Aviation News

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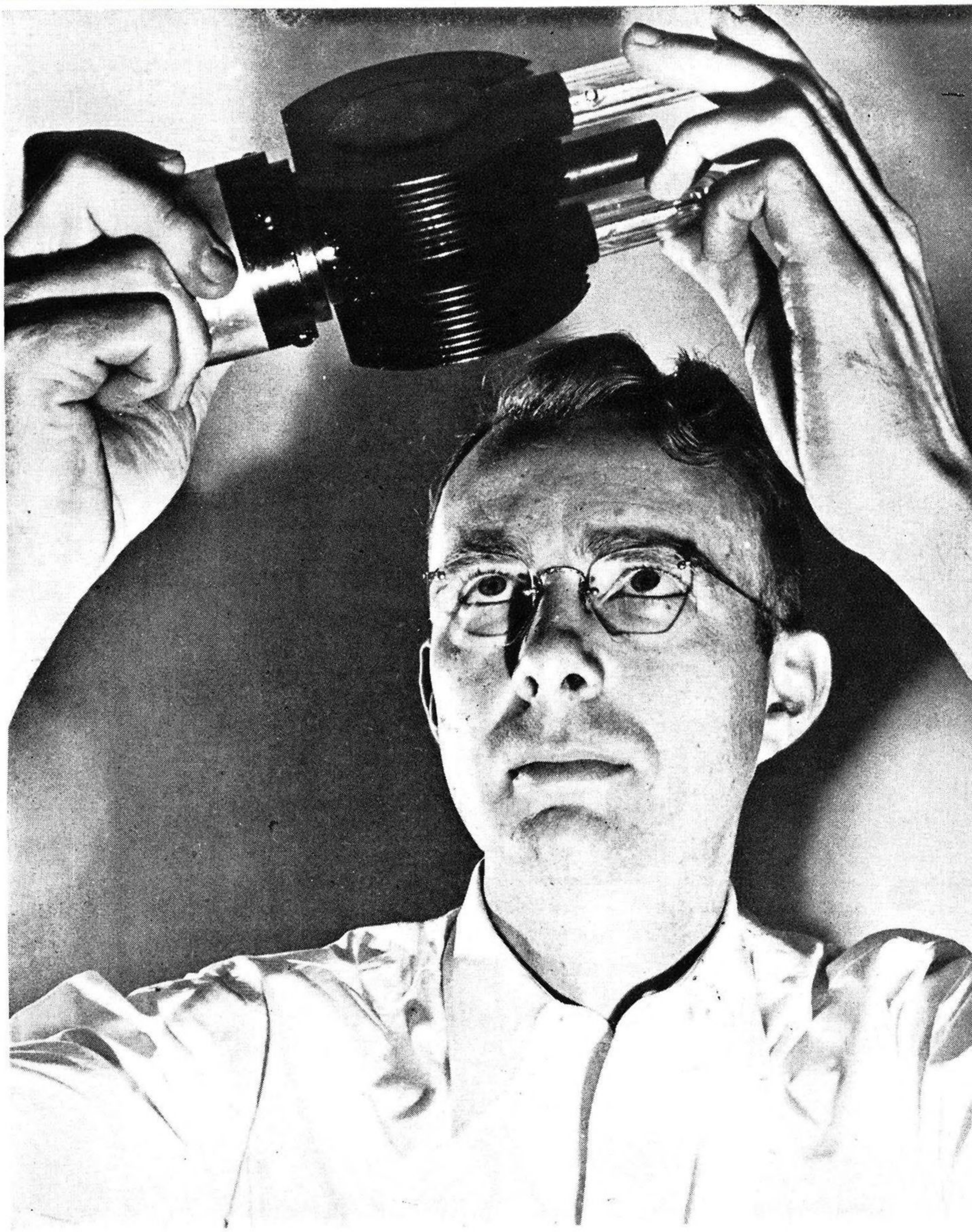

Trophy Winner: *Dr. Luis Alvarez, developer of the radar Ground Control Approach system, has been awarded aviation's highest civilian prize, the Robert J. Collier Trophy for outstanding contribution to aviation. Dr. Alvarez, shown here examining a magnetron, a key part of all radar, will receive the Collier Trophy tomorrow at the White House from President Truman, acting on behalf of the National Aeronautic Association which administers the award.* *(Story on page 7).*

Washington Observer

CRACKING DOWN ON THE LITTLE FELLOW—The country's small fixed base charter and air taxi operators are worrying about the attitude of the new director of CAB's Safety Bureau, Wallace S. Dawson. They feel that the recently circulated proposals which would stiffen air taxi regulations are only the beginning of trouble for them. Many expect to be forced out of the air taxi business, citing the director's remarks at a closed meeting he held with the airlines in Washington on Oct. 18. At that time, he served notice that the Bureau would place heaviest restrictions on the little fellows, "those with the least facilities and organization." At the same time he promised to give every break to the scheduled airlines "with the most qualified personnel and facilities." The small air taxi operators point out that this policy not only fails to recognize the perfect safety record many of them proudly boast, but would deprive the public of charter service at hundreds of small airports in the country where twin-engined planes cannot operate.

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TRUCKERS SYMPATHIZE WITH AIRLINES—In an unpublicized report to the House Interstate & Foreign Commerce Committee, the American Trucking Associations, Inc., takes a hefty slap at ICC policies members have been subjected to and expresses sympathy toward the airlines' opposition to regulation by that agency. The transportation subcommittee is making a survey to determine requirements for new legislation. The truckers' spokesman charged the railroads with pursuing a "calculated and destructive policy" toward his industry "with the full knowledge and permission of the ICC."

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AAF HANDOUT FAMINE?—Army Air Forces' current economy wave, a hangover from Gen. Spaatz's 20 percent personnel cut, has hit Public Relations with a vengenance. The Office of Information Services will be abolished and the Public Relations staff will be slashed in half by Jan. 1.

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"THE PEOPLE NEVER LEARN"—Lieut. Gen. Ira C. Eaker, Deputy Commanding General of the AAF and generally regarded as the likeliest successor to Gen. Spaatz, has indicated to close friends that he will definitely retire before the end of next year. Eaker, a veteran of the budget-starved prewar Air Corps era, is disgusted with current economy waves that make it impossible (even after a global air war) to maintain and operate an air force worthy of the name. The country, he says, will never learn the value of an air force. Unless Eaker should serve only a short time as AAF chief, before stepping out, his retirement would boost the stock of Gen. George Kenney, present Strategic Air Force commander, as Spaatz's successor.

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JET STANDARDS SET—Aeronautical Board has adopted standard Army-Navy specifications for jet engines and will disclose them shortly, with specs for turbo-prop engines to be ready about Jan. 1. This is the first tangible result of the speed-up in government-industry cooperation on standards which was announced jointly by the Army and Navy last week. With Aircraft Industries Association acting as the industry liaison, the Board will review and revise Army-Navy specs to keep them up to date.

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FOREIGNERS VS. THE FOLKS AT HOME—U. S. air transport applicants who have waited up to three years for action and spent untold thousands of dollars in pursuing their cases, are comparing their treatment with that given foreigners. Norwegian Air Lines was issued a foreign air carrier permit two months after its application was made, and the Board held a hearing on British Commonwealth Pacific Airlines' permit request the day after it was filed.

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CAB AGENDA CLOGS UP—Civil Aeronautics Board is losing ground in its struggle against a huge backlog. There were 1100 cases pending Nov. 30, compared with 928 on June 30 and 968 on March 31. Since July 1 applications have increased sharply. From March through June the Board received about 31 new applications a month. From July through November the average shot to 66. CAB's limited personnel has been overwhelmed.

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SUBSIDY BUGABOO AGAIN—Steamship spokesmen have quietly gathered ammunition for the propaganda battle on Capitol Hill and in the press on aviation subsidies. They expect thus to increase chances for legislation which will permit them to enter aviation. The result is likely to be a free-for-all which will discredit all transportation, since air, rail and steamship services either are receiving or have received government aid at some stage of their development, which was deemed at the time to be in the public interest. Worry of the airlines is that the new outburst may build up a public record which will give further encouragement to advocates of government ownership of all common carriers.

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News Digest

DOMESTIC

Boeing Aircraft Co. has discontinued production of its Model 417 transport due to lack of orders, materials and labor shortages, and the financial condition of some feeder airlines that have already ordered the plane.

Arbitration hearing on TWA pilot pay issues has been postponed from Dec. 18 to Jan. 3. It will be held in Chicago.

Rear Admiral Leslie C. Stevens, assistant director of the Navy's Bureau of Aeronautics in charge of research and development, has been named to the National Advisory Committee on Aeronautics. He succeeds Rear Admiral Lawrence B. Richardson now with Curtiss-Wright.

Orlando Airlines, Florida feeder, expects to inaugurate mail and cargo service on AM 75 between Orlando, Ocala, Gainesville, Lake City, Live Oak, Tallahassee and Jacksonville around Dec. 20 with twin-engine Beechcrafts.

FINANCIAL

CAB granted Northeast Airlines a temporary mail rate increase retroactive to May 1, 1945.

Slick Airways, Inc., registered 500,000 shares of common stock at $10 par value and partially assignable options to purchase 175,813 shares of common stock with SEC. Shares will be sold and options distributed directly by the company without underwriters.

Western Airlines reported a net loss of $267,037 after all charges and taxes for the first nine months of 1946. Third quarter profit was $288,000 compared with a first half loss of $706,277.

FOREIGN

International air mail increased 24.4 percent during the first 15 days of November, according to the Post Office Department. Middle East and Asia registered the largest gain with 38 percent.

First deliveries will be made next Fall on the 17 Douglas DC-6s purchased last month by four Scandinavian airlines. Ten planes go to Swedish Air Lines (ABA), three to Swedish Intercontinental Airlines (SILA), and two each to Norwegian Air Lines (DNL) and Danish Air lines (DDL).

▸Grumman is building an enlarged version of the Mallard for the Navy. Known as the XJR2F-1, the amphibian will be powered by two Wright Cyclone engines, have an 80 ft. wing span and carry 16 passengers.

▸*AAF will spend $140,000 building jet engine test cells at Oklahoma City. This is another step in the trend toward decentralization of test facilities from Wright Field. Power potential at Wright Field is already strained to the limit and most of its wind tunnels can be run at full speed only between 3 and 6 a.m. when power load for the rest of the field is at a minimum.*

▸A. V. Roe Canada Ltd. of Toronto has been assigned a large part of the wartime munitions factory at Nobel, Ont. by the Canadian Department of Reconstruction and Supply for work on gas turbine engines. Roe has taken over development of both jet and gas turbines from the Government's Turbo Research Ltd.

▸*Navy's Air Reserve will consist of 15 large, 5 medium, and 35 escort carrier groups; 45 observation squadrons; 21 patrol bomber squadrons, and 24 transport squadrons.*

▸According to the Department of Commerce the model airplane and engine industry has grown to a $50,000,000 during 1946.

▸*Army Transportation Corps is completing arrangements with American Overseas and TWA for carrying 2,000 dependents of the Army of Occupation in Germany from New York to Frankfurt-am-Main in Germany.*

▸Production of military aircraft reciprocating engines hit a new high for the year in October with the manufacture of 221 engines with a total capacity of 430,000 hp. Jet engine production was 100 with a capacity of 360,000 lb. static thrust.

▸*A boom in aviation pictures is in the making in Hollywood if public reaction tests now in progress produce positive results. Top men in the postwar flying films will be Paul Mantz, 1946 Bendix trophy winner and veteran purveyor of planes to film companies and eloping movie stars, and Col. Clarence A. Shoop who commanded the 7th Photo Group in Europe and is now aviation adviser for Columbia and Paramount.*

▸Australian Government is negotiating with the United Kingdom Government for purchase of BOAC's 50 percent interest in Qantas Empire Airways. Qantas has ordered four Constellations which will be placed in Australia-United Kingdom service about the middle of 1947.

▸*Worried by CAB's apparent determination to crack down on nonscheduled passenger and charter operations, several of the larger uncertificated passenger carriers are considering using the old steamship dodge of shifting their registry and headquarters to the protection of foreign flags in the West Indies.*

▸The Navy's Antarctic Expedition will have a fleet of 23 planes. Six DC-3 type transports will be equipped with jato units for take-offs from the carrier Philippine Sea, auxiliary fuel tanks and cold weather equipment for long range photo missions. Six Sikorsky helicopters will operate from platforms on the forward deck of ice-breakers functioning as spotters of ice floes and channels for the ships. Six Martin PBMs, two SOC floatplanes and a Noorduyn Norseman skiplane will also be used on the expedition. All planes will be painted bright orange to make them visible at long range.

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December 16, 1946

Collier Trophy Award to Alvarez Spotlights GCA Development

Instrument landing system controversy stirred by AAF report and Arcata tests urging immediate use of integrated aids.

By WILLIAM KROGER

As evidence continues to mount that the ground controlled approach radar landing system holds most promise for immediate solution of the bad weather landing problem, award of the Robert J. Collier Trophy to Dr. Luis W. Alvarez for his development of GCA is seen as perhaps putting the clincher on that system's claims.

Historic role of the 35-year-old trophy has been in focusing attention on solid accomplishments which often have been controversial at the time of the award, but which later became standard in application: first amphibian, gyroscope control, controllable pitch propeller, air-cooled engine, twin-engine airplane.

