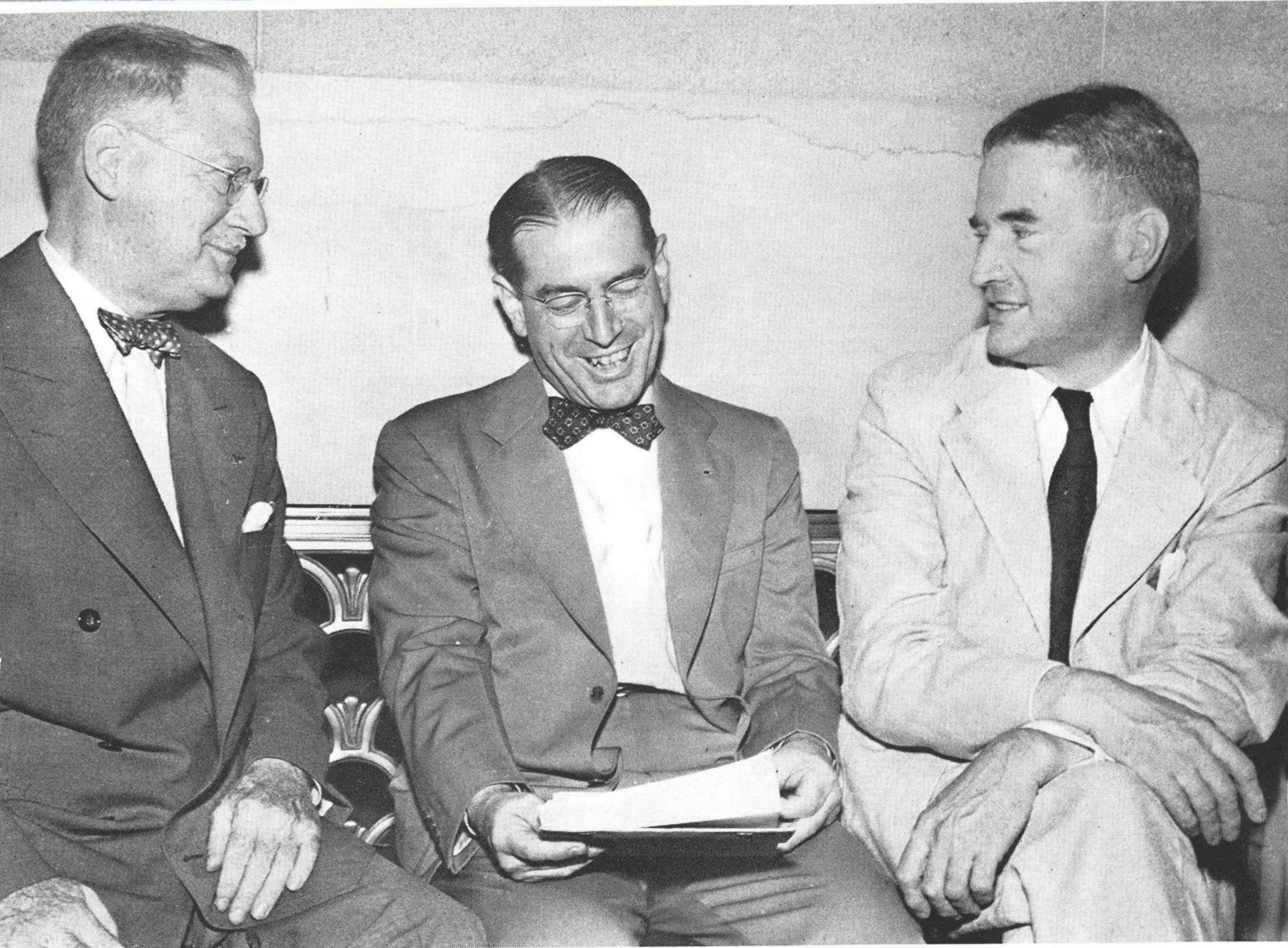


Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

JULY 31, 1944



Testify at American Export Purchase Hearing: *Top airline officials were among witnesses as a Civil Aeronautics Board examiner took testimony in a Washington hearing on American Airlines' proposed acquisition of American Export Airlines. Left to right are A. N. Kemp, president of American Airlines; John E. Slater, executive vice-president of American Export, and Ralph S. Damon, vice-president of American.*

Pogue Body Urges Speedy Disposal of Large Planes

SWPA advisory group would clear field of big transports in 15 months after they have been declared surplus.....Page 7

AA Transport Merger May Force CAB to Clarify Policy

American Export acquisition hearing boils down to struggle over chosen instrument or free competition.....Page 34

GE Moves to Mass Production of JP Aircraft Turbines

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Airport Users Urge Program for Expansion of Fields

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Progress of Air Mission to Spain Rouses Optimism

Ryan returns to U. S. after "busy trip"; Stanton and Novinger to stay two weeks longer to study landing facilities.....Page 31a

DC-3 Reconversion Costs Average \$32,000 to \$40,000

Between 12,000 and 15,000 manhours reported required to restore planes returned by Army to airlines.....Page 25

KEN-RAD

Transmitting Tubes

FOR AIRBORNE EQUIPMENT



The transmitting tube plant of Ken-Rad does not face a severe post-war reconversion problem as the types now made for airborne equipment are ready for commercial aviation. Additional types will be made promptly to serve requirements. In the meantime our Aviation Division is prepared for peace while working for war.

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THE AVIATION NEWS

Washington Observer

UNITED AND FOREIGN ROUTES—W. A. Patterson's flat statement last week that United Air Lines does not intend to file application for any foreign routes, even though it now is flying the Pacific regularly as an ATC contractor, is not being interpreted by the industry as a lack of interest in international post-war flying by UAL. It has been known for some time that United would like to organize an affiliated or subsidiary company, preferably teaming with other interests including a major steamship company like Matson, to fly internationally. The separate operation might be controlled by the parent United company, with minority stock held by one or more other transportation companies with world-wide experience in travel merchandising and hotel and tour management. It is United's belief that no present domestic airline company will fly internationally, but that any such service will be flown by specially organized, separate subsidiaries or affiliates.

U. S. AID FOR SOUTH AMERICAN LINES—Impressive plans are already being carried out toward what may become a large-scale U. S. aid program to build up Latin-American national airline services. Many students from these countries are already in training in air schools here. These graduate pilots, mechanics and operations specialists will return as a core for local civilian air expansion. Typical is the case of Peru, whose officials have had various preliminary talks in Washington. In their discussions with CAA they showed interest in obtaining aid to select and translate regulations, textbooks, etc. Peru has nebulous plans for a large feeder airline system, possibly using Douglasses. U. S. technicians would be lent to set up airways, plan bases, and set up a network. The antiquated Faucett Line planes are

out of the picture because of higher safety standards required for Andean flights, but the Faucett company may be the nucleus for the organization. The Peruvian government would regulate the company but it would be financed by private capital, partly Peruvian, partly U. S. Plans have not crystallized as to specific routes or added mileage, required.

JP AHEAD OF SCHEDULE—Quantity production of jet propulsion engine equipment announced by General Electric last week is convincing proof of recent reports by engineers that JP progress is ahead of schedule. There are many problems. But few, if any, such revolutionary improvements in aviation have given higher performance in so short a time. It is no secret that the 500 mph. air speed mark has been reached with JP.

*

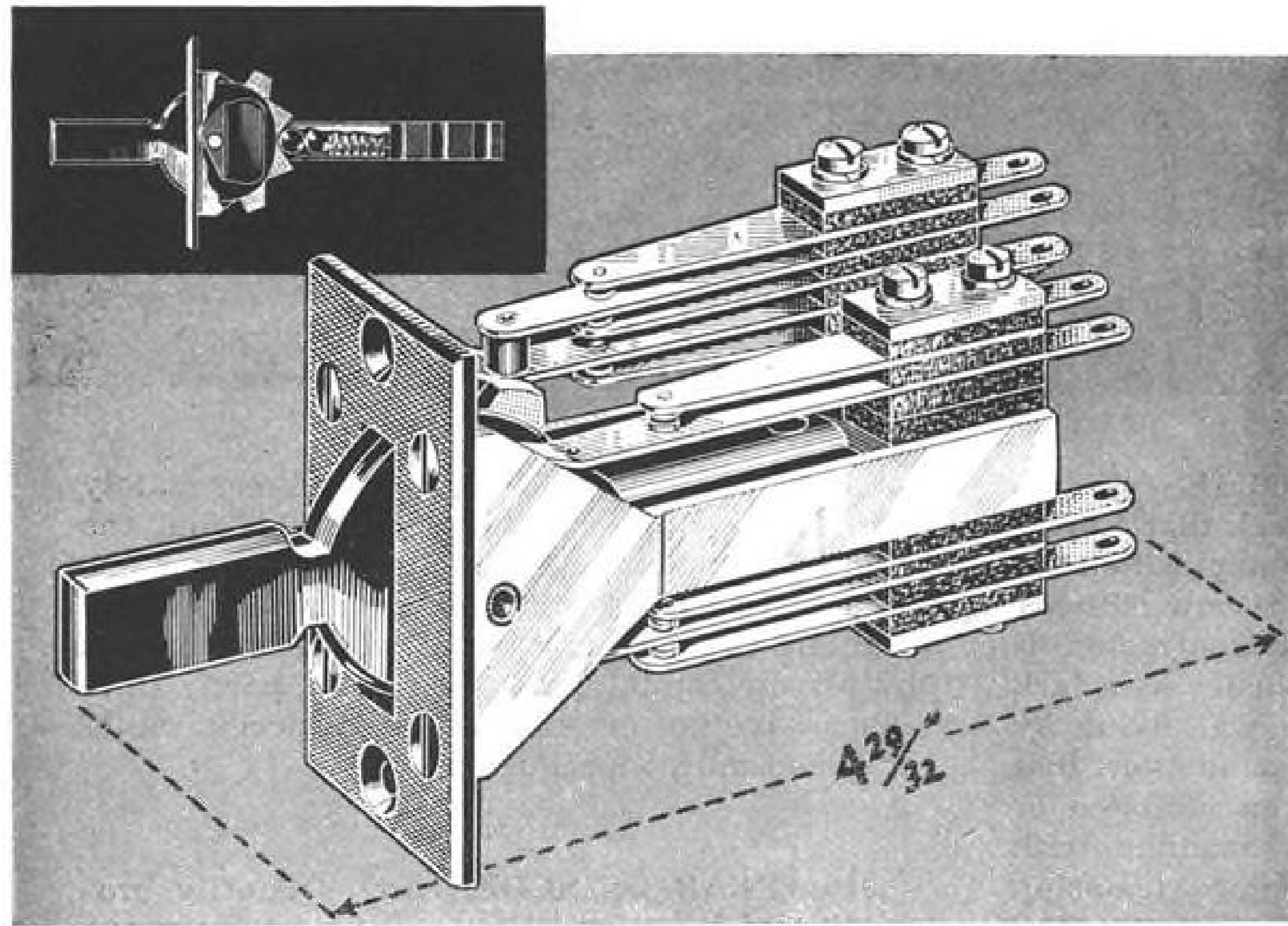
JP AND ROBOTS—The General Electric announcement should not be tied to the epidemic of JP-operated robot bombs. High-speed fighter aircraft is not the defense answer to pilotless craft. Once released, robot bombs are missiles in free flight, just as are artillery shells or aerial bombs. Shooting down such missiles simply isn't done. True, the robot bomb can be destroyed en route, but in general this is an inefficient and a futile defense. The answer is still the classic one—root out the points of origin.

