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RESTRICTED SEAPLANE LANDING AREA ESTABLISHED IN SAN FRANCISCO BAY

Exclusion of Surface Craft From Landing Area Marks Precedent—Seadrome Contact Lights To Be Installed for Tests

What is believed to be the first restricted area for exclusive use of trans-oceanic seaplane operations in the world was established February 5 with the issuance by the Secretary of War of a regulation setting aside a triangular area in San Francisco Bay of approximately 2,000 acres in extent.

The rapid development of overseas air commerce has led to the demand for adequately protected seaplane operating areas at important coastal terminals. Furthermore, in anticipation of night operations to meet existing and prospective demands for faster schedules to other continents, such restricted seaplane landing areas are regarded as an urgent necessity.

As early as 1936, consideration was given to this problem by those agencies of the Federal Government involved. Conferences were held by the representatives of the Army Corps of Engineers, the Navy Bureau of Aeronautics, the Coast Guard, Bureau of Lighthouses, Bureau of Marine Inspection and Navigation, and the Bureau of Air Commerce. In order to provide maximum protection for seaplanes and surface craft operating on the water, it was the consensus of the groups represented at these various conferences that special areas should be provided for seaplane operations.

Section 7 of the Rivers and Harbors Act of August 8, 1917, provides that the Secretary of War may prescribe such regulations for the use, administration, and navigation of the navigable waters of the United States that in his judgment the proper public necessity requires for the protection of life and property. The navigation and operation of seaplanes within such restricted areas was a matter within the jurisdiction of air commerce under the provisions of the Air Commerce Act of

1926 and the subsequent Civil Aeronautics Act of 1938.

Aside from a few applications of minor importance or temporary nature, the first of such applications of major significance was submitted to the Army Corps of Engineers district office at San Francisco by Pan American Airways on March 23, 1939, requesting that three lanes within an area designated as anchorage No. 6, San Francisco Bay, be set aside for the purpose of air navigation. The results of an inspection made by representatives of the Authority were fully discussed with representatives of the other Federal agencies involved as mentioned previously. Subsequently, recommendations were made by the Authority that a triangular area covering a somewhat larger area than that originally proposed by Pan American Airways be restricted not only to anchorage but also to surface watercraft to provide adequate protection for scheduled seaplane night operations and to permit seaplane testing of special seadrome lighting equipment.

A public hearing was held in December 1939 at which an opportunity was afforded to shippers, railroads, private interests, and the three bay cities involved, Oakland, Berkeley, and Emeryville, to present any objections that they might have to the program. A representative of the Authority's Airport Section was on hand to make supplemental statements and answer technical questions raised. All objections presented during the hearing were satisfactorily met and a favorable report by the district engineer was submitted to the Secretary of War for further action. To complete arrangements for the marking and lighting of the area, the Coast Guard, the Bureau of Lighthouses, and the Bureau of Marine Inspection at

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Restricted Landing Area

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San Francisco, were invited to submit their comments and recommendations. A conference was also called by the National Electrical Manufacturers Association and the Illuminating Engineering Society for the discussion of standards for seadrome lighting equipment and the possibilities of adopting such standards internationally.

A floating seadrome boundary marker light, developed by the Westinghouse Electrical Co. and Firestone Rubber Co. in accordance with recommendations made by the Authority and other Federal agencies, will be installed for service tests. It consists of a light mounted on a standard rising from the center of a doughnut-like flotation device made of high grade rubber. Two long rows of the markers, anchored securely to the bottom of the bay, will outline what will be the equivalent of a runway on an airport for land planes.

The unique feature of the light is its ability to provide a fixed indication of the water's surface even under rough water conditions.

Air Safety Board Reports on 203 Aircraft Accidents**Inexperience and Bad Judgment Contributing Factors in Majority of 195 Non-airline Accidents**

Accidents that could have been avoided by use of better judgment or pilot technique and in which the inexperience of the pilot was an important factor comprised the majority of 195 non-airline accidents analyzed by the Air Safety Board and reported to the Civil Aeronautics Authority during the month of December 1939. In addition to these accidents, which occurred over

United Air Lines-Western Air Express Hearing Concluded**Proceedings Speeded by Prehearing Conferences**

Formal hearing before the Civil Aeronautics Authority on the application of United Air Lines Transport Corporation for approval of a proposed acquisition of control or merger with Western Air Express Corporation was concluded at Washington on January 17. Roscoe Pound, internationally known jurist and Dean of the Harvard University Law School for 20 years, is conducting this case as special trial examiner for the Authority.

It is one of the most important cases which has been presented to the Authority thus far and the final decision may very well lay down certain principles along which the future development of air transportation in the United States will proceed for many years to come.

Aside from the principles at issue, the case was particularly interesting to lawyers and air-transport operators alike, because of the "streamlined" procedure adopted to simplify and speed up its disposition.

It was the first case at which a formal prehearing conference, attended by all parties, was held. This permitted a more comprehensive preparation for the formal hearing than heretofore has been possible in economic regulatory cases. Numerous exhibits to be introduced in the formal proceeding by both parties

were exchanged and discussed, and the opposing parties had ample opportunity to prepare for cross-examination on the exhibits.

Opportunity was presented also for reaching mutual decisions regarding the order of procedure, statements as to qualifications of witnesses, time for filing of briefs, and requests for additional and specific information.

Members of the Authority's staff and representatives of the air carriers have expressed enthusiasm over the possibilities of this method of procedure in facilitating the more efficient disposition of cases before the Authority. In view of the foregoing, and in the belief that such prehearing conferences lead to better organization of cases, consideration is being given to the adoption of a permanent procedure of this kind.

Preliminary briefs will be due in the United-Western Air case on February 8, following which the trial examiner's report will be made.

Further prehearing conferences have been conducted by the Authority since the aforementioned proceeding was concluded. One meeting was held in connection with the Authority's investigation of the air travel card plan, and another conference is to be held prior to the start of formal hearings.

a period of several preceding months, the Board transmitted eight reports on accidents involving air-line equipment and made two recommendations to the Authority concerning non-air-line equipment during the period. With exception of the accident which occurred at Rio de Janeiro, August 13, 1939 (Civil Aeronautics Journal, vol. 1, No. 3, p. 40), in which 14 persons lost their lives, the air-line accidents reported on during the month were of minor nature.

Spins or stalls remained in the lead as to the nature of most of the fatal accidents, 22 of the 40 fatal non-air-line accidents reported being in this category. Acrobatic or show-off flying at low altitude was the cause of 9 fatal and 2 serious accidents. Six of these fatal accidents involved spins or stalls, and 3 were the result of colliding with objects on the ground. Three accidents were due to aircraft colliding with other aircraft in flight. One of these accidents resulted in fatalities, one in serious injury, and in the other, a landing accident, no one was hurt.

Pilots continuing flight into known adverse weather was given as the cause of four fatal accidents and one accident in which there was no injury to personnel. A similar fatal accident in which the pilot landed at sea after becoming lost and running out of fuel was attributed to intentional instrument flying without proper equipment or training. Fuel exhaustion resulted in one fatal accident and three in which no injury was sustained by personnel. Another accident of a similar nature, in which no one was hurt, was attributed

to the pilot taking off without first turning on the gasoline valve.

The reports included two cases in which pilots attempted to demonstrate satisfactory spin-recovery characteristics of old models of aircraft. In both cases the pilot was forced to jump; one failed to release his parachute and was killed.

Four accidents were attributed to landings made at night without proper facilities. One of these accidents resulted in a fatality; no injuries were experienced in the others.

The primary cause of three of the fatal accidents was attributed to structural failure of the plane; in two, the failure occurred during power dives and in the other the failure occurred as the result of an abrupt pull-out from a dive.

The recommendations transmitted to the Civil Aeronautics Authority during the month were made in conjunction with two specific reports on non-airline accidents in which the Board believed recurrence of similar accidents might be avoided by mechanical changes in the equipment involved. Neither of the accidents resulted in a fatality.