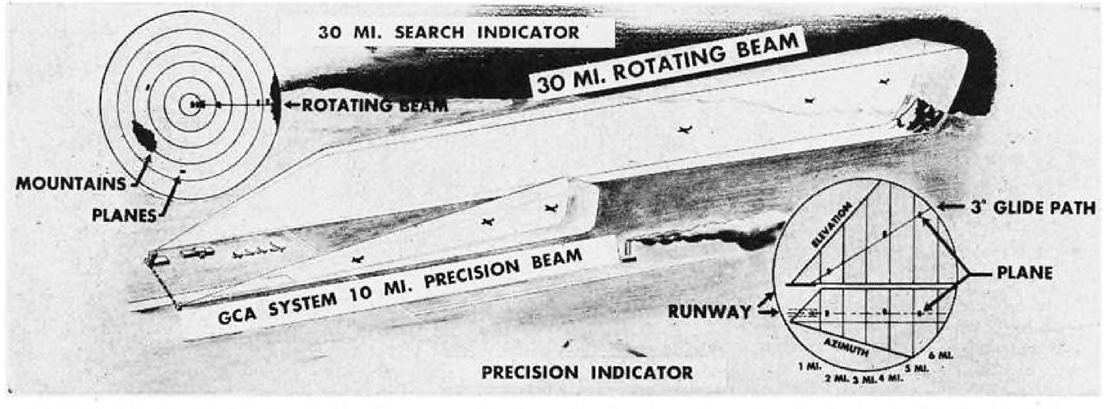
▸**Problem at Peak**—Announcement of the award to Alvarez comes at a time when emphasis on the bad weather landing problem has reached a new peak. A joint government-industry experiment in landing aids at Arcata, Calif., resulted in a report which urgently recommends that "those agencies directly concerned with flight regulation take such steps as may be necessary to approve, sponsor, and encourage the use of an integrated landing aids system," of which GCA could be a part. Cost of an integrated system including lights and fog dispersal would be $300,000-$450,000. In a single 90-day period this year bad weather caused airlines a loss of $1,700,000.

In the search for a solution to the landing difficulty, more and more faith is being placed in GCA. The heavily-traveled North Atlantic route will be all GCA. A long-buried AAF report on the experiences of various groups of pilots on GCA and CAA's Instrument Landing System gives a definite nod to GCA.

In the field of actual use, as distinct from reports and recommendations, GCA is attaining additional recognition. It is the standard landing system of the Navy. It is being installed, as an alternate to ILS, at New York, Washington and Chicago. Gander and Heathrow Airports, principal terminals of trans-Atlantic operations, are installing GCA. Pan American Airways, TWA and American Overseas Airlines are checking out their pilots on GCA.

▸**Five Years Old** — When Luis Alvarez receives the trophy tomorrow from President Truman, acting on behalf of the National Aeronautic Association which administers it, it will be nearly five years since the first demonstration of the system in Jan., 1942. Alvarez, now 35 and a physics professor at the University of California, went to work at the radiation laboratories at the Massachusetts Institute of Technology in 1940. While working with radar, he conceived the idea of utilizing the "interrupted beam" phenomena to aid in landing. He was in the plane that made the first operational landing in England, in Aug., 1942.

Throughout the balance of the war, GCA was used by the Navy, AAF and the RAF at first slowly and on a small scale. Later, on Iwo Jima, it was almost a standard procedure. Wartime secrecy was lifted in the Fall of 1945 and the controversy over the merits of GCA and ILS began taking shape. GCA's benefits, however, were suf-



GCA Diagram: *Drawing of Ground Control Approach System manufactured by Gilfillan Bros. for the Army. The 30-mi. beam is used to "talk" the plane into the approach zone, from where it is guided down to the runway with the course indicated on the two precision scopes.*

ficiently plain to the Collier Committee to win Alvarez the award for the year 1945 for the "greatest achievement in aviation in America, the value of which has been demonstrated by actual use during the preceding year."

Selection of GCA as 1945's outstanding development by NAA's committee of outstanding aviation leaders focuses attention again on the GCA-ILS controversy. Adding fuel is the fact that the Provisional International Civil Aviation Organization has recommended standardization by all countries on ILS and CAA has planned 110 ILS installations in the U. S.

GCA requires no special devices in the plane other than a radio receiver. The operator on the ground follows the plane's flight on the radar scope actuated by a 30-mile search beam, and when the plane reaches the final approach point, directs the pilot by radio instruction, following the course on a smaller, 10-mile precision scope which indicates both the glide path and the relation of the aircraft to runway's centerline.

ILS is a straight radio system. On the ground it has a localizer transmitter sending out a beam in line with the runway, a glide path transmitter sending out and up an angular beam, and two or three fan markers transmitting vertical beams to mark certain distances from the end of the runway. In the plane, there must be separate radio receivers for each of these beams.

GCA Cost Greater—Initial cost of GCA is greater than that for ILS, disregarding the cost of the aircraft receivers. GCA requires one or more, probably two, special operators on the ground. ILS is automatic. Use of ILS requires special knowledge on the part of the pilot and intensive practice. GCA requires of the pilot only the ability to maintain a heading.

At the Indianapolis experimental station of CAA, AAF undertook a series of tests with airline pilots, CAA pilots, and various categories of AAF pilots, using CAA-employed GCA controllers. The pilots made two ILS approaches and two radar-controlled approaches in a C-54. Of 75 pilots quizzed, 70 preferred GCA.

In the report of this experiment, which has never before been published, the record shows that GCA gives a better alignment with the runway by 350 percent than can be achieved by ILS with an addition of a couple of thousand hours flying experience and 110 ILS approaches.

Figures Given—Airline captains participating in the experiment had an average of 6,560 hours flying time. Forty percent had previously flown GCA, 20 percent previously had flown ILS. Ninety-one percent were able to touchdown with GCA, only 54 percent with ILS. Landings could have been made with a 50 ft. ceiling by 54 percent on GCA, but only by 16 percent with ILS. With a 100 ft. ceiling, 72 percent could land on GCA, 54 percent on ILS. With a 300 ft. ceiling, 100 percent could land on GCA, 91 percent on ILS.

The CAA pilots in the test also fared better on GCA than on ILS. A group of fighter pilots, flying C-54s and with an average of only 805 flying hours, were far more accurate in landings on GCA than with ILS. They could touchdown only 50 percent of the time on ILS, as against 83 percent with GCA. They had never before used GCA, yet could get better alignment on the runway with it than CAA and airline pilots with far more flying experience could do with ILS.

It was also noticed during the experiments that pilots had a general tendency to land far short when using ILS. This is credited partly to the instruments necessary in using ILS.

Pilots who reached the one-half mile point on ILS and about 100 ft. altitude would suddenly reverse their sensing of the glide path needle and dive into the ground. At this point, the needle is rather sensitive and once a full-scale deflection is reached the pilot became alarmed and made a radical change in attitude to correct it and invariably made it down.

Needs Defined—The AAF report states that neither GCA nor ILS in their present state are desirable. However, the reasons differ vastly and points to a more easily-utilized GCA. GCA to be satisfactory, according to the report, must be remoted in the tower and requires better selection and training of controllers. Both of these measures are now being taken. ILS will require better pilots and better installations and monitoring.

Gilfillan Bros., Inc., Los Angeles, maker of AAF's GCA sets and which now has Alvarez on its staff as a consultant, is training CAA operators for the three commercial installations and is manufacturing a set that can be remoted to the tower. Bendix Radio Division of Bendix Aviation Corp, which makes Navy's GCA, also produces apparatus that can be remoted to the tower.

The report of the work at Arcata straddles GCA-ILS issue declaring that systems available today are not the final solution, but that they are workable answers for today needs. It recommends that either GCA or ILS be used as the base of a landing system supplemented by high intensity runway and approach lights, and a fog-dispelling system.

Costs Listed—Initial cost of GCA is put at $150,000, or ILS, $35,000. Runway lights would cost $45,000, approach lights $70,000. Installation of high pressure FIDO for fog dispelling, would cost between $150,000 and $200,000, with an operating cost of from $15 to $45 per minute. For between $300,000 to $400,000, the Arcata report declares, a runway could be completely equipped with landing aids, using either ILS or GCA. This is less than the cost of the runway, and far less than airline losses due to cancelled schedules.

The work at Arcata has been directed by United Air Lines under contract with Navy's Bureau of Aeronautics, with AAF sharing in the cost. Direction of the program is controlled by a committee on which are represented CAA, CAB, Air Transport Association and the pilots. The report recommends immediate action in certifying the use of landing aids equipment for installation at major air terminals.

Drinkwater Named Head of Western

Terrell C. Drinkwater, widely known aviation executive, has resigned from American Airlines to take over the presidency of Western Air Lines, Beverly Hills, Calif., Jan. 1.

He will succeed William A. Coulter, who is withdrawing Dec. 31 from active participation in Western's management, although remaining as a member of the board of directors. Coulter plans to dispose of the 250,000 shares he holds in the company.

Drinkwater was elected president, chief executive officer and a director of WAL at a meeting of the company's board last week. He has resigned as vice president of American and vice president and director of its subsidiary, American Overseas Airlines.

First XS-1 Powered Flight Opens Drive to Supersonic Speeds

Goodlin hits 550 mph. in brief burst at full power, reports plane handled well; plan 20 subsonic flights before supersonic attempt.

The first powered flight last week of the rocket-powered Bell XS-1 is perhaps the most important single event in aeronautics in the current year and certainly marks the beginnings of a new era of flight.

Launched from a B-29 at 25,000 ft., the XS-1 with Bell test pilot Chalmers (Slick) Goodlin at the controls, flew for approximately 19 min. before landing. Goodlin conservatively cut in first one, then in succession the other three of the four 1,500 lb. thrust rocket engines, using the four together for only a second. Maximum speed attained was 550 mph.

Goodlin's Report—It was the first flight in this country in a man-carrying aircraft propelled by rockets. Toward the last stages of the war in Europe, the Germans tried a rocket-powered piloted interceptor.

Engineers, bent upon extracting the last possible measure of information from the XS-1 flight, quickly pounced upon one report of pilot Goodlin: that he felt a very slight oscillation, presumably in the ailerons. It has been presumed all along that at high speeds, the XS-1 would run into control difficulties as turbulence caused by transonic flow over the wings would produce an up-and-down movement of the ailerons, despite any corrective action.

Reflecting upon this, some engineers close to the XS-1's development have already decided that the plane will never attain the 1,700 mph. mark with present control surfaces. They are now pondering the practicality and possibility of eliminating aileron controls. These same men caution that Goodlin's report must not be overstressed until more information is available. It might well be that the oscillation he noticed will either disappear at higher speeds, or not become a serious handicap until higher speeds are reached.

Rocket Performance Good—Performance of the rocket engines was a source of satisfaction, particularly the exact measure of control over them that was possible. The plane carried 600 gallons of ethyl alcohol and liquid oxygen as fuel. The liquids flow to the stainless steel combustion chambers from pressurized tanks through several types of control valves operated by pneumatic pressure. Pressure is supplied by either nitrogen or helium. Within the combustion chambers, 24 volt DC igniters can be controlled separately to operate individually. The complete power plant weighs 210 lb. without fuel, is 56 in. long with a diameter of 19 in.

When his fuel was exhausted, Goodlin glided into a landing at a speed that was not disclosed. Landing gear was operated pneumatically rather than electrically or hydraulically.

Observers at the first flight, which was over Muroc Army Air Base, were Col. S. A. Gilkey, Muroc commander, R. M. Stanley, Bell chief engineers and a principal designer of the plane, Roy Shoults, Bell engineering vice-president, and James Voyles, Wright Field project representative. Representatives of the National Advisory Committee for Aeronautics, for whom Bell is carrying out acceptance tests, telemetered the test flight.

Plan 20 Flights—Next step is up to pilot Goodlin, that is, the altitude and speed at which he wants to fly. NACA's requirement is satisfactory response to the controls at a speed of Mach number .8 (about 609 mph.), an 8G (eight times the force of gravity) pullout at an indicated airspeed of 500 mph., an 8G pullout at minimum speed, and takeoff and climb to 35,000 ft. under its own power.

In all, about 20 preliminary flights are scheduled before the full 6,000 thrust pounds of power will be cut in at once for an attempt to breach the sonic barrier, possibly next summer. Before much higher than last week's speed can be reached, however, experience has already shown that a new windshield of special glass will have to be installed. Friction of the air passing over the surface at high speeds builds up such heat that present glass would melt.

Bell, AAF and NACA have already reams of wind tunnel data on the XS-1, but until last week's flight it was all theoretical. All three emphasize the extreme clinical nature of the XS-1 tests. It may never attain supersonic speed, yet still be an outstanding success by being able to furnish data otherwise unobtainable.

The XS-1 that made the historic flight at Muroc was number two of a series of three. Number one has been glide-tested at Orlando, Fla., and number three is expected to be completed in 6 months.

ROCKET CHASER:

This first-published photograph shows a specially-designed two-place Bell P-63 which will carry a photographer in attempts to photograph high-speed flights of the rocket-powered Bell XS-1 research airplane. Now at Muroc Flight Test Base on the Mojave Desert, the plane originally was modified for high altitude testing of a variety of airfoils. The cameraman will ride in the rear cockpit, in space made available by removal of the plane's auxiliary supercharger. The plane is equipped with an Allison V-1710-93 engine. (Schmidt photo)

Airlines Are Facing Charge for Airways

Government to press for levy from scheduled carriers to pay partial cost of airways operation.

The Air Transport Association, presently striving to trim its budget for the next six months by organizational and travel curtailments, is confronted with a new airline financial problem in a federal proposal that its member carriers be called on to help pay the cost of air navigation facilities.

This often-discussed suggestion reached its most concrete form at this month's meeting of ATA's membership, where it was outlined by top talent from Government air agencies, including Chairman James M. Landis of CAB, Administrator T. P. Wright of CAA, Assistant Secretary of Commerce for Air William A. M. Burden, and Burden's assistant, George Burgess.

The membership meeting followed a session of the Association's board of directors at which the trend towards budget reduction was evident in discontinuance of ATA's Labor Relations Department, agreement to hold fewer committee meetings, and a decision to pass the budget along to pres. Emory S. Land for determination of what further cuts could be made.

▸**Budget Cuts**—The budget for the first half of next year runs between $450,000 and $500,000 (AVIATION NEWS, Dec. 2), exclusive of approximately $275,000 for the important Air Navigation-Traffic Control Division. Elimination of the Labor Relations Department, whose work will be taken over by the airlines negotiating conference, is expected to save about $25,000 a year.

The airways' "pay-your-way" proposal has been under study at ATA for some time, since it involves questions of means of payment and collection of charges and, particularly, the ability of the airlines to pay such charges.