*

ROBOTS AND AIR FORCES—Far-seeing aviation observers think the robot bombs' development will have ultimately a very important effect on military aviation. There is little doubt that the next few years could bring improved long-range missiles, radio-controlled



Thunderbolts for U. S., Russia, Brazil and England at Republic's Farmingdale Plant.



This Light Weight, Heavy Duty MOSSMAN AIRCRAFT SWITCH Can't Be Jarred Out of Position

Positive locking of this Mossman O-42 Heavy Duty Lever Switch is assured by a detent mechanism which retains its position under extreme jar and vibration.

Designed with a full understanding of the requirements of aircraft use, this switch has a die-cast aluminum frame which gives it a weight of but 4 1/2 ounces with 8 contact springs. As many as 32 contact springs can be built into this switch.

Detent mechanism consists of a stainless steel spring which is located in a nickel-plated brass tube. This is staked into the tunnel of the switch frame, where the spring exerts pressure against two free rolling, stainless steel balls. Pressure brought to bear on the lever forces the outer ball to follow the contour of the latch plate, giving a positive locking or spring return to center position. The pressure on the latch is independent of the pressure on the contact springs.

The Mossman O-42 Switch is usually mounted directly to a panel. An escutcheon plate is available and may be ordered in finish to match panel.

RATING:
5 amperes, 110 volts A.C. (non-inductive).

INSULATION:
Spring pile-up insulators are Bakelite wafers assembled under pressure to guard against distortion.

The Mossman O-42 Heavy Duty Lever Switch is one of a line of precision electrical components which includes many types of heavy duty, multiple circuit lever switches, turn switches, push switches, plug jacks and special switching components. Send for catalog containing full information.

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from a remote point, sending back radio impulses which would enable a dispatcher to plot the bomb's exact location at any moment. It is only a matter of time until this country will be launched on the world's greatest pilotless bomb research program, in the opinion of competent officials in Washington. The study will also devote keenest attention to defense measures against these weapons.

AIMING ROBOTS—Sources that know say now that the robots can be aimed more accurately than top airmen are admitting. Two methods used by the Germans are reported. Each robot, it is said, has a small rotating cam that emits three letters by radio constantly during its flight. Radio direction stations in France take bearings and plot its course. Each successive salvo emits its own three letters and by this method its explosion point can be determined. The Germans also are reported tracking the robots with radar from ground stations and planes. They are NOT using radar or radio controls, but follow the robots with radar and radio to determine their striking position in relation to the target. Then they correct on succeeding salvos to hit what they want. It is merely old artillery practice adapted to use the longer range of the robot and the longer range of new equipment such as radar and radio.

FEEDER LINE DAMPENERS—The Air Line Pilots Association, AFL union, can be expected to make loud protests as soon as the feeder airline program shows signs of blossoming to sizable proportions. It hopes to take in all feeder line pilots as full-fledged members to maintain its powerful position and consequently will exert strong pressure to prevent lower pay rates than prevail on the big lines. No responsible observer can see how smaller companies can meet the trunk lines pay scale, nor any reason why this should be done. The ALPA also will strike at any move to allow feeder lines to operate with one pilot instead of two, and is likely to demand twin-engine instead of single engine equipment even in charter operation. It will combat vociferously all attempts to change civil air regulations for the benefit of small airliners and small companies, despite improved aircraft and equipment. It will be an unhappy fight for air transportation if it develops as expected.

ATC COMPETITION—Recent reassurances from high military sources make it clear the officers of the Army Air Forces' vast globe-circling Air Transport Command have no intention to compete in international air transporta-

tion with commercial companies. For example, they would prefer to move out of Europe in a matter of weeks after Germany is beaten. If Germany goes down within a few months, however, general consensus is that no commercial airline will be ready to take over ATC routes. Would an ATC close-down be wise then from the standpoint of U. S. prestige? Growing opinion in Washington is that it would not, and that ATC should be kept in regular operation on, for example, the North Atlantic service until properly certificated airlines can start. In the meantime, ATC already is beginning to accept paid passengers in a few cases, similar to BOAC practice, and this can be expected to continue to an increasing extent.

OUR PACIFIC POWER—This nation's naval and air power in the Pacific beyond Hawaii is discussed in awed tones even by experienced newsmen, not easily impressed, who have returned from fleet assignments. Our strength is being increased every month. Naval officers here say the Japs don't know the half of it and might not believe it if they did. Officials here are convinced that the Jap Navy won't dare to take the offensive at any point except in a desperate suicide strike. Our air reconnaissance is so efficient that a surprise jab at any of our fleets is called impossible. Big plans are being made. Big moves will be undertaken about August and September.

EMPHASIS ON NIGHT FIGHTERS—There will be other new specially designed night fighters joining the Northrop Black Widow. We are behind the British in night fighting equipment and experience. Up to now we have been able to leave the burden of this work to the RAF. But as Pacific activity steps up the U. S. must expect to take the brunt of night fighting responsibility too. Washington officials are making full preparations.

BEAVERBROOK'S AVIATION TALKS — Best British sources aside from Lord Beaverbrook himself contend that any aviation talks during his current visit to Washington, primarily for oil discussions, will be held incidentally, if time permits. Aviation people here fully expect, however, that Beaverbrook "will find the time," and official circles anticipate that there will be some aviation huddles, though probably involving only matters brought up at previous conversations, without consideration of new major subjects. Peter Masefield, former aviation writer on various British papers, accompanies The Beaver.



GI's ... by proxy

Whether it's forty degrees below zero in Alaska or one hundred and seventy in the sun at Iran, the technical representatives of Bell Aircraft's field service staff help keep thousands of Airacobras flying... and fighting in the far corners of the world.

The first technical mission sent to Russia by an American manufacturer consisted of Bell Aircraft servicemen and engineers. These men gave valuable technical information to the Red Air Force to assist their engineering officers and ground crews in servicing and maintaining the thousands of Bell fighter planes on the Eastern front. In return they brought back first hand knowledge of Airacobras in action which has aided us in producing even more effective air weapons.

Theirs is a dangerous life. They are civilian GI's who play an important part in helping the Army Air Forces and our Allies to keep 'em flying. Here in America, they serve nine commands of the Army Air Forces—living a soldier's life on the California desert or in the swamps of Florida—in order to learn how to work under actual war conditions.

Some of these Bell Servicemen are now studying the new powerful fighter

plane coming from our Niagara Frontier Division. Some are giving their entire attention to the flexible machine gun mounts made by the Bell Ordnance Division. Others are taking a special course on America's first jet propelled plane designed and built by Bell Aircraft—as spectacular in its way as the B-29 Super-fortresses of which Bell Aircraft is one of the producers in its bomber plant at Marietta, Ga.

And when the new Bell helicopter becomes available for general use, the service department will add this latest Bell Aircraft development to its activities. © Bell Aircraft Corporation.

MEMBER AIRCRAFT WAR PRODUCTION COUNCIL—EAST COAST, INC.

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PACEMAKER OF AVIATION PROGRESS

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BUY WAR BONDS AND SPEED VICTORY

Pogue Subcommittee Urges Speedy Disposal of Large-Plane Surplus

SWPA advisory group would clear field of big transports in 15 months after they have been declared surplus; study follows general lines of Harvard survey.

A generally favorable reaction to the Surplus Aircraft Advisory Subcommittee report, which would clear the field of large planes in less than 15 months after they had been declared surplus, is anticipated by spokesmen for the industry.

In its general lines, the report of the aircraft subcommittee, headed by L. Welch Pogue, chairman of the Civil Aeronautics Board, follows that of the Harvard School of Business Administration, although it differs in some pertinent details.

► **Speed**—The essence of the report is speed in disposal. If followed by Surplus War Property Administrator W. L. Clayton and the head of the Aviation Division of the SWPA, Col. William B. Harding, tactical aircraft would be transferred to "unabsorbed surplus" within four months, transport craft within nine months. Unabsorbed surplus would be held for a period of only six months for sale at nominal prices to schools, for experimental uses or for memorials, and then scrapped.

Personal aircraft and components would have to be disposed of within a time limit of three years.

► **Transport Plane Conversion**—One significant difference between the subcommittee report and the Harvard report lies in the conversion of transport planes. The Harvard report recommends that the original design manufacturer overhaul all such planes. The subcommittee recommends that transports be sold "as is" and that the purchaser have necessary overhaul, modification and refurbishing done wherever the buyer chooses. The subcommittee states that while the members believe the work should be done by the aircraft manufacturers, it is suggested that the work go to manufacturers as a result of "competition and competency"

rather than as the result of assignment. The subcommittee points out that the manufacturer should be able to do better work at a more economic price and would develop sales contacts and sharpen initiative in obtaining this work in a free competitive market.

