

Aviation News

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Lawrence D. Bell, president and general manager of Bell Aircraft Corporation, who was elected president last week of the Aircraft War Production Council, East Coast. On Sept. 1 he also assumed the position of president of the National Aircraft War Production Council.

Big Bomber Production Soars

August output of four-engined bombardment craft is three times the monthly rate of production at the beginning of the year.



August Plane Output Sets Record

Latest report of last month's war-plane turn-out indicates previous all time high of 7,373 is exceeded by considerable number.



Hughes Shuffles Cargo Plane Men

Edward G. Bern resigns as chief of eight-engine wooden cargo plane project, followed by his aide. Both firms deny Kaiser-Hughes split.



National Service Act Seen

Close observers in Washington forecast a National Service Act and believe "educational" campaign is already underway to prepare the public.



Action Hinted on Foreign Routes

CAB is asking for data on the international air routes most likely to be required first, and hints that some action may precede the Armistice.



CAB Defines Jurisdiction

Clarifies its authority over airlines which are owned or controlled by other types of carriers, specifically commenting on Northeast case.



3 Lines' Financial Reports Analyzed

Financial commentator compares record for first six months of the year, made by the three transcontinental lines, American, TWA and United, with a year ago.

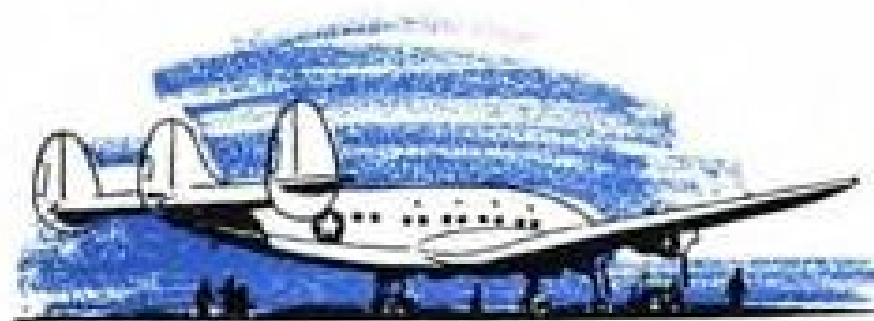


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THE AVIATION NEWS

Washington Observer

AIR POWER—For a man who has had such opportunities to observe the potency of air power at close range, Brendan Bracken, British Minister of Information, shows a strange reaction. He actually discounts air power as a decisive factor in winning the war. He conceded that "some enthusiastic and gallant airmen" believe the Axis can be reduced by bombing. But his attitude at a Washington news conference was strictly luke-warm on air power possibilities.

★ ★ ★

FLYING BOATS VS. LAND BASED PLANES—This perennial argument got a little new fuel in scraps of information from the confidential report on cargo planes made by Grover Loening for top war production officials. Reports that he urged large production of the Martin Mars were



only half-true. Production of flying boats was urged along with recommendations for increased production of several other types. Replacement of planes taken from the airlines by the Army also was advocated.

★

Glenn L. Martin, of course, has long been a leading advocate of the flying boat. On his side are the engineers who maintain that the landing gear on large land-based planes becomes so heavy that operating efficiency goes down. Land-based plane people hold, on the other hand, that the hull of the flying boat reduces operating efficiency. Another argument recently has been advanced by the flying boat people—a psychological one. It is that passengers flying over water have a greater sense of security if they know their airplane can land in water. The land-based plane people say this argument doesn't hold in view of the daily transoceanic trips being made, not only by experienced airmen, but by passengers of great prominence whose safety and security is vital.

★ ★ ★

COMBAT PLANES—That release expected from WPB Chairman Donald Nelson showing that our combat plane production exceeds by a

considerable margin the number of aircraft lost in battle, accident and obsolescence was held up by his information department so that it would not coincide with Nelson's monthly production report. And incidentally, the Office of War Information has completed its report on our combat planes. Release was expected by this time, but the report is getting another going over from the Army.

★ ★ ★

MANAGEMENT ON THE SPOT? Top WPB officials believe that the real test of management's war contribution is now coming up, particularly as regards manpower. They contend that there must be more efficiency, better utilization of labor and—more and harder work by labor. They are privately expressing concern that management, having done a magnificent job up to this time, may spoil some of the record by stumbling on production coming down the home stretch. They are concerned, too, they say, over indications that management believes the Army and Navy has more than enough equipment in some categories. That, say these WPB officials, is for the military to determine. In this connection, airplane attrition has not been nearly as high as originally estimated.

★ ★ ★

REORGANIZATION — It's a dull week in Washington when a government agency is not being reorganized. Latest reports concern a merger of several agencies to form an over-all super agency to handle all phases of economic warfare. Of course, many of these things die aborning, so don't plan on this one.

★

Rumored, however, is a foreign economic set-up which would include parts of Lend-Lease, Office of Strategic Services, Office of Economic Warfare, Gov. Lehman's group, Office of War Information, Overseas Service, certain State Department divisions and what is left of domestic OWI. Incidentally, Elmer Davis has denied persistent reports that he was going to resign. Claims he isn't.

★ ★ ★

BRITISH MISSION—There have been recurrent reports that a British mission is circulating around town on the trail of post-war airline equipment, etc. Everybody shies away from the question. Some aviation people in the capital are of the opinion, however, that there may be a few such persons, operating semi-officially, in the Churchill entourage. Of course there are many British missions in Washington including the British Ministry of War Transport, which may be thinking about post-war aviation problems from time to time.

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September 6, 1943

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NEW CARGO PLANE—Fairchild has a new cargo plane on the way about which little may be said at this time. It is understood it is a multiple-purpose plane and airmen who have seen it are enthusiastic. Watch for something to break on this within two or three weeks. And speaking of cargo planes, a prototype of the new Budd cargo carrier (illustrated in the Aug. 2 issue of "Aviation News") will be ready in a month or two.

BIG BOMBERS—There is probably no subject more publicly hush-hush and more privately discussed in aviation circles than the new big bombers now on the way. Any word on them is welcome. The current "Army Ordnance" carries an article signed by General Arnold which says the new bombers will "dwarf our present *Flying Fortresses*," and carry half a carload of bombs across the Atlantic and fly home without stop. He pictures the planes as covered with multiple-gun turret blisters, controllable from sighting stations. In this connection it is reported that most of the new super bombers will be Boeing products and that Consolidated will concentrate on its *Liberators*.

It is interesting to note that while the United States builds the greatest long-range bombers in the world, the world's air distance record is still held by Britain—7,159 mi. Obviously there is no difficulty in flying 3,000 mi., but to fly 3,000 mi. with a useful bomb-load. That is the problem.

TRUMAN COMMITTEE is on the go again—this time by plane to Alaska. The purpose of the trip is secret, but it has been suggested the committeemen may be taking a look at Alaskan manpower and material possibilities.

AIR SERVICE COMMAND—The OWI report on the Air Service Command is now set for tentative Sept. 13 release. It is awaiting War Department clearance. The Air Service Command has been doing an outstanding job with little fanfare. The command, with headquarters at Patterson Field, Dayton, is said to be the largest single employer of labor in the world under a single command. Somebody apparently failed to foresee the expansion of this service and part of the payoff is at Patterson Field where the construction program has fallen behind expansion. Housing for new employees is poor, transportation is bad and eating places are inadequate, according to recently returned visitors.

AAF CHANGES—Whispers of reorganization within the Army Air Forces is not entirely without basis in view of several changes recently in

Washington Observer

top ranking assignments. There are indications that a whipping boy will be found for some plane production blunders and that it might reach high in the old materiel command, now the Office of the Deputy Chief of Air Staff, Materiel, Maintenance and Distribution, Maj. Gen. O. P. Echols. General Echols himself has been mentioned in some capital corners in this connection, although most of the orders for planes now considered obsolete were made before he took over.

ROBOT PLANES—Reports from Sweden that a pilotless German mystery plane which crashed there had been steered by radio were not surprising to our own aviation technicians, who have done and are doing considerable work themselves on such equipment. Very secret, however.

SKYMASTERS—Small quantities of Douglas C-54's (*Skymasters*) are being turned over to some airlines for their Air Transport Command operation. Most of these are for over-water



routes. Latest deliveries are to United Air Lines, which will probably fly them over the Pacific. The experience gained in the use of the land-based cargo plane on an over-water route undoubtedly will be of great value when peacetime flying is resumed. This experience compared with that of the flying boat experience of Pan American's Boeing Clippers will provide plenty of land-based plane versus flying boat argument.

There is a startling newcomer in the speed sweepstakes, this one Howard Hughes' colorful new twin-boom radial-engine experimental plane now undergoing tests on California's Mojave Desert. There is much speculation on the performance of this one. It is identified by Hughes as the D-2 (for Duramold) and is rumored to have passed 300 mph at quarter-throttle. There is no indication whether it will be adapted to military use—potentially it is an attack bomber—or used to attempt new speed records and to serve as a guinea pig for subsequent military designs.

LENGTHENING SHADOWS OF PROGRESS..



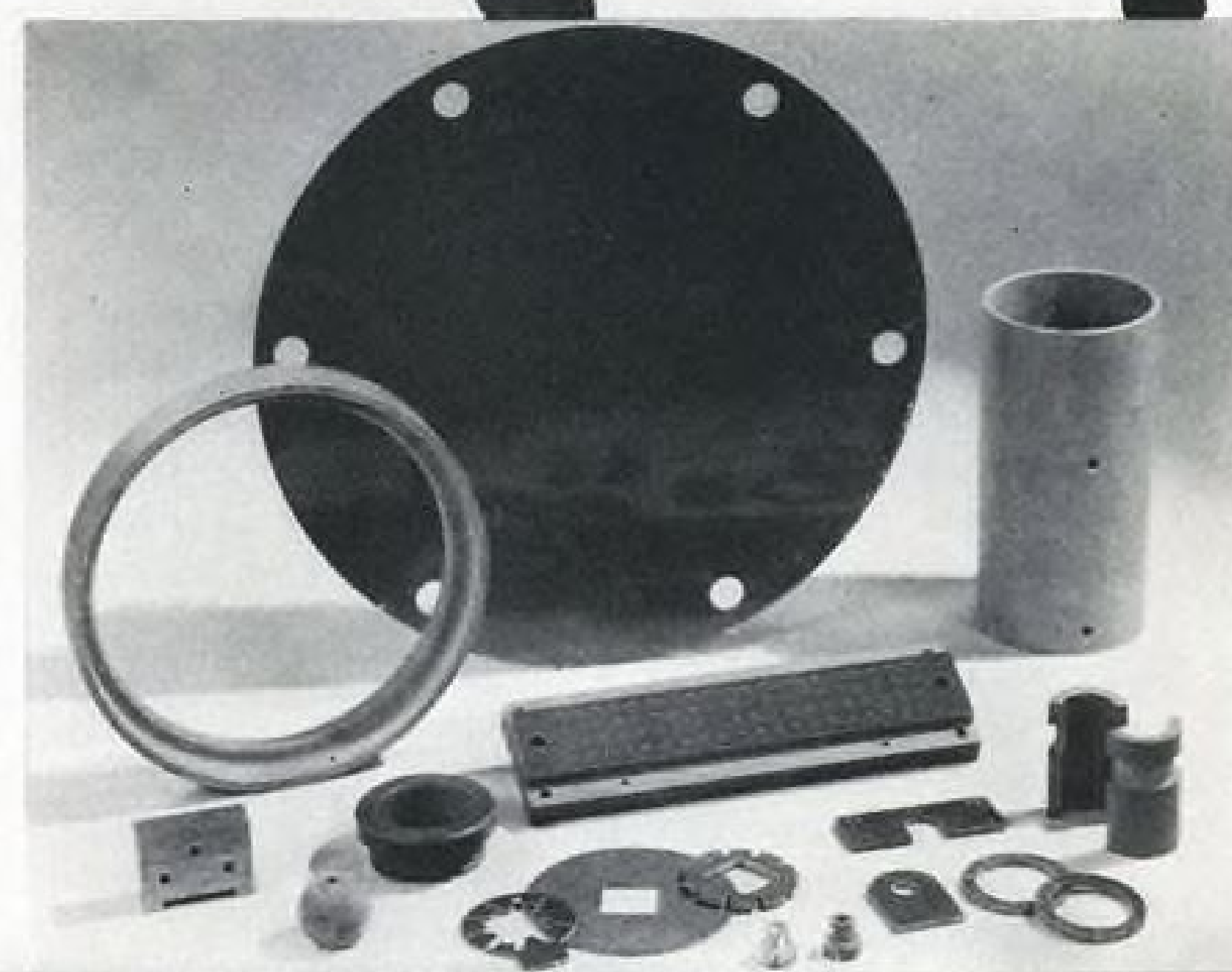
THE ability to get things from where they are made to where they are needed has been the key to our success in this War. Transportation will play an equally important part in building the Peace to come. The shadows of progress are again lengthening and pointing to air transport as the future's answer to local and World Commerce.

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Aviation News

VOLUME 1 • NUMBER 6

McGraw-Hill Publishing Co., Inc.

SEPTEMBER 6, 1943

CAB Defines Its Control Over Lines Owned by Ground Carriers

Holds jurisdiction only if stock ownership has increased since passage of Civil Aeronautics Act.

The Civil Aeronautics Board has held that in a control relationship involving an air carrier and other carriers, created before the Civil Aeronautics Act became law, it has jurisdiction only where control by the latter has increased since the Act was approved.

► **Policy Established**—The principle was established in an opinion in which the Board found it unnecessary to pass on applications by the Boston and Maine Railroad and Maine Central Railroad company requesting it to find they had not acquired control of Northeast Airlines since the Act became law, or approve such control if it was found to have been acquired since the date of the act.

► **Rails**—The board concluded that the railroad group, in which it included the Central Vermont Railroad, now controls Northeast, but dismissed the actions because the control has not increased since the Act became effective in 1938. Central Vermont, while not a party to the proceeding, shares 40 percent of Northeast's stock with the other railroads and "has always voted its stock with the applicants on every major issue which has arisen," the Board found.

Northeast a few days later petitioned for permission to intervene in the case, which it requested be reopened and reconsidered.

► **Jurisdiction**—The board stated in its opinion that "while we do not believe that Congress intended us to exercise jurisdiction over a control relationship created prior to the effective date of the Civil Aeronautics Act and existing unchanged from that date forward, we do believe that we possess jurisdiction in a case where the extent or effectiveness of control has increased. . . .

► **Control**—"The number of powers and the degree of influence which the controller held on the effective

date of the Act must be deemed approved by Congress, but a subsequent increase in the number of powers, or a strengthening of influence, does not in our opinion share this immunity. This is particularly true in a situation where the control at the time Congress acted was only partial, but complete after that time. And in the event of a change in control whereby different or other common carriers acquired controlling interests in an airline, this change would, of course, be subject to our approval. . . ."

► **Contention**—It cited an Air Transport Association memorandum urging it to take the position that any substantial change in the control relation after the Act became law required board approval. This contention was agreed with as it related to increase in the extent or effectiveness of control, but the board did not concur that a decrease in control would give it jurisdiction.

► **Public Interest**—In line with views previously expressed in 1942, in the

American Export Lines control case, the board declared that "Congressional action clearly indicates a conclusion that the public interest requires that the various forms of transportation be kept distinct, so that each can operate in its own sphere independently of the others. We must therefore scrutinize carefully each situation in which there exists a relationship between an air carrier and another common carrier. . . ."

► **Buy Air Shares**—Northeast's petition pointed out that on Aug. 31, in a sale prepared for considerably earlier than that date, it disposed of 200,000 shares of additional stock. The railroad group could have purchased 80,000 shares of the new issue, which would have maintained the 40 percent ownership. On the contrary, the airline said, Boston and Maine and Maine Central elected to purchase only the former stockholdings of the Central Vermont Airways, subsidiary of the Central Vermont Railway, and an additional 15,000 shares of the new stock, so they now own a total of 150,000 shares. The line contended that this reduced the railroad ownership from 40 to 30 percent, and asked that the Board determine that the railroads do not and cannot control Northeast.

The board's decision also was seen

Mustang the World's Fastest?

For some time the DeHavilland *Mosquito* has been claimed as the fastest airplane in the world. The top speed of this remarkable all-wood reconnaissance-bomber-fighter has never been released, but it is undoubtedly well over 400 mph, possibly 425 mph in its unarmed photographic version.

The technical editor of *The Aeroplane*, London, in an analysis of the P-47 *Thunderbolt* fighter, gives a speed of 420 mph at 35,000 ft. Navy's new fighter, the Grumman F6F *Hellcat*, powered with the same engine and some

2,000 lb. lighter than the P-47, should have a higher top speed at its best altitude. The improved *Lightning* is up in that same bracket, somewhere. All of these fighters would crowd the *Mosquito* for the title.