One of the accidents which caused the Board to make a recommendation occurred during the starting of an engine by hand. When the pilot turned the propeller in an attempt to start the engine, the propeller kicked back and struck him. The subsequent investigation disclosed that the type of "booster" magneto used was not grounded out and might have been ac-

(Continued on page 64)

PRIVATE FLYING

New Safety Records Established in Private Flying for First Six Months of 1939

Reflecting a continued improvement in safety in flying, operators in the private-flying classification during the first 6 months of 1939 established new safety records for the number of miles flown per fatal accident, miles flown per accident, and miles flown per pilot fatality,

according to an analysis of accidents reported to the Civil Aeronautics Authority by the Air Safety Board.

During the period January-June 1939, the private-flying operators flew 764,868 miles per fatal accident, 74,297 miles per accident, and 943,668 miles per pilot

fatality, as compared with 706,238 miles per fatal accident, 67,261 miles per accident, and 869,216 miles per pilot fatality during the same period of 1938.

Additional details and comparisons with other periods are contained in the following tables. Estimates of private-flying accident and operations figures for the full year 1939, based on partial returns, are contained in tables C and D.

TABLE A.—Analysis of causes of accidents in private flying operations for the period January-June 1939

(Causes of accidents indicated in percentages. For comparison with previous years see Civil Aeronautics Bulletin No. 3, Sept. 1, 1938, and Air Commerce Bulletins, vol. 10, Nos. 5 and 12, Nov. 15, 1938, and June 15, 1939)

	Certificated aircraft and pilots ¹					Experimental and restricted ² certificated aircraft flown by certificated pilots				Uncertificated aircraft and certificated aircraft flown by uncertificated pilots					Grand total
	In- struc- tional	Ex- peri- mental	Com- mer- cial	Pleas- ure	Total	Ex- peri- mental	Com- mer- cial	Pleas- ure	Total	In- struc- tional	Ex- peri- mental	Com- mer- cial	Pleas- ure	Total	
Number of accidents involved.....	295	4	142	448	889	9	17	5	31	13	4	3	38	58	978
Causes															
Personnel:															
Pilots:															
Error of judgment.....	9.29	0	8.10	14.48	11.67	5.56	9.12	10.00	8.23	15.38	0	0	6.05	7.41	11.31
Poor technique.....	47.51	25.00	21.48	35.72	37.32	40.00	23.53	50.00	32.58	53.85	25.00	16.67	38.29	39.74	37.31
Disobedience of orders or regulations.....	1.07	0	0	.51	.61	0	0	0	0	3.85	0	0	7.90	6.04	.92
Carelessness or negligence.....	13.05	25.00	9.51	12.77	12.40	22.22	11.76	8.00	14.19	7.69	0	16.67	6.45	6.81	12.12
Miscellaneous.....	1.35	0	.70	0	.56	0	5.88	0	3.23	0	0	0	0	0	.61
Total pilot errors.....	72.27	50.00	39.79	63.48	62.56	67.78	50.29	68.00	58.23	80.77	25.00	33.34	58.69	60.00	62.27
Other personnel:															
Supervisory.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous.....	0	25.00	0	0	.11	0	0	0	0	0	0	0	0	0	.10
Total personnel errors.....	72.27	75.00	39.79	63.48	62.67	67.78	50.29	68.00	58.23	80.77	25.00	33.34	58.69	60.00	62.37
Material:															
Power plant:															
Fuel system.....	2.31	0	5.64	4.84	4.10	0	5.88	0	3.23	0	25.00	0	2.63	3.45	4.03
Cooling system.....	.34	0	0	.22	.23	0	0	0	0	0	0	0	0	0	.20
Ignition system.....	.51	0	.70	1.52	1.04	0	0	0	0	7.69	0	0	1.06	2.41	1.09
Lubrication system.....	0	0	1.41	.41	.43	0	0	0	0	0	0	0	0	0	.39
Engine structure.....	1.35	0	4.23	1.96	2.11	0	5.88	0	3.23	0	0	0	2.63	1.72	2.13
Propeller and accessories.....	0	0	.70	.45	.34	0	5.88	0	3.23	0	0	0	0	0	.41
Engine control system.....	.68	0	0	.22	.34	0	0	0	0	0	0	0	0	0	.31
Miscellaneous.....	.71	0	1.20	.22	.54	0	0	0	0	0	0	0	0	0	.49
Undetermined.....	2.66	0	5.64	3.33	3.46	21.11	5.30	0	9.02	7.69	0	33.33	2.63	5.18	3.74
Total power plant failures.....	8.56	0	19.52	13.17	12.59	21.11	22.94	0	18.71	15.38	25.00	33.33	8.95	12.76	12.79
Structural:															
Flight control system.....	.68	0	.70	.67	.67	0	0	0	0	0	0	0	2.63	1.72	.72
Movable surfaces.....	.68	0	0	0	.23	0	0	0	0	0	0	0	0	0	.20
Stabilizing surfaces.....	0	0	.70	0	.11	0	0	0	0	0	0	0	2.63	1.72	.20
Wings, struts, and bracings.....	1.18	0	1.41	.67	.95	11.11	5.30	0	6.13	0	0	0	5.26	3.46	1.27
Undercarriage.....	2.03	0	5.64	3.13	3.15	0	0	0	0	0	25.00	0	0	1.72	2.97
Retractable landing gear mechanism.....	0	0	1.41	0	.23	0	0	0	0	0	0	0	0	0	.20
Wheels, tires, and brakes.....	0	0	1.41	1.90	1.18	0	0	0	0	0	0	0	0	0	1.08
Pontoons and boats.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fuselage, engine mounts and fittings.....	0	0	.70	0	.11	0	0	0	0	0	0	0	0	0	.10
Tail wheel or tail skid assembly.....	0	0	1.41	0	.23	0	0	0	0	0	0	0	0	0	.20
Miscellaneous.....	.34	0	.70	.22	.34	0	0	0	0	0	0	0	0	0	.31
Undetermined.....	0	0	.70	0	.11	0	0	0	0	0	0	0	0	0	.10
Total structural failures.....	4.91	0	14.78	6.59	7.31	11.11	5.30	0	6.13	0	25.00	0	10.52	8.62	7.35
Handling qualities.....	0	25.00	.70	.07	.26	0	0	0	0	0	25.00	0	0	1.72	.34
Instruments.....	.27	0	0	0	.09	0	0	0	0	0	0	0	0	0	.08
Total material failures.....	13.74	25.00	35.00	19.83	20.25	32.22	28.24	0	24.84	15.38	75.00	33.33	19.47	23.10	20.56
Miscellaneous:															
Weather.....	6.29	0	8.06	7.21	7.01	0	0	0	0	3.85	0	0	5.00	4.14	6.62
Darkness.....	0	0	0	.11	.06	0	0	0	0	0	0	0	0	0	.05
Airport—water or terrain.....	4.88	0	14.33	6.43	7.15	0	4.12	12.00	4.19	0	0	33.33	3.68	4.14	6.88
Other.....	1.80	0	1.41	2.72	2.19	0	16.76	20.00	12.42	0	0	0	0	0	2.39
Total miscellaneous causes.....	12.97	0	23.80	16.47	16.41	0	20.88	32.00	16.61	3.85	0	33.33	8.68	8.25	15.94
Undetermined and doubtful.....	1.02	0	1.41	.22	.67	0	.59	0	.32	0	0	0	13.16	8.62	1.13

¹ This involves accidents to aircraft and pilots certificated in accordance with the Civil Air Regulations.

² This involves accidents to aircraft certificated only for restricted and special purposes in accordance with the Civil Air Regulations.

