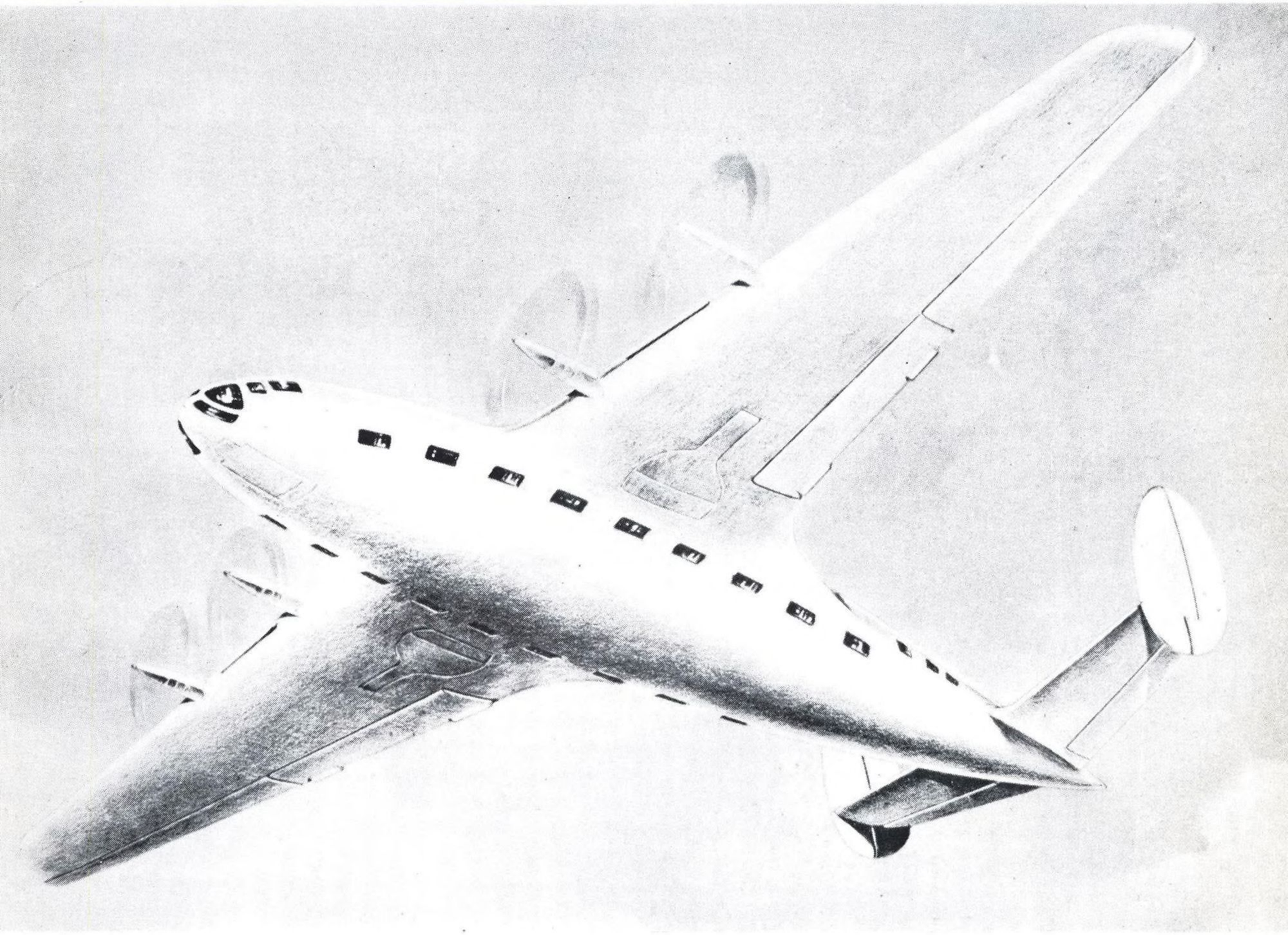
Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC. MARCH 6, 1944



British Post-War Airliner: *First sketch released in this country of the* Miles "X," *an all-metal, eight-engined design proposal by F. G. Miles, which has been submitted to the British Ministry of Aircraft Production. British Information Services reports the craft could carry 50 passengers and crew of five 3,450 miles at 350 miles an hour cruising speed. Wing span is 150 feet; length 110 feet.* *(Story on Page 7.)*

CPA Engineers Reveal Preferred Transport Types

Vast simplification program planned for post-war period expected to effect standardization of craft; sharp reduction made in engine types used. Page 38

February Plane Output Expected to Top 9,000 Mark

All-time record, both in units and—more important—weight, foreseen; production of heavy bomber and fighter types stressed.....Page 31

Allied Air Blitz Cuts Nazi Fighter Production

Assault on Axis plants reaches whirlwind proportions, entering new phase with increasing large-scale participation by U. S. heavy bombers. Page 19

Good Personal Plane Market Seen in Post-War Alaska

New passenger and cargo aircraft also to be needed to supply demands of air-enthusiastic inhabitants, CAA regional manager declares.....Page 41

Airline Officials' Holdings of Company Stock Disclosed

Some of principal officers of domestic firms listed as controlling as much as 50 percent of voting shares, according to CAB data.....Page 26

Truman Pays High Tribute to Plane Manufacturers

Committee cites "unbelievable" progress from handful of plants a few years ago to industry making 40 percent of our war material now....Page 9

THE AVIATION NEWS

Washington Observer

THE AIR WAR—Even the most conservative air officers are permitting themselves the luxury of private optimism over the results of our continuing aerial offensive against Germany. Weather plays a part in this offensive, even with our new devices which neutralize flying conditions, which heretofore kept warplanes grounded. Successive days of good flying weather will see even greater devastation visited upon the heart of Naziland.

★

AERIAL OFFENSIVE—History is in the making in the wings over Europe and, as Gen. Arnold commented, the attacks on German aircraft plants laid the foundations for "final and decisive operations in the future." German fighter production is being wiped out. The Germans are beset not only by day and night attacks from Britain, but also by blows from Italy. The question of whether Allied air supremacy can assure the success of a continental invasion and whether it might lead to a breakdown of German morale are not yet answered. More weeks of aerial hammering will be needed before the answer is clear, but no one can deny that this test of air power thus far has yielded results which are encouraging.

★

ENEMY'S DEFENSES—There are definite indications that the enemy's defenses have been breached. There is evidence on the other hand that vigilance is still necessary against counter-attacks as was pointed up by German raids on London, small though they be compared with our aerial attacks on Germany. It may be, too, that the Germans are husbanding their air power—what they have left—for a final desperate assault on Britain or as a defense against the invasion which certainly will come. Be that as it may, the fact remains that we are able to replace our losses and that our constant pounding renders the Germans incapable of replacing theirs. The ultimate outcome is obvious.

★

AIR POWER—The perennial debate as to whether air power alone is enough to bring the enemy to his knees is raging anew in the light of our terrifying aerial offensive. It should not be overlooked that when airmen speak of the ultimate use of air power they mean that the enemy can be crushed to a point where his capacity to resist is destroyed, not that airpower alone can "occupy and hold" territory. It should not be overlooked, either, in this connection, that our air generals, for the first time since the start of the war, have the minimum of sufficient men, planes and equipment to carry out an aerial offensive which will produce the results they have long attributed to concentrated and concerted air power alone.

★ ★ ★

THE BOEING WAY—Interesting in a day when many aircraft plants are spending millions on long, mechanized, flow-motion assembly lines, is Boeing's B-17 assembly plant in Seattle. Space utilization there excels that of many other plants and units are moved by monorail toward final assembly. The large, square assembly area is

notably free from costly, semi-permanent assembly line mechanism and there is indication that it might be converted at little expense to the assembly of new models—or the post-war manufacture of "other things" that Boeing intends to produce.

★ ★ ★

BATTLE REPLACEMENTS—The question of "battle replacements" is giving the Navy's Industrial Incentive Division some concern. While many of the Navy's prime contractors are meeting their production schedules for completed planes and ships, they are falling behind on their battle replacements quota. It has been found that some manufacturers, in their desire to meet

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their finished products quota, are "borrowing" from the battle replacements stockpile, leaving that short. The Industrial Incentive Division said that workers, in many instances, fail to realize the full importance of battle replacements. The Bureau of Aeronautics has worked out a program of balanced production of planes and spare parts, so that they will be available, since planes grounded for lack of battle replacements are now considered definite hazards, because they are potential targets. Planes must be produced at the proper rate to have them ready when the carriers they will supply are about to leave for the battle line, but the battle replacements themselves also must be available for instant use in emergencies. A general program to create additional replacements is under way.

* * *

PROPELLER EXPERIMENTATION—Little is being said at this time, but several manufacturers are making tests on small controllable pitch propellers for engines down to the 175 to 200 hp. class. It is believed that the costs of production would outweigh the advantages to be obtained at this time, unless a very simple two-position pitch control was used. Just how this will work out is still a matter of speculation, but some engineers are optimistic and the outcome may have important bearing on personal planes of the future.

* * *

AERIAL RECONNAISSANCE—On the long Pacific front, few branches of the Allied forces charged with prying the Japs out of their scat-

tered island bases are more vital than aerial photo reconnaissance squadrons, as has been proved repeatedly in recent days. Swooping down over enemy outposts, defying the anti-aircraft fire which guards salient sectors, "camera" planes film details of construction and topography invaluable to intelligence officers. From their photos, mosaic maps are made and photo interpretation reports prepared which provide vital information for combat tactics. Such a squadron is the Navy's famed VD-1, based on Guadalcanal. Their insigné is colored bright blue and gold, with a camera bug in pursuit of a Jap target.

* * *

BARUCH-HANCOCK REPORT—The blueprint for converting to a peacetime economy has been generally well received by aircraft executives, whose reaction might well be summed up in the observation that it is a good program and it is hoped that it can be put into effect. The report has been attacked by the AFL on the grounds that no provision is made for labor and management to participate in the administration of post-war planning, but it is not believed this viewpoint is generally held. A newly published appendix to the report emphasized the policy-making prerogatives of Congress in connection with demobilization and appeared designed to answer criticism that the report's recommendations rely too strongly on executive directives.

* * *

DRAFT DEFERMENTS—The new selective service directive calling for a review of cases of all registrants given occupational deferment is causing some concern in the aircraft industry. As was pointed out in an article in AVIATION NEWS several weeks ago, it will become increasingly difficult for aircraft manufacturers to justify deferments for young, unmarried men, despite the fact that technical and engineering departments are largely staffed with men in this category. It is still too early to determine just what effect the new policy will have on the industry's manpower problem, but it appears at this stage that a good many men now deferred will be reclassified.

* * *

PLANE NAMING—The business of naming an airplane is not as simple as it may appear on the surface. The names, under the policy of the Joint Aircraft Committee, must or should consist of but one word, and superficially compounded names should be avoided. In addition, the names must dramatize the function of various types of aircraft. To aircraft companies who want to name a new plane, or to change the name of an existing plane, the procedure may seem ridiculous. Among other things, existing names are involved with military communication, making changes difficult. On the other hand, it is no secret that there are unscrupulous persons around the country who are poring over dictionaries and thesauri and other reference books, seeking out names which might be applied to aircraft and then sitting back waiting to sue in the event a company selects a name which they have taken as their own property.

VOLUME 1 • NUMBER 32

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Data on 8-Engined Airliner Released by British Authorities

Miles "X," 55-passenger aircraft, powered by Rolls-Royce motors producing 14,000-hp. at 425 mph., is expected to carry pay load of 16,430 pounds; range 3,450 miles.

British Information Services last week released sketches of the *Miles "X,"* another proposed peacetime commercial airliner to compete with American transports.

The eight-engined 55-place craft would utilize Rolls-Royce engines producing 14,000 hp. at 425 mph. at 16,000 feet, or, on a weak mixture, 10,000 hp. at 380 mph. at 18,000 feet.

Disposable load is set at 63,280 pounds, with a payload of 16,430 pounds for a range of 3,450 miles. Payload at 2,100-mile range would be 32,680 pounds and at 1,000 miles it would be about 47,800 pounds.

▸ **Scale Model Flown**—A scale model already has been flown, the British Information Services stated, but no other details were made available.

In January, Lord Beaverbrook described plans for another giant transport, the *Brabazon,* with total weight of more than 100 tons, speed of 250 mph., and capacity for 50 passengers and two tons of mail. It was claimed that a prototype was on order, although design work was not completed.

▸ **32-Ton Plane**—A third commercial design, named the *Tudor,* would weigh about 32 tons loaded, cruise at 220 mph., and would carry only twelve trans-Atlantic passengers.

The *Avro York,* a civil version of the *Lancaster* bomber, is already reported in general operation.

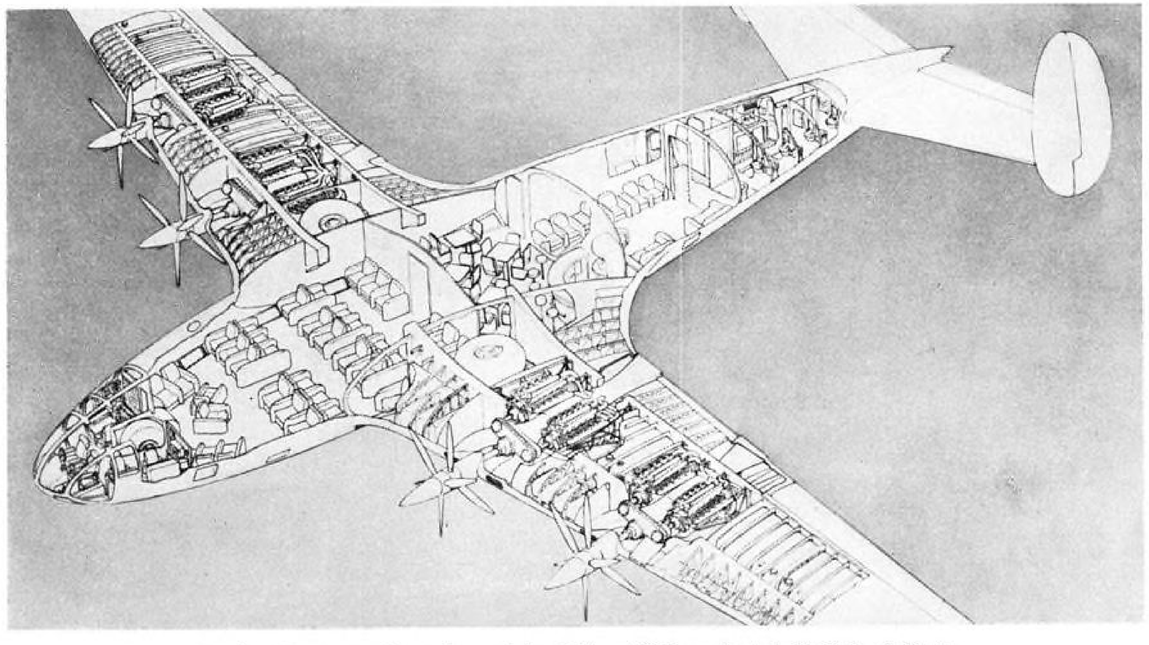
Philadelphia Probe

Civil Aeronautics Board has ordered an investigation of the situation at Philadelphia Municipal Airport, where it suspended service last December because of special hazards created in the airport vicinity by intensified military activity.

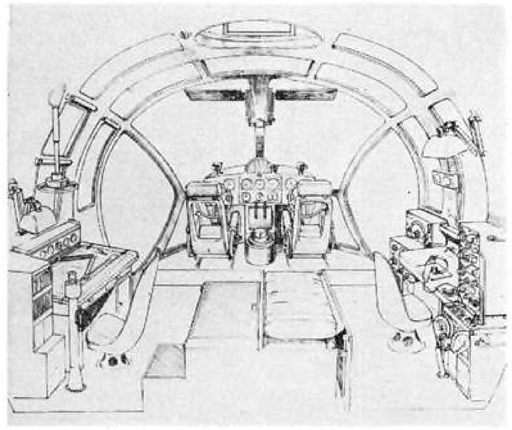
The investigation will seek to determine whether the hazards no longer exist or procedures have been worked out for the airport's use in view of the special conditions, and whether the December order should be revoked.

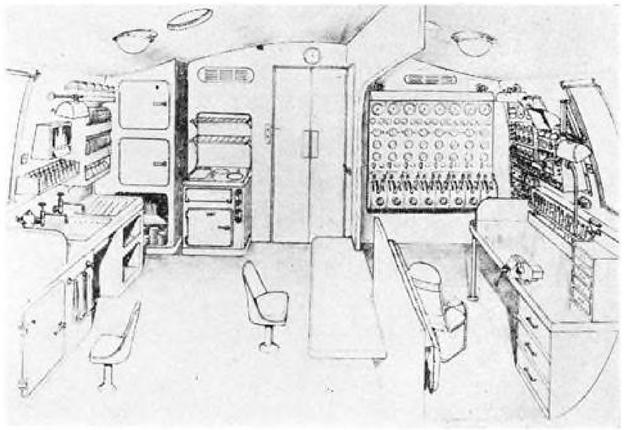
Anglo-U.S. Talks On Air Policy Near

After many dud rumors, negotiation with the British on international aviation policy is about to begin. Months ago, the Senate Commerce Committee asked the



Sectioned perspective view of the Miles "X," *projected British airliner.*





Interior Views of Miles "X": *Above, left, shows pilot's cockpit, with navigator on left and wireless operator on right. Other sketch shows galley and engineer's station of projected eight-engined airliner.*

administration to cease further dealings abroad until a complete understanding could be reached here at home.

Meanwhile the Interdepartmental Committee on International Aviation, of which Adolf Berle, Assistant Secretary of State, is chairman, produced a report to the President on recommended United States Policy. This report has not been thrown out, as some observers believe. It simply was not signed by the ICIA members. The object was to avoid putting on paper any commitments around which foreign parties could lay their strategy.

▸ **Green Light**—The Senate Committee now has heard most of the opinion and evidence and seems to have given the State Dept. the green light. This does not mean the Senate will retire from the picture; actually it will have the final say when it passes upon whatever treaty the Administration may make. Lord Beaverbrook, who will talk for Britain and who is often erroneously reported en route to Washington is really expected soon now.

One of Washington's best-kept secrets has been ICIA's report and its opinions. State Dept. laid down the law that horse trading cannot succeed if the traders know all about the horses in advance. But numerous people of necessity saw the report; several publishers knew what was in it during recent months; and one, far from Washington, published a fairly accurate outline of it.

Both the British and the United States are determined to cover the earth with airlines; both regard aviation as a major instrument of their future world relations.

Four Plants Affected By Cut in Trainers

Fairchild, Aeronca units and two Convair factories curtail output.

Four aircraft plants have felt directly the curtailment of the training plane production schedule with the termination of contracts by the Army.

Primary contractors affected by the order are Consolidated-Vultee at Nashville, Tenn., and Downey, Calif., Aeronca Aircraft Corp., Middletown, Ohio, and Fairchild Aircraft Division at Hagerstown, Md. This does not mean that these plants will be idle, but simply that more workers and materials will be available for the manufacture of combat planes and components.

▸ **Training Needs Met**—The need of the Army Air Forces for training planes on the vast scale of the past two years has now been met, and the cancellations are part of a gradual conversion of production to most needed types. A quantity of incompleted fabricated parts at the plants will be utilized as spares in maintaining trainer aircraft which at one time constituted nearly 60 percent of the aircraft production program.

Possibility of contract termination had been foreseen for some time by the manufacturers, since there has been a gradual decrease in number of training planes for several months as the emphasis has passed to heavier combat types and the emphasis on numbers of planes produced has shifted to weight.