The policy of levying part of the costs against the airline users is not challenged, but students of the problem feel that the airlines cannot stand financially the burden which would be imposed by full allocation of their share of the annual airways operation cost. Even a token payment, would be a hardship unless load factors improve and operating costs discontinue their upward trend—an unlikely prospect in view of the carriers' expansion programs.

▸**Want Deferment**—Right now costs are rising, load factors are dropping, and the scheduled airline industry is facing a period of competition with nonscheduled and charter operators that is bound to bring pressure for lower rates. Feeling among the airlines is that such payments cannot possibly begin before the summer of 1948.

Either of two methods of collecting the proposed user charges is seen as the more likely. One of these is through gasoline taxes, the other through gross revenue tax. Considerable opinion favors the latter.

The gas tax method is criticized for the possibility that it might become rigid and hard to adjust downward, with a tendency towards acceptance as a contribution to general revenues instead of payment for a special service. CAB, it is noted, has proposed that the taxation of aviation fuel be left exclusively to the federal Government, with taxation of highway motor fuel a state province. If this step is taken, the airlines probably will look more kindly on gasoline taxes as a method of collecting user charges.

Right now it is felt that the advantage would lie with a limited gross revenue tax, which would vary with traffic volume and make it easier to maintain identity of the payments as a user charge.

▸**Pay Rate Computed**—Analysis has shown that from the standpoint of the airlines' ability to pay, the maximum amount they could stand in their present status would be the equivalent of ½ to ¾ of a cent per gallon of gasoline depending on load factors.

The membership meeting elected as directors C. R. Smith, American; T. E. Braniff, Braniff; C. Bedell Monro, PCA; C. E. Woolman, Delta; E. V. Rickenbacker, Eastern; Juan Trippe, Pan American; T. B. Wilson, TWA; W. A. Patterson, United, and Joseph Garside, Wiggins.

The new board reelected Land as president.

AVIATION CALENDAR

Dec. 10—International Air Transport Association North Atlantic Traffic Conference, New York.

Dec. 12-15—International Aviation Celebration, El Paso, Texas.

Dec. 16-18—Aviation Distributors and Manufacturers Association Annual Meeting, Edgewater Beach Hotel, Chicago, Ill.

Dec. 17—Anniversary Dinner, Aero Club, Hotel Statler, Washington, D. C.

Dec. 17—Wilbur Wright Memorial Lecture—Dr. Theodore Von Karman, Hotel Statler, Washington, D. C.

Dec. 17—Helicopter Council of AIA, Hotel Statler, Washington, D. C.

Jan. 6-10—Society of Automotive Engineers Annual meeting, Book Cadillac Hotel, Detroit.

Jan. 6-16—Aviation of Tomorrow Exhibit, Miami, Fla.

Jan. 10-11-12—All American Air Maneuvers, Miami, Fla.

Jan. 14—IATA Australian Traffic conference.

Jan. 27-30—IAS Annual Meeting, New York.

Feb. 1-8—New York Aviation Show, Grand Central Palace, New York.

Feb. 8-9—Women's Aviation Convention, San Antonio, Tex.

Maintenance Awards

Three airlines and one contract cargo carrier received the 1946 Aviation-Air Transport Magazines' Maintenance awards at ceremonies held in Ithaca, Kansas City and Burbank, Calif.

The citation for maintenance employees of lines operating more than 10,000,000 revenue plane miles per year was presented in Kansas City to Trans World Airlines. Winner among scheduled lines operating up to 10,000,000 yearly revenue plane miles was Western Air Lines, whose employees received their citation in Burbank, Calif.

Robinson Airlines, operating between New York City, Ithaca, Binghamton, Buffalo and Albany, received the award for regional carriers, the first time such operators have been included. Also presented for the first time was an award to contract carriers. Slick Airways, Inc., largest of the country's contract cargo carriers, won the initial award for this category.

Tower Service Cut

CAA is discontinuing operation of 57 aeronautical communications stations and four control towers, and reducing from 24 to 16 hours the operating time at six others.

An appropriation was granted CAA for the current fiscal year for operation of 105 control towers, but it did not cover usual raises-in-grade for employees so that actually the funds are not sufficient to defray expenses for all the towers. Ones being discontinued are at Bangor, Me., Alice, Tex., Red Bluff, Calif., and Winslow, Arizona.

Daily operation of towers will be reduced to 16 hours at Abilene, Austin, Brownsville, Big Springs and Corpus Christi, Texas, and Little Rock, Ark.

Republic Gets Order For 500 Thunderjets

With one of the largest military orders given since the end of the war—a $25,000,000 AAF contract for about 500 P-84 Thunderjets—Republic Aviation Corp. is engaged in trying to surmount shortages of both materials and working capital.

By last week the latter situation seemed to be clearing with negotiations being completed for a bank loan of slightly less than $10,000,000. The lack of materials is a different matter with some instruments being so slow in delivery that they are being flown into the Farmingdale plant by P-47s.

In the face of the threatened rail embargo because of the coal strike, Republic had furloughed approximately one-half of its 8,200 employees before the miners went back to work. These are expected to be back to work by the end of the week. But the expectation that materials will continue short for some time has forced the company to drop temporarily plans to expand its working force by 1,100.

Tooling for line production of the P-84 has been completed and there are a number of planes now on the line. But Republic has been living on a hand-to-mouth basis as far as materials are concerned and production is down about 50 percent.

The new AAF contract brings Republic's total backlog to more than $100,000,000, of which $69,000,000 is military. In addition to the P-84 and research and development work, Republic is at work on the second XF-12, four-engine, long-range reconnaissance plane, and a new restricted jet XP-91.

C-54 Sale

Sale of 31 C-54D and one C-54B, as well as other in-demand surplus aircraft, will begin Jan. 6, War Assets Administration discloses. The C-54s are mainly those that were released by the Army to be allocated to airlines last summer at the time of the grounding of the Constellations. Eastern was the only airline to accept a plane and the others until recently were tied up by an injunction suit, brought by veterans, which has now been dropped.

Of the 38 planes involved, six have been bought by the Government. The balance will be placed on sale at a fixed-price of $100,000, the first 15 days being reserved for veterans and other priority holders. The C-54B, which was not involved in the court case, will sell for $90,000.

All the planes are located at Bush Field, Augusta, Ga., where there are also 30 liaison planes, one C-47 and ten R4Ds (Navy version of C-47). There are three more R4Ds at Ontario, Calif.

Dr. Sorenson Awarded Brewer Education Trophy

Dr. F. E. Sorenson, associate professor of education at the University of Nebraska, has been awarded the Frank G. Brewer trophy for the "most outstanding contribution to the development of air youth in the field of education and training."

The award, made annually by the National Aeronautic Association, is designed to promote aviation education, particularly in high schools. Dr. Sorenson is coordinator of the Nebraska aviation education program and chairmanned a committee which prepared a high school textbook, "Elements of Pre-Flight Aeronautics." He collaborated in the preparation of another elementary school aviation textbook.

Empire Downs Beeches

Empire Airlines, New York intrastate carrier, has grounded its fleet of five Beech D-18Cs as a precautionary measure following bearing failures in two 525 hp. Continental R9A engines utilized by the nine-place planes.

Dean Alfange, Empire's board chairman, said the D-18Cs will remain grounded until CAA has made an inspection of the engines. The carrier has been flying 15 trips daily in and out of LaGuardia Field to upstate communities.

FRANCE'S ORANGE SQUASH:

Displayed at the air show in Paris was this experimental jet-propelled helicopter, SO 1100, which because of its bright orange color and dumpy shape has been dubbed the Orange Squash. The three-bladed rotor with nozzles at the tips is driven at 300 rpm. by the exhaust from a 170-hp. engine. This engine also powers a three-bladed fixed-pitch pusher propeller mounted behind the cabin and enclosed in a guard ring. This novel rotorcraft had not yet flown at the time of the show. (McGraw-Hill World News photo)

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Nonscheduled Lines Eye Winter Trade

Passenger-carrying operators face tough fight for tourist business this season.

By CHARLES L. ADAMS

Efforts of uncertificated airlines to tap this winter's tourist traffic along the East Coast and to the Caribbean in much the same manner as a year ago are headed for rough sledding even though they are now featuring de luxe DC-4s with hostesses instead of C-47s with bucket seats.

Several factors militate against repetition of last year's lush season for the nonscheduled carriers aside from expectations that tourist business will drop somewhat. There are, however, good prospects for all-expense, "packaged" air tours, which include the round-trip flight, hotel accommodations and sightseeing. Now getting its first real popularity test, this type service has not yet run afoul of CAB regulations.

▸ **Scheduled Competition** — Unlike last year, the scheduled airlines now have plenty of equipment to handle all business coming their way. Competition, especially to Caribbean points, will be much stiffer as the result of routes granted by CAB in its Latin American decision six months ago. National Airlines and Chicago & Southern will be operating to Havana, while Pan American and Eastern have new services to San Juan.

Pan American instituted special roundtrip excursion rates between New York and San Juan several months ago, and Eastern will slash its Miami-San Juan fares one-third on Jan. 1. Moreover, there is increased competition from foreign operators such as Linea Aeropostal Venezolana, operating Constellations from New York to Havana and Caracas.

▸ **Orders Hit Operators**—Ten of the 12 show cause orders recently issued by CAB were directed against operators in the New York-Miami-Caribbean service who allegedly were conducting scheduled common carrier activity in violation of the Civil Aeronautics Act. Every indication points to continued close scrutiny of these operations by CAB, which last spring in the Page and Trans-Marine decisions tightened its definition of legitimate nonscheduled service.

In view of the Board's crackdown, many uncertificated lines are now offering their services only through travel agencies which do not mention the name of the carrier in advertising the flights. Some companies, however, are continuing to advertise, giving no mention of times or frequencies.

Included in this group are Peninsular Air Transport (New York - Miami-San Juan - Havana with DC-4s and DC-3s), Trans Caribbean Airways (New York-Miami - Havana with DC-4s), Waterman Airlines (New York-Miami-San Juan with DC-4s), Great Continent Airlines (New York-Miami with DC-3s), Nationwide Air Lines (New York-Miami-Kingston), and Dartmouth Airways (N. Y.-New Hampshire).

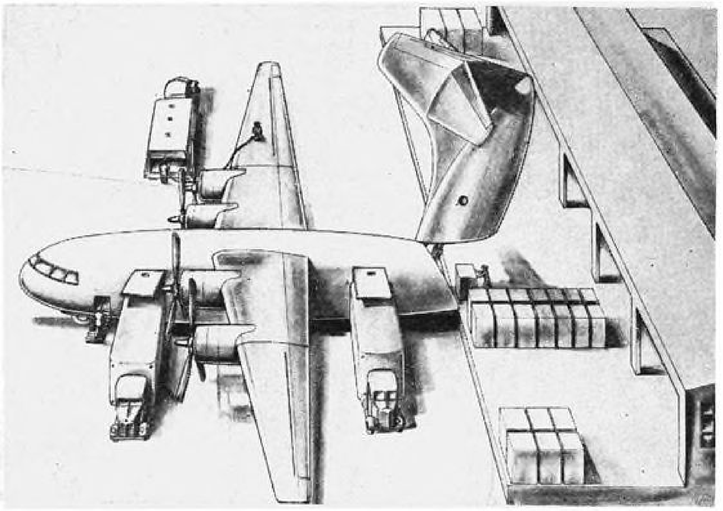
New Cargo Service Started by Mutual

Company using C-47s on intrastate route between New York City and Buffalo.

Initial flights along an intrastate all-cargo route were scheduled last week, with Mutual Aviation, Inc., Tonawanda, N. Y., fixed base operator, using three C-47s in scheduled daily service between New York City and Buffalo.

An applicant in CAB's airfreight case, Mutual is conducting the operation to test new freight handling methods it proposes to use if certificated. The service will also provide a thorough test of cargo potential on short hauls, Buffalo and New York being only 431 rail miles, 370 highway miles and 290 air miles apart.

▸ **Leased C-47s**—Mutual has leased its C-47s from Flamingo Air Service, Inc., New York, for 90 days



AIRFREIGHTERS VIEW MODEL OF CW-32:

American Air Express Corp.'s testimony in CAB's airfreight case was featured by the carrier's display of a model of Curtiss-Wright's proposed new four-engine cargo transport. William G. Shoemaker, AAE vice-president of operations, explained the plane's characteristics. While American Air Express plans to conduct initial operations with DC-3 and DC-4s if certificated, company officials say these planes may be replaced with CW-32s when they become available. In addition to offering a unique loading arrangement, the plane will permit a one-stop coast-to-coast operation at a direct cost of 6.16 cents a ton mile and total cost of about 9.02 cents a ton mile, according to Curtiss-Wright.

and intends to replace them with two surplus C-46s, Joseph L. Homesburger, company president, said at the airfreight hearing. Rates to be charged on the intrastate run will average 19 cents a ton mile. Up to three roundtrips daily are contemplated.

Routes requested by Mutual in its airfreight application include New York to Chicago and St. Louis, Boston to St. Louis, and Philadelphia to Chicago, Cleveland and Buffalo. Service would be provided with Martin 202s. Mutual plans to purchase 12 if granted routes by CAB.

Special Methods—Cargo handling methods conceived by Mutual are especially designed for shipping small lots. Complete freight terminal facilities would be erected by the company at each of the ten cities to be served. Outbound packages would be unloaded from trucks onto a conveyor belt which would carry them to the weighing scale and to the load clerk who would check weights, mark the destination and make up the manifest.

A second conveyor would move the packages to a sorting table where they would be placed in specially-designed lightweight cargo containers marked for the various stops on Mutual's routes. While use of the containers would add considerable non-revenue load per plane, Mutual estimates the loss would be balanced by savings in airplane ground time and more efficient labor utilization.

Taking the stand before Mutual, American Air Express Corp., New York, presented its case for cargo routes from New York to San Francisco and Los Angeles. AAE would operate three roundtrips daily coast-to-coast (two express and one local) with four DC-3s and five DC-4s, charging rates of 12 to 25 cents a ton mile.