TABLE B.—Vital statistics and results of accidents in private flying operations for the period January-June 1939

[For comparison with previous years see Civil Aeronautics Bulletin No. 3, Sept. 1, 1938, and Air Commerce Bulletins vol. 10, Nos. 5 and 12, Nov. 15, 1938, and June 15, 1939]

	Class	Certificated aircraft and pilots ¹					Experimental and restricted ² certificated aircraft flown by certificated pilots				Uncertificated aircraft and certificated aircraft flown by uncertificated pilots					Grand total
		In- struc- tional	Ex- peri- men- tal	Com- mer- cial	Pleas- ure	Total	Ex- peri- men- tal	Com- mer- cial	Pleas- ure	Total	In- struc- tional	Ex- peri- men- tal	Com- mer- cial	Pleas- ure	Total	
Number of accidents involving:																
Fatal injuries		32	1	6	37	76	2	2	2	6	1	0	0	12	13	95
Severe injuries		13	0	5	20	38	1	1	0	2	0	0	4	4	44	
Minor and no injuries		250	3	131	391	775	6	14	3	23	12	4	3	22	41	839
Total accidents		295	4	142	448	889	9	17	5	31	13	4	3	38	58	978
I. Injuries to personnel:																
Pilots:																
Certificated		309	4	146	460	919	9	17	5	31	10	3	2	6	21	971
Uncertificated		0	0	0	0	0	0	0	0	4	1	1	32	38	38	
Fatal injury	A	26	1	6	28	61	2	2	2	6	1	0	0	9	10	77
Severe injury	B	15	0	4	22	41	1	1	0	2	0	0	5	5	48	
Minor injury	C	31	0	13	46	90	1	3	0	4	3	2	1	2	8	102
Uninjured	D	237	3	123	364	727	5	11	3	19	10	2	2	22	36	782
Copilots or students:																
Fatal injury	A	1	0	0	1	2	1	0	0	1	0	0	0	0	0	3
Severe injury	B	3	0	1	2	6	0	0	0	0	0	0	0	0	0	6
Minor injury	C	5	0	0	0	5	0	0	0	0	0	0	0	0	0	5
Uninjured	D	59	0	5	6	70	0	0	0	0	0	0	0	0	0	70
Passengers:																
Fatal injury	A	14	0	12	36	62	6	0	0	6	0	0	0	9	9	77
Severe injury	B	5	0	1	11	17	0	0	0	0	1	0	0	3	4	21
Minor injury	C	2	0	10	26	38	0	0	0	0	0	0	0	2	2	40
Uninjured	D	9	0	158	233	400	13	0	0	13	3	0	2	6	11	424
Aircraft crew:																
Fatal injury	A	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Severe injury	B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minor injury	C	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Uninjured	D	0	1	10	1	12	4	0	0	4	0	0	0	0	0	16
Third parties: ³																
Fatal injury	A	2	0	0	0	2	0	0	0	0	0	0	0	0	0	2
Severe injury	B	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total injuries and noninjuries:																
Fatal injury	A	43	1	18	65	127	11	2	2	15	1	0	0	18	19	161
Severe injury	B	24	0	6	35	65	1	1	0	2	1	0	0	8	9	76
Minor injury	C	38	0	23	72	133	1	4	0	5	3	2	1	4	10	148
Uninjured	D	305	4	296	604	1,209	22	11	3	36	13	2	4	28	47	1,292
Total		410	5	343	776	1,534	35	18	5	58	18	4	5	58	85	1,677
II. Damage to material:																
Aircraft:																
Certificated		320	4	151	474	949	9	17	5	31	4	0	0	24	28	1,008
Uncertificated		0	0	0	0	0	0	0	0	10	4	3	16	33	33	
Completely demolished	A	53	0	26	75	154	3	3	2	8	3	2	1	18	24	186
Complete overhaul	B	100	2	37	151	290	2	6	1	9	6	1	0	6	13	312
Major assembly repairs	C	134	2	60	201	397	3	8	2	13	4	1	2	12	19	429
Minor repairs (see definition)	D	32	0	26	45	103	1	0	0	1	1	0	0	3	4	108
Not damaged (see definition)	E	1	0	2	2	5	0	0	0	0	0	0	0	1	1	6
III. Nature of accident:																
Collision (see definition)	A	3	0	0	1	4	0	0	0	0	0	0	0	0	0	4
Collision (see definition)	B	17	0	10	35	62	0	2	1	3	1	0	0	3	4	69
Spin or stall (engine failure)	C	2	0	1	8	11	0	0	0	0	0	0	0	1	1	12
Spin or stall (not engine failure)	D	34	1	5	33	73	2	1	0	3	2	2	0	7	11	87
Forced landing	E	33	0	27	62	122	2	4	0	6	2	1	1	5	9	137
Landing accident	F	106	0	54	161	321	3	6	2	11	6	0	0	7	13	345
Take-off accident	G	33	2	13	63	111	0	0	0	0	1	0	0	3	4	115
Taxiing accident	H	52	1	15	61	129	0	0	1	1	1	1	1	5	8	138
Fires in the air	I	1	0	1	1	3	1	2	0	3	0	0	1	0	1	7
Structural failure	N	12	0	14	15	41	1	2	0	3	0	0	0	4	4	48
Miscellaneous	X	2	0	2	6	10	0	0	1	1	0	0	0	0	0	11
Indeterminate and doubtful	Y	0	0	0	2	2	0	0	0	0	0	0	0	3	3	5
Miscellaneous information:																
Fires after accident		3	0	3	7	13	0	0	0	0	0	0	0	1	1	4 14
Propeller accidents to persons		1	0	1	9	11	0	0	0	0	0	0	0	0	0	5 11
Glider accidents		1	0	0	2	3	0	0	0	0	0	0	0	0	0	6 3
Parachute jumps (voluntary)		0	0	1	0	1	0	0	0	0	0	0	0	0	0	7 1
Parachute jumps (involuntary)		0	0	2	0	2	0	0	0	0	0	0	0	0	0	8 2
Acrobatics		8	1	2	11	22	1	0	1	2	1	0	0	4	5	9 29

¹ This involves accidents to aircraft and pilots certificated in accordance with the Civil Air Regulations.

² This involves accidents to aircraft certificated only for restricted and special purposes in accordance with the Civil Air Regulations.

³ "Third parties" include spectators and any other persons who were not occupants of, or in any way connected with, the operation of the aircraft.

⁴ This figure covers the number of fires occurring after accident. Results are included in the above regular aircraft accident statistics under groups I, II, and III.

III. ⁵ Passenger, 1 fatal injury occurring in an accident directly connected with flight operations. The result is included under groups I, II, and III. Also pilots, 4 severe injuries; aircraft crew, 2 severe injuries; ground personnel, 2 severe injuries, third parties, 1 fatal injury and 1 severe injury. The results of these accidents are not included under groups I, II and III as they did not occur in connection with flights.

⁶ Pilots, 1 severe injury, 1 minor injury and 1 uninjured. Results are not included under groups I, II, and III.

⁷ Voluntary parachute jumper, 1 fatal injury. Result is not included under groups I, II, and III.

⁸ Pilots, 2 uninjured. The results are included under groups I, II, and III.

⁹ 19 fatal accidents resulting in fatal injury to 17 pilots and 11 passengers.