▸ **No Layoffs Expected**—At Hagerstown, Richard S. Boutelle, Fairchild vice-president and general manager, said "we anticipate no appreciable change in the number of workers here and look forward to the opportunity to equal our trainer production performance on other projects which have been under way for some time."

The situation at other plants involved was understood to be similar to that at Fairchild. There were no indications of the number of workers affected in the four plants.

Martin Speeds Up Assembly Line

Halves time on final leg with new chain conveyor system.

A new automatic chain conveyor system installed in the horseshoe curve of the final assembly line for B-26 *Marauders* at Glenn L. Martin Co., has cut in half the time required to move the line and reduced from 66 to 6 the number of men required for the operation.

The former operation was a combination use of manual and tractor. The eight ships nearest completion were moved by tractor, with two men in the crew. The other nine ships were moved manually by crews of seven men each.

▸ **Chain Conveyor Installed**—Under the new set-up, a 1,320-foot conveyor chain, consisting of 1,100 solid and 1,100 split links, was installed in a channel several inches into the floor of final assembly. Powered by a 15-hp. motor, it pulls 225 tons of *Marauders* and dollies and other equipment 60 feet in three minutes. The dollies ride along a small track under the *Marauder* nose wheel.

Truman Report Pays High Tribute To U. S. Plane Manufacturers

Committee cites "unbelievable" progress of industry from handful of plants a few years ago to one now producing 40 percent of American war material.

By SCOTT HERSHEY

There probably is no Congressional agency that has scrutinized the aircraft industry more closely than the Senate Investigating Committee headed by Sen. Truman and, consequently, the Committe's comment on its third annual report that the aircraft industry as a whole deserves commendation for progress made in the production of military aircraft assumes more than ordinary importance.

The Committee report adds that "it would have been almost impossible to believe at the beginning of our defense program that an industry which then included only a handful of small and medium-sized companies would be scheduled in 1944 to produce almost 40 percent of our total war material."

▸ **Lauds Small Plants**—The original aircraft manufacturers, of course, have been tremendously expanded and manufacturers from other fields have been brought into aircraft both as subcontractors and producers of complete airplanes. These, too, the committee notes "in most cases have produced successfully."

The report takes notice of the thousands of plants which are manufacturing aircraft parts and components, mostly with private capital, and says great credit is due them. Because most of them manufacture only a small part of the completed airplane, their work tends to go unnoticed. But without them, and their excellent production records, as the committee points out, it would have been impossible to have had a successful aircraft program.

▸ **Few Bad Spots**—The Committee mentions the inquiries it has made in connection with aircraft manufacturing and comments that in any program which is so large there are certain to be some bad spots.

"The Committee has investigated and called attention to some of these in the past," the report says. "That it will undoubtedly do so in the future should not be allowed to detract from the record of the industry as a whole."

It is considered especially significant that the Truman Committee would comment thusly in view of some of the unfavorable publicity for the industry which has resulted from some of their investigations.

▸ **Stabilization** — Senator Truman and his committee members do not overlook the fact that the industry is now producing at the rate of more than 100,000 airplanes a year and that the ratio of combat planes to trainers and of superior planes to less desirable ones is steadily increasing. The report notes, too, the progress being made toward the stabilization of our production on our best types which "in practically all cases, are equal or superior to anything produced elsewhere."

"The ability of our aircraft to take punishment has been demonstrated on countless occasions," the report says.

Brief comment is added that improvement has been made in efficient utilization of manpower, although the committee says further attention on that subject is required.

▸ **Lauds Plane Industry**—"On the whole," the report adds, "the Committee believes that the aircraft industry should be commended and that it should continue to make every effort in the future to guarantee that our fighting forces are furnished with all the planes they need of the best quality that it is possible to produce."

A part of the aircraft section is devoted to a list of our Army and Navy combat craft, with brief descriptions which contain little new information.

In connection with naval air-

AWPC ENGINEERS CONFER:

Leading West Coast aircraft engineers met in Los Angeles recently as members of the engineering committee of Aircraft War Production Council, Inc. Identified clockwise around the table are: John W. Cramer, standards engineer, Boeing, (foreground); W. N. Wallace, Staff engineer, Lockheed; B. C. Boulton, staff assistant, Douglas; N. S. Houston, assistant chief engineer, North American; C. L. Bates, chief stress engineer, Northrop; R. A. Dutton, engineering manager, Northrop; M. E. Oliveau, executive assistant, Douglas; A. E. Raymond, vice-president, engineering, Douglas; B. T. Salmon, chief engineer, Ryan; and, standing, James L. Straight and Roger J. Dieudonne, AWPC staff members.

craft, the report gives special attention to Grumman and says "the Committee believes that the Grumman Aircraft and Engineering Corp. deserves special commendation because of the splendid work it has done for the naval aircraft program, both in designing superior planes and in obtaining large production."

▸ **Folding Wing**—"The new type of folding wing developed by Grumman has greatly increased the number of planes that can be carried by, and consequently the striking power of, a limited number of aircraft carriers."

As has been noted before, the manufacture of four-engine flying boats for use as patrol bombers will be discontinued and the few remaining to be produced will be modified as cargo airplanes. In the future, the Navy's four-engine patrol bomber will be a land-based plane, the PB4Y, to be built by Consolidated Vultee.

▸ **Transports**—On the question of cargo and transport aircraft, the Committee report says one of the most substantial contributions the United States has made in the field of aircraft was accomplished by providing thousands of cargo and transport aircraft which have flown millions of ton-miles of cargo.

The report notes that there were forward-thinking officers in both the Army and Navy who realized that a substantial contribution could be made by cargo with transport planes "although naturally even they could not foresee the full measure of that contribution. It involved too many imponderables, for unless operations were to be undertaken on a scale many times greater than our private airlines had ever attempted, the burden of establishing and maintaining the service would have exceeded the benefits to be obtained from it."

In the field of cargo and transport production, the Committee says "the greatest credit must go to Douglas Aircraft Co. and its DC-3 plane (Army C-47 and C-53) popularly known as the 'workhorse of the air'." This plane does not possess range and cargo-carrying capacity equal to others being built today, including other planes built by Douglas, such as the C-54A designed for mass production and a proposed new super cargo plane being developed by Douglas, for it is a modified version of a comparatively old plane first produced for private airlines in 1934.

However, many thousands of these planes have been built and more cargo and transport work has been done with this plane than with all other types of cargo and transport planes put together."

C.-W. Shifts Chiefs

A series of shifts in the top personnel of Curtiss-Wright's airplane division, effective immediately, moves Charles W. France from St. Louis, where he has been general manager, to the post of general manager of the Buffalo plants.

France succeeds William Davey, who, according to Burdette S. Wright, vice-president in charge of the division, will take over new duties with the Curtiss-Wright Corp. at the end of a two-months' leave of absence.

▸ **Succeeded by Witherspoon**—Burton H. Witherspoon, who has been executive assistant to Wright, with headquarters in Buffalo, succeeds France in St. Louis. William E. Nickey, formerly assistant to France in St. Louis, has been given the title of assistant general manager of the St. Louis plant.

ATS Chief Urges Long Range Program

Coombs links post-war aviation future to Pilot Training Program.

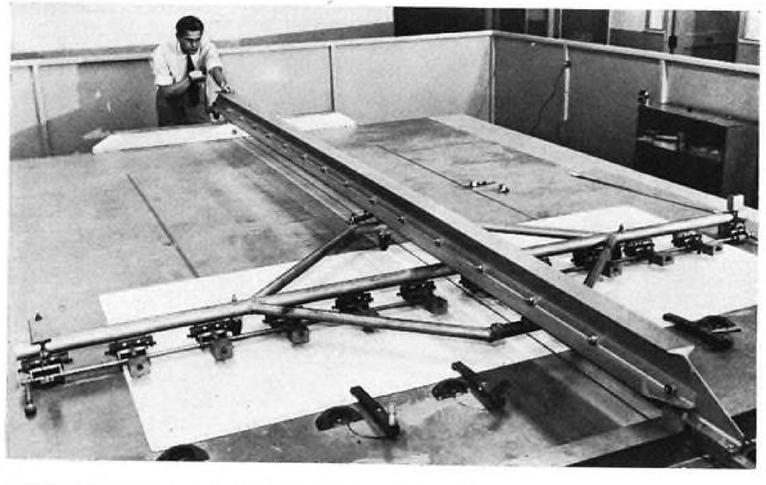
Aircraft production in West Coast plants inevitably is linked in the post-war era with the nation's Pilot Training Program and support of a long-range, adequate training program must be insured if plane plants are to escape the debacle of nearly complete shutdown, J. Wendell Coombs, president of Aeronautical Training Society, told representatives of 16 army contract flying training schools in California and Arizona.

Pointing out that military pilots become obsolete at about the same rate as military aircraft, he said flyers would have to be retrained for post-war commercial aviation.

▸ **Safety Record**—"America's future security and future production of aircraft are strictly limited by the number of pilots able to fly the latest types of aircraft that come off the assembly line," he said.

Coombs also told the school operators the latest safety figures of the 63 ATS schools training Army Air Force cadets and United Nations pilots. The fatal accident rate in primary training is only one for every 43,478 hours flown. On the basis of 100 miles per hour, that is only one per 4,347,800 miles. He said one of the schools has flown over 375,000 hours without a fatality.

Progress of the war indicates a slackening in the pace of cadet training, but Coombs said he thought the training program would continue on a replacement basis. Thirteen of the 63 schools have been placed by the AAF on a standby basis between now and June 30.



BOEING DEVICE AIDS DRAFTSMEN:

With this "grid machine," the invention of Lyle L. Pierce, chief of the master layout unit, two Boeing Aircraft Co. draftsmen can do in one day more and better work than they could do previously in half a year. The machine's gang scribers mark with mechanical accuracy grid squares necessary for accurate drawing of designs on the painted surfaces of steel sheets carrying master layout drawings.

Over 5,000 Planes Sent Reds in 1943

More than 3,000 of total received in Russia reported ferried all the way.

More than 5,000 American airplanes were sent to Russia last year under lend-lease, twice as many as in 1942 and over 3,000 were ferried all the way.

Leo Crowley, foreign economic administrator, in reporting on the aid given the Red Army, said virtually all planes sent to the Soviet Union have been combat types and last year they were principally Bell's P-39 *Airacobra* fighters; Douglas A-20 attack bombers and North American's B-25 *Mitchell* medium bombers.

The report said the United States has contributed a total of 7,800 planes to Russia.

New Prop-Testing Stand Developed

Designed for calibrating and adjusting all Curtiss Electric prop governors.

A new test stand for Curtiss Electric propeller governors that produces flight-condition vibration on the governor being tested has been developed by engineers at Airplane Manufacturing & Supply Corp., manufacturing division.

The unit is designed for testing, calibrating and adjusting all Curtiss Electric propeller governors and featured in the stand are its automatic control unit which allows the governor under test to control the speed of the driving unit—a selector switch on the instrument panel enabling the operator to choose automatic or manual operation—two lamps to indicate opening and closing of the inc. and dec. rpm. governor contacts during operation, and another lamp to indicate any grounded circuit in the governor.

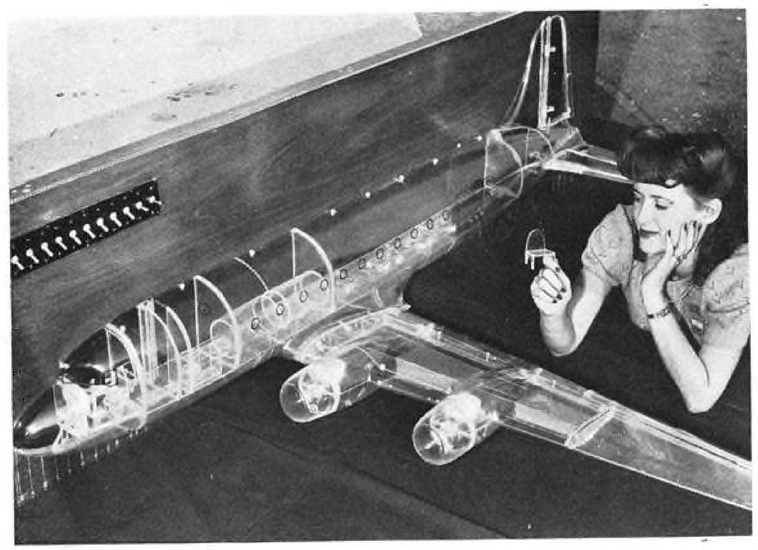
Study Consolidation Of Army, Navy, AAF

There are renewed indications that a consolidation of Army, Navy and Air into one Department of War is again receiving the favorable attention of the Chiefs of Staff, a set-up which would provide for a general staff which would function under a single chief of staff, with equal rank for Army, Navy, Air and Supply.

Although such a proposal has been widely discussed in Washington for some time and the ultimate establishment of a unified air force forecast by AVIATION NEWS some months ago, a copyright story in the *Washington Post* once more brought the whole question out into public notice.

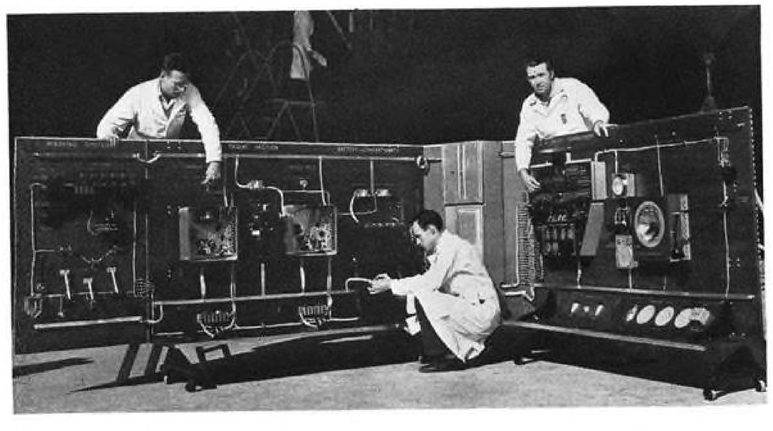
▸ **Program**—The plan, as outlined, provides that all land-based planes function under a single air command but that the Navy control all carrier-based planes.

The single department would have a civilian head with civilian assistants for each service; a single chief of staff with the proper deputies and the general staff would be divided into two parts, Operations and Materials. Under each would be sections handling the special branches—Army, Navy and Air.



MOBILE TRAINING UNITS:

Flight and ground crews at AAF bases now receive supplementary aid from elaborate mobile training units. Douglas officials report units have been built around critical mechanical parts of thirteen planes: P-39, P-38, P-40, P-47, P-51, A-20, B-25, B-26, B-17, C-46, C-47 and C-54. A mobile training unit for the Boeing Superfortress, *B-29, is being assembled. In the latest Douglas unit, shown here, all functional systems of a C-54 are contained in displays carried in two truck-towed trailers, identified as Mobile Training Unit No. 69 of the Army Air Forces Western Technical Training Command. The C-54 unit is accompanied by nine instruction specialists. Douglas also has developed a panel-mounted C-54 instruction unit for transportation to overseas bases aboard C-47 transports.*



WPB Emerges With Major Role In Industrial Demobilization Plan

Appendix to Baruch-Hancock report reveals Board's place in post-war reconversion program as that of powerful unit instead of third-rate agency depicted in original draft.

The part to be played by the War Production Board in the demobilization of industry was pretty clearly defined last week by Bernard M. Baruch and John Hancock in an appendix appearing in printed copies of their report on war and post-war adjustment policies. The report was released several weeks ago but the appendix did not appear on the original copies.

According to the two White House planners, WPB will not be the third-rate agency which many persons suspected upon reading the original report. In discussing broad policy questions, Baruch and Hancock gave WPB some general operations to perform but little or no policy voice. However, in their later delineation of WPB's role in the reconversion picture, the agency seems to emerge as a relatively powerful unit and one that may have considerable control over all the transition problems facing the aircraft industry in the shift from war to peacetime production.

▸ **WPB's Job**—This is WPB's job, as described by Baruch and Hancock:

▸ To keep the program of production for war and civilians in constant balance.

▸ To lay down the policies to guide the choices for canceling contracts of war goods no longer needed.

▸ To work with the armed services and other procurement agencies and with the War Manpower Commission and other civilian agencies in making the actual choices of which producers are to be canceled and which left in war production.

▸ To guide the shifting of contracts to make use of facilities or manpower freed from war production.

▸ To decide what civilian production and employment is to be resumed as war needs slacken.

▸ To work with the surplus administrator and armed services on the disposal of surplus government property so as to stimulate both war production and resumption of civilian employment.

▸ To keep all war controls under constant review so that they can be promptly modified.

▸ To review worthwhile local projects, deferred during the war, and which may be cleared as war needs slacken.

BUILDING A BASE AT ADAK:

Type of airport construction equipment used by Navy Seabees in the northern Pacific is shown in this photo taken shortly after work started at Adak, Alaska, months ago, while tents served as shelter.

This definition of WPB's job in reconversion supplies the missing chip in the Baruch plan and it is now possible to foretell more or less precisely how a given aircraft manufacturer will be handled during the reconversion period. If the Baruch plan is not superseded by legislation which would radically change the present policy, this is the outline of events which would get the aircraft manufacturer out of war work:

▸ As the military situation shifts, the production of certain types of aircraft and aircraft munitions is cut. Although over-all aircraft production is still at peak levels, many minor adjustments already have taken place and with the defeat of Germany, major cuts would come.

▸ After WPB and the armed services have decided what cuts are to be made, they will then determine which aircraft manufacturers are to be canceled out and which will be left in production.

▸ On all aircraft contracts terminated, the government will owe the manufacturers money. It will be necessary to determine what the government owes and to pay manufacturers promptly so they will have ready working capital with which to take on new business. This is the contract termination settlement phase.

▸ At the same time, these aircraft plants must be cleared physically of government-owned inventories, raw materials, equipment, and semi-finished parts, so as to make room for new equipment and new materials to start up peacetime production.

▸ Materials, inventories, equipment and other properties coming into the possession of the government will be redistributed as far as practicable among aircraft manufacturers remaining in war work.

▸ As aircraft plants, manpower, and materials are freed from war production, these resources will be shifted to other warwork.

▸ When war needs are satisfied, these resources of manpower, materials, and plants will be shifted to production and employment for civilians.

▸ As war needs slacken, wartime controls on aircraft production and production of aircraft components will be modified or removed.

Some of these steps will be carried on concurrently, while others will take place in sequence, but, regardless of the order in which they will occur, this is unquestionably the picture of the future.

FEDERAL DIGEST

Time-and-Half Pay At Wright Allowed

Summary of week's activities in U. S. and war agencies.

By MARY PAULINE PERRY

Wright Aeronautical Corp. was authorized by National War Labor Board to pay time and a half for work on the sixth day of the work week to employees at the Lockland, Ohio, plant. About 26,000 production workers are affected.

Dec. 16, the Board directed the company and the union to negotiate on reduction of labor grades in the plant from 28 to 13, and to establish the same progression schedule as in the Paterson, N. J., plants, except that the overall length of the schedule was set at 38 months.

▸ **War Production Board** restricted manufacture of lighting equipment for aircraft to equipment certified by the Aeronautical Board, the AAF, the Navy Bureau of Aeronautics or the Civil Aeronautics Administration.

The action, effective Apr. 10, 1944, will standardize and simplify lighting equipment and eliminate substandard and obsolete items, except as needed for maintenance and repair of existing craft. Maximum interchangeability of parts and equipment for military and civil aircraft will also result.

▸ **Equipment Table**—A table of acceptable aircraft lighting equipment accompanies the order as an informational supplement drawn up for the guidance of the industry, WPB said.

Subcontractors may procure public address system sound equipment since WPB has announced a limited number now available for industrial plants engaged in essential war work.