The new *Mustang*, however, has been reported as considerably faster than any of these speeds so far mentioned. If this is substantiated by consistent tests, as appears likely, this will be, for the moment, the world's fastest airplane. It still leaves the *Mosquito* as the world's fastest bomber in operation. NAVIGATOR

by the petitioner as having "serious consequences" in presentation of its case in connection with hearings in Boston-New York route applications in New York Sept. 8, in which Northeast is one of several applicants.

► **Rails Want Control**—"In view of the determination of railroad control," the petition said, "efforts by opposing interests undoubtedly will be made to force Petitioner in a position where it must defend its right to the issuance of a certificate, since it has been adjudicated to be rail-controlled." Northeast described it as "totally unnecessary" to require it to maintain such a position "with the manifest burdens attendant thereto in view of changed conditions."

It asked that an order finding the railroads do not and cannot control Northeast be entered on or before Sept. 7, and requested hearing, if oral testimony is desired.

3 Battle-Scarred Marauders on Tour

Battle planes, back from Sicilian campaign, making circuit with their crews.

Three battle-scarred Martin *Marauders* with their veteran crews, just returned from Sicily, are touring war plants and Army training installations.

► **Start at Martin**—The tour started with ceremonies at The Glenn L. Martin plant at Baltimore. All 22 of the airmen wear the air medal and many of them hold higher decorations. The airmen have completed nearly 150 missions in the bombers which they flew home from the Mediterranean area.

Bell Heads National And Eastern Councils

Succeeds Cohu as president of nation-wide group; meeting planned.

Lawrence D. Bell, president of Bell Aircraft Corp., was elected president of the Aircraft War Production Council, East Coast, last week, and also assumes the presidency of the National Aircraft War Production Council. He succeeds J. Carlton Ward, president of Fairchild Engine and Airplane Corp., on the East Coast council and LaMotte Cohu, Northrop Aircraft, Inc., as national president.

L. C. Goad, vice-president of General Motors Corp., and general manager of its Eastern Aircraft Division, becomes vice-president of the eastern council.

► **East & West Meet**—A joint meeting of the directors of both East and West Coast councils will be held in New York in late October, the presidents of the eight leading West Coast aircraft companies returning the visit made last April by East Coast presidents.

Other officers of the East Coast council are: Ken Ellington, secretary, and Francis T. Boyd, assistant treasurer. C. M. Vandeburg is general manager.

Chamber Members Voting On Plan

Reorganization proposal being considered by mail ballots.

The Board of Governors of the Aeronautical Chamber of Commerce at a meeting in Washington Aug. 31 ordered a mail ballot of Chamber

members—there are more than 200—on a proposed reorganization plan designed to make the trade association a more vocal and potent force in all matters affecting the aircraft manufacturing industry.

► **Revitalization**—A special committee which has been working on the revitalization program reported to the Board which was understood to have approved in general the proposals submitted. These plans call for re-implementation of the public relations department and the selection of an aggressive administrator with a knowledge of the industry and the workings of Washington byways, as the executive head. The presidency of the Chamber would rest with an industry executive. The post is now held by James P. Murray, Boeing vice-president and eastern representative.

► **Deadline**—With the return of the mail ballots, on which there is a Sept. 10 deadline, it was expected that the Board of Governors will call a special meeting of the membership, such a meeting being necessary to make required changes in the articles of incorporation and the by-laws to make the new program effective.

WPB Seeking Cut In Plastics Uses

New committee formed to encourage use of other materials.

Plastics, long thought of as convenient substitutes for vital metals and woods, have now entered the critical list ahead of secondary sheet aluminum and plywoods and WPB officials are seeking to prevent substitution except where it increases performance by a new group, the

"End Use Committee for Plastics," in the Chemicals Division.

► **Vital Features**—Only three reasons for substitution of plastics in aircraft are set forth by the committee chairman, Ward Jackson, aircraft consultant for the division: (1) If it is indispensable to operation or performance of a plane; (2) if it saves weight; (3) if the use saves man-hours in production.

"Loss of war functions cannot be continued, and steps have been taken to advise the manufacturers on new end uses before considerable effort has been expended," the committee said in its formation order.

Northrop Producing Secret Warplane Type

Cohu alludes to new design in revealing shift-over in operations.

First open reference to one of the nation's new super-secret airplanes was made by an official of Northrop Aircraft, Inc., pioneers of the controversial "flying wing," when La Motte T. Cohu, general manager of the firm, disclosed a shift-over in production to a "new Northrop designed airplane with many new tactical features."

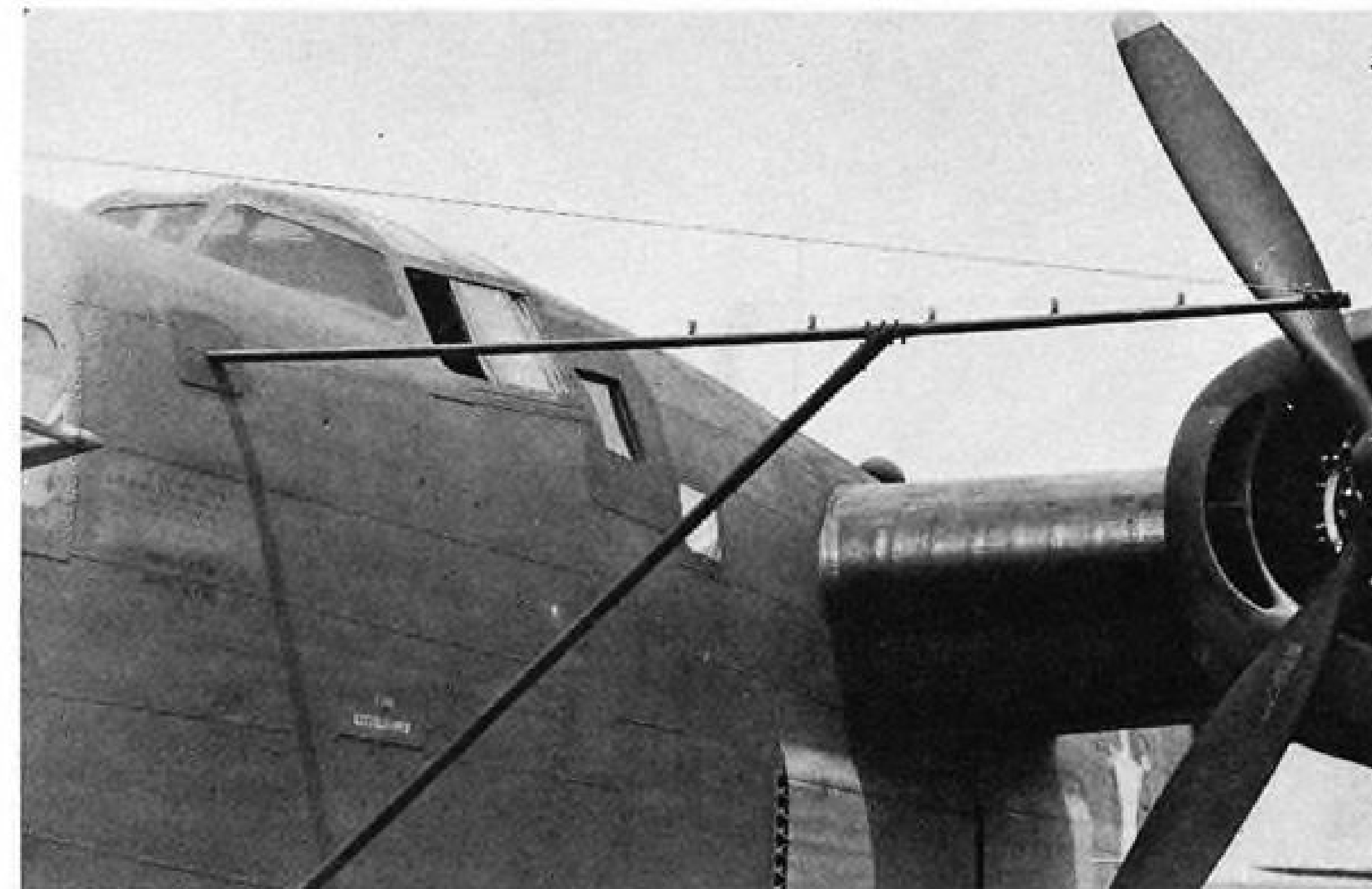
August Plane Record

There is good news from the aircraft production front—August production set a new high and was substantially above July's announced figure of 7,373.

► **Off Plateau**—The August production is considered all the more remarkable because of the manpower and other problems now besetting the industry. And it definitely moved production off the disconcerting plateau which had WPB officials worried.

► **Quota Unreached**—While the month's production was encouraging it should be said, before the industry's constant critics go to work, that it was under the August schedule—but that is nothing new. The August schedule figure probably will not be reached before the end of the year.

Next year's aircraft schedules are being formulated on a 10,000-a-month basis.



AAF DEVELOPS A PROP ICER:

Engineers at the AAF Materiel Command, Wright Field, have devised this trigger on a Liberator to produce formations of ice on whirling propeller blades while the plane is in flight. Water stored in tanks located in the bomb-bay is thus sprayed into the No. 2 propeller. This makes possible study of ice formations at high altitudes which otherwise could rarely be observed. Camera, installed inside plane, is aimed at prop through specially built window, its shutter synchronizing with prop speed to take detailed photos of formations and rapidity with which ice builds up and is thrown off.

► **Beat Output Quotas**—Cohu, in reporting that Northrop was beating production schedules, said that during June, July and August, their assembly lines had been changed over from production of the A-31 dive bomber to the new plane. He added that Northrop was delivering this new type plane to the Army on schedule.

► **Critics Answered**—He took occasion to answer critics of lagging production, pointing out that the manufacture of a two- or three-year-old airplane in increasing volume presents no great difficulties provided there is an adequate manpower supply and materials flow through on schedule.

► **Production — Research** — Cohu pointed out that entirely different problems were involved in stepping up production schedules and continuing improvements on existing models while engineering and setting up for new types. He emphasized that the aircraft industry is the only one in which production and research are indissolubly linked.

He said that hundreds of thousands of man-hours of production layout, tooling and engineering are involved in getting into production of a new airplane, designed to surpass anything in the air of its particular type.

► **"Deadlier Type"** — The executive disclosed no details of the new airplane except to label it a "new and deadlier type."

Cohu reported that in the Northrop fiscal year which ended July 31, "our deliveries amounted to approximately \$70,000,000, an increase of more than 100 percent over the previous year's \$33,000,000."

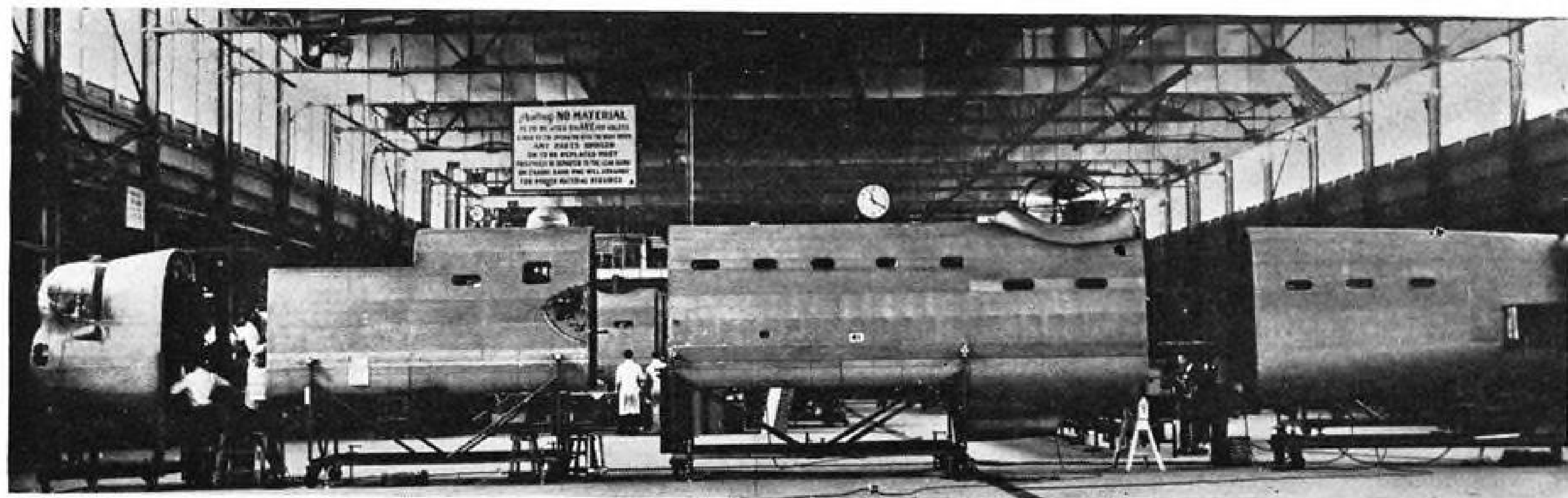
► **New Records in '44**—"From here on," he said, "the schedule on our new Northrop production model steps up so that in the coming year we expect to reach much higher production peaks."

Post-War Airline "Romance" Decried

PCA President says years will be needed to set up world systems.

The public's theories that airlines will be running fast, huge cargo ships at drastically reduced rates immediately after the war or establishing transoceanic super-service, were deflated by C. Bedell Monro, Pennsylvania-Central Airlines president, at a Kiwanis Club luncheon in Washington last week.

► **Nothing New**—"Absolutely nothing new in the way of planes has come out of this war," said Monro.



SHOWS BRITISH CONSTRUCTION METHOD:

This new photo from Victory Aircraft, Toronto, shows section construction of the big fuselage of the British 4-engine Lancaster. No sections are larger than will

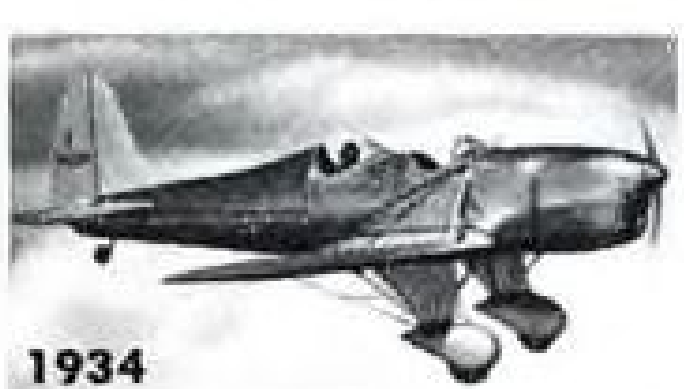
fit on the small 30-ft. freight cars of British railways. All parts of the Canadian craft are interchangeable with those built in England.



1923
RYAN-STANDARD cabin plane; pioneer passenger airliner.



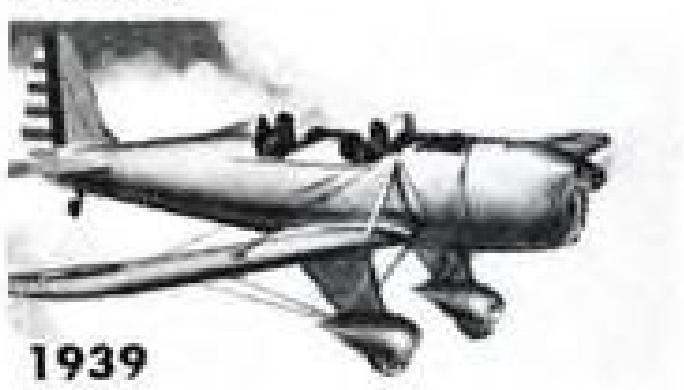
1925
RYAN BLUEBIRD, cabin monoplane, forerunner of "Spirit of St. Louis"



1934
RYAN S-T metal-fuselaged primary trainer, led trend to low-wing types.



1937
RYAN S-C, cabin plane for private-owner use, featured all-metal construction.



1939
RYAN STM, first low-wing primary trainer types (PT-16 and PT-20) used by Army.



1941
RYAN STM-S2 seaplane, exported for training Naval pilots.



1943
RYAN PT-25, superbly engineered plastic-bonded plywood trainer.

Earth-Bound No Longer

YOUNG HAWKS OF CHINA'S GROWING AIR FORCE FIND THEIR WINGS IN RYAN PLANES

Today the eyes of young China are in the sky. Chinese air cadets are now on an even footing with the flyers of other nations.

Ryan is proud of the part played in this by its military trainer airplanes. These sleek, highly maneuverable planes—similar to the Ryans in which American Army pilots get their first training—are being used in China, not only for primary training, but also for basic and transitional instruction.

Since 1940 Ryans have been reliable "work-horses" for the growing Chinese Air Force. Here, as elsewhere, Ryan planes in military service have proved

that RYAN BUILDS WELL.

