

Aviation News

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APRIL 17, 1944

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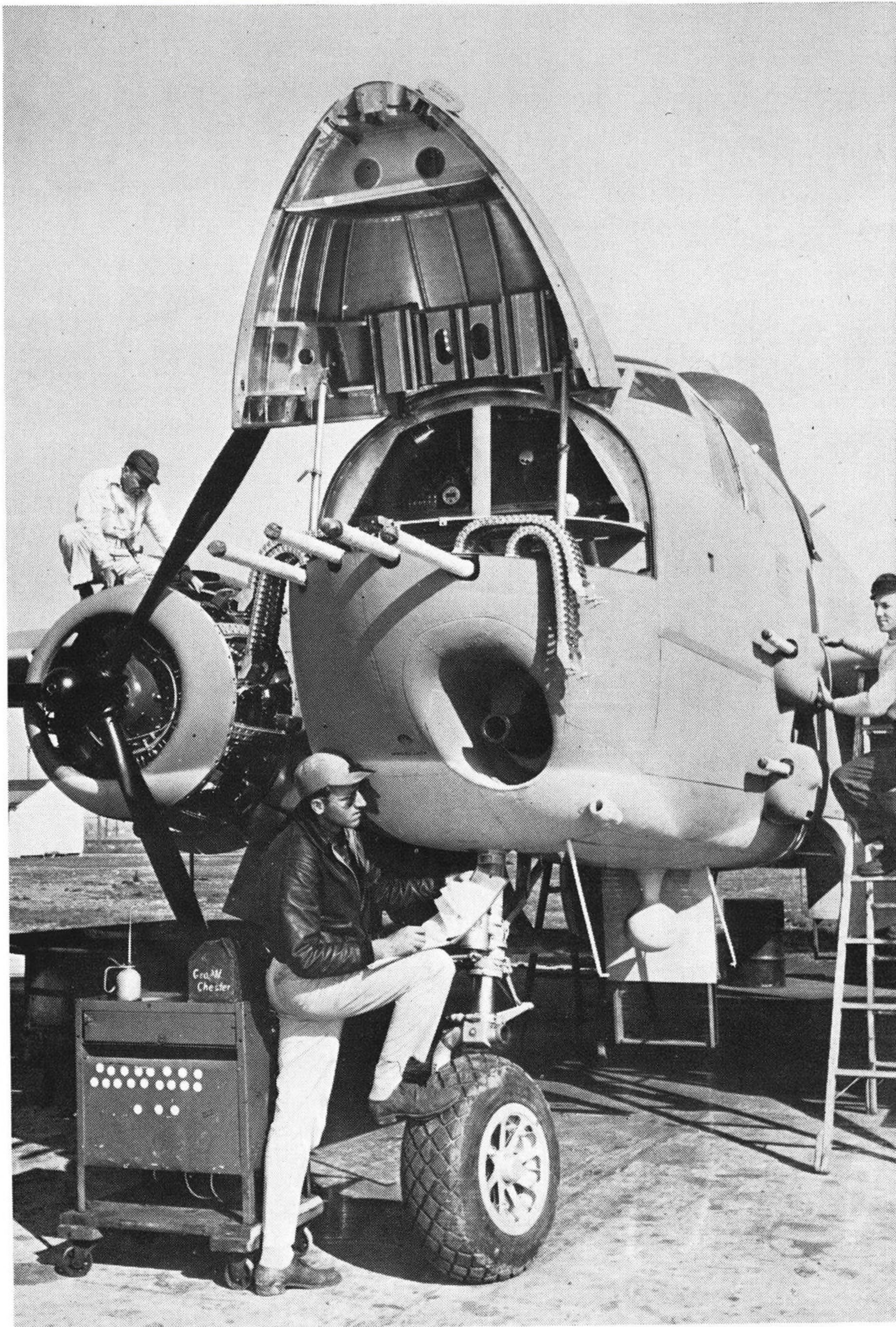
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Soviets Watch U. S.-British Talks

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New B-25 Profile On Tokyo Raid Anniversary: Two years ago, Apr. 18, B-25's bombed Tokyo. They carried two .30-caliber guns in the nose, two .50-caliber guns in the upper turret. The nose of the plane above carries eight .50-caliber guns and a 75-mm. cannon. Top turret, tail mount and two waist .50's complete the armament of 14 machine guns.



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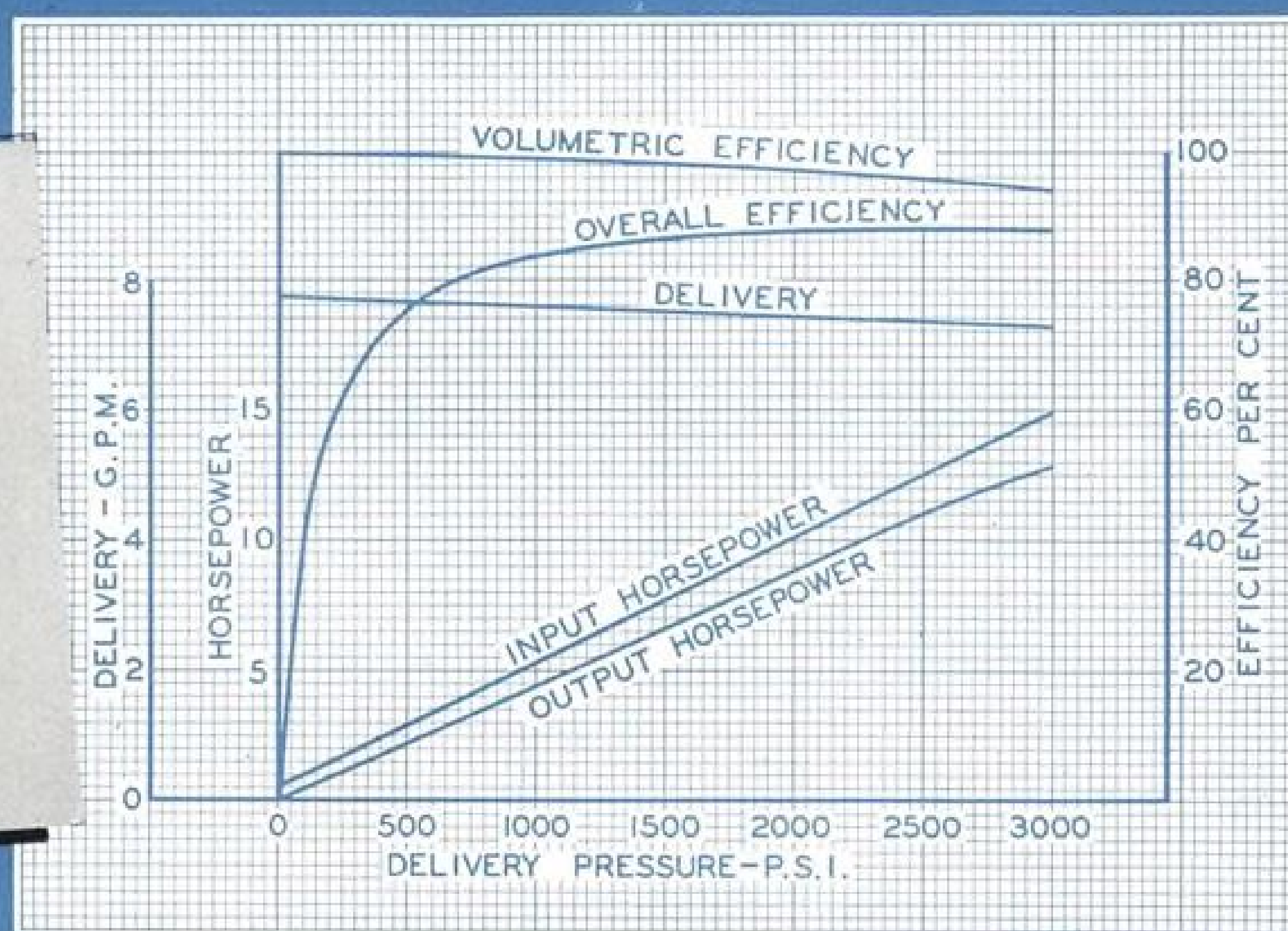


ON DOUGLAS SKYMASTER (C-54)

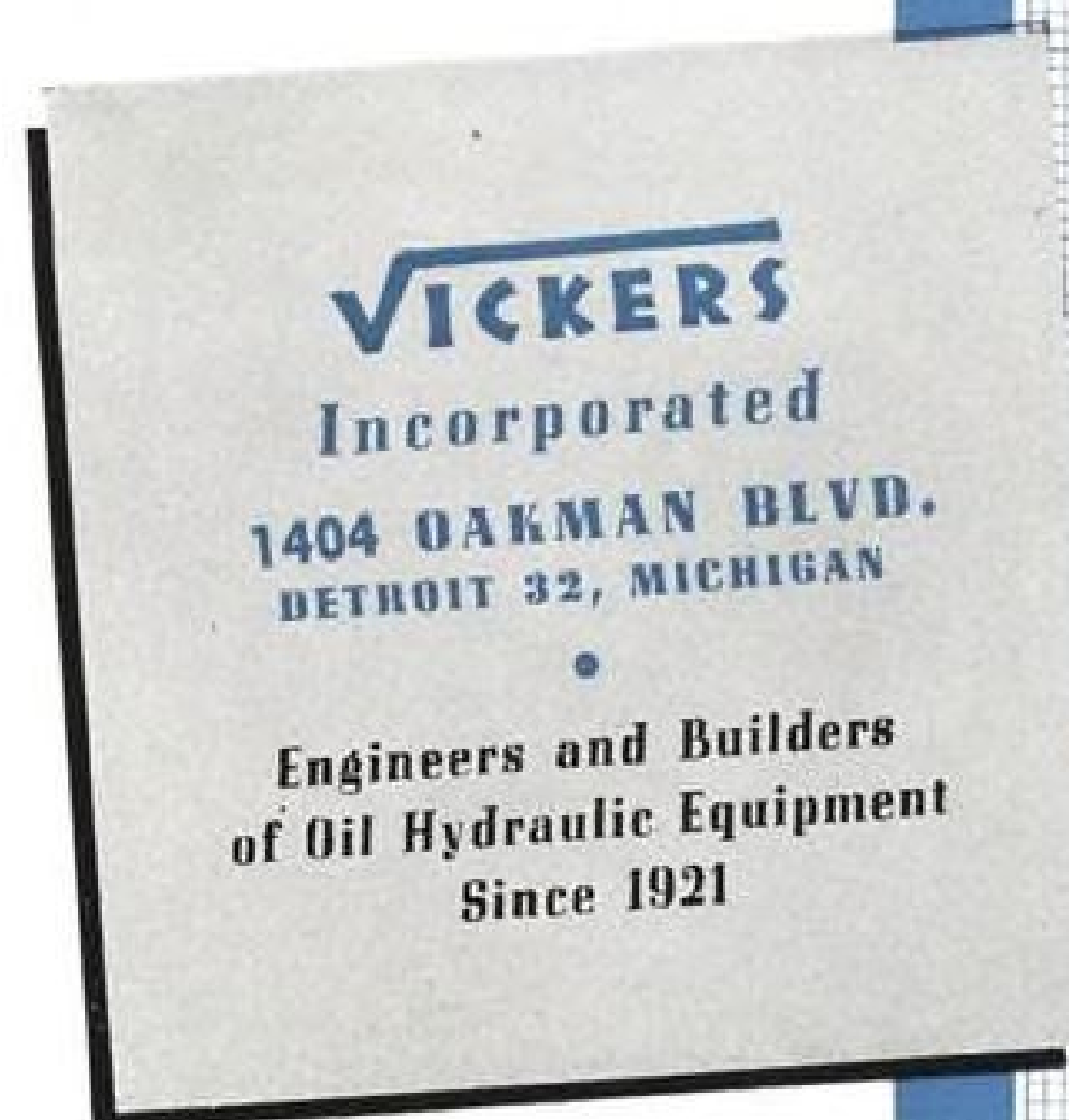
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Curves are for Vickers Aircraft Piston Type Constant Delivery Pumps Model PF-3911 Series at 3600 rpm using approved AN aircraft type hydraulic fluid



THE AVIATION NEWS

Washington Observer

BRITISH SUPER-FIGHTER—The new RAF super-fighter which the British Ministry of Aircraft Production announced will go into action some time this spring is a jet-propulsion craft, in the opinion of Washington aviation circles. Jet power is generally believed to be the only answer to the semi-official but cryptic reference to "more sensational performance" than that of any plane now flying.

★

TORNADO DEFERRED—The British reference to the new plane inspired a London dispatch from International News Service praising the single-engine Hawker *Tornado* fighter. The story described the *Tornado* as capable of 425 miles an hour, the same figure released last week for the *Mustang*, adding that the fighter "has not yet been put into action." The inference drawn was that the *Tornado* is the super-fighter publicized earlier. Actually, the *Tornado*, equipped with a Rolls-Royce Vulture engine, has not proven successful and will not go into production.

★ ★ ★

AIR TRAVEL—The return of transport planes to the commercial airlines by the Army doesn't always mean that a corresponding increase in seats will be available to the flying public. Several of the lines are putting the added planes into cargo service, which not only pays better but also saves the cost of installing luxury fittings.

★ ★ ★

B-29 PRODUCTION—The output of Boeing B-29 *Superfortresses*, which is definitely on the up-grade, will approximate the production of the B-17 *Flying Fortress* shortly after the first of the year unless unforeseen difficulties arise. Some critics have claimed that B-29 quantity production will be too late to make any real

contribution in Europe, since most targets are within range of the B-17's and Consolidated's *Liberators*. These critics are obviously uninformed as to the potentialities of the B-29—its actualities, of course, still being under wraps.

★ ★ ★

KAISER AGAIN—As of this writing, Henry J. Kaiser is not choosing to run for the Brewster Aeronautical Corp. presidency, and will not accept the post even if the stockholders vote it to him. The annual meeting of the stockholders is set for May 17. Navy contracts now in existence will be completed in the months to come and there are indications that the Navy soon will terminate the voting trust under which Kaiser was voted the presidency, returning vote control of the 145,100 shares of Brewster stock to James Work, who holds a little more than 90,000 shares, and to the "Miranda group." Shares outstanding total 556,551, of which 384,726 were voted at last year's stockholders meeting, all but 25 of them for Kaiser and his "Navy" board.

★ ★ ★

RECONVERSION PROBLEM—The aircraft industry might well look into the significance of the automobile industry's turndown of a suggestion that one company be permitted to build 200,000 automobiles. It is the crux of the whole reconversion problem and will bring many headaches for Washington before and after peace comes. The cars are needed; there is little difference of opinion on that. This is true particularly in the southwest, but in other sections of the country, too, war workers' cars driven long distances to war plants are nearing their limit. Automobile companies don't want to see one manufacturer given a head start, even in the small number suggested. The same situation will hamper reconversions in other industries, unless a crack-down attitude is developed,

First photo of North American's newest P-51 Mustang, with speed over 425 mph.



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April 17, 1944

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which probably will not occur, particularly in an election year.

GOVERNMENT OWNED PLANTS — The pending acquisition by the British government of Power Jets, Ltd., a pioneer builder of gas jet propulsion aircraft power plants, is being watched with interest by aviation manufacturers in the United States. Nationalization of the industry has caused industry leaders some concern from time to time and any move in that direction, whether here or elsewhere, provides a pattern which is given the closest attention by the industry. The fact that the British government has spent considerable money under development contracts placed with the company may provide some solace for the British manufacturer, but purchase of the firm would bring unfavorable reaction in this country.

NAVY UNCAMOUFLAGES — The Navy has quietly taken the camouflage paint off some of its transport planes and may, like the Army, extend the program to all its aircraft with certain strategical exceptions. The Army last fall took this step after deciding that the shiny aluminum was as good disguise as any under most conditions, plus a saving in weight and speed.

PROSPECT FOR AIR LEGISLATION — Little chance for action on any of the major aviation bills before Congress is seen until after the elections. This does not mean that there will be a shutdown of activity, but unless something now unforeseen occurs it will be preliminary work, such as that now under way in the Airlines Committee for U. S. Air Policy. The committee has been holding a series of meetings preparing a point-by-point analysis of various measures. These may be released to clarify in the public mind the issues involved in the international aviation dispute between American companies. The fact that the decisive international conferences are a good many months away will contribute to this, since it will be difficult for the United States to legislate when it does not know what the outcome of the conferences will mean.

TECHNOLOGICAL CONFERENCE — CAB Vice Chairman Edward P. Warner remained in London for several days after Assistant Secretary of State Berle returned to the U. S. to arrange details of international technological conferences that have been agreed upon.

Interested nations feel that this is the one

Washington Observer

ground on which firm action can be taken, and that the conference in this category should be held as soon as possible and preparations made for making the results effective as soon as possible after military operations are suspended.

*

RUSSIAN TALKS — Washington has been awaiting arrival of Russian representatives for exploratory talks, which probably will start this week. It will not be surprising to find Russia and the United States in substantial agreement on international air, since both are large land powers without the island bases with which the British can exercise a lever. And it shouldn't be overlooked that Russia and the United States are historically friendly nations, despite ideological differences.

HELICOPTER BAROMETER — Subsiding anti-sub warfare is interpreted as mainly responsible for a general let-down in helicopter interest in Washington. Present indications are that the NACA's subcommittee on helicopters, for example, still will not have its first full membership meeting until early next summer, although no date has been set. The group, formed several months ago with Grover Loening, WPB's aviation consultant, as chairman, has representatives from Army Air Forces, Bureau of Aeronautics, Coast Guard, Civil Aeronautics Administration, NACA, educational institutions and industry.

WEST COAST MANPOWER PROSPECT — WMC officials no longer are expressing concern at the manpower prospect on the West Coast when the European war ends. Previously they feared housing and other shortages when the area became the only point of debarkation for Army and Navy in a stepped-up Pacific offensive. Now the consensus is that enough contracts will be canceled to balance out other increased requirements.

HEAVY BOMBER INDEX — Another index to the phenomenal output of four-engine bombers is the fact that every month United States plants are producing more than twice as many of these heavy craft as medium bombers, despite the big difference in man-hours per plane. Furthermore, the four-engine bomber production in one recent month was 60 percent higher than the total output of single- and twin-engine advanced trainers, basic trainers and primary trainers combined. Heavy bomber peak is still to be reached, while the other types mentioned are declining steadily.



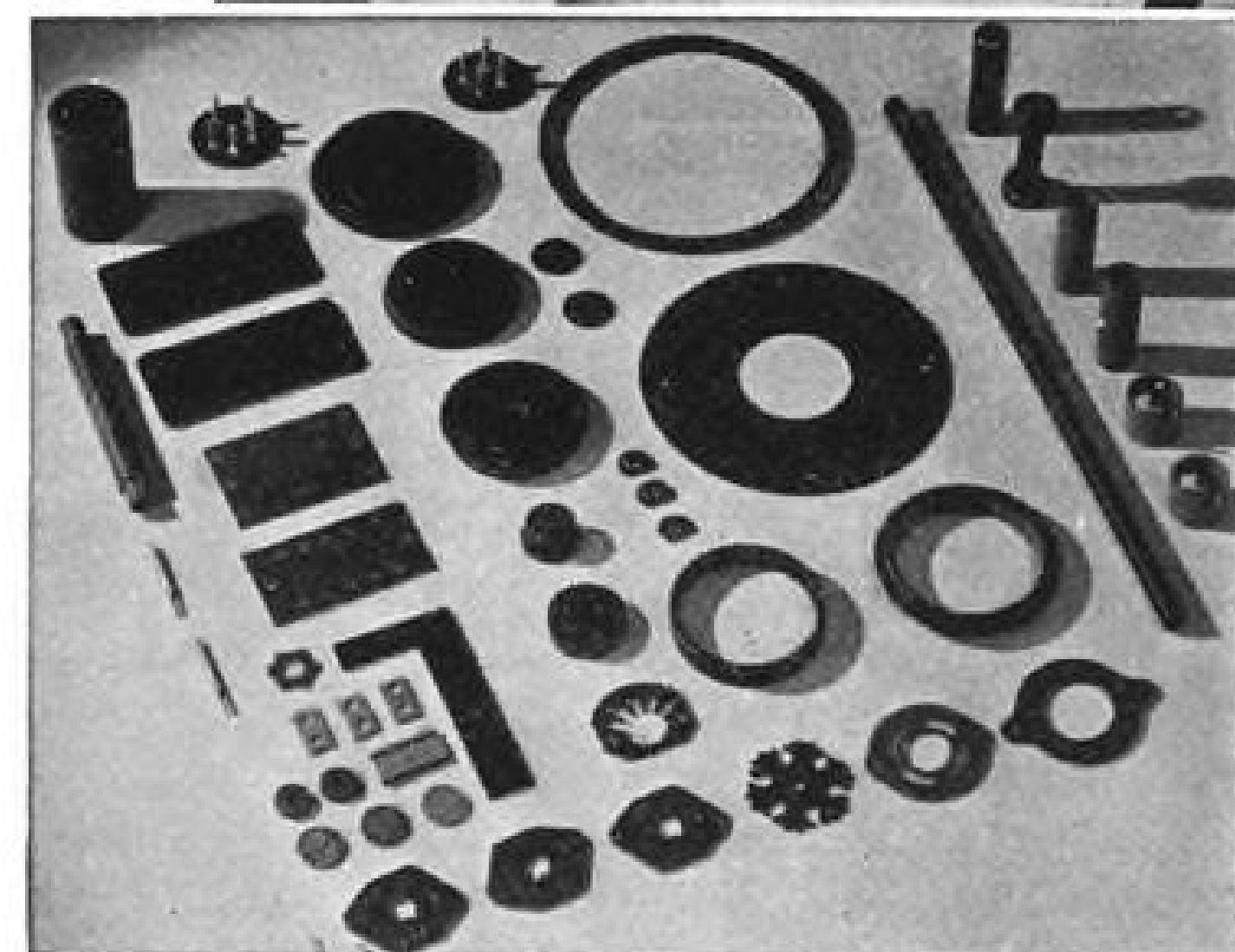
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Action Near on Disposal Policy For Surplus Transport Planes

Washington officials forecast progress in 60 days, following talks with government, military, industry representatives.

By WILLIAM G. KEY

A policy for disposition of surplus transport airplanes owned by the government is expected to be worked out within the next two months.

While many details remain to be settled, and some sharp differences of opinion exist as to methods, general outline of the surplus transport program is taking shape.

► **Meet in Los Angeles**—Some differences may be resolved or compromised at the meeting next Monday of new Aeronautical Chamber of Commerce directors and the Joint Aircraft War Production Councils in Los Angeles.

Under present law, Army and Navy are directed to auction goods declared surplus. However, the economic realities of the situation and the experience following the last war, when vast quantities of valuable goods found their way into the hands of speculators, now is dictating the change in procedure being formulated by Congress and the Executive departments.

► **Come Under SPB Control**—Under this changed procedure, goods declared surplus by the armed services would come under the control of the Surplus Property Board for disposal to the best interests of the nation. Considerable latitude is being provided for the operation of the Surplus Property Board to carry out disposition of these surplus supplies.

Several national groups are working on the overall planning, while individual manufacturers are now beginning to devote time to the handling of their own problems. The working basis for surplus disposal probably will come from the George-Murray bill, formalizing the present organization headed by Surplus Property Administrator Will Clayton and setting up procedures for operation of the administrator and the surplus property board on which L. Welch Pogue is the aviation member.

► **Special Study Under Way**—Observers feel that the mechanics of surplus transport plane handling will be carried out through the Civil Aeronautics Board, since emphasis

in the Baruch-Hancock report and in Congressional reports has been on the handling of details of disposal of surplus products through existing agencies thoroughly familiar with the subject, although at present the CAB is not so designated. No disposal agency has been assigned.

A special study by a Harvard School of Business Administration group is now under way and its report is expected to be made next month, after which time definite action is looked for. At the same time, a surplus property board group will discuss phases of the problem informally with industry experts.

► **Policy Agreement**—In industry circles, there has been general agreement on the statement of policy drafted by the surplus aircraft committee of the Aeronautical Cham-

ber of Commerce of America.

This committee "believes that the proper disposition of surplus government-owned and lend-lease aircraft equipment promptly after the cessation of hostilities is of vital importance to the aircraft manufacturing industry."

"If an abrupt and drastic dismissal after the war of all except a very minute percentage of those employed by the industry is to be avoided, it is essential that legislation be adopted which will remove the possibility of dumping such surplus aircraft into the domestic or foreign market."

► **Dumping Problem**—"The committee believes that the only way dumping can be avoided is by scrapping, at the point where it is found, government-owned and lend-lease aircraft as soon as it is declared surplus, not suitable for reconversion."

"The committee further urges that such aircraft, suitable for reconversion, and for which there is a demand, should be returned for that purpose to the proprietor of the original design who might thereafter sell or otherwise dispose of the converted aircraft as agent for the government, during the period before newly manufactured aircraft



B-25 HAS A STING IN ITS TAIL:

Latest version of the 75 mm. armed B-25, described as the most heavily armed bomber in the world, packs a hefty wallop in its tail, too. Shown here is one of the two waist guns and the tail turret, built in to ward off fighter attacks or to strafe enemy ships or installations.

to fill the particular task is made available. Any remaining surplus not so disposed of to be held in storage by the government for five years and thereafter scrapped."

► **Agreement**—But general agreement does not mean full agreement on details. Some members of the industry question the suggestion that the planes be returned to the "proprietor of the original design," for one thing, while others who have been manufacturing only war-planes unsuitable for conversion feel that an unnecessary hardship would be worked on their companies through this plan.

These companies feel that the planes to be converted should be pro-rated through the industry to spread the employment benefits to be gained from conversion. Some airlines with war-swelled employment rolls also have presented the viewpoint that they could accomplish the conversion work for their own planes, purchasing "conversion kits" from manufacturers and performing the work in their own shops.

► **Method**—There does appear to be full agreement on the method of placing the surplus airplanes in service. Ownership of all would remain with the government, the planes being leased to airlines here and abroad for a specified period until new production can be put into service. This would be a period of from two to five years, after which the surplus planes would be returned to the government and scrapped or otherwise completely removed from service.

Airlines in this country, under proposals now being discussed, would be required to place firm orders for new equipment as part of

AVIATION CALENDAR

Apr. 17-20—Fourth Annual Conference, Society of Aeronautical Weight Engineers, Brown Palace Hotel, Denver.
Apr. 19-20—Northeastern District Technical Meeting, American Institute of Electrical Engineers, Hotel Statler, Boston.
Apr. 24—East and West Coast Aircraft War Production Councils, Joint Meeting, Los Angeles.
Apr. 27-28—National Light Aircraft Meeting, Institute of Aeronautical Sciences, Detroit.
Apr. 28-30—Southwest Aircraft and Accessories Exposition, Dallas. (Texas Aviation Week.)
May 1-3—Third Wartime Aviation Planning Conference, Texas A. & M., College Station, Texas. (Texas Aviation Week.)
May 2-3—National Conference on Aviation, Aeronautical Institute of Canada, Toronto.
May 8—Meeting of Board of Directors, National Aeronautic Association, Washington.
May 15-16—South Dakota Airport Planning Conference, Huron, S. D.
July 10-12—American Association of Airport Executives, Annual Meeting, Hotel Sherman, Chicago.
Aug. 2-3—National Business Meeting, National Aeronautic Association, Denver.
Oct. 5-6—SAE National Aircraft Engineering and Production Meeting, Los Angeles.
Dec. 4-6—SAE National Air Cargo Meeting, Chicago.

the leasing agreement. This might place a hardship on companies with new commercial planes coming along that could not be considered for firm orders when the lease agreement is made.

► **Consensus**—While airlines in this country would not be required to add to their capital burden by making large down payments, the consensus for handling of surplus planes leased in foreign countries is that a similar new plane requirement should be a part of the lease agreement, with at least a 10 percent down payment on the new equipment being made. The lease agreement also would provide that a percentage of the lease payments would be put into a trust fund for the account of the foreign buyer so that, when new equipment became

available, a good portion of the cost of the new plane would already have been paid.

This would make it possible to scrap all present equipment within the two-to-five-year period after the war as new production comes in—and it is not felt that this will come any sooner. In the case of foreign airlines, or foreign countries, it would not be possible for them to use new equipment in deluxe service and the older equipment for auxiliary purposes with negligible original cost investment. ► **U. S. in Strong Position**—The requirement of down payment and trust fund payments would tend to bolster the American aircraft industry, and make it impractical for foreign lines to use the American plane reserve at lease prices while putting their own new equipment into service—resulting in a net loss to this country.

The fact that the United States has the only usable transport plane reserve places it in a position to strengthen the American aircraft industry through the operation of this plan. Foreign countries will have to operate this equipment, unless they want to use ineconomic converted bombers, with which they could not meet competition. At the same time, aviation circles in this country do not believe that these countries should use this equipment under lease without giving the U. S. business to which it is entitled.

► **Plan Not Popular Abroad**—Foreign countries will not like the plan, but will have little choice. It is felt that, if the positions were reversed, even more stringent terms would be applied to this nation. There is general agreement that all transport planes should be returned under lend-lease provisions.

"Reconversion kits" now are being prepared by most of the major transport plane manufacturers for their planes, so that work can be quickly started. Most of them are expected to be ready with these kits in a few months, indicating that the surplus program may be put into effect even before the end of the war to ease the transportation crisis. These kits will be standard units and the airlines will have to forego their individually tailored interiors until new production comes along.

► **Choice of Colors**—There will be choice of fabrics and colors, manufacturers say, but that will be about the extent of any changes from standard. Of course, some airlines may make further modifications in their own shops—many have had experience in that field through war work—but even this will be limited by the physical facts. Radio installations that differ from Army or Navy practices and differ between needs of various airlines may be one bottleneck in the program. Varying arrangements for food service aboard the ships may have to be modified also.