C. E. Wilson has issued a WPB order delegating all authority for control of idle aircraft inventory to the director of the Aircraft Resources Control Office or such persons as the director may designate in writing. The order reads that no person may sell, trade, give or otherwise transfer any idle aircraft materials of the type listed on an attached schedule except in accordance with regulations issued by ARCO.

▸ **Board Membership**—Personnel of the new War Contracts Price Adjustment Board, created by the renegotiation section of the Revenue Act of 1943, include representatives from: War Dept., Navy Dept., Maritime Commission, War Shipping Administration, Treasury Dept., Reconstruction Finance Corp., and War Production Board. The first meeting of the Board was held Feb. 26.

All legal authority on renegotiation is lodged in the War Contracts Board which, among other things, has responsibility for fixing policies, principles, interpretations and procedures.

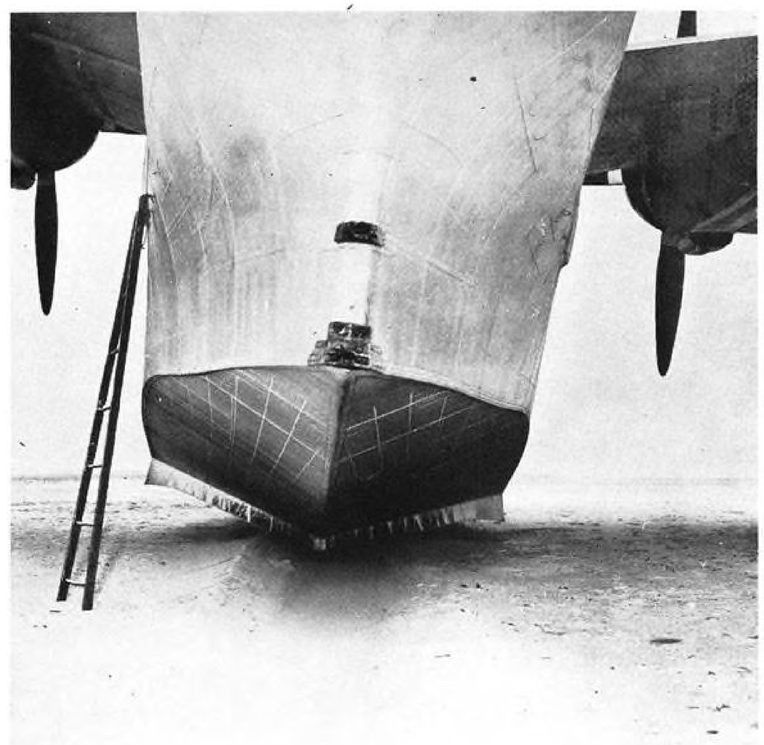
▸ **Defense Plant Corp.** increased its contract with Lockheed Aircraft Corp. by approximately $475,000 for additional facilities at a plant in Burbank. Over-all commitment is now about $8,500,000.

An added $670,000 in DPC's contract with Briggs Manufacturing Co. brings total commitment to approximately $9,500,000. The increase was for additional plant facilities in Detroit.

▸ **National Labor Relations Board** ordered an election for Bell Aircraft Corp., Buffalo, militarized guards for or against UAW-CIO. Timekeepers and assistants of Aluminum Forgings, Inc., Erie, Pa., will vote for or against the same union.

During the week, certifications were made at the following plants: Eclipse Aviation, Pioneer Instrument Division, Bendix Aviation Corp., for Aircraft Workers Union of N. J., Inc.; General Motors Corp., Detroit Transmission Division; General Motors Corp., Fisher Body-Fleetwood; and Willys-Overland Motors, Inc., Toledo, all for UAW-CIO.

▸ **War Department** announces award of a contract for construction of runways, taxiways and apron expansion at Matagorda



MARINER MAKES DRY LANDING:

The Navy pilot of this Martin PBM-3 Mariner *set the flying boat down on dry land. It was during a night operation flight, the weather had closed in and visibility was zero minus. He "felt" the fully loaded 24-ton patrol bomber down onto what he thought was the channel between two sand bars. He called for sounding and back through the interphone came, "Zero, zero, sir." The service crew, the next day, arriving with full crash equipment, discovered all they needed was shovels, strong backs and a couple of paint brushes. Not even a rivet popped.*

LATEST FIRE FIGHTING SUITS:

These two firefighters, shown on duty aboard a Navy carrier while planes are landing and taking off, are garbed in the latest asbestos fire-resisting suits in use. Firefighters are always ready to rush to any place which crashes and burns.

Island, Tex., to amount to $986,-102. Another contract has been let for construction of parking apron and landing field expansion at March Field, Riverside, Calif., for $735,227.

In addition, the War Dept. has let contracts for $1,205,000 improvements at AAF bases.

▸ **Office of Civilian Defense** will present the National Security Award to Consolidated-Vultee Aircraft Corp., San Diego, Mar. 10. Six establishments will be given the award for superior plant protection and security organization.

Hothouse Tests Air Photo Equipment

Testing of aircraft equipment in "cold" chambers of various types is now more or less routine, but now comes a "hothouse" developed to combat rust and corrosion of photographic equipment to be used in the tropics and near the sea.

Development of a "hothouse" was announced by Fairchild Camera and Instrument Corp., one of the principal suppliers of aerial cameras to the armed services. The hothouse, or room, is built off the ground and airtight.

Piper to Emphasize Aircraft Production

About 37 percent of output now is represented by Army L-4 plane, company reveals.

Major portion of Piper Aircraft Corp. production during the fiscal year ended Sept. 30 consisted of material of a nature which the company is not at liberty to disclose, while approximately 37.5 percent of the output was represented by the Army plane known as the L-4, a somewhat modified and improved version of Piper's well-known standard low-powered trainer.

Significantly, the company in its report emphasized that "current indications are that our fiscal year 1944 will see a higher percentage of aircraft in our output. Virtually all Piper's output during the past year went to the Air Corps and Signal Corps.

▸ **Private Plane Output**—It is the belief of company officials that the manufacture and sale of airplanes to private owners ultimately will constitute the major portion of the aircraft industry, but at the same time they feel that the immediate expansion of the business will be much less spectacular than is generally anticipated, with very keen competition in the field.

The report noted that because of limited manpower and because the company's energies have been directed toward government orders, the Experimental Department has been unable to devote much time to the development of new models.

▸ **New Plane Developed**—However, during the year, the company designed and constructed a low-wing monoplane with landing gear retractable into plywood wings (described in a previous issue of AVIATION NEWS) which has been well received by those who have seen it or flown it.

During production of the L-4, Piper has been constantly making changes and will be able to present an improved trainer immediately after cancellation of contracts or whenever raw material is released for civilian use.

▸ **Post-War Aviation**—Turning to post-war aviation, the report emphasizes that regardless of how efficient, how low-priced future airplanes may be, flying will never reach any magnitude without suitable facilities, a theme which has been propounded by other authorities.

Until recently, as the report points out, emphasis in the United States has been on large air terminals, for the cost of one of which hundreds of small airports could be built. Little has been said about the need for landing strips, small airports, emergency fields, and servicing outlets until of late, but private flying will expand only as fast as small airports are constructed adjacent to highways and towns.

▸ **Renegotiation**—The report disclosed that renegotiation of war contracts for the fiscal year ended Sept. 30, last, was concluded by assessment of a gross refund of $360,-000 resulting in a net refund to the United States Treasury of $88,209 after credit for income taxes.

Results to be anticipated from renegotiation for the fiscal year, the report says, are uncertain and accordingly it is not possible to give the shareholders an accurate picture of the net profits.

In preparing the financial statement, the company's auditors included an allowance for renegotiation based on the results of renegotiation for the prior fiscal year and $368,000 has been set aside as a reserve for net refund to the United States Treasury.

▸ **V-Loan Negotiated** — In May, 1943, the company entered into an agreement on a V-Loan with a group of banks headed by Manufacturers Trust Co., of New York, providing for a revolving credit not to exceed $2,000,000 at any time.

During the fiscal year 1943, the company spent approximately $100,000 in new building additions which house a portion of the crating, warehouse, receiving stockrooms, tubing and metal fitting departments.

Douglas to Refund $12,000,000 to U.S.

Douglas Aircraft Co. reports a renegotiation agreement has been reached with the government on 1942 earnings under which the company will refund $12,000,000.

Ralph V. Hunt, vice-president, said 1942 earnings after adjustment, amounted to a profit of 1.7 percent on billings of $494,781,985. After federal income tax adjustment, the settlement made reduced net income for the fiscal year ended Nov. 30, 1942, by $2,500,000. Net income after adjustment was $8,-554,619, equal to $14.25 a share, compared with $18.42 a share reported before renegotiation.

New 'Skin' Developed As Prop De-Icer

A new electrically heated propeller "skin," made in part of a special conductive synthetic rubber that enables the propeller surface to warm has been developed by the B. F. Goodrich Co., in conjunction with the National Advisory Committee for Aeronautics.

The new heated propellers, designed to combat formation of ice, are now, following tests, being installed on planes destined for icy-region operations. The "skin" is made of a combination of two kinds of synthetic rubber, the outer surface being a thin coating tailor-made to conduct electricity instead of blocking its flow.

▸ **Current from Generator**—Since the current comes from a generator attached to the shaft, the propeller can be kept warm and ice-free as long as the engine is running. When there is no danger of icing, no current is passed through the skin and it simply rides the propeller, cemented permanently in place and conforming exactly to its shape so as not to interfere with aerodynamic design or performance.

Controllable Pitch Prop Tested For Use on Small Plane Motors

Aeroproducts Division, General Motors, conducting experiments on light model attached to 450-hp. engine on trainer.

While most spectacular work in airplane propeller development is going in the direction of bigger diameters and more blade area to accommodate higher horsepowers supplied by giant new aircraft engines, at least one of the principal propeller manufacturers, Aeroproducts Division, General Motors Corp., at Dayton, is doing some interesting experimental work on propellers for smaller engines.

Working on an Army experimental contract, the Dayton manufacturer already has made flight tests on a small controllable pitch propeller mated to a 450-hp. engine on an Army trainer, lent to the manufacturer for the tests.

▸ **Plane's Gear Shift**—Advantages of controllable propellers on Army trainers, and on possibly even the small Grasshopper type liaison planes are obvious. Pitch control serves much as the gear shift on an automobile, enabling the pilot to use full engine rpm for takeoff, with a low blade pitch, and to increase his blade and throttle down the engine for cruising, once he has attained the level at which he wishes to fly.

Pitch control gives greatly improved performance on any airplane, other factors being equal, so that the small Army planes would have improved takeoff and flight characteristics, instead of having to use fixed pitch propellers, set at a compromise pitch, which gives neither maximum efficiency for takeoff nor for continuous operation.

▸ **Hollow Steel Blades**—The experimental two-blade propellers, which have been test flown, are fitted with hollow ribbed steel blades, copper brazed, similar to those mounted in the hubs of the larger production propellers made by Aeroproducts, but the engineers are studying other materials, and do not expect necessarily to be limited to steel for the small props. Advantages of the hollow-steel blade in weight-strength ratio are lessened as the size of the blade diminishes and this may be a determining factor in selection of some other material for the smaller propellers.

The four-year-old firm, which climbed rapidly into major league competition in the propeller industry on the strength of its new simplified hydraulic propeller design, makes three- and four-blade propellers for Army fighters, and is now in production on a six-blade dual rotation propeller for use on a plane not yet announced.

▸ **Adaptable to Fighters**—The sin-

CATALINA'S IMPROVED GUN BLISTER:

Gunners in Consolidated Vultee Catalinas *(PBY-5, nicknamed the* Dumbo *in the Southwest Pacific) have been photographed rarely in recent years. This new photo shows the plane's improved gun blister.*

gle-rotation propeller is particularly adaptable to fighters of the Bell *Airacobra* type, because of the absence of any operating mechanism in the center of the hub, permitting the mounting of a cannon through the propeller shaft. The hollow shaft design also is adaptable to dual rotation with only minor changes.

Basically, the Aeroproducts design includes two assemblies, a one-piece forged alloy steel hub in which the blades and their pitch-change mechanisms are mounted and a regulator containing the oil reservoir, pump and governor. Pitch change is accomplished by a torque unit mounted in the hub-barrel and extending up into the hollow shank of each blade. Actually, this unit is a piston fitted with internal and external splines. These are mounted between an external spline fixed to the hub and an internally splined cylinder connected directly to the blade shank. When hydraulic pressure is applied to either side of the piston the resulting axial motion changes the blade pitch through the spline arrangement.

▸ **Maintains Operating Speed** — From the oil reservoir in the regulator, the hydraulic fluid is pumped under high pressure to the governor, which directs it to the side of the pitch control piston necessary in order to maintain constant engine speed. The governor is actuated by centrifugal force balanced by a spring load. The spring load in turn may be controlled by the pilot to select the desired operating speed, which then is automatically maintained by the propeller.

Besides the studies in dual-rotation and small blades, Aeroproducts is doing research on reverse pitch and full-feathering propellers, as well as seeking to step up still further the speed of the pitch change, in line with advanced thinking of many leading propeller experts (AVIATION NEWS 1/31/44, page 11).

▸ **Commercial Use**—Asked about post-war possibilities of the small blades, Aeroproducts representatives admitted they had not had time to study commercial applications of the blades because of their military commitments and declined to make any estimate of possible costs.

It is apparent, however to any aviation observer, that inexpensive small controllable pitch propellers could have far-reaching effect in improvement of small commercial and private airplanes, giving the same improvement in performance that it would give to Army trainers and *Grasshoppers*, which are basically not unlike many of our private planes, from which they were developed.

▸ **Cost Factor**—Costs would be the main limiting factor, and these would be determined largely by complexity of pitch change mechanism, materials used, and most of all, the amount of quantity production achieved. Private plane manufacturers generally are seeking to get the costs of their post-war planes down to a figure near that of an expensive automobile, and this leaves them only a limited budget for propellers. If they can buy a propeller with pitch control and stay within their budget, they can offer a vastly improved airplane.

CORONADO'S SIDE GUNNERS:

Arrangement of the side gunners' hatch in the Navy's four-engine PBY2 flying patrol boat, the Coronado, *is shown in this new photo released by Hill &Knowlton. A limited number of* Coronados *was built by Consolidated Vultee's West Coast plant last year.*

United Air Lines Adds Two Officers

United Air Lines has announced election by its Board of Directors of Curtis Barkes as comptroller and Carrol H. Blanchar as auditor. William A. Patterson, president, said the two new offices were created in view of United's growth and the "increasing complexity of its activities."

N. B. Haley will continue as treasurer, supervising collection and disbursement of funds. Barkes will have charge of accounting functions and Blanchar of internal auditing. The three will report to John W. Newey, vice president in charge of finance.

▸ **Veteran** — Barkes is one of United's oldest employees in point of service. He joined National Air Transport as assistant treasurer in 1925, and continued in that post when NAT became part of United. Blanchar, a University of Wisconsin graduate, joined United last November. He had been auditor of Commonwealth Edison Co. for six years and was with Arthur Andersen & Co. for four.

Aerial Survey Made Of Latin America

Inter-American aviation will benefit by a survey being conducted to provide accurate, uniform, coordinated maps of all countries of the hemisphere.

The work is described by Robert H. Randall, chief examiner of surveying and mapping in the Budget Bureau, in the current *Geographic Review*, organ of the American Geographic Society of New York.

COMMENTARY

Nazi Plane Output Drops Sharply Under Weight of Allied Air Blitz

Assault on Axis fighter plants reaches whirlwind proportions, entering new phase with increasing large-scale participation by American heavy bombers.

This is it. Twenty-one months ago General Henry H. Arnold was in London completing arrangements with Generals Spaatz and Eaker of the Eighth Air Force and Air Chief Marshal Portal and Air Marshal Harris of the RAF for the forthcoming American participation in air operations over Europe. Before leaving London, he stated: "My visit has, I hope, hastened the time when our air arms shall join in an air offensive against the enemy which he cannot meet, defeat or survive." A few days before, by a terrific effort on concentration, the RAF Bomber Command had demonstrated the possibility of sending 1,000 bombers against Nazi industrial cities in overwhelming night attacks by carrying out such missions against Essen and Cologne.

Earlier in his statement, General Arnold indicated the scope of the joint air offensive which would be possible when full strength had been built up in both commands. He said there was every reason to believe 1,000-bomber attacks could be made several nights per week, dropping between 2,000 and 3,000 tons of bombs on vital industrial cities, and that similar armadas of American heavy bombers could be sent on precision daylight missions against several key targets at one time. This strategy was confirmed at Casablanca a few months later by the combined chiefs of staff.

Plan in Action—The RAF part of the combined program went into effect last spring with the opening of the "battle of the Ruhr," virtually completed by late fall with more than a dozen of the chief Ruhr valley cities knocked out of the war potential. Many other such cities remain in other parts of the Reich, and the RAF Bomber Command continues to knock them out, "city by city." The AAF part of the program, due to the demands of the Pacific-Asiatic theaters, the anti-submarine campaign and the Mediterranean campaign, took longer to reach the scale of the huge RAF attacks. Despite spectacular and often highly destructive individual missions during the past six or eight months, it may be reasonably stated that the effort of the Eighth Air Force entered a new phase on Jan. 11, 1944, in the shattering blows delivered against three great aircraft factories at Oschersleben, Halberstadt and Brunswick.

Whirlwind of Destruction—The Allied air offensive against the top priority fighter aircraft industry reached whirlwind proportions during the week of Feb. 20-26. It began with a very heavy RAF attack on Feb. 19-20 against Leipzig, a key industrial city which has assumed an even greater importance during the past few months since the destruction of much of the Ruhr heavy industry. Leipzig contains the important Erla ME-109 assembly plant, which hitherto has not had the attention given two other principal producers of this fighter, the assembly plants at Regensburg and Wiener-Neustadt.

The week ended with the Feb. 25-26 RAF attack on the main Messerschmitt (former Bayerische Flugzeug Werke) factory for the assembly of twin-engine rocket-firing ME-410 fighter-bombers. Other RAF night attacks include Stuttgart (Feb. 21-22), containing important aircraft parts, engine and bearing factories, and Schweinfurt and Frankfurt on Thursday night (Feb. 24-25). The savagely defended Leipzig target brought a record loss of 79 RAF heavy bombers, but the huge night attacks went right on.

U. S. Strategic Air Forces—It was the American effort, however, which reached a new high during the week. On Sunday (Feb. 20) 1,000 *Fortresses* and *Liberators*, escorted by another 1,000 *Thunderbolts, Lightnings* and *Mustangs*, struck heavy blows at no fewer than eight important fighter aircraft factories. These ran the gamut of the main single- and twin-engine fighter opposition now being met in the air battles over Europe, including the ME-109, the FW-190 and the JU-88 (the 188 is a radial-engine bomber, now taking part in the raids on London), and the ME-110 and improved 410.

The attack on the Arado FW-190 factory at Tutow was the first since the Eighth's "little blitz" on the fighter factories last summer (July 28-August 17), at which time, if the present strength of heavy bombers, crews and escorting fighters had been available, the job could have been practically completed. Without giving the Luftwaffe time to catch its breath, repeat blows on the same targets as those struck on Feb. 20, together with some new ones, were inflicted by the Eighth Air Force on Feb. 21, 22, 24 and 25 (see accompanying table). Coupled with this were heavy attacks by the Fifteenth Air Force, based in Italy, on Feb. 23 to 25, completing the air pincers movement from the south.

Fifteenth Air Force—During October, 1943, the Twelfth Air Force Bomber Command was in process

EMERGENCY KIT:

This new RCAF bandolier personal emergency kit worn by all flying personnel when aloft, carries food, medical and signal aids.

of reorganization as the Fifteenth Air Force, primarily for the purpose of attacking German war industries in the eastern and southeastern parts of Germany, and in Austria, Czechoslovakia and Poland. The Twelfth became a Tactical Air Force for cooperation with the ground forces. The Fifteenth was announced on Nov. 1, 1943, and got off to a flying start the next day with a smashing attack on the ME-109 factory at Wiener-Neustadt. In the four months since that attack, activity does not appear to have reached the stage where another attack is in order.