Other significant conclusions of the subcommittee are:

During the period of short supply, the Surplus War Property Administrator should decide which airlines, domestic and foreign, should have precedence in receiving surplus transport aircraft. In general the needs of American operators would be given first consideration, but international policy, economic rehabilitation and the establishment of a customer base for future markets demand a number be given foreign operators even while domestic needs are being met.

Aircraft manufacturers should

act as agents for the government in the sale of transport planes, receiving reasonable fees. This is advocated to establish factory-customer relationships. Foreign disposal negotiations should be with the ultimate user rather than the user's government.

Only a very few serviceable transport planes will be declared surplus abroad, the subcommittee revealed it has been told.

Sales should be either outright for cash, through lease or a terminable installment plan. Domestic users should be given terms as favorable as those given foreign users.

The subcommittee rejects the Harvard report recommendation that prices of transports vary depending on the transportation use to which the plane will be put; pricing determinations, the committee asserts, should be uniform and approached from the point of view of airline operations.

Also rejected is the recommendation of other groups that a portion of lease funds be placed in escrow for purchase of a new American plane. Newly designed planes in the American market will force operators to retire transports at an early date, the subcommittee holds, and the plan in foreign operations would meet with resent-



BOMB BAYS OF BOEING SUPERFORTRESS:

Bomb bays fore and aft of the big midwing of the B-29 are one secret of the tremendous bomb load carried by the big ship. A special mechanism releases bombs alternately to maintain the plane's equilibrium on bombing runs. Small or large bombs or a combination of both may be carried. Exact capacity of the big ships has never been revealed.

ment as an effort to force American equipment on other nations to the detriment of their own manufacturers.

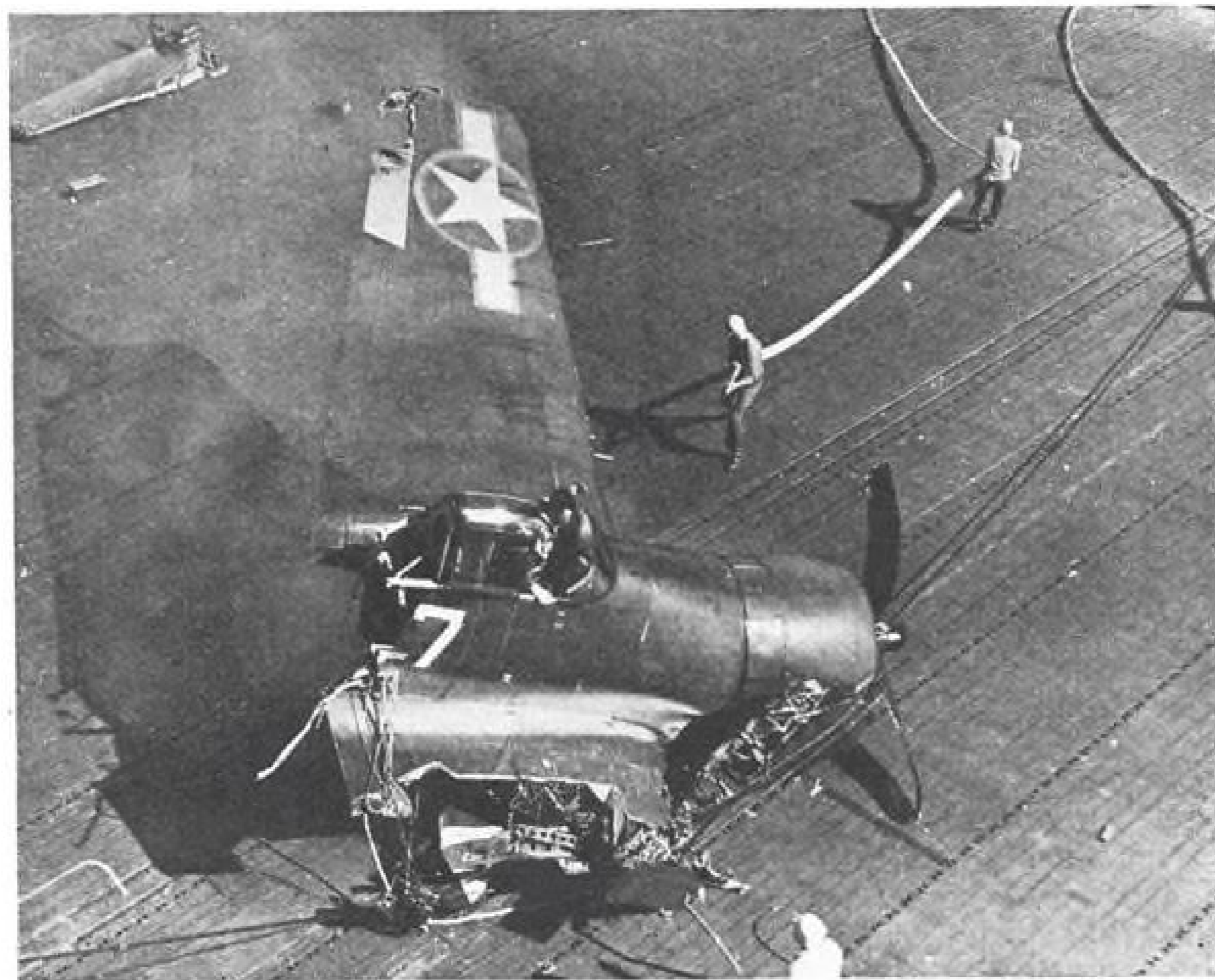
Lend-lease transports should revert to the United States unless disposed of by international agreements and should immediately be declared surplus.

Regular studies should be made of supply and demand factors and transports in excess of prospective demand should immediately be transferred to unabsorbed surplus.

Prompt disposal of personal-type aircraft is urged, the subcommittee pointing out that the earlier planes are available the greater the return to the government.

Small transports should be handled under transport policies while a transport plane shortage continues, but prices should be uniform in sale for transport or personal uses.

Sales of personal craft should be on an "as is" basis with individual CAA inspection after overhaul. Sales should be for cash and at such prices that the widest distri-



HELLCAT COMES BACK:

Hellcat pilot Ensign R. Black, shot up over Palau in the Pacific, started back for his carrier with his hydraulic system gone and his flaps useless, a large hole in his right wing and his ailerons smashed. He found his carrier, but slipped off to one side coming in, shearing off a wing and the tail on a gun turret. With what was left of his ship he still made the landing and emerged with no other injuries than a few scratches.

bution and greatest use can be obtained as quickly as possible.

The War Training Service of the CAA should be used as the disposal organization for the personal planes.

Fixed prices, quantity discounts and commissions are recommended for personal planes—the main objective in this class plane being creation of a post-war market.

Training planes should be held from unabsorbed surplus for three years to permit schools to initiate flight training programs.

There will be such a large surplus of engines, propellers, instruments and other components that it may be impossible to sell used items. Original manufacturers or companies licensed by the manufacturer for the work should be given equipment on consignment and act as agent for the government. New equipment should be sold before money is spent in reconditioning old equipment. A fixed sales price of 75 percent of cost is recommended.

Flight training instruments should be sold for training purposes only at a price not less than 10 percent of cost.

Licensing powers of the CAA should be used to control a limited "sportsmen" market among civilians for combat craft.

Surplus Planes Net \$3,242,000 in 5 Mos.

Reconstruction Finance Corp. received \$3,242,000 for sale of surplus airplanes during the first five months of 1944, a newly released Office of War Information report reveals.

These sales, mostly in trainer planes, would represent an average of approximately \$1,300 a plane on the basis of the previously reported sale of 2,500 planes in the same period.

► \$5,000,000 a Week—Sales of surplus aircraft and aircraft property now are at the rate of \$5,000,000 a week—this includes the excess inventories of the plane manufacturers and machinery no longer needed in some plants.

Other details of the OWI report largely summarize previously reported data on the aircraft surplus problem, but it does bring out that the Army has reported to the Surplus War Property Administration that chemical coatings now used in some combat theaters are an emergency expedient and can be relied upon only to a limited extent to keep surplus planes from rusting and deteriorating. Storage of planes now is largely outdoors at 36 strategically located fields.

Airport Users Urge Program for Expansion, Operation of Fields

Executive committee named at NAA-sponsored conference in Washington to guide Federal legislation on port development, seek uniformity in state and local laws and standard charges to various classes of users.

The National Aeronautic Association last week completed the first step in the country's first effort to organize the thinking of persons and agencies concerned with design, construction and use of airports.

Fifty-one organizations from aviation, industry, business, education, and local and federal government participated in the Joint Airport Users Conference at the Statler Hotel, Washington, July 24-25.

Closing the meetings, they voted the conference permanent status, and appointed an executive committee, whose initial endeavor will be to guide Federal legislation on airport expansion, try for uniformity in state and local airport legislation, and for uniform charges to various classes of users.

► Land and Runways—The meetings just concluded dealt only with land and runways. Probably one

or more additional conferences will be called on airport buildings, lighting, equipment and services, and with traffic control.

Conferees agreed that design and distribution of landing facilities may be the most important factor in aviation, which in turn will profoundly affect life and development in this country. The task was taken seriously, opinion and criticism were batted around sharply, but with equanimity.

Nobody was authorized or expected to take executive action on any of these matters. It is hoped that clarified thinking, and in some cases agreement, will take the form of action on the part of law-making bodies, aviation groups and company managements, and engineers and suppliers to airport construction.

► Old Controversy Revived—The long-standing controversy over heavy municipal investments in

ports for airlines to the alleged disadvantage of non-scheduled operations, came up again, with no conclusions reached.

Particularly interesting was discussion of runways for feeder planes, some speakers contending that special feeder planes should be designed to save terminal time by making brief approach turns and short runs on the ground, using short runways.

Proposal to use the term "airparks" for minor air fields was debated, some speakers contending each municipality is entitled to at least one "airport"—its air terminal. Others argued that inclusion of recreation facilities in the term "airparks" will help sell the necessary bonds. All agreed that the term is suitable for secondary fields in any given locality.

