compromise of civil penalties. | 8 | Apr. 15 | 166 | Kratz, Winston W., interlocking relationships approved. | 18 | Sept. 15 | 431 |
| Hobbs, L. L., violation referred to Attorney General. | 8 | do | 167 | Krenwinkel, William F., pilot certificate revoked. | 13 | July 1 | 265 |
| Hoffman, Leo J., student pilot certificate revoked. | 23 | Dec. 1 | 502 | Kubida, William, pilot certificate suspended | 11 | June 1 | 240 |
| Holden, O. L., violation referred to Attorney General. | 4 | Feb. 15 | 61 | | | | |
| Holland, John P., violation referred to Attorney General. | 11 | June 1 | 237 | L | | | |
| Honolulu, aircraft accident, Feb. 4, 1940 | 19 | Oct. 1 | 436 | Lambros, George, Jr., offer accepted in compromise of civil penalty. | 11 | do | 240 |
| Hoppin, Marshall C., reports on Authority's construction program in Alaska. | 6 | Mar. 15 | 77 | Lample, Chris: Ordered to show cause | 6 | Mar. 15 | 84 |
| Horgan, Cornelius J. J., offer accepted in compromise of civil penalty. | 13 | July 1 | 266 | Order to show cause discharged | 13 | July 1 | 264 |
| Hosmer, Wm. J., offer accepted in compromise of civil penalty. | 5 | Mar. 1 | 74 | Landing beams. (See Civil Aeronautics Authority—Airways system.) | | | |
| Houston, Tex., airport project approved | 9 | May 1 | 201 | Landing system. (See Civil Aeronautics Authority—Airways System.) | | | |
| Howarth, Arthur L., offer accepted in compromise of civil penalty. | 9 | do | 205 | Lane, J. W. Harmon, violation referred to Attorney General. | 1 | Jan. 1 | 15 |
| Hurst, Franklin, offer accepted in compromise of civil penalty. | 14 | July 15 | 304 | Lang, Henry S., pilot certificate suspended | 24 | Dec. 15 | 526 |
| Hutchinson, Milford C., offer accepted in compromise of civil penalty. | 7 | Apr. 1 | 121 | Lansing, Mich., airport project approved | 5 | Mar. 1 | 71 |
| | | | | Layne, James Henry: Revoked | 9 | May 1 | 206 |
| I | | | | Student pilot certificate suspended | 7 | Apr. 1 | 118 |
| Icing. (See Carburetor.) | | | | Violation referred to Attorney General | 7 | Apr. 1 | 118 |
| Index to Civil Aeronautics Journal, Notice re | 24 | Dec. 15 | 505 | Lederer, Jerome, appointed Director of Safety Bureau. | 14 | July 15 | 298 |
| Indianapolis, landing aids demonstrated | 7 | Apr. 1 | 109 | Lee, J. M., joint author, Tech. Devel. Rept. No. 9. Legislation. (See Aeronautical legislation.) | 9 | May 1 | 201 |
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| Ingalls, Laura, solo pilot certificate suspended | 2 | Jan. 15 | 24 | Violation referred to Attorney General | 8 | Apr. 15 | 167 |
| Instrument landing system. (See Civil Aeronautics Authority—Airways.) | | | | Letters of approval. (See Certificates, approvals, and ratings.) | | | |
| Instructors, Authority offers refresher courses to | 7 | Apr. 1 | 112 | Lesley, William M., student pilot certificate revoked. | 24 | Dec. 15 | 527 |
| Instrument landing equipment for airplanes, conference to study problem of standardization. | 3 | Feb. 1 | 37 | Lewis, Valta G., violation referred to Attorney General. | 4 | Feb. 15 | 64 |
| Instrument landing system. (See Civil Aeronautics Authority—Airways.) | | | | Lievre, Joe B., offer accepted in compromise of civil penalty. | 10 | May 15 | 228 |
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| | | | | Log books. (See Civil Aeronautics Authority—Publications.) | | | |
| J | | | | Logan, Dixon, C., offer accepted in compromise of civil penalty. | 5 | Mar. 1 | 75 |
| Jackson, A. L., offer accepted in compromise of civil penalty. | 2 | Jan. 15 | 24 | Logan, Utah, airport project approved | 4 | Feb. 15 | 63 |
| Jackson, C. H., joint author of Tech. Develop. Report No. 9. | 9 | May 1 | 201 | Long Beach, Calif., airport project approved | 10 | May 15 | 224 |
| Jackson, Lewis A., offer accepted in compromise of civil penalty. | 9 | do | 207 | Long range airport development program. (See Airports.) | | | |
| Jacobsson, Charles E., Jr., offer accepted in compromise of civil penalty. | 3 | Feb. 1 | 50 | Loring, Charles P., pilot certificate, suspended | 3 | Feb. 1 | 50 |
| Johnson, Charles Odell, violation referred to Attorney General. | 7 | Apr. 1 | 120 | Do | 2 | Jan. 15 | 24 |
| Johnson, R. S., airman certificate suspended | 2 | Jan. 15 | 26 | Do | 1 | Jan. 1 | 14 |
| Johnson, R. S., directed to show cause | 4 | Feb. 15 | 61 | Los Angeles, Calif., permitted to intervene in American Airlines application. | 6 | Mar. 15 | 84 |
| Johnson, R. S., certificate suspended for additional 30 days. | 5 | Mar. 1 | 75 | Love, Robert G., offer accepted in compromise of civil penalty. | 13 | July 1 | 267 |
| Johnson, R. S., certificate revoked | 7 | Apr. 1 | 117 | Lovettsville, Va., P. C. A. accident, Aug. 31, 1940, report on. | 23 | Dec. 1 | 493 |
| Johnson, Rufus S., violation referred to Attorney General. | 10 | May 15 | 226 | "Low visibility, etc." (See Civil Aeronautics Authority—Publications.) | | | |
| Johnston, Albert Hugh, certificate suspended for 30 days. | 9 | May 1 | 207 | Lubbock, Tex., airport project approved | 9 | May 1 | 201 |
| Johnston, Albert Hugh, student pilot certificate suspended. | 10 | May 15 | 228 | Lustig, Harry M., pilot certificate suspended | 11 | June 1 | 238 |
| Johnston, James H., application for interlocking relationship dismissed. | 6 | Mar. 15 | 82 | Lustig, Harry M., pilot certificate revoked | 12 | June 15 | 247 |
| Johnston, James H., interlocking relationship approved. | 9 | May 1 | 208 | Lynchburg, Va., airport project approved | 24 | Dec. 15 | 527 |
| Jones, Charles "Casey" named on executive committee, Aeronautical Advisory Council. | 23 | Dec. 1 | 489 | Lyon, Stanley, student pilot certificate suspended | 18 | Sept. 15 | 430 |
| Jones, J. Don, pilot certificate suspended | 11 | June 1 | 238 | | | | |
| Jouett, John, named on executive committee, Aeronautical Advisory Council. | 23 | Dec. 1 | 489 | Mc | | | |
| | | | | McCarthy, Henry F., interlocking relationship approved. | 2 | Jan. 15 | 26 |
| K | | | | McCarthy, Patrick B., offer accepted in compromise of civil penalty. | 6 | Mar. 15 | 86 |
| Kansasville, Wis., aircraft accident July 5, 1940 | 24 | Dec. 15 | 508 | McClain, Raymond C., offer accepted in compromise of civil penalty. | 8 | Feb. 15 | 163 |
| Kenan, Wm. B., Jr., interlocking relationship authorized. | 6 | Mar. 15 | 87 | McInnis, Emmett E., interlocking relationship authorized. | 6 | Mar. 15 | 87 |
| Kendall, Walter, violation referred to Attorney General. | 5 | Mar. 1 | 75 | McIntyre, Duncan A., offer accepted in compromise of civil penalty. | 9 | May 1 | 265 |
| Kidd, Raymond Lee, offer accepted in compromise of civil penalty. | 2 | Jan. 15 | 24 | McKee, Mark T., interlocking relationship approved. | 3 | Feb. 1 | 51 |
| Kilner, Walter G., interlocking relationships approved. | 12 | June 15 | 248 | McKelvey, John E., granted intervention in T. W. A. application. | 7 | Apr. 1 | 117 |
| Kirk, Clyde Jay, offer accepted in compromise of civil penalty. | 7 | Apr. 1 | 121 | McKnight, Marvin O., violation referred to Attorney General. | 7 | do | 117 |