Surplus Sale Nets \$1,320,000 in Week

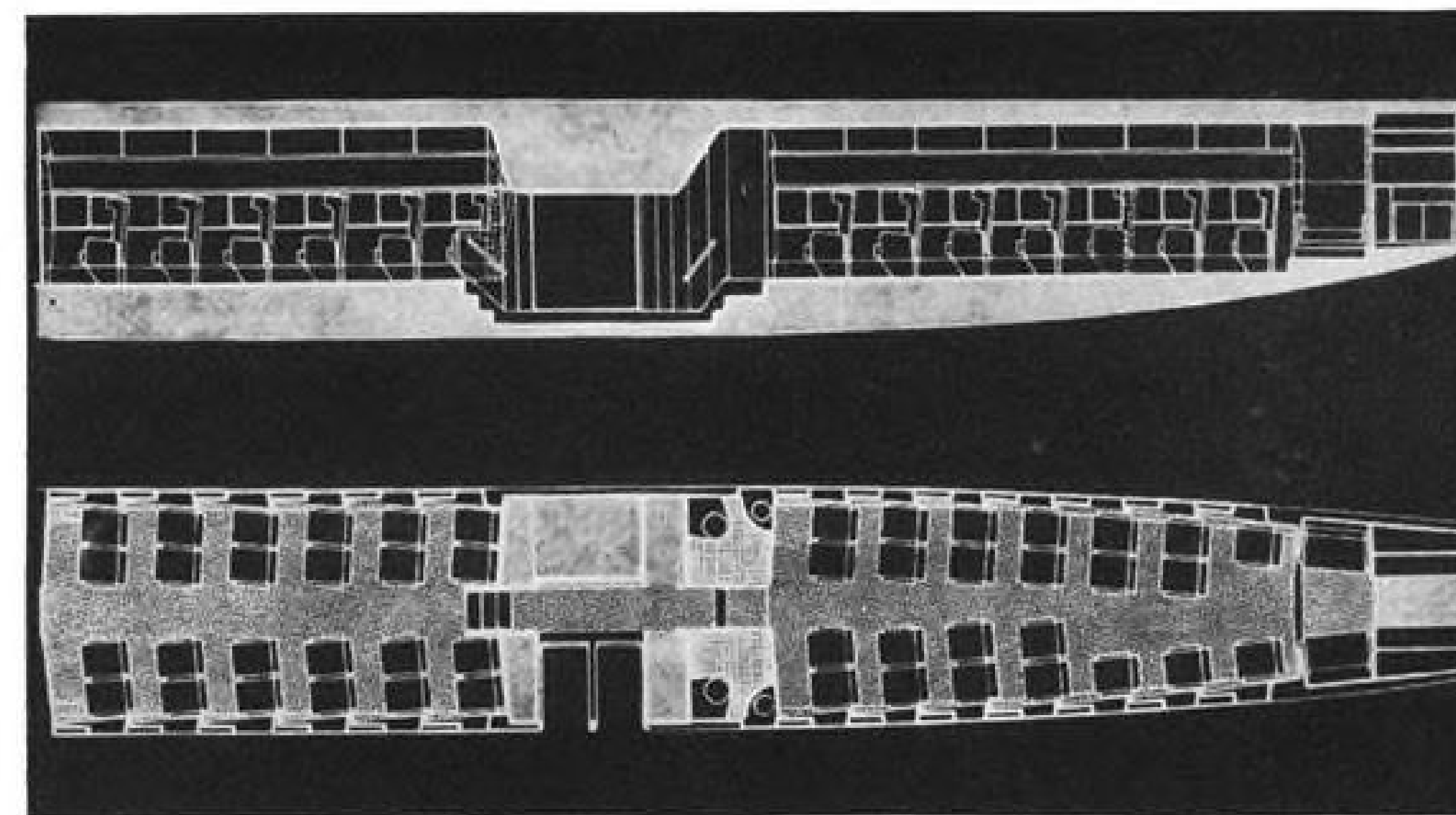
WPB lists 748 transactions, with increase expected for second half of exhibit.

More than 3,000 persons visited the surplus materials sales exhibit of eastern aircraft manufacturers in New York during the two-week display at the Hotel McAlpin and while final sales figures are not ready the report for the first week totaled \$1,320,000, representing 748 transactions.

The New York Regional Office of the War Production Board, which sponsored the exhibit, said last week that final totals could not be given because many sales were in the negotiation stage and would be completed by the individual plants participating. These were the Bell Aircraft Co., Eclipse-Pioneer Division of Bendix Aviation Corp., Eastern Aircraft Division of General Motors Corp., Glenn L. Martin Co. and Republic Aviation Corp. WPB officials said it probably would be a month or more before final totals are compiled. Many sales, particularly of aluminum, are dependent on Washington WPB sanction of end usage.

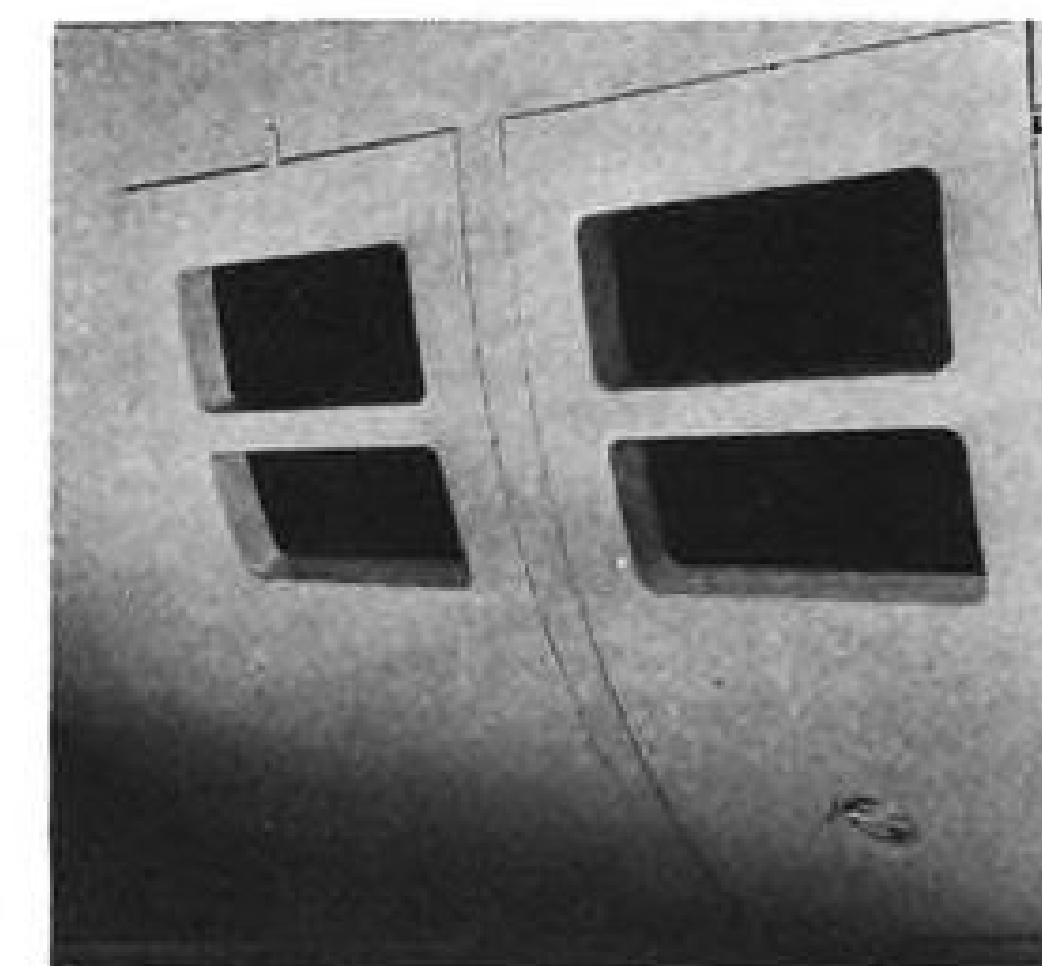
► **Permanent Display Considered**—Although the display was considered a success, and many channels for distribution of the surplus materials were uncovered, no appreciable dent has been made in the eastern surplus problems, if the sales of the first week are any criterion. Although it is probable that second week sales were appreciably higher, and that subsequent sales through the contacts made at the exhibit will prove valuable in moving much of the excess inventory, it has been estimated that the total eastern surplus will run to more than \$50,000,000. Nevertheless, the show is considered to be well worth while, and probably will be duplicated in the central section with a display at Cleveland and in the West with an exhibit at Los Angeles. A permanent display, not on the scope of the McAlpin exhibit, is being considered for New York. One has been maintained in Los Angeles.

One heartening factor in the New York sales was that they were made at or near market levels. Low bids were rejected, and officials at the exhibit said that many such bids were entered by buyers seeking distress goods



MODEL 39'S NEW SLIDING DOORS AND SEATING PLAN:

Layout of canted seat scheme as seen from side and above in Consolidated Vultee's projected 46-passenger transport. In addition to the 48 places shown, there are four additional seats in the lounge and two in the lobby. Photos show new streamlined sliding doors, open and closed.



for speculation. "We could have sold out the raw materials on low bids," said a WPB official. One \$65,000 bid for tools was rejected as too low.

► **Hardware in Demand**—Hardware and component parts, such as might be used in building, were in great demand, it was reported, and negotiations now are under way between manufacturers and mail order houses and big distributors for disposal of stocks of these goods.

Steel sales were good and, provided WPB approval is given, aluminum sales will run high. Most of the bidders for the aluminum stocks were small manufacturers who could turn the aluminum into civilian goods. ► **Attendance Off; Sales Up**—WPB said attendance dropped off the second week from the first week's 2,000 but that sales and potential sales ran higher.

During the first week, one sale of 290,000 pounds of stainless steel tubing at \$95,000 was reported. Transactions ranged from this one to sheet of ¼-inch aluminum.

In all, 839,555 pounds of various types of steel were sold during the first week for a total of \$198,435; 718,957 pounds of aluminum for \$231,276; hardware, tools and miscellaneous materials for \$190,745.

Two million feet of aluminum extrusions were sold for \$80,000; 160,400 feet of rubber mat for \$70,000; 230,000 pounds of aluminum sheet for \$70,000; 500,000 pounds of fiber glass went for \$20,000; one lot of 50,000 tools for \$15,000, and 1,300,000 feet of copper wire for \$8,000.

Manning Killed

Col. L. B. Manning, commanding officer of Hunter Field, Savannah, Ga., was killed Apr. 10 in the crash of a bomber in Alabama. He was a director of Consolidated Vultee and Aviation Corp. A former head of Stinson Aircraft Co., Manning had served as a major executive of Cord Corp., American Airways, and its successor company, American Airlines. He was a resident of Chicago.



BLACK CAT GETS MOTOR CHECK:

This new photo shows members of a U. S. Navy Squadron of Black Cats tuning up an engine of a Consolidated Catalina. Based in the Japs' outer defense perimeter, this one squadron has sunk 58,000 tons of enemy shipping and damaged 20,000 tons in four weeks, doing all its deadly work by night.

Johnston Appraises Air Progress For First Five Post-War Years

Washington representative of Curtiss-Wright Corp. and *Wings After War* author sees rosy hopes of aviation enthusiasts realized in time, but probably not so soon as forecast.

By BLAINE STUBBLEFIELD

Miracles of flight currently promised in the popular press to commerce and the citizen pilot will be made good, but not so soon as most people believe. Objectives can be realized sooner if the Government will take the lead in implementation of a definite policy and plan, now. This conclusion is reached in *Wings After War*, a monograph by S. Paul Johnston, aeronautical engineer, executive and historian. The book will appear April 20.

A dozen governmental and private post-war planning boards and committees, each with a different point of view, each trying to heat its particular iron the hottest in the fires of public opinion, are merely creating confusion, says the author, who is Washington representative for Curtiss-Wright Corp. He suggests that the President, without influence of partisan politics, appoint a five-man committee, representing aircraft manufacturing, air transport, the Army, the Navy, and Labor. This committee would formulate the policies of the immediate post-war period. Out of its work might well emerge a permanent body for the coordination and control of all aviation. Possibly the creation of a Cabinet post for Air would be the final answer.

► **Urges U. S. Policy**—The govern-



S. Paul Johnston

ment must make up its mind what it wants and expects of the aviation industry, and must announce it in a loud clear voice. It must decide how far it plans to go to encourage private flying by relaxing restrictions and by expanding the airports program. It must settle once and for all the place of organized air transport in the national transportation pattern. It must come to some agreement quickly with other governments concerning the rules and regula-

tions under which world air routes will be operated. Above all, it must tell industry its future needs for military aircraft, its plans for the disposal of the wartime surpluses, and what it proposes to do with the plants it has built for war use.

The book, published by Duell, Sloan and Pearce, details the technical problems that must be solved before current prophecies can be made good. The author believes that aircraft design will follow its present basic pattern for several years after the war. Airplane efficiency has reached the point of diminishing returns. Fractional gains are made laboriously by research men with wind tunnels and slide rules.

Mr. Johnston, former editor of *Aviation Magazine* and later coordinator of research for the National Advisory Committee for Aeronautics, believes that whether post-war personal planes are plastic wood, metal or cloth, 1938-39 models will persist for several years. Their utility will remain limited, and the annual sale rate will not approach 20,000 per year for at least five years, and then only if general prosperity exists. In-line or flat-opposed air-cooled engines will be used; controls will be simplified.

► **Plane Types**—Roadable types, to improve utility, can be flown, but weight and cost will be hard problems. Desirability of the helicopter is beyond question, but perfection of this machine will require great engineering effort over a period of years. Successful application of jet power to commercial planes is not expected in less than five years. Atom-smashing power is a possibility in the farther future. All-wing design begins to

be practical at gross weight of about 350,000 pounds, a long jump ahead. The future of cargo glider trains is not promising.

Air transport, in Mr. Johnston's opinion, holds the brightest spot in the first post-war decade of aviation. Within five to seven years, planes may appear which will justify a 3-cent per seat mile fare, but for the first post-war years, best guess is for a 4-cent minimum. At present 70 cents per ton-mile express rates, few commodities can be carried. Gradual rate reductions will add to the list.

Official Tells Story Of Merlin Adaptions

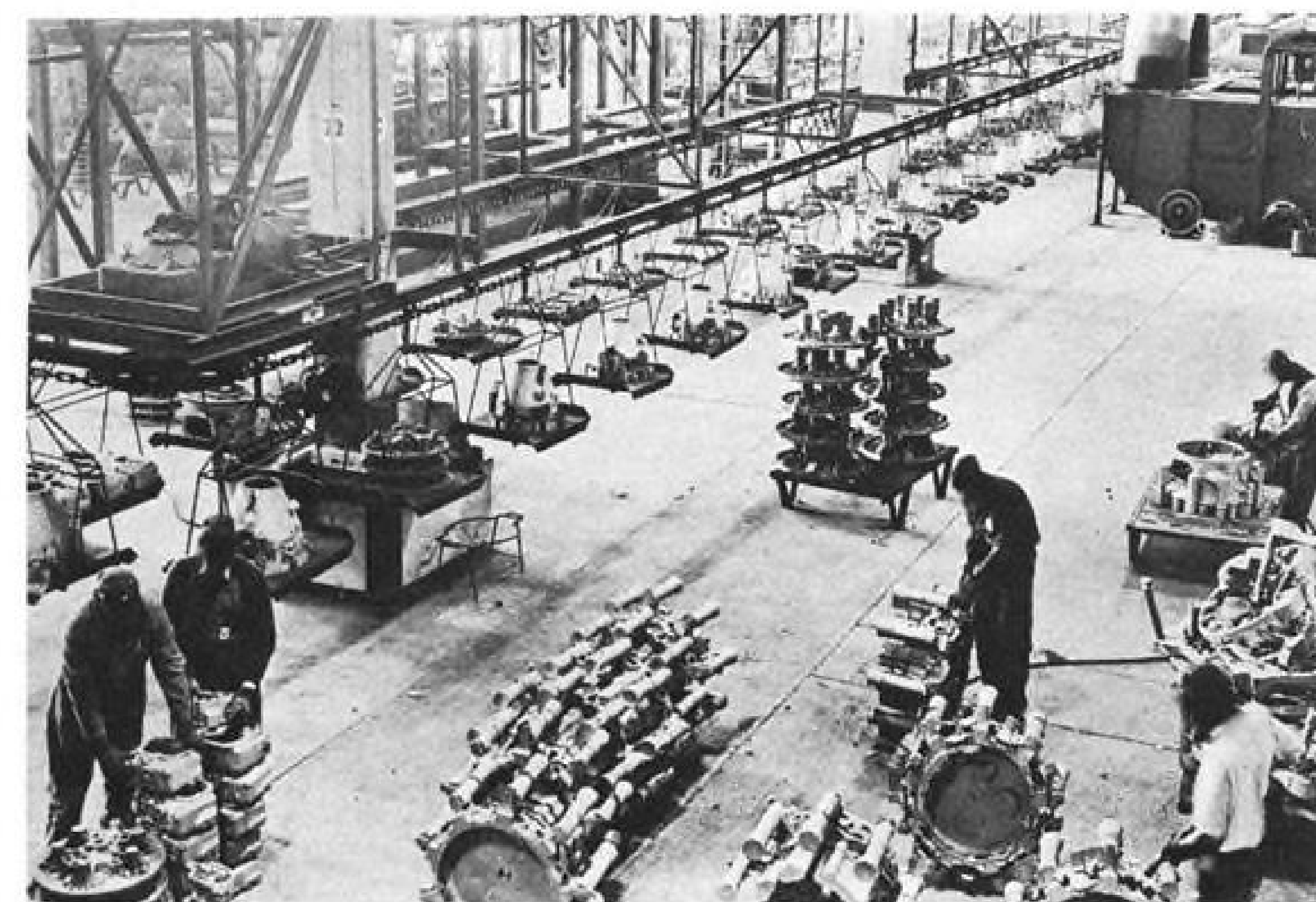
Manufacturing drawings of Rolls-Royce engine alone kept 75 men working four months, Packard official tells SAE meeting in New York.

Seventy-five men working four months were required to make the manufacturing drawings for American production of the Rolls-Royce Merlin engine, Col. Jesse G. Vincent, vice-president of engineering of Packard Motor Co., says in a paper prepared for presentation to the Society of Automotive Engineers at a national aeronautic meeting in New York.

Describing the difficulties of preparing for production of the British engine, selected because it could be put into production before any comparable American engine, Vincent said that almost two tons of British blueprints had to be completely redrawn because of the differences of nomenclature and methods. Specifications for the finish of all parts had to be established and included on the drawings.

► **Carburetor Changed**—The only change made in the engine was the substitution of an American-designed and built carburetor for the British carburetor formerly used, Vincent explained, in the effort to get the engine into production. More than 60,000 gauges, tools and fixtures were designed and constructed as the drawings came from the drafting rooms.

G. Wayne Thomas, executive engineer, Continental Motors Corp., also presented a paper at the meeting, describing the application of air-cooled airplane engines to tanks. He explained that light tanks are using 250 hp. radial engines and medium tanks 400 hp. engines, the first a Continental and



DODGE OPERATES LARGEST MAGNESIUM FOUNDRY:

Castings being cleaned and made ready for machining in one of the 19 buildings of Chrysler Corp.'s huge Dodge Chicago plant, where 18-cylinder Wright 2200 hp. engines are manufactured. Current output of magnesium at the plant is 50,000 pounds daily.

the latter a Wright Whirlwind. Advantages derived from use of air-cooled airplane engines are weight saving; lessened vulnerability to damage, a serious factor with liquid-cooled engines; cooling is accomplished with less expenditure of power, and servicing considerations.

Lothrop Reports On Post-War Study

Tells Harvard alumni his 1943 survey shows market for 1,700 transports in first two peace years.

Evidence of the widespread, sustained attention being given various reports of aviation authorities on future transport operations was seen last week when Harvard Business School alumni at New York called on E. Earl Lothrop to present in person the details of a study he made some months ago on the probable market for planes in the immediate post-war years.

Lothrop, who is manager of the Research and Statistical Department of the Aeronautical Chamber of Commerce, made his study last year. It was published in the December issue of *Aviation*. In it he predicted that, in the first two years after the war, 1,700 new transport planes, with a value of \$512,500,000, will find a market. This he breaks down to 1,500 for domestic operation, 100 for inter-

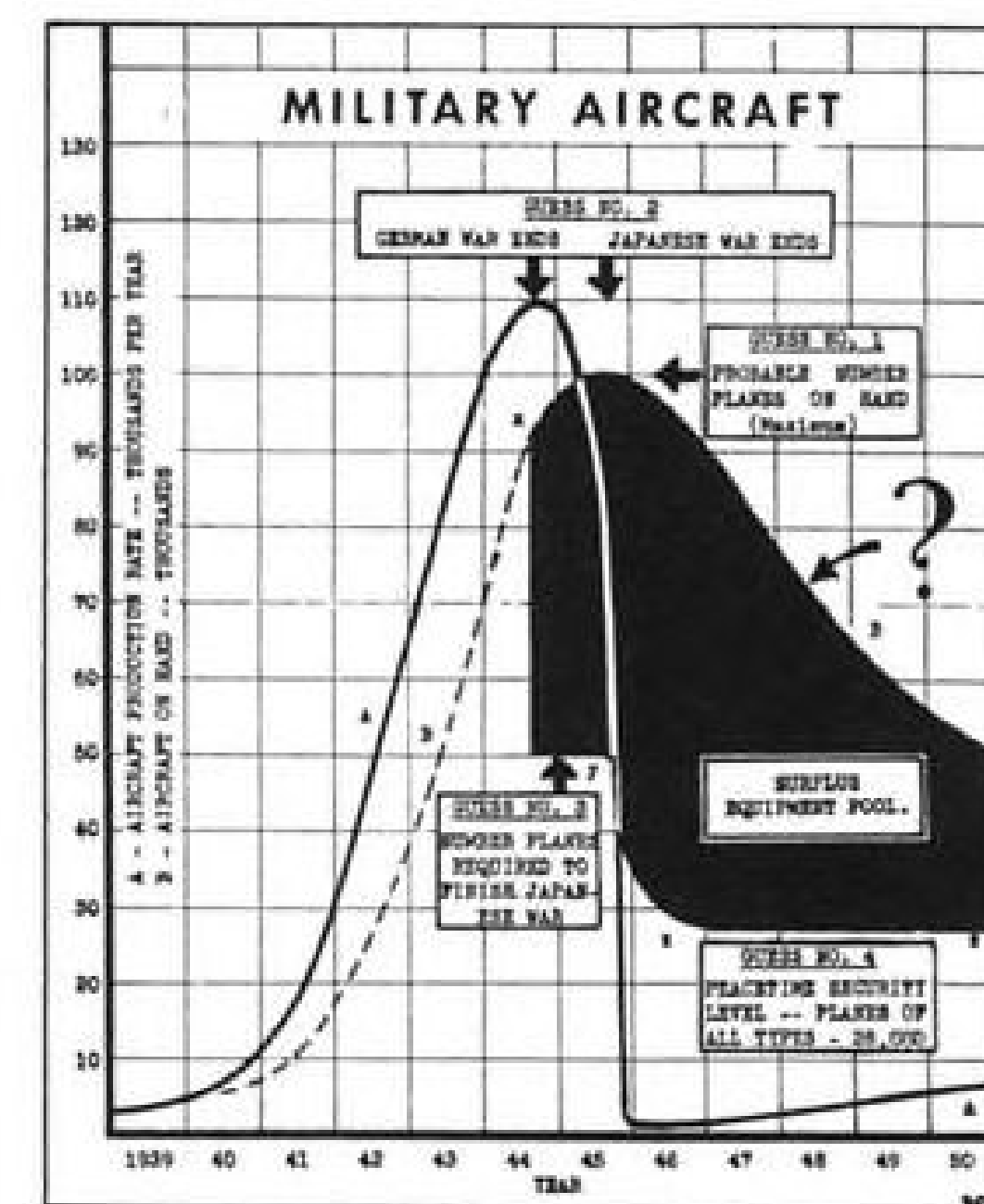
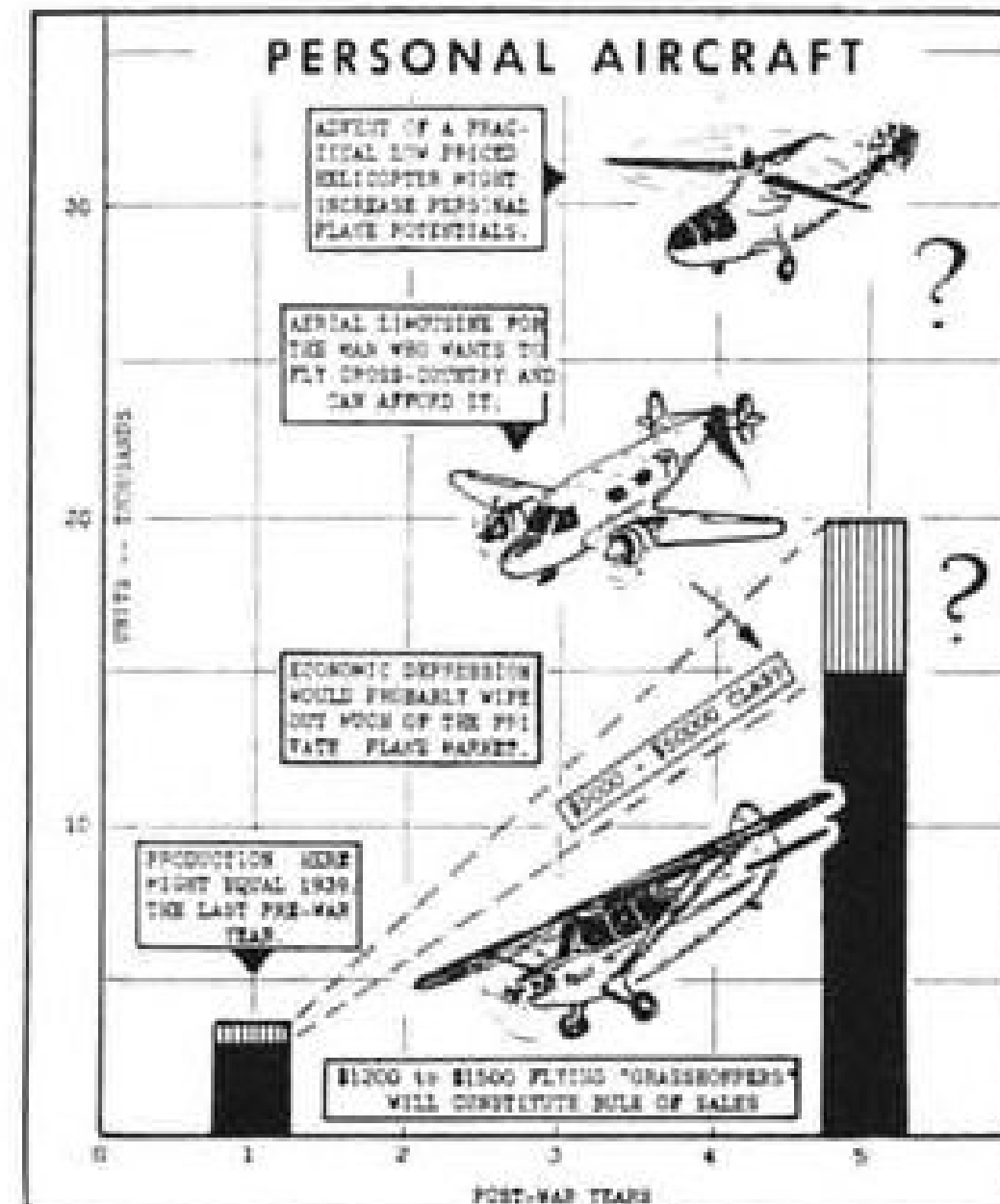
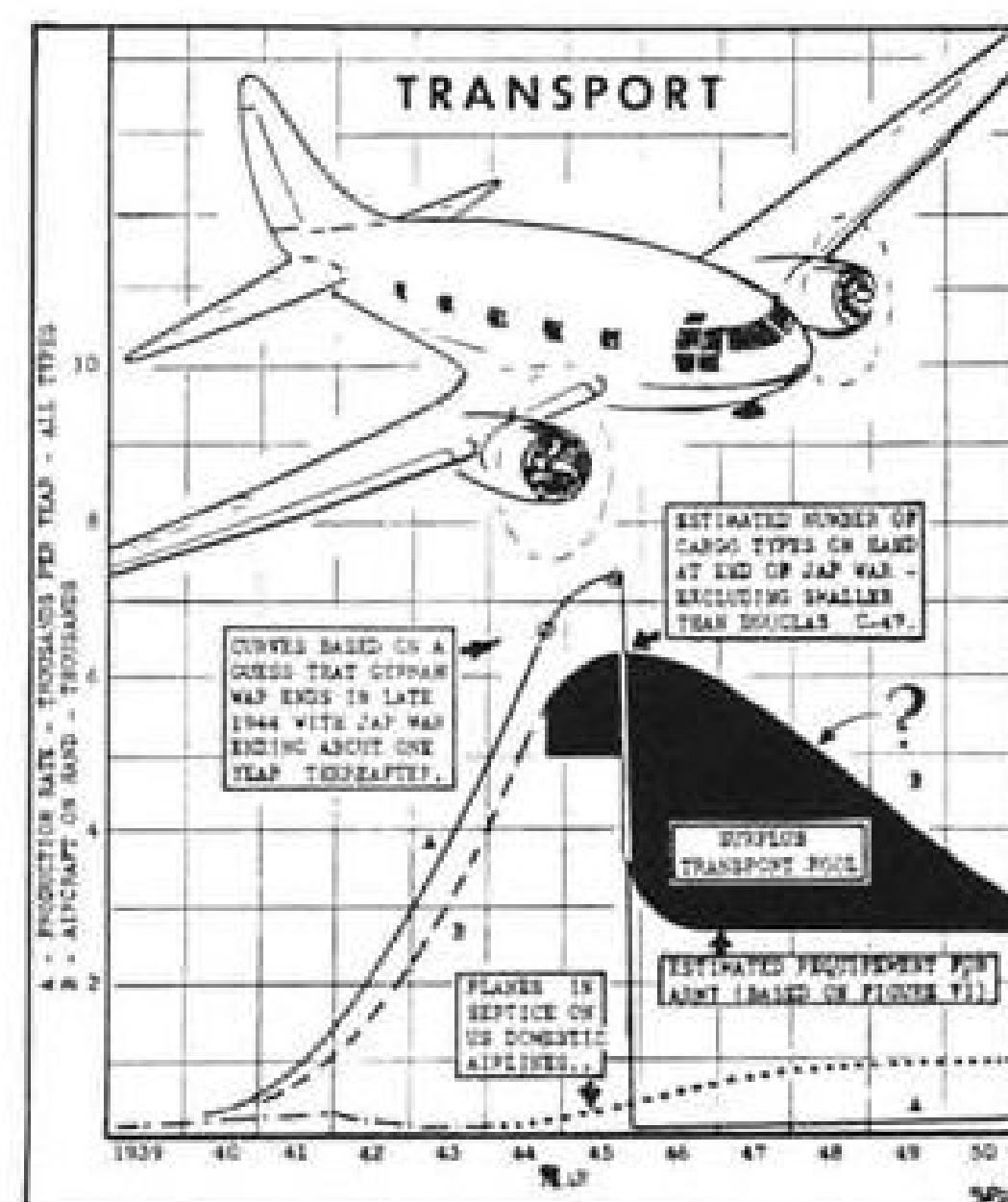
national operation by United States airlines, and another 100 for export. About 350 planes were being operated by the nation's commercial air carriers when the war started.

► **New Planes Preferred**—Lothrop believes that the major airlines probably won't accept wartime transport planes for conversion, but will prefer new, more efficient models he thinks can be built at costs in line with those of converted planes. "Any wholesale utilization of military craft for commercial purposes for a two- or five-year term," he told the Harvard group, "would be a major tragedy for our commercial airline system and the aircraft manufacturing industry."

He sees the "most expandable market" for the plane manufacturer in the private flying field, but looks for only 9,500 new private planes including a "doubtful total" of 2,500 helicopters. The military's share of the two-year market he estimates at a 20,500 maximum.

Post-War Forecast—For the first five post-war years, he forecasts a market for 2,925 commercial passenger craft, 2,875 cargo planes and 30,000 military planes, with personal plane requirements not estimated.

Chairman L. Welch Pogue of the Civil Aeronautics Board also spoke briefly at the meeting.