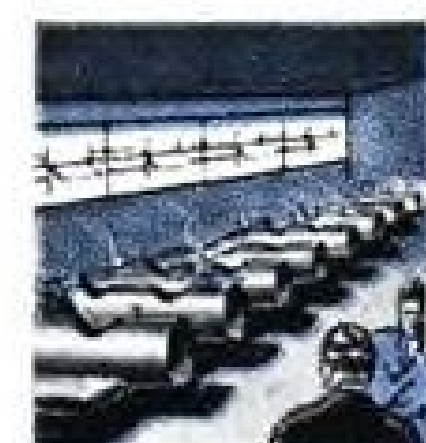
Ryan's current activities include the engineering, development and manufacture of the most advanced type combat airplanes for the armed services of our country, detailed information regarding which is restricted.

"ESSENTIAL POINTS IN POST-WAR AVIATION." A comprehensive, but realistic, interview with T. Claude Ryan, President of Ryan Aeronautical Company, is now being published under the above title. A man who has been making airplanes for 20 years, gets down to the basic consideration in aviation following the war—one which will affect all business. A copy gladly sent at your request.



RYAN

Rely on Ryan to Build Well



RYAN BUILDS WELL
Ryan construction, proven in aviation's pioneer days, now proven in war, will tomorrow produce safer, more useful peacetime aircraft.



RYAN TRAINS WELL
Ryan School of Aeronautics, famous peacetime air school, now training fine U.S. Army pilots, follows one creed: Thoroughness.



RYAN PLANS WELL
Modern engineering + flying experience. Typical result: Ryan exhaust manifold systems are now used on the finest planes of other manufacturers.

RYAN AERONAUTICAL COMPANY, SAN DIEGO—MEMBER, AIRCRAFT WAR PRODUCTION COUNCIL, INC.

Ryan Products: Army PT-22s; Navy NR-1s; Army PT-25s; S-T Commercial and Military Trainers; Exhaust Manifold Systems and Bomber Assemblies.

"The only thing new from a commercial aviation standpoint is the development of radar."

► **Dream Ships**—Mr. Monro blamed the airlines themselves and the manufacturers for building up "romance" ideas and pointed out that it would take years to perfect the huge cargo ships and flying boats on a transoceanic service that are being dreamed up.

► **Lobbying**—He decried ambitions of surface transportation industries to combine post-war air transportation, and warned: "Surface transportation men don't seem to realize that it takes years to develop air service, but meanwhile they are trying to tie up post-war air transportation by lobbying for regulations in Washington that will influence airlines but won't hurt surface transportation."

CAB Hints Action on Foreign Routes

Suggests industry submit outline of services to be needed most.

The Civil Aeronautics Board, in official recognition of international air transportation problems, has disclosed it is making an informal study of international routes "likely to be especially important to the United States in the post-war period."

► **Views Invited**—Interested persons were invited in the board's statement to submit written views on routes appearing to them desirable, and the suggestion was made that these would be "of maximum value" if accompanied by supporting analyses and data.

Submission was requested before Oct. 1, and the board made it clear that those who answered its questions on international routes last May need not duplicate their answers now.

► **Basis for Applications**—The announcement emphasized that while the current study is informal, it "will be used later as a basis for formal consideration of applications for certificates of public convenience and necessity involving international services.

"The study," the board pointed out, "does not involve any consideration of the identity of the particular carrier or carriers by whom such services should be operated, but is directed solely to the question of the routes which would be desirable."

► **World Picture**—This was interpreted to mean that the board is seeking a broad conception at the

outset of the entire international route picture, based on the largest cross-section of views it can obtain, as a factor in determination of the pattern it will follow when it begins actual consideration of individual applications for overseas certificates.

Many of these have been filed, and the extent and variety of the routes they ask indicates some of the applicants are not too hopeful of early consideration by the board.

► **Duration**—However, the more practical of these may not have to wait until the end of the war before they receive official attention. This is apparent in the fact that no release or statement by the CAB has referred to the duration of the war as a period during which applications would not be considered.

► **Pogue**—Another evidence to that effect came in a recent radio comment by Chairman L. Welch Pogue, when he said "the law requires that the Civil Aeronautics Board shall hold public hearings on these applications. The war which, of course, holds top priority, stopped such hearings after Pearl Harbor.

"These applications have been and are on ice." But he added, significantly, that "regardless of when the war ends, they will be unfrozen the minute the over-all war program permits that to be done."

► **Flexible Policy**—Another example of the board's effort to maintain a flexible policy in this regard was its announcement early in the summer of restoration of domestic new route applications to the active calendar.

"Questions of international policy," this earlier statement said, "make consideration of foreign routes inopportune at this time." The explanation was made, however, that this situation would prevail only "until such time as changed circumstances make further relaxation appropriate."

Convair Training Plan

Engineers without aviation experience will take paid course.

Fort Worth Division of Consolidated Vultee announces that engineers without previous aircraft experience will be accepted for a paid aeronautical engineering familiarization course to be given with the cooperation of Texas A. & M. College, beginning Sept. 13, for six weeks. Enrollees will receive \$200 per month and, upon successful completion of the course, will be assigned to design drafting or stress analysis groups in Convair's Fort Worth plant at salaries of \$292.50 on the basis of a 48-hr. week.

To Fire Absentees

Curtiss-Wright Corp. airplane division at Buffalo has announced that chronic absentees at its plants will be discharged and not rehired. Thirty percent of the absences in the airplane division plants were caused by 5 percent of the employees and 50 percent of the absences by less than 15 percent.



B-17'S NEW FANGS:

Just released is this photo of the Boeing Flying Fortress' new frontal positions for the .50-caliber machine guns. In all, 13 guns defend the B-17, with those pictured being a special answer to recent tactics of Nazi pilots who sweep in head-on.



MARAUDER BATTERS NAZI GLIDER:

A giant German ME.323 power glider is straddled by a stream of cannon shells just before being destroyed by a Martin Marauder of the RAF near Cap Corse. This picture, considered by the British Information Services one of the war's most remarkable, suggests that the glider was a transport loaded with troops, as Tommy guns were fired at the attacking Marauder from the plane's windows.

Interest in Future Airports Growing

Administrator Stanton reports national concern for post-war problems at commercial bases.

A growing interest in airport development, manifested by alert state and municipal aviation officials, is paralleling the increasing consideration being given post-war flying prospects in the operating end of the aviation industry.

This interest was noted by Charles I. Stanton, administrator of the Civil Aeronautics Administration, at the recent Midwest Global Air Conference at St. Paul.

► **Local Airports First**—The conference, paradoxically, did not devote much attention to global expansion, said Stanton, who discussed the airport situation at length in an address before the meeting. Twenty-one states were represented among the 400 who attended, and state aviation commissions as far away as Tennes-

see and Louisiana sent delegates. Mayors and city engineers were prominent.

► **Expansion Projects**—Attention focused, instead, on expansion problems for municipal airports, in obvious anticipation of extension of existing airline routes and prospective feeder and pickup services. A concomitant question was the one on financing—whether the municipalities could look forward to state or Federal aid, or must finance their own development of landing areas to take care of the expected increase in air traffic.

► **How Big?**—The question followed the line set out in the many requests for information the Administrator said the CAA has received from all over the nation. His interrogators wanted to know how large airports should be for various size towns—whether they should be laid out on a big scale at the start, or might be constructed on a smaller field to which more land might be added. Frequently he was asked "how fancy they should be to start."

► **Location**—Generally, Stanton answered that a municipal center of fair importance should select an airport site that could be developed extensively, though initially it need not be built to satisfy more than immediate requirements. For secondary airports in the biggest cities, he suggested planning for Class 2 types, located with a view to population centralization. Small towns should develop their airports, he suggested, with an eye to accommodating feeder lines.

► **Highway Pattern**—In his prepared address, Stanton suggested that the pattern for the nation's airport development might well emulate the federal aid highway program. He told the conference that the field will provide a "splendid chance for the federal government to prove its good-will by establishing a policy which for more than 20 years has proved its practicability in the field of highways."

Three Airport Grants

WPB reinstated three CAA airport projects last week. One airport at Aberdeen, S. D., has been permitted to spend \$250,000 on an extension of runways and existing facilities. At Grand Forks, N. D., \$344,669 will complete an airport started by WPA. Seven hundred thousand dollars will be spent on a municipal airport at Burlington, Ia.

All these projects must be requested by the Army or the Navy.

Shadle Calls for Uniform State Laws

CAA General Counsel says status of aviation as interstate agency must be determined.

Existing state aviation laws, says Webb Shadle, general counsel for the Civil Aeronautics Administration, must yield to uniformity if the progress of aviation is to continue.

Even a "bad body of law," if uniform, would "remove conflicts and the air carriers would know the worst to expect." But, he pointed out, a uniform state sales act has been adopted by only 30 states since its submission in 1907.

► **Insurance**—Shadle discussed aviation insurance in the light of pending legislation before the American Bar Association at Chicago.

He declared it "fair to assume that if the carriers can insure against principal risks and the insurance carried is financially sound, and the machinery for covering risks and meeting claims functions, then, to that extent, the growth and development of air transportation will be assured."

► **Revolving Fund**—He predicted Congress would consider only the insurance investigative and reporting procedure set forth in Committee Print No. 3 of the Lea bill to amend the Civil Aeronautics Act, still in the House Interstate and Foreign Commerce Committee, rather than act on another bill introduced by the California Democrat to provide for

air and war risk insurance from a government revolving fund.

► **Interstate or Intrastate**—One thing must be determined, Shadle told the lawyers, before any nationwide liability program can become effective.

"The states and the federal government," he said, "must decide whether aviation shall remain part interstate and part intrastate, or become all interstate." The government now has interstate jurisdiction.

► **Defines Air Navigation**—Here again he referred to the latest draft of the Lea bill, which would define "air navigation" as the operation or navigation of aircraft upon any airport in the United States or in the airspace over the United States.

► **Prohibits Restraint**—He cited a section requiring that regulation of air navigation be as nearly uniform as practicable throughout the nation, prohibiting any state from imposition of regulations which would constitute a burden on "air navigation" without consent of the Congress.

► **Fast or Slow**—On the action of Congress, he said, "hinges, in no small measure, the acceleration or deceleration of aviation."

► **Shadle Predicts**—He concluded his address with these predictions:

That the federal government will exercise jurisdiction over the airspace of the United States; that uniform liability will be established for air carriers; that therefore there should be no necessity for the federal government to enter the aviation insurance business, unless to aid domestic companies in reinsurance.



NEW FIRING RANGE AT WRIGHT FIELD:

Captured .30-caliber enemy machine gun bullets as well as 37-mm. cannon shells thump into the huge new armament firing range at Wright Field. At the end of the range, above, is a backstop for 500-yd. tests. In the center is the 200-yd. test backstop. An Army bomber is prepared in the foreground for test firing of its nose guns, while at the right, a top turret, mounted on a truck, aims its guns at a closeup target.

TELLING THE WORLD

► Effective November 1 advertising for Transcontinental & Western Air, Inc., will be handled by Arthur Kudner, Inc.

► Fourth advertisement in the current campaign of the Lycoming Division, Aviation Corp., is built around a "Secret Weapon" theme (American ingenuity). Copy has run this month in 15 newspapers, in three Sunday magazine sections, and *The Pathfinder*. McCann-Erickson is the agency.

► Howard Aircraft Corp. of Chicago and St. Charles, Ill., is planning an immediate promotional campaign to familiarize more people with its name and products. One basic factor behind this decision is that available labor in adjacent territory has been absorbed and the company is forced to go farther afield for additional employees. Another is the desire to help tie in its large list of subcontractors. H. C. Vogel, account executive of Reincke-Ellis-Young-green & Finn, will handle the campaign. Howard Aircraft is a prime contractor for Army & Navy and has underway a new type of ambulance plane which will be produced for the Navy at the St. Charles plant.

► At the Kellett Aircraft plants any employee who has his picture taken for their house organ, *Kellett News*, is presented with a print of the picture in a paper album frame, heavy enough to be able to stand up on a table or mantle. Opposite the picture is the following inscription: "With sincere appreciation of the job you are doing to speed America's Victory."

Air Express Marks 16th Anniversary

September 1 marked the 16th anniversary of commercial air express with the air cargo service growing from 17,000 shipments in 1928 to more than 1,405,000 shipments last year.

Today's inter-city schedules are twice as fast as those 16 years ago, while rates are one-third what they were in 1927.

► **International Air Express**—Flown between the 350 U. S. and Canadian airport cities, and Central and South American, Mexican, Bermudian and Alaskan points, the total was 87,420 shipments in the first six months of the year, 5,862 shipments more than last year.

THE AIR WAR

COMMENTARY

U. S. Leads World in Radial Engines; New V-Type Liquid Designs Near

Navigator, in review of Allies' and Axis' power plants, warns of advanced developments in German craft.

Announcement that the new type Rolls-Royce *Merlin* aircraft engine has been in production for several months at the Packard Motor Car Co.'s plant and is being used to power the new model of the P-51B *Mustang* fighter is a reminder that in a combat plane the engine is the prime consideration. In the race to attain and hold air supremacy how does America stand today?

► **Air-cooled Leaders** — In the field of air-cooled radials there is no question anywhere that this country leads the parade. The Pratt & Whitney R-2800 or *Double Wasp* was the first 18-cylinder 2,000 hp. engine to reach quantity production anywhere. It powers a great variety of Army and Navy fighters, bombers and transports, including the Navy's Vought F4U *Corsair* (also built by Goodyear and Brewster), Grumman's new F6F *Hellcat*, full performance data on which promises to be sensational, and Army Air Forces' high-flying Republic P-47 *Thunderbolt*; Martin B-26 *Marauder* and Vega *Ventura* (B-34, PV-1), fast, powerful twin-engine bombers; and the C-46 Curtiss *Commando* which carries a bigger load at a greater speed up to 1,500-mi. trips than any other 2-engine transport.

► **18-Cylinder Job** — Wright Aeronautical's R-3350 Duplex *Cyclone* is a somewhat larger 18-cylinder job and has been used to date on Consolidated's model 31 flying boat, the Martin *Mars*, and Army's Douglas B-19 and Lockheed *Constellation*. There has been renewed interest in the first two of these ships as cargo-transporters in the Navy's far-reaching Pacific operations.

In England the 18-cylinder Bristol *Centaurus* has been under development for some years, but no news has broken as to its use in any bomber or transport to date, although the 14-cylinder *Hercules* has been successfully used in many of Britain's best bombers and fight-

ers, including the *Stirling*, *Wellington* and *Beaufighter*.

► **German Version** — The same is largely true of Germany's B.M.W. 802, an 18-cylinder version of the highly efficient B.M.W. 801 which powers the crack Focke-Wulf 190 fighter, the Dornier 217-E 1, bomber, the newest model of the versatile Junkers 88 day-and-night fighter-bomber (giving this formidable ship sharply improved performance above 30,000 ft.), and the Junkers 290 heavy transport. This 14-cylinder engine is roughly equivalent to Wright's R-2600 *Double Cyclone*, both rating at about 1,700 hp. for take-off, and 1,600 for operations.