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| McKusick, Paul J., violation | 13 | July 1 | 264 | New type certificates. (See Certificates, approval and ratings.) | | | |
| McLatchy, Walter W., offer accepted in compromise of civil penalty. | 4 | Feb. 15 | 64 | New York City: Airport project approved | 3 | Feb. 1 | 47 |
| McLaurin, Horance, student pilot certificate revoked. | 16 | Aug. 15 | 407 | Do | 5 | Mar. 1 | 71 |
| M | | | | New York Municipal Airport name changed | 3 | Feb. 1 | 52 |
| Madison, Wis., airport project approved | 24 | Dec. 15 | 527 | New York World's Fair. (See Restricted flying areas.) | | | |
| Mail pay, Authority institutes investigation of 5 air carriers. | 1 | Jan. 1 | 6 | New Zealand—United States air service authorized. | 13 | July 1 | 257 |
| Manchester, N. H., airport project approved | 24 | Dec. 15 | 527 | Newman, C. D., pilot certificate revoked | 4 | Feb. 15 | 64 |
| Maneuvering Load Factors, full text | 23 | Dec. 1 | 495 | Newport News, Va., aircraft accident | 24 | Dec. 15 | 508 |
| Manufacturing & production. (See Airplanes Manufacture.) | | | | Newton, F. B., violation referred to Attorney General. | 7 | Apr. 1 | 121 |
| Mangum, Ralph C., pilot certificate suspended | 9 | May 1 | 209 | Nichols, Arthur B., interlocking relationship approved. | 2 | Jan. 15 | 26 |
| Manhattan, Kans., airport project approved | 5 | Mar. 1 | 71 | Norman, Harry Hershey, student pilot certificate revoked. | 22 | Nov. 15 | 487 |
| Mann, Phillip S., pilot certificate revoked | 4 | Feb. 15 | 61 | Norris, Ernest Eden, interlocking relationship approved. | 3 | Feb. 1 | 51 |
| Maps. (See Aeronautical charts.) | | | | Norsigian, Norris, student pilot certificate suspended. | 4 | Feb. 15 | 62 |
| Marianna, Fla., airport project approved | 4 | do | 63 | Do | 5 | Mar. 1 | 75 |
| Marsh, Fred J., Jr., student pilot certificate revoked. | 1 | Jan. 1 | 16 | Do | 6 | Mar. 15 | 84 |
| Martin, Walter Ireland, student pilot certificate revoked. | 4 | Feb. 15 | 63 | Do | 19 | Oct. 1 | 435 |
| Mayo Foundation to conduct aviation research project. | 24 | Dec. 15 | 505 | North Platte, Nebr., airport project approved | 5 | Mar. 1 | 73 |
| Mechanics. (See Airmen.) | | | | Norway, Maine, airport project approved | 4 | Feb. 15 | 63 |
| Medford, Oreg., airport project approved | 24 | do | 527 | O | | | |
| Medford, Wis., aircraft accident, July 21, 1940 | 23 | Dec. 1 | 492 | Oakland, Calif., airport project approved | 7 | Apr. 1 | 113 |
| Medical examiners. (See Civil Aeronautics Authority.) | | | | O'Connor, John W., directed to appear before Board examiner. | 19 | Oct. 1 | 443 |
| Meetings. (See Conferences.) | | | | Official actions. (See Civil Aeronautics Authority.) | | | |
| Melbourne, Fla., airport project approved | 24 | Dec. 15 | 515 | Olympia, Wash., airport project approved | 24 | Dec. 15 | 527 |
| Mellon, Richard King, interlocking relationship application dismissed. | 6 | Mar. 15 | 83 | Omaha, Nebr., airport project approved | 3 | Feb. 1 | 47 |
| Melton, John R., Jr., violation referred to Attorney General. | 10 | May 15 | 226 | Do | 7 | Apr. 1 | 113 |
| Memphis, Tenn., airport project approved | 13 | July 1 | 262 | Opinions. (See Civil Aeronautics Authority—Official actions.) | | | |
| Do | 3 | Feb. 1 | 47 | Orange, Wis., airport project approved | 24 | Dec. 15 | 527 |
| Mendenhall, S. D., offer accepted in compromise of civil penalty. | 14 | July 15 | 304 | Do | 7 | Apr. 1 | 114 |
| Meridian, Miss., airport project approved | 3 | Feb. 1 | 47 | Orlando, Fla., airport project approved | 24 | Dec. 15 | 515 |
| Merrill, Robert V., pilot certificate revoked | 4 | Feb. 15 | 64 | Otay, Calif., aircraft accident, July 19, 1940 | 23 | Dec. 1 | 492 |
| Meteorological conditions associated with aircraft lightning discharges, etc. | 9 | May 1 | 198 | P | | | |
| Midland, Tex., airport project approved | 24 | Dec. 15 | 527 | Palmer, Lester E., student pilot certificate revoked. | 10 | May 15 | 227 |
| Millikan, Dr. Clark, elected second vice chairman, Aeronautical Advisory Council. | 23 | Dec. 1 | 489 | Parachutes: | | | |
| Military competence in piloting aircraft prescribed. | 5 | Mar. 1 | 76 | Exports, 1932-June 1940 (value) | 20 | Oct. 15 | 457 |
| Miller, Vincent W., offer accepted in compromise of civil penalty. | 4 | Feb. 15 | 64 | Type certificates. (See Certificates, approvals and ratings.) | | | |
| Minerva, Ohio, accident June 20, 1940 | 24 | do | 508 | Parker, Harold L., offer accepted in compromise of civil penalty. | 4 | Feb. 15 | 64 |
| Minneapolis, airport project approved | 24 | Dec. 15 | 527 | Parkersburg, W. Va., airport project approved | 4 | do | 63 |
| Minsler, E. J., article on meteorological conditions. | 9 | May 1 | 198 | Do | 13 | July 1 | 262 |
| Missoula, Mont., airport project approved | 12 | June 15 | 245 | Passes. (See Regulations, economic.) | | | |
| Mixer, George, interlocking relationships approved. | 5 | Mar. 1 | 75 | Patchin, Robert H., interlocking relationship approved. | 3 | Feb. 1 | 51 |
| Montgomery, Ala., airport project approved | 3 | Feb. 1 | 47 | Peterson, George E., offer accepted in compromise of civil penalty. | 2 | Jan. 15 | 24 |
| Moorhead, Miss., airport project approved | 24 | Dec. 15 | 515 | Petrone, William R., pilot certificate revoked | 22 | Nov. 15 | 486 |
| Morgan, Stokeley Williams, interlocking relationships approved. | 6 | Mar. 15 | 84 | Phillips, Chester L., Jr., private pilot certificate revoked. | 7 | Apr. 1 | 115 |
| Morgan, Thomas A.: | | | | Piche, Paul E., student pilot certificate revoked | 9 | May 1 | 206 |
| Elected first vice chairman, Aeronautical Advisory Council. | 23 | Dec. 1 | 489 | Pierce, Charles G., pilot certificate revoked | 23 | Dec. 1 | 502 |
| Interlocking relationships approved | 6 | Mar. 15 | 84 | Pilots. (See Airmen.) | | | |
| Morris, Henry Prescott, interlocking relationship approved. | 6 | Mar. 15 | 84 | Place, Willard F., interlocking relationship approved. | 6 | Mar. 15 | 87 |
| Morrison, Albert Leo, violation referred to Attorney General. | 1 | Jan. 1 | 10 | Port Angeles, Wash., airport project approved | 24 | Dec. 15 | 517 |
| Monan, Daniel A., pilot certificate: | | | | Portland, Maine, airport project approved | 12 | June 15 | 245 |
| Suspended | 9 | May 1 | 207 | Portland, Oreg., airport project approved | 10 | May 15 | 224 |
| Do | 10 | May 10 | 228 | Do | 13 | July 1 | 262 |
| Revoked | 11 | June 1 | 237 | Position lights, pilots urged to keep in proper condition. | 23 | Dec. 1 | 491 |
| Morrison, Ralph E., offer accepted in compromise of civil penalty. | 11 | do | 239 | Postmaster General cites growth of air mail | 3 | Feb. 1 | 40 |
| Moss, William V., student pilot certificate revoked. | 10 | May 15 | 225 | Preister, Andre A., interlocking relationship approved. | 9 | May 1 | 208 |
| Mulac, Vincent J., violation referred to Attorney General. | 4 | Feb. 15 | 64 | Presque Isle, Maine, airport project approved | 24 | Dec. 15 | 515 |
| Munising, Mich., airport project approved | 24 | Dec. 15 | 515 | Private flying (see also Civilian pilot training gram): | | | |
| Murphy, Davis A., offer accepted in compromise of civil penalty. | 6 | Mar. 15 | 85 | Accidents. (See Accidents.) | | | |
| Murphy, Davis A., violation referred to Attorney General. | 5 | Mar. 1 | 74 | Airplanes in operation, 1929-39 (annual summary). | 20 | Oct. 15 | 456 |
| N | | | | Fuel consumed, 1929-39 (annual summary) | 20 | do | 456 |
| Nashville, Tenn., airport project approved | 5 | do | 71 | Progress. (See Progress.) | | | |
| Do | 3 | Feb. 1 | 47 | Operations statistics | 4 | Feb. 15 | 57 |
| Nason, William R., offer accepted in compromise of civil penalty. | 6 | Mar. 15 | 86 | Do | 13 | July 1 | 261 |
| National Academy of Sciences approves instrument-landing program. | 3 | Feb. 1 | 37 | Do | 20 | Oct. 15 | 456 |
| National Airport. (See Airports—Washington National.) | | | | Production statistics. (See Airplane manufacture.) | | | |
| National defense and civilian flying | 20 | Oct. 15 | 451 | Progress of civil aeronautics: | | | |
| National Youth Administration. (See Civil Aeronautics Authority—National Youth Administration.) | | | | In Alaska | 6 | Mar. 15 | 77 |
| Naudack, Dr. R. W., offer accepted in compromise of civil penalty. | 9 | May 1 | 208 | In the United States (1929-June, 1940 statistics) | 20 | Oct. 15 | 454 |
| Netzel, Adolph P., pilot certificate revoked | 2 | Jan. 15 | 25 | Preliminary year-end survey shows wide progress (1939). | 2 | Jan. 15 | 17 |
| New Bedford, Mass., airport project approved | 7 | Apr. 1 | 113 | Prohibited flying areas (see also Restricted flying areas): Canada | 5 | Mar. 1 | 73 |
| | | | | Projects. (See Airports.) | | | |
| | | | | Propellers, certificated. (See Certificates, approvals, and ratings.) | | | |