Industrial Demobilization Plans Get Under Way in Senate and WPB

George committee urges immediate legislation on contract termination; Donald M. Nelson establishes advisory committee to help formulate reconversion policies.

Reconversion moved slowly ahead on two fronts last week. In both cases the movement was weak and uncertain, but it contrasted sharply with the inactivity and lack of agreement which has characterized administrative and Congressional action up to this time.

The most significant step forward was that taken by the Senate Committee on Post-war Economic Policy and Planning. This special committee, headed by Senator George, recommended to the Senate Military Affairs Committee, that the various phases of industrial demobilization be broken up and considered separately. Specifically, the committee asked that contract termination legislation be enacted first.

► **Special Report Made**—"It (the committee) has concluded," said a special report, "in view of the speed with which contracts are being terminated, and the legal obstacles in the way of their settlement, that it is imperatively necessary that legislation dealing with the subject be passed at the earliest possible moment and that such legislation not await the solution of other problems of demobilization."

This was generally felt to be an important development, since the Senate has heretofore been totally unable to agree on whether or not contract termination should move alone or as a part of omnibus demobilization legislation.

► **Murray Bill**—If this recommendation is followed, and there is reason to believe that it will be, S.1718—the Murray contract termination bill—will be reported soon, and debate will begin on the floor of the Senate. This would be real and substantial progress.

It was clear, however, that S.1718 was in for some heavy amending, and this would unquestionably delay and make more tortuous its passage through the Senate. Senator Murray, author of the original bill, announced that he expected two amendments. One of these would provide for unemployment compensation on cancellation of contracts, the other would

Rotary Wing Lag

Although four companies have been given the green light to produce rotary wing aircraft, actual production is small, and about 50 percent behind schedules, Washington officials acknowledge. Fewer than 50 such craft were produced in 1943, and monthly output now is running less than 20.

As previously announced, the companies in the rotary wing program are G & A, at Willow Grove, Penna., Platt LePage at Eddystone, Penna., Sikorsky Division of United Aircraft Corp., and Kellett Aircraft, Philadelphia.

give the Comptroller General broad power for investigating and reporting to Congress on waste and extravagance in post-settlement audits. While neither of these amendments has yet been drawn up, Senator Murray predicted they would be prepared soon and that the entire measure would be passed during the present session of Congress.

► **New WPB Committee**—The other significant action of the week developed in the War Production Board, where Chairman Donald M. Nelson established an "Advisory Committee on Civilian Policy." Obviously designed to be a top-flight committee to help formulate reconversion policies, the group was scheduled to meet and start functioning immediately.

While the exact task of the new committee was not fully known, it was said by persons close to Mr. Nelson to consist of examination of cutbacks, development of policies to return idle facilities to civilian production, and determination of procedures to follow in solving unemployment and manpower problems. All in all, it would be WPB's reconversion committee and, on matters of civilian production and other reconversion problems, probably would occupy a similar level of authority with the Production Executive Committee.

► **Membership**—Asked to serve on the committee were Eric Johnston, president of the U. S. Chamber of Commerce; Robert M. Gaylord, president of the National Association of Manufacturers; William Green, president of AFL; Philip Murray, president of CIO; Eugene Meyer, publisher of the Washington Post, and several others.

Whether or not this committee would replace the Production Planning and Adjustment Committee, which was understood to have been in process of forming under direction of Vice Chairman Charles E. Wilson, remained to be seen. Their functions sounded so much alike that it is very doubtful that both committees actually will be established.

It also was stated that Dr. Luther Gulick, who has been associated with WPB in the past, had agreed to return to the agency and help integrate the new committee into WPB and plan whatever reorganization will be necessary to permit the committee to function properly. Hesitancy of Mr. Nelson to name a successor to Arthur D. Whiteside, who resigned as Director of the Office of Civilian Requirements about two months ago, also was traced to the impending reorganization of WPB around the new committee.

UAL Approved for Denver-L. A. Route

Recommendation that United Air Lines be given the highly prized route between Denver and Los Angeles nonstop and via Grand Junction, Colo., and Las Vegas, Nev., to span a big gap in the nation's commercial air network, has been made to the Civil Aeronautics Board by Examiner Albert F. Beitel.

Four lines had applied. Two of them, United and Transcontinental & Western Air, are among the largest of the domestic companies. Two smaller applicants are Continental Air Lines and Western Air Lines. The examiner recommended dismissal of the other three applications.

► **Transcontinental Carrier** — He concluded, on the basis of hearings held in January, that because of the nature of prospective passenger traffic over the route, it could best be served by a transcontinental carrier. Most of that traffic, he said, will come from or go to cities east of Denver.

Beitel described the route as "inherently a segment of a Great Circle transcontinental route," and said the type of equipment necessary could best be utilized by a transcontinental carrier.

TWA had contended it could provide Denver-Los Angeles service and simultaneously give Den-

BRIEFING

Woodrum Committee on post-war military policy is completing its organization and is expected to begin hearings soon.

Addition of a top turret mounting two .50 caliber guns has added to the firepower of the Douglas A-20 to give it a total of nine .50's. Six are mounted in the nose, one fires from the plane's underbelly.

Formation of the National Aviation Supply Co. is announced by Albert McGhee, president. Officers and warehouse are at 701 E. Carson St., Pittsburgh 3. The company, McGhee said, will have personal representation in 16 states, and will issue a national catalog.

Request has been made officially that the President lift his 200 limit on the number of planes the domestic airlines may use in their commercial operation. There is said to be little doubt that the Presidential order will be modified when the Army is ready to turn back more planes to the airlines. Of the nine planes, all DC-3's, in the latest return from the Army, three went to American, two each to Northwest and TWA, and one each to Delta and Pennsylvania-Central. When all have been placed in operation, the total in commercial use will be at the wartime limit.

Douglas Forms Own Termination Body

A corporate termination claim committee to develop and direct the mechanics of major contract terminations has been created by Douglas Aircraft Co.

So new that it still is groping for policies that will apply to the handling of termination claims, it nevertheless points to a probable industry-wide trend to create corporate units that will be trained and ready to act when cancellations assume major and complex proportions.

The Douglas committee is a supplement to the company's longstanding executive management committee headed by Donald Douglas.

► **Members**—Manager of the committee is Karl P. Grube, formerly with the company's contract administration division. Other committee members are F. W. Conant, vice-president of manufacturing, and Ralph V. Hunt, vice-president and comptroller, who serves as committee chairman.

First step of the termination claim committee will be appointment of a sub-committee to act on termination claims of less than \$50,000, thus clearing the deck for the major committee's development of mechanics for the handling of major terminations, when and if they come.

► **Backlog of Three Billion**—An indication of the necessity for creation of the committee is the fact that Douglas Aircraft now carries a three-billion dollar backlog that may be subject to critical inroads by contract terminations.



NAVY FIRE FIGHTING UNIT:

Using the improved Bean high pressure fog unit produced by the Food Machinery Corp., Navy firefighters are able to rescue crewmen from burning planes faster and with greater safety. A fan spray protects the fireman while fog from the nozzle sweeps the fire away. Mechanical foam for fires that fog alone cannot extinguish also can be used with the Bean unit.

100-Octane Plants Called Investment

Ickes cites comparatively small government participation in financing operations; summary of week in U. S. and war agencies.

By MARY PAULINE PERRY

Expansion in postwar commercial and private flying should make the country's outlay of \$760,000,000 for new 100-octane aviation gasoline facilities a sound peacetime investment, Petroleum Administrator for War Harold L. Ickes predicts.

He points out that no other major war industry has so small a proportion of government participation. Eighty-two percent of the ultimate capacity of 100-octane plants in the U. S. will be privately owned, with private companies obligating approximately \$550,000,000 of their own money and about \$210,000,000 of government investment.

► **Financing**—Expansion of facilities for production of 87 and 91 octane gasoline needed for training purposes and conversion of existing equipment for 100-octane production was accomplished entirely with industrial capital. The new plants are being built mainly with funds from Defense Plant Corp.

May will mark the tenth anniversary of the first shipment of 100-octane gasoline to the Army Air Forces at Wright Field. The largest amount ever delivered, 1,000 gallons, was delivered to Wright Field for test purposes.

► **War Production Board** has received a series of recommendations for increasing output of anti-friction bearings, used in aircraft and other key programs, from the Anti-Friction Bearing Labor Advisory Committee. The committee pointed out that bearing production must be increased and made wage, turnover and employment suggestions.

► **Aluminum Shipments**—A total of 215,600,000 pounds of aluminum fabricated products was shipped during January, 34 percent more than in January, 1943. Sheet aluminum showed the greatest rise of any product with 85,000,000 pounds being shipped as against 66,900,000 pounds during Decem-

ber, 1943, the War Production Board said. There was a 33 percent increase in January this year of castings which totaled more than 44,000,000 pounds.

► **War Department** announced that an Army Service Forces' representative has been designated in each of the War Production Board's 13 regions to work with other government agencies to raise production and help solve manpower and draft problems. Each regional representative will organize an Advisory Committee composed of representatives of each of the Army's technical services, the Army Air Forces and the service commands which have an interest in procurement or installations in that region. The 13 officers will arrange for representation on all Area Production Urgency and Manpower Priorities Committees.

The War Department has awarded a contract for construction of additional landing field facilities and roads at Indian Springs Army Airfield, Nevada, for an estimated \$624,116.

► **Army Air Forces** have let contracts for additional constructions at air depots and airfields totaling approximately \$3,448,000.

Lockheed Asks Fair Termination Policy

Lockheed Aircraft Corp. last week joined other firms in the aviation industry demanding government fair dealing in renegotiation and contract termination.

Robert E. Gross, president of Lockheed, in announcing a value of \$697,408,167 on production and services performed in 1943, and a 1943 stock earning of \$7.44 a share after anticipating renegotiation not yet discussed with the government, said "The aircraft industry must take its chances on getting business after the war, but meanwhile it must not be penalized and broken by termination problems."

► **1943 Accounting**—In Lockheed's 1943 accounting, provision was made for a \$15,000,000 reduction of sales income through renegotiation, and \$14,727,527 as a provision for possible inability to obtain payment on all items charged to cost-plus-fixed fee contracts.

Lockheed earmarked \$9,000,000 of 1943 earnings for post-war adjustments and ended the year with \$19,100,000 working capital.

550 of 1,000 WTS Surplus Planes Sold

Entire 5,000 may be put on market with termination of pre-military flight courses.

Up to last weekend, about 550 of the 1,000 light airplanes declared surplus by CAA's War Training Service had been sold to bidders.

Now that the last of the WTS pre-military flight courses is ordered discontinued as of June 30, probably all 5,000 of its training planes (including the above 1,000) on loan from Defense Plant Corp., will be declared surplus and put on the auction block.

► **Demand Heavy**—So far there has been a lively demand for the planes on sale, at fairly substantial prices, and WTS officials say they believe that, barring unforeseen developments, all 5,000, if put on the market, could be sold this year.

Progressive closing of Air Force contract schools of the Aeronautical Training Society brings up the question whether their planes also will be offered for sale. Indications are that contract school planes, which belong to the Army, will be set aside as they become surplus.

► **165 to 225 hp.**—Most of the primary (PT) planes of the contract schools range between 165 and 225 hp. The basic trainers (BT) rate still higher. Planes having more than 100 hp. are not marketable in appreciable numbers to private flyers, because of their large gasoline consumption and expensive maintenance.

Opinion is expressed that the Army will not try to sell them when all the contract schools are closed, but will store them as standbys. Time and swift obsolescence will soon fetch them to the boneyard.

Martin Election

All officers of the Glenn L. Martin Company were re-elected at the annual meeting of stockholders last week.

They are: Glenn L. Martin, president; Joseph T. Hartson, Harry F. Vollmer, William K. Ebel, Harry T. Rowland, vice-presidents; Myron G. Shook, treasurer and assistant secretary; Morgan R. Schermerhorn, Jr., comptroller, and Thomas H. Jones, secretary.

Pilot Training Cuts Traced to Quotas

Tapering off program attributed to too high schedules and unexpectedly low attrition rate.

Too high quotas and a lower attrition rate than originally anticipated are contributing factors to the tapering off of pilot and air crew training by both the Army Air Forces and the Navy. In addition, both services are lengthening the training period for pilots to permit greater emphasis on quality than on the number of men trained.

The Navy revised 1944, 1945 and 1946 requirements and concentrated all pre-flight training in four schools coincident with their withdrawal from the CAA-War Training Service, which becomes effective during the summer.

► **Naval Requirements**—Prospective naval aviators are now required to spend three college terms in the V-12 program before entering aviation training.

The AAF announced termination of training of pilots and air crew in 81 institutions by June 30, and termination of contracts at eleven civilian flying schools, members of the Aeronautical Training Society, by Aug. 4. Pre-

viously 13 schools were closed or closing. This follows closely the announcement that 36,000 prospective airmen have been released to the Army Ground and Service Forces.

Meanwhile, the Senate passed Senator Pat McCarran's bill to extend the Civilian Training Act of 1939, and continue the CAA-CPT civilian schools. The House sent the bill to the Committee on Interstate and Foreign Commerce for consideration.

► **Affects Crew Students**—The closing of the 81 college courses affects only air crew students and does not alter the status of Army Specialized Training Program, the Army Specialized Training Reserve Program and the AAF Ground Crew Training Program.

Students in the college air crew training program who are still in college on June 30 will be assigned to on-the-job air crew training at air fields in the AAF Training Command while awaiting pre-flight instruction. All those at the eleven flying schools will finish their current course of instruction before being moved on to the next course at an Army school.

► **Civilian Schools**—It is estimated that, of the 64 civilian contract schools giving all primary flight training for the AAF, only about 30 will continue after August. The

record set by these schools is good and they point out that cadets from these schools are flying ten times as many plane miles a month as all the airlines operating in the U. S. In November, the 18 domestic airlines flew 9,436,663 miles while ATS cadets flew 94,500,000.

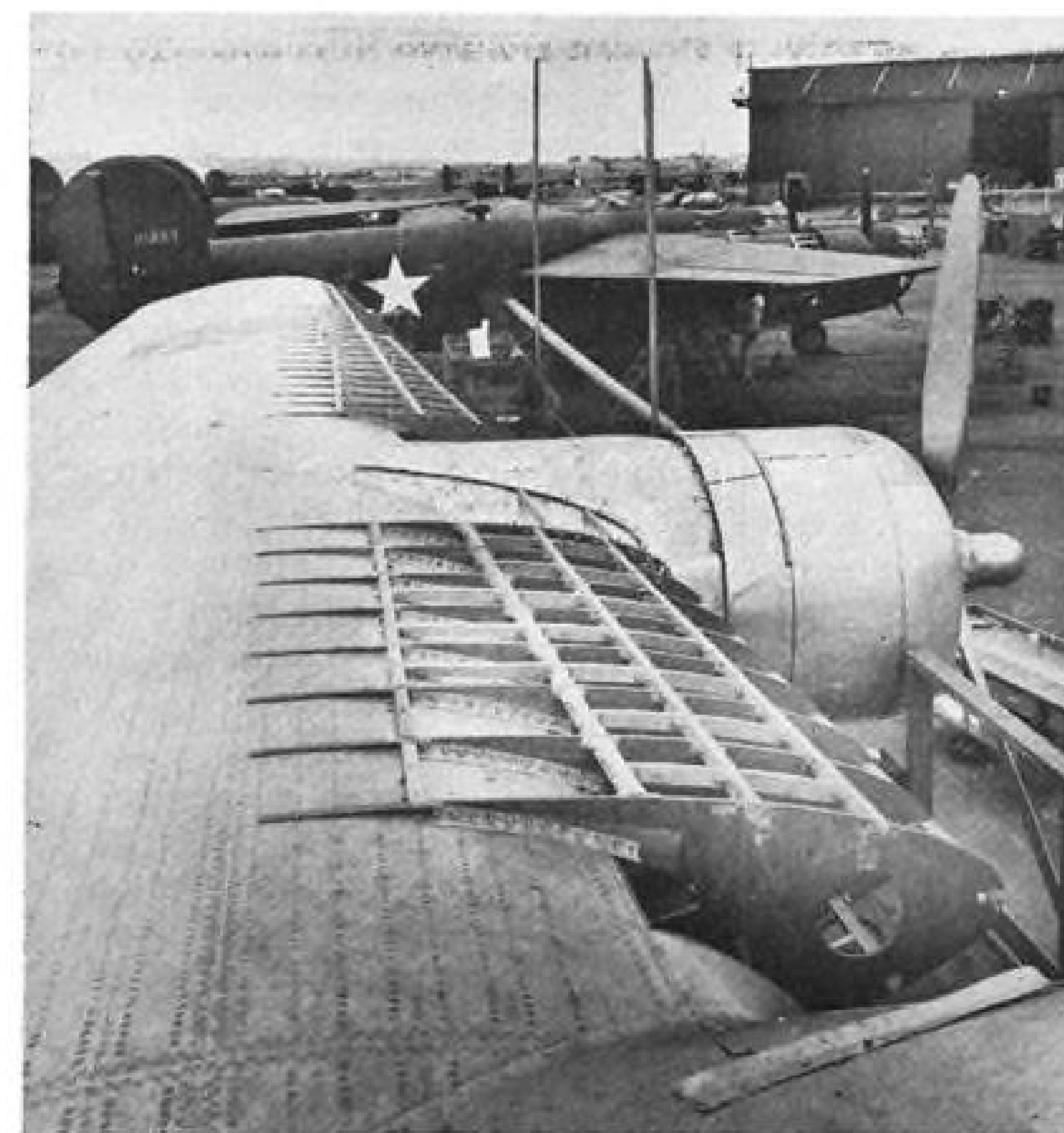
First Liberator Used for Tests

Pioneer plane now operated as laboratory for Consolidated Vultee at San Diego.

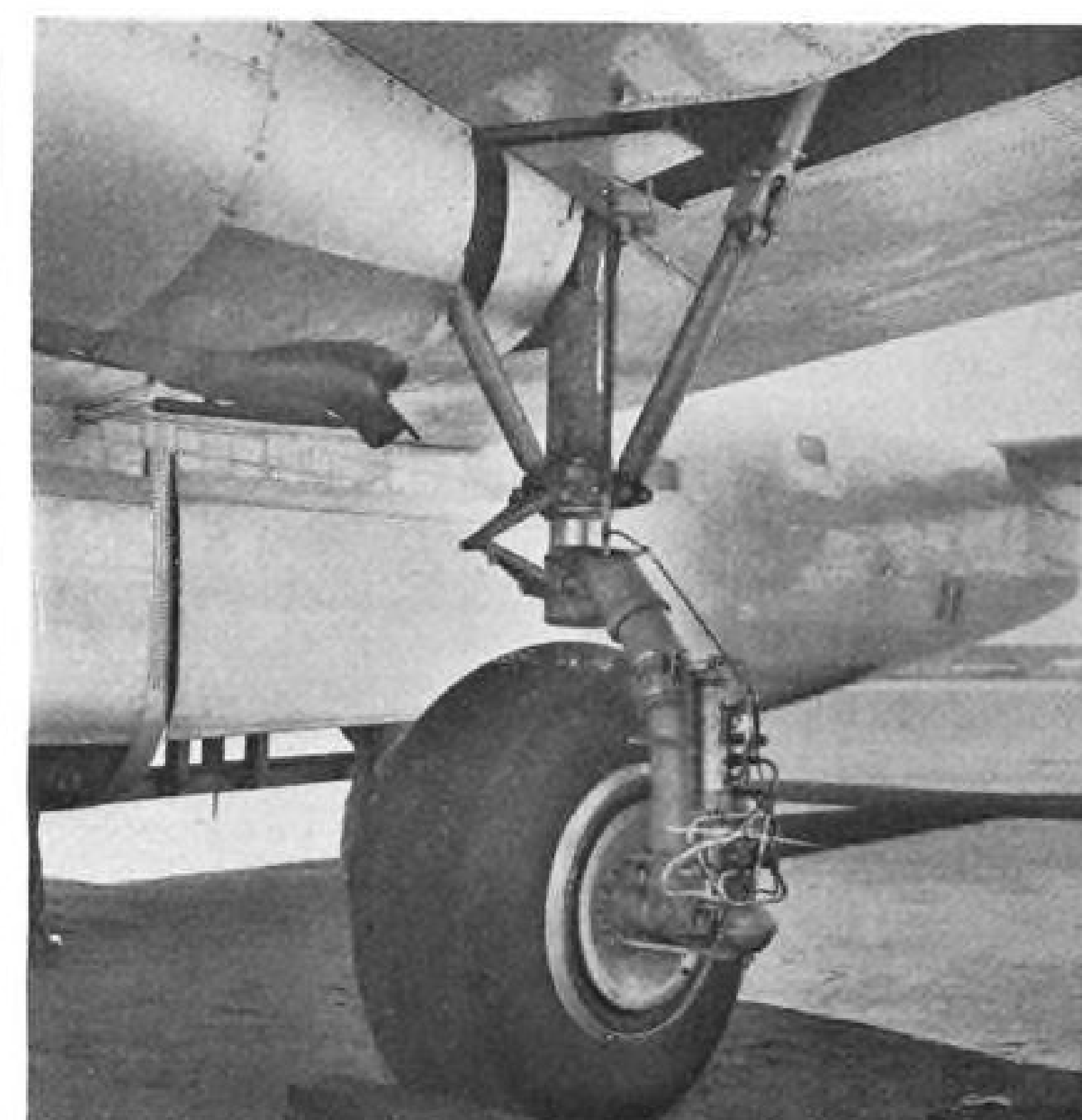
The first *Liberator* bomber built is still flying and contributing its part to the building of better bombers.

This original version of the *Liberator* is used as a flying laboratory at San Diego, and has flown in numberless forms, with superimposed wing structures, variations of landing gear, for slipstream characteristics tests and for other experiments, many of which still are on the secret list.

► **Battle Tests**—Built in 1941, the ship has been used as an experimental plane for improvements on the battle models of the B-24. Proved on this ship, known to Consolidated Vultee pilots as "Grandpappy," the changes are put into the production models.



First "Liberator" Used as Flying Laboratory: Photo at left shows the first Liberator, now being used by Consolidated Vultee in experimental work, in this case testing a new type wing. Superimposed on its wings is an experimental version to determine the profile drag and other performance characteristics



of a wing approximating a laminar flow airfoil. At right, single-unit hydraulic brake, designed by a Consolidated Vultee engineer, is mounted on the first Liberator's wheels for service testing. Wheel-driven hydraulic pump, accumulator and selector valves all are mounted on the wheel.

End of Delay Asked On Termination Bill

Committee recommends that hearings be suspended on George-Murray measure and that bill be reported out.

Terming it "imperatively necessary that legislation dealing with" contract termination "be passed at the earliest possible moment," the George post-war economic policy and planning committee has requested quick passage of the George-Murray Bill and recommended the hearings be suspended and the bill reported out.

The changes, those close to the George Committee and the Baruch group that drew up the original demobilization plan, represent "complete agreement" between the two groups. There has been some indication of Congressional reluctance to accept the Baruch blueprint, but this latest report may be the first step in working out, quickly, the necessary overall plan for return of the country to some semblance of normalcy.

► **Machinery**—The machinery of the report is rather unusual, in that the George Committee made its report to the subcommittee on War Contracts of the Senate Military Affairs Committee. This committee is headed by Senator James E. Murray (D., Mont.), who is co-author with George of the demobilization bill. The bill is limited largely to contract termination and largely embodies the recommendations of the Baruch report.

Of primary importance in the draft of the bill to be reported to the Senate is the emphasis on binding agreements being made quickly. The authority of the General Accounting Office, the bill as now drawn states, "shall be confined to determining after final settlement" whether excessive payments or fraud have been involved in payments to contractors. As an additional protection, the bill adds that "the GAO shall not be charged with the duty or responsibility of detecting frauds in connection with such settlements except as the presence of fraud may be indicated by the records."

► **Warren Protests**—This amendment was sought by the War Dept. and disputed by Controller General Lindsay Warren. Generally speaking, full GAO review of settlements would mean delays that in the case of the aircraft industry might be disastrous.

In the form that undoubtedly will reach the Senate floor, although it may strike some snags in the House, the bill provides the machinery for interim financing, removal and storage of materials not needed after termination, and appeal channels. The procedures would be in charge of a director of Contract Settlements, with contracting branches of the government being used to the fullest possible extent on termination.

Republic Delivers 6,500 P-47's to AAF

More than 6,500 *Thunderbolt* P-47's have been delivered to the Army Air Forces by Republic Aviation Corp., Alfred Marchev, president, told stockholders at the annual meeting last week. The *Thunderbolts* have been built at the Farmingdale, Long Island, and Evansville, Ind., plants. Marchev also disclosed that P-47's are being delivered in quantity to three united nations countries.

Directors, with the exception of R. S. Damon, who has returned to his post as vice-president and general manager of American Airlines, were re-elected. Damon declined renomination because of his return to airline service.



BIGGEST PROPELLER:

This four-blade Hamilton Standard propeller, nearly 17 feet in diameter, is said to be the largest airplane propeller being produced on a quantity basis. Larger ones have been built, but they are not currently scheduled to fly. One shown here is of the Hydromatic type and has blades of duralumin.

Vickers Selection For DC-4 Explained

Canadian-owned Victory plant busy with \$200,000,000 *Lancaster* contract, Howe reveals.

Agreement between Douglas Aircraft and Canadian Vickers, Ltd., Montreal, to manufacture Douglas DC-4's for Canada's post-war use involves approximately \$15,000,000.

This detail of the arrangement was disclosed in Parliament by Munitions and Supply Minister C. D. Howe, in answer to criticism from Ontario's premier, George Drew, who asked why the airplane was not being built at the government-owned Victory Aircraft, Ltd., plant near Toronto.

► **Holds Contract**—Howe pointed out that Victory Aircraft holds a contract for construction of *Lancaster* four-engine bombers amounting to about \$200,000,000 and that Vickers was chosen for the DC-4 job because the company did not have a long-term war contract.

There has been considerable discussion in Canadian political circles on the choice of the DC-4, since Howe said it was chosen by aviation experts as the aircraft best suited to Canada's flying needs for the immediate post-war period.

► **Chosen By Two Surveys**—Toronto *Financial Post* reported that it had learned that both Trans-Canada Air Lines and Canadian Pacific Airlines made independent surveys as to the type of aircraft required by Canada for the post-war period and that each came independently to the conclusion that the DC-4 fitted into the program.

The *Financial Post* also said the contract apparently permits Canada to sell DC-4 aircraft on a competitive basis with the parent company in Great Britain.

► **Financial Setup**—About a quarter of the shares of Canadian Vickers are held by Losanac, Ltd., an investment trust of a Belgian banking concern, Solvay et Cie., now headquartered in London. About two-thirds of the shares are held by individual Canadians, the rest by individuals in the United States, Great Britain, Bermuda and Newfoundland.

The plant now making DC-4's is Canadian government-owned and managed by Canadian Vickers on a fee basis.



The real *payload*
is the full load

Let's be realistic. Many have prophesied, ourselves included, the future vastness of air transportation. The industry well knows its great possibilities. But the most pressing problem in aviation will be to make sure that *all* transports, large and small, fly full.

The full transport is the key to expansion because it provides that margin of profit which makes possible reduced rates—and, in turn, more business. First class mail by air, the opening up of new cargo possibilities, the establishment of

feeder service, faster schedules and more economical operation are goals which will provide increased public usefulness and acceptance. All are within reach and can be made actualities of the near future.

As an engine manufacturer, our contribution is operating economy. The aircraft designer can rely on Wright engines to operate on less fuel and cost less for maintenance. And because they weigh less than comparable powerplants, they provide a profitable payload bonus.

Wright Cyclones pay their way.



Cyclones Save 3 Ways

LESS WEIGHT—MORE PAYLOAD
LOWER FUEL CONSUMPTION
REDUCED MAINTENANCE

WRIGHT
Aircraft Engines

**"We at Colonial Value a Pound
Saved on a Plane at \$400⁰⁰"**
SAYS SIGMUND JANAS,
PRESIDENT, COLONIAL AIRLINES, INC.



"AIRPLANE manufacturers are keeping a constant look-out for practical means of reducing the empty weight of aircraft. One example of this is the uncamouflaged Boeing Flying Fortresses, now being delivered without war paint in accordance with the War Department's recent directive. This change lightens each big bomber by some 60 pounds, adds several miles per-hour speed. All this cannot be measured in terms of money. But on commercial planes, weight saved and increased revenue are synonymous. Here at Colonial Airlines, we estimate that every pound saved is worth \$400.00 throughout the first five years of the life of a plane."

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THE AIR WAR

COMMENTARY

Airpower Facing Its Greatest Test in Next Six Months

Proof of value more evident in staving off defeat in Pacific than in European theater, where Allied air dominance is not so marked as against Japs.

It is difficult to stay in the middle of the road when considering such a controversial subject as the place of airpower in modern warfare. Disregarding theories for the moment, what are the facts? In the Asiatic-Pacific theaters there is no question regarding the fact that airpower staved off defeat, and is now spearheading an advance from several directions which will enable combined United Nations forces—land-sea-air, American-British-Chinese—to win a decisive victory over the common enemy.

The story can be summed up in a few words and phrases which highlight the events: Coral Sea, Midway, Dutch Harbor; Chennault and the Flying Tigers and Fourteenth Air Force; Kenney's bombers and the airborne division which saved Port Moresby; Bismarck

Sea; conquest of the Solomons, Gilberts, Marshalls; Rabaul and northeastern New Guinea. Victory in the air has enabled the naval and ground forces to defeat the enemy, and to advance here slowly, there by leaps and bounds. Airpower must be taken in the broadest sense, including air bombardment, air fighting, air reconnaissance and air transport.