During the next three months, important strategic targets were hit by the Fifteenth, including the ball-bearing works at Turin (twice), the ME-410 assembly plant at Augsburg, the airfield and ME-109 parts factory at Klagenfurt, Austria (twice) and many vital industrial and communications targets in southern France and northern Italy. From time to time, notably during the past few weeks in connection with the Anzio bridgehead when weather permitted, the Fifteenth Air Force has left its strategic job and thrown its very heavy weight around in connection with ground operations.

▸ **The Fifteenth Arrives**—During the week of Feb. 20 to 26, however, General Twining's bombers carried out the biggest missions yet conducted in the Mediterranean area. These include two attacks on the ME-410 plant and one on the engine and bearings factory at Steyr, Austria, and a finely synchronized attack on Regensburg's Prufening aircraft factory (ME-109's) in coordination with an attack on the same target from Eighth Air Force British-based bombers; the effect on Nazi air defenses was demoralizing, and the factory was practically wiped out. In addition, the Fifteenth bagged some 93 German planes during this attack, a record for the Mediterranean theater. General Eaker, commanding general of the Mediterranean Allied Air Forces, reported that reconnaissance photographs indicate that substantial damage was done in all attacks.

Actual operations of the Fifteenth are under the over-all direction of Gen. Spaatz, as a part of the U. S. Strategic Air Forces in Europe, which includes the Eighth Air Force under General Doolittle. The possibilities of similar coordinated attacks are immense. Another good example of coordination was the round-the-clock attacks on Leipzig, RAF Saturday night, AAF Sunday; strictly speaking, round-the-clock bombing means *hitting the same target* night and day. Another rare example of this was the night and day attack on Hamburg, July 25. The Schweinfurt and Augsburg attacks worked the other way, the AAF striking on Feb. 24 and 25 by day, and the RAF at night, guided by the fires.

▸ **Effect on the Luftwaffe**—It is too early to gauge the effects of this air blitz on the Luftwaffe. The preliminary figures are impressive enough. Nearly 20,000 American tons of bombs dropped in six days by Allied aircraft, inflicting heavy damage on 15 or more important fighter aircraft factories, besides engine and ball-bearing plants. There are certainly many more aircraft factories in the greater Reich, including some in occupied France and northern Italy, but the ones attacked appear to be all the important ones in good current production.

It may be that the announced estimate of 80 percent of the twin-engine fighter production, 60 percent of the single-engine fighter production and 25 percent of the bomber production as having been at least temporarily destroyed since Jan. 1, appears a bit on the optimistic side, but a study of the accompanying list will give an idea as to how thorough a job has been done. On the basis of estimated production of 600 S/E fighters per month for November and December, this would mean a minimum of 250 to 300 for March; and of an estimated 250-300 twin-engine fighters for December, production of 60 to 75 in March will be an achievement.

NAVIGATOR

Battle for Aircraft Factories

Date of Attack	*City*	*Plants Raided*	*Type of Planes Produced*	*Attack made by*
The Little Blitz				
Apr 17, '43.	Bremen	Focke-Wulf (formerly Heinkel)	Fw-190	8th A/F
July 28.....	Oschersleben	Ago	Fw-190	8th A/F
28.....	Kassel (Bettenhausen)	Fieseler (assembly)	Fw-190	8th A/F
29.....	Tutow (Warnemunde)	Arado-Heinkel	Fw-190	8th A/F
30.....	Kassel (Waldau)	Fieseler (component parts)	Fw-190	8th A/F
Aug. 13.....	Wiener-Neustadt	Wiener-Neustadter	ME-109	12th A/F
17.....	Regensburg	Messerschmitt	ME-109	8th
Oct. 3-4....	Kassel	Night attack—damage to several factories		RAF
9....	Marienburg	Focke-Wulf (moved from Bremen)	Fw-190	8th A/F
9....	Anklam	Arado (parts for Marienburg)	Fw-190	8th A/F
24.....	Wiener-Neustadt	Wiener-Neustadter	ME-109	12th A/F
25-26..	Kassel	Night attack—very heavy damage		RAF
Nov. 2....	Wiener-Neustadt	Wiener-Neustadter (3d attack)	ME-109	15th A/F
Dec. 3-4...	Leipzig	Heavy night attack (30 percent industries destroyed)		RAF
19.....	Augsburg	Messerschmitt (B.F.W.) main assembly	ME-410	15th A/F
NEW PHASE				
Jan. 11, '44.	Oschersleben	Ago (more important since Marienburg)	Fw-190	8th A/F
11.....	Halberstadt	Junkers (wings)—drive on T/E fighters begin		JU-88/188
11.....	Brunswick	Waggum	ME-110	8th
13-14..	Brunswick	Heavy night attack		RAF
16.....	Klagenfurt (Austria)	Messerschmitt (parts) & airfield	ME-109	15th A/F
30.....	Brunswick	Waggum	ME-110	8th
31.....	Klagenfurt	Messerschmitt (parts) & airfield	ME-109	15th
Feb. 10.....	Brunswick	Waggum, Muhlenbau (4th in 4 weeks)	ME-110	8th
The Big Blitz				
Feb. 19-20..	Leipzig	Very heavy night attack, Erla, Junkers	ME-109, JU-88	RAF
20....	Leipzig	Day attack, (round-the-clock) Erla	ME-109	
20.....	Oschersleben	Junkers (fuselages)	JU-88/188	
20.....	Halberstadt,	Junkers (wings)	JU-88/188	8th A/F
20.....	Bernburg	Junkers (main assembly plant)	JU-88/188	(8 targets
20.....	Gotha	Gothaer	ME-110	in one
20.....	Brunswick	Wilhelmitor	ME-410	day)
20.....	Tutow (Warnemunde)	Arado-Heinkel (2d attack)	Fw-190	
20.....	Posen (Poland)	Aircraft component parts	Fw-190	
21.....	Brunswick	Wilhelmitor (2d in week)	ME-410	8th A/F
21.....	Hannover	Aircraft & engine parts factories		8th A/F
21-22	Stuttgart	Aircraft & engine parts factories		RAF
22.....	Bernburg	Junkers (assembly)—2d attack	JU-88/188	8th A/F
22.....	Halberstadt	Junkers (wings)—3d attack	JU-88/188	8th A/F
22.....	Oschersleben	Ago (3d attack)	Fw-190	8th A/F
22.....	Regensburg	Messerschmitt (1st attack 8/17)	ME-109	8th A/F
23.....	Steyr (Austria)	Steyr-Daimler-Puch	ME-410	15th A/F
23.....	Steyr (Austria)	Steyrwaffen F. W. (engines and ball-bearings)		15th A/F
24.....	Steyr (Austria)	Steyr-Daimler-Puch (2d in 2 days)	ME-410	15th A/F
24.....	Gotha	Gothaer (also Schweinfurt bearing works)	ME-110	8th A/F
25.....	Regensburg	Obertraubling and	ME-109	8th &
25.....	Regensburg	Prufening	ME-109	15th A/F
25.....	Stuttgart, Fuerth	Aircraft, engine parts, ball-bearings		8th A/F
25.....	Augsburg	Messerschmitt (B.F.W.) main plant	ME-410	8th A/F
25-26..	Augsburg	Night attack (2 waves)—same plant	ME-410	& RAF

PERSONNEL

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The late **Edmund Turney Allen**, leading American test pilot, has been awarded the Guggenheim Medal for 1943 "for major contributions to aeronautics leading to important advances in airplane design, flight research, and airline operation; particularly for the presentation of new methods for operational control and for the development of scientific and systematic methods in the flight testing of aircraft for basic design and performance date." Allen, who was killed Feb. 18, 1943, in the crash of a new Army bomber he was testing, had previously been given the Octave Chanute Award by the Institute of the Aeronautical Sciences. He delivered the Wright Brothers lecture in New York on Dec. 17, 1942, presenting a paper on *Flight Testing for Performance and Stability*. The medal and its accompanying scroll were presented to Mrs. Allen in Seattle by P. G. Johnson, president of Boeing Aircraft Co.

Joseph C. Collins has been named to the newly created post of Eastern Regional manager of the agency and interline department of Transcontinental & Western Air, Inc. He has been a traffic representative and is a travel expert. His headquarters will be in the Airline Terminal Building, New York City.

Bert Conway has been named vice-president in charge of manufacturing of Aviation Corp., with headquarters in Detroit at the Federal Avenue plant of Republic Aircraft Products. He was formerly manufacturing coordinator for the corporation as production and tooling adviser at all AVCO manufacturing plants. He was with General Motors Corp. for 22 years.

Conway

Arthur W. Gratop will supervise the new publicity bureau of Aviation Corp. which will handle information and publicity covering Lycoming and Spencer divisions of Williamsport, Pa.; American Propeller and Northern Aircraft Products Division at Toledo; and Republic Aircraft Products division plants at Detroit. The bureau will be in Toledo.

William A. Straith has been named general operations assistant for TACA Airways Agency, Inc., with headquarters in New York. He will work in an advisory capacity with airways represented by the TACA Agency. Straith formerly was assistant director of training of the Airlines War Training Institute. **John Taylor Floyd, Jr.**, is acting traffic manager of TACA to coordinate passenger and freight traffic in airways the agency represents. He was chief of planning at American Export Airlines. In January, Floyd will make a trip through Central America and the West Indies covering TACA's operations.

Straith

Floyd, Jr.

E. R. (Dick) Hawkins, former Atlanta newspaperman, has been appointed executive assistant to Vice-President Harry E. Collins, of Bell Aircraft Corp., to carry out general assignments for the Georgia division departments. He has been connected with Bell's Niagara Frontier division for a year.

William Littlewood, vice-president of American Airlines, Inc., has been appointed by President Roosevelt a member of the National Advisory Committee for Aeronautics for a term of five years. He succeeds **Dr. George J. Mean**, retired because of ill health. Littlewood's appointment will bring to the NACA the viewpoint of an expert in air transportation. Littlewood, engineering vice-president of American since 1937 is in addition: chairman, SAE Air Transport Engineering Activity; chairman, ATA Committee on Airport Requirements; chairman, SAE Aircraft Accessories and Equipment sub-division; member, Coordinating Research Council; member, I.A.S. Advisory Board; member, Wright Brothers Medal Board of Award; member, Guggenheim Medal Board of Award; member, Clarkson Memorial Committee; member, M. I. T. Visiting Committee, Dept. of Meteorology; and member, Council of Cornell Society of Engineers.

Stanley G. King has been elected vice-president and managing director of American Airlines de Mexico. **Tull Rea** has been elected vice-president in charge of operations for American Airlines' Mexican subsidiary.

E. E. DaParma, manager of the Brooklyn plant of Sperry Gyroscope Co., has been named manager of the company's Nassau plant at Great Neck, L. I.

Ray J. Cowden has been appointed sales manager of Lycoming division of Aviation Corp. in Williamsport, Pa. Cowden for the past two years has been contract and service engineer at the American Propeller Corp., a subsidiary of Aviation Corp. He has been working closely with Wright Field as an engineer.

William P. McCracken, Jr., William P. Redding, and **Lowell H. Swenson** will constitute the editorial board of *National Aeronautics*, monthly magazine, since the resignation of Capt. Gill Robb Wilson. The NAA also announces that **S. Ralph Cohen**, formerly associate editor, will be managing editor and **Virginia Edwards** will become an editorial assistant. **Cecile Hamilton** leaves the staff to work with Captain Wilson.

Robert K. Ogden has been elected controller at a meeting of the Northrop Aircraft, Inc., board of directors. He was formerly with Lockheed Adel Precision Products.

W. H. Maxwell, with United Air Lines' Pacific operations since 1942, has been transferred to his former position as station manager at LaGuardia Field, New York, according to United, which is making several announcements of new assignments. **Charles A. Sluder**, who was station

Sluder

Maxwell

manager at LaGuardia, will return to Omaha, as station manager, now that Maxwell has returned to New York. **O. W. Brownlee**, acting station

Palmer

Brownlee

manager at Omaha, is being assigned as station manager at Toledo and **Cyril L. Palmer** has been transferred from Toledo to Youngstown as station manager there. He succeeds **Rolf Batzer**, who has been assigned to Toledo.

Frank T. Magennis has been named a vice-president of Goodyear Tire and Rubber Export Co. He was formerly an assistant manager of the export company. Magennis interrupted 25 years' service with Goodyear to join the Naval Flying Corps in the last war.

Karl O. Larson, chief engineer of Northwest Airlines, has been appointed to the new Air Transport Engineering Activity Committee of the Society of Automotive Engineers. Larson has been a member of the SAE Aircraft Activity Committee and is also a member of the Future Aircraft Requirements Committee of the Air Transport Association.

Larson

H. F. Hargrove, formerly factory superintendent at Vultee Field, Downey, Calif., has been appointed to the staff of C. A. Sharpe, works manager at Consolidated Vultee's Fort Worth division.

William D. Cross, Jr., has been appointed contracts manager of the Duramold Division of Fairchild Engine and Airplane Corp. He has served with Douglas Aircraft and Lockheed Overseas Corp.

Lieut. Col. Robert D. Moser, USMC, has been transferred from headquarters to aviation duty at the Marine Corps Air Station, Santa Barbara, Calif.

William G. Wilson becomes superintendent of traffic at the Consolidated Vultee's Fort Worth division. Wilson was formerly stationed at Vultee Field, Downey, Calif., and has been chairman of Convair's traffic managers' conference since its inception.

Lieut. Comdr. F. S. Hodgman, USNR, retired, has been named manager of the Marine division of Sperry Gyroscope Co. The Marine division will absorb the company's Brooklyn plant.

Merle Cartwright has been appointed ticket agent in New York City for Trans-Canada Air Lines. Miss Cartwright was formerly assistant ticket agent in New York.

Crew of First Continental Route 60 Flight: *Left to right, O. R. "Ted" Haueter, Continental Air Lines' vice-president of operations; Mildred "Tommy" Heck, chief hostess; and J. F. "Jack" Weiler, chief pilot, are three officials of the airline who will comprise on Mar. 1 the crew for the first official flight over Continental's new Route 60, between Denver and Kansas City with intermediate stops at Salina and Topeka.*

Airline Officials' Holdings Of Own Company Stock Listed

Some of principal officers of domestic firms disclosed as controlling as much as 50 percent of voting shares, according to data on file with CAB.

By ROGER WILCO

Officials of America's domestic airlines are generally substantial stockholders in the companies which they manage, according to records on file with the Civil Aeronautics Board. In a number of instances this ownership is as much as 25 percent of the voting stock, and in several cases officials' ownership runs as high as 50 percent.

In the case of National Airlines, Inc., with 270,000 voting shares, CAB reports show that G. T. Baker, president, held 108,494 shares, or 40.18 percent, at Nov. 30, 1943, while H. S. Parker, Jr., vice-president, held 29,250 shares, or 10.83 percent.

Inland Air Lines—R. Leferink, president, Inland Air Lines, Inc., held 79,650 of the company's 164,218 voting shares Oct. 31, or 48.5 percent, while M. W. Landes, vice-president, owned 41,550 shares, or 25.3 percent.

Carleton Putnam, president, Chicago and Southern Air Lines, Inc., owned 54,184 shares of the voting stock No. 30, or 23.63 percent, and J. R. Longmire, a director, held 3,072 shares, or 1.34 percent. A substantial number of shares of the voting stock are in a voting trust agreement, of which Putnam is the sole trustee.

Delta Air Corp.—The president of Delta Air Corp., C. E. Faulk, held 23,291 of the company's 197,394 shares of voting stock Nov. 30, 1943, or 11.74 percent. C. E. Woolman, vice president and general manager, owned 21,188 shares, or 10.68 percent. Biedenharn Realty Co. held 11,760 shares, or 5.93 percent. M. S. Biedenharn is vice president of Delta Air Corporation.

Louis H. Mueller, chairman of the board of Continental Air Lines, Inc., held 36,400 of the company's 251,256 voting shares Oct. 31, 1943, or 15 percent. Lawrence C. Ames, a director, owned 19,872 shares, or 8 percent. The estate of W. H. Earhart, of which Thomas H. Roberts is executor, held 62,050 shares, or 25 percent. Roberts is a director of Continental.

The accompanying tabulation shows the largest stockholders (including officers and directors) of a group of domestic airlines.

Airline Ownership	Voting shares	Number of shares held	Percent of total
American Airlines, Inc. (at 10-31-43)	574,848		
Jesse H. Jones, trustee under agreement dated July 9, 1941, with Aviation Corp.		143,769	25.01
Braniff Airways, Inc. (at 12-31-43)	1,000,000	341,304	34.1
Colonial Airlines, Inc. (at 11-30-43)	259,999½		
S. Janas		14,710	5.7
Chicago & Southern Air Lines, Inc.* (at 11-30-43)	291,337		
Carleton Putnam		54,184	23.63
I. M. Simon & Co.		16,954	7.39
Ince & Co.		12,650	5.51
J. R. Longmire		3,072	1.34
Continental Air Lines, Inc. (at 10-31-43)	251,256		
Lawrence C. Ames		19,872	8
Leonard B. Daniels		14,200	6
Lehman Bros.		13,475	5
Louis H. Mueller		36,400	15
Estate of W. H. Earhart, Thomas H. Roberts, executor		62,050	25
Phillips Petroleum Co.		7,530(Pref)	100
Delta Air Corp. (at 11-30-43)	197,394		
Biedenharn Realty Co.		11,760	5.93
C. E. Faulk		23,291	11.74
Richard J. Reynolds		60,600	30.55
C. E. Woolman		21,188	10.68
Eastern Air Lines, Inc. (at 10-31-43)	586,961		
Laurance S. Rockefeller		25,000	4.33
W. R. Grace & Co.		20,000	3.47
Richard J. Reynolds		19,200	3.33
Hare & Co.		13,895	2.41
Cudd & Co.		12,200	2.11
E. V. Rickenbacker		12,000	2.08
Inland Air Lines, Inc. (at 10-31-43)	164,218		
R. Leferink		79,650	48.5
M. W. Landes		41,550	25.3
A. Leferink		15,000	9.1
Mid-Continent Airlines, Inc. (at 10-31-43)	389,398.60		
Estate of A. S. Hanford		21,814(1/10)	5.6
Ince & Co.		17,000	4.3
Thomas Fortune Ryan, 3rd		104,097(3/10)	26.7
Mary Jane Ryan		4,500	1.1
Patricia Eaton Ryan		4,500	1.1
Thomas Michael Ryan		4,500	1.1
Zink Co.		11,650	2.9
National Airlines, Inc. (at 11-30-43)	270,000		
G. T. Baker		108,494	40.18
H. S. Parker, Jr.		29,250	10.83
Frank Gould		21,000	7.78
Lehman Bros.		20,572	7.62
Northwest Airlines, Inc. (at 9-43)	234,920		
H. H. Irvine		19,200	8.17
Ince & Co.		15,000	6.39
Cudd & Co.		10,200	4.34
The Milwaukee Co.		7,230	3.08
Pennsylvania-Central Airlines Corp. (at 10-31-43)	358,034		
Carl M. Loeb, Rhoades & Co.		48,867	14.7
Pittsburgh Aviation Industries Corp.		31,500	9.5
Ince & Co.		17,360	5.5
Lorenz Iversen		8,000	2.4
Renee duPont Donaldson		7,500	2.2
Thomson & McKinnon		7,060	2.1
Salkeld & Co.		6,200	2
Transcontinental & Western Air, Inc. (at 10-31-43)	965,173		
Hughes Tool Co.		440,050	46.2
United Air Lines Transport Corp. (at 11-30-43)	1,500,451		
Lehman Bros.		33,867	2.2
Western Air Lines, Inc. ** (at 11-30-43)	409,954		
Smith & Sanford		193,565	47.22

* A substantial number of shares of voting stock are in a voting trust agreement of which Mr. Putnam is the sole trustee.