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| Prosser, Warren C., offer accepted in compromise of civil penalty. | 9 | May 1. | 205 | Regulations—Continued | | | |
| Purcell, Richard G., Jr.: Solo-pilot certificate suspended..... | 7 | Apr. 1. | 118 | Exceptions to physical requirements; amendment 67 adopted. | 18 | Sept. 15. | 360 |
| Solo-pilot certificate revoked..... | 9 | May 1. | 205 | Text..... | 18 | do | 432 |
| Puvogel, Robert, student-pilot certificate revoked. | 2 | Jan. 15. | 25 | Foreign and overseas flights, amendment No. 59 adopted. | 14 | July 15. | 429 |
| Q | | | | Flying school rating, amendment No. 50 creates new methods. | 12 | June 15. | 251 |
| Quidley, Donald A., student-pilot certificate revoked. | 23 | Dec. 1. | 502 | Free transportation for C. A. A. inspectors, amendment No. 2 modifies provisions of regulations. | 11 | June 1. | 240 |
| R | | | | Ground instructor rating, amendment 35 creates new method. | 5 | Mar. 1. | 76 |
| Rackham, Lowell, private-pilot certificate revoked. | 1 | Jan. 1. | 16 | Instrument rating for military pilots adopted amendment No. 63. | 16 | Aug. 15. | 408 |
| Radio aids to air navigation. (See Civil Aeronautics Authority—Airways system.) | | | | Minimum altitudes for flight instruction and solo practice, amendment No. 43 adopted. | 8 | Apr. 15. | 167 |
| Radio frequencies and their allocation..... | 6 | Mar. 15. | 80 | Military competence for piloting aircraft under instrument conditions, amendment No. 38 adopted. | 5 | Mar. 1. | 76 |
| Raleigh, N. C., airport project approved..... | 9 | May 1. | 201 | Modified by amendment No. 55..... | 12 | June 15. | 251 |
| Ralston, Stewart W., offer accepted in compromise of civil penalty. | 9 | do. | 205 | Reexamination for mechanic certificates, amendment No. 44 adopted. | 11 | June 1. | 240 |
| Ramaker, Joe H., offer accepted in compromise of civil penalty. | 7 | Apr. 1. | 122 | Repair stations, amendment to part 52 of regulations. | 5 | Mar. 1. | 69 |
| Randle, Ulmo S.: Ordered to show cause..... | 4 | Feb. 15. | 64 | Repair stations, new method for certification created by amendment No. 36. | 5 | do | 76 |
| Student-pilot certificate revoked..... | 10 | May 15. | 226 | Revised..... | 5 | do | 65 |
| Rayner, Herbert Jr., violation referred to Attorney General. | 14 | July 15. | 303 | Do..... | 17 | Sept. 1. | 412 |
| Raynes, Albert J., interlocking relationship approved. | 2 | Jan. 15. | 26 | Correction..... | 19 | Oct. 1. | 434 |
| Reed, Harry V., pilot certificate revoked..... | 14 | July 15. | 302 | Safety belt requirements..... | 11 | June 1. | 234 |
| Reese, Harold H., offer accepted in compromise of civil penalty. | 9 | May 1. | 207 | Solo and Limited Commercial certificates eliminated by amendment No. 37. | 5 | Mar. 1. | 76 |
| Reference and Research Section. (See Civil Aeronautics Authority.) | | | | Status of parts and amendments..... | 22 | Nov. 15. | 488 |
| Refresher course. (See Civilian pilot training program.) | | | | Do..... | 23 | Dec. 1. | 504 |
| Regulations: | | | | Take-off weight and fuel dumping..... | 3 | Feb. 1. | 41 |
| Acrobatics: | | | | Violations. (See Civil Aeronautics Authority: Official Acts.) | | | |
| Amendment revises term..... | 5 | Mar. 1. | 76 | Weather interruption reports discontinued, amendment No. 52. | 12 | June 15. | 251 |
| New definition..... | 5 | do | 68 | Regulations, foreign: Canada, flying civil aircraft during war. | 5 | Mar. 1. | 67 |
| Air carrier: | | | | Regulations special: Flying United States aircraft to Canada. | 14 | July 15. | 303 |
| Aircraft airworthiness, amendment No. 56 provides alternative requirements. | 12 | June 15. | 252 | Reid, Randon M., order to show cause in..... | 10 | May 15. | 227 |
| Altitudes and permissible errors, text of amendment: | 23 | Dec. 1. | 503 | Dismissed..... | 17 | Sept. 1. | 419 |
| Airmen: | | | | Reorganization. (See Civil Aeronautics Authority.) | | | |
| Night flying, amendment No. 53 revises requirements for. | 12 | do | 251 | Repair station certificates. (See Certificates, approvals, and ratings.) | | | |
| Privileges, amendment No. 49 modifies..... | 11 | June 1. | 240 | Repair stations, new method of certification. (See Regulations.) | | | |
| Amendment No. 51 revises qualifications..... | 12 | June 15. | 251 | Research project to be conducted by Mayo Foundation. | 24 | Dec. 15. | 505 |
| Dispatchers, amendment No. 46 creates new method for certification. | 11 | June 1. | 240 | Restricted flying areas: | | | |
| Operations, amendment 51 revises qualification. | 12 | June 15. | 251 | Indianapolis Speedway..... | 12 | June 15. | 252 |
| Simultaneous departure over same route prohibited. | 5 | Mar. 1. | 76 | New York World's Fair..... | 11 | June 1. | 233 |
| Repealed..... | 16 | Aug. 15. | 402 | New York World's Fair, repealed..... | 1 | Jan. 1. | 14 |
| Aircraft: | | | | San Francisco Bay (for landing)..... | 4 | Feb. 15. | 53 |
| Airworthiness tests, amendment No. 48..... | 11 | June 1. | 240 | Rihl, George Lawrence, interlocking relationships approved. | 6 | Mar. 15. | 84 |
| Amendments adopted..... | 11 | do | 230 | Rimmer, John W., interlocking relationships approved. | 2 | Jan. 15. | 26 |
| Cincinnati control zone area, requirement re-radio equipment. | 16 | Aug. 15. | 408 | Rio de Janeiro. (See Accidents.) | | | |
| Identification marks, text of amendment No. 80. | 23 | Dec. 1. | 503 | Roanoke, Va., airport project approved. | 24 | Dec. 15. | 527 |
| Registration, etc., amendment 45 adopted..... | 11 | June 1. | 240 | Roberson, Richard M., pilot certificate suspended. | 17 | Sept. 1. | 419 |
| Airmen: | | | | Robertson, Mo.: Aircraft accident, July 16, 1940..... | 23 | Dec. 1. | 493 |
| Applicants for certificates, new requirements adopted, amendment No. 42. | 7 | Apr. 1. | 122 | Airport project approved..... | 10 | May 15. | 224 |
| Certification of mechanics, new method prescribed by amendment No. 39. | 5 | Mar. 1. | 76 | Rochester, N. Y., airport project approved..... | 10 | do | 224 |
| Airport discontinued by amendment 64 (Camden, N. J.) | 16 | Aug. 15. | 408 | Roig, Harold, interlocking relationships, approved. | 3 | Feb. 1. | 51 |
| Airways traffic control system, amendments Nos. 70 and 71. | 18 | Sept. 15. | 432 | Revised order..... | 4 | Feb. 15. | 63 |
| Amendments adopted..... | 18 | do | 432 | Roop, James Clawson, interlocking relationship approved. | 3 | Feb. 1. | 51 |
| Do..... | 14 | July 15. | 305 | Roosevelt, President: | | | |
| Do..... | 11 | June 1. | 230 | Congratulates air carriers and Civil Aeronautics Authority on air safety record. | 8 | Apr. 15. | 157 |
| Do..... | 16 | Aug. 15. | 408 | Lays corner stone at Washington National Airport. | 20 | Oct. 15. | 446 |
| Do..... | 14 | July 15. | 306 | Roper, George, offer accepted in compromise of civil penalty. | 6 | Mar. 15. | 86 |
| Do..... | 13 | July 1. | 268 | Rosenhan, Alfred H., violation referred to Attorney General. | 12 | June 15. | 250 |
| Amendment No. 1 to Regulation 88 adopted. | 14 | July 15. | 305 | Ross, Cecil A., named Chief, Reference and Research Section. | 1 | Jan. 1. | 2 |
| Applications for certificates, amendment adopted. | 23 | Dec. 1. | 503 | Rotary. (See Airplanes.) | | | |
| Civil Aeronautics Authority inspectors granted access to aircraft. | 4 | Feb. 15. | 64 | Routes. (See Air carriers.) | | | |
| Certificates, amendment explained..... | 5 | Mar. 1. | 65 | Russellville, Ark., airport project approved..... | 3 | Feb. 1. | 47 |
| Certificates, renewal and special issuance: Amendment 65 provides for..... | 16 | Aug. 15. | 408 | Ryan, Oswald, excerpts from address on Washington National Airport. | 1 | Jan. 1. | 1 |
| Text..... | 17 | Sept. 1. | 412 | | | | |
| Certification of mechanics, new method prescribed by amendment No. 39. | 5 | Mar. 1. | 76 | S | | | |
| Control zones..... | 4 | Feb. 15. | 64 | Safety. (See Air safety.) | | | |
| Control zones, amendments (text)..... | 22 | Nov. 15. | 487 | Safety belt regulations. (See Regulations, Civil Air.) | | | |
| Disabled pilots, amendment re..... | 16 | Aug. 15. | 404 | Safety Bureau. (See Civil Aeronautics Authority.) | | | |
| Educational requirements amended (amendment No. 40). | 5 | Mar. 1. | 76 | Safety reports. (See Air Safety Board.) | | | |
| Effective date of revisions..... | 9 | May 1. | 200 | St. Joseph, Mo., airport project approved..... | 24 | Dec. 15. | 415 |
| Do..... | 5 | Mar. 1. | 74 | St. Louis, Mo., airport project approved..... | 7 | Apr. 1. | 114 |
| Do..... | 9 | May 1. | 200 | | | | |
| Do..... | 11 | June 1. | 239 | | | | |
| Engine log books, amendment No. 69..... | 18 | Sept. 15. | 432 | | | | |