TABLE C.—Mileage flown per accident and fatality in private flying operations

	1932	1933	1934	1935	1936	1937	1938	1939
Miles flown.....	78, 178, 700	71, 222, 845	75, 602, 152	84, 755, 630	93, 320, 375	102, 996, 355	129, 359, 095	182, 000, 000
Number of accidents.....	1, 951	1, 603	1, 504	1, 517	1, 698	1, 917	1, 882	2, 250
Miles flown per accident.....	40, 071	44, 431	50, 267	55, 871	54, 959	53, 728	68, 735	80, 889
Number of fatal accidents.....	208	182	186	164	139	185	172	190
Miles flown per fatal accident.....	375, 859	391, 334	406, 463	516, 803	586, 921	556, 737	752, 085	957, 895
Pilot fatalities.....	167	154	148	134	130	152	141	160
Copilot and student fatalities.....	16	19	18	19	15	16	15	20
Passenger fatalities.....	133	129	151	100	119	112	115	150
Aircraft crew fatalities (other than pilot, copilot, or student).....	1	5	4	4	6	2	1	5
Ground crew and third party fatalities.....	4	3	4	5	2	1	3	5
Total fatalities.....	321	310	325	262	272	283	275	340
Miles flown per pilot fatality.....	468, 136	462, 486	510, 825	632, 505	717, 849	667, 608	917, 440	1, 137, 500
Miles flown per passenger fatality.....	587, 810	552, 115	500, 677	847, 556	784, 205	1, 009, 768	1, 124, 862	1, 213, 333
Miles flown per fatality.....	243, 547	229, 751	232, 622	323, 495	343, 090	363, 945	470, 397	535, 294

	January-June 1932	January-June 1933	January-June 1934	January-June 1935	January-June 1936	January-June 1937	January-June 1938	January-June 1939
Miles flown.....	33, 722, 685	32, 748, 485	36, 780, 157	40, 234, 185	41, 517, 085	45, 259, 950	56, 499, 045	72, 662, 445
Total number of accidents.....	847	765	649	708	789	842	840	978
Miles flown per accident.....	39, 814	42, 808	56, 672	56, 828	52, 620	53, 753	67, 261	74, 297
Total number of fatal accidents.....	95	80	87	81	60	72	80	95
Miles flown per fatal accident.....	354, 976	409, 356	422, 760	496, 718	691, 951	628, 610	706, 238	764, 868
Total number of pilot fatalities.....	73	68	68	67	48	58	65	77
Miles flown per pilot fatality.....	461, 955	481, 595	540, 885	600, 510	864, 939	780, 344	869, 216	943, 668
Total number of passenger fatalities.....	57	54	75	49	41	44	60	77
Miles flown per passenger fatality.....	591, 626	606, 453	490, 402	821, 106	1, 012, 612	1, 028, 635	941, 651	943, 668
Copilot or student fatalities.....	7	6	11	5	8	4	8	3
Aircraft crew fatalities (other than pilot, copilot, or student).....	1	2	2	0	0	0	1	2
Ground crew and third party fatalities.....	3	0	3	3	1	1	0	2
Total number of all fatalities.....	141	130	159	124	98	107	134	161
Miles flown per fatality.....	239, 168	251, 911	231, 322	324, 469	423, 644	422, 990	421, 635	451, 320

¹ Estimated from partial returns.

Private Flying Operations Statistics for First Half of 1939

Operators in the private flying classification flew 72,662,445 miles and carried 651,215 passengers during the first 6 months of 1939, according to reports made to the Civil Aeronautics Authority. During the same period of 1938 these operators flew 56,499,045 miles and carried

710,114 passengers. Estimated operations for the full year 1939, based on partial returns, and comparisons with previous years, and comparisons of January-June 6-month periods appear in the following table. Private flying operations include all civil flying except scheduled transport.

TABLE D.—Private flying operations for the January-June periods and the calendar years 1931 through 1939

	1931	1932	1933	1934	1935	1936	1937	1938	1939 ¹
Miles flown:									
Certificated aircraft.....	81, 872, 340	69, 898, 680	66, 150, 955	71, 173, 439	80, 918, 520	89, 826, 705	100, 225, 605	127, 044, 885	180, 500, 000
Uncertificated aircraft.....	12, 470, 775	8, 280, 020	4, 711, 890	4, 428, 713	3, 837, 110	3, 493, 670	2, 970, 750	2, 314, 210	1, 500, 000
Total.....	94, 343, 115	78, 178, 700	71, 222, 845	75, 602, 152	84, 755, 630	93, 320, 375	103, 196, 355	129, 359, 095	182, 000, 000
Passengers carried:									
For hire.....	1, 430, 052	879, 225	908, 970	1, 044, 079	1, 014, 957	1, 215, 405	1, 295, 904	1, 238, 133	1, 197, 200
For pleasure.....	437, 465	376, 584	339, 164	353, 209	272, 418	250, 653	284, 508	337, 018	442, 890
Total.....	1, 867, 517	1, 255, 809	1, 248, 134	1, 397, 288	1, 287, 375	1, 466, 058	1, 580, 412	1, 575, 151	1, 640, 000

	January-June 1931	January-June 1932	January-June 1933	January-June 1934	January-June 1935	January-June 1936	January-June 1937	January-June 1938	January-June 1939
Miles flown:									
Certificated aircraft.....	37, 137, 775	29, 940, 780	30, 787, 025	34, 690, 474	38, 401, 970	40, 184, 030	43, 992, 175	55, 470, 630	71, 803, 605
Uncertificated aircraft.....	6, 144, 820	3, 781, 905	1, 961, 460	2, 089, 683	1, 832, 215	1, 333, 055	1, 267, 775	1, 028, 415	858, 840
Total.....	43, 282, 595	33, 722, 685	32, 748, 485	36, 780, 157	40, 234, 185	41, 517, 085	45, 259, 950	56, 499, 045	72, 662, 445
Passengers carried:									
For hire.....	610, 339	343, 458	294, 799	398, 726	425, 840	427, 280	509, 254	566, 438	474, 523
For pleasure.....	201, 251	157, 095	139, 787	172, 967	130, 492	104, 515	124, 997	143, 676	176, 692
Total.....	811, 590	500, 553	434, 586	571, 693	556, 332	531, 795	634, 251	710, 114	651, 215

¹ Estimated from partial returns.

AIRWAYS AND AIRPORTS

New Aeronautical Lights and Obstruction Marking Manual Available.

A revised manual designed to serve as a guide for the establishing of aeronautical lights has been prepared by the Civil Aeronautics Authority. Interested persons may obtain copies of the Aeronautical Lights and Obstruction Marking Manual by addressing their requests to the Correspondence Unit, Civil Aeronautics Authority, Washington, D. C.

The manual explains the standards applied in the rating and classification of aeronautical lights by the Authority. It contains, in addition, standards recommended by the Authority for the marking of structures which present hazards to air commerce.

Detailed drawings illustrate typical obstruction light fittings, various types

of beacons, method of painting towers and poles and of mounting obstruction lights, and a suggested obstruction light-assembly for smokestacks.

Airports of Entry

As of February 1, 1940, there were 60 airports and seaplane bases designated as airports of entry through which aircraft arriving in the United States from foreign countries may clear customs and immigration.

Airports of entry are designated by the Treasury Department after consultation with representatives of other interested Federal agencies and due consideration as to the necessity for such designation. Some are designated without time limit, while others are given temporary designation for the period of 1 year, as shown in the tables below:

Without time limit

Location	Name	Location	Name
Ajo, Ariz.	Municipal airport.	Miami Fla.	Dinner Key Seaplane Base.
Akron, Ohio	Do.	Nogales, Ariz.	Nogales Municipal Air- port.
Albany, N. Y.	Municipal field.	Ogdensburg, N. Y.	Ogdensburg Harbor.
Brownsville, Tex.	Municipal airport.	Pembina, N. Dak.	Fort Pembina Airport.
Buffalo, N. Y.	Do.	Portal, N. Dak.	Portal Airport.
Caribou, Maine	Caribou Municipal Air- port.	Port Angeles, Wash.	Port Angeles Airport.
Cleveland, Ohio	Cleveland Municipal Air- port.	Port Townsend, Wash.	Port Townsend Airport.
Detroit, Mich.	Detroit Municipal Airport.	Put-in-Bay, Ohio	Put-in-Bay Airport.
Do	Ford Airport.	Rochester, N. Y.	Rochester Municipal Air- port.
Do	Wayne County Airport.	Rouses Point, N. Y.	Rouses Point Seaplane Base.
Douglas, Ariz.	Douglas Airport.	San Diego, Calif.	San Diego Municipal Air- port (Lindbergh Field).
Duluth, Minn.	Duluth Municipal Air- port.	San Juan, P. R.	Isla Grande Airport.
Do	Duluth Boat Club Sea- plane Base.	Seattle, Wash.	Boeing Municipal Air Field.
Eagle Pass, Tex.	Eagle Pass Airport.	Do	Lake Union.
El Paso, Tex.	Municipal Airport.	Skagway, Alaska	Skagway Municipal Air- port.
Fairbanks, Alaska	Weeks Municipal Airfield.	Swanton, Vt.	Missisquoi Airport.
Juneau, Alaska	Juneau Airport.	West Palm Beach, Fla.	Roosevelt Flying Service Base (Currie Common Park).
Ketchikan, Alaska	Ketchikan Airport.	Wrangell, Alaska	Wrangell Seaplane Base.
Key West, Fla.	Meacham Field.		
Laredo, Tex.	Laredo Airdrome.		
Miami, Fla.	Pan-American Field (or 36th St.).		