Plan Salvage Test

The report of the Surplus Aircraft Advisory Subcommittee reveals that a salvage test will be conducted with a four-engine bomber soon to determine the cost in labor and time of reclaiming salable components and preparing residual parts for scrap.

The subcommittee recommends that the Reconstruction Finance Corp. consider contracting with aircraft manufacturers whose contracts have been terminated or materially reduced in this reclamation work if the test proves it to be economically feasible.

It is pointed out that this method of issuing salvage contracts would serve to give employment during the period of readjustment and create an interim use for government-constructed facilities.

AAF 37 Years Old

The Army Air Forces this week will observe its 37th anniversary.

During the past year the Air Forces completed the mighty Boeing B-29 Superfortress and perfected a jet propulsion plane. It mounted new and greater fire power—rockets and cannon that as far outgun the machine guns of the first World War as the planes of this war make museum pieces of the ships of that day.

► Created in 1907—The Division of Aeronautics of the Signal Corps of the United States Army was created Aug. 1, 1907, four years after the Wright Brothers first flew at Kitty Hawk. The new branch of

Price Formula

The use value of a C-47, completely overhauled, modified and refurbished, will be \$60,000 if the recommendations of the Surplus Aircraft Advisory Subcommittee are followed. The "as is" price to users should be fixed, the Pogue body urges, at a figure which, when it has added to it a reasonable estimate of the overhaul cost, would equal that figure.

The price is arrived at by using the formula of the Harvard report, based on yearly value in airline use times the number of years in expected economic life. The value in use is based on a depreciation rate which airlines considered appropriate in the pre-war period.

Prices of airplanes having larger capacity, additional desirable operating characteristics, and a longer estimated economic life, would be adjusted upward nearer the original cost of the aircraft.

The prices, the subcommittee states, are fair to both user and the government and would insure a wide distribution of transport aircraft for transport purposes. In the case of the C-47, the price is approximately one-half of that paid for DC-3's in the pre-war market.



Address Joint Airport Users: These three were among the speakers at National Aeronautic Administration's two-day Joint Airport Users Conference in Washington last week. Left to right are William R. Enyart, NAA president; John Groves, operations manager, Air Transport Association, and J. E. Sommers, Deputy Civil Aeronautics Administrator.

the service consisted of one captain and two enlisted men. Today, the AAF comprises 2,300,000 officers and men and more than 75,000 planes, of which 34,000 are combat types. It took two years for the division to obtain delivery of its first plane. Today, hundreds come from giant factories each day.

WEST COAST REPORT

Industry Eyes Order On Post-War Tooling

Plane manufacturers look to Army for confirmation of program easing ban on civilian production plans.

By SCHOLER BANGS

Executives of several major West Coast aircraft factories are preparing to talk openly of post-war plans following War Production Board orders authorizing American industry to begin tooling up for commercial manufacturing to a degree that will not interfere with present war production.

However, definite as are some of their plans, they will require even more substantial encouragement to accept the WPB indication that just around the corner they may see a green light for limited manufacture of civilian goods.

► **Army Stand Awaited**—Heartening to manufacturers as they are, the WPB orders come from a fabulous place 2,500 miles away, and the Army frowns on "post-war talk."

One major manufacturer still follows the Army lead and insists that his plant is giving no time to post-war planning and is engaged in unwavering all-out war production. That this factory has met and bettered war schedules is a fact. But it also is a fact that many months ago, long before victory was even in sight, it did set up a post-war planning department.

Thirty production investigators and a chief planner sifted the mass of things the company might make after the war, and only recently completed a detailed report to the company president. Participants in the research indicate the report was discouraging on the extent to which the company might compete in fields other than aircraft.

► **Labor Factor**—In Army circles the reason given for opposition to post-war talk is that it will start



CARRIER WIND GAUGE:

Sufficient wind for safe landings must be registered on this anemometer before a pilot is permitted to land aboard the USS Charger, converted training carrier, aboard which American and British pilots practice carrier landings. The Charger, which operates in the Norfolk and Hampton Roads area, has chalked up more than 24,000 landings on her flight deck since sailing into the Chesapeake two years ago.

a quit-work landslide and lead to labor shortages.

Manufacturers have been unable to convince the Army that announcements of post-war plans will help to persuade workers to stay on the job.

► **PERSONAL PLANES**—Only a military bureau chief could believe that it still is a "secret" that at various West Coast plants a goodly handful of four-engine transports have been outfitted as the personal planes of United Nations government leaders. They have been seen by airport thousands.

Minor military chiefs with power of censorship fear a public reaction to the spending of "taxpayers' dollars" for luxurious transports that will never see combat. They do not reason that a majority of taxpayers might commend the effort of the military to provide a Chief Executive with transportation that will assure him the maximum of rest and minimum of distraction from critical duties on flights to global conferences.

Most famous of the "special" planes, completed or under construction are the big Douglas outfitted for President Roosevelt, and Winston Churchill's globe-journing *Liberator* "The Commando." Now in the last stages of overhaul on the West Coast. "The Comman-

do" has been polished until it shines like a new dollar, and probably will fly Churchill in state to peace conferences.

Beeches, Lockheeds To Be Sold by DPC

Small transports, still in Army depots, may go on sale in August or early September.

An undetermined number of Beech and Lockheed transports is expected to be placed on sale by the Defense Plant Corp. in about 30 days.

The small transports have not yet been released to the DPC from Army depots, and the total to be turned over for sale as surplus has not been disclosed, but DPC is making plans for their sale late in August or early in September. Some may be turned over to the Foreign Economic Administration for sale in other countries under the surplus program.

► **Surplus Picture Unchanged**—Frank Ronan, vice-president of DPC, said last week that the surplus picture had not changed in the past month, and that new increments of surplus planes for sale were numbered only in hundreds, including gliders. As of July 1, an estimated 11,450 planes were in the hands of DPC for sale and approximately 2,500 had been sold, chiefly WTS trainers in the light plane category. Some special types also have been disposed of, although Mr. Ronan again emphasized that no combat ships had been sold to private purchasers (AVIATION NEWS, July 10).

Mr. Ronan did reveal that DPC expects to place some Army trainers in the heavier categories on sale within the next 30 days, and that preliminary plans for the sale were now being drawn.

These trainers already have been surrendered to DPC from the Army training program, and about 6,000 will be available for distribution in addition to the 5,000 lighter trainers released from the WTS program. It is anticipated that training schools will be in the market for some of the surplus planes in the heavier category, although it remained doubtful that the full complement will find a market in this country. However, through various means it is expected that this portion of the potential surplus will find comparatively easy sale here and abroad, particularly in South America.

GE Moves Toward Mass Production Of New JP Aircraft Turbines

All important nations at work on developments, but lack of materials necessary to stand intense heat and pressure remain major barrier; jet engine has three-to-one thrust power advantage over conventional power plant; further gain seen.

Announcement by General Electric Co. that it will devote 600,000 sq. ft. of plant space to production of jet propulsion aircraft turbines and that a "large engine manufacturer" has been "approached" to go into quantity production at this limited development stage indicates satisfactory completion of certain current developments.

This is significant because it is an indication of solid achievement having important and lasting implications. It is not a hint of military desperation because it is obvious that existing conventional equipment is adequate for successful prosecution of the war.

It does not mean perfection of the jet engine, but the turbine is a basic though small element in a series of developments which loom large on the horizon of future aircraft power plant schemes.

► **Here to Stay**—Jet propulsion is here to stay. All of the world's aviation powers are busy with its development, and General Electric and Bell Aircraft Corp., the pioneers here, are not the only principals in the U. S.

Principles involved are well established. We are dealing with known forces and the roads to perfection are fairly obvious to experts.

Main barrier is materials, but that has never stymied aviation for long. Already, considerable progress has been made despite limitations, and efficiencies will improve as materials are developed.

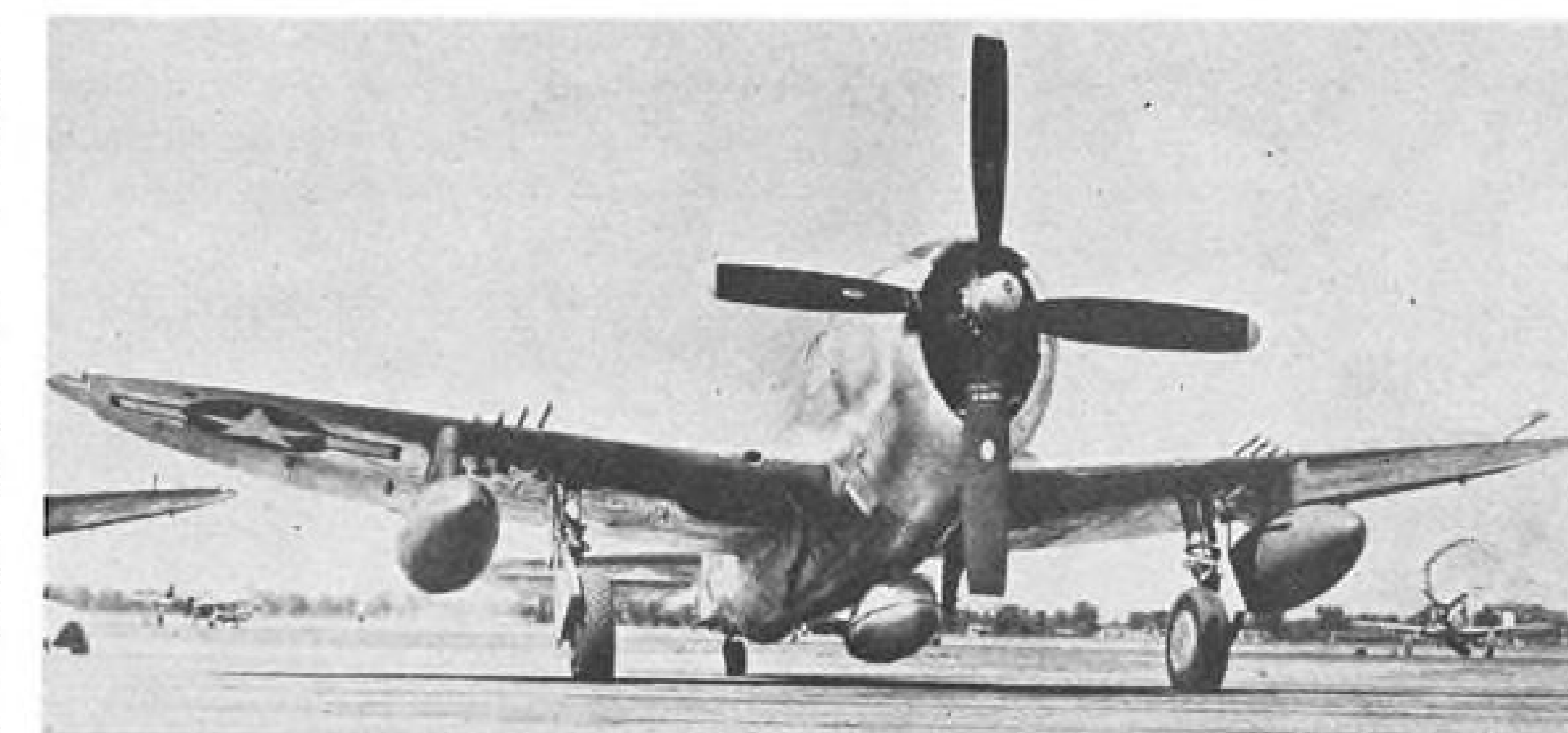
► **Strain on Materials**—The great amount of heat required to transform air into a propulsive force severely taxes the materials used to contain and direct these temperatures. Light alloys or other materials of reasonable price and availability, capable of withstanding higher temperatures, will permit a more effective concentration and longer-time utilization of heat values of relatively simple fuels at a more efficient rate than at present. It should not be surprising if the ancient art of refractories were