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| St. Paul, Minn., airport project approved..... | 7 | Apr. 1..... | 114 | Trippe, Juan Terry, interlocking relationships approved. | 6 | Mar. 15..... | 84 |
| Do | 24 | Dec. 15..... | | Trunk, John L. H., authorized to fly Colombian aircraft in United States. | 10 | May 15..... | 227 |
| St. Petersburg airport leased by Authority for standardization center. | 19 | Oct. 1..... | 434 | Tucson, Ariz., airport project approved..... | 12 | June 15..... | 245 |
| San Diego, Calif., airport projects approved..... | 5 | Mar. 1..... | 73 | Do | 24 | Dec. 15..... | 515 |
| San Francisco Bay, restricted landing area established. | 4 | Feb. 15..... | 53 | Tulsa, Okla., aircraft collision June 17, 1940. | 24 | do | 509 |
| Sanders, Elmo Edward, violation referred to Attorney General. | 14 | July 15..... | 302 | Tyler, Harland B., offer accepted in compromise of civil penalty. | 1 | Jan. 1..... | 15 |
| Santa Monica (Clover Field) designated control airport. | 14 | do | 306 | Tyler, Kenneth W., violation referred to attorney general. | 11 | June 1..... | 237 |
| Scandrett, Benjamin W., interlocking relationship authorized. | 6 | Mar. 15..... | 87 | Tyler, Tex., airport project approved..... | 10 | May 15..... | 224 |
| Scheduled air transportation. (See Air carriers.) | | | | Type certificates. (See Certificates, approvals and ratings.) | | | |
| Schofield, Lewis E., offer accepted in compromise of civil penalty. | 14 | July 15..... | 304 | | | | |
| Schools. (See Certificates, approvals, and ratings.) | | | | U | | | |
| Seal, Clinton A., pilot certificate suspended. | 18 | Sept. 15..... | 430 | Umholtz, Neal, offer accepted in compromise of civil penalty. | 9 | May 1..... | 207 |
| Seaplane bases and anchorages. (See Airports.) | | | | Umphress, John Edgar, offer accepted in compromise of civil penalty. | 1 | Jan. 1..... | 15 |
| Seaplane training. (See Civil pilot training program.) | | | | United Air Lines.—Western Air Express hearing concluded. | 4 | Feb. 15..... | 54 |
| Seattle, Wash., airport project approved..... | 5 | Mar. 1..... | 73 | | | | |
| Shamblin, Walter H., pilot certificate revoked. | 23 | Dec. 1..... | 502 | V | | | |
| Sharples, Laurence, named on executive committee, Aeronautical Advisory Council. | 23 | do | 489 | Van Arsdale, William Dawes, pilot certificate revoked. | 23 | Dec. 1..... | 502 |
| Shillington, W. R., offer accepted in compromise of civil penalty. | 10 | May 15..... | 228 | Venezuelan planes authorized to make United States flight. | 1 | Jan. 1..... | 13 |
| Simms, William Gilmore, Jr., offer accepted in compromise of civil penalty. | 11 | June 1..... | 240 | Vincennes, Ind., aircraft accident near..... | 23 | Dec. 1..... | 492 |
| Simultaneous plane departures. (See Regulations, Civil Air—Air carrier.) | | | | Vital statistics. (See Accidents.) | | | |
| Sioux Falls, S. Dak., airport project approved.... | 24 | Dec. 15..... | 493 | | | | |
| Smith, Henry Morgan, pilot certificate revoked.... | 22 | Nov. 1..... | 486 | W | | | |
| Smith, Col. Sumpter addresses Washington Board of Trade. | 1 | Jan. 1..... | 1 | Wagner, Harold, violation referred to Attorney General. | 12 | June 15..... | 248 |
| Solomon, Samuel J., interlocking relationships approved. | 2 | Jan. 15..... | 26 | Walters, Lewis Edward, pilot certificate revoked.. | 23 | Dec. 1..... | 502 |
| Soukop, Milos J., offer accepted in compromise of civil penalty. | 6 | Mar. 15..... | 86 | Warner, Edward, address on rotary aircraft..... | 1 | July 1..... | 2 |
| Spanish Fork, Utah, airport project approved..... | 24 | Dec. 15..... | 527 | Address on rotary aircraft..... | 1 | Jan. 1..... | 2 |
| Spann, Anthony F., offer accepted in compromise of civil penalty. | 6 | Mar. 15..... | 81 | Appointed vice chairman of Civil Aeronautics Board..... | 14 | July 15..... | 297 |
| Spiva, Alva Wilson, parachute rigger's certificate suspended. | 9 | May 1..... | 206 | Washburn, Carl L., violation referred to Attorney General. | 8 | Apr. 15..... | 164 |
| Spokane, Wash., airport project approved..... | 24 | Dec. 15..... | 527 | Washington National Airport. (See Airports.) | | | |
| Standley, William H., interlocking relationships approved. | 12 | June 15..... | 521 | Wasil, Nicholas, offer accepted in compromise of civil penalty. | 1 | Jan. 1..... | 15 |
| Stanton, Charles I., appointed Assistant Administrator of Civil Aeronautics. | 22 | Nov. 15..... | 473 | Watertown, S. Dak., airport project approved.... | 10 | May 15..... | 224 |
| Starbuck, Raymond D., interlocking relationship approved. | 6 | Mar. 15..... | 87 | Watson, Edward C., ordered to show cause in violation proceeding. | 14 | July 15..... | 303 |