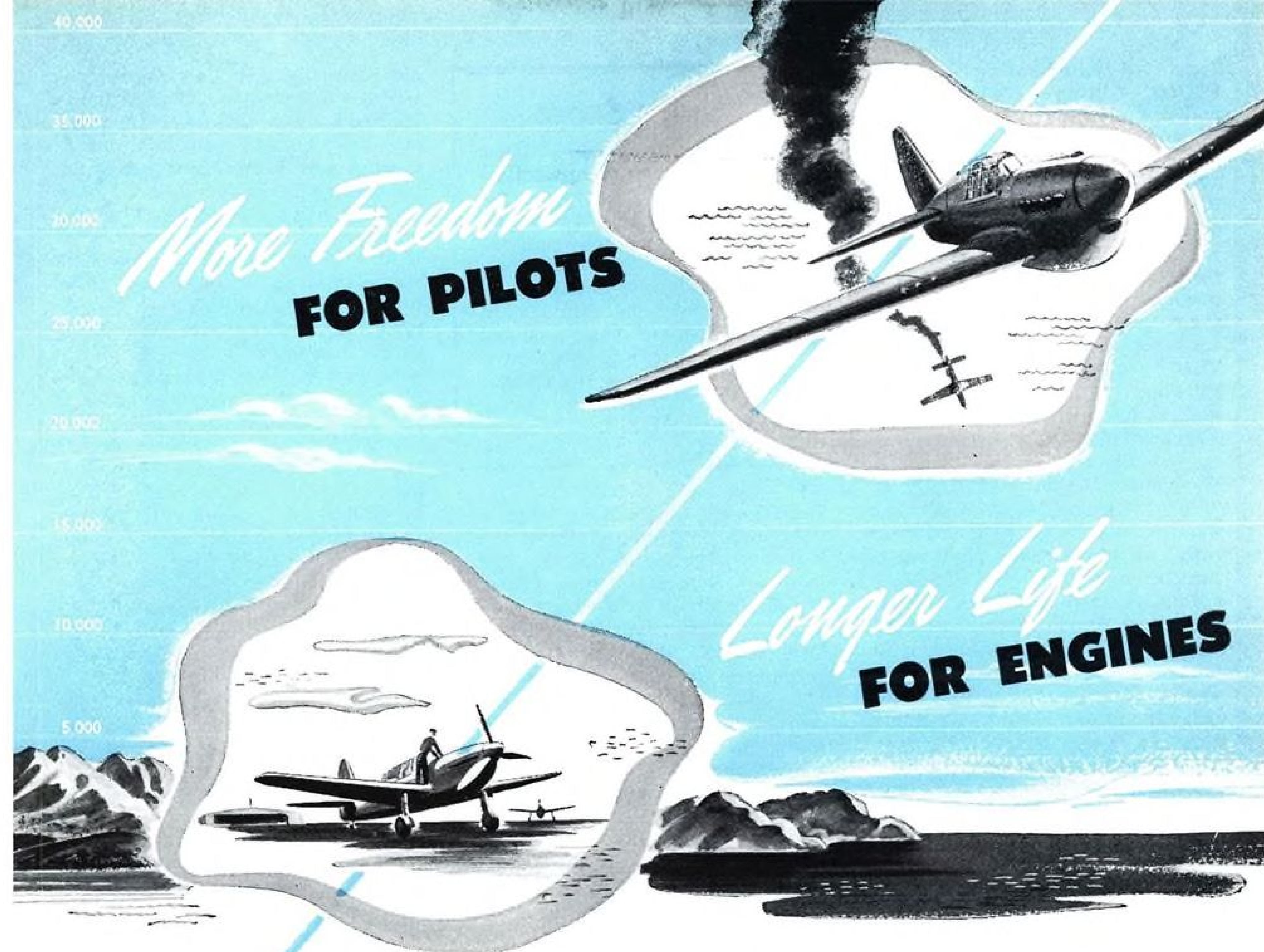


U.S. BULLETS RIDDLE AIRACOBRA:

American fighting planes are being riddled with bullets from American guns at the Wright Field armament laboratory, to test the effectiveness of concealed armor plate. The planes, which have been salvaged after crashes to serve as targets, are subjected to heavy firing ground tests from various caliber guns and aerial cannon. The courses taken by bullets are studied by armament technicians and reports are prepared for reinforcing armor, or placing of additional armor. Above, Technician C. M. Erwin examines bullet slashes in a P-39 Airacobra consigned to target work after a crash.

The 18-cylinder BMW is reported as powering an advanced Focke-Wulf 290, and Do-217 E 2, both of which have flown, but neither reported as in combat operation. Britain's 24-cylinder H-shaped liquid-cooled *Napier Sabre*, with sleeve valves, is a distinctive job. Rated at 2,400 hp. for take-off, 2,000 operational, it powers the husky *Typhoon* fighter.

► **Lag in Liquid-Cooled Progress** — There is no doubt that this country's success with air-cooled radials allowed us to fall a bit behind in developing the V-type liquid-cooled engine. Not so far as is commonly supposed, however. While Germany was secretly working along with their inverted V-12 Daimler (or Mercedes) — Benz, DB-600, which came out in 1934 at 650 hp. and Britain was developing the Rolls-Royce *Merlin* V-1650 which turned up 900 hp. in 1935, the Army Air Corps had a redesigned version of the Navy Allison V-1710 pass a 50-hr. test at 800 hp., an improved model turning up 1,000 hp. in 1935. The exacting hurdle of 150-hr. test was not passed until March 1937, installed in the Curtiss XP-40 in 1939, with a 1,090 hp. rating, but all early deliveries had to be held back to around 950 hp. Further improvements resulted in a 150-hr. test in



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Air combat tacticians say, "Leave the pilot free for fighting." Freedom from the constant manual operation of engine controls, and safer, more efficient engine operation is the purpose of the Simmonds-Hobson Automatic Engine Controls.

This outstanding engineering development constitutes an important step toward relieving the pilot of routine. By automatic control of such essentials as manifold pressure and mixture, it acts as a third hand for the pilot, giving engine protection and longer life. The sensitive unit maintains a selected setting through varied maneuvers and altitudes, thus eliminating the manual operation of cockpit control and assuring more efficient performance.

Proven in service and now in production for the fighting planes of the United Nations are units which provide automatic control of manifold pressure (boost) and mixture. With even more far-reaching designs now in the experimental stage, Simmonds offers its services to the industry as headquarters for Automatic Engine Control problems.



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Aviation—A Progress Report

The Lessons of War Become the Key to a Richer Peace

TUNISIA, PANTELLERIA, SICILY — stepping stones to momentous events! But that is not all. For they spell out across the blue waters of the Mediterranean a pattern of invasion that has progressed far since last summer's first major Commando operation against the French coast.

From Dieppe, you remember, too many of the raiders never got back. But in Tunisia, and on through Sicily, the Allied might plowed inexorably forward, winning objective after objective at a surprisingly low cost in casualties. Air supremacy over the battlefield? Yes. But we have learned, too, how to save lives and shorten the war by strategic air bombardment as a prelude to invasion.

Thus the bombardment plane—rarely seen by the doughboys on the fighting fronts—is destined to save their lives by hundreds of thousands in the decisive attacks that are to come. This fact is confirmed by the cold calculations of the responsible strategists. It will give renewed courage and confidence to every member of the armed forces and of the home fronts throughout the United Nations.

For instance: thorough strategic bombardment of an objective reduces by nearly fifty per cent the surface forces required for invasion. Anticipated losses are reduced from more than fifty per cent of the original ground force to about twenty per cent. Precision bombardment—as used on railroad objectives in Rome—reduces this percentage of loss still further when it is followed by offensive action on the ground.

The inference is clear. Effective prosecution of the war will require smaller ground combat forces and much larger air forces than some of our strategists once thought.

Our most urgent need, then, is for ever-mounting fleets of aircraft. And, fortunately, this is just what we are getting. The American aircraft industry now is producing as many airplanes as all the rest of the world combined. In 1938 we made 100 planes a month. Now we make three times that many in a single working day. By the end of 1943, our production rate will be about 10,000 a month.

But at this stage of the war, types of planes are more important than mere numbers. In the early months the program was heavy, and properly so, with single-engine trainers. Then, as training planes accumulated, the emphasis shifted to heavier types. Now we are turning out multi-engined bombers at a rate that is the envy of

the entire world. Some months ago the President revealed that we were manufacturing 500 long-range bombers every month. The figure was conservative even then. And soon we shall be producing planes of this one type at a rate adequate to replace the normal losses of a fleet of at least 1000 American heavy bombers operating as continuously as the weather will permit.

A glimpse of the poundage production may help us still further to evaluate the miraculous achievements of the aviation industry as a whole. It was 89,000,000 in 1941 . . . 291,000,000 in 1942 . . . 911,000,000 in 1943 . . . and 1,417,000,000 in 1944

This is the fifteenth of a series of editorials appearing monthly in all McGraw-Hill publications, reaching more than one and one-half million readers. They are dedicated to the purpose of telling the part that each industry is playing in the war effort and of informing the public on the magnificent war-production accomplishments of America's industries.

—if we need it. There you have the magnificent record of the American aircraft manufacturing industry—a monument to the cooperation of industry, labor, government, and to all-out teamwork between the aviation industry and those other industries which have converted their facilities to the manufacture of airplanes.

What of our enemies and our Allies?

German production probably has flattened out at 2500 a month—with downward revision in immediate prospect. Japan may be able to produce as many as 1000 planes a month—until we get our new long-range super-bombers in sufficient numbers to whittle down that figure. Italy may be able to turn out her 500 a month—for a little longer. At best the maximum Axis monthly total is 4000.

Add to our monthly score of nearly 8000, a total of approximately 4000 for Britain, Canada and Russia, and the United Nations score comes to 12,000 monthly. There we have a three to one advantage for our side. And between our own rising production and the brilliant operations of our bomber commands we should soon boost the ratio well above that figure. Therein lies the certainty of continued and growing air superiority over all the far-flung battlefields.

The critics of American airplane quality have been silenced ever since the ratio of enemy combat losses to our own on bombardment missions surpassed four to one. In the Pacific where our heavily armed and armored planes are knocking off the desperately stripped racing craft of the Nipponese, enemy losses often run as high as eight to one or more. In the Mediterranean theater, where the Italians were abandoned by their Allies, the story is much the same. Only in the well-defended homeland of the Nazis do we sometimes drop below the average, but even in those rare instances the ratio is still well in our favor and the effectiveness of our bombardment is adding constantly to our margin.

* * *

Behind the production lines the battle of research and design still rages. In many a laboratory night-shift, on many a secret test field, new and terrible surprises for the enemy are in the making. Super-bombers, destined for Tokyo, have long since passed

out of the design stage and the Japanese may learn about them almost any day. New discoveries, designed to sow swift and silent devastation, are farther along than our enemies believe. No longer will fog or storm or night be permitted to fight on the side of our foes.

The men of science who are toiling to broaden the horizon of our knowledge stand today on the threshold of discoveries that have been sought for centuries. New reservoirs of power may soon exert a profound influence in many fields of technology and through them on our way of life.

Once the war is won these new discoveries will be translated into better living. No longer will countless thousands spend their lives within their own communities or countries. New efficiencies in transportation will bring world travel within the reach of many who once had to stay at home. New family vehicles will navigate the skyways as easily and safely as the highways. Already more than a dozen manufacturers of airplanes, ships, automobiles, and electrical equipment are designing, building, or flying rotary-winged aircraft such as the helicopter or autogyro to meet the needs of tomorrow's families. New and safer aircraft of the fixed-wing type are ready for production as soon as materials become available.

The quality that now makes each of our war planes worth so many of those built by our enemies will be translated into the sturdy reliability demanded by peacetime operation. The devices that seek out and find our enemies behind the veil of fog or darkness will, after the war, reduce weather hazards to the point where they will be no greater in the air than on the ground.

Science and industry will continue to do their jobs and do them well. But if the world is to be made a better place for men to live in, statesmanship must not fail to do its part.



President, McGraw-Hill Publishing Company, Inc.

the special committee on Utilization of War Plants and Surplus Property is being held in Washington on Sept. 9 and 10, to make a preliminary survey of the scope and extent of the problem.

Members of the committee include officers of companies engaged in the production of raw materials, war supplies, industrial machinery and transportation equipment, building and operation of ships, manufacture and distribution of consumer goods, and banking.

► **Voorhes Chairman**—Among the 27 men who have accepted invitations to serve on this group is S. W. Voorhes, staff assistant to the president of Lockheed Aircraft. Voorhes is presently serving also as chairman of the Economic Development Committee set up by the Aeronautical Chamber of Commerce to study

post-war planning. Albert C. Mattei, president of the Honolulu Oil Corp., San Francisco, and a vice-president of the U. S. Chamber of Commerce, is chairman.

► **Excess Stock**—Pointing out that the accumulation of excess stocks of some kinds of war material and supplies is inevitable in a highly mechanized war, the Chamber hopes to work out before the close of war the problems of disposition of surplus and the efficient utilization of the great "special-purpose" manufacturing plants.

► **Problems Invited**—All businessmen are invited to bring to the attention of the committee phases of the problem that are of particular concern to them. Communications should be addressed to T. W. Howard, manager of the Chamber's department of manufacture.

U.S. Plans National Service Act, Informed Observers Believe

Drafting of labor appearing more likely daily, but only after advance "educational" campaign to soften the shock.

By SCOTT HERSHEY

There are increasing signs that the government's answer to the manpower question will be a National Service Act.

► **Labor Draft**—That actually means the drafting of labor. That conclusion, as yet unverified, does not mean that the important announcement expected from the Office of War Mobilization, headed by James F. Byrnes, is going that far. The announcement, which was scheduled for release over Labor Day—and timely it is if it comes then—probably will be merely the beginning of an educational program to prepare the nation for a National Service Act. That goes, regardless of the nature of the announcement.

► **Answer Secret**—The nature of the immediate answer to the problem was a closely guarded secret as this was written. It is known, however, that the various government agencies that deal with manpower—and there are many—have all been dropping their suggestions and proposals into a common pot.

These suggestions and proposals have been stirred, sifted, strained and cooked in search of a combination of ingredients which will be digestible to war contractors and the public alike.

► **Buffalo Plan**—Among other proposals much in discussion is the so-

called Buffalo plan. This plan, much favored at the moment by officials who are hesitant about sponsoring a National Service Act, involves a Community Leadership program. Under this, a "neutral" chairman is selected for a committee which represents labor and management. The committee decides just where the available labor in a community shall perform. It involves, too, the business of priority industries—that is—industries producing vital and prime products.

► **Closed Industries**—Government officials are prepared to carry this to the extent that industries not involved in No. 1 vital production will be closed. It sounds high-handed and it is, but if the War Production Board withholds materials priorities from any manufacturer it would be difficult for him to perform.

► **Contract Withdrawals**—Another possibility presents itself—the withdrawal of contracts from certain areas in which there are labor shortages. In spite of complaints from such areas, the government not only is prepared to do this, but is actually waiting for the opportunity.

► **Male Inventory**—One indication of the possibility of a National Service Act is seen in the proposal for a

nation-wide inventory of all men registered with Selective Service. This survey is tentatively set for Sept. 16 to 30. It is a major step in the program to draft possible registrants—not occupationally or otherwise deferred—before the scheduled induction of pre-Pearl Harbor fathers on Oct. 1. Most Washington observers believe that Congress will put a stop to that when the legislators go back into session the middle of September.

► **Into Congress' Lap**—And that is a further indication that the whole manpower problem, regardless of announcements from such important people as Assistant President Jimmy Byrnes, will drop into Congress' lap.

► **Detour**—Many Administration leaders look to the Buffalo plan, the so-called Community Leadership plan, as a means of avoiding National Service, or at least the last step before action for which the nation is not yet prepared.

► **Drastic Action**—At the same time, some such drastic action is needed if the aircraft industry, particularly on the Pacific Coast, is to meet the schedules which have been set.

San Francisco May Get Chinese Plant

San Francisco probably will be the site for the building of Douglas A-20 attack bombers by Chinese-manned China Aircraft, Inc.



China Aircraft Conferees: Col. Lynn Chu of the Chinese Air Force looks over the shoulder of Lt. Col. G. H. Moriarty, AAF Materiel Command official, at plans for China Aircraft, Inc., which will be located in California with the aid of Defense Plant Corp.



PRODUCTION OFFICIALS CONFER WITH AWPC:

Charles E. Wilson, vice-chairman of WPB and chairman of Aircraft Production Board, is shown here with APB and other government officials during a meeting in Los Angeles recently with West Coast aircraft executives, members of the Aircraft War Production Council. Left to right: Brig. Gen. Ben W. Chidlaw, AAF Mate-

riel Command; Rear Adm. E. M. Pace, Navy Bureau of Aeronautics; LaMotte T. Cohu, president of Northrop Aircraft, Inc., and of AWPC; Mr. Wilson; Robert P. Patterson, Under-Secretary of War; Lt. Gen. William Knudsen, War Dept., and T. P. Wright, director of ARCO, of the APB.

► **Chinatown**—This is anticipated on the West Coast in view of the fact that California's Chinese population is centered in San Francisco's Chinatown, and location of the proposed factory elsewhere in the state would necessitate the dislocation of large numbers of Chinese families in the San Francisco area to obtain the "large number" of Chinese to be sought for the factory.

► **Strompl Heads Project**—George Strompl, recently in charge of a Douglas Aircraft Co. foreign project, has been returned to the factory's Santa Monica headquarters to supervise preparations for the China Aircraft project.

► **Immediate Training**—Strompl said that large groups of Chinese will be brought to the Douglas Santa Monica plant immediately for sheet metal training pending the opening of China Aircraft's factory.

Brazil to Build Ranger Engines

Ranger Engine Division of the Fairchild Engine and Airplane Corp. has signed a contract with the Republic of Brazil under which Ranger engines will be built in the South American country to power the Fairchild M-62, a primary trainer identical with the U. S. Army's PT-19, already under production there.

► **Agreement**—Under the agreement, Fabrica Nacional de Motores, the Brazilian government's recently completed engine plant, will produce the six-cylinder Ranger inverted in-line aircooled engine, 175 to 200 hp, making use of drawings, manufacturing data, jigs, tools and fixtures provided by Fairchild.