Economist Testifies — Testifying for the carrier, Dr. Donald S. Watson, economist, estimated that average annual domestic freight traffic between 1947 and 1949 would be 500,000,000 ton miles at a 15-cent rate without taking perishables or parcel post into consideration. AAE hopes to fly 30,413,429 ton miles in its first year.

American Air Express has been operating three DC-3s and for the six months ended Oct. 31 flew 640,000 ton miles for a $4,716 net profit, according to John C. Lambert, president.

CAB Cites Pilot Errors In Trans-Luxury Accident

Faulty execution of an emergency single-engine approach following failure of the left engine in flight probably caused the crash of Trans-Luxury Airlines' DC-3 near Moline, Ill., airport Aug. 21, a CAB accident report states.

Contributing to the mishap was the failure of the pilot to exercise sufficient caution by having a qualified mechanic determine the reasons for oil leakage in the left engine prior to the TLA plane's departure for Omaha from Chicago, the Board said. Evidence indicated that a progressive cylinder crack, the primary stages of which had occurred prior to landing at Chicago, accounted for the oil leakage.

Shortly before the nonscheduled carrier's plane reached Moline, the entire upper part of the cylinder broke loose; the engine failed; and the landing became necessary. Pilot and co-pilot were killed and several passengers were injured when the DC-3 crashed 1,500 ft. beyond the field.

New York Carrier Moves to Florida

Long Island Airlines, which from July 22 to Oct. 15 flew 4,000 passengers between New York City's midtown skyport and three Long Island communities, has shifted operations, personnel and equipment to Florida for the winter.

The company's four Grumman Widgeons will fly ten roundtrips daily between Miami and Bimini, Bahama Islands, furnishing the transportation for an all-expense tour. LIA will pick up passengers at their Miami hotels, take them to Bimini—where they will have eight hours of deep sea fishing and overnight accommodations — and return them to Miami for $69.75.

In addition to the fishing tours, LIA will offer complete amphibious charter service out of Miami, according to Royce Grimm, president. F. W. Wiggin, formerly with the Contract Air Carriers Association, Miami, has been named assistant to the president and will handle public relations.

Coincident with the start of Long Island Airlines' new operations, another Florida service provided by Skyline, Inc., Miami, was to be inaugurated. A war veteran organization which has flown extensively on the New York-Miami-Caribbean run, Skyline will offer daily intrastate flights between Jacksonville, St. Augustine, Gainesville, Ocala, Orlando, Lakeland, Tampa and Miami with DC-3s.

HELICOPTER SERVICE COMES TO ARIZONA:

Arizona Helicopter Service, subsidiary of Southern Arizona Airlines, Inc., Tucson, began operations Nov. 29 with a series of demonstration flights at Phoenix. At left, the Bell Model 47 with Yale McFate, member of the Arizona Corporation Commission, as a passenger prepares to land in front of the Arizona State Building. Second photo shows Gov. Sidney P. Osborn (left) with Edwin J. Montgomery, president of the helicopter line, after the state executive was flown from his home in a Phoenix residential district to the capitol grounds. AHS holds an Arizona Corporation Commission certificate granting exclusive rights to conduct commercial helicopter operations in the state.

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Current Investment Surveys Highlight Airline Imponderables

Group of analyses of carriers' present earning position anticipates poor period in immediate future; write-off of equipment cuts profits.

A number of significant analyses currently highlight the many imponderables facing the airlines and receiving attention in financial circles.

Writing in the current issue of BARRON'S, Selig Altschul presents an exhaustive analysis entitled "Higher Rate Structure Essential For Airlines."

The conclusion reached is that the air carriers may receive remedial action through higher mail compensation, or higher passenger fares, or a combination of the two. Reduced operating expenses will also prove beneficial. The airlines are experiencing a tightening squeeze on profit margins. The price of what they sell—passengers, mail and cargo services—has been coming down while the cost of doing business has been rising steadily.

The article further declares that narrowing profit margins were in evidence last year but high load factors disguised the basic difficulties ahead. Further, much of the higher operating costs were attributed to the heavy development expenses peculiar to the extensive expansion programs undertaken. Expansion programs have largely been completed. Now, in fact, retrenchment is the order of the day.

▸**Basic Ailments Remain**—Current earnings, nevertheless, have failed to bounce back as anticipated. Instead, declining load factors have accentuated the difficulty. It is pointed out that the basic ailments of the industry will remain until such times as the rate structure is brought into closer alignment with operating costs.

Despite the clamor in certain quarters for increased passenger fares, the author does not see this development with the planes now flying the airways. An increase in the passenger fare structure is most likely when new equipment is placed in service. The DC-6 and "Rainbow," for example, are expected to be higher-fare planes while the present rates with a relatively slower type of service may be maintained with the DC-3 and DC-4 equipment.

Writing in the "Analysts Journal," published in July, 1946, the author stated his belief that a number of airlines would petition the CAB for relief and seek higher mail compensation. Within recent weeks, Chicago & Southern, Braniff and Continental have so applied to the Board with the indications of more carriers to follow suit.

▸**Growing-Pain Period**—Standard & Poor's Corp. in its current "Outlook" again reviews the position of the airlines. This analysis concludes that the industry is now experiencing a period of growing pains accentuated by the airport bottleneck, and a period of poor earnings appears to lie immediately ahead. The investment advisory service now takes the position that "While prospects have been discounted to a considerable extent by the declines in prices of airline shares in recent months, the drab immediate outlook weakens the relative market position of the group. Buy ratings have been removed from the leading stocks, and a conservative attitude should be taken toward the less strongly situated equities."

It is interesting to contrast this current conclusion with what Standard & Poor's declared in July, 1946 (AVIATION NEWS, August 12, 1946). At that time, the service declared that the airlines have turned the earnings corner and sharp traffic gains and large earnings are considered likely for the second half. At that date, the service concluded that ". . . current prices of the group, far below the 1945 highs, fully reflect the unfavorable earnings developments of earlier this year, but have not yet begun to discount the brighter prospects in view."

Acceleration of an upward earnings trend was anticipated by the expected scheduling of additional four-engine equipment and by high passenger load factors. This circumstance never materialized.

▸**Early Optimism**—The Argus Research Corp. in a report dated July 31, 1946, had this to say about the airlines: "In our opinion, the poor earnings reported by the airlines during this expansion period must be placed in their proper perspective. . . . It is our feeling that the worst phase of huge expenditures has now passed and that, from here on, the additional four-engine equipment placed into service will produce greater profits for all the individual airlines. Our projections indicate that net income in the second half of 1946 will establish record levels, and these earnings should continue until at least late in 1947. Since the turn in airline earnings has just begun we feel a more optimistic attitude toward the industry is warranted, and market positions withdrawn at the beginning of the transition period may now be re-established."

This was in July. Since that time no subsequent analysis and recommendations on the airlines have been available from Argus.

▸**Constructive View** — Merrill, Lynch, Pierce, Fenner & Beane in their current "Investor's Reader" continue to take a constructive view of the airline picture. This large New York Stock Exchange firm has generally been consistently optimistic about the airlines. In its current analysis it declares that "the worst may be over."

To keep ahead of the times, most airlines are writing off equipment as fast as they can. For example, United's fleet of 22 DC-4s (at $460,000 each) are written off at the rate of about $2,500,000 annually. This cuts big chunks out of present profits, but once the planes are written off, future earnings will show the benefits.

The analysis reports that the difficulties encountered may have a good side, if for no other reason than they taught a big lesson and may serve as the first real test of airline management. Merrill, Lynch cheerfully concludes: "Thus last week it seemed pretty clear that much of the trouble is a prelude to the time when the airlines will again rev up their engines for another high and handsome take-off."

European Lightplanes Follow Principal American Trends

Paris air show features Fokker two- and four-place pushers and new line of French personal planes; prices higher than in U. S.

(McGraw-Hill World News)

Paris—A study of European personal planes exhibited at the recent Paris International Aeronautical Exhibition, indicates a number of interesting trends, which in the main parallel similar trends in personal aircraft development on this side of the Atlantic.

▸ **Tricycle landing gears** are fast replacing the old style tail-down landing gears.

▸ **All-metal construction** predominates, although some manufacturers still are using plywood, and fabric-covering construction.

▸ **Twin-tailboom pusher** construction was represented by two planes, and a 2-place flying wing experimental plane was shown.

Majority of planes shown were three- and four-place conventional low-wing monoplanes. Prices were considerably higher than those asked for American-built planes of similar type and performance.

One of the most interesting planes past the prototype stage, the four-place Courlis, made by Societe D'Etudes et de Constructions Aero-Navales, is a high-wing pusher of metal construction with twin tailbooms and fixed tricycle landing gear. Powered by a 200-hp. Mathis engine (alternate 240-hp. Renault engine), it cruises at 143 mph. with a range of 620 miles fully loaded. Two-way radio and soundproofed cabin, easily entered through a large door, are other features. Landing speed is 50 mph.

Gross weight is 3,010 lb. and useful load 750 lb. Three of the planes have been finished, seven more are in construction with 300 scheduled for production beginning in May. Orders have been taken for the plane in France, Britain, Belgium and Egypt. Price is $12,500.

The Sud-Est company showed its small experimental flying wing, SE 2100, an all-metal, two-place tricycle-gear, pusher, powered by a 140 hp. Renault engine. It cruises at 123 mph. with 140 mph. top speed, 56 mph. landing speed, 310 mile range and 16,000 ft. ceiling. Wingspan is 32 ft. Weight empty is 1,140 lb., gross weight 1,760 lb.

Sud-Est also is making a three-place low-wing monoplane, SE-2310 with a 140-hp. Renault engine. Top speed is 137 mph., cruising speed 118 mph., range 559 miles, and wingspan 33 ft. 6 in.

The Nord company (a nationalized industry like the Sud-Est and Centre companies), showed its two all-metal low-wing monoplanes, the three-place Norecrin and the four-place Noralpha. The company is now tooling to make 1,500 Norecrins (quite similar to the SE-2310, except it is lighter and faster.) At a price of $8,400, the company is taking orders for delivery in March or April, has sold a number to French, North African and South American buyers. The Noralpha, already in production, sells for $21,000 to $25,000 and is used by several French air-taxi services, the Swiss TARSA company and others.

Norecrin has top speed of 164 mph., cruising speed of 143 mph., landing speed of 45-55 mph., and 560 mile range. It has mechanically retractable tricycle landing gear, two seats forward and one in the rear. Noralpha is larger, has hydraulic-operated landing gear, and variable-pitch propeller. Powered with a 240-hp. Renault engine, it has top speed of 190 mph., cruising speed of 170 mph., landing speed of 62 mph., 750 mile range, 37 ft. wingspan. Gross weight, 3,640 lb.

The Centre company showed a four-place high-wing tricycle-gear prototype, the Chardonneret, scheduled to be produced at the rate of 25 a month beginning in February, and to sell for $7,500. The fabric-covered plane has 36 ft. wingspan, 120 mph. cruising speed, and 500 mile range. Power plant is the 140-hp. Renault.

Max Holste, another privately-owned company, exhibited his 52-E two-place plane which American airplane spotters might mistake for the Ercoupe. It is a low-wing tricycle-gear all-metal plane with twin rudders, powered with a 150 hp. Potez engine. Top speed is 140 mph., cruising speed 130 mph., takeoff speed 34 mph., and range 340 miles. Wingspan is 32 ft. Weight empty is 1,400 lb. and gross weight 1,900 lb.

Among the most advanced planes shown, as far as customer appeal is concerned was the four-place Fokker Promoter ($11,600 at Amsterdam) of plywood construction except for nose, engine panels, tailbooms and two vertical fins, which are of metal. A retractable step gives easy access. The 190-hp. Lycoming power plant is a pusher installation. The fuselage nose has a door opening to a baggage compartment, which also may be used to accommodate

Four-place Courlis

Two-place SE 2100

a stretcher for an ambulance patient. Promoter has top speed of 133 mph., 120 mph. crusing speed, 540 mile range, weight empty of 2,050 lb. and gross weight of 3,140 lb. Fokker is also developing a two-place pusher tailboom plane along similar lines, called the Partner.

Morane Saulnier showed the four-place Model 571 low-wing monoplane, which sells for $14,000 and features folding wings and a sliding cockpit enclosure of transparent plastic.

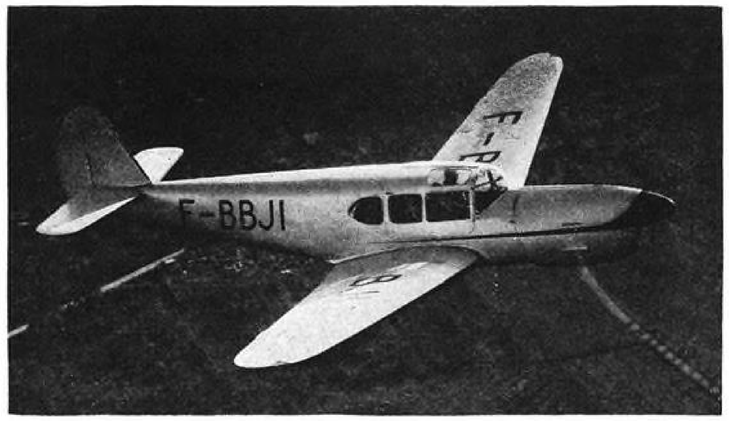
Roche Aviation showed first models of the two-place T-35 and three-place T-39 of similar construction. Fifteen of the T-35s are under construction, priced at $8,400, and ten of the three-place plane are being built at a price of $11,000. Power plants are a 140-hp. Renault and a 175-hp. Mathis engine, respectively. Both planes are of plywood, have fixed conventional landing gear.

Other planes:

Four-place wooden S-20 of the Societe Industrielle pour l'Aeronautique, (SIPA) powered with 145-hp. Gipsy Major engine. Top speed 168 mph., cruising speed 150 mph., range 620 miles, span 34 ft. Gross weight, 2,200 lb.

Four Czechoslovakian (nationalized factory) planes: The three- to four-place low-wing Zlin 122 powered by a 94-hp. Zlin Toma 4 engine, with 135 mph. top speed, 119 mph. cruising speed, 620 mile range with three persons, and 750 lb. useful load.