called upon to help with the solution.

A comparable rate of fuel consumption with internal combustion engines is not to be expected in the thermal jet engine. This is an important consideration but does not represent a crippling handicap. It is important, of course, because the amount of fuel carried affects both weight and range.

► **Fuel Changes Likely**—It is likely that the form and composition of fuels will undergo transformation and development which will render this comparison academic.

But as for weight itself, the jet engine holds at least a three-to-one advantage over the conventional power plant when related to thrust power and that advantage is bound to increase. The conventional power plant comprises a third of the total empty weight of an airplane and a reduction of that weight element by two-thirds is an appreciable payload advantage. ► **Costs to Be Reduced**—Cost of jet propulsion engines should become infinitely lower than conventional types, and maintenance cost should be very much less because of its relative simplicity. Absence of myriad accessories and instrumentation also accrue to the jet engine's advantage on an economic basis.



THUNDERBOLT MOUNTS THREE AUXILIARY TANKS:

Newly-released photograph shows Republic's P-47 fighter-bomber with three extra gasoline tanks for missions at extreme range. Information from Europe indicates fighters will accompany heavies all the way on shuttle runs across the continent.

AVIATION CALENDAR

- Aug. 2-3—Cancelled—National Business Meeting, National Aeronautic Association.
- Aug. 5-6—Motorless Flight Conference, Soaring Society of America, Polytechnic Institute of Brooklyn, N. Y.
- Aug. 14-20—North Carolina State Aviation Week, Charlotte.
- Aug. 29-31—Southeastern States Airport Management Conference, Alabama Polytechnic Institute, Auburn, Ala.
- Oct. 5-7—SAE National Aircraft Engineering and Production Meeting, Los Angeles.
- Nov. 13-14—National Association of State Aviation Officials, Annual Meeting, Oklahoma City.
- Nov. 15-18—National Clinic of Domestic Aviation Planning, Oklahoma City.
- Dec. 4-6—SAE National Air Cargo Meeting, Chicago.
- Dec. 5-7—Second Annual Meeting, Aviation Distributors and Manufacturers Association, Jefferson Hotel, St. Louis, Mo.

Ultimately, the matter of relative efficiencies at various altitudes probably will be an academic consideration. Militarily, performance will dictate the choice of power plants, while in commerce economies will require adaptation of operating procedures to the most economical propulsion methods.

It seems unlikely that there will be any satisfactory compromise in the form of jet-engine-propeller combinations. Aircraft will be designed to be propelled by either one or the other, depending on type of operations. Hybrids are seldom economically feasible in aviation.

T. E. Moodie Dies

Thomas Edward Moodie, 44, of Boston, executive vice-president of Aviation Engineering, Inc., and former Professor of Aeronautical Engineering at Georgia Tech, died in Boston. A native of Texas, Mr. Moodie took his B. S. at Massachusetts Institute of Technology and his master's at Georgia Tech. He was a member of the National Association of Aeronautical Engineers.

Bendix Gives New Data on Helicopter

Brochure lists two-place, 165 hp. craft with rated cruising speed of 100 mph.

Details of the Bendix helicopter not heretofore revealed are disclosed in a brochure issued by Bendix Helicopter, Inc., over the signature of Vincent Bendix, founder and one-time president of the aeronautical equipment company that bears his name. There is no connection between the two companies.

Although previous announcements (AVIATION NEWS, Feb. 28 and June 19) have indicated that engineering for various models was being conducted, the new brochure lists only one, a two-place, 165 hp. helicopter with a rated cruising speed of 100 mph. Earlier reports were that the two-place ship was being designed, together with a 10-passenger, one-ton, 600 hp. helicopter and a 20-passenger, two-ton, 1,200 hp. design.

► **Tricycle Landing Gear**—First sketches of the Bendix design showed a four-seat plane with tricycle landing gear. The present model carries pontoon-type gear. Plans for the manufacture and sale of various type of helicopters are being made, Bendix says.

There is no rear anti-torque control propeller in the Bendix design. It is listed as having a useful load of 626 pounds, with maximum speed of 120 mph. and cruising speed at 75 percent power of 100 mph.

► **Other Specifications**—Vertical climb (minimum) 480 feet a minute; endurance at 75 percent power, 3.25 hours; engine speed, 2,100 rpm; rotor speed, 300 rpm; tip

speed, 345 mph; rotor diameter, 32 feet.

Bendix asserts in the brochure that with exclusive designs of the company, complete three-axis control is an accomplished fact. Attached to the under side of the variably pitched rotor wings, he says, are propulsive blades, which can be so operated as to give flight in any desired direction—forward, backward or laterally. These blades, he says, also provide complete control in roll, pitch or turn in hovering, climb or flight.

Higher forward speeds become possible with vibration or flapping because of the special propulsive system and rigid hub construction, Bendix asserts. Also claimed for the special propulsive system is the use of a lower pitch on the wing maintaining automatic rotation for safe descent without engine power.

FEDERAL DIGEST

WPB Issues New Reconversion Orders

Measures designed to minimize dislocation in event of sudden cutbacks.

By MARY PAULINE PERRY

War Production Board has issued several new orders on reconversion and cutbacks. The fractional horsepower electric motor industry advisory committee announced that the industry would be able to resume production of appliance motors within 60 days after military programs are canceled and pointed out that specialized aircraft motors for the latest airplane models continue to absorb facilities which could be used for the appliance program.

► **Procedure**—Arthur H. Bunker, deputy executive vice-chairman of

the WPB, outlined the procedure by which the staff of the committee will handle cutbacks and other production adjustments so that there will be the least possible dislocation of employment and the greatest utilization of resources. He said the staff would arrange for handling of cases in such a way as to advise the contractor and the workers before the public announcement is made.

► **Petroleum Administration for War** has tightened control of high-octane aviation gasoline and its components. Under the new terms PAW controls all transfer within the petroleum industry of aviation-grade base stock, blending agents, and high octane aviation fuel.

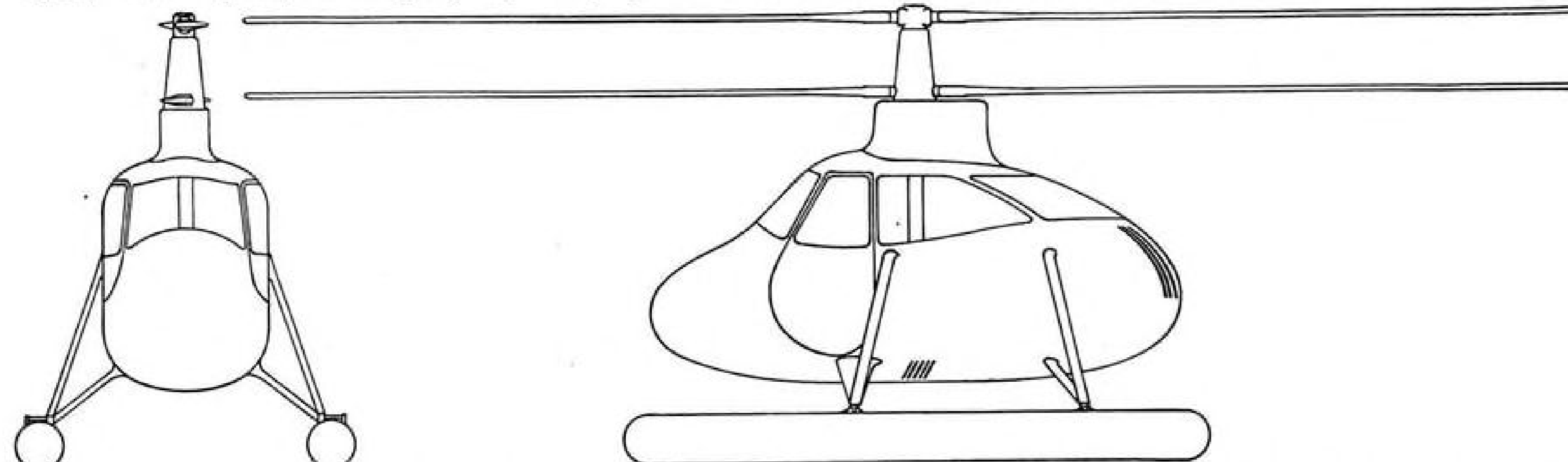
► **War Department** has awarded a contract for construction of buildings, utilities and roads at the AAF In-transit Depot, Alameda, Calif. The contract totals \$2,450,304.

