

Aviation News

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NOVEMBER 22, 1943



Resignation Opposed: *Charles E. Wilson, WPB executive vice chairman, has submitted his resignation but many leaders of the aircraft industry are insisting that he continue his able and successful direction of aircraft production, an insistence expected to stay Wilson's departure, at least for the time being.*

Allies Step Up 3-Way Air Assault Against Nazis

Large-scale bombing attacks increased sharply in move for quick knock-out, says CommentatorPage 16

Wright in Production on New 2200 hp. Engine

Company announces data on air-cooled radial powerplant, described as one of most powerful in the world.....Page 25

Pogue Urges Allied Firm Operate Air Bases

CAB chairman favors private management of global routes in talk on "World Highways of the Air".....Page 37

Ford Divulges Plan To Build Postwar Planes

Reveals program for manufacture of high-speed, safe and economical craft of "unique design" at Willow Run.....Page 14

Prehearing Talks Open on Caribbean Routes

Nineteen companies represented out of 21 seeking to operate air lines to Mexico, Central and South America, Caribbean...Page 34

Air Problems Threshed Out at Oklahoma Clinic

About 400 representatives of airlines, industry and private flyers discuss wide range of topics at NAA planning parley....Page 7



Flight tests ON THE GROUND

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THE AVIATION NEWS

Washington Observer

AVIATION CLINIC—The National Clinic of Aviation Planning at Oklahoma City, sponsored by the National Aeronautic Association, was regarded with some skepticism in the industry when it was first proposed. The results of the meeting, attended by aviation-minded men from the government, aircraft industry and airlines, routed that skepticism and the fact that these leaders were able to agree on unified action on subjects of vital importance to aviation generally indicates that aviation, suffering from growing pains, is beginning to mature.

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LEA BILL AT CLINIC—The Lea Bill, which seeks to amend the 1938 Civil Aeronautics Act, naturally was a major controversial issue. This was not unexpected in view of the varied interests represented at the sessions. The fact that the delegates were willing to pass that issue and agree on other basic questions indicated a recognition of the necessity of a united front for the common good of the industry.

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ALL IS CONFUSION—Contradictions in high official quarters make it increasingly difficult to get a clear picture of our war position. Confusion, which is frequently created in the minds of the people on the home front, stems directly from statements made by high-ranking, responsible officials, statements which vary widely in their conclusions and statements which contribute to unwarranted optimism on one hand and unwarranted pessimism on the other.

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STRENGTH OF THE LUFTWAFFE—A few weeks ago, Gen. Arnold disclosed that as a result of our long-range bombing attacks, the strength of the Nazi air force had been drastically reduced, that the Luftwaffe was seriously crippled. Recently, Maj. Gen. George V. Strong, assistant chief of staff and chief of military intelligence, said Germany had more airplanes than she had in 1939. On almost the same day, Secretary of the Navy Knox told his news conference that we have complete domination of the air in the Solomons, New Guinea, the Mediterranean, France, Germany and Britain.

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PUBLIC PUZZLED—The question naturally arises—has German air strength increased or diminished? Do we have control of the air over enemy territory or don't we? Gen. Arnold should know and undoubtedly does. Gen. Strong should know and undoubtedly does. Secretary

Knox should know and undoubtedly does. It would help if they got together.

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OUTDOOR ASSEMBLY LINE—When the West Coast editor of AVIATION NEWS reports on various developments in the great aircraft industry there, it is most difficult for him to refrain from mentioning that Southern California weather and to compare it—uncomplimentarily—with that of Washington. We had to bow to



him on the weather angle when he sent along the interesting picture of Lockheed's outdoor assembly line which is adding to the record-breaking output of the much-in-demand P-38 fighter.

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TEN-HOUR SHIFTS—The aircraft industry is watching closely the experimental ten-hour shift programs at Northrop and North American on the West Coast. The West Coast generally did not take kindly to the suggestion of WPB that they adopt ten-hour shifts as a production stimulant. Some industry leaders believe a change-over from the present set-up would result in at least a temporary lowering of production and that the loss would not be compensated by any subsequent production improvement. One aircraft executive went so far

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as to say he believed production would go up if an eight-hour, five-day week were adopted in the industry. That doesn't appear likely.

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INCENTIVE WAGES—Little has been said publicly, of late, regarding wage incentive programs in the aircraft manufacturing industry and the proposition is under serious study on the West Coast and elsewhere. Setting up such plans which will be fair and equitable to both labor and management is a tremendous task, but there are indications there may be some West Coast aircraft companies which will announce some type of incentive plan by the first of the year.

★ ★ ★

THE COUGHIN' COFFIN—Present aircraft production schedules still call for a gradual and final tapering off in output of the Martin B-26 "Marauder," despite the glowing reports on this plane from the battle-front and from returned pilots. It would be pretty difficult, for example, to talk down the "Marauder" to the crew of The Coughin' Coffin, a battle-scarred B-26 which went through 50 bombing missions from Jan. 1 to Oct. 29. She had an engine shot away and she came back full of holes, but she always came back and her crew came through unscathed.

★ ★ ★

ANGLO-AMERICAN AIR—Cooperative air operations on a most impressive scale have been taking place during the past two months in the Mediterranean. The creation of a new all-American Mediterranean Air Force under Lt. Gen. Carl Spaatz, probably marks the beginning of reorganization in Mediterranean air affairs. There may be less mixing of British and American air units, with close contact at the top rather than in subordinate formations.

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INTERNATIONAL AIR—Informal conferences between British and American aviation men appear to be in the offing. Lord Beaverbrook, whose arrival in the United States soon has been forecast, was reported as this was written to be on this side of the Atlantic. If so, his arrival in Washington is imminent, with a direct report on recent sessions in London at which the opinions of the Dominions were thrown into the general discussion pool.

★ ★ ★

AUSTER MARK 3—There have been few details on this aircraft which is actually the British Army's Taylorcraft. This Taylorcraft airplane is manufactured in England by an entirely separate company from Taylorcraft Aviation Corp., of Alliance, Ohio. The British firm,

Washington Observer

Taylorcraft Aeroplanes, Ltd., is under license from the American company and while they have drawings and designs for the current Taylorcraft *Tandem*, the L-2 Army model, it is not believed they have manufactured any of this type. They have been building some side-by-side Taylorcrafts, however, which use 90 and 100 hp. Cirrus engines. The Auster Mark 3 is the same side-by-side model with a higher horsepower engine (130 hp.) installed.

★ ★ ★

OVER 100 HELICOPTER PROJECTS—There are now more than 100 companies which have designs and ideas about production of helicopters. Not more than a half dozen of these actually have built helicopters that will fly, one expert says privately, and considerably less than half of the total involved have been projected by aircraft or related companies.

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GOVERNMENT OWNED FACILITIES—It is understood that some members of the Inter-Departmental Committee, studying disposal of government-owned facilities, are considering the possibility of leasing war plants to private industry during the period of negotiation for sale. This proposal is still in the study stage but would have the advantage of providing a working arrangement in the event negotiations became protracted, which they well might in some cases.

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POSTWAR PLANES—Conjecture on what postwar airplanes will look like is as wide as the sky, but it is pretty generally agreed that during the immediate postwar period there will



be little change. Trans-oceanic airplane interiors, for example, probably will look pretty much like the interior of the Pan American clipper pictured on this page, a picture taken during the happier days of peacetime flying.

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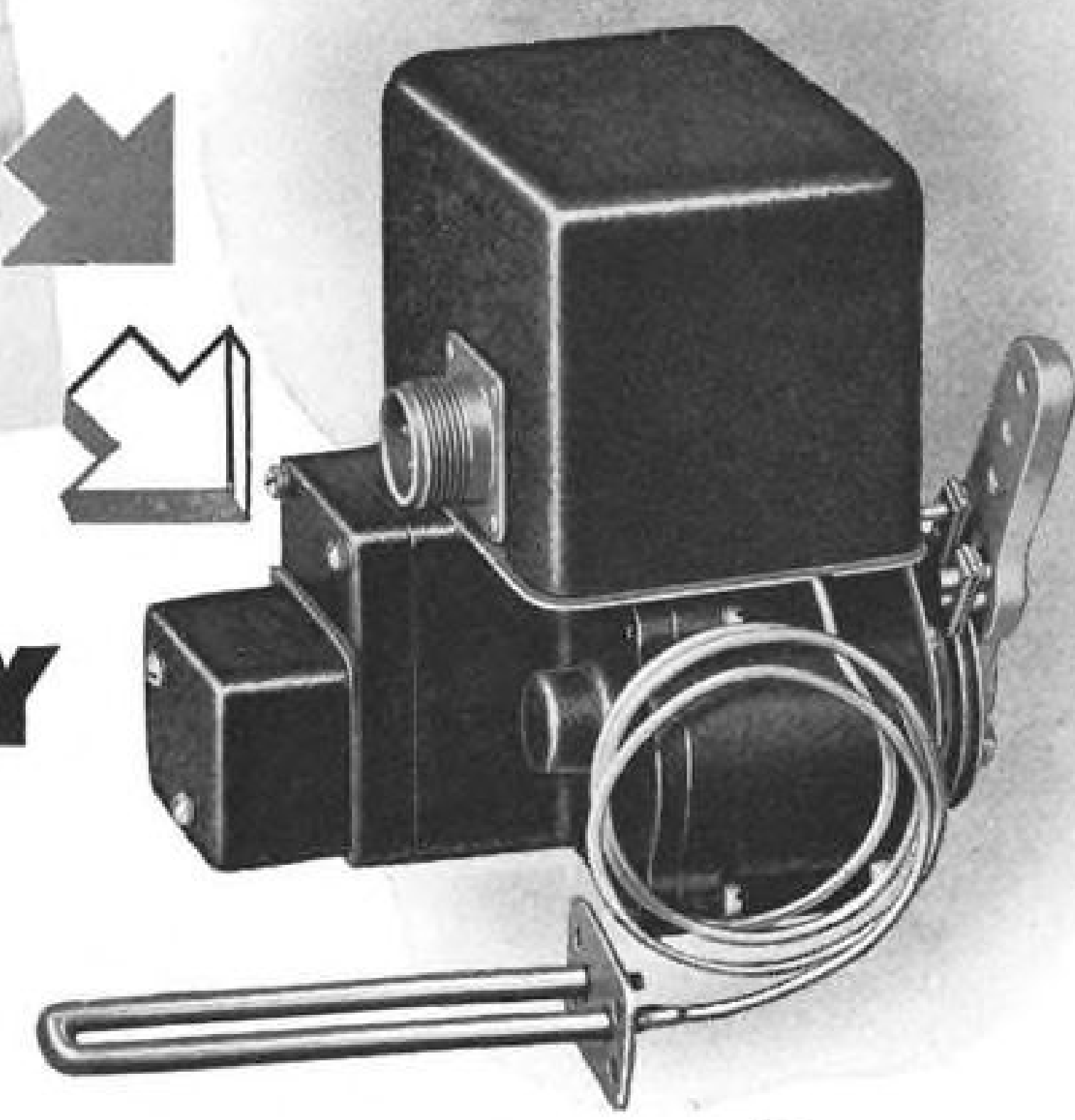
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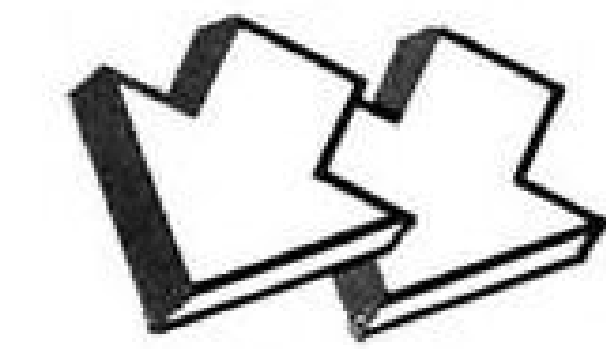
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Aviation News

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NOVEMBER 22, 1943

Postwar Air Problems Threshed Out At Oklahoma City Aviation Clinic

400 representatives of aircraft industry, airlines and private flyers discuss wide range of topics at first national aviation planning conference.

BY ALEXANDER MCSURELY

Signs of the beginning of a new era of maturity in the aviation industry were apparent in many quarters, in the First National Clinic of Domestic Aviation Planning, held under sponsorship of the National Aeronautic Association, at Oklahoma City, Nov. 11, 12, and 13.

Not the least of these was the ability of the industry to set aside resolutely a controversy which seemed impossible of settlement, in regard to the Lea Bill, in order to continue the sessions to formulate policies on other matters of equal importance, on which the 400 representatives of aircraft manufacturers, private flyers, airlines, and other representatives could agree.

► **Resolutions**—Wide scope of the meeting is shown by the variety of resolutions, unanimously adopted, which called for:

Establishment of a Department of National Defense, eliminating separate Navy and War departments in the cabinet, and grouping these with undersecretaries, on an equal footing with the Air Force, in the new department.

Immediate CAB action to set up a pattern for feeder routes to small cities, and prompt hearings on applications for such routes.

► **Air Parcel Post**—Action by Congress and Post Office Department toward adoption of legislation creating system of air parcel post, with earmarking of profits from air postal service for expansion of air postal service, and additional appropriations for expansion.

Continuance and expansion of intensive research on all aspects of aviation by both Government and private enterprise.

Cooperation by state and federal governments in establishing postwar airports in suitable numbers

and locations in the various states.

► **Airport Protection**—Revision of regulations closing coastal airports and placing 24-hour guards on all airports, as soon as revision is consistent with national safety.

Appointment of a standing committee on aviation education to foster extension of aviation education in the nation's schools.

Continuation of government pilot training programs in the postwar, both for a military air reserve, and for civilian pilots.

► **Contract Termination**—Prompt action in termination of war contracts, with uniform procedure to be set up by Congress, and with control of disposition of surplus aviation

equipment at the close of the war, to go to an appropriate government agency.

All possible measures to multiply number of airports for personal use, with simplified regulations governing their use.

Observers noted that a number of the resolutions in effect called for support of certain portions of the Lea Bill, indicating these portions at least were generally acceptable to the entire industry. Controversy over the proposed bill, which seeks to codify existing federal aviation regulation, and revise it, started at the clinic's opening day luncheon, when Col. Edgar S. Gorrell, president of Air Transport Association of America, outspokenly advocated support of the bill, warning that conflicting state regulations would interfere with aviation's progress unless some such federal regulation was set up.

► **Lea Bill Attacked**—The controversy flared later when Thomas Walsh, state aeronautical official from Michigan, attacked the bill as abrogating state's rights. Later a group of aviation officials representing 31



RESOLUTIONS COMMITTEE:

Members of the Resolutions Committee for the National Clinic of Domestic Aviation Planning are shown at one of their sessions in Oklahoma City. Left to right, seated: J. E. Yonge, George Logan, Ralph J. Hall, Kern Dodge, chairman; Frank Fogarty, Percy McDonald, Fowler W. Barker, editor of Air Transport, and Dr. Ben Wood. Standing, NAA President Gill Robb Wilson, Paul Hoheisel, Tom E. Braniff, Merrill C. Meigs, vice-chairman; Terrill C. Drinkwater, and John E. F. Morgan.



LEA BILL PRO AND CON:

Representatives of opposing views on the Lea bill to amend the Civil Aeronautics Act, now pending in Congress, are shown at the National Clinic for Domestic Aviation Planning, Oklahoma City. Left to right: Thomas Walsh, Terrill C. Drinkwater, Gov. Matt Neely and William L. Anderson. Walsh and Anderson, state aeronautical officials from Michigan and Pennsylvania respectively, attacked the bill as interfering with state's rights, while Drinkwater, executive vice-president of Continental Airlines, Denver, and Governor Neely, of West Virginia, were among the bill's strong proponents.

states, according to William Anderson of Pennsylvania, chairman, voted independent resolutions attacking the bill, and urging postponement of any federal legislation until after peace.

Statements at the clinic included: **William A. M. Burden**, special aviation assistant to the Secretary of Commerce: "There are 6,600 communities of 1,000 persons or over in the United States, almost all of which should ultimately have an airport. National plan now calls for approximately 6,000 airports, instead of 4,000, most of the increase being in small fields for private flying.

"Plans indicate need for about 1,900 more small fields. The government must continue to help civilian aviation training until such time as it is absolutely certain a sufficient number of our citizens can and will learn to fly each year at their own expense to insure the United States' remaining the largest and most important air power in the world."

Harlee Branch, CAB member: "There are now on file with the board 233 applications to serve approximately 3,400 towns and cities, with proposed new routes totaling approximately 310,000 miles. Twen-

ty-six applications for helicopter service over 91,000 miles of routes have been filed, and 25 for airmail pickup services over new routes aggregating 54,000 miles. If airlines depend too heavily on governmental subsidy, they may expect sooner or later a demand for government ownership.

"Within a year after the end of the war there will be at least twice as many schedules over heavy traffic routes, and an increase in schedules flown over practically every route. It would seem conservative to estimate that the airlines will, within the first year after the war, be doing at least twice the business they did in 1941."

C. P. Graddick, United Air Lines: "There is no reason why an airline, railroad and trucking company serving the same territory should not be able to be competitive and at the same time work together in assisting communities to raise their standards of living and create more business for all. . . . There is no question but that the public will demand all longhaul first class mail be transported by air soon after the war."

Dr. A. C. Willard, University of Illinois president: "You can't op-

erate a commercial peacetime industry on a wartime philosophy involving great personal risks and in which waste and extravagance are inevitable. It is in this connection that educational levels can serve both the public and the aviation industry in re-emphasizing and restoring our peacetime standards of safety, economy and efficiency in air transportation."

Don Flower, Cessna: "For personal flying we want airports that cannot be expanded in the future to drive out the private flyer. We want a landing strip in the park here in Oklahoma City, one block from wherever you want to go. The personal plane won't be any harder to fly or take any more runway in the postwar than it does now. It will show substantial improvements in both respects."

Gill Robb Wilson, NAA president: "A vast redistribution of civilization and population will follow the war, because aviation has narrowed the world to one neighborhood. We will take out of the old world's capitals millions of youth eager for peace and settle them in new territories. . . . Let's get together and pull together and cut out this damn foolishness."

William B. Stout, aircraft designer: "There are 5,000 roofs in New York right now which could be used for helicopter landings, by only unlocking the doors to the roofs. Helicopters will be used in crowded urban areas but are less practical for wide open spaces."

Col. Edgar S. Gorrell, ATA president: "No program for America's civil aviation would be complete without a ringing declaration of independence of civil aviation from domination by surface carriers. There has been a growing indication which warns of the elaboration of complex sets of state regulations which would in some cases affect a portion of civil aviation and in other cases might affect all branches."

Francis A. Callery, vice-president, Consolidated-Vultee Corp.: "The cost of shrinking a business is as much a cost of war, as the cost of expanding it. . . . Quick postwar settlements of contract termination are necessary to avoid a chaotic condition in the production facilities of our nation."

Dudley Steel, manager Lockheed Air Terminal: "There is need to apply modern merchandising to airports. Suggestions for additional revenues include: hotels, garages to store cars for passengers, gasoline service stations, parking lots charg-

ing small fees except to passengers, cocktail lounge, coffee shop, restaurant, barbershop, drugstore, bowling alley, news reel theater, drive-yourself cars, steam bath, showers, massage rooms, controlling revenues of telephone and telegraph facilities, getting a percentage return on their intake."

C. Edward Leasure, chief, proceedings division, CAB: "Consensus among those qualified indicates that new type airplanes suitable for operation of local service including

combination passenger and pickup equipment, will not be ready until at least one year after Germany's collapse, and that commercial helicopters are at least a year off."

Business sessions were conducted in the House of Representatives chamber in the Oklahoma State Capitol. Diversions for the delegates included trips to the big Douglas C-47 plant, and to the Area Air Service Command at Tinker Field, and a barbecue and Indian dance at the local golf and country club.

\$800,000,000 Airport Program Urged by Burden for Post-War Era

Stresses need of bigger and better fields for accommodation of large transports, increased commercial and private traffic.

Organization of a postwar airport development program to cost approximately \$800,000,000 is recommended by William A. M. Burden, special aviation assistant to the Secretary of Commerce.

Burden pointed out that the expenditure, while it would mean doubling our present airport investment, is only a fraction of the two

and a quarter billion spent annually by federal, state and local governments on highways, streets and roads.

Post-War Requirements — While conceding that postwar airport requirements cannot be foreseen in detail, Burden says they fall generally into four categories:

1. Development of large airports

for transcontinental and transoceanic operations.

2. Development of existing designated air carrier airports.

3. Development of facilities for local or feeder scheduled service.

4. Development of facilities for the private flyer.

Burden expressed his views at the recent National Clinic of Domestic Aviation Planning at Oklahoma City.

Our present system of airports is an extensive one and generally was adequate for pre-war commercial aviation. The United States is served by some 2,600 civil airports, of which 750 are suitable for transport airlines. In addition, several hundred military airports have been built during the war, of which probably somewhat less than half of them will be permanently useful for civil purposes.

Survey Made in 1939—The airport survey made by the Civil Aeronautics Administration in 1939 recommended a national airport development plan embracing some 4,000 airports. It appeared then that a network of that size would be sufficient to serve the future needs of aviation for some years.