Tipsey Belfair, two-place low-wing product of Avions Tipsey, Belgian subsidiary of the British Fairey Aviation Co., is first plane made in Belgium since the close of World War II. Plane is powered with 62 hp. Walter Mikron engine, cruises at 100 mph.



Four-place Nord 1101

Three-place Noreerin

Two-place Holste 52-E

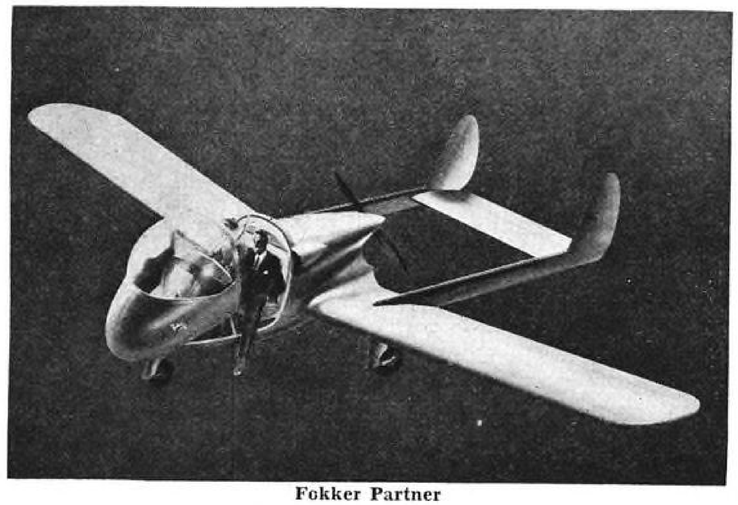
Three-place SE 2310

Bendix Buys Towson Plant for Research

The radio division of Bendix Aviation Corp. has purchased from the Defense Plant Corp. the main plant at Towson, Md. which the company occupied during the war. The building, with 215,000 sq. ft. of floor space, and miscellaneous equipment, cost a reported $1,-700,000.

This brings Bendix investment at Towson to more than $2,200,000, and includes, in addition to manufacturing facilities, a research and development laboratory and machine shop.

Fokker Promoter



Fokker Partner

Zlin Model 122

Morane-Saulnier 571

Four-place Chardonneret

New Products

Rotol Rpm. Regulator

An automatic synchronizer developed by Rotol Ltd., Gloucester, England, which governs engine rpm. is said to eliminate the "surging" characteristics of multi-engined transports.

The Rotol system is based on the selection of a "master" engine, the remaining engines being subject to continued automatic correction. This is accomplished by fitting an alternator and differential motor to each engine. Rotors of the differential or corrector motors are connected through worm gears and crank pins to the engine's constant speed units. One winding of the corrector motor is electrically connected to the subject engine's own alternator and the other to the alternator of the master engine. The rotor of the corrector motor will, therefore, in each case rotate at a speed proportional to difference in speed between master alternator and subject engine alternator. Through its connection with the constant speed control, rotor will then make necessary corrections to governing unit.

In addition, any engine can be selected as the master so that in the event of its failure the remaining engines can continue to function by selection of a new one.

Rolaire Map Case

A compact case for easy handling in flight has been developed by Rolaire Engineering Products, Los Angeles 5, Calif., called the Rolaire Map Case. A simple turn of a knob unrolls the map of entire route during a cross-country flight.

Measuring 12½ x 10 x 1½ in. and weighing 37 oz., case takes 22 ft. of any kind of air maps. The plastic face is specially treated for pencil notations. A "Navtab" at end of each shows distances and magnetic courses for each leg between principal cities and airports, already computed and ready to fly, saving hours of plotting.

One roll will hold 4,000 miles of regional and route charts; 2,000 miles of sectional maps; 8,000 miles of direction finding charts, or any combination of these plus a section of planning chart.

Now ready for delivery, Rolaire Map Cases will be sold through airports and aviation supply dealers. Retail price, $14.95; with rheostat internal light, $17.95.

THE LABOR CRISIS

..."Absolute power corrupts absolutely"

THE NEW CONGRESS is going to overhaul the federal laws governing organized labor. If the election returns left any doubt about that, John L. Lewis has removed it by torturing the nation with its second soft coal strike in six months.

If, however, the overhauling is to get at the roots of our labor troubles, it must go further and deeper than most of the proposals would go. Indeed, it must not stop until it has dealt decisively with that most basic cause of devastating trouble—the entrenched monopolistic power of enormous international unions, now concentrated in a handful of union leaders. Industry-wide collective bargaining is one outgrowth of this power.

"Power tends to corrupt, and absolute power corrupts absolutely." That great truth, phrased by the historian Acton, is as true of labor leaders as it is of business leaders, princes or potentates. It is also true that John L. Lewis and some of his fellow labor leaders now wield what approaches absolute power in their respective domains. Failure to recognize these facts and act on them can make a tragic mockery of the present opportunity to restore good sense and good order to our labor relations and our national life.

To realize this opportunity the labor monopoly must be made a major target.

In the minds of many people, particularly in the business community, the root cause of our labor troubles is to be found in the National Labor Relations Act, commonly called the Wagner Act. They feel that if they could get rid of the one-sided handling of a number of key labor problems provided by that act and its administrators, we would have the legislative part of the problem of creating good labor relations pretty well solved.

To be sure, there is occasion, long overdue, to balance up the lopsided treatment of labor relations by the Wagner Act and those who apply it. It has been so interpreted and applied as to deny free speech to employers. On occasion it has extended the special protection of the federal government to workers striking to force employers to break the law. It has done the same for workers striking to force the federal government to change its policy the way the strikers want it changed.

The Wagner Act has required employers to bargain with unions, but imposed no companion obligation upon unions to bargain with employers. It has given protection to workers who have broken their agreement by striking. It has been applied so as to break orderly lines of management by encouraging and giving special protection to union organization of foremen who, to do their work efficiently, must represent management. Abuses such as these should be cleaned up, and soon.

Monopoly is the Target

But if perfection were attained in eliminating all of the abuses stemming from the Wagner Act, numerous and grievous as they are, the basic problem of establishing the legislative foundations of sane and safe labor relations in the United States would by no means be solved. John L. Lewis and his fellow labor dictators would, no doubt, be annoyed, but their power would not be seriously impaired. *That power is derived from monopoly control of labor.* Just as in the case with any other kind of monopoly power, it will only be made subservient to the public interest by attacking it at the source and smashing it.

The way to do that is to apply the anti-monopoly laws to monopolies in the field of labor just as they are applied to business and industrial monopolies. At the same time more vitality should be pumped into these laws all along the line.

When our basic anti-monopoly law, the Sherman Antitrust Act, was passed in 1890, it was designed to apply to economic monopolies of all kinds, and was so held by the courts. Organized labor sought exemption from this law, largely on the ground that its bargaining power was weak, as compared with that of industrial corporations. In recent decisions, a majority of the United States Supreme Court justices have held that, when combined with the Clayton Act of 1914, the Norris-La Guardia Act of 1932 gives organized labor virtually complete exemption from the antitrust laws.

In the meantime, the relative weakness in bargaining power which was made the occasion for exempting organized labor from the antitrust laws has become a myth. In soft coal, John L. Lewis is the monopolist. Through his United Mine Workers he controls about 90% of the miners. No one of the thousand or more highly competitive companies engaged in soft coal mining controls more than about 5% of the output.

In steel the monopoly control is that of Philip Murray's United Steel Workers whose organization represents well over 80% of the production workers in that industry. United States Steel, the corporate "giant," controls only about one-third of the steel making capacity. In automobiles the United Automobile Workers represent about 90% of the production workers. A year ago the union's officers flaunted their monopoly power by announcing plans to pick off one automobile manufacturer after another by a series of centrally controlled strikes.

Industry-Wide Bargaining

Confronted by the rise of government-fostered monopoly power in the hands of organized labor, employers in some industries have sought to match it by joining together for collective bargaining on a more or less industry-wide basis. In other industries, notably steel, the federal government, through the War Labor Board, took the lead in forcing a pattern of industry-wide bargaining. Bedevilled by a myriad of cases, the Board thus sought to settle scores of them in the steel industry by one action.

It is easy to understand how an employer, confronted by an industry-wide monopoly of labor, would be tempted to join with his fellow employers in an industry-wide bargaining group. In that way he might see a chance to establish something like equality in bargaining power.

However, if the employers' bargaining group were as effective as the union in creating a monopoly set-up, it would merely confront one monopoly with another. That, in turn, would heighten the chances of having either a devastating head-on collision as a result of failure to agree, or having the two monopolies reach an agreement at the expense of the consuming public.

Actually, however, the chances that employers can create an industry-wide bargaining group as tight as that created on the side of labor by union organization are virtually zero. For if a group of employers were to agree to shut down in unison or take other united steps to balance the bargaining power created by the threat of a monopolistic union to strike, they would unquestionably find themselves on the receiving end of an indictment for violation of the federal antitrust laws.

To Break the Monopoly

Thus, both from the point of view of the public and the point of view of the employer, industry-wide bargaining is no effective offset to the monopoly power created by industry-wide unions.

The only way to cope with this monopoly power is to subject it to the anti-monopoly laws in the same way business and industrial management are subjected. In the process industry-wide labor monopolies would be cut down to safe size, possibly by limiting the percentage of workers in any industry who are permitted to belong to a single labor organization.

Also application of anti-monopoly laws would clean out local pockets of labor monopoly which block the way of industrial progress. As matters stand, the freedom of unions from control by the antitrust laws permits organized workers in one city to refuse to install equipment shipped in from another city, thus establishing private tariff walls. It also permits organized workers to refuse to install or work on materials made by other workers whose union affiliation, or lack of it, they do not like.

If the anti-monopoly laws were applied to organized labor, boycotts of this sort would be outlawed. In the aggregate they now take a tremendous toll for no legitimate purpose. But primarily John L. Lewis and a handful of his fellow labor dictators might be cut down to a size that can be safely accommodated by the American democracy. If that is not done, the last great opportunity to give industrial and political democracy a chance to work, in its last great stronghold, will be lost. From such a tragic turn of events no one would lose more than the American worker.

President McGraw-Hill Publishing Company, Inc.

THIS IS THE 53RD OF A SERIES

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Court to Weigh Rival Plans For Taylorcraft Reorganization

Lightplane manufacturer will be liquidated unless acceptable scheme is submitted at stockholders and creditors meeting, referee says.

By ALEXANDER McSURELY

Plans for reorganization of Taylorcraft Aviation Corp., Alliance, Ohio, were to be weighed in federal court in Cleveland today (Dec. 16,) against advisability of liquidating the company's assets.

Carl D. Friebolin, special referee of Federal District Court, said last week the company "undoubtedly would be liquidated," unless an acceptable reorganization plan was submitted at the Dec. 16 meeting of stockholders and creditors he had called. He described plant maintenance as "very expensive."

▸ **Plan Proposed**—Main chance for survival of the one-time third largest lightplane producer, lay in a plan which was being studied by a committee of Taylorcraft dealers and distributors at Kansas City last weekend.

The group, headed by John T. Mann, Los Angeles distributor, and representing a considerable portion of the 900-odd Taylorcraft dealers and distributors, had met previously in Alliance. Following that meeting they instructed Maurice Feldman, New York attorney, to draft a reorganization proposal, for further study in a closed session beginning last Friday at Kansas City.

The company in its petition for reorganization under Section 10 of the Federal Bankruptcy Act, listed assets of $4,982,959 (book value) and liabilities of $2,807,122. The company is now the defendant of a $1,000,000 damage suit, filed by C. G. Taylor, original head of the company; owes nearly $600,000 to the Government, and $34,000 to employees in back pay.

▸ **Factors Considered**—Factors expected to be considered by the dealers' reorganization committee included: possibilities of obtaining outside capital to put the company back on its feet; advisability of reentering the personal plane market competition during a period of slumped sales; satisfying requirements of other creditors and stockholders; planning for selection of new management, and others.

A second plan, favored by Nash Russ, Taylorcraft president, is also expected to be presented. Russ had asked the court to be continued in the management of the company when the petition to reorganize was filed. The court assigned Friebolin and H. Austin Hauxhorst, disinterested trustee, to study the company's operation and report back. They recently filed a report stating that "no reorganization seems possible." Details of the Russ plan have not been announced.

The dealers' reorganization plan, reportedly called for a cooperative organization financed by the dealers' resources, to take over the plant and resume operations.

▸ **Alliance Active**—It is understood that business interests in the little town of Alliance are active in efforts to continue the plant's operations since it is one of the largest if not the largest industry there. Company assets in addition to the main Alliance plant which has approximately a quarter-million square feet of floor space, available or under construction, include a smaller sub-assembly plant in Cleveland. At the peak postwar operation the plant employed approximately 1,600 at Alliance and about 500 at Cleveland.

At the time operations ceased the company was manufacturing only one basic model, the two-place 65 hp. BC12D, offered in several price ranges as standard, deluxe and custom models, variations being mainly in equipment. A four-place 150 hp. Taylorcraft Model 15 had received its CAA approval, and tooling for it was underway. Taylorcraft's first metal-fuselage plane, the two-place 100 hp. Model 16, was also under development.

GRASSHOPPERS:

First postwar reunion of the original Grasshopper Pilots, who demonstrated the utility of the civilian lightplane for military liaison use, and paved the way for the outstanding record of Stinsons, Pipers, Aeroncas and Taylorcrafts in World War II brought this group together in Washington. Left to right: front row, Hans Groenhoff, aerial photographer; John E. P. Morgan, manager, Aircraft Industries Association, who arranged the original tests; Tom Hall Miller, William D. Strohmeier, Henry Wann, Howard Piper, Henry Kubick, and Lee H. Smith, Aeronca Aircraft executive vice-president; second row, T. V. Weld, Piper Aircraft vice-president; T. I. Case, H. S. Chadwick, Tony Piper, W. T. Piper, Sr., Piper Aircraft president; Charles Helbert and J W. Miller.

Plane, Auto Costs Compared on Trip

Convincing sales argument for executive air transportation by small company planes is offered in a comparative record compiled by Mallard Air Service, New York, North American Navion distributor in the Northeast, on two trips by auto and by Navion, over their sales territory.