► **Europe and Africa**—In the west, the case is not so clear-cut, though some examples are outstanding. The battle of Britain witnessed a strategically airminded RAF defeating in the air an essentially ground-minded Luftwaffe. In Africa the initial use of admittedly superior airpower in the ebb and flow campaigns under Wavell and Auchinleck was disappointing. However, following the break-

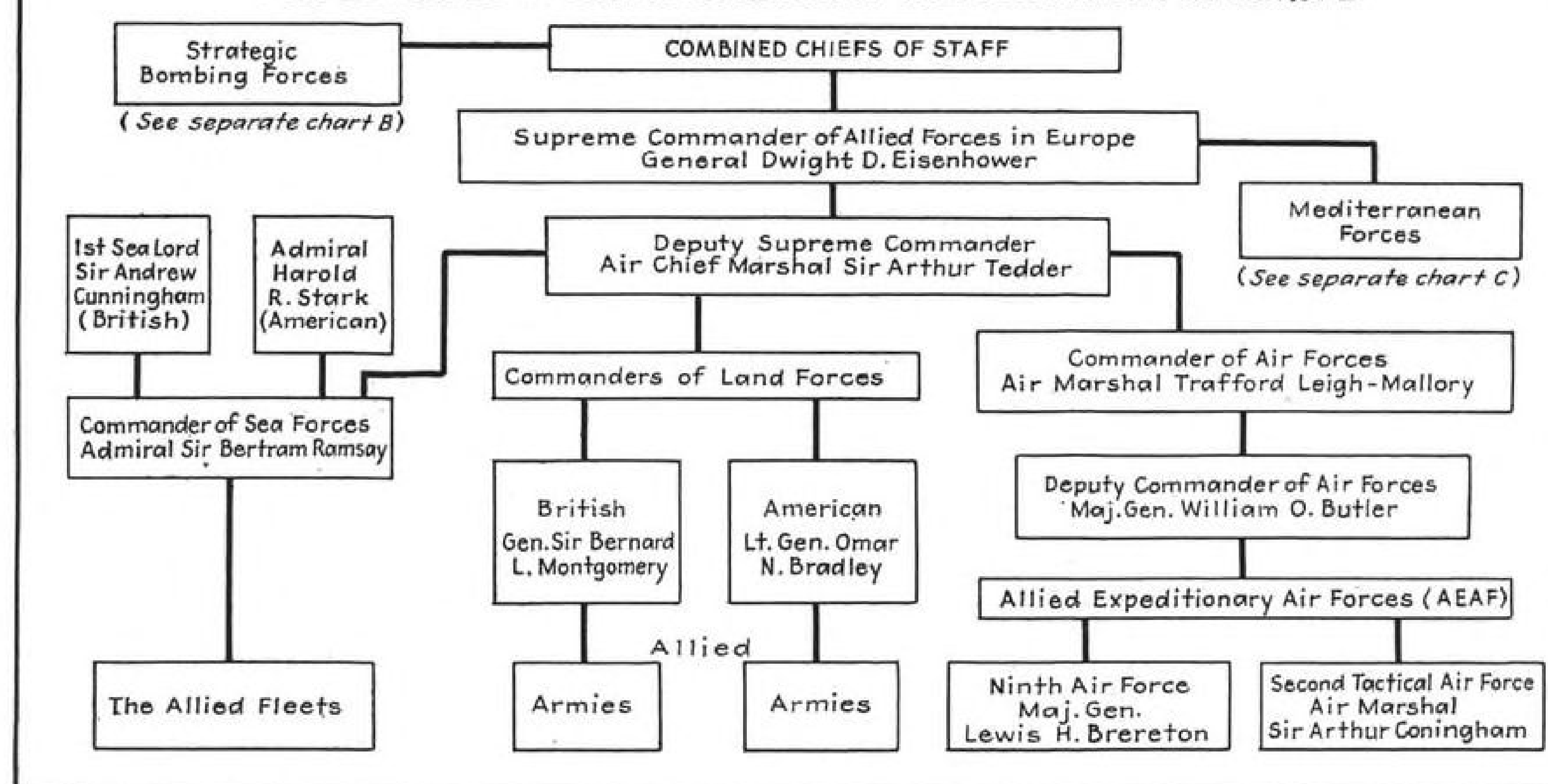
Invasion Tools

The American drive in the Pacific, already well underway but still destined to reach its peak, will require millions of dollars in ground equipment in addition to aircraft, according to AAF logistics officers.

Maj. Gen. W. D. Styer, chief of staff of the Army Service Forces, reported orders have been placed for thousands of bulldozers, barges, tractors, portable sawmills, dredges, pipelines, lumber and other material for construction of ports, landing fields, and roads, plus generators, well-drilling rigs, steel for hangars and housing, petroleum products, jungle clothing, medicine, insecticides, refrigeration units.

through at El Alamein, a new pattern of tactical airpower came into its own. Tedder, Spaatz and Coningham are the air leaders associated with the new air blitz, and Montgomery is its outstanding ground champion. Its essence is contained in the opening words of the War Department regulation FM 100-20, *Command and Employment of Airpower*: "Land Power and Airpower are co-equal and interdependent forces; neither is an auxiliary of the other. The gaining of air superiority is the first requirement for the success of any major land operation. . . . The inherent flexibility of airpower is its greatest asset."

FOR COMBINED OPERATIONS AGAINST THE CONTINENT OF EUROPE



► **How It Worked**—The air part of the successful Tunisian campaign may be summed up in 4 phrases:

- Counter air force activity, neutralizing enemy airfields and shooting his planes out of the sky.
- Isolating the battlefield by preventing supplies and reinforcements coming by land, sea or air.
- Attacking ground objectives in close cooperation with the ground forces.
- Long range strategic missions against the enemy's productive capacity and lines of communication. It worked in Africa, in Sicily, at Salerno, though it was nip and tuck there for a couple of days, owing to the distance from our fighter bases. Despite the present

stalemate and the relative failure at Cassino, there are indications that it has been partly successful in Italy, with final returns not in until there has been a reasonably long spell of decent weather. Check on this about June 1. With practically the entire first team of the African campaign running the invasion show, with Tedder as deputy supreme commander, there is no doubt that its biggest trial is just ahead, adjusted to meet the new conditions.

► **Air Objectives**—One of the great strategic objectives of the war already has been gained in the possession, on the soil of southern Italy, of a great air base for striking at Nazi war production located

40,000 Navy Flyers

The Navy added 20,000 pilots to its air force in 1943, and the total now is about 40,000, according to Navy Department officials. This figure includes the Marine Corps. By next January it is anticipated the number of pilots will stand at 56,000, with the ultimate goal now placed at about 65,000.

Adm. Ernest J. King announced Jan. 30 that Navy, Marine and Coast Guard had about 27,000 aircraft, including trainers and transports, while James Forrestal, Under-Secretary of the Navy, has announced to a group of West Coast executives that 13,617 combat planes were built in 1943 for the Navy, bringing the number of combat planes—after losses—to “nearly 16,000,” against 5,800 in existence in Jan. 1943.

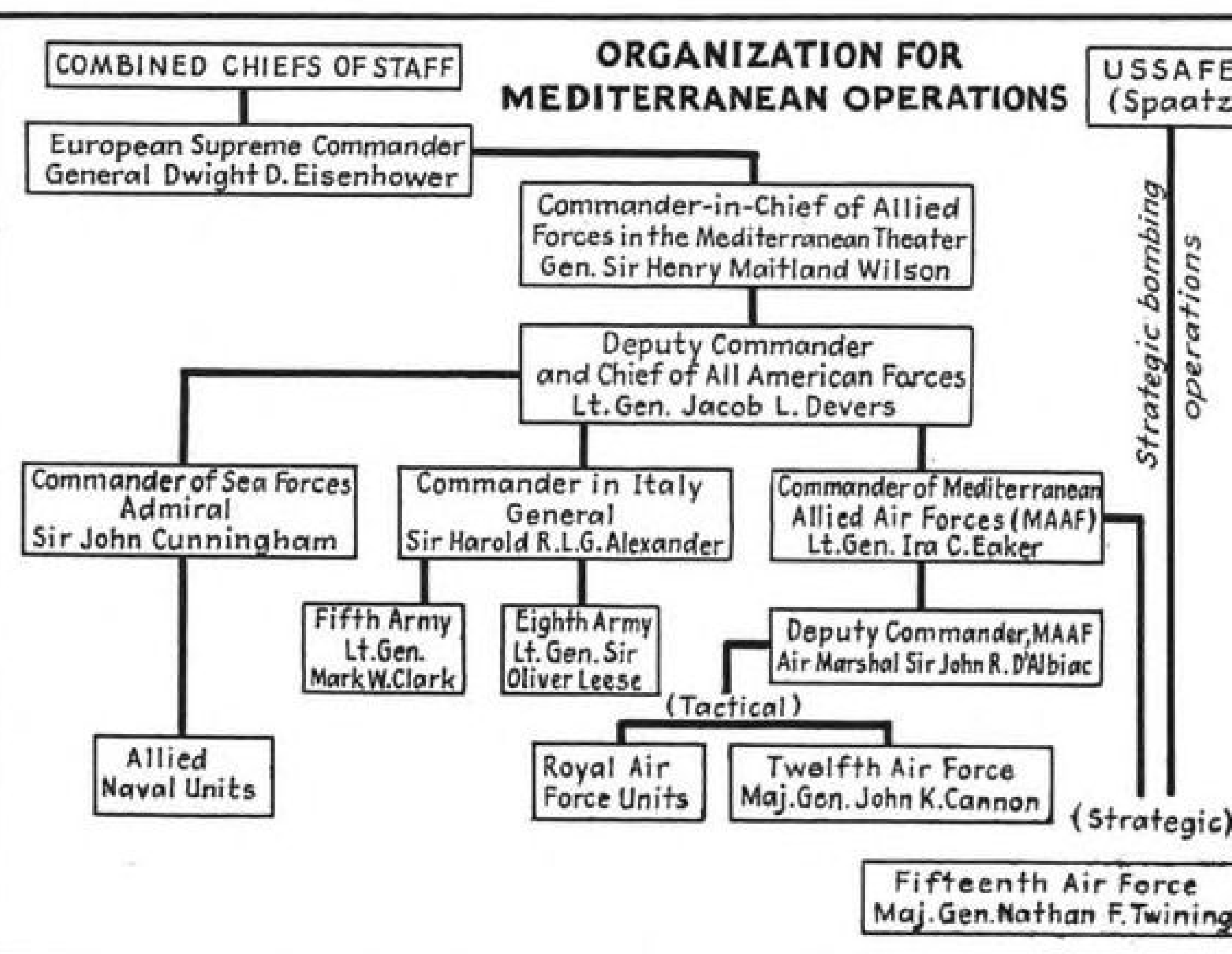
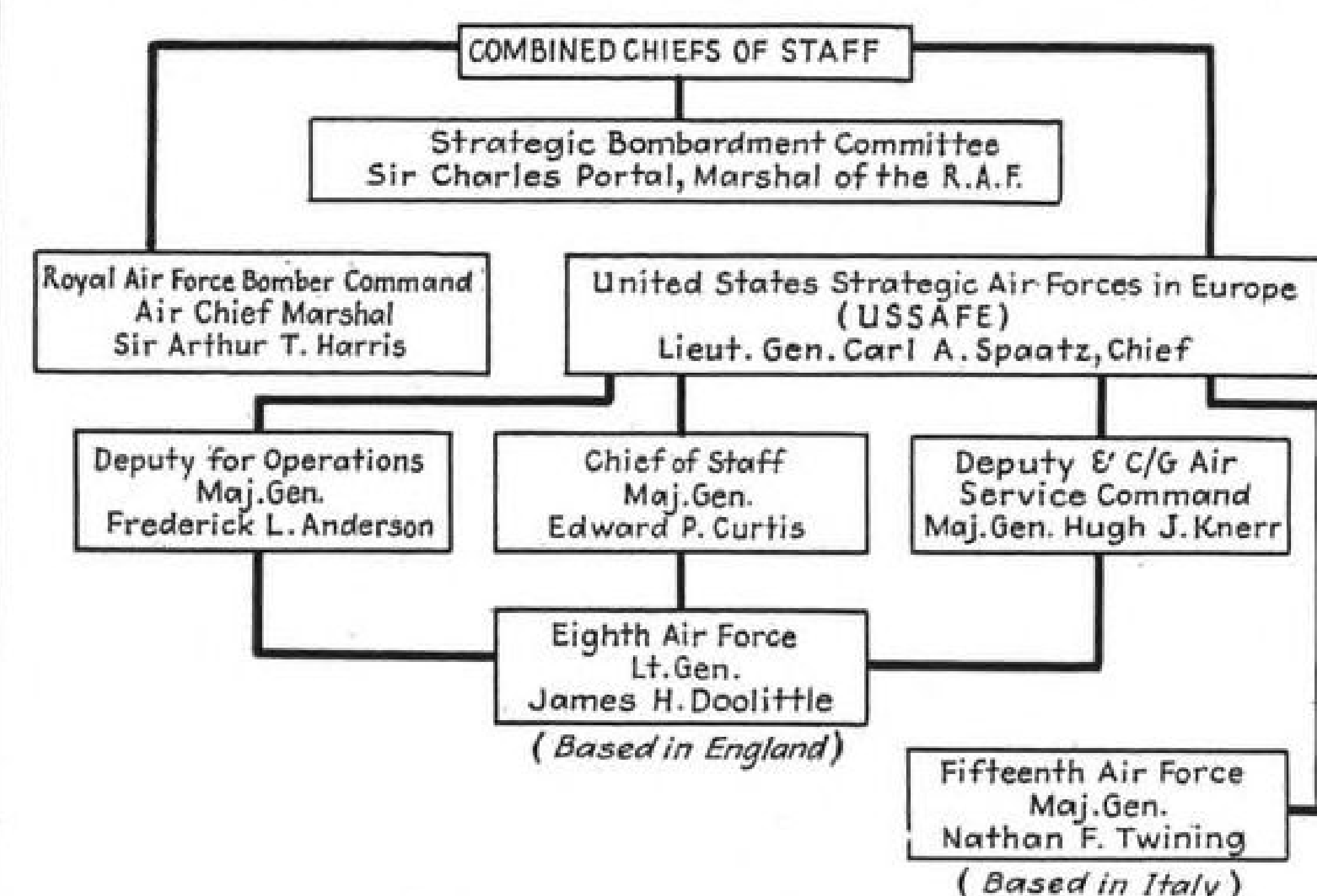
“We completed six aircraft carriers of the Essex type—27,000 tonners, and nine light carriers of the 10,000-ton converted cruiser type, as well as 50 escort carriers,” said Forrestal.

beyond the effective range of bases in England, and for air operations in the Balkans, behind the retreating divisions of the Wehrmacht. Another strategic objective is the destruction of the Luftwaffe—in the air, on the ground and on the production line.

That a good start on this has been made is hardly to be denied, and with three or four months of average weather, with a few spells of better than average, such as obtained in the week of Feb. 20-26, this part of the job should be well on the way to its conclusion. Then, and on a progressively greater scale as this particular goal is approached, the final air objective can be achieved: “The destruction and dislocation of the German military, industrial and economic system, and the undermining of the morale of the German people to the point where their capacity for armed resistance is fatally weakened.”

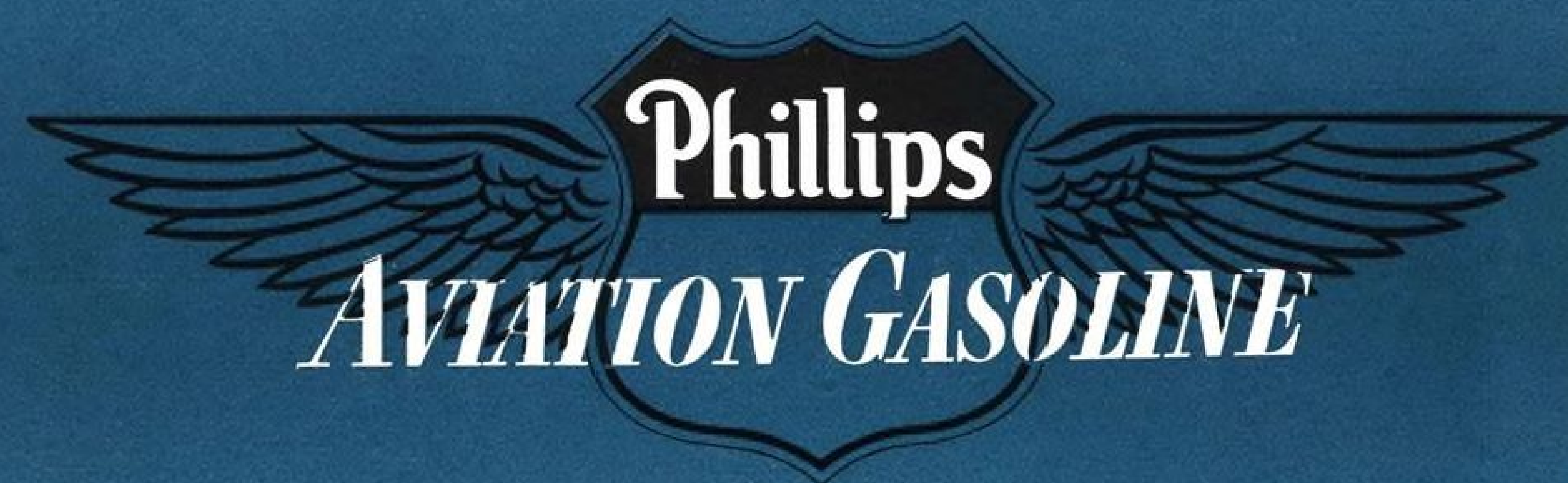
► **Teamwork the Final Word**—Certain airpower has its limitations, as does land power and sea power. These fighting forces, with their vast service and supply organizations, plus the production lines and the home front in general—all are needed, with the hardest fights still ahead. NAVIGATOR.

LEADERS IN THE COMBINED STRATEGIC AIR OFFENSIVE AGAINST GERMANY



Phillips

present production of
100-octane gasoline
could fuel enough
Flying Fortresses
to drop
600 tons of bombs
on Berlin every day



PHILLIPS PETROLEUM COMPANY, BARTLESVILLE, OKLAHOMA
A major supplier of 100 octane gasoline to the Army, Navy, and United Nations air forces

PERSONNEL

Alfred B. Bennett, widely known flyer and airplane salesman, has been appointed director of post-war sales for Aeronca Aircraft Corp., Middletown, Ohio. In announcing the appointment, Carl Friedlander, Aeronca president, said Bennett's addition to his firm places the company in a very strong position, since Bennett was "the foremost merchandiser of civilian aircraft before the war." A graduate of the University of Pennsylvania, where he majored in economics, Bennett took flight training in the Army at Brooks Field, Tex., and in 1931 established his own flying field with a single second-hand *Grasshopper* type plane. From that small beginning he has climbed to be recognized as one of the leading personal plane sales experts of the country.

Hubert G. Larson has been named procurement director for Republic Aviation Corp., Farmingdale, L. I.



Larson, a Navy man in the World War, joined Republic last July as manager of subcontracts. He was formerly associated with General Motors Corp. as eastern investment manager and regional manager.

Joseph P. Ripley, New York investment banker, has been nominated to fill a vacancy on the Board of Directors of United Aircraft Corp. He was a director of United Aircraft and Transport Corp., from its organization in 1929 until its dissolution in 1934. He then became a director of United Air Lines Trans-



Ripley

port Corp., one of three successor companies, serving until a year ago. Ripley is chairman and a director of Harriman, Ripley & Co., Inc., New York, and a director of Brown, Harriman & Co., Ltd., of London.

Carey E. Hood has been named chief traffic dispatcher for TWA at LaGuardia Field.



The post is one of three established with the opening of a new system of coordination between traffic and operations departments. Chief traffic dispatchers also are stationed at Kansas City, Burbank, Calif. The New York office controls loads through all TWA stations east of Chicago.

John Paul Riddle, president of the Embry-Riddle School of Aviation at Miami, and Sao Paulo, Brazil, has returned from Brazil accompanied by Adriano Polzin, an executive of the company.

Jay Abbott, who has been in the public relations office of American Airlines in Washington, has been transferred to the New York office.

Comdr. John D. Reppy, USN, has been detached from the office of the assistant chief of the Navy's Bureau of Aeronautics where he served as coordinator in materiel matters for lighter-than-air craft.

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Quentin G. Turner, chief industrial engineer of the Miami division of Consolidated Vultee Aircraft Corp., has taken over duties as assistant chief industrial engineer of the San Diego division.

Comdr. R. E. Stieler, USN, has been appointed to the Maryland State Aviation Commission. He is senior air officer at the U. S. Naval Academy. Commander Stieler replaces Lieut. Comdr. J. E. Leeper as a member of the commission.

Two representatives of South American air missions have arrived in the U. S. Joao Da Cruz, representative of the Brazilian Air Ministry in Miami and also a member of the Brazilian-United States Defense Commission, has returned from Havana, and Col. Raul Gonzalez Nolle, Chief of the Chilean Air Mission at Washington, has returned from Chile.

Karl P. Grube (photo) has been appointed manager of the newly created corporate termination claim committee of Douglas Aircraft Co. The committee will formulate and



administer, through present company division channels, necessary company-wide policies and procedures essential to any reduction, cancellation or termination of supply contracts with the government and all subcontracts and purchase orders related to such contracts. The committee is composed of R. V. Hunt, vice-president and comptroller, as chairman, and F. W. Conant, vice-president of manufacturing and Grube as members.

Comdr. Geoffrey S. Smith, USNR, has been detached from the Production Division, Navy Bureau of Aeronautics where he was head of the materials and resources branch.

Charles Kastler, jr., is project superintendent of the new Douglas Aircraft Co.'s A-26 attack bomber division. Starting in the Santa Monica plant in 1936, Kastler worked on the early development and construction of the



Kastler

Conrad

A-20 *Havoc*. John R. Conrad heads a new type of division at Douglas Aircraft. He has been appointed properties manager for the company at Long Beach. The properties management division has been duplicated at the Tulsa plant and is concerned with unifying the functions of plant equipment, layout and tooling divisions to obtain a maximum of centralization and a minimum of duplication of effort.

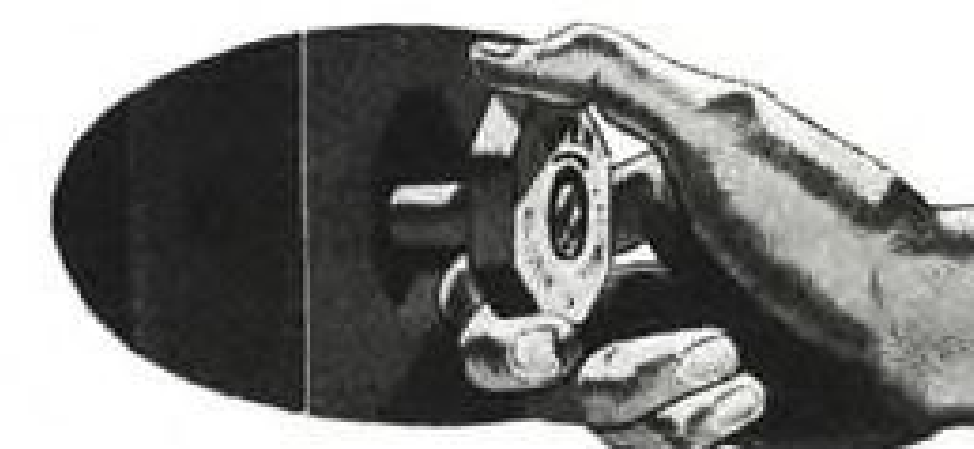
NOW! A flush door lock for aircraft

Projecting door handles are eliminated by the new Hartwell flush door lock. It presents a smooth, flat surface; improves streamlining and aids performance. The lock comes equipped with mounting plate, variable skin-thickness adapter plate, and a key

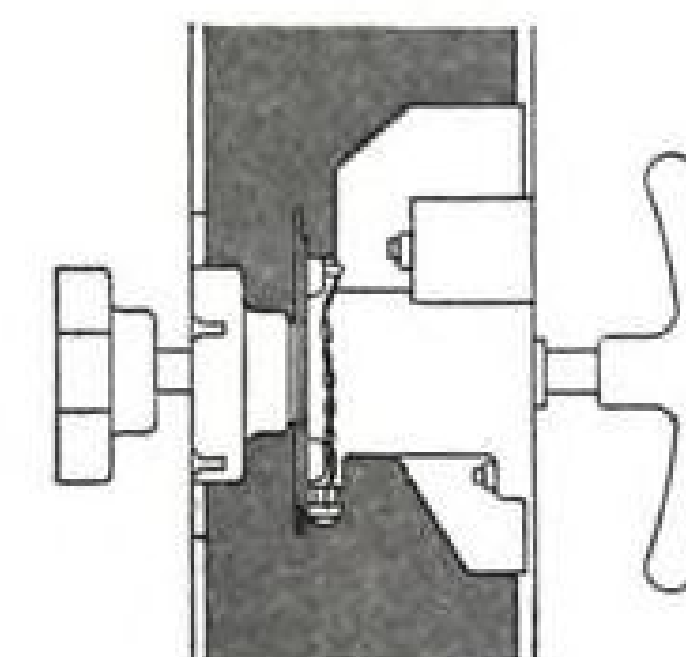
lock, which is built into the push-button control. Designed for fast warplanes, the new Hartwell flush door lock will be a streamlining *must* on all peacetime planes. Write our Los Angeles office for complete engineering details for this "airage" door lock.



Push-button release. To open the plane door from the outside, the release button is pressed, as shown here. This permits the recessed, octagon-shaped handle to slide forward.



Convenient grip. In the released position, the handle—measuring 3 in. across—provides a convenient grip. It can be pushed back into place from the outside, or pulled flush when the door is closed from the inside.



Profile of handle. This cutaway view of the Hartwell flush door lock shows how it looks installed. It can be adjusted to doors of varying thickness by lengthening or by shortening the inner door handle shaft.



Patent Pending



Flush mounting is assured. A die-stamped, variable skin-thickness adapter plate, riveted to the mounting plate, assures flush mounting. The airframe manufacturer is required only to make a circle cutout for the door lock.

Single source for 779 different aircraft production parts and tools

HARTWELL
AVIATION SUPPLY COMPANY

3417 Crenshaw Boulevard, Los Angeles 16, California
Dallas, Texas • Detroit, Michigan • Kansas City, Kansas

Sylvester J. (Spec) Roll, for the past four years general manager of Compania de Aviacion Pan American Argentina in Buenos Aires, has been appointed assistant to the general traffic manager with headquarters in New York. Before becoming general manager of Compania de Aviacion, he was commercial representative for Pan American in Venezuela and the Caribbean area.

Kentner L. Wilson has been named branch manager of the Minneapolis-Honeywell Regulator Co., Detroit office. Previously Wilson has been industrial manager of the Brown Instrument Co., subsidiary of Minneapolis-Honeywell. Al. J. McCullough and Jack E. MacConville have been placed in joint charge of industrial instrument sales for the Brown Instrument division at the Cleveland office.

Major Harry Tremaine has replaced Lieut. Col. George M. Sugden as AAF resident representative for the Tucson division of Consolidated Vultee Aircraft Corp. Colonel Sugden has been transferred to the Boeing Aircraft Co., at Seattle. Major Tremaine was at the San Diego division of Convair.

R. B. Moon, former chief of receiver development at the radio division of Bendix Aviation Corp., in Baltimore, has been named Pacific Coast branch manager of the radio division. His headquarters will be in North Hollywood. The branch office will work on new radio installations and to improve satisfactory field performance.

Transcontinental & Western Air, Inc., has announced three promotional shifts in the traffic department. Russell G. Petite, 14 years with TWA and district manager at St. Louis, has been appointed assistant to W. W. Coyle, Midwest traffic manager with headquarters in Kansas City. John D. Thomas, reservations manager in New York, succeeds Petite in St. Louis, and W. J. MacDonald, jr., chief reservations control representative in New York, was named to Thomas' former post.

Capt. John B. Pearson, USN, formerly head of the fighter plane design branch of the Navy Bureau of Aeronautics' engineering division, has been detached.

H. H. Epstein, chief project engineer at Globe Aircraft Corp., has been named to the Airworthiness Requirements Committee of the Aeronautical Chamber of Commerce.



15-YEAR PIN PRESENTED:
C. F. Weaver, western superintendent of reservations for American Airlines, is presented with a 15-year pin in Los Angeles by A. R. Boone, Jr., American's Western traffic manager.

Squadron Leader E. Drinkwater, RCAF, is officer in charge of the airworthiness of all Boeing-built Catalinas at the Boeing Aircraft of Canada, Ltd., Vancouver plant. He was formerly resident inspector for RCAF at the San Diego plant of Consolidated Vultee Aircraft Corp.

Hall L. Hibbard, vice-president and chief engineer of Lockheed Aircraft Corp., is head of the engineering



GETS WORLD WAR MEDAL:
Capt. S. F. Whitaker, million-mile pilot with Delta Air Lines, shown belatedly receiving the Purple Heart for wounds received in World War I. The award was made by Lieut. Col. C. D. Wright, deputy commanding officer of Selman Field, Monroe, La., when Whitaker passed through the field on his regular passenger run from Atlanta to Fort Worth.

departments of Factory A and Factory B that have been consolidated to permit more effective utilization of overall corporate facilities and personnel. Mac Short, formerly vice-president in charge of the Factory A engineering branch, will be vice-president in charge of special Navy projects. A. G. Meyer remains as assistant to Short and J. B. Wassall, formerly chief engineer of Factory A will continue in charge of operations in that department, reporting to Hibbard.

Rear Admiral A. W. Radford, USN, has assumed duties as assistant to the Deputy Commander Naval Operations (Air), having relieved Rear Admiral F. D. Wagner, USN, who has been assigned to sea duty. Admiral Radford will act as assistant to Vice Admiral John S. McCain, USN. He was formerly director of the Aviation Training Division and more recently served in a command post in the Pacific.

The former vice-chairman of the War Production Board and former head of the Army-Navy Munitions Board, Ferdinand Ebersadt, president of F. Ebersadt & Co., Inc., was elected, together with Roger J. Whiteford, of the Washington (D. C.) law firm of Whiteford, Hart and Carmody; Fred Jones, head of many Ford agencies in Oklahoma, and George A. Butler, senior member of the law firm of Butler and Binion, Houston, Tex.

Four new members of the Board of Directors, two from Eastern firms and two from the Southwestern section, were elected at the annual meeting of Braniff Airways stockholders in Dallas.

Weatherill Medal Awarded duPont

Richard C. duPont, who was killed last year in a glider crash, has been awarded, posthumously, the John Price Weatherill Medal of the Franklin Institute for his work in development of pick-up air service to small communities. The medal will be presented Apr. 19.

DuPont, president of All American Aviation Inc., was serving in the Army at the time of his death, working in the glider program, a field in which he had been interested for years.

► **Westendorp Honored**—A second medal will be awarded Willem F. Westendorp, of General Electric Co.'s research laboratory, for development of a transformer used in the industrial X-ray units used in many aircraft manufacturing plants to inspect parts.

What's the Answer to Vibration Control?

1. IT TRAVELS LIKE THIS

IN THREE DIRECTIONS PLUS TORSIONAL

VIBRATION ORIGINATES HERE

2. THE ROBINSON PRINCIPLE OF V.C.

NEUTRAL AXIS SUSPENSION

3. ABSORBS VIBRATION HERE

ROBINSON-DESIGNED SHOCK MOUNTS

Answer: Rubber in Compression

Laboratory and flight tests of vibration control equipment in aircraft reveal a startling fact. It is found that conventional shock suspensions, using bonded rubber shear type mountings, absorb vibration in only one direction, and within a limited frequency range. This type of shock mount amplifies vibration in other directions, due to horizontal rigidity or "stability." In addition, the conventional shock mounts do not control torsional or rotational vibration.

Robinson engineers have found that suspensions based on the double Neutral Axis principle, using sponge rubber in compression, furnish tremendously improved performance,

absorbing vibrations from all three directions and also rotational impulses. The rubber units, mechanically retained, are free to deflect vertically, laterally, and longitudinally.

As a result, airplane, radio, and instrument manufacturers are rapidly adopting Robinson-designed and built shock suspensions for protection of their equipment.

Because of these developments, you will want to know more about this new principle. Robinson-designed shock suspensions are being adapted to a variety of uses, and our new booklet, **VIBRATION CONTROL BY ROBINSON**, describes the Neutral Axis principle and its various applications. Write for a copy today.