Burden said we are now in process of revising our national plan and estimates of four years ago were



CLOSEUP OF A BABY CARRIER:

This new photograph of the USS Card shows more detail than any pictures previously released by the Navy of our baby flat-tops. The Card, with its planes and three accompanying destroyers, knocked out more Nazi subs than any other combination in Naval his-

tory. It was converted from a Maritime Commission hull by Seattle Tacoma Shipbuilding Co., and commissioned on Nov. 8, 1942, the day of the North African invasion. Note smudges at top of mast where censor deleted details.



AIRCRAFT STANDARDS GROUP:

Officials of National Aircraft Standards Committee for 1943-44 photographed at their recent meeting at Hotel Lexington in New York. Seated, left to right: Charles Sardou, Jr., Consolidated Vultee Aircraft, West Coast chairman; Jack F. Cox, Vega Aircraft, national chairman; George W. Baughman, Cessna Aircraft, East Coast chairman; standing, left to right: Glen M. Aron, Northrop Aircraft, vice-chairman, West Coast; Eugene W. Norris, secretary of national office, Washington, D. C.; Jerome Gropper, Brewster, vice-chairman, East Coast. Not present in the picture are board members R. W. Miller, executive engineer, Republic Aviation; and E. W. Wells, chief engineer, Boeing.

too conservative. He said the number would have to be increased to approximately 6,000, most of the increase being in small fields for private flying.

► **Local Participation**—"One thing is certain," Burden said, "and that is that if the program is to be developed on a sound basis, there must be a far higher proportion of local financial participation than there has been in the past."

He pointed out that equally essential to safe air navigation either by airlines or private flyers is the federal airways system.

► **Modernization**—"The postwar requirements of expanding commercial aviation will demand extensive modernization of the present airways system and the building of thousands of miles of new airways to serve the extensions of trunk air routes and whatever feeder route expansion the CAB sees fit to certify and Congress to finance."

Burden estimates the cost of the airways modernization and expansion program would be extremely small in relation to other aeronautical expenditures.

► **Investment**—"Total present investment in airways facilities," he

said, "is only \$50,000,000—less than the cost of one of our very large international airports—and new airways of the most modern type can be built for only \$2,000 per mile."

Burden discussed the Civilian Pilot Training program and said that when the pattern of federally assisted postwar flight training is finally set "we will find that a larger proportion of it will be conducted by high schools than is now the case, with the colleges remaining the backbone of the system."

► **Civilian Training**—"In my opinion," he added, "the postwar civilian training program should be following these principles:

1. It should be carried out by private flight contractors working with our educational institutions.

2. It should be highly selective on a scholarship basis, with only the boys and girls who stand at the top of their classes in ground school work eligible for federally-assisted flight training.

3. Some financial contribution should be made by the students themselves when they are capable of doing so.

4. The standards of flight and ground training should be high.

5. The students receiving flight training at federal expense might, if Congress desires, either be enlisted in an aerial R.O.T.C. or pledged for a limited number of years to military service in the event of war."

Burden said he did not visualize that federally assisted training need be a permanent part of American aeronautical policy, but such a program would accelerate the development of the private flying industry to the point where it can stand on its own feet economically.

NASC Adopts New Standards on Planes

Action taken at three-day meeting expected to simplify design.

Adoption of new standards and specifications which will simplify design, assembly and maintenance of United States government airplanes all over the world, were announced by the National Aircraft Standards Committee of the prime airframe manufacturers at the conclusion of its three-day sixth annual meeting in New York.

The meeting was attended by more than 40 representatives of the 32 contractors for design and production of government airplanes as well as members of the Army-Navy Aeronautical Board, the Bureau of Aeronautics of the Navy, Wright Field staff, Army, War Production Board, American Standards Association, British Air Commission, Royal Canadian Air Force and the Australian Office of War Supplies.

► **Progress Report**—Retiring national chairman Eric Dudley, materials and standards engineer for Curtiss-Wright, Buffalo, announced that the meeting approved the progress report of his subcommittee for reduction of varieties of sizes, thicknesses and tolerances for carbon, alloy and stainless steels in sheet, plate and bar form to approximately one-seventh of their former number. This project is now nearly complete.

Dudley disclosed that his committee, now in its third year, has produced from 50 to 75 new standards and specifications per year, which have been officially adopted, and all of which will greatly simplify the raw materials problems of airplane designers, manufacturers and purchasers.

► **Responsibility**—He said, further, that the Army-Navy Aeronautical Board is giving the National Aeronautics Standards committee in-

creasing responsibility in preparation of data for Army-Navy standards, which are the highest in the aviation world.

Listed among the accomplishments of the National committee during the past year was the reduc-

tion of 2,700 varieties of dural tubing materials and sizes to 325, a corresponding reduction in steel tubing and cutting of the approximately 100 varieties of rivet types and materials used in airplane construction to fewer than ten.

WAL Purchase of Inland Expected To Pave Way for Other Airline Deals

Results of CAB hearing on consolidation watched with interest by other companies reported contemplating similar moves.

BY SCHOLER BANGS

If Western Air Lines' purchase of Inland Air Lines sets the pace, future deals for absorption of small domestic routes by major operators may be expected to pop like firecrackers.

Learning that Inland was "in the mood," WAL officials wasted no time in opening purchase negotiations Oct. 5. Two days later, in Casper, Wyo., sales agreement was signed for the purchase price of \$363,688.

► **Other Deals Expected**—Outcome of the CAB hearing on the deal Nov. 18 on which CAB is expected to rule within 60 or 90 days undoubtedly will bring to light similar proposals involving other air lines.

The view that CAB takes after studying the Western-Inland price with respect to valuation of tangible assets involved will be watched with interest by air transport concerns "in the mood."

► **Details**—A year ago, WAL and Inland had reached the serious stage in negotiations that fell through because Western refused to be rushed. Inland is understood to have negotiated with Continental, Northwest and Braniff prior to the western purchase.

Similarly, Continental and Mid-Continent Air Lines have been reported interested in the possibilities of a merger.

► **CAB Stand Awaited**—Whether Mid-Continent and Northwest might re-open negotiations that were reported to have collapsed earlier this year may be determined by CAB action on the western deal.

Because of its strategic position with routes radiating from Denver, on the Central Transcontinental Airway, to El Paso, to Wichita and Tulsa, and to Kansas City, Continental Air Lines should have little

difficulty in obtaining purchase offers.

► **Focus on Washington**—The combination of merger fever and new route venturing probably will focus on Washington and CAB the attention of small air lines that never before have felt the need of full-time representation in the capital.

WAL, for example, now vitally concerned with what is going to happen to its Inland purchase as well as applications for new routes extending from Nome, Alaska, to Buenos Aires, opened Washington



WASP WINGS:

Here is the official uniform and insignia for the WASP (Women's Airforce Service Pilots) civilian women pilots assigned to the Army Air Forces. They are now ferrying 17 types of aircraft in the United States and Canada. Including pilots in training, the WASP by Jan. 1 will number approximately 1,000 women, with an additional 1,000 waiting acceptance of their applications. The model is Deena Clark, Washington, D. C.

offices last week with Ronald C. Kinsey in command as assistant to William A. Coulter, Western Air Lines president.

Kinsey formerly was an executive of Airlines War Training Institute in Washington and previously was secretary-treasurer and director of Gorst Air Transport in Seattle.

Gorst Air Transport was owned at the time by Vern C. Gorst, founder of Pacific Air Transport, which pioneered the Los Angeles-Seattle Airway in 1927.

BRIEFING

► An observer at an advance New Guinea base watched airborne American engineers unload 5,000 pounds from each of their C-47 troop carrier planes in seven minutes and build a mile-long airstrip in 46 hours. He commented: "The C-47, the jeep and the bulldozer—three things the Japs don't have—are winning the war in the Pacific."

► The aircraft carrier *USS Card*, her air squadrons and her escort vessels, after destroying more submarines than any team in Naval history, recently returned to an East Coast port to receive a Presidential unit citation. The unit citation was presented by Admiral Royal E. Ingersoll, U.S.N. Commander-in-Chief of the Atlantic Fleet in behalf of the President. The *Card*, a baby flat top, is commanded by Capt. Arnold J. Isbell, U.S.N.

► A survey recently taken by the Psychological Corp. and released by the National Electrical Manufacturers Association listed the aviation industry second in retaining employment after the war—behind the automobile industry—and placed the aviation industry as the one "which will do the most for the American people in the future."

► Grumman Aircraft Corp. has received its fourth "E" award for "continued excellence in production" of *Avenge* and *Hellcat* planes.

► The Frigidaire Division of General Motors at Dayton, one of Hamilton Standard's licensees, recently completed its first 24F60 propeller with 6497-6 blades, starting production on the largest Hamilton Standard propeller, the first of this size to be manufactured in quantity. The propeller measures 16 ft., 7 in. tip to tip.

► Carl T. Doman, vice-president and chief engineer of Aircooled Motors Corp., has been named first vice-president of the company. C. F. B. Roth was appointed vice-president in charge of sales and Charles F. Carr was appointed secretary-treasurer; Joseph Babcock, production manager, and Walter W. Burrows, administrative engineer. The company manufactures Franklin aircraft engines.

Wilson's Move To Quit WPB Post Opposed by Air Industry Leaders

Nelson's right-hand man credited with breaking materials bottleneck and clearing way for all-out production of warplanes.

Resignation of Charles E. Wilson as executive vice-chairman of the War Production Board will not be accepted by President Roosevelt if some leaders of the aircraft manufacturing industry have their way in the matter—they want Wilson to stay.

More than any single man, Wilson is credited with putting the lagging aircraft production program on a definite up-grade a year ago to its present record-breaking monthly total of nearly 9,000.

► **Cracked Bottleneck**—Wilson left his post as president of General Electric Co. a year ago and came to Washington and almost immediately cracked the bottleneck of materials flow to end what was rapidly becoming a production crisis in the aircraft industry. Critical materials are no longer a problem and Wilson, feeling that that phase of the job is done, is anxious to return to private industry.

Wilson's resignation has been at the White House for some time but he says no determination has been made of it. He says too, that even though it were accepted he could not leave Washington immediately. Officials at WPB say Wilson is hopeful he can get away by the first of the year.

► **Still Has Job To Do**—"There may be a considerable job sketched out for me to complete," Wilson commented in regard to his leaving, but he declined to amplify the remark.

It was considered likely that Wilson will remain on the job for the time being, anyway. It is known that many leaders in the aircraft industry are most determined that Wilson stay on the job and they are prepared to make representations in the proper places to keep him in WPB as long as possible. They will remember the tangled situation in the War Production Board when Wilson arrived in Washington a year ago last September and they do not want a recurrence of that situation.

► **Speculation** — WPB is now a smoothly operating organization and WPB Chairman Donald Nelson and Wilson have made a good team. It is vital to aircraft and other war production that WPB remain a smoothly operating organization and industry leaders are fearful of what might happen if Wilson leaves.

What would happen to Wilson's WPB post if he does leave is a matter of considerable speculation in Washington and throughout the industry. There are some who believe Nelson might take over Wilson's duties in addition to his own and that the position of executive vice-chairman created with Wilson's advent, might be abolished. Some aircraft executives have expressed the view that there is need for such a position in the WPB set-up.

Air Industry Bearish On Lightplane Field

Sees little promise in meeting vast post-war employment needs, report says.

Contrary to the opinion of many aviation men that the light plane field offers best possibilities in the immediate postwar period, an unpublished Government survey discloses the viewpoint that "of all the major markets to which the aircraft producers can turn in the postwar period, the field of private flying holds forth the least promise."

The report, prepared by the industrial section of the now-discontinued National Resources Planning Board, concedes that it is undeniably true that, like other phases of aviation, this field will receive tremendous stimulus from the war.

► **Potential Users**—The report points out that the vast pilot training programs, both military and civilian, will make available hundreds of thousands of expert flyers, each of whom will be a potential user, if not an actual owner, of a light plane after the war.

"The wartime expansion of productive facilities, the introduction of new methods and materials into small plane manufacture, the expansion of aviation gasoline refineries, of maintenance and repair facilities, and of airports and roadside landing strips, will in some measure reduce the cost of buying, owning and operating a light plane and add to its utility," the report says.

► **Obstacles**—Granting these things and conceding that factors such as these assure the future growth of

private aviation, the report contends that there will remain many important obstacles to limit the extent of this growth in the immediate post-war period.

The report lists cost as most important, citing the initial cost of the light private plane before the war at between \$1,500 and \$2,000 and adds that even if the price is brought down to \$1,000, operating and overhead expenses "probably will remain high."

► **Overhead High**—Civil Aeronautics Board estimates place direct flying cost at approximately \$1.80 per hour and fixed, overhead costs at an average of \$840 per year.

Crowley Lists Planes Sent Reds at 6,500

The United States has made available more than 6,500 airplanes to the Soviet Union up to Sept. 30, it was disclosed by Leo T. Crowley, foreign economic administrator, in a report on shipments to Russia.

He said shipments through last Sept. 30 totaled \$3,287,047,000. Of this amount, \$1,853,656,000 were military items, \$884,369,000 industrial materials and \$549,022,000 foodstuffs and agricultural products. ► **Pace Increases**—The stepped-up flow of aid is indicated by the fact that more than half the total lend-lease aid to Russia was sent during the first nine months of 1943. The remainder was provided in the preceding 15 months.

Industrial items shipped have included more than 1,000,000 tons of steel and steel products, more than 300,000 tons of non-ferrous metal, 300,000 tons of chemicals and explosives, 500,000 tons of petroleum products and more than 17,000 metal cutting machine tools, all of which have helped the Soviet Union to expand munition production.

12 Lines Seek Routes To Latin America

Applications reveal firms' plans for post-war expansion.

Applications for air service filed with the Civil Aeronautics Board last week continued to concentrate on the Caribbean, Central and South American regions. Twelve applications and one amendment were filed, though primary interest of one applicant was beyond this area and another sought merely to make

permanent its temporary certificate for service between El Paso and Mexico City. The latter was American Airlines, which began operations over FAM 26 last September.

American Export Airlines' interest in the Caribbean and South American area exists only insofar as certain points lie on the route it has chosen from New York to Cape Town, South Africa.

► **Post-War Plans**—In its application, American export revealed its postwar plans. It consists of two basic trunk lines: between the co-terminals New York, Boston, Chicago and Washington, D. C. to Cape Town; and over the North Atlantic route to Bombay, India.

Paralleling the company's present route between New York and Foynes, the North Atlantic trunkline will go through Paris, Rome, Athens, Cairo, and Basra to Bombay. At Athens, the route splits to serve Istanbul, Bucharest and Sevastopol, USSR.

► **Southern Route**—The southern trunkline, following the shortest air route to South Africa, will originate at the same co-terminals in the United States and go via Puerto Rico, Port of Spain, Belem, Natal, Ascension Island and Windhoek to Cape Town. Branching off from Natal, another route would proceed to Dakar, Casablanca, Algiers and join the northern route at Rome.

In filing its application for extensive amendments to its present routes in the Caribbean, South and Central America, Pan American Airways principally asked for short cuts or additional points on the gulf coast. Pan American plans to use both four-engine and two-engine craft in different parts of its routes and said its service could be rendered at substantially lower tariffs for passengers and express and without mail subsidy.

► **Panagra Amends Application** — With the four Pan American directors of Pan American-Grace Airways present but not voting, on the vote of directors representing the W. R. Grace and Co., application was filed for various amendments to Panagra's existing certificates mostly on the west coast of South America. These included routes within Peru; from Balboa to Buenos Aires; from Cali, Colombia, to Buenos Aires; between Buenos Aires and Montevideo; and from Mendoza to Tucuman, Argentina.

Grace Line and Moore McCormack lines filed for air service mostly paralleling their steamship routes. Both plan to coordinate air and sea operations.

International Airways Atlantic, Gulf and West Indies Steamship Co. subsidiary

filed an amendment extending routes outlined in its previous application. Some of these would go from New York to the terminals, Balboa, Mexico City, and San Juan. Other routes would extend from these terminals to Port of Spain via various intermediate stops, or connect the terminals.

► **Pennsylvania-Central Airlines**, which already has requested eight routes to Miami from various points in the United States, and extension of Route 55 to New Orleans, applied for points in the Caribbean and Central and South America through these gateways. Routes would go to Port of Spain from both U. S. terminals, from New Orleans to Belize and from Miami to Barranquilla, via intermediate points, an 8,000-mile network.

An extension of its Route 24 from New Orleans to Havana was sought by Delta Air Corp.

Only applicant for a route from the Pacific Coast extending into Central and South America was Western Air Lines. They propose to serve a route extending from Los Angeles to Buenos Aires and Rio de Janeiro via several intermediate points, and an alternate route between Rio and Buenos Aires.

National Airlines filed application for air service between Tampa, Miami and Mexico City via Havana and Merida. Company also asked for several routes from the U. S. terminals Miami, Tampa and New Orleans to the South American terminals Rio de Janeiro, Buenos Aires, Montevideo and Santiago via various intermediate points in Mexico, Central and South America.

National seeks to have its Route 39 extended from New Orleans to El Paso via New Iberia, La., Port Arthur, Galveston, Houston, San Antonio, Uvalde and Del Rio, Texas. Extension was also sought

of Route 31 from the intermediate point Tampa to the co-terminals Dallas-Fort Worth, via Pensacola, Mobile and New Orleans; and from Jacksonville via various alternate paths to Kansas City.

United Air Lines asked to be allowed to stop at Klamath Falls, Ore., on Route 11 between Medford, Ore., and Red Bluff, Calif.

Braniff Airways asked CAB permission to consolidate Routes 9 and 50 into one route.

Other applicants in the past week included a department store in Richmond, Va., Thalheimer Bros., which wants to provide its customers with helicopter service on twelve routes stemming out of Richmond.

A feeder line to connect with Western Air Lines at Pocatello, Idaho, and with United at Boise and Pendleton, Ore., was applied for by Interstate Airlines, Twin Falls, Idaho. The line would cover an overall distance of about 444 miles between Pocatello and Pendleton and serve various intermediate points.

Landon Lawson Clevenger of Centralia, Ore., applied for further helicopter service covering about 307 miles on the west coast of Oregon from Astoria to Crescent City, Calif.

William Edward Hann of Detroit filed application to transport persons, property and mail in scheduled and unscheduled operations on 21 routes within Arizona. He proposes feeder and pickup service to towns from 18 to 124 miles apart.

Kansas Aviation Co., Manhattan, Kan., applied for feeder and pickup service from Omaha to Wichita, via six intermediate towns. Partners in this company are William and E. H. Ong, who are connected with operations of Ong Aircraft Corp. and WTS schools.



WESTERN EYES SOUTH AMERICA:

Western Air Lines, shortly after it asked CAB approval to expand through purchase of Inland Air Lines, has requested nearly 9,000 miles of routes in Mexico, Central and South America. The proposed inter-American route was discussed at a recent conference by Harry Alonzo Dae-English, Paraguayan consul; William A. Coulter, president of Western Air Lines; G. Lopez Fabrega, consul of Panama; and Dr. Emilio Lasceno Tegui, consul of Argentina.

Ford To Build Big Cargo Planes At Willow Run Plant After War

Auto manufacturer says he will continue in aviation field; reveals plans for high-speed, safe and economically operated craft of "unique design".

The much-debated question of whether aircraft companies will manufacture automobiles after the war and whether automobile manufacturers will go into aircraft production has been answered, so far as Henry Ford is concerned, with his announcement that he plans to make airplanes.

His present plans call for large, multiple-engine cargo passenger planes of "unique design," to be manufactured at the Willow Run plant which is now turning out B-24 Liberator bombers.

► **Experiments**—Ford goes so far as to foresee production of his new type of plane as possibly revolutionizing long distance transportation as his Model-T affected short distance transportation.

"We have been planning for a long time to build a cargo plane at Willow Run," Ford disclosed, "and our ideas are becoming more settled all the time. Although we have not been able to give any great amount of time and effort to the project because of all-out war production, we have been experimenting with small models and engines."

► **Safety and Economy**—He disclosed further that there will be some new ideas in the Ford design, but added that he could not say much about it yet. He did say, however, that "we are trying to design a plane which will not need such tremendously long runways for takeoff, a plane which can be operated at a fraction of the cost now necessary for flying big planes, and a plane which will be as positively safe as it is possible to make it."

Ford and his consultants have been obtaining data from engineers and others around the Ford plant for some months and it was understood that Charels A. Lindbergh, for some time attached to the Ford staff, has been a constant consultant with Ford on the type of plane and engine which would best suit Ford requirements and ideas for postwar manufacture.

► **High Altitude Tests**—Lindbergh is said to have been experimenting with high altitude engines with the indication that some of his experi-

ments will influence the design of the new plane.

Ford has first option from the government on Willow Run for postwar use and the company plans to take up the option. Ford explained the "first reason for this is to create jobs for the people who will need them."

WPB Halts Aluminum Plant Construction

Other federal actions of the week include Army and DPC contracts.

Two major construction jobs were halted last week by the War Production Board. Since the aluminum extrusion program has been brought into balance, WPB ordered that construction on plants being built by Reynolds Metals Co., at Memphis, Tenn., and by American Brass Co., at Waterbury, Conn., cease within ten days of the order. Actually little construction has been done at the two plants, although ground had been broken. The former was to have cost \$20,000,000 and the latter \$17,000,000.