Direct operating cost for the Navion, including gas, oil and storage, was $33.70 for 816 miles, in three days, in which 16 business contacts were made. Direct cost of the auto trip of 939 miles was $33.53 for 939 miles, covered in 11 days, during which 23 business contacts were made. Total traveling time was 6 hours 50 minutes by plane, as against 21 hours, 25 minutes by car.

Real economy of the plane trip, of course, lies in the eliminating non-productive travel time between stops and savings in board and lodging bills. The Mallard analysis showed a salary of $13 a day for each of its two representatives and $11.50 for the pilot, plus $10 per diem per man for board and lodging. On this basis, the plane trip cost $187.50 while the auto trip cost $496, showing a saving of more than $300, for the plane trip. Even after higher indirect costs of the airplane's depreciation, insurance and maintenance are subtracted, a substantial saving still remains.

Longest flight was 174 miles, and shortest two miles, but flights averaged about 60 miles, in length. Mallard had an advantage over many businessses, in that the dealers, whom its representatives were visiting were usually located at the airports, thereby eliminating the serious problem of transportation from airport to business district, which a non-aviation company, using a plane, would have to solve.

The Navion trip began at New York, included stops at Elmira, Buffalo, Rochester, Syracuse, Utica, Albany, Gloversville, Springfield, West Springfield, Hartford, Bridgeport, and back to New York. The auto trip included one other stop, Niagara Falls, but missed six of the cities visited in the plane trip.

WAA Rushes Action On Surplus Fields

Interim operating permits granted for 58 additional airports; problems of return to owners still unsolved.

Stung by criticism of its delay in turning over to state and local governments surplus airports, as detailed in an AVIATION NEWS editorial Nov. 25, War Assets Administration has announced the issuance of 58 additional interim operating permits.

▸ **376 Interim Permits**—These permits make possible the use of the fields for landings and takeoffs while their final disposition is being decided. WAA says it has now issued 376 interim authorizations, as against somewhat more than double that number of airports originally declared surplus.

WAA maintains the delay in turning back to the owners fields taken over by the Army and Navy during the war is due largely to the state and local governments. The point at issue is that practically all of the fields were either greatly enlarged or greatly improved in various other ways.

Under the airport disposal regulations, the group taking over a surplus field must maintain it. States and cities getting back airports larger than they gave up just can't see where the money is coming from to keep up their swollen facility.

▸ **Damage Settlement** — Another factor in the surplus airport situation that is bothering local governments is obtaining from the wartime user settlement for damage to the fields. Return of several airline terminal airports to cities has been delayed because the city and the Army could not agree to a proper renovation settlement.

Other airport developments:

Opening date of mammoth Idlewild Airport that is someday to serve as New York City's main terminal, has again been postponed from next June 1. Chief of the city's construction, Robert Moses, declared that the 18-month old dispute between two unions over the pulling of telephone cables, makes the June opening impossible. It had been believed that operations could be started on that date from six of the runways.

A new type of boundary light, developed by Leland Electric Co., Dayton, Ohio, is being used experimentally at the Artez Airport, Lafayette, Ind. The only one of its kind, the Artez installation utilizes a gas-filled tube and special ceramic electrodes permitting operation on a high current at a low voltage. Showing green on the outer sides and red on the inner, the lights have been found visible 18 miles from the airport at 1,000 ft. Operation cost is approximately one and one-half cents per hour.

TEN YEARS' PROGRESS:

Aeronca Aircraft Corp. shows development in two-place aircraft in the last decade, by contrasting the Aeronca C-3, built in 1935, and still flying, with the company's latest plane, the all-metal Chum. Comparative performance statistics for the C-3 and the Chum: Cruising speed, 65 and 108 mph.; top speed, 75 and 118 mph.; rate of climb, first minute, 450 and 600 ft.; range, 200 and 400 miles, baggage allowance, 43 and 60 lb. Simplified control eliminating rudder pedals, and tricycle landing gear are other major improvements on the Chum.

FLOATS FOR CESSNA T-50:

Preliminary tests with a float version of the twin-engine Cessna Crane (T-50) by MacDonald Bros. Aircraft, Winnipeg, Canada, have shown good performance characteristics both in flight and on water, indicating a new versatility for the five-place plane, widely used by American and Canadian fixed base operators for charter flying. Floats are Edo design Model 61-5870, manufactured by MacDonald Bros. Net increase in weight due to floats and fittings was reported at 443 lb. Seaplane version cruises at 120 mph. and has useful load of 1446 lb. which would be a payload of 850 lb., on a 250 mile flight. Plane is owned by C. A. MacMillan, Rossport, Ont. Approval on the seaplane T-50 is being asked from the Canadian Department of Transport.

Aviation Council of metropolitan St. Louis has recommended that the area's second major airport, when needed, be constructed across the Mississippi River in Illinois, rather than in the Columbia bottoms section north of the city where the city has already acquired considerable acreage. It also urged action by the county and municipalities in immediately constructing the smaller airports in the area that have already been planned.

Air Accident Rate Drop Shown in '45

But reckless, low, acrobatic flying takes increased toll, CAB analysis shows.

Low, reckless and acrobatic flying caused more than twice as many (113 percent) non-air carrier fatal and serious injury flight accidents in 1945 as these types of flying caused in 1944, Jesse W. Lankford, CAB Safety Bureau accident analysis head, disclosed last week.

This serious trend is seen partly as a reflection of the return of many "hot" military pilots to civilian flying, and partly a result of the large increase in student pilot instruction.

Of 614 fatal and serious injury accidents recorded in 1945, low and reckless flying and unauthorized carrying of passengers by student pilots are held responsible for 41 percent.

A reduced aircraft accident rate for non-air carrier flying is indicated for 1945 over 1944, however, by the fact that while the number of pilots increased 58 percent, the number of accidents showed only a 39 percent increase over those in 1944.

▸ **4,652 Accidents in 1945**—Accidents for 1945 in the non-air carrier category totalled 4,652. Of these, 322 involved fatalities, 292 serious personal injury; 792 washouts of aircraft, 1,652 overhauls; and 2,166 major assembly work.

Analysis shows that in 76.9 percent of the accidents no one was injured, but that in 99 percent damage to aircraft required major assembly or greater repair work.

Of only 42 accidents involving minor or no damage to the airplane, 37 involved injuries from propellers. One fatality, and 26 serious injuries were among these.

▸ **508 Killed**—Of 7,252 persons involved in the 4,652 accidents, 5,627 escaped injury, 671 suffered minor injuries, 446 were seriously injured and 508 were killed.

Numerically the 1945 total shows an increase of 1,309 over the 1944 total, while fatal accidents showed an increase of 153 and serious injury accidents an increase of 120. Numerical increases are an anticipated result of the great increase in non-air carrier flying in 1945 and do not reflect a true picture unless the increase in number of pilots, passengers and planes flying is considered.

However, analysis does show an increase of 3 percent in the ratio of fatal and serious injury accidents to all accidents for 1945 over comparable figures for 1944. Percentage of washouts among aircraft damaged in accidents is rising. In 1945 of all aircraft damaged, 17 percent were washouts as compared to only 14.5 percent in 1944 and 12.8 percent in 1943.

Engine Exchange Plan For Lightplane Owners

A "factory-remanufactured" engine exchange plan has been announced by Continental Motors Corp., Muskegon, Mich., covering five of the power plants the company builds for lightplanes.

Under the plan, Continental dealers immediately replace old engines with the remanufactured ones which carry a new engine guarantee. Although it has many ramifications, essence of the new plan is to save the plane owner time and money that ordinarily would go into a major overhaul. Price is for the engine stripped, and the dealer still gets the installation and accessories business.

The plan covers the A50, 5, 8 and 9 engines, the A65-3, 7, 8, 9, A75-3, 8, 9 C75-12 and the C-85-12. Prices are: A65, $287.50, A75, $316.10, C75, $334.94, and C85, $334.94. All prices are list with the old engine.

The program is part of the company's campaign to establish a more effective and reliable dealer set-up throughout the country and eliminate criticism that has been directed at both its engines and its dealers' repair and maintenance. The company insists that most of the adverse comments on its engines arise from the fact that some of its dealers are inexperienced or "rusty" because of the wartime hiatus.

Continental is also launching at its factory a training program for its dealers' mechanics.

Canadian Nonscheds

The Canadian Air Transport Board recently issued numerous permits authorizing nonscheduled commercial airline operations in all parts of the Dominion. About half of the grants were made to carriers in northern Canada beyond the railroad lines so that service could be provided for mining, fur trapping and exploration activities.

AIRPORTS

Atlantic Aviation Explains Structure

Following publication of a story of Atlantic Aviation operations in AVIATION NEWS, Dec. 9, a statement outlining the corporation setup of the two major Atlantic Aviation divisions, which operate independently with equal status in two eastern trade territories has been issued by the organization.

Stewart E. Poole, managing director of the home office for both divisions, at duPont Airport, Wilmington, Del., holds offices in both divisions, as secretary and treasurer of Atlantic Aviation Service, and as vice-president and treasurer of Atlantic Aviation Corp. His summary follows:

"Atlantic Aviation Corporation operates in New England, New York and northern New Jersey. This division is the distributor for Beechcraft, Bendix Radio, United States tires, and several other aviation accessories. Sydney Nesbitt is president and general manager of Atlantic Aviation Corp.

"Atlantic Aviation Service, which is the other major division, operates in southern New Jersey, Delaware, Maryland, District of Columbia, and Virginia, and in the State of Pennsylvania in the distribution of Piper Cub and Bendix Radio. This division is a distributor for Beechcraft, Bendix Radio, Piper Cub, Goodyear tires and Exide batteries. This division is under the management of Stewart M. Ayton, and a branch is operated in Baltimore."

Lockheed Terminal Fee For Landings Eliminated

Lockheed Air Terminal, Burbank, Calif., has become once again a "haven for the private flier."

Cyril Chappellet, pres. of Lockheed Air Terminal Corp. (subsidiary of Lockheed Aircraft Corp.) withdrew a $2.50 landing fee inaugurated a month ago for the ostensible purpose of eliminating the private flier from the Air Terminal's economic picture. The reason given for the landing charge was that private fliers, scoring 50 landings and takeoffs per day, were a hazard to transport aircraft.

The picture changed suddenly Dec. 9 when airlines moved to Los Angeles Airport and the three million dollar Lockheed Air Terminal assumed momentarily the appearance of a "ghost terminal." LAT officials are convinced that contracts with air freight lines and special services will enable the airport to continue operations.

Briefing *For Dealers and Distributors*

7,000 OPERATORS—A list of approximately 7,000 fixed base operators in the United States, compiled by E. H. Pickering, director of Air Market Data Service, Dallas, for a mail survey, is nearly double the figure of 4,000 operators recently estimated by Harry Meixell, NATA executive director. Pickering estimates more than 3,000 of the 7,000 are non-duplicated aircraft dealers. The others are aviation service and accessory sales organizations.

REPAIR ESTIMATES—Clyde Brayton, President, Brayton Flying Service, St. Louis, urges the need for more business-like methods of handling aircraft repair charges by operators. Key to efficiency and customer satisfaction is an inflexible practice of advance estimates and corresponding charges. If additional repairs must be made it is far better to phone the customer in advance than to go ahead unauthorized and expect him to swallow the additional costs.

"If aviation falls flat on its face," Brayton warns, "it will be because repair depots have not exercised good judgment in keeping flyers' costs to minimum. When airplanes fly they are customers for gasoline, oil, tires, props and other supplies. Keep those planes flying and we will prosper. Sock the customer with heavy repair bills and we will all be out of business."

CUSTOMER AID—Southwest Airmotive Co., Love Field, Dallas, is giving a handbook on Love Field, and Dallas, with a little incidental advertising about SAC, to transient pilots. It includes field diagram, chart of radio facilities, field regulations, telephone numbers for taxis, hotels, airlines, airport officials, home phone numbers of SAC shop superintendents, and a list of recommended Dallas food and entertainment.

TRANSCONTINENTAL TRUCK TRIP—Roy Huber, Vancouver, Wash., Taylorcraft distributor recently ordered a transcontinental round trip for his big lightweight truck trailer, in order to meet a backlog of orders for Edo floats, tied up in a New York area trucking strike. Bill Huber, Roy's brother, made the 6,000 mile roundtrip in 12 days, brought back 12 sets of floats. The trailer designed by Huber, is all aluminum except steel framework, is 33 ft. long will carry five complete airplanes plus a spare set of wings and a large stock of parts.

STANDARD OPERATING PROCEDURE—Socony-Vacuum Oil Co., has recently published a booklet "Standard Operating Procedure for Friendly Service," which would move the aircraft service industry about five years ahead, overnight, in customer satisfaction, if operators would see to it that their line maintenance crews adhered to the recommended policies. In a step-by-step picture story it shows a clean-uniformed courteous mechanic, handling both a gas stop and an overnight stop, and performing such extra services as cleaning windshield, greasing tail or nosewheel, checking tires, emptying ash trays, vacuum cleaning or brushing out plane interior, arranging for transportation and hotel reservation, learning departure time, so as to have plane on line ready to go. A back-cover chart shows accepted hand signals for taxiing instructions.

2100 EXPORT CUBS—Walt St. John, Piper Aircraft Corp. Sales Manager, reports over 600 Piper Cubs have been shipped to foreign countries since VJ-Day and he has export orders for 1,512 additional Piper planes. On a recent six weeks trip to eight Latin American countries he received 450 orders. In addition, 720 surplus Piper L-4S have been sold in foreign countries, mainly through Piper export dealers. One of the "hottest" foreign sales territories is the Union of South Africa, (pop. 10,000,000) where 31 active Piper dealers are established, and 350 orders have been taken since V-J Day.

VOICE FROM SKY—Carl Hamilton, operator of Hamilton Flying Service, Delano, Calif., equipped one of his Ercoupes with a public address amplifier system and flew about the airport neighborhood to announce to ranchers and farmers that he was giving free Ercoupe rides. Then he enlisted his wife as chauffeur of the family car to provide roundtrip transportation for prospects between homes and airport. —Alexander McSurely

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Air Mail Pay Subsidy Claim Stirs Airline-Steamship Row

Sea-Air Committee survey shows Government paid $10,969,513 subsidy to air carriers as mail pay.