ROBINSON AVIATION, INC.
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FINGER-TIP CONTROL for MARTIN



A G-E Engineered System That Facilitates Accurate Aiming at 300 Mph

● Enemy fighters buzzing 'round a bomber can make things tough for a turret gunner. But one thing now made *easy* for him is the control of his turret—a job that a G-E control system can do electrically.

In a Martin turret, the gunner does not have to move the guns themselves. He simply turns his control handle—the turret and guns move correspondingly. Smoothly, speedily, and without effort, the gunner is able to train and hold his guns on the enemy plane.

Exactly what this highly successful system

comprises and how the various elements are connected cannot be told. But typical components are described at the right.

Designing and producing aircraft systems for flight, radio, and power-plant control is becoming an increasingly important phase of General Electric engineering. For information regarding available systems, and consultation regarding new projects involving electric control, write to the nearest G-E office. *General Electric Co., Schenectady, N. Y.*

Testing G-E control system for Martin turrets under firing conditions



TURRETS

The G-E Turret Speed-control System

This typical G-E aircraft system facilitates control of the turret and its guns. While its layout and equipment specifications cannot be revealed, components include the following:

1. TURRET DRIVE MOTOR. Standard G-E 24-volt d-c intermittent-duty unit of rigid construction and light weight. Equipped with steel shell, aluminum or magnesium end shields, and double-shielded ball bearings.

2. AIRCRAFT AMPLIDYNE. Provides enormously amplified power (up to 10,000 to 1) from low control-field excitation, and instant response, insuring smooth, dependable performance under rapidly changing conditions.

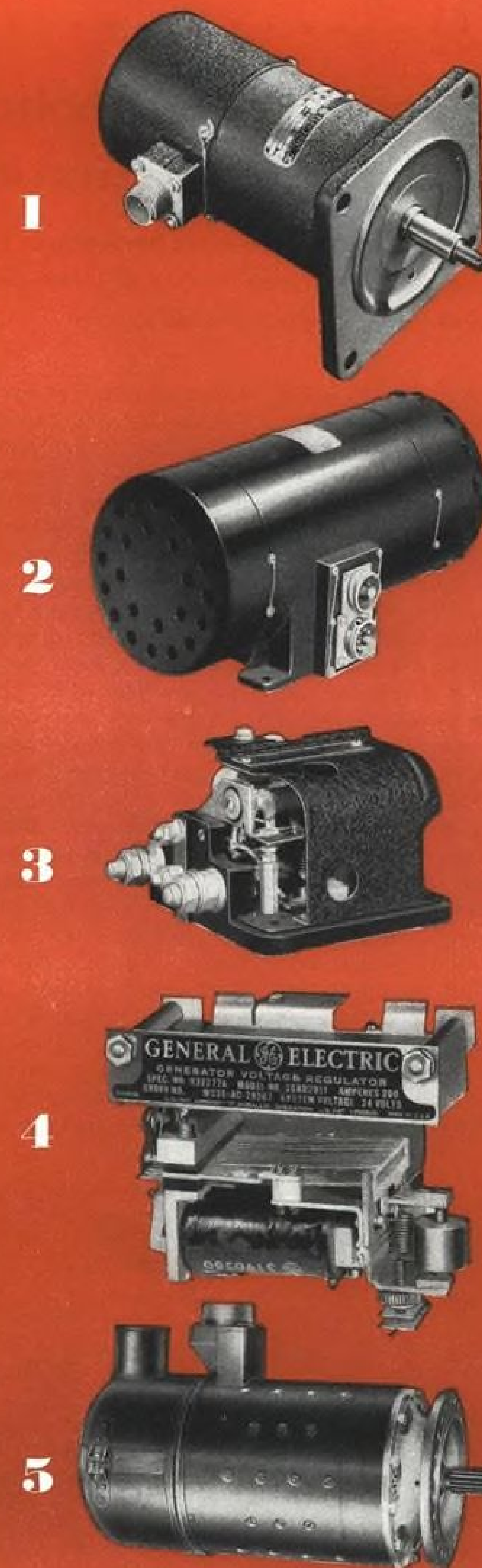
3. REVERSE-CURRENT RELAY. Automatically connects or disconnects generator from bus. Opens main contactor on reverse current of about 15 amp. Will interrupt reverse current several times rating of relay.

4. VOLTAGE REGULATOR. Controls generator field current and maintains constant voltage under varying generator speed and load. Equipped with equalizing coil for equal division of generator load in multi-engined aircraft.

5. AIRCRAFT D-C GENERATOR. Supplies electric power for G-E "power packages" and other electric equipment, as well as for turrets. Especially light in weight, with high overload capacity. Special shaft construction withstands vibration and torque pulsations.



**PRECISION PRODUCTS
AND ENGINEERED SYSTEMS
FOR AIRCRAFT**



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AIRCRAFT PRODUCTION

Wright Reports New Cooling Fan Gives Sharp Boost to Motors

Company says device gives 336 extra horsepower per engine at 30,000 feet, based on engineers' tests, and raises climbing speed 20 percent and greatly increases load capacity.

Increases in rate of climb, gross load, cruising speed and high altitude performance are claimed by Wright Aeronautical Corp. through use of a new cooling fan for air-cooled aircraft engines.

Myron B. Gordon, vice-president and general manager, said that flight tests of the Wright cooling fan have shown that it increases a plane's rate of climb as much as 20 percent and that it increases the pay load of some types of twin-engine airplanes several thousand pounds. Gordon sees the device as of great advantage on large flying boats and heavy land-based bombers or cargo carriers.

► **Tested at 30,000 Feet**—Wright test crews, he added, found that on a plane moving at a long-range cruising speed of 150 miles per hour at 30,000 feet without an engine fan, a total of 456 hp. was required for each engine to overcome the drag of cooling air and the engine cowl-ing while, with a fan, only 120 hp. was required, thus giving the plane

336 more horsepower from each engine to increase its speed and still retain the same fuel economy.

The cooling fan was developed in cooperation with engineers of the armed services to solve two problems which have developed as the power of engines and the speed and load of planes have increased. There was the problem of speed-killing drag created by the cowl-ing and the flow of air through it, and the problem of cooling the engine under difficult operating conditions, such as a steep climb or long takeoff with a heavy load.

► **High Pressure Maintained**—The cooling fan maintains a high pressure flow of air through the cowl-ing, even with the flaps closed and, in addition, the exhaust air is pushed out into the slip stream at high speed, instead of moving out as a slow, dragging mass. The fan also permits the engine to be run at high power for long periods. Since temperature is the main limiting factor on how long full pow-

er can be maintained in an engine, the cooling fan plays an important role when the plane is moving at a slow speed, on takeoffs, steep climbs and long taxi runs.

The fan is also important at high altitudes, since the thin air at stratosphere levels is needed in greater volume to flow over the engine for cooling purposes. On planes without a fan the cowl flaps must be opened at high altitude to increase the flow of air, again creating a drag.

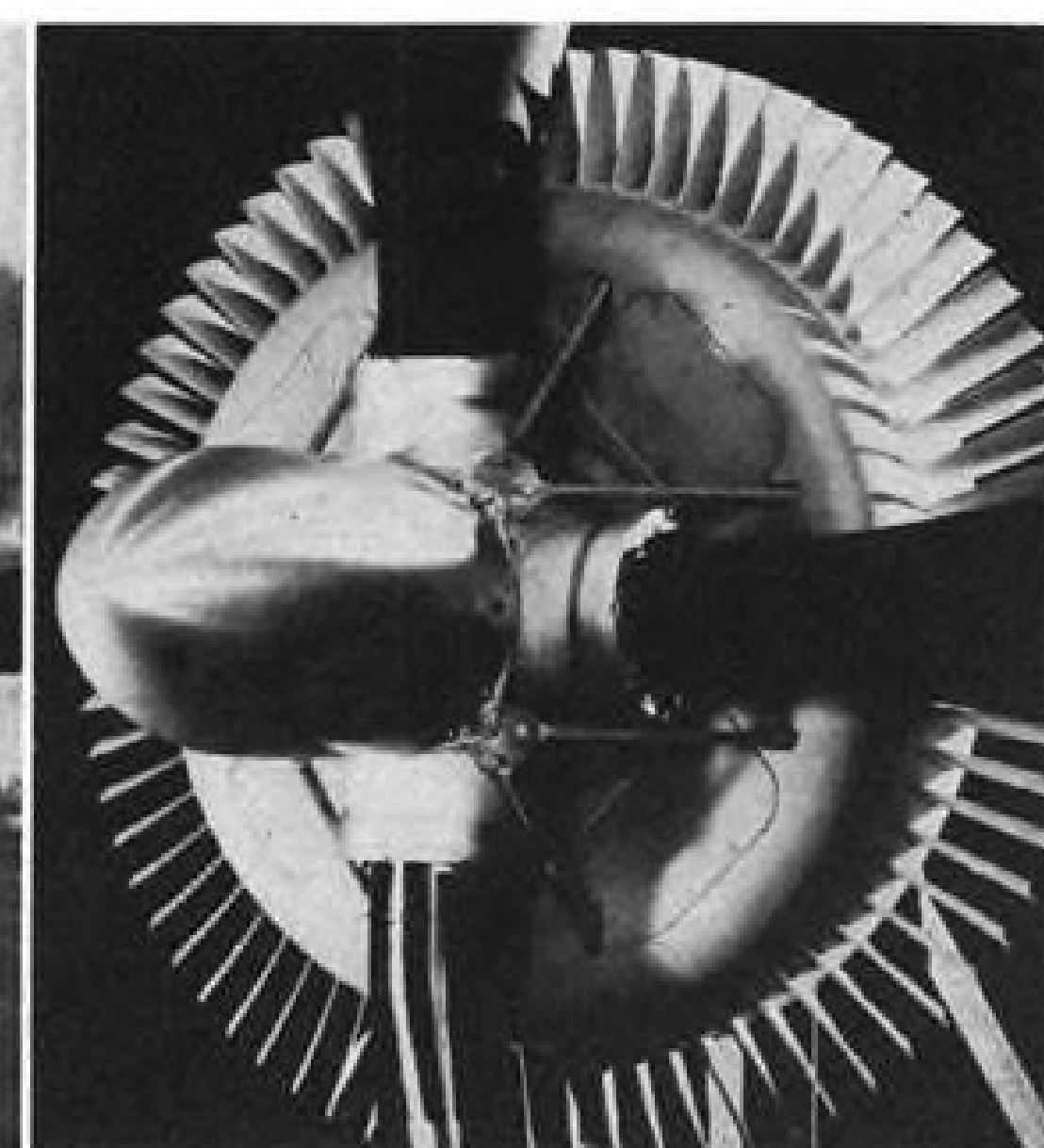
The new fan, Wright engineers say, not only overcomes this drag, but under some high speed conditions actually gives the plane additional forward thrust, due to the jet-like action of air being expelled from the cowl at high speed.

► **Uses Some Power**—While a small amount of power is necessary to turn the fan, the amount required is only a fraction of the total gain in useful power which makes the fan possible. Likewise, it adds some weight to the engine installation, but this is largely balanced by the elimination of moving parts on the ordinary type of aircraft cowl-ing.

Wright engineers, who have been working on the new project said that the Germans have a similar type of project under way. However, they added, the art of casting deep cooling fins on cylinder barrels has reached a higher peak in the United States, with resulting better cooling even as engines moved upwards to 2,000 hp. and more. In contrast, they said, the Germans have encountered difficult cooling problems at a much lower level of power.



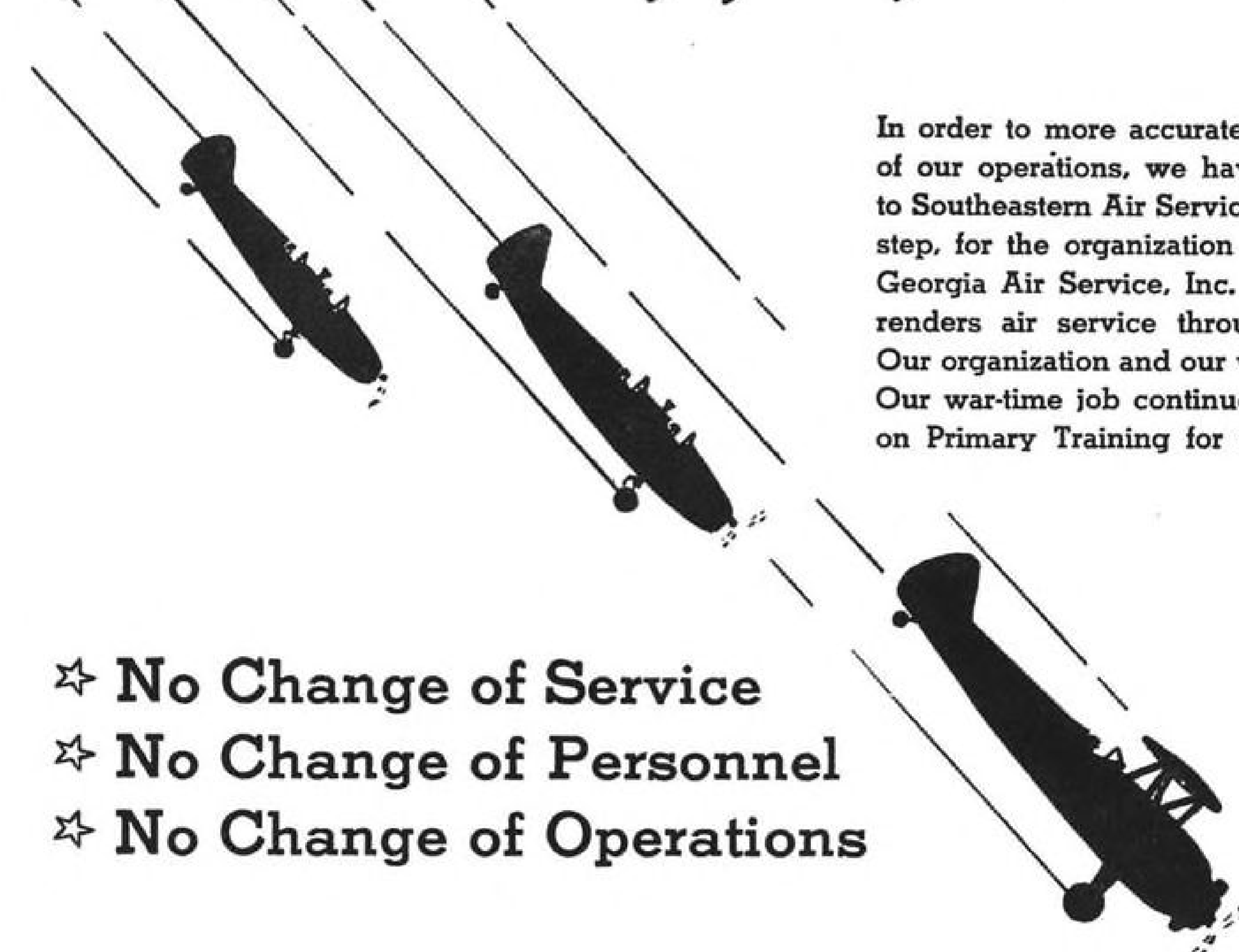
Newly Developed Engine Cooling Fan: The many-bladed fan shown mounted on the propeller shaft of a Wright Cyclone engine, and as it appears installed on a plane, has been developed by Wright Aeronautical



Corp. engineers to improve rate of climb, cruising speed, payload and altitude performance. It largely eliminates the speed cooling drag present in older methods of engine cowl-ing and cooling.

"SOUTHEASTERN"

the New Name of Georgia Air Service, Inc.



In order to more accurately describe the scope of our operations, we have changed our name to Southeastern Air Service, Inc. This is a logical step, for the organization which was known as Georgia Air Service, Inc. has "grown up," and renders air service throughout the Southeast. Our organization and our work remain the same. Our war-time job continues to be concentration on Primary Training for the Army Air Forces.

- ☆ No Change of Service
- ☆ No Change of Personnel
- ☆ No Change of Operations

POST WAR PLANS are important, too! The hundreds of pilots, mechanics and aircraft technicians among our skilled personnel constitute a smooth-working machine which can render invaluable service to aviation in the Southeast. Our vast backlog of experience in war flying will be available to both commercial and private flyers. Through our affiliated company, Southeastern Air Express, Inc., we plan a system of feeder air lines. Southeastern Air Service, Inc., is the name which will designate the fixed base operations. We invite continued contacts from manufacturers and others in aviation who are interested in post war sales, service and maintenance "all over Dixie."



**SOUTHEASTERN
AIR SERVICE, INC.**

Formerly GEORGIA AIR SERVICE, INC.

Flight Contractors to U. S. Army Air Forces — Bennettsville, S. C. and Jackson, Tenn.
EXECUTIVE OFFICES — ATLANTA, GEORGIA

B-29 Nears Quantity Output in Five Plants

Superfortress described as most formidable of bombers, although yet to face test of battle.

By midyear, Boeing's *Superfortress* will be in quantity production at five of the nation's greatest aircraft plants.

Conceded to be the most formidable of the sky giants, although not yet flown in battle, the B-29 now is being built at Boeing-Wichita Plant 2, Boeing-Renton, Bell-Marietta and Martin-Omaha plants. Conversion of Boeing Plant 2 in Seattle has been started and will be completed within several months.

► **Light Heavy to Continue**—The *Flying Fortress*—the "light heavy" predecessor of the B-29—will continue in production at the Douglas and Lockheed plants. All Boeing facilities with the exception of Seattle Plant 1, where experimental work is done, and Boeing-Wichita Plant 1, where Kaydet PT-17's are being built, will then be devoted to the *Superfortress* production. Boeing-Seattle will continue to do all engineering work on the B-17.

The Seattle changeover noted here last week will be made with-

out shutdowns or layoffs and activities there will be coordinated with those at the Renton plant, so that each plant will be turning out the subassemblies for which their facilities are best suited. During the conversion period, matching steps will be taken at the six Boeing branch plants in western Washington so that these plants will be producing *Superfortress* parts and assemblies for the main plants as the production line goes into operation.

► **No Secret**—Philip G. Johnson, Boeing president, said this coordinated program at Plant 2 and Renton will mean that B-29 production will be considerably greater than if completed planes were built at each plant.

That production of B-29's was on the schedule for Martin-Omaha has been no secret in the aviation industry, but public announcement was withheld until a few days ago, when the last Martin B-26 *Marauder* rolled off the assembly line and all facilities were turned over to speeding production of the B-29. Martin has been converting the Omaha plant for several months, the changeover requiring a \$2,000,000 addition to the main assembly plant. The last *Marauder*, was the 1585th B-26 to be built at that plant.

► **Production Gains**—Boeing's Plant 2, the company says, is one of the most efficient in the country, and Johnson revealed a few days ago that production of *Fortresses* at the plant was nearly one-fourth greater in March than in February, previous high in the company's history, and 34 percent above January's output—which in turn was more than double that of January, 1943.

Johnson said the Seattle plant production exceeded by a considerable margin the output of any other plant, American or foreign. He disclosed that Boeing's production rate has increased more than 400 percent in the past two years with the same number of direct factory workers as at the start of the period. More than 50 percent of the Boeing factory workers are women.

► **Airframe Record**—During 1943 Boeing produced an average of 2.23 pounds of airframe per square foot of factory floor area per month, which compared with 2.5 pounds for the next highest manufacturer, irrespective of type plane produced. Johnson said two pounds was the average of the leading seven bomber plants and 1.3 pounds the average of all aircraft plants.

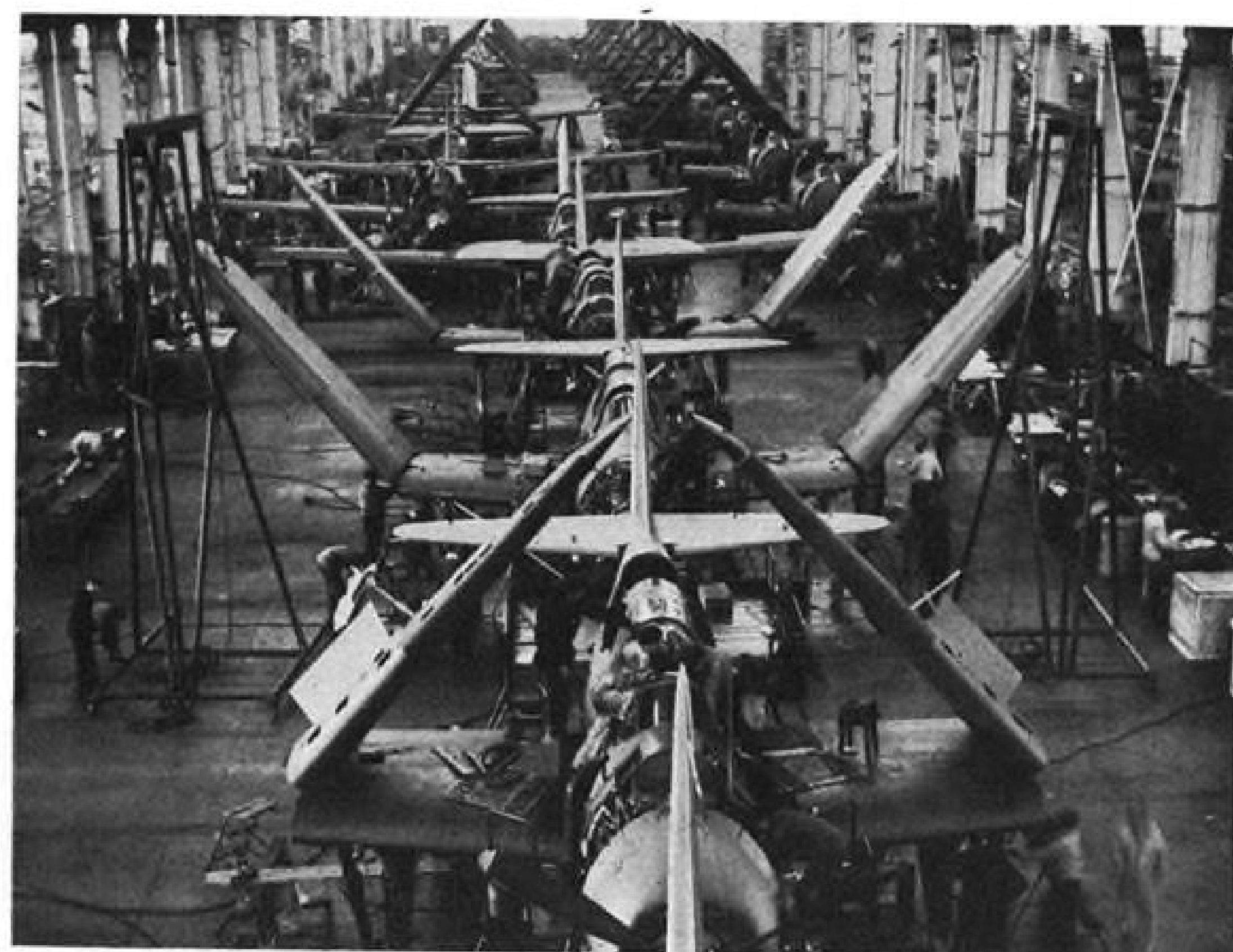
In setting its March production record—last for the *Fortress*—the figure reached at the Seattle plant was 4.85 pounds per square foot.

In the same plant, nine-tenths of one man-hour was the year's average for 1943 required to produce a pound of airframe. Johnson said that 1.1 hours was the record of the next heavy bomber plant, 1.9 hours that average of the leading seven heavy bomber plants and 3.6 hours the average of the aircraft industry. In March, Boeing man-hours per pound were 0.6.

Portable Heater

Development of a new portable heater is announced by Surface Combustion, Toledo, which ascribes countless applications for the unit, including warming aircraft engines, cockpit and cabin on the ground and drying out of cabins and instruments in airplanes in warm climates.

The new "Janitrol" portable heater embodies the same "whirl flame" combustion principle as the new Janitrol aircraft heater which the company, in cooperation with air force engineers, perfected and recently announced.



CANADIAN HELLDIVERS ASSEMBLY LINE:

Part of the assembly line of Curtiss Helldivers being built at the Fort William, Ont., plant of Canadian Car and Foundry, Ltd., for the United States Navy. The Fort William plant employs 5,500 men and women and is one of two Canadian plants making the Helldiver. The two Canadian plants, according to official Canadian statements, are making one-fourth of the total production of this dive-bomber.

Simmonds *PUSH PULL* Controls

win the YELLOW DOT of Army Air Force Winterization Approval

As a result of their proven performance under severe Arctic conditions, Simmonds-Corsey Push-Pull Controls have won new honors—the Yellow Dot of approval by the U. S. Army Air Force Winterization Program. Thousands of hours of operation at temperatures down to 65 below zero have confirmed laboratory experiments which indicated the low frictional qualities of these controls.

More than 250,000 of these precision-built controls have been installed on the fighting planes of the United Nations, including the leading U. S. military and transport aircraft. Because of their wide range of applications, they are being used also for marine and automotive units.

Simmonds Equipment Flies With Every Type of Allied Aircraft

Automatic Engine Controls • Chronometric Radiosondes
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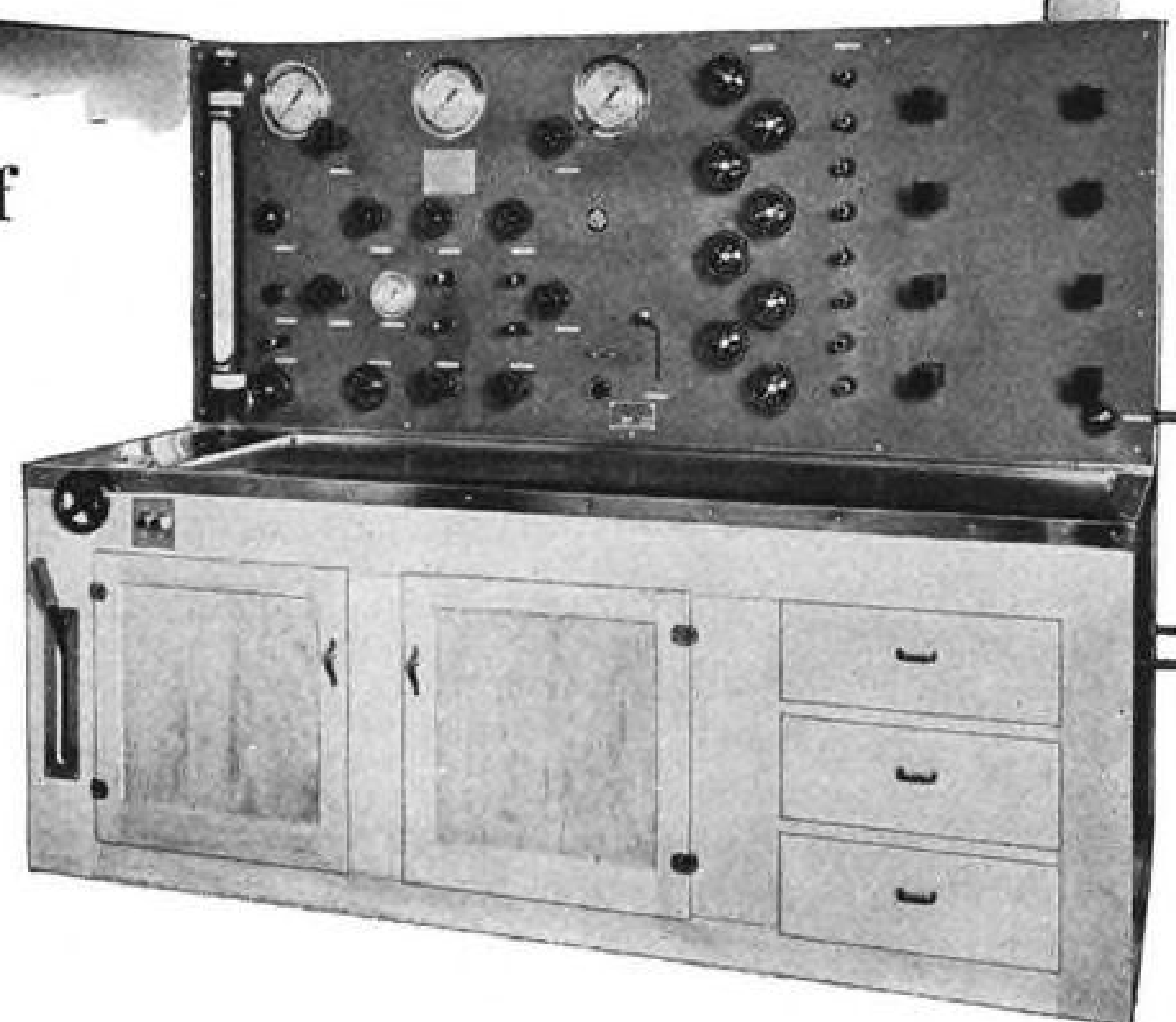
MY FOOLISH FRIEND



FREE ENLARGEMENTS (14" wide) of this cartoon by Edmund Duffy, three-times winner of the Pulitzer Prize, are available. Write, on your business letterhead, to: Bruce Livie, President, Liberty Motors & Engineering Corp., Baltimore-1, Md.

Quickly Tests All Types of Hydraulic Equipment for Aircraft

THIS Liberty Test Bench (Type 101) is a high efficiency unit for testing entire hydraulic systems, parts, fittings and accessories. Ideal for testing such hydraulic equipment as Flap Operating and Landing Gear Cylinders, Gun Turret and Gun Firing Mechanisms, Unloader Relief Valves and Flow Divider Valves. Provides a variable flow of oil, up to 12 g.p.m., with pressures up to 1,500 p.s.i. Also provides hydraulic pressure up to 10,000 p.s.i. for burst pressure tests and leakage tests. Complete information will be sent upon written request.



**LIBERTY MOTORS
& ENGINEERING CORPORATION**
BALTIMORE-1, MARYLAND

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MANUFACTURERS OF AIRCRAFT SERVICE TOOLS AND TEST EQUIPMENT

DuPont Perfects New Plane Rivet

Model is modified version of original explosive type.

Development of an improved explosive rivet that expands to fit the hole has been developed by the explosives department of E. I. du Pont de Nemours & Co., for greater speed and uniformity of results in riveting military aircraft.

Engineers explained the rivet is expanded from within along substantially its entire shank by a tiny explosive charge and du Pont says it is a marked improvement over their original explosive rivet, now in wide use in the aircraft industry.

► **Explosive**—Improvement of the rivet, made of aluminum alloy, was accomplished by embodying in it a small auxiliary explosive cavity and modifying slightly the explosive charge. The auxiliary cavity extends from the main chamber in the shank toward the head of the rivet. Detonation of the charges expands virtually the entire shank, thus an exact fit between the drilled hole and the shank is no longer required.

This leeway makes possible more rapid insertion of the rivets. After insertion, the new rivet, like the original, may be expanded by one man at the rate of 10 to 20 per minute, as contrasted with two to four per minute for most "blind" rivets.

Pratt & Whitney Shuffles Engineers

Beardsley becomes assistant to Willgoos; King named chief designer.

Changes in the Pratt & Whitney Aircraft Division of United Aircraft Corp., to strengthen the engineering department, will involve realignment of the duties of nearly a score of engineers, the company announces. The changes are designed to "facilitate expansion of design and production activities," the company said.

