Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC. OCT. 22, 1945

Culver's Model V: *New features of the spinproof post-war Culver Aircraft Corp. two-place Model V are shown to advantage in this first flight picture. They include 85-hp. Continental fuel injection engine, electrically retractable tricycle landing gear, full wingflaps linked with stabilizer for automatic trimming, wing dihedral, and one-piece elevator. The Model V is a development of the pre-war* Cadet *and subsequent Culver radio-controlled target planes.*

Washington Observer

★ ★

PLANT SALES BASIS—Chances that the aircraft industry's ideas on plant disposal terms may be adopted by Surplus Property Administration and Reconstruction Finance Corp., appear brighter on the basis of the report on steel plants submitted to Congress by SPA. Cardinal plank of the steel plant policy bases price on prospective earnings, the same formula asked by the aircraft industry. Now, it develops that SPA is considering the same yardstick for all "problem plants," among which are aircraft facilities.

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ORPHAN PLANES—Within a few months, orphaned airplane models are going to start troubling the Army and Navy. Many of these models, on which production has ceased—such as the Navy's *Catalina*—are due for several years of post-war use and they will need spares. Some manufacturers are reluctant to tie up materials and space with tooling for these models and it may be that cannibalism will be the fate of many such craft. The Navy, which probably faces the most acute problem in regard to orphans, is taking steps to provide adequate spare parts for such planes as the *Kingfisher,* the two *Catalina* models, the TBM, and the PV-2. By this time next year there may be embarrassing shortages.

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OVERSEAS SURPLUS—The three United States international air carriers, Pan American, TWA and American have been discussing purchase of surplus maintenance and communications equipment overseas with the Army-Navy Liquidation Commissioner's aviation division. Report is that the airlines will have to send their own men to the field commissioners overseas and make their purchases there. AAF is said to have been blocking airlines and also ANLC, who have buyers for certain types of equipment such as hydraulic jacks and wheeled equipment which the Army refuses to declare surplus on the ground they might need it themselves sometime in the future. Airlines feel they need interim equipment to start giving service before foreign operators put in equipment at the fields.

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SURPLUS SLOW-UP—Add reasons for slow disposal of aviation surpluses: RFC recently announced it has about 1,500 Guiberson radial diesel engines, originally designed for aircraft, on sale by competitive bid. However, before that course of disposal was adopted, a Texas firm offered close to $1,000,000 for the lot. RFC's board of directors took the offer under consideration. When the board did not act after several weeks, the prospective buyer withdrew the offer. Note: informed sources do not expect the total sale under competitive bidding to approach the original offer.

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BT BID BASIS—It is expected, in informed quarters, that the Reconstruction Finance Corp. shortly will put the sale of surplus basic trainers on a bid, rather than a price-tag basis. With less than 100 BT's sold out of more than 8,000 declared surplus, RFC seeks to determine whether the lack of sales is due to no demand, or to price. Disposal by bids should furnish an indication to the answer.

★ ★ ★

AIR REPORT—The report of the Interdepartmental Committee for the Demobilization of the Aircraft Industry, originally formed by the assistant secretaries for air of the War, Navy and Commerce departments, and now a subcommittee of the overall government Air Coordinating Committee, will shortly be submitted to Congressional committees concerned. It will set forth the peacetime measures that must be taken if the aircraft requirements of a future mobilization are to be met.

All-metal Globe Swift, a promising lightplane contender

AVIATION NEWS

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Volume 4, Number 13

Advertisers Index

News at Deadline

Doolittle Returns To Shell

Lt. Gen. James H. Doolittle, who has been mentioned as a likely nominee for the Civil Aeronautics Board and also as a favored candidate for the presidency of the Air Transport Association, is planning to return to his pre-war business affiliation, Shell Oil Co., after his separation from the service sometime in November. The famous pilot-engineer who led the first Tokyo raid of World War II, and later was a key air force commander in the African and European theaters, was manager of the Shell Oil Co. aviation department before he was called to active military service in 1940.

GE Jets In XP-83

The new Bell XP-83 jet fighter disclosed last week has two General Electric I-40 superjet engines as its powerplants, giving it twice the thrust-pounds of the Lockheed P-80 *Shooting Star*. Bell Aircraft Corp., describes its second jet fighter as "in the top speed bracket" and designed for very long range operation. Without using external tanks it can carry enough fuel for a range exceeding that of most fighters, Bell asserts.

Swing To Unification

A renewed drive for a single Department of National Defense is under way in the Senate. The Department would have coordinated air, ground and naval forces. Secretary of War Patterson urged the change before the Military Affairs Committee, but there are few signs that the Navy has changed its stand against unification. Support for the move appears to be gaining, however, with several Senators who have backed the Navy view, indicating a change in attitude.

Plan Foreign Production

United Aircraft Corp. has been given the green light by the State Department to negotiate with France and Sweden for production of Pratt & Whitney R-1830 and R-2800C engines and Hamilton Standard propellers by those countries, under license.

▸ Atchison, Topeka and Santa Fe is studying aircraft equipment and may become the first railroad to enter air transportation through use of planes as supplementary to regular operations. The line, months ago, had a research report prepared on air transportation. The Santa Fe is interested in establishing a passenger service which would connect with and speed up its ground accommodations.

▸ ATA publicity men hope to have President Truman address the presidents of the U. S. airlines when they meet in Washington late in November for their annual session.

▸ Virtually every aircraft company is working on supersonic or guided missile research of one kind or another. The War Department soon will place big orders in this field.

▸ Boeing's Plant 2 at Seattle will begin installing jigs for production of the YC-97 transport within three weeks. Employment cut to 7,000 by B-29 cancellations will be upped 1,600 by Nov. 15 for assembly of remaining 39 B-29A's, and an additional 400 will be hired in December.

▸ Hawley Bowlus, sailplane and glider designer, will announce within the month a powered glider for the personal aircraft market. It will be a pusher, with propeller behind the tail, and designed for off-and-on use of the engine for thermal soaring. The prototype, built at San Fernando, Cal., is ready for test flight.

▸ Detroit officials describe GM's 200-hp. aircraft engine as far from ready for mass, low-cost production. Buick has made an extensive production study the past six months but so far has shown little long-term interest. The department which was developing the engine has been curtailed in staff and the remaining few engineers are content with making a few minor design changes.

▸ The proposed Lockheed-Curtiss-Wright merger is still cooking, despite official denials, and financial observers believe there is a strong chance that it will go through.

▸ Milwaukee Railroad has ordered a research study made which will guide it in deciding whether to venture into aviation.

▸ Prototype of Lockheed's Saturn, feeder transport, now is expected to be flying in January or February. If so, it will be the first of the strictly post-war planes to take the air.

▸ Deliveries of the commercial version of the *Constellation*, originally scheduled for this month or early November, may be delayed as a result of an engine nacelle fire in a PAA-ATC *Constellation* at Topeka, Kan. Modifications are being made on the line, following grounding of all *Constellations* for a short time.

▸ Chance-Vought F4U-4 *Corsair* shipboard fighter has a level-flight top-speed of more than 450-mph. with latest water injection equipment, and the 2,100-hp. P&W Double Wasp. The F4U-1, which went into combat in 1943, hit 416-mph. top.

▸ Boeing, pioneer heavy bomber producer, is experimenting with a new fighter model for the Navy. Work is well advanced on 3 versions, designed for exceptional power and rate of climb. Special attention is being given to the engine installation.

▸ Consairway will dissolve Jan. 1 with termination of its ATC trans-Pacific cargo contract. At peak of operations there were 800 employees. The line had explored and operated new southern routes from California to the Philippines, using 16 Army-owned cargo and passenger modifications of the *Liberator* bomber. A year ago Consolidated-Vultee negotiated with several prospective purchasers, including TWA and Matson, but the deals collapsed. Buyer spokesmen said the asking price was excessive.

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Aviation News

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October 22, 1945

RESEARCH RESULTS

Guided Bombs, Giant Powerplants Unveiled At Wright Field Exhibit

Deadly new air weapons forcefully demonstrate vital role of continuing U. S. aeronautical leadership in dawning era of possible scientific, total destruction.

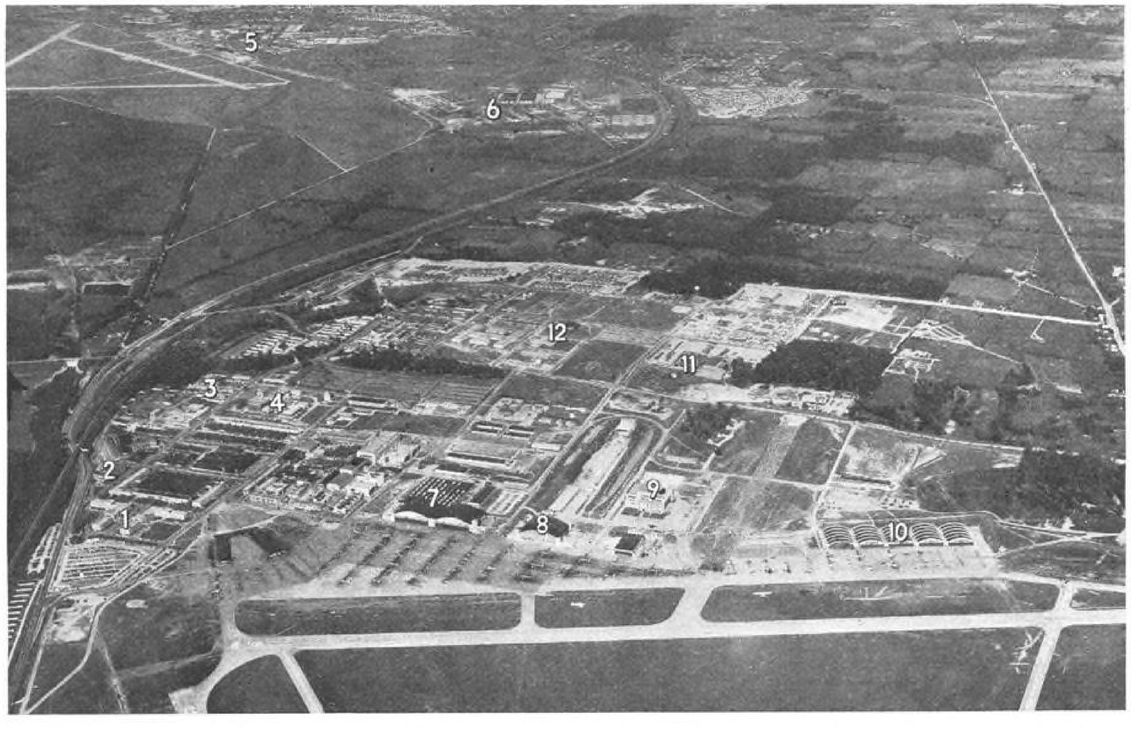
By ALEXANDER McSURELY

Necessity for continuing U. S. leadership in aeronautical research and development was brought home forcefully last week to members of the Senate and House, and the public generally, at Wright Field, Dayton, Ohio, where the Air Technical Service Command lifted the cloak of secrecy from some of its deadly new aerial weapons at the AAF's "Air Fair."

In a tent show of exhibits from the various experimental laboratories of Wright Field which created a mile-long midway on the huge concrete apron of the flying field, laboratory specialists turned lecturers explained the operations of television bombs, huge new engines, jet propulsion, rockets, radar, and other developments of World War II.

Flight Show—Meanwhile, overhead flew an all-inclusive AAF type "Airmada," including the giant B-19, while their sister ships and many strange experimental aircraft, both American and captured from the enemy, were on display below.

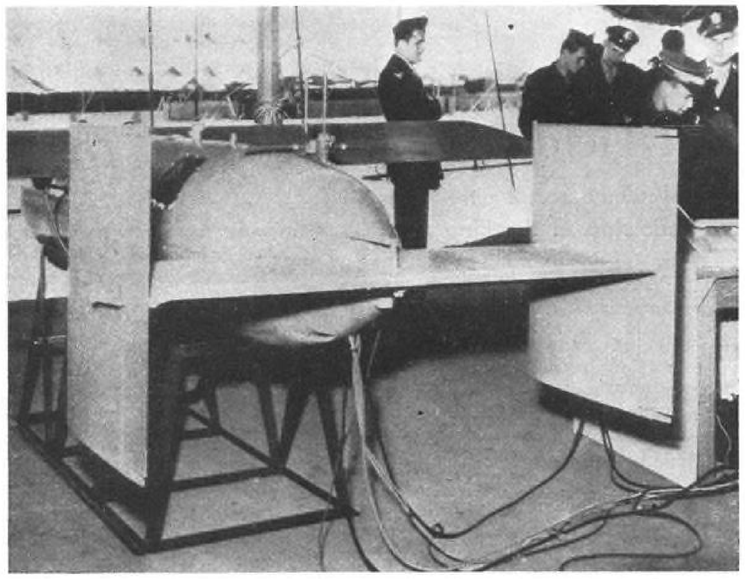
Newly disclosed aerial weapons on display in the tents included: The radio-control Azon bomb, an ordinary bomb to which a radio-controlled fin was added. This bomb was first used in precision bombing to destroy the Avisio viaduct near Rome, to break the German supply line to that city. It was later used in Burma in early 1945, to destroy every bridge which was of strategic value to the Japanese. Bombardiers in combat usually released four Azon bombs at once, picked the one which seemed best-aimed and by radio control headed it directly



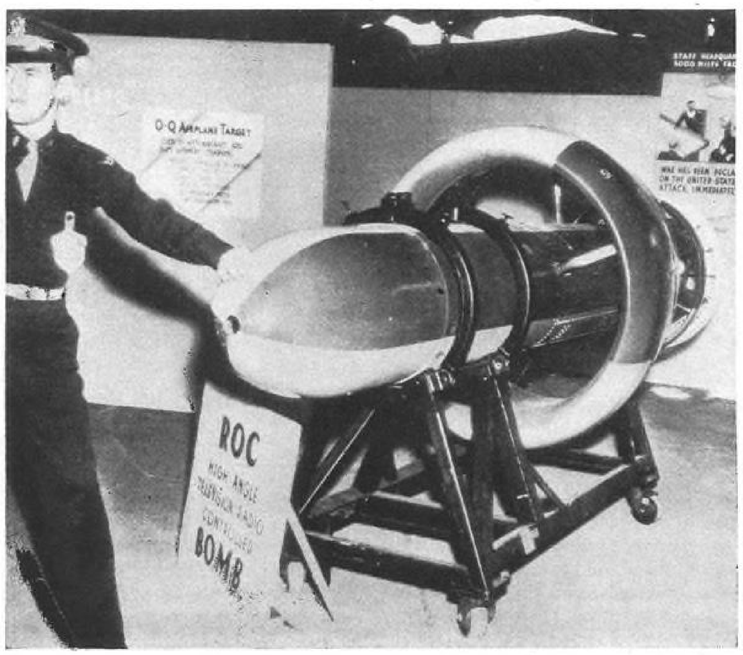
Home of AAF Developments: *First aerial photograph of the $150,000,000 Wright Field, Dayton, Ohio, headquarters of the Air Technical Service command, as it has developed to meet wartime demands. Shown: 1. Office buildings; 2. Aeronautical museum, now used for additional offices; 3. Aero-Medical laboratory; 4. Wind tunnels; 5. Patterson Field; 6. Wright Field area "A"; 7. Hangars and shops; 8. Armament laboratory and range; 9. Static test laboratory; 10. Flight test; 11. Equipment laboratory; 12. Offices.*

to the target. The other three bombs, responding to the same control would follow the leader to hit the target also.

▸ The GB-4 television glider bomb, which carries a ton of explosive and mounts a television transmitter under its nose. It has small wings and a double tail. The television unit transmits to a screen in the plane from which the bomb has been dropped, showing the bombardier exactly where it is heading. He can correct its direction by radio control, for a 20 mile flight, while it is traveling at 300-mph. although his plane may be miles away, heading for home.



Television Bombs: *Two versions of television-radio-controlled bombs, were unveiled for the public last week at the Air Fair held by Air Technical Service Command at Wright Field, Ohio. The GB-4 glider bomb, above, and the ROC high-angle bomb, below, both have television transmitters in their noses which send a continuous picture of where they are heading. The image is flashed on a screen in the plane from which they have dropped, so that the bombardier, by manipulating radio controls, can correct their fall if necessary, putting them "on target."*



▸ The ROC high angle television bomb which has a similar transmitter in its nose, a radio controlled fin at the tail, and a strange-looking "hoop" around its middle. The bombardier follows its movements on the screen, and may aim it at any angle necessary for a direct hit, by means of a stick control in the plane.

Combination of these or even more deadly long-range guided missiles, with an atomic bomb warhead would be the obvious future evolution of these weapons, offering the prospect of total destruction of warring nations within a few hours.

Development of the guided missiles stemmed from the application of remote radio controls to small model planes used as targets for anti-aircraft practice.

Latest development in target planes, the Culver PQ-14, which cruises at 160-mph. and is powered with a 155-hp. Franklin engine, was displayed at the Air Fair in a flight from Columbus to Patterson Field. The successful flight ended in a mishap, when the plane crumpled its nosewheel in a crosswind landing at Patterson Field.

▸ **Robot Fleet** — This demonstration offers possibilities of long-range future flights of fleets of robot bombers controlled by a mother plane, or by a panel at the home base. Obsolete four-engine bombers loaded with explosives were crash dived on enemy targets in Europe by radio control during World War II.

Powerplants Laboratory display showed a number of heretofore undisclosed reciprocating engines as well as displaying the General Electric *Superjet* engine which powers the Lockheed P-80, and other jet propulsion engines. The display included:

▸ Two big Lycoming experimental engines, one believed to be the most powerful reciprocating engine yet developed. This 36-cylinder radial monster weighs 5,500-lbs., and develops 5,000-hp. for takeoff. Designated XR-7755, the engine is designed for a plane not yet built. The second Lycoming, X143625, is a 12-cylinder flat engine weighing only 1,445-lbs. and credited with 2,100-hp. at emergency rating.

▸ A 42-cylinder Wright liquid-cooled engine, Model R 2160, designed for the experimental fighter XP-58, and rated at 2,500-hp.

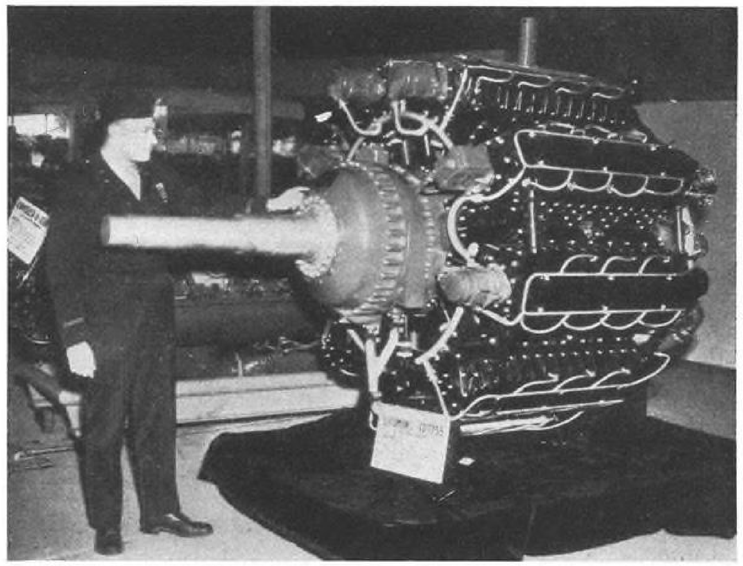
▸ A 2,500-hp. Chrysler 16-cylinder aircraft engine, weighing 2,430-lbs., designated Model X-12220-11.

▸ A display showing two Allison engines with long extension shafts turning a six-blade dual rotation propeller, similar to the installation in the Douglas "Mixmaster" XB-42 and other Allison planned systems (AVIATION NEWS, Oct. 8).

▸ Displays of the leading Pratt & Whitney, Wright and Allison engines which powered most World War II warplanes.

Many interesting applications of radar were shown, among them a radar tailgun sight which enables a tail gunner to spot any enemy approaching from the rear long before he comes in sight, and to fix his guns on the plane. A motion picture explained the workings of GCA, the Gilfillan Ground Control Approach system which used radar to enable planes to make blind landings in zero visibility, and which is expected by many experts to be a time-saving answer to the cumbersome approach systems now in use at commercial airports.

Most interesting experimental plane on exhibit was a tiny unnamed flying wing jet fighter which carried the pilot in a prone position with his head enclosed in the plastic nose, and a chinrest to make him more comfortable in flight. The plane had a towing connection in the nose and had been towed to determine its flight characteristics before it was cut loose on its own. No performance data on this plane was made available.



Giant Lycoming: *Developing 5,000-hp. at takeoff, this monster Lycoming 36-cylinder, radial engine weighs 5,500-lbs. It was first shown to the public recently at the AAF's Air Fair at Wright Field. Believed to be the most powerful reciprocating engine for aircraft yet produced, the Lycoming XR7755 is designed for a plane which has not yet been completed. Its size may be gauged by comparison with the officer, Lt. S. M. Kaufman, Boston, standing beside it.*

▸ **Nazi Threat** — Highlight of the enemy equipment display was the Bachem BP-20 Natter (*Viper*) a German plane which was launched vertically from a rocket platform to a 36,000-ft. altitude. After firing its 24 rockets at the enemy, the plane is designed to break in two, with a parachute lowering the expensive engine to the ground for recovery, while the pilot also parachutes.

Radio Plane Control Technique

Technique of operating a radio-controlled target plane from a "mother" plane flying some distance away was disclosed last week by Air Technical Service Command at the Wright Field "Air Fair."

In the Beechcraft C-45, used as the control plane, a pilot sits in the co-pilot seat and operates a control box equipped with a small control stick, and a series of levers and lights. Coordination between this control and the Culver PQ-14 target plane is instantaneous.

▸ **Reception**—Radio waves from the control box are received in the target plane by a 10-channel, frequency-modulated radio receiver which transmits the waves in the form of electrical impulses to a gyro-stabilized flight control unit in the plane. This operates hydraulic "muscles" which control the plane's roll, pitch and yaw, and apply wheel brakes, and can maneuver the target plane in attitudes up to 70 degrees of bank and 70 degree dives.

Throttle, retractable landing gear and flaps are actuated by small electric motors also set in motion by impulses from the receiver.

The robot plane can fly up to 17,000-ft., and carries fuel to fly non-stop three hours at 160-mph. cruising speed. While the average life of a target plane is about 10 hours before it is shot down by practicing gun crews, one PQ-14 survived 42 missions, crossing the line of fire 83 times.

New Construction Materials Studied

A wide range of research projects on wood and plastics as well as other aircraft materials, improved aircraft structures and numerous projects associated with high-speed airplanes are being carried out at the Research Laboratory of the Curtiss-Wright airplane division at Buffalo.

The Subcommittee on Wood and Plastics for Aircraft of the National Advisory Committee for Aeronautics held a two day meeting at the laboratory last week. Dr. C. C. Furnas, director of research, was host.

▸ **Test Units** — The equipment of this aeronautical laboratory includes a new high-speed wind tunnel, soon to be placed in operation, and a special test chamber in which the atmospheric conditions of high altitudes can be closely simulated.

Although light metals are the currently predominant materials used in airplane manufacture,

particularly for large and high-performance aircraft, research on wood and plastics for aircraft is being vigorously pursued in many laboratories. A large amount of research in this field is being sponsored by NACA.

Considerable time was devoted at the Buffalo meeting to so-called "sandwich construction," which is reported to hold real promise for all types of aircraft, including high performance models. Sandwich materials are so named because they consist of thin-gage "faces" of high-strength material, bonded by a special synthetic material adhesive to a considerably thicker, low-density core material.

▸**Even Glass** — Super-thin sheets of steel, aluminum, or even high strength glass fabric might be used as faces bonded to such low density material as balsa wood or a foamed plastic. Some engineers believe the inherent rigidity and strength of such materials could conceivably lead to construction of aircraft without the internal supporting members which limit space and account for much of the weight of aircraft as now built.

An experimental airplane fuselage has been constructed of plastic sandwich materials which is 67 percent stronger, with almost the same weight, than a similar fuselage of metal construction.

Lodwick Honored For AAF Work

One of the few times the award has been made to a civilian, the Bronze Star has been bestowed by the AAF on Albert I. Lodwick, president of the Lodwick School of Aeronautics, Lakeland, Fla. The citation credited Lodwick with suggestions resulting in "many technical developments and changes in procedure" following his overseas trips as a member of special consultant missions for the AAF.

Long one of the country's leading aircraft service operators, Lodwick trained many Army airmen during the war at his school, in addition to his contribution as a consultant. In the latter capacity, he traveled some 81,000 miles in 1943, 1944 and 1945, and visited all fronts where American troops were in action.

▸**Star-Studded**—Award was made at AAF headquarters in the Pentagon by Lt. Gen. James H. Doolittle, whose Eighth Air Force was a major recipient of Lodwick's advice. Present at the ceremony were Lt. Gen. Ira Eaker, deputy AAF commander, and Maj. Gens. C. C. Chauncey, Edward M. Powers, Lauris Norstad, and Brig. Gen. William M. Welsh.

"Meritorious Civilian": *Lt. Gen. James H. Doolittle pins the Bronze Star medal on Albert I. Lodwick, president of Lodwick School of Aeronautics, Lakeland, Fla., as reward for meritorious service overseas as special technical consultant for the Army Air Forces.*

RFC Components Post Resigned By Peterka

Lt. Col. A. E. R. Peterka has resigned as chief of the aircraft components section of the office of surplus property of the Reconstruction Finance Corp., effective Oct. 31. He is being succeeded by Col. George H. Moriarty, formerly of Wright Field.

Col. Peterka will rejoin the manufacturing firm of Lamson and Sessions, Cleveland, Ohio. Before assuming his duties at RFC last April, he was in the AAF for three years. He originated the plan for redistribution of aircraft parts and components which evolved into the Aircraft Scheduling Unit.

▸Before entering the Army, Col. Moriarty was in the automobile manufacturing business. Stationed at Wright Field for four and one-half years, he was in charge of allocation and control of all raw materials, machine tools, plants and manufacturing equipment. He supervised the setting up of plants built for the aircraft industry.

New Non-Scheduled Dates Are Set

Civil Aeronautics Board has set an oral argument for Nov. 26 on the subject of proposed economic regulation of non-scheduled air services, and has extended until Jan. 31, the date for receiving comments from the industry on proposed safety regulation: Part 42 of the Civil Air Regulations.

All persons intending to participate in the oral proceeding should advise Francis W. Brown, CAB's chief examiner, by Nov. 5. "The communication should set forth the name of the person who will argue, the party or group of parties whom he will represent, and the amount of time desired for presentation," Brown announced. "It will be of considerable assistance to the Board if individuals with a common interest in this proceeding can arrange to present their argument through one representative. As soon after Nov. 5 as possible all parties will be advised of the names of the persons who will argue and the time allotted."

▸**Subject Stressed**—It was emphasized that the argument will relate only to proposed economic regulation. A date has not been set for oral discussion of the safety regulations. In granting more time for the industry to forward its comments on these proposals, the Board anticipates aid from various regional and national meetings to be held in the next three months.

State Control Seen For Airport Funds

Congressional action sets stage for final discussion and passage of construction program.

State governments which have waged a hard fight to obtain complete control over federal expenditures for airport development appeared assured of an unqualified victory in Congress last week.

Following lead of the Senate, the House adopted an amendment to the $1,300,000,000 Lea airport bill requiring that all federal outlays for airport construction shall be funneled through state governments. The vote on the amendment was 135 to 126.

▸**Field Difference** — The House amendment placed the airport program, without qualification on a federal-state basis. It omitted the stipulation contained in the Senate-passed airport bill, which would require state governments to use 65 percent of federal funds on small flying fields and 35 percent on commercial transport fields.

The House appeared set to approve the Lea airport measure late last week following overwhelming rejection of an amendment to kill the bill.

Differences in the Lea bill and the Senate-passed McCarran airport bill would then have to be ironed out by a joint conference committee of the two chambers.

▸**Size Issue**—One of the major issues in the airport program, which will have to be decided in conference, is the size of the program.

The Senate trimmed the program proposed in the McCarran bill down to a total of $750,000,000. The House, however, voted last week to retain the $1,300,000,000 airport program contemplated in the Lea bill.

Under the Senate-passed bill, state governments would be required to match federal expenditures of $75,000,000 annually on a 50-50 basis over a five-year period.

▸**Ten-Year Plan** — The Lea bill would extend the program over a ten-year period, involving a total federal expenditure of $650,000,000. States would be required to match federal funds on a 50-50 basis, and the maximum federal expenditure in any one year would be $100,000,000.

An amendment offered by Rep. Carlson, (R-Kans.), to cut the airport program from a total of $1,300,000,000 to $1,000,000,000 was rejected by the House 106 to 60.

Surplus Airfield Disposal Readied

With the trend of thinking now swinging toward placing disposal of surplus airfields with the real estate division of the Reconstruction Finance Corp., work on the regulation setting forth policy for disposition of the fields is nearly complete.

Comments on the initial draft have been received from the Army and Navy, and target date for release of the regulation is the end of this month.

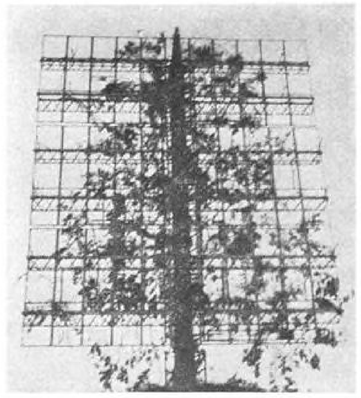
▸**Gift Clause**—Leaping the barrier of the Surplus Property Act which forbids gratis distribution of government property, the airfield regulation will make possible the release of surplus fields to states, counties or municipalities for "valuable considerations to the government other than cash payment."

In plain language, this is explained as meaning that the fields can be turned over to non-federal public agencies on a guarantee that they will be available for government use in an emergency. Recipients would also warrant to maintain the fields properly.

This proposal roughly parallels the bill of Sen. Brien McMahon (D-Conn.) introduced as an amendment to the surplus act to make possible grants of fields to states, counties and municipalities.

Meanwhile, following the action of the Navy several weeks ago in announcing the list of fields it will release and those it will retain, the AAF last week disclosed its own list.

▸**More Coming**—However, the 62 combat fields, Air Transport Command and troop carrier bases, training installations and other fields listed as being retained by the AAF do not comprise the full set-up. The ones named were arrived at after two months of study, AAF declared, and consideration is continuing on other fields.



RADAR "TREE":

Camouflaged to resemble a tree, this radar installation near Stuttgart was used by the Luftwaffe to detect approach of Allied aircraft. Uncovered by air disarmament specialists as part of the Ninth Air Force program to neutralize facilities of the Luftwaffe, this lattice-like contrivance illustrates marked differences in appearance from the more compact American devices.

Airpower Taxation Approved In Poll

A survey made by Benson and Benson, Princeton, N. J., indicates that a majority of the American public not only desires post-war national security in the air, but is willing to pay extra taxes to achieve it.

The survey, released through the Aircraft Industries Association shows that 91 percent of those questioned, desire post-war air security, seven percent do not, while two percent have no opinion on the subject.

▸**Week's Earning** — When this group was asked "would you be willing to pay a tax equal to a week's earning to maintain a strong air force," the response was 67 percent yes, and 20 percent no, while 7 percent opposed an air force and four percent were undecided and two percent had no opinion.

So far as the product of the American aircraft manufacturing industry is concerned, 91 percent held that the United States makes the best airplanes, three percent held that the best airplanes were made in Germany, two percent said England and one percent Russia, while three percent had no opinion. The survey did not indicate the number questioned

NPA Report Backs Industry In Urging Full Air Production

Planning association includes significant emphasis of non-scheduled and private flying potential; asks subsidized pilot training; manufacturing termed vital reservoir of military, commercial strength.

By SCOTT HERSHEY

A strong aircraft manufacturing industry is an absolute prerequisite to the proper functioning of the other two interrelated elements of our aviation—military air force and civilian air commerce—in the opinion of the Advisory Committee on the Aircraft Industry of the National Planning Association.

The committee, in its just-issued report, says that the aircraft manufacturing industry is the reservoir from which the strength of the other two elements is drawn and raises the question as to what extent the aircraft industry will continue to be a munitions industry, to what extent it will produce for commercial uses and, finally, what proportion of its present capacity will be neither military nor commercial production.

▸ **War Shift**—The industry, before the war, was about 61 percent a munitions industry, that percentage of its output going to the armed forces. During the war, of course, it was 100 percent a munitions industry.

The committee feels that on the military side the industry should maintain production at a rate sufficient not only to maintain a high level of research and development and to supply the air forces with the best airplanes by way of current replacements, but also to make it possible rapidly to expand production which would be necessary to meet emergency requirements of international obligations and national defense.

On the civil side, the committee believes that we should strive for the greatest development of air commerce in order that as much of our essential aircraft manufacturing industry as possible may be supported from this economically useful source.

▸ **Best Fields**—The committee's report noted significantly that non-scheduled commercial and private flying offer an even greater commercial potential than scheduled air transportation. Their promotion, the report says, should be accomplished by measures calculated especially to improve the safety and utility of the smaller airplanes. By utility the committee explained it means a combination of economy, reliability, and convenience of use.

Recommendations were made that the federal government should make provision of a large number of effectively planned and located airports, together with airways improvements, navigation facilities, and traffic control; make provision for research and experimentation with respect to the smaller types of airplanes, especially new types of unconventional design, and their accessories.

In addition, the committee believes there should be a minimum of economic regulation of unscheduled flying, as well as the elimination of unnecessary technical regulation not contributing toward safety.

▸ **Pilot Plan**—The report recommends that proper action be taken to insure that a substantial number of young men and women learn to fly each year, through a Civilian Pilot Training Program for college-age youths, sponsored by the Civil Aeronautics Administration. The program, the committee believes, should provide federal subsidization of part of the cost of flight instruction necessary for private pilot certification.

The work of stimulating interest in aviation through encouragement, guidance and technical assistance should extend through all levels of education, in addition.

A research and development program should be carried on, the committee says, at a rate which will assure our continued technological and industrial leadership. In the field of fundamental research, where the object is the attainment of basic knowledge not limited in its applicability to any specific project, the committee believes government-financed fundamental aeronautical research should continue to be carried out by the National Advisory Committee for Aeronautics. In applied research and development, where competitive excellence in applying principles to particular objects or processes is of the first import, the committee holds that industry should take the lead.

Export Role

The Advisory Committee on the Aircraft Industry of the National Planning Association reports that in the aircraft manufacturing industry, exports have accounted for a larger proportion of the dollar volume produced than have exports in almost any other manufacturing industry.

The committee recommends that, in order to promote our aviation abroad, government policy should be directed toward the following ends:

▸ Liberal policies with respect to licensing, for export and for manufacture abroad, of our latest and best designs, to the extent consistent with national security.

▸ Effective cooperation of U. S. military, commercial and civil air attaches abroad, in prompt reporting of information with respect to aviation in foreign countries, as well as in the furtherance of our own aviation.

▸ Technical assistance to friendly foreign countries, especially by making aeronautical training in this country available to nationals of other countries. The cost of such training should be born partly by the foreign government and partly by our own government.

NEW FAA DIRECTOR:

Joseph J. Mitchener, Jr., has been named executive director of the Feeder Airlines Association to replace Don V. Seevers, who has accepted a position with National Aeronautic Association. Mitchener, former treasurer of FAA, takes over the association offices in Washington after having been manager of Hawthorne Airways and director of base operations of the Hawthorne aviation organization. He has had charge of all Hawthorne activities in the Carolinas except an Army contract school. Mitchener previously was a specialist in private flying and served as second region superintendent of CAA's War Training Service.

PT, Cessna Prices To Be Lowered

New "floor" prices for surplus primary trainers and Cessnas, are expected to be set shortly by the Reconstruction Finance Corp., disposal agency for surplus aircraft.

The revised rates, implementing the changed sales policy on surplus trainers and Cessnas (AVIATION NEWS, Sept. 17), are believed to retain the old ceiling prices of $2,400 on PT's and $8,500 on Cessnas. Lowest price on PT's, however, will now be $590 in place of $875.

RFC is studying closely the changes in regulations governing all surplus sales to veterans, to determine the effect on aircraft disposal. Initial reaction is that there will be little effect, although the elimination of the $2,500 limit on purchases may result in more ex-servicemen entering business as aircraft service operators.

While dropping the floor for Cessnas from $3,900 to $2,400, RFC is expected to establish separate price ranges based on condition for the different models of these aircraft.

▸ Models with heavy wing (5,400-lbs. gross weight), constant speed propeller, probably will be tagged at $8,500 when in above average condition; $7,750 when in average condition; and $7,000 in below average condition.

▸ Cessnas with heavy wing, wooden propellers, likely will sell for $7,000, $6,250 and $5,500 according to the three grades of condition. Planes with light wing (5,100-lbs. gross weight), constant speed propellers, will range from $4,500 to $3,750, to $3,000. Those with light wing, wooden propeller, and in above average condition will be priced at $3,000. All others of that description will go for $2,400.

In addition to the revised price scales, two other recent developments are expected to figure strongly in the clearing up of the tremendous number of surplus aircraft on hand. The first is the ever-growing volume of combat aircraft being scrapped by RFC. The AAF is hitting a peak of 400 planes being flown daily to RFC scrap centers.

The second is the surprising response to the educational program, under which aircraft are sold to schools and colleges, for non-flying use, at very low prices. To date, total disposals in this category are 190 — 16 bombers, 67 fighters, 100 trainers and seven gliders.

▸ **School Rush**—There has been a rush of applications from educational institutions in recent weeks, with a sizeable number of requests now in negotiation.—W. K.

WPB End

No change in the present handling of aviation by WPB is contemplated when that agency gives way to the new Civil Production Administration on Nov. 3. Since liquidation of the aviation division of WPB, main priority assistance has been for maintenance and repair of airline equipment. This will continue under the direction of William B. Hoeck, chief of the foreign and aviation sections of the Special Rating Division.

Four Air Firms Change Top Posts

Late executive appointments, resignations listed by Northrop, TACA-Kellett, Aireon; vice-presidential shifts predominate.

Vice-presidential appointments and resignations in the aviation industry highlighted late personnel news this week.

Theodore C. Coleman, vice-president of Northrop Aircraft, Inc., has resigned to organize and head a South American importing and exporting business with headquarters in Sao Paula, Brazil. He will retain his membership on the Northrop board of directors, however, and will represent the Northrop Company in South America.

▸ His resignation was accepted at a board meeting during which several executive promotions were voted. **Robert H. Biron, Jr.,** indus-

Complete Automatic Flight Revealed

"Push-button" flying, long forecast by some enthusiasts as possible in the post-war era, is feasible now through war-proven devices revealed by the Minneapolis-Honeywell Regulator Co.

Being exhibited in New York is the firm's new electronic pilot which, Russell H. Whempner, sales manager of the company's aeronautical division, says enables a plane to be flown to its destination without the necessity of a flight crew's touching the controls.

▸ **Blind Landing** — Weighing 60 lbs., the autopilot contains plug-in facilities so that an airplane can be "tuned" to a radio beam. The device contains three small motors, gyroscopes and a control panel. Additional instruments can be coupled to the auto-pilot, making possible blind landings without human touch on the controls.

Whempner said it is practical to equip an aircraft with push-button mechanism tied into the automatic radio direction finder, with each button tuned to a different city. After takeoff, the pilot can push the proper button for a point 200 miles away, and the device will fly the plane directly to the destination.

Whempner pointed out that while these and other war-born equipment make flying simpler, more economical and safer for pilots and airline operators, they were developed especially for the use of the passenger and private flyer.

▸ **Companions**—The other electronic systems are: cabin temperature control; "formation stick," making possible one-hand control of aircraft through the electronic pilot; engine temperature control; a gasoline gauge; a cathode ray artificial horizon; a remote positioner; an altitude switch which can regulate movement through or around dust filters depending on the height of the airplane and the volume of dust in the air; a device to control gasoline flow from various fuel tanks.

trial relations director since April, was named vice-president in charge of industrial relations. **Roland J. Pagen**, controller, received appointment as company treasurer. **Claude N. Monson**, former treasurer and vice-president, was appointed to the position of vice-president in charge of finance.

▸ **Leonard C. Peskin** has been named vice-president, contracts, of Kellett Aircraft Corp., for administration of the military contracts, commercial sales, products research and development, field service and testing, helicopter flight operations and customer servicing functions. Peskin, who joined Kellett in 1943, has been manager of the contracts division and prior to that was products engineer and co-ordinator of experimental helicopter projects.

▸ **A. E. Welch,** formerly vice-president and treasurer of Aireon Manufacturing Corp., has been named executive vice-president and treasurer. At the same time, appointment of **Jack Kaufman** as vice-president of the company was announced. Welch has been with Curtiss-Wright and General Motors. Kaufman is an expert in the field of electronics.

▸ **Brig. Gen. Thomas O. Hardin** has been elected executive vice-president of TACA, SA, parent company of the TACA airlines in Central and South America. General Hardin has had experience in South America since 1941 when the Defense Supplies Corp. sent him there to "de-Nazify" airlines. In 1943 he became commanding general of the entire India-China division of the Air Transport Command. Prior to that, General Hardin was chairman of the Air Safety Board of the original Civil Aeronautics Authority.

'Port Radio Station 'Package' Developed

A ready-to-use airport radio station, for point-to-point and ground to plane communications, has been developed by Aireon Manufacturing Corp., of Kansas City, which produced electronic and radar equipment for Army and Navy use during the war.

Aviation radio experts, asked to comment on features of the set as announced by Aireon, expressed special interest in its flexibility. The unit has two-channel telephone emission with frequency ranges for both day and night operation and 100 percent modulation in all frequency ranges, according to the company's statement.

▸ **Highlight**—The channel range is from 2.0 to 8.0 megacycles, 200 to 410 kilocycles, or 118 to 132 megacycles, with other frequencies available on special order. Informed sources said that if this flexibility is achieved without switching units within the frame, and without impairment of performance, it is very much worth while.

Simple push-button control is provided, requiring no dialing or tuning as each channel is pretuned and controlled by radio crystals. The 50-watt packaged station, "ready to plug into a socket," is designated Type RS-1. Only component not furnished with the outfit is antenna supporting poles.

The producer says the station can be handled by third class operators since all tuning adjustments and all components are enclosed, and circuit design has been simplified. Only controls required are the mechanically interlocking push buttons and a hand or foot push-to-talk switch. Price and weight of the equipment were not given.

U. S. Aircraft Export Revealed

The U. S. sent abroad 29,074 aircraft of all types during 1943 and 1944, it is revealed by export trade figures just taken off the restricted list. The figures cover both Lend-Lease and orthodox trade, but do not include any aircraft sent out of this country for use by our own armed services.

Number of single-engine fighters led the lists for both years. In 1943's total of 12,711 aircraft, 5,314 were of that type. In 1944, 16,363 airplanes were shipped, of which 5,150 were fighters. Russia took the majority in both years, 3,442 in 1943, and 3,105 in 1944.

▸ **Red Surprise**—A surprising item in the tabulation was the number of two-engine bombers consigned to Russia: 1,357 in 1943, and 1,162 in 1944. Medium transport shipments to the Soviet also were greater than generally presumed: 148 in 1943 and 270 last year.

Aircraft shipments to the United Kingdom totaled 6,965 for the two years, with the number in 1944, 4,573, being nearly twice as much as in the preceding period. Advanced trainers constituted the most numerous type: 438 shipped in 1943, and 1,074 in 1944.

Shipment of medium transports to the U. K. (DC-3 and *Lodestar* types), only became heavy in 1944, when the number was 532. The previous year, 57 were consigned. Illustrating one of Britain's greatest weaknesses in combat aircraft is the record on naval fighter shipments: 258 in 1943, and 614 last year for a total of 872.

▸ **Bombers to Britain** — One peculiar fact turned up in a study of the trade figures is the number of light and medium two-engine bombers consigned to Britain, a total of 1,248 for the two years. It had been generally supposed that at that stage in the war, the U. K. was using mostly its own bombers as well as its own fighters.

AVIATION CALENDAR

Oct. 25—Institute of Aeronautical Sciences, Meeting, Washington, D. C.
Oct. 25-26—Institute of Navigation, Meeting, Hotel Lexington, New York.
Oct. 26—University of Illinois Airport Dedication.
Nov. 1—SAE Southern California Section, Aeronautical Meeting, Los Angeles.
Nov. 5-6-7—National Association of State Aviation Officials, Annual Meeting, Coronado Hotel, St. Louis, Mo.
Nov. 6-7—Society of Automotive Engineers National Fuels & Lubricants Meeting, Mayo Hotel, Tulsa, Okla.
Nov. 15-16—First Statewide Arizona Aviation Conference, Tucson.
Nov. 17—National Aeronautic Association, Board of Directors, Fourth Quarterly Meeting, Oklahoma City.
Nov. 19-20—Tenth Annual Meeting of the National Aircraft Standards Committee, Aircraft Industries Association, Chicago.
Nov. 19-21—Third National Aviation Clinic, Oklahoma City.
Nov. 26-27—National Aeronautic Association—Joint Private Flyers' Conference, Statler Hotel, Washington, D. C.
Nov. 26-30—American Society of Mechanical Engineers, 66th Annual Meeting, Hotel Pennsylvania, New York.
Dec. 3-5—SAE National Air Transport Engineering Meeting, Edgewater Beach Hotel, Chicago.
Dec. 10-11—Aviation Distributors and Manufacturers Association, Hotel Statler, Cleveland, Ohio.
Dec. 13-14—Airline Finance and Accountant Conference, Dallas.
Dec. 16-17—International Aviation Day, El Paso.
Dec. 17—Institute of Aeronautical Sciences, Wright Brothers Lecture, Washington.
Dec. 17—Award of Robert J. Collier Trophy, auspices of National Aeronautic Assn. Place to be announced.

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Jan. 4-5-6—All-American Air Maneuvers, Florida Air Races.
Jan. 7-11—SAE, Annual Meeting, Book-Cadillac Hotel, Detroit, Mich.
Jan. 11—Cleveland (Ohio) Aircraft Show.
Jan. 28—Institute of Aeronautical Sciences, Honors Night Dinner, Waldorf-Astoria Hotel, New York.
Jan. 29-31—Institute of Aeronautical Sciences, Annual Meeting, tentatively scheduled for Pupin Laboratory, Columbia University, New York.
April 3-5—SAE National Aeronautic Spring Meeting, Hotel New Yorker, New York.

New Culver Model V Features Control Changes, Fuel Injection

Manufacturer claims postwar, two-place lightplane is fastest in world for given horsepower; spinproof, antistall characteristics described as CAA certification is awaited; dealer demonstrators promised soon.

Electrically-actuated, retractable, tricycle landing gear and large wing-flaps, spinproof and antistall characteristics, and a fuel injection 85-hp. Continental engine are interesting new features of the two-place post-war Culver Model V, announced by Culver Aircraft Corp., Wichita, last week.

Without giving actual performance figures "until they have been certified by CAA", the manufacturer describes the new plywood-fabric, low-wing monoplane as "the fastest lightplane in the world for given horsepower" and more specifically as having a cruising speed higher than the guaranteed 120-mph. cruising speed of the pre-war Culver 75-hp., two-place plane.

▸ **Control System**—The "simplified control" at which Culver teaser advertisements have been hinting turns out to be a "basic interconnection of wing flaps with the stabilizer together with a flight control dial indicating optimum settings to obtain the best performance of the airplane. At such settings the airplane will inherently tend to trim for optimum performance."

An interconnection of stabilizer and flap was used on the Stinson SR-6 *Reliant* a number of years ago. Its purpose is to trim the plane automatically by tilting the leading edge of the stabilizer to counteract the changes in center of gravity of the plane caused by various flap settings.

Culver describes its simplified control as "greatly reducing the hazards from the art of flying" and asserts it "eliminates the hazards of cross-wind landing which are existent on other types of so-called simplified control."

The manufacturer has advised AVIATION NEWS that "information concerning the entire mechanics for simplified control will be released at a later date along with performance details and price."

▸ **Wing**—Wing design of the Model V is interesting with flaps extending the full length of the inboard wing section and under the fuselage. Outboard portions of the wings are set at a marked dihedral giving the plane a gull-wing appearance.

Tail surfaces are large, and a one-piece elevator is used.

▸ **Tank**—A nylon and rubber gas tank, developed by Goodyear, which makes it possible to carry gasoline in the leading edge of the wing without damage to tank from deflection of the wing, and which insures a minimum change in trim, is used in the model V.

▸ **Gear**—The tricycle gear, which is tucked away neatly into wings and nose, is actuated with an electric power unit developed by Al Mooney, Culver chief engineer, with emergency manual operation provided also.

The landing gear and other features of the plane which differ markedly from the pre-war Culver, are products of the company's war-time experience in building what the AAF calls *Yehudis* radio-controlled target planes for anti-aircraft artillery practice. During the war years, Culver built several thousands of these planes with powerplants ranging from 90-hp. to 150-hp., and with fixed and retractable tricycle landing gear. The planes were widely used in this country and abroad for practice of both Army and Navy gunners.

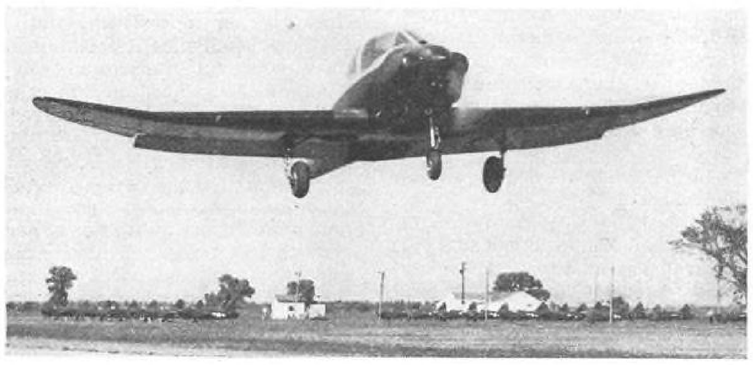
Among other features cited in the company announcement:

▸ Sufficient payload to carry 80-lbs. of baggage; 35 gallons of fuel;

Culver Comparison

Dimensional comparison of the new Culver Model V with the pre-war Culver *Cadet* shows that the new plane is larger in every respect:

Model V		*Cadet*
20-ft., 6-in.	Length	17-ft., 8-in.
29 ft.	Span	27-ft.
6-ft., 9½-in.	Height	5-ft., 6-in.



Culver's Post-war Offering: *With flaps and tricycle gear extended, the new Culver Model V comes in for a landing at Wichita, above. Comparison of the post-war Model V with the pre-war Culver* Cadet, *below, shows the increased size, cleaner lines and roomier cabin of the newer plane, at left. The Model V is entered through a hatch swinging forward on hinges to the engine cowling.*

pilot; passenger; oil; chutes, and essential flight instruments.

- Elimination of the carburetor icing threat by the fuel injection system in the powerplant.
- Factory built-in provision for two-way radio.
- Individually adjustable seats with rubber Airfoam cushions.
- Larger and wider cabin.
- Larger landing gear wheels (eliminating the most criticized feature of the pre-war Culver) and a "soft landing gear."

The new Culver Model V has been flying for some time at the Wichita plant and demonstrators of the new type will be placed in the hands of dealers soon after Jan. 1.—A. McS.

Civilian Air Schools End AAF Program

The program under which civilian flight schools trained military airmen for the AAF and allied nations, ended last week with the graduation of the final class from Hawthorne School of Aeronautics, Orangeburg, S. C.

While the exact number of cadets given primary training under the program has not been announced by the Army, the total is estimated at 250,000 by Wayne Weishaar, secretary of the Aeronautical Training Society, the organization representing the 64 schools engaged in the work.

- **Ending**—Last students to fly at the contract schools were French pilots at the Orangeburg base. British training ended last month, and the last AAF school closed August 4.

In the five years of the program, ATS schools:

- Increased the pilot production rate from 500 to 110,000 a year.
- Saved, at a conservative estimate, $250,000,000 a year, based on what it would have cost the AAF to expand its own facilities to achieve that rate.
- Attained a safety record of only one fatal accident for every 63,230 hours of primary flight, which is about equal to 6,323,000 miles of flying.

The contract school program was launched in 1939 when the AAF was the Army Air Corps, and its only primary training facility was Randolph Field, Texas—capacity, 500 pilots a year.

Since the barnstorming days of the twenties, the veterans of aviation had been conducting their own flying schools and charter operations, some doing well, most operating on a marginal basis. These were the men called upon when the Army saw the need to expand its aviation arm. According to one account, they gambled completely, were given no contracts, no guarantee of payment—because the Air Corps did not have the authority nor the funds to make the venture official.

- **Narrow Margin**—The school operators paid their own expenses, some borrowed. When an appropriation was finally obtained from Congress, it won by two votes.

CAP Funds

Appropriation of $214,000 of state funds for support of the California State Wing of Civil Air Patrol for the next two years has been approved by Earl Warren, governor of California. Disbursement of the funds will be supervised by the State Department of Education. Colorado and Wyoming also are expected to make biennial CAP contributions of $20,000 and $16,000 respectively.

UPMA Representative Named For Air Parley

James W. Batchelor, Washington attorney and aviation legal consultant, is representing United Pilots & Mechanics Association at the Provisional International Civil Aviation Organization meeting which opened Oct. 15 at Montreal, Canada.

The association will offer recommendations for simplicity of regulation, elimination of "red tape" and removal of international barriers to free transit of private and non-airline planes between nations. The association is urging the importance of permitting the fullest development of private flying internationally, by avoiding complicated rules and over-rigid pilot standards. A minimum of international regulation consistent with public safety is asked also.

Exhibit Invitation

Invitations to all manufacturers of personal planes to exhibit their post-war models at the opening of Oakland (Calif.) Municipal airport to civilian flying, sometime next spring, is being extended by the Oakland Chamber of Commerce. The airport has been in military use for the last three and one-half years, and exact date of the private flying show will be determined by the date the field is released by military authorities.

PENALTIES

Ten Lose Licenses For CAR Offenses

Fraudulent altering of Airman Rating Record and flying while under the influence of intoxicating liquor are two of the violations of Civil Air Regulations which prompted the Civil Aeronautics Board to revoke pilot certificates of four airmen, recently, and suspended six others.

Summary of the violations and Board actions follow:

REVOCATIONS:

Donald Tait Speirs, private pilot, for misrepresenting in writing, Mar. 2, 1945, that he had been a member of the armed forces of the United States within the preceding 12 months and had served on solo flight status for six months, fraudulently altering his Airman Rating Record to indicate that he was the holder of a 0-330 horsepower rating, and piloting various aircraft when he had not passed the required physical examination. **Actions violated CAR sections 20.121 and 20.73. Certificate revoked.**

Henry Alexander Duncan, commercial pilot with flight instructor ratings, for flying at less than 1,000-ft. altitude over a congested area of Fort Yukon, Alaska, July 4, 1945, and carrying a passenger dangerously low over the solarium of a hospital and over a congested area at a time when he was under the influence of intoxicating liquor. **Actions violated CAR sections 60.3500 and 60.345. Certificate revoked.**

David Bovarsky, student pilot, for carrying a passenger who was not a certificated instructor, in the vicinity of Ashburn Airport, Chicago, May 19, 1945, and flying without having in his personal possession a pilot certificate, a then required Airman Identification Card, and medical certificate, and for making an unauthorized cross-country solo flight outside of the vicinity of the operating base of his instructor. **Actions violated CAR sections 20.720, 20.33, 20.37, 20.730, and 20.71. Certificate revoked.**

Gaylord Sanford Sargent, private pilot (student pilot at the time of the offense), for carrying passengers on numerous occasions in the vicinity of Chinook, Mont., and for piloting an aircraft of greater horsepower than that authorized by his rating numerous times during May 1945. **Actions violated CAR sections 20.720 and 20.70. Certificate revoked.**

SUSPENSIONS:

Mozelle Henderson, student pilot, for permitting a person to operate and carry a passenger in his Piper Cub without first ascertaining that such person was the holder of an appropriate, curently effective pilot certificate, by actual examination of same, and requiring the person to identify himself, Feb. 11, 1945. **Action violated CAR section 20.726. Certificate suspended for 90 days.**

Two students pilots flying at less than 500-ft. altitude violated CAR section 60.3503 and received six months suspensions of their pilot certificates:

Billy Frank Chapman in the vicinity of Martin Springs, Tex., Apr. 7, 1945.

James Douglas Connell in the vicinity of Monmouth, Ill., Mar. 28, 1945.

Student Pilots David Kamar Gardner and Levi Franklin Branch for taking off from Peter O. Knight Airport, Tampa, Fla., and proceeding to a practice area five miles distant, where they flew at 500-ft. altitude within 500-ft. of each other Mar. 1, 1945. **Actions violated CAR section 60.343 and 60.3503. Certificates revoked for six months.**

Bert E. Buttles, student pilot, for performing an acrobatic maneuver, consisting of a stall, when he was not wearing a parachute, Mar. 18, 1945, and landing on a highway near Hopkins, Minn. Although the propeller of the plane sustained major damage in landing,

Sales Staff Rise

Organization of distributor-dealer units by the leading personal plane manufacturers, is crystalizing into a set-up far beyond the number of dealerships existing for the same companies in pre-war years. The pre-war "Big Three" companies in light-plane sales, Piper, Taylorcraft and Aeronca, now have approximately 60 distributors apiece. Besides these, Piper and Aeronca each have close to 500 dealers while Taylorcraft has more than 250, and may increase this number.

Buttles attempted to takeoff from the highway, and consequently collided with an automobile. **Actions violated CAR sections 60.72 and 01.24. Certificate suspended for six months.**

Tuna Fleet Plane Opens New Fields

Use of the Republic *Seabee* amphibian as a scout plane for the San Diego, Calif., tuna fleet is being watched with interest by the fishing industry as the possible opening of a new field for small seaplanes and amphibians.

The four-place *Seabee* was carried on the big new tuna boat, *Pan-American*, skippered by M. M. Hodina and owned by Anthony Martinolich, who also designed and built the motor clipper. Largest of the tuna fleet, the *Pan-American* is big enough to carry a small seaplane without trouble. The *Seabee* is to operate from a land base in Costa Rica, scouting the Central American waters for schools of tuna, and will direct the fleet to the best fishing areas by radio.

Original — While small float planes have been used by warships for many years as scouting planes, it is believed that this is one of the first instances of a scout plane used with a fishing fleet.

Rotor Glider Shown

A rotary-wing glider, with possible sport flying applications, which operates on the principle of auto-rotation of two blades without power in a descending flight, is under experimental test at Wright Field. Shown to the public for the first time at the AAF "Air Fair," the entire device weighs only 50-lbs., is designed to carry a load of 240-lbs. to a landing.

Developed as a mechanical parachute to land personnel and supplies behind enemy lines, the *Rotachute* is launched from a transport plane in flight. The occupant sits on a bicycle seat, controls the device's direction by vertical and horizontal control surfaces behind him.

Briefing *For Private Flyers and Non-Scheduled Aviation*

First use of a helicopter for a "frost dispersal" experiment is scheduled at Michigan State College, East Lansing, within the next few days. A. W. Farrall, head of the agricultural engineering department, has arranged to have an AAF helicopter flown to the college experimental farms from Wright Field for the tests. Temperature readings show that the air is usually from 5 to 10 degrees warmer at about 25-ft. above the ground than at ground level during "cold snaps." The Michigan agricultural experts anticipate the whirling helicopter blades may fan the warmer air down to the ground thus preventing frost on the college orchards and muck farm.

NEW INDIANAPOLIS HAVEN—New haven for the private flyer in the Indianapolis area will be Brightwood Airport, 200 acre field only 3.7 miles from the well-known center of the Hoosier capitol, Monument Circle. Better still, the airport will have regular city bus and trolley service. The fourth private airport to serve Indianapolis, Brightwood airport was approved by the county planning commission only after a lengthy fight and over the protests of neighboring landowners. A trio of businessmen flyers, William and Milton Barker and Jerry Roesch, will operate the field, with Mrs. Esther Latham, ground school instructor and private flyer, as manager. Approved plans call for 4,000-ft. sod runways, so that the field will be useable by fairly large planes, and may eventually be used by feeder airlines as a convenient terminal with public transportation to downtown Indianapolis.

MORE WORK FOR FBI—Amendment to the Dyer motor-theft law, which has now become effective, makes interstate transportation of a stolen airplane, a federal offense. The amendment sponsored by Senator Pat McCarran, and recently signed by President Truman, gives the Federal Bureau of Investigation and other federal enforcement officials authority to arrest and prosecute anyone who flies a stolen plane over a state line. The motor-theft act has been the most effective method of breaking up "hot-car rings" which used to take a heavy toll of automobiles. And now that personal planes are expected to become "a big business," most aviation people agree that similar protection for the private plane owner is well worth having.

TAYLORCRAFT SALES PLAN—Taylorcraft aviation division of Detroit Air-Craft Products, has announced completion of arrangements for a special sales training program for its distributors and dealers, under supervision of O. M. Bell, sales manager. The course is in many respects similar to those previously announced by the other two largest lightplane manufacturers, Aeronca and Piper, since all three courses are designed by the Aviation Institute of Professional Sales Training for a 24 weeks correspondence school program. Supplementary training sessions are planned by Taylorcraft at the factory and at dealer meetings in all parts of the country during the next few months. Importance of adequate salesmanship training is emphasized by Taylorcraft, because of the keen competition which is to be expected in personal plane sales as soon as the first post-war demand is satisfied and the sellers' market becomes a buyers' market.

IDAHO TOURIST AIRPARK—At Thousand Springs Airpark, Hagerman, Idaho, extensive accommodations for air tourists are being constructed by Delbert Clampitt, owner of the new field. These include tourist cabins; a lodge building, including a ballroom, and dining room with 400-person capacity; cocktail lounge; game rooms, 24-hour service coffee shop; swimming pool; tennis courts; riding academy; motor cruiser rides on Snake River, and rental boats for fishing and duck hunting. The airpark, located in Snake River Canyon, will have a 4,500-ft. main runway, cinder block hangar with showrooms, shops, parts department, and A & E mechanics and flight instructors. Lamdine Stevens, aerial coyote hunter, has been named manager of the field.

—Alexander McSurely

Lightplane Control Techniques Loom As Critical Sales Point

Simplified versus conventional control question provides previously minimized marketing controversy; concessions to new methods becoming apparent; public defense of orthodox system undertaken by Piper.

By KARL HESS

Lightplane control systems, simplified or conventional, promise to provide a highly contested selling point in the peacetime personal aviation market, although concessions to the simplified technique are apparent.

What appeared to be a definite step toward public airing of this phase of lightplane design came recently when Piper Aircraft stressed the utility of its *Cub* trainer on the basis of conventional controls that would allow "slipping" into tight landing areas.

▸ **Cross Control**—The fact that the *Cub's* controls, like those of all conventional planes, could be crossed—rudder pedals and stick reversed laterally—was pointed to as an extra margin of safety not found, it was intimated, in simplified control aircraft where the rudder control is automatically coordinated with the aileron control for elimination of the pedals.

Performance reports of the *Ercoupe*, most publicized and one of the two simplified control planes now listed as flying, raise an immediate defense, however. (The second simplified craft, developed by General Aircraft as the G1-80 *Skyfarer*, is set to be produced by Le Mars Aircraft as the *Skycoupe*.)

First defense centers on the tricycle landing gear featured by the *Ercoupe* and allowing greater braking to halt fast, steep landings. The plane has been reported, by one pilot, to have sustained a 90-mph. landing without damage and without excessive roll, pitching forward on the front wheel oleo instead of nosing over as would a tail-wheel plane under such brake pressure.

▸ **'Mush Vs. Slip'**—Aimed squarely at the landing feature claimed by the conventional control craft, the *Ercoupe's* aerodynamic design provides a little publicized, but tested, method of emergency or "tight" approach. At what would amount to full-stall stick position on a conventional plane, the *Ercoupe* "mushes" downward at an acute angle but without building up great speed. This almost vertical mushing effect has been termed, by some users, equal and superior to the older slipping method of "getting in tight." Basically it seems it would provide, at least, a practical emergency substitute for the slip.

▸ One "dark horse" possibility in the control field is a simplified system promised by Culver for its post-war personal plane. Company officials have stated the technique employed will allow the beginner to fly safely in a shorter time than usual; but hinted it would not be patterned after the system employed in the *Ercoupe*. (See Culver story, Page 14, this issue).

Main concession of an orthodox control manufacturer to the simplified control is that of Aeronca, now licensed to use the *Ercoupe* patent. One of the largest lightplane builders, Aeronca's move toward the new technique is perhaps just the first of many such moves by other companies.

▸ Another simplified control model reportedly headed for the peacetime market is the Kaiser-Hammond pusher, twin-boom lightplane where rudder pedals are eliminated by a system described as different from the Ercoupe plan.

▸ Following the switch of General's *Skyfarer*, production to Le Mars, General is planning expanded production of "other models" of the simplified control plane at a Tennessee plant.

▸ Farther afield than any of these is the "great unknown" of control techniques as advocated by George Spratt, Convair engineering executive, in his "movable wing" experiments. Spratt has asserted he is aiming at even further simplification of controls than those incorporated in the rudder-aileron planes with only two basic control movements. Ideal, according to Spratt, would be a single control movement, adjusting ascent and descent by use of speed changes alone. He reports accomplishing this in one of his first experimental models, and thereby provides another stepping stone in the "where do we go from here" path of lightplane development.

Lightplane Trips Beat Airline Time

Savings in time by flying in private plane rather than in an airliner are possible if the private plane used is of a type suitable for cross-country flying and not mere airport hopping, C. S. Robinson, operator at Bendix Airport, Teterboro, N. J., declares.

Citing figures from his own experience flying a Fairchild 24 from New York to Washington, as against trips he has made by air and by train, on scheduled commercial carriers, he reports the following time analysis, showing comparative times of 2 hours, 35 minutes, for the private plane, 3 hours, 10 minutes, by airliner, and 4 hours, 55 minutes, by train, each representing time consumed from his office in New York to his hotel room in Washington:

PRIVATE PLANE	*TRANSPORT PLANE*	*TRAIN*
To airport—25 mins.	To city ticket office—10 mins.	To the station — 15 mins.
At field—10 mins.	At city ticket office—10 mins.	At station—15 mins.
Flight to Wash.—1 hr. & 40 mins.	To airport—25 mins.	Train time—4 hrs.
At Wash. Airport—10 mins.	At airport—15 mins.	
Cab to hotel—10 mins.	Flight to Wash.—1 hr. & 40 mins.	At Washington station—15 mins.
	At Wash. Airport—20 mins.	To hotel—10 mins.
	To hotel—10 mins.	
TOTAL: 2 hrs., 35 mins.	TOTAL: 3 hrs., 10 mins.	TOTAL: 4 hrs., 55 mins.

ACCIDENT REPORTS

Lightplane Mishaps Analyzed By CAB

Investigations of seven lightplane accidents have been released by the Civil Aeronautics Board. Three persons were killed and ten others injured as a result of the mishaps.

Briefs of the accidents and Board findings are given below, in an effort to help pilots see and avoid the mistakes of these airmen.

CORPUS CHRISTI, TEX.: Student Pilot William Parkes Collins, 19, Webster Grove, Mo. (2nd solo flight), and Jerry Jean Jarbdaux, 17, Corpus Christi (21 solo hours), piloting a Piper J3F and Piper J3L were injured in an air collison which occurred when the two pilots attempted to land at Cliff Maus Airport, Feb. 13, 1945. Miss Jarbeaux, flying the flight pattern, received a green light to land and started her final turn for approach. Collins, at this time, turned from his downwind to his base leg and was also given a green light. The aircraft were about 2,000-ft. apart, flying nearly at right angles, Jarbeaux gliding toward the southeast, Collins cruising toward the south-southwest and angling in toward the field. The control tower gave Collins a red light which Collins stated he did not see. Continuing on their respective courses, the aircraft collided at 100-ft. altitude about 600-ft. from the end of the runway. Investigation found Jarbeaux substantially on the flight pattern, Collins in shortening the pattern, had deviated from it. He said he was "crabbing" into the wind to counteract drift.

CAB FINDING: Probable cause of accident was Pilot Collins' failure to adhere to the established traffic pattern. Contributing factor was lack of alertness on the part of both pilots.

SPRINGFIELD, MASS.: Commercial Pilot John M. Wells, 41, Southbridge (1,050 hours flight time), and his passenger, Commercial Pilot Ben F. Follett, Jr. (564 hours), were injured when they attempted to land the pilot's F-17D Beechcraft with vision obscured by an oil-covered windshield, Oct. 20, 1944. At the end of an uneventful flight from Buffalo, Wells started a letdown into the Springfield Airport from 1,000-ft. Just after the landing gear was lowered, and with engine at cruising rpm., oil began misting on the windshield and smoke entered the cabin. Forward vision was completely obscured within a few seconds. The pilot made two landing approaches, overshooting on both. Smoke then became so intense that the pilots suspected fire. On a third approach, at 80-mph. airspeed, the plane overshot, and struck fence and trees before finally stopping 150-ft. beyond. Investigation revealed the oil had come from the propeller oil seal gasket which had failed. Smoke was due to some of this oil striking the hot exhaust collector ring.

CAB FINDING: Probable cause of accident was loss of forward vision while landing due to the failure of a gasket which permitted oil to spray over the windshield.

ANCHORAGE, ALASKA: Private Pilot Roger Ernest Smith, 18, Aleknagik (230 flight hours), was injured fatally when he attempted to land his Taylorcraft BCS-65 during thick fog at night, Sept. 27, 1944. Smith took off from Lake Creek at sunset on a return trip to Lake Spenard, 65 miles distant, although the weather at his destination was rapidly becoming unsuitable for contact flight. He crashed on Elmendorf Field, presumably while trying to get under the fog and after probably having seen the lights of that field. Visibility was ⅛ mile. Investigation revealed that aircraft's pontoons had struck an embankment on the airport during a fast glide.

CAB FINDING: Probable cause of accident was poor judgment of pilot in attempting a flight under known adverse conditions.

GRANTS PASS, ORE.: Mrs. Ernest King was seriously injured when she walked into the idling propeller of a plane, Mar. 11, 1945. Mrs. King saw a friend, Student Pilot Bennie Spalding, 30 (300 hours), taxi to the line and walked forward to talk to him. The wind was blowing and as she reached for her hat she stepped into the propeller path. Spalding did not notice Mrs. King until she had neared the propeller at which time he cut the switch.

CAB FINDING: Probable cause of accident was carelessness of Mrs. King in approaching the idling propeller.

BROWNFIELD, TEX.: Private Pilot Lawton Nicholson, 43 (163 hours), was killed and his three passengers, Robert Bowers, Jr., 15, Jack Worsham, 14, and Richard McDuffie, 15, were injured when the pilot's Piper J5A lost altitude during a sharply banked turn near the ground and crashed, Feb. 18, 1945. Flying over the town at about 150-ft. altitude, Nicholson made alternate dives and climbs in such a manner that his passengers were lifted from their seats and two of the boys became air sick. At 50-ft. the plane was seen to enter a very sharp diving turn which continued until the left wing struck the ground. Investigation showed no malfunctioning of the aircraft. Apparently the pilot had not fastened his safety belt.

CAB FINDING: Probable cause of accident was reckless low flying during which the pilot failed to properly control the aircraft.

DAYTON, OHIO: Private Pilot John Ernest Golob (800 solo hours), and his passenger, Miss Doshia Coomer, were seriously injured when an improperly installed control stick caused an uncontrolled climb in which the plane stalled and crashed to the ground, Oct. 12, 1944. Golob installed the rear control stick and, with his passenger in the front seat, started a takeoff. The plane left the ground in an almost stalled attitude and climbed steeply to an altitude of 75-ft. At this point the plane stalled, fell off the right and crashed. Investigation revealed that the curved control tick was only partially inserted in its socket. The bend, instead of being to the rear, was forward where it would strike the rear of the front seat and restrict normal down travel of the elevator when forward pressure was applied on the stick. Normal longitudinal control was impossible. The safety pin was found, minus its cotter, on the floor of the front cockpit.

CAB FINDING: Cause of this accident was carelessness on the part of the pilot in not installing the control stick properly, with the result that no downward movement of the elevators could be accomplished.

WEST MANCHESTER, OHIO: Student Pilot Donald Stephen Overholser, 18, Dayton (47 flying hours), was seriously injured and his passenger, Stanley Ashbaugh, 18, was killed in a crash which followed 20 minutes of reckless flying in an Aeronca 65-LB, Nov. 12, 1944. Overholser, supposedly on a local practice flight, landed on a farm 20 miles from Dahio Airport and picked up Ashbaugh. Following takeoff from the farm field the plane was observed hedge-hopping, diving and zooming. After 20 minutes of this reckless flying the plane was pulled up into a steep climb and stalled. It then dived nose-first to the ground. Investigation revealed that dual controls were operative and that neither safety belt was fastened. There was no indication of aircraft failure.

CAB FINDING: Probable cause of accident was reckless, low flying which terminated in a stall at an altitude too low to effect recovery.

FIRST UNIVERSITY AIRPORT IN WEST:

To his already long list of contributions to University of Southern California, Los Angeles, Allen G. Hancock, wealthy oil man, has added the facilities of Hancock College of Aeronautics at Santa Maria, Calif. War pilots originally were trained at Hancock. Now, the college students enrolled for aeronautics courses will use these trainers, including an Ercoupe, *in the foreground, to extend into the air their ground instruction.*

CERTIFICATIONS

Surplus Lightplanes Licensed By CAA

New airworthiness certificates for 23 lightplanes have been granted by the Civil Aeronautics Administration. These aircraft were purchased by individuals and firms from military surplus.

List of the aircraft numbers, buyers, make and model of plane and engine, and date of manufacture follows:

NC 47292—Vincent S. Burass, 1005 S. Chester Park Ridge, Ill. Aeronca, Continental A65, Mfd. Jan. 1943.

NC 47571—Carlos A. Clark, 5203 Vera Cruz Ave., Minneapolis, Minn. Aeronca, Continental A65, Mfd. May 1943.

NC 47423—Leon Wise, 428 E. Siebenthaler Ave., Dayton 5, Ohio. Aeronca, Continental A65, Mfd. May 1943.

NC 47473—Milton Lamb, Vermontville, Mich. Aeronca, Continental A65, Mfd. May 1942.

NC 47529—F. E. Martin, Hatbox Field, Muskogee, Okla. Aeronca, Continental A65, Mfd. July 1943.

NC 47613—Ralph Ashlock, Baird, Tex. Aeronca, Continental A65, Mfd. July 1942.

NC 47669—Leonard C. Host, Box 481, Cleveland, Tex. Aeronca, Continental A65, Mfd. July 1942.

NC 47750—Eugene H. Ryan, 301 East Mesa, Gallup, N. Mex. Aeronca, Continental A65, Mfd. Nov. 1941.

NC 47791—Kenneth Blair, Alta Fied, Route 2, Dinuba, Calif. Aeronca, Continental A65, Mfd. Aug. 1942.

NC 47816—C. G. Mixon, 120 W. Young St., San Antonio, Tex. Aeronca, Continental A65, Mfd. Mar. 1942.

NC 47859—Harry Schroeder, 405 N. Seventh, West Monroe, La. Aeronca, Continental A65, Mfd. Feb. 1942.

NC 47886—Elmer J. Chambers, 2044 Bissonnet, Houston, Tex. Aeronca, Continental A65, Mfd. Aug. 1942.

NC 48054—Thomas B. Stevens, 317 N. First, Grand Junction, Colo. Aeronca, Continental A658, Mfd. Sept. 1942.

NC 46026—Harold H. Harwich, 27 Lanark Rd., Brighton, Mass. Aeronca, Continental A658, Mfd. Jan. 1944.

NC 47292—Vincent S. Burass, 1005 S. Chester, Park Ridge, Ill. Aeronca, Continental A658, Mfd. Jan. 1943.

NC 47571—Carlos A. Clark, 5203 Vera Cruz Ave., Minneapolis, Minn. Aeronca, Continental A658, Mfd. May 1943.

NC 47423—Leon Wise, 428 E. Siebenthaler Ave., Dayton 5, Ohio. Aeronca, Continental A658, Mfd. May 1943.

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Plea For Government Policy Outlines East Coast Planning

Bell, United stress helicopters; C-W, Martin stress military order need; Fairchild sees "new" industry; Grumman, Republic list other projects during testimony before Senate subcommittee.

Crystallization of postwar plans among East Coast aircraft manufacturers awaits to a considerable degree a definite Administration aviation policy and the setting up of a clearly understood military program of procurement, research and development.

This was plain in the testimony of leading East Coast aviation executives before a Senate subcommittee at which a hint of immediate programs was given.

▸ **Bell**—L. D. Bell, president of Bell Aircraft, said his company was convinced that the utility of the helicopter is so high that it will ultimately prove to be the basis for an entire new air industry. He said the company was so impressed with the successful flight characteristics of their experimental helicopters that Bell's board of directors has authorized the production of a substantial number. The new helicopters now designed range in power from 150 to 500 horsepower and are suitable for a wide variety of commercial, industrial and military uses.

The company's work in the military aircraft field is now primarily concerned with experimental and development work. Bell said the company has always placed special emphasis on research and developmental aviation and there is no inclination to alter this procedure. He said the company was engaged in several projects which call for the development and operation of high speed unconventional aircraft.

▸ **United**—H. M. Horner, president of United Aircraft Corp., said his company plans to "aggressively pursue commercial markets for engines, propellers and helicopters, domestically and abroad." He added that United does not plan to enter any fields other than aircraft at this time.

▸ **C-W**—G. W. Vaughan, president of Curtiss-Wright, reported that his company will complete delivery of all remaining military production except for some spares and certain experimental contracts this month. Curtiss Wright has approximately 25,000 employes on the payroll today compared with 127,000 on VJ Day. Of the 25,000, about 10,000 are engaged on termination while a substantial percentage of the others are on assembly operations, a large part of which will be completed by the end of this month.

Curtiss-Wright has a small amount of commercial orders but Vaughan said no matter how successful the company is in increasing these, they must rely heavily on military orders for some years to come if they are to maintain a nuclear structure sufficiently strong and sufficiently skilled to supply the Air Forces with advanced types of aircraft and other devices.

Vaughan said Curtiss-Wright is definitely interested in the development of products either related to or wholly unrelated to the aircraft industry and had devoted considerable time and effort recently to the study of dozens of products which fall within this category.

▸ **Fairchild**—J. Carlton Ward, Jr., head of Fairchild, looking to the future said the Duramold division is ready to start employment with plans to continue basic Duramold research which has applied to war products and which now can be shaped into the needs of the postwar military branches in addition to new uses for peacetime products. In this manner, he added, they hope to create a new industry that did not exist before the war.

▸ **Ranger**—The Ranger Engine Division, he explained, presents a problem that is large and complicated since no current demand exists for the specialized military engines that were developed. Realizing that approximately five years is required for a new engine to be perfected and that no immediate solution is in sight for this specialized field of activity, attempts have been made by Ranger to procure suitable contracts as a subcontractor to manufacturers in other industries for the manufacture of peacetime articles for which a demand already exists.

▸ With respect to Fairchild Aircraft Division, no insurmountable problem presents itself in the Hagerstown locality as long as present Army contract for the C-82 *Packet* is continued. In connection with the private owner airplane field, Fairchild is giving this problem considerable attention.

▸ **Martin**—The Glenn L. Martin Co. feels that future sales possibilities for manufacturers of commercial aircraft are extremely limited and that the comparatively small demand will enable the industry to retain only a minor portion of the nation's aircraft producing capacity. The manufacture of commercial flying boats, in which Martin has always been one of the leaders, is considered a potential source of future sales, although the company has no orders for such craft at present.

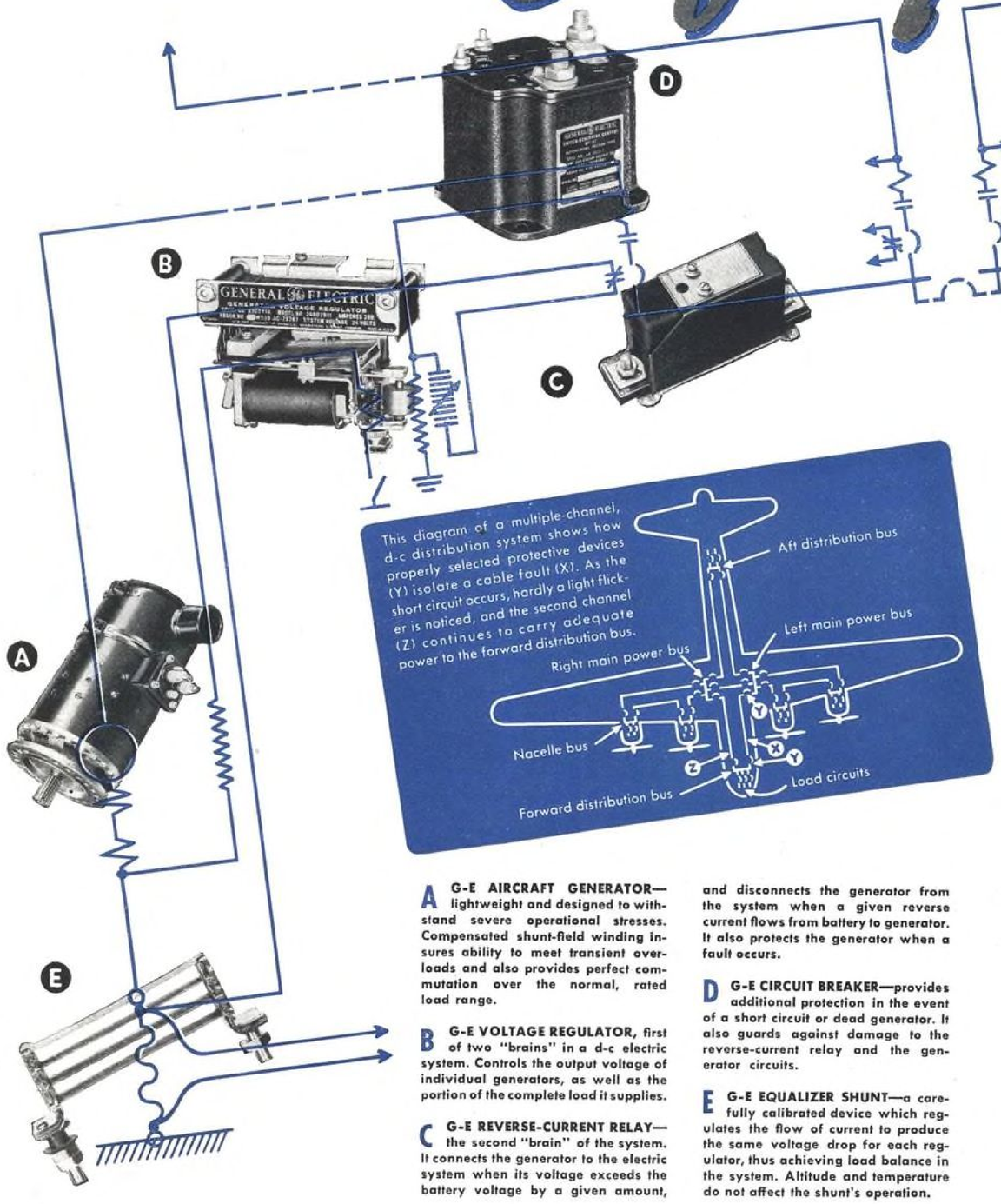
A small group of Martin em-

LIGHTWEIGHT RECEIVER: *First post-war aircraft radio receiver of the Ranger Aircraft Radio division of Electronic Specialty Co., is this Model 117 weighing 1-lb., 12 ounces. A five-tube superheterodyne with automatic volume control, it operates on batteries. The entire unit is a three and three-quarters inch cube and the receiver may be mounted anywhere on the instrument panel through a three-inch hole. Battery pack measures 2¾-in. square by 6½-in. deep.*

HERE'S NEW Safety.... NEW Stability

FOR BIG-PLANE ELECTRIC POWER SUPPLY

Developed for the B-29, this G-E power system makes four or more generators work as a balanced unit—gives a uniform flow of power under all conditions of flight.



A G-E AIRCRAFT GENERATOR—lightweight and designed to withstand severe operational stresses. Compensated shunt-field winding insures ability to meet transient overloads and also provides perfect commutation over the normal, rated load range.

B G-E VOLTAGE REGULATOR, first of two "brains" in a d-c electric system. Controls the output voltage of individual generators, as well as the portion of the complete load it supplies.

C G-E REVERSE-CURRENT RELAY—the second "brain" of the system. It connects the generator to the electric system when its voltage exceeds the battery voltage by a given amount, and disconnects the generator from the system when a given reverse current flows from battery to generator. It also protects the generator when a fault occurs.

D G-E CIRCUIT BREAKER—provides additional protection in the event of a short circuit or dead generator. It also guards against damage to the reverse-current relay and the generator circuits.

E G-E EQUALIZER SHUNT—a carefully calibrated device which regulates the flow of current to produce the same voltage drop for each regulator, thus achieving load balance in the system. Altitude and temperature do not affect the shunt's operation.

Multi-engined airliners and cargo planes can now have a reliable, lightweight d-c electric system that will boost both the safety and simplicity of big-plane operation. With this new d-c system, you can make wider use of such modern electric apparatus as motors, heaters, instruments, and communication equipment. You get better protection for expensive devices and reduce down-time for maintenance. *Short circuits, no matter how serious, just can't "go places" and do damage.*

Developed for the B-29, this G-E system has conclusively proved its practicality on America's most highly electrified war plane.

Here are some of the advantages of the system over conventional single-generator systems:

UNFAILING POWER Normally, the system continuously splits the load among all of the generators. If one or more generators "kick out" for any reason, the system splits the load among the remaining generators so that they can handle the load without excessive voltage dips. Plenty of power is still available to operate instruments, landing gear, and other vital auxiliaries.

SHORTS STYMIED Although all generator circuits are closely co-ordinated, individual circuits become independent once trouble occurs. Short circuits are effectively isolated to hold damage to the minimum.

NO LIGHT FLICKER Despite wide variations in load during take-off and landing, all generators act in co-ordination to maintain extremely uniform voltage.

Aircraft manufacturers are turning, more and more, to General Electric for completely engineered systems, such as d-c or a-c power supply, ignition systems, and engine-temperature control. Their wartime experience has shown that they save time and eliminate many design headaches when they bring their electrical problems to G.E. in the earliest stages of their planning. May we do the same for you?

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

PRECISION PRODUCTS & ENGINEERED SYSTEMS FOR AIRCRAFT

GENERAL ELECTRIC

674-42-8872

Lightplane Diesel Perfected

Perfection of a four-cylinder diesel engine for small personal aircraft is announced by Fred Thaheld, former chief engineer and consulting engineer for the Guiberson Engine Co. of Dallas, Tex.

Thaheld, now located in Brea, Calif., told AVIATION NEWS that a four-cylinder prototype rated for 100-hp. at 2,400-rpm. has completed a test stand run successfully and within the coming month will be installed in a plane, possibly a Luscombe, for flight demonstrations.

▸**Test Power**—He reported that in the test run the engine actually developed 127-hp. at 2,100-rpm. with a fuel consumption of three gallons per hour.

The inventor said he intends to license his design to a major manufacturer for commercial production of 100 and 125-hp. four-cylinder models, and 150 and 175-hp. six-cylinder models. He said he is considering several manufacturing offers, including one by a Los Angeles firm and another by "an airplane manufacturer in the Philadelphia area."

The Thaheld engine is reported to operate without exhaust smoke and to possess quicker throttle response throughout the entire throttle range than gasoline engines. A combustion cartridge is used for starting.

▸**Weight Drop** — Thaheld declared, "For preliminary production, the engine will approximate the weight per horsepower of comparable gasoline engines, so that they can be used in light aircraft now under production without affecting airplane balance. However, later models can be manufactured with a 10 to 15 percent reduction in weight."

ployees has been engaged in plastics and chemicals research during the war and the company will continue to employ a small number in this activity. The experience gained by the company in the design and manufacture of power operated turrets will be put to continued use in the experimental design and production of advanced models as required by the military services.

The company now has five experimental contracts with Army Ordnance for the preserving of ordnance equipment.

▸**Grumman** — Leroy Grumman, president of Grumman Aircraft and Engineering, reported their Naval aviation program is down to 36 airplanes a month, that they are working on new, advanced designs probably utilizing jet power. In the commercial field, Grumman is building some of their amphibians of prewar design, expects to produce a new amphibian of postwar design and has set up an airplane repair shop for general service.

▸**Republic**—Alfred Marchev, president of Republic, told the committee that "comparatively, our Farmingdale plant looks like somebody had put a quarantine sign on the front door." But he expressed optimism for the future. Included in Republic's plans is the four-place amphibian, the *Seabee* for the personal aircraft field for which a number of initial orders have been taken. Republic is completing their dealer and distributor organization and the schedule calls for production of these airplanes at the rate of 425 a month when they reach a steady level in June of next year.

Republic has just announced a contract with Pan American Airways for a number of *Rainbow* transport, a four-engine high altitude plane which will fly at speeds of 400-mph. and more.

In addition, employment is provided for many workmen while the company is tooling up for the *Seabee* and the *Rainbow* through a contract with American Airlines for conversion of 50 Douglas C-54's.

The last P-47 *Thunderbolt* is off the Republic line, and Marchev says the company is nearly ready to put a new military fighter into the air.

Air Design Buses

Mercury Aircraft, Inc., has purchased Penn Yan Buses, Inc., it has been announced by Mercury President J. F. Meade, and will apply the light metal technique developed in the aircraft industry to the manufacture of buses.

Mercury points out a need for weight reduction in the construction of buses, without sacrifice of structural strength. It believes this can be attained by the application of its aeronautical experience. The bus company will close its plant at Penn Yan, N. Y., and transfer to the Mercury factory at Hammondsport, N. Y.

Lockheed President Outlines Air Power

Firm backlog, military and commercial, placed at quarter-billion, research and pilot-line production stressed

Need for research and pilot-line production to keep the nation's air power in a state of readiness for whatever the future may bring, was emphasized by Robert Gross, president of Lockheed, at a recent news conference in New York.

Looking ahead to the military aircraft of the future, he forecast that air power would be composed of three main parts:

▸A striking force of uninhabited missiles — unmanned, remotely controlled aircraft which could be sent vast distances.

▸Reconnaissance planes of supersonic speed to act as the eyes of the air force.

▸Huge cargo planes that could service and supply an army or an air force in the field as ships have done in this war.

Gross said Lockheed had firm orders for $75,300,000 in commercial aircraft, represented by air line orders for *Constellations*, and conditional orders totaling $46,300,000 from air lines for the twin-engine *Saturn* and the big *Constitution*.

Lockheed's backlog of military work was given as $137,606,272 for the P-80 *Shooting Star* jet-propelled craft, an unannounced Navy patrol bomber, a long-range transport for the Navy, and some development work.

▸**Work Slate** — Total backlog, therefore, is $259,406,272 and Gross estimated that the backlog would take approximately two years to work off. Regarding the future of the company, he said that it intended going strongly into the commercial field, as it had done before the war, but that it also would remain in the military field. Moreover, Gross said the personal aircraft field looked attractive and he felt that the company must get into it—but thus far it was without specific plans ready for announcement.

Questioned as to the possibility of air cargo becoming the most profitable segment of air transportation, he said "I've never been able to get myself as enthusiastic over cargo per se as for the more precious cargo of passengers and mail." He went on to say that while there would be a tremen-

THE *WIDOW'S* MATE:

Closeup photo of the revisions that turned the Lockheed P-38 Lightning *into a formidable two-place night fighter to fly as a companion with the P-61* Black Widow. *Visible under the nose is a radar installation while the added cockpit placement for a radar operator is shown behind and above the pilot. The radarman is peering into a shield surrounding the blackness piercing scope. Designation of the new version is P-38M.*

dous increase in passenger, mail and express traffic in coming months, the time would never come when everything and everybody would travel by air.

Gross mentioned that an improved version of the *Constellation* would come next year.

Ford Air Venture Speculation Arises

Appointment of Clyde Paton, aeronautical engineer, seen possible groundwork for return to aviation production.

Appointment of Clyde R. Paton, long associated with the aeronautical and automotive field, as a consulting engineer of the Ford Motor Co. has aroused new speculation that Ford may be contemplating another peacetime venture in aviation.

While Paton's exact duties were not defined in the announcement, his experience has been divided between aircraft and automobiles. He worked on powerplant research with the National Advisory Committee for Aeronautics in 1923, later was with both the Packard and Studebaker companies. In 1942, he joined the Allison division of General Motors, went to the Middle East to investigate aircraft operational failures. Last year, he established aircraft engine development and flight test facilities for the AAF at Willow Run.

▸**Recurring Rumor**—The prospect of the Ford company's return to aeronautics has been a recurring subject of conjecture ever since the firm discontinued production of its all-metal, tri-motor transport about 15 years ago.

Unconfirmed reports during the war centered about a large freighter-type aircraft, while the appointment of Paton has provoked talk of a possible Ford aircraft engine to compete with General Motors' projected 200-hp. powerplant.

Ford's first experience with aircraft was in the middle twenties when Harry Brooks interested Henry Ford in a low-wing single-seater. While very slow, it also landed slowly and on the whole had good performance. A maintenance error, however, resulted in an accident and Brooks' death. Allegedly because of Ford's great affection for Brooks, and his grief over the latter's death, the Ford company never sought to develop the design.

▸**Airliner Success**—Later, William B. Stout teamed with Ford to create the famed Tin Goose, which was used on airlines over the world and some of which, until the past few years, were still in service as freight carriers in Latin America.

New Lightweight Radio

A new crystal controlled, lightweight aircraft communication receiver will soon be announced by the Collins Radio Co., Cedar Rapids, Iowa.

Using the Collins "Autotune" for selecting the channel of operation, the receiver offers ten different easily pre-selected frequencies for reception anywhere within the range of 2.4 to 18 megacycles. Maximum time required to change channels is two seconds. It is designed for commercial transport and executive planes and weighs less than 20-lbs. The receiver operates from a 24 volt d.c. source, with a 12 volt model as an optional alternate.

British Give Details On *Vampire, Hornet*

With the lifting of many wartime security restrictions, the British have released fuller details on two of its late fighter planes, the de Havilland-made *Vampire* and *Hornet*, early reports of which were carried in AVIATION NEWS, June 18.

Powered by the de Havilland-designed *Goblin* jet engine, which was also used in the U. S. P-80 prototype, the *Vampire* is "believed to be the world's fastest airplane," according to a British statement. Actually, the *Vampire* is faster than the P-80 above 12,000-ft. At sea level, however, the *Shooting Star's* 558-mph. speed is thought to be tops.

▸**Wing Factor** — Lockheed's jet fighter does not increase in speed proportionately to the *Vampire* at altitude because of the former's wing design which is said to reach the compressibility area sooner than do the *Vampire's*.

The *Hornet*, a conventionally-powered, two-engine fighter, has a top speed in excess of 470-mph. Like the *Vampire*, it was designed to function at great altitude, 35,000-ft.: the *Vampire's* claimed operational ceiling is about nine miles.

The *Hornet* resembles the de Havilland *Mosquito* and, like it, is of plywood construction. The powerplant installation is unorthodox. Although each engine is a Rolls Royce *Merlin* developing 2,070-hp., and is mounted in the usual position in the wings, the propellers rotate in opposite directions.

▸**Jet Tests**—This is only one of the propulsion innovations being tried by the Rolls Royce company. It has gone in heavily for jet experimentation and there are indications that it has already flown a *Meteor* with a jet-propeller combination.

A third British warplane, just

taken off the secret list, is the *Firebrand IV*, the only single-seater torpedo-carrying aircraft. It is built by Blackburn Aircraft Ltd., which has specialized in naval aircraft.

Powered by a Bristol *Centaurus* 2,500-hp. engine, the *Firebrand* has a span of 51-ft., length of 39-ft., and a gross weight of 15,670-lbs., which is more than the usual ship-based airplane. Just going into service with the British fleet, it is projected also as a fighter and dive bomber.

Canadian Surplus Sale Rule Stressed

Many inquiries by prospective purchasers in the United States of surplus Canadian aircraft has resulted in a reiteration by the Canadian War Assets Corp., that approval from the United States surplus disposal agency is necessary before American citizens can buy the surplus.

Aircraft sold by the Canadian corporation are certified airworthy by the Canadian government's Department of Transport, and stories carried in AVIATION NEWS at various times about WAC surplus aircraft availabilities have brought about inquiries from the United States to Canadian officials. They suggested that prospective purchasers of Canadian surplus aircraft keep this approval requirement of the Surplus Property Board in mind.

Cessna Only — The War Assets Corp., currently has only Cessna *Crane* twin-engine transports for sale, but expects other types from time to time. The Aircraft Division of WAC points out that numerous prospective purchasers in the United States "are not eligible due to the present agreement existing between this corporation and the U. S. Surplus Property Board wherein neither government will endeavor to dispose of its surpluses on the other's markets unless the items or equipment required are not available in the inquirer's country."

New Interior Plastic

A plasticized polyvinyl chloride material that can be used in place of leather, rubber and linoleum in aircraft interiors, with a saving in weight, is being marketed by the aeronautical sales division of the B. F. Goodrich Co.

LOW COST OF OPERATION

In the Boeing Stratocruiser, high aerodynamic and structural efficiency, ease of maintenance and rapid-loading features all contribute to economical operation. A high ratio of useful load to gross weight means less operating cost per unit of payload. And high cruising speed makes possible more trips in a given period, distributing all fixed costs over more passenger-miles and ton-miles. This airplane can operate profitably even when carrying less than 20 per cent of payload capacity at present airline rates.

OUTSTANDING PERFORMANCE

One of the reasons why the Stratocruiser so far outperforms competitive airplanes is the Boeing 117 wing, which enables it to do more work for its weight and size than any other transport. High wing loading and low gross weight per horsepower make possible faster cruising speed and greater all-around performance. In addition, it is cleaner aerodynamically than any comparable aircraft.

A PROVED AIRPLANE

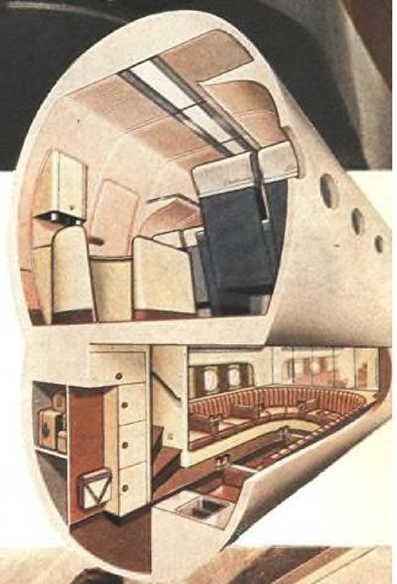
The Boeing Stratocruiser is not a "paper airplane." It is a *flying* airplane, with "bugs" eliminated through extensive tests of the military prototype. After its cross-continent flight, faster than any other aircraft had ever made the trip, it landed at Washington without a single item requiring maintenance attention. Newest member of the famous Boeing 4-engine family, which includes the Flying Fortress, Stratoliner and Clipper, it embodies many advances war-tested in the mighty Boeing B-29 Superfortress.

SAFETY AND RELIABILITY

The design of all the Stratocruiser's structural and mechanical elements gives exceptional stamina without increasing airframe weight. Superior safety is assured as a result of its unusual ease of control, pilot visibility, stability, good stall warning and excellent stall characteristics, thermal anti-icing and other advancements. New war-developed electronic devices will be available for installation, making possible safest operation both in landing and in flight. Additional safety is provided by high-altitude performance, allowing normal flight above storms, even with one engine inoperative.

GREATER UTILITY

The Stratocruiser's two-deck, three-cabin design permits adaptation to all types of operation—cargo, high density passenger traffic or luxury travel. Some of the possible



PERSONNEL

★ ★

Jeannette Lempke Named Ninety-Nines President

The Ninety-Nines, organization of women pilots, has elected Jeannette Lempke of Saginaw, Mich., president, succeeding Ethel A. Sheehy of Fontana, Calif. Formerly vice-president of the National Aeronautic Association affiliate, Miss Lempke is succeeded in that post by Belle Hetzel, Omaha, secretary during the past year. Ruth A. Heller, former WAVE, of Washington, is the new secretary of Ninety-Nines and Evelyn C. McRae of Miami Springs, Fla., remains as treasurer.

Col. Richard Deichler, former administrative officer for the Army Air Forces at the Pentagon, has joined American Airlines as executive assistant to C. R. Smith, chairman of the board.

Capt. Asa Rountree, Jr., has resumed the position of director of Aeronautics for Alabama, from which he has been on military leave in the Army Air Forces. Rountree has held many prominent aviation positions in Alabama and is well known throughout the country.

William T. Scully, until recently president of the Canadian government-owned Victory Aircraft, Ltd., Toronto, has been appointed deputy minister of the Department of Reconstruction and Supply, Ottawa, replacing **R. A. C. Henry,** who has resigned to give more time to his post of chairman of the Canadian Air Transport Board.

PUBLIC RELATIONS CHIEF:

Ken Ellington's appointment as director of public relations for Republic Aviation Corp., has been announced. Ellington has been manager of the Aircraft Manufacturers Council, eastern region, and former secretary of the Aircraft War Production Council, East Coast.

James E. Conner, left, has been appointed maintenance superintendent

of Pan American Airways' Alaska service, replacing **Peter Gregor,** right, transferred to Pan Am's Atlantic division in New York. Conner, an aeronautical engineer, joined Pan Am nine years ago as an apprentice engineer. He was transferred to Seattle in 1941.

William L. Wilson, vice-president of Kellett Aircraft Corp., has been elected new chairman of the public relations advisory committee (Eastern Region) of the Aircraft Industries Association, succeeding **Jesse W. Sweetser** of the Curtiss-Wright Corp. **Joseph E. Lowes, Jr.,** director of public relations for the Fairchild Engine and Airplane Corp., was elected vice-chairman.

Richard C. Higgins (photo) has joined Transcontinental & Western Air, Inc., as assistant to the vice-president of traffic. Higgins has had travel experience with the Cunard-Anchor Steamship Lines, Keller Travel Club and Anchor Steamship Line. He had been with Pan American Airways since 1941, prior to joining TWA, as tariff agent handling rules and regulations, rates and tariffs for passenger and express divisions.

William H. Hottel, formerly traffic manager and later staff assistant to the executive vice-president of Glenn L. Martin Co., has joined TACA Airways as general traffic manager, northern region, and will be based in Tegucigalpa, Honduras. Hottel previously was senior tariff analyst for the Civil Aeronautics Board, Washington. He is a veteran airline man, having been with Western Air Express before it became TWA.

HEADS NAA REGION:

Don. V. Seevers' appointment as National Aeronautic Association regional representative for the Southwest has been announced. Seevers, who will have headquarters in his region, has been executive director of Feeder Airlines Association since its formation and prior to that was with All American Aviation as public relations director. He has been a pilot since 1925 and plans to use a personal plane in covering his new assignment.

TWA APPOINTMENTS:

Leo R. Gilleran, left, former assistant director of the treasury division of Boeing Airplane Co., Wichita, has joined Transcontinental and Western Air, Inc., as assistant to the treasurer. Dr. John H. Furbay, right, has been named to head TWA's newly created Air-Age Education program. He will work with all types of educational institutions to share the technical and research material available within TWA. He has been with the U. S. Office of Education and recently completed a year's survey of the educational institutions of South and Central America. He has also made documentary films for the Army.

A NEW CONCEPT IN AIR TRANSPORT

The Martin 202

Obsoleting all commercial aircraft of her class, the Martin Two-O-Two provides much higher speeds, more luxurious accommodations and more cargo space than any transport of comparable size. Low direct flying costs and maintenance costs assure profitable airline operation—at fares below first-class railroad rates. Here are some reasons why:

- Cruises at a speed approaching 300 m. p. h.—upward of 100 m. p. h. faster than present day transports.
- On a 250 mile city-to-city hop, direct flying costs, exclusive of operating overhead, are less than one cent per seat mile.
- Carries 30 to 42 passengers—in luxury unsurpassed by even the largest 4-engine air liners flying today.
- Utmost passenger comfort assured by comfortable roomy seats, plenty of head room and leg room, large windows, modern heating, ventilating, sound-proofing and lighting.
- Has far more cargo and baggage space (525 cu. ft.) than any transport of comparable size.
- Three large exterior doors, and two large doors between passenger and cargo compartments, permit swift loading and unloading to cut waiting time at airports.
- Will utilize every new electronic device, including radar, to permit all-weather flying.
- Embodies such improvements as reversible pitch propellers, heat anti-icing, laminar flow wings, tricycle landing gear.
- Flexible Mareng fuel cells cut maintenance costs and contribute to safety.
- Equipment is located below floor, easily accessible for servicing through exterior hatches.

THE GLENN L. MARTIN COMPANY, BALTIMORE 3, MD.

Airline Earnings Forecast By Financial Firm Analysis

Goodbody and Co., of New York Stock Exchange, presents projection of income for 12 carriers; new study uses compromise of peace and wartime profit margins in calculations.

A provocative projection of airline earnings is advanced in a current analysis presented by Goodbody and Co., New York Stock Exchange firm.

Traffic of the airlines is expected to increase from four to seven times over present levels in the next three to six years. Based on this expectation and assuming satisfactory unit operating profits with income taxes at 40 percent and with capitalizations increased by 25 or 50 percent, earnings are projected for twelve of the airlines.

TABLE I

Estimated net per share with four times present traffic under varying conditions

	A	B	C	D	E	F
American	$8.85	$4.45	$7.00	$3.50	$5.90	$2.95
Braniff	2.25	1.15	1.80	0.90	1.50	0.75
Chi. & So.	5.05	2.50	4.05	2.00	3.40	1.70
Delta	3.30	1.65	2.65	1.85	2.20	1.10
Eastern	10.70	5.35	8.55	4.30	7.10	3.55
National	3.20	1.60	2.55	1.30	2.15	1.10
Northeast	1.35	0.70	1.10	0.60	0.90	0.45
Northwest	4.65	2.35	3.70	1.85	3.10	1.55
PCA	5.35	2.70	4.30	2.15	3.60	1.80
TWA	8.00	4.00	6.40	3.20	5.30	2.65
United	6.00	2.90	4.80	2.30	4.00	1.95
Western	3.00	1.50	2.40	1.20	2.00	1.00

Key: A—10 cents a mile profit and present capitalization.
B—5 cents a mile profit and present cap.
C—10 cents a mile profit and present cap. plus 25 percent.
D—5 cents a mile profit and present cap. plus 25 percent.
E—10 cents a mile profit and present cap. plus 50 percent.
F—5 cents a mile profit and present cap. plus 50 percent.
Source: Goodbody and Co.

TABLE II

Estimated net per share with seven times present traffic under varying conditions

	A	B	C	D	E	F
American	$15.50	$7.75	$12.50	$6.25	$10.30	$5.15
Braniff	3.75	1.90	3.00	1.50	2.50	1.25
Chi. & So.	8.50	4.25	6.80	3.40	5.65	2.80
Delta	6.00	3.00	4.80	2.40	4.00	2.00
Eastern	18.75	9.40	15.00	7.50	12.50	6.25
National	5.60	2.80	4.50	2.25	3.75	1.90
Northeast	2.40	1.20	1.90	0.95	1.60	0.80
Northwest	8.50	4.25	6.80	3.40	5.65	2.85
PCA	9.30	4.65	7.40	3.70	6.20	3.10
TWA	14.75	7.40	11.80	5.90	9.80	4.90
United	10.75	5.10	8.60	4.15	7.20	3.40
Western	5.50	2.75	4.40	2.20	3.80	1.90

Key: A—10 cents a mile profit and present capitalization.
B—5 cents a mile profit and present capitalization.
C—10 cents a mile profit and present AXXX cap. plus 25 percent.
D—5 cents a mile profit and present cap. plus 25 percent.
E—10 cents a mile profit and present cap. plus 50 percent.
F—5 cents a mile profit and present cap. plus 50 percent.
Source: Goodbody and Co.

Conjecture Point—It is recognized that future operating profits and capitalizations are highly conjectural. Prior to the war, unit operating profits of most air carriers were very small, Eastern and American being exceptions.

Today, profit margins are quite large: 25 to 30 cents per dollar of gross. If typical pre-war unit operating profits were used, per share results would be meager regardless of the volume.

Similarly, if today's margins were used, the results would be astounding. For this reason, Goodbody and Co. have taken a compromise of the two extremes and premised their projections accordingly.

Tabulation — The substance of these forecasts appear in the accompanying tables. Table I discloses estimated per share earnings with traffic volume at four times present levels. It can be seen, for example, that American is expected to show earnings of $8.85 per share operating at a profit margin of 10 cents a mile and with its present capitalization.

Should profit margins drop to 5 cents a mile, then per share earnings would decline to $4.45. On the other hand, should the present capitalization be increased by 25 percent, then profits would be diluted to $7.00 and $3.50 per share with profit margins of 10 cents and 5 cents a mile, respectively. With capitalizations increased by 50 percent, still further dilution of earnings would occur.

The effect of a seven fold increase in traffic on airline earnings is shown in Table II. Using American again as an example, it can be seen that this carrier's earnings would amount to $15.50 per share if profit margins of 10 cents a mile with present capitalization were obtained. A 25 percent increase in the capitalization and a profit margin of 5 cents a mile would return earnings of $6.25 a share.

Intensified service of routes already served may increase traffic greater than average for the industry as a whole. As new equipment is added, it will become feasible to exploit present routes to a greater degree. It is these ever-changing variables which make uniform projections very difficult. The estimates advance, however, serve as a convenient form of making calculations on a comparative basis for the separate lines.

Maryland Sets Liberal Policy For Intrastate Airlines

Public Service Commission grants franchises to three companies, including bus line, ordering beginning of service within six months.

Maryland Public Service Commission, acting under orders of the governor to promote aviation, has granted charters to three instrastate airlines for unduplicated routes. Service must start within six months from the date of the certificates.

"The commission, in considering the several applications, has been mindful that the policy of the state as announced by Gov. O'Connor and as reflected in recent legislation is to promote the rapid development of air service in Maryland and make it available as soon as possible to all communities which desire it," the Commission stated.

Maryland's populous areas are separated by Chesapeake Bay and mountains, and the state, like Michigan, is more feederline minded than most.

▸ **Engine Factor**—Two of the companies will use single-engine aircraft and one plans to operate twin-engine Boeings. "While being inclined to put more confidence in an aircraft equipped with two engines than in a single-engine aircraft, we find that the record indicates a high degree of dependability in such engines and since it is quite apparent that many of the smaller communities will be unable to have better than Class 1 airfields, which we believe will safely accomodate only the light single-engine aircraft, the use of such aircraft in daylight contact flying seems to be justified and to be necessary if many of the small communities are to have air service," it was asserted.

The Commission deemed only four airports suitable for twin-engine equipment. Cumberland's municipal airport is on West Virginia soil and may not be available for intrastate service.

"While no showing was made at the public hearing of any immediate public demand for air service and the Commission has no means of estimating at this time the volume of traffic to be served, it seems reasonable to expect that the establishment of such a service will stimulate interest therein and that the more convenient and attractive the service is made the more rapid will be its development.

▸ **Bus Entry** — Another entering wedge by surface carriers into air transportation, without need for a federal certificate, is seen in the plans of Red Star Motor Coaches, Inc., to connect Baltimore, Easton, Salisbury, and Ocean City by air. It already operates buses between Baltimore and principal eastern shore points, and is prepared to coordinate bus and aircraft schedules "to give maximum service to the public."

Commenting on this feature of Red Star, the Commission states: "The coordination of bus and aircraft operations will provide complete service during the development period when, for lack of adequate landing fields, it will not be possible to reach many of the towns by aircraft. The combining of surface and air operations will produce a flexibility which will permit the use of each to whatever extent is currently required and to the best advantage of the public." Red Star proposes to se Beechcraft. Fare will be 10 cents a mile.

▸ Columbia Airlines, Inc., which already owns two Boeing 247D transports, is authorized to operate between Baltimore, Hagerstown, and Cumberland. Fare will be 10 cents a mile.

▸ Pan Maryland Airways, Inc., whose plans have been reported earlier in AVIATION NEWS (May 25, 1945) is certificated to fly Taylorcraft single-engine planes in daylight contact service between Baltimore, Annapolis, Easton, Cambridge, Crisfield, Chestertown, Westminster, Frederick, College Park (Washington suburb), Havre de Grace, Bel Air, Elkton, Centreville and Brandywine. Passenger fare will be 6 cents a mile.

A few days after releasing the opinion, the Commission issued general regulations governing control and operation of public air carriers operating under its jurisdiction. These are available from its offices at Baltimore.

Charter Services Get New Demands

New firm illustrates growing pace of air rentals to business executives; J. H. Wilson named vice-president.

Charter service of airplanes for business executives is already beginning to assume an importance far beyond pre-war status and is expected to expand rapidly as more equipment becomes available, and more business firms realize the advantages of air travel.

One of the best examples of this new type of service is the recently formed Central States Aviation, Inc., which, operating from Sky Harbor airport near Chicago, has a fleet of 13 twin-engine, four-passenger Cessnas being prepared for luxury travel. Two of the planes are already in service and others will be available soon.

▸ **Officials**—The new company is headed by O. A. Helsing, Chicago restaurant operator and aviation enthusiast, as president, with John H. Wilson, former executive director of National Aviation Trades Association, as vice-president, secretary and general manager. Other associates are Herman Krissman, treasurer, Harold C. Mattes and William Turgeon, partners in operation of Sky Harbor airport.

The company plans operation of its planes by company pilots on a round trip fare basis with minimum daily rates which include layovers. Future plans include expansion of operations to other airports in the Chicago area, with broadening of the company's activities to include fixed base activities such as sales, flight training and service facilities.

Meanwhile, Beech Aircraft Corp., through its customer service department, is providing a temporary service to executives who are awaiting delivery of the post-war

Beech Model 18S. It is renting Cessnas, on a monthly basis for $100 a day to customers desiring this service, with the rental including pilot, insurance, maintenance, repair, and hangar rental. Beech now has 11 Cessnas, and has 10 more to come.

Air Cargo Company To Buy Douglases

Files SEC statement to sell common stock to public.

First public stock offering to be listed with the Securities & Exchange Commission by an air freight company was registered last week by Air Cargo Transport Corp. of New York City to set up a national non-scheduled system.

It is proposed to use $150,000 of the proceeds for six Douglas C-47's from RFC; $154,000 for spare parts and engines, radio equipment, maintenance supplies; $5,000 for motor vehicles and other ground equipment; $30,000 for hangars, and $50,000 to repay company's founders. The Douglases will cost from $20,000 to $25,000 each. Possession is expected in a few days. The company's now operates one Lockheed *Lodestar*.

▸ **Packets Sought**—Balance of stock income will go for working capital, under present plans, including one or two Fairchild *Packets* or other available cargo planes, when available.

H. Roy Penzell is president, treasurer, and director. Other officers and directors are Alexander Westerman, Brooklyn, director; Louis DeCovney, Jamaica, L. I., director; William L. Rome, New York, executive vice-president and director; Thomas M. Reilly, New York, secretary, assistant treasurer, director; F. Malcolm Minor, Montclair, N. J., director, and William A. Smart, New York, director. Minor and Smart are to be elected directors after the financing. Founders, and their common stock holdings are: Penzell 34,998 shares; Abraham Glickman 20,000 shares; Meyer Natelson, 15,000 shares; Alexander Westerman, 10,000 shares; Samuel Shupack 10,000 shares, and Louis DeCovney, 10,000 shares.

The company, organized under New Jersey charter March 12, 1945, registered 420,000 $1 par common shares, of which 120,000 are reserved for warrants. The remaining 300,000 shares will be offered publicly at $3 a share by a group headed by Bond & Goodwin, Inc. The warrants will entitle holders to purchase an aggregate of 120,000 shares at $3 in the period ending five years from registration effective date.

▸ **Warrant Sale**—The stock purchase warrants will be sold by the company at a cent a warrant. For each 10 shares of common stock sold to or through underwriters, the underwriters will be entitled to purchase 3 shares of common at a cent per warrant share. In event the underwriters purchase or find purchasers for the entire 300,000 common shares, underwriters will be entitled to purchase a total of 90,000 warrant shares.

National Skyway Cargoes Increase

Further indication of the variety of business which non-scheduled airlines may gain comes from a review of the recent coast-to-coast activities of National Skyway Freight Corp. of Long Beach, Calif.

Robert Prescott, president, reports that cargoes, increasing in quantity and diversity, have included shipment of 8,000 tulip bulbs from New York to Los Angeles, 16,000 pounds of grapes, 10,000 pounds of manufactured garments, household furniture shipments, a race horse, drugs, aircraft parts and automobiles.

▸ **Navy Men Charter Ships**—An appreciable amount of business has come from off-schedule passenger flights, including the chartering of five of the company's fleet of Budd Conestogas by 120 enlisted men and petty officers of the U.S.S. Astoria for furlough flights to eastern cities and return to Long Beach. By using air transportation they spent more of their 30-day leave at home. Groups of motion picture players have been flown to distant locations, and on one occasion a Conestoga was chartered to carry the Philadelphia Eagles, professional football team, and 2,000 pounds of equipment, to Buffalo and return.

Later this month the company expects to fly four thoroughbred racing horses from near Hollywood to San Francisco. Stalls will be built into the plane.

▸ **September Cargoes** — During September alone cargoes included penicillin, 34 tons of fruits and vegetables, 17 tons of furniture, 3 tons of machinery, 4 tons of clothing, 4 tons of California wine, 8,000 baby chicks, several motor cars and plane parts. Motion picture players flew from Los Angeles to Las Vegas, Nev., and several contingents of Marines flew coast to coast.

Feeder Role Vital Says Idaho Board

The Idaho state planning board has gone on record favoring support of regional feeder air services as essential to the state's future program.

Copies of the resolution are being forwarded to chambers of commerce in the state, emphasizing that "feeder airlines are vital to accomplish the tasks of transportation and communication between our regional cities within Idaho and the adjacent states with which we have constant economic relationships."

▸ **Certificate Asked**—The resolution was adopted at a board meeting which coincided with a session with Bert Zimmerly of Lewiston, Idaho, who has already filed with CAB for a certificate to serve points in Oregon, Washington and Nevada for his Empire Airlines.

Zimmerly has already flown leading air enthusiasts of Idaho on surveys of proposed feeder routes.

State Rules Against Sharing Charter Craft

Public Utility Commission of Pennsylvania has turned down an application of an operator for a charter air service because of the possibility that aircraft other than those owned by the applicant would be pressed into service.

Russell V. (Bob) Trader had proposed a "call and demand" seaplane service along the Alleghany River and its tributaries within a 50-mile radius of Pittsburgh.

▸ **Decision Lever**—The Commission indicated that it probably would have given a favorable decision except for that provision of the application which said that aircraft not belonging to the applicant might be used when necessary to meet public demand.

According to a spokesman for Trader, "It is a question of the Commission being able to supervise an operator. In order to do that they must have control over the equipment through the operator."

The most complete line of rubber products for airplanes

B. F. GOODRICH AIRPLANE TIRES AND TUBES

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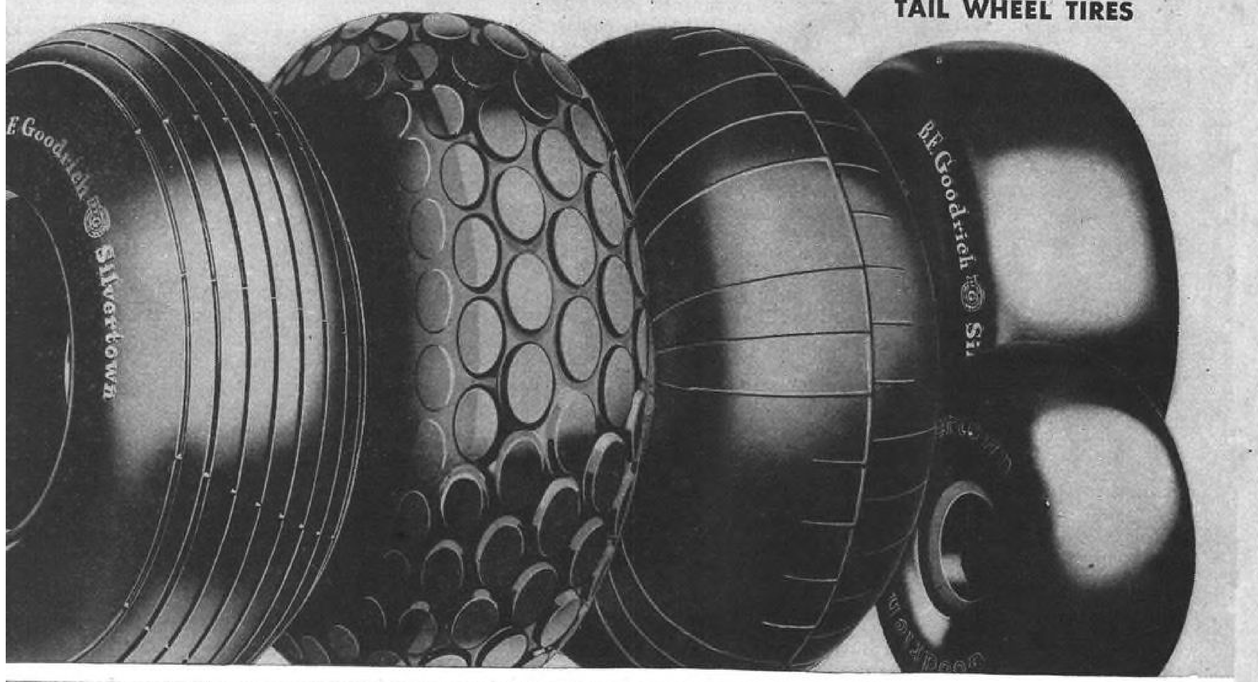
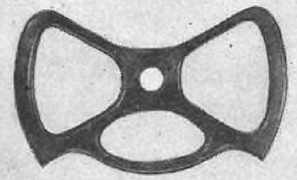


GROMMETS AND GASKETS OF ALL TYPES

CONTROL WHEELS



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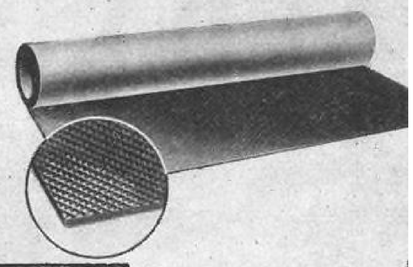
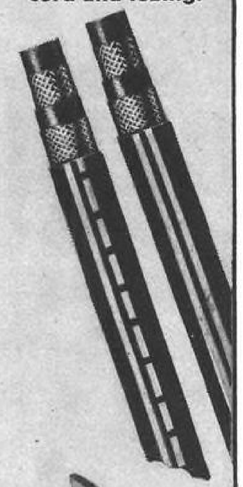


ALL TYPES OF AIRCRAFT HOSE, shock absorber cord and tubing.



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YOUR B. F. Goodrich distributor sells a complete line of accessories . . . from matting, grommets and molded rubber parts to sponge rubber, friction tape, all types of hose, anti-freeze propeller feed shoes, as well as the famous B. F. Goodrich-developed low-pressure airplane tires and tubes.

He is distributor for exclusive B. F. Goodrich aircraft items, too. De-Icers for use on the larger private airplanes; rubber abrasion shoes that save leading edges of tail surfaces; abrasion shoes molded to fit the biting edges of propellers.

Airplane service operators know the dependability of B. F. Goodrich rubber parts for airplanes. And B. F. Goodrich distributors are strategically located to serve them promptly. The B. F. Goodrich Co., Aeronautical Division, Akron, O.

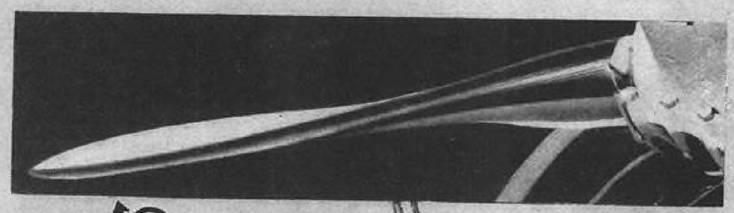
SPONGE RUBBER

RIVNUTS

DE-ICERS AND ANTI-ICING EQUIPMENT...

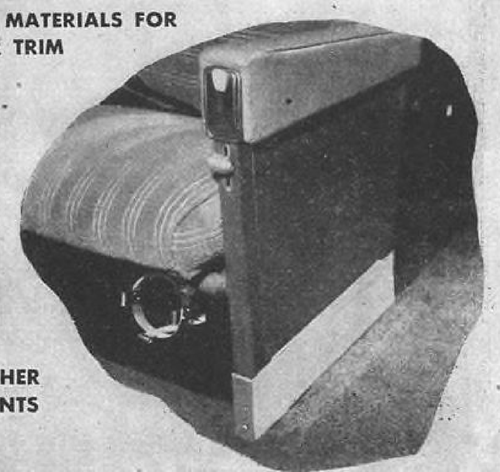
1. De-Icers protect wing leading edges on many privately owned airplanes.

2. Two systems to control propeller ice are sold through B. F. Goodrich distributors . . . anti-freeze feed shoe and electrically heated shoes.



RUBBER ABRASION SHOES

FLEXIBLE MATERIALS FOR INTERIOR TRIM



VULCALOCK AND OTHER STANDARD CEMENTS

Skyway or Highway

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FIRST IN RUBBER

"Grass Roots" Airline Support Sought By Permanent ATA Unit

Lines designate 400 workers throughout nation to secure local civic, commercial and other organizations' backing of carriers' position on transportation policies, problems; move follows successful blueprint of older industries.

A permanent nationwide organization to enlist "grass roots" support for preservation of sound air transportation policies has been completed by the commercial air carriers through the Air Transport Association.

Taking a cue from older industries where similar groups have been successful, the airlines now have some 400 workers throughout the country who, with the blessings of their managements, will solicit support for the carriers' position on transportation problems from local civic, commercial and other organizations.

▸ **Organization Plan**—ATA's State Relations Department has divided the U. S. into six divisions, in each of which representatives of carriers in the areas have selected chairmen and vice-chairmen to direct the new organization's activities. These state chairmen, in turn, have lined up co-workers in each of the cities served with scheduled air transportation.

Probably, the first program will deal with the question of exclusive Federal control of common air carriers in interstate commerce; favored by the airlines. During the past year, when 44 state legislatures were in session, the National Association of Railroad and Utility Commissioners urged passage of state air carrier bills in 24 of them. Only three, however, enacted laws, and these exempted interstate air carriers.

Agitation for such legislation has continued and, in 1947, the situation is expected to be much more serious than it was last winter. The airlines, hence, are anxious to have Congress settle the question once and for all, and do it at this session.

▸ **Action Soon**—The new airlines' organization is ready for its first assignment as soon as the Special Committee on Governmental Regulation (a subcommittee of ATA's State Relations Department) gives it word to start. This may come sooner than expected, since it is understood that ATA's board of directors at a recent meeting decided to support H. R. 3383, with some clarifications. This bill would reserve for the federal government sole and exclusive regulation of common carriers by aircraft operating in interstate commerce.

The question of regulation, however, is not the only problem facing air transportation. The move being directed by the railroads and the Transportation Association of America for integration of all forms of transporttaion is gaining momentum. Furthermore, the steamships still are fighting hard to get into air transportation. And when these problems are disposed of, the question of taxation remains.

Chairmen of the Special Comittee on Governmental Regulation directing the new airline organization is O. M. Mosier, vice-president of American Airlines. Mosier also is chairman of Division I. Other division chairmen: II, E. Smythe Gambrell, general counsel of Eastern Air Lines; III, Russell Cantwell, executive assistant, TWA; IV, Robert M. Averill, assistant to the president, PCA; V, A. E. Floan, secretary, Northwest Airlines; VI, Hainer Hinshaw, assistant to the president of United Air Lines.

▸ State chairmen and vice-chairmen:

Division I

Connecticut—Chairman H. Ainsley Highman, United. Vice-chairman, S. E. Collins, American.

Delaware — Chairman, Harry Stringer, All American Aviation.

Maine—Chairman, Paul Collins, Northeast.

Massachusetts — Chairman, W. Nelson Bump, American. Vice-chairmen, A. W. French, TWA; Fred Knight, Northeast; Charles Tehan, Eastern (Boston); Sterling Nelson, United (Springfield).

New Hampshire—Chairman, Paul Collins, Northeast.

New Jersey — Chairman, Raoul Nehr, American. Vice-chairman, James Edwards, TWA.

New York—Chairman, Herbert J.

TWA'S CAIRO OFFICE:

Transcontinental & Western Air says its Cairo office, shown above, will be less than 30 hours from Washington under proposed international schedules. Sign above the awning, according to the line's Washington office, says "World's Greatest Airline."

Lyall, American. Vice-chairmen, W. W. Coyle, TWA (eastern section); R. M. Ruddick, United (western section); D. Murray, PCA (New York City).

Pennsylvania — Chairman, James Wulpi, TWA. Vice-chairmen, William Winters, PCA (Harrisburg); R. Robeson, United (eastern section); Edward Fincke, Eastern (Philadelphia); W. I. Gates, PCA (Pittsburgh).

Rhode Island—Chairman, W. C. Harris, American.

Vermont—Vice-chairman, A. M. Hudson, Colonial.

Division II

Alabama—Chairman, Vance Tomlin, PCA. Vice-chairman, George McGough, Eastern.

Florida—Chairman, T. P. Caldwell, Eastern. Vice-chairman, J. D. Culpepper, Jr., National.

Georgia—Chairman, R. D. Hager, Eastern. Vice-chairman, Vic Little, Delta.

Maryland — Chairman, Richard Holman, American. Vice-chairman, Marshall Butler, PCA.

Mississippi—Chairman, T. E. Hawkins, Chicago & Southern. Vice-chairman, R. L. Blackwell, Delta.

North Carolina—Chairman, James Goodwin, Eastern. Vice-chairman, M. L. Funkhouser, Eastern.

South Carolina—Chairman, Frank Loomis, Eastern. Vice-chairman, Mercer Dye, Delta.

Tennessee — Chairman, W. S. Weismann, Jr., American. Vice-chairmen, M. T. Bellah, PCA; H. C. Duncan, American.

Virginia—Chairman, Rolph Prevost, Eastern. Vice-chairmen, Charles Jones, PCA; George Bray, American.

West Virginia—Chairman, G. W. Hawes, Jr., American. Vice-chairman, Jack Hilton, PCA.

Division III

Arkansas—Chairman, Fred Dabolt, Chicago & Southern. Vice-chairman, R. A. Culpepper, American.

Colorado—William E. Amlong, Continental. Vice-chairman, Edward Nicholson, United.

Kansas—Chairman, H. A. Stancil, TWA. Vice-chairman, Horace Gates, Continental.

Louisiana — Chairman, William Parker, Chicago & Southern. Vice-chairman, David Stoddard, Eastern.

Missouri—Chairman, David W. Shaughnessy, American. Vice-chairman, John Thomas, TWA.

New Mexico—Chairman, K. A. McGaha, TWA. Vice-chairman, Frank Skinner, Continental.

Oklahoma — Chairman, Robert Hodder, American. Vice-chairman, William Morgan, Braniff.

Texas—Chairman, M. D. Miller, American. Vice-chairmen, Robert Burke, Braniff; J. D. Lea, Eastern.

Division IV

Illinois—Chairman, L. W. King, American. Vice-chairmen, C. E. McCollum, TWA; M. W. Stevenson, United.

Indiana—Chairman, Frank Bodwell, American. Vice-chairman, N. W. Waldron, TWA.

Iowa — Chairman, Jack Barnes, Mid-Continent. Vice-chairman, C. M. Sharrar, United.

Kentucky—Chairman, A. Laird Raysor, Eastern. Vice-chairman, Andrew Burkhardt, American.

Michigan — Chairman, Thomas Kerr, PCA. Vice-chairmen, Jack A. Tompkins, American; Casey Britt, PCA.

Ohio—Chairman, Paul D. Strahm, TWA. Vice-chairmen, Norman L. Hess, AA; Jack Burlington, TWA.

Wisconsin—Chairman, Remi Ludwig, Northwest. Vice-chairman, John Dickson, PCA.

Division V

Minnesota—Chairman, H. C. Timberlake, Northwest. Vice-chairman, C. L. Stewart, Northwest.

Montana—Chairman H. L. Cummings, Northwest. Vice-chairman, R. B. McKenna, Western.

Nebraska—Chairman, C. M. Sharrar, United. Vice-chairman, Bruce Barcley, Mid-Continent.

North Dakota—Chairman, C. R. Dalrymple, Northwest. Vice-chairman, John Lendbolm, Northwest.

South Dakota—Chairman, M. A. Kennedy, Northwest. Vice-chairman, C. R. Dalrymple, Northwest.

Wyoming—Chairman, H. L. Cummings, Northwest. Vice-chairman, Jerry Brooder, Western.

Division VI

Arizona—Chairman, J. S. Robb, American. Vice-chairman, Dick Searles, TWA.

California—Chairman, Perry Taft, TWA. Vice-chairmen, Bob Caskey, United; William Sample, American.

Idaho—Chairman, Robert Schatz, United. Vice-chairman, Clarice Tripp, Western.

Nevada—Vernon Willis, Western. Vice-chairman, William Brussard, United.

Oregon—Chairman, E. C. Maroney, United. Vice-chairman, Sherwood Gish, Northwest.

Utah—Chairman, Samuel Kellogg, United. Vice-chairman, Lois Lake, Western.

Washington—Chairman, D. C. Vaile, Northwest. Vice-chairman, Willis Camp, United.

Constellation Test

Coincident with the disclosure of airline purchase orders, Lockheed Aircraft Corp. announced a *Constellation* accelerated service test flight of 4,960 miles in an elapsed time of 20 hours and 58 minutes using less than 50 percent power.

The test run was made between Lockheed Air Terminal at Burbank, Calif., and New York, by Lt. Col. T. W. Rafferty and a special Air Transport Command crew.

▸ **Schedule**—Flying time was 8 hours and 35 minutes eastbound and nine hours and 51 minutes westbound. A turnaround ground time of two hours and 18 minutes was spent at Mitchel Field, N. Y.

In continuation of the tests the *Constellation's* engines will be carried through 1,000 hours before overhaul.

Island Appeal

The retiring commander of the Pacific wing, Naval Air Transport Service, Capt. D. W. Tomlinson, predicts little South Pacific island appeal for the post-war air tourist, except for one or two garden spots.

Captain Tomlinson recently ended two years in his NATS job. A former board member and vice-president-engineering for Transcontinental & Western Air, he said he plans to settle down in Arkansas, but generally it was believed he will return soon to TWA.

▸ **Shipboard Pleasure**—He saw no reason, he declared, for a desire by the average tourist to undertake exceptionally long trans-ocean flights at the sacrifice of "steamship travel and the pleasures of shipboard life."

'Chosen Instrument' Becomes Mail Issue

Congressional consideration of appropriation to cover new overseas airmail contracts to revive competition arguments.

The international aviation issue of regulated competition versus a "community company" will again be thrashed out when a Post Office Department deficiency appropriation, to cover airmail contracts for the three lines recently awarded North Atlantic routes, comes before Congress.

Advocates of the "chosen instrument" policy, including Sen. Pat McCarran (D-Nev.), will attempt to block appropriations for airmail contracts for Transcontinental & Western Air and American Airlines Overseas, leaving Pan American Airways as the sole mail-supported carrier in the international field. McCarran is a member of the Senate appropriations subcommittee on the Post Office Department.

▸ **Rates Awaited**—The Post Office Department, turned down by the Budget Bureau on its proposal for a blanket appropriation to cover the North Atlantic air mail contracts, is now waiting for CAB to set rates so that an exact appropriation request can be made.

It is well remembered in aviation circles that the opposition of the Senate Appropriations Com-

mittee killed an airmail appropriation to American Export Airlines in 1940—despite Administration support. At that time, however, there was another major issue involved: American Export was controlled by a steamship operator. It was on the argument against surface carrier control over an air carrier that expert's appropriation was defeated.

Meanwhile, Sen. McCarran is withholding further action on his "All American Flag Line bill," stating that he is undecided as to whether to introduce a new version of the legislation for reference to Senate Interstate Commerce Committee or to offer a new version as a substitute for his old bill which missed being reported out of Senate Commerce on a tie vote. It is believed that McCarran may wait until Congress has acted on air mail contract appropriations for the North Atlantic before pushing his community company legislation.

N. J. Air Service To Resume Soon

Metropolitan New Jersey is looking forward to resumption, in a matter of weeks, of airline service it has lacked more than three years, with announcement early this month that the War Department is ready to turn back Newark Municipal Airport to the city.

Twenty daily commercial flights have been authorized by the Army Air Forces, which will retain use of a part of the field. Resumption of schedules is awaiting CAB action. Eastern Air Lines, American Airlines, United Air Lines and TWA hold leases with the city, and four other lines are understood to be ready to sign.

▸ **Improvements** — With return of the field the city will acquire an estimated $10,000,000 in improvements made since the Army moved in. About $9,000,000 went for extension of the field and construction of new, longer runways.

The Army will retain about five percent of the field, or approximately 15 acres. Eventually it will give up all but one hangar, to be held for emergency use.

Announcement of the Army's willingness to vacate revealed a conflict in high War Department and Air Forces offices. One faction had hoped to retain the field as a permanent defense installation, while another had other facilities in mind.

PICAO, IATA

Top Issues Slowed At Twin Meetings

Interim Council lags in consideration of political, economic questions upon which airline group action is seen largely dependent.

Montreal became the interim capital of international air transport last week as two world aviation organizations—one representative of governments, the other of airlines—met there.

The Interim Council of the Provisional International Civil Aviation Organization (PICAO) opened its second session with an agenda expected to keep it busy until early December. The International Air Transport Association (IATA), holding its first annual general meeting, quickly and smoothly dealt with an agenda initially emphasizing organizational questions.

▸ **Speed Lack**—Both were seeking to carry forward tasks assigned them respectively at Chicago last year and at Havana last Spring, but AVIATION NEWS correspondents reported that while it was clear that a multitude of problems stand in the way of aviation's full utilization, it was not nearly so clear that as rapid progress was being made toward solutions as governments and airlines would be expected to insist upon.

PICAO appeared to be doing admirable work on the technical side of aviation, but there was some concern that it was not moving as strongly to compromise outstanding political and economic issues left in the air at Chicago. To the extent that PICAO defers action on these matters, IATA will be hampered in its operations.

Trend of deliberations of PICAO centering on the controversial fifth freedom question indicated that there will be no unlimited commercial rights in any agreement on international air transport which PICAO's Interim Council may eventually submit to the body's full assembly.

▸ **Convention Agreement**—Recognition of advantages of a multilateral convention in the development of international flying over the present system of bilateral arrangements was unanimous, but it was generally conceded that such an agreement will include definite commercial freedom limitations.

First stages of the work of two statutory committees — on air transport and air navigation—have been accomplished and detailed study of questions involved have been turned over to subsidiary groups. The air transport committee has suspended meetings pending reports from three special committees appointed to consider matters under its jurisdiction.

Work of the air navigation committee has been partially delayed until PICAO's secretariat is completed and the necessary technical advisers are available to continue, but four technical subcommittees are in session.

▸ **Staff Shortage** — Meetings of other air navigation subcommittees scheduled for next month were cancelled at the suggestion of Dr. Edward Warner, Interim Council president, because of the staff shortage.

Most IATA sessions were behind closed doors. The organization confirmed unanimously its executive committe's appointment of Sir William Percival Hildred, British director of civil aviation, as director general of the new organization. It also decided to increase the executive committee from nine to 12, new appointments being Brig. Gen. T. B. Wilson, board chairman of Transcontinental & Western Air; Maj. Gen. T. H. Shen, vice-president and managing director of China National Aviation Corp., and Hassen Sadik Pasha, general manager of Misr Network, Egypt.

C-54 Exemption

The Civil Aeronautics Board has adopted a special Civil Air Regulation making exceptions to Part 04 of CAR in order to permit use of C-54E type airplanes in scheduled operations.

Effective from Oct. 11 to Feb. 1, 1946, this type aircraft will not be required to have a master switch disconnecting all sources of electrical power from the electrical distribution system. In addition, a maximum take off gross weight of 61,100-lbs. may be authorized when there are no fuel dump chutes on the plane.

▸ **USERS** — C-54E's were recently declared surplus by the Army and allocated to the three carriers—American Airlines Overseas, Pan American Airways, and TWA — certificated for trans-Atlantic operations.

AA Considering Additional DC-28's

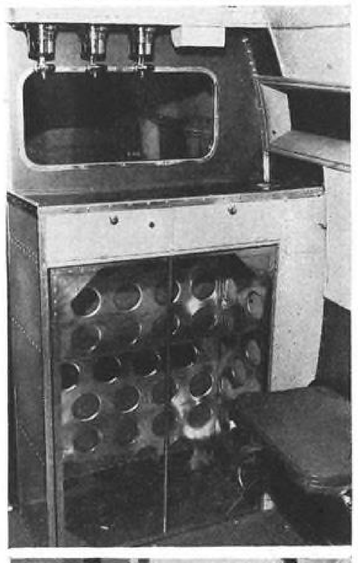
Public response to American Airlines' use of a 28-passenger DC-3 between New York and Boston has been so favorable that the company probably will fit others to carry a similar passenger load on short flights.

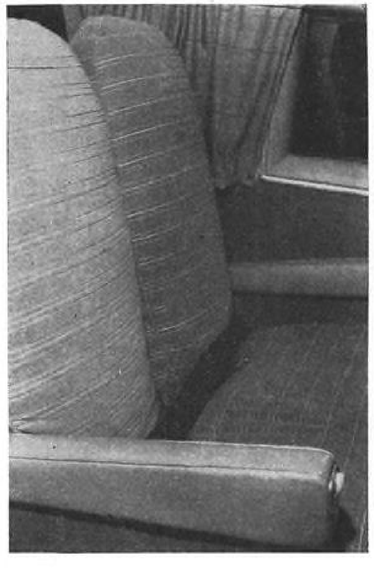
American calls the plane the DC-28. Decision whether to build more will be based on air traveler reaction and operational data. Details on operation are not yet available.

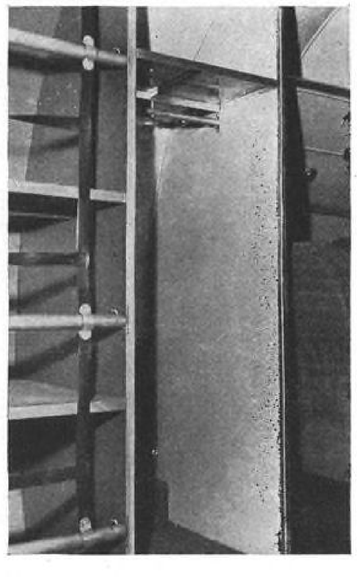
▸**Double Check**—To obtain public reaction, cards with requests for opinion were placed in the seats, and company representatives rode on the initial trips. Information from these two sources has convinced the company that people like the modification, and particularly that feature of it whereby they handle their own baggage (AVIATION NEWS, Oct. 8).

A number of first time air travelers have ridden on the airplane. It probably was one of these who told a fellow-passenger that he was riding in a DC-4 and thought it was surprising that the airlines had been able to place them in service so rapidly.

Except for one special trip to Washington, the modified DC-3 has been used exclusively on the New York-Boston run.







Inside 'Mass Travel' DC-3: *Cabin view of American Airlines' 28-passenger DC-3, looking towards rear, shows seating arrangement and narrowed aisle. Closeups show double seat with full width safety belt, baggage and coat racks for passenger use, and stewardess' buffet with window in partition. Non-adjustable seat backs have a hinged arm rest between them.*

Pan Am Domestic Entry Opposed By 10 Lines

Pan American Airways' attempt to enter the domestic air transportation field without the requirement that traffic be destined for foreign points, appears headed for strong opposition.

At a prehearing conference last week on PAA's application for eight routes across the U. S. to link its international gateway cities, on which it could carry domestic air travelers, 10 other airlines indicated that they will seek either to intervene or to appear as applicants through requests for a consolidated proceeding. Some of these lines have already filed applications for service in the areas involved, while others contemplate doing so. The 10 are: American Airlines, Braniff Airways, Delta Air Corp., Eastern Air Lines, National Airlines, Northwest Airlines, PCA, TWA, United Air Lines, and Western Air Lines.

ATA Move To End Air Delays Workable Here, Opposed Abroad

State Department experts see success of action to eliminate customs, visa, passport slowing of air travel in Western Hemisphere but warn of ancient obstacles in Europe, Asia.

By BLAINE STUBBLEFIELD

The Air Transport Association's campaign to remove passport, visa, and customs barriers which delay foreign-service air traffic, can succeed quickly in the Western Hemisphere but will meet with serious obstacles in other regions, in the opinion of State Department experts.

Security espionage between nations apparently will continue. Ancient suspicion and distrust will be hard to break down in Europe and Asia. Emigrant pressure toward the United States, due to war impoverished conditions nearly everywhere else, is tremendous. Illegal entries continue on a large scale.

▸ **Personal Problem**—It would be difficult, authorities argue, to devise a universal travel card, proposed by ATA, that would have the personal documentary character of the present passport procedure. Even passports are widely altered, and are simulated wholesale. Very often physical examinations are required for protection against communicable disease. But, if any practical short cuts can be worked out, they would be welcomed officially.

Border controls are mainly laws, not mere regulations. Any important changes will have to be made by Congress. Interdepartmental conflicts will have to be

Rainbows Ordered

Pan American World Airways has on order a fleet of Republic Aircraft Corp.'s high-speed *Rainbow* transports, the manufacturer disclosed last week. Delivery of the first six is expected to start within 22 months. Cost is to be $1,250,000 each.

Claimed to be the fastest commercial transport design, the *Rainbow* (AVIATION NEWS, Sept. 3) has a guaranteed cruising speed of 400-mph. and a high in excess of 450-mph. The 40-passenger cabin will be pressurized for high-altitude operation.

▸ Additional details on the *Rainbow*, released by Republic, puts its gross weight at 113,250-lbs.; span, 129-ft.; length, 98-ft. It is designed to carry a 10,000-lb. payload 4,150 miles. Despite its high speed, it is designed for a stalling speed of 95-mph.

dealt with. The State Department handles passports; visas come under the Department of Justice and of State; customs are a Treasury responsibility.

Thus, even here at home, drastic revision of old institutions and habits would be necessary. Not the least obstacle would be the usual inertia of bureaucracy and job holders.

Vital Time — All observers say that ATA has a good idea. Talk of low fares on 10-hour trips to Europe, for example, is all right till the customer runs against the two-day to weeks-long red-tape of getting a passport and visa. Time lost preparing for air trips is proportionately far greater than for surface trips.

It was suggested, by an informed source, that persons who expect to fly cross-border get passports far in advance and hold them. Persons who have obtained one passport can get the next one in two or three days—in Washington, one day.

At present, U. S. citizens entering Canada need only proof of citizenship; same for Canadians coming here, but they need passports for more than 29 days. U. S. tourists need only a card to enter Mexico, but they meet complications, later. Emigrants and business trippers need passports. Passports are required of Mexicans entering the U. S., but total obligations of travel between the two countries are about even. Frontier dwellers on both sides can cross on border cards.

Hope Here—ATA hopes, as a first step, that card travel can be established between here and Mexico and Canada. Emigration pressures within this hemisphere are very light; espionage is almost non-existant. Freedom of movement, State Department officials admit, should be attainable.

Loosening of travel and customs barriers throughout the world would be a major step toward international cooperation, and Congress undoubtedly will make initial moves in that direction.

ATA hopes that steamship, rail and bus operators, all of whom would benefit, will join its campaign. A joint committee to study the problem will be named in the next few weeks.

Two U. S. Lines Start London Trips

Pan American, American Airlines Overseas open operations; TWA may not begin for month.

Two of the three U. S. flag lines awarded routes across the North Atlantic last summer by the Civil Aeronautics Board, are starting service to London.

Pan American Airways reestablished its North Atlantic service between New York and London on Saturday, Oct. 20, and American Airlines Overseas is to begin operations Tuesday, Oct. 23.

Survey Flights — Transcontinental & Western Air, the third line, has not completed survey flights over its European routes, and may not begin scheduled trans-Atlantic commercial operation for another month.

Both American Overseas, formerly American Export, and Pan American are using C-54E's. Pan American expects flying time from New York to London to be about 15 hours.

Pan American says it is permitted two round trips between the U. S. and United Kingdom under U. S.-British agreement, and its new landplane service therefore will be limited to this number. Hope was expressed that the number may be increased soon and the State Department already has indicated this will happen (AVIATION NEWS, Oct. 15).

Cost Drops—Fares will be $275 one way and $495 round trip. This compares with pre-war flying boat fares of $375 one way and $675 round trip. Pan American hinted that rates may be lowered if frequencies increase.

Meanwhile, the line will continue to operate flying boats on twice-weekly schedules to Lisbon,

with fares reduced Oct. 20 to the pre-war figure of $390. Flying time and passenger fares between New York and Lisbon are to be cut further by Nov. 15, when additional C-54's are expected to be available.

Pan American notified CAB last week that it intended to serve London by landing at Hurn and/or Bovington. The former is 158 miles from London and probably would entail a shuttle connection by British Overseas Airways. Bovington is 18 miles from London.

American Airlines System's trans-Atlantic operation will start with three round trips each week between New York and London. One of these round trips will serve Boston. Eastbound flights will leave New York Tuesday, Thursday and Saturday, while the return flights will leave London on Wednesday, Friday and Sunday. The Tuesday eastbound and Wednesday westbound flight will stop at Boston. All flights will be made by way of Newfoundland and Eire.

The first American flight will leave the International Terminal at LaGuardia Field at 3 p.m. Tuesday. The equipment used will be exclusively DC-4's, counterpart of the Army C-54E. American will fly a crew of seven: captain, first officer, navigator, radio operator, flight engineer, purser and stewardess.

Ralph Damon, president of AA, and Harold R. Harris, vice-president and general manager of American Export Airlines, discussed the plans for the trans-oceanic operation with members of the press last week in an aerial press conference held over New York City in the first DC-4 to be certificated for civilian transport use.

CAB Tightens Liaison As Lines Speed Tempo

The Civil Aeronautics Board viewing the increasing tempo of the air transport industry, has tightened its liaison with the air carriers "on matters not otherwise reported to the Board through established channels."

Charles O. Cary, executive assistant since July, 1944, to Chairman L. Welch Pogue, has been placed in a new job as Special Assistant to the Board to carry out the work. The CAB announcement says he will confer with airline personnel on economic, labor, operational and developmental problems. The Board thus expects to gain first-hand, prompt information on industry problems of a day-to-day as well as a policy nature.

▸ **Successor** — Miss Marian L. Newman will succeed Cary in Pogue's office, where she has been the Chairman's secretary since March, 1942. She has been with the Board since its organization in August, 1938, and for three and a half years was its recording secretary.

Name Change Vote

The change in name of American Export Airlines to American Airlines Overseas, Inc., recently approved by American Airlines' board of directors, was up for stockholder ratification late last week. Company officials said full approval was a foregone conclusion.

SHORTLINES

▸ American Airlines reports a sharp upward trend in airfreight and international air express, with Mexico becoming an outstanding center for both. Eastern region figures show Philadelphia now among major airfreight cities, with an outbound tonnage for August of 19,000-lbs.

▸ Colonial Airlines passenger traffic between New York and Montreal was 61 percent higher in September than in the same month a year ago. Twelve additional planes will be placed in operation in coming months to increase New York-Montreal service and establish service from Ottawa to New York and Washington.

▸ Mid-Continent Airlines is earmarking for returning servicemen 25 percent of its employment openings.

▸ Pan American-Grace Airways has ordered three Douglas DC-6's and two Lockheed *Constellations*, which it predicts will be "particularly well adapted to the high-speed express service which Panagra will offer soon."

▸ PCA has just opened enlarged consolidated reservations and traffic offices in Pittsburgh.

▸ Pan American has announced reduction from 55 to 37 cents a pound in the rate for air shipments between New York and Bermuda. Exceptions are Bermuda lilies at 28 cents a pound and newspapers and magazines at 19 cents.

CAB ACTION

The Civil Aeronautics Board:

● Granted cities of Sault Ste. Marie, Mich., and Piqua and Zanesville, Ohio, permission to intervene in Great Lakes Area case (Docket 535 et al.) and denied intervention by Owensboro (Ky.) Chamber of Commerce.

● Dismissed, at applicant's requests, applications (Dockets 1925 and 1926) of Southwestern Air Freight & Express Airlines.

● Consolidated into Mississippi Valley case (Docket 548 et al.) application of Southern Commercial Air Transport (Docket 2070).

● Permitted Chicago and Southern Air Lines to inaugurate non-stop service between Detroit, Mich., and Fort Wayne, Ind., on AM 53.

● Granted cities of Lancaster, Penna., and Jamestown, N. Y., State of Rhode Island, and Baltimore City Aviation Commission permission to intervene in Middle Atlantic case (Docket 674 et al.); amended its consolidation order in the case to eliminate proposals for through service from Detroit or Cleveland to Boston, New York, or Philadelphia, and consolidated into the proceeding numerous other applications.

CAB SCHEDULE

Oct. 22. Prehearing conference in Board investigation of agreement between Pan American Airways and Panair do Brasil, S. A., relating to services and facilities. Postponed from Oct. 8. (Docket 2032.)

Oct. 22. Briefs due in American Airlines' Oklahoma City-Tucson and Oklahoma City-Phoenix nonstop case. Postponed from Oct. 14. (Docket 1895.)

Oct. 22. Oral argument in West Coast case. Postponed from Oct. 8. (Docket 250 et al.)

Oct. 22. Rebuttal exhibits due in Mississippi Valley case. (Docket 548 et al.)

Oct. 22. Hearing at Jacksonville, Fla., on National Airlines accident near Banana River Naval Air Station.

Oct. 25. Briefs due in Pan American's Juneau-Ketchikan local service case. (Docket 1972.)

Oct. 25. Hearing in Board investigation of suspensions of, and failure to provide, service at Clarksburg and Morgantown, W. Va., by American Airlines, Pennsylvania-Central Airlines, and Transcontinental & Western Air. (Docket 2030.)

Oct. 25. Exceptions due to examiner's report in Trans-Marine investigation. (Docket 1967.)

Oct. 25. Prehearing conference on Swedish Intercontinental Airlines (SILA) application for foreign air carrier permit. (Docket 2071.)

Oct. 26. Prehearing conference on Expreso Aereo Inter-Americano, S. A., application for foreign air carrier permit. (Dockets 2012 and 1787.)

Oct. 26. Prehearing conference on Compania Cubana de Aviacion, S. A., application for foreign air carrier permit. (Docket 1887.)

Oct. 29. Briefs due in South Atlantic route case. Postponed from Oct. 18. (Docket 1171 et al.)

Oct. 29. Briefs due in Cincinnati-New York case. Postponed from Oct. 1 and 15. (Docket 221 et al.)

Oct. 29. Oral argument in Pacific case. (Docket 547 et al.)

Oct. 29. Exchange of exhibits in American Airlines route consolidation case. (Docket 932.)

Oct. 31. Prehearing conference on Royal Dutch Air Lines (KLM) and Royal Netherlands Indies Airways (KNILM) application for foreign air carrier permits. (Docket 1277.)

Nov. 1. Briefs due in Bristol Bay case. (Docket 1309.)

Nov. 2. Prehearing conference on Aerovias Nacionales de Colombia application for foreign air carrier permit. (Docket 1983.)

Nov. 2. Prehearing conference on American Airlines proposed acquisition of Mid-Continent Airlines. (Docket 2068.)

Nov. 5. Briefs due in New England case. (Docket 399 et al.)

Nov. 5. Prehearing conference on Pan American Airways application for amendment of trans-Atlantic air routes. (Docket 2076.)

Nov. 5. Hearing in Mississippi Valley case at New Orleans, La. (Docket 548 et al.)

Nov. 12. Oral argument in South Atlantic route case. (Docket 1171 et al.)

Nov. 14. Briefs due in Trans-Marine case. (Docket 1967.)

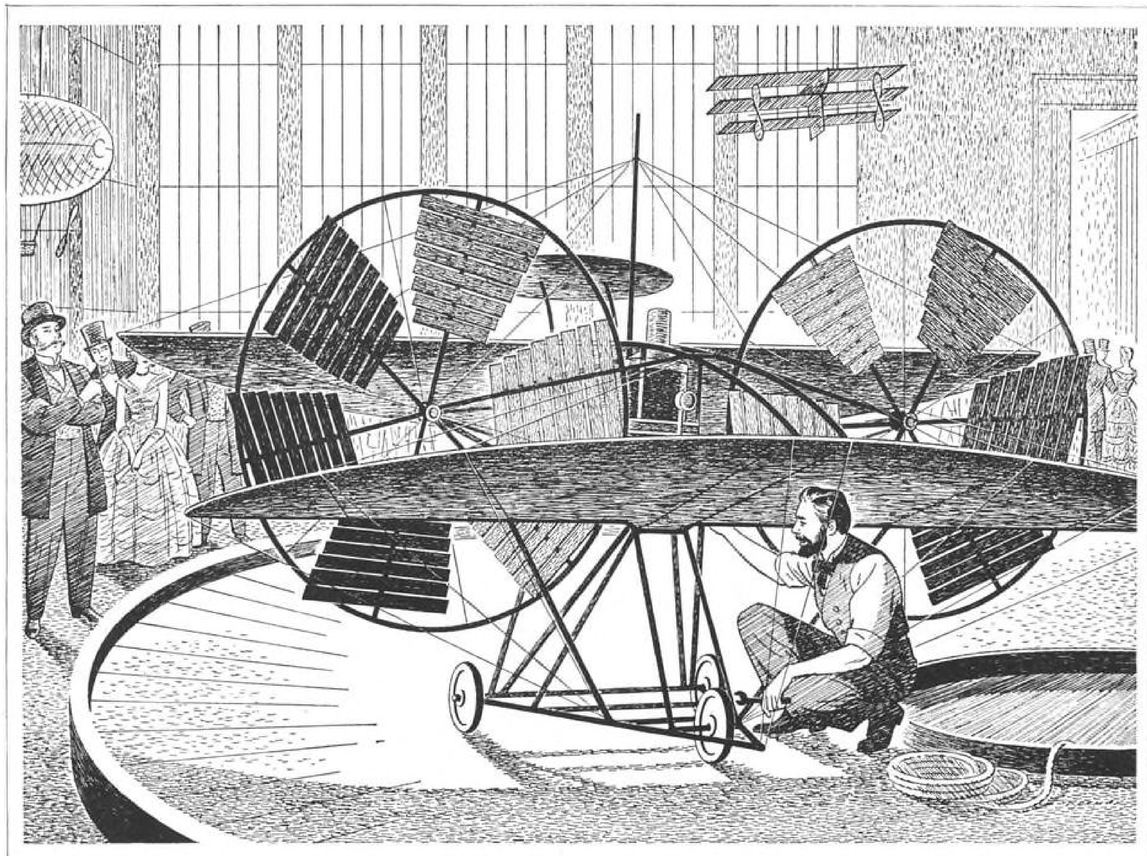
Dec. 7. Exchange of exhibits in Kansas City-Memphis-Florida case. Postponed from Nov. 1. (Docket 1051 et al.)

Dec. 14. Exchange of exhibits in Middle Atlantic case. Postponed from Nov. 1 and 30. (Docket 674 et al.)

Dec. 24. Rebuttal exhibits due in Kansas City-Memphis-Florida case. Postponed from Nov. 20. Hearing, previously set tentatively for Dec. 3, postponed to unspecified time in January. (Docket 1051 et al.)

Dec. 28. Exchange of rebuttal exhibits in Middle Atlantic case. (Docket 674 et al.)

Jan. 14. Hearing in Middle Atlantic case. (Docket 764 et al.)



Thomas Moy, engineer-member of the Royal Aeronautical Society, designed this model with 114 square feet of wing surface. It weighed 120 pounds and was powered by a 3 h.p., 80 lb. steam engine driving six-bladed windmill-like propellers. Tested at London's Crystal Palace in 1875, the tethered model rose six inches — the heaviest power machine yet to fly

Marshall and the Role of Air Power

GENERAL MARSHALL'S brilliant 72,000 word report on World War II will take its place as a great document of history. Because of the general's unparalleled prestige on Capitol Hill and with the public its influence will be considerable. Yet, except for one extended passage on the strategic and tactical bombardment of Germany, headed "Victory In the Air," and a few scattered paragraphs, the report virtually ignores the decisive role of air power in the victory of allied arms over Germany and Japan.

This is regrettable. Never has it been more urgent for Congress to understand fully the role and value of air power, and the necessity to keep it with continued aeronautical research, development, and production.

A possible but inadequate reason for the omission may have been Marshall's feeling that General Arnold is making a separate report to Secretary Patterson covering the achievements of the Army Air Forces. However, in any over-all report on the strategy of victory and the progress of the various campaigns, more specific recognition should have been made by the Chief of Staff concerning the branch of the triple-headed U. S. Army which, with Naval air, knocked Japan out of the war without a costly invasion of the home soil, the threat of which caused Italy to capitulate, and which was more than any other single factor acknowledged to be responsible for the final collapse of Germany.

ON THE OTHER HAND, it should not be inferred that General Marshall was actually anti-airforce in his magnificent job of re-arming the country for the coming conflict, which will be his everlasting monument as Army Chief of Staff before and through World War II. He it was who rescued the late Lt. Gen. Frank M. Andrews, one of this country's original air pioneers, from oblivion, made him his G-3 in charge of training and operations, gave him the vital Caribbean and Canal Zone defense command, then at a crucial time the important Middle East Command. This in turn was but preparation for the big job of commanding general of the entire European operations, land and air, in the early part of which he was lost in a crash during a routine air inspection flight. If this had not happened, it is likely that the commanding general of the allied forces which brought Germany to defeat would have been distinctively an air officer.

While all this was going on, General Marshall was working at Headquarters to give General Arnold every possible assistance in his task of building up a powerful striking air force from pitifully small beginnings. With General Arnold's elevation to membership in the Joint (USA) and Combined (Anglo-American) Chiefs of Staff, General Marshall consistently backed his policies at such critical points, for example, as the Casablanca decision for the AAF to continue bombing, and the capture of the Marianas for what proved to be the decisive B-29 operations.

ALL THIS IS TRUE, and wholly to the good, but the fact remains—and Congress should note and ponder—that General Marshall's report reflects the viewpoint of an able but conservative Army officer. Ground strategy and tactics, logistics, the capture of positions, artillery, tanks are the all-important considerations. Air activites are but preliminary or at best auxiliary operations. And even on this level, admitting the fact that the details reach the public in General Arnold's previous and forthcoming reports, there are notable omissions as to the genuinely decisive part played by tactical air power itself in connection with certain critical points of the various campaigns.

These might well have been covered at least in a sentence or two to show that air's decisive part was realized, permitting the details to follow in the report of the commanding general of the Army Air Forces. Tactical air power's unique role in teaming with General Patton in his lightning dash across France is one example; air's part in the "battle of the bulge" is another.

In the light of the atomic bomb and fantastic air weapons in being or under development, air's future role in possible offense and defense will be greater than ever. The single department of defense, with co-equal air, should certainly get a better hearing than it has had to date. It is significant that on the Army side the highly successful team of Ike Eisenhower and Tooey Spaatz, firmly knit in Africa and Europe, will shortly be functioning in Washington.

ROBERT H. WOOD

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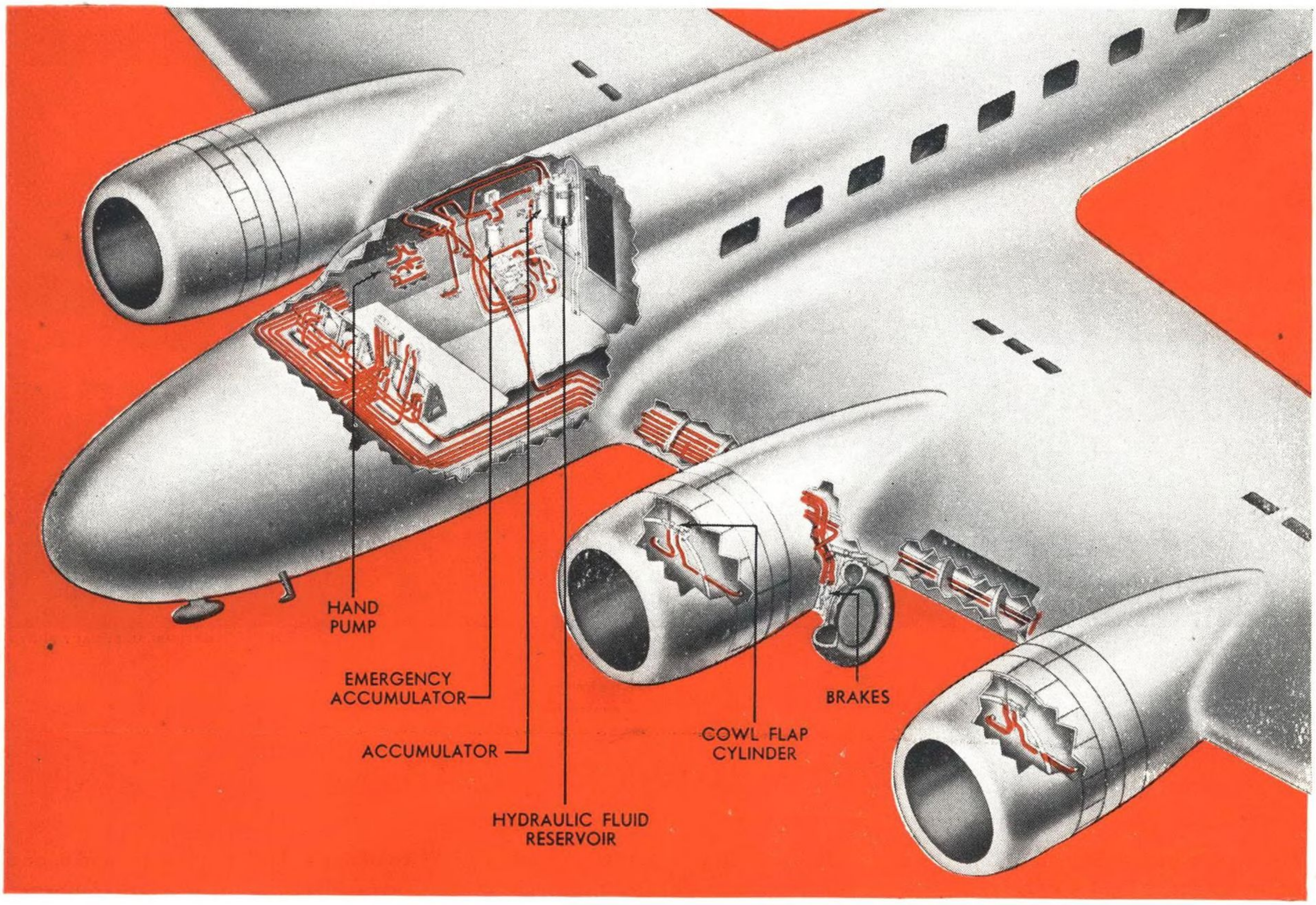

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