A dispute between the Air Transport Association and American Federation of Shipping's Sea-Air Committee was touched off last week by release of a Sea-Air Committee study claiming that $10,969,513 out of the total Government mail payment to 19 domestic airlines last year of $26,878,645 was "subsidy."

ATA challenged the study as "fallacious reasoning" and "statistical dishonesty" and objected to its classification of all mail income over and above cost as subsidy without allowance for a legitimate profit.

The Sea-Air group stood pat in defense of the survey, claiming "we bent over backward in every instance to give the airlines the benefit of doubt. Our conclusion is that a $10,000,000 subsidy is the minimum they received last year."

▸ **First of Series**—The study is the first of a series contemplated by the Sea-Air group in its drive for congressional legislation permitting steamship companies to operate airlines over their routes. Others will show subsidies received by international air carriers, and mail "overpayments" to the domestic carriers by the Government under existing rates of 45 and 60 cents a ton-mile, based on the finding of non-scheduled operators that property can be transported with a comfortable profit at a 20-cents-per-ton-mile rate.

Following are the "subsidies" the Sea-Air Committee study claimed were received by domestic carriers last year:

American Airlines, $1,481,202, or 33 percent of the carrier's $4,335,186 total mail payment; Eastern, $787,062, or 43 percent of $1,819,193; TWA, $1,472,755, or 26 percent of $5,646,287; United, $2,616,550, or 37 percent of $7,106,876; Braniff, $246,080, or 50 percent of $490,302; Chicago and Southern, $92,612, or 41 percent of $228,933; Delta, $318,014 or 47 percent of $680,359; Hawaiian, $3,132, or 20 percent of $10,922; Northwest, $696,450, or 49 percent of $1,420,096; PCA, $207,817, or 37 percent of $557,144; Western, $163,715, or 35 percent of $463,495; All American, $19,806, or 3 percent of 662,388; Carribbean Atlantic, $10,832, or 71 percent of $15,257; Colonial, $108,414, or 76 percent of $143,588; Continental, $582,827, or 90 percent of $647,741; Inland, $571,923, or 94 percent of $608,257; Mid-Continent, $848,225, or 89 percent of $951,754; National, $178,239, or 45 percent of $397,197; and Northeast, $457,685, or 90 percent of $507,177.

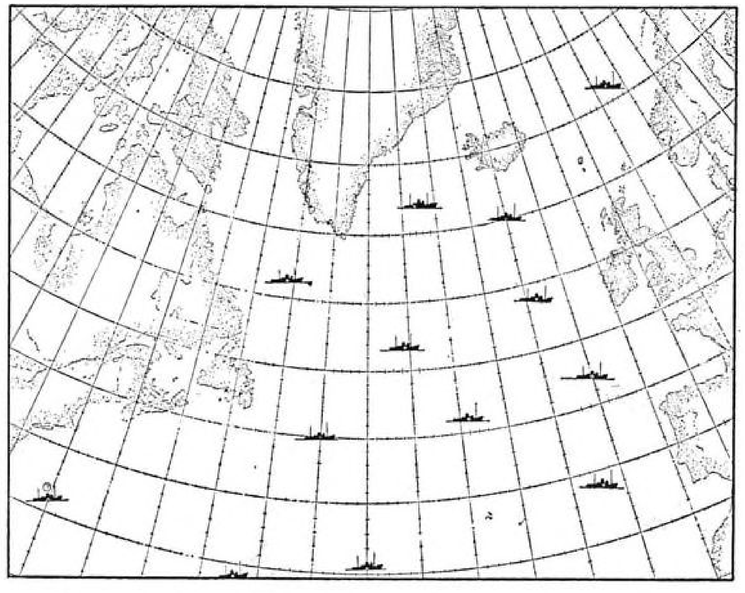
The Sea-Air Committee-ATA conflict over the statistical method (shown in the accompanying table) and conclusions of the former's study centered in the $164,604,096 figure listed as "cost of transporting mail" and what the item represented.

ATA counsel Stewart Tipton accepted the figure as representing the total cost of transporting mail only. The Committee's director of research, Richard Webb, conceded that the designation "cost of transporting mail" was a poor one, and stated that the item included all operational costs of passengers, express, freight, etc., as well as mail. It is, he said, the total operating expense of $240,177,890, minus only items "obviously" allocable to passenger service such as meals, hostesses, maintenance of ticket offices, etc.

▸ **Statistical Row**—After accepting the $164,000,000 figure as cost of transporting mail exclusively, Tipton said the study's method of obtaining the ton-mile cost of handling mail by dividing that figure by the total ton-miles of all services (517,702,577) is "statistically dishonest", and maintained that

Stringer to Sea-Air

Harry R. Stringer, who resigned recently from All American Aviation (AVIATION NEWS, Dec. 2), has joined the Sea-Air Committee of the National Federation of American Shipping, Inc., as assistant to chairman Tirey L. Ford. He takes over his new duties today (Dec. 16).



PICAO WEATHER SHIP LOCATIONS:

Thirteen weather ships will be established at the locations shown on the above map to provide meteorological services for international air operations. International agreement on the program resulted from meetings of the Provisional International Civil Aviation Organization. Five of the stations are in operation, and plans call for completion of the system by next July 1. Nine countries are participating, in the operation or its financial support.

Disputed Airmail Formula

The following table shows the formula used by the Sea-Air Committee—and disputed by Air Transport Association—in computing what the committee claims was an airmail subsidy received by the domestic airlines during the twelve months ended June 30:

Total operating expenses		$240,177,890.60
Deduct expenses of:		
Passenger Service	$20,413,622.05	
Traffic and Sales	25,497,836.01	
Advertising and Publicity	7,930,246.50	
Gen'l and Administrative	21,731,089.28	75,572,793.84
Total cost of transporting mail		$164,604,096.76
Divide total cost of transporting mail by:		
Total revenue ton-miles flown		$517,702,577.00
To obtain the cost per ton-mile of transporting mail (cents)		31.79
Subtract that cost from revenue per ton-mile paid (cents)		53.71
The result is subsidy contained in rate (cents)		21.92
Multiply subsidy by total U. S. mail ton-miles flown		50,043,413.00
Result is total subsidy payment		$ 10,969,513.03
Compare with total U. S. mail revenue paid		$ 26,878,645.67

the Committee's "cost of transporting mail" figure should have been divided by the total ton-miles of mail flown (50,043,413) to obtain the cost per ton-mile of mail operations.

Webb contended that "it is statistically accurate" to obtain the cost per ton-mile of handling mail and other property over the airline system by dividing the total cost of operating the system, minus only special items allocable exclusively to passenger service, by the total ton-miles of all traffic flown.

Tipton interpreted the Committee's study as showing that the airlines paid $164,000,000 to transport the mail and received a revenue for the operation from the government of only $26,000,000.

Had Sea-Air's study accepted the proposition that ton-mile costs of operating all airline services is the same, Webb pointed out, it would have taken the total operating expense of $240,000,000, divided it by the total ton miles flown and found that the average ton-mile cost of airline operations is 39 cents.

"This would have shown," he commented, "that the airlines received a 14-cents per ton mile subsidy, or a total mail subsidy for the year of $7,000,000."

AIRLINE SOLVES HOUSING PROBLEM:

Twenty prefabricated bungalows like that shown above are being flown to Alaska by Northwest Airlines to house employees stationed at Anchorage on assignment to the Alaska section of NWA's eventual route to the Orient. Valued at $12,000 each when set up on their waiting foundations, the houses will remain NWA property. Each house, completely furnished, will have six rooms and bath and be insulated against Alaskan winters. They are made at Sheboygan Falls, Wis., by Williamson Co. for Gamble-Skomo, Inc.

Two Airlines Ask More Mail Pay

Braniff and Continental cite rising costs and lowered revenue as factors necessitating higher mail rate.

Citing progressive increases in the cost of labor, materials, equipment and fuel, Braniff Airways and Continental Air Lines have followed the lead of Chicago & Southern in asking for higher mail pay.

The two carriers acted despite reports filed with CAB a few days earlier showing substantial increases in airmail volume during the first month under the new 5-cent postage rate. Their requests coincided with further indications that the recently-certificated feederlines will seek considerably more than the 25 cents a plane mile mail pay currently given Pioneer Air Lines, only local service operator for which a rate has been set.

▸ **Revenues Insufficient** — Braniff's petition to CAB states that the company's operating revenues are insufficient to produce a fair and reasonable rate of return on its investment. Passenger income declined during recent months as costs went up, Braniff declared, adding that institution of the 5-cent rate Oct. 1 only partly offset the overall postwar slump in airmail volume.

Continental said that in its opinion operating expenses will continue to rise for some time, thus compounding the difficulties which forced a 25 percent reduction in CAL's scheduled miles and a 12 percent cut in personnel during October. Accentuating Continental's loss of revenue were the 25-day TWA pilot strike, which resulted in a substantial drop in interline traffic, and a heavy snowstorm which tied up all operations at Denver for more than four days earlier in November.

▸ **Southwest Asks 25 Cents**—Second of the nine feeders certificated in 1946 to file for mail pay is Southwest Airways Co., which has asked for a temporary rate of 25 cents a plane mile over newly-activated AM 76. The California car-

rier says it believes operating results will justify a "substantially larger" permanent rate. Empire Air Lines previously requested 39.04 cents a plane miles temporary mail pay for its Idaho-Oregon-Washington routes (AVIATION NEWS, Sept. 9).

Tending to reduce the feeders' need will be the higher mail volume now being carried under the 5-cent postage rate. American Airlines flew 671,325 mail ton miles in October against 475,570 in September, Braniff 61,694 against 46,724; Chicago & Southern 34,632 against 27,253; Continental 17,496 against 14,183; Northwest 189,626 against 143,753; and United 753,122 against 596,169.

Three Airlines Hit Pan American's Bid

Three of the smaller domestic airlines lashed out at Pan American Airways' arguments for domestic routes as CAB's hearing on the PAA application entered its second month.

Western Air Lines said it would lose $3,000,000 annually in cargo and passenger revenue if PAA is granted the routes requested. Arthur F. Kelly, WAL general traffic manager, declared the future of all carriers would be jeopardized if Pan American achieves its objective of becoming the largest domestic airline as well as the world's largest overseas operator. PAA, Kelly stated, is trying to take the cream of the long-haul domestic traffic while ignoring the less lucrative local runs.

Braniff Airways witnesses said Pan American's recent publicity and advertising had implied that the 13 cities on the proposed routes would always be without high-speed, nonstop trunkline service if the PAA application is denied. By 1948 or 1949, the earliest PAA could put its program into effect, Braniff will be able to provide as fast and convenient schedules as those proposed by PAA, Paul D. Niles, general traffic manager, domestic division, declared.

T. M. Miller, Chicago and Southern's economic research director, asserted that PAA's plan to fly from Chicago and Detroit to New Orleans and Houston would duplicate his company's terminal-to-terminal domestic operations 100 percent while providing new one-carrier service for only 5.7 outbound international passengers a day.

Vikings Grounded

Temporary grounding of its Vickers Viking because of a tendency toward instability under icing conditions was announced last week by British European Airways Corp.

The company had seven of these British-built planes in service Dec. 1 on Continental European routes, and 37 more are due for delivery by March 1, although there have been signs that BEAC is reconsidering its decision to buy them (AVIATION NEWS, Oct. 14).

Douglas DC-3s will substitute for the grounded Vikings, on which British technicians are considering structural changes to solve cold weather problems.

CAB Asks for Comment On Stronger Seat Belts

CAB's Safety Bureau is soliciting comments on a proposed civil air regulations revision requiring more strength in safety belts used in all types of aircraft.

Data compiled by the Board and CAA during recent years indicate that the standard 1,000-lb. single-person and 2,000-lb. two-person safety belts fail to give adequate protection in relatively minor crashes. In numerous instances the belts have not withstood loads imposed on them, allowing the users to be thrown against the plane's structure, instrument panel, controls or other protruding objects, with resulting severe or fatal injuries.

Fuel Starvation Caused TWA Crash at Chicago

Accident involving a TWA DC-3 near Chicago Municipal Airport July 2 probably was caused by complete loss of power in both engines due to fuel starvation, a CAB accident investigation report states. Reason for the fuel starvation could not be determined, and the Board describes the mishap as "novel in the experience of accident investigation."

Shortly after taking off from Chicago for New York the DC-3's left engine failed without warning. As the plane turned back to the airport, the right engine also failed without prior indication of difficulty. An emergency landing was made in a field 1½ miles northeast of Chicago Municipal Airport with minor injuries to several passengers.

More Air Express

Air express will serve 53 additional cities through extension of the Air Express Division of Railway Express Agency over Southwest Airways Co., Los Angeles; West Coast Airways, Seattle; and Orlando Airlines, Orlando, Fla.

JATO BOOST FOR NONSTOP FLIGHT:

American Airlines' cargo flight that took off with jet assist at Mexico City (above) to fly nonstop to New York with ten tons of bananas, put down at LaGuardia Field 12 hr. 19 min. after takeoff, having stopped at Philadelphia to fuel. The cargo plane began a return trip to Mexico City a few hours later with a load of radios.

SHORTLINES

▸ **Alaska Airlines'** decreased operating loss of $130,598 for 10 mos. ended Aug. 31 reflected operating revenue for the period of $1,083,879. For 12 mos. ended Oct. 31, 1945, operating revenue was $864,987, operating loss $428,286. Maintenance costs were estimated at about 30 percent above similar costs in U. S., mainly due to labor.

▸ **American's** heaviest passenger day saw 2,956 passengers taking off from LaGuardia Field and Newark Airport Nov. 27, day before Thanksgiving. . . . Second new cargo record for a scheduled carrier in as many months was claimed for October, with 1,545,050 ton miles. September figure was 1,106,826.

▸ **Braniff's** air freight service is a year old this month. Rates dropped from 45 to 26 cents per ton mile after six mo. operation, and as low as 21.2 cents on volume shipments.