** 189,965 shares are held as nominee for William A. Coulter.

Financial Reports

Breeze Corporations, Inc., and subsidiaries for 1943 reported a net profit subject to renegotiation and

after $7,113,000 provision for taxes, of $2,610,064 on net sales of $45,268,029. Net profit for 1942 after renegotiation and $3,359,200 tax charges was $1,279,583 on net sales of $38,699,262. The corporation added $2,193,553 to its earned surplus.

▸ **Hayes Manufacturing Corp.** and subsidiary reported for year ended Sept. 30 a net profit of $821,145, equal to 94 cents a share after provision for renegotiation, $50,000 for development of post-war products and $1,693,404 for taxes. Revised net profit for the previous year was $587,386 or 67 cents a share. The report said adjustment of 1942 fiscal earnings increased net profit for that year by $362,660 or 41 cents a share.

▸ A dividend of 75 cents a share on the capital stock of Bendix Aviation Corp. has been declared, payable March 31 to stockholders of record Mar. 10.

War Exhibit Shows Conversion Extent

Examples of widespread conversion of peacetime American industry to making military aircraft parts and equipment may be seen in the War Products Engineering exhibit opened by 50 Dayton industries, in the Engineers' club there.

The display includes Hamilton Standard propellers and aircraft machine guns made by Frigidaire division, General Motors Corp., which also is making the big four-bladers used on the new super-bomber, the B-29; Chandler-Evans carburetors for aircraft engines, made by National Cash Register Co.; bomber landing gears built by Delco Products Division, General Motors; and a wide variety of other aircraft parts and precision instruments turned out by firms which, before Pearl Harbor, knew little about aircraft components.

Supply Contracts

Aircraft supply contracts through December amounted to $47,772,093,000, the War Production Board reports. The aircraft category includes contracts for airframes, airplane engines, propellers and other parts and certain related equipment and shows California far ahead with contracts totaling $8,775,213,000.

Other leading states include: Michigan $5,630,923,000; New York $5,220,261,000; New Jersey $3,295,998,000; Ohio $3,029,363,000; Connecticut $2,656,835,000; Indiana $2,386,870,000; Kansas $2,239,474,000; Washington $1,881,983,000; Maryland $1,818,948,000; Texas $1,593,475,000; Illinois $1,465,585,000; and Oklahoma $1,084,468,000.

Air Associates Assets $7,350,995

Company points out possibility of revision after renegotiation of contracts.

Total current assets of Air Associates, Inc., at the close of the fiscal year ended Sept. 30 were reported at $7,350,995, or $8,413,434 after including other assets. The company said renegotiation of war contracts for the fiscal year had not been started and the possible effect of this upon its financial statement could not now be forecast.

As a result, no provision therefor was made in the financial statements and any required refund would be after credit of the amount of applicable federal income and excess profits taxes, according to the company's report to the Securities and Exchange Commission.

▸ **Salaries Listed** — The report showed H. I. Crow, president and director of Air Associates, was paid $64,964 during the fiscal year, of which $18,000 represented salary; $1,000 director's fees; $34,473 was percentage compensation at the rate of 3 percent of the company's net profit after taxes and $11,491 represented 1 percent of the net profits in consideration of the surrender by Crow on Sept. 18, 1941 of options for purchase at $8.50 a share of 5,700 common. The percentage compensation has been accrued on the books, pending approval of the Salary Stabilization Unit of the Treasury Department.

R. E. Acre, vice-president, received $17,745 including $5,745 percentage commission at the rate of one-half of 1 percent of net profit after taxes, which amount is subject to approval of the Treasury unit. G. S. Kleverstrom, secretary and treasurer, was paid $9,498.

▸ **Stockholders**—Largest individual stockholders of the company were Gilbert Colgate, chairman of the board, with 17,448 common, representing 12.9 percent of that class and Haven B. Page, of Alexandria, Va., with 13,900 shares or 10.3 percent of the common.

'Props' Salvaged At Canadian Plant

Thousands of dollars' worth of propellers annually are saved from the scrap pile and sent on their way to fly again at the propeller division of Canadian Car & Foundry Co., Ltd., Montreal, where hundreds of crippled propellers monthly are sent for repair and reconditioning.

The broken props are returned from airfields throughout eastern Canada where the hub mechanism is taken apart, examined for damage and repaired and reconditioned while new blades are attached.

Canadian Car & Foundry also has built a modification center at Montreal, where work is done on the Anson twin-engine trainers, which includes replacement of engines with more powerful plants.

Ohio Bill to Ask Aviation Gas Tax

Revenue, estimated at $150,000 a year, would be used to improve airports.

Legislation asking taxes on aviation gasoline, to be used for improving Ohio airways and airports, will be presented at the next session of the Ohio legislature, according to Columbus reports.

Ohio now has two state gasoline taxes, one a 1 cent liquid fuel tax, and the other a 3 cent motor vehicle tax for highway maintenance. Whenever the second tax is collected on gasolines used for aviation purposes, the State Department of Taxation will refund it, if claim is filed within 60 days.

▸ **Refunds**—One basis for preliminary studies on the proposed tax, is a survey recently completed by the state department of taxation, showing the amount of refunds claimed on aviation gasoline during the last half of 1942. Refunds were granted on 2,405,397 gallons, totaling $72,161. On the basis of this survey, it appears that approximately $150,000 annually might be available for airport construction or improvement, from this source. Advocates of the tax believe additional revenues would be forthcoming from aviation gasoline users not now claiming refunds.

Plane Output During February Expected To Top 9,000 Mark

All-time record both in units and—more important—weight foreseen; heavy bomber types stressed.

All signs point to a new record-breaking aircraft production performance in February, on the basis of unofficial estimates, with unit production as well as weight exceeding any previous month in the nation's history.

It appeared likely that unit output would be above the 9,000 mark, and that weight output, the significant yardstick, would show an even greater corresponding increase over other months.

▸ **Heavy Types Stressed**—An indication of the figures for February may be seen in a comparison with January figures, when airplane acceptances numbered 8,789, a figure which undoubtedly will be topped for February unless entirely unforeseen circumstances move in to reduce it. As was pointed out by WPB Chairman Donald Nelson in his most recent report, numbers no longer do justice to the progress of the aircraft program, since production is now concentrated on the larger and heavier combat types.

In terms of airframe-weight, January output was 5 percent above December—6 percent if spare parts, etc., are included.

Of more importance to the industry is the estimated output on the basis of aircraft scheduled. T. P. Wright, head of the Aircraft Resources Control Office, noted that January production beat schedule by 2 percent and he indicated that February output would be even more above schedule on a percentage basis, with increases in all classes except possibly rotary wing craft.

▸ **Scheduling**—Most scheduling is now done on a daily basis, Wright pointed out, utilizing working days per month instead of monthly totals as the unit of measurement of production. About 75 percent of all aircraft producers are now on that type schedule, which is more realistic than some of the others given to the industry to fill.

Wright reiterated that the industry has about reached its peak in numbers, but that weight output would continue to increase, particularly as the larger and heavier craft output goes up. The West Coast airframe manufacturers, for example, are producing more airplanes than ever before in terms of weight and the planes now being built are bigger, heavier and deadlier.

▸ **Not Out for Records**—While the industry has justifiable pride in the number of planes it builds, it should be emphasized that the program for airplane construction is not based on beating the record set the month before or the year before—although the industry need make no apologies in that respect.

Basically, the aircraft builders must give the armed forces the number of types of airplanes which tactical knowledge dictates they must have for successful waging of the war. Numbers of planes are only part of the story and this is no longer the most important or significant part of the story. It is important that the airplanes being built today are better airplanes, safer, bigger, faster, more heavily armed, capable of longer range and higher altitude and bigger loads of bombs or ammunition.

▸ **Castings and Bearings Problem**—The only difficulties in the way of production at the moment, Wright said, appeared to be castings and bearings and he does not consider either of them serious at this time. There undoubtedly are manpower troubles ahead, but not currently, although there are some tight spots, particularly on the West Coast.

It should not be overlooked in considering the present manpower situation that, in addition to the fast airplanes now being turned out are better airplanes, they are being built with fewer manhours and with less cost to the Govern-

FLYING FORTRESS OUTPUT SPURTS:
Production of Boeing Flying Fortresses *is constantly on the up-grade and contributed to February's record-breaking output of warplanes in weight and numbers. Pictured here are wing sections, each with two powerful Wright engines, awaiting mating with fuselage sections in Boeing's Seattle plant.*

ment. In January, 1943, for example, it required 1.67 direct man-hours to produce one pound of airframe weight (excluding subcontracting and spares). By December, the figure had been reduced to .87 of a man-hour.

In this connection, it should be noted, too, that women constituted almost 43 percent (42.87) of the total personnel in the Pacific Coast plants in December of last year, and that more of them will be needed.

In the early months of the year 1942, relatively few women were employed in the industry. But in December of that year, women employed in Pacific Coast plants passed the 100,000 mark.

In December of 1943, there were 113,870. While the number of women employed has gone up, the number of men employed has gone down and as the armed forces call for more and more men, more women will be needed in aircraft plants to meet the accelerated scheduled prompted by the major air offensives on all fronts.

Burnelli Contract Being Negotiated

Canadian Car & Foundry expected to build transports for South American interests.

Negotiations are now under way by Canadian Car & Foundry Co., Ltd., Montreal, to build Burnelli transport planes for South American interests, although contractual details are not yet available, and probably will not be for some weeks.

No data are being released as to the number of transports involved in the projected deal, nor has Canadian Car & Foundry announced the name of the airline for which the planes are to be built. The company holds the Canadian rights to the Burnelli.

▸ **Fruit Express**—While no official confirmation could be obtained, it was considered likely that the plane involved is the Burnelli fruit express transport (AVIATION NEWS, Dec. 20) planned by Colonial Airlines for post-war use, since there have been definite indications previously.

The fruit express, discussed before, would carry fruit in a refrigerated transport at eight cents per ton mile from Miami to Montreal in 14 hours according to the estimates of one official.

Stromberg Develops New Ice-Free Unit

Carburetor series reported produced for use in Army helicopter engines.

Suitable for small airplane engines up to 200 hp., a new series of aircraft "injection" carburetors which maintain the ice-free characteristics of the larger types that now equip most of America's combat planes has been developed by Stromberg carburetor division of Bendix Aviation Corp.

▸ **Helicopter Model** — Frank C. Mock, director of engineering for the division, said the new, smaller series is being produced for the Army Air Forces for use in helicopter engines. He added that these carburetors, incorporating basic design features, called for in Army and Navy specifications for smaller aircraft, will be ready for delivery to private plane engine builders after the war.

The new smaller carburetors, he disclosed, are single barrel units and can be adapted for use in any one of three positions—updraft, downdraft or horizontal. All models are equipped with a vacuum-operated, single diaphragm accelerating pump and a combination manual mixture control and cut-off. Automatic mixture control and additional power enrichment features are optional.

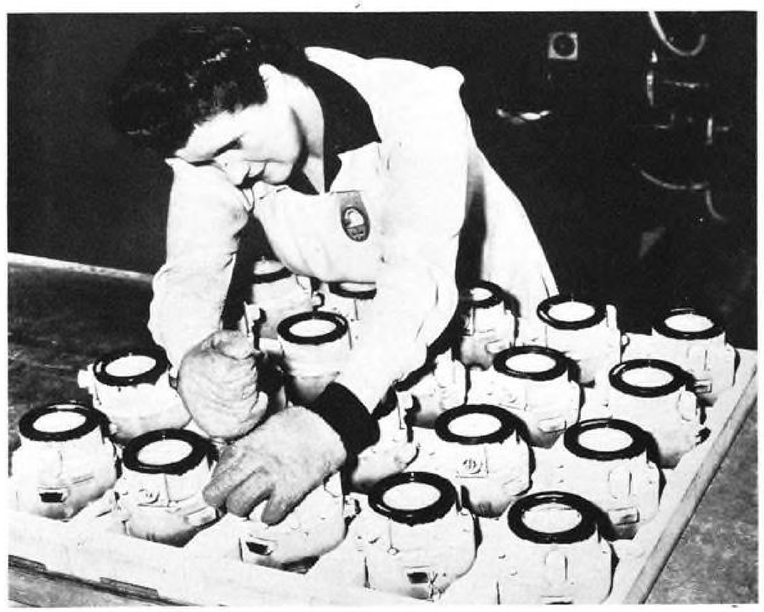
List of Essential Activities Revised

A revised list of essential activities has been released by the War Manpower Commission, including many changes which have been made from time to time, but comprising the first complete list since December, 1942.

The criterion followed in determining whether or not an activity to be included in the list touches activities directly engaged in production of war materials.

▸ **Guide**—On the list, in No. 1 position is "Production of aircraft and parts—The production, maintenance and repair of aircraft, gliders, parachutes, dirigibles, balloons, aircraft engines, aircraft parts, pontoons, and propellers.

The list serves as a general guide on which manpower programs for allocating labor to the different needs are based. It is designed primarily for use of the United States Employment Service and the Selective Service System.



TRANSMITTERS TESTED AT 65 BELOW:

Temperature tests more severe than actual flying conditions are given transmitters and indicators of the remote reading magnetic compass in production at the Ternstedt Aircraft Instrument plant, Fisher Body Division of General Motors. Worker shown is checking frosted transmitters after they have been subjected to a two hour test at 65 deg. below zero.

WPB Production Exposition Opened

Display held in capital designed to spur labor and management to meet 1944 quotas.

A number of aircraft and aircraft parts manufacturers were represented at an exposition in Washington under sponsorship of the War Production Board, designed to point up labor and management teamwork for war production.

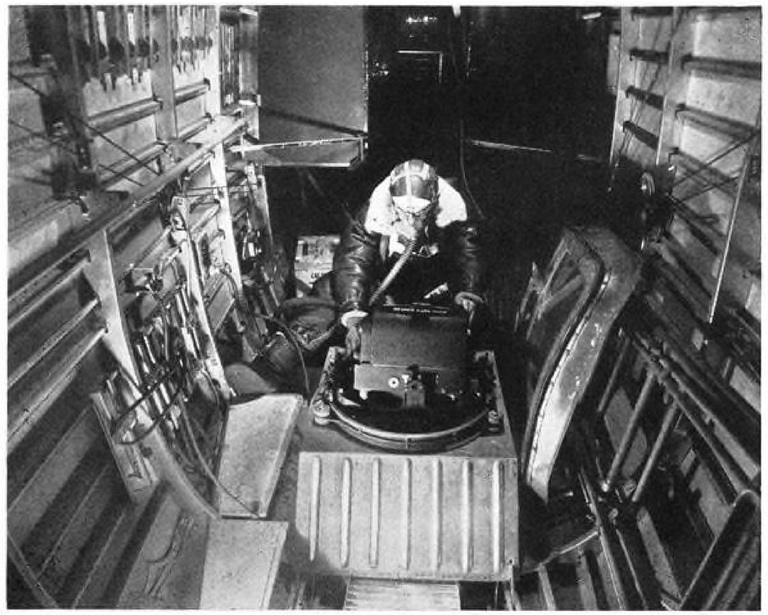
Government, military, war agency, diplomatic, industry and labor officials attended advance showings of the exposition, which is planned to tell graphically the story of sustained output, due to united attack by workers and management on production problems, and to focus attention on the necessity of achieving more production in 1944 and the part labor-management committees are playing.

▸ **Firms Represented**—Among the companies represented were Bell Aircraft, Curtiss-Wright Corp., Douglas Aircraft, Glenn L. Martin Co., North American Aviation, Northrop Aircraft, Pratt and Whitney, Thompson Aircraft Products Co., Goodyear, Firestone, General Motors, Minneapolis - Honeywell, Packard, Walter Kidde & Co., Western Electric, Westinghouse.

Tactical Planes

The basis for our aircraft production program rests on output of tactical planes, as was pointed out recently by T. P. Wright, head of Aircraft Resources Control Office, who was asked in a radio interview as to whether there was emphasis on fighter plane production or bombers. Mr. Wright replied as follows:

"Actually, emphasis is on tactical plane production, which includes both fighters and bombers, also cargo planes as well. We must have a balanced air force adequate in all necessary types. Although it is true that in the Army Air Forces our basic offensive program is the heavy bomber and we are rapidly increasing our output of these in both size and quantity, we also require further increases in fighters and transport planes, and we are keeping these increases in proper balance, in both the Army and the Navy."



AERIAL PHOTOGRAPHY FROM A *LIBERATOR:*
This new photograph, taken on one of Consolidated Vultee's high flying Liberator *bombers, shows an aerial photographer at work, with latest equipment including an oxygen mask, in a plane especially equipped for this type of mission.*

Study Labor Waste In Cost-Plus Plan

Hearings open in Senate on system and charges of manpower squandering.

Hearings which opened last week on a Senate investigation of cost-plus-fixed-fee war contracts were described on Capitol Hill as being neither a witch-hunt nor a whitewash, but their effect on such contracts held in the aircraft industry cannot be determined until the hearings have progressed further.

It was noted by Washington observers, however, that Chairman Murray (D.-Mont.), of a Senate military affairs subcommittee, said they were investigating complaints that "an unbelievable waste of manpower and money has resulted under the cost-plus system."

▸ **Plane Output Cited**—This is not a new complaint and in the aircraft industry, where such contracts are held, it had been generally believed that this criticism had been answered in production figures and in reduction of manpower-per-airplane-pound.

The investigation resulted from introduction by Sen. Ferguson (R.-Mich.) of a bill to require conversion of present outstanding cost-plus contracts to the fixed-price type and to prohibit further use of cost-plus contracts, except where the head of the Government contracting agency personally certified that it was necessary "because of lack of precedents of experience on which to base fixed prices."

Ferguson's bill also would require, when cost-plus contracts are awarded or continued, that an incentive fee plan be included under which the contractor's fee would be increased as a reward for reducing production costs and increasing production volume.

Ceramic Insulators

Three new-type spark plugs for aircraft which feature insulators made from ceramic instead of the conventional mica are now being produced for Army aircraft by Electric Auto-Lite Co.

Their engineers report the new aircraft plugs are the result of many months' experiment and development and that, under conditions of high power output, ceramic plugs of this type will last longer than mica aircraft plugs formerly used. General improvement in plug operation is gained mostly, they reported, through development of the ceramic insulator.

Rubber Sheets Cut Plane Skin Process

Martin plant reports rise in output, sharp reduction in costs under new system.

Substitution of thin rubber sheeting for grease on blocks of stretching machines used to process large sheets of metal in making airplane skins at Glenn L. Martin Co., is reported to have resulted in an improvement in virtually every phase of the procedure in the detailed manufacturing department.

The process used before the 1/32-inch thick elastic "lubricant" method was adopted was a tedious and difficult one. The lubrication was necessary to complete the stretching process, but the grease made it difficult to finish other operations. Because of the time element involved, it was found impractical to treat the huge sheets to the vapor bath cleaning method before they were scrubbed.

▸ **Production Increases** — Frank Weisner, foreman of the stretching machine department, said that, with adoption of the rubber sheeting method, production immediately went up.

"The new plan saved production costs in a number of ways," he said. "Our total department output was increased by almost 50 percent. In addition, we saved the excess cost of the grease, which was much more expensive than the rubber sheeting, the machines and tools do not have to be cleaned each shift, and we eliminated a number of safety hazards, keep the department much cleaner and we are doing the work with fewer people."