Bern Walks Out as Kaiser-Hughes Cargo Plane Project Manager

Kenneth Ridley, Hughes chief engineer, takes helm as announcement reveals Nov. 15 completion date is revised.

By SCHOLER BANGS

Howard Hughes and Henry J. Kaiser envisioned an end to the "family trouble" which threatened their \$18,000,000 "biggest flying boat" project in Culver City, Calif., when they accepted the resignations of the program's two top executives—Edward G. Bern, general manager, and former American Airlines vice-president, and John W. Le Duc, works manager, previously in charge of development of Emerson Electric Company's war industry plant at St. Louis.

► **Ridley New Chief**—Into the front office, with full charge of the Hughes-Kaiser flying boat project, went Kenneth F. Ridley, chief engi-

neer of Hughes Aircraft Company. Kaiser is understood to have told Hughes that he wants the sportsman-flyer-manufacturer to carry the project through to completion and that he would leave in Hughes' hands all future determination of operating policy.

There is no indication, however, that Kaiser intends to withdraw completely from the Hughes-Kaiser alliance, as has been widely rumored.

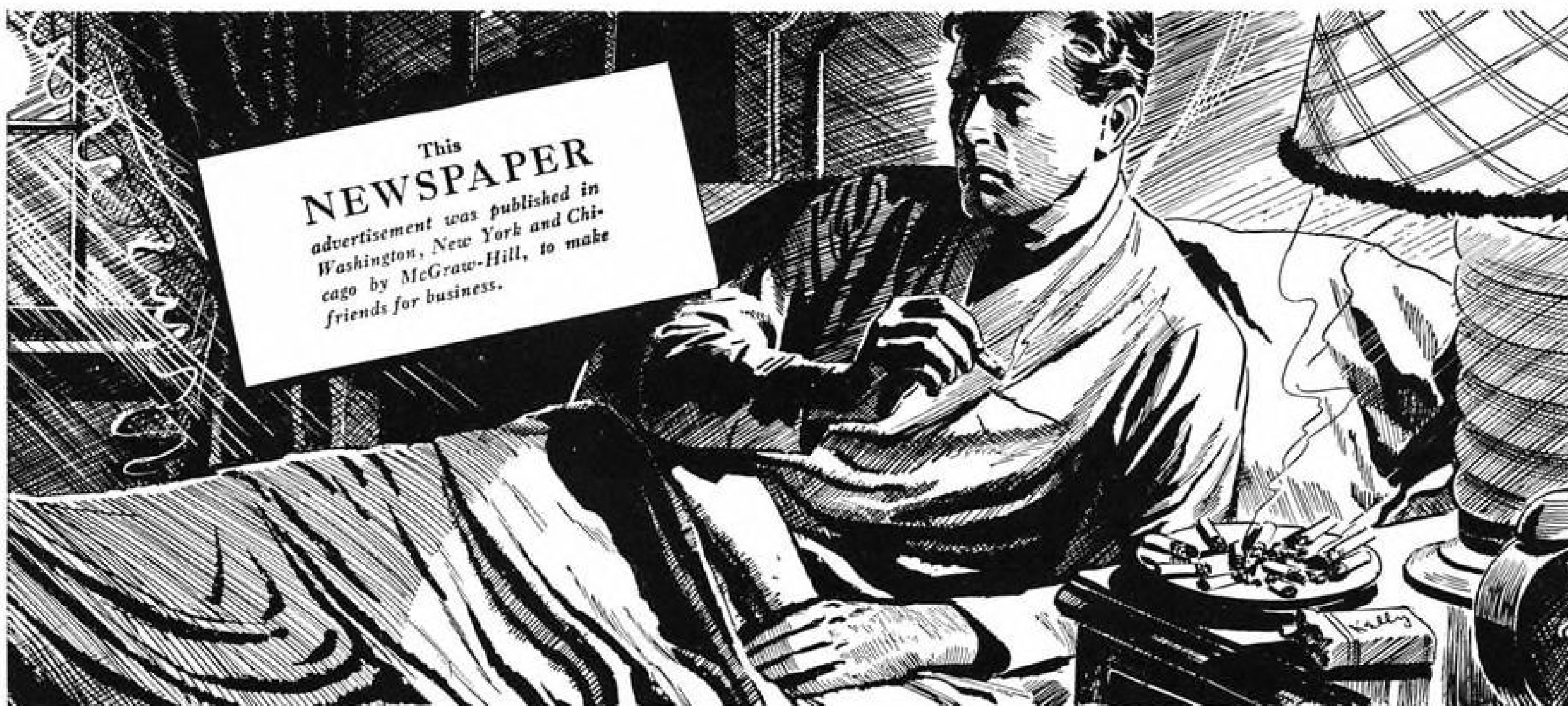
► **Rumors**—Some of these rumors arose from the evident dissatisfaction on the part of veteran Hughes associates, soon after Le Duc was brought to Culver City a year ago to direct all preparations from ground to factory roof, for construction of the first of the three widely-heralded, if skeptically received, eight-engine flying boats. Bern, sales manager for Hughes in Washington for a year and then manager for Consolidated Vultee plants in the East for about a month, went to Culver City as Hughes' general manager about two months ago.

► **Bern Balked**—Confronted recently with the prospect of having several departments of the boat project shifted from his control to Ridley, Bern was said to have balked, then resigned. And with him walked Le Duc.

"It was thoroughly amicable,"

Largest Propeller

The world's largest four-blade warplane propeller—a giant, electrically controlled Curtiss hollow steel type developed by Curtiss-Wright, is currently on exhibit at the Museum of Science and Industry in New York City. The propeller, which measures 16 ft. 8 in. in diameter and weighs approximately 800 lb., is said to exceed in size anything yet produced by the enemy.



Have you ever been out of a job?

What you can do

The best way to insure good jobs and better living is to create an environment favorable to continuous industrial progress.

The best way to insure healthy industrial progress is through a nation-wide understanding of the fact that we live better through doing more work in less time.

Nation-wide understanding of that fact will result in laws that encourage industrial progress.

Nation-wide understanding always will be a will-o-the-wisp, unless each business man does his share of: (1) Understanding his own responsibilities in maintaining industrial progress; (2) Explaining the relation between *good* business and good living to his employees and neighbors.

The newspaper advertisement reprinted here is McGraw-Hill's share in the job of explaining the source of good living. It has appeared in Washington, New York and Chicago, as well as in all McGraw-Hill publications. It is available, for use over your own company signature, in your plant city. A mat, six-column size for newspaper reproduction, will be sent to you upon request. Booklet reprints are also supplied at cost (\$10.00 per thousand).

James H. McGraw, Jr.
President

McGraw-Hill Publishing Company, Inc.

IF you have ever been out of a job, and if you had a wife, children and slender resources at the time, then the fattest paycheck will never quite obscure the memory of the days and nights you lived with fear.

Some of that fear lingers in every man's mind, for all have suffered in some degree.

► That's why you hear the words "postwar planning" so often. Americans are determined that, one way or another, they are going to keep our thousands of factories going after the war, so that there will never again be a vast army of unemployed.

As usual, in a democracy, there are two entirely different ideas as to how to make 56 million jobs grow after the war, where only 46 million existed before.

Both kinds of people, who hold these different ideas, sincerely want to make the postwar world a better place for you to live in. They have complicated arguments, backed by lots of figures.

But when you trim all the arguments and figures down, you find that one side believes in DIVIDING jobs to make them go round, and the other side believes in MULTIPLYING jobs so there will be greater opportunity for all.

We believe in the MULTIPLYING plan for making postwar jobs and ask you to believe in it too.

Look back over our history. What made us great? Was it rich soil? Africa's is as rich. Was it

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Have you ever been out of a job? (cont'd)

natural resources? China has them in abundance.

NO, the greatness and the good living of America is the direct product of her genius for doing more work in less time.

Invention is the source of improvement, and *improvement* is the multiplier of jobs . . . when products are improved in service or style, or lowered in price, new customers are attracted and new jobs created.

That's why it is true that good living has its source in industrial progress.

When industrial progress is interrupted, we have a depression, and there is less good living.

When (through courageous investment in new and better products) industrial progress is resumed, we go on to even higher levels of good living.

► If every able-bodied person in America is to have a job, then we must all understand the things that make good living possible, and we must all help *improve* the methods that have given so much good living to so many people already.

For businessmen, that means a constant search for improved methods and machines, a regular year-after-year investment in industrial progress. This means avoidance of such things as speculation in inventories that tend to create booms and depressions rather than consistent progress.

For every citizen, it means a constant search for the best ways and means to prevent and cure depressions.

Businessmen, alone, cannot prevent bad times. It's a job for *every* citizen. Every American can help just by knowing that good living comes from doing more work in less time. If you, and all other Americans, swing on to that fact, the laws that control our rate of industrial progress will be better designed to keep the improvement engine running.

That's where government really can be helpful in postwar planning.

It can encourage the "take a chance" spirit that is the basis of all progress. And it can improve the measures which prevent and cure depression.

At present, our laws are not framed to encourage investment in new and better methods.

Many local, state and national taxes work out in favor of keeping an old machine, instead of buying a new one.

► There are tens of thousands of machines in the country that are over 20 years old. Even our shiny new war equipment is living 3 years in one, and will be old when the war is over.

Every machine should be regarded as obsolete as soon as it is installed and work started on a better one. In the long run, that is the best way to multiply jobs and create better living. Our laws should *encourage* the process, not *discourage* it.

New machines can only be bought with the profits created by old machines. The money that is laid aside by industry to develop and buy new machines is called "Seed Money." If laws take away too much of the Seed Money of business, that will prove disastrous. High taxes must be paid, but they should not destroy Seed Money, which is the only source of improvement.

That's why it's so important for everyone, no matter what his walk in life, to know this fundamental fact:

*"Industrial Progress
is the Source of all Good Living."*

THE MCGRAW-HILL NETWORK OF INDUSTRIAL COMMUNICATION

24 publications, which gather "war-news" from the "war-production-front" through a staff of more than 153 editors and 725 engineer-correspondents . . . More than 1,500,000 executives, designers, production men and distributors use the editorial and advertising pages of these magazines to exchange ideas on war-production problems.

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Publishers of technical, engineering and business books for colleges, schools, and for business and industrial use.

This advertisement is available in handy booklet form. (Less than 100 copies free. Larger quantities, \$1.00 per 100; \$10.00 per 1000.)

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said Bern, "and has not impaired my friendship for Howard Hughes nor my interest in the success of the project."

► **Streamlining**—Ridley, facing the doubly-difficult job of engineering the big boat and administering all phases of construction, said he plans only minor changes, a "slight streamlining of engineers" and assembly workers manning a staff of 2,200.

► **Revised Deadline**—With the shake-up came the admission that the original Defense Plant Corporation deadline of Nov. 15 for completion of the first flying boat, a complete

model for static load tests, has been "revised." The DPC is putting up \$18,000,000 on a "no profit" basis.

What was involved in the "revision" Hughes officials declined to say. The Hughes-Kaiser boat No. 2 is scheduled to follow the static model by three months, and to be test flown at Los Angeles Harbor. Boat No. 3 is due three months after No. 2.

► **Secret Design**—Under a shield of secrecy that has kept aircraft leaders opposed to Kaiser's big boat plan guessing, construction of HK-1 is well through the primary stage. Small sections of plywood parts

are under construction and in a massive, 700-ft. building, jigs are nearing completion for the hull and 320-ft. wings. Visible from nearby highways is a towering plywood mockup of the hull.

► **Shirt-Sleeve Supervision**—Hughes, recently occupied with Mojave Desert test flights of his latest speed plane, a twin-boom creation that looks like an enlarged P-38, is expected to keep a personal shirt-sleeves watch over HK-1 progress. Ridley, formerly assistant project engineer on the Douglas DC-3, has been with Hughes since October 1939.

FEDERAL DIGEST

WLB Opinion Says Federal Powers Supersede State Wartime Labor Acts

Summary of government actions for the week includes DPC loans, NWLB and NLRB orders, and OPA price regulation.

National War Labor Board has made it clear that war powers of the President and Congress supersede in wartime acts of state legislatures in labor relations matters.

"No law of a state which is aimed at inserting conditions in a collective bargaining contract between an employer and the bargaining agent of the employees can be said to supersede any order of the War Labor Board regulating relations between employer and employee in time of war when the power to issue that regulation flows from the war powers of the U. S.," an opinion stated.

► **Defense Plant Corporation** increased contract with Douglas Aircraft Co., Santa Monica, for additional plant facilities costing \$250,000 increasing the company's overall DPC commitment to \$980,000. Douglas will operate the property. Contract of Willys-Overland Motors, Inc., Toledo, was augmented for more equipment at an Ohio plant, increasing overall commitment by \$460,000 to \$2,600,000. The company will operate the new facilities.

► **Equal Pay for Women**—The board also ordered unanimously that equal pay be given for women doing work comparable in quality and quantity to work performed by men in a case involving the Celotex Corporation. It said the company's present 45c minimum rate for women is 5c below the minimum rate for men.

► **National Labor Relations Board's**

trial examiner William E. Spencer recommended that Thompson Products, Inc. and Thompson Aircraft Products Co., Cleveland and Euclid, Ohio, completely disestablish Aircraft Workers Alliance and Brotherhood of Independent Workers as representatives of any employees for the purpose of collective bargaining, and cease giving effect to contract and agreement with those Independents; cease and desist from discouraging membership in the UAW-CIO and International Assn. of Machinists; offer one employee immediate reinstatement with back pay; back pay only to six others; and post compliance notices for 60 days. The trial examiner also recommended that one individual desist from interfering in any way with the self-organizational rights of employees of these companies; dismissal of complaint insofar as it alleges that Old Guard Assn. and Social and Recreation Club are labor organizations, and in so far as it alleged that the companies discriminated against four other employees.

► **Elections Directed**—Within 30 days of Aug. 21, truck and motorcycle drivers of the two North Hollywood plants of Bendix Aviation, Ltd., will vote for UAW-CIO; International Assn. of Machinists; or neither. All timekeepers of Eastern Aircraft, General Motors, Trenton, N. J., will vote for or against UAW-CIO, within 30 days of Aug. 16.

► **The NLRB directed** that a run-off election be conducted within 30 days among the employees of the Glenn L. Martin Co., Middle River, Md., to determine whether or not they wish to be represented by UAW-CIO as their collective bargaining agent. This is the first run-off election ordered by the board under its new policy, adopted Aug. 23, which is to be followed in cases where the original election is inconclusive. The original election resulted as follows: 40.44 percent for the UAW; 11.13 percent for Aircraft Lodge-IAM; 0.9 percent for Middle River Aeronautical Employees Assn. (Ind.); and 42.33 percent for none.

► **Certified**—International Assn. of Machinists was certified for production and maintenance employees at El Segundo, Calif., Division of Douglas Aircraft.

► **OPA Revised** maximum price regulations on aircraft and No. 1 sheet stock veneer (Rev. MPR 338).

New Aircraft Flooring

Glenn Martin Co. says new plastic material increases payload, cuts costs.

A new lightweight plastic aircraft flooring has been developed by The Glenn L. Martin Co., which will allow additions to payload and effect operating economies of thousands of dollars to airline operators. ► **Light & Strong**—The material used is laminated phenolic strips and the flooring weighs about ¼ lb. per sq. ft. less than other types of equal strength.

► **Revenue-Maker**—Martin engineers estimated that over the life of an airplane a pound of weight saved may add up to \$500 in revenues through greater capacity and lower fuel costs.

TRANSPORT

CAB Simplifies Regulations For New Route Applications

Extends time for filing of interventions but orders separation of petitions for domestic and foreign service.

Civil Aeronautics Board has revamped its economic regulations to aid present and would-be air carriers. It has eliminated the requirement that notice be served by route applicants on all other applicants and certificate holders, and has assumed that responsibility itself.

► **Maps**—Filed with application, maps no longer need show existing service by other carriers to points involved.

► **Extension**—At the same time, the board extended the time for the filing of interventions. Motions to intervene have had to be submitted within 15 days after a proceeding was instituted. Now the board says petitions for leave to intervene must be filed not later than ten days prior to hearing, or before the first pre-hearing conference, if one is held.

One part of the order may entail some additional work for applicants. This is the requirement that domestic route applications be filed separately from those for overseas routes.

► **Revisions**—Affecting sections 238.1 and 285.4 of the board's Economic Regulations, revisions were promulgated in an order issued last week effective Aug. 25. A note of explanation said they were decided upon "in view of special and emergency circumstances." A flood of applications has complicated the work of the board and its examiners in recent months.

► **More Work**—The growing total also has increased the work of applicants, who under the old regulations were required to serve notice of application or amendment to application on all holders of certificates of public convenience and necessity issued by the CAB and on applicants for such certificates, except those relating to Alaska unless that territory was involved.