Guy E. Beardsley, Jr., becomes assistant to Chief Engineer Andrew V. D. Willgoos, and Alexander H. King is appointed chief designer, reporting directly to the chief engineer and acting as consultant to all design groups. Beardsley has been associated with



Beardsley

P & W since 1928, and is being succeeded as chief of auxiliary development by Donald S. Hersey.

► **Riker Chief Inspector**—Andrew L. Riker becomes assistant chief inspector in the new organization.

In the auxiliary development group, John H. Marchant has been assigned to a new division working with fluid mechanics and heat flow, while Benjamin T. Howes will take over engine cooling and volumetric efficiency as project engineer.

The former new engine group in the engineering department is renamed Section A, and Augustus Hasbrouck will be chief design engineer in this section. Design project engineers will be Lawrence Castonguay, Harry W. Gunberg, Nathaniel Haynes, Philip P. Newcomb and Lewis M. Porter.

► **New Design Projects**—These project engineers will be assigned responsibility for various new design projects of the company.

The Production Engine Group becomes Section B, and will be headed by Gilmoure N. Cole. Design project engineers will be Erwin Beyer, Carl N. Furay, John S. Hasbrouck, Charles A. Morss and Chester R. Wells.

Globe Corp. Buys Frankfort Sailplane

Frankfort Sailplane Co., Joliet, Ill., has become an operating division of Globe Corp., manufacturers of aircraft.

Russell E. George, vice-president and general manager, said the action was deemed advisable in order to assure most efficient management and sound financial backing.

► **Personnel Retained**—Globe Corp.,

in acquiring assets of Frankfort Sailplane Co., has assumed all liabilities. In retaining the same personnel, it expects to continue without interruption output of a product vital to the war effort.

Frankfort's notice of dissolution was filed Mar. 31. Globe received its charter in 1901 and has actively conducted various operating divisions since that time.

Douglas Aide Lists Design Fundamentals

Stresses importance of safety, weight and serviceability at New York SAE meeting.

The three fundamentals—safety, weight and serviceability—which most influence design decisions in aircraft engineering are emphasized by the maxims that a saving of 250 pounds in weight is worth more than the initial cost of an airplane, that airplane assembly and installation operations now occupy 80 percent of a plane's construction time and airplanes must be built and serviced by simple tools and simple minds.

These points were outlined by A. L. Klein, design consultant, Douglas Aircraft, in recommendations to the SAE Aeronautical Meeting in New York. He asserted that small causes lead to catastrophes and added that, since every device and part known to man will fail sooner or later, it is imperative that the designer make such failures non-catastrophic. He lauded the aircraft industry for developing multi-engine planes.

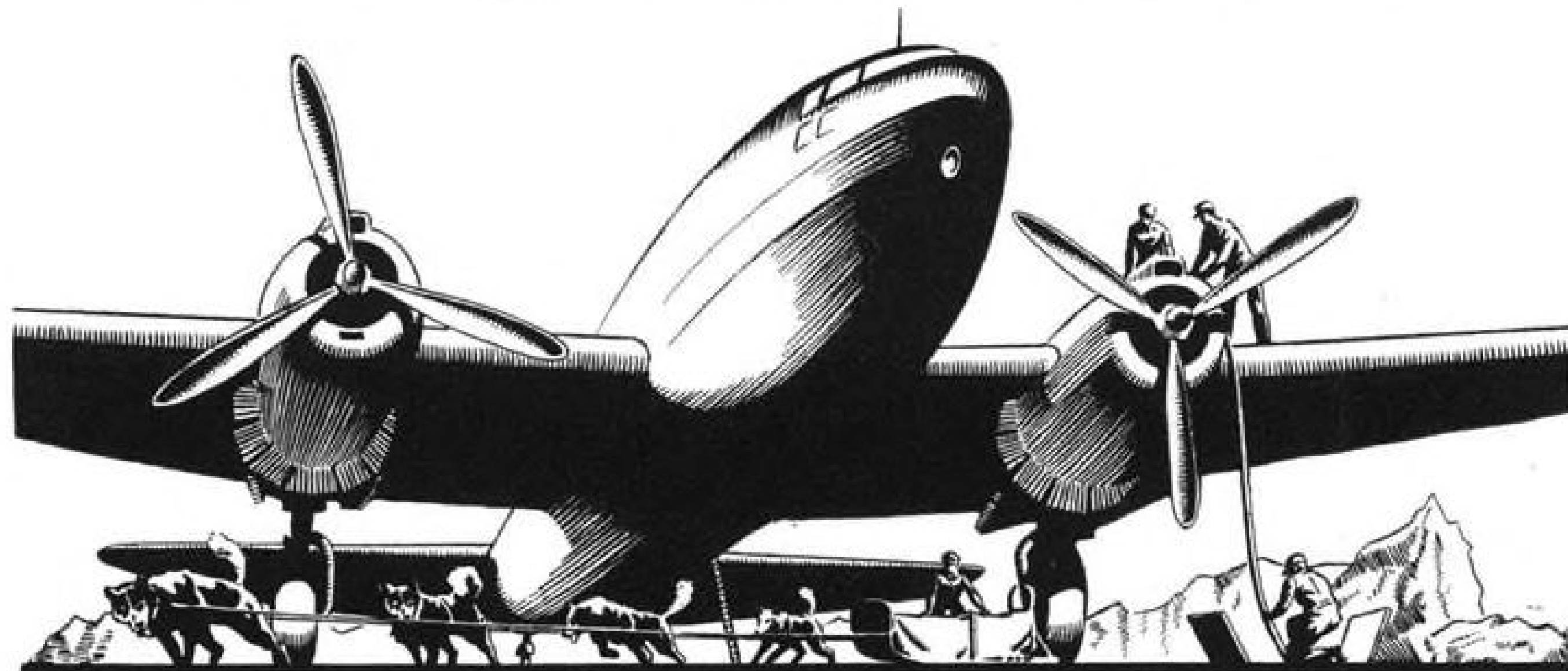
► **Lighter Parts Stressed**—Weight-saving is as important on small items as large, Klein pointed out, adding that a good way to make parts lighter is to make them smaller—which seems obvious but which is not always practical.

"Designers have tendencies to make such things as engine controls larger in larger airplanes," he said, "even though they are still operated by the same size men."

► **Equipment Utilization**—Klein contended that airplane devices of established reliability obviate the need for spares and interchangeability. He expressed the opinion that "higher utilization of the equipment owned will be achieved by assembling most of the spares into aircraft and flying them. Spares in the stockroom represent only an expense; when they are flying, they are earning."

UP WHERE SAW MILLS HAVE TO BE FLOWN IN,

Bowser Engineered Airport Fueling Systems



Among the tougher aviation jobs of recent years was the installation of Northwest Airline's route from Minneapolis to Fairbanks, Alaska. It was largely through primitive country, some of it so isolated that air transport was called on for many abnormal jobs. For instance, a 24-bed hospital, complete with X-ray machines, was flown in. So was a saw mill. That gives you an idea of the country...and the installation problems.

Bowser Aviation Fueling Systems were chosen for two major reasons...

1. In airport operations, large and small and under all extremes of conditions, Bowser Sys-

tems have proved superior in the delivery of clean, dry, safe fuel.

2. Besides making an extensive standard line Bowser designs and builds systems to meet virtually every kind of special requirement, however unusual.

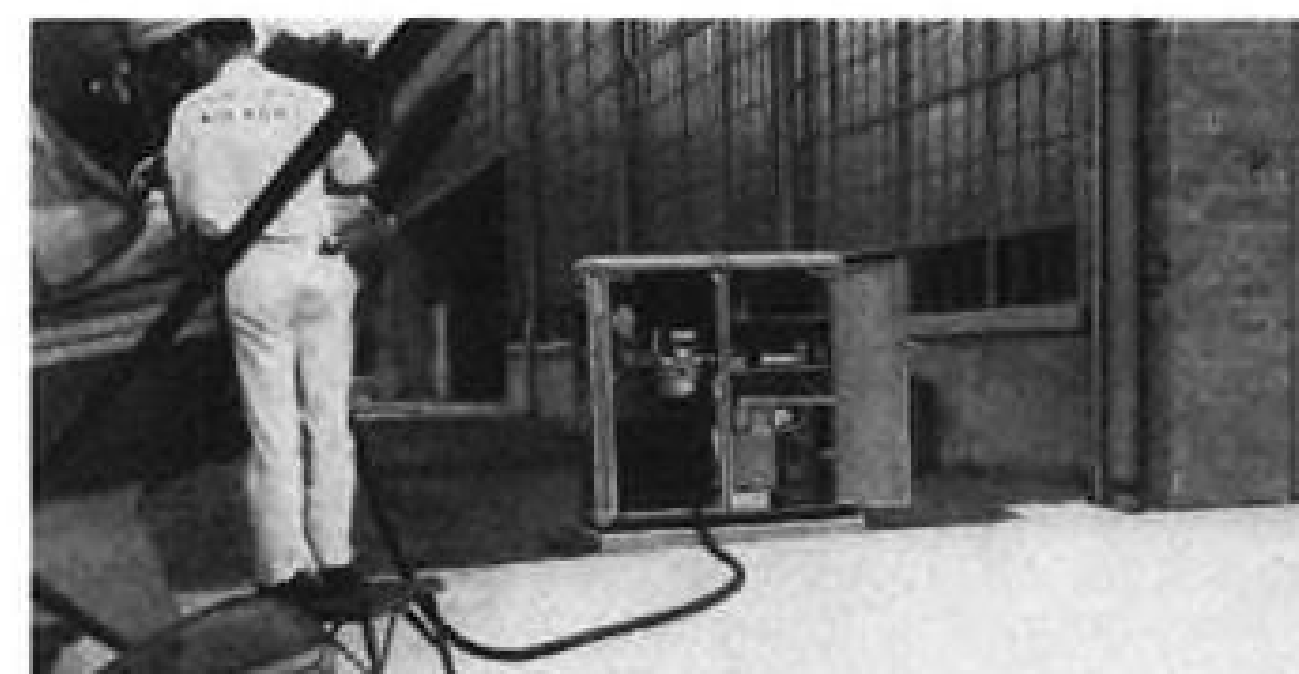
Bowser equipment includes both portable and fixed type systems, with capacities up to 4,000 g.p.m., marine terminal installations and defueling units.

This, too, is important—wherever you are, you're close to a complete Bowser service organization. BOWSER, INC., Fort Wayne 5, Ind.

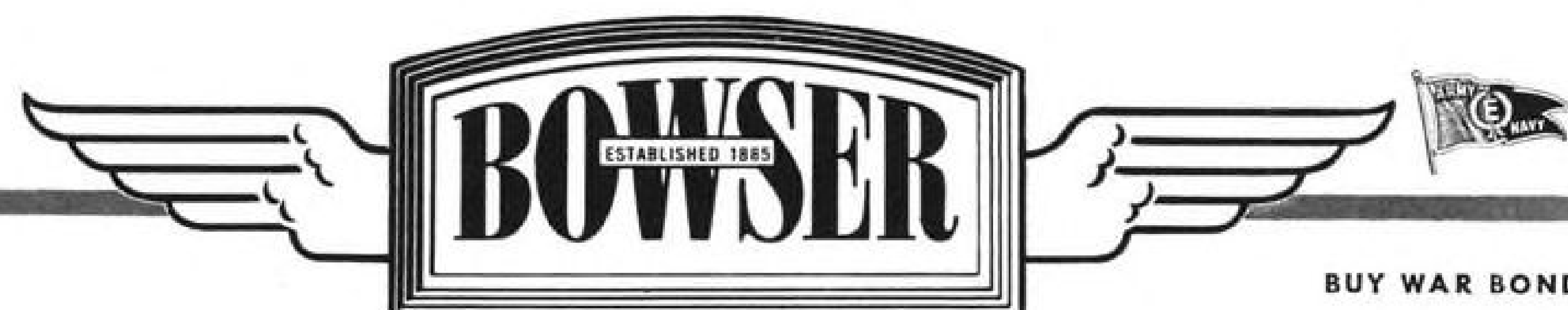
For Medium and Smaller Airports—BOWSER SERV-A-PLANE

Compact, entirely self-contained, durably built, easily installed, simple to operate...Serv-A-Plane is the right installation for medium and smaller airports, or for fueling smaller planes. Bowser's famous Xacto Meter assures accurate measurement and recording.

To operate Serv-A-Plane—Flip the switch to start the motor-operated pump...pull out the hose...dispense the amount desired...step on the pedal to operate the motor-driven hose rewind...stop the motor. That's all there is to it.



Serv-A-Plane serves clean, dry, safe fuel



Top Air Executives Join ACCA Board

Move seen as important step in revitalization of Chamber.

Top executives of the aircraft manufacturing industry were named to the Board of Governors of the Aeronautical Chamber of Commerce last week in what should be an important step in the reorganization of the industry's national trade association.

Revitalization of the Chamber is long overdue and the necessity for a strong, alert and vigorous trade association is now generally recognized within the industry itself, as is shown by the willingness of important executives to give their time and attention to the work of the organization.

► **Meet in Los Angeles**—Organization of the new board and the expected election of Donald Douglas as its head, will be accomplished next week in Los Angeles in connection with the meeting of the National Aircraft War Production Council, whose members also are members of the Chamber.

The aircraft industry, which has jumped from 44th to first place among the industries of the country, is one of the few major industries which does not have a unified post-war policy. True, many of the industry's top executives have expressed themselves on various phases of the future of aviation, but the industry as a whole has been sadly lacking in united action on problems vital to its existence and to the economy of the nation as a whole.

► **Outlook Brightens**—With leading executives ready to accept the responsibility which membership on the Chamber's board of governors entails, the situation takes on a brighter hue than it has had for more than a year, when the aircraft manufacturing industry—or a good part of it, set upon its own trade association and rendered it almost impotent and mute.

Three departments of the Chamber have done yeoman duty in carrying on their important work under great difficulties: the Technical Department, Traffic Department and the Economic Development Department. These departments and other Chamber activities can perform an important function for the industry if they get proper cooperation.

Those named in addition to

Douglas were: J. H. Kindelberger, North American; Robert E. Gross, Lockheed; Harry Woodhead, Consolidated Vultee; P. G. Johnson, Boeing; T. Claude Ryan, Ryan Aeronautical; Guy W. Vaughan, Curtiss-Wright; E. E. Wilson, United Aircraft; Glenn L. Martin, the Glenn L. Martin Co.; Victor Emanuel, Aviation Corp.; Alfred Marchev, Republic Aviation; Ernest R. Breech, Bendix; R. E. Gillmor, Sperry; Clayton J. Brukner, Waco, and J. Carlton Ward, Jr., Fairchild.

Plane Improvement Aim of U.S. Mission

Striking evidence of the progress of the aircraft production program is the nature of a recent United States mission to Britain, which concerned itself with technical subjects designed to improve American and British craft rather than to increase output of planes.

High ranking officers of the Army Air Forces and the Navy Bureau of Aeronautics, together with a civilian expert, met with their opposite numbers in Britain. The subjects considered were in sharp contrast to those which engaged a similar mission about a year ago, when ways and means were being sought to increase aircraft production.

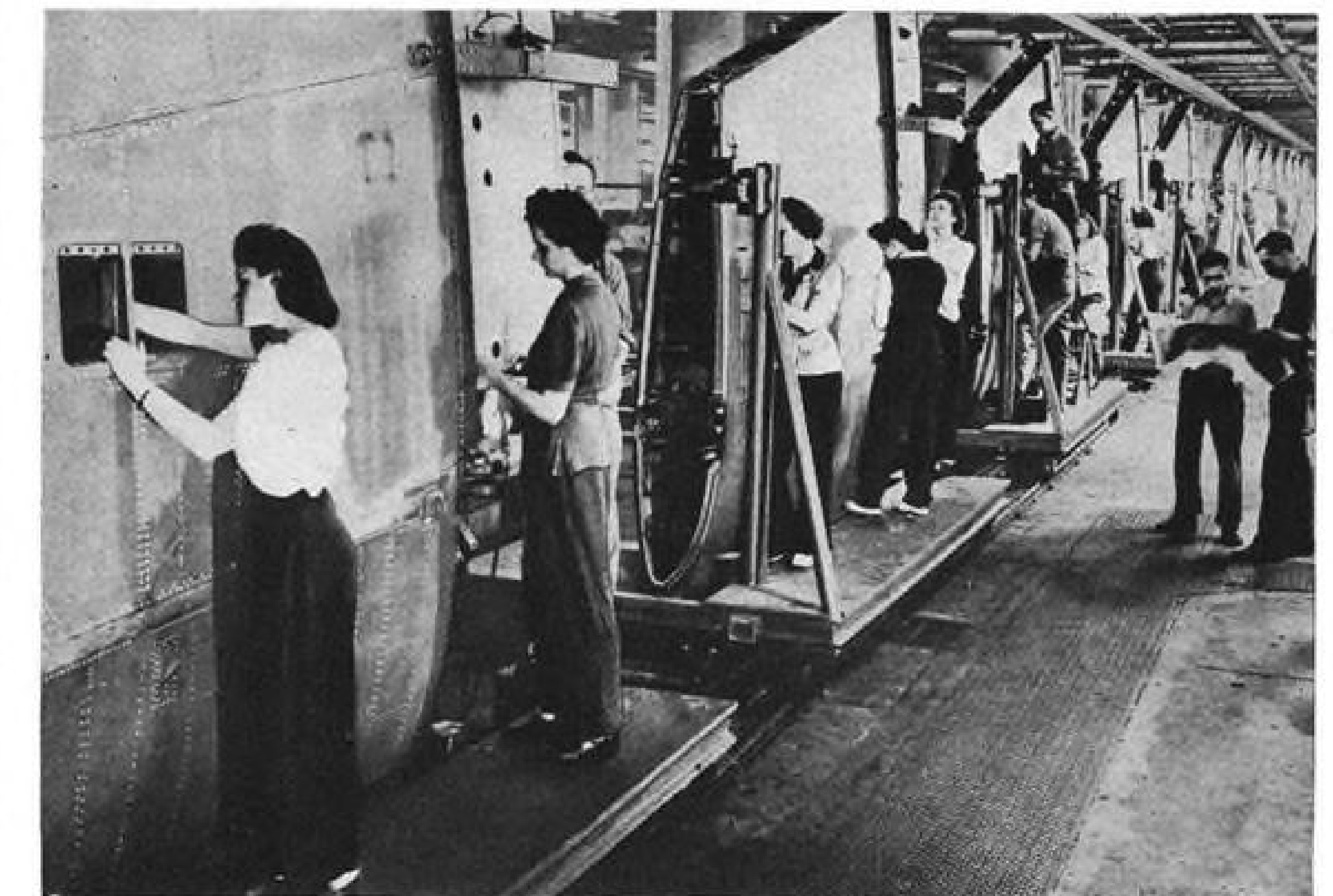
► **Quality Stressed**—The mission, recently returned, has made no public report on its activities and none is expected, because of the secret nature of the discussions.

T. P. Wright, director of the Aircraft Resources Control Office, played an important role in both missions. He is known to favor concentration at this time on quality as schedules are being met regularly and to believe that air power is the main factor in winning the war.

At the time of Munich, Germany had about two and one-half times as much aircraft production as England and France and at the time of Pearl Harbor, aircraft output of the United Nations was about level with that of the Axis.

► **Trebles Axis Output**—Best estimates now have it that United Nations' production is three to four times that of the Axis. In addition, our numerical superiority continues as enemy aircraft are destroyed in the air and their production facilities are crippled or destroyed by aerial bombardment.

Results of the recent mission undoubtedly will not show immediately, but the aircraft industry generally is expected to benefit, not only until hostilities have ceased but thereafter as a consequence of the meetings in Britain and inspection trips made by the United States mission.



CHRYSLER PLANT WORKERS 65 PERCENT WOMEN:

Women's natural skills, supplemented by company training schools, are turned here to mass production of center wing sections for dive bombers at a plant of DeSoto Division, Chrysler Corp., where more than 65 percent of the aircraft workers are women. Similarly, at other plants in the aircraft industry, the percentage of women is rising, particularly with the Selective Service emphasis on men under 26.

TRANSPORT

Soviets Watch London Talks As Own Parley with U. S. Opens

China agrees to join in bilateral conferences conducted by America but no official date has been set; Berle returns.

United States and Russian aviation conferees are scheduled to begin their exploratory consideration of mutual post-war air problems this week against a backdrop of only moderately successful talks in London between American and British officials.

Russian observers, it may be assumed, closely followed the London talks for whatever light they might throw on Anglo-American air policies. It is the view of some of the best-informed aviation circles here that Russia's attitude will be conditioned considerably by air arrangements Britain and America may make with respect to a variety of complex matters such as use of bases on international routes, disposition of surplus aircraft, subsidies, etc.

► **China to Join in Talks**—It was learned officially, meanwhile, that China has agreed to join in the bilateral talks the United States is conducting, but no date has been

established for this participation. Assistant Secretary of State Adolph Berle, Jr., returned from London last Wednesday after several days of conferences with Lord Beaverbrook which, as far as the public has been told, resulted only in the conclusion that the main points of difference between the two countries could be composed at an international conference.

► **Beaverbrook Statement**—This was the gist of a statement, issued by Beaverbrook's office, saying there was "sufficient agreement between them to justify the expectation that final dispositions can be reached at an international conference." It appeared, as forecast last week, that most of the delicate problems confronting the two countries must await consideration on a higher official level.

The conferees also announced that they had agreed "that international control should govern a considerable field of technical mat-

Agree on 2 Points

The Berle-Beaverbrook exploratory conference on post-war aviation is reported to have reached accord on two points of vital interest.

These are that each nation shall decide for itself whether one company or competing airlines shall carry its flag in international aviation after the war, and determine its own schedules depending on economic considerations.

ters." These matters were not specified, but in view of the fact that the United States is far less avid about international controls over aviation than is Britain, they probably deal only with safety standards, weather reporting and similar details.

► **Warner Stays Over**—Civil Aeronautics Board Vice-Chairman Edward Warner remained in London an extra day or two, presumably to canvass further the technical field; he was expected in Washington as this issue went to press.

Berle, on the basis of reports from London, both private and public, apparently achieved the announced purpose of his visit. That and no more. He held exploratory talks and discussed agenda for an international conference. Nothing, apparently, was settled.

► **Explanation**—Aviation observers have offered several explanations



NORWEGIAN AIR OFFICIALS VISIT PCA:

Photo shows leading aviation figures of the Norwegian Government who visited the hangars and shops of Pennsylvania-Central Airlines. Left to right are Comdr. K. Ostby, air attache of the Norwegian embassy; Knut Somme, member of the Royal Norway

Air Transport; PCA president and host, C. Bedell Monro; PCA vice president "Slim" Carmichael; Advokat Annaeus Schjodt, chairman of the board of the Royal Norway Air Transport; Capt. Morten Krog, RCAF, assistant air attaché; Ralph Manchester, PCA.

for the seemingly unfavorable outcome of the London talks. They point first and foremost to the attitude of Congress, which is not too well defined as yet, but which nevertheless appears to diverge considerably from the views held by Berle and certainly would never support the degree of international control proposed by Britain. It is pointed out also that Berle had very restricted authority, was confined mostly to expressing negatives, and could make no statements even bordering on commitments. A report was current in diplomatic circles at the week-end that the British were "sorely disappointed" by the outcome of the conference, believing that Berle and Beaverbrook did not get along at all well.

The Washington atmosphere, meantime, is charged with speculation about the Russian-American talks. No one could be found who professes to have even a remote idea of the Soviet's ambitions, and for that reason all manner of guesswork is being done.

► **Soviet Attitude**—Russia's place in post-war international aviation apparently will be determined by her decision regarding participation in a general United Nations organization and the development of her domestic economy.

CAB Chairman L. Welch Pogue, technical adviser to Joseph C. Grew, head of the U. S. delegation for the Russian talks, believes Russia and this country may develop a considerable commercial rela-

tionship which would stimulate the development of air services.

Other sources suggest that Russia and America will not be very far apart on aviation matters unless Britain and America form too close an association with respect to international air commerce, which thus far appears unlikely.

► **Speculation**—Still others say Russia may intend to develop her internal aviation and stay out of the international field for some years to come. And some point out that if Russia intends to have a sphere of influence in eastern Europe, she surely will exploit that region's air traffic possibilities.

These brief bits of speculation are sufficient to demonstrate that U. S. officialdom goes into talks with Russia without the slightest idea of what the Soviets desire.

Officials say the same points will be discussed with Russia that were discussed in Britain.

New Air Route

Use of a new route from Great Britain to Edmonton, Alberta, by the RAF Atlantic Ferry Command was disclosed early this month when one of the Command's two-engine planes landed at Edmonton just 24 hours after it left Britain.

Later, two other RAF Ferry Command planes took off and flew the same route, details of which were not revealed, back to Britain. Edmonton is the southern starting point of the Alaska Airway and highway.

Major Lines Assail CAB Feeder Report

C & S opposes move to bar big companies from cities under 25,000.

Views of the major airlines, as expressed by their counsel in the local-feeder-pickup oral arguments before the Civil Aeronautics Board, differed sharply last week with the report of Examiners Madden and Beitel. The Board now has the case under advisement.

Opinion of examiners that major lines should be barred from cities of less than 25,000 population was attacked by counsel for Chicago and Southern, who said such cities could be served more adequately as stops on a larger system than by local service. He said his line has applications to serve some cities of this class already on file.

► **TWA Clarifies Stand**—Counsel for TWA took issue with the claim of the Greyhound Corp. that it intended only local service in its numerous helicopter applications, contending that the real intention of the company was to establish an entering wedge in long haul air transport.

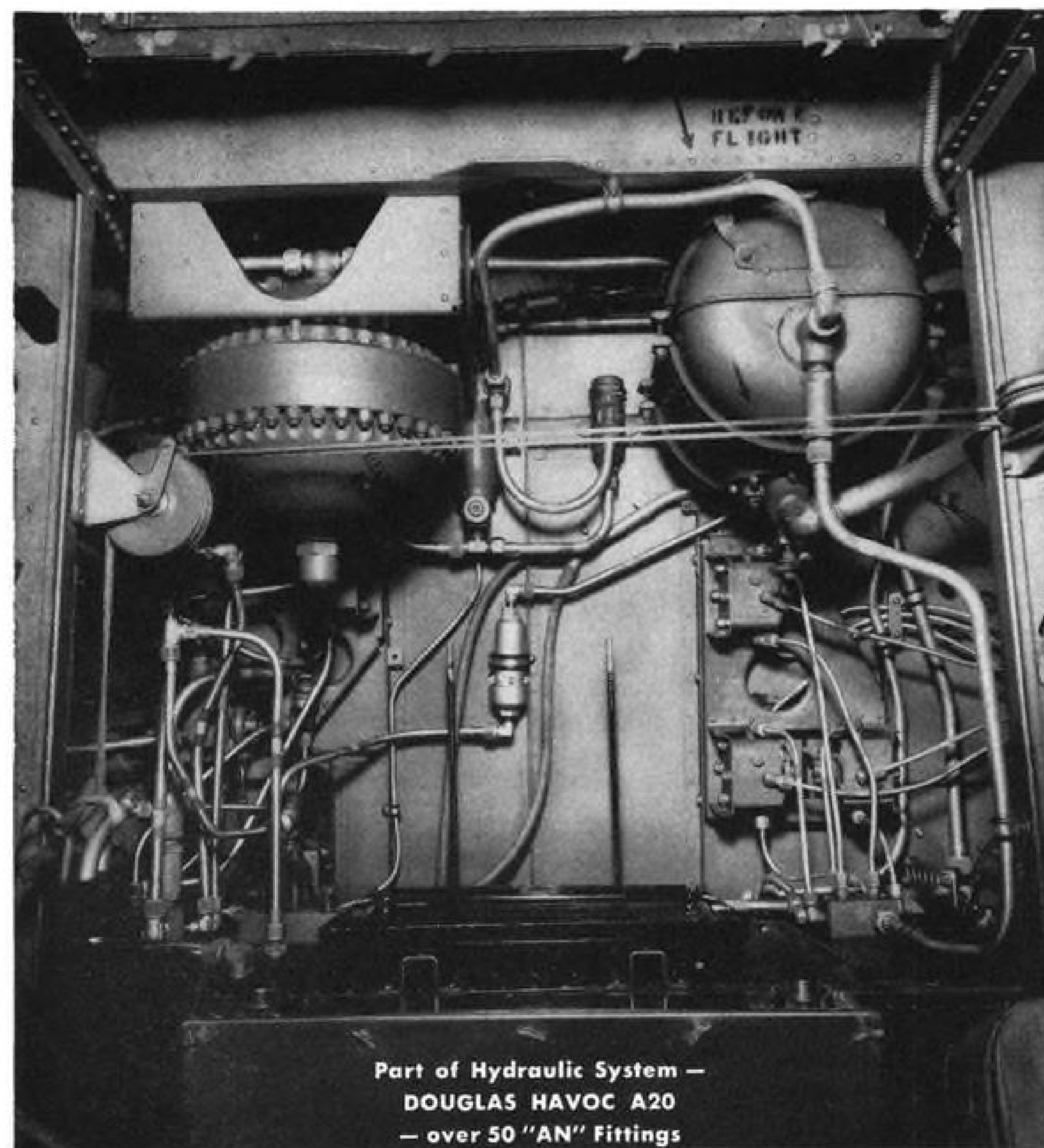
Much of the argument revolved about the issue of surface carriers as air operators, many who appeared differing strongly with the Board's interpretation of the Civil Aeronautics Act which prevents a surface carriers from entering the air transport picture.



