Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC. JANUARY 15, 1945

Boeing's New C-97 Super Cargo and Troop Transport: *The record-breaking airplane—biggest land-based transport—which flew the 2323 miles from Seattle to Washington in six hours, three minutes and 50 seconds, is shown in flight in this new photograph.*

Wide Ramifications Likely on CAB Air Service Patterns

Board's report expected to be reflected in future international negotiations as well as South Atlantic route hearing in connection with which it was made public.....Page 43

Advisory Group to Have Major Role in Post-War

CAA administrator's appointment of group representing both private flyer and plane industry regarded as important step, giving more attention to non-scheduled flying.....Page 15

Shipping Firms Deny Joint Move for Air Routes

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1945 Schedule Calls for Output of 78,000 Warplanes

Unit production to be approximately 18,000 aircraft under last year but airframe weight will continue over billion pound mark, compared with 1,112,000,000 in 1944.....Page 26

Biddle Intervention May Force SPB Policy Revision

Attorney General submits preliminary report to Congress; opposes return of war goods to original manufacturer for sale to public with maker acting as agent for U. S.....Page 11

Score of Aviation Bills Introduced on Congress Opening

Virtually all phases covered, including new Lea measure calling for basic changes in Civil Aeronautics Act of 1938; Randolph moves for federal airport aid.....Page 9

THE AVIATION NEWS

Washington Observer

AIR POWER RESULTS—Members of Congress just returned from the European theater are reported satisfied with aviation and most ground operations. It was said the enemy is dispersing and putting underground so much productive activity that strategic air attack will bring diminishing returns from now on. If the Allies had been able to strike early in the war with the air power they now have, the Wehrmacht might have been paralyzed. As it is, the Nazis have been greatly slowed by the air attack. It was reported from one source that battlefields are littered with dead horses, used by the Germans to haul fuelless artillery.

★ ★ ★

GERMAN PRODUCTION—There is concern in some quarters over the ability of Germany to maintain production of aircraft, munitions and supplies despite the heavy air bombardment. Reports of pending inquiries into this question are thus far not officially confirmed. However, disappointment over the effect of bombing is definitely in the minds of some members of Congress and some high military officers. There is no criticism of the Air Forces in this connection. The explanation wanted is how the Germans manage to evade so much destructive force or to rebuild after it.

★ ★ ★

RUSSIAN LEND-LEASE—The Russians are said to have asked for substantial numbers of air transport equipment under the 1944-45 Lend-Lease Protocol. While they would like to get some of our newest types, current opinion in Washington is that they will have to be satisfied with DC-3's. Czechoslovakia, Yugoslavia, Belgium, France, and the Netherlands, are also anxious to receive DC-3's under Lend-Lease.

★ ★ ★

GREATER AVIATION VOICE—Secretaries of War and Navy have requested Congress that the armed services be given a greater voice in post-war domestic and foreign commercial aviation determinations, because of the close tie-in between the national defense and peacetime civil aviation. They have asked that they be consulted on all matters pertaining to international aviation; that War and Navy Department approval be required before permits are granted to foreign commercial airlines to operate in this country, that the services be consulted by CAA in establishment of air navigation facilities and that the departments be heard on any and all national airport programs.

★ ★ ★

ARGENTINA RELATIONS—While the primary reason for the President's desire to reach a diplomatic truce with Argentina is said to be the bad effect the present situation has on Latin American relations generally, the post-war international aviation picture is also an important factor. With the British (generally regarded as our chief rivals) holding six seats on the Interim Council to our one, interested American officials are anxious to solidify our relations with Latin America, which holds six seats and generally accepts our views regarding post-war aviation.

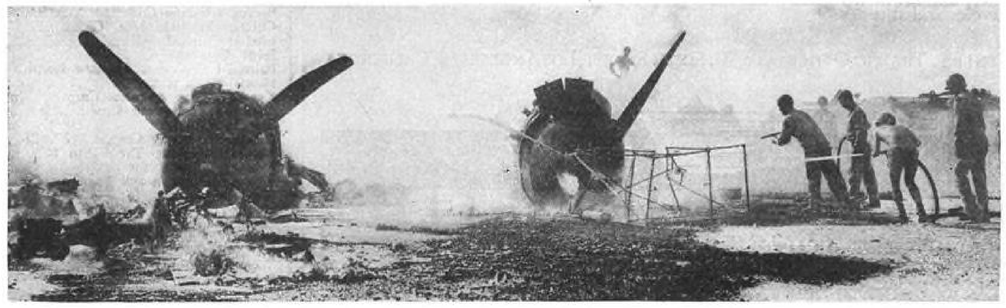
★

WELLES TO BUENOS AIRES—Hottest report on the State Department grapevine was that Sumner Welles, former Under Secretary of State, flew to Buenos Aires recently as special emissary of the President to patch up Argentine-U.S. relations. Report said he went incognito. State Department declined to confirm the report.

★

BRITISH BUILDING—British Airways is reported to be taking advantage of our relations with Argentina by attempting to build up their position in that country. The Dutch and TACA also are active.

Wrecked engines of B-29 destroyed in Jap raid on Saipan base.



AVIATION NEWS

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Advertisers Index

Washington Observer

WPB ADVISORY COMMITTEES—Plans are projected for establishment of both an aircraft manufacturers' advisory committee and an airline advisory committee to the new Aircraft Division of the War Production Board, of which Henry Nelson is director. As soon as legal requirements are met, invitations will be issued in such a way as to strike a balance across the industry among large and small manufacturers, new and old-line companies, Chamber members and non-Chamber members, Aircraft War Production Council members and non-members, and makers of personal planes and Bunyanesque transports. It will be the most difficult, since the airline committee will be set up along normal rules giving representation both to the large lines and the smaller operations.

* * *

BENTONITE TO BE ALLOCATED—Desiccant grade bentonite, used in packing aircraft engines and other precision products to protect them against moisture deterioration, will go under allocation the first of February. This product has been a substitute for desiccant silica gel, which is in tight supply and has been under allocation for some time. The action will be taken to cause almost complete diversion of both commodities to the military, according to WPB sources.

* * *

Industry Observer

▸ The Landgraf helicopter, which recently crashed, will be rebuilt shortly, with improved control features.

▸ Youthful Stanley Hiller will probably testfly his new 2-passenger prototype helicopter next month. He is testing new blades on his *Hillercopter* and construction is under way on a net set of different design which he expects will represent still other improvements. West Coast aviation experts are amazed at the speed of Hiller's construction, doing in weeks what others would require months to accomplish.

▸ A new cargo tie-down using magnesium straps and a special tightening jack of new design is being developed by a West Coast company.

▸ Although it has not been announced, a new wartime glider manufacturing program is under way, after such construction had dropped to the lowest point in several years. Waco and other glider makers are in line for business.

▸ Airport operators are interested in a single seat jeep which Willys-Overland has converted into a plant fire engine in Toledo. A few aviation observers see it as a satisfactory, inexpensive fire truck for small airports.

▸ Air transport industry is watching with interest for the appointment by Secretary Stettinius of the director and deputy director of the reorganized State Department's Office of Transportation & Communications, which has jurisdiction over the Aviation Division, headed by Stokeley Morgan. Action awaits Assistant Secretary Clayton's confirmation and study of the situation.

▸ Standard Oil Co. will announce plans this week for participation in development of the personal aircraft market, with special reference to sale and service of Esso aviation products.

▸ Allison's big 24-cylinder liquid-cooled model announced last May as the most powerful aircraft engine in the world, turning up 3,000 hp, will not go into production.

▸ Although reports continue to be published about rapid development of helicopter speeds, the maximum still is not much over 100 mph, and some small civilian test ships such as the *Hillercopter* do little better than 50 mph.

▸ AAF authorities, in addition to permitting mention of the C-109, the flying tanker, a modified Consolidated *Liberator*, have taken off the secret list the name of another plane which will become famous as soon as manufacturer, power plant and performance can be published. It will be known as the *Shooting Star*.

▸ Although the press did not emphasize it, Glenn Martin's recent forecast of new alloys after the war, which will cut aircraft weights considerably, pointed up engineering belief that transoceanic aircraft will be able to carry at least 20 percent greater payloads than most statisticians now are providing for in their estimates of future operating costs.

▸ Aero Services, Inc., Van Nuys, Cal., is angling for more aircraft modification contracts. The firm is still on war work but some of its conversion projects may be on troop transports for passenger service. It is now modifying multi-engined planes for PAA and TACA.

▸ A Canadian newspaper has released a war secret previously well kept of development of a twin-engine simulator to permit multi-engine training for pilots similar to that given by Link trainers. It is made by West Aeronautical Devices, Inc., Montreal, and has been used since 1942 by pilots training in British, Canadian and U. S. air forces.

▸ In-flight teletypes which would eliminate verbal radio orders are declared commercially practical by engineers and are being studied by airline officials for possible installation in airlines after the war.

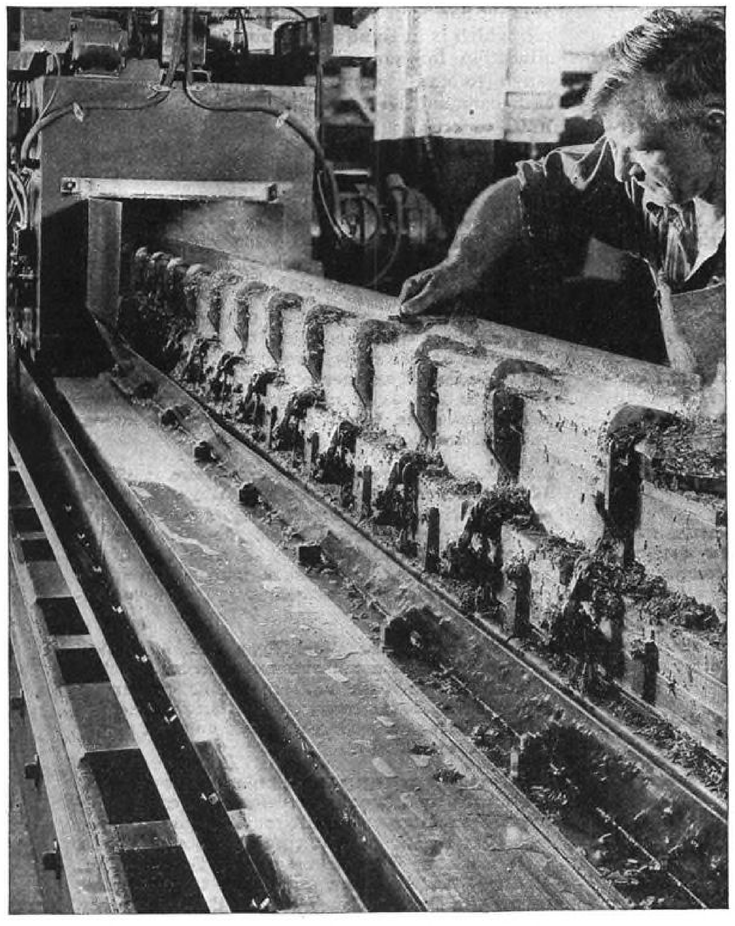
▸ Developments in design and construction lead some engineers to make the prediction that all plane engines and most heavy duty truck engines will use sodium cooled exhaust valves after the war. They cite a new simple valve rotating device which doubles valve life and merely replaces the valve spring retaining washers on certain engines.

PRODUCING WING SPARS ON SHORT ORDER

By WILLIAM WINTER

Editor of "Air Trails" and author of "War Planes of All Nations" tells how Bell Aircraft has developed a spar milling machine that in twenty-two minutes does the job that once required twenty-four hours.

"THE Bell-designed spar milling machine is one of the great contributions this progressive company has made to speed up American aircraft production. Previous to the development of this mill, now being used by Bell and many other aircraft companies, it required twenty-four hours to complete a wing spar. Now these ingenious machines, covered by Bell Aircraft patents, turn out the spars for the giant Boeing B-29 Superfortresses being built in the Marietta Bell Aircraft plant in twenty-two minutes.



"The Bell spar milling machine, first developed in 1940, makes a cut two inches deep and four inches wide at the rate of sixty-five inches per minute.

"Under the old, slow method the material was fed into stationary cutter heads. In the Bell-designed mill the cutter moves across the metal, which is securely held to a bed by clamps that automatically drop down to let the cutting machinery pass and then jump up to grip firmly the spar behiud the moving section.

"Since the cutting head runs on a cam which acts as a die, the machine cuts any contour up to twenty degrees.

"Each machine is its own meticulous housekeeper, for streams of coolant pumped onto the high speed cutter heads sweep away the shavings and deposit them into a central salvage pit.

"The advanced design which Bell engineers have built into this spar milling machine are further evidence that American 'know how' is the prime factor that now makes this country the greatest air power in the world.

"And when V-day dawns, this same engineering ability will be utilized in producing peacetime products that will bring this nation better living and greater values."

★ *Buy War Bonds and Speed Victory* ★

VOLUME 2 · NUMBER 25

Aviation News

McGRAW-HILL PUBLISHING CO., INC.

January 15, 1945

C-97's Record Flight Indication Of Postwar Transport Performance

Seattle-Washington, D.C., hop of Boeing's new cargo plane, capable of carrying 100 passengers at 30,000 feet in pressure cabin, gives hint of what to expect in airline of future; craft is transport version of B-29 *Superfortress*.

The record-breaking flight last week of Boeing's new C-97 transport which flew non-stop from Seattle to Washington—2323 miles—in six hours, four minutes and 33 seconds, was an indication of what may be expected on the airways in the coming era of high speed and big ships.

This counterpart of the Boeing B-29 *Superfortress* flew at an altitude of about 30,000 feet most of the way, the pressurized cabin assuring the 13 passengers aboard complete comfort.

▸**Constellation Mark Broken** — Previous coast-to-coast transport record was made last April by Lockheed's *Constellation,* which flew the slightly less than 2400 miles from Burbank to Washington in six hours, 57 minutes, 51 seconds. The average speed was over 380 mph.

The C-97 was designed and built by Boeing at Seattle under contract with the Air Technical Service Command of the AAF, and was developed in close liaison with ATSC engineers.

This new super cargo and troop transport for the Air Forces is capable of carrying more than 100 fully equipped troops for long distances at high speed. Boeing already has announced a commercial version of the plane, the *Stratocruiser,* which will carry up to 100 passengers in luxurious comfort for operating ranges up to 3,500 miles with ample fuel reserves.

▸**Restricted**—Details of the plane's performances, operating range, etc., are restricted, but the C-97 is larger, faster and will carry a greater load farther than any other military land transport. It has a maximum speed of well over 300 mph.

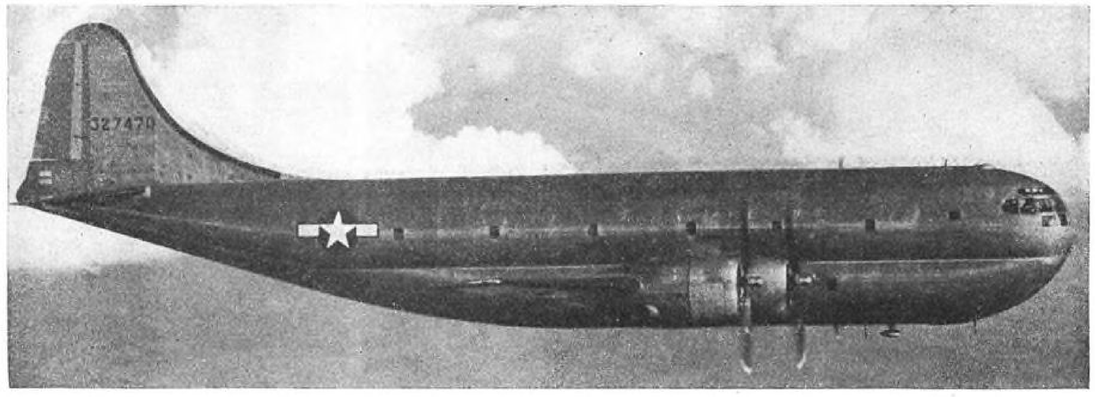
Wings, tail surfaces and landing gear are identical to those of the B-29, but the volume, 10,000 cubic feet, is more than twice that of the B-29. It has usable cargo space almost equal to that of two average railway box cars. It utilized the Boeing "117" low-drag wing and other aerodynamic advancements proved on the B-29.

The C-97 is powered by four 18-cylinder Wright Cyclone engines, the same as those used on the B-29. They drive four-bladed Hamilton Standard propellers. The plane is 110 feet, four inches long, 12 feet longer than the B-29. It has a wing-spread of 141 feet, three inches, the same as the *Superfortress.* Its design gross weight is 120,000 pounds. Payload is 25,000 pounds.

▸**Large Loading Doors**—A unique feature of the C-97 is a pair of large loading doors which open under the rear of the fuselage with a drive-up ramp which is let down from within.

The ramp is self-contained and is retracted by an electrically powered hoist eliminating the necessity for special equipment on the field to load or unload the plane. Two fully-loaded ton and one-half trucks can be driven up the ramp and into the airplane with room for other equipment or cargo, or two light tanks can be accommodated. The cargo hoist operates on a ceiling rail along the entire length of the fuselage.

▸**Loading Facilities**—To facilitate loading and unloading, the powered traverse hoist operates directly over the main loading doors so that a truck can be backed under it or loads can be picked up direct from the ground. Latest developments in cargo tie-down systems are included, making obsolete systems of ropes and nets. One method, for example, employs four



Silhouette of C-97 in Flight: *The aerodynamic cleanness of Boeing's new cargo and troop transport, a counterpart of the B-29* Superfortress, *is emphasized in the above picture.*

Mars Larger

The Boeing C-97 is the largest land-based cargo transport, exceeded in size only by the Navy's giant Martin *Mars* flying boat.

Span of the *Mars* is 200 feet against 141 foot wingspread of the C-97. Length of the *Mars* is 117 feet, and 110 feet for the C-97. Both have listed payloads of 25,000 pounds.

large pallets which are preloaded on the ground and the cargo lashed down. The entire platform is then lifted into the ship and made fast.

Two decks of the plane are achieved by building, in effect, one fuselage section on another, the upper section being longer. The bottom section is the same diameter as the B-29 and the top section considerably larger. A cross-section of the plane resembles an inverted figure "8". This two-deck arrangement, with two separate cabins below and a main cabin 78 feet long above, permits flexibility in utilizing the plane to military cargo. Standard crew for the plane will be composed of a pilot, co-pilot, flight engineer, radio operator, radio operator and navigator.

Asks $10,000,000 Air Research Bill

An appropriation of $10,000,000 is provided in a bill introduced by Rep. Bulwinkle (D-N.C.) the money to be used "for the purpose of developing and improving devices for the propulsion of aircraft of considerably more power than now exist in the United States."