Another contract for \$1,941,562 has been awarded for reconstruction of runways, taxiways and parking apron, and all appurtenant work at Langley Field, Elizabeth City County, Va.

► **Foreign Economic Administration** said almost \$1,400,000,000 worth of lend-lease supplies were shipped to the China-Burma-India theater of operations from the beginning of the war to May 1, 1944. Aircraft shipments totaled \$269,404,000, and were exceeded only by tanks and vehicles which were shipped in the amount of \$270,187,000, and industrial items in the amount of \$322,328,000. Other shipments included Ordnance \$216,319,000; watercraft, \$25,141,000; and agricultural products, \$65,177,000.

Besler Steam Engine

The three photographs of a steam power plant for aircraft which appeared in AVIATION NEWS July 3, on page 11, depicted the 1933 development of William J. Besler of the Besler Corp. of Oakland, Calif. The caption incorrectly identified the engine as one invented by Louis C. Trosky. The accompanying news story was correct. The editors regret this error.



Bendix Model G Helicopter: The detail sketches above show the counter-rotating rotor wing assemblies that mark change in the Bendix helicopter from other versions so far announced. A useful load of 626 pounds is claimed for the ship, which is expected to have a cruising speed of 100 mph.

Future of Model 39 Up to Car Changes

Consolidated Vultee spearheads increasing pressure for liberalized airworthiness requirements for airliners.

Consolidated Vultee's Model 39, the *Liberator*-liner, has brought the controversial question of liberalizing government airworthiness regulations for scheduled airliners to the surface, because even with construction changes already under way this four-engined transport will not meet current minimum requirements of CAA and CAB.

Several aircraft manufacturers feel that extensive changes should be made in airworthiness and performance requirements to take advantage of technical improvements in planes. Takeoff and landing weights, stalling speeds, and construction changes are mentioned. Curtiss-Wright, Douglas and Boeing probably will encounter little difficulty in getting CAA approval of commercial versions of their large military transports. Consolidated Vultee, however, built its model 39 on the gamble that sufficient changes in regulations will be made to permit it to fly on the airlines.

► **Some Changes Likely**—Government officials do expect some changes, but at this time they express doubt that these will be major revisions, feeling that minimums are now about as low as they should be.

Consolidated, in a statement for AVIATION NEWS, says the first two Model 39's are being modified. The second will fly within 30 days. A tentative Navy contract for a quantity of the Model 39 will not be forthcoming.

The company concedes that "presentation of the model 39 to the CAB for certification for commercial use will be watched with extreme interest since it does not conform to outmoded CAB regulations. In announcing the Model 39 in April, AVIATION NEWS viewed the airplane as establishing a significant precedent in its incorporation of wing loading and stalling speed characteristics exceeding present limitations imposed by the civil air regulations."

► **Based on Military Success**—Typical of the contention by some industry engineers that requirements should be liberalized to take advantage of improved aircraft is



B-18 USED IN RESCUE TRAINING:

This venerable Douglas B-18 bomber, built in 1938 or 1939, and retired from active duty with the AAF, now is used by the marine division of the AAF Training Command's Air-Sea Rescue School at Gulfport, Miss., in practice. Bit by bit, the derelict is being cut to pieces as rescues are made from various parts of the ship.

Consolidated Vultee's point that "millions of miles of safe flight and countless takeoffs and landings of military *Liberators* provided a record that should prevail over any set of theoretical regulations. The 39 uses *Liberator* components through out-wing, engine and landing gear—with exception of the fuselage. Since April the 39 has been under constant test flights, has weathered without major damage a forced landing when the nose wheel failed to lower properly on a shake-down hop." Federal officials point out, however, that military standards should not be compared to commercial, peace-time requirements.

4th Council Formed By Contract Schools

Organization of the Central Information Council, a fourth regional clearing house for activities and accomplishments of air training schools, sponsored by the Aeronautical Training Society, was revealed last week. It is composed of representatives of Army contract flying schools in the Central Flying Command.

Like those groups formed in the Western and Eastern Flying Training Commands, the new council will study the possibilities for utilization of the schools when their Army training program is completed.

Chairman of the Central Council

is Cal Newton of Hangar Six, Uvalde, Texas. J. B. Striplin, Harman Training Center, Ballinger, Texas, was elected vice-chairman and L. M. Fauber, Air Activities of Texas, Corsicana, secretary.

Study Performance Of Future Planes

Aeronautical engineers at L. A. meeting see greater loads carried at higher speeds as result of constantly increased efficiency of aircraft.

Evidence of unanimity of engineering attention to the development of aircraft structures that will carry increasingly heavy loads at advancing speeds made important the summer annual meeting of the Institute of Aeronautical Sciences in Los Angeles last week.

Papers read by West Coast and eastern engineers showed a preparation by engineering staffs for use of new engineering techniques necessary for development of massive post-war transport aircraft. About 400 engineers attended the sessions.

► **Testing Methods Stressed**—Emphasis upon "rigorous" testing methods was given in papers by C. J. Buzzetti and W. L. Howland, of Lockheed Aircraft Corp., "Measurement of Maneuvering Loads in Flight"—by Robert Rosenbaum and Robert Scanlon of Eastern Aircraft Division, General

Motors Corp., "Influence Coefficients in Stress and Vibration Analysis"—by Fred A. Heddleson, Westinghouse Electric and Manufacturing Co., "Altitude Chamber Tests of Aircraft Electric Motors and Generators"—and by Robert J. Kutzler, Minneapolis-Honeywell Regulator Company, "Use of a Precision Automatic Pilot in Recording Aircraft Performance Data."

Unusual interest was shown, too, in a thermodynamics paper bordering on effects that may be anticipated in the development of the gas turbine engine. This paper, using as foundation a discussion of thermodynamics of the laminar boundary layer of engine cylinders, was the presentation of Arthur N. Tifford, Lockheed Aircraft Corp.

► **Aerodynamic Balancing**—The long study of aerodynamic balancing of control surfaces, which has led to elimination of hydraulic boosts to supplement controls in large aircraft, was given for the first time by L. E. Root, of Douglas Aircraft Co.

Extreme importance was attached to the paper of R. M. Head, Lockheed Aircraft Corp., giving a positive method for determining the altimeter lag experienced in testing modern aircraft of high climb and diving speeds. In support of his offering of lag curves that may be applied to check the readings of given altimeter systems in particular aircraft, he outlined in detail equations used to develop lag curves.

Chairmen of the sessions, and co-chairmen, were outstanding West Coast engineers: Clark B. Millikan, California Institute of Technology; J. Richard Goldstein, Douglas Aircraft Co.; A. L. Klein, Douglas; E. C. Wells, chief engi-

Landgraf Tests

Los Angeles will be the scene of tests of another West Coast helicopter, that of Landgraf Helicopter Co., during the next month.

The 'copter, design details of which were given by AVIATION NEWS July 3, has claimed nation-wide interest among engineers of rotating wing craft and will demonstrate the first application of previously untried methods of directional control and distribution of power to twin synchronized rotors that mesh on a horizontal plane.

neer, Boeing Aircraft Co.; Elliott G. Reid, Stanford University; E. J. Horkey, North American Aviation, Inc.; E. G. Stour, Consolidated Vultee Aircraft Corp. and William R. Sears, Northrop Aircraft Corp.

New Helicopter Tested on Coast

Forward speed of 100 mph. and cruising rate of 75-80 claimed by 19-year-old designer and builder, Stanley Hiller, Jr.

Secrecy surrounding flight tests held at Berkeley, Calif., of what the builders describe as the West Coast's first successful helicopter, was broken last week after two months of experimental flights.

The new rotor craft has a 12-foot tubular steel and fabric fuselage, carries a 90 hp. Franklin engine, is surmounted by superimposed contra-rotating two-blade rotors of 25-foot diameter, and is reported to have developed forward speeds of 100 mph. and 75-80 mph. cruising.

► **Designed by 19-Year Old**—Designer and builder of the new 'copter is 19-year old Stanley Hiller, Jr., associated with his father in the diecasting firm of Hiller Industries.

Control of the Hiller helicopter is reported to be easy (no torque rotor is required on the tail) and the inventor claims that a novice can be trained to fly it after two hours of instruction.

► **No Vibration**—An achievement of major importance reported by Hiller is the absence of vibration throughout all conditions of flight.

Military cooperation received in building the craft over a period of three years prevents him from making public design details of his rotors and controls, Hiller said.

► **License Test**—Herbert Toomey, chief of flight engineering, Civil Aeronautics Administration, Sixth Region, was scheduled to fly the helicopter during the week for issuance of an "NX" experimental license, and a week-end public demonstration was to follow.

Readiness of University of California to give Hiller the use of the University's stadium as a testing ground accounts for the inventor's success in keeping secret preliminary flights, which were held to altitudes of less than 100 feet. Hiller expects his 'copter to reach an altitude of 6,000 feet in future test flights.

CAA Plans Lab for Engine Fire Study

Facilities expected to be set up by Aircraft Development Section at test station in Indianapolis.

New test laboratories for study of aircraft engine fires will accelerate research being conducted by the Aircraft Development Section of Civil Aeronautics Administration. Money already has been obligated for facilities which probably will be at the CAA's test station at Indianapolis.

Proposed is a separate building for power plant fire tests, with a 3,000 hp. motor and 4-bladed 16 ft. 6 in. propeller creating an air blast of at least 185 mph. in a separate test section, accommodating a powerplant and wing section and modern recording instruments.

► **Design Changes**—In the past four years Douglas DC-3, Curtiss-Wright C-46 and Waco YKS-37 installations have been fully fire tested in laboratories at the National Bureau of Standards under direction of A. L. Morse, chief of the CAA section. Objectives have been to determine criteria for design of fire-resistant installations in future planes and to develop fire extinguishing systems for existing ships.

Basic investigations were made in fire resistance of materials, fire sources, fire detection and fire extinguishing. Results have been analyzed and condensed in Technical Development Note No. 31, used by both AAF and CAA as basis for specifications for fire protection.

► **Fire Resistant Fabric**—The Waco tests showed little is gained by providing engine fire protection for fabric-covered planes unless such fabric can be made fire-resistant. Accordingly, Bureau of Standards will attempt to provide a fire-resistant coating for doped fabric aircraft surfaces.