PILOT'S COMPARTMENT AND ENGINEER'S CONTROL BOARD OF THE MARS:

Photos taken on the flight deck of the Martin Mars, Navy's 70-ton flying boat and holder of numerous cargo and distance records, show (left) closeup of

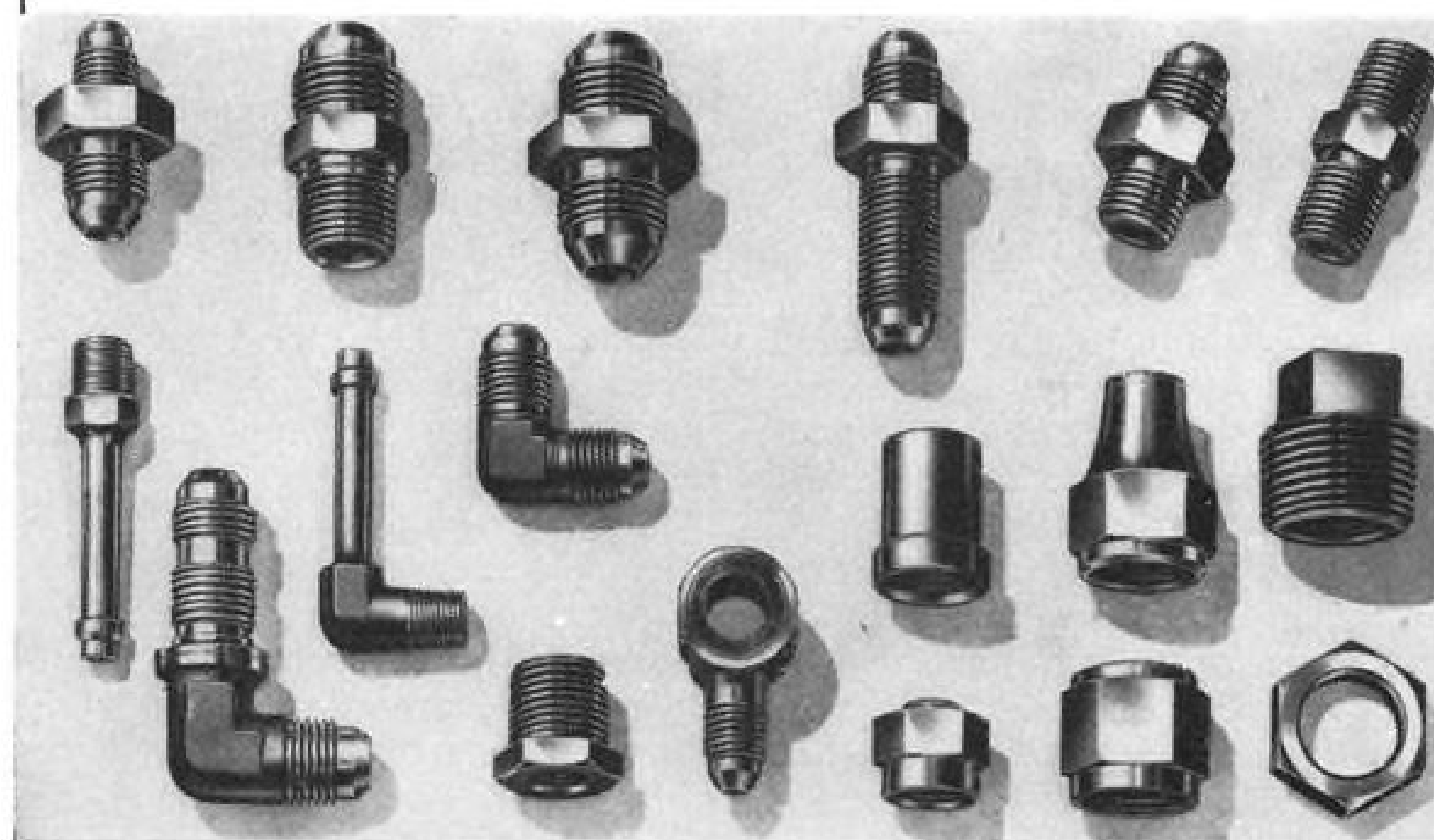
the flight engineer's control board and (right) general view looking forward toward the pilot's spacious compartment.



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CAB Warns Workers Of Safety Rules

Reminds inspectors on aircraft of regulations; four suspended.

The Safety Bureau of the Civil Aeronautics Board has issued a warning to all certificated mechanics regarding violations of the safety regulations governing the periodic inspection reports of repairs and ground work done on aircraft.

Noting an increase in the number of violations of this rule since Jan. 1, the bureau pointed out that the mechanic's certificate issued by the CAA "is both a license and a diploma which certifies to the competency and reliability of the holder."

► **Four Suspended**—Certificates of four mechanics have already been suspended, and six more cases are pending. The mechanics involved had signed inspection reports without having performed the work themselves, or without personally inspecting the repairs.

Jesse W. Lankford, director of the Safety Bureau, said the Board has no intention of acting as a police agency, but that the warning was issued to discourage any further laxities. He attributed the violations to pressure of work and shortage of certificated personnel.

Navy Lauds CAA For Nats Radio Aid

Praise for the role played by the Civil Aeronautics Administration's radio stations in aiding operations of the Naval Air Transport Service in the Pacific area was expressed by Rear Admiral Joseph R. Redman, director of Naval Communications, in a letter to Charles I. Stanton, CAA administrator. In the Pacific, as in many other areas, the CAA radio stations assist and augment the Navy's radio facilities for handling NATS radio traffic.

► **Cooperation**—Admiral Redman said the equipment and operations of the CAA stations was of the highest quality. He also remarked on the willingness of CAA radio personnel to offer extra services whenever required.

CAA has played an important part in setting up and maintaining a part of the communications network for both the Naval Air Transport Service and the Army's Air Transport Command.

Super-Service

Good connections and a fast over-ocean flight recently permitted a letter posted in Britain by a Canadian serviceman to be delivered to his family at Beaverton, Ontario, the same day.

The RCAF Transport Command said the man, a Canadian airman, got his letter aboard the Transport Command bomber just as it was leaving for Canada. A five-hour time lag and a close connection with a Toronto-bound express from Montreal on arrival of the bomber there did the rest.

Two 9th Air Force Command Changes

Two changes in command in the Ninth Air Force based in England include appointment of Maj. Gen. Henry J. F. Miller as commander of the Ninth Air Force Service Command, and appointment of Brig. Gen. Samuel E. Anderson to be commander of the Bomber Command.

General Miller formerly commanded the Eighth Air Force Service Command, being succeeded in January by Col. Donald R. Montgomery. General Anderson has served in the Pacific and received the DFC for organizing and directing medium level air operations.

C & S Asks New Airmail Rate

Chicago and Southern Airlines has filed with the Civil Aeronautics Board a petition requesting Board revision of its mail rate. The current rate of 0.3 mill per pound mile, fixed by Board order last December, is considered too low.

Renegotiation of contracts unfavorable to the line, increased operating costs despite price controls, and the inability to increase service due to the non-availability of new aircraft were offered as factors adversely affecting the line, which "during certain recent months has actually conducted its operations at a loss."

These factors were not operative during the base period from which the present rate was determined, and the airline desires a hearing far enough in the future to take full cognizance of their effects.

Formation of New North Atlantic Airline Reported Under Way

"Important interests" in U. S., Britain, Canada and Newfoundland expected to join forces in projected air service.

A new factor has been thrown into the international air transport picture with the announcement that "important interests" in the United States, Canada and Great Britain would "join with a Newfoundland group in the establishment and operation of North Atlantic air services." United States aviation and official circles plainly were puzzled, and the implications of the project are many.

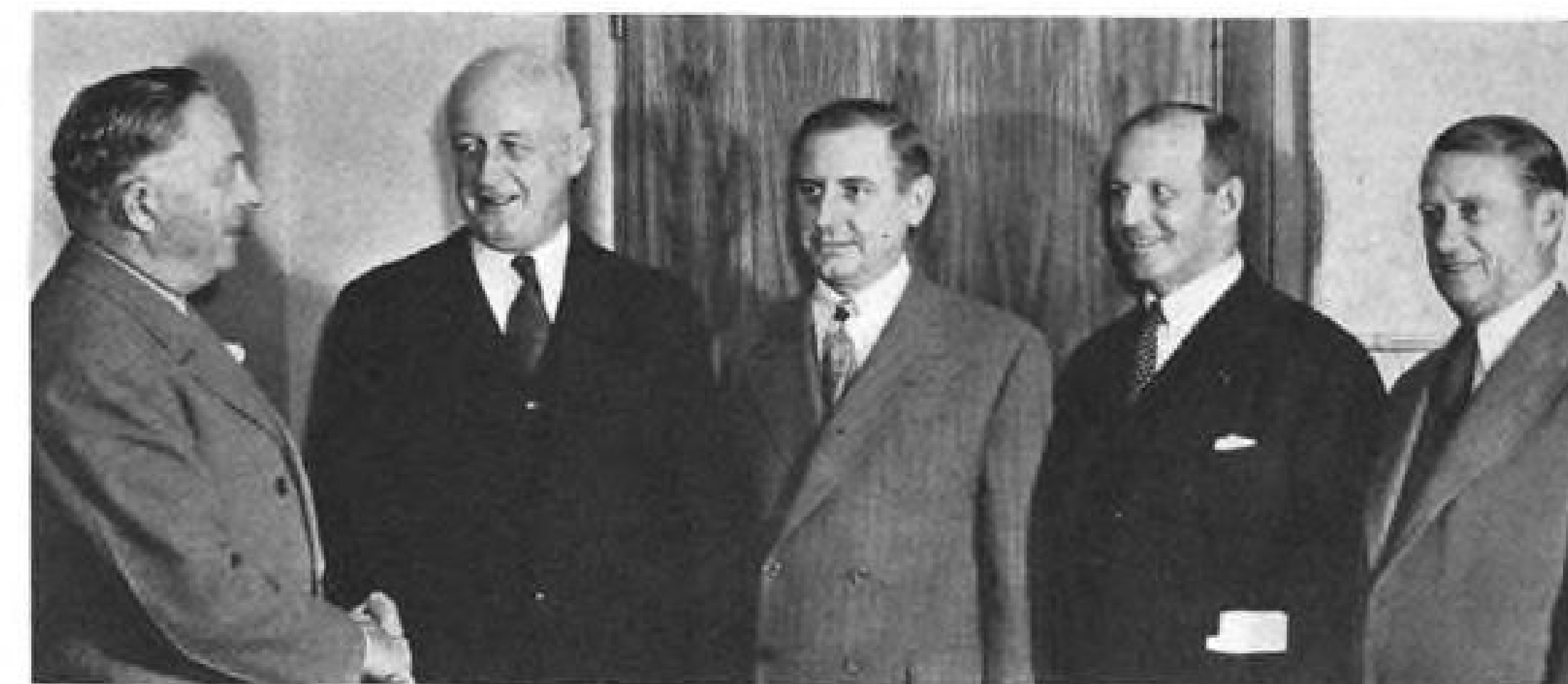
Newfoundland is the key to North Atlantic operations over the great circle route. Without it, trans-Atlantic operations, except via Bermuda and the Azores or the South Atlantic, would be virtually impossible for the United States. Labrador, which conceivably could be used on an alternate route, is a dependency of Newfoundland and the announcement of organization of the new company made it plain that the company would demand "reciprocal rights in those countries which may be accorded similar facilities in Newfoundland and Labrador."

► **Key Territories**—The company illustrates the vital importance of key territories in international airline operation and the uses to which they can be put. The 300,000 inhabitants scattered over the 42,000 square miles of Newfound-

land and the uninviting 110,000 square miles of Labrador would hardly justify an international airline, certainly not on a scope demanding the participation of Smith, Barney & Co., New York investment bankers long involved in the financing of American and other air transport companies, and Greenshields and Co., Inc., of Montreal, one of the largest investment houses in Canada, with British interests that are not identified in the first announcement of the undertaking.

It is the first project of its kind, and presents so many possibilities that the full background probably will not emerge for some time. Operating under Newfoundland laws, the company would have wide latitude. And the announcement says "the company has under consideration methods whereby other countries may have an opportunity of participating in the organization. This would tend to strengthen it politically as regards the international character of its ownership and operations."

► **Newfoundland Status**—The governmental structure in Newfoundland makes the picture even more confusing, since the North Atlantic island, once a dominion, now is governed by what is in effect a



BRANIFF WELCOMES NEW DIRECTORS:

Braniff Airways has four new directors, being welcomed here at the president's dinner after this month's annual stockholders meeting in Dallas by T. E. Braniff (left), president and director. Left to right are Roger J. Whiteford, Washington attorney for Braniff; George A. Butler, its legal representative at Houston; Ferdinand Eberstadt, whose New York firm has handled both of Braniff's public stock issues; and Fred Jones, Oklahoma City automobile and oil man. Addition of these men expands Braniff's board from five to nine.

trusteeship. A governor appointed by King George VI, three English commissioners and three Newfoundland commissioners comprise the ruling body. The dominion status of the island was suspended in 1935 in what virtually amounted to a bankruptcy action after almost 80 years as a dominion.

Vice Admiral Sir Humphrey Walwyn is the present governor. The Commissioner for Public Works and Public Utilities, under whose aegis the projected company would come, is a British civil servant of some 40 years' service and he is expected to retire soon, possibly next month. He is Sir Wilfred W. Woods. The appointment of the new commissioner, who will be an Englishman, will therefore be of great significance in the international air transport picture and possibly afford a clue to the attitude the British government is taking toward the project. All foreign relations of the "dominion in suspended status" are handled through the dominions

office in London, which means that the demands of the company for reciprocal rights would be handled through English channels.

► **Central Figure**—The key figure of the company in Newfoundland is V. S. Bennett, of St. John's, identified as a business man who served as an RAF captain in the world war. Bennett is Newfoundland representative of Shell Oil Co. and a local director of the Anglo-Newfoundland Development Co., a Rothermere enterprise.

The company already has been incorporated in Newfoundland in the name of Air Transport, Ltd. This name, the announcement said, will be changed to North Atlantic Airways.

► **Domestic Services**—Surveys also are being made, it was said, for the provision of internal domestic services "preliminary to passing the resulting recommendations on the Newfoundland government for such action as that government may consider necessary." The Newfoundland government would

be invited to have a representative on the board of directors, and Newfoundland capital interests would be offered participation "on the same basis as those of the other countries.

"Mr. Bennett," said the announcement, "expressed a belief that only by a strong company with international support of this kind would Newfoundland be able to enjoy the full economic benefits to which it is entitled by virtue of its geographical position on the important world air routes.

► **Connections**—"Such a project," he said, "will naturally include carefully worked out arrangements with other factors in the transportation field, for establishing airline connections in all the countries concerned."

State Department sources professed to be in the dark about the project and said their sole information was derived from the news stories announcing formation of the international company.

Michigan Maps State Port Program

Michigan Board of Aeronautics has announced a post-war airport and construction and employment program. Recommended by the Advisory Committee on Aviation to the State Planning Commission, the program envisions ultimate expenditure of \$72,000,000 for 299 existing and proposed airports.

Indicating Michigan will not wait to ascertain whether the Federal Government will match state expenditures, and backed by a healthy state treasury surplus, the report summarizing the program mentioned Federal aid only inferentially. Thomas E. Walsh, acting Board director, stated that "any federal assistance, in addition, would permit a more rounded plan and development of fields more consistent with the early post-war air transportation requirements."

► **Matches Funds**—The state would match funds, according to the plan, for airport grading, surfacing, drainage and lighting with municipalities to the amount of \$50,800,000. In addition to half this sum, the municipalities would be responsible for \$11,315,600 site costs and \$10,357,500 building and miscellaneous costs.

A recommendation that a special session of the Michigan legislature earmark \$3,000,000 to begin proc-

essing county and municipal airport planning and construction was withdrawn in deference to the governor's request that no items not on his agenda be brought up before the regular 1944 session.

W. A. Patterson Feted on 15th Year

Officers of United Air Lines re-elected at annual meeting.

William A. Patterson, president of United Air Lines, this month starts his 11th year as president of United Air Lines. He and other officers and directors of the company were re-elected last week at the annual stockholders meeting and a subsequent meeting of the Board.

To mark completion of his tenth year as president and his fifteenth year with the company, UAL employees presented Patterson with a silver plaque with the names of 677 who have been associated with him in United.

Officers re-elected are Patterson; J. A. Herlihy, vice-president, operations; Harold Crary, vice-president, traffic; C. C. Thompson, vice-president, public relations; S. V. Hal and R. L. Dobie, regional vice-presidents, operations; N. B. Haley, treasurer; P. M. Wilcox, vice-president, administrative; John W. Newey, vice-president, finance; S. P. Martin, secretary; Curtiss



Patterson

Barkes, comptroller, and C. H. Blanchard, auditor.

Directors re-elected were Martin C. Ansorge, Justin W. Dart, Paul M. Godehn, Herlihy, John J. Mitchell, Patterson, Gov. Sumner Sewall, Paul G. Hoffman and Gardner Cowles, Jr.

18 YEARS AGO THIS MONTH



Little man, you had a busy day...

You couldn't see over the crowd... and you didn't quite understand what the excitement was all about. But, gosh, some of the grown-ups towering around you didn't either.

The big shirt-sleeved man they called "Pop" Hanshue did. So did the tall fellow in flying suit and goggles named Kelly. They were starting an airline... Western Air Express... to fly the mail between Los Angeles and Salt Lake City... and someday passengers!

Sure, "Pop" Hanshue knew what it meant. For it was only two years later (you hadn't even started to school yet) when he was operating big 3-engined planes between Los Angeles and San Francisco, with 12 soft chairs in a cabin big enough to walk around inside... meals in the sky... and limousines to the airport. They called this the "Million Dollar Airway."

Today they're all "million dollar airways," thanks to men in the aviation industry everlastingly figuring how to build better planes to fly faster and carry bigger payloads. Right now these men are helping to win a war but after that you'll see wonderful new planes, offering still faster service at lower costs.

And you'll see, too, that the men who run Western Air Lines *never* stop figuring better and cheaper ways to carry passengers and cargo. They'll always be PIONEERS.

General Traffic Offices: 510 West 6th Street, Los Angeles 14, California

Western Air Lines
America's Pioneer Airline



NORTHEAST'S CARGO BASE MOVED:

Northeast's cargo base for its military trans-Atlantic operation was moved to Logan International Airport at Boston from Presque Isle, Maine, this month by Army. On hand for the first arrival, a Douglas C-47, were Paul F. Collins, president Northeast (center), and M. H. Anderson, vice-president in charge of operations (right). Collins is greeting Capt. A. R. Chaves of Arlington, Mass. In the doorway (front) are Navigator Dan McCullough of New York and Fred A. Weyhrach of Winthrop, Mass., supervisor of cargo operations, and (rear) Radio Officer E. R. Hardy of Ashland, Mass., and Co-pilot Richard B. Hubbell of Shelton, Conn.

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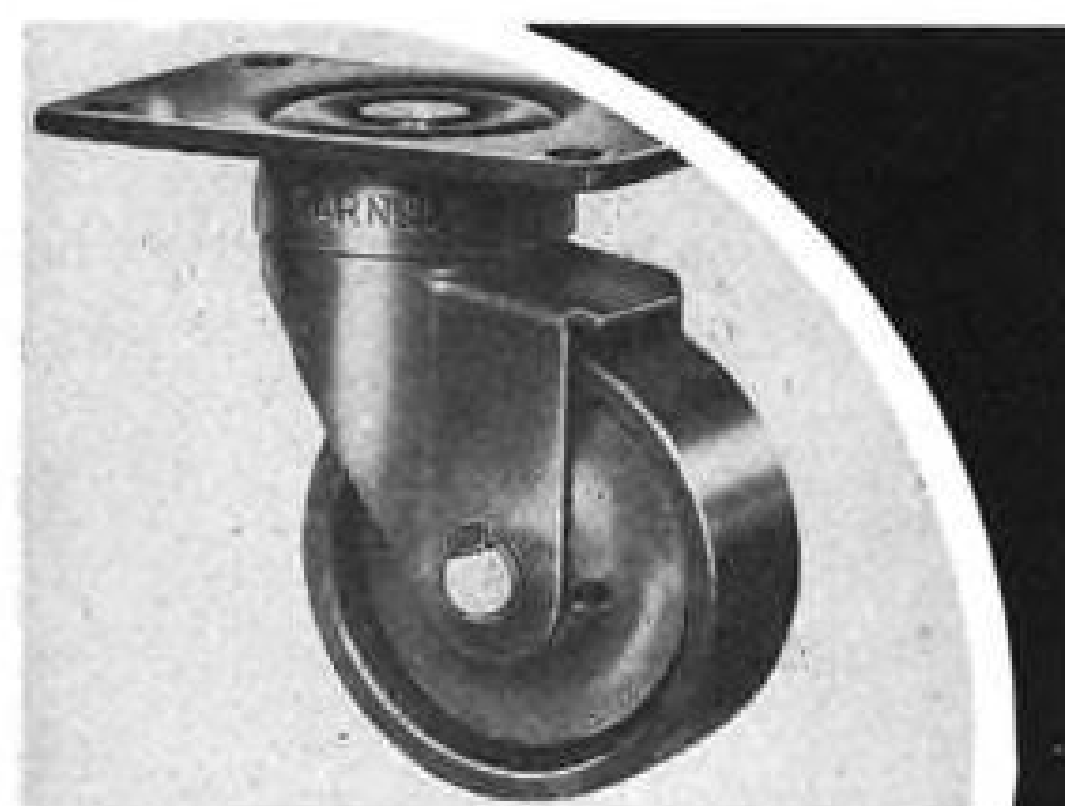


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Air Giants Unlikely, Says Douglas Aide

A spokesman for Douglas Aircraft Co., whose DC-3's today fly most of the nation's commercial runs, says post-war transport planes will not be so large, so fast, nor so fantastic as many people expect. But they will have pressurized cabins and will cruise at better than 250 mph "above the weather" at 25,000 feet.

By 1950, predicts Geoffrey F. Morgan, head of Douglas' "speakers bureau," airplanes carrying ten tons of cargo and 70 to 100 passengers will be commonplace. Longest non-stop trips over land will be 1,000 miles.

► **Air Vacations Abroad**—Lacking the safeguards and skill of commercial pilots, private flyers will not become so common as automobile drivers, Morgan believes, but he expects that thousands who never dreamed it possible will be able to fly abroad for vacations.

Morgan made his forecasts in a talk before Pittsburgh's Junior Chamber of Commerce. They were of more than usual interest since a short time before drawings and descriptive matter had appeared on the proposed Douglas DC-7, a post-war air vehicle designed to carry 86 passengers and 20,000 pounds of cargo, or 150 passengers and a moderate amount of baggage.

► **Present Types to Predominate**—DC-3's, DC-4's and C-46's will predominate on the domestic airlines for one to three years after armistice, he says. A fleet of fewer than 1,000 pre-war type planes should be able to handle post-war passenger traffic for the next four or five years. Huge planes for several hundred passengers are technically feasible but the optimum size will depend on economics. Design will be conventional for five or ten years. Delivery of goods by parachute might prove practical.

Military air transport commands have given tremendous impetus to world-wide commercial operations. Mr. Johnston appears to favor competition rather than the "chosen instrument" policy. He says the Martin Mars is probably the most efficient cargo plane built so far. No real volume of Atlantic passenger traffic can develop until present fares are cut in half. Chances of such a cut in five years are not good. Atlantic fleet requirement might be fifty 50-passenger planes at the end of five

years and forty 100-passenger planes at ten years. Part of this fleet probably will be flown by foreign operators.

► **Post-War AAF**—Mr. Johnston makes an off-the-cuff guess that Army may have a post-war air force of 18,000 planes, Navy 10,000. Replacements would total 5,600 per year, or one-twentieth of the wartime peak. But war surplus would fill much of this need for five years or so after peace. The effect of the surplus pool is shown in a chart.

In the aggregate, the expectation is for a total volume of business for the aircraft industry of about one-quarter billion dollars for the second post-war year; possibly one to one-and-one-quarter billion by the fifth year, if all goes well. Bulk of this business must come from U. S. Army and Navy. How much of the post-war business will be taken over by automotive people is unpredictable.

Contrasted with wartime peaks, the immediate post-war picture is indeed black, but those who remember the state of affairs in industry in the pre-war decade, will find that real progress is being made and the outlook for the future is most encouraging.

Application Filed For Seafood Airline

New Bedford, Mass., firm plans service throughout New England and Eastern states.

Transportation of seafood products by air is envisaged in an application filed with the Civil Aeronautics Board by Fish Airlines Corp., of New Bedford, Mass. The stockholders of the air carrier corporation are also stockholders in a motor carrier company engaged in transportation of property and seafood from the New England area to various points in the Eastern States.

The company, which has no aviation equipment at present, has asked for a certificate to cover charter and unscheduled service from the Boston area as far south as Miami and west to Milwaukee.

► **School Asks Certificate**—The Ryan School of Aeronautics, San Diego, Calif., has asked a permanent or temporary certificate to operate a feeder and pickup service in California and Arizona. The applicant at present is training flyers in the War Training Service.

Bouquets for CAB

Executives of two big airlines have had commendatory words recently for the Civil Aeronautics Board.

Ralph S. Damon, vice-president and general manager of American Airlines, spoke of the Board's "sound appreciation" of air transportation economics and "realistic approach to the problem of preventing in 1949 the spectacle of the carcasses of defunct airline companies strewn across the country resulting from unsound promotion now." It's a spectacle, Damon said, that "could easily take place, except for the wise course" set by CAB.

In another New York talk, William A. Patterson, president of United Air Lines, said "one saving grace in the air transport business is that we have a Civil Aeronautics Act and that we have a regulatory body to prevent us from destroying ourselves. We have a good law, and we have honest, capable and sincere men on the Civil Aeronautics Board attempting to administer that law."

The scheduled service proposed would handle mail, passengers and property in a series of feeder routes. Los Angeles, San Diego, San Francisco, Calif., and Yuma, Ariz., are the chief terminal points requested in the application.

► **St. Louis Firm Files**—Another Local-Feeder-Pickup application was filed by the Kratz Corp. of St. Louis, an airport operating corporation. The application requests authorization to transport mail, passengers and property on a scheduled service over numerous routes fanning out from St. Louis and reaching into Indiana, Iowa, and Illinois.

A bus company, the Service Stages, Inc., of Atlanta, Ga., proposes to augment its motor carrier operations with a helicopter system. They have filed with CAB for a certificate of convenience and necessity which would permit coordination of the two services. The scheduled service proposed would carry mail, passengers, property and express on routes from Atlanta, Ga., to Gadsden and Anniston, Ala.

► **Colorado Circle Service**—Mountain States Aviation, Inc., of Denver, has filed for a certificate to

authorize a mail and property drop and pickup service in Colorado on a circle route out of Denver.

The applicant is an operator of airports and airport facilities at Denver and Boulder, Colo.

Damon Urges Cargo Trade Development

AA official tells Security Analyst of airlines' need for passenger and freight service expansion to offset decline in mail revenues.

The air transport industry after the war must place increasing reliance on expansion of its passenger and express services to counteract the downward trend in unit return on airmail, says Ralph S. Damon, vice-president and general manager of American Airlines.

Singling out the ability of the industry to develop profit on invested capital as one of many factors in its future, he told the Society of Security Analysts at New York that the possibility of further reduction in fares hinges on many things that cannot now be foretold. Among these are living costs, taxes, and ultimate costs of new equipment. Meanwhile, the development of air freight potential business depends to high degree on efficiency of types of equipment which will be available for post-war use.

► **Military Transport**—The work of the Army Transport Command and Naval Air Transport Service, while it has demonstrated feasibility of carriage of heavy cargo, is no criterion for the airlines, in Damon's opinion, because cost was not an important factor.

Currently, he added, air cargo development is almost out of the question because of lack of planes. Here he took occasion to decry lack of information from the Administration as to return of the planes given up by the airlines under Presidential order.

He found the omission hard to understand in view of high production of transport planes. "Diversification of factory deliveries of this type of plane for only one day," Damon said, "would do much to help speed the war work of the domestic airlines in the large priority loads they carry."

► **Speaks for All Airlines**—Presumably this criticism was made in behalf of all the airlines, since American's share of planes already

returned, including replacements, has been higher than that of any other individual line.

He made a few guesses on likely occurrences in the first five years after the war. Among them:

► Airline service to 1,000 communities in the United States, against 270 in 1941.

► Flying speeds between five and six miles a minute on the longer hauls.

► Expansion of the 44,000 route-miles of airways of 1941 to something like 100,000 route miles.

► Two- or three-fold increase in the number of flights a day over each mile of route, and a five-times expansion in service.

► Larger planes, seating up to 100 passengers. These he expects as a sequel to such planes as the Douglas DC-4, seating between 40 and 50, which he anticipates "immediately after the war," in addition to the present DC-3 21-passenger plane types.

In a reference to surface carriers, Damon said that whatever business air transportation may



PARATROOPER'S VEST:

A new type of vest for Army flyers, which carries a .45 caliber pistol, ammunition, emergency rations and other equipment to enable a parachuting flyer to live off the land until he can return to his base, is worn above by Lieut. Col. E. V. Stewart, Wright Field, Colo. Stewart has been making jumps since 1920, has 438 jumps on his record and was instructor at Fort Benning, paratrooper school, before assignment to Wright Field, parachute branch.

take from them will be offset, perhaps many fold, by other traffic from a broadened market and increased commodity interchange. He said he had challenged a number of railroad executives to prove statements that they are losing traffic to the airlines which is not fully regained otherwise through a quickening, due to the airlines, of all industry.

Boston Expansion

Northeast Airlines reports it will add to its facilities at Boston by taking over a hangar formerly used by the military. The addition will follow the moving of its Atlantic Division terminal from Presque Isle, Maine, to Logan Airport at East Boston.

Paul F. Collins, president, said the change in base location would consolidate Northeast's trans-Atlantic operation for the Army with its commercial operation. He predicted that heavier cargo loads would be leaving the terminal "as runway lengths increase under the present airport expansion program."

Air Festival

Las Vegas, Nev., will hold a three-day civic "hospitality" fiesta beginning Apr. 15. L. Welch Pogue, Civil Aeronautics Board chairman, will be the principal speaker at the "Aviada," during the first western display of CAB's "Airways To Peace" exhibit.

The Aviada, sponsored by the Las Vegas Junior Chamber of Commerce, will commemorate the city's 18th year of airmail service.

Mackenzie River Route Details Told

Airline system involved in Canada's decision for Dominion ownership of ports and airways built jointly with U. S.

Details of the Mackenzie River air route to the Arctic came to light with Canada's decision to take full ownership of all airports and airways built jointly with the United States as wartime measures.

Flight strips along this route to the oil development at Norman Wells, as well as those along the Alaska Highway and improvements on the Edmonton-Alaska airway, are included in the \$54,000,000 deal announced by the Canadian government.

Used by Bush Pilots—The Mackenzie River route has been used by Canadian bush pilots since about 1928, but the Canol project for developing oil wells on the Mackenzie River just south of the Arctic Circle required increased facilities. Canadians had been flying with skis in winter, floats in summer, but Canol project freight required year-round operations without the risk of a halt in seasonal freezing and ice break-up periods.

An official Canadian report says twin-engine transport aircraft were decided on, and landing facilities were provided at McMurray (southern terminus and end of steel), Embarras, Fort Smith on the Slave River, Fort Resolution and Hay River on Great Slave Lake, and on the Mackenzie River at Fort Providence, Mills Lake, Fort Simpson, Wrigley, Norman Wells and Camp Canol.

Cutoff Winter Route—A cutoff

winter route goes north from Peace River, Alberta, via Metis and Upper Hay River Post to Mills Lake on the Mackenzie. Except for fields at McMurray and Peace River, fields and landing strips have been built since May, 1942, by the United States personnel stationed at each location and the Royal Canadian Signal Corps supplying weather information.

Other subjects on the agenda of the conference call for employment of at least 25,000 RCAF personnel, use of Anson and Cessna twin-engine trainers as privately owned planes and as eight-place transports for small airlines between Canadian communities.

Gains in Pacific Extend NATS Lines

Each time the Japs lose another island, the Naval Air Transport Service's Pacific Division, adds another cargo and passenger stop, and airplanes operating in this division are now flying 320,000 miles a week, equivalent to nearly ten trips a day between San Francisco and Tokyo, where the Navy airline hopes to make a terminus.

Present mileage of the NATS Pacific Division is a 450 percent increase over a year ago and almost all these miles are flown as part of the normal day-and-night operating schedules which uses the timetable methods of commercial airlines.