▸ **Old Method**—The old method involved covering blocks of the stretching machines with a thick coating of grease. After the stretching process was completed, the large sheets of metal were placed on the floor, where a second group of workers removed as much of the grease as possible with rubber scrapers and wiping cloths. The sheets were then taken to a scrubbing table where they were marked with part outlines to be followed by the sawers when they trimmed and cut out the diagrammed sections.

Because these sections had a burred edge after being cut, they had to be moved to another group of workers who removed the burrs. When these operations were completed, the parts were moved into a hot vapor bath pit where the grease was removed. Then the part was numbered and, after being loaded into containers or on skids, sent to other departments for finishing operations.

Motor Sand Blast Uses Wheat Cereal

New ASC process reported to cut cost of cleaning engine blocks from $7.93 to $1.

Use of a Mexican wheat cereal in a sand-blasting machine, to clean aircraft engine parts, with greater efficiency than any previous process used, is reported from the Sacramento Air Depot of the Air Service Command.

The wheat is boiled an hour to remove starch, then dried and ground with steel cutters, putting sharp corners on tiny particles, providing abrasive quality which cleans carbon from the engines.

▸ **Cut Costs Sharply**—The process has cut the cost of cleaning engine blocks from $7.93 to $1, while pistons are now cleaned at a twelve cent cost, against $1.20 under the old screw-driver-hacksaw method. In blasting the wheat particles, about 40 pounds of air pressure is used, about half the pressure used in ordinary sand-blasting of spark plugs and similar motor parts.

"VEST POCKET" TRAINER: *A mass of cogs, cams and rods that took three months to design and assemble synchronize the dials of this Southwest Airways flight trainer with the operation of a tiny stick and rudder pedals directly beneath the dials. Flight Instructor Earl H. Gertje of Southwest's Falcon Field at Mesa, Ariz., invented the instrument to give students "ground flying" that will prevent critical errors in flight.*

Boeing Scales Used To Check B-17's C.G.

Balances developed by company now employed throughout industry to weigh aircraft.

Scales designed by Boeing engineers have become widely used in the aircraft industry for weighing airplanes since the time when the company first started to build four-engine bombers and found that no scales then available were suitable for the job.

The engineers designed a scale and several were built from the design by a scale manufacturer. Three separate scales are used to weigh a *Flying Fortress*. Two are placed under the wings near the point at which they join the fuselage and the third just ahead of the rear landing wheel.

▸ **Center of Gravity**—In the case of a well-established airplane, such as the B-17, the engineers are not so interested in actual weight as whether the center of gravity falls within a previously prescribed limit. Every 100th *Flying Fortress* that rolls off the assembly lines is weighed with meticulous care.

Berger Anderson, Boeing's weights unit chief, said the center of gravity of the *Fortress* falls approximately one-third back from the leading edge of the wings. When a plane is loaded for flight, this point may shift forward or backward a prescribed distance without interfering with flight stability. These limits are determined, of course, when the airplane is designed and loading arrangements are planned that will not throw the center of gravity past these limits in either direction.

▸ **Load Shift Essential**—"This ability to shift is most essential," Anderson explained. "If an airplane would fly safely only when the center of gravity was at a fixed point, you would have to load the ship with a pair of scales to maintain this point, and no one could move about inside a plane in flight without disturbing this center."

This range in shift is not great, however, and it is for this reason that provisions for an airplane's heavy loads—such as bombs and fuel—are made at as near the center of gravity as possible.

▸ **Preparation Important** — Actual weighing of a *Fortress* is not difficult, Anderson says, but the preparation is something of a task. All the equipment has not been installed when the weighing is done.

Canadian Pacific Aides Reveal Preferred Plane Types for Future

Simplification program planned for post-war period expected to effect standardization of craft; 15 different engine types used at present.

By SCHOLER BANGS

World trade ambitions of Canadian Pacific Railway's subsidiary, Canadian Pacific Airlines, were made known in Los Angeles recently and indicate a coming test of the survival of the Dominion's declared "chosen instrument" policy. Canada's "chosen instrument" of the sky is Trans-Canada Air Lines, government-owned and at the moment of this writing the only Canadian air service empowered to engage in international operations.

C. H. Dickins, Montreal, vice-president and general manager of CPA, examining transport airplane designs of Southern California factories, said "The Canadian Pacific System is a worldwide transportaion company, and Canadian Pacific Airlines, as a division of such a company, intends to develop its services to the maximum possible extent."

▸ **Business Booming**—Today CPA, representing the merger of ten separate air lines and doing a booming wartime business—ten million pounds of freight, two million pounds of air mail, and 70,000 passengers last year—has a fleet of 80 planes.

G. W. G. McConachie, general manager of CPA's western lines, who accompanied Dickins, sees the necessity of simplifying the varied equipment of the ten companies absorbed into CPA. At one time the system's planes were powered with 41 different types of engines: currently reduced to 15 types.

▸ **Plane Types Studied**—American aircraft factories will be interested in the types of airplanes Dickins and McConachie believe will be "best suited" to the post-war expansion of air services that will open to exploitation Canada's vast virgin wilderness:

One is a single-engine, 600 hp. general utility airplane using wheels, floats or skiis and having approximately 7,500 pounds gross weight. It should carry eight passengers or one ton of freight 500 miles. Speed will not be a vital factor, and a cruising speed of 135 mph. will be satisfactory.

▸ **Twin-Engine Model**—A second type will be a twin-engine design, adaptable to floats or skiis, using two 600 hp. engines of the same make as the single-engine plane. It will weigh perhaps 15,000 pounds gross and carry twelve passengers or 4,000 pounds of freight 700 miles. Its cabin should possess 400 cubic feet of usable cargo space.

Two other types of planes of undetermined size and performance will be desired; one a large land plane for continental operations, and the other a plane for long-range ocean flights.

The Canadian operators are "definitely" interested in helicopters for use in wilderness areas devoid of waterways or open land adequate for use of airplanes.

▸ **Adjustments**—Both feel that friendly "adjustments" in Canadian-United States air transport relations are in order. They cite as an unbalanced situation the fact that only one Dominion air line enters the United States (Trans-Canada's Toronto-New York service) while seven American lines enter Canada over nine routes: Fairbanks to White Horse and Juneau to White Horse (Pan American); Seattle to Vancouver (United); Great Falls to Lethbridge (Western); Minneapolis to Winnipeg (Northwest); New York to Montreal (Colonial); Boston to Moncton and Boston to Montreal (Northeast); and New York to Toronto (American).

AA STATION MANAGERS AT ANNUAL MEETING:

American Airlines' station managers and other officials from the eastern section of the northern area of AA's system met in New York recently for their annual meeting.

Seated, left to right (all station managers unless otherwise specified), are Mary Todd, stewardess supervisor; Clarence A. Clarke, assistant to vice-president of properties; I. Williams, supervisor of stations; R. M. Burrows, northern superintendent of stations; E. J. Wood, Hartford; Muriel Hyatt, secretary; R. Kerr, Jr., airways and airports; W. E. F. Clark, Providence; J. A. MacMillan, Tri-cities; H. E. Gifford, Rochester; T. G. Williams, northern superintendent of operations, Chicago; K. A. Kemp, Roanoke; L. G. Riley, Syracuse. Standling, left to right, Olin D. Haley, communications; Tom Sanders, communications; C. A. Davenport, Philadelphia; M. K. Davis, Buffalo; Harold Matheny, chief pilot, New York; James Durham, Knoxville; Houston Silliman, Washington; W. Davis, Erie; R. McDonald, Toronto; H. F. Palmer, assistant director of stations, New York; E. B. Hale, Boston; G. M. Curry, cargo traffic superintendent, New York; G. E. Mears, communications director, New York; H. L. McCune, New York; R. W. Baker, superintendent of reservations and ticket offices, New York; P. Franklin, eastern personnel director, New York; R. A. Otto, Baltimore, and J. F. Smythe, airways and airports, New York.

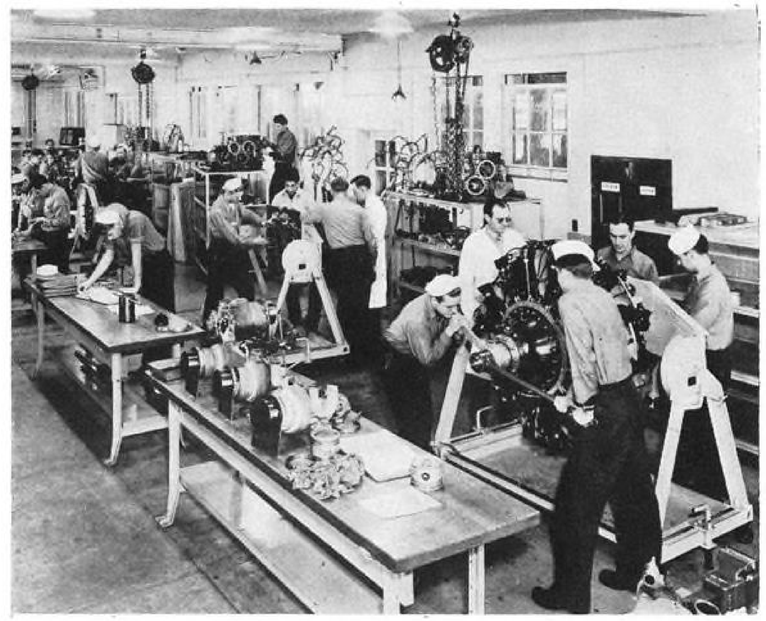
FLYING WING:—Without use of the forbidden term "Flying Wing," which non-aircraft companies can portray freely but which is under military restriction as far as Northrop Aircraft is concerned, the California company is believed to be hinting broadly at its post-war ambitions in current national magazine advertising.

West Coast observers see in the Northrop ad the picture of a young couple stepping from a passenger ramp into the spacious entrance of a massive "Flying Wing"—an entrance apparently in the sloping underside of a "wing" beneath the leading edge.

▸ **Censorship**—Why Jack Northrop has been prohibited from theorizing openly on the commercial possibilities of the flying wing design, even within limits of plentiful pre-war comment on it, persists as one of the minor mysteries of military censorship.

When a considerable number of Air Transport Command pilots come home from war fronts, they will be unique in the adornment of two sets of wings—Army Air Forces and Royal Air Force. They are the pilots trained at Southwest Airways' Falcon Field in Arizona. At Falcon, basically an RAF training center, AAF cadets who had gone through their basic course were given advanced training under the vastly different British flight syllabus. Each, upon graduation, was given both AAF and RAF wings and a second lieutenant's commission.

▸ **Post-War Equipment**—Following closely the lead of United Air Lines' President W. A. Patterson's forecast of 100-passenger planes for a 250-mph. coast-to-coast service, Harold Crary, UAL vice-president, told a Portland, Ore., audience recently that United already has raised $10,000,000 for purchase of new post-war equipment. Future disclosure that United is making detailed population movement surveys, with a critical eye on feeder service prospects in sparsely populated areas now having comparatively inadequate ground transportation, will not come as a surprise.



UNITED TRAINING NATS MECHANICS:

Naval Air Transport Service mechanics are shown in the engine shop at United Air Lines Oakland training center. All phases of aircraft mechanical work are taught to prepare the trainees for duties with NATS squadrons.

Airline Revenues Continue Gain

Total for twelve months reported to CAB as $29,517,809 against $24,664,939 in preceding period.

Civil Aeronautics Board figures on the 18 domestic carriers showed net operating revenue was lower in November than for the same month of 1942. For the twelve months ended Nov. 30, however, the net was considerably higher than for the same period a year earlier.

The figure for November was $2,174,015, against $2,381,157 in November, 1942. For the year ending Nov. 30, 1943, net operating revenue was $29,517,809, compared with $24,664,939 in the preceding twelve-month period.

The total revenue miles flown in November were 9,436,663, or 1,525,978 more than the same month in 1942. For the year ended Nov. 30, on the other hand, they had dropped off to 103,316,249, against 115,360,929 for the year to Dec. 1, 1942.

▸ **Statistics**—Late statistics on the full year's operation show that 1943 passenger miles were ahead of those for 1942, although total miles flown decreased. Total scheduled miles flown were 103,678,999, or 95.58 percent of the 108,468,776 scheduled. In 1942 scheduled miles flown were 108,122,689, or 94.29 percent of the 114,666,644 scheduled. Total passenger miles last year were 1,669,214,115, compared with 1,500,762,963 in 1942. In 1943, 1,632,452,433 of these were revenue passenger miles. This figure for 1942 was 1,417,265,363. Revenue passenger load factor increased from 72.21 to 88.01, while average available seats per mile was rising from 17.92 to 18.35 and average revenue passenger load jumped to 16.15 from 12.94.

Mail pound-miles for 1943 were 72,133,899,534 last year, compared with 42,332,048,722 in 1942, and average mail load rose from 380.6 pounds to 686.2. Express pound-miles meanwhile were rising from 23,801,663,974 in 1942, when the average express load was 214 pounds, to 31,257,460,811 last year, when express loads averaged 297.4 pounds.

Good Market for Personal Planes Seen in Alaska in Post-War Era

New passenger and cargo aircraft also to be needed to supply demands of air-enthusiastic inhabitants, CAA official says

SEATTLE — American aircraft manufacturers can count on Alaska as a good market for post-war personal airplanes as well as new passenger and cargo planes.

A survey of existing equipment throughout Alaska and the existence among the territory's 70,000 inhabitants of tremendous enthusiasm for flying gives this indication.

▸ **Wide Open Territory**—The territory is even more "wide open" for the sale of helicopters, particularly a small helicopter of family fly-about design.

"All you seem to hear about up here is 'helicopter'. There isn't a person in Alaska, including natives, who doesn't want one, or a light plane," says Marshall C. Hoppin, eighth region manager for the Civil Aeronautics Administration, with headquarters at Anchorage.

▸ **Bush Pilot Lines**—This interest is the result of nearly two decades of steadily growing "bush pilot" airplane service throughout Alaska, the advent of Seattle-Alaska civilian service by Pan American Airways, and increasing dependence on the airplane for passenger and cargo transportation in a vast region of few and short highways, with the exception of the new Alcan Highway, and one railroad that extends from Seward through Anchorage to Fairbanks.

Recently the success of military aircargo operations throughout the Alaskan interior and along the coast has stimulated the desire of Alaska's populace for improved air services.

▸ **Principal Cities**—Today Alaska is served commercially by approximately 21 "bush pilot" operations and small airline groups, in addition to Pan American and Alaska Star Airlines, the latter owning 34 airplanes of various makes and possessing routes to all principal Alaskan cities and villages with general offices at Anchorage.

Approximately 86 airplanes are owned and operated by commercial concerns other than Alaska Star and Pan American.

▸ **Planes Obsolete**—With few exceptions, the airplanes operating throughout Alaska are obsolescent, although kept in good repair and up to CAA safety standards, which are enforced rigidly. Many are ten years old and owners are confronted with increasing problems of maintenance and repair, due to inability to obtain new parts.

Several operators have expressed a desire to obtain modern equipment and during the past year would have bought multi-engine cargo-passenger transports with the expectation of having them pay for themselves within twelve months, had the planes been available.

▸ **Airports Developed** — Extensive development of CAA airports throughout the territory, together with the installation of a closely spotted network of CAA radio ranges is increasing the safety of flying operations and reducing the risk of heavy investments that would be required for modern airplanes.

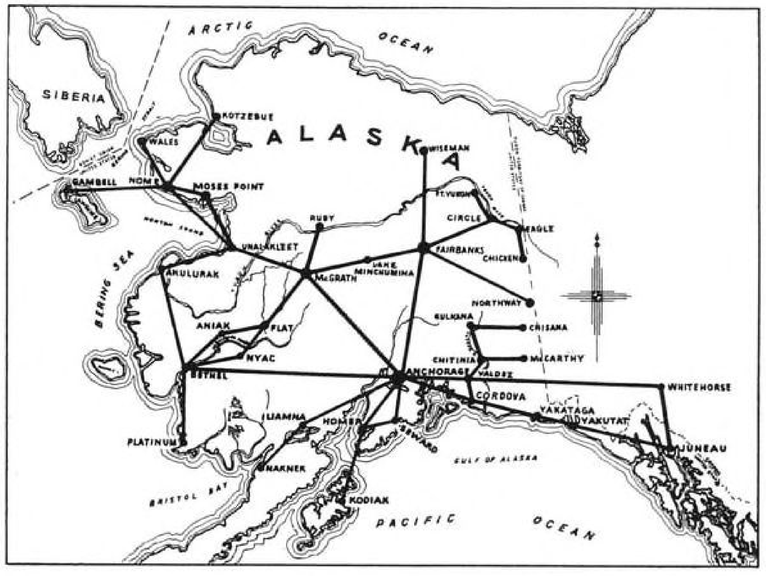
Alaska bush operators enjoy a moderate air passenger business throughout the year, heavy seasonal business in the transportation of miners and fishermen, and in some areas a constantly heavy cargo business. One small operator recently had a backlog of 20 tons of freight stored in his hangar awaiting air delivery.

▸ **Equipment**—An Alaskan authority on northern flying operations believes the ideal equipment for post-war rehabilitation of the territory's air services will be land and float type planes, single or

NAA Exposition

A four-day convention of airport managers, base operators, flight instructors, dealers and county and city officials will coincide with the first annual Northwest Aviation Exposition being held at Minneapolis Auditorium Mar. 25 to Apr. 1.

Models of present and projected planes will be displayed by the Twin Cities chapter of the National Aeronautic Association, exposition sponsors. Gov. Edward J. Thye has proclaimed the period "Minnesota Aviation Week" in tribute to the exposition.



Alaska's Growing Airways: *To many outsiders, Alaska has been overlooked as a territory of extensive air transport operations that has 5,800 miles of CAA airways, including more than 48 radio range stations and 26 CAA air fields. This map of the routes of Alaska Star Airlines shows basic Alaskan airways. To them should be added CAA airways from Anchorage to Northway on the Yukon border, and from Nome to Fairbanks. Military airways, that undoubtedly will have extensive commercial use after the war, are not indicated.*

twin-engine, capable of carrying six persons and up to 600 pounds of freight, and convertible to all-cargo service to carry up to 2,000 pounds of freight.

Expansion of CAA facilities in Alaska and efforts of CAA inspectors in persuading pilots to obtain instrument rating will be factors in the post-war growth of air transport operations in the northland. Pilots concede that year-'round flying is practical and enhanced by the fact that no Alaskan landing fields exceed 2,800 feet in altitude.

British Ship Firms Plan Own Airlines

Most of companies studying post-war possibilities of coordinated service.

British shipping men, apparently not entirely satisfied with the monopoly their government has in British Overseas Airways Corp., have done their own air transport grouping against the time equipment will be available for private operation.

Individually, most of the companies, 32 of which have started planning for air operation, are keeping their arrangements to themselves. Five groups have been organized with post-war air transport in mind. They are designated North Atlantic, South American, South and East African, Eastern, and Coastal and Continental. British Latin-American Airlines, Ltd., has been formed separately by the South American group, and another company is in the offing with the Coastal and Continental group.

Shipowners Interested — The Chamber of Shipping of the United Kingdom has expressed its active interest in air transport questions, stressing the shipowners' claims to participation. Sir Leighton Seager, shipping executive who presided at the Chamber, commented that only limited governmental regulation should bear on this development. He expects the North Atlantic Eastern and African groups to form air transport companies soon.

Those who have been watching these British developments doubt that all the 32 British shipping companies which announced they might operate airlines actually will engage in air transport along with their shipping activities. In some cases, the move was seen merely as a precautionary one against possible post-war contingencies.

At any rate, the recent activity of British shipping people is a reflection, observers say, of British interest in the possibilities of post-war shipping-air transport coordination.