Temporary (1 year)

Location	Name	Date designated
Bangor, Maine	Bangor Municipal Airport.	June 26, 1939
Bellingham, Wash.	Graham Airport.	Apr. 18, 1939
Buffalo, N. Y.	Buffalo Marine Airport.	July 29, 1939
Burlington, Vt.	Burlington Municipal Airport.	June 29, 1939
Calexico, Calif.	Calexico Municipal Airport.	Jan. 10, 1940
Cape Vincent, N. Y.	Cape Vincent Harbor	Apr. 25, 1939
Clayton, N. Y.	Clayton Seaplane Base	Oct. 13, 1939
Crosby, N. Dak.	Crosby Municipal Airport.	June 28, 1939
Fort Yukon, Alaska	Fort Yukon Airfield.	July 6, 1939
Great Falls, Mont.	Great Falls Municipal Airport.	June 2, 1939
Havre, Mont.	Havre Municipal Airport.	Do.
Malone, N. Y.	Malone Airport.	Apr. 18, 1939
Miami, Fla.	Chalks Flying Service Airport.	Sept. 17, 1939
Niagara Falls, N. Y.	Niagara Falls Municipal Airport.	July 2, 1939
Plattsburg, N. Y.	Plattsburg Municipal Airport.	June 2, 1939
Sandusky, Ohio	Sandusky Municipal Airport.	June 1, 1939
Sault Ste. Marie, Mich.	Sault Ste. Marie Airport.	Aug. 4, 1939
Spokane, Wash.	Spokane Municipal Airport (Felts Field).	June 2, 1939
Warroad, Minn.	Warroad Seaplane Base.	Sept. 2, 1939
Watertown, N. Y.	Watertown Municipal Airport.	June 2, 1939
Wellesley Island, N. Y.	(Wellesley Farms Airport. (Wellesley Island Seaplane Base.	May 1, 1939

STATISTICAL SUMMARY

See charts on facing page →

● A sharp upturn instead of the normal seasonal trend downward characterized traffic statistics of domestic air carriers for December. Passenger traffic at 65,017,499 revenue passenger-miles showed an improvement of 74 percent over December 1938.

● Although figures for November had shown a decrease from the record high achieved in October, December figures reflected sharp upward recoveries from November in every category and established new all-time records in miles flown per month and in express traffic. Total miles flown were 7,715,775, an increase of 36.2 percent over December of 1938.

● The revenue passenger load factor of 56.97 percent for December was an improvement of 17.49 percent over the corresponding figure for the previous year. Express traffic at 595,121,775 pound-miles was 31.94 percent better than in December 1938.

● Figures for the whole year represented a series of new all-time highs in air transport history. Miles flown totaled 82,554,239, an increase of 18.5 percent over 1938; revenue passenger miles flown reached 677,672,955, an improvement of 42.25 percent; and express pound-miles were 5,411,227,041, an increase of 24.47 percent above express traffic of 1938.

Airport Projects Approved

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

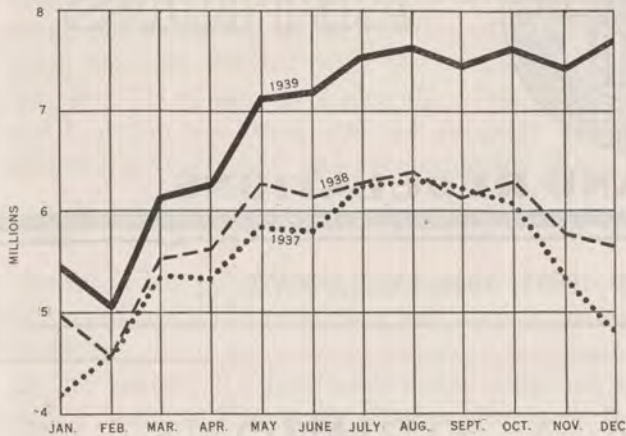
Fort Smith, Ark.—\$65,643 for W. P. A. project for paving NE.-SW. and E.-W. runways, including necessary grading and drainage; paving essential taxi-strips, aprons, and ramps; fine grading, seeding and/or sodding, and sprigging of all unpaved areas; removal of obstruction timber from approach and turning zones; fencing unenclosed portion of airport; installation of boundary, range and obstruction lights and a rotating beacon; construction of entrance roads, driveways, and parking

(Continued on page 63)