► **Notifications**—Now the board announces it will notify the public of the filing of applications, by posting notice of each in the Secretary's office and making the information

available to the press. The Docket Section will distribute to a mailing list, including existing air carriers and other applicants, description of all applications filed. These are expected to go out about once a week.

► **Consolidation**—In separating applications for domestic and foreign air routes, the board explained that such applications might occasionally be consolidated for hearing. The distinction in filing is being made, board sources say, to limit the volume of material sent the President under Section 801 of the Civil Aeronautics Act.

► **"Overseas or Foreign"**—This requires, among other things, that "copies of all applications in respect to such (overseas or foreign) certificates and permits shall be transmitted to the President by the Authority before hearing thereon, and all decisions thereon by the Authority shall be submitted to the President before publication thereof."

Many have been separating their applications voluntarily in this regard, but others, in filing for overseas operation, have incorporated proposed domestic routes.

► **Redtape Cut**—Simplification of the regulation as it applies to maps filed with applications also will benefit applicants. The board retained the requirement that such exhibits be filed, drawn approximately to scale and show terminal and intermediate points to be served, with approximate mileage and principal over-all distances. It eliminated, however, a rule that the maps also show all such points "now served by air carriers, indicating by arrows the directions flown by such interconnecting carriers and stating their principal terminals."

► **Time-Saver**—Considerable time-saving was expected to result from the change in the regulation on interventions (285.4). In the past, interveners sometimes came into cases hurriedly because they had

only 15 days to file after the proceeding was started, then found later intervention was not necessary. Adjustment of the time limit to ten days before hearing or prior to pre-hearing conference was expected to alleviate this difficulty. In other instances motions to intervene have been consolidated.

The method of intervention becomes a "petition for leave to intervene," under the revision, where the regulation formerly referred to "motion for leave to intervene."

Army Base Officers Plead for Air Service

Commanders of 23 Fields and depots cite poor rail facilities.

Twenty-three letters from commanding officers at military bases in west central Texas, stressing the military need for air service in that area, have been submitted to the Civil Aeronautics Board by Continental Air Lines. They included appeals from Randolph and Kelly Fields.

► **Applications**—CAL filed the memoranda in support of its amended application for temporary, permanent or limited air service between Hobbs, N. M., and San Antonio, serving also Midland-Odessa, Big



INSIDE A C-87:

This photo shows why the C-87 Liberator Express is not being considered for post-war passenger service. Although a four-engine ship, its fuselage is narrower than a twin-engine Douglas, which accommodates three rows of seats. The Express, however, can carry a considerably heavier cargo in its fuselage than a DC-3.

Spring and San Angelo, Tex. Other applications for routes south of this area also are before the board. American wants to fly nonstop from El Paso to San Antonio, while Braniff Airways would go from El Paso to San Antonio via Marfa, Del Rio and Uvalde. These and other applications are to be argued before the Board Sept. 6.

► **Continental** — Already operating between El Paso and Hobbs, Continental also submitted other data, but the letters constituted the major portion of its new memoranda, and then revealed how inadequately surface carriers are serving this important military area. This is believed to be the first time so many base commanding officers of the army have ever gone on record to urge commercial air service.

"At present, the only air communications to the west from San Antonio involves a trip to either Dallas or Fort Worth and a transfer at one of those points to a westward bound plane," one commanding officer wrote. "This proposed line will also be of military value."

► **Direct Lines Urged**—"At present," said another, "it takes longer for an air mail letter to reach San Antonio than it does by straight mail service. It (the proposed line) would be of considerable benefit to the military service."

"It is extremely desirable that a direct line be available for travel of personnel and shipment of express," another wrote.

"Unquestionably, direct airline connection between this vicinity and the San Antonio district would be of material aid toward furthering the war effort. Railroad facilities to and from San Antonio are very limited, being particularly slow and unsatisfactory and causing much inconvenience to the expedition of official correspondence," said another.

► **Vital Need**—"In the operation of this type of Army activity, it is necessary that we have quick mail, passenger, and express transportation from San Antonio to Carlsbad. We receive a large number of students from the Army air bases at Midland, Big Springs and San Angelo. The rail transportation between these cities and Carlsbad is very bad. We have a train which operates not more than twice a week from Carlsbad to Pecos, Tex., and passenger traffic is routed by bus to El Paso, thence to San Antonio and other cities," one officer said.

"This route is an excellent idea. It will materially help the movement of personnel in addition to mail.

Commanding officers are now using telegrams and private planes because the existing air service is so bad."

The letters came from brigadier generals, major generals and colonels in charge of bases, schools, and other establishments.

MCA Asks Routes

To apply for more midwest services, with extension to Atlanta.

Mid-Continent Airlines has announced plans to file new applications in a route expansion program, among them requests for lines from Kansas City to St. Louis; Kansas City to Atlanta; Minneapolis-St. Paul to Chicago via Rochester, Minn., and Milwaukee; Minneapolis-St. Paul to St. Louis via Rochester, Waterloo, Cedar Rapids, and Iowa City, Iowa, the Tri-Cities, Peoria and Springfield, Ill., and Tulsa to Dallas.

► **Routes**—Already applied for are routes from St. Louis to Detroit via Fort Wayne, Ind.; Minneapolis-St. Paul to Chicago via Rochester, Dubuque, Iowa, and Rockford, Ill.; Tulsa to New Orleans; Minot, N. D., to Regina, Canada; feeder routes serving 136 towns within and adjacent to its present territory; and intermediate stops on its route between Kansas City and Tulsa.

Airport Troop Lounge Underway at Lockheed

Service women's idea results in new building at air terminal.

What may develop into a nationwide answer to the crowding of domestic airport passenger terminals by military personnel awaiting plane connections is offered by Lockheed Air Terminal, Burbank. ► **Officers & Men Welcome**—By September 6 a "Troops-in-Transit" lounge and recreation building, suggested by Vega Aircraft Corp.'s Blue Star Service Women and being built by Lockheed Air Terminal, Inc., will be open for officers and men of armed forces.

U.S.O. hostesses will be present on 24-hr. duty.

► **Relaxed Waiting**—"It will give service men, many forced to wait at air terminals over extended periods for travel orders, the relaxation that is impossible under present crowded conditions in air terminal passenger lobbies designed for rapidly moving peacetime patrons of airlines," says Dudley M. Steele, L.A.T. airport manager.

Domestic Carriers Study Feeder Idea

Airline policy group collecting data on servicing 3,000 communities throughout the U. S.

The 16 domestic airlines which signed a joint policy statement on international aviation in Washington last month probably will have something to say publicly soon about their domestic intentions.

► **Outlook**—While they already are starting to file their overseas applications, the lines are collecting data and doing research on the home aviation outlook.

► **Feeder Lines**—They may, in fact, outline plans to bring air transportation to more than 3,000 municipalities in this country with a liberal employment of the feeder system idea. Chances are the plans will be presented individually by the lines, however, in their own areas.

► **Northwest Leads**—In the meantime, Northwest Airlines has started the ball rolling again in the international application field by telling the Civil Aeronautics Board it would like to have a commercial air route to Tokyo, and on to Shanghai and Manila.

► **Over Sea Route**—American Airlines filed for a route to London, and Braniff Airways has indicated it will visit the board in another three weeks with applications for air cargo and transport routes to Europe, Central and South America, the Caribbean Islands, and the Panama Canal Zone.

More Planes To Bring Added Cargo Flights

Ray Grant, new Western Air Lines express chief, forecasts additional schedules.

Ray Grant, newly appointed mail, express and traffic manager for Western Air Lines, believes that every airline in the country could operate all-cargo planes profitably and now, if given the equipment.

► **All-Cargo**—Commenting on American Airlines' recently launched all-cargo transcontinental service, Grant said he believed all-cargo services will be started on virtually all lines upon the return to the industry of planes taken over by the Air Transport Command.

► **Equipment Barrier**—"We could and probably would be operating so-called all-cargo flights today if Western could get the equipment," said Grant, "and such services are

needed even more by the transcontinental lines."

The return of planes to the airlines during the war, he added, would result simply in the return to airline passengers, priority and ordinary, of seats occupied with increasing frequency by piles of high priority express packages and even large "must go" packing cases.

Big Braniff Gains

July mail and express up over 100 percent from year ago. Stock oversubscribed.

Braniff Airways, in offering 400,000 shares of common stock at \$12.75 a share last week—one of the largest public financing moves in recent years by a domestic airline company—has reported increases in all lines of traffic for last July over the same month a year ago.

► **Mail and Express**—Mail Volume was up over 163 percent from 201,811 pounds to 532,056, while mail pound miles increased from 73,932,000 to 209,950,419, or 183 percent. Express pound miles went from 30,785,000 to 73,991,039, a boost of 140 percent, and air express poundage was up 94 percent from 75,950 to 147,480.

► **Income Up**—Revenue passengers increased 40 percent from 10,451 to 14,632. Passenger miles operated were 6,229,996 in July, this year, compared with 3,517,273 in the 1942 month, a gain of 77 percent. Plane miles increased 34 percent, from 266,972 to 360,167.

► **Braniff**—Now fifth largest airline in the country, this carrier offered its stock through F. Eberstadt & Co. and associates to increase its capital funds for post-war expansion. The offering was oversubscribed.

Of \$5,100,000 proceeds, about \$2,000,000 is to be used to purchase equipment for and modernize existing domestic routes, \$1,000,000 for new equipment for a trade area feeder system, and \$2,000,000 for proposed foreign route operation, specific details yet to be decided.

NWA May Refinance

Croil Hunter, president of Northwest Airlines, has let it be known the company is considering financing for expansion, and that stockholders may be asked at their next meeting for authority to increase capitalization. Details were not disclosed.

NATS Flies 15,000 Passengers Monthly

Naval "airline" using about 100 transports, carrying cargo over globe.

More than 100 two-engine and four-engine transports now fly cargo and personnel under the banner of the Naval Air Transport Service, which had less than ten planes before the war.

► **For the Fleet**—NATS acts as a supplier for the fleet and at the moment flies some 60,000 miles to carry around 15,000 passengers and 4,500,000 pounds of cargo, including mail, a month. Cargo ton-miles average 2,900,000 each month. Although many of the personnel are former airlines men, the NATS flies routes not regulated, but anywhere a mission sends them—in any kind of weather conditions and with any kind of a load.

► **McCain Commands**—A compact group that functions for all bureaus of the Navy, NATS was recently placed under direct command of Vice Adm. John S. McCain, Deputy Chief of Naval Operations (Air). Until the recent reorganization NATS was under Adm. Ernest King,

Chief of Naval Operations. A small staff of officers of the Aviation Section continues under the new set-up to function under Vice Adm. McCain.

► **High Scores**—Officials estimate that during June, 1943, NATS was flying a number of aircraft equal to approximately 40 percent of those employed by the commercial lines operating the year before in this country. Its planes flew about 35 percent of the total ton-miles such lines flew. Of course, airlines are computed to carry 85 percent of their load as passengers, easy to load, whereas 65 percent of NATS loads are cargo and mail, more difficult to stow aboard a ship.

► **Land and Sea**—Both landplanes and flying boats are used in their operations, the numbers about equal. One fourth of the planes operate in this country while the rest fly the oceans of the world, often putting into ports where airfields are incapable of handling large landplanes.

There are now eight transport squadrons activated within NATS and the Navy expects two more to be in existence by fall. Six of the present squadrons have airlines pilots as squadron commanders indicating the vast experience needed for the operations of NATS.



NATS Serves Around the World: Naval Air Transport Service duplicates scenes like this around the world, loading war cargo, medical supplies, important passengers, confidential reports, and V mail for all fleet units and Naval establishments. It has even carried scores of prisoners of war.

TWA Filing for Foreign Routes; Reports Over 1,000 Ocean Flights

Request to CAB for Los Angeles-Honolulu service says other international applications will be ready soon.

By MERLIN MICKEL

Transcontinental & Western Air, announcing last week it was filing an application with the Civil Aeronautics Board to operate between Los Angeles and Honolulu, disclosed its plans to file "in the near future" for trans-Atlantic service "and to other parts of the world from several major American cities."

► **Jack Frye**—TWA's president said his company had given the Los Angeles-Honolulu application priority because of an urgent need for the service and the fact that no negotiations with foreign countries for landing rights were involved.

He said the line would be ready to start service "on short notice," adding that "equipment to fly this route may be available as the war further progresses."

Hawaiian Airlines, Ltd., of Honolulu, which now operates among the islands, also has applied to CAB for a route from Honolulu to Los Angeles.

► **Overseas Route**—TWA's application was described as its first for a permanent overseas route certificate, although it has been flying the Atlantic under contract to the Air

Transport Command since February, 1942, and was "the first domestic airline to operate in trans-oceanic service."

► **Prediction**—Forecasting high-speed service from American cities to Honolulu, Frye said if large four-engine aircraft now being manufactured became available, the latter would be approximately ten hours from California's largest city, seven hours under fastest schedules between Los Angeles and New York.

The proposed extension would add 2,557 miles to TWA's present 6,534 miles of routes.

► **Crossings**—In describing its ATC operations, TWA said it has made more than 1,000 ocean crossings, carrying supplies to the fighting fronts, and has carried government and military leaders of the United Nations, including President Roosevelt, on special missions to most of the world open to Allied aircraft. Its aircraft also have served as ambulance planes for returning sick and wounded from battle areas.

Applications received by the board last week included the following:

Chicago and Southern Air Lines, Memphis, Tenn. Scheduled air transportation of persons, property and mail, five routes: Chicago to New Orleans via Peoria and Springfield, Ill.; St. Louis and Poplar Bluff, Mo.; Jonesboro, Ark.; Memphis, Helena, Ark.; Clarksdale and Natchez, Miss.; Baton Rouge, La.; Chicago to New Orleans via Bloomington and Springfield, Ill.; St. Louis and Cape Girardeau, Mo.; Cairo, Ill.; Blytheville, Ark.; Memphis, Tenn.; Greenwood, Jackson and McComb, Miss.; and Bogalusa, La.; Chicago to New Orleans via Champaign-Urbana and Decatur, Ill.; St. Louis, Mo.; West Frankfort, Ill.; Paducah, Ky.; Dyersburg, Jackson and Memphis, Tenn.; Tupelo, Columbus, Jackson and Hattiesburg, and Gulfport-Biloxi, Miss.; Memphis to Houston via Pine Bluff and El Dorado, Ark.; Shreveport and Natchitoches, La.; and Beaumont, Tex.; Memphis to Houston via Little Rock and Hot Springs, Ark.; Texarkana, Ark.; Shreveport, La.; Marshall, Tyler, Palestine and Huntsville, Tex.

United Transport, Oklahoma City. Transportation of cargo and express in interstate and foreign air commerce between points in Missouri, Kansas, Oklahoma, Texas, Arizona and New Mexico, on call and demand basis.

Arkansas Motor Coaches Ltd., Little Rock. Passengers, mail and express by helicopter or similar aircraft, eight routes: Memphis to Little Rock via Forrest City, Brinkley and Leno, Ark.; St. Louis to Little Rock via Flat River and Poplar Bluff, Mo.; Paragould, Jonesboro, Newport and Searcy, Ark., with feeder route from Dyersburg, Tenn., to Little Rock via Paragould, Jonesboro, Newport and Searcy; Kansas City to Little Rock via Clinton and Springfield, Mo.; and Harrison and Conway, Ark.; Tulsa to Little Rock via Muskogee, Okla.; Fort Smith, Paris, Russellville and Conway, Ark.; Oklahoma City to Little Rock via Seminole and McAlester, Okla.; Mena and Hot Springs, Ark.; Houston to Little Rock via Lufkin and Nacogdoches, Tex.; Shreveport, La.; Texarkana, Hope, Prescott, Arkadelphia, Hot Springs, Ark., with alternate route from Lufkin stopping at Henderson and Marshall, Tex.; New Orleans to Little Rock via Baton Rouge, La.; Natchez, Miss.; Monroe, La.; and El Dorado, Ark.; Jackson, Miss.; to Little Rock via Vicksburg, Miss.; and McGeehee and Pine Bluff, Ark.

Big Horn Airways, Sheridan, Wyo. Mail and express and later passengers when facilities are available from base point at Sheridan to Rock Springs via Greybull, Cody, Thermopolis and Lander, and to Cheyenne via Buffalo, Gillette, Newcastle, Lusk and Torrington, all in Wyoming.

Among recently filed amendments to previously submitted applications were the following:

Kentucky-Tennessee Airlines, Lexington, Ky. Changes previous proposed routes to Lexington to Memphis; Lexington to Chattanooga; Louisville to Knoxville, and Cincinnati to Atlanta, all via intermediate points.