The fire test program was recently expanded to develop sensitive smoke detectors in aircraft cargo compartments to give rapid warning of fires, without giving false alarms.

Proposed facilities will be used to test military engine installations during the war and to continue with civil installations afterward, with equipment suitable for newer, larger aircooled radials, liquid and aircooled inline engines, and Diesels.



NORTH AMERICAN MITCHELL . . . one of the world's best attack bombers. Performance of this outstanding plane with its deadly

bomb load, 75 m.m. cannon and heavy caliber machine guns has proved a scourge to Nazi and Nippon on land and sea.



PESCO HYDRAULIC RELIEF VALVE—MODEL 1 V-575

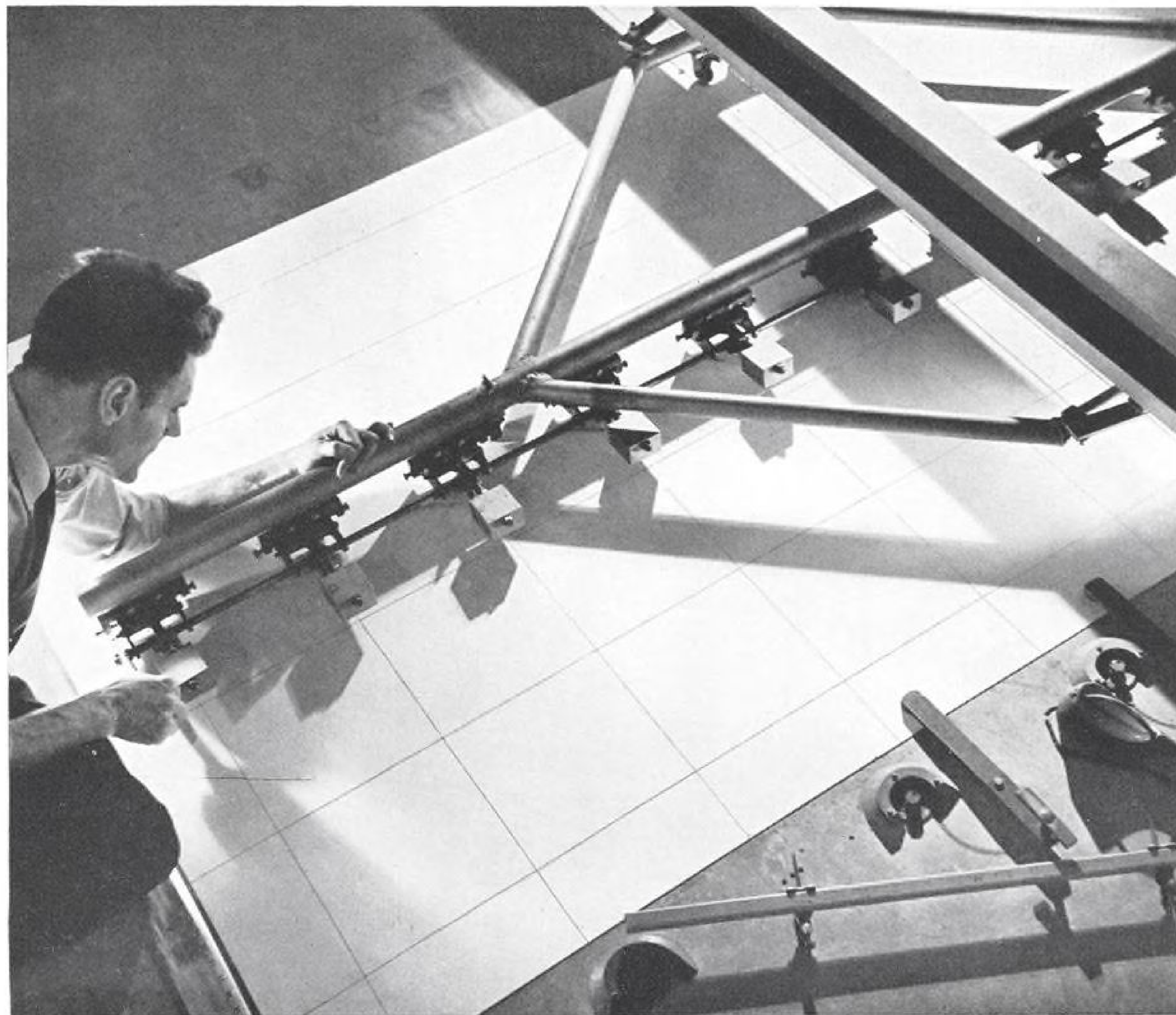
NEW PESCO HYDRAULIC RELIEF VALVE. Now a relief valve that meets the rigid AAF winterization requirements. Precision-built throughout, it features simplicity of design with a minimum number of parts. Tests prove high operating efficiency through a temperature range of -65° F. to $+160^{\circ}$ F. Now available in accordance with AN specifications. Complete details will be sent upon request. Also ask for the new book, "Pressurized Power and Controlled Flow by PESCO". Write, PESCO Products Company, 11610 Euclid Avenue, Cleveland 6, Ohio. (Division Borg-Warner).

In Aircraft Hydraulics, Fuel Pumps, Air Pumps, Related Accessories . . .



Pesco FIRST

PERFORMANCE POINTS TO



Buy War Bonds — to Have and to Hold

Bee-lines to Berlin

A straight line—really *straight*—is one of the hardest things in the world to draw. Yet thousands of mathematically straight lines are necessary to the building of a big airplane like the Boeing Flying Fortress and the B-29 Superfortress.

The master layout drawings for every part of a bomber must be made on flat sheets of lacquered steel. To insure the accuracy of the finished drawing, the metal is first scribed with intersecting reference lines like those on a gigantic sheet of graph paper. And the lines must cross each other in perfect 10-inch squares, without deviating as much as 1/100th of an inch.

Until recently this was a slow and laborious job. Draftsmen sprawled across the big tables hour after hour, ruling in reference lines with straight-edges. But the slightest miscalculation—even the expansion of metal caused by the sun's heat—might ruin their efforts. Drawing the grid lines on master layouts for the frames and bulkheads of one model alone consumed 5600 hours.

Boeing engineers determined to change the method. They built the "Grid Machine" shown above—a simple, supremely accurate device that draws a dozen parallel straight lines while you watch. It never makes a mistake. And

it has already saved thousands of priceless hours between blueprint and bombing mission. Today the work is done in less than a tenth of the former time.

All through the Boeing plants are similar examples of ingenuity and skill applied to the task of building *more* airplanes *faster* and *more economically*—speeding the production that shortens the distance to Victory.

When the war is won, Boeing's abilities in design, engineering and manufacturing will again be applied to peacetime products. You can be sure of any such product . . . if it's "Built by Boeing" it's bound to be good.

BOEING

DESIGNERS OF THE FLYING FORTRESS • THE NEW B-29 SUPERFORTRESS • THE STRATOLINER • TRANSOCEAN CLIPPERS

Specialized Depots Aid ASC Activity

One-plane warehousing speeds up shipments of replacement parts to world's battlefront bases.

The specialized depot system of the AAF Air Service Command, whereby one depot handles the servicing and part replacement of only one type of plane or only one class of supply, has been largely responsible for the fine record that has been established by the ASC, in the opinion of Maj. Gen. W. H. Frank, who until recently commanded that branch of the AAF. General Frank now is serving as a member of the Army Board investigating Pearl Harbor.

The 810th AAF Specialized Depot, at Flushing, Long Island, barely more than a year old, has been called an outstanding example of the specialized program. Here parts for P-47 *Thunderbolts* fighting on every front are received from the manufacturer, sorted and stored, and kept available for immediate shipment.

► **Shipments**—These vary greatly in size, some requisitions being for one or two parts while others may run as high as 150 pages, 20 items to the page and sometimes a thousand identical parts in one item.

With the exception of the officers in charge, all the work is handled by civilian employees. In this compact depot is carried on every phase of the servicing operation: budget and fiscal control, stock records, receiving, inspecting and warehousing, maintenance repair, contractor liaison, repacking, and shipping by rail, truck or air freight.

► **Well Equipped**—The depot is well



Maj. Gen. W. H. Frank

equipped with modern materiel-handling equipment. Original shipments of parts from the plane manufacturer range from nuts and bolts to fuselage sections and wing assemblies. These, depending on size and demand, are repacked in large cases for quantity shipment or sorted into bins for rapid filling of requisitions calling for single parts. By a carefully coordinated system, shipments ranging from small packages of a few parts to huge packing cases or crates are routed daily to the war fronts.

► **Close to Source**—One important feature of the specialized depot plan is the location of each unit close to its source of supply. This has cut down materially on much cross-hauling and on long distance primary shipping which so often resulted in re-shipment over much the same route for final dispatch to the fighting fronts.

The ASC, with a civilian personnel of 180,000 throughout the

country, handled 651,000 requisitions during May, 1944, any one of which may have covered thousands of parts needed for plane maintenance at some distant air base. It has been estimated that suspension of ASC activities would cause every plane in the AAF to be grounded within seven days.