▸ **BOAC** will increase schedules on its Baltimore-Bermuda flying boat run during the coming holiday period. . . . British South American Airways contemplates using Panama as intermediate point on its Central and South American service. . . . British European Airways has carried as high as 1,600,000 lb. of freight in one month to various parts of the world.

▸ **Colonial** broke its air express records in October with 16,012,036 pound miles, increase of 227 percent over a year ago. Passenger traffic was 19 percent higher than a year ago but lower than September. . . . Company sponsors weekly ski broadcasts over a New York radio station.

▸ **Delta's** all-time high in total revenue for year ended June 30, including $6,953,944 from passengers and $29,411 from express and freight, compares with $5,156,527 the previous year. . . . Line's DC-4s, during first 19 days of nonstop Chicago-Miami operation, cut schedules average of 42 min. daily southbound and 32 min. northbound.

▸ **Eastern** carried almost 1,000,000 lb. of airmail in October, or about 250,000 over that in September, last mo. of the 8-cent rate. Company's field and advisory boards met in Chicago to plan for expected heaviest North-South winter travel in EAL history.

▸ **Empire's** Burley, Idaho, stop is No. 13 on company's Spokane-Idaho Falls route, now covered by two flights each way daily.

▸ **KLM,** during first 6 mo. of its New York-Amsterdam service, carried more than 7,000 trans-Atlantic passengers, 300 tons of freight and 14 tons of mail. Planes are Constellations.

▸ **Mid-Continent's** new through-routing connections have reduced fares from various points on its system to Jacksonville, with St. Louis connections on Eastern, and Miami, with New Orleans connections on National.

▸ **National** has obtained CAB permission to fly a more direct New York-Miami route, trimming 30 min. from previous schedules for an estimated savings of $9,000 a mo. or over $100,000 a yr. in its DC-4 operations. . . . Company is considering removal of its general base from Miami to New Orleans, New York or Newark because of high operating costs and tax increases.

▸ **Pan American** planes made 100 trans-Atlantic trips in October, bringing to 918 the total for the first 10 mo. this year. PAA flew 320,078,234 passenger miles in the third quarter of 1946, against 271,377,401 in the same period a year ago and 280,183,101 in the second quarter this year. . . . Company predicts its passengers in and out of Miami will exceed 500,000 for 1946. Station managers from Latin America points met there last week to discuss problems.

▸ **PCA** will stress freight shipments to offset an expected decline next year in passenger travel, officials say. . . . Company statisticians estimate that recent Washington hotel strike and Pittsburgh hotel and utilities strike cost it $226,309 in revenue on basis of PCA air travel at the two cities before, during and after the strikes.

▸ **Pioneer** has moved its headquarters from Love Field, Dallas, to the Houston Municipal Airport. Pres. Robert E. Smith said the company could not obtain ample facilities at Dallas, its headquarters since 1939.

▸ **SAS** (Scandinavian Airlines System) has opened a second ticket office in New York City at 6 West 51st Street in Rockefeller Center. Offices also are in Chicago and Minneapolis.

▸ **TACA** has instituted a personal shopping service to aid Central Americans in ordering goods from New York.

▸ **Trans-Canada** carried 28,475 passengers in October against 32,826 in September. Airmail was up from 187,376 to 210,200 lb., while air express dropped from 89,118 to 70,642 lb.

▸ **TWA,** with resumption of its fifth daily flight serving Washington, started its first westbound service into Wheeling, W. Va., set to begin Nov. 1 but delayed by the pilots strike. . . . Half fares for children on TWA became effective Dec. 15.

▸ **United** has established at Lincoln, Neb., what it believes is the first "airline hotel" for use when weather cancels or delays flights. A former Army classroom building at Lincoln Airport will accommodate 200. . . . Company is cooperating in education of engineering students at Purdue and Northwestern Universities. . . . Philadelphia is now one of five UAL Atlantic Seaboard terminal points. Others: Washington, Newark, New York, Boston.

CAB SCHEDULE

Dec. 16. Hearing on Pan American Airways' Alaska mail rate case. (Docket 1499.)
Dec. 16. Hearing in Pan American Airways' Atlantic rate case. (Docket 1706.)
Dec. 16. Hearing on investigation of Airlines Negotiating Conference agreements. Postponed from Dec. 9. (Docket 2603.)
Dec. 18. Hearing on foreign air carrier route application of Far Eastern Air Transport. (Docket 2570.)
Dec. 18. Oral argument on route consolidation applications of Braniff and Chicago & Southern. Postponed from Dec. 2. (Docket 1154 et al.)
Dec. 19. Oral argument on PAA-Panagra through flight agreement. (Docket 2423.)
Dec. 19. Hearing on BOAC's application to use MacArthur Field, Islip, L. I., N. Y., as co-terminal with LaGuardia Field on trans-Atlantic flights. (Docket 2674.)
Dec. 19. Prehearing conference on Mid-Continent's proposed service between Minot, N. D., and Regina, Saskatchewan. (Docket 628.)
Dec. 20. Exchange of exhibits in freight forwarder case. Postponed from Nov. 15. (Docket 681 et al.)
Dec. 20. Hearing on application of Aerovias "Q" for foreign air carrier permit. (Docket 2374.)
Jan. 1. Exchange of exhibits in Caribbean-Atlantic Airlines' application for foreign routes. (Docket 2246.)
Jan. 6. Exchange of exhibits on Cia. Mexicana de Aviacion's foreign air carrier permit application. (Docket 1992.)
Jan. 6. Prehearing conference on route applications of Western Washington Airways, Lummi Island Stage Lines and Island Airways. (Dockets 1503, 1703 and 2368.)
Jan. 13. Exchange of exhibits in TWA-Delta equipment interchange agreement. (Docket 2346.)
Jan. 13. Oral argument in Cincinnati-New York route case. Postponed from Dec. 9. (Docket 221 et al.)
Jan. 15. Hearing on Caribbean-Atlantic Airlines' application for foreign routes. (Docket 2246.)
Jan. 27. Hearing on Cia Mexicana de Aviacion's foreign air carrier permit application. (Docket 1992.)
Feb. 3. Exchange of exhibits in case involving additional Florida area service. Postponed from Dec. 20. (Docket 1668 et al.)
Feb. 17. Hearing in freight forwarder case. Postponed from Jan. 10. (Docket 681 et al.)
Feb. 18. Hearing on TWA-Delta equipment interch[illegible] (Docket 2
Mar. 10. Hearing in case involving additional Florida area service. Postponed from Jan. 20. (Docket 1668 et al.)

CAB ACTION

The Civil Aeronautics Board:

- Permitted BOAC to increase from twice-weekly to daily the frequency of its Baltimore-Bermuda service between Dec. 21 and Jan. 11.
- Permitted West Coast Airlines to use airports serving Medford, North Bend-Marshfield, Eugene, Albany-Corvallis, McMinnville, Portland and Astoria, Ore.; and Chehalis, Olympia, Seattle, Aberdeen-Hoaquim, Port Angeles, Everett, Mt. Vernon, Anacortes and Bellingham, Wash., on AM 77; and authorized West Coast to suspend service temporarily at Port Townsend, Tacoma and Kelso, Wash., and Roseburg and Grants Pass, Ore., on same route.
- Permitted Southwest Airways to suspend service temporarily at Santa Maria, Dunsmuir and Yreka, Calif., and Medford, Ore., on AM 76.
- Dismissed route application of Inter-Americas Airlines (Docket 1862) at applicant's request and dismissed route application of Desert Airways (Docket 1308) for want of prosecution.
- Consolidated applications of Florida Air Lines (Docket 1668), Florida Airways (Dockets 2328, 2352 and 2370), and Plantation Air Lines (Docket 2108) into single proceeding; refused to consolidate applications of National Airlines (Dockets 2215, 2438, 2567, 2568 and 2631), PCA (Docket 1013), and Eastern (Docket 2578) in the case; and dismissed applications of J. I. Leak (Docket 1392) and U. S. Flying Service (Docket 1900) from proceeding for want of prosecution.
- Rescinded order authorizing temporary suspension of service by Empire Air Lines at Burley, Ida., on AM 78.
- Permitted United Air Lines and TWA to serve Los Angeles through Los Angeles Municipal Airport on AM 11 and 2, respectively.

TWA Will Begin New Flights to Palestine, India

TWA will inaugurate direct air service from New York and Washington to Palestine and India shortly after the first of the year. The new operation is an eastward extension of the carrier's present route to Cairo and Dhahran, Saudi Arabia.

Proposed schedules call for elapsed flying time of 31 hr. 35 min. between New York and Lydda Airport, Palestine, and 41 hr. 40 min. to Bombay. Inauguration of the service was made possible by the recent signing of the U. S.-India bilateral air transport agreement.

Additional service has also been announced by American Overseas Airlines which plans to increase its trans-Atlantic roundtrips from 14 to 16 weekly effective today (Dec. 16).

The XS-1 Flies

While there is a natural and understandable tendency within aviation to treat with reserve any venture such as rocket propulsion, the importance of the initial flight of the rocket-powered XS-1 should not be underemphasized. Bell Aircraft Corp., Reaction Motors, Inc., the Army Air Forces and the National Advisory Committee for Aeronautics are due congratulations for their vision backed up by practical engineering accomplishments. Also, they are due praise for the caution with which they have approached the tremendous hazards inherent in high speed flight, particularly with an entirely new form of propulsion.

The engines in the XS-1 in themselves are of tremendous significance. It was nearly 40 years before a new form of engine—the turbojet—was introduced as a possible successor to the reciprocating engine. Now, within five years, another new form of power has been introduced. Of major importance is the fact that this power was utilized not in a one-shot, freak aircraft, but the first of a series to be similarly powered. There are two XS-1s built, another nearly complete. Douglas, Bell, and Northrop are constructing other rocket-powered craft.

There will be months and years of set-backs and heartaches in perfecting this revolutionary development. Nevertheless, together these planes give hope that the U. S., far from being behind other nations in new fields of aircraft propulsion, is in the van, and possibly far out in front.

Western's Drinkwater

No appointment in the industry in recent years has evoked as much interest and such wide expression of approval as the election by Western Air Lines of Terrell Drinkwater as its new president.

Drinkwater's entry into air transportation was as attorney for Continental Air Lines. It was not long before he was elected a vice president by that company. During the military tour of duty of its president, Robert Six, Drinkwater conducted the affairs of the company. His record during the war was outstanding, and that well known team in the nation's largest airline, C. R. Smith and Ralph Damon, were not long in tapping him for their aide, as a vice-president. His latest recognition makes him chief executive officer of one of the country's oldest airlines. The industry, and AVIATION NEWS, wish him well.

7,000 Grassroots Operators

Following announcement last week on this page that Harry Meixell of National Aviation Trades Association estimated the number of aviation trades bases at approximately 4,000, E. H. Pickering of Air Market Data Service informs the NEWS that his up-to-date list approximates 7,000. At least 3,000 unduplicated dealers can be verified from lists of the manufacturers themselves.

Importance of the fixed base operators, both numerically and qualitatively, has been underestimated by aviation for many years. They are grassroots aviation. With all of the credit to the airlines, and the thousands of passengers they carry every year, the fixed base operators come closer to the American public, and to being home town aviation, than any other group in flying. They are public relations men, teachers, salesmen, and servant combined. It's high time aviation and Government quit ritzing them, and set out to help them sell aviation to the public.

ROBERT H. WOOD.

The Reader Writes

Airport Disposal

This letter is occasioned by your editorial Nov. 25 regarding WAA's handling of surplus airport disposal. This editorial, I believe, indicates only a partial understanding of the airport picture. For the last year and a half . . . I have dealt intimately with Art Manley, director of the Airports Division. I assure you that he is a conscientious and capable administrator. Moreover, he is a friend of aviation.

However, he has been up against terrific difficulties. In the first place, there are over 1,100 airports which are or will be surplus; a policy once established will apply to all and therefore must be very carefully formulated. Promises made by Manley's predecessors without much such proper consideration of the overall problem already hamstring WAA seriously. During the time the program has been in the process of development, there have been three surplus property administrators, two different disposal agencies and two different disposal boards.

Airport disposal is not merely a matter of returning pre-war airports to the cities from whom they were taken. It involves much more than land and runways, which for many cities are only a liability. The Government has added substantial improvements to most airports in the form of hangars, shops, control towers, barracks and equipment. Manley has fought successfully for the inclusion of certain improvements in all regulation 16 transfers. Even so, some cities have been reluctant to accept transfers with the obligation for maintenance that must be imposed.

CAA has been extremely overzealous, sometimes to the degree of absurdity, in their recommendations as to what improvements should be transferred. It has been necessary in many cases to request modification of their recommendations.

Political pressure of all kinds and on all sides has been brought to bear on airport disposal. Cities have demanded transfer of property on the grounds that it was absolutely necessary for the operation of the airport and have then offered them for lease to industrial concerns. The Army and Navy have placed complicated restrictions on certain facilities and in some cases have withdrawn.

In spite of these difficulties, the program is now clearly established, and airport disposals over the next few months will probably exceed all other classes of disposal. If you feel that the cities will not get all they deserve, and in some cases a great deal more than normal traffic will justify, I suggest you examine the Tulsa and Cheyenne transfers, recently approved by WAA.

A WAA Executive

(Since the letter was not written for publication, the editors have deleted the writer's name. It does, however, help to present WAA's side of the airport disposal problem).

For The K. L. M. Royal Dutch Airlines

Collins 17H-2 Radio Transmitters

"The vast K. L. M. Royal Dutch Airlines System, running from Europe to Java, throughout Europe itself, and thence across both the North and South Atlantic Oceans to the Americas, is one of the most far-flung in the world. There is also a Caribbean Division, whose place in the system increases the demand for range and versatility in radio equipment.

"As a result of a search for transmitters whose power, frequency coverage and reliability would provide adequate communication service on a system-wide basis," said K. L. M.'s North American Division Technical Manager recently, "the Collins 17H-2 Autotune equipments were chosen. These units are installed in all K. L. M. DC-4's and Constellations."

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