Chesapeake Airline, Carl F. Eck, now with Air Transport Command stationed at Alexandria, Va. Changes previous request for non-scheduled routes to scheduled routes, proposed between Baltimore and Atlantic City, Baltimore (or Washington and Ocean City, Md.) and Washington to Atlantic City, via intermediate points.

Virginia Central Airlines, Lynchburg, Va. Originally asked certificate for transportation of persons and property on six routes between Lynchburg and New York, Atlanta, Mobile, Cincinnati, Norfolk and Chicago, all via intermediate points. Now asking Lynchburg to New York (same); Lynchburg to Mobile (same); Lynchburg to Atlanta (same except Winston-Salem, dropped as intermediate point); Lynchburg to Atlanta via Columbia, S. C.; Lynchburg to Chicago (same except Roanoke, Va., included as intermediate point); Lynchburg to Cincinnati (same); Lynchburg to Norfolk via Petersburg, Va. (same), and these additions: Lynchburg to Norfolk via Danville, Va.; Lynchburg to Norfolk via Richmond; Lynchburg to Alexandria via Charlottesville, Va.; Lynchburg to Alexandria via Staunton, Va.; Lynchburg to Bristol, Va.-Tenn., via Virginia points;

Lynchburg to Bristol via Bluefield, W. Va.; Lynchburg to Charleston, W. Va.; Alexandria to South Norfolk; Richmond to Lexington, Va.; Richmond to Roanoke, via Danville; Danville to Bluefield; Lynchburg to Greensboro, N. C., via New Bern, N. C.; Raleigh, N. C., to Columbia, S. C.; High Point, N. C., to Augusta, Ga.; Salisbury, N. C., to Spartanburg, S. C.; Augusta, Ga., to Greenville via Atlanta; Augusta to Mobile via Macon and Columbus, Ga.; Bristol to Knoxville, Tenn.; Charlotte, N. C., to Spartanburg, all by intermediate points.

Transcontinental & Western Air has asked to include Providence, R. I., on its proposed New York to Boston route.

SHORTLINES

► **Big Horn Airways** of Sheridan, Wyo., surprised CAB in an application for mail and express routes by stating it has the equipment. Applicant proposes to use six Luscombe 65-hp planes it now owns, four in service and two in reserve. CAB, accustomed to applications for routes when equipment is available, conjectured that Big Horn Airways is operating on charter.

► **United Air Lines** has applied to CAB for continuation of temporary suspension of service at Grand Island, Neb. Operations there were halted in June last year because of airport and construction work at the municipal airport. To reinstate service, UAL contended, would require construction of building to handle passengers, mail and express.

► Approval of interlocking relationship of C. E. Woolman as vice-president, director and general manager of Delta Air Corp. and director of Air Cargo, Inc., has come from CAB.

► An application by Samuel J. Solomon and Northeast Airlines, of which he is president and director, for approval of interlocking relationship by virtue of his being also president and director of Airlines War Training Institute, was dismissed by the board, which found that the Institute is not engaged in a phase of aeronautics within the meaning of the Civil Aeronautics Act section bearing on interlocking relationships, that AWTI is of a temporary nature, and does business under War Department direction as a "non-profit endeavor of 19 air carriers to make more effective their participation in the war."

► **Trans-Canada Air Lines** announces July traffic increases over July, 1942: mail load amounted to 316,547 pounds, an increase of 123,576 pounds; passengers numbered 13,468, an increase of 4,028; and express amounted to 73,994 pounds, an increase of 40,671 pounds.

► **American** announces a policy, effective Sept. 1, of absorbing insurance premiums into fares paid on its flights over Mexico. Refunds on cancellations will include the premiums, American says, heretofore paid sepa-



LEECHES BY AIR:

The Leech King of Long Island, Charley Yacobellis, prepares a container of live leeches to be rushed across the country by air express. They are perishable unless kept cool and moist, so are packed in wet moss. Air Express Division of Railway Express Agency says from 200,000 to 300,000 leeches are imported yearly from Portugal and are re-shipped to drug laboratories throughout U. S. and Canada.

rately and retained in such instances. Because fares will remain at the same figure, American describes the procedure as a reduction in fare to the amount of the premium, which is required by Mexican law on all forms of travel in Mexico, and on a round trip from the border to Monterey or Mexico City is \$1.80.

► A recent CAB order limits transportation of persons to and from Palm Springs, Calif., by American Airlines to members of the armed forces of the United States and Allied Nations. American was authorized by the board last month to use the Palm Springs Army Air Base.

► **Alaska Central Airlines**, Fairbanks, has received CAB permission to transport persons, property and mail between points in the 4th Judicial District of Alaska; offer charter or contract service with the Army, United States Engineers, Civil Aeronautics Administration or other government branches; and operate between Fairbanks and Valdez via Big Delta, Rapids, Gakona, Gulkana (or Dry Creek) and Copper Center, for the duration of the war and six months thereafter. The line was temporarily exempted from certification requirements to take care of the overflow from regular operators. The board was guided "primarily by con-

sideration of the emergency conditions . . . and the necessity of removing restrictions which would impede the full use of available aircraft."

► Fare reductions from three United States cities to points in Central and South America have been announced by Pan American Airways, effective Sept. 1. Reductions of \$6 are made on fares from Brownsville to Mexico City (now \$29, was \$35); Brownsville-New Orleans-Laredo to Buenos Aires, now \$524; Brownsville-New Orleans-Laredo to Lima, now \$344; Brownsville-New Orleans-Laredo to Balboa, now \$154. Equivalent reductions apply to round-trip fares, the company announced.

► A tentative schedule of time and cost of world air trips from New York in 1948, prepared by Pan American Airways, greeted visitors at the Airways to Peace Exhibition at the Museum of Modern Art in New York City. Samples: London, 13 hr. 48 min., \$186 round trip; Rio de Janeiro, 19 hr., \$256; Moscow, 19 hr. 12 min., \$259; Cairo, 23 hr. 12 min., \$313; Tokyo, 27 hr. 36 min., \$373; Singapore, 43 hr., \$580; Bombay, 32 hr., \$432; Capetown, 34 hr., \$469; Auckland, 37 hr., 36 min., \$507; Hong Kong, 44 hr., \$594.

The tentative schedule was based on the belief planes will travel great circle routes at 250 miles an hour, explained Reynolds G. Rockwell, assistant advertising manager for PAA.



KLM MARKS INAUGURAL FLIGHT:

When the first transport of the fleet operated by KLM Royal Dutch Airlines put down in Miami from Curacao, her captain was met and congratulated by notables on hand for the occasion. Left to right: M. E. A. L. De Jong, KLM vice-president and acting director; Netherlands Consul T. M. van den Stempel; Rear Adm. Meyer Ranneft; Wireless Operator Groeneveld; Second Pilot B. Langenberg; Capt. Hakkenberg v. Gaasbeek, head of pilots for KLM; Engineer Arnold Bak; Lt. W. W. Gibbs, U.S.N.; and Lt. Col. R. C. Hornsby, U.S.A.

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PERSONNEL

Washington Chapter of the National Office Management Assn. has elected



Ray G. Lochiel, treasurer and comptroller of Pennsylvania-Central Airlines, as president. He is also currently president of the Airline Financing & Accounting Conference. Before joining PCA in 1932, Lochiel was with Beard & Abney, specializing in aviation accounting.

L. L. Frey has been named assistant general plant manager by Sperry Gyroscope Co. He was formerly senior industrial specialist with the U. S. Dept. of Labor. J. J. Wilson, former assistant procurement manager at Sperry has been appointed general purchasing agent. Concurrently R. V. Elms becomes purchasing agent in charge of raw materials and J. R. Walker, purchasing agent for electrical materials.

Col. William P. Nuckols, who was recently replaced by Col. William Westlake as assistant to the director for AAF, Bureau of Public Relations, has been assigned to the Third Air Force, Tampa, Fla. His exact assignment is not known in Washington.

Colonel Nuckols is just back from Russia. He accompanied Capt. "Eddie" Rickenbacker on his recent mission for the Secretary of War.

Colonel Arthur Ennis, who headed public relations for General H. H. Arnold before the reorganization of the Public Relations Bureau, is Chief of the Air Section, Third Air Force.

Calvin K. Townsend, director of contract administration, has been appointed assistant general manager of Aircraft Accessories Corp. He was previously with the WPB in Washington and San Francisco, and previously was branch and district manager of Remington-Rand, Inc., for a period of nearly 20 years.

Gilbert G. Rudwig (photo) has resigned as president of Aircraft Components, Inc., to enter the Marine Corps, aviation division, as a major in charge of administration at the U. S. Marine Base, Cherry Pt., N. C. He was a flying instructor in World War I. He is succeeded as president by Walter Innes, Jr., chairman of the board. Other officers are E. S. Steel, executive vice-president, treasurer and general manager; Leonard Comegys, vice-presi-



THOMPSON HONORED:

Cyril C. Thompson, well known vice-president of United Air Lines, was awarded an honorary doctor of laws degree from Parsons College, Fairfield, Iowa. He is shown as he appeared at the ceremony.

dent and legal counsel; and Brendon O'Farrel, secretary in charge of accounting.

Capt. William H. Graham, Jr. has been appointed district public relations officer of the Eastern Procurement Division, Army Air Forces Materiel Command, with headquarters in New York City. He was previously publications officer in the Bureau of Public Relations for the Army Air Forces; before that chief of the Information Section, Information and Education Branch, in the Publications Office in Washington. Before being commissioned a 2nd Lt. in the Air Corps



WILSON VISITS FAIRCHILD AIRCRAFT:

On an eastern tour Charles Wilson, WPB vice-chairman, called at the Hagerstown, Md., plant of Fairchild Aircraft. Left to right: B. J. Hoffman, personnel representative; Edward Place, editor of "Labor Management News"; Sherman M. Fairchild, chairman of Fairchild Engine & Airplane Corp.; Theodore Quinn, executive

director of the war production drive; Mr. Wilson; J. Carlton Ward, Jr., president of Fairchild; Brig. Gen. F. M. Hopkins, Jr., chief of Resources Division, ARCO; Richard S. Boutelle and Paul J. Frizzell, general manager and assistant general manager, respectively, of Fairchild Aircraft Division.

in February 1942, Capt. Graham was on the *Aeronautical Review*, and promotional research manager of *Aviation*, *Bus Transportation* and *Transit Journal*.

In the expansion of the traffic department of Continental Air Lines, three promotions and transfers have been announced. Horace C. Gates, CAL's district traffic manager at Tulsa, was transferred to Denver as city traffic manager; he was succeeded by William O. Lennox, traffic representative in the Denver reservations office. Frank Skinner, also a traffic representative at Denver, was named district traffic manager at Wichita.

Ryan Aeronautical Co. announced that Nathaniel E. Warman has joined the company as assistant to the chief engineer. Warman was formerly chief marine engineer of Marinship Corp., in charge of machinery design on 10,000-hp. tankers. He designed the fastest single-screw tanker ever



built, completing his designs in 87 days, instead of the usual 18 to 24 months required for this job. He has also held executive engineering positions with Pontiac Motors division of General Motors, Lockheed Aircraft Corp., W. A. Bechtels Co. and California Shipbuilding Co. He graduated from the U. S. Naval Academy in 1931 and did post-graduate work in aeronautical engineering at California Institute of Technology.

Woodrow Campbell, owner of cafes throughout Nebraska and Idaho, believes, as newly appointed supervisor of restaurants for Western Air Lines, that airline passengers are eating better meals than any other group of travelers. "Because their meals, like their seat space, are 'reserved' and can be planned well in advance," he explains. Campbell graduated from University of Oklahoma in 1929 in business administration, and then found himself in the restaurant business with his father.



Thomas D. Brooks has been appointed superintendent of Maintenance at Chicago & Southern Air Lines' main overhaul base at Memphis, succeeding Harold Foster. Brooks started his aviation career while in the U. S. Marines stationed at Quantico, Va. He has been with C. & S. for the past eight years in such capacities as lead mechanic, crew chief, and general superintendent of Modification and the Military Transport Division.



United Air Lines has named Frazier S. Wilson (left) insurance manager with headquarters in Chicago. He was formerly with the RFC as senior examiner with the meat subsidy program and rubber reserve salvage, before that with Adae & Hooper, London & Lancashire Indemnity Co. and the General Motors Acceptance Corp. He succeeds E. C. Thomas (right), who is transferred to an executive job in United's San Francisco headquarters, after 12 years as insurance manager. Thomas was formerly with the Boeing System at Seattle, a predecessor of United, and with the Wells Fargo Bank in San Francisco.

Delos M. Palmer, dean of engineering at the University of Toledo since 1934, has been appointed plant engineer at the American Propeller Corp., subsidiary of Aviation Corp. Previous to joining the University staff 16 years ago, Palmer was engineer in charge of construction by Westinghouse in Pittsburgh of electric locomotives for Japan and was assistant to the factory manager of the Spicer Manufacturing Co. A graduate of the University of Michigan in 1921, he is a member of

a number of engineering societies, including the American Society of Mechanical Engineers.



WRIGHT TELLS A SCOUT:

Orville Wright shows blueprints of his first plane to a youthful Air Scout model builder. This latest photo, taken at the home of the 72-year-old co-inventor of the airplane and first man to fly it, shows Mr. Wright still maintains an active interest in youth and new ideas. He continues work on several inventions.



PCA HOLDS MANAGERS' MEETING:

Station and reservation managers of Pennsylvania-Central Airlines met recently for a two-day conference at Cleveland. Pictured among those who attended are, seated, left to right: R. P. Brinkley, assistant to vice-president, E. C. Penny, C. E. Conroy, Mary E. McCormack, J. W. Stout, Fred Vrnak, Elmer Madsen, T. W. Preston, Charles Hunt. Standing, left to right: W. R. Manchester, superintendent of operations, Charles Knoble, superintendent of airmail and cargo, V. K. Stevens, D. C. Wilt, W. C. Barnhart, J. Cochrane, S. Clark, J. Murphy, R. W. Hardesty, superintendent of stations, J. Roth, M. E. Cole, superintendent of reservations and C. J. Miller, Jr.

Russell J. Smith (photo) has been appointed superintendent of passenger service for Western Air Lines, succeeding Hugh Cohn, who recently joined Mid-Continent Air Lines as general traffic manager with offices in Kansas City. Smith was formerly system reservations manager, assistant district reservations superintendent with a transcontinental airline, and with Century Air Lines. He holds a master mechanics degree from the Boeing School of Aeronautics. William Kerrigan was named assistant to Smith at the general passenger offices in Burbank. He was formerly manager of passenger service in the Salt Lake City offices, station manager at Long Beach, Calif., and in the engineering department of Curtiss-Wright.



United Air Lines has appointed E. P. Lott (photo) director of design building and airports at its Chicago headquarters. Lott has recently been in charge of the military operations which United is conducting under contract for ATC, in which he will be succeeded by W. J. Addams, director of flight operations.

Maj. Gen. Delmar H. Dunton has returned from overseas to become deputy commander of the AAF Air Service Command with headquarters at Patterson Field near Dayton. Gen. Dunton has been on sick leave for the past month and was awarded the Legion of Merit for outstanding service in organizing supply details of the North African campaign.



Four executive changes have taken place at General Motors Corp. E. B. Newill has been made general manager of the Allison division, Indianapolis, and F. C. Kroeger, a vice-president, has been given a leave of absence from the Indianapolis post. C. R. Osborn, former assistant to R. K. Evans, vice-president in charge of the general engine group, has been elected a vice-president of the company and will be in charge of the electromotive division at La Grange, Ill. A. W. Phelps has been transferred from La Grange to Detroit and will be assistant to E. F. Johnson, vice-president.

FINANCIAL

Analysis of Transcontinental Lines Shows Best Record Made by United

Important increases shown in all departments by Big Three carriers for first half of 1943, with express traffic leading.

By ROGER WILCO

Record gains in all departments were reported during the first half of 1943 by the three transcontinental airlines—American, TWA and United, in the reports recently released for the second quarter.

► **Analysis**—Taken by themselves, the individual reports present a commendable showing. Greater significance, however, can be derived by a study of comparative performance on a relative basis. This analysis is presented in the accompanying tables and highlights a number of interesting results. At the outset, it must be recognized that while transcontinental in character, all three lines do not have identical operating conditions, but in general are more comparable than any other group.

► **Leaders**—While American continues to lead in the amount of passenger revenues, United made the greatest gain in this department, showing an improvement of 25 percent for the first six months of 1943 over the like period a year ago. TWA was up 18.5 percent while American gained 10.6 percent.

► **Express**—Percentage-wise, the improvement in express revenues was astounding—ranging from 109.1 percent for American down to 81.8 percent for TWA. Express operations contribute very little in terms of total gross revenues but account for a far greater percentage of the net profits. This is due to the favorable conditions surrounding air express operations when reaching heavy loads as at present. The leverage present is partly due to the existing terms of the contract with the Railway Express Agency. In simple terms, once the REA is reimbursed for out-of-pocket expenses, the air carriers retain the largest share of the gross revenues.