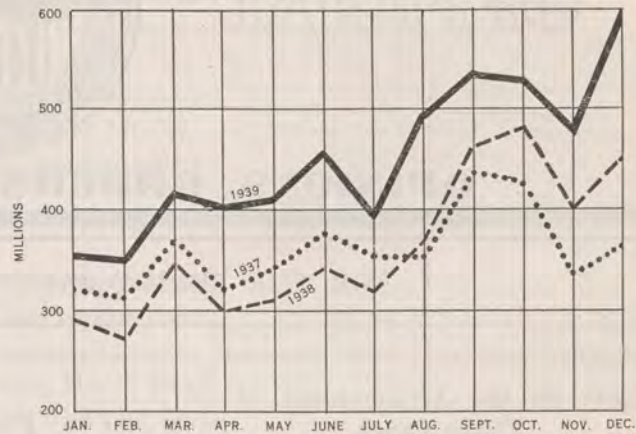
AIR TRANSPORTATION

Domestic Air Carrier Traffic Statistics for 1937, 1938 and 1939

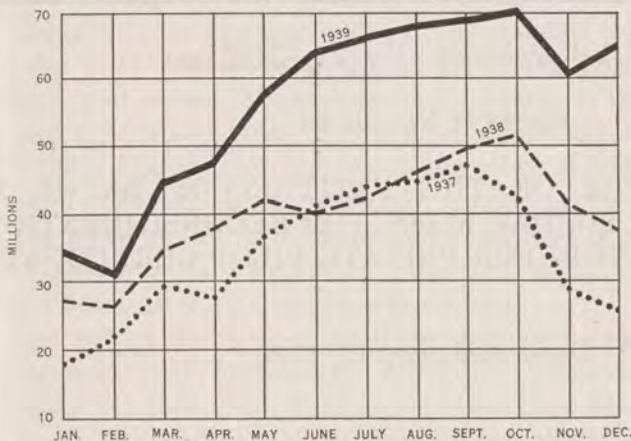
REVENUE MILES FLOWN



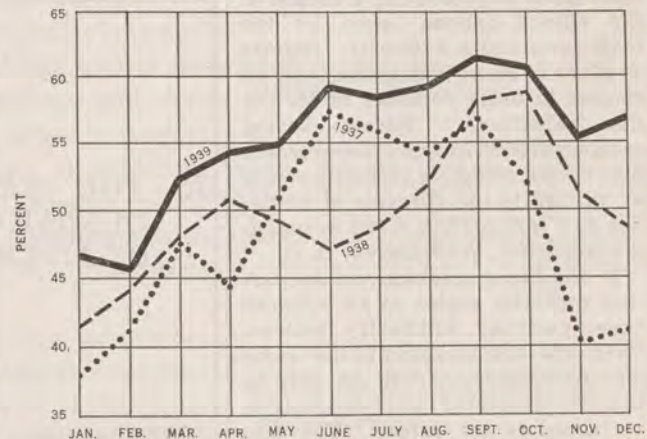
EXPRESS POUND MILES FLOWN



REVENUE PASSENGER-MILES FLOWN



REVENUE PASSENGER LOAD FACTOR



Domestic Air Carrier Traffic Statistics for December 1939

Operator	Revenue miles flown		Revenue passengers carried		Revenue passenger-miles flown		Express pound-miles flown		Revenue passenger load factor (percent)	
	December 1939	Percent change over 1938	December 1939	Percent change over 1938	December 1939	Percent change over 1938	December 1939	Percent change over 1938	December 1939	December 1938
American Airlines, Inc.	1,889,782	44.56	53,093	83.41	20,672,154	74.67	177,167,475	32.42	67.35	54.82
Boston-Maine Airways, Inc.	56,712	11.16	1,364	43.13	206,483	50.02	367,239	95.55	36.40	27.09
Braniff Airways, Inc.	311,074	25.26	6,234	56.87	2,003,535	47.79	11,694,905	5.20	63.80	57.01
Chicago & Southern Airlines, Inc.	158,008	38.49	2,237	64.49	922,362	61.26	5,055,899	12.53	58.37	40.13
Continental Air Lines, Inc.	99,656	77.59	911	173.58	274,411	137.83	439,446	21.90	43.04	34.27
Delta Air Corporation	151,721	29.86	3,178	80.98	858,749	61.44	2,802,828	10.68	56.60	45.50
Eastern Air Lines, Inc.	1,117,262	51.13	24,043	72.55	11,583,339	70.53	76,502,152	27.53	56.41	54.16
Inland Air Lines, Inc.	80,390	-5.55	772	60.50	196,938	70.00	436,230	13.20	24.50	13.61
Marquette Air Lines, Inc.	16,324	-3.60	125	25.00	30,554	30.42	0	-----	21.20	15.94
Mid-Continent Airlines, Inc.	106,125	26.46	1,538	50.78	396,516	71.14	1,257,874	22.11	37.36	31.72
National Airlines, Inc.	71,583	19.07	1,301	187.20	283,302	284.42	459,103	68.90	39.60	12.48
Northwest Airlines, Inc.	465,217	18.85	8,052	80.58	3,119,896	67.87	21,472,110	54.62	40.19	47.48
Pennsylvania Central Airlines Corporation	309,512	25.43	10,550	57.67	1,834,730	57.14	10,479,128	40.99	59.68	48.86
Transcontinental & Western Air, Inc.	1,138,216	46.86	19,871	105.17	9,479,258	89.05	86,203,669	48.30	50.44	39.53
United Airlines Transport Corporation	1,552,990	30.50	24,095	77.23	12,151,845	76.57	185,693,907	27.56	58.20	50.16
Western Air Express Corporation	187,243	4.97	2,768	59.82	983,087	52.23	14,845,040	27.40	44.27	30.35
Wilmington-Catalina Airlines, Ltd.	3,960	18.64	678	52.70	20,340	52.57	244,770	13.81	52.07	37.84
Total	7,715,775	36.20	160,810	78.83	65,017,499	74.00	595,121,775	31.94	56.97	48.49

CIVIL AERONAUTICS AUTHORITY

OFFICIAL



ACTIONS

OPINIONS, ORDERS AND REGULATIONS

FOR THE PERIOD JANUARY 16-31, 1940, INCLUSIVE

Note on the Arrangement of These Pages

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

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

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

C. A. A. OPINIONS

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

DOCKET No. SR-32

IN THE MATTER OF THE PETITION OF BRUCE L. DUNBAR OF BOSTON, MASS., FOR RECONSIDERATION OF APPLICATION FOR PRIVATE PILOT CERTIFICATE

Decided January 16, 1940

APPEARANCES:

Douglas L. Hatch, counsel for the respondent.

Lambert S. O'Malley, counsel for the Civil Aeronautics Authority.

OPINION

BY THE AUTHORITY:

The application of Bruce L. Dunbar of Boston, Mass. (hereinafter referred to as the "petitioner"), for a private pilot certificate was denied by the Authority on October 25, 1939. This action was taken because of reports which indicated that the petitioner's operation of motor vehicles since 1937 had been characterized by carelessness and disregard of the rules of safety and that his attitude in this respect had, prior to the filing of his application, been reflected in his navigation of aircraft.

The petitioner, on October 28, 1939, filed a petition with the Authority for reconsideration of his application and, in accordance with the terms of section 602 (b) of the Civil Aeronautics Act of 1938, a public hearing in the matter was held on November 9, 1939, before an examiner of the Authority in the Post Office Building, Boston, Mass.

At the hearing, petitioner appeared in his own behalf and was given full opportunity to be heard, to examine and cross-examine witnesses, and to introduce evidence bearing upon the issues presented. Thereafter, on December 4, 1939, the examiner filed his report in which he found that the petitioner had established an extended record of violations of the laws of Massachusetts and New Hampshire, particularly those designed to promote safety in the operation of motor vehicles and that, while the petitioner had displayed greater than average technical skill in the piloting of an airplane, his tendency to violate the laws dealing with the operation of motor vehicles was reflected in his operation of aircraft. For these reasons the examiner found that the petitioner was not properly qualified to perform the duties of a private pilot and recommended that the Authority affirm

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its denial of the petitioner's application. The examiner's report was duly served upon the petitioner and no exceptions to the report have been filed.

At the hearing the petitioner called only one witness, Harry Burbank, of Newton Highlands, Mass. Burbank testified that he had flown with the petitioner on five or six occasions and while he had expected to find the petitioner a reckless pilot in view of his motor-vehicle record, he found petitioner's flying to be very conservative.

The petitioner was then called to the stand at the request of counsel for the Authority and stated that he was 19 years of age and in his second year at the Massachusetts Institute of Technology and that he had received a Massachusetts automobile driver's license in August of 1936. Counsel for the Authority then introduced in evidence, without objection from petitioner, a copy of the petitioner's record in the office of the registrar of motor vehicles of the Commonwealth of Massachusetts. Petitioner admitted that, with the exceptions noted hereinafter, the record was accurate.

The record shows that petitioner's driver's license was suspended on April 21, 1937, on a charge of speeding, which suspension was lifted on May 24, 1937. On February 1, 1938, and March 19, 1938, pleas of guilty to speeding were entered by the petitioner in the municipal court of Brighton, Mass., and Brookline, Mass., respectively. On March 31, 1938, his license was again suspended on a similar charge. This suspension was lifted on April 16, 1938. On April 6, 1938, he entered a plea of guilty in the municipal court of Roxbury, Mass., on a charge of not slowing down at an intersection. On June 7, 1938, the license was revoked because of three speeding violations at Newton, Mass. On October 6, 1938, it was reissued and again suspended on January 3, 1939. This suspension, shown on the record as due to "improper person complaint," was in force at the time of the hearing.

The petitioner testified, however, that the quoted notation was erroneous and that the suspension was by reason of his refusal to reveal the name of a friend to whom he had loaned his car and against whom a complaint had been lodged that he had sideswiped the complainant's car and departed from the scene of the accident. The petitioner also admitted that on March 7, 1939, he pled guilty to each of two charges, one for drunkenness on which a fine of \$25 was assessed, and the other for tampering with the police signal system at Brookline, Mass.,

ABSTRACTS

ORDERS

Order No. 334: Violations referred to the Attorney General for judicial action.

The Authority on January 16 referred the following cases to the Attorney General for judicial action for certain violations of the Civil Aeronautics Act of 1938 and the Civil Air Regulations:

O. L. Holden, Fort Worth, Tex.—For piloting certificated aircraft on several occasions without being possessed of a valid pilot certificate, one flight also having been made on a civil airways; and

Aleck Barthule, Townsend, Mont.—For piloting an aircraft on and across various civil airways without being possessed of a valid pilot certificate, and other violations.

Order No. 335: Application for private pilot certificate of Bruce L. Dunbar denied. (For full text of opinion and order, see Docket No. SR-32, p. 60.)

Order No. 336: Private pilot certificate of Phillip A. Mann revoked.

The Authority on January 16 revoked private pilot certificate No. 64985, held by Phillip A. Mann, Van Wert, Ohio, for piloting an aircraft acrobatically over an open-air assembly of persons and for not being equipped with a parachute on said flight.