Aerial Survey Made Of Hudson Bay Area

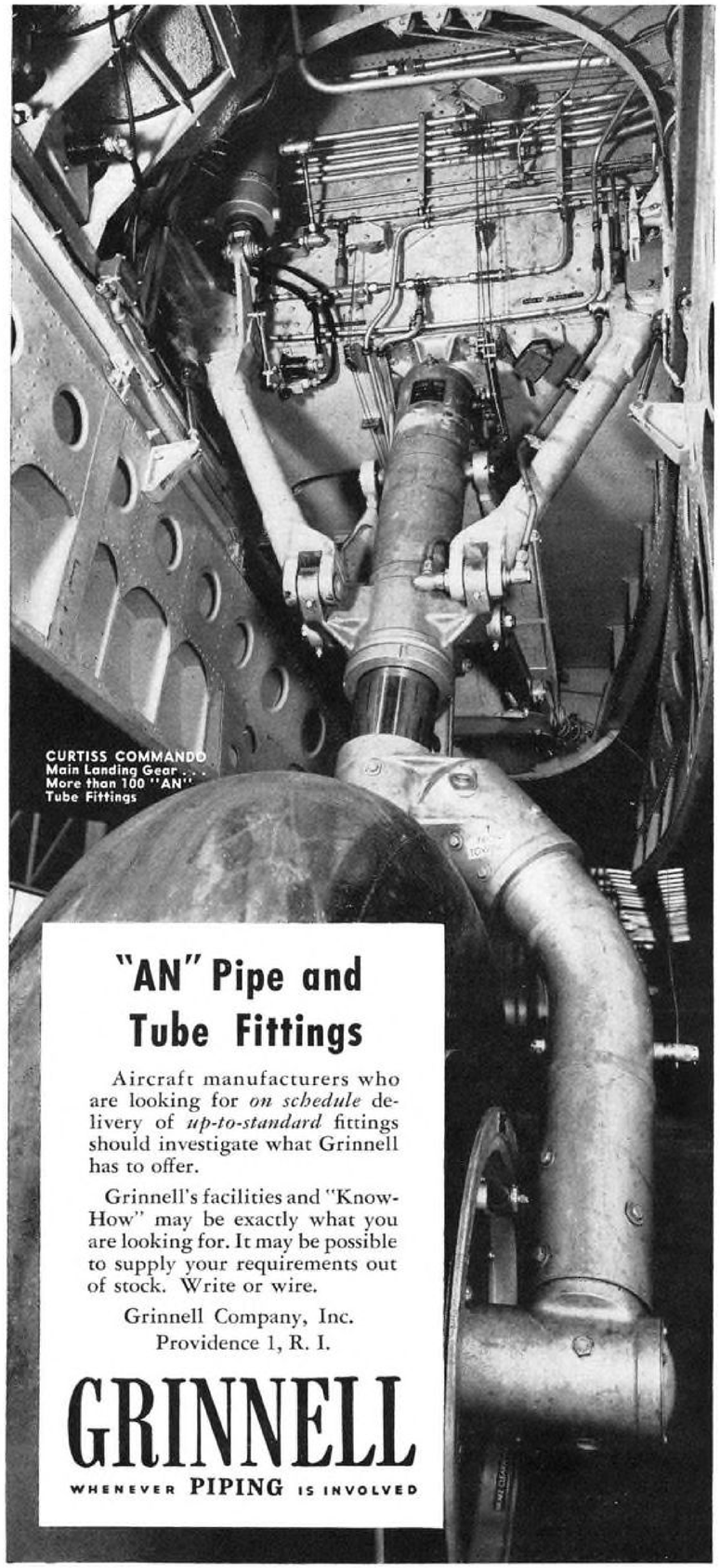
RCAF maps thousands of islands never before listed; more than 100,000 sq. mi. covered.

An aerial survey of the Hudson Bay and Hudson Straits area, made last summer by the Royal Canadian Air Force, has shown that even the latest maps of the area were inaccurate.

Covering vital wartime areas at the top of the continent, the survey was made to establish ground

NWA STARTS FLIGHT CONTROL INSTRUCTION:

Northwest Airlines is training all flight control officers for the 23 Army flight control centers in the United States, an assignment from Army Air Forces. At a meeting in NWA's St. Paul headquarters where the program was planned were (left to right): Maj. C. P. Burton, chief of operations, Flight Control Division, Office of Flying Safety, Headquarters Army Air Forces, Winston-Salem, N. C.; Lieut. Col. G. K. Hazeltine, commanding officer of AAF Seventh Flight Control Region, Seattle; Lieut. Col. R. J. Moore, chief of Flight Control Division, Winston-Salem; R. L. Smith, NWA operations manager, in charge of the training program; Maj. M. V. Fredenhagen, executive of flight control division, Winston-Salem, and R. E. Stelzig, NWA system chief, flight superintendent, who will direct all instruction.



controls for aerial mapping. It blanketed thousands of miles of Ungava Peninsula, Baffin Island and the west coast of Hudson Bay. Among its discoveries are a mountain range 7,000 feet high, a triple glacier, and thousands of islands never before mapped.

▸ **100,000 Miles Covered**—A former bush pilot, Squadron Leader Jack Hone, commanded the expedition. It consisted of 31 officers and men including twelve Dominion government civilian surveyors. This RCAF Arctic survey party left Ottawa June 22 in a Canso amphibian and four Noorduyn *Norseman* seaplanes. They returned Sept. 20 after covering 100,000 square miles of territory in 950 flying hours.

Ports to Get New CAA Radio Units

Installation of equipment to begin this spring, Stanton tells engineering group.

Need for improved air radio and communications equipment is being answered by Civil Aeronautics Administration, says Charles I. Stanton, administrator, with very high frequency range equipment.

Installation is to begin this spring, Stanton informed a joint meeting of the New York sections of the American Institute of Electrical Engineers and Institute of Radio Engineers. Airport traffic control towers are to operate on ultra-high frequencies, and instrument landing systems will be installed as circumstances permit.

▸ **Saturation**—Pointing to the increase in aircraft movements handled by CAA centers—from 25,000 a month in 1938 to more than 1,000,000 a month last year—Stanton explained that saturation already has been reached in radio range frequency assignments, and "few if any frequencies are available for future expansion of the range system."

The administrator asserted that of the four elements in an instrument landing system, one is unavailable. This is "glide path" equipment, which he told the group will be installed as soon as available. Other parts of the system are the localizer, boundary marker, and outer marker.

▸ **New Equipment Installed**—Stanton said CAA, with War Dept. cooperation, is at work at more than 100 airports putting in ultra-high frequency equipment which will permit aircraft when properly fitted to approach on instruments when there are low ceilings or "even zero-zero conditions." Military aircraft, he disclosed, are the only ones capable now of taking advantage of such facilities.

Without the glide path, Stanton said, the localizer and the markers permit instrument approaches under weather conditions less favorable than those now required. Present requirements are a 400-foot ceiling and a mile visibility. This equipment will allow a 100-foot ceiling and one-fourth mile visibility.

He declared that radio and electrical developments in immediate prospect are "mild in comparison" with what may be expected in new electronic developments.

Air Freight Traffic Class Is Formed

Airline and other transportation representatives and businessmen enroll for training at academy.

Among several recent indications of growing attention to air cargo problems, with particular attention to post-war, was the organization of a class in air freight traffic by the Academy of Advanced Traffic in New York.

Airline and other transportation representatives, as well as business executives from banking, insurance and engineering fields, registered for the course. Subjects to be covered included freight carrier design, the air transport system, certified routes, air freight equipment, international operation, airline rates and tariffs, and priorities.

▸ **Instructor**—At the teacher's desk was Walter H. Johnson, Jr., assistant cargo traffic manager of American Airlines. Johnson's associate instructor is Woodrow J. Weinert, air cargo instructor of American Export Airlines. In addition to these, the class is to hear at intervals specialists in the field, among them George F. Bauer, international traffic analyst for Air Cargo, Inc. Text and material for the course have been compiled by Arthur Arsham, the Academy's research director.

Air Cargo, Inc., meanwhile, is meeting "quite a bit of cooperation," according to its Washington representative, in the market analysis it started several months ago. Hopes are that the actual survey may be completed this summer, with compilation completed sometime next fall.

▸ **Cargo Data Gathered**—Designed to assemble air cargo information in the present and future market for the member airlines of the organization, the survey in its current phase consists of spot checks in important cities throughout the country by various market analysts. Some of these are "borrowed" personnel from the airlines. They are visiting industries, shippers and prospects, and asking questions on rates, schedules, pick-up and delivery service possibilities, airport cargo facilities, and other pertinent matters.

Private industry also is turning its mind to these problems, as witness a 48-page booklet, *Air Cargoes,* put out currently by Robert Gair Co., a New York shipping container manufacturer. Claim is that its predictions are not visionary but are "based on facts gathered from military and civilian experience."

▸ **Revolutionary Changes Seen**—Among other things, the Gair concern sees air transport revolutionized by planes as large as the *Mars* or larger. Then, goes the forecast, shipping costs will be cut, warehouses can be eliminated at many points, and there will be speedy distribution of perishable products to new markets. Information and recommendations on packaging requirements accompany the predictions of the flying freight and express future and reports of Gair laboratory tests.

Railway Express Agency reports that 1943 rail-air express handled for the airlines was 28.3 percent ahead of 1942, shipments numbering 410,758 compared with 319,983 in the previous year. Express charges in excess of $4,000,000 last year were 63.2 percent higher than in 1942.

TWA Expert Cites Need for Engineers

Whitmer tells Dallas group of rich field in aviation.

Aviation, with the problems attendant on development of commercial flying, is seen by R. E. Whitmer, head of Transcontinental & Western Air's department of tariffs, schedules and research, as a rich field for the engineer.

Among the many places he believes improvements must be effected before general decreases can be made in commercial airline

rates, or the average citizen may fly his own plane, are maintenance requirements, hangar facilities, airway traffic control, communication facilities and the airport and landing strip location and frequency pattern.

▸ **Electronics**—He forecasts a great need for improved electronic apparatus so that instrument flights may operate at the same efficiency as contact flights.

Whitmer presented his views in an address before the North Texas section of the American Society of Mechanical Engineers at Dallas.

Congress Approves Synthetic Gas Bill

Votes $30,000,000 for establishment of plants to develop process for extracting fuel from coal, shale, farm products, etc.

By BLAINE STUBBLEFIELD

The House and Senate passed legislation authorizing construction of laboratories to develop synthetic liquid fuel processes.

At least three demonstration plants will be built, with appropriations of not more than $30,000,000 to be called for after the authorization bill is signed.

▸ **May Top Nazi Quality**—Petroleum authorities in the Interior Dept. said there is no special problem about making high octane aviation fuel synthetically. They said that if we knew the Germans' data and processes on synthetic liquid fuel we would not need the demonstration plants. But having the plants, we probably will produce better fuel than the Nazis did.

The new fuel program, which was proposed in the House by Jennings Randolph and in the Senate by Joseph C. O'Mahoney, is intended to insure against possible exhaustion of fuel in case the war drags on.

▸ **Use Exceeds Discovery Rate**—Petroleum is now being consumed three times as fast as new reserve sources are discovered. Perfection of fuel synthesis from natural gas, coal, shale, farm products and other sources will insure adequate fuel supplies for from one or two thousand years, authorities say.

Most of the 48 states have coal or gas and many of them are angling for the demonstration plants. Interior Dept. officials say the plants will be located solely on basis of technical advantages.

Non-Stop Service To Foynes Opened

Export reports completion of 15 trans-Atlantic flights in succession.

American Export Airlines, whose trans-Atlantic operation has developed from two flights a week to that many a day, reports completion of a "new series" of 15 consecutive non-stop crossings over its route from New York to Foynes, Ireland.

These North Atlantic flights, which skeptics of a bygone day said would never be possible, were made in American Export's Sikorsky VS-44-A's, a high wing monoplane flying boat designed to cross with full passenger, crew and mail load. For daylight operation, this ship can carry 40 passengers 3,000 miles with a 200 mph. cruising speed.

▸ **6,000-Mile Range**—Under special fuel and load conditions, its maximum non-stop range is over 6,000 miles. The line ordered its first Sikorsky flying boats for non-stop operation in 1937.

American Export claims a world's record of 72 hours for the run from New York to Ireland, Africa, South America, and back to New York. It attributes to Charles F. Blair, Jr., its chief pilot, the shortest trans-Atlantic crossing by a commercial airline, from Bermuda to Foynes. Blair flew 3,450 miles at an average over-water speed of 243 mph., making the trip in 14 hours, 10 minutes.

▸ **Longest Commercial Flight** — Blair also set what Amex says was the longest flight for commercial operation—from Foynes to New York—of 25 hours and 53 minutes. Headwinds accounted for the long time lapse.

Chief pilot Blair's plane carried 16 passengers, mail and cargo. Five other flights have been in the air more than 20 hours, American Export says.

In referring to the speed of its Sikorsky's, the company acknowledges that bombers have been ferried across the ocean in much less time, but points out that this was under conditions of maximum fuel and little or no pay load, while the condition is reversed with commercial airlines.

"In most instances," American Export says, "commercial airliners fly for twice the length of time and over a greater distance, under more trying conditions."

Clarence B. Coombs, Pioneer Pilot, Dies

Started as flyer in 1909; held numerous records and awards.

Clarence B. Coombs, pioneer pilot and holder of many records and awards, died last week at the age of 55 after a brief illness in New York where recently he has been acting as consultant for the New York State regional office of the War Manpower Commission.

He started his aviation career as a pilot in 1909 and later turned to the engineering branch of the industry. His flying record of 10,746 hours included establishment of six world altitude marks for multi-passenger planes in 1919, 1920 and 1921; winning the New York to Toronto race in 1919, in which he established a speed record of 139.3 miles an hour; winning the Pulitzer Cup race in 1922 and the Statue of Liberty race in 1918.

▸ **Test Pilot**—Coombs served in the aviation section of the U. S. Signal Corps and became a test pilot and qualified also as a flight instructor, master signal electrician and aviation mechanic. He laid out the Schenectady airport in 1930 and was operations and general manager of International and Canadian Airways, Ltd., from 1928 to 1931, and from 1931 to 1935 served in a similar capacity for International Airways, Inc.

Coombs was honored by the Aero Club, won the Valentine trophy, the Bowman and Canadian Flying trophies and was a member of the Early Birds. He studied at the University of California, Cornell and Massachusetts Institute of Technology.

WTS Men to Choose AAF Assignments

Although the Army Air Forces have announced that men formerly employed in the CAA-War Training Service program will be allowed to choose assignments in the AAF, CAA-WTS officials say there are few openings in flying jobs they can fill and their assignments will be mostly in the technical and mechanical fields.

More than 4,000 men were affected by the recent Army cancellation of the CAA-WTS instructor program.

▸ **Schools Closed**—The final instructor schools at Brooks Field and Randolph Field, Texas, have been closed to WTS-trained men. AAF instructors will be sufficient for the replacement training program the Army now plans, the Department said.

CAA-WTS graduates will be given a selection of three categories if they are properly qualified. They may volunteer for aviation cadet training, glider training, or technical training, the War Dept. said.

▸ **Other Courses Open**—Instructors released from the program may take aviation cadet training or pilot assignments with the Air Transport command.

U.S. Air Policy Studied by C. of C.

Airport problem is one of topics expected to be covered.

Domestic air policy is being studied by the Transportation and Communications Department Committee of the United States Chamber of Commerce. The Committee has not yet decided what problems will be dealt with, but one or more reports will be issued soon. One matter almost certain to be covered is the nation's airport program.

Of particular interest to the Committee is the relationship of fixed base operations, both contract and charter, to scheduled air transport. Some members believe fixed base expansion will be extensive under the impetus of new demand for such service and of skilled airmen coming home from war. Fixed base service might develop strong competition against the airlines.

▸ **Control Undecided**—Some members of the Committee are undecided what control should be put upon participation of the railroads in aviation. It is clear, they say, that railmen strongly oppose prohibiting laws, but just what they wish to do and will be able to do in the air is not known—probably not even to the railmen themselves.

There is much difference between the need of the steamship operators and that of the railroads for auxiliary air services, in the opinion of some Chamber transport men. The ship lines, they say, do not want to sail their expensive luxury liners; they would prefer to put their upper deck trade on airplanes and concentrate their ships on cargo and multitudinous subclass passengers.

▸ **Supertrains**—On the other hand, the railroads plan intensive development of their supertrains, most of which, contrary to some popular opinion, earn a profit. The Interstate Commerce Commission's formula for allocating the joint costs of freight and passenger rail transportation, in the opinion of some Chamber traffic experts, contributes to this erroneous conclusion. But the committee takes no stand, as yet, and some of its members feel that the time is not ripe for a decision on the rail-air question.

The Chamber's International Transport Committee made a report on U. S. Foreign Air Policy last October and still thinks it was a good job.

Warner Sees Gains In Avigation Aids

But there is still long road ahead, CAB vice chairman tells Chicago U. meteorology class.

Progress has been made in the science of meteorology, but there is a long road ahead, in the judgment of Vice-Chairman Edward Warner, of the Civil Aeronautics Board, before realization of its full possibilities in aeronautics.

Warner sees this progress continuing in two related channels, the first a continuing accumulation of scientific invention, the second improvement in observation technique and the mechanics of transmitting, correlating and interpreting the data thus obtained. His views were outlined in an address to the Institute of Meteorology graduating class at the University of Chicago.

▸ **Political Forecasts**—Political and technical problems both will attend forecasting as it relates to intercontinental air routes, he told the group.

"The political problems are not essentially new, and meteorological organizations have typically set the world an exceptional example of international cooperation for many years past; but the end of the war will present the need for cooperation on an unprecedented scale."

He credited the association of the United Nations and dispersion of American forces with having created "a meteorological observing and communication network of unprecedented completeness."

▸ **Responsibility**—But, Warner told the graduating class, "It is the responsibility of statesmanship to find the means of keeping the great observing net intact in peace, with as little disturbance of its operations by international boundary and as high a degree of technical competence as at present." And there must be international conferences to that end.

The CAB member enumerated several places where improvements in meteorological studies would be welcome, not the least of them in the prediction of ceiling and visibility at airports. Here he lauded the radio-sonde as "the greatest addition to the resources of meteorological observation since the invention of the first continuously recording instrument."

▸ **Sees Cut in Cancellations**—Now, he said, about 6 percent of scheduled flights are canceled, over a year's time, with anticipated ceiling and visibility conditions at destination responsible for more than two-thirds of the concellations. Yet, in more than half the cases where flights were canceled actual weather conditions at arrival time would have permitted safe landing.

Standard Oil Plans Air Filling Stations

Intava, Inc., organized to form world chain of service units.

Ground-work for a world chain of aviation "service stations" has been laid by Standard Oil Co. of New Jersey and Socony-Vacuum Oil Co., Inc., through formation of Intava, Inc.

The new corporation, which takes its name from International Aviation Associates, has been organized with a capitalization of $100,000 to serve planes at any foreign base where private operation is permitted. The earlier company was created eight years ago to coordinate the work of aviation suppliers and distributors through their foreign affiliates and further petroleum products development.

▸ **Officers**—Shepard Dudley, Intava's president, once represented International Aviation Associates in this country and later directed supply and distribution of aviation petroleum products for member companies in other parts of the world. C. H. Baxley, vice-president, also was with IAA many years. Other officers and directors are from management of Standard and Socony-Vacuum.

Anticipating post-war global expansion of regular American air transport service, Intava plans to offer complete accommodations in foreign countries, except where there are government monopolies.

New Flying Hazard

Vice-Chairman Edward P. Warner of the Civil Aeronautics Board is not unmindful of future possibilities of private flying. In impressing a Chicago University class in meteorology with the importance of adequate forecasts, he looked ahead to say that the "greatest potential threat to safety in an airspace occupied by hundreds of thousands of aircraft" would come from the inexperienced pilot who encountered bad weather conditions and kept on, uncertain of location, a menace to other aircraft.