| State cooperation sought in proper airport zoning. Statistical summary. (See Air carriers, accidents, airplane production, and/or private flying.) | 23 | Dec. 1..... | 494 | Weather Bureau and Authority to train 100 student pilots for aviation weather service. | 17 | Sept. 1..... | 409 |
| Stearns, Richard S., Jr., pilot certificate revoked.... | 7 | Apr. 1..... | 117 | Weightman, Richard H., offer accepted in compromise of civil penalty. | 4 | Feb. 15..... | 64 |
| Stevens, Eugene, offer accepted in compromise of civil penalty. | 13 | July 1..... | 267 | West Lafayette, Ind., airport project approved.... | 12 | June 15..... | 245 |
| Stillwater, Okla., airport project approved..... | 13 | do | 262 | Westfield, Mass., airport project approved..... | | | 515 |
| Stirling, John B., student pilot certificate revoked.. | 14 | July 15..... | 302 | Whisler, Eugene, offer accepted in compromise of civil penalty. | 6 | Mar. 15..... | 81 |
| Stockton, Calif., airport project approved..... | 24 | Dec. 15..... | 515 | Whitman, Marvin M., offer accepted in compromise of civil penalty. | 10 | May 15..... | 228 |
| Stroud, James M., pilot certificate suspended..... | 17 | Sept. 1..... | 419 | Whitney, Cornelius Vanderbilt, interlocking relationships approved. | 5 | Mar. 1..... | 75 |
| Swanson, Richard W., granted student pilot certificate. | 1 | Jan. 1..... | 10 | Whittimore, Lawrence F., interlocking relationships approved. | 2 | Jan. 15..... | 26 |
| Swingler, Richard, violation referred to Attorney General. | 10 | May 15..... | 226 | Wickham, James M., pilot certificate suspended.. | 8 | Apr. 15..... | 164 |
| T | | | | Willimantic, Conn., airport project approved.... | 24 | Dec. 15..... | 515 |
| Take-off weight and fuel-dumping regulations..... | 3 | Feb. 1..... | 41 | Wilmington, N. C., airport project approved.... | 13 | July 1..... | 262 |
| Tallahassee, Fla., airport project approved..... | 24 | Dec. 15..... | 515 | Wilson, T. B., interlocking relationships approved. | 9 | May 1..... | 209 |
| Tamblyn, Joseph, student pilot certificate revoked. | 11 | June 1..... | 238 | Wilson, Russell E., pilot certificate revoked..... | 1 | Jan. 1..... | 10 |
| Tampa, Fla., airport project approved..... | 24 | Dec. 15..... | 151 | Winings, Everett, pilot certificate revoked..... | 19 | Oct. 1..... | 443 |
| Taylor, Cornell, violation referred to Attorney General. | 13 | July 1..... | 267 | Winston-Salem, N. C., airport project approved.. | 24 | Dec. 15..... | 527 |
| Thach, Robert G., interlocking relationships approved. | 5 | Mar. 1..... | 75 | Winston-Salem, N. C., allowed intervention in Eastern Air Lines application. | 22 | Nov. 15..... | 486 |
| Thomas, Robert Jeff, violation..... | 13 | July 1..... | 264 | Wise, Marion J., interlocking relationships authorized. | 6 | Mar. 15..... | 87 |
| Thomas, S. Edward: | | | | Wivell, William, pilot certificate revoked..... | 18 | Sept. 15..... | 430 |
| Offer accepted in compromise of civil penalty.... | 13 | do | 266 | Wizelman, Leon, airman certificate revoked..... | 6 | Mar. 15..... | 82 |
| Violation referred to Attorney General..... | 7 | Apr. 1..... | 116 | Woodbridge, John Sylvester, interlocking relationships. | 3 | Feb. 1..... | 51 |
| Thompson, Harold, directed to show cause..... | 23 | Dec. 1..... | 502 | Woodward, Stanley H., denied rehearing in certificate revocation case. | 1 | Jan. 1..... | 10 |
| Thornton, Jack R., violation referred to Attorney General. | 13 | July 1..... | 268 | Works Progress Administration announces program for aviation ground work. | 22 | Nov. 15..... | 474 |
| Thornton, Jack Robert, student pilot certificate revoked. | 9 | May 1..... | 206 | Works Progress Administration report on National Airport building program, as of Dec. 31, 1939. | 8 | Apr. 15..... | 160 |
| Tichenor, Frank A., elected permanent chairman of Aeronautical Advisory Council. | 23 | Dec. 1..... | 489 | Wray, Donald W., violation referred to attorney general. | 12 | June 15..... | 250 |
| Tilton, Russell O., ordered to show cause..... | 9 | May 1..... | 209 | Wright, Orville, Pilot Certificate No. 1 presented to. | 18 | Sept. 15..... | 429 |
| Tilton, Russell O., student pilot certificate suspended. | 12 | June 15..... | 247 | | | | |
| Toughness testing machine developed by Forest Products Laboratory. | 18 | Sept. 15..... | 428 | Y—Z | | | |
| Tozier, Willard M., student pilot certificate revoked. | 23 | Dec. 1..... | 503 | Young, Evan E., interlocking relationship approved. | 6 | Mar. 15..... | 84 |
| Transatlantic weather station established..... | 5 | Mar. 1..... | 67 | Youngstown, Ohio, airport project approved..... | 13 | July 1..... | 262 |
| | | | | Zahnd, Arnold Earl, offer accepted in compromise of civil penalty. | 1 | Jan. 1..... | 15 |