Order No. 337: Eastern Air Lines permitted to withdraw application for review of certain actions of the Postmaster General.

The Authority on January 16 granted application of Eastern Air Lines, Inc., to withdraw its application for review of certain actions of the Postmaster General and its complaint against certain unfair practices and methods of competition of American Airlines, Inc.

Order No. 338: R. S. Johnson directed to show cause why mechanic certificate should not be revoked or further suspended.

The Authority on January 16, directed R. S. Johnson, Houston, Tex., whose aircraft and aircraft engine mechanic certificate No. 3870 was suspended on December 28, 1939 (Order No. 317), to appear before an examiner of the Authority to show cause why this certificate should not be revoked in whole or in part, or further suspended in whole or in part.

ABSTRACTS

(Continued)

Order No. 339: Four applications of Trans-Canada Air Lines consolidated into one proceeding for hearing.

The Authority on January 16, consolidated four applications of Trans-Canada Air Lines for foreign air carrier permits into one proceeding for the purpose of hearing.

Order No. 340: Applications of Northwest Airlines, Pennsylvania-Central, and Canadian-Colonial consolidated into one proceeding for hearing.

The Authority on January 16, consolidated into one proceeding, for the purpose of hearing, applications for certificates of public convenience and necessity of Northwest Airlines, Inc. (Chicago-New York via Toronto), Pennsylvania-Central Airlines Corporation (Buffalo-Toronto), and Canadian-Colonial Airways, Inc. (New York-Toronto).

Order No. 341: Solo pilot certificate of Donald L. Frahm suspended for 30 days.

The Authority on January 19, suspended for a period of 30 days from January 5, solo pilot certificate No. 60806, held by Donald L. Frahm, Monolith, Calif., for piloting an aircraft carrying a person other than a certificated instructor actually giving instruction.

Order No. 342: Student pilot certificate of Norris Norsigian suspended for 30 days.

The Authority on January 19, suspended for a period of 30 days from January 9, student pilot certificate No. 65559, held by Norris Norsigian, Tulare, Calif., for piloting an aircraft on a civil airway carrying a person other than a certificated instructor actually giving instruction, and other violations of the Civil Air Regulations.

Order No. 343: Flight of Argentine plane over Canal Zone authorized.

The Authority on January 19, granted application of the Argentine Government for permission for Alberto Santu Riestra and Miss Susana Ferrari Billinghurst to fly a Sikorsky S-38 aircraft, bearing Argentine identification marks, owned by Sociedad Argentina de Navegacion Aerea, on a test flight over the Canal Zone, and thereafter to depart from Cristobal, C. Z., on a flight to Buenos Aires, subject to certain terms and conditions.

for which a fine of \$50 was imposed and that his New Hampshire driver's permit had been revoked 2 or 3 months prior to the hearing because of a violation of the traffic laws at Alton in that State. This revocation was in force at the time of the hearing.

In addition to the above offenses, the petitioner admitted that he had entered a plea of guilty to a charge of lying in the middle of a street in Newton, Mass., in an intoxicated condition at 2 a. m. on

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October 11, 1939. However, notwithstanding his plea of guilty as thus stated, he testified that he was not drunk at the time. In answer to an inquiry by the attorney for the Authority as to whether he would care to explain why he was lying in the street at Newton at that time of night, he replied:

"I would not mind. The Newton police and I have been having a duel for some time in which I generally come out the loser. I have developed a dislike for them as a class of citizens, and perhaps foolishly, I attempt to antagonize them every time I see them. That was such a case. First of all, I was coming toward an accident which had just happened down about a half a mile from where I was and I saw the police car coming from the accident and heading toward the Newton Hospital. I decided to lie down in the street and see what they would do."

Mr. Cannon, the petitioner's flight instructor, was called as a witness on behalf of the Authority and stated that he was the holder of a commercial pilot certificate with an instructor rating, had logged approximately 2,000 solo flying hours, and had been giving instructions to students for about 5 years. He stated that he had given petitioner his first flying lesson in April 1939 and, after the period of dual instruction required by the Civil Air Regulations, had soloed him. The witness expressed the opinion that the petitioner was above the average in ability in the mechanical operation of aircraft but that he displayed recklessness in the operation of aircraft and a lack of respect for the principles of safe flying. The witness referred to one specific instance in which he accompanied the petitioner upon a cross-country check flight during which they were faced with two thunder clouds. He stated that the petitioner flew directly toward them and it was necessary for him to take over the controls in order to prevent the petitioner from flying directly into the clouds. He stated that by reason of this incident and others which had been reported to him, he had refused to take the responsibility for permitting the petitioner to fly the aircraft owned by the Inter City Airlines, Inc., his employer.

John R. Hartwell was called as a witness on behalf of the Authority and testified that he was also a commercial pilot with an instructor rating and in the employ of the Inter City Airlines, Inc. He stated that he was acquainted with the petitioner and had come in contact with him on a number of occasions on which the petitioner had unsuccessfully insisted on renting aircraft owned by the Inter City Airlines, intending to fly into weather which was below the contact minimums. He also referred to one occasion upon which Dunbar had insisted upon flying to Alton Bay in the southern part of Lake Winnepesaukee despite previous warnings that for a pilot of his experience it would be a dangerous venture because of the difficulty of landing on the bay.

From the entire record in the proceeding, we find that petitioner, since receiving his first driver's permit, has demonstrated a singular

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disregard for the laws of Massachusetts and New Hampshire, particularly those dealing with the operation of motor vehicles, and has persisted in defying the legal authorities of those States. We further find that these same tendencies were, prior to our denial of his application for a private pilot certificate, becoming evident in his operation of aircraft. Section 602 (b) of the Civil Aeronautics Act requires us to issue an airman certificate to an applicant therefor if we find that he is properly qualified for, and physically able to perform the duties pertaining to, the position for which the airman certificate is sought. Since there appears to be no question but that the petitioner is physically able to perform the duties of a private pilot, the question for determination in this proceeding is as to whether he has the proper qualifications for the certificate sought.

We hold that the petitioner does not at this time have such qualifications, not because he is unable to pilot an airplane with skill, for the evidence is that his mechanical skill is above average, nor because he has established a consistent record of violating the regulations dealing with the operation of aircraft, for no such violations were charged or proved in this proceeding. The petitioner's deficiency lies in his lack of mature judgment, his tendency toward recklessness, his lack of respect for laws designed for the protection of the public, and his attitude of defiance toward those whose duty it is to enforce these laws. By reason of this deficiency, the interest of public safety requires us to deny the petitioner's application.

ORDER

The Civil Aeronautics Authority, acting pursuant to the Civil Aeronautics Act of 1938, particularly sections 205 (a) and 602 thereof, orders that the application of Bruce L. Dunbar, Boston, Mass., for a private pilot certificate be, and it is denied.

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

ABSTRACTS

(Continued)

Order No. 344: Northwest Airlines authorized to intervene in Trans-Canada applications.

The Authority on January 19, granted Northwest Airlines, Inc., permission to intervene in the applications of Trans-Canada Air Lines for foreign air carrier permits.

Order No. 345: Eastern authorized to intervene in Braniff, Kansas City Southern, Mid-Continent, and Continental applications.

The Authority on January 19, granted Eastern Air Lines, Inc., permission to intervene in the applications of Braniff Airways, Inc., Kansas City Southern Transport Co., Inc., Mid-Continent Airlines, Inc., and Continental Air Lines, Inc., for certificates of convenience and necessity.

Order No. 346: Leasing agreement between United and Eastern approved.

The Authority on January 19, approved an agreement between United Air Lines Transport Corporation, and Eastern Air Lines, Inc., providing for the leasing by United to Eastern of four Douglas DC-3 aircraft.

Order No. 347: Revision of Order No. 331.

The Authority on January 23 adopted a revised order, superseding Order Serial No. 331, approving interlocking relationships of Harold J. Roig, Robert H. Patchin, William F. Cogswell, and Pan American-Grace Airways, Inc.

Order No. 348: Student pilot certificate of Kirkland C. Krueger revoked.