► **AAF Contracts**—Various contracts for AAF installations and for additional work at airfields were awarded by the War Department. An AAF installation in Dallas County, Texas, to cost in excess of \$1,000,000 and one in Highlands County, Florida, to cost \$1,000,000, were authorized.

Concurrently, construction contracts amounting to \$800,000 were announced by the chief of engineers, War Department. At Bexar Co., Texas, construction of apron and taxiways, electrical work and removal of tie down rings will cost about \$500,000; additional taxiways and apron in Grayson Co., Texas, will amount to \$30,000. Removal of flight hazards at a field in Caddo Co., Louisiana, will cost \$10,000. In Carter Co., Oklahoma, additional hangars were authorized, costing \$200,000; sealing runways at a field in Hardin Co., Kentucky, will come to \$20,000, and a \$40,000 contract was awarded for repair, construc-

tion and completion of hangar and strengthening trusses at Shelby Co., Tennessee.

► **Chemical Allocated**—The expanding aviation program moved WPB to place under allocation metallic sodium, an essential chemical in high-octane gasoline manufacture, used also in making plexiglass airplane noses. Orders for more than 100 pounds a month must be filed with the Chemicals division, WPB, for authorization on or before the 10th of the month preceding the month in which delivery is requested. Manufacturers of less essential items will be able to obtain substitute chemicals, WPB said.

► **Full Work Schedules**—With the single exception of the Christmas week-end, full work schedules should be observed in all war plants, Donald M. Nelson, WPB chairman, announced. Where continuous operations are essential, such as blast furnaces and open hearth furnaces producing carbon steel, it was requested that work be carried on over the Christmas week-end.

► **DPC Contracts**—\$3,450,000 went to Vega Aircraft Corp. from Defense Plant Corp. to provide plant facilities in California. A contract executed with Chrysler Corp. to provide equipment for a plant in Ohio will cost about \$80,000. DPC increased a former contract with Chrysler by \$40,000, to provide additional equipment at a plant in Michigan, bringing the over-all commitment to about \$815,000. An increase in contracts with General Motors Corp. and Amco Magnesium Co. was also announced. For additional equipment at plants in Ohio, GM gets approximately \$1,660,000 Amco's increase of \$35,000 for more equipment at a New York state plant brought its overall commitment to about \$7,150,000.

► **NLRB Action**—Trial Examiner Max G. Baron of the National Labor Relations Board recommended that Liberty Aircraft Products Corp., Farmingdale, N. Y., cease and desist from discouraging membership in UAW-CIO or from interfering in any other way with employees' self-organizational rights. NLRB directed that elections for militarized plant protection employees, firemen and guides at Fairchild Engine & Airplane Corp., Aircraft division, Hagerstown, Md., be held within 30 days of Nov. 4. The vote will be for or against representation by UAW-CIO.

Dismissed was the petition filed by Associated Engineers and Technicians (Indep.). The Board found

that a unit composed of engineers in the design department of Lockheed Aircraft Corp., Burbank, Calif., was inappropriate for purposes of collective bargaining. NLRB also dismissed a petition filed by International Assn. of Machinists, AFL, finding that operations of Brayton Flying Service, St. Louis, at Lambert Field do not affect interstate commerce within the meaning of the Act. United Office and Professional Workers, CIO, was certified for employees in the Template Unit, Curtiss-Wright Corp., Airplane division, Buffalo plants.

► **Army-Navy E**—Army-Navy production awards went to the Kollsman Instrument division, Square D Corp., Elmhurst, N. Y., and for the second time, to Pesco Products Co., Cleveland.

Wright Honor Guest At Anniversary Fete

Flight pioneer to attend dinner of notables in capital Dec. 17.

Only because the invitation comes from President Roosevelt, Orville Wright has consented to step into the limelight which he dislikes and appear as guest of honor at a dinner in Washington marking the 40th anniversary of the historic flight at Kitty Hawk, N. C., Dec. 17.

Invitations to the dinner, which will be limited to 800, are now being issued by the Committee on Arrangements, of which Robert H. Hinckley, former Civil Aeronautics Administrator, now with Sperry, is chairman.

► **Peace**—Theme of the occasion will be "Aviation in Peace," not only because Orville Wright and his brother Wilbur saw the airplane as a means of communication in a peaceful world, but also to consider the part aviation is expected to play in peace and maintenance of the peace it is helping to win.

Chairman of the Anniversary Committee is Jesse Jones, Secretary of Commerce. Other members are: L. Welch Pogue, chairman, Civil Aeronautics Board; Robert A. Lovett, Assistant Secretary of War for Air; Artemus L. Gates, Assistant Secretary of the Navy for Air; Dr. Jerome Hunsaker, chairman, National Advisory Committee for Aeronautics; W. A. M. Burden, Special Aviation Assistant to the Secretary of Commerce; Gill Robb Wilson, National Aeronautics Association; Lester Gardner, Institute of Aeronautical Science; Edgar S. Gorrell, Air Transport Association;

James P. Murray, Boeing Aircraft Co., Aeronautical Chamber of Commerce and Tom Morgan, Sperry Corp.

Davison's Successor Veteran Naval Flyer

Richardson, new assistant chief of aeronautics bureau, entered aviation 21 years ago.

Rear Admiral Lawrence Baxter Richardson, new assistant chief of the Navy's Bureau of Aeronautics, and Naval aviation veteran of 21 years' service, has been named to replace Rear Admiral Ralph E. Davison, pioneer Navy aviator, who is going on sea duty.

► **Started in 1922**—Admiral Richardson, whose promotion has just been confirmed by the Senate, joined the Office of General Inspector of Aircraft, Garden City, L. I., in 1922. He completed his training as a Naval aviator in 1925 at Pensacola, Fla. Since then Admiral Richardson has held a succession of aircraft posts including: Inspector of Naval Aircraft at Glenn L. Martin Co.; planning officer in the assembly and repair department; and was stationed in the Procurement and Maintenance Section of the Bureau, the Airplane Design Section, on the staff of the Commander of Aircraft Battle Force; as aeronautical engineer for the construction corps of the line; head of the Procurement Divi-

sion of the Bureau of Aeronautics. He also served at the Naval Aircraft Factory in Philadelphia.

He returns to the Bureau from the West Coast where he was materiel officer with the Fleet Air.

Admiral Davison took up flying in 1919 and received his wings at the Naval Air Station in Pensacola, Fla. He did experimental work with torpedo planes and took training at Kelly Field in land planes. Admiral Davison has served aboard many of the U. S. Navy's aircraft carriers. He has been in Bureau of Aeronautics since 1941.

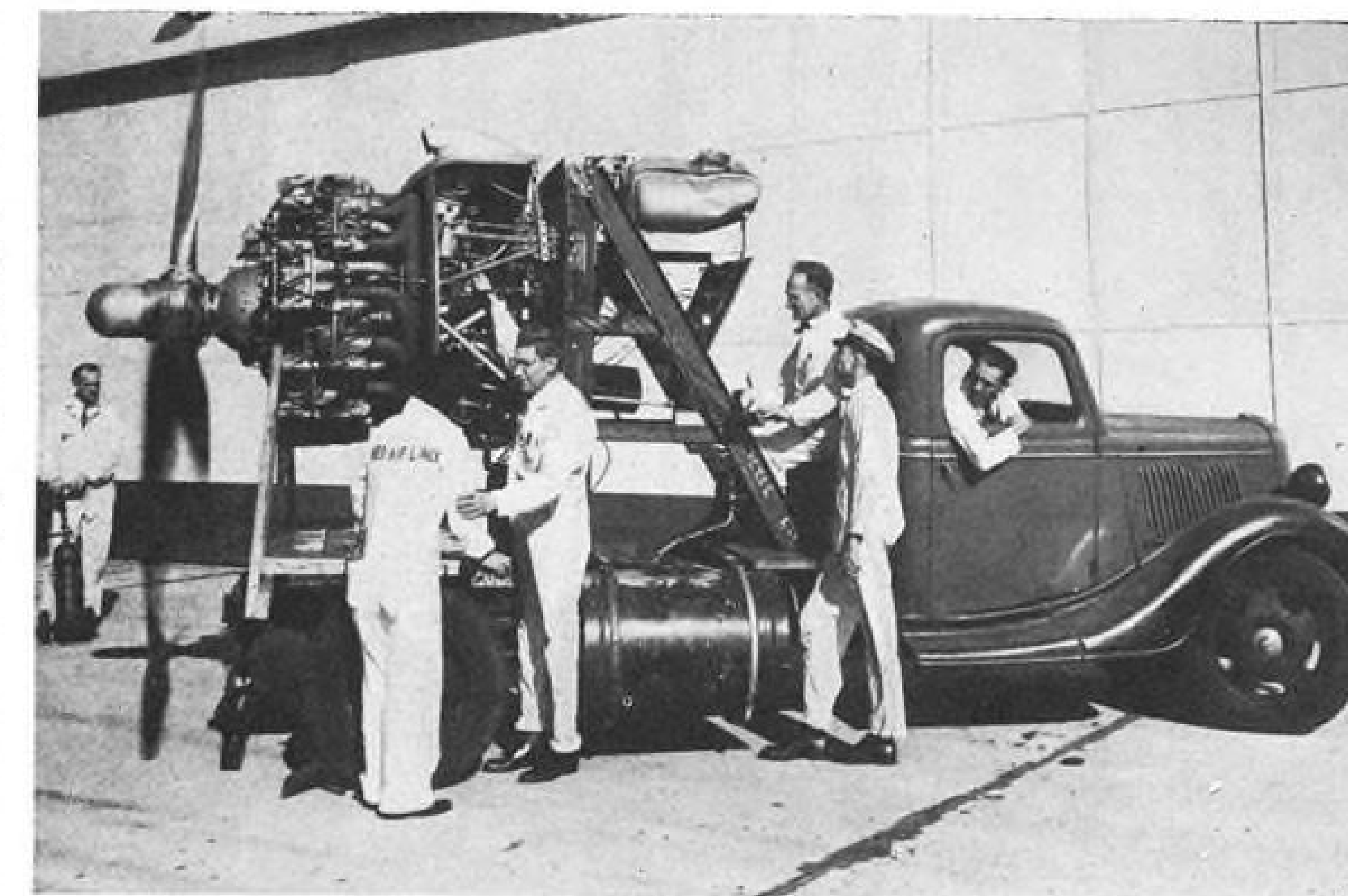
Woodward Cites Gain In Brewster Output

Points to marked increase in firm's percentage of "Corsair" quota.

Rear Admiral Clark H. Woodward, chief of the industrial incentive division of the Navy, lauded recent plane production of Brewster Aeronautical Corp. at a ceremony unveiling a plaque to honor 4,851 former employees in the Service.

The admiral said the company filled 61 percent of its Corsair fighter quota in October, explaining that the figure had been only 33 percent to Oct. 21, but that it had been almost doubled in the remaining ten days of the month.

► **Kaiser Reports Gain**—Henry J. Kaiser, head of Brewster, has reported output on the upgrade for the first part of November.



UNITED PUTS BUGS IN THIS ENGINE:

This is how United Air Lines provides a portable engine for men in training at the new Chicago school for mechanics' helpers. The school supervisor puts the "bugs" in the engine and it's up to the students to get them out. The Pratt & Whitney C series engine develops 1,200 hp. at 2,450 rpm. and drives a Hamilton Standard-23 hydromatic propeller.

THE AIR WAR

COMMENTARY

Three-Way Air Assault Stepped Up In Move To Knock Nazis Out of War

Allied strategy indicates increasing large-scale bombing attacks from south and east, as well as from Britain, in gigantic softening-up operation.

Outstanding result of the Moscow conference from a military standpoint is the quickened pace of the war in the west resulting from a genuine coalition of the great powers of the United States, Great Britain and Russia in a concentrated effort to knock out Germany within a matter of months.

Russia's great land drive in the Ukraine continues to deal the Wehrmacht staggering blows; *Lancasters* and *Halifaxes* of RAF's Bomber

Command and *Fortresses* and *Liberators* of the 8th Air Force, in greater numbers than ever before, wield devastating attacks by night and day from the west; and the newly formed 15th has opened up a series of smashing assaults from the south. All this, however, was in the cards before Moscow. What new decisions were arrived at, what new plans made which would hasten the defeat of the common enemy?

► **New Bomber Springboard**—The

fact that the Red Air Force has been used for the most part in tactical support of the Red Army has tended to obscure its great part in the mounting victory. In preparation for the summer offensive, from late March to the end of June, Russia's air force employed its long range heavy bombers against strategic targets in East Prussia, the Baltic states and the Nazi communication and supply lines with great effectiveness and a low percentage of losses. Improved models of these bombers are ready to pick up the ball during the coming months.

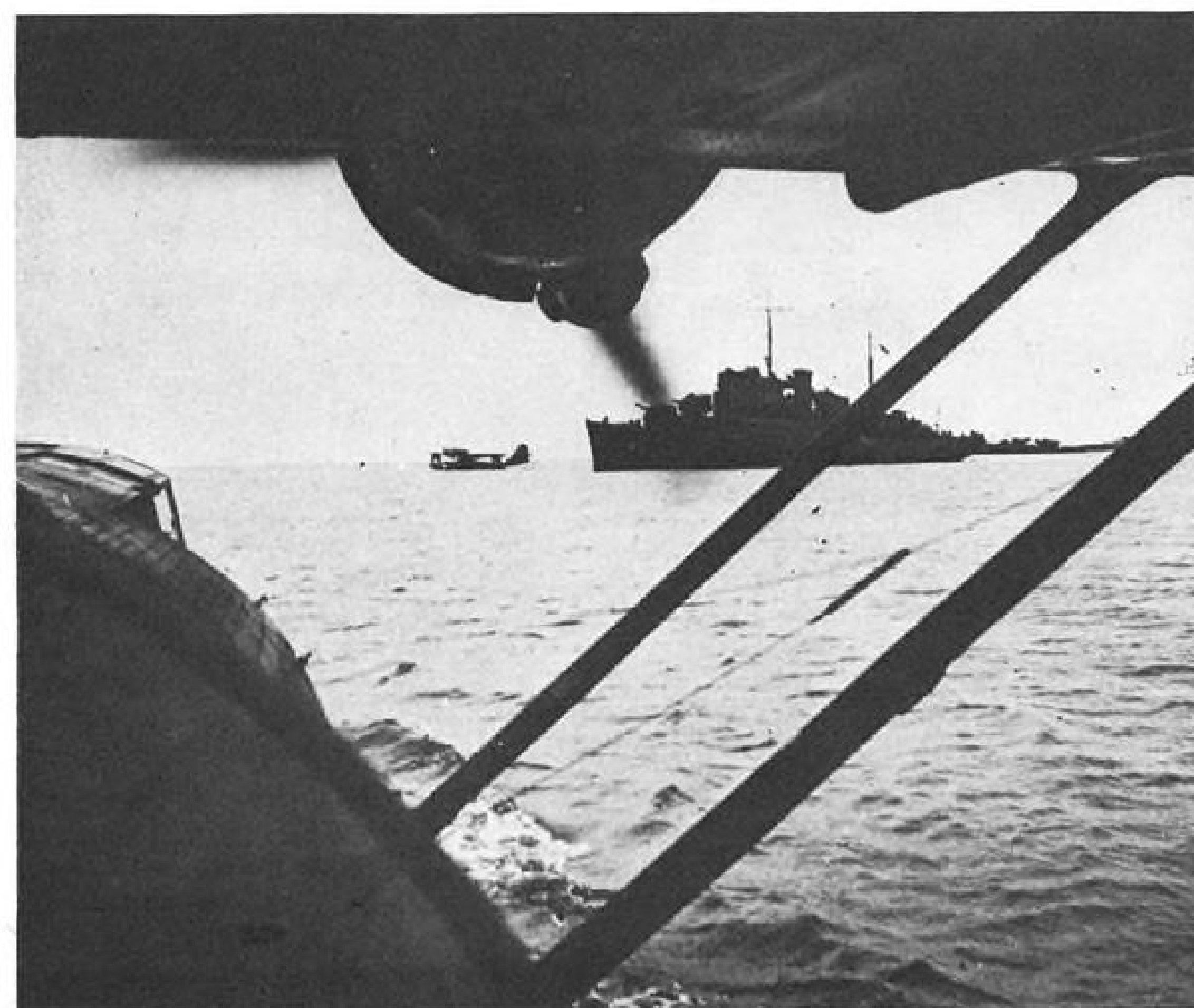
In September, 1942, the Red Independent Bomber Force was completely reorganized, and last spring's efforts may prove to have been a mere workout. This outfit has the same strategic objectives as the RAF Bomber Command, the U. S. 8th Air Force Bomber Command in Britain, and the 15th Air Force, soon to be moved up from bases in Tunisia to southern Italy (especially Foggia), and possibly Sardinia and Corsica. These "strategic" air forces are out to destroy the Nazi war machine from within.

► **Russian Bases for Allies**—By Russian bases we don't mean Siberia. In addition to the renewed activity of the Red Bomber Force, another "shorten the war" move would be the granting of air bases well behind the present battle line in Russia for the use of American and British long range heavy bombers, a type which the Red Air Force has not built in substantial numbers owing to its pressing need of such tactical types as fighters, assault planes and dive bombers. This would provide an East-West shuttle bombing service of tremendous value.

All evidence points to the fact that the battle of the Ruhr is fairly well over, except for a few remaining important targets and occasional air attacks on points where renewed activity is indicated. However, far to the east—in Silesia, Poland and Czechoslovakia, 600 to 800 air miles from Britain—much vital heavy industry has been concentrated.

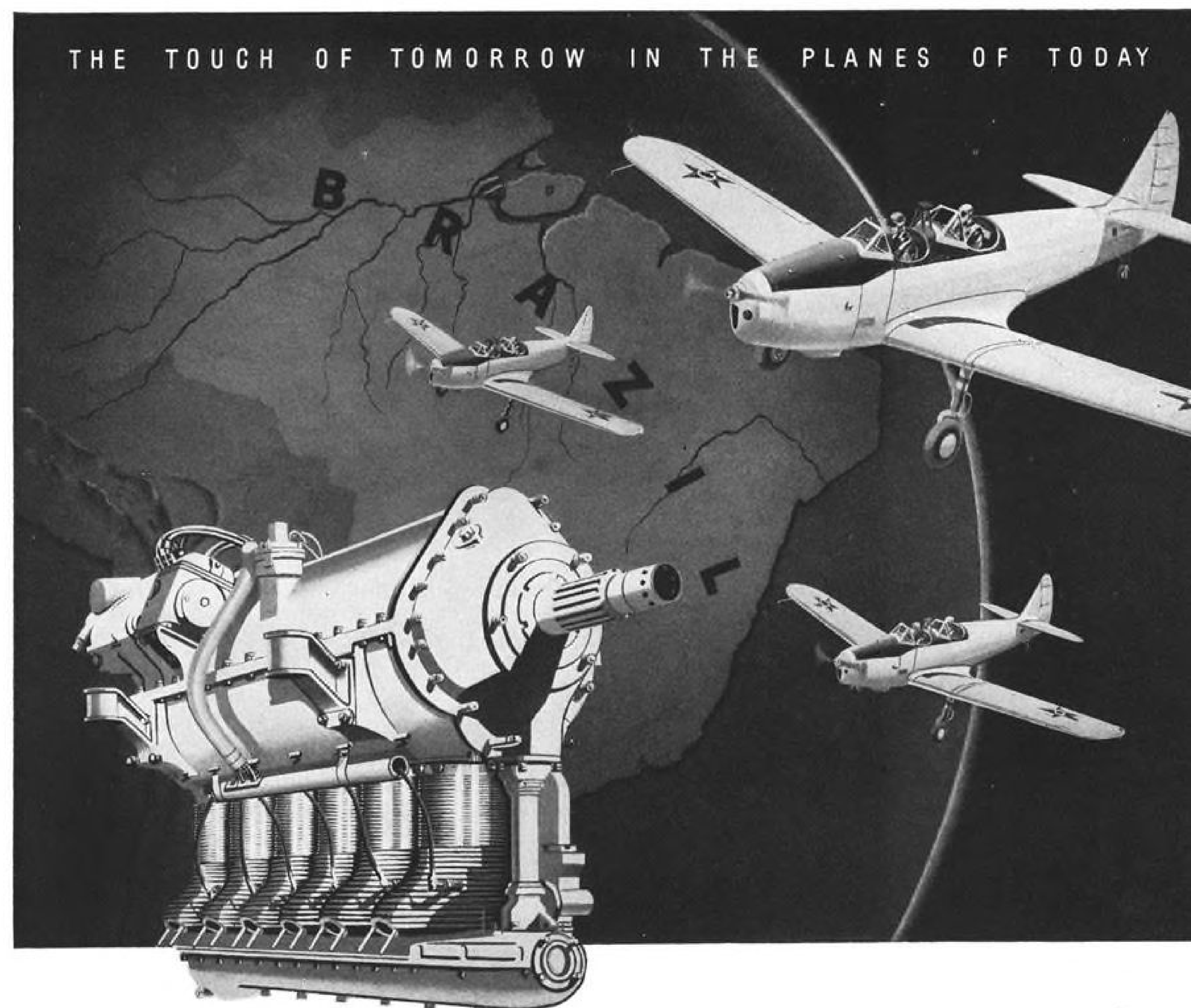
► **Shuttle Service**—Allied four-engine bombers from British bases, with heavier bomb loads for the one-way trip, could strike smashing blows at these factories and then proceed to bases in Russia, say at Smolensk, an additional distance of some 400 miles and comparatively free from strong enemy fighter opposition. The same goes for the return journey.