CIVIL AERONAUTICS BOARD

OFFICIAL ACTIONS



Abstracts of Opinions, Orders, and Regulations

FOR THE PERIOD NOVEMBER 15-30, 1940

Orders

ORDER No. 735: *Solo pilot certificate of Henry S. Lang suspended for 90 days.*

The Board on November 19 suspended for a period of 90 days, solo pilot certificate No. 76115, held by Henry S. Lang, Princeton, Ill., for piloting an aircraft carrying a passenger other than a certificated instructor and other violations of the Civil Air Regulations.

ORDER No. 736: *Authorized issuance of amended certificate to Pan American-Grace authorizing new stops and abandonment of certain previous stops.*

The Board on November 2 authorized issuance of an amended certificate of public convenience and necessity to Pan American-Grace Airways, Inc., effective November 18, 1940, authorizing new stops and abandonment of certain previous stops. (Opinion and order—dockets 459, 492, and 493).

ORDER No. 737: *Instituted inquiry and investigation in matter of form of accounts and reports of all of existing domestic air carriers.*

The Board on November 19 instituted an inquiry and investigation in the matter of the form of accounts and reports of all of the existing domestic air carriers.

ORDER No. 738: *Temporarily approved interlocking relationships of Frank Beale and Railway Express Agency.*

The Board on November 20 approved temporarily the interlocking relationships of Frank D. Beale and Railway Express Agency, Inc., and certain railway companies.

ORDER No. 739: *Authorized Boston-Maine Airways to engage in air transportation between Bangor, Maine, and Moncton, New Brunswick, Canada.*

The Board on October 28 authorized

Boston-Maine Airways, Inc., to engage in air transportation with respect to persons, property, and mail between Bangor, Maine, and Moncton, New Brunswick, Canada, effective November 19, 1940 (opinion and order—docket 290).

ORDER No. 740: *Approved agreement between American and TWA relating to services of a mechanic at Philadelphia Municipal Airport.*

The Board on November 22 approved an agreement between American Airlines, Inc., and Transcontinental & Western Air, Inc. (Contract C. A. B. No. 136), relating to the services of a mechanic at the Philadelphia Municipal Airport.

ORDER No. 741: *Approved agreement between American & Western Air Express relating to rental of a link trainer.*

The Board on November 22 approved an agreement between American Airlines, Inc., and Western Air Express Corporation (Contract C. A. B. No. 143) relating to the rental of a link trainer.

ORDER No. 742: *Granted United Air Lines Transport Corporation permission to intervene in application of Nick Bez.*

The Board on November 22 granted United Air Lines Transport Corporation permission to intervene in the application of Nick Bez for a certificate of public convenience and necessity.

ORDER No. 743: *Robert Alley directed to show cause why his private pilot certificate should not be revoked or suspended.*

The Board on November 22 directed Robert W. Alley, Knoxville, Tenn., to appear before an examiner of the Board and show cause why his private pilot certificate No. 10788-40 should not be revoked or suspended for piloting an aircraft over a congested area at an

altitude estimated to be as low as 150 feet, and other violations of the Civil Air Regulations.

ORDER No. 744: *William Ferguson directed to show cause why his student pilot certificate should not be revoked or further suspended.*

The Board on November 22 directed William S. Ferguson, New Orleans, La., to appear before an examiner of the Board and show cause why his student pilot certificate should not be revoked or further suspended for piloting an aircraft acrobatically at an altitude of less than 1,500 feet, and other violations of the Civil Air Regulations.

ORDER No. 745: *Approved acquisition by Lockheed of outstanding capital stock of United Airports Co. of California.*

The Board on November 22 approved the acquisition by Lockheed Aircraft Corporation from United Air Lines Transport Corporation of all of the outstanding capital stock of United Airports Co. of California, Ltd. (opinion and order—docket 507).

ORDER No. 746: *Denied application of Pan American for authorization to furnish free overseas air transportation.*

The Board on November 26 denied the application of Pan American Airways Co. (Nev.) for a special authorization to furnish free transportation from Los Angeles, Calif., to Honolulu, T. H., to Mr. and Mrs. William Henry.

ORDER No. 747: *Student pilot certificate of Elliott L. Berger revoked.*

The Board on November 29 revoked student pilot certificate No. S-41329, held by Elliott L. Berger, Buffalo, N. Y., for piloting an aircraft carrying a passenger other than a certificated instructor and other violations of the Civil Air Regulations.

ORDER No. 748: Student pilot certificate of Wendell M. Lesley revoked.