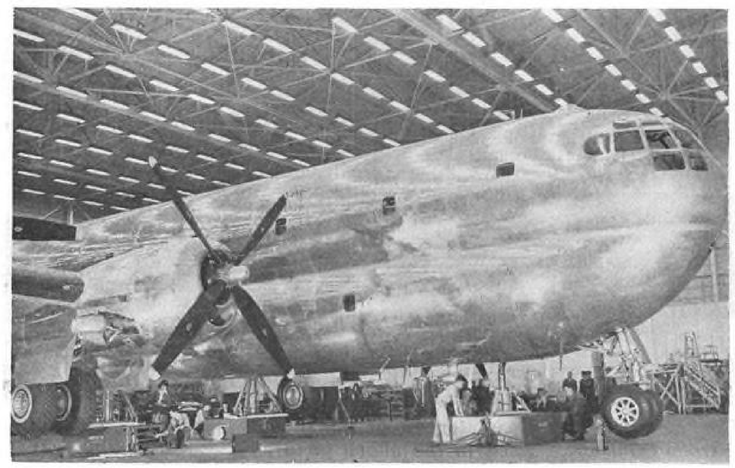
▸ **Includes Jet Power**—Rep. Bulwinkle said he had in mind experimentation and development of all types of aircraft power plants, including jet and gas turbine units to enable the United States to keep abreast and ahead of other nations and to maintain its present position in military and civil aeronautics.

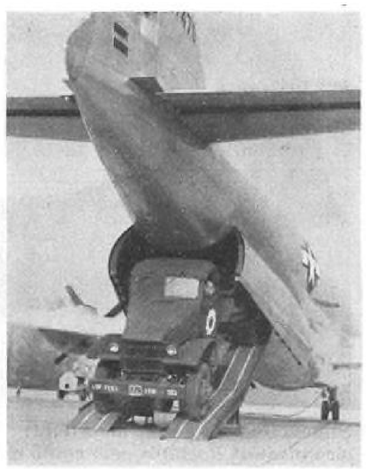
The bill provides that the President may allot the funds to such federal department or agency as he may charge with the responsibility of carrying out the purpose of the act.

AVIATION CALENDAR

Jan. 15-17—National Aircraft Standards Committee, ACCA, Electric Circuit Breaker Meeting, Stevens Hotel, Chicago, Ill.
Jan. 16-17—National Aircraft Standards Committee, Society of Automotive Engineers, Hydraulics meeting, Stevens Hotel, Chicago, Ill.
Jan. 17-18—Engine Technical Committee meeting, Hotel Lexington, New York.
Jan. 18-19—Air Express Committee, ATA, Chicago.
Jan. 18-19—National Aircraft Standards Committee, ACCA, Society of Automotive Engineers Circuit Breaker meeting, Stevens Hotel, Chicago, Ill.
Jan. 22-26—Winter Technical Meeting, American Institute of Electrical Engineers, Engineering Societies Building, New York.
Jan. 24—Air Transport Conference, United Fresh Fruit and Vegetable Association, Hotel Stevens, Chicago.
Jan. 24-26—American Meteorological Society, annual meeting, Kansas City, Mo.
Jan. 26—Mid-Continent Section, Society of Automotive Engineers, Mayo Hotel, Tulsa, Okla.
Jan. 30-31—National Aeronautic Association, annual meeting, Brown Palace Hotel, Denver, Colo.
Jan. 30-Feb. 1—13th Annual Meeting of Institute of Aeronautical Sciences, New York, canceled.
Feb. 2-3—Air Carrier Performance Subcommittee, ARC and ATA, Hotel Lexington, New York.
Feb. 5-6—ARC-CAA-CAB Air Carrier Performance meeting, Statler Hotel, Washington.
April 4-6—National Aeronautical Meeting, Society of Automotive Engineers, Hotel New Yorker, New York City.
Apr. 10-11—Airplane Technical Committee, ACCA, New Orleans.
Apr. 13-14—National Airworthiness Requirements Committee, ACCA, New Orleans.
May 6-9—International Aviation Fraternity, first annual convention, Miami Beach, Fla.
May 20-27—Pan-American Aircraft Exposition, Dallas.

Features of Army Air Forces' Newest Transport: *Size of the double-deck Boeing C-97 which is capable of transporting more than 100 fully equipped troops 2000 miles non-stop in less than 10 hours is shown here—the huge nose on the fuselage which is 12 feet longer than the B-29 and the cargo loading doors giving maximum facility for loading large and heavy equipment.*





Score of Aviation Bills Introduced On Opening Days of New Congress

Virtually all phases covered, including new Lea measure calling for basic changes in Civil Aeronautics Act of 1938.

More than a score of bills, covering almost all phases of aviation from a proposal to direct the Chief of the Weather Bureau to investigate causes and characteristics of thunderstorms to a new Lea Bill calling for basic changes in the Civil Aeronautics Act of 1938, were introduced during the opening days of the new Congress.

The highly controversial Lea bill, which was the center of a violent intra-aviation storm last year, died in the Rules Committee. The new bill, which includes airport financing features, was referred to the House Interstate and Foreign Commerce Committee of which Rep. Lea (D-W.Va.) is chairman. The bill is discussed elsewhere in this issue.

▸ **Randolph Bill Among First** — One of the first measures introduced was one by Rep. Randolph (D-W.Va.) long-time friend of aviation, to provide federal aid for the development, construction, improvement and repair of public airports.

The measure proposes an appropriation of $100,000,000 for the first fiscal year after passage of the bill and a like amount for each of the nine successive years thereafter. This would remain available until expended, of which not to exceed five percent would be available to the Civil Aeronautics Administrator for all necessary planning and research and for expenses incident to the administration of the act.

Randolph emphasized that needs of both air commerce and private flying would be taken into consideration by the administrator in formulating the program. The bill would authorize the Administrator to make grants of funds to States and their political subdivisions, and other non-Federal agencies, for development of airports.

▸ **State and Urban Program**—The Randolph federal-aid program would consist of two parts, a state program to include all projects for development of Class 3 and smaller airports and an urban program for projects for development of Class 4 and larger airports.

In the state program, all federal grants would be made to the state airport agencies, whether the projects are sponsored by the state airport agency or other public agency. In the urban program, the federal grants would be made directly to the public agencies sponsoring the projects.

Grants may be made on a basis of population and size of areas in which the various projects would be located.

▸ **$1,000,000,000 Program**—Senator McCarran (D-Nev.) has introduced a bill calling for $1,000,000,000 expenditure by federal, state and local governments for construction and development of some 6,000 airports. The Senator describes his measure as a compromise between a federal-state program and a federal-city program. The program outlined in the bill would cover a five-year period, with the federal government providing $100,000,000 a year for five years which would be matched by state and community funds.

Among other bills introduced are:

▸ A proposal to amend the Civil Aeronautics Act to provide compensation for disability or death of air-carrier employees and another defining the liability of air carriers regarding passengers, both by Rep. O'Hara (R-Minn.); a bill by Randolph to establish a division of aviation education in the Office of Education.

▸ Rep. Woodrum (D-Va.) introduced a resolution to establish a Select Committee on Post-war Military Policy, which would continue a similar committee which he headed in the last Congress.

▸ A proposal for establishment of an Air Policy Commission was introduced by Randolph and Rep. Bulwinkle (D-N.C.) introduced a resolution to authorize the Interstate and Foreign Commerce Committee or a sub-committee to investigate subjects related to air commerce and air navigation.

▸ Rep. Snyder (D-Pa.) proposes creation of an office of military research and development in the War Department and a similar proposal is made for the Navy Department in a bill by Rep. Sheppard (D-Calif.)

There are many other legislative proposals concerning aviation, some making minor amendments in existing laws and other revolutionary changes which have been dropped in the hopper or will be dropped in the next few weeks. Many of them will never see the light of day, but others which will come up in weeks to come will have an important bearing on the whole aviation picture.—C. S. H.

Aviation Standing Committees Urged

Bills providing for establishment of standing committees on aviation have been introduced in the Senate and House by Senator McCarran (D-Nev.) and Rep. Randolph (D-W. Va.)

McCarran's bill provides for a permanent committee on civil aviation and aeronautics with 13 members. Most aviation matters are now handled by the Commerce Committee, although various phases go to other Senate committees.

Randolph's bill provides for a permanent committee on aviation in the House to be composed of 21 members. Most aviation matters in the House now are referred to the Interstate and Foreign Commerce committee. Randolph, without disparaging this committee, commented that it has approximately 40 different subjects in its jurisdiction and that aviation, with its manifold problems, should be handled by a regular standing committee devoted entirely to this subject.

AAF Status Certain Of Congress Debate

Proposals for independent organization and giving aviation equal rating with Army and Navy also to be threshed out.

Question of giving the air arm equal status with the basic Army and Navy organizations and proposals for an independent air force are certain to become subjects for debate in the new Congress. Several proposals already have been incorporated in bills introduced and others probably will follow.

A measure of wide scope has been introduced by Rep. Maloney (D-La.) which would set up a Department of Air Defense, establish the United States Air Forces as a separate branch of national defense and set up a United States Aviation Academy to provide officers for the separate air arm.

▸ **Asks Air Defense Unit**—His bill

proposes the establishment of a Department of Air Defense with a Secretary of Air Defense. All powers, duties and functions now exercised by the War and Navy Departments pertaining to aviation and air defense would be transferred to the new department.

Rep. Randolph (D-W. Va.) proposes a Defense Department, headed by a Secretary with cabinet rank and under secretaries for the Air Forces, Army and Navy.

Rep. O'Brien (D-Mich.) proposes establishment of divisions of Air Warfare, Navy and Army, as coequal divisions under a Department of National Defense.

Seek Labor to Ease Aluminum Shortage

WPB officials see manpower as answer to production crisis.

Unless manpower is obtained immediately, the demand for aluminum sheet in 1945 may present a serious aluminum production crisis, in the opinion of WPB officials. This would have a sharp effect on aircraft production, since two-thirds of America's total output of aluminum is used in aircraft construction.

Shortages reported by AVIATION NEWS (Jan. 1) are beginning to be felt and WPB now describes it as "an extremely tight situation in aluminum sheet." While the situation admittedly is causing concern, it still is not so bad as it was about a year ago, when it was a major aircraft production headache. Magnesium, incidentally, presents no immediate supply problem.

▸**War Optimism Factor**—T. E. Covel, deputy director of WPB's aluminum and magnesium division, said that, coincident with the wave of optimism that swept the country last summer and early fall, orders by the military for aluminum sheet fell drastically as efforts were made by consumers to use up accumulated sheet inventories.

Aluminum companies which had acquired a large carry-over of finished sheet as a result of maintaining production despite declining demand had no alternative in the face of declining orders than to reduce production, which meant allowing employment to drop. This action had the approval of WPB.

▸**Stocks Low**—Thus production is low and consumers' inventories and stocks are becoming exhausted while military demand for aluminum sheet is increasing. There were some in WPB who assumed that much of the demand was unrealistic and that companies such as aircraft manufacturers did not need all that they were ordering.

WPB, after going into the matter, now agrees they do need the amount they have ordered and, moreover, that they need it right away and their requirements will increase.

Irving B. Babcock

Babcock Election Draws Interest

Keen interest has been shown by the aviation industry in the election of Irving B. Babcock to the presidency of the Aviation Corp. because of his reputation as an expert in automotive manufacturing. Considerable speculation has followed the announcement that he will give up several other executive posts in the automotive field to devote his entire attention to Aviation Corp. He was particularly prominent in the bus manufacturing industry. Industry observers recall that Greyhound Bus Lines placed a contract last Summer with Consolidated Vultee Aircraft Corp., an Aviation Corp. associate, for construction of an experimental model bus.

When Yellow Cab, subsequently Yellow Truck and Coach Mfg. Co., was taken over by General Motors in 1925, he continued as vice-president and became president and general manager in 1936. He has served the War Production Board on advisory committees of the motor truck, bus manufacturing, automotive farm and tractor and liquid-cooled engine industries, and has acted as advisor to ODT and as a director of the Automotive Council for War Production.

Mr. Babcock succeeds Victor Emanuel, who becomes chairman of the board of Aviation Corp. William F. Wise will continue as executive vice-president.

WPB Acts to Ease Airline Supply Job

Aircraft Division seeks to simplify problems of obtaining materials for maintenance, repair and operations.

Radical simplification of the problems of maintenance, repair and operating supplies of the airlines is being undertaken by the new Aircraft Division of War Production Board.

The first step taken by the division, headed by Henry Nelson, is revision of the form used by the airlines to obtain the supplies, reducing paperwork to an absolute minimum.

A second step involves the internal operation of WPB, with the Aircraft Division undertaking to obtain clearance for materials needed by airlines where specific rating and authorization are required. This will eliminate, in all but the most critical materials, the need for individual applications by airlines to other WPB divisions for release of the needed supplies.

▸**Allotment Symbols Changed**—A third step is the changeover in allotment symbols to an S-4 designation to replace the MRO symbol, which will facilitate the purchase of materials formerly barred to the MRO symbol under blanket authorization.

The new form WPB-1747 is an adaptation under Order P-47 and enables the airline operator to make but one application for maintenance, repair and operating supplies for the entire year 1945. The same form may be used as an interim application if the needs increase during the year through acquisition of additional planes or other unforeseen contingency.

While the Aircraft Division makes a point that it cannot function as a purchasing agent for the airlines, it is believed that with cooperation from airline departments that procedures will be simplified.

The most helpful step is believed to be that in which the Aircraft Division will function in obtaining clearance within WPB for tight materials. Only in instances where materials are on the extremely critical list will it be necessary for the individual line to go to other divisions of WPB.

Biddle Intervention May Force Revision of SPB Basic Policy

Attorney General submits preliminary report to Congress; opposes return of war goods to original manufacturer for sale to public with maker acting as agent for U. S.

Intervention of Attorney General Francis Biddle in the surplus disposal picture, opposing the return of war goods to the original manufacturer for sale to the public with the maker acting as agent for the government, may force a revision of basic policy on the part of the Surplus Property Board.

The Attorney General has submitted a preliminary report to Congress and will follow this with monthly reports and "letters of advice." Aircraft will be one of the specific items to be covered.

▸**Support for Industry**—Contracts, which so far have been unacceptable to most manufacturers, already have been offered by Defense Plant Corp. in preparation for the agency agreements. The intervention of Mr. Biddle came as an unexpected support for manufacturers who say the contract offered by DPC would be tantamount to "economic suicide." Industry sources say the contracts would have required handling and sale of equipment and engines at a fixed percentage against sale of new equipment and engines. Several have rejected the contracts.

Biddle's attitude that return of the surpluses to the original manufacturers may continue concentrations which have inevitably occurred in the letting of government contracts and discriminate against small business and industry engaged in fabricating and assembling component parts.

Mr. Biddle's intervention further complicates the surplus picture insofar as engines are concerned—a picture already complicated by the fact that designer-companies have refused to guarantee engines manufactured under license without complete overhauling and rebuilding by the original design company. Their position is that they have not had control of the operations of the licensee manufacturer, and that they have no guarantee that their standards of manufacture have been met. They also raise the point that licensee manufacturers have in many instances changed designs to meet production needs without approval of the original manufacturer.

▸**Veterans' Preference**—There has been some discussion of utilizing the veterans' preference provisions of the surplus legislation to clear away some of the equipment and instrument surplus, permitting war veterans to obtain equipment stripped from scrapped planes at nominal cost. The argument here is that the veterans would be given equipment they could not buy and that the manufacturer would benefit from the market for replacement parts. This, however, is only in the discussion stage and any final action must await delineation of policy on the part of the new Surplus Property Board, which held its first session last Wednesday. The SPB officially began functioning Jan. 2, taking over from the Surplus War Property Administration.

The action of Mr. Biddle probably will require that the SPB return to Congress for an exposition of the policy of Congress in matters such as that brought up by the Attorney General. Heretofore there has been no expressed opposition to the policy of returning the equipment to the original manufacturer for sale.

Outcome of this policy delineation by Congress may have a profound effect on many aspects of surplus. Should Biddle's viewpoint be supported in Congress, it may mean the Surplus Property Board will have to build up a tremendous administrative and sales organization of its own, an eventuality that the agency agreements were designed to prevent.

There is also the possibility that engines and equipment under such a policy would be channeled to a dealer organization, which then would be selling the surplus products in competition with new post-war production—in which case, say industry sources, there would inevitably be a repetition of surplus choking out new manufacture for a period of years following the war, with its trail of bankruptcy and halted technological progress.

Output Up Sharply In Midwest States

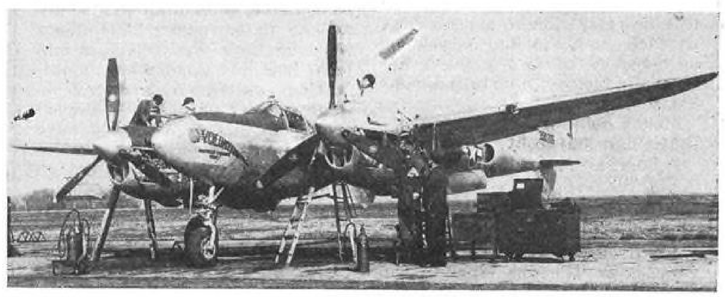
Produced 240,000,000 pounds of airframes last year compared with 133,000,000 in 1943, ATSC reports.

Thirteen states in the Midwestern District of the Air Technical Service Command produced 240,000,000 pounds of airframes last year compared with 133,000,000 pounds in 1943.

Brig. Gen. Ray G. Harris, in command of the district, noted that the district turned out only 1,800 more planes last year as a result of the emphasis on very heavy bombers at Boeing-Wichita, Martin-Omaha and Consolidated Vultee-Fort Worth. The district produced more than 22,300 completed planes during the year.

▸**Heavy Planes Stressed**—Modification centers in Texas, Colorado, Wyoming and Nebraska turned out 11,500 airplanes ready for combat. The emphasis throughout the Middle West is on the B-29, B-32 and A-26.

General Harris commented that the workers at Martin-Omaha



FIRST P-38 FROM CONVAIR:

Nashville Division of Consolidated Vultee has completed its first production of the Lockheed P-38 Lightning *fighter, shown here, and the ship is now in test flight. It was named for Tennessee, the Volunteer state. Re-tooling for P-38 production was started while the plant was still building A-35* Vengeance *dive bombers.*

have been on a 12-hour day; those at Boeing-Wichita on a 10-hour day and seven-day-week. Production of "the very heavy bomber" was 10 times greater in 1944 than in 1943.

Employment in the aircraft plants of the district reached a total of 205,000. In addition there now are about 92,000 workers in small plants and shops in the 13 states—Wyoming, Colorado, Nebraska, Kansas, Oklahoma, Missouri, Texas, Louisiana, New Mexico, Arkansas, South Dakota, North Dakota and Montana.

▸**New Workers Needed**—General Harris said thousands of new workers would be needed in the plants this year to meet requirements of the armed forces. He announced the following changeover in types of planes during the year in the district:

Douglas-Tulsa from B-24 *Liberators* to A-26 *Invaders;* Beech-Wichita from trainers to A-26 wings; North American-Dallas from B-24's to tool for the new Fairchild C-82 transport-cargo; Martin-Omaha from B-26 *Marauders* to B-29 *Superfortresses;* Cessna-Wichita from C-78 Cessna transports to B-29 and A-26 parts; Consolidated Vultee-Fort Worth from B-24 to B-32 *Dominator* bomber; Douglas-Oklahoma City A-26 parts in addition to C-47 *Skytrains.*

Bill Asks Tighter Merger Control

Measure designed to amend Civil Aeronautics Act relating to consolidations, mergers and acquisitions; expected to provoke widespread debate in aviation industry.