► A significant straw in the wind is the recent appointment of Brig. Gen.



SEAPLANE TENDER ON GUARD:

Few pictures of the Navy's seaplane tenders have been released, although they are on duty all through the Pacific area. Framed under the wing of a Catalina, this 2,000-ton tender is shown at anchor somewhere in the Aleutians. Another Catalina and an auxiliary tender are shown beyond. This ship "mothers" Catalinas, Kingfisher observation planes and PT boats, stocking their fuel, supplies, and ammunition, making repairs, and housing flying crews.



More Air Power for another United Nation

The Brazilian Air Force will soon get six-cylinder, inverted, in-line, air-cooled Ranger engines made in Brazil, under a contract recently signed by that good neighbor's Government and the Fairchild Engine and Airplane Corporation.

Brazil-made Rangers, to power its air force's primary trainer, the Fairchild PT-19, will enable Brazil to turn out better pilots than ever in an even shorter space of time.

Ranger-powered PT-19's, with "fighter" characteristics, are ideal for the strenuous course of acrobatics included, today, in practically all United Nations' primary flight training. Unlike the trainers used in

the last war, the PT-19 with its Ranger engine, can safely do every maneuver in the book: slow rolls, snap rolls, Immelmans, loops, half rolls, inverted coordination exercises and turns, vertical reversements, spins, and combinations of these. The result—better pilots trained faster.

Brazil-built Rangers will also power Muniz M-9 biplanes and 2-engine Grumman Widgeons currently seeing service in Brazilian coastal patrol, Amazon River patrol and mail delivery. Thus, to the Brazilian Air Arm is added that "touch of tomorrow in the planes of today," which characterizes Fairchild planes and engines everywhere.

BUY U. S. WAR BONDS AND STAMPS

RANGER AIRCRAFT ENGINES

Division of Fairchild Engine and Airplane Corporation • Farmingdale, Long Island

Hoyt S. Vandenberg, deputy chief of the Air Staff, as a lend-lease assistant in Russia. American and British military missions are already at work with Russian military leaders, and a Joint Staff may be in the making.

► **Importance of Foggia**—The tremendous value of Foggia as an air base for devastating blows from the south will hardly be realized until it is put into use, which should be within the next few weeks. Engineering work must be completed on the airfields, big supply and service facilities must be set up, and the enemy must be driven further north before large numbers of the big *Fortresses* or *Liberators* can be safely brought up to the new base. Foggia is the strategic jewel of the entire Mediterranean campaign.

This center permits air mastery over the Adriatic Sea and Dalmatian coast, provides a springboard to finish off the Rumanian oil fields at Ploesti, knock out such vital but seldom bombed targets as Friedrichshafen, Munich, Pilsen, Nuremberg and Leipzig, and smash industrial and communication centers in northern Italy.

► **Balkan Menace**—Also from Foggia, by a southern shuttle route, with a Russian base, say at Kharkov, the Balkan satellite states could soon be knocked out of the war by air power, as Italy was, and the retreating Nazi forces further har-

assed by air blows from the rear, smashing up their communication and supply centers.

All this would be right on the beam for the 15th Air Force, which according to reports will eventually be commanded by Major General Doolittle, who led the Strategic Air Force in the North African campaign. This would leave the 12th as a Tactical Air Force to continue its invaluable support of the advancing Allied armies. Both would continue under the air command of Lt. Gen. Spaatz, one of America's top flight air officers, and one who incidentally, like the late Lt. Gen. Frank Andrews, has consistently seen the great value of the air assault from the south as part of the knockout air strategy.

► **Whirlwind from the West**—November promises to provide an all-time high in the number and weight of shattering blows by the RAF-AAF team in Britain. Here, if anywhere, the burning conviction that Germany can be knocked out of the war by air power alone, flourishes. City by city, target by target, the master plan is being worked out. The air offensive still has the edge and these boys mean to keep it.

► **Air Power and Invasion**—While in England recently, Gen. Arnold declared the air program was just about on schedule, and after that would come the invasion of the continent. The outlines of the Allied

air setup for this supreme effort are beginning to emerge. Details and personalities may differ when finally announced, but the general scheme seems to be in order.

If Maj. Gen. Brereton is confirmed as heading up the Tactical Air Force, and if the British choice goes to Air Marshal Coningham who headed the RAF in Tunisia, this will bring together again the two air leaders who played such a vital part in driving the Afrika Korps out of Libya, and who with Gen. Montgomery brought the air-ground team to such a high degree of perfection.

In any case, the Tactical Air Forces—British and American, or united in one—have been handed one of the toughest military assignments in history. The better the Strategic Air Forces can do their stuff during the next few weeks, the less costly will the great invasion be. —NAVIGATOR

North American Asks WMC Dallas Study

Requests Washington agency to investigate manpower utilization at criticized plant.

A study of manpower utilization is under way at North American Aviation's plant at Dallas which came under the scrutiny of the Truman senate investigating committee and was the object of a personal study by Charles E. Wilson, WPB executive vice-president.

► **Washington Aide Gets Assignment**—The survey is being made at the request of J. H. Kindelberger, president of North American. The request was granted by the War Manpower Commission which assigned G. C. Chesney, of the WMC Washington staff, to do the job.

► **Turned Down Trained Men?**—Senator Tom Connally, of Texas, said he believed there were a number of able men in Dallas and surrounding territory who, although not aircraft men, are trained in production and supervisory work and added that "many of those people were not given sufficient consideration when they applied to the North American plant at Dallas, which seemed principally interested in hiring as many untrained workmen as possible."

► **Estimates Reduced**—A reduction of 10,000 in manpower estimates for the plant was recommended by Wilson and subsequently ordered by the War Manpower Commission.

With the pilot of every Air Transport plane you'll find...RADIO

Locomotive, Motor-car, Airplane — these things alone are not sufficient in themselves to create a dependable transportation system. The simple fact that man can fly in an airplane does not necessarily provide safe air transportation.

The auxiliary equipment and sciences have provided the "missing links" in man's great conquest of the air. The science of electronics—which is another way of saying Electron Vacuum Tube—has for example contributed as much to safety and dependability in

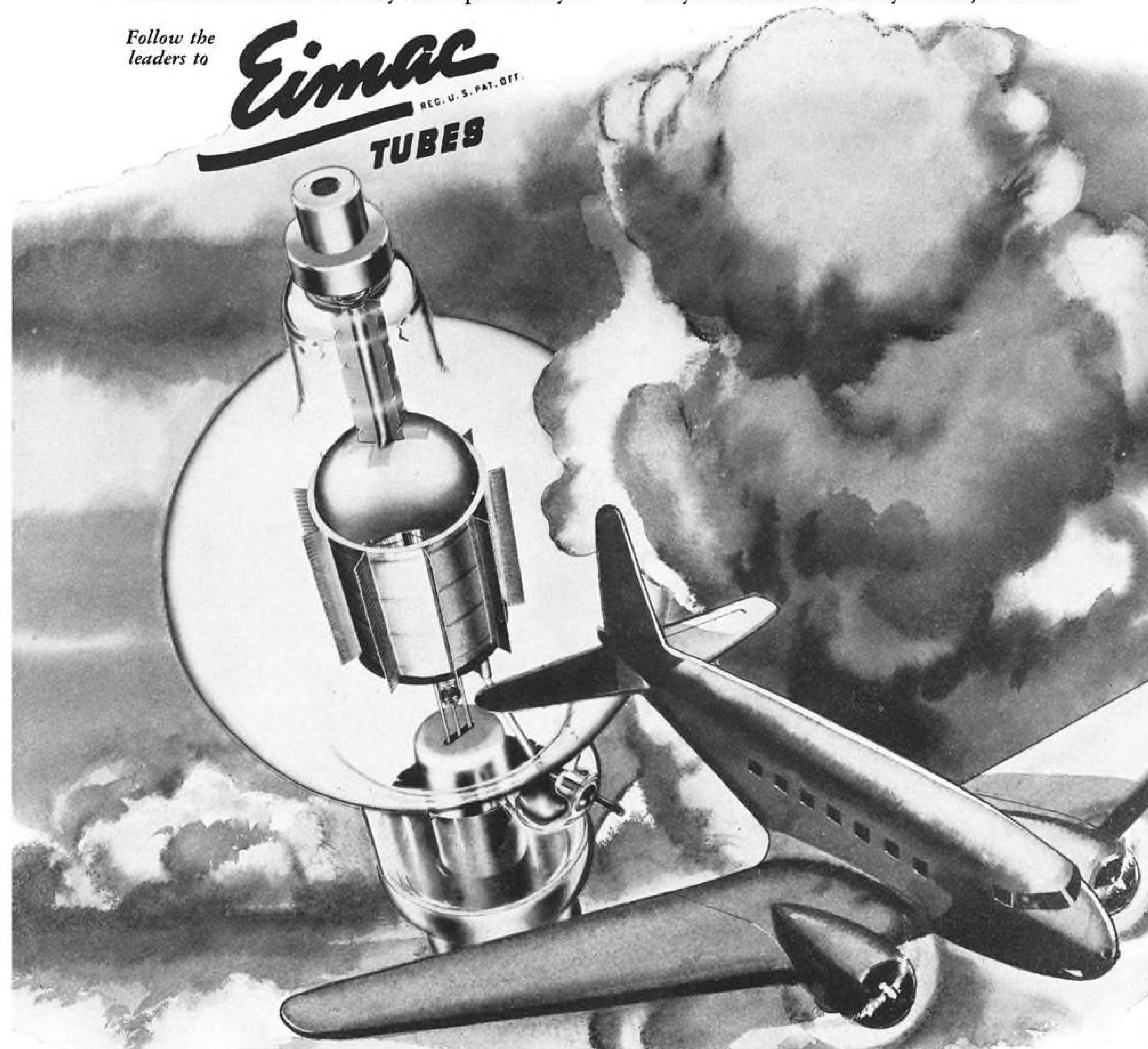


air transportation as the skill and craftsmanship in designing the airplane itself. Instrument landing devices, cross-country beacons, communications and today other now secret electronic equipment

rank in importance with motor, fuselage and wings. Eimac electron vacuum tubes are first choice in the air transport industry. They have long, successful experience in this field and their dependable performance has contributed much to the enviable safety records established by the major airlines.

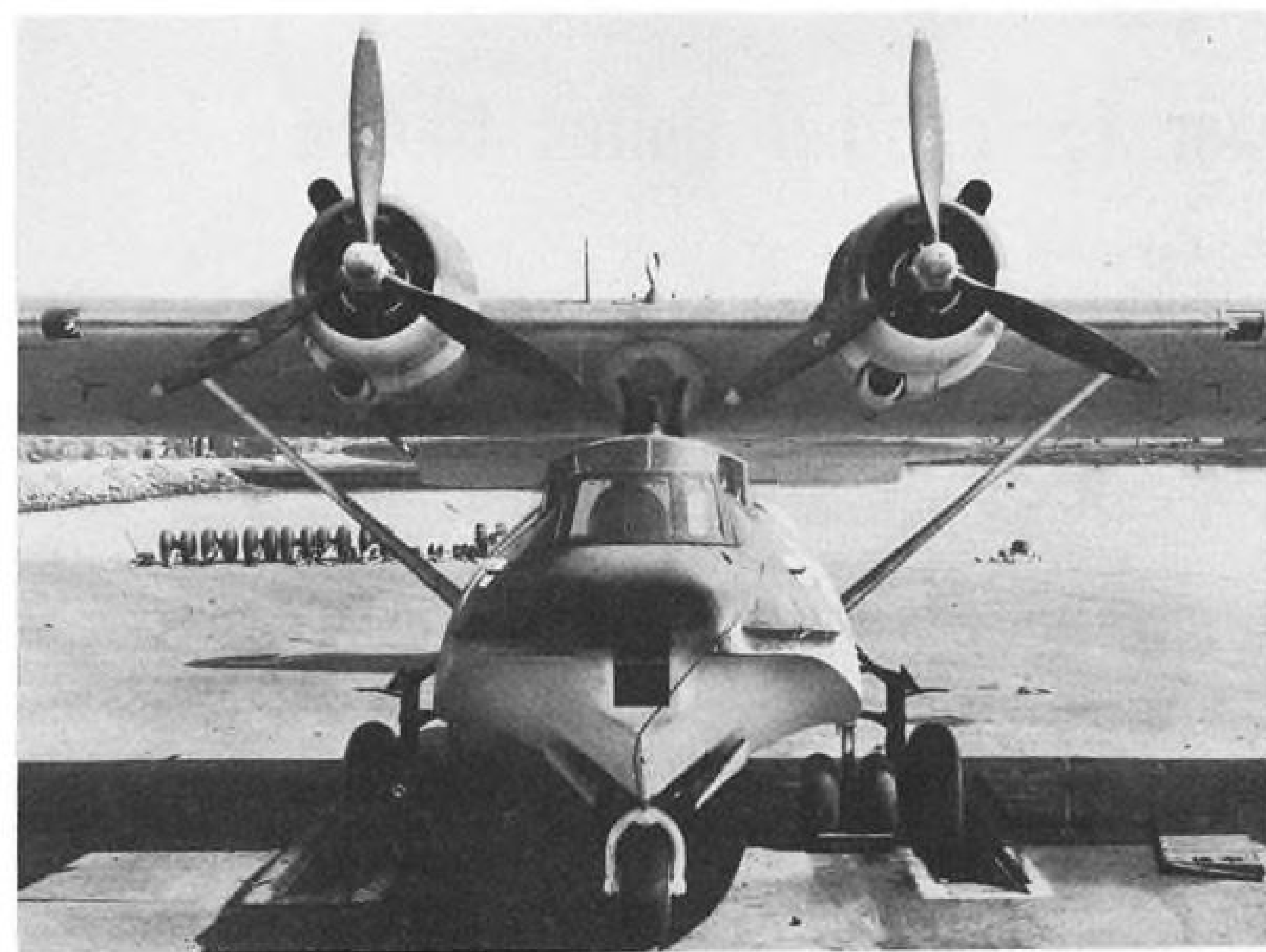
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A "CAT" GETS A CHECK-UP:

An amphibian version of a Catalina PBY was photographed by Consolidated Vultee Aircraft Corp. as the landing gear was extended into check pits at the company's seaplane ramp at San Diego.



AIRCRAFT PRODUCTION

Post-War Plane Demand May Drop To 3.7% of 1944 Peak, Report Says

Survey prepared for National Resources Planning Board says 1944 program stood at 129,000 planes last August.

By BLAINE STUBBLEFIELD

Total postwar demand for planes of all types, from the U.S. aircraft industry, which has been expanded 100-fold since 1939, will be 3.7 percent of peak capacity in 1944. This forecast is made in an unpublished report completed in August by the National Resources Planning Board just before it was finally liquidated when Congress refused further funds.

Melvin A. Brenner, author of the report, says the 1944 schedule last August called for output of 129,000 planes, valued at 19 billion dollars. (The 1944 program has been revised downward recently to approximately 120,000 planes.) 72 percent will be combat types, 11 percent transports,

and 17 percent trainers. In addition, he says the industry will produce spare engines, propellers and parts worth 10 billion dollars, bringing the total to 29 billion dollars.

► **Concession**—The 1944 schedule represents a cut-back of about 10 percent in units—15 percent in tons and dollars—below the original figure. This reduction was a concession to actual capacity, the report states, and did not indicate a lesser military requirement. The Board believes plane production will continue at capacity when Germany folds, with changes to fit the war on Japan.

War investment in aircraft facilities through Apr. 30, 1943, is given

as \$2,443,000,000, 72.5 percent, by Defense Plant Corp.; emergency plant contracts, \$596,000,000, 17.6 percent, by Army and Navy; \$259,600,000, 7.7 percent by private industry; and \$74,000,000, 2.2 percent, by the British; total, \$3,372,000,000. This was about 19 percent of total for all manufacturing industries.

► **Plant Expansion**—Ninety percent of the total plant expansion is government money. Excepting the Navy's small plant, all aircraft plants are managed by the industry. Nearly all private investment is in additions rather than new plants. Joint ownership of plants will have to be untangled before final disposition can be worked out.

The report estimates postwar annual plane output in millions of dollars by type of market as follows, percentages being based on peak wartime capacity:

Domestic:	Millions	Percent
Military	\$625	2.1
Commercial, passenger	82	.3
Commercial, cargo ..	44	.1
Commercial, oversea ..	15	.1
Private	50	.2
Total—domestic ..	816	2.8
Foreign:	270	.9
Total—foreign ...	1086	3.7

► **Air Police Force**—It is predicted that the number of planes surviving hostilities plus those in transit and process will be more than adequate for initial establishment of a U. S. air force and for participation in any world police power. Enemy air forces and productive facilities will have been abolished and will constitute small threat.

For the first few years following the war, domestic airline business may reach eight to twelve billion passenger miles, or five to eight times 1942 volume. One Curtiss Commando, for example, operated at 3000 hrs. annually, can deliver 14 million passenger miles. Thus the equivalent of 550 to 840 such units would be needed for this volume.

► **Cargo Rates**—A minimum port-to-port air cargo rate of 10c. per ton mile is indicated for the immediate peace period, with ground service costs adding perhaps 3c. or 4c. This rate cannot begin to compete, the report states, with the average railroad rate of .98c. per ton mile or the truck rate of 4c. But the airlines can handle a large part of long-haul express, which travels at 10-15c.

The Board's opinion was that the airmail, during the first two years of peace, can be carried on regular passenger flights. First expansion requiring additional planes will be



LOCKHEED LIGHTNING PRODUCTION:

This P-38 assembly floor scene shows why output of the Lightning is constantly going up. A new system of subcontracting is expected to boost production of these fighters to hundreds a month. The mechanized line moves with first leg completed, then carriages are

transferred to a second line moving in the opposite direction then to a third leg which moves in the original direction again. Production manhours on the Lightning have been halved since delivery of its 300th fighter. Good news for us and bad news for the Axis.

for the in-flight pickup system.

► **Overseas Traffic** — Mr. Brenner quotes the Civil Aeronautics Board on overseas passenger traffic, saying it may increase in the two-year period to six times that of the year ending in April 1942, and that it can be carried in about 35 planes the size of Martin's Mars. Allowing for cargo, annual demand for planes might be 10 to 20 billion dollars.

In the field of private flying, the report concludes that if 5 percent of the families able to buy and support personal airplanes at an average purchase cost of \$2000, do buy them, the market will be about 50 million

dollars annually. This is based on CAA reports that per hour cost of private flying is \$3.48 to \$10.20, scaled on 100 to 500 hours per year. Development of the helicopter is expected to take several years.

Heavy Bomber Output Hits All-Time High

Output of *Liberators* and *Fortresses* estimated at over 1,000 monthly.

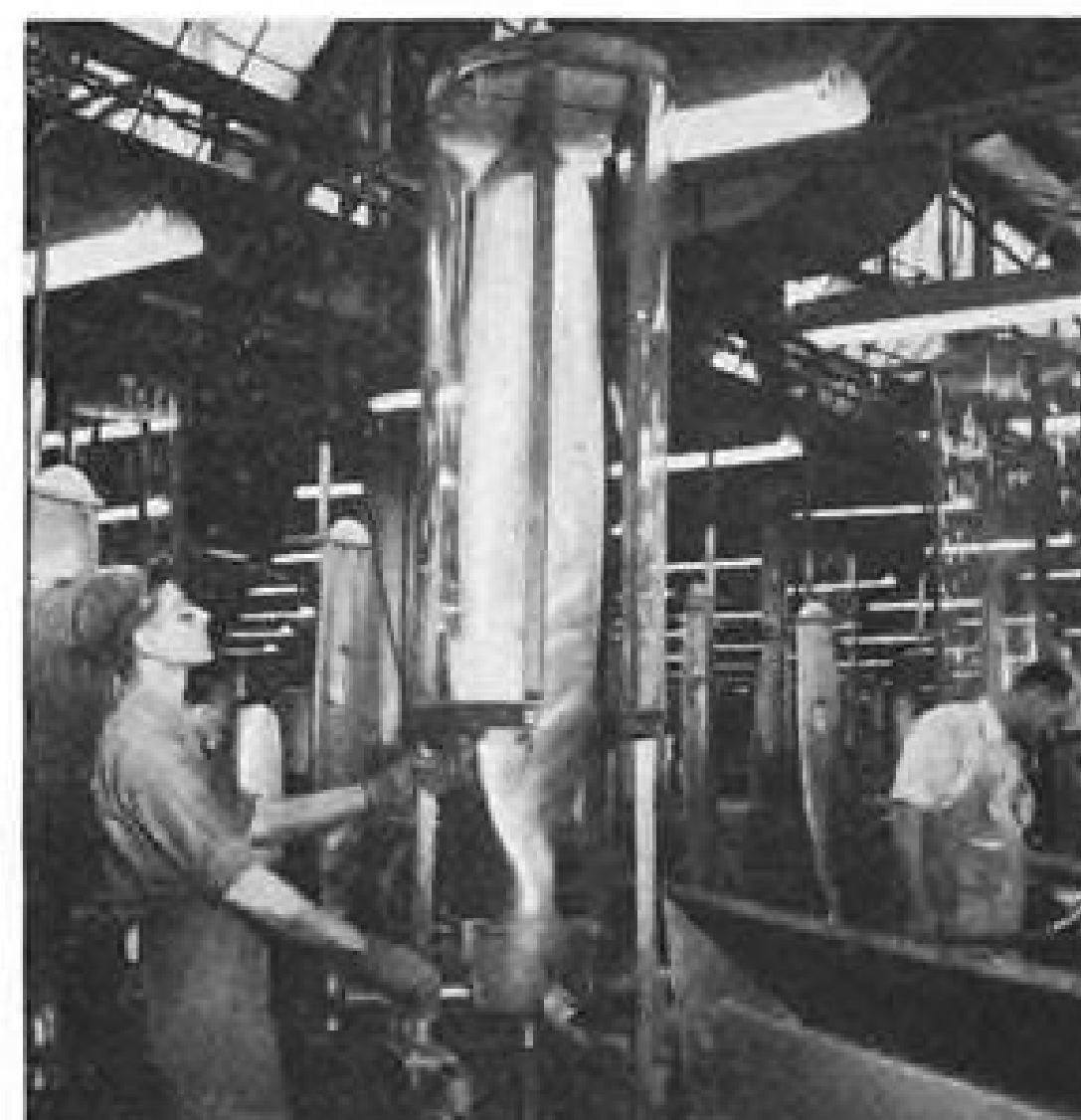
Emphasis being placed on heavy bomber production, which best estimates place at over 1,000 in October,

is pointed sharply up in the report of Harry Woodhead, president of Consolidated Vultee Aircraft Corp., that the San Diego division last month produced more four-engine bombers than ever had been produced by any aircraft company in one month.