The distances involved in the Pacific are so great that the NATS refers to a 1,000-mile hop as a "shuttle trip."

Main Cargo is Freight—More than 5,500 passengers are carried monthly by the division, although

the principal cargo is freight. In December, the service was operating more than 3,450,000 ton-miles a month.

SHORTLINES

►The municipally owned Toronto Transportation Commission and its subsidiary Gray Coach Lines with motor bus routes through Ontario, have applied to the Canadian government for permission to use helicopters and other forms of aircraft for an air service immediately after the war. Coach line terminals would become air fields and at least one trip by air would be made each day over routes now served by coach in Ontario and connecting at the border at Niagara Falls. Wheels, skis or pontoons would be used to maintain service to every district, buses to be used in bad weather. Former employees now in the RAF would be employed. Air schedules would be coordinated with coach schedules to give joint air-highway through service. The applicant plans to use seven- to fourteen-passenger helicopters.

►As part of its Caribbean service, Pan American has added a twice-weekly round trip between Miami and San Juan, Puerto Rico. The addition increases from 14 to 16 the number of weekly services on the route in both directions. These are local services, eight round trip "through" trunk line flights being operated weekly by Pan American.

►Continental marked opening of air mail service between El Paso and San Antonio with an unofficial cachet, through cooperation by the Post Office Department and local postmasters. The cachet pictured a 14-passenger Lockheed Lodestar flying over the Alamo at San Antonio, with the lettering "First Flight Route 29 — Midland-Odessa, Big Spring, San Angelo and San Antonio."

►Panagra, which has advisory management of Lloyd Aereo Boliviano in Bolivia, reports that the latter has extended directly weekly air service 200 miles south from Sucre to serve Tarija, capital of the agricultural and mineral province of that name.

►American Airlines' roster shows 181 pilots who have flown more than a million miles. Three claim three million, 62 two million, and 116 one million. The list includes all captains and over a fourth of the line's reserve captains.

►Pan American reports increases up to 40 percent, effective this month, in its passenger, mail and cargo service in the Caribbean. Trips affected are those to and from Haiti and British West Indies points.

CAB SCHEDULE

- Apr. 18. Hearing on All American Aviation's application to include Athens, Ohio, on its run from Pittsburgh to Huntington, W. Va. (Docket 1327)
- Apr. 27. Prehearing conference on route applications in the West Coast area. (Docket 250 et al.)
- May 1. Hearing before Examiner Ross I. Newmann on Pan American's acquisition of Aerovias de Mexico, S. A.
- May 1. Prehearing conference on applications for trans-Pacific routes between Honolulu and Los Angeles, San Diego, San Francisco, and Seattle. Applicants in this proceeding include Hawaiian Airlines, Ltd., TWA, Matson Navigation Co., and Northwest. (Docket 85 et al.)
- May 1. Hearing on proposed U.S. to Canada service. Interested applicants include Colonial Airlines, American, Pennsylvania-Central, United, Eastern, Page Airways, Hylan Flying Service and Union Airways. Examiners William J. Madden and H. Heinrich Spang. (Docket 609 et al.)
- May 11. Prehearing conference involving route application in the Rocky Mountain area. (Docket 152 et al.)
- June 1. Deadline for exhibits in the Caribbean investigation.
- July 1. Rebuttal exhibits due in the Caribbean case.

►Among a group of Swedish industrialists who visited Douglas Aircraft plant at Santa Monica recently was Rolf Von Heidenstam, chairman of the directorate of Swedish Intercontinental Airlines. Von Heidenstam is one of the group who formed the line, with government sanction, about a year ago. Plans call for operation between Stockholm and New York in regularly scheduled service after the war.

►Official Guide of the Airways, Chicago, has placed on sale an airline map showing, in addition to airline routes, more than 4,000 cities and towns. Heretofore, the publisher says, most airline route maps have been in a sense only charts, showing only cities directly on airlines.

►Pan American's Africa-Orient Division, about which little was said for a long time, is being mentioned by PAA in current releases. The division is said to have about 100 trans-ocean flight crews in this operation, which is exclusively for the Air Transport Command. This division has completed 2,200 crossings of the Atlantic on military flights.

►Ballard Aircraft Co., Elkhart, Ind., has placed its advertising account with Swafford and Koehl, New York City.

►Arthur Foristall, who has been resident director of public relations of Consolidated Vultee Aircraft Corp., has returned to the New York office of Hill and Knowlton, public relations counsel for Consolidated. He is being succeeded by Louis H. Renn of Hill and Knowlton.

►United Air Lines and Southwest Airways Co. are reported to have shown interest in establishing post-war feeder lines in the Dunsmuir-Mount Shasta district in northern California. Plans for terminal facilities are being pushed by local officials and civic groups.

CAB ACTION

- TWA has been granted permission by the Civil Aeronautics Board to intervene in the Washington-Canada case, which comes up for hearing May 1 before Examiners Madden and Spang. At the prehearing conference, representatives of TWA sought to have applications filed by their line included in the consolidated docket. The examiners characterized the proceedings as essentially North-South in scope and opposed the inclusion requested by TWA on the grounds that the applications asked new steps on existing East-West routes. They did, however, approve of TWA's appearing as an intervener.
- Compania Mexicana de Aviacion has announced that a connecting service with Braniff Airways was started Apr. 10 at Nuevo Laredo, Mexico. Braniff recently received permission from the CAB to serve Nuevo Laredo. Braniff's Mexican subsidiary, Aerovias Braniff, is not yet in operation.
- Two applications filed with CAB by Southwestern Airlines, Inc., have been removed from the Docket of the Latin American proceedings at the request of the airline. The applications requested authorization of service from Houston to St. Louis and from St. Louis to Mexico City. The fact that the president of the line is on active duty as an officer with the Navy was given as the reason for the request. The Board authorized Port of New York Authority to intervene in the same proceeding. Several of the applications under consideration in the consolidated docket list New York as the northern terminal for Latin American routes.
- Kansas City, Mo., was granted permission by CAB to intervene in the St. Louis-Detroit case. (Docket 303 et al.)
- The Board has granted Western Air Lines permission to serve San Francisco on AM 63 through the use of the San Francisco Municipal Airport (Mills Field). A representative of Western stated that the service probably would not begin until May. 1.
- The Board authorized Continental Air Lines to establish non-stop service between Denver and Pueblo, Colo., eliminating a stop at Colorado Springs from one of six daily trips. Braniff Airways also operates two trips daily between Denver and Pueblo, both of which make the Colorado Springs stop.

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LAST CATALINA PRODUCED AT SAN DIEGO:

The last of the famous Catalinas to come off the production line at the Consolidated Vultee plant in San Diego leaves with assembly line workers' names scrawled all over it in chalk. The Cat has been built at San Diego since 1935, and 1,943 have been built there. Production has been shifted to Convair's New Orleans plant, and only Liberators and cargo-transport planes will be built at San Diego. Other Catalinas have been built by Boeing and Canadian Vickers.



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Commercial Air Transport Growth Revealed in 5-Year CAB Survey

Traffic and financial operations of individual companies during period 1938-42 summarized by Economic Bureau of Rates and Audits Division.

By ROGER WILCO

The phenomenal growth of commercial air transport is the highlight of a five-year airline statistical survey made by the Economic Bureau, Rates and Audits Division, of the Civil Aeronautics Board. Covering the period 1938 through

► **Assets Up Sharply**—Current assets grew from \$15,142,691 to \$81,195,528 (up 436.20 percent) during the five-year period, and at Oct. 31, 1943, current assets stood at \$110,035,708. Working capital at Oct. 31 last year was \$57,032,-

Domestic Airlines						
Balance Sheet Items At Dec. 31, of 1938, 1939, 1940, 1941, 1942 and Oct. 31, 1943*						
Assets	1938	1939	1940	1941	1942	1943
Current Assets.....	\$15,142,691	\$23,691,796	\$36,326,940	\$48,766,772	\$81,195,528	\$110,035,708
Investment—Special Funds.....	2,435,410	2,657,292	1,723,787	2,863,980	14,193,992	21,148,263
Property and Equipment.....	16,436,509	17,744,877	31,702,544	33,314,942	25,368,075	23,260,127
Deferred Charges.....	1,820,090	1,791,678	2,268,520	3,031,349	3,322,707	3,305,542
Capital Stock Discount and Expense.....	49,708	59,890	70,734	114,162	—	37,421
Other Assets.....	685,896	648,043	466,933	187,567	158,659	159,234
TOTAL.....	36,570,308	46,593,579	72,559,460	88,278,774	124,238,962	157,946,295
Liabilities						
Current Liabilities....	\$4,542,372	\$9,333,846	\$15,595,279	\$22,195,523	\$41,806,606	\$53,003,696
Long Term Debt and advances from affiliates.....	3,759,607	4,063,210	4,262,626	1,769,771	459,759	1,914,975
Deferred Credits.....	1,105,403	720,988	1,230,839	1,850,171	4,211,127	8,687,892
Operating Reserves.....	252,844	272,063	287,795	1,015,725	299,453	864,943
Capital Stock Outstanding.....	21,274,439	22,454,311	28,406,962	33,095,620	33,304,575	33,436,094
Surplus.....	5,635,640	9,749,158	22,775,956	28,351,962	44,157,440	60,038,695
TOTAL.....	36,570,308	46,593,579	72,559,460	88,278,774	124,238,962	157,946,295

*Balance sheet at Oct. 31, 1943, excludes All American Aviation, Inc. and Hawaiian Airlines, Ltd.

1942 on a calendar year basis, the study summarizes the traffic and financial operations of each of the domestic carriers during the period.

Total assets for the industry (domestic air carriers) at Dec. 31, 1942, had reached \$124,238,962, which represented an increase of 239.73 percent over the \$36,570,308 at the close of 1938. An independent financial study of the domestic carriers (excluding All American Aviation, Inc. and Hawaiian Airlines, Ltd.) shows that assets at Oct. 31, 1943, totaled \$157,946,295, a gain of more than 27 percent over the 1942 year-end.

012 compared with \$39,388,922 at Dec. 31, 1942. Cash, which rose from \$6,720,869 at the close of 1938 to \$21,838,379 at Dec. 31, 1942, had increased further to \$33,354,803 at Oct. 31, 1943.

A comparison of balance sheet items for the five-year period covered by the CAB study, together with comparable figures at Oct. 31, 1943 (excluding All American Aviation, Inc. and Hawaiian Airlines, Ltd.) is shown above.

According to the survey, employees at Dec. 31, 1942, totaled 26,910 and monthly compensation \$4,957,227. At June 30, 1940, the number of employees was 13,886

and monthly compensation \$2,-494,003.

Mail revenue, which in 1938 was over 37 percent of total operating revenues, was down to 21 percent of total revenues in 1942. For the calendar year 1942, the domestic airlines reported aggregate operating revenues of \$108,147,909 against operating expenses of \$81,603,745, leaving an operating profit of \$26,544,164. In 1938, operating revenues of \$42,844,721 compared with operating expenses of \$43,861,230, making a deficit of \$1,016,508.

► **Revenues Up**—By 1939, operating revenues had reached \$55,947,765 and operating expenses \$51,391,560, making an operating profit of \$4,556,205. A year later revenues climbed to \$76,863,642 against expenses of \$70,896,614, leaving a profit of \$5,967,028. In 1941, operating revenues totaled \$97,311,133 and operating expenses \$89,919,133, making operating profit \$7,392,000. An analysis of revenues is shown below.

Analysis of traffic data shows that revenue passenger miles climbed from 479,843,978 in 1938 to 1,632,452,433 in 1943, while revenue passenger load factor was up from 50.43 percent to 88.01 percent. Mail pound miles jumped from 14,898,491,093 to 72,133,899,534, with the largest increase taking place during 1943. Express pound miles rose to 31,257,460,811 in 1943 from 4,364,840,277 in 1938. A breakdown of traffic data is shown below.

WAL Net Off Sharply

Western Air Lines reports net profit of \$90,194 for 1943 against \$693,703 in 1942.

William A. Coulter, president, gave as causes for the decline: \$500,000 decrease in airmail revenue; a 10 percent cut in passenger fares and 12½ percent cut in express rates July 15, 1943; and increases in operating costs involving increases in wages, materials and supplies, and the addition of new personnel to cover expansion.

WAL passenger revenues for 1943 were up 38 percent to \$1,709,402.

	1938	1939	1940	1941	1942		Rev. Pass. Miles	Mail Pound Miles	Express Pound Miles	Rev. Pass. Load Factor
Passenger.....	\$24,860,594	\$34,843,711	\$53,308,171	\$69,791,337	\$74,757,776	1938.....	479,843,978	14,898,491,093	4,364,840,277	50.43%
Mail.....	15,797,988	18,482,475	20,090,123	22,696,350	23,446,587	1939.....	682,903,683	17,221,453,558	5,426,198,390	56.20%
Express.....	1,278,163	1,619,131	2,077,726	2,919,003	6,968,357	1940.....	1,052,155,884	20,235,715,061	6,952,448,883	67.90%
Other.....	907,975	1,002,447	1,387,622	1,904,441	2,975,189	1941.....	1,384,733,251	26,236,027,723	10,517,102,345	59.13%
TOTAL.....	42,844,721	55,947,765	76,863,642	97,311,133	108,147,909	1942.....	1,417,525,877	42,332,048,722	23,803,586,614	72.21%
Operating Exp. 43,861,230	51,391,560	70,896,614	89,919,133	81,603,745		1943.....	1,632,452,433	72,133,899,534	31,257,460,811	88.01%
Operating Prof. 1,016,508	4,556,205	5,967,028	7,392,000	26,544,164						

SEC Reports Ryan Income and Salaries

Net earnings for twelve months ended Oct. 31, 1943, put at \$597,312.

T. Claude Ryan, president and treasurer of Ryan Aeronautical Co., received \$44,290 in compensation during the fiscal year ended Oct. 31, 1943, according to the company's annual report as filed with the Securities and Exchange Commission.

Of this sum, \$30,490 was charged to the company, \$9,000 to the Ryan School of Aeronautics, and \$4,800 to the Ryan School of Aeronautics of Arizona.

► **Other Salaries**—Earl D. Prudden, vice-president, received \$31,100 during the last fiscal year, divided as follows: \$5,000 from the company, \$15,300 from the Ryan School of Aeronautics and \$10,800 from the Ryan School of Aeronautics of Arizona.

Eddie Molloy, vice-president in charge of manufacturing for the company, received total compensation of \$17,061, all of which was charged to the company.

► **Train Army Pilots**—The two aeronautical schools are engaged exclusively in airplane pilot training for AAF.

Total net sales were \$25,328,448, of which \$19,705,524 was from manufacturing operations and \$5,622,923 from school operations.

► **Balance**—Expenses, including cost of goods sold, school operating expenses and general and administrative expenses amounted to \$22,361,022 leaving a balance of \$2,967,426. Other income in the amount of \$113,732 brought the balance to \$3,081,159.

After deductions there was a balance of \$2,996,519. After providing \$2,149,206 for normal and surtax federal income tax, and excess profits tax (less post-war refund), there was a balance of \$847,312, leaving, after deduction of \$250,000 for contingencies and post-war adjustment, a net income for the year of \$597,312.

Braniff Dividend

Payment of quarterly dividend of 15 cents a share for the first quarter of 1944 has been authorized by the Board of Directors of Braniff Airways and will be paid May 15 to stockholders of record May 1.



HALIFAX AT PROP PLANT:

The British ambassador, Lord Halifax (center), with Gov. Raymond E. Baldwin (left) and Raycroft Walsh, vice-chairman of United Aircraft Corp., on a recent visit to the Hamilton Standard Propeller plant at East Hartford, Conn.

Financial Reports

► **Canadian Pacific Airlines** reports loss of \$236,573 in 1943. Expansion of radio communication facilities during the year were reported, as well as additions to ground equipment, shops and airport facilities, for which the Canadian Pacific Railway advanced to CPA \$2,027,000. CPA transport planes were flown 6,133,751 miles in revenue service, an increase of 17 percent over 1942. Aircraft operated by the air observer schools of the CPA system flew more than 57,000,000 miles during 1943.

► **Hawaiian Airlines, Ltd.** reports net profit of \$132,053 in 1943 after tax deductions of \$308,533 despite reductions in rates, mail compensation rate, and increased operating costs. The company flew 916,147 plane miles in 1943 and experienced a 19.24 percent increase in operating revenues, due to an increase in passenger revenue of \$176,953 and in freight revenue of \$128,593.

► **United States Plywood Corp.** and subsidiaries for the nine months ended Jan. 31 reported net profit of \$634,280 equal after preferred dividends to \$1.96 each on 299,932 common shares, compared with \$537,721 or \$2.06 each on 249,932 common shares for nine months to Jan. 31, 1943; net sales were \$15,107,908 as against \$13,194,540; earnings before taxes were \$2,190,280 compared with \$1,747,023.

OWI Lauds Convair's Split-Shift System

Coronado feeder shop, staffed by women, reported far ahead of production quota.

Success of Consolidated Vultee's feeder shop at Coronado, which employs only women who work on a split-shift schedule, is reported by the Office of War Information as evidence that a split-shift feeder-shop system staffed only by women can be effective.

Since its beginning in May of last year, the Coronado shop has progressed from simple rivet-sorting to dashboard panel and bomber panel electric wiring. The labor force has grown from 25 to more than 100, plus a waiting list.

► **Feeder Shop Idea**—The Coronado feeder shop idea is credited to Consolidated Vultee's head of personnel, Mrs. Rene Anne Towers, wife of Vice Admiral John H. Towers.

Of the women in the feeder-shop crew, approximately 90 percent are married and 70 percent have school-age children. Several of the workers have cooperative arrangements whereby a worker on the second shift—12:30 p.m. to 4:30 p.m.—takes care of the children of workers on the early 8:30 a.m. to 12:30 p.m. shift. The average weekly pay runs about \$14.

New Plane Names

The Bell jet propelled fighter has been named tentatively the *Aircomet* by the Army Air Forces, while another new Bell plane, already hinted at in the press, has been christened the *Kingcobra*.

The Fairchild transport designated the C-82, expected to make its appearance this year, probably will be named the *Packet*. Waco's new twin-engine specially designed glider tug, built mainly of wood, has been given no official designation other than the C-62. No deliveries have been made, although schedules called for one before Apr. 1.

Budd Manufacturing Corp.'s new stainless steel twin-engine transport with the Navy identification of RB-1 has been named the *Conestoga*. Deliveries are anticipated from now on.

A new version of a Douglas bomber is being titled the *Destroyer*.

For a Peacetime Air Force Of 50,000 Planes

THE United States aircraft industry built 117 planes during September, 1939, when the European war started. Total output that year was 2,400 planes, including scores of trainers. On Dec. 7, 1941, we had 159 four-engine bombers. The Army Air Forces had 1,157 first line combat planes, with only 526 of these strategically located to meet possible attacks on Hawaii and the Philippines. Within a few hours this number dropped to 176. The Japs' string of conquests continued with little resistance almost to Australia.

Today's production is 9,000 military planes every month, including possibly 1,500 heavy bombers. We have the world's greatest Military and Naval Air Force, by quantity and quality. Its peak is still unattained. Over half of the Army's total 1944 production represents aircraft and its equipment.

In the heat of battle, on the threshold of the mightiest invasion ever planned, it is time to start planning our insurance for the future. To assure ourselves that a phlegmatic peacetime let-down does not lay us open to another enemy—or "friend."

The United States must continue to maintain the world's greatest air force, whether it polices others or remains based on American territory. Its very existence will be a powerful deterrent to ill-judged action elsewhere.

AVIATION NEWS believes American public opinion will demand that we retain a bristling air force equaled or exceeded by none in the world, even by our present Allies. This is believed to be the opinion of some of our highest officials. It is a prevailing belief of a group of the most responsible members of Congress.

Such an air corps, and our determination to keep our leadership, will be as powerful a force at the peace table as in the years ahead.

THEFORE, the News believes that Congressional plans should encompass the following minimum post-war air program:

1. A peacetime Army and Navy Air Force of at least 50,000 combat planes, plus necessary trainers and military transports.
2. Annual production and replacement of 25,000 of the most advanced combat aircraft.
3. Continuation of what already is the world's best equipped aircraft and equipment research plant, to be maintained by the National Advisory Committee for Aeronautics, plus AAF and naval testing centers, and independent facilities for individual aircraft plants.
4. A continuing national aviation training pro-

gram utilizing private schools, turning out necessary technicians and a minimum of 100,000 private pilots a year as a constant source of potential combat pilots of the required ages. This program would be independent of a nucleus training system continued by the services.

5. The world's largest and finest equipped commercial airline system with subsidies only on a few uneconomic but militarily and commercially important world routes. The airlines should retain some contract connections with the Army and Navy Transport Services for training and transportation.

6. A peacetime Army Air Transport Command and Naval Air Transport Service competing with no commercial airline, but serving as training and supply agencies.

THE AMERICAN PEOPLE can find little legitimate complaint in the cost factor of an insurance policy with a premium which is hardly more than several of the current 2,000-plane raids over Berlin.

There are other post-war problems to be solved, of course. What about our post-war Army, surface Navy, peacetime conscription? The question of implementing the post-war air force must be solved. Will the air force be one of the co-equal arms of a single department of defense, for example?

It is now up to our Congressional leaders, like Rep. Woodrum and his well-selected military planning committee, to gather the expert recommendations and testimony of our wartime leaders in the services and industry, and prepare a report on which the House can take swift action.

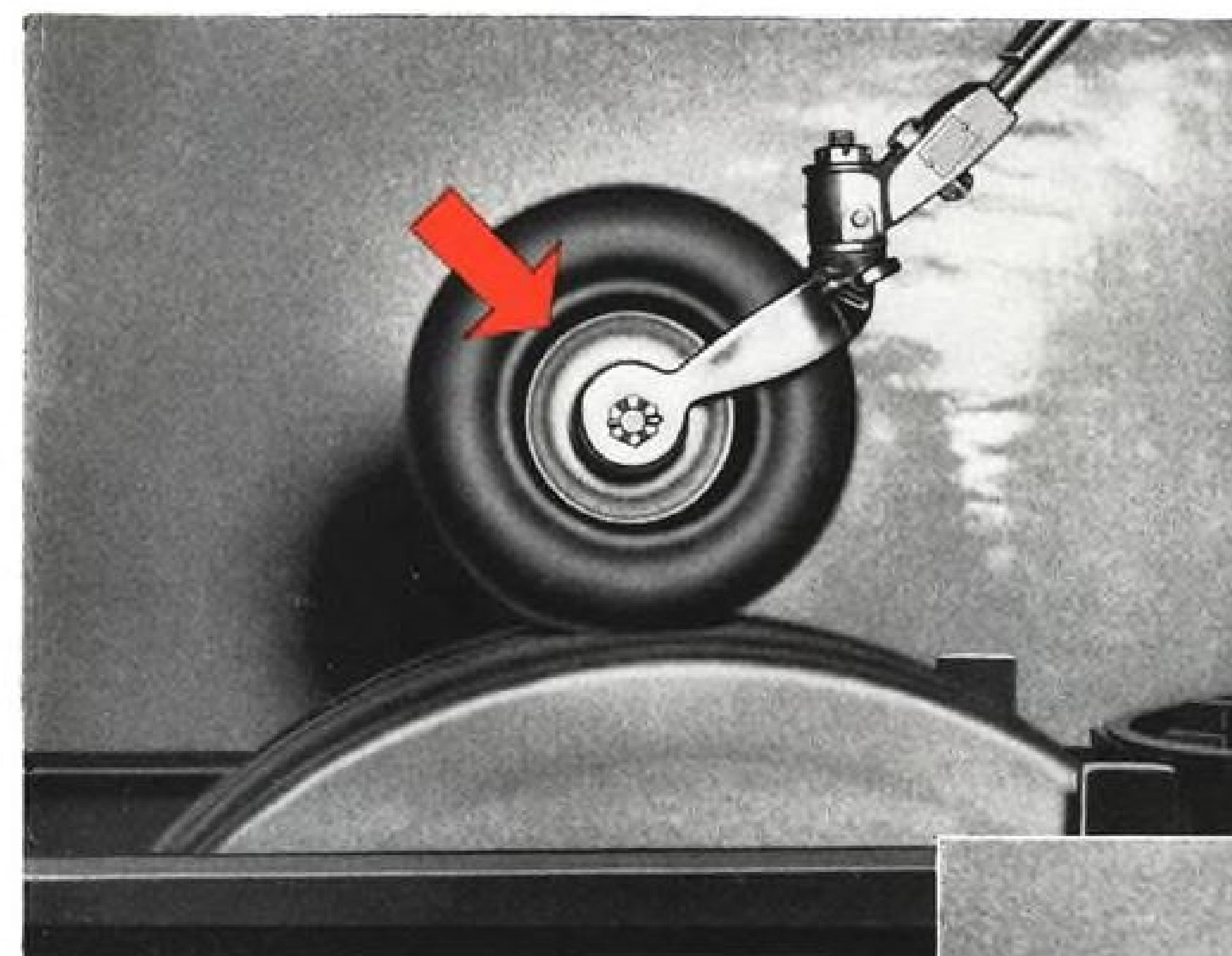
Let them recall these words from Gen. Arnold's classic report to the Secretary of War early this year, listing the Army Air Forces crippling liabilities in the pre-war period.

"These were the lack of funds, the people's aversion to all forms of war which forced us into makeshift methods. The AAF had to teach the nation that large numbers of planes did not in themselves constitute airpower; we had to show the folly of the numbers racket. We designed different planes to do different jobs, and shouted from the hangar tops that no one superplane could do everything. . . . The people did not realize that the plane had broken down all boundaries of time and distance; that even our inland cities were within bombing range of the enemy."

We believe the people realize these things now and that they expect their Congress to start to work now to insure us against another war.

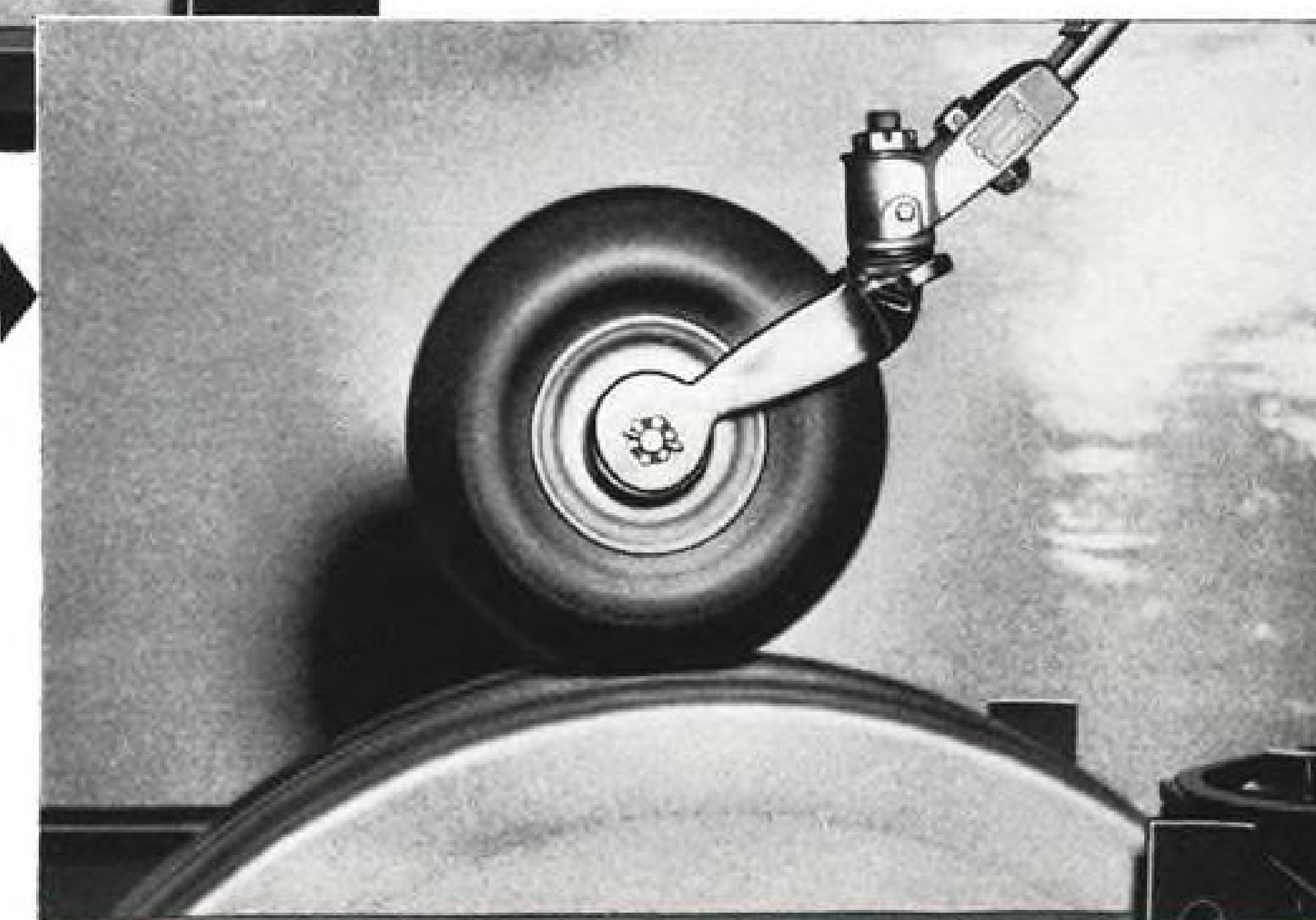
ROBERT H. WOOD

***NOW!* IMPARTIAL TEST PHOTOS PROVE
WHICH TAIL WHEEL TIRE *HOLDS* BEST**



■ *Photo shows competitive 6 x 2.00 tail wheel tire on test machine in laboratories of Scott Aviation Corporation—being rotated at equivalent of 30 miles per hour. Note how centrifugal force has separated beads of tire from the wheel. (arrow). Scott Aviation say, "...all (competitive tires) tested behave in exactly the same manner as the competitive tire pictured."*

General 6x2.00 Tail Wheel Tire—on same wheel as above—at same speed. *Note complete lack of any distortion.* Note how it hugs the wheel perfectly . . . without any separation. Scott Aviation say, "General's steel wire bead makes it impossible for the tire to be thrown from the wheel."



GENERAL'S Exclusive STEEL WIRE BEAD Is The Answer!



The General 6x2.00 tire—with exclusive steel wire bead—is typical of why all General Tail Wheel Tires have *consistently* proved their superiority in countless laboratory tests and in actual service by leading users. The complete General Tire-Tube-Wheel *combination* brings you General's famous *Top-Quality*—safe, dependable performance—exclusive features—in *one package* ready for quick installation. *Immediate delivery is available.* For further information write or wire:

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from small aluminum stampings—formerly a laborious hand operation. A Texaco Engineer discovered that putting the stampings into tumbling barrels with *Texaco ALMAG Cutting Oil* increased output 20 times.

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- ★ More locomotives and railroad cars in the U. S. are lubricated with Texaco than with any other brand.
- ★ More revenue airline miles in the U. S. are flown with Texaco than with any other brand.
- ★ More buses, more bus lines and more bus-miles are lubricated with Texaco than with any other brand.



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