Britton Advanced

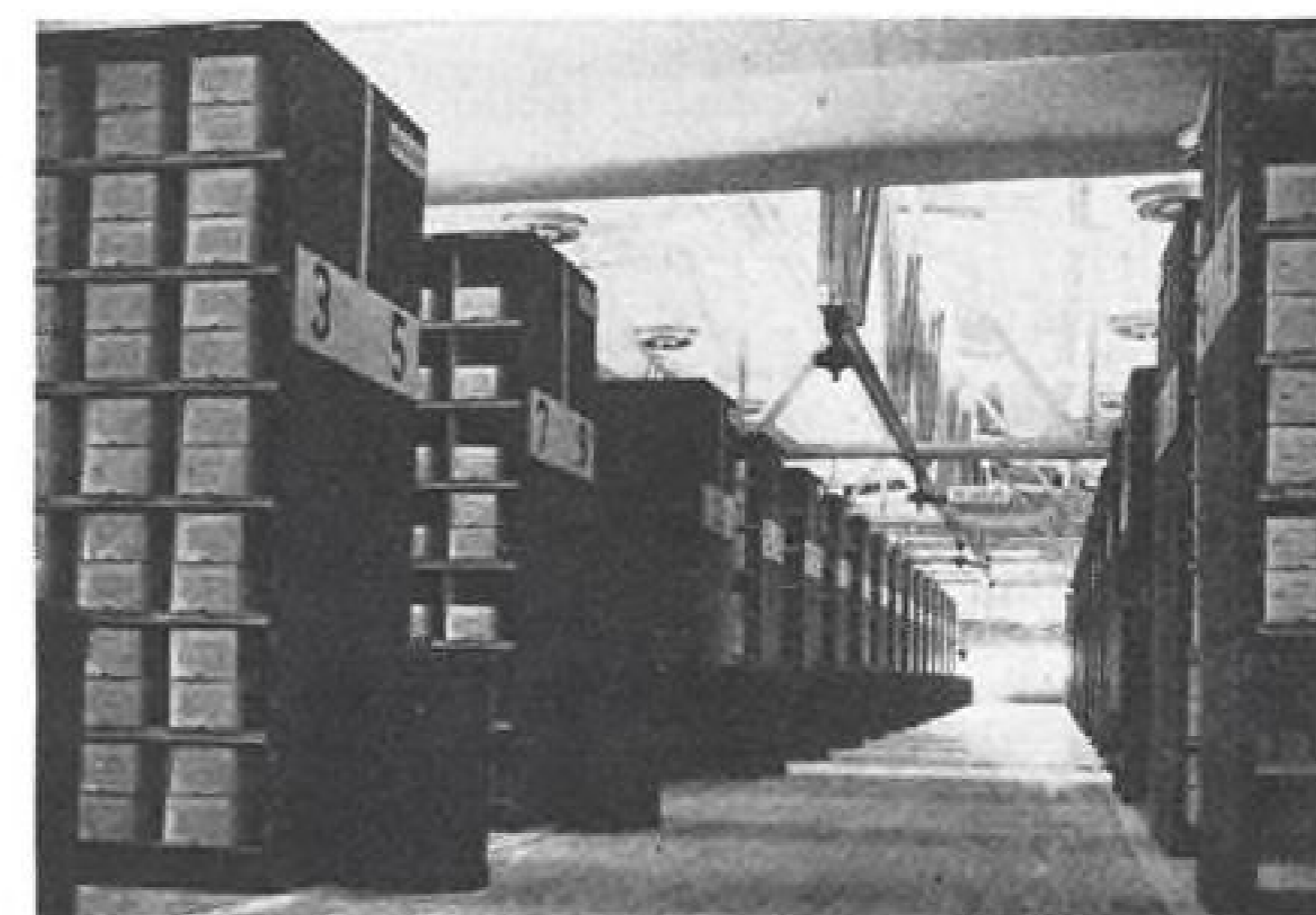
Mason Britton, director of the Machine Tool Division of the Surplus War Property Administration, has been named assistant administrator and henceforth will have general supervision of disposal of all types of surplus property for which Reconstruction Finance Corp. is disposal agency. Among his responsibilities will be supervision of disposal of surplus industrial plants, aircraft, machine tools and industrial equipment, chemicals, metals and minerals, and other capital and producers' goods.

Mr. Britton, a director of McGraw-Hill Publishing Co. since it was formed and a vice president since 1922, resigned July 1 to join the SWPA.

Safety Record Cut

Safety records of the Army Air Forces, based on percentage of accidents per 100,000 hours of flying, showed a decrease of 29 per cent in all types of accidents for the first five months this year, measured against the same period last year.

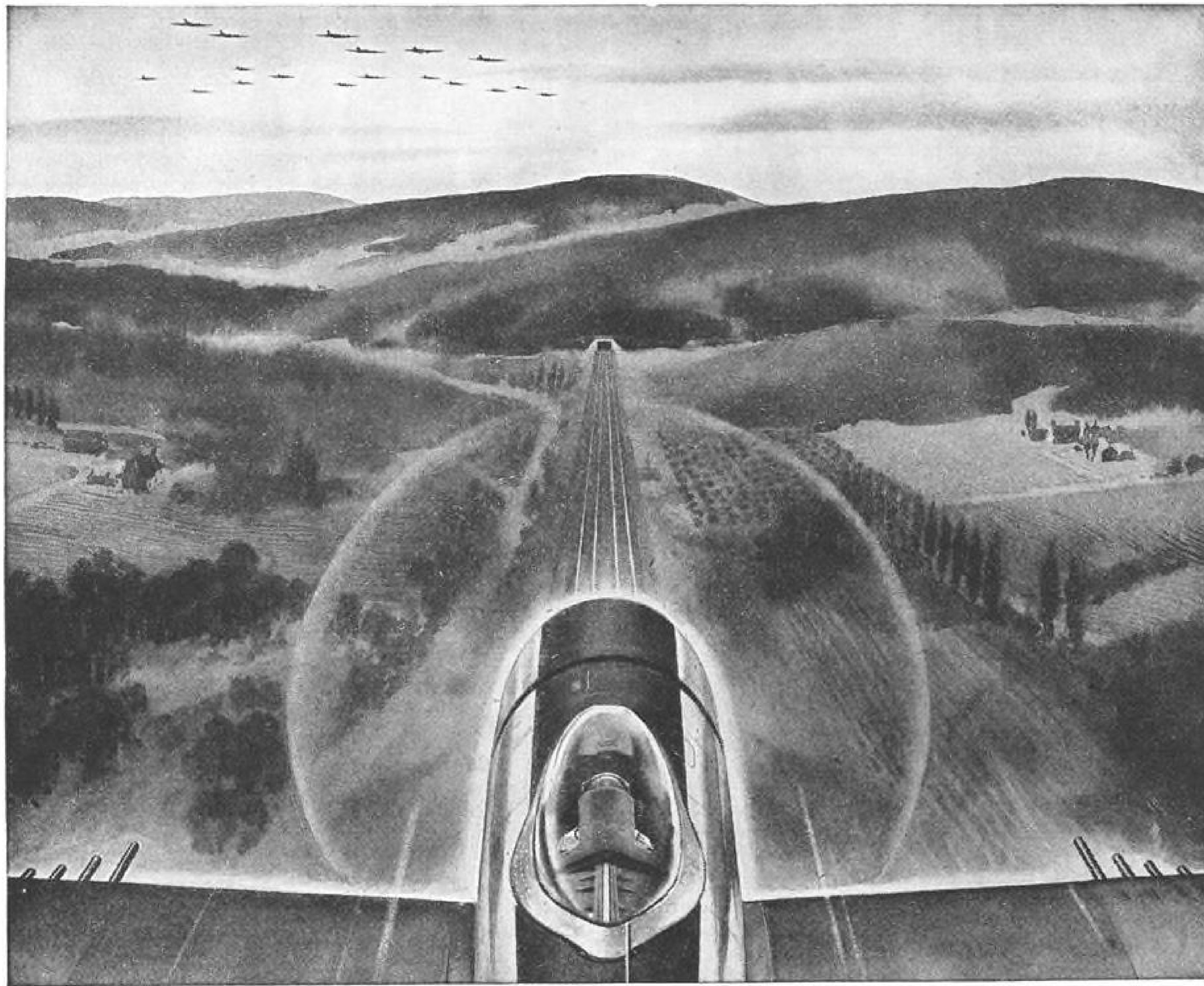
Training accidents, the AAF said, were reduced by 25.5 per cent. Rate of all fatal accidents is placed by the AAF at 37.5 per cent less, and rate of fatal training accidents 40 per cent less.



ASC Stock Room: Photo at left shows section of warehouse at 810th AAF Specialized Depot, where small P-47 parts are stored, ready for shipment to



bases all over the world. At right are shown P-47 wing sections stored in one of the depot's large warehouses.



THUNDERBOLTING THE GATES

In a matter of seconds, this Thunderbolt pilot will plant two half-ton bombs smack in the throat of that tunnel ahead—bolting the gates against enemy reinforcements.

This and similar Thunderbolt "buzz-bombing" tactics are today in regular use on all fronts, providing powerful precision "artillery" that paralyzes enemy movement by blasting bridges, viaducts and railroads many miles behind the lines. With its eight 50-caliber machine guns, the Thunderbolt has also proved highly efficient at scrambling ground targets . . . riddling locomotives, troop trains, flak towers, ships and anything else that impedes our march to Berlin and Tokyo.

This work, you may say, is a far cry from the high altitude bomber-escort job for which Republic Thunderbolts were originally designed and at which they are still busily engaged. But Army Air Forces pilots, aware of the plane's versatility, evolved techniques by which it fights as effectively and ferociously on the "deck" as at seven miles high.

Thunderbolt pilots are in truth hitting the enemy wherever they find him—high or low, near or far.
Republic Aviation Corporation, Farmingdale, Long Island, N. Y., and Evansville, Ind.

Republic *firsts* in war point to *firsts* in peace

"DECK" WORK!

In 30 days, a single Thunderbolt group operating at low altitudes—"on the deck"—accomplished the following tasks (from a War Department release):

Cut enemy rail lines in 201 places. Destroyed six tunnels, ten railroad bridges, 178 railroad cars. Set 226 motor transports afire. Blew up 17 ammunition dumps. Destroyed radio station and high-tension tower. Silenced four ack-ack posts, three machine gun positions. Set 34 buildings and warehouses afire. Destroyed 11 enemy planes on the ground. Sank two barges, damaged six landing craft.



REPUBLIC AVIATION

CORPORATION

Specialists in High-speed, High-altitude Aircraft

THE AIR WAR

New Planes Stress Long Range To Carry War to Jap Homeland

Super-bombers, fighters and transports to meet revised tactics necessary in Pacific warfare after collapse of Germany, which is regarded by commentator as possible by Christmas.

As the war in Europe heads up toward a climax by late Summer, with a better than 50-50 chance of its conclusion before Christmas, a little noticed statement by General Arnold in his press conference ten weeks ago assumes great interest and importance. He said that the movement into the Pacific is going to be a "terrific job," with staggering problems of logistics; that aircraft needs