This came on the heels of an announcement by P. G. Johnson, president of Boeing Aircraft Co., that production of *Flying Fortresses* for the month set an all-time record and that it was possible to predict that their production would continue to increase until by the end of the year the company will have overtaken the goal set by the War Department for accelerated monthly deliveries.

► **Efficiency Rating**—Woodhead disclosed in his report that the War Production Board rates Consolidated Vultee as operating the most efficient plants in the nation in three aircraft categories for the past five months.

These are: San Diego division in heavy bomber classification; Nashville division in the single engine bomber field and Vultee Field division, first in basic or advanced trainer and utility transport classification. The Stinson division, he said, was



NEW PLASTIC SHIELD:

This new transparent Lumarith plastic vertical shield prevents air drafts from striking the propeller blade and permits operator to see the position of the blade—perfectly balanced as it must be for progressive checks as they are ground. Use of the shield eliminates time lost in carrying blades to special enclosed room free of drafts. Tests are exact and blade must be perfectly motionless.

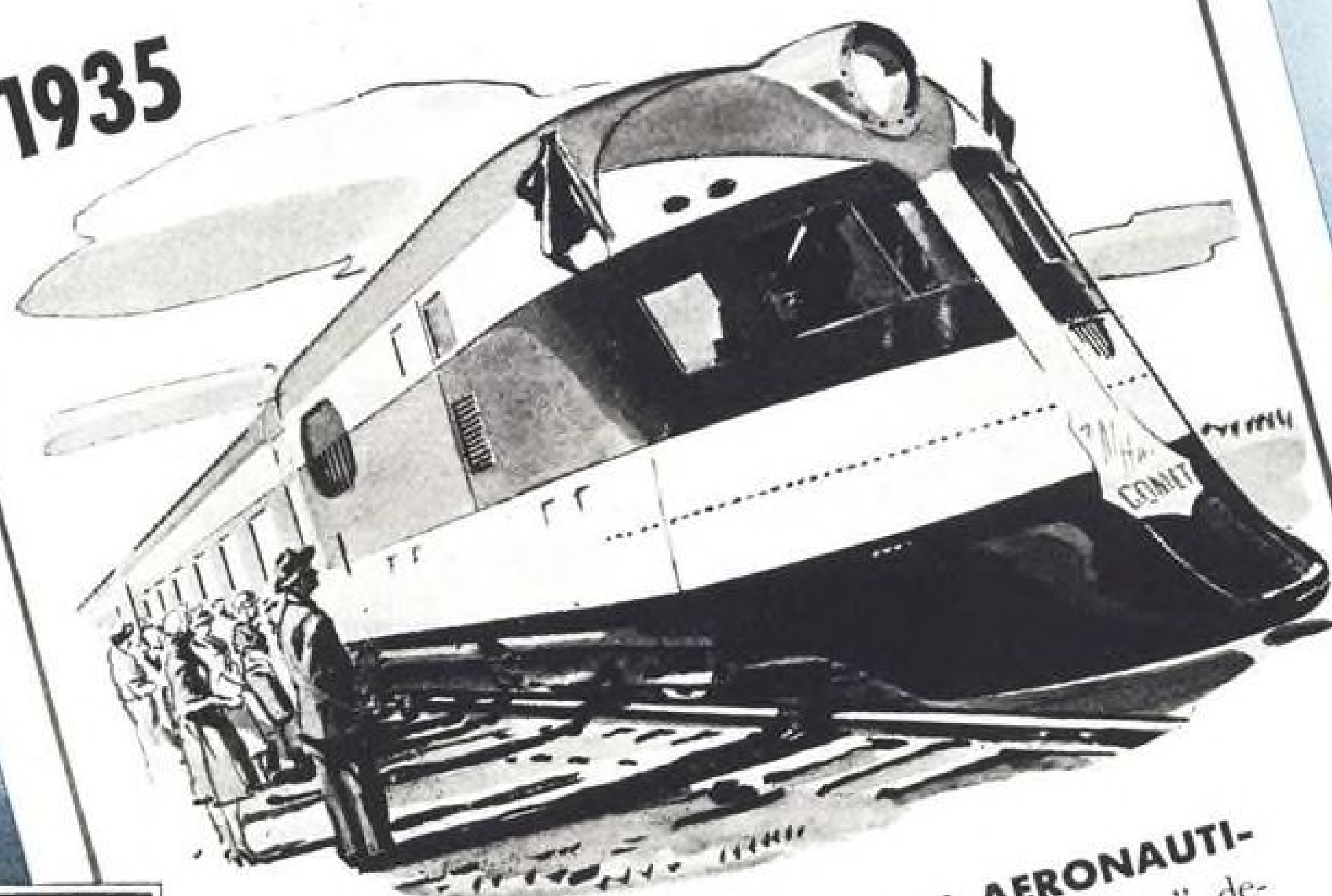


MORALE BOOSTER:

West Coast Army officers are considering as a morale booster the flyabout display of completed warplanes at subassembly centers. Fresno branch plant employees of Vega Aircraft are shown here inspecting the latest model B-17G, as part of a plan to show piece workers the completed airplane which they helped build. Col. Guy Kirksey, commanding officer, Hammer Field, does some "ground bombing" practice from the bombardier's seat in the nose. With him is Capt. C. J. Long, of the Vega Army office in Burbank.

Trail Blazing in the Skies

1935

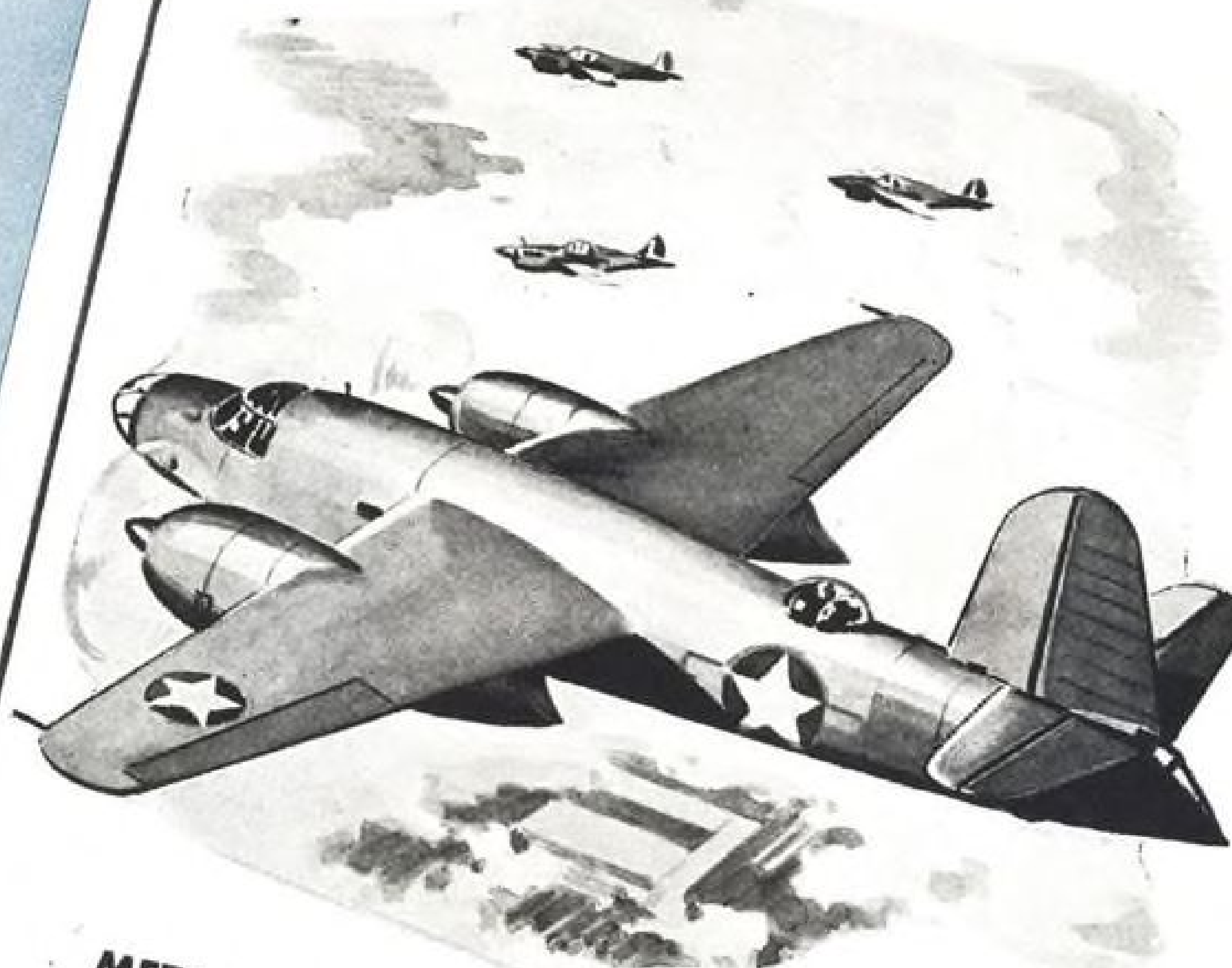


FIRST STREAMLINER BUILT ON AERONAUTICAL PRINCIPLES was the famous "Comet," designed and fabricated by Goodyear's Aircraft division in 1935 for the New York, New Haven & Hartford Railroad. In the Comet, lightness-with-strength was achieved by designing roof, sides and floor of the cars as main load-carrying elements of the structure — the same stressed-skin or monocoque construction widely used in aircraft. This undertaking was part of Goodyear's early work in exploring the possibilities of light aircraft metals that contributed to the development of the superior alloys in use today.

HOW GOODYEAR AIRCRAFT CORPORATION SERVES THE AIRCRAFT INDUSTRY

1. By constructing subassemblies to manufacturers' specifications.
2. By designing parts for all types of airplanes.
3. By re-engineering parts for mass production.
4. By extending our research facilities to aid the solution of any design or engineering problem.
5. By building complete airplanes and airships.

1943



METALCRAFTING EXPERIENCE THAT STREAMLINES MANY PRODUCTION PROBLEMS. As a result of its long experience in aeronautical design and light-metal fabrication, Goodyear is today one of the largest producers of subassemblies for all types of aircraft. These include complete empennages and wing panel assemblies, and all their component parts, cabin structures, floats, and float mechanisms—for both "hot" fighters and heavy bombers. And in addition Goodyear is one of the producers of the Corsair — a fact that bespeaks Goodyear's ability to handle complete and intricate production problems on a large scale.

Back
the attack
with
WAR BONDS

GOOD YEAR
AIRCRAFT

second in this classification.

► **Output Up Sharply**—"Latest indices of production efficiency of the War Production Board," Woodhead said, "show *Liberator* output in terms of airplane pounds per employee per day was 30 percent greater at San Diego during July, August, September and October than that of any other manufacturer of heavy bombers."

He said "production of Consolidated B-24 *Liberators* at San Diego increased 75 percent during the ten-month period from January through October, despite a 17.6 percent loss in production workers."

► **Manpower Problems**—Woodhead said man-hours necessary to build a *Liberator* have been reduced 30 percent in the past ten months and that this follows a cut of approximately 60 percent in 1942.

"Assuming manpower problems are solved and sufficient materials are received," Woodhead said, "Consolidated Vultee will meet steadily increasing production schedules set for the coming months."

He added that the October *Liberator* production record at San Diego was attained at the same time schedules set by the Navy for output of *Catalina* and *Coronado* flying boats were met.

RAF Gives Details On Mosquito Bomber

All-plywood craft's construction described by British Information Services.

As winter draws on and RAF *Mosquitoes* still swarm over Germany and German occupied Europe, the British have disclosed more details on this swift bomber, including the fact that it was flying 22 months after the designer began work on the drawing-board. They claim this as a world's record.

This achievement is the more remarkable because the *Mosquito's* airframe is made almost entirely of wood. Only the ailerons are metal. The rest is Oregon pine, spruce, English ash, and balsa, a wood lighter than cork.

► **Glue and Plywood**—The *Mosquito's* fuselage is made in two parts, on long frames or jigs. Over each frame is stretched, first, a skin of three-ply sheets the thickness of a penny; then, balsa filling; then, another skin of ply-wood.

This "sandwich" is pressed hard against the frame and glued solid.

Vega Wanes

All ships that come out of the sprawling Lockheed and Vega factories will carry the single identification "Lockheed" after Nov. 30.

On that date absorption of the identity of Vega Aircraft Corp. by its parent Lockheed Aircraft Corp. will be completed.

Gradually working away from the confusing "Lockheed-Vega" name combination, the corporation now stands ready to capitalize in peace production the name that has become a wartime by-word.

Actually, popularity of the "Lockheed" trademark was well-established long before the war, dating from 1926 when the company founders, Allan and Malcolm Loughead, adopted the phonetic spelling of the company's name, and a year later flew the first of a historic series of Lockheed planes, the all-wood "Vega" high-wing monoplane.

Under the direction of President Robert S. Gross, Lockheed organized Vega Aircraft Corporation shortly before the war to build a light transport, the *Starliner*. Purchase of all Vega assets by Lockheed two years ago, and Vega war contracts that have allied its activities closely with Lockheed production, led to the present absorption of Vega's identity.



VEGA TO LOCKHEED:

Courtlandt S. Gross, president of Vega Aircraft Corp., on Nov. 30 becomes vice-president and general manager of Lockheed Aircraft Corp., as right-hand man to his brother, Robert E. Gross, Lockheed president, with the absorption of Vega by its parent, Lockheed.

Construction is done in two parts to facilitate work on controls and accessories which have to be put inside. When they are in, the two parts of the fuselage are glued together like the rest.

► **Flown to Britain**—Many *Mosquitoes* are made in Canada and flown direct to airfields in Britain, where hundreds of carpenter shops and furniture factories make parts for the bomber.

Proponents of the *Mosquito* hold that wood construction has some decided advantages over metal in a machine as fast as the *Mosquito*, since wood is an insulator against cold and sound, can absorb splinters and bullets without breaking up and floats also; any skilled carpenter can repair it.

► **430 Miles an Hour**—Although the *Mosquito's* speed has never been officially made known—Britons claim it is the fastest bomber in the world—a Swiss report puts its speed at about 430 miles an hour, just over seven miles a minute. Its speed does make it possible for the *Mosquito* to bomb specific targets at low level without worrying too much about enemy ground defense and fighters. In a raid on Copenhagen Jan. 27, *Mosquitoes* bombed submarine-engine factories from as low as 50 ft. and only one airplane was lost.

British figures report that in the six months ended Oct. 29, *Mosquitoes* made 1,000 nuisance raids on some 30 German industrial cities. They attacked Cologne 33 times, Berlin 27 times, Duisburg 26 times, and Duesseldorf 15 times. Of the *Mosquitoes* taking part in the attacks, only 11 are missing.

Vets Job Preference Program Studied

Industry eyes General Aircraft's plan to meet hiring problem.

A program instituted by General Aircraft Corp. under which only discharged veterans of the present war are considered for employment is attracting attention throughout the aircraft industry. This effort to systematize private re-employment of service men was announced by H. J. Maynard, president.

► **Jobs for 500**—He estimated on the basis of the current turnover rate that General should employ nearly 500 men during the coming year. Twenty men were hired during the first week of the program's operation. The plan presently applies only to skilled assembly workers.

Wright in Volume Production On New 2,200 hp. Cyclone Engine

Company reveals details on air-cooled, radial, one of most powerful service aircraft power plants in operation.

Secrecy which has surrounded the development of a new powerful aircraft engine by Wright Aeronautical Corp. has finally been lifted with the disclosure that the company is in quantity production on an air-cooled radial *Cyclone* of 2,200 hp., one of the most powerful service aircraft engines in the world for use on heavy, long-range bombers, fighters and transports.

Myron B. Gordon, vice-president and general manager of Wright Aeronautical, in announcing volume production pointed out that the new engine is a much more powerful type than the *Cyclones* which power the *Flying Fortresses*.

► **Highest Horsepower Figure**—The engine has the highest horsepower figure the War Department has ever published. This Wright *Cyclone* "18" has 18 cylinders built in two banks of nine cylinders each with a displacement of 3,350 cu. in.

Despite its tremendous power, the new engine has a diameter of only 55 inches, the same as that of the original nine-cylinder *Cyclone* which was introduced in 1927 with a rating of 525 hp.

► **Used on "Constellation"**—While information on specific military aircraft installations is still restricted, it is known that the *Cyclone*-18 made its first transport appearance in the four-engine Lockheed C-69 *Constellation*, a 60-passenger, high speed plane originally ordered by Transcontinental & Western Air and Pan American Airways.

Gordon said design work on the engine was well started before the outbreak of hostilities and that "we originally planned this engine for transports such as the *Constellation* and passenger planes even bigger."

► **Model Improved**—Based on a previous model of the same displacement which developed only 2,000



STUDY NEW WRIGHT:

Lt. Col. Carl R. Borkland, AAF resident representative, and Myron B. Gordon, vice-president and general manager of Wright Aeronautical Corp., inspect the new *Cyclone* 18 developed by Wright which develops 2,220 hp. This engine, one of the most powerful service aircraft engines in the world, is now in volume production.

hp., the *Cyclone*-18 is now being produced in a new Wright plant constructed specifically for this engine. In addition, an automotive company has been licensed for quantity production of the engine.

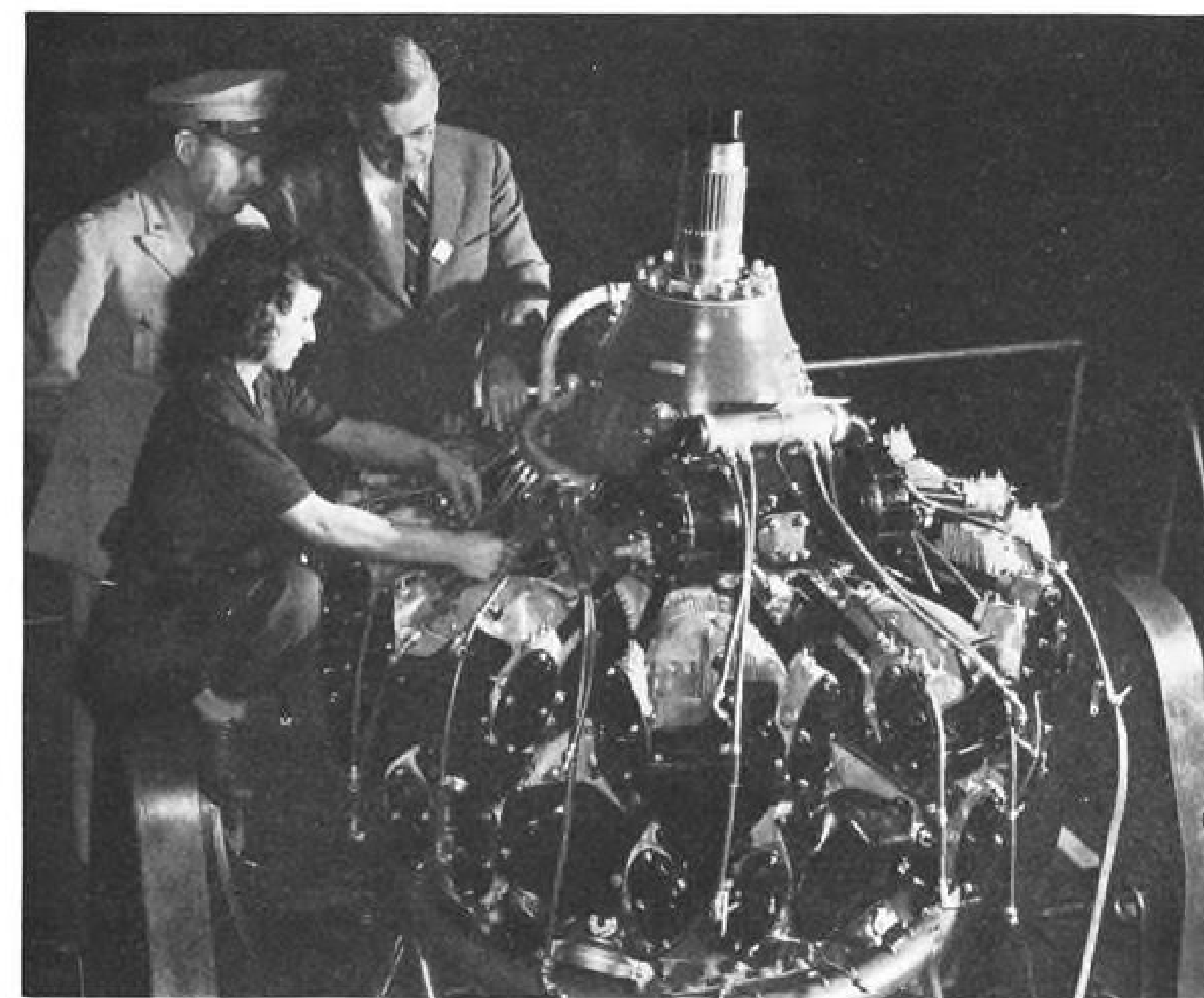
Among construction features is a nose section especially designed to permit use of a close-fitting cowl to further decrease air resistance. The engine has aluminum alloy cylinder heads and nitralloy steel cylinder barrels.