The Board on November 29 revoked student pilot certificate No. S-25594, held by Wendell M. Lesley, Cleveland, Ohio, for piloting an aircraft carrying passengers other than a certificated instructor and other violations of the Civil Air Regulations.

REGULATIONS

REGULATION No. 127: The Board on November 29 adopted Amendment No. 82 to the Civil Air Regulations, making changes in section 20.33 of Part 20 of the CAR. The amendment, entitled "Duration of Pilot Certificates," became effective on November 29. The full text follows:

1. By amending section 20.33 to read as follows:

"20.33 Duration.—A pilot certificate shall be of 60 days' duration and, unless the holder thereof is otherwise notified by the Administrator within such period, shall continue in effect indefinitely thereafter, unless suspended or revoked, except that it shall immediately expire (1) at the end of each designated period after the date of issuance thereof if the holder of such certificate fails to secure an endorsement by an authorized inspector or, in case of a student pilot certificate, a medical examiner of the Administrator within the last 45 days of each such period, or (2) at any time an authorized inspector of the Administrator, or, in case of a student pilot certificate, an authorized inspector or medical examiner of the Administrator, shall refuse to endorse such certificate after inspection or examination: *Provided*, That no solo or limited-commercial pilot certificate shall be endorsed to remain effective beyond May 1, 1941, in the case of solo certificates, or May 1, 1942, in the case of limited-commercial certificates. The duration or endorsement period of any pilot certificate expiring on or after November 29, 1940, which has been suspended at any time during such duration or endorsement period, is extended by the length of time of such suspension."

¹ A statement of duration in substantially the form of § 20.33 will appear on all pilot certificates. The above reference to a "designated period" means the period which will be designated on each pilot certificate. For example, the holder of a student or a private certificate will, under ordinary circumstances, be required to secure an endorsement each year while a limited-commercial or a commercial pilot will be required to secure an endorsement every 6 months. Hereafter in this Part this period will be referred to as the "endorsement period".

MAYO

(Continued from page 505)

Principal aim will be to develop more accurate yardsticks, in simplified and improved methods of physical examination, to predict on the ground the relative ability of pilots and prospective pilots, Mr. Hineckley said.

Ten Mayo specialists in the various related fields—vision, hearing, heart, etc.—not only will study their student "guinea pigs" on the ground, but will follow them step by step through the flight courses in order to watch and measure the relation of actual performance to the medical forecasts.

Several of the Mayo medical men are flight surgeons trained at Pensacola and Randolph Fields. Others, without flying experience, will take the C. A. A. civilian-pilot training courses along with the students they are studying. Dr. W. Randolph Lovelace II of the Foundation has informed the C. A. A.

Airports

(Continued from page 515)

MONTANA

Billings.—\$87,228 for W. P. A. project, consisting of grading and surfacing E.-W. runway, the removal and reconstruction of boundary fence, and the relocation and installation of lighting facilities, excavation and fill, compacting, construction, finishing, grading, and appurtenant work at municipal airport.

NEBRASKA

Fremont.—\$6,348 for N. Y. A. project, including construction of brick hangar, concrete floor and footings, fabricating wood trusses, installation of doors and windows, erection of partitions, and installation of electrical, plumbing, and heating fixtures at municipal airport.

NEW HAMPSHIRE

Claremont.—\$95,995 for W. P. A. project, work to be done includes construction of two paved intersecting runways, grading and seeding landing strip, construction of taxi-strip, necessary drainage, and installation of lighting system at Claremont Airport.

Manchester.—\$231,294 for W. P. A. project, including additional paved runway with landing strips, paving parking area; paving of area between a runway and apron in front of the hangars and administration building; installation of additional drainage; extension of existing drainage and installation of additional lighting facilities at Manchester Airport.

NEW YORK

Buffalo.—\$222,855 for W. P. A. project, including an alteration to Hangar No. 3 to be used as a garage, construct runways, grade and drain areas, improve and provide lighting facilities and paving at municipal airport.

NORTH CAROLINA

Winston-Salem.—\$345,132 for W. P. A. project, including lengthening of N.-S. runway, construction of base for runway, development of parking area, grass and plant field, move and reset building, construct hangar building and lighting system, and generally improve field at Winston-Salem Airport.

NORTH DAKOTA

Bismarck.—\$164,750 for W. P. A. project, work including leveling landing strips, constructing base for hard-surfaced runways; installing new lighting system; laying underground telephone conduit; changing location of power line, constructing hangar and idling aprons, and other incidental work at municipal airport.

OREGON

Medford.—\$99,229 for W. P. A. project, consisting of providing adequate drainage, grading and regrading, constructing gravel shoulders; paving of main N.-S. runway, producing and placing base rock, constructing a 2-inch base course plant, mix asphaltic concrete surface, providing flush-type border runway lights, and providing temporary facilities during construction at municipal airport.

SOUTH DAKOTA

Sioux Falls.—\$56,206 for W. P. A. project, including grading and surfacing runways, clearing and grubbing field, and placing drain tile at municipal airport.

TEXAS

Midland.—\$105,699 for W. P. A. project for construction of airport facilities consisting of a hangar, additional runways, installing contact lights, and boundary lights, and improving drainage system at Midland Airport.

UTAH

Spanish Fork.—\$1,920 for N. Y. A. project, work including construction of an airplane hangar, grading of two landing strips, field marking at Spanish Fork Airport.

VIRGINIA

Charlottesville.—\$21,000 for W. P. A. project, work including the erection of a cinder block and frame administration building, erection of a steel hangar with a shop wing, installation of necessary water supply and sanitation, razing of obstructions and grading of two landing strips, each of which may be extended 600 and 100 feet, respectively. The items of construction to be accomplished involve masonry and carpentry work, erection of 35 tons of structural steel, placement of 94 squares of corrugated metal siding and roofing, miscellaneous field grading esti-

mated at 2,500 cubic yards, fencing and affiliated and appurtenant items including plumbing and electrical installations at University of Virginia Airport.

Lynchburg.—\$191,775 for W. P. A. project, including lengthening and widening runway; constructing parking area; aprons and drainage facilities; paving runways; installing boundary lights and landscaping at municipal airport.

Roanoke.—\$253,315 for W. P. A. project, including lengthening and widening of landing strips, paving of runways thereon, and general airport improvement. The items of construction to be accomplished involve grading drainage, paving and affiliated work at municipal airport.

WASHINGTON

Olympia.—\$134,695 for W. P. A. project, work including excavating, laying drain pipe, back-filling, and construction of manholes and inlets, and installing contact, boundary, and range lights at Olympia Airport.

Port Angeles.—\$211,752 for W. P. A. project, work to be performed includes construction of runways No. 1 and 2 by clearing, grubbing, grading, draining, surfacing with bituminous pavement, and lighting and surfacing turnarounds with concrete pavement at Clallam County Airport.

Spokane.—\$471,827 for W. P. A. project, including construction of four cement-bound runways, each 150 feet wide with 75-foot asphalt shoulders and strips graded to a full 500 foot width. The paved lengths will be 5,621, 6,858, 6,574, and 7,825 feet, respectively. This is the initial project in the development of the facility, including field lighting but no large structures at Sunset Airport.

WISCONSIN

Madison.—\$230,711 for W. P. A. project, work including grubbing, filling, rolling, fine grading, fertilizing and seeding, french drains, bituminous pavement, concrete turnarounds, sea coat, painting runway strips, field lighting; extension of surfaced runways, tile dug out and relaid, new lighting installations, and appurtenant items at municipal airport.