"It is a reasonable hope for the future," he said, "that the entire nation will be so closely served with meteorological information as to leave no pilot any excuse for getting into such a situation, or for starting a trip without reasonable assurance of being able to complete it in satisfactory weather."

Feeder Lines Urged To Aid RCAF Vets

Head of Aeronautical Institute of Canada sees program as providing post-war jobs for flyers.

Expansion of aerial feeder lines and lightplane flying rather than long-range air service will be the key to providing employment to thousands of Canadians now in the Royal Canadian Air Force with post-war aviation employment, in the opinion of C. R. Patterson, president of the Aeronautical Institute of Canada.

He pointed out in a recent address in Toronto that the future of Canadian aviation could be assured by "pump-priming" about $20,000,000 into airport construction which would provide 400 more Canadian towns and cities with small but adequate airport facilities.

▸ **32 Cities Have Airports**—According to latest figures, only 32 of 580 communities with a population of more than 1,000 have airports. Of this total, 75 are expected to have converted military airports after the war.

"The natural trend in airplane design and development," Patterson said, "is to larger and faster aircraft, resulting in longer flights and elimination of more stop-over points. Feeder lines, therefore, offer the only solution. Every new stop means added employment."

Northwest Application Revives Problem of 4th Trans-U. S. Route

CAB hears arguments on airline's request for certificate to operate between Chicago and New York.

By MERLIN MICKEL

Consideration by the Civil Aeronautics Board of Northwest Airlines' application for a certificate to operate between Chicago and New York renews the old question of a direct northern (and fourth) transcontinental line and throws a new element into pending negotiations between the United States and Britain on division of post-war international services.

At hearings before a CAB examiner last week on the Northwest application, John A. Wood of the New York Port Authority said Trans-Canada Airlines, as a link in future Great Circle routes between the United States and Europe and Asia will be a little shorter than the best possible connections through the United States. Trans-Canada, he said, can even serve the northwest border states and the northeastern states, from Europe and Asia respectively, better than our own lines can.

▸ **Protest**—Charles A. Rheinstrom, vice-president of American Airlines, protested that if a northern transcontinental line is necessary, one of the present services between Chicago and New York should be extended to the northwest, rather than extend Northwest Airlines eastward, thus creating another Chicago-New York operation. Observers in CAB pointed out that Northwest would have grounds for vehement objection to such a move.

Other parties to the consolidated hearing, of which Northwest was the center, were Transcontinental and Western Air, American Airlines, Colonial, Penn-Central, United, Chicago and Southern, Braniff and Northeastern, which dropped out. These parties are interested in applications for route extensions which would be affected by the northwest proposal. Milwaukee, Detroit, and the Port of New York Authority intervened.

Seattle-Tacoma Port Nearly Ready

Commercial operations expected to be shifted to new field by July 1.

Shift of all commercial airline operations from Seattle's Boeing Field to the new five-million-dollar Seattle-Tacoma Airport may be ordered before July 1.

Completion of airport runways and temporary airline quarters by June 1 is anticipated.

The new airport, 13 miles south of Seattle and 17 north of Tacoma, and adjacent to the Seattle-Tacoma highway, will be the largest on the West Coast and one of the finest in the nation.

▸ **Runways**—It will open with a north runway of 6,100 feet, a 5,000-foot northwest runway, a 5,602-foot northeast runway, and a 5,000-foot west runway. Eleven hundred acres in area, the airport will permit later installation of parallel runways and extension of primary runways up to 9,100 feet.

Intense congestion of Seattle's Boeing Field, officially King County Airport, by production testing and delivery operations of Boeing Aircraft Co. will prompt the moving of United Air Lines, Northwest Airlines, and Pan American Airways operations to the new airport as soon as runways are completed, according to Paul Morris, Seventh Region manager for Civil Aeronautics Administration.

▸ **$5,000,000 Airport** — Seattle-Tacoma Airport has been under development since June, 1942, and represents an investment of $4,100,000 by the CAA; and the following land purchases: Port of Seattle, $700,000; Port of Tacoma, $70,000; City of Tacoma, $15,000; and Pierce County, $15,000.

The airport's 400-foot altitude places it above surface fogs that occasionally halt flying at Boeing Field. Approaches are adequate for later installation of instrument landing facilities.

Col. W. C. Bickford, general manager of the Port of Seattle, says present plans call for erection at an early date of a $750,000 airport terminal building of advanced design.

U. S.-Canada Airmail Begun 25 Years Ago

It was just 25 years ago this month—Mar. 3, 1919—that the first international airmail flight was made between Canada and the United States when a Boeing model C-3 two-place seaplane carried a single sack of mail containing about 60 letters between Vancouver, B. C., and Seattle, 125 air miles to the south.

Pilot of the plane was Eddie Hubbard, a veteran flyer who later was destined to write air mail history. The passenger was W. E. Boeing, founder and at that time president of the Boeing Airplane Co., a fledgling aircraft firm which had taken root a few years previously during the first World War.

▸ **Take-off**—The actual takeoff was at one end of Coal Harbor on Burrard Inlet, near the site of the Vancouver Yacht Club. A landing was made for gasoline at Edmonds, a small town on the shores of Puget Sound, a few miles north of Seattle. After refueling, the plane took off again, this time to settle finally on the waters of Lake Union, in the middle of the city of Seattle.

Both Hubbard and Boeing worked on in the then infant aviation industry to make contributions which are now recognized as milestones in the industry.

▸ **History**—Boeing, as founder of Boeing Airplane Co., can look to the world-wide achievements of the Boeing *Flying Fortress* and the Boeing *Superfortress* now on the way, the trans-ocean Boeing *Clippers* and the Boeing *Stratoliners*.

Hubbard became the first international air mail pilot assigned to fly a regularly privately contracted route on this continent—that between Seattle and Victoria, B. C. Service was started with a Boeing B-1 seaplane Oct. 15, 1920. It was a time-saving link between America and the Orient, since much of the mail Hubbard carried was flown between the transcontinental trains at Seattle and the incoming and outgoing trans-Pacific ships at Victoria. Hubbard successfully flew the route daily for seven years, logging 350,000 miles in his B-1.

▸ Trans-Canada Air Lines has compared 1943 figures with those for its first year of operation six years ago with these results: air express volume was nearly 108 times greater, air mail was 11 times greater, and more than 68 times as many passengers were carried.

Macauley Lists Helicopter Groups

At least 50 firms and organizations are engaged in either the development or manufacture of helicopters. Among them are the following, taken from C. B. V. Macauley's new book *The Helicopters are Coming:*

Air Cruisers, Inc., 330 Highland Ave., Clifton, N. J.
Adel Precision Products, Burbank, Calif.
Aeronautical Products Inc., 18100 Ryan Rd., Detroit 12.
Airex Mfg. Co., 5-33 48th Ave., Long Island City, N. Y.
All American Aircraft Products, Inc., 1350 E. Anaheim St., Long Beach 4, Calif.
Avery, Harold, 1129 Mandana Blvd., Oakland, Calif.
Aviation Engineering, Inc., 1390 Blashfield St., S. E., Atlanta.
Bell Aircraft Corp., 2050 Elmwood Ave., Buffalo.
Blount, Earl E., 445 Debaliriere Ave., St. Louis.
Clark Electronics & Aviation Corp., 699 Madison Ave., New York.
Cook, D. A., 2125 Lakeshore Ave., Los Angeles 26, Calif.
Detroit Gear Aircraft Parts Div., Borg-Warner Corp., Detroit.
Engineering Development Associates, 4310 Degnan Blvd., Los Angeles.
Fleetwings, Div. of Kaiser Cargo, Inc., Bristol, Pa.
G & A Aircraft, Inc., subsidiary of Firestone Tire & Rubber Co., Willow Grove, Pa.
Helicopter Corp. of America, 36 W. 44th St., New York 18.
Helicopters, Inc., 50 Rockefeller Plaza, New York 20.
Higgins Rotorplane, Higgins Industries, Inc., New Orleans.
Kellett Aircraft Corp., 58th & Grays Ave., Philadelphia.
Landgraf, Fred, 2123 W. 79th St., Los Angeles.
Mainline Trailer Coach Co., 8825 Avalon Blvd., Los Angeles.
McCulloch Aviation, Milwaukee.
Nash-Kelvinator Corp., Lansing, Mich.
National Advisory Committee for Aeronautics (Research), Washington, D. C.
National Bent Steel Corp., 5307 Metropolitan Ave., Brooklyn.
Pennsylvania Aircraft Syndicate, Wilford Bldg., Philadelphia.
Pittsburgh Plate Glass Co., Grant Bldg., Pittsburgh 19.
Platt-LePlage Aircraft Co., Eddystone, Pa.
P-V Engineering Forum (Frank Piasecki), Ridge Ave. at Fairthorn, Philadelphia.
R. T. Machine Shop, 1207 E. Florence Ave., Los Angeles.
Reynolds Metals Co., Louisville, Ky.
Rota Wings, Inc., 1011 Chestnut St., Philadelphia.
Roteron Co., 2514 Sunset Blvd., Los Angeles.
Rotoplane Corp., North Hollywood, Calif.
Sikorsky Aircraft Div., United Aircraft Corp., Bridgeport, Conn.
Stout Research Division, Consolidated Vultee Aircraft Corp., Dearborn, Mich.
Timm Aircraft Corp., Van Nuys, Calif.
Traverse Bay Mfg. Co., Traverse City, Mich.
Twin Coach Co., 850 W. Main St., Kent, Ohio
Ziebarth, Fritz, Co., San Bernardino, Calif.

Grayson Dies

Death of George Harvey Grayson last week took from the Post Office Dept. an official well known in foreign airline circles and to domestic airlines serving foreign countries.

Mr. Grayson, who was 66, was director of international postal service, and had charge of all postal service aside from the domestic. Death resulted from a heart attack.

He entered the postal service in October, 1897, as substitute clerk in the railway mail section. In 1929, 27 years after his transfer to Washington, he was named assistant director of the International Postal Service. He held that position until his appointment as director in December, 1942.

Among those being considered as his successor is S. M. Weber, present assistant director, who has been in the department for many years. The new director will be appointed by the Postmaster General.

SHORTLINES

▸Canadian Pacific Air Lines reports 5,806 passengers carried during January, an increase of 83 percent over January, 1943. Cargo was up 2 percent to 620,500 pounds, while mail dropped 14 percent to 185,793 pounds. Passenger miles were 2,005,225, or 145 percent over the 1943 month. Mail pound miles of 69,224,680 amounted to a 4 percent increase.

▸United's schools and college services department has made possible the award of five $100 scholarships for improvement of aviation educational materials, through a grant to Teachers College, Columbia University. The scholarships will aid elementary and high school teachers in preparation of aviation instruction materials and assist college students and instructors in aviation instruction research.

▸Northwest Airlines has been awardthe Treasury's Minute Man flag for war bond purchases by employees.

▸Transcontinental & Western Air has announced its seventh annual competition for aviation writing and photographic awards. Four rotating trophies, twelve cash prizes and as many commemorative plaques will go to the winners. Competition closes Apr. 1.

▸Pan American reports that its passenger miles for the last quarter of 1943 totaled 177,831,576 against 100,453,873 in the same period a year earlier. Plane miles of 17,797,175 compared with 10,461,109.

▸TWA's airmail and express pounds for 1943 were more than half again as large as in 1942, according to preliminary reports. These gave mail poundage at 15,039,800, or 52.5 percent higher than 1942's total of 9,861,449. For express, the gain was 54.4 percent, from 4,890,962 to 7,553,878. Last year's air mail peak on TWA was reached in April, express in October.

▸Main overhaul and repair plant for aircraft and engines is being established by Canadian Pacific Airlines at Winnipeg to center CPA's repair facilities. T. W. Siers, superintendent of maintenance, is moving his offices there from Montreal. CPA's engineering division, under A. G. Clarkson, is being moved to Winnipeg from Edmonton. Trans-Canada Air Lines, incidentally, also has its main repair and overhaul plant at Winnipeg.

▸Northwest Airlines' figures showed 1,554,732 express pounds carried 1,000,634,952 pound miles last year increases respectively of 391,483 and 144,029,792 over 1942.

Truman Praise

THE LATEST Truman Committee report, paying highest tribute to the aircraft industry and its thousands of subcontractors, finds no current, major flaws in the largest aeronautical production effort the world has ever seen. There could be no greater praise for aircraft executives and workers. It is an encouraging harbinger of America's ability to build the world's finest commercial planes after the war.

"In any program which is so large there are certain to be some bad situations," the report states. "The Committee has investigated and called attention to some of those in the past. That it will undoubtedly do so in the future should not be allowed to detract from the record of the industry as a whole."

There has been no doubt in the past year of the Committee's sincerity in tracking down all reports and rumors it has received of inefficiency and bungling in the nation's war effort.

It was disappointing, however, that several of the Committee's previous premature reports, so critical of some aspects of the aircraft program, came when they did, while the industry was still in desperate throes of organization to meet tremendous demands.

Companies criticized were aware of their problems before the Committee announced them, and were making earnest efforts to correct their mistakes. However, the public was given the erroneous impression that the Truman Committee discovered all of the "scandals," and therefore that no corrective action whatever had been taken before the reports were released to the press. The result was a serious drop in aircraft workers' morale at the very time it should have been highest.

Yet the industry fought on, and licked the problems which had kept its output below Government schedules. But there is a question as to whether the Truman reports helped much, however.

Mr. Littlewood and NACA

ELEVATION by President Roosevelt of William Littlewood, American Airlines' vice-president in charge of engineering, to membership on the National Advisory Committee for Aeronautics, is deserving recognition for one of the most capable airline executives.

The selection from one of the commercial airlines to the most distinguished aeronautical research group in America is even more a recognition of the role U. S. airlines have played and are expected to perform in the further technical development of aviation.

Mr. Littlewood joins a group well known and highly respected. Dr. Jerome Hunsaker of Massachusetts Institute of Technology is NACA's chairman. Dr. Lyman Briggs of the Bureau of Standards is vice-chairman. Other members are Dr. Charles G. Abbot, Gen. Arnold, William A. M. Burden, Dr. Vannevar Bush, Dr. William F. Durand, Gen. Echols, Admiral Pace, Admiral McCain, Dr. Francis Reichelderfer of the Weather Bureau, Dr. Edward Warner, Dr. Orville Wright, and Dr. T. P. Wright. Dr. George W. Lewis is the internationally known director of Aeronautical Research. John F. Victory and Edward Chamberlin are secretary and assistant secretary.

The group has an unprecedented task, now and in the future. But there is every reason for confidence in its ability to do it well.

International Cooperation

FORTUNATELY, all propaganda emanating from England on the subject of post-war international airline cooperation is being scrutinized closely by responsible government and industry officials. It is realized that the first moment we relax our attentiveness we may find ourselves charmed out of demanding rights we should seek when the time arrives for sitting down at the conference table.

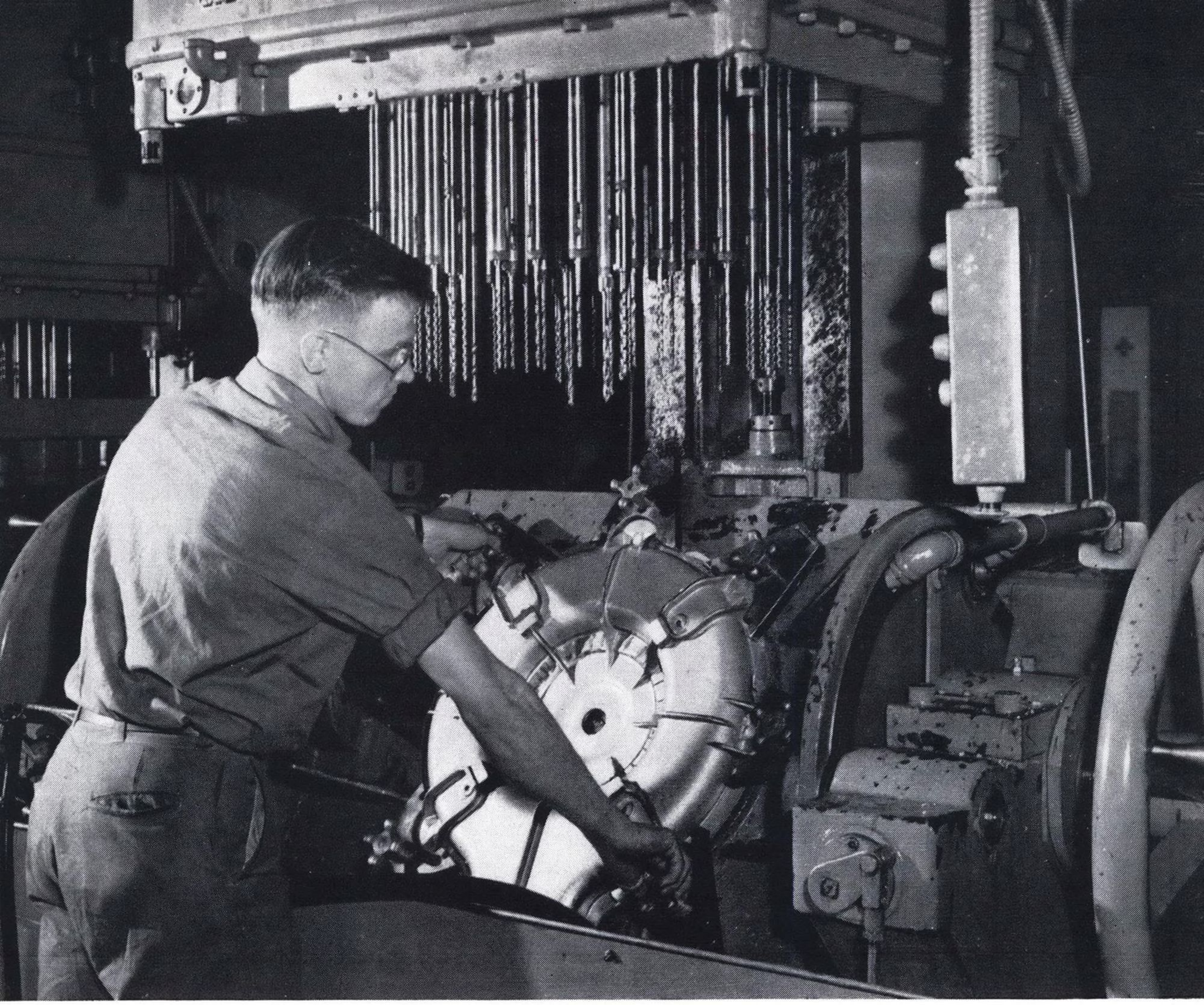
The latest unofficial proposal, appearing in an English aviation magazine, is for a world air transport association "to control and operate all civil airlines," with financing from every country in the world on the basis of population, estimated density of routes, and frequency of schedules. Executives would comprise delegates from everywhere. This is the wildest one yet.

Unfortunately, even government officials are divided on the extent of our rightful demands in international flying, chiefly because of some evidence of the President's other post-war ideas for supplying our resources generously to the rest of the world at the expense of U. S. business.

The President, necessarily, will dictate the direction of most early international discussions, but the Congress of the United States will ratify the final plans. An equitable policy of cooperation is essential for post-war aviation. No American denies that. But on the other hand there is no evidence so far in this war—certainly not from our soldiers abroad—that we Americans will be in any more beneficent mood toward our world neighbors than our pre-war business sense of survival dictated.

We hope the British and some of our own government leaders will remember that, no matter how much of a smoke screen is sent up between now and the time of ratification.

ROBERT H. WOOD



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