Construction utilizes a steel crankcase, which permits taking more power from the engine than possible with an aluminum case and a light weight magnesium in the nose section and supercharger housing. The engine's weight is just fractionally over one pound per horsepower.

► **Reduction Gear System**—In order to transmit the 2,200 hp. to the propeller at the most efficient speeds, Wright engineers designed a reduction gear system which they believe is probably the lowest ratio ever used on any aircraft engine.

Extremely large, broad-bladed propellers are used for the engine in order to keep the blade tip speeds within efficient limits and these propellers turn at much less than half crankshaft speed.

At some cruising speeds, the propeller turns at only 600 revolutions per minute.



NEW WRIGHT CYCLONE 18:

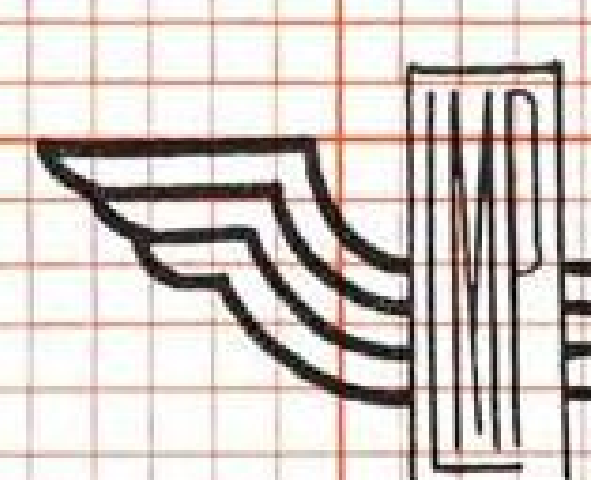
The new 2,200 hp engine which Wright Aeronautical Corp. at Paterson, N. J., is now producing in quantity for use in heavy, long range bombers, fighters and transports. It is one of the most powerful service aircraft engines in the world. Lt. Col. Carl R. Borkland, U. S. Army Air Forces resident representative (left) and Myron B. Gordon, Wright vice-president and general manager, watch a girl attach ignition harness to the engine.

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Transcontinental & Western Air by William J. Halliday (photo), formerly a civilian employee of the War Department Signal Corps shipments division at Bradley Beach, N. J. Before that he was

with the shipment division of a St. Louis beverage firm for six years. He succeeds Clarence Olson, recently named Central Regional mail and express manager in Chicago.

Capt. Norman M. McNeil (photo), who joined Pennsylvania-Central Airlines as a station manager at Flint, Mich., five years ago, has been appointed chief, Flight Test Section. With PCA, he has been co-pilot and captain from Detroit, in Washington as a captain in the Military Transport Division and assistant to the chief of MTD flight training. He succeeds Capt. G. A. McKee.



B. H. Gilpin, executive vice-president of Chandler-Evans Corp. since October, 1939, will become vice-president and general manager. He was formerly assistant general manager of Bendix Corp. and factory manager of Pratt & Whitney.

Thomas O. English, with American Airlines for the past 13 years, has been named director of budgets. He is succeeded as chief accountant by Lee Glasgow, head of the general accounting section. Assistant director of budgets is Chester May, financial analyst in the research department.

Clayton R. Burt (right), president and general manager of Niles-Bement-Pond Co., has been elected chairman of the board. A past president of the National Machine Tool Builders' Assn., Burt will continue to spend full time at the West Hartford plant which has



Deeds



Burt

PERSONNEL

been under his executive management since 1924. Concurrently elected president and general manager was Charles W. Deeds (left), president of Chandler-Evans Corp., recently acquired by Niles-Bement-Pond. Deeds was once vice-president and general manager of Pratt & Whitney Aircraft Division.

James F. Hamilton has been named technical service director of the Central States Aircraft Veneer Committee. He has been with U. S. Plywood Corp. as chief wood technologist in charge of research and development of modern flat and molded plywoods, and has spent much time in developing aircraft and other specialized plywoods for the armed services.

Henry S. Jones (photo), former assistant works manager of Fairchild Engine & Airplane's Hagerstown plant, has been transferred to the company's Burlington plant as factory manager, succeeding Clayton Merry. Jones was once with Globe Wernicke Co.

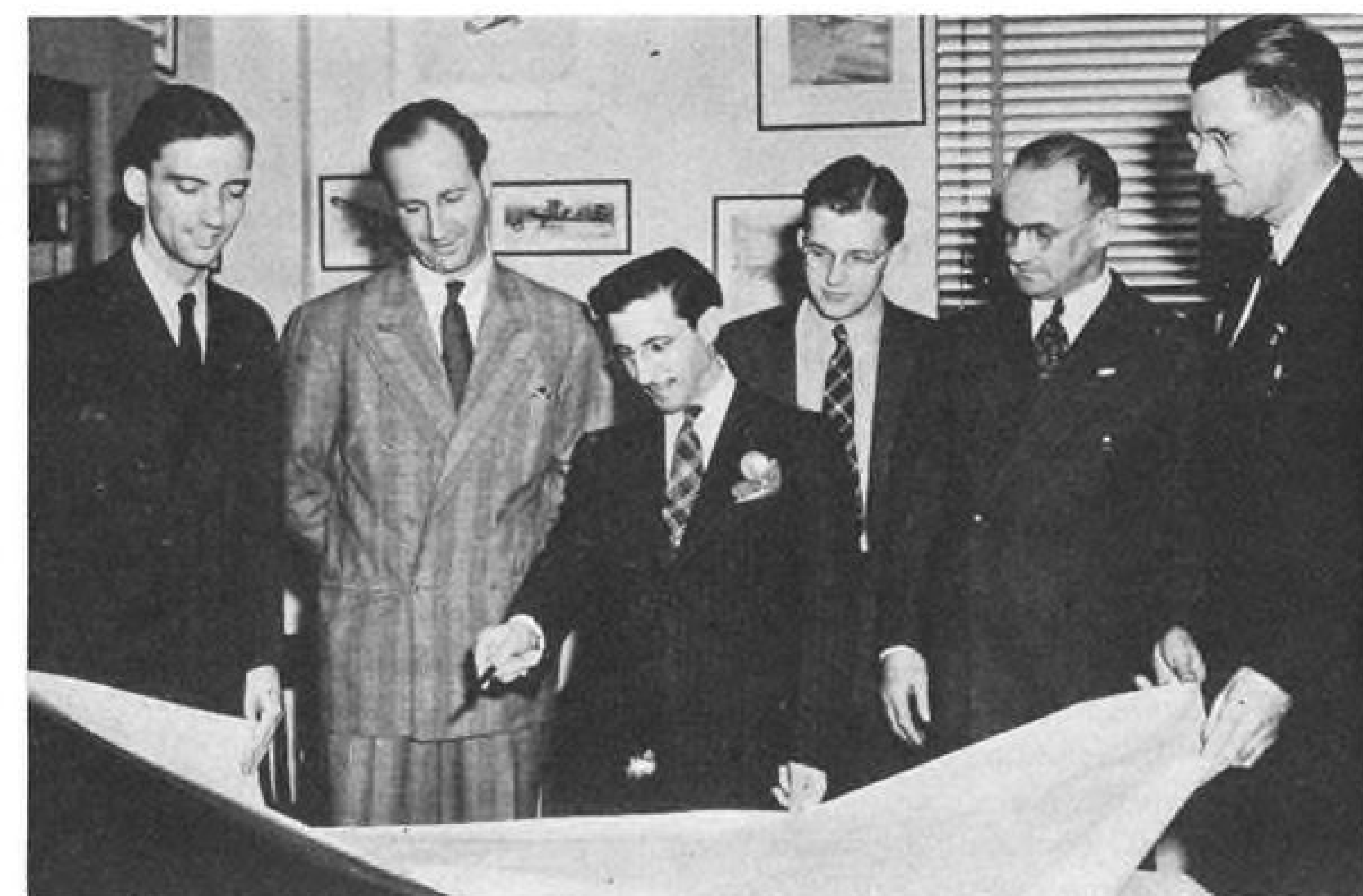


As of Jan. 1, 1944, Walter F. Fowler, operations superintendent of Trans-Canada Air Lines, Moncton, will take over the job of assistant operations superintendent at Winnipeg. One of the first group of pilots to join TCA, Fowler was formerly with Canadian Airways. He will be succeeded at Moncton by Frank I. Young, chief pilot at Toronto, formerly pilot and instructor with Dominion Skyways, National Air Transport, Brantford Aero Club and Century Airways.

In recognition of Hartford, Conn.'s increasing importance as an air travel and war production center, James P. Dean (photo), with United Air Lines since 1933, has been named district traffic representative for United Air Lines in that city.



Philip G. Johnson, president of Boeing Aircraft Co., has been named a regional vice-chairman of the Committee for Economic Development. Johnson will have jurisdiction over CED activities in the states of Washington, Oregon, Idaho and Utah.



NEW AERONCAR ON THE WAY:

Peter Altman, consulting engineer for Aeronca Aircraft Corp., is explaining his postwar designs for the new sea and air Aeroncar, details of which are not yet ready for release. Looking on from left to right are: Ed Burn, director of research; Carl Friedlander, president; Altman, W. D. Hall, chief engineer; Elmer Sutherland, vice-president and Al Helmers, secretary-treasurer.



VIBRATION May Have Caused This

Common causes of mechanical failure of automobiles are vibration-loosed connections. And loose connections can result in anything from an annoying body squeak to a loose wheel—and a serious accident. The answer to any vibration-loosed connection is a vibration-proof fastening. After Victory, automobile manufacturers with an eye to added driving safety will protect their cars with Boots Self-Locking Nuts which withstand severest vibration.

More Cargo, When They Fly With Their Boots On

Cargo planes are performing heroic service ferrying men and supplies to the fighting fronts. Almost always loaded to capacity, they are constantly subjected to terrific vibration stress by engines which must strain to the limit to lift the big ships from the ground and keep them in the air. That these planes are able to "take" severest vibration without "coming apart at the seams," is due largely to the vibration-proof Boots Self-Locking Nuts which protect them.

Boots Nuts are not only tough, they are also lighter than other nuts, save many pounds on each plane... thus allow for more cargo. In addition, they can be used and re-used as often as desired—literally "outlast the plane." Boots Self-Locking Nuts, standard for every type of U. S. aircraft, meet the exacting specifications of all government aviation agencies.

BOOTS

Self-Locking Nuts For Application In All Industries

BOOTS AIRCRAFT NUT CORPORATION ★ GENERAL OFFICES, NEW CANAAN, CONNECTICUT

Maurice L. Perry has been named superintendent of counter service for United Air Lines in Chicago. He formerly served in the same capacity in Los Angeles and his job now will be to synchronize the work of UAL's traffic counters throughout the entire system.

W. Kent Wheeler, in the aircraft business for 16 years both as an executive and as a pilot, has joined Ryan Aeronautical Co. as Dayton liaison representative of the manifold manufacturing division. His background includes ten years with Solar Aircraft Co., a year with Lockheed, a year and a half with Glenn L. Martin Co. as assistant supervisor of production, and jobs with several small aircraft companies. At Dayton, he will specialize in engineering service for Ryan exhaust systems manufacturing division, working in collaboration with Paul Hugh Waldman, head of Ryan's liaison office with the AAF since last June.

Jerry Keefe (photo), has been appointed to the position of director of



public relations of the Lewis School of Aeronautics, Lockport, Ill. He was formerly vice-president of Halas and Keefe, sales counselors.

W. A. Patterson, president of United Air Lines, is a busy man these days. He recently was elected to the board of directors of the City National Bank & Trust Co. of Chicago, named to the National Industrial Conference Board and elected a director at large of the Illinois State Chamber of Commerce.

D. A. Beck (photo), formerly with Glenn L. Martin Co. in Baltimore has been named to the position of assistant manager of general design engineering in Good-year Aircraft Corp.'s plants A and B, Akron, Ohio.



A. F. Mannella, plant superintendent at East Hartford for Hamilton Standard Propellers Division of United Aircraft, has been appointed assistant general superintendent. He was formerly with Standard Steel Propeller Co., predecessor of Hamilton, with Westinghouse and Austin Tool & Machine Co.

The following naval aviators have assumed these new posts: Comdr. Ross F. Mahachek, USN, has reported for duty in the Radio and Electrical Branch, Bureau of Aeronautics; Lt. Comdr. George Crompton, Jr., USNR, will serve



After a long illness, James V. Griffin is back at his desk in Lockheed Aircraft Corp.'s publicity department.

Vernon L. Gunn (photo), Transamerica and Western Air's district traffic manager at Dayton, has been promoted to the newly created post of assistant to the Central Region traffic manager. He has been in the airline business for the past 14 years.



Paul R. Jordan, general manager of Harvill Corp., Los Angeles die-casting and hydraulics firm, was elected vice-president of the company. He will continue also as general manager.

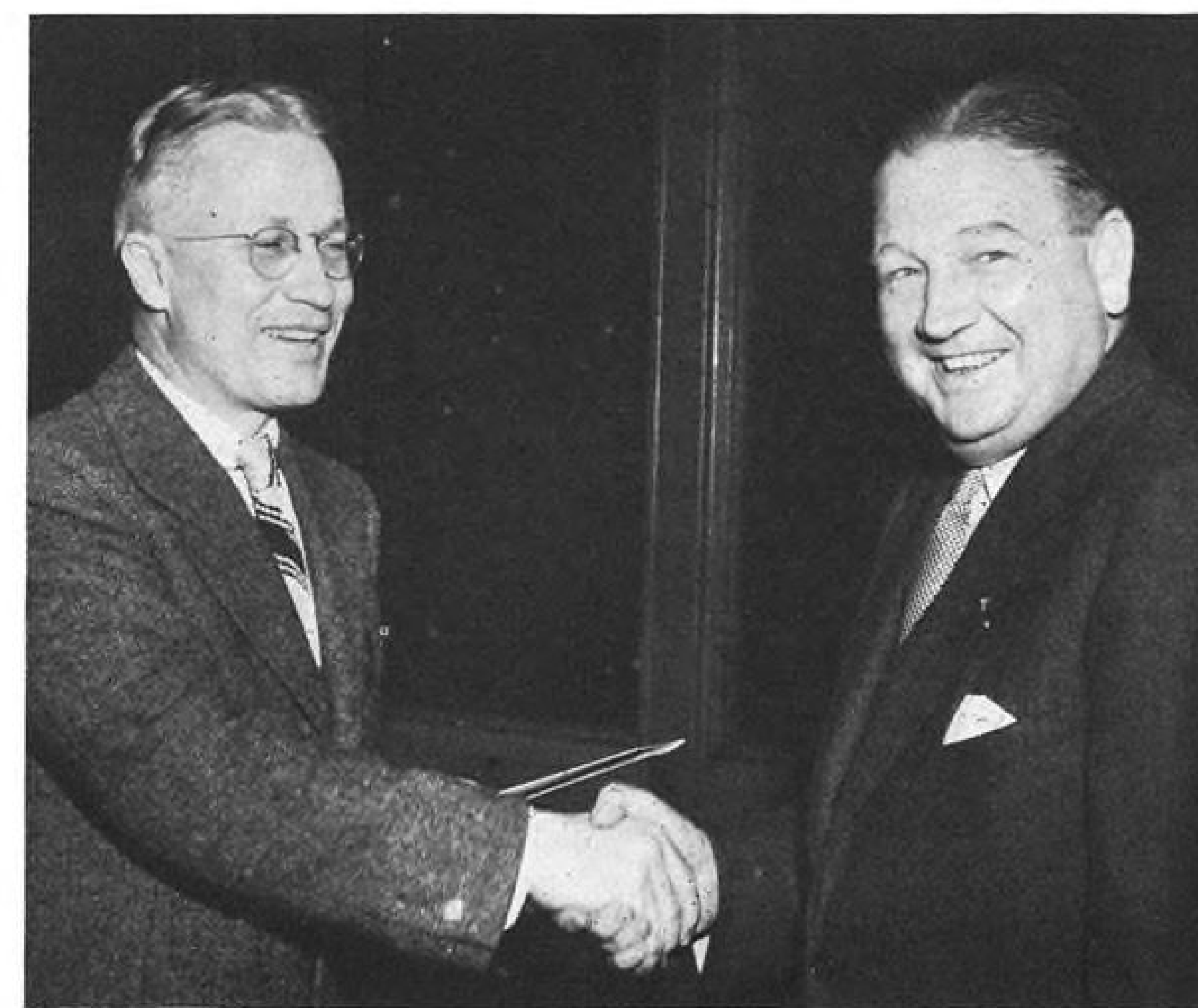


ALL-AMERICAN VETERAN:

Charles W. Wendt, who has been appointed vice-president of All American Aviation. He was previously director-treasurer of the mail pickup company from its inception in 1938.

in the Procurement Division, BuAer; Lt. Comdr. Paul P. Barriek, USNR, has been detached from the Aviation Personnel division. Capt. D. F. Smith, USN, has assumed duties of director, Naval Air Transport Division, DCNO, relieving Capt. J. P. Whitney.

Promotion to lieutenant colonel of Robert F. Six, on leave from his duties as president of Continental Air Lines since Sept. 1942, is announced. He is presently stationed at Morrison Field, West Palm Beach, with the Air Transport Command.



PAA'S LONDON CHIEF MARKS 10 YEARS ON JOB:

John C. Leslie (left), Atlantic division manager of Pan American Airways, congratulates Richard C. Long, PAA's regional director for the United Kingdom, Eire and Portugal, on the occasion of the latter's completion of ten years with the company. Long, whose headquarters are in London, was with the Department of Commerce as a trade commissioner and commercial attaché for ten years before entering the aviation field.

Airline Survey by Brokerage Firm Lists Factors in Industry's Future

Contains valuable statistical material but fails to give completely accurate picture of aviation industry and problems facing individual companies.

By ROGER WILCO

Widespread interest in airline securities has brought various studies on the industry by a number of investment firms. Recently released, and assured of a wide circulation, is a 36-page review entitled, "Airlines, 1943," issued by Merrill, Lynch, Pierce, Fenner & Beane, many-branched New York Stock Exchange firm.