► **Reduced Rates**—With an 11 percent reduction in effect as of July 15 on express tariffs, the carriers will be somewhat less favorably situated during the second half. For exam-

ple, United estimated that had these reduced rates been in effect during the first half, express revenues would have been lower by about \$150,000 or roughly 15 percent of the total.

► **Operating Costs**—American reduced its operating expenses by a small margin while United was virtually unchanged with TWA up 11.8 percent. Sharply lower charges for depreciation, due to the smaller amount of planes in service, accounted for these restrained total operating expenses.

► **Profits**—It is because of high load factors, and these reduced expenses or their failure to mount in direct ratio to revenues, that airline operations have been so profitable.

► **United Makes Best Showing**—The net result of all these changes indicate that United made the most impressive showing during the first half of the year. Measured in terms of net profit before federal income taxes, United gained 165.1 percent, TWA 110 percent and American 103.6 percent.

After federal taxes, United continued to retain the greatest share of its revenues for its stockholders. The increases in net profits after all taxes were: United, 144 percent; TWA, 47.4 percent; and American, 12.8 percent.

► **Tax Predicament**—Federal income taxes continue to present a complicated predicament. American believes it is subject to excess profits taxes and has accordingly set aside 70 percent of net for taxes. United, on the other hand, does not believe it is liable in this respect and accrued its total federal income tax liability for the first six months at 40 percent which represents a downward adjustment for the 50 percent used for the first quarter. TWA evidently is of the same view as United as to its tax liability.

► **Excess Profits**—The whole question as to the airlines' status on excess profits taxes is very much up

in the air. Thus far no clear cut definition or ruling has been forthcoming which can be accepted with finality. It is believed that only when the Internal Revenue Department reviews the carriers' tax returns and places them in litigation will some basic principle be enunciated.

The accompanying tables indicate significant changes in both amounts and percentages for the three carriers and are not repeated by further comment. The figures speak for themselves.

► **Tells All**—It is worth commenting, however, on the form of releases of these operating results by the three carriers. As usual, United presented a complete, detailed account of its operations with ample, comparative data. Accompanying these figures was a concise, explanatory statement, not only encompassing the figures but covering various phases of the company's operations. All in all, it is a report that should be welcomed by any sophisticated stockholder who desires to keep informed on the affairs of his company. Come what may, full disclosure of all pertinent information, good and bad, is highly desirable.

Ryan Reports

Net profit before renegotiation is 97c a share, or \$424,648.

Ryan Aeronautical Co., consolidated net profit for the company and its wholly owned subsidiaries for the eight months ended June 30 amounted to \$424,648 after provision

for estimated federal income taxes and excess profits taxes of \$1,578,878. Net profit per share was 97c in this period, and the provision for taxes was at the rate of \$3.59 per share. These profits are subject to renegotiation, President Ryan said.

Wright Income Up

Engine subsidiary of Curtiss-Wright doubled 1941 shipments.

Net income for Wright Aeronautical Corp. for 1942 was \$8,904,711, a percentage of 1.981 to sales, after renegotiation, taxes and reserves, against \$10,255,874 net income for the previous year.

► **Vaughan Releases Figures**—Guy W. Vaughan, president of the corporation, in releasing the figures, said renegotiations for 1942 have been concluded with the local renegotiation panel, but have not been fully approved by Washington. Federal income and excess profits taxes payable for the year amounted to \$50,919,264, to be reduced eventually by the post-war refund of \$4,922,000.

The report showed that shipments for the year were more than double the previous year, amounting to \$449,545,679, as compared with \$208,345,090 in 1941 and \$67,537,213 in 1940.

► **Wright Power**—Vaughan pointed out that Wright *Cyclone* engines power Boeing *Flying Fortresses*, North American *Mitchells*, Douglas *Dauntless* dive-bombers, Douglas *Havoc* attack planes, Lockheed Hud-

sons, Grumman *Avengers* and other warplanes, and General *Sherman* and General *Grant* medium tanks and M-7 tank destroyers.

Willys Steps Up Aviation Operations

Report for nine months shows gain in production of assemblies and wings.

A great expansion of the aircraft division of Willys-Overland Motors, Inc., is noted in a nine-months report ended June 30, which said the firm was moving into volume production of landing gear assemblies for the Grumman *Wildcat* fighter and the center wing section of the Vought *Corsair*.

► **Biggest Producer**—The company, the report said, is now one of the nation's largest producers of aluminum aircraft forgings, shipping parts to virtually every aircraft concern.

► **75% Increase**—The statement reported sales at a new high of \$123,921,920 which was 75 percent above the volume of the previous year's period. Ward M. Canaday, chairman, and Joseph W. Frazer, president, said the company showed a consolidated net income of \$2,139,664 after providing \$14,123,000 for taxes and \$4,666,411 for reserves. The earnings are equivalent to 1.7 percent of the sales and compare with a net income of \$1,164,543 in the first nine months of the preceding fiscal year when taxes amounted to \$3,741,359.

COMPARATIVE OPERATING RESULTS

AMERICAN AIRLINES, INC.					TRANSCONTINENTAL & WESTERN AIR, INC.—(Continued)				
	Six Months Ended June 30 1943	1942	Amount of Increase	% Increase		Six Months Ended June 30 1943	1942	Amount of Increase	% Increase
Operating Revenues					Net Profit before Federal Inc. Taxes	\$1,768,417	\$841,315	\$927,102	110.2
Passenger.....	\$11,513,361	\$10,411,929	\$1,101,432	10.6	Prov. for Federal Income Taxes	1,035,839	343,100	692,739	201.9
Mail.....	2,097,052	1,912,280	184,772	9.7	NET PROFIT.....	\$732,578	\$498,216	\$234,362	47.4
Express.....	1,303,753	623,493	680,260	109.1	Earned per common share....	\$0.76	\$0.44	\$0.32	72.7
Miscellaneous.....	338,494	348,726	-10,232	-2.9	Common shares outstanding..	985,083	950,582		
Total Oper. Revenues.....	\$15,252,660	\$13,296,428	\$1,956,232	14.7					
Total Oper. Expenses.....	10,452,745	10,938,410	-485,665	-4.4	UNITED AIR LINES TRANSPORT CORP.				
Net Profit before Federal Income Taxes.....	4,799,915	2,358,018	2,441,897	103.6		Six Months Ended June 30 1943	1942	Amount of Increase	% Increase
Provision for Federal Income & Excess Profits Taxes (Less Credit).....	3,440,000	1,152,700	2,287,300	198.4	Operating Revenues				
NET PROFIT.....	\$1,359,915	\$1,205,318	\$154,597	12.8	Passenger.....	\$8,599,898	\$6,879,326	\$1,720,572	25.0
Earned per common share ...	\$2.18	\$1.91	\$0.27	14.1	Mail.....	2,827,966	2,430,184	397,782	16.4
Common shares outstanding..	574,848	574,848			Express.....	1,016,396	880,701	135,695	15.4
					Miscellaneous.....	265,802	244,805	209,970	85.8
TRANSCONTINENTAL & WESTERN AIR, INC.					Total Oper. Revenues.....	\$12,710,062	\$10,435,016	\$2,275,046	21.8
	Six Months Ended June 30 1943	1942	Amount of Increase	% Increase	Total Oper. Expenses.....	9,140,409	9,062,361	78,048	.9
Operating Revenues					Net Earn. from Operat.....	\$3,569,653	\$1,372,655	\$2,196,998	160.1
Passenger.....	\$5,811,902	\$4,906,575	\$905,327	18.5	Other Income.....	327,959	97,844	230,115	235.2
Mail.....	1,909,798	1,682,147	227,651	13.5	Net Profit before Federal Inc. Taxes.....	\$3,897,612	\$1,470,499	\$2,427,113	165.1
Express.....	958,506	539,581	418,925	77.6	Federal Income Taxes.....	1,744,212	588,200	1,156,012	196.5
Miscellaneous.....	130,718	71,908	58,810	81.8	Net Income.....	\$2,153,400	\$882,299	\$1,271,101	144.1
Total Oper. Revenues.....	\$8,810,925	\$7,200,211	\$1,610,714	22.4	Earned per common share....	\$1.44	\$0.59	\$0.85	144.1
Total Oper. Expenses.....	7,230,789	6,466,584	764,205	11.8	Common shares outstanding..	1,500,451	1,500,451		
Net Earns. from Oper.....	\$1,580,136	\$733,627	\$846,509	115.4					
Other Income.....	188,281	107,688	80,593	74.8					

More Authority Needed for Navy Aviation

RECENT REORGANIZATION of Naval aviation does not go far enough but it paves the way for other important reforms both in the Bureau of Aeronautics and in the Office of the Deputy Chief of Naval Operations for Air.

Most attention, naturally, has been given transfer of operations from the Bureau to the new Office, and speculation is rampant over the future relative positions in authority of the battleship sea dogs and top ranking airmen in combat. This matter is as intriguing as it is important, but there is further action which the Secretary should take at once to utilize the Naval air experts to the maximum.

The Bureau of Aeronautics' prime function under the reorganization is announced as the design and procurement of the finest fighting aircraft. Yet the air-minded public does not realize that in order to carry out this function the Bureau even yet is at the mercy of other non-aviation bureaus.

Aeronautics personnel, although responsible for most of the work involved in such vital questions as communications equipment and armament which goes into Navy planes, have only limited authority.

The Bureau of Ships *still* has the last word on types of radio installed and the Bureau of Ordnance is undisputed boss of aircraft armament. Thus, we see the same men who design and install 16 inch guns on a wallowing surface vessel having authority to overrule the recommendations of battle-

Airline Passenger Service Problems

THE AIRLINES are doing a remarkable job, despite wartime difficulties, but there are becoming apparent to air travelers increasing delays and slip-ups affecting passenger relations which hint at the beginning of a breakdown in supervision on reservations and airport personnel.

Results of these oversights are confusion and delays far out of proportion to their cause. Apparently the fault lies not in the employee's original training for his job, but in seeing to it that he follows it.

Typical of comment by seasoned air travelers is the complaint that on several lines more passengers are permitted to get all the way to their plane than can be taken aboard. This results in delays up to 20 minutes while various lists are checked, all passengers interviewed, and the inevitable removal of the excess passengers, through no fault of theirs.

scarred pilots, just back from fighting zones, on machine guns or aircraft cannon installations.

In fairness to these ship men it must be said that in recent months they have listened to Bureau of Aeronautics officials in many cases, but it is safe to say that our Navy aircraft would have had a heftier punch at war's outbreak if airmen had been in complete control of Naval aircraft procurement.

A similar control by ship men prevails even in the new air operations division. The reorganization announcement made the point that personnel functions were transferred from the Bureau of Aeronautics. This resulted in the general impression that such matters passed entirely to the newly promoted Admiral McCain. Here again, however, it is conservative non-airmen in the Bureau of Naval Personnel who control all personnel.

The reorganization, heralded by the Navy with pardonable fanfare, is a commendable beginning. But if Secretary Knox has the best interests of Naval aviation at heart, rather than a dominating fear of a separate air force which conceivably could take away some of his aviation prerogatives, he should strip the old-line bureaus of their authority over the air arm.

That, to quote the Navy Department's own press handout, would go much farther to "increase the responsibility and autonomy of the aeronautics organization in procuring the finest aircraft types . . . so vitally important to the operations of the war."

Errors by reservations people are growing, such as failure to inform the passenger he must report at a deadline or face cancelation, failure to record reservations after assuring the passenger he has space, and reserving space on wrong flights.

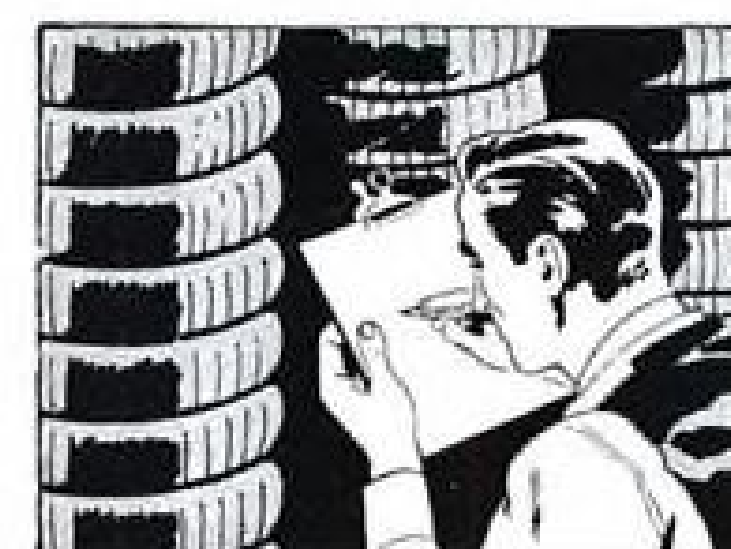
Delays in delivering baggage from planes, keeping airport limousines and taxicabs waiting 15 minutes or more, is now common. The catalog of delays could be continued.

Delays are expected at an airport, but objection of airline passengers is that most of the confusion appears to be result of curtailed supervision by perhaps one or two individuals rather than the result of problems inherent in war operations. The industry should make every effort to preserve its remarkable reputation for service to the traveling public. A little more attention by supervisory people to routine would have amazing results.

ROBERT H. WOOD

Buy Tail Wheels...Tail Wheel Tires & Tubes

THE GENERAL WAY*



The Old Way . . . tires, tubes, wheels bought as separate units require extra warehousing space, extra inventory and stock records.



The Old Way . . . means lost time in obtaining needed tail wheel units from separate storage spaces.



The Old Way . . . necessitated assembly of tail wheel units—waste motion!

General's tire-tube-wheel combination eliminates waste! Can be stored in one place . . . *is ready for installation!*



*** IN ONE PACKAGE!** When you buy GENERAL's tire-tube-wheel *combination* you eliminate need for extra storage space . . . avoid unnecessary inventory . . . save production and maintenance time, cut costs and at the same time get the *quality* design that counts!



GENERAL Military and Commercial type tail wheels are fabricated from aluminum or magnesium alloy castings. Precision machined . . . fitted with tapered roller bearings. Both tapered and straight axles. Designed and built to A. A. F. Spec. No. 25272. (Easily removable dust-proof cover equipment.)

The General Tire & Rubber Company's *complete* ahead-of-the-field line of military and commercial type tail wheels is backed by General's long, practical experience in the manufacture of aircraft wheels, brakes, tires and allied aviation products . . .

General tail wheels are *rugged*, built to take as much abuse as main landing wheels . . . yet they're *light*—for *increased payload*!

Designed to meet Army, Navy and C. A. A. specifications . . . General tail wheels and tires alike have *proved* their superiority in action on every type of aircraft and in tests run at General's own completely equipped laboratories as well as in extensive tests by leading users.

A case in point was the way the General Twin-Bead tail wheel tire stood up . . . where single bead tires failed . . . in sideload tests run by a large, eastern aircraft company. General's Twin-Bead feature provides *extra-grip* on the wheel rim!

So it's good news that today General has production facilities available for immediate delivery on General tires, tubes and wheels. *For further information write or wire—Aviation Division*



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Tire Pressure in Just 60 Seconds...**

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With the General Deflect-O-Gauge, each tire can be inflated to exactly the *correct pressure* required for the load. No graphs, charts, use of scales or air pressure gauges necessary... simply use the General Deflect-O-Gauge and air hose! Write now for free instruction folder. Address: Aviation Division, The General Tire & Rubber Co., Akron, Ohio.

A NEW AVIATION GREASE... **LOW-TEMP** THAT WORKS AT... **MINUS 100° F.**

50,000 Ft.

40,000 Ft.

30,000 Ft.



BASED on the belief that the stratosphere temperature was minus 67°F., Aviation greases were developed to lubricate critical airplane controls at or above this temperature.

However, recent test flights in the stratosphere recorded temperatures ranging between minus 80°F. and minus 90°F. and other tests registered still lower temperatures. The U. S. Weather Bureau has confirmed that temperatures lower than minus 67°F. exist in the upper air at all U. S. stations on practically all days.

On these test flights, greases made for minus 67°F. temperature froze up when the stratosphere was reached. To correct this serious condition, Texaco developed a product which will permit all parts of the plane where it is used to function perfectly... *even at minus 100°F.* This product is Texaco **LOW-TEMP Grease.**

A Texaco Aviation Engineer will gladly cooperate in the solution of your low temperature problems. Phone the nearest of more than 2300 Texaco distributing points, or write The Texas Company, *Aviation Division*, 135 East 42nd Street, New York 17, New York.



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