Orange.—\$455,417 for W. P. A. project, work to be performed includes grading, paving, expansion of water distribution system, and expansion of sewer system at Wisconsin Military Reservation Camp Williams.

EXPORTS

(Continued from page 516)

Canada's purchases of United States aeronautic products in September amounted to \$3,424,500, bringing total purchases for the 9 months to \$19,858,470.

In all, 13 countries each purchased more than a million dollars worth of products in the January-September period. These, with the value of their purchases, were:

| | |
|----------------------------|--------------|
| United Kingdom..... | \$77,256,731 |
| France..... | 75,463,921 |
| Canada..... | 19,858,470 |
| Australia..... | 11,594,257 |
| China..... | 6,364,771 |
| Sweden..... | 5,076,513 |
| Finland..... | 4,206,714 |
| Netherlands Indies..... | 3,526,928 |
| Turkey..... | 2,262,964 |
| Brazil..... | 1,970,788 |
| Norway..... | 1,241,338 |
| Union of South Africa..... | 1,150,083 |
| Belgium..... | 1,150,083 |

September exports consisted of 284 aircraft valued at \$12,228,209. This included 255 land planes valued at \$10,071,076; 27 land planes in partial shipments to be assembled abroad for \$2,130,306; and 2 seaplanes and amphibians for \$26,827.

Other exports during September were 441 engines valued at \$4,311,910; engine parts and accessories for \$1,747,313; propellers and parts worth \$552,395; parachutes and parts valued at \$78,019; instruments and parts at \$821,988, and other parts and accessories valued at \$3,199,863.

Status of Parts of the Civil Air Regulations and Amendments

As of December 15, 1940

All persons affected by the Civil Air Regulations, including those preparing for examination for certificates, may obtain the parts required from the Publications and Statistics Division, Civil Aeronautics Administration, Washington, D. C., without charge.

ONLY PARTS ACTUALLY NEEDED SHOULD BE REQUESTED

For example, *pilots* are governed in general by parts 01, 20, and 60; *aircraft mechanics* by parts 01, 04, 15, 18, 24, and section 60.32; and *aircraft engine mechanics* by parts 01, 04, 13, 14, 18, and 24.

How To Order Parts

Those persons not affected by the C. A. R., but desiring all or any part of the Regulations for other

purposes, may obtain them in the manner herein described. Those parts on which a price is listed in the tabulation below are on sale by the Superintendent of Documents, United States Government Printing Office, Washington, D. C., and are not available for free general distribution.

Eventually, all parts will be placed on sale; meanwhile, parts not yet on sale (carrying remark, in tabulation below, "order from C. A. A. only") may be obtained without charge from the C. A. A., upon demonstration of valid interest on the applicant's part.

Bound volumes of the complete Civil Air Regulations are no longer available.

IMPORTANT: AMENDMENTS

All amendments to the Civil Air Regulations are printed in the Official Actions section of the CIVIL

AERONAUTICS JOURNAL, as released. (Occasional amendments, too long to print in full, are abstracted to describe fully the nature and purpose of the amendment's provisions so that the individual may determine whether he need order the full text.)

All amendments must be ordered from the C. A. A. There is no charge for amendments. The Superintendent of Documents does not handle any amendments.

The tabulation below carries in the right-hand column the numbers of all effective amendments to each part issued subsequent to the date of that part. When ordering parts from the C. A. A., all effective amendments are automatically included. But, when ordering parts from the Superintendent of Documents, the amendments to each part, as listed below, must be ordered separately from the C. A. A. to bring the part up to date and to make it accurate and complete.

NOTE.—Part numbers not included in the list below are unassigned.

| Part No. | Title | Date | Remarks | Price | Amendments to date |
|----------------------------------|---|----------------|---|--------|--------------------------|
| AIRCRAFT | | | | | |
| 00. | CANCELLED | | Now incorporated in Part 01. | | |
| 01. | AIRCRAFT REGISTRATION AND AIRWORTHINESS CERTIFICATES. | July 15, 1940 | In stock at C. A. A. and on sale at G. P. O. | \$0.05 | 68, 75. |
| 02. | TYPE AND PRODUCTION CERTIFICATES. | do. | do. | .05 | 75. |
| 03. | CANCELLED | | Now incorporated in Part 01. | | |
| 04. | AIRPLANE AIRWORTHINESS ¹ . | Nov. 15, 1940 | Reprint, including amendments, to be available soon from C. A. A. | | |
| 13. | AIRCRAFT ENGINE AIRWORTHINESS ² . | | In stock; order from C. A. A. only. | | |
| 14. | AIRCRAFT PROPELLER AIRWORTHINESS ³ . | do. | do. | | |
| 15. | AIRCRAFT EQUIPMENT AIRWORTHINESS ³ . | do. | do. | | |
| 18. | REPAIR AND ALTERATION OF AIRCRAFT. ¹ | do. | do. | | |
| AIRMEN | | | | | |
| 20. | PILOT CERTIFICATES. | May 1, 1940 | In stock at C. A. A. and on sale at G. P. O. | \$0.05 | 54, 63, 65, 67, 75, 82. |
| 21. | AIRLINE TRANSPORT PILOT RATING. | Nov. 15, 1940 | In stock; order from C. A. A. only. | | |
| 23. | CANCELLED | | Now incorporated in Part 51. | | |
| 24. | MECHANIC CERTIFICATES. | May 1, 1940 | Out of stock at C. A. A., but on sale at G. P. O.; Now being reprinted. | .05 | 44, 61, 73, 75, 82. |
| 25. | CANCELLED | | Now incorporated in Part 24. | | |
| 26. | AIR-TRAFFIC CONTROL-TOWER OPERATOR CERTIFICATES. | Oct. 4, 1940 | In stock at C. A. A. and on sale at G. P. O. | .05 | |
| 27. | AIRCRAFT DISPATCHER CERTIFICATES. | July 15, 1940 | do. | .05 | 74, 75. |
| AIR CARRIERS | | | | | |
| 40. | AIR CARRIER OPERATING CERTIFICATION (INTERSTATE). | Nov. 1, 1940 | Out of stock; to be available soon at C. A. A. and on sale at G. P. O. | | |
| AIR AGENCIES | | | | | |
| 50. | FLYING SCHOOL RATING ² . | Nov. 1, 1940 | In stock at C. A. A. and on sale at G. P. O. | \$0.05 | |
| 51. | GROUND INSTRUCTOR RATING. | May 1, 1940 | do. | .05 | 75. |
| 52. | REPAIR STATION RATING ¹ . | do. | do. | .05 | 75. |
| 53. | MECHANIC SCHOOL RATING ² . | Sept. 15, 1940 | do. | .05 | 75. |
| AIR NAVIGATION | | | | | |
| 60. | AIR TRAFFIC RULES ¹ . | Oct. 4, 1940 | In stock at C. A. A. and on sale at G. P. O. | \$0.10 | 76, 77, 80. |
| 61. | SCHEDULED AIR CARRIER RULES (INTERSTATE). | May 31, 1938 | In stock; order from C. A. A. only. | | 601-A-1, 51, 52, 62, 75. |
| MISCELLANEOUS⁴ | | | | | |
| 98. | DEFINITIONS. | Nov. 15, 1940 | In stock; order from C. A. A. only. | | |
| 99. | MODE OF CITATION OF REGULATIONS. | do. | do. | | |

¹ Manual out of stock.

² Manual not yet issued.

³ Supplementary Manual for this part available; order from C. A. A. only.

⁴ Parts 90.-96., inclusive, have been cancelled.