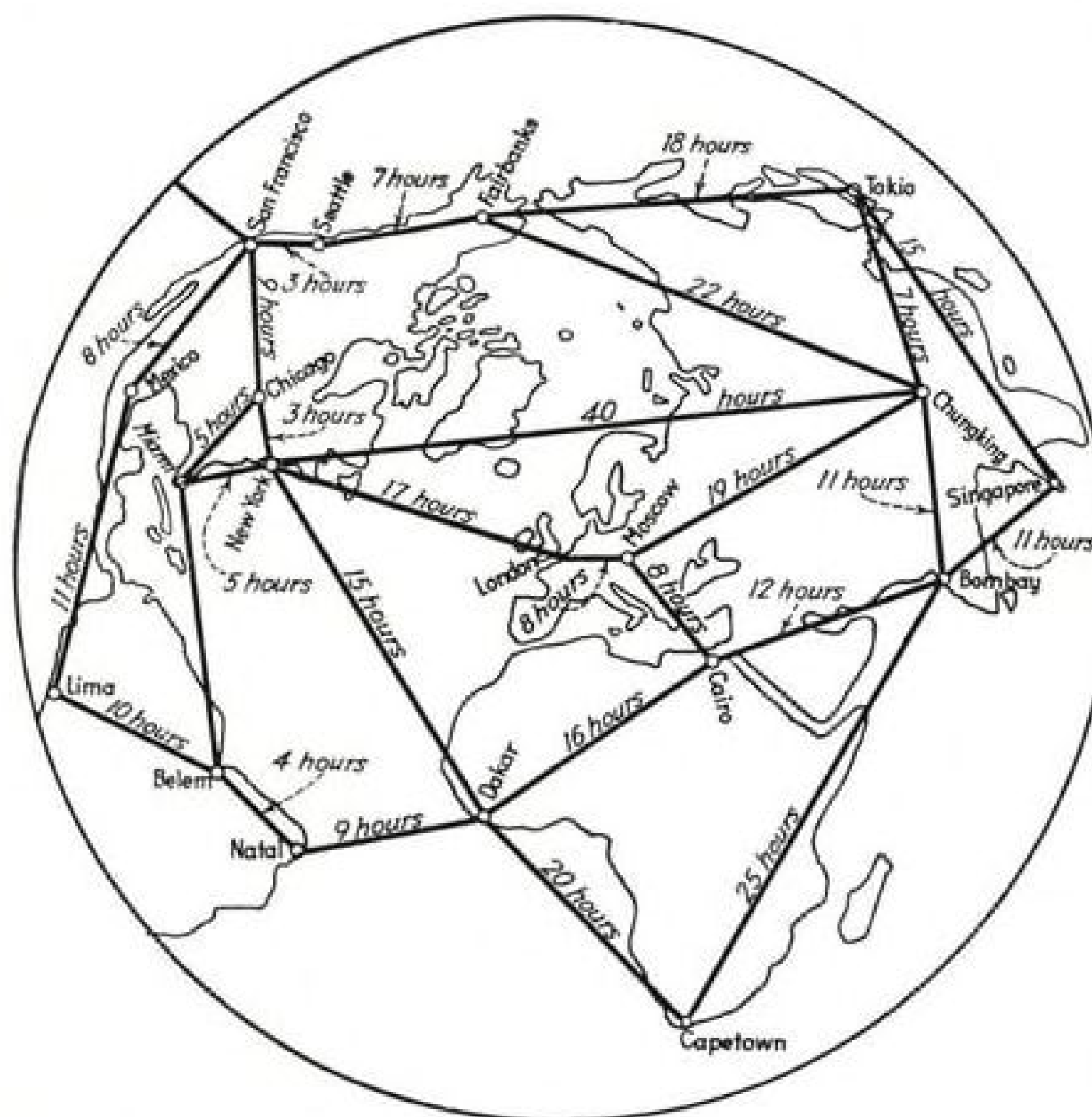
Breezily written, this survey contains considerable reference material of a useful nature to an airline outsider attempting to look inside. To a sophisticated airline observer, however, much of the report is superficial and, in a few instances, the report is actually misleading.

► **Realistic**—The study does attempt to take a realistic view of the industry's present and future and does a reasonably good job in evaluating pertinent factors. Short, one-page reviews of each of the eighteen airlines having securities publicly outstanding, also are presented.

A short history of the airlines' association with the Air Transport Command and Naval Air Transport Service is provided and shows the place of such wartime activities in the revenues and profits of the industry and the experience gained for commercial expansion. Among other things, a roster of airline men now serving in uniform in key positions is presented. Many will wonder why the name of Commander Paul Richter, TWA's able executive vice-president on leave with NATS, was omitted. Perhaps a few other names also could have been added.

► **Perspective**—The study places the airlines' war-inflated earnings in proper perspective and notes the temporary nature of such income. The paradox of stock prices attempting to follow airline developments also comes in for attention.

In speaking of the future, the report notes the highly optimistic aspirations of the airline operators themselves. "To a man, their peacetime cry is one: expansion, here, there and everywhere." This expresses the brokerage company's appraisal of the industry's hopes. The difficulties and competitive influences from other transportation agencies also are duly noted.



AIRLINES—1943:

Global map based on developments made possible by growth of Army and Naval Air Transport Services shows probable air routes in post-war era. The illustration appears on cover of new brochure on "Airlines—1943," published by Merrill, Lynch, Pierce, Fenner and Beane.

► **Sound Thinking**—In examining the future of air cargo operations, the sound thinking expressed by aviation people is reflected in the statement: "Even if the airlines wangled only one-tenth of railroad less-than-carload freight it would be almost 100 times all current air cargo—certainly something to shoot at."

In addition to enumerating the favorable factors, cognizance is taken of the specific post-war problems to be faced by the industry. The financing of the industry, strict regulation, severe international competition and Government operation all serve to place doubts in the investor's mind.

► **Costs Problem**—The report's assertion that postwar "plane and equipment costs are sure to nose-dive" will come in for a serious argument from many responsible quarters. United Air Line's Patterson not so long ago stated that, because of higher labor costs, equipment costs may be expected to be materially higher in the postwar era.

The survey's statement that "over-all labor costs will also go down mostly because the U. S. military forces have trained . . . 3,000,000 pilots, navigators, technicians, mechanics and ground crewmen" is also subject to considerable doubt.

The high standards, prevailing regulations and the place of organized labor in the industry will hardly make for "pilots at a dime a dozen."

The report estimates that the "Big Five" airlines (American, Eastern, Pan American, TWA and United) should earn at least \$15,000,000 for all of 1943, up fractionally from 1942's \$14,828,000. This department, in the first issue of AVIATION NEWS, Aug. 2, 1943, indicated the factors mitigating against increased earnings for 1943 over last year. The same belief is here reiterated and the "Big Five" will do well to approach 1942 results this year.

► **Helpful Data**—The histories and statistical data surrounding each of the individual airlines presented should be very helpful and find frequent use. However, for complete data on any of the companies involved, the investor would do well to make further examination. For

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example, in the Braniff presentation, no mention is made of the fact that if a present CAB mail rate action is sustained, the company's net income will be reduced by about \$145,500 for the first six months of 1943.

► **Sidelight**—An interesting sidelight also is provided by the firm's policy of disclosing its interest and/or its general partners in airline securities. The 1942 edition showed that the Merrill, Lynch firm for its own account and its general partners on Nov. 17, 1942, owned a "small" interest in Braniff, Eastern, Pan American, PCA, TWA and United. A "substantial" interest was reported in American. Almost a year later, on Oct. 15, 1943, investments were confined to a small interest in Pan American and United. (An interest in a company having a market value of less than \$50,000 is denominated "small": between \$50,000 and \$100,000, "substantial.")

Financial Reports

► **Northwest Airlines, Inc.**, for the year ended June 30, 1943, reports net income of \$614,301 after charges and federal taxes, equal to \$2.61 a share on 234,920 shares of capital stock, compared with \$430,100 or \$1.83 a share for the preceding year.

► **Chicago and Southern Air Lines, Inc.**, has filed an amendment to its registration statement with the Securities and Exchange Commission in which it gives the offering price on the voting trust certificates for 60,000 shares of common stock to be sold to the public at \$12.50 a share. Proceeds will be used for new equipment to be used on present or proposed routes, reduction of bank loans and working capital.

► **Pennsylvania-Central** reports net income of \$260,012 for the nine months ended Sept. 30. Operating revenue for the nine-month period was \$2,887,405, operating expenses \$2,348,018 and operating income \$539,387 before taxes and reserves. Net income, after \$90,000 reserve for reimbursable costs adjustments under war contracts and \$206,500 for federal income taxes, amounted to 57 cents a common share, on 357,234 shares.

Net income for the third quarter was \$140,493, equal to 34 cents a common share, against \$107,128 or 25 cents a share the second quarter. Net working capital at the end of the third quarter was \$2,508,430, as against \$2,077,476 Dec. 31, 1942. In the nine-month period, the ratio of cash to current liabilities increased

from .42 to 1 to 1.43 to 1, and the ratio of current assets to current liabilities from 2.71 to 1 to 3.46 to 1. PCA's assets totaled \$5,043,786 compared with current liabilities of \$1,019,012. Capital surplus was \$1,541,743, earned surplus \$636,681.

► **Braniff Airways** reported net profit for the September quarter, after charges and \$221,290 taxes was \$305,543, the equivalent of 30 cents each on 1,000,000 shares. Last year the figure was \$191,993 after \$121,338 taxes, or 19 cents a share. Operating revenue for the quarter was \$1,459,765, an increase of \$860,014 over the 1942 quarter. This year's figure was made up of: mail revenue, \$358,116; passenger, \$978,329; express, \$71,294, and other revenues (net), \$52,025.

Total expenses, without federal income taxes, were \$932,931, consisting of \$616,043 operating, maintenance and passenger; \$267,239 traffic and sales, advertising and publicity and administration, and \$49,642 depreciation and obsolescence. In last year's third quarter, total expenses were \$546,632. T. E. Braniff, president, informed stockholders that, in view of the increase in the company's size, importance of its operations and the number of stockholders, reports will be made quarterly hereafter, instead of annually or semi-annually, as in the past.

Northwest Reports

Northwest Airlines reports net income for the year ended June 30 was \$614,301, or \$2.61 a share. For the previous fiscal year, net was \$430,100, or \$1.83 a share.

United to Refinance

Stockholders to vote on authorizing of 200,000 cumulative preferred and shortening name.

United becomes the latest airline to announce refinancing plans with disclosure that it has informed the Securities and Exchange Commission of a meeting in Chicago Dec. 22, where stockholders will be asked to act on a proposal by the company's board.

In addition to changing the name of the corporation, now United Air Lines Transport Corp., to United Airlines, Inc., the proposal is to change provisions on capital stock in order, among other things, to authorize 200,000 shares of cumulative preferred stock

► **Convertible Series** — "Of this amount," United said, "the corporation would plan presently to issue 105,032 shares in the form of a convertible series which would be offered to holders of the common stock in the ratio of seven shares for each 100 shares of common stock held."

Investment bankers are to underwrite the offering, probably headed by Harriman Ripley & Co., Inc., with whom talks are being held.

The statement also said United has no intention of issuing the balance of cumulative preferred to be authorized, nor does it intend now to issue any additional common.

Vancouver-Victoria Seaplanes Planned

Canadian Pacific seeks permit for service, using float-equipped Beechcrafts.

By JAMES MONTAGNES

Westcoast Canadian cities are preparing for a postwar advance in commercial flying. Canadian Pacific Air Lines is planning to establish a regular seaplane service from Vancouver harbor to Victoria next summer, although the Vancouver city council objects to shipping as well as aircraft using the harbor, since a combined seaplane and landplane base has been built at Sea Island, within a few miles of Vancouver. Sea Island is the civic airport and site of the Boeing Aircraft of Canada plant.

► **Test Flight Hangar**—Construction of a big test flight hangar for CPA is well under way at the Vancouver municipal airport. The building is to be 264 ft. long, 120 ft. wide and 50 ft. high, of all-wood construction and concrete foundation. The hangar is close to the airport seaplane lagoon and will be used to store and equip planes being tested.

CPA is to use two new twin-engine float-equipped Beechcraft planes on the Vancouver-Victoria service, and is arranging for larger planes for use on the route from Regina, via Moose Jaw and Saskatoon to North Battleford, Sask. Problem of providing passengers with adequate ground accommodation in far northern points is rapidly being solved with erection of passenger stations and overnight accommodations at strategic points, L. B. Unwin, CPA president, reported after a 10,000-mile inspection tour of CPA facilities.

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A Reserve Guard platoon demonstrates a "Spear-head Wedge" formation used in crowd control

(below) Reserve Guardettes show their proficiency at semaphore drill . . . a useful means of emergency communication



Beech Aircraft



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TRANSPORT

Prehearing Conference Opens In Capital on Caribbean Routes

Nineteen companies are represented out of 21 seeking to operate air lines to Mexico, Central and South America and Caribbean.

BY BARBARA FREDERICK

All but two of the 21 applicants to the Civil Aeronautics Board for permission to provide air service from the United States to Mexico, Central and South America and the Caribbean Area, sent representatives to a prehearing conference in Washington last week. More than half the requests were filed within the last few days before the conference in a mad scramble to get on record as having interest in this area.

Missing were representatives for Southwestern Air Lines, which had just filed for an air freight and express route from St. Louis to Mexico City, and Andrew J. Burke, applicant for a route from Corpus Christi, Tex., to Monterrey, Mexico, to carry mail, passengers and express.

► **Arguments**—Although Examiner Francis W. Brown complained to company representatives that they were not being very specific in revealing the issues to be considered in their cases some indications of forthcoming arguments were revealed. Section 408 of the Civil Aeronautics Act would definitely be an issue, Public Counsel Stuart Tipton stated. On this question, Grace Line intends to show that there is nothing in 408 which prevents a steamship company from operating air service.

United Fruit Co. will contend that 408 does not apply to their case. Waterman Airline expects to recommend to Congress that the act be amended to clarify or eliminate this section.

► **Challenge**—International Airways questions the interpretation by either CAB or Congress of the meaning of 408 and believes steamship lines can comply by meeting requirements of CAB, such as the divestment ordered in the case of American Export Lines.

Moore McCormack Lines agreed substantially with International but

stated that they also expect to bring up Sec. 212B2 of the 1936 Merchant Marine Act, in which the Maritime Commission was instructed to investigate air service. If the CAB



BACK FROM CARIBBEAN:

Edward Warner, Civil Aeronautics Board vice-chairman, has returned from a "familiarization tour" of air routes in the Caribbean. He is shown boarding a Pan-American plane at Miami, when he flew to Port-au-Prince. Other points on his itinerary were Ciudad Trujillo, San Juan, Antigua, St. Thomas, Port of Spain, Barbados, Curacao, Kingston, Cienfuegos, Havana and Nassau. He returned to Washington Nov. 17, after being away two weeks. CAB will make important decisions on Caribbean air services in coming months.

had had this in mind in the American Export decision, counsel for Moore McCormack suggested the outcome might have been different.

► **Pan American Stand**—Expecting to fight these interpretations, is Pan American Airways, whose counsel said his company would take its usual position on 408. Counsel for Pan American-Grace also indicated that his company will resist.

Most participants agreed that hearings could not be held before late March or early April, and many considered these dates too close.

► **CAB Prepares Study**—In one respect, the hearings will be unique in that CAB's economic staff is working on a study of factors which govern economic necessity and convenience in these territories, which will eliminate much duplication of effort by applicants. This study is to be completed by next month.

Probability is that all applications for these areas will be consolidated for one hearing, although certain days may be specified for particular portions such as Mexico, or the Caribbean, exclusively.

Both National Airlines and Waterman Airline expressed the opinion that, as their applications have been before the Board for three years, they should be considered and disposed of before the proposed hearings.

► **Protest**—Chicago and Southern Air Lines, Eastern Air Lines and Delta Air Corp. protested intervention in these proceedings by W. R. Grace and Co. If allowed, "Any substantial stockholder in any company could intervene," according to Eastern's counsel.

W. R. Grace and Co. has filed an intervention on Eastern's application number 1066 to protect Panagra's interest in Balboa, "In view of the fact that Pan American and its four directors on the board of Pan American-Grace are opposed to the extension of Panagra's route from Balboa to the United States."

► **Present**—Representatives of the following companies were present at the conference: American Airlines, American Export Airlines, Braniff Airways, Caribbean-Atlantic Airlines, Chicago and Southern Air Lines, Delta Air Corp., Eastern Air Lines, Gordons North-South Air Lines, International Airways, Moore McCormack Lines, Grace Line, W. R. Grace and Co., Pan American-Grace Airways, Pan American Airways, National Airlines, United Fruit Co., Pennsylvania-Central Airlines, Waterman Airline, and Western Air Lines.

Post Office Frowns On Future Subsidies

Postmaster General says expansion in smaller communities should pay its own way.

Post Office Department does not begrudge the financial aid it has given air transport, but it feels that future expansion of air service to smaller communities should be without subsidy. Moreover, it does not see the airplane replacing the motor truck when it comes to short haul traffic after the war.

► **Letter to Pogue**—These views were outlined in a letter to L. Welch Pogue, Chairman of the Civil Aeronautics Board, from Postmaster General Frank C. Walker, for the record in the CAB local-feeder-pickup investigation.

Pointing out that his department chartered and sponsored the majority of the present air routes, Walker said the department's financial aid was "a most essential factor," but now the system has reached financial self-sufficiency.

► **Convenience and Necessity**—Sound development and expansion should continue until air transportation is available wherever public convenience and necessity require, but "the best interests of aviation will be served by healthy growth, induced by independent stability and unnurtured by subsidy financing except when the national interest clearly requires such assistance."

► **Sound Postal Financing**—Future increases in airmail volume, Walker expects, will continue to follow closely the normal trade channels and will be absorbed by additional schedules and larger aircraft.

"Undoubtedly there are still potential routes, and feeder service areas, awaiting wise selection, where traffic potentials indicate early self-sufficiency, or where possible public benefit clearly transcends the factor of cost."

► **Sees More Mail by Car**—As to feeder routes, the letter continued, "it should be borne in mind that motor transportation will be resumed after the war with increased emphasis. This medium is well adapted for short haul traffic and high in popular favor. Supercedure by aircraft is not in immediate prospect."

There will be few of the many proposals for local and feeder air service that will meet the searching tests of practicability and economy in competition with surface transportation having inherent advantages."



CANADIAN PACIFIC SETS 100 PERCENT FLIGHT RECORD:

Canadian Pacific Airlines' flight between Edmonton and Whitehorse, a 2,000-mile round trip, has completed a record nine months of 100 percent scheduled operation. This meant 213 consecutive round trips, some 475,000 route miles and 6,500,000 passenger miles. Nearly 7,000 passengers and more than 360,000 lb. of mail went to vital points along the Alaska Highway. Flight conditions along the route, which extends from the temperate zone to Yukon Territory, range widely. Temperatures vary from 60 degrees below zero to 103 above. In the photo, Capt. Ralph Oakes, CPA pilot, is being congratulated by Capt. James Bell (left), manager of the Edmonton airport, and G. W. G. McConachie, general manager, western lines, CPA, right. With Oakes are Stewardess Ruth Northcott and First Officer Art Haldin.

Kansas City Area Holds Feeder Talks

135 towns and cities in district to be represented at discussions.

A new type of round table, to provide opportunity for applicants for local air service in a given trade area to discuss their plans with representatives of communities in that area, is being held this week in Kansas City.

The Chamber of Commerce says its "Heart of America Local Air Service Conference" there Nov. 23 is the first of its kind, so far as it can determine. Chambers of Commerce and city administrative officers in 135 towns and cities in the Kansas City trade area have been invited, all of them from places covered in applications filed by existing and prospective air carriers with the Civil Aeronautics Board.

► **Applications**—Thirty-four applicants, all of whom also have been invited to participate, have filed for

73 routes to and from Kansas City and affecting 348 communities.

Principal speaker will be C. Edward Leasure, chief examiner for the Civil Aeronautics Board, who will discuss prospects for local service systems with particular reference to the part chambers of commerce can take in the development of such systems.

The program will include such subjects as trade area airline service, feeder and pickup service, local and feeder services proposed by fixed base operators, and local service on trunk line routes. A demonstration of air mail pickup will be a feature of the meeting. Other speakers are T. E. Braniff of Braniff Airways, J. W. Miller of Mid-Continent Airlines, W. Haley Reed of Consolidated Air Lines, and E. Lee Talman of TWA. T. E. Flaherty, regional airport supervisor for the Civil Aeronautics Administration; W. E. Clark, CAA senior air carrier inspector, and airport engineers, managers and airline technicians are to be available for panel discussions.

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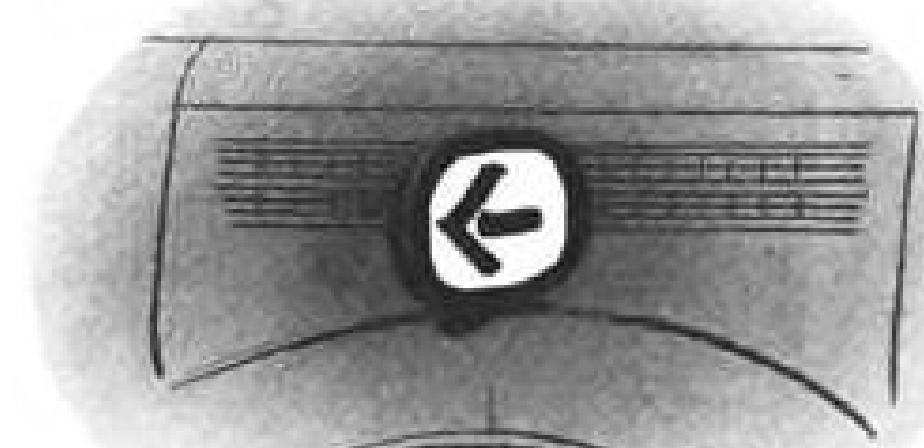
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Pogue Urges Allied Firms Operate Foreign Air Bases Following War

CAB chairman favors private management of global routes in talk on "World Highways of the Air."

L. Welch Pogue, referring to the much-discussed foreign air bases, has suggested their eventual operation by a business organization sponsored by United Nations interested in their upkeep.

The Civil Aeronautics Board chairman also has come out for private ownership in international air operations, but does not take sides on the question of monopoly vs. competition in the international field.

► **Question**—He posed the latter question in a speech in New York last week, said the problem was a hard one, and then did not commit himself. He was discussing "World Highways of the Air" at the annual *New York Herald Tribune* Forum.

Pogue feels that the Board should not expect to be the last word on international aviation policy, which he described as so closely identified with international relations that "final solution of national policy questions must rest with our elected representatives, the President and Congress." But he pleaded for a well informed public opinion on international aviation as a basis for that policy.