The Authority on January 30 revoked student pilot certificate No. 46734, held by Kirkland C. Krueger, Indianapolis, Ind., for piloting aircraft acrobatically over an open-air assembly of persons at an altitude not sufficient to permit at all times an emergency landing outside of such area in event of complete power failure, and other violations of the Civil Air Regulations.

Order No. 349: Student pilot certificate of Walter Ireland Martin revoked.

The Authority on January 30 revoked student pilot certificate No. 27927, held by Walter Ireland Martin, Denison, Tex., for piloting an aircraft carrying for hire a person other than a certificated instructor actually giving instruction.

Airport Projects Approved

(Continued from page 58)

areas for automobiles, including landscaping; and laying water line to hangar area at municipal airport.

Logan, Utah.—\$1,350 for N. Y. A. project for painting of the roof of the hangar, construction of landing field markers, the removal of 10,000 feet of fence and the reconstruction of 3,800 feet of fence, subject to withdrawal for certain specified causes, including failure to operate the project in accordance with approved plans, specifications, and other supporting material. This project is supplementary to a project for the construction of a hangar at the municipal airport.

Marianna, Fla.—\$128,620 for W. P. A. project for clearing and grubbing, grading, drainage, sprigging, mucking and hard-surfacing of two runways 100

feet by 3,500 feet and other incidental and appurtenant work.

Norway, Maine.—\$2,256 for N. Y. A. project for construction of new airport, consisting of a landing strip approximately 1,600 feet in length and 300 feet in width, the work to consist of clearing, grading, and work necessary and appurtenant thereto.

Parkersburg, W. Va.—\$224,932 for W. P. A. project for construction of No. 3 runway, the work to include grading, clearing and paving complete, drainage complete within the graded area, and work incidental and appurtenant thereto, including the production of stone for use on this project, grading the entrance to the airport from the Williamstown Pike, and the necessary clearing and draining on No. 2 runway in order that waste excavation from No. 3 runway may be advantageously placed there for future use at Wood County Airport.

ABSTRACTS

(Continued)

Order No. 350: Solo pilot certificate of Robert V. Merrell revoked.

The Authority on January 30 revoked solo pilot certificate No. 44635, held by Robert V. Merrell, Sharon Springs, Kans., for piloting an aircraft carrying a person other than a certificated instructor actually giving instruction, and other violations of the Civil Air Regulations.

Order No. 351: Student pilot certificate held by C. D. Newman revoked.

The Authority on January 30 revoked student pilot certificate No. 64991, held by C. D. Newman, Lavelette, W. Va., for piloting an aircraft over a congested area at an altitude insufficient to permit at all times an emergency landing outside of such area in the event of complete power failure, and other violations of the Civil Air Regulations.

Order No. 352: Daniel L. Boone ordered to show cause.

The Authority on January 30 directed Daniel L. Boone, Urbana, Ill., holder of limited commercial pilot certificate No. 38859, to appear before an examiner of the Authority and show cause why this certificate should not be revoked or suspended for giving flying instruction without being possessed of a valid instructor rating, and other violations of the Civil Air Regulations.

Order No. 353: Ulmo S. Randle ordered to show cause.

The Authority on January 30 directed Ulmo S. Randle, Fairfax, Va., holder of student pilot certificate No. 91304, to appear before an examiner of the Authority and show cause why this certificate should not be suspended or revoked for piloting an aircraft over a congested area at an altitude not sufficient to permit at all times an emergency landing outside of such area in the event of complete power failure, and other violations of the Civil Air Regulations.

Order No. 354: Offers accepted in compromise of civil penalties for violations.

The Authority on January 30 accepted certain offers in compromise of civil penalties incurred for violations of the Civil Aeronautics Act of 1938 and the Civil Air Regulations as follows:

Vincent W. Miller, Logansport, Ind.—For piloting an aircraft on and across various civil airways in solo flight outside an area within a 25-mile radius of

his point of take-off as provided in his student pilot certificate, and other violations—\$50.00; and

Harold L. Parker, Glendale, Calif.—For failure to circle the Los Angeles Municipal Airport to the left when approaching for a landing, and other violations—\$25.00.

Order No 355: Offers accepted in compromise of civil penalties for violations.

The Authority on January 30 accepted certain offers in compromise of civil penalties incurred for violations of the Civil Aeronautics Act of 1938 and the Civil Air Regulations as follows:

Lee E. Chamblin, St. Louis, Mo.—For piloting an aircraft on a civil airway without being possessed of a valid pilot certificate—\$25.00;

Gerald R. Klingel, Edwardsville, Ill.—For piloting an aircraft on a civil airway carrying a person other than one possessed of a pilot certificate valid for the operation involved who occupied a control seat of said aircraft without the dual controls thereof having been made inoperative—\$100.00;

Walter W. McLatchy, Ashland, Mont.—For piloting an aircraft on a civil airway after said aircraft had been damaged in an accident and before it had been rerated as to airworthiness—\$25.00; and

Richard H. Weightman, Los Angeles, Calif.—For piloting an aircraft on a civil airway although the airworthiness certificate of said aircraft had expired—\$50.00.

Order No. 356: Violation referred to the Attorney General for judicial action.

The Authority on January 30 referred the following case to the Attorney General for judicial action for certain violations of the Civil Aeronautics Act of 1938 and the Civil Air Regulations:

Valta G. Lewis, Concordia, Kans.—For piloting an aircraft on a civil airway outside an area within a 25-mile radius of his point of take-off as provided in his student pilot certificate, and other violations.

Order No. 357: Violations referred to the Attorney General for judicial action.

The Authority on January 30 referred the following cases to the Attorney General for judicial action for certain violations of the Civil Aeronautics Act of 1938 and the Civil Air Regulations:

Vincent J. Mulac, Traverse City, Mich.—For piloting an aircraft on a civil airway without being possessed of a valid pilot certificate; and

Theodore Dahmus, St. Louis, Mo.—For piloting an aircraft on a civil airway without being possessed of a valid pilot certificate and on such flight for flying over a congested area at an altitude less than 1,000 feet.

REGULATIONS

Regulation No. 55: Amendment adopted granting access to aircraft to inspectors of the Authority other than air carrier inspectors.

The Authority on January 19 adopted amendment No. 1 of section 228.3 of the Economic Regulations, granting access to aircraft to inspectors of the Authority other than air carrier inspectors.

Regulation No. 56: Adopted amendment No. 33 of the Civil Air Regulations.

The Authority on January 30 adopted amendment No. 33 of the Civil Air Regulations which provides for amendment of definitions and redesignation of control airports, control zones of intersection, radio fixes, and airway traffic control areas.

Air Safety Board

(Continued from page 54)

identally actuated causing preignition of the engine.

The Board attributed the accident to "Failure of the pilot to keep clear of propeller during hand-starting operations."

The recommendation, however, states:

"Although the investigation of this accident does not conclusively show that the starting magneto contributed to the cause of the accident, the lack of grounding is considered as very dangerous and it is recommended that such installations be improved as to safety by grounding through the ignition switch."

The second recommendation was made in conjunction with an accident which occurred to an aircraft during crop-dusting operations and was attributed to a static electric discharge between unbonded parts of the aircraft igniting sulphur dust. The Board's recommendations were:

"It is recommended (1) that complete electrical bonding be effected on all aircraft used in crop-dusting operations; (2) that such necessary alterations be made, if necessary, to provide scavenging by means of forced draft of fresh air in all closed compartments (other than the hopper) of such aircraft; and (3) that the dust-discharge pipe be further extended into the air stream so that dust will not be carried back on to surfaces of the aircraft."

A total of 215 aircraft were involved in the 203 accidents reported, 12 of the accidents being the result of air or ground collisions in which 2 aircraft were damaged. There were 395 persons involved, 75 of whom received fatal injuries, 20 serious injuries, 29 minor injuries, while 271 escaped unhurt. Damage to aircraft resulted in 53 planes being destroyed, 118 severely damaged, and 32 slightly damaged, while 4 were involved in accidents without becoming damaged.