An amendment to the Civil Aeronautics Act section relating to consolidations, mergers and acquisitions of control has been introduced by Rep. Bulwinkle (D-N.C.) which undoubtedly will provoke debate in the aviation industry.

This bill would make it unlawful for (1) any air carrier and any person who is a common or contract carrier or engaged in any phases of aeronautics or (2) any foreign air carrier or any citizen of the United States who is a common or contract carrier or engaged in any phase of aeronautics to consolidate or merge their properties, or any substantial amount thereof, for the ownership, management or operation of such properties by one person.

Further, the bill would make it unlawful, unless approved by order of the Commission:

▸For any air carrier to purchase, lease, or contract to operate the properties, or any substantial part thereof, or to acquire control of any common or contract carrier, or of any person engaged in any phase of aeronautics.

▸For any foreign air carrier to purchase, lease or contract to operate the properties (or any substantial part thereof) or to acquire control, of any citizen of the United States who is a common or contract carrier or engaged in any phase of aeronautics.

▸For any common or contract carrier, other than an air carrier or foreign air carrier, to purchase, lease, or contract to operate properties (or any substantial part thereof) or to acquire control of any air carrier or if such common or contract carrier is a citizen of the United States, of any foreign air carrier.

▸For any person engaged, otherwise than as an air carrier or foreign air carrier, in any phase of aeronautics to purchase, lease, or contract to operate the properties (or substantial part thereof), or to acquire control of any air carrier, or, if such a person is a citizen of the United States, of any foreign air carrier.

Because the provisions are so all inclusive and with the expected development in the contract carrier field, the proposal is being closely watched by aviation leaders in all fields.

New DPC Grants

Aerojet Engineering Corp., of Pasadena, Calif., has been granted an increase of approximately $200,000 by Defense Plant Corp., bringing the company's total contract with DPC to $975,000. The additional contract is to provide equipment at a plant in Azusa, Calif., on an Army Air Forces contract.

DPC also announced execution of a contract with Northwestern Aeronautical Corp., St. Paul, Minn., wholly owned subsidiary of Auchincloss, Parker and Redpath, to provide equipment at a plant in St. Paul. Cost will be approximately $70,000.

Average Life of Warplanes Short

For the first time it is possible to disclose that combat planes have an overseas life expectancy of less than nine months before their loss or relegation to second line. The life of a transport in war theaters is 25 months.

Army Air Forces' estimates make it possible to obtain a perspective of the average life of combat aircraft and the need for a continued high production rate irrespective of technological progress that outmodes fighting planes.

The AAF analysis gives the present overseas life of airplanes sent to war theaters, prior to their loss or relegation to second line. In each case, the figure includes an average of two months life from the factory to its initial combat sortie:

Heavy bomber	9 months
Medium and light bomber	11 months
Fighter	8 months
Transports (Troop Carrier)	27 months

Commenting on the figures, Col. Charles B. Thorton, chief of the Statistical Control Division, Management Control, cites that "in considering the above, it should be borne in mind that the life of a plane will vary with its usage (i.e., transport type aircraft may be used for dropping of troops over hostile territory, or carrying supplies from a rear area to an advance base.) These figures do not present such a breakdown, but rather give a more general perspective."

The estimates reveal why, with annual production running in the 90,000 bracket and a quarter of a million planes built for the Army and Navy since 1941, the total of Army first line combat planes, including reserves, was only 23,000 as of Oct. 31. Of these planes, 12,000 were assigned to operating squadrons; 6,000 were in the supply funnel overseas as ready replacements, or in maintenance depots or under repair; 1,200 others were on their way overseas and 1,270 had left factories or modification centers on their way to staging areas or points of departure from this country; 800 were in modification centers, and a ready reserve of 1,000 remained in this country. Of the 75,000 announced total of AAF planes, 2,500 were second line combat planes being maintained overseas; 14,000 were first line combat and transport types in this country; 5,000 transports and 2,000 light utility and transport planes were overseas; 5,000 were in the shops for repair or overhaul; and 23,000 consisted of trainers and miscellaneous types in this country.

Shipping Firms Deny Joint Move For Air Route Certification

Statement, issued by National Federation in behalf of merchant marine, says the eight companies seek only right to be considered on equal footing with other applications.

The eight steamship companies which have applied to CAB for air certification set out last week to show the public they are not acting as a group to engulf one form of transportation with another, but merely ask an even break with other applicants for overseas routes, with the public interest governing the decision. This they did in a statement issued by the National Federation of American Shipping in behalf of the merchant marine.

"The applicant companies," the statement said, "ask only that the circumstance of being steamship companies, rather than some other kind of company, be not held against them in the consideration of air applications. They seek only the right to be considered on an equal footing with all other applicants and the determining factor should always be the public interest."

▸**"Lack of U. S. Policy" Cited** — The pronouncement contained the usual reference to "lack of a government policy with respect to international sea and air transportation," with the claim the applicants thereby were kept from planning their requirements for passenger ships for post-war use. Fact is, the government has a policy, but it is not favorable to air participation by the steamship companies or at least has not been so interpreted.

As this was written, no legislation had been introduced in the new Congress with the specific intent of giving steamship lines entry into the air, but in view of the House Merchant Marine and Fisheries Committee report of last month, such a measure is expected. Probably, however, the Committee will tone down its earlier recommendation that the Maritime Commission be authorized to determine whether a steamship operator might use aircraft in connection with or in lieu of vessels. Chances are that the reaction to this proposal will result in a measure whereby the Commission would recommend to CAB in this connection, instead of acting as final arbiter.

▸**United Fruit Co. Case**—The Shipping Federation cited the case of United Fruit Co., which has withdrawn from the Latin American case its application for air routes, as an example of prevailing "uncertainty." At the time of this withdrawal, United Fruit also canceled its application to the Maritime Commission to build three new combination passenger-cargo refrigerator ships. The explanation was that, because of indeterminate government policy, it couldn't ascertain what the requirements would be.

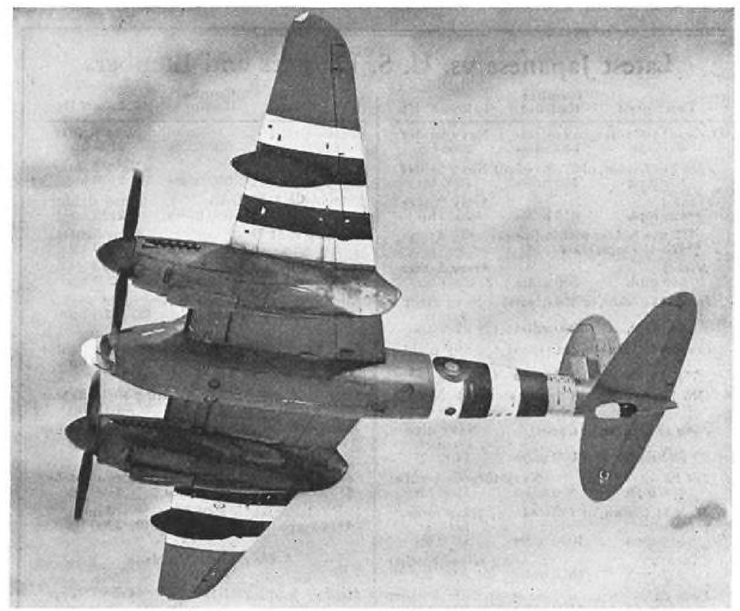
Before United Fruits' withdrawal from the CAB case, the American South African line had applied for certification. This leaves at eight the number of applicant steamship lines. Others are Atlantic, Gulf & West Indies Lines, American President Lines, Ltd., Grace Line, Inc., Matson Navigation Co., Moore-McCormack Lines, Seas Shipping Co., and Waterman Steamship Corp.

The Federation, pointing out that these are only eight of more than 100 American shipping companies, said the situation is "aggravated by the fact that the merchant marine of other great maritime powers will almost certainly employ all the advantages of combined ship-air service" leading to "an efficient unified plan of operation." Failure to permit this nation's merchant marine to do similar planning, it is contended, will put it at a critical disadvantage.

Cancel IAS Dinner

Institute of Aeronautical Sciences has canceled its Honors Night Dinner scheduled for Jan. 29 in New York and the three days of technical discussions at Columbia University which were to follow in accordance with recent government requests to refrain from holding conventions and meetings requiring the use of transportation facilities.

The 45 technical papers which were to have been presented, covering details of such general topics as airplane design, materials, radio and instruments, aerodynamics, structures, power plants and propellers, meteorology and air transport will be made available to the members through the Institute's publications.



***MOSQUITO* WITH PRESSURIZED-CABIN:**

The Mosquito *Mark XVI, shown here in this new picture is equipped with a pressure cabin enabling it to operate at 30,000 feet or more. It is designed for the light night striking force and has attacked Berlin and other German industrial cities with 4,000 pound and other bombs.*

Plane Industry's Outlook Linked To Aviation as Peace Instrument

Air power to be dominant factor in promotion of peacetime prosperity as well as in inevitable victory, ACCA points out.

Post-war outlook of the aircraft manufacturing industry, as seen by leading executives, is based on air power as a dominant factor as an instrument for peace and the promotion of prosperity just as it is a dominant factor in the inevitable victory.

Air power, they point out, means more than quantity. American air power is aircraft quality, industry technology—the sum total of all our resources in both civil and military aviation.

Air power is composed of the following factors, as emphasized by the Aeronautical Chamber of Commerce:

- Air forces of such strength, technological excellence and readiness as to preclude a successful assault on the country and its possessions.
- A fully developed system of domestic and international air transport.
- The broadest and fullest use of personal aircraft.
- Preservation of a strong aircraft manufacturing industry.
- Public air-mindedness.

While the current campaign for increased production and daily evidence of tough months ahead overshadows post-war thinking, the new Congress may have something to say on the size of the post-war air force.

There are strong indications that the government is determined to see that aircraft manufacturers have sufficient contracts to enable them to continue the pace and quality of aeronautical development in order that the present technological position of our military air power is not threatened by any potential enemy.

Biggest Market—The biggest market for the aircraft industry will remain the sales of aeronautical equipment to the armed forces, in the opinion of William A. M. Burden, Assistant Secretary of Commerce, who estimates possible annual sales totaling a billion dollars a year five years after the war.

In the field of the world market for air transport planes, Burden does not expect a mass market, but does forecast possible annual sales of $130,000,000 in transport planes five years after the war, of which $110,000,000 was classified as domestic sales and the rest foreign.

Personal Planes—Estimates on number of personal planes in the United States after the war vary widely. Civil Aeronautics Administration estimate is 400,000 civil personal airplanes within 10 years after the war, with subsequent increases. Licensed civilian aircraft at the time of Pearl Harbor numbered fewer than 25,000.

Possible annual sales of personal aircraft five years after the war, as seen by Burden, approximate $100,000,000. It should be emphasized, however, that to realize maximum economic and military benefit from the vast potential of flyers, the utility of the personal plane must first be increased, with the expansion of landing facilities the first problem. Second barrier to expanded use of personal planes is restrictive civil air regulations affecting the personal flyer.

Aviation leaders within the government and outside are at work now on these problems.

Latest Japanese vs. U. S. Fighters and Bombers

Top Speed	Combat Radius*	Take-off Hp
George 11 (*Shiden*, or *Lightning*) 400 mph	650 miles	Navy fighter 2000 hp
Jack 11 (*Raiden*, or *Thunderbolt*) 400 mph	450 miles	Navy fighter 1800 hp
Frank 1 **420 mph	650 miles	Army fighter 2000 hp
???(new fighter with in-line engine) **425-450 mph class		Army
Nick 2 350 mph	500 miles	Army fighter (2) 2200 hp
Irving 11 (*Gekko*, or *Moonbeam*) 350 mph	800 miles	Navy night fighter (2) 2200 hp
Frances 12 (*Hakko*, or *Corona*) **360 mph	800 miles	Navy night fighter (2) 3200 hp
(No Jap Army night fighter since NF *Nick* 1)		
Judy 12 (*Suisei*, or *Comet*) 320 mph	800 miles	Navy dive bomber 1400 hp
Jill 12 300 mph	800 miles	Navy torpedo bomber 1500 hp
Myrt 11 (*Saiun*, or *Painted Cloud*) 380 mph	1000 miles	Navy recce. bomber 1800 hp
Dinah 3 385 mph	1000 miles	Army recce. bomber (2) 3000 hp
Betty 22 325 mph	1100 miles	Navy medium bomber (2) 3600 hp
Frances 11 (*Ginka*, or *Milky Way*) 350 mph	1100 miles	Navy medium bomber (2) 3200 hp
Emily 22 280 mph	1500 miles	Navy patrol bomber (4) 5600 hp

Top Speed	Combat Radius*	Take-off Hp
Corsair F4U-1 410 mph	650 miles	Navy fighter 2100 hp
Hellcat F6F-5 395 mph	650 miles	Navy fighter 2100 hp
Thunderbolt P-47 D-25 430 mph	650 miles	Army fighter 2100 hp
Mustang P-51 D 440 mph	700 miles	Army fighter 1650 hp
Lightning P-38 L 420 mph	750 miles	Army fighter (2) 3200 hp
Harpoon PV-2N 310 mph	650 miles	Navy night fighter (2) 4200 hp
Tiger Cat F7F-2N **420 mph	700 miles	Navy night fighter (2) 4200 hp
Black Widow P-61 B **365 mph	800 miles	Army night fighter (2) 4000 hp
Helldiver SB2C-3 290 mph	600 miles	Navy dive bomber 1800 hp
Sea Wolf TBY-1 **305 mph	600 miles	Navy torpedo bomber 2100 hp
FSE (photographic P-38 L) **440 mph	900 miles	Army (2) 3200 hp
No comparable plane		
Mitchell B-25J(PBJ-1J) 295 mph	800 miles	Army/Navy (2) 3600 hp
Invader a-26B **350 mph	650 miles	Army light bomber (2) 4000 hp
Sea Liberator PB4Y-2 240 mph	1300 miles	Navy patrol bomber (4) 5400 hp

*40% of maximum range **estimated
All performance figures are approximate

AAU Adds Commerce Union-Ocean Group

Associated Aviation Underwriters has added the Commercial Union-Ocean Group to its organization with its appointment as the Aviation Department for the companies of the group.

Companies in the Commercial Union-Ocean Group are Commercial Union Assurance Co., Ltd.; American Central Insurance Co.; Commercial Union Fire Insurance Co.; California Insurance Co.; Ocean Accident and Guarantee Corp., Ltd.; British General Insurance Co., Ltd.; Palatine Insurance Co., Ltd.; Union Assurance Society, Ltd.; and Columbia Casualty Co.

Associated Aviation Underwriters is composed of 50 fire, marine and casualty companies in this country and England, and writes only aviation insurance. This is the first venture of the new Group into the American aviation insurance field.

●

Dr. L. G. Lederer, PCA's medical director, recently discussed aviation medicine before the New York Section of the Institute of Aeronautical Sciences.

New Advisory Committee to Have Major Role in Post-War Aviation

CAA administrator's appointment of group representing both private flyer and plane industry is regarded as important step forward in giving more government attention to non-scheduled flying.

Large scale success of personal aviation in the immediate post-war years may depend in considerable measure on the functioning of the newly Advisory Committee on Non-scheduled Flying, representing both the private flyer and the aviation industry, which has just been created by T. P. Wright, CAA administrator.

Coupled with the appointment of John Geisse as assistant to Administrator Wright in charge of development of private flying, the new committee is regarded as an important step forward in giving more government attention to non-scheduled aviation.

12-Man Committee — Working with the 12-man committee, including seven leaders in private flying activity, and one representative each from aircraft manufacturers, airlines, aviation consumers, fixed base operators and state aviation officials, will be four federal aviation officials: Geisse, Jesse Lankford, CAB safety bureau director; Fred Lanter, director of CAA Safety regulation, and W. L. Jack Nelson, of CAA, who will serve as executive secretary of the committee.

While the Administrator has already invited representative organizations of the various groups to be included, to make nominations, additional nominations are invited from the general public. Success of the entire plan depends largely on the caliber of the members named, and the quality of the recommendations which they make to the Administrator.

Since no appointments will be made except from the group nominated from the industry, and the general public, it is essential for persons interested in the future of personal aviation to make their nominations, which are to be sent either to Administrator Wright or to Executive Secretary Nelson at the CAA in Washington.

Terms Staggered—Terms of service will be staggered but of short duration so that the committee over a period of time will provide a wide cross section of opinion from the flyers and other parts of non-scheduled aviation. Meetings will be held at least once each quarter. Additional nominations may be submitted for future consideration by any bona fide representative of non-scheduled aviation. Names of the first committee will be announced shortly and it will begin to function within a few weeks.

Establishment of the advisory committee is seen as an effort on the part of the administrator to obtain a positive, active public expression concerning the development of personal aviation, charter flying, fixed base operations, etc. It is expected that the committee when properly functioning, will serve to attract many useful ideas which will be channeled through public representatives, to the administrator for action. Likewise it is believed that the committee will serve as a useful counterbalance and check on unsound governmental regulations and practice which may be suggested. Perhaps if such a committee had been functioning in the past, many of the restrictions and curbs now imposed on private flyers would never have been placed in force.

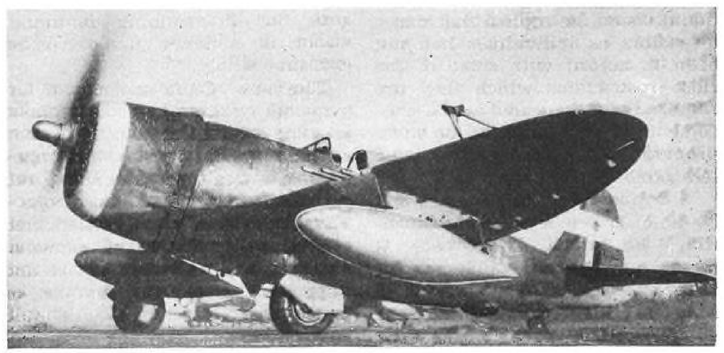
Work of Committee — In announcing creation of the committee, the administrator pointed out that he expected it to serve a function similar to other advisory committees chosen from industry, now working with OPA, Petroleum Administration, WPB and other agencies.

"The private flyer and non-scheduled operator do not feel that they have been adequately represented in the activities of the federal aviation agencies," Wright said. "We know that private flying possesses potentialities that may some day compare with scheduled flying as the private automobile now compares with the bus. If we are to have an aviation manufacturing industry of outstanding economic importance, it must be based upon non-scheduled flying and its needs. The CAA will profit greatly by assistance of this committee in formulating its policies relating to the encouraging and fostering of this part of civil aviation."

'Approved' Plants

Fifteen plants manufacturing airplanes and parts in the Wichita area were awarded the Army Air Forces "approved" inspection rating during 1944. The plants so recognized are:

Boeing Airplane Co., Beech Aircraft Corp., Cessna Aircraft Co., Coleman Lamp & Stove Co., Krehbiel Plastic Products, Davis-Westholt, Inc., Aircraft Welders, Inc., Kuhlman & Harmon Machine Co., Aero Parts Manufacturing Co., G & H Tool Manufacturing Co., Aircraft Spinning Co., American Chain & Cable Co., and Swallow Airplane Co., all of Wichita; John E. Boyer Co., Ponca City, Okla., and Halliburton Oil Well Cementing Co., Duncan, Okla.



LONG RANGE TANKS ON P-47 *THUNDERBOLT:*
A Republic Thunderbolt, *operating with the RAF, is shown here on a forward airstrip near the Burma front, carrying long-range fuel tanks and about to take off for an attack on the Japs in Burma.*

PRIVATE FLYING

Two Important Jobs Face Geisse In New CAA Personal Plane Post

Simplification of government regulations for private flying is first objective; second is promotion of technical development of improved personal aircraft.

By ALEXANDER McSURELY

Personal aviation's newly named representative in the Civil Aeronautics Administration, John H. Geisse, considers simplification of government regulations for private flying his first order of business, and after that he wants to get at a second important job—promoting technical development of improved personal aircraft.

At his Washington office, the recently-appointed assistant to the administrator for personal flying development, said he believed current proposed simplifications of pilot's regulations "have come a long way" but that there is still more to be done.

"I feel, and the Administrator has expressed the same opinion, that government regulation of flying should leave the main responsibility for the pilot's actions, up to the pilot himself, instead of trying to cover his every action by regulation," Geisse said.

▸**Private Flying Promotion** — He does not expect to have a large new organization to assist him, but will work through established CAA field organizations. Asked whether he believed personal aviation would receive the proper cooperation from the general inspection division, he replied that many inspectors as individuals had not been in accord with some of the close restrictions which they are required to enforce and would welcome the opportunity to do more promotion of private flying and less policing.

"I suppose some of them won't be able to see it without education," he added, "but really it means a more responsible job for them and a pleasanter one, and as soon as they realize that the change will not mean losing their jobs, but giving them better jobs, we expect them to cooperate."

▸**Physical Requirements** — Discussing physical requirements for private flyers, Geisse personally believes that considerably more latitude should be allowed, and that the ultimate determining factor should be the ability of the individual to operate a plane competently rather than any rigid set of minimums. The CAA is interested in the tests now being con-

John H. Geisse

ducted by the National Research Council in cooperation with the CAB's safety bureau which are expected to make possible new standards for determining minimum vision at which a plane can be operated safely.

The new CAA spokesman for personal aviation, expects to make a swing around the country as soon as the immediate problem of regulations is dealt with, to sound out manufacturers, fixed base operators, individual plane owners, and others, on problems of personal aviation, and welcomes advice and suggestion from any sources as to the program which CAA should undertake.

▸**Stymied**—Currently stymied in expenditure of government funds for development of specific technical projects for personal aviation, by a turndown from the budget bureau on a first request for funds to foster development of a cross-wind landing gear, the CAA still hopes to encourage such developments, although there is no thought of the Government building a complete plane, in competition with private industry.

"Many people have forgotten that the proposal to build a low-cost personal plane, suggested by the CAA development section back in 1935, was suggested as a work relief project, at a time when the lightplane industry was not flourishing, Geisse observes.

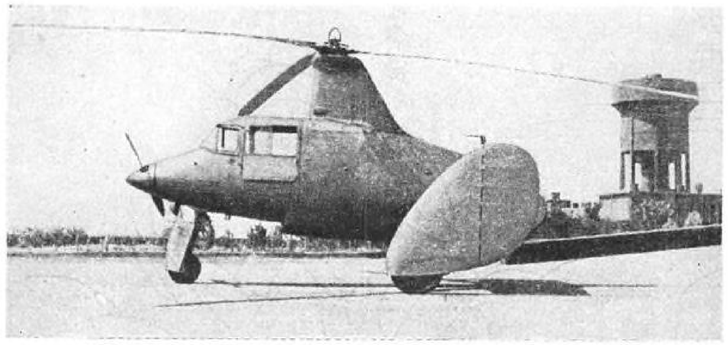
A CAA appraisal of plane production estimates two planes under $2,000 were produced in 1933, one plane in 1934, and 436 in 1935. Production jumped to 889 in 1936, to 1,523 in 1937, and had reached an estimated 4,950 in 1941, when civilian plane production was terminated.

Geisse envisions the government-sponsorship of selected technical developments for personal aircraft, as an opportunity to encourage the small manufacturers, who might not be able to afford development costs necessary for a worthy project. He believes, however, that probably the best method of government stimulation of development would be through the offering of prizes for attainment of specified objectives. History of some aviation prize competitions in the past has been that as much as $9 of development money has been invested for $1 of prize money offered. The practice has had good results in Germany and France.

▸**Recalls Earlier Projects** — As chief of the CAA's technical development section from 1933 to 1937, Geisse recalls several of the aircraft development projects fostered by the government back at that time, before a change in policies virtually terminated any official encouragement of further developments in aircraft. The Hammond company was successful bidder in one lightplane competition in which 13 companies competed, while the Waterman *Aerobile*, a Curtiss-Wright low-wing side-by-side plane, the Lockheed 12, first feederline type plane, and the first roadable autogiro, built by Pitcairn, were other government-stimulated developments.

From 1937 to 1939, he was chief of the CAA power plant section, and since that time he has been economic consultant for the CAA, until his new appointment.

▸**Engine Consultant** — Prior to



FRENCH GYROPLANE DESIGN:

Interesting French development for post-war civilian use is the SE 700, designed and constructed by Société Nationale de Construction Aeronautique Sud-Est, which apparently combines characteristics of the autogiro and the helicopter. The three-blade main rotor of 41-foot diameter provides vertical takeoff and vertical landing but the craft is also equipped with a tractor propeller mounted on the nose. It will use either a 220 hp. Renault engine or a 400 hp. 12 cylinder, in-line, air-cooled Béarn engine. The tricycle landing gear has retractable nose wheel, and twin rudders are mounted at the main wheel fairings. Designed for airmail use, the SE 700 has other interesting possibilities, particularly because of its reported maximum speed which is very high for this type of craft. Top speed is said to be 220 kph. (approximately 137.5 mph.) with the Renault, or 250 kph. (approximately 156 mph.) with the Béarn.

coming to the government he was a consultant on aircraft engines, vice-president of the Comet Aircraft Engine Corp., Madison, Wis., and had been chief engineer at the U. S. Navy Engineering laboratory for six years. His record also includes a year as assistant chief of power plants laboratory at old McCook Field, early Army experimental center, two years with Wright Aeronautical Corp., and service as an Air Corps second lieutenant in the First World War.

Administrator T. P. Wright, in setting up the new assistant's post, has prescribed its duties as to recommend policies and procedures for advancement of personal flying, and to prepare studies and make recommendations to the Administrator concerning development of privately-owned aircraft, and to act as liaison officer for the Administrator with other agencies, federal, state and civil, in personal flying matters.

Geisse foresees a huge potential market, if the expectations of potential customers "entirely within the realm of possible accomplishment" are met. Automobile passenger mileage for trips of 200 miles or more alone, in pre-rationing days, closely approaches the combined passenger mileage of streetcars, buses and trains, and it is in this field of cross-country transportation that he expects personal aircraft to be used principally.

Plan Aviation Agency

A two-story office building at 1100 Main Street, Buffalo, N. Y., has been purchased by Buffalo Aeronautical Corp., for conversion into a post-war aviation center for display and sales of aircraft and aircraft accessories. The corporation, which operates at Buffalo municipal airport and Lee airport at Lockport, is distributor for the new Republic amphibian, and for Stinson. F. Leslie Marsden is president and H. L. Wheeler is treasurer.

Plans include operation of an instructional center at the newly purchased building, with courses for mechanics and private flyers. At one time the corporation operated a fleet of 28 planes. It now operates 10.

Milwaukee Port Plan

Plans to establish small airports in residential sections in the Milwaukee area have been announced by Victory Air Activities Corp., newly formed organization. A. B. Taylor, an Army Air Corps captain in World War I, and one of the three incorporators, reports the corporation expects to establish airparks in residential districts, so arranged that each neighboring family will have its own small hangar, enabling the head of the family to use the plane for commuting to work, or for longer business trips. Other incorporators are Andrew Lindeman and Charles H. Freese, also of Milwaukee.

Wright, PAC Agree On Technical Plan

Personal Aircraft Council of ACCA expected to aid CAA in further organization of development program.

Administrator T. P. Wright of CAA, and the Personal Aircraft Council of the Aeronautical Chamber of Commerce now are agreed on broad outlines of CAA's plan to foster technical development, making possible better personal aircraft, and the council is expected to aid CAA in further organization of a development program. The matter is on the agenda of the council's Washington meeting Jan. 16.

The agreement developed from a recent luncheon conference attended by Wright, John E. P. Morgan, manager, and Joseph T. Geuting, Jr., acting manager of the council. The conference resulted in a re-definition of terms acceptable to both CAA and the council.

Ends Controversy—Thus terminates an embryo controversy, which had threatened seriously to impede the progress of the technical development program. Observers believe the administrator and the council have come a long way toward a mutual understanding which eventually will pay off in better personal aircraft.

There still remains, however, the serious stumbling block of Budget Bureau approval on any appropriation requested by CAA for technical development, and the Bureau already has acted adversely on one such request.

As soon as the recommended program is developed, the next major step is for someone, presumably Administrator Wright, to convince the Budget Bureau of the fact, apparent to the aviation industry but not so obvious to the outsider, that a realtively small investment in technical development within the next few months and years, may be expected to bring about tremendous advancement in personal aviation which will repay manyfold the original cost.

L. A. Plan Envisages 48 Ports in County

Adoption of new program for area to be considered in March; will specify areas restricted to airfield development.

Los Angeles County, holding the West Coast's densest population, will be ready to consider in March the adoption of a new airfield master plan proposing a county-wide system of 48 airports.

As now contemplated by engineers of the Los Angeles County Regional Planning Commission, the master plan will specify areas that will be restricted to airport usage and will terminate the county's present policy of considering individual applications for airport permits in unlimited zones.

Port Sites Studied—Tyler Suess, county land use engineer, says the master plan policy is being developed through studies of airport sites and in consideration of the desires of land owners that their property be incorporated in the plan.

The County's projection of plans and specifications for airports not yet developed, and for expansion of existing airports, is being carried out by planning commissioners possessing extensive aviation experience and in close cooperation with Civil Aeronautics Administration.

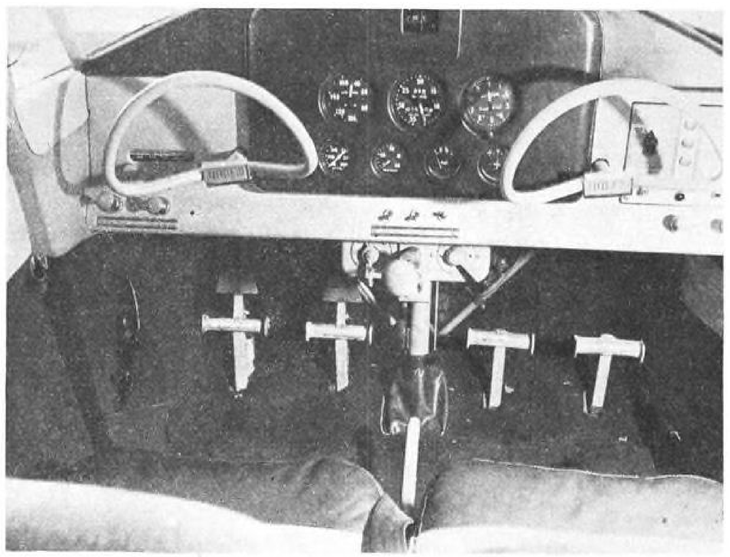
The Commission's airport planning group is under the direction of Arthur Adams, acting chief engineer, and includes C. M. Meadors, for seven years with Consolidated Vultee Aircraft Corp., (whose personal airplane is used for air surveys of proposed sites); R. M. Cooley, formerly associated with Newfoundland airport development; John P. Wilkins, formerly with Lockheed and North American; O. A. Brodie, three years with the CAA as a soil analyst and airport designer; and Bart Dunn, who assisted in developing a now outmoded county airport plan.

May Get Military Ports—Considered in the plan will be the probability that some military airports within the county will be offered for commercial use soon after the war ends. The plan also will estimate all development costs and possible uses for airports proposed.

Far ahead of the master plan in aggressive action is the City of Santa Monica, within Los Angeles County, which this week served notice on 46 owners of improved property to vacate by Feb. 15, under a federal court order, to allow extension of the city's 2700-foot runway, adjacent to Douglas Aircraft Co., to a length of 5000 feet.

Alhambra Field Important—Directly east of Los Angeles, within a quarter-hour highway drive, historic Alhambra Airport, original terminal of Western Air Express and now owned by TWA, has become suddenly important to the County Planning Commission as a site that can be developed to serve 33 percent of the metropolitan area population. County engineers will propose the underpassing of a major highway to permit expansion of the airport, now holding one 2600-foot runway, to a field possessing a 6500-foot instrument landing runway and two other runways of 5000 and 5500 foot lengths. County planners estimate that Lockheed Air Terminal is accessible to 18.46 percent of the metropolitan populace; Los Angeles Airport to 34.40 percent and Long Beach Municipal Airport to 14 percent.

Review of the approach Los Angeles County is making to the post-war airport requirements of a heavily populated region is interesting in comparison with efforts now under way elsewhere throughout the nation, and also because Los Angeles County has seen seven of its 19 pre-war airports disappear, their land converted to other uses, residential and industrial.—S. B.



VOYAGER 125 CONTROLS:

Simplified dual wheel controls, automotive-type starter, push-pull button for locking parking brakes, compact radio installation, and wing-flap control lever, may be seen in this view of the Stinson Voyager *125 control panel. The 3-4 place plane, Consolidated-Vultee's first announced entry in the post-war personal plane field, is a good example of the trend toward improved interior fittings for personal planes as a means of attracting wider consumer acceptance.*

Twin Cities Win Case

Final legal obstacle to establishment and operation of the joint Minneapolis-St. Paul Metropolitan Airports Commission designed to coordinate operations of airports and airparks in the area of the Twin Cities, has been eliminated by action of the U. S. Supreme Court dismissing a suit by Mart M. Monaghan, Minneapolis attorney.

Monaghan had sued to prevent the Minneapolis Park Board from turning over to the Commission the operation of Wold-Chamberlain field, contending the action deprived the city of property without due process of Law. After he had lost his suit in the county court, and on appeal in the Minnesota Supreme Court, the U. S. Supreme Court refused to hear the case, on the ground that no federal question was involved.

Instructors Urged For Licensing Detail

Revision of procedure proposed as means of assuring air-minded public of courteous and friendly treatment in learning to fly.

Proposal to desginate properly authorized instructors to handle much of the detail connected with licensing private pilots, which is now handled by the CAA General Inspection Division, has been suggested as a means of assuring that the aviation-minded public is handled by individuals who are interested in seeing that the public receives courteous and friendly treatment in learning to fly.

Under such an arrangement, the instructors would handle examining permits, etc., and all the routine that takes place up to and including the actual issuance of the private pilot's license. It would be up to the instructor to examine his student on civil air regulations before he was allowed to solo, and later after he had passed his tests for a private license, would certify this to the CAA, so that in due course he would receive his private license.

▸ **Spot Checking**—It is suggested that the CAA could maintain an adequate control over this system by spot checking the instructors at any time, and would be at liberty to revoke the license of any instructor who was passing students inadequately prepared for private licenses.

It is further pointed out that it would be against the instructor's interests, to pass students who were unfit to fly, since he is dependent for his livelihood on his reputation as a competent instructor. And the instructor, too, would be better acquainted with his pupil's handicaps and abilities through frequent contact with him over the period of instruction and be a more competent judge of his real ability than an inspector who had never seen the license applicant before and might never see him again.

Albany Meeting

New York State Department of Commerce has announced an aviation conference to be held at Albany, Jan. 19, sponsored jointly by the department, the Conference of Mayors, the County Officers' Association, and the Association of Towns to study development of airports and airways for local communities. The commerce department will be the state agency in charge of developing aviation, according to a program announced by Gov. Thomas E. Dewey.

Some States Curb Aviation Instruction

Tendency attributed to shortage of qualified teachers and fact that aeronautical courses were regarded as pre-induction subjects.

Because the teaching of aviation sometimes has been regarded as a pre-induction subject and because there is a lack of qualified teachers, courses in aeronautical subjects are being dropped rather than expanded in many states.

A survey made by Paul E. Elicker, Executive Secretary of the National Association of Secondary-School Principals, and reported in the December issue of the *Bulletin* of the association, reveals that some air programs are being contracted rather than expanded. In many other states the teaching of aviation is more or less static.

On the other side of the picture, however, are the states now laying the groundwork for expanded interest in the subject after the war. (AVIATION NEWS, Dec. 18, Pg. 9.) Since the American Council on Education has reported that 96 percent of colleges and universities accept high school aeronautics as elective subjects in science, little trouble is expected in establishing aviation courses as a subject for which credit is given toward graduation and college entrance.

▸ **Lists 3 Classifications**—Mr. Elicker points out that aviation education in high schools will come under three general classifications. The first is the infusion of materials on aviation into all subjects of the regular curriculum wherever the facts and implications of aviation can appropriately be used to modernize or enrich the subjects.

The second lies in the field of aviation-centered industrial arts and vocational courses. New York state has developed this type of work in its program, where elementary classes are taught air toy construction and study, junior high students learn flying model and scale model aircraft construction, and senior high school students learn junior aviation maintenance and repair, glider construction and receive flight instruction when this is provided by the local school board.

The third, now most widespread, is the one in which aviation courses are considered as science courses and are usually taught as laboratory exercises.

But even the extent of these courses is highly restricted, and aviation and education experts point out that the trend has been toward offering aviation study to a comparatively few students in the wealthier school districts.

▸ **Teachers Lacking**—Lack of qualified teachers is specifically cited in

PROJECTED WICHITA STRIP:

Single landing strips, widely used in military aviation, may be the coming thing for private airports, particularly if cross-wind landing gear development is successful. Wichita's Chamber of Commerce projects this north-south strip for its central east side, adjoining Wichita East High School. Records show prevailing north or south winds 90 per cent of the time there, so that the single strip would be effective nine-tenths of the time, even with current landing gear.

reports to Mr. Elicker in the following states: Arkansas, Kansas, Maine, Mississippi, Montana, North Dakota, and West Virginia. Reports of other states indicate that this has been a major problem, although in many it has been solved by development of teachers of other subjects through special courses.

In New Jersey, emphasis in aviation has been almost entirely a pre-induction program, with the result that the number of schools offering aviation classes has dropped sharply—62 this school year as compared with 95 last year, out of 187 senior high schools in the state.

31% of Trainers Made in Wichita

Wichita's four airframe manufacturers have produced 31 percent of the nation's training planes, according to Brig. Gen. Ray G. Harris, commanding the Midwestern District of the AAF Air Technical Service Command. Beech and Cessna, as of Dec. 1, had produced 74 percent of all the twin-engined trainers manufactured in this country since the start of the defense program and Boeing had fabricated 44 percent of all primary trainers.

In addition to supplying our own air forces, the Wichita plants have supplied trainers for Canada, Bolivia, Brazil, China, Mexico, Colombia, the Netherlands East Indies, New Zealand, Cuba, Great Britain, Dominican Republic, Guatemala, Peru, Chile, France and Uruguay. Hundreds of Boeing primary trainers (*Stearmans*) have gone to these countries, many before the defense program. Boeing received its first contract for the trainers in 1934 when the Navy ordered 41.

Program Curbed—The trainer program has been decelerated, but there has been no letup in Wichita's production. Boeing and Cessna are busy on B-29's and Beech is producing complete wing assemblies for A-26's. Culver continues to turn out the speedy military version of its commercial model. General Harris announced that the three major companies, Boeing, Beech and Cessna turned out 750 CG-4A gliders back in 1942 in addition to their regular production programs.

Wichita now has 52,000 men and women employed in the aircraft production program, General Harris said. In addition to the four airframe manufacturers there are 128 subcontractors in the city working on aircraft parts.

Wichita plants now are working on active contracts totaling $2,160,000,000, he said. A total of 22,334 planes has been produced in Wichita since the start of the defense program. Of these, 15,559 were trainers.

Briefing

For Private Flyers and Non-Scheduled Aviation

The "safe and sane" element in aviation which hopes some day to make of it a vast new travel utility which almost any average citizen can use, by flying his own plane, is viewing with more than a little alarm, the recent indication that Cleveland wants to resume the National Air Races, after the war.

Roman Holiday—The National Air Races were a thrilling dramatic spectacle, which year after year, brought exciting entertainment to thousands of spectators. But, much of that excitement was caused by crashing and burning airplanes, and mangled lifeless bodies of daring speed pilots who gambled and lost.

Growing Feeling — There has been for some time a steadily swelling sentiment among leaders of aviation, that daredevil speed races, as a public spectacle, are no asset to aviation; that they are just about as useless as wing-walking, and other aerial feats of unquestioned daring and skill which went out of fashion years before. In the place of races, it appears preferable to hold aviation expositions and exhibits, with perhaps free, safe, comfortable airplane rides for persons who never have flown before.

Value to Science—Question has been raised as to how much actual value the National Air Races contributed to the advancement of aviation through scientific research. In the early days of the races, there is little doubt that the contribution was large. But as time went on, and methods of research and development crystallized into a more exact science, the latter races contributed relatively little that was not already known through independent studies by military and civilian research experts.

Where to Put It—A considerable portion of the area used pre-war for the Cleveland races is now occupied by the new NACA engine research laboratory, which is probably making a far greater contribution to the development of aviation. If Cleveland does want to resume her National Air Race program as a recent 25th anniversary publication of the Cleveland Aviation Club indicates, the question of where to hold the races appears. But this is a minor point, and the enormous Cleveland airport could probably provide sufficient space.

Main Issue—The No. 1 question is: Shall there be any more National Air Races after the war? The affirmative debaters point to the thrills, glamour and glory, and the local commercial advantage to whatever city sponsors the big show. But the negative opponents point to the deterrent effect which the sight of crashing planes and the scream of crash wagons and ambulance sirens has on the public's personal interest in flying.

Try and Tell Him—Of course the average man who flies an airplane isn't expected to make the terrific high speed turns around pylons, and perform the feats of the trained racing pilot, any more than the average autodriver would enter his tudor sedan in the Indianapolis 500-mile auto race; but aviation is still new, and many a prospective flyer can scarcely be convinced of this fact.

Hardly a Selling Point—Perhaps later, when the average man has been flying long enough to know what he has to do, he will be ready to watch the speed races again. At this stage of the game, when personal aviation is on the threshold of a tremendous increase, and when aviation safety must be emphasized above all else, it seems a poor time to revive the races. —A. McS.

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China National Aviation Corp. (CNAC), Pan American Airways' Chinese affiliate, announces it is in urgent need of skilled maintenance technicians, who are available to leave for China and India immediately. Among types of workers required are experienced aircraft electricians, field maintenance engineers, automotive mechanics, crew chiefs, riggers and ground school instructors. CNAC's U. S. address is Chrysler Bldg., New York 17, N. Y.

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A short film feature, *World Without Borders*, depicts the history of aviation and discusses the future. Universal Pictures is the producer.

New Schedule Calls for Output Of 78,000 Warplanes in 1945

Unit production to be approximately 18,000 aircraft under last year but airframe weight will continue over billion pound mark, compared with 1,112,000,000 in 1944.

By SCOTT HERSHEY

Upward revisions of aircraft production schedules for 1945 will not reach the 96,369 unit output of last year, but in terms of airframe weight the industry will be called on to produce over 1,000,000,000 pounds.

Immensity of the task facing the industry can be seen in the fact that the poundage output last year for 96,369 airplanes totaled 1,112,000,000 while current unit schedules for 1945, subject always, of course to revision, approximate 78,000 planes.

▸ **Subject to Change**—Changes in the military situation will have their effect on production schedules even as they did last year when they were revised slightly downward and then sharply increased again near the end of the year. The first of the year schedule for 1944 was for 109,000 airplanes.

The production line in the accompanying chart shows plainly the course of unit output with the peak reached last spring, followed by a drop, a sharp upswing and then a gradual decrease toward the end of the year.

It has been estimated that we are producing five times as many planes of all types as the Germans and nearly eight times as many as the Japanese, although reports from Europe indicate the Germans, despite their losses, have more warplanes now than they did in June at the time we invaded Europe.

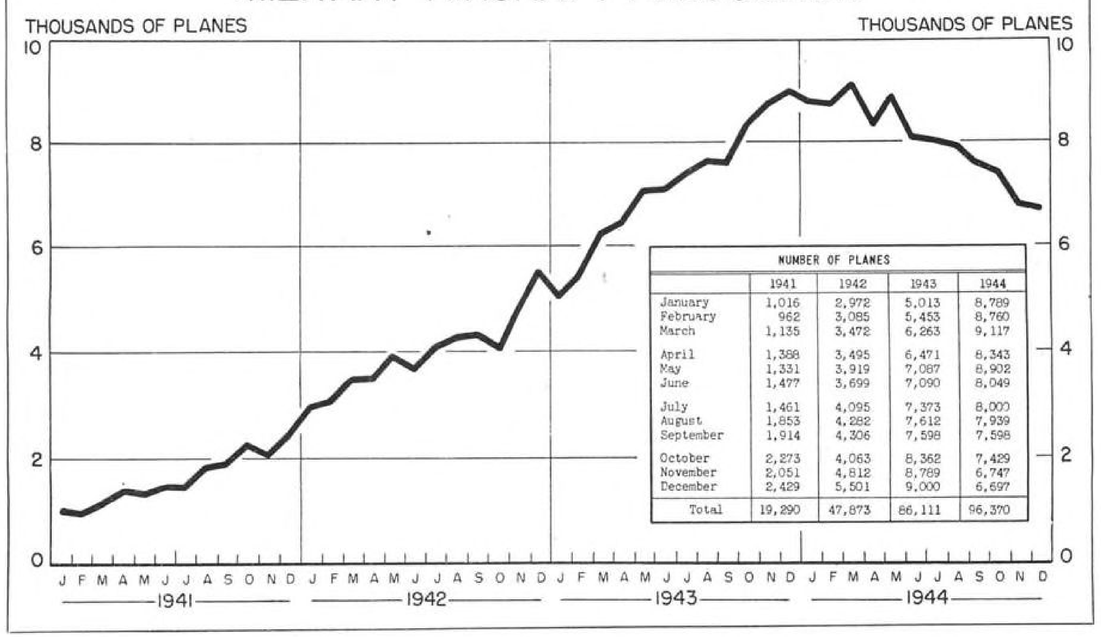
▸ **Challenge**—The challenge facing the industry is pointed up by the December output which, although it was 98 percent of the working schedule, did not satisfy military requirements to that extent.

The schedules undergo constant scrutiny of the Aircraft Production Board and are adjusted as necessary to conform with realistic production estimates, so as to avoid unbalance in procurement of materials and components. Thus, during December, even though Boeing *Superfortresses* and Douglas *Skymasters* met working schedules for the month, production of these planes was below that required to fulfill military needs.

Aircraft manufacturers are reexamining their facilities and personnel to meet 1945 requirements. Chance Vought division of United Aircraft Corp., for example, has returned to a 53-hour work week from a 48-hour which had been in effect for six months. This was found necessary to meet stepped-up schedules and in addition several hundred more workers are needed to keep pace with the Navy's program for *Corsairs*.

▸ **Billion Dollar Backlog** — Lockheed Aircraft started the New Year with a billion-dollar backlog of orders for 6,632 airplane units. The company's 1944 production totaled 85,000,000 pounds in the delivery of 5,858 planes. Delivered spare parts totaled 12,700,000 pounds. Lockheed is producing P-38's, B-17's, a revised version of the *Ventura* Navy search bomber, the C-69 *Constellation* troop and

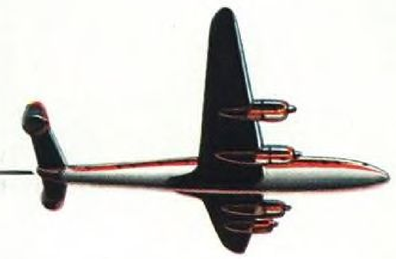
MILITARY AIRCRAFT PRODUCTION



NUMBER OF PLANES

	1941	1942	1943	1944
January	1,016	2,972	5,013	8,789
February	962	3,085	5,453	8,760
March	1,135	3,472	6,263	9,117
April	1,388	3,495	6,471	8,343
May	1,331	3,919	7,087	8,902
June	1,477	3,699	7,090	8,049
July	1,461	4,095	7,373	8,000
August	1,853	4,282	7,612	7,939
September	1,914	4,306	7,598	7,598
October	2,273	4,063	8,362	7,429
November	2,051	4,812	8,789	6,747
December	2,429	5,501	9,000	6,697
Total	19,290	47,873	86,111	96,370

CONSTELLATION FACTS



A commercial transport that flies farther, faster, carrying greater payloads than any other land transport in use today. A cruising flight ceiling of over 20,000 feet. The ability to use—with room to spare—any standard airport. Offering *more* operational economy (even on flights of as short as 100 miles) than the ordinary two-engine transport in use today. Less "on the ground" maintenance time—more hours per day in the air, more flights per month, fewer planes per airline.

The Lockheed Constellation

*Highest speed * longest range * largest load-carrying capacity of any land transport in use today * And these performance factors make the Constellation the safest of any transport.*

LOOK TO *Lockheed* FOR LEADERSHIP

cargo transport and a new fighter.

Douglas airframe production last year was 152,700,000 pounds with an additional 22,400,000 pounds of spare parts. For the second consecutive year the company produced more than a billion dollars worth of planes. The production was accomplished with 12½ percent fewer employes than in 1944. Bulk of year's output was the C-54 and the C-47 together with the new A-26 *Invader* attack bomber.

▸ **Convair** — Consolidated Vultee's wartime production reached 30,159 airplanes and equivalent parts. During 1944 they delivered 9,387 planes and equivalent spares. The company's eleven manufacturing divisions have been producing 14 types of aircraft ranging from the small liaison model to the new B-32 *Dominator* bomber.

Boeing, Consolidated, Douglas, Lockheed, Northrop, North American and Ryan, comprising the Aircraft War Production Council, West Coast, produced 12 percent more airplanes by weight in 1944 than they did in 1943. Output of major airframe companies was 341,330,900 pounds and goal for this year is none less.

Special Plate Glass Developed for AAF

Glass manufactured in quantity, in which thickness cannot vary more than 3/10,000th of an inch in a one-inch length, has been developed and is being produced for the Army Air Forces by the Pittsburgh Plate Glass Co.

The glass is being used in B-29's equipped for reconnaissance photographic missions over Japan—from which pictures are taken at heights greater than six miles—and for other high-altitude photographic planes in which cabins are pressurized.

▸ **Minimum Distortion** — Special machinery was devised for finishing the glass to a smoother, flatter surface than glass has ever been polished before. For example, while the tolerance in an inch length is held to 3/10,000th, the change itself should not vary in a rate along the inch length by more than several millionths of an inch per inch.

Photographs taken through regular plate glass at high altitudes show distortion caused by light rays "bent" when they pass through a glass surface that may vary in flatness even the slightest. Heretofore, glass of high tolerance had to be manufactured in an individual operation similar to that used in the making of camera lenses.

New Device Speeds Bomb Bay Opening

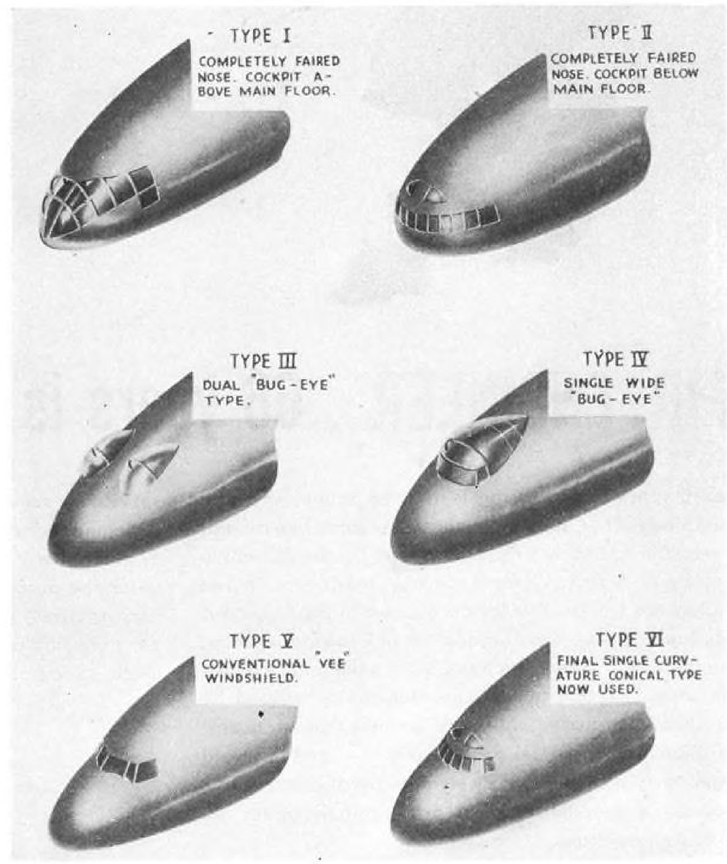
Pneumatic apparatus developed to cut time on B-29's from more than 15 seconds to 0.7 second.

Latest refinement in Boeing's B-29 *Superfortress* since it has been in action over Japan may now be disclosed as split-second opening of bomb-bay doors.

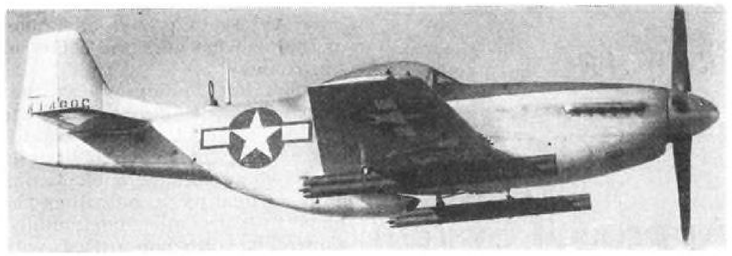
Boeing reports bomb bay doors now snap open in seven-tenths of a second and close in three seconds by means of a pneumatic actuating device. Under the former system, controlled electrically, it took 15 or more seconds to open fully the doors and longer to close them.

▸ **Nazi Tactics Factor**—Change in the system was dictated by the tactics of German fighters in striking at B-17 *Flying Fortresses*. The Nazis learned that the opening of the bomb bay doors was a signal the B-17 had started its bombing run and that when a bomber started its run it had to maintain a constant speed on a steady course. The Nazis would lurk out of range until the bomb bay doors started to open and then dart in for an attempted kill, knowing the pilot could take no evasive action on the run.

Fortress pilots tried to offset these tactics by opening the doors at the last possible moment, but



CONSTELLATION WINDSHIELD DESIGNS:
These sketches represent an engineering problem in connection with the design of Lockheed's Constellation. *Maximum visibility and minimum drag were prime considerations in research on cockpit windshield proposals for the plane. Types I to V indicated maximum streamlining, but Type VI was chosen. Engineers found little drag difference between it and other shapes and visibility excellent.*



"Mustangs" To Be Built In Australia: *License to manufacture P-51* Mustangs *like this bazooka-carrying fighter has been granted the Australian government by North American Aviation. Planes will be built by Commonwealth Aircraft Corp.*

this handicapped the bombardier because the bomber would be slowed when the doors opened and this interfered with his "tracking."

▸ **Requested By ATSC**—The Air Technical Service Command asked Boeing to develop a quick-opening bomb bay door to meet this situation for both B-17 and the B-29.

A pneumatic, or compressed air system was engineered and test models were manufactured by Boeing. Concerns which cooperated in supplying test parts included the Cornelius Co. of Minneapolis, Adel Precision Products Corp., of Burbank and Bendix Aviation Corp., Pacific Division.

Burlington Enlarges Cars for B-29 Parts

Burlington Lines' cooperation with the Martin-Nebraska plant at Omaha has resulted in the movement of 17,640 carloads of plane construction material and even the building of 69 special freight cars, 12 inches wider and 19 inches higher than ordinary box cars, to handle assemblies of B-29's, the Burlington Lines report. It also has meant raising the roof of 60 box cars 26 inches to accommodate other assemblies.

Since railroad clearances are usually restricted to standard equipment, this meant checks over the entire system on which they would be used to make sure these special cars would clear overhead and adjacent structures.

▸ **85% Moved By Rail**—The Burlington Lines estimate that 85 percent of the material used in the planes built at the Omaha plant—B-26's and B-29's was moved to the plant by rail. Three thousand additional carloads were handled in the building of the plant, which began operations Jan. 1, 1942. Average haul of materials used in the planes is between 800 and 900 miles, and consists of lumber from the Pacific Northwest and the South; aluminum from Arizona, California, Tennessee, Indiana and Pennsylvania; steel from Indiana, Illinois, Pennsylvania, West Virginia and Michigan; rubber from Michigan and Ohio; electrical material from a dozen states; engines from the Dodge plant in Chicago; propellers from Cleveland, and major assemblies from Detroit and Akron.

Schedule Up 35%

Eastern District of the Air Technical Service Command must produce 35 per cent more material for the Army Air Forces in 1945 than last year, when production amounted to about $10,000,000 a day, according to Col. Kenneth R. Collins, commanding officer of the district.

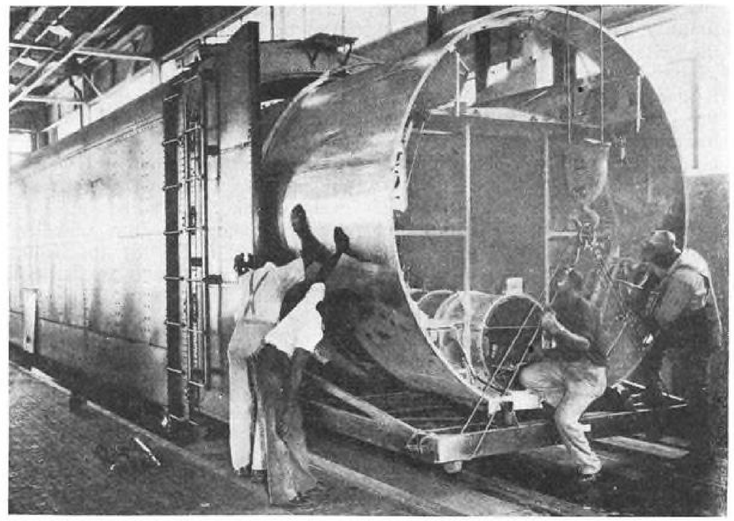
Mustang Production Planned in Australia

Arrangements have been completed for production of North American's P-51 *Mustang* fighter in Australia and complete sets of component parts, sub-assemblies and accessories have been provided under the licensing agreement.

The material, along with detailed drawings and engineering photographs, has been furnished the Commonwealth Aircraft Corp. of Melbourne under the terms worked out with the Commonwealth of Australia. The company already is building, under license, North American's AT-6 *Texan* combat trainer, known as the *Wirraway* to Australian flyers. The same trainer also is produced under license in Canada and Brazil.

▸ **License Plan**—The license plan for the *Mustang,* worked out through the U. S. Army Air Forces called for delivery of parts and subassemblies sufficient to build an unidentfied number of P-51's, and complete sets of detailed component parts and accessories for a number of additional *Mustangs.* after which the Australian plant will produce its own parts.

Production of the *Mustang* in Australia will give the Royal Australian Air Force a fighter with a publishable speed of 450 mph., ceiling of over 40,000 feet and a range of 2,000 miles.



B-29 Assembly Requires Special Freight Car: *Workers at the Martin plant in Omaha, Nebr., roll a center section of a Boeing B-29* Superfortress *out of a specially-designed car provided by the Burlington Lines. The assembly is brought by rail from plant 800 miles to the east.*

COMMENTARY

AAF Instrument Approach System Is Result of Many Years' Research

Pioneered by Doolittle and various agencies and airlines in the '30's, perfected at insistence of General Knerr, present system eases strain of landing big bombers by pilots fatigued after long hazardous flights, particularly in bad weather.

Historically, the recently announced Army Air Force instrument approach system is the outgrowth of many years of work by numerous agencies. In the early 1930's, Lieut. Gen. James H. Doolittle then a lieutenant in the Air Corps) pioneered the first "blind" landing by instruments. The developments were shared by Army Air Corps, Signal Corps, Navy, Bureau of Standards, Radio Engineering section of CAA, commercial airlines and others.

The present system now in operation in Europe was perfected largely at the insistence of Maj. Gen. Hugh J. Knerr, administrative deputy of the U. S. Strategic Air Forces in Europe. It became imperative to reduce the strain of pilots in landing their *Fortresses* and *Liberators* at the end of long tiring missions, especially when the weather over their bases in England turned sour. The system is also in use in the Hump operation between India and China. As installation of the system is extended, medium and heavy bombers and transport planes will be able to make routine landings on runways with very low ceiling and poor visibility.

Signal Corps Equipment — The aircraft instrument approach system consists of three pieces of ground transmitter equipment and four items of airborne receiving equipment. The primary ground element is a *localizer transmitter* which establishes a horizontal plane to guide aircraft directly over the center of a runway. This is designated AN/MRN-1. (AN/ signifies a major component, used by Army, Navy or both; M means mobile, transportable by truck; R is for radio set; N means that it is a navigational device). A similar set known as AN/CRN-3 comes all crated for air transport, the "C" apparently standing for "cargo" plane.

Another piece of equipment is the radio set AN/CRN-2, being an air transportable *glide path transmitter* which provides vertical guidance to an aircraft while making an approach and landing; this set can be mounted in a trailer. A straight-line guide path is precisely defined, independent of fluctuations in signal strength.

Marker Beacon Sets — Three *marker beacon* sets (AN/MRN-3) are used. One is installed at the edge of the runway; a second about two miles from the point of contact, and a third is placed two and a half miles further out. The MRN-3 radiates a fan-shaped pattern vertically, indicating to the pilot by means of a lighted lamp his progress along the glide path, with varying coded flashings for the respective marker positions. This completes the ground installations.

Airborne Equipment — In order to use the instrument approach system, bombers and transports are equipped with the *Localizer* receiving set (RC-103), the *Glide-path* receiving set (AN/ARN-5, "A" signifying airborne), and the *Marker Beacon* receiving set (RC-193); these pieces of equipment correspond to the ground equipment previously noted. Glide-path and localizer information is presented to the pilot in the form of deflections of the vertical and horizontal pointers of a *cross-pointed indicator* (I-101) on his instrument panel. He needs only to follow the pointer in the same way as he does in using the right-left radio compass. The indications are highly sensitive, in order to assure proper alignment of the airplane with the center of the runway.

Automatic Landings — Further refinements in the system include the use of the C-1 Sperry automatic pilot, which consists basically of two gyroscopes, one spinning on a vertical axis, controlling the plane's tilt, the other horizontally, controlling direction. Used with the instrument approach system, the Localizer and Glide-path signals actuate a special receiver which, in turn, transmits adjustments to the auto-pilot. "George" then flies the plane down to the runway. The pilot only has to make power adjustments to slow down the plane, lower the landing gear and the flaps. A still more accurate method is under development whereby the pilot may be "talked" down to a perfect landing by means of ground control and electronic devices.

New Airborne Radio Transmitter —During the past year the AAF has adopted for use in its bombers and transports a new high-power liaison transmitter (AN/ART-13 —"T" for transmitter) as a replacement for the BC-375. This was the transmitter component of the SCR-287 (Signal Corps Radio), standard liaison set at the outbreak of the war. The function of the liaison radio set is that of communication between the aircraft and its base during long missions. The ART-13 weighs 100 pounds less than its predecessor, and requires one-third as much cubic space. It has 10 pre-set channels in the high frequency band, and one in the low-frequency band, with push-button automatic frequency selection controls requiring less than 25 seconds to place in operation. The new set operates up to 40,000 feet altitude. Altogether, a fine piece of engineering development on the part of the Radio and Radar Section, Wright Field, headed by Col. Hobart R. Yeager.

NAVIGATOR

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Col. George F. Schlatter, commanding officer of West Point's Stewart Field, has been assigned to an important military post in the European theater of operations, according to the superintendent of the academy. Colonel Schlatter replaced Col. John M. Weikert, first commander of the base, in 1943.

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Maj. Gen. Claire Chennault has been awarded the Legion of Merit for the "phenomenal success" achieved as commander of the China Air Task Force in 1942 and 1943.

PERSONNEL

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Col. R. P. Swofford, who was project officer on the AAF's jet propulsion airplane, has been awarded the Legion of Merit for his work on jet propulsion. Col. Swofford is a graduate of the University of Missouri and West Point and has been on duty recently at Wright Field on several technical projects.

Consolidation of Northwest Airlines' plant maintenance and plant engineering sections as part of the program to expand commercial airline activities has been announced. **E. J. McKellar,** who has been plant maintenance superintendent, will head the new section, which will be part of the mechanical division, directed by **Ralph E. Geror. V. C. Lundquist** will retain his title as chief plant engineer.

York Research Corp., New York, announces the following changes in personnel: **Victor A. Stokes** has been appointed sales engineer. **Anthony M. Ioppolo** becomes chief of the Aircraft division in New York. He has been associated with the firm as aircraft project engineer since its formation. **Anthony Mannina** is the new personnel manager.

Walter S. Orr, Edward S. Gremse, Lawrence W. Mattson, Sr., Houghton W. Clarke and **William D. Byrne** have been elected directors of General Aircraft Corp. Gremse has been elected president and treasurer, **Lawrence M. Mattson, Jr.,** vice president and general manager, and **R. Ian Dean,** secretary.

American Airlines, Inc., has announced several new appointments.

Theodore Pennock Gould (photo) has been named district traffic manager for New York. He has held several traffic positions with American and has been manager of reservations and ticket offices for the airline since 1943. **John P. Callahan** has been appointed editorial specialist in the department of public information. He has been director of public relations for the New York Curb Exchange. **Peter J. McDonnell** has been made Eastern regional director of public relations.

W. V. Kirkpatrick, formerly office service manager for Ryan Aeronautical Co., has assumed the position of staff assistant to G. C. Woodard, vice president in charge of general administration. Kirkpatrick will be responsible for coordination of building and facilities expansion.

Delta Air Lines has announced five promotions in its traffic department.

Lemly **Bishop** **Beard**

Maj. Thomas M. Lemly (photo), recently released from active duty with AAF, has returned to Atlanta as assistant to the general traffic manager. **Manley E. Beard** (photo), city traffic manager in Shreveport for the past three years, has been promoted to traffic manager. **Edwin H. Bishop** (photo), city traffic manager in Birmingham has been advanced to district traffic manager for Alabama and Mississippi. **Charles J. Payne** has been given the new title of superintendent of reservations and schedules. **Allen V. Birmingham,** former district traffic manager in Dallas, has been promoted to western district traffic manager with enlarged territory.

Claude Leach, Jr., for the last three years sales promotion manager of McGreevey, Weering and Howell, a buying office, has been appointed sales promotion manager for Bendix Aviation Corp.'s forthcoming line of radios and radio-phonograph combinations.

FRYE'S 10TH ANNIVERSARY AS TWA PRESIDENT:

Jack Frye was presented with a silver tray at a luncheon given in Washington on his tenth anniversary as president of Transcontinental and Western Air, Inc. Left to right are: Benjamin Wilson, son of TWA's board chairman; Clarence E. Fleming, vice president; Brig. Gen. T. B. Wilson, chairman of the board; Frye; Capt. Paul Richter, in charge of Naval Air Transport Service operations who made the presentation; George Spater, TWA attorney; Lieut. Col. Gerard Brophy of the Army Air Forces, and Otis F. Bryan, TWA vice-president in charge of war projects.

A. Howard Hasbrook has been named sales engineer of Aeromatic

Aircraft Propellers, Bartlett-Hayward Division, Koppers Co., Inc., Baltimore. Hasbrook was eastern representative of Aircraft Owners and Pilots Association and a free lance aviation writer, until he became a flight instructor soon after Pearl Harbor. He will demonstrate the Aeromatic automatic propellers as well as general sales work.

John H. Spade has been named division accountant of the Sikorsky Aircraft division of United Aircraft Corp., to succeed **Richard T. Horner** who recently was named division accountant of Pratt and Whitney Aircraft division at East Hartford. **Robert A. Aspinwall** will succeed Spade as assistant treasurer of United Aircraft Corp., assigned to the Sikorsky Division.

Navy Department announced appointment of **Lieut. Comdr. John E. Conley** as officer in charge of the press section, Bureau of Public Relations. **Lieut. W. Joynes MacFarlan** has been made executive officer of the section.

Joseph Mack has replaced **W. R. Rivers** as chief engineer for Arrow Safety Device Co., Mt. Holly, N. J., manufacturers of automotive aviation.

Capt. Eddie Rickenbacker and **William R. Enyart,** president of the National Aeronautic Association, will be on the board of judges who will select the winner of the annual Fawcett Aviation Award for 1944. Other judges will include **Maj. Al Williams** and **Casey Jones.**

John C. Slocum, who has represented Ranger Aircraft Engines Division of Fairchild Engine and Airplane Corp., in Washington for two years, has been named to represent the Fairchild Aircraft division of the corporation. He will continue to represent Ranger.

Hugh O. Fry succeeds **James W. Elliott** as director of industrial relations and employment of Grand Central Airport, Glendale, Calif. Newly appointed employment manager of the airport which is being developed for diversified post-war aviation enterprises by Maj. C. C. Moseley, is **W. O. Aby,** former assistant paymaster.

Col. A. S. Albro, U. S. Army, retired has been made chief of contracts for Consolidated Vultee Aircraft Corp.'s Tucson Division. He has held the Convair position in an acting capacity for the past several months.

Gordon C. Sleeper, director of public relations for Republic Aviation Corp., has just been named sales manager of the corporation's new personal plane division. He will continue his duties as director of public relations.

Los Angeles Chamber of Commerce has announced appointment of **John M. Costello** as general counsel and manager of the Washington office.

R. E. Whitmer (photo) has been named director of cargo sales for

Transcontinental and Western Air, Inc. Whitmer, who has been manager of rates, schedules and research department since 1943, succeeds **A. W. French** who has been appointed district transportation manager in Boston. Whitmer is a pioneer with TWA, having joined the airline in 1929 as a radio operator. He previously was with Pan American Airways.

Philip S. Brayton has been appointed vice chairman of the National Airframe Panel of the National War Labor Board. He went to the Board as a mediation assistant and has been executive assistant to **Dr. Frank P. Graham,** a public member.

D. C. Wilkens, Jr., has been appointed chief of the industrial relations department for the Vultee Field Division of Consolidated Vultee Aircraft Corp. He was formerly wage and salary administration supervisor.

Maj. Mary C. Freeman, WAC staff director for the AAF Training Command, Fort Worth, Tex., has been promoted to the rank of lieutenant colonel. Her assistant, **Dorothy M. Harms,** has been made a major. Both serve in the office of the assistant chief of staff for personnel at Lieut. Gen. Barton K. Yount's AAF Training Command Headquarters.

Leonard M. Reno, 47, World War ace credited with shooting down eleven German planes, died at Provo, Utah, where he was sales representative for a steel company. He joined the Lafayette Escadrille and later transferred to the Navy as a flying ensign in the last war.

Ernest P. Couture is the new superintendent of the industrial engineering department at Interstate Aircraft and Engineering Corps., Los Angeles. During the past eight years Couture has been associated with Douglas, Lockheed, Northrop and Vought-Sikorsky.

Consolidated Vultee Aircraft Corp.'s Louisville Division announces appointment of **H. A. O'Brien** as acting chief of materials. He was formerly supervisor of receiving and stores. **J. Guy Daniel** has been named salvage foreman, replacing **R. S. Tolles,** resigned.

Louis P. Mareschal has been appointed transportation manager in charge of Washington district of Transcontinental and Western Air.

George H. Montgomery, Jr., Federal Aircraft, Ltd., Montreal, has been appointed deputy aircraft controller, a new position, with the Department of Munitions and Supply, Ottawa. **W. A. Newman,** of the same company, is controller of aircraft production in the Department of Munitions and Supply.

Capt. R. E. Hatfield, of Winnipeg, has been elected president of the Canadian Airlines Pilots Association. **Capt. C. R. Robinson,** Edmonton, was elected first vice-president and **Capt. George Lothian,** Edmonton, second vice-president.

D. C. Greene has been named district manager for Haskelite Manufacturing Corp., in the New York area. He formerly was manager of the St. Louis district.

Robert H. Bolander, Jr., secretary and general counsel of Chicago and Southern Air Lines, has been elected vice-president by the board of directors. Bolander joined C. and S. in 1941 succeeding **Amos Culbert,** now American Airlines vice-president.

W. L. Scott has been appointed superintendent of reservations and ticket offices for Chicago and Southern Air Lines.

Morgan D. Douglas has been elected a vice-president of General Motors Corp. He has just been appointed general manager of the GMC Truck and Coach Division, and formerly was general parts and accessories manager of the Chevrolet Motor Division and general manager of the General Motors Parts Division.

Air Marshal Douglas Colyer has arrived in Washington to take up the appointment of head of the R.A.F. delegation and R.A.F. member of the British Joint Staff Mission, in succession to **Air Marshal Sir William Welsh.** Air Marshal Colyer has been Assistant Chief of the Air Staff (Policy) since 1943.

Richard H. Diesel, who has been manager of the War Contract Service Department in the Stamford Division of the Yale and Towne Manufacturing Co., has been appointed manager of aircraft and automotive sales with offices in Detroit. Diesel and his staff will provide sales engineering service to aircraft manufacturers.

FINANCIAL

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Financing of Feeder Aircraft By Local Interests Urged

Advisability of underwriting by persons or organizations located within territory served, at least as far as equity issues are concerned, is pointed out by head of John J. Bergen & Co., Ltd.

Proposal by Comdr. John J. Bergen, president of John J. Bergen & Co., Ltd., that local interests finance the purchase of aircraft for feeder air transport companies "at least so far as the equity issues are concerned" merits serious consideration both in aviation and banking circles.

The financing of small business was one of our major problems before the war. It drew comment from leaders in business and government usually under the title of centralization versus decentralization. Congress itself expressed a local or regional philosophy regarding the electric light and power business when it passed the Public Utility Holding company Act calling for the geographical integration (local groupings) of utility systems.

▸ **Public Policy Factor**—Bergen expressed the belief at a Detroit SAE meeting that, where the local air transport company serves as a feeder to but one major airline, public policy may require that the airline being served shall not have a controlling interest in the feeder. He sees a desirability for the local company to be owned, financed and controlled entirely by local people—"by interests residing within the territory served."

Where the feeder company serves two or more major airlines, however, Commander Bergen feels the public interest may not necessarily be the same, and control may properly be permitted, or the securities offered in whatever securities market they find ready acceptance and on the most attractive terms.

▸ **Regional Capital Markets**—When Supreme Court Justice William O. Douglas was chairman of the Securities and Exchange Commission, he strongly advocated the development of regional capital markets to take care of the financing of local business and said it should bring these following conditions:

▸ Simpler and more conservative finance—where finance is brought closer to the locus of the business and where investors are brought closer to finance and investment.

▸ Better-planned financing.

▸ Develop an adequate organization for supply of long-term capital, particularly in equity form.

▸ Reduce absentee ownership and management.

▸ Bring new capital and new brains into the investment banking industry and the financial management of local business.

Bergen believes the capital structure of the feeder lines generally should follow the well-accepted formula for corporate capitalization—equity, junior and senior securities, with the venture capital base (represented by the equity and junior issues) sound, adequate and sufficiently broad and flexible so that it may be expanded readily to take advantage of legitimate corporate expansion and attractive business opportunities.

Also, he believes the capital base is important in this new field "because the failure of any one of these local transport companies, whether because of incompetence in management or because of an unsound capitalization, will greatly harm others and will substantially increase the difficulties and cost of financing other such companies."

In Bergen's opinion, if the equity financing is established on a proper basis, certain well-known types of senior securities are easily suited to the industry's needs.

▸ **Example**—"Required funds for purchase of new equipment can be obtained readily through issuance of (1) equipment trust notes along the lines of what is quite familiarly known as the Philadelphia Plan, which has been so often used in financing the purchase of railroad cars and locomotives; (2) the conditional sales contract used in financing purchase of automobiles and other chattels, and (3) the chattel mortgage."

Bergen believes the least expensive form of corporate financing is probably the equipment trust because of the high degree of confidence in that type of security by the investing public. His suggestion of the equipment trust note type of financing recalls that spokesmen for the aviation industry also have pointed to the equipment trust for possible senior financing.

▸ **Cites Growing Regulation** — In his opinion the industry must be protected against the ever-increasing encroachment of government regulation and regimentation. "Depending entirely upon the nature of the regulation to which it may be subjected," Bergen says, "this young industry can thrive and grow strong, or it can wither and die.

"It must not be unfairly or too heavily fettered, but permitted to develop so that it may serve both the public convenience and the national interest. Unless safeguards against possible bureaucratic tyrany are erected and maintained, the financing of these companies will be more difficult to accomplish and more costly."

He believes the exploits of our combat aviation and the notable performance of the commercial airlines and of the Army and Navy Air Transport Commands have convinced the American people that the future of commercial aviation is unlimited.

Northwest Income $517,889 in 12 Mos.

Northwest Airlines showed net profit of $517,889 for the fiscal year ended June 30, 1944, according to its annual report to the Securities and Exchange Commission at Philadelphia.

Total operating revenues amounted to $6,857,491, of which principal components were: passenger transportation, $4,234,564; mail, $1,413,203, and express and freight $296,708. Operating expenses totaled $5,690,370, the major items being: compensation and expenses of aircraft crews, radio operators, superintendents, clerks, airport and hangar employees, $1,563,346; aircraft fuel and supplies, $437,981; traffic, sales and advertising, $690,732, and administrative and general expenses, $480,356.

CAB Report on Air Service Patterns Likely to Have Wide Ramifications

Expected to be reflected in future international negotiations as well as South Atlantic route hearing.

By MERLIN MICKEL

The attempt by Civil Aeronautics Board analysts to outline in a new report on overseas air service patterns the international composition of potential air travel can be expected to have importance to future international negotiations as well as the South Atlantic route hearing in connection with which it was made public.

Most of the material in the current survey by Chief F. H. Crozier of the Research and Analysis Division and his staff, dealing with travel distribution and composition for all areas, was part of the vast volume of statistics the U. S. delegation had with it at the Chicago air conference. It follows trans-Atlantic and trans-Caribbean sections of the pattern study. A trans-Pacific section has not been made public.

Based on Steamship Records— Like the others, the current report is based on steamship records, mostly for 1937, and makes no attempt to predict quantities of traffic. But it states that travel between the U. S. and Gulf Stream and Caribbean areas can be expected to continue of first magnitude. Cultural ties may be expected to wield major influence on distribution of world travel, with a great portion of that generated in the western hemisphere continuing to move across the Atlantic. Communities of natural interest also are reflected in the history of air and first and cabin class sea travel between the U. S. and Hawaii and Alaska. And there are excellent possibilities for "substantial air traffic development between the U. S. and English-speaking nations of the South Pacific and neighboring islands.

Approximately all the historic volume of overseas air and first and cabin class travel, the report points out, interchanged between the U. S. and foreign countries, is within the fare range projected for future international flag operations. Yet it can be anticipated that air transportation will bring changes in overseas travel habits reducing seasonal travel peaks and valleys due to fair and foul "sailing" weather, and serving areas difficult or inaccessible to surface transportation. Greatest departure from the historic pattern concerns routes of travel, although the bulk of travel probably will continue between the world's historic traffic centers.

Air Travel Advantages — There are conditions conducive to air transportation in all three of the transit regions. In the North Atlantic, the researchers expect the plane to make winter trans-Atlantic travel as comfortable as during other seasons. In trans-Caribbean service the advantage lies in "typically time-consuming and costly journeys" by surface transportation, and in the trans-Pacific there are good opportunities, due to the great distances, with prospects for long-term air developments particularly over the great-circle Alaskan routes between the U. S. and Asia.

Growth of overseas air travel, says the survey, will bring some loss to surface carriers, but the greatest diversion of travel to air can be expected to fall principally on foreign surface carriers, especially those in trans-Atlantic service. Of gross revenue ($85,600,000) from U. S. and foreign passenger traffic in the trans-Atlantic region in 1938, U. S. vessels carried 9.46 percent by residence of travelers and foreign vessels 90.54 percent. In the Trans-Pacific region and Africa,

PAA ANTICIPATES TACA COMPETITION:

This map, prepared by the Research Department of Pan American Airways for the Latin American case, shows routes it believes Transportes Aereos Centro-Americanos, S. A. (TACA), will be operating in Central America after the war. To meet this threatened competition, PAA has recently organized four new additional airline companies, one each in Honduras, Costa Rica, Nicaragua and Panama, which will be affiliated with Pan American.

the latter comparatively unimportant ($15,300,000) the figures respectively were 43.14 and 56.86. But in the trans-Caribbean region ($28,800,000), they were 60.42 and 39.58.

The South Atlantic hearing, opening in Washington last week was marked in its early stages by the familiar contest between coastal cities for preferential consideration as international route termini. American Export Airlines was the first carrier to begin presentation of its case. Most of the first day was devoted to testimony on behalf of Miami, Baltimore, Philadelphia, Jacksonville and other ports. Examiners are William J. Madden and James S. Keith.

PAA Forms 4 New Latin American Lines

Organized in Costa Rica, Honduras, Nicaragua and Panama to meet TACA competition.

Four new national airline companies—one each in Costa Rica, Honduras, Nicaragua and Panama—have been formed in Central America under Pan American Airways' leadership in an effort to meet the competitive threat Lowell Yerex' TACA Airways is offering in that area. Pan American is expected to retain a 40 percent stock interest in each company, with 20 percent held nationally, and the remainder by other interests.

Planes for the new lines probably will come from U. S.-built craft declared surplus by the Army, but the actual date for beginning operations remains uncertain. The new companies will be affiliated with Pan American Airways System.

▸ **Competitors** — TACA has been Pan American's chief competitor in Central America for many years, and doubtless will expand considerably when more planes become available. Like PAA, TACA also has set up a number of national affiliates which it hopes to form into a large Central and South American operation after the war.

In their brief in the Civil Aeronautics Board's Latin American case, Pan American lawyers said: "It (TACA) is owned by American, British and other nationals in proportions never clearly revealed. In Middle America it poses as Central American, in Brazil as South American, in the West Indian Islands as British, and it manages to surround itself with an aroma of United States identity everywhere."

AA Asks Modification Of Show Cause Order

Reveals plan to cut passenger fares 6½ percent about Mar. 15 in reply to CAB move to reduce mail pay rates.

American Airlines has announced plans to lower passenger fares 6½ percent over its entire system on or about Mar. 15 and, in light of that intention, has requested Civil Aeronautics Board to vacate or modify the show cause order setting a tentative rate of mail pay for the line at a figure slightly more than half the present rate.

The announcement was in a formal objection to CAB's mail rate show cause order. The objection suggested that the board vacate the order or adjust upward the tentative rate of 32 cents per ton mile to reflect decrease in passenger revenues that American might expect should the cut in fares be made.

▸ **UAL Plans Reduction**—United Air Lines, another of the Big Four carriers receiving the mail rate reduction orders, also has announced its intention to make a reduction in its passenger fare schedules.

It was thought in some quarters that the Board's proposed mail pay cuts might revise carriers' plans to lower fares. From American's objection it appears that the lines may go ahead with fare cut proposals, hoping they will cause the Board to diminish its announced intended slash in airmail pay planned for American, United, TWA and Eastern.

American was the first of the four to file notice of objection to the show cause orders. Final deadline for such notice is Jan. 21, with documentary support of the objections due for filing 25 days thereafter.

May Cut Over 6½%

United Air Lines President William A. Patterson disclosed last week that his company's studies on prospective passenger fare reductions had been nearly completed and that there was a possibility United might lower its fares somewhat more than the 6½ percent proposed by American Airlines. Patterson said the lowered passenger tariffs would be submitted to Civil Aeronautics Board soon.

Meanwhile the Office of Defense Transportation, originally reported a probable opponent of any air fare cuts at the present, said it had not received official notice of the proposed reductions and therefore had no comment. ODT, which not long ago opposed lower fares sought by the railroads, may not object to airline reductions which would operate to relieve the railroads' congested Pullman situation. Priority controls on air travel make the airline situation different.

BRITISH ENSIGN OVER NILE:

The BOAC has carried Britain's civil air ensign to many parts of the world throughout the war, transporting many important passengers and vital war freight. This official photograph shows an Ensign airliner circling over the Nile before landing at Khartoum.

Runway Construction Problems Discussed by SAE in Detroit

Stafford of CAA sees length still going up, although end may be in sight; 300-foot width maximum usable; patterns to be improved, particularly for short haul operators; pavements and undercarriage for increasingly heavy aircraft studied.

Airport designers, faced with prospects of heavier airline equipment immediately after the war, are struggling with new problems of runway design and construction.

Some of these were discussed last week at the war engineering annual meeting of the Society of Automotive Engineers at Detroit by Paul H. Stafford of Civil Aeronautics Administration and Arthur Ayres of Pan American Airways. Ayres is the line's consulting airways engineer. Stafford is assistant chief of the engineering and construction division in CAA's airport service.

▸ **Functional Station**—No longer is an airport merely a place to land and take off. Now it's a "functional station" on air routes, a meeting place of air carriers and their customers, with the objective of safe, fast, efficient and economical traffic flow.

This is the expression of Stafford, who sees these trends:

▸ **Runway Length**—Still going up, though the end may be in sight since present increases are largely for more safety under unfavorable operating conditions. CAA recommends 5,000 feet for domestic service and 7,000 for trans-oceanic.

▸ **Runway Width**—About 300 feet seen as maximum usable, with a 100-foot width of tread adequate even for 500- or 600-foot wing spans, should they ever be reached. Width of 150 to 200 feet sufficient for the 100-passenger planes being planned with treads under 50 feet.

▸ **Runway Patterns**—Airport delays are particularly hard on short haul air carrier operations, therefore patterns will be improved to expedite these and handle increased traffic.

▸ **Pavements**—An economic problem that should not be evaded with the excuse that aircraft owners do not pay airport cost directly. Stafford suggests separate undercarriages under each engine or additional wheels under fuselage to reduce airport cost and increase number of existing terminals that could be served by a given weight aircraft. Dual tires, he says, give pavement designers little relief, since two points still support the weight. He sees a continuing trend toward greater thickness, better materials and more exacting specifications as plane size increases.

From Ayres comes the proposal that designers of aircraft form an association with airport designers on an international basis to exchange information. For members, he suggests outstanding aircraft designers, airline airport engineers, CAA, air carrier and airport officials, from the Allied nations and neutral countries.

This engineer feels that in most U. S. highly populated and industrialized areas facilities for handling the future's big planes are behind development of the planes themselves. Despite the millions spent on airports throughout the world, many have become obsolete in crowded areas where land values are high. Meanwhile the designers still plan larger and faster aircraft which will need longer and wider landing and takeoff.

▸ **Revisions Likely**—Three types of port and possibly four, Ayres believes, will be needed for the various future types of flying, and the average airport already built may need expansion and construction for years after the war. Either various governments interested in service of large planes such as the DC-7—of which Pan American has ordered 26—must expand airport facilities or international airlines must restrict their operations to certain dispatch points in some instances as far as 2,000 miles apart, even over land.

Even should the various governments agree to sponsor adequate airport development, there is a question whether plane and port designers would be able to advise them as to what would be needed for the next 10 or 20 years.

▸ **Problems Discussed**—The meeting also heard James B. Kendrick, of Lockheed Aircraft Corp., discuss applied aero-economics, study of aircraft design and operational problems through quantitative investigations with various factors which separate the effect of certain variables on overall utility.

Such principles may indicate

DC-3 and DC-7 Runway Requirements

This comparison of weights and figures pertinent to runway requirements for the DC-3 and DC-7 was given at an SAE meeting by Arthur Ayres, Pan American Airways engineer:

	DC-3	DC-7
Weight GW (Pounds)	25,200	162,000
Static load each main wheel (Pounds)	11,650	76,800
Static load tail or nose wheel (Pounds)	3,200 (tail)	19,250 (nose)
Tire footprint pressure (Square Inches)	49	85
Landing gear tread (Inches)	222	440
Landing speed	70 mph	85 mph
Take-off speed	97 mph	104 mph
Ground run to take off	1,500 ft.	2,470 ft.
Payload pounds	6,540	30,500
Take-off runway length CAA	3,500 ft.	6,640 ft. (est.)

DC-3 JOINS LOCKHEED FLEET:
First Douglas DC-3 to join Continental Air Lines' fleet of Lockheed Lodestars *is shown being refitted after its return from Army use in CAL's Denver shops. Conversion required 15,000 man-hours. This ship is now in service on Continental's Denver-Topeka-Kansas City operation. It is the first of three such ships allocated to the line.*

means to cut cost of fleet operation, aid in design and development work, coordinate work of the aircraft manufacturer and component manufacture, and evaluate improvements for the operator or customer. As examples, he analyzed the small, 24-passenger airliner, and the five-passenger aerial taxicab.

Sale of Mayflower To NEA Completed

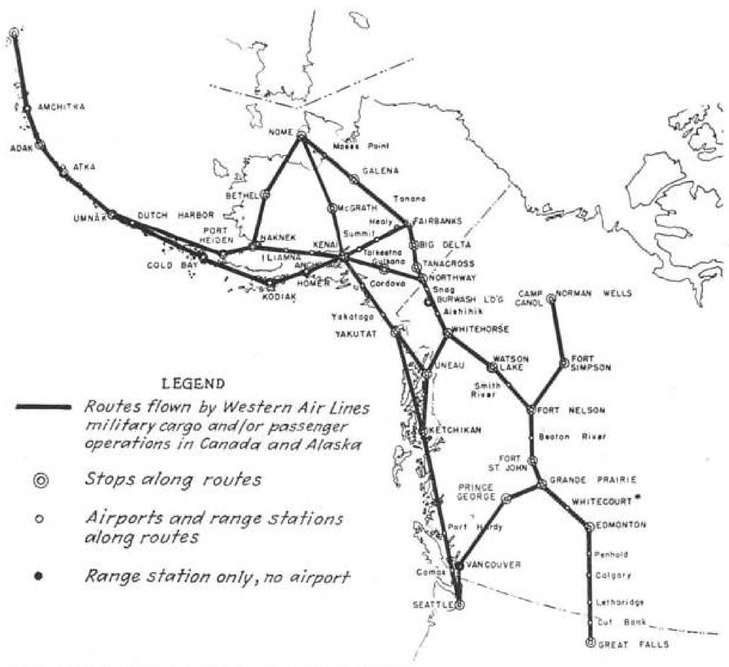
Final formalities in Northeast Airlines' acquisition of Mayflower Airlines were completed last week with issuance by Civil Aeronautics Board of a certificate establishing the old Mayflower system as AM 70. The certificate was issued after Northeast had furnished evidence of satisfactory completion of its purchase contract with the trustee in bankruptcy administering Mayflower affairs.

Purchase price of the route was $17,500, and was the cause of considerable controversy last summer between CAB, Northeast, and the Mayflower trustee. In its original approval of the acquisition, the Board had attempted to limit this price to $10,000, but was later compelled to reverse its stand when the trustee in bankruptcy refused to sell at that figure.

▸**Boston to Nantucket**—AM 70, extending from Boston to Nantucket via Provincetown, Hyannis and Oak Bluffs, Mass., is the second completely intra-state route authorized by a CAB certificate. Essair's AM 64 lies wholly within Texas. Northeast has application pending before CAB to consolidate the domestic sections of its other certificated routes, AM 27 and AM 65, with AM 70, the consolidated to be known as AM 27.

Ore Shipped By AA

American Airlines handled its first air shipment of ore when a 1200-pound consignment of bauxite moved between Memphis, Tenn., and Washington. The ore was transshipped at Washington and went by rail to Pennsylvania State College. Shipment was by the Porocel Corp. of Little Rock, Ark., for use in a 3600 degree Centigrade high-temperature experimental furnace at the college. The ore was moved by air to forestall shutting down the furnace between experiments.



WESTERN'S ALEUTIANS ROUTE:
Western Air Lines has carried 16,006,556 pounds of cargo in the last three years over its ATC routes, shown above, between the U. S., Alaska and the Aleutians. The line claims a perfect safety record on its Alaskan Wing job, with 2,589 trips between the U. S., Canada and Alaska. Planes used have varied from C-47's to C-46's, with the operation reaching an average plane utilization of 15.9 hours per day.

2 Vacancies in Key Personnel of CAB

Two vacancies exist among the key personnel of Civil Aeronautics Board's functional divisions, as charted for last month's air conference in Chicago. These are the posts of assistant general counsel (finance) in the office of general counsel, and tariffs and service division, in the economic bureau.

Other top spots in the divisions are occupied as follows:

Consultants—Raymond W. Stough, special assistant to the Board, and John Sherman, liaison consultant.

Public Information Section—E. E. Slattery, Jr., chief.

Office of General Counsel—George C. Neal, general counsel. Rates Section (legal), Harry A. Bowen (acting); contract section (legal), D. Franklin Kell; assistant general counsel (operations), John H. Wanner; economic operations, Philip Schleit; safety section, Merrill Armour.

Economic Bureau—Irston Roberts Barnes, director. Research and analysis, Frank H. Crozier; rates and audits division, Warner H. Hord; rates section, Hayden H. Cady (acting); audits section, A. H. Gilbert; air transport information division, Harold A. Van Dorn.

Safety Bureau—Jesse W. Lankford, director. Safety rules and education division, Robert D. Hoyt; accident investigation division, Jesse K. Fenno; accident investigation section, W. K. Andrews, Jr.; analysis section, Richard C. Hughes.

Office of Trial Examiners—C. Edward Leasure, chief. Examiners, Francis W. Brown; editorial and service unit, Carrie Lawton; docket section, Catherine F. Williams.

Office of Secretary—F. A. Toombs, secretary. Minutes section, Mabel McCart; personnel section, Lolita T. Fetter; mail, files and duplicating section, Edwin O. Hathaway; publications section, Caroline D. Flanner.

Safety bureau field office men are: Region 1, Allen P. Bourdon, New York, and Joseph O. Fluet, Pittsburgh; Region 2, Fred G. Powell, Atlanta; Region 3, Herbert V. Shebat, Chicago, Earl L. Smith, Minneapolis, and Leon H. Tanguay, Detroit; Region 4, Perry B. Hodgden, Fort Worth; Region 5, Raymond P. Parshall, Kansas City, and Charles S. Collar, Denver; Region 6, Ralph A. Reed, Santa Monica, and Alexander E. Cabana, Reno; Region 7, Charles F. Lienesch, Seattle, and Alaska office, Robert J. Bartoo.

Dutch Force Active

Communication flights between London and continental bases are being made by the Netherlands Air Forces in Lockheed *Hudson* transports. More than 300 were made between Sept. 23, starting date, and Christmas, with cargo of more than 50,000 pounds of freight and 450 passengers. Pilots come

from the Netherlands *Mitchell* bomber squadron operating in Belgium.

Sorrell to Return To U. of Chicago

Research and planning director will retain ATA assignment on part-time basis.

Dr. Lewis C. Sorrell, widely known in aviation circles for his work as research and planning director for the Air Transport Association, is returning to the University of Chicago, although retaining the ATA assignment on a part-time basis.

The Association is bringing in Dr. Myles E. Robinson, who has been with the Interstate Commerce Commission for the last year, to assist in Sorrell's department. Sorrell has left for Chicago, but expects to return in about a month, after which time he will be in Washington off and on.

▸**Data Collected**—He has been massing material in anticipation of the airlines' fight against surface carriers' entry into the air, and also in preparation for Civil Aeronautics Board's study of non-scheduled operators and prospective operators.

Dr. Robinson has been working on air aspects of post-war transportation at the ICC. He is a former instructor at James Millikin University at Decatur, Ill., in business and economics, and received his doctorate at Northwestern University.

Dr. Sorrell will deal particularly with post-war planning in his work at the University of Chicago, with which he has been associated 25 years. As Professor of Transportation, he will teach three courses in that subject, one on air transport. He joined ATA in January, 1943, with a year's leave which has been continued until now.

10 More Transports Allocated to Airlines

Ten additional DC-3 type transport planes were allocated last week, seven of them going to domestic airlines and three to KLM, Dutch airline now operating a Caribbean service from Miami. Three Lockheed *Lodestars* also were assigned, one going to Zimmerly Air Transport, now operating a war contract service, and

Harold F. Blackburn

one each to Canadian Pacific and Navegacao Aerea Brasileira. Canadian Pacific previously had been sold two Lockheeds and NAB, one.

Domestic allocations were to TWA, two; one each to American, Mid-Continent, Northwest, Pan American and United.

▸**Brings Total to 104**—The new allocations brought the total to 104, of which 66 went to domestic airlines and 38 to foreign nations.

This constitutes the bulk of surplus transports expected in the near future, with a few more scheduled to be turned over. After that, it is anticipated that the flow will slow to a dribble until the war situation begins to clear up. Transport aircraft still constitute one of the critical short items in war theaters, and only the fact that the allocated planes are non-standard to Army use makes them available.

47 Passengers Die In Landing Crashes

Two fatal landing approach accidents last week, one on Pan American Airways and another on American Airlines, cost 47 passenger lives.

The Pan American crash occurred at Port of Spain, Trinidad, when a 10-year-old Martin-built amphibian, south-bound on the company's African route, plunged in the harbor while making a night landing approach. Seven of thirty persons aboard were reported safe.

▸**Flew Over 12,000,000 Miles**—The plane had been operated in excess of 12,000,000-passenger miles in Pan American's service, and had been known as the China Clipper during pioneering days in the Pacific. Civil Aeronautics Board accident investigators are at Trinidad seeking the probable cause of the crash.

An American Airlines DC-3 crashed into a knoll near Burbank, Calif., Jan. 10, after discontinuing an instrument approach to the field through foggy weather. The ship had abandoned its attempt to land at Burbank and was apparently headed to an alternate field when the accident occurred.

Army authorities have taken charge of the investigation, inasmuch as all the 21 passengers were service men traveling on priorities. All passengers and three crew members were killed.

TWA Reorganization Near Completion

Final moves in reorganization of Transcontinental & Western Air, begun last September (AVIATION NEWS, Sept. 4) are nearing completion with managers of four newly-created regions established in office.

Jack Frye, TWA president, said the company's objective is to free the administrative staff from detail work so it can concentrate more on matters of policy, and to get better coordination between traffic and operations heads and their personnel.

▸**Transportation Dept.**—This is achieved by the creation of a transportation department, under Vice President John A. Collins. The four new regional managers, each of whom has authority over both traffic and operations in his district, report to Collins.

Eastern Region is headed by W. F. McGrath, with headquarters at New York; Central Region, by C. E. McCollum, at Chicago; Midwest Region, by W. N. Gorham, at Kansas City; and the Western Region by J. S. Bartles, at Los Angeles.

Harold F. Blackburn has been named manager of TWA's Intercontinental Division in Washington, replacing Clifford Mutchler, who transfers to the airline's Kansas City offices. Blackburn, a ten-year TWA veteran, has been in charge of Air Transport Command operations under contract with the company since July, 1942.

If and when the company receives foreign operations permits applied for, the new administrative system can be simply expanded with additional regional managers—for the Atlantic, the Pacific, etc.

Air Cargo Study Pledged By Lea

Gives assurance that post-war development will be considered when Congress takes up aviation legislation.

Chairman Clarence F. Lea of the House Interstate and Foreign Commerce Committee has given assurances that the post-war development of air cargo will be a consideration when the new Congress takes up major aviation legislation.

The Congressman recently heard an expression of views on legislation to promote independent air cargo transport development after the war, with W. Garfitt, vice-president of the United Fresh Fruit and Vegetable Association. This organization, which represents more than 2,000 fresh produce growers and dealers, will hold an air transport conference Jan. 24 in Chicago as part of its national meeting. Staff members have been studying the subject for more than a year.

▸ **New Network Suggested**—Garfitt contended disadvantages would result from development of a cargo transport system under the aegis of passenger airlines, and suggested that attention be given to establishing an entirely new airline network for cargo.

Among other things, he pointed out that passenger transport involves expensive overhead, while cargo carrying doesn't, and management of both types of operations by one company would result in a charging of the overhead to cargo as well as passenger functions. Under such a practice, Garfitt contends, an unfair boost in cargo rates would result.

Delta Asks Extension To Jacksonville, Fla.

Delta Air Corp. has asked Civil Aeronautics Board for route extensions in the southern states which would give the line access to Jacksonville, Fla., as the terminus of a new route from Memphis via Tupelo, Miss., Birmingham, Ala., and Columbus and Valdosta, Ga. Another route would link Jacksonville with Savannah, for which Delta is now certificated, via Brunswick, Ga.

The line also requested alternate routing between Atlanta and Meridian, Miss., via Columbus, Ga., and Montgomery, Ala., another alternate between Atlanta and Savannah would include Macon, Ga.

▸ **Plans Stock Issue**—C. E. Woolman, Delta's vice-president, announced last week that the company plans to issue 102,424 shares of its $3 par value common stock, which when completely sold will bring the outstanding stock shares to 400,000 of 500,000 authorized.

Delta will pay a stock dividend Jan. 25, consisting of one share for every two shares outstanding as of Jan. 10, issuing thereby 99,192 additional shares. Both financing moves are designed to underwrite the line's post-war expansion plans.

C-87's to Consairway

Consolidated Aircraft Corp.'s Pacific contract operation for the Army Air Transport Command has been expanded by addition of 25 percent more C-87's. Total number of planes operated by Consairways remains confidential because most of the line's operations are directly into combat zones.

A few minor changes have been made in routes flown by Consairway. The operation, as now conducted, links California with Brisbane, Australia, via Hawaii, Christmas Island, Canton Island, Fiji Islands, and New Caledonia. The second route extends from California to Guadalcanal via Hawaii, Canton and Tarawa. No contract carriers are yet operating into the most advanced combat zones such as Leyte.

Early Action Likely On New Lea Bill

Date for consideration by the House Interstate and Foreign Commerce Committee of the new Lea Bill (H. R. 674) to amend the Civil Aeronautics Act has not been set, but it is certain to rank high on the committee's agendum.

Rep. Lea, chairman of the group, introduced the bill early in the session of the new Congress, but as this was written the committee personnel had not been announced, and it was unlikely that the date for hearing would be set before that happened.

▸ **Measure Revised** — Lea told the House the new measure had been revised substantially over H. R. 3420, the legislation he introduced during the last session, "to cure defects found to exist in that bill and to provide solutions for new problems which have come up since that bill was written."

CAB SCHEDULE

Jan. 15. Oral argument on reopened portions of Memphis-Oklahoma City-El Paso case. (Docket 503 et al.) Argument limited to issues of service to Wichita Falls and Lubbock, Texas.

Jan. 15. Hearing on Northeast Airlines' application to consolidate domestic segments of AM 27, AM 65, and Mayflower route. (Dockets 1607 and 1084.). Examiner Frank A. Law, Jr.

Jan. 18. Oral argument in American Airlines-American Export Airlines acquisition case. (Dockets 1345 and 1346.). Postponed from Jan. 9.

Jan. 22. Prehearing conference on applications within the general area of Virginia, North Carolina, South Carolina, Georgia, Alabama, and Tennessee.

Jan. 22. Deadline for exhibits in the Pacific route proceeding. (Docket 547 et al.). Postponed from Jan. 12.

Jan. 23. Oral argument in Colonial Airlines' proceeding to fix mail pay rate for FAM 1.

Jan. 30. Briefs due in Great Lakes-Florida case. (Docket 570 et al.). Postponed from Jan. 10.

Jan. 31. Rebuttal exhibits due in Pacific proceeding. (Docket 547 et al.). Postponed from Jan. 26.

Jan. 31. Hearing in Texas-Oklahoma case before examiner Thomas L. Wrenn in Texas Hotel, Fort Worth, Texas. (Docket 337 et al.). Postponed from Jan. 8.

Feb. 1. Briefs due in West Coast case. (Docket 250 et al.). Postponed from Jan. 15.

Feb. 1. Exhibits due in North Central States case. (Docket 415 et al.). Deadline extended from Jan. 1.

Feb. 11. Tentative hearing in Pacific route case before Examiner Ross I. Newmann. (Docket 547 et al.). Postponed from Feb. 1.

Feb. 12. Tentative hearing date for investigation of non-scheduled air services. (Docket 1501.).

Feb. 20. Rebuttal exhibits due in North Central states case. (Docket 415 et al.).

Feb. 20. Exhibits due in National Airlines rate case. (Docket 824.).

Mar. 5. Hearing in North Central States case in Washington, D. C. (Docket 415 et al.).

Mar. 12. Tentative hearing date in National Airlines mail rate case for AM 31 and AM 39. (Docket 824.).

REA Cuts Rates on Air Express

Four new special commodity air express tariffs, filed with Civil Aeronautics Board by Air Express Division of the Railway Express Agency institute reductions of as much as 40 percent on charges for certain specified commodities shipped over the routes of Braniff Airways and Chicago and Southern Air Lines. The move to cut existing rates was instituted by the two carriers and concurred in by REA.

Three of the four published tariffs provide reductions in rates for fresh fruits, vegetables, mushrooms, and seafood, and magazines, newspapers and racing forms shipped over the lines of both carriers. The fourth is a fresh fruit, vegetable and cut flower tariff applicable to C. & S. only.

▸ **Lower Rates**—The rates are considerably lower than those generally established by REA. For less than 100-pound lots the charges are less than those set by American Airlines' airfreight tariff. The newly filed tariffs represent reductions averaging slightly more than 30 percent in most cases.

A special fresh fish rate from Denver, Colorado Springs and Pueblo, Colo., has been included in Braniff's rates to attract shipments of fresh-water trout originating in those areas.

The tariffs are largely experimental and will continue in effect for periods varying between four and five months. The amount of express traffic generated because of the lowered rates will determine whether they will be made permanent.

CAB ACTION

● The Department of Justice, the City of Milwaukee and Braniff Airways have received CAB permission to intervene in the North Central States case.

● Division of the numerous applicants in the Texas-Oklahoma case into two classes—those proposing through service, and those seeking local or feeder authorizations—has been made by Examiner Thomas L. Wrenn in an attempt to simplify the proceeding as much as possible. Through service applicants whose presentations will be heard first, include American, Chicago and Southern, Eastern, Mid-Continent and Braniff. The second section of the case involves 33 applicants for local service whose proposals will be further subdivided into those located in the north and west area and the central and southern area.

● United Air Lines has filed with CAB notice of its intention to start non-stop service on AM 11 between Sacramento, Calif., and Eugene, Ore., bypassing Medford, Ore.

● The Board set Jan. 19 as date for a prehearing conference on the joint application of Transcontinental & Western Air and Chicago and Southern for approval of their equipment interchange agreement.

● Hearing date in the Pacific case (Docket 547 et al.) has been postponed from Feb. 11 to Feb. 13. Deadline for exhibits has been extended to Jan. 27. Rebuttal exhibits are due Feb. 7.

SHORTLINES

▸ San Francisco airport officials, hopeful of obtaining voters' approval of a $20,000,000 bond issue to finance improvements at Mills Field Airport, have disclosed that 13 airlines have made application for new facilities there and are prepared to spend from 3 to 7 million each on new hangars, shops and other facilities, contingent upon approval of the bond issue. Pan American Airways is said to have proposed expenditure of $7,000,000.

▸ Hull-Dobbs Enterprises has added Eastern at Jacksonville to its list of spots where it caters to airlines. This deal, involving purchase of the Feltman Catering Co. of Jacksonville, puts Hull-Dobbs on the eastern seaboard, but does not include operation of Jacksonville's Municipal Airport restaurant.

▸ National plans to put four additional round trips in operation late next month between New York City and Jacksonville. Two more *Lodestars* recently brought to six the additions to its fleet in the last month. Service out of New York City now is twice a day.

▸ Mid-Continent showed a net loss of $6,654 in November, compared with $14,180 profit for November, 1943, because of accrued depreciation on Lockheeds bought from the military last June on which purchase price was determined in November. Operating revenue reported for last November of $176,477 was over that for the same month a year ago.

▸ Pan American Airways quotes Brig. Gen. Vasco Alves Secco, chief of the air section of the Joint Brazil-U. S. Defense Commission in Washington, to the effect that the South American nation wishes its official observers to inspect U. S. commercial airlines as well as military air installations.

▸ A new Chicago ticket office recently was opened by Northwest Airlines.

▸ Australian domestic airlines' traffic figures for 1943 indicate a 116 percent increase in passenger business over 1939, although fewer planes were in service. Volume of airmail handled was 56 times that of 1939, and express shipment also increased by 90 percent. All operations on the Australian domestic lines have been conducted on a strict priority basis.

New Mechanics Regulations

FORTUNATELY, THE WHOLE ATTITUDE of CAA's General Inspection Division and of operators and private flyers appears to be changing on the Civil Aeronautics Board's proposed requirements for mechanics' certificates, and favorable action is anticipated soon.

The new Part 24 of the Civil Air Regulations proposed by CAB's Safety Bureau has been widely misinterpreted and as a result a large part of the comment received up to a short time ago was unfavorable. However, wherever the Bureau has had an opportunity to discuss this part with operators and mechanics, it has in most instances found that they favored the proposed revision.

The first criticism of the part has been that it has been made more complicated rather than simpler and it is true that new categories have been added. It must be remembered, however, that although it has been generally agreed for years that Part 24 should be brought up to date, nothing was actually accomplished.

One of the many faults of the present Part 24 is that to obtain a mechanic certificate an applicant must pass an examination covering aircraft ranging from the smallest sport plane to the largest of the transports. This was obviously unfair to mechanics wishing to specialize on smaller aircraft, because they could not prepare to pass an examination in many points beyond their interest.

To correct this, the aircraft mechanic certificate was arbitrarily divided into two categories, for aircraft up to 5,000 pounds gross weight, and the other covering all larger aircraft. Likewise, engines were divided at the 500 hp. point.

Another step in modernizing this part is the recognition of the difference in work done by those mechanics on the line and those who confined their efforts to shop work. For this reason, the categories of "maintenance and service" and "overhaul and repair" were introduced. The next commendable step in modernization was to fill the need of a mechanic with the competency to return aircraft back into service without recourse to a CAA inspector. This resulted in setting up a mechanic rating higher than any previously in effect, designated as "first class." The specialist ratings were included to take care of those many individuals who want to perform one class of work only.

The first point of misunderstanding was the general interpretation that approved repair stations and operators would be able to hire only certificated personnel and that in addition to a first class mechanic they would be required to hire various specialists. This is not the case, however, as the proposed second class mechanic has all the privileges of the present mechanic and may work upon any appliance or instrument which comes within his rating and the proposed first class mechanic can, in addition, return aircraft to service, provided he has the necessary facilities to do the job.

If the problem is analyzed in the light of modern requirements and studied as to how it will work out in practice, the proposed part is in no way complicated, and appears to represent another step forward in modernizing our regulations.

Underestimating the Japs

ALTHOUGH THERE IS NO CAUSE for undue alarm, it is time that the American public realizes that unless we knock out the most important of Japan's aircraft plants in the next few months our own aircraft losses in the Pacific will rise substantially. The average newspaper reader, lulled by the overwhelmingly favorable box scores of the past, automatically discounts Japanese airpower. There are more new high quality Jap aircraft already in the air than is generally realized, and more on the way.

The record shows, however, that as far back as Oct. 11, 1943, Navigator, AVIATION NEWS' Air War commentator, warned that new appraisals of the Jap air force were necessary. Last September Navigator disclosed data on new Jap models and equipment which brought them nearer battle equality with American types. This was about the time Secretary Forrestal stated that the U. S. did not have as important technical advantages over the Pacific enemy as a year earlier. On Oct. 2 Navigator pointed out that "there is increasing evidence that defensively the Jap air force is preparing to pack a considerable punch, with a lot of good stuff coming up . . . at least half a dozen new Army and Navy fighters are reported as in production."

Navigator's analysis two weeks ago, covering technological developments in evidence over the Saipan and Japan areas, lent support to the revised statement of Secretary Forrestal that the U. S. now has only a "slight technical superiority" over Japanese aircraft. It indicates that apparently conflicting statements of Vice Admiral Mitscher and General Kenney, commander of the Far Eastern Air Forces, deal mainly with the past and not with the new types coming into production and just now being met in action. At least 8 new Jap types have been encountered, including at least one with a speed of well over 400 mph. A chart in the current issue of the NEWS compares the new Jap types with current U. S. types.

All of which warns the discerning reader that even the Allies' most important wartime aeronautical development, jet or turbine propulsion, and the Germans' revolutionary robot or rocket bombs, may be encountered in a good stage of development, and at any time, in Japanese hands.

While we, too, have important new planes under wraps, we have lost the relative advantage of even a year ago and it will require the utmost energy in aeronautical research and development by both government and industry to retain our position.

ROBERT H. WOOD

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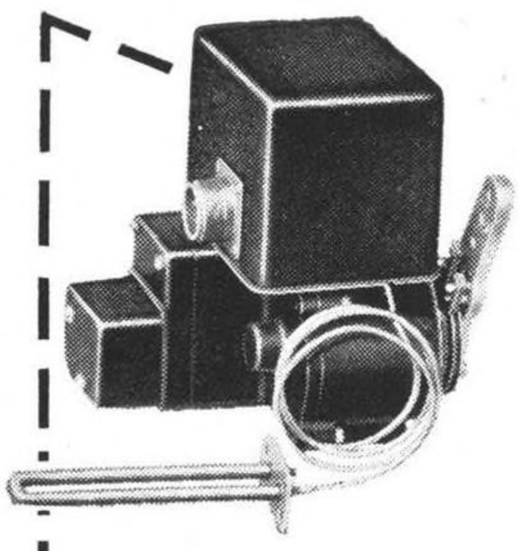

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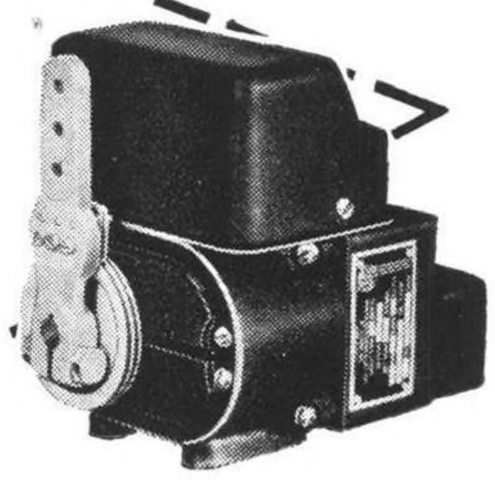

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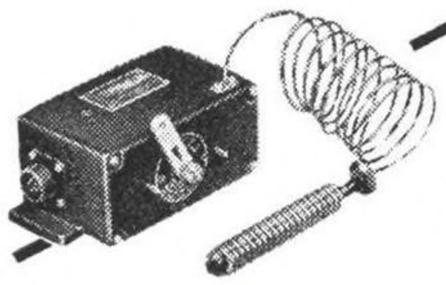

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