► **Opposes Curbs**—"International air transportation," he said, "must not be shackled by unwarranted restraints." Few international problems, the chairman declared, could lead more readily to "power politics." On the other hand, none has offered so great an opportunity for world-wide lasting friendship and peace.

Emphasizing that the views were his own and not government policy, he said he favored "a minimum of artificial barriers to international commercial air operations; universal recognition of the right of commercial air transit; avoidance of a world checkerboard of zones of air influence; and suitable airports throughout the world available on a fair and equal basis to commercial aircraft of all nations participating in international air transportation."

► **Airport Program**—Pogue pointed out that the war had resulted in many "excellent airports" built or enlarged with resources of nations other than the one where they are, some of which naturally could play

an important part in the future world air transport network.

He suggested that the countries having sovereign jurisdiction over them "might be willing to permit such airports to be owned, operated and financially supported by a business organization which would in turn be owned by those United Nations desiring to see such airports so administered and willing to underwrite costs of upkeep not met by operating income." Such an arrangement, he predicted, would insure uniform methods, fair service charges, and other benefits, and be "one place where, on a hard-headed business basis, international cooperation holds high promise of benefit to all."

► **European Airlines** — The CAB chairman acknowledged that most of the European airlines are "chosen instruments" of their respective nations, mostly owned in whole or part by their governments, and each enjoying a monopoly of all interna-

tional commercial air operations originating in the country.

But in this country, "private ownership, under government regulation and with government aid where required, has given us the finest domestic and international airlines in the world. . . . I, therefore, believe that private ownership should be continued in our international air operations, subject to appropriate governmental regulations."

► **National Policy**—Then he asked rhetorically whether the national policy should be to authorize a single American flag air carrier or several such carriers to conduct "our inevitably widespread and tremendously important international air transportation and, if several, should each operate in an area of the world where it does not compete with any other American air carrier, or should reasonable competition between them in such traffic areas be permitted?"

Several objectives should be sought, Pogue said. Strength and harmony in international relations are factors, but "we must beware of over-bigness" and not confuse it with strength.

► **Defense Factor**—"The policy we adopt should be one which will best contribute to the national defense, the commerce, and the postal serv-



POWER SWEEPER PROTECTS TIRES:

American Airlines is using this power sweeper to pick up nuts, bolts and other sharp pieces of metal on ramp and hangar floors, as a protection for airplane tires. The machine is said to replace a crew of three or four men on the outside and five or six man-hours in the hangar.

ice of the United States," one emphasizing aircraft development of new and better aircraft equipment, operating techniques and business practices, "the one which will best lend itself to reasonable government regulation."

Nations should outlaw "exclusive air use" agreements, Pogue said, and agree as a part of international working arrangements "that rights of commercial air transit shall be generally available to commercial aircraft of all nations."

Feeder Survey Planned by ATA

Dr. Sorrell to conduct study if University extends his leave.

By MERLIN MICKEL

Air Transport Association is planning its own study, through its Research Department, of the air feeder line question. Whether its findings will augment those of the Civil Aeronautics Board, which recently completed an investigation along this line, remains to be determined.

► **Would Study Rail History**—There are some who feel the CAB hearings did not bring out enough information on the experience of other forms of transportation, notably the railroads, in the stage of their evolution comparable with the present development of the airlines. The question also has been raised whether the data submitted at during the CAB investigation was adequate to establish a base for de-

termination how far and how fast this field of air transportation should be developed. More information on traffic potentials particularly is desired in these circles.

Other points likely to be considered are the relationship of the feeder problem development of the entire domestic air transport system; attainment and retention of a balance among the airlines so that no group will depend unduly on another group or be forced to rely permanently on government subsidy; maintenance of safety and

operating standards; airline obligation to render adequate local service as effectively as long haul through service; and prevention of surface carriers' engaging in feeder or trunk line air transportation.

The task of conducting the ATA study naturally will fall to Dr. L. C. Sorrell, the association's research and planning expert. Dr. Sorrell is with the ATA on leave of absence from the University of Chicago, where he is professor of transportation. His leave expires at the end of this year.

Two More Airlines Issue Story of ATC Contract Jobs

Pennsylvania-Central's announcement recently of its military transport accomplishment aroused comment in the industry and is followed by similar reports from American Airlines and Pan American Airways.

► **Tells of Training**—American states it "has had a part in almost every phase of the military operations conducted by the Army except the actual fighting." Committed to training 60 to 70 percent of all Army men assigned to the airlines, it has instructed pilots, navigators, radio operators, control, priority and transportation officers and mechanics for the ATC or the Naval Air Transport Service, and civilian planes for its ATC operations.

► **Experimented With Rafts**—Overseas crews have been instructed in

ditching procedures—technique of abandoning a plane at sea—which have been developed by American and adopted as an ATC standard. Experimental work on life raft development has led to a type of equipment for making sea water potable that also has ATC approval.

► **Put DC-3 on Floats**—American engineers and those from Edo Aircraft Corp. worked out the first pontoons on a C-47—largest and only amphibious pontoons to date, the airline says. Its transocean planes come into their La Guardia hangars regularly for overhaul and special work for the military on installation of radio, instrument, accessory, passenger and cargo features.

Research work is being done on loading devices and packaging. A special job has been done with General Electric on pressurized cabins for high altitude flying. There have been B-24 modifications to British standards, C-46 modifications for military cargo, and conversion of a C-87 and C-54A into litter ships for wounded. Test flights are conducted, with engineers as observers.

► **Pioneered Oceanic Routes**—American says its crews have pioneered routes across the Pacific and Atlantic, flown missions besides regular military cargo service, and are flying on still secret routes along which ground crews may have mahogany Christmas trees hung with tangerines.

Top man of the 125 flying with the Army or Navy on leave of absence from American is Brig. Gen. C. R. Smith, former AA president and now deputy commander of ATC. American has sent another 1,569 employees into the military services.

► **Fleet Cut**—Before the United States entered the war, the govern-

ment bought seven American planes, and later the airline released contract deliveries of DC-3's and DC-4's. But although its Flagship fleet was reduced from 79 to 43 between March and June, 1942, the airline has been carrying almost double the pre-war cargo—much of it war material. About 10 percent of American's personnel mans these planes, which require more than 500 pilots and 250 stewardesses. Two hundred more pilots fly for the ATC on the secret routes.

Meanwhile, behind the scenes, the experimental work continues, largely for the ATC but with postwar commercial application in view.

Pan American's report, issued a few days later, said its 5,000th trans-ocean crossing since Pearl Harbor was completed last week. Pointing out that the record was many times the total trans-oceanic flying done by all the airlines of the world before the war, PAA said it included 2,733 Atlantic crossings for the ATC, and 481 for the Naval Air Transport Service and by PAA Clippers on regular runs between the United States, Europe and the British Isles.

► **3,259 Crossings**—Including special missions, crossings over both North and South Atlantic totaled 3,259 with the first PAA transport arrival in the United States Nov. 17.

The airline completed 1,221 crossings of the North Pacific between the Hawaiian Islands and the mainland, both scheduled and for the NATS, and 520 to the South Pacific war theater for the NATS. During the period, PAA crews have done more than 21 million airplane miles of over-ocean flying and carried some 100 million ton miles of war cargo to overseas destinations for the military.

► **Serve Fighting Fronts**—Passengers have included government and military leaders of each of the 33 United Nations, besides representatives of neutral countries, among them President Roosevelt (to and from Africa at the time of the Casablanca war conference), and Prime Minister Churchill (en route to London after his first war meeting with the President in Washington). Pan American takes pride in the fact that its clippers have been in cross-ocean service continually since Pearl Harbor, and recalls that early Jap attacks caught four of the ships in the Pacific area. While routes and schedules of operations for the Army and Navy are military secrets, PAA disclosed that they serve every fighting front except Russia, and even that indirectly.

CAB ACTION

• CAB authorized American Airlines to include Akron, Ohio, on its route 22 between Cleveland and Columbus.

• A rate of 0.3 mills per pound mile for transportation of mail from Jan. 1, 1943, computed on direct airport to airport mileage was ordered for Western Air Lines. In its decision, the Board added that fixing a fair and reasonable rate for compensation for mail does not require the allowance in the mail rate of amounts heretofore frequently necessary in these cases, to permit the carrier to cover deficiencies in revenues of its commercial operations.

• Opening of service at Raleigh, N. C., on Route 5, and at Columbia, S. C., on Route 6 of Eastern Air Lines need no longer be delayed by requirements of national defense, according to a CAB order.

• American Airlines, Wilson McCarthy and Henry Swan, trustees for Denver & Rio Grande Western Railroad and Rio Grande Motor Way, Inc., were granted permission to intervene in the matter of applications of Western Air Lines, United Air Lines, Transcontinental & Western Air and Continental Air Lines for air service between Denver and Los Angeles.

• CAB issued an order to Colonial Airlines to show cause why the Board's conclusion that present mail compensation rates over FAM route 1 are fair and reasonable should not be made final. Colonial had alleged that the base rate of 21.61 cents per airplane mile was too low. This rate was applicable to mail on northbound trips and the Burlington-New York City sector of southbound trips. The same rate was fixed by the Postmaster-General for carriage of Canadian mail on the Montreal-Burlington sector of southbound trips.

• Dec. 1 is the new date set for hearing on TWA's application for service to Morgantown, Va. At a prehearing conference before Examiner Barron Fredericks, counsel for Blue Ridge Lines, suggested that distinction should be drawn between so-called trunk line service and the type proposed by his client. Counsel for Greyhound Corp. thought an applicant proposing local service should be protected against invasion of his field by a trunk line. All American said it would not participate unless the occasion should arise. The usual exhibits of economic characteristics and public convenience and necessity will be introduced by TWA at the hearing.

• At prehearing conferences on acquisition of Mayflower Airlines by Northeast Airlines, Public Counsel John Wanner suggested that this matter be consolidated with that of E. W. Wiggins Airways for air service between Providence and Nantucket and with Northeast's application to carry mail by helicopter to various points in New England. Northeast protested and requested that these matters be heard separately.

• Hawaiian Airlines withdrew its objections to a CAB show cause order that 0.3 mill per pound mile for mail, computed on direct airport to airport mileage basis was reasonable compensation.

• Record of hearing on renaming the Sarasota airport on National's Route 31 as Sarasota-Bradenton will be open for ten days to permit Public Counsel to enter another stipulation.

• Stipulations were agreed upon between Public Counsel and Counsel for Continental Air Lines in its mail rate case and the airplane agreed to supply further data. Continental requested that hearing be held in Denver.

► **War Service**—After a pat on the back for its ocean pilots, the report said service for the Army and Navy by PAA crews is far more than total plane miles flown by the system on all its civil air routes to 46 countries and colonies. Special mention was made of these civil air routes between this country and Europe, the British Isles, the Belgian Congo, Hawaii, Alaska and a 50,000-mile network in the West Indies, Central and South America. On a single division, PAA said, it has 106 flight crews expert in four-engined aircraft operation. The division flies 1,250,000 miles a month, carrying 3,500,000 ton miles of overseas cargo every 30 days.

Pan American also disclosed that one of 700 special missions it has flown for the military took a Clipper around the world, and involved the first aerial crossing of the Indian Ocean direct to Australia.

Cost-Plus Contracts Being Converted

Action regarded as evidence of progress in cutting war costs.

Disclosure that cost-plus-a-fixed-fee war contracts are being converted whenever possible into employer-incentive and fixed price contracts is made through reports of the War and Navy Departments, Maritime

Commission and War Shipping Commission to James F. Byrnes, Director of War Mobilization.

Government officials say the action is significant in that progress definitely is being made toward reducing the cost of war materials, eliminating conditions which have caused some war contractors to hoard labor and eliminating waste of manpower and money.

► **Background**—Behind this action is the fact that, when the war preparations program was started, Government procurement agencies undertook to secure fixed-price contracts. In 1940, Congress made illegal the old cost-plus-10 percent contract of the last war.

It developed, however, that procurement agencies could not secure the needed production of war goods under fixed-price contracts because many manufacturers were without experience in producing war materials and had no basis on which to estimate their costs.

► **Solution**—To meet this situation, a cost-plus contract was developed, the fee being a fixed amount of dollars which did not change with variations in cost. As production attained large volume, and production experience indicated what further production would cost, Government procurement agencies have been able to get many contractors to convert to a fixed price basis.



TCA'S NEW RESERVATION CONTROL OFFICE:

Trans-Canada Air Lines has a staff of 70, of whom 66 are girls, in its new central reservation control office at Toronto. Feature of the office is a forecast board that makes flight details available at a glance to operators in 14 sound proof telephone cubicles, who answer direct public inquiries and communicate with ticket office clerks.

Airways Traffic Levels Off, CAA Says

Army, Navy flights continue to make up bulk of those cleared through control centers.

Airway flight operations appear to have leveled off in September, after heavy increases since the first of this year, on the basis of latest figures from the Civil Aeronautics Administration.

Army and Navy flights continue to make up the bulk of those cleared through the airway traffic control centers and local towers. Others are classified as itinerants and carriers.

► **Slight Increase**—Navy and air carrier flights increased slightly in September over August, and a slight decrease was shown in the other two categories. A month earlier, heavy gains were reported in all four. All were higher in mid-year than in January, but it should be noted that not all of the 23 airway traffic control centers were in operation before July, so reports at the first of the year were somewhat incomplete.

Flight operations are reported by these centers and the 108 local traffic control towers to CAA's eight regional offices, which compile them and send them on to Washington. In the following table, which compares operations for January with those for July, August and September, it should be remembered that since each clearance by a traffic control center is listed as an operation, the number of actual flights was less than half the number of operations.

► **Protective Service**—The comparison serves, however, to indicate the proportion and growth in flight types, as reflected in recorded operations.

Type of operation	Jan.	July	Aug.	Sept.
Itinerant	38,221	65,563	74,602	65,797
Air carriers	79,792	98,489	103,385	104,660
Navy	79,187	172,720	197,592	199,443
Army	620,440	1,144,977	1,336,834	1,294,551
Total	817,590	1,491,739	1,712,413	1,664,451

Increase "Homing" Range Stations

CAA announces plan to step up number by 71 within few months.

Civil Aeronautics Administration is increasing the number of "homing" range stations—those which send their signals in all directions as opposed to the conventional four-direction transmitters. Seventy-one are on CAA's present program, and while their power at first will be



GLIDER AIDS BOND SALE:

John E. Parker, director of Northwest Airlines and president of Northwestern Aeronautical Corp., Minneapolis, sponsored a recent display of a Waco CG-4A glider built by Northwestern to aid a war bond drive in St. Paul. He is shown here with a WAC corporal and Marine sergeant.

only up to 50 watts, more powerful equipment is to be installed later.

Planes are being equipped in increasing numbers with direction-finding radios which enable them to fly to such stations, CAA reports. A few months will be required to

make the installations, placed near intermediate fields for ready location in emergencies.

CAA also is putting voice facilities in many places where previously communication was limited to teletype.

Airmail Pickup Sought in Canada

Line asks permit for service similar to All American system.

Canada soon may have a non-stop airmail and air express pickup system similar to that operated in the United States by All American Aviation.

Canadian Air Express, Ltd., of Kitchener, Ont., has applied to the Department of Transport at Ottawa for such an operation, to link Canadian centers with main transcontinental mail routes. Edward Good-eve, company president, cited the marked success of the system in this country, and said that if the application received approval, his firm expects to go into operation before the end of the war.

► **Helicopter** — Canadians are not overlooking the possibilities of the helicopter, either. Dominion Air Transit Co., Montreal, has applied for permission to operate a 2,000-mile helicopter service throughout Quebec's populated area as far west as Ottawa.

SHORTLINES

► The increase in express revenues on August rail-air express cargo was 47.4 percent, compared with August a year ago, while the number of shipments, totaling 34,664, was up 26.7 percent, according to the air express division of Railway Express Agency.

► Aircraft coming into the United States may clear customs and immigration through 39 airports and seaplane bases (as of Oct. 30), states the *Civil Aeronautics Journal*. Thirty-one of the "airports of entry" are without time limit, the other eight being on a temporary one-year basis.

► United says its proportion of 40 percent women in its 7,500 employees compares with an average of 36 percent for the airlines, which it reports lead other transportation systems in percentage of women employed. Women comprise 85 percent of United's passenger service department personnel, 80 percent of accounting department, and 75 percent traffic department.

► Demands for the House Interstate and Foreign Commerce Committee report (No. 784) on the Lea Bill (H. R. 3420) were so great that the House was called on, a few days ago, to authorize the printing of an additional 2,000 copies, a fourth for the Committee's use and the remainder to go to the House document room.

► Northwest Airlines asserts that its October express pound mileage of 96,973,821 set a new record for the company and marked the third straight monthly increase. The figure was more than 4 million pound miles higher than that for September. Cargo for the month was 147,558 express pounds, President Croil Hunter noted, mostly war materials.

► New figures from the Civil Aeronautics Board show that net operating revenue of the 18 domestic airlines for the year ended Aug. 31 was \$31,354,799, compared with \$18,040,576 for the same period a year earlier. Total operating revenues for the 12 months to

Aug. 31 this year were \$118,413,474, against \$106,373,928 a year ago, while operating expenses were \$87,058,675 compared with \$88,333,352.

► Pennsylvania-Central has opened a ticket office at the Naval Operating Base at Norfolk for convenience of the personnel there and at the Naval Air Station.

► CAB issues a safety bulletin urging pilots and navigators to keep up to date on vital cross country flying information on airway and airport changes. Twice recently, the bulletin said, pilots became lost and crashed because of their failure to acquaint themselves with realignment on a radio range.

► Another CAB safety bulletin announces that authority to modify the left hand circle rule over landing areas has been transferred from the CAB to the Administrator of Civil Aeronautics, to permit quicker action when immediate deviation from standard practice is expedient.

► Toronto has been informed officially that it will have use of the DeHavilland Aircraft airport north of the city after the war. Built by the Canadian Government, the port is being used to test *Mosquito* bombers built by DeHavilland. It is nearer the city than the present commercial field at Malton, 17 miles out. Malton will become an auxiliary field. The Toronto Island airport, within sight of the downtown business district, is being used by the RCAF, but will become an auxiliary field and seaplane base.

► Four men from CAB circles attended the First National Clinic of Domestic Aviation Planning at Oklahoma City last week. Chairman L. Welch Pogue was unable to get away from Washington, but Member Harilee Branch made the trip and delivered a speech. Member Josh Lee, being an Oklahoman himself, presided at one day's session. Chief Examiner C. Edward Leasure told the meeting about local-feeder-pickup service. Fourth man was Edward E. Slattery, of the public information section.

► The Laredo, Tex., Airdrome has been withdrawn by the Bureau of Customs as an airport for entry for civil aircraft and merchandise.

► CAA is issuing a written examination guidebook for pilots, compiled by its examination unit, to assist applicants for pilot certificates and ratings.

► Port of New York Authority has started air transport terminal studies with a view to post-war possibilities. John Walter Wood, air transport analyst, has been added to its planning staff. Air traffic potentials will be examined, pickup and delivery problems gone into, and data on applications for routes gathered for submission at Civil Aeronautics Board hearings.

Navy's Gas Needs

"Largest single military use of petroleum products is for aviation gasoline," Assistant Secretary of the Navy Ralph A. Bard discloses, citing the Navy's newest fighter plane, the *Hellcat*, which he said required as much aviation gasoline to keep it in the air an hour as would be required to drive a car from Chicago to Los Angeles.

Bard also pointed out that aviation gasoline suitable for operation of a commercial airliner between well-developed airports over well-monitored air routes is not satisfactory for operation of a carrier-based torpedo bomber. These bombers need a fuel that will deliver maximum power instantaneously to lift them fully loaded off the short deck of a carrier.

► Woodley Airlines, Anchorage, Alaska, asked CAB to extend its order of last June 30 for suspension of service to Pedro Bay, Alaska, which expires Nov. 15. No adequate or safe landing facilities are yet available, the applicant said.

► Northwest has informed the CAB it is resuming service at Grand Forks, N. D., Nov. 1, after suspension since Aug. 6 because of airport construction.

► Hawaiian Airlines, Ltd., of Honolulu, and David Watson applied to CAB for approval of interlocking relationships. Eighty-eight percent of the airlines' stock is owned by Inter-Island Steam Navigation Co. Watson has served as chief accountant for both companies since January, 1941; was elected assistant treasurer of the steamship company last March, and to the same post with the airlines

last June. To comply with section 409(a), Watson and the Hawaiian Airlines have asked approval of his serving as an officer of the company.

► Recommendation to the Civil Aeronautics Board was made by Examiner Ross Newman, following a hearing in Washington, that American Airlines' application to include Akron, Ohio, as a stop on AM 22, be granted.

► CAB examiners have recommended that Braniff be allowed to stop at Moline, Ill., as intermediate point on AM 9, between Chicago and the intermediate point of Burlington, Iowa. United, which stops at Moline on AM 1 out of Chicago, did not oppose the application.

► Ralph S. Damon and American Airlines filed with CAB for approval of interlocking relationships for Damon as vice-president, general manager and a director of American and as director and (until Feb. 1, 1944) consultant without compensation for Republic Aviation Corp.

► United reports it flew 35,058,300 revenue passenger lines in October for a new high. It was a gain of 3 percent over September and 24 percent over the 28,165,630 in October, 1942. Plane miles of 1,940,890 were 9 percent higher than the 1,891,772 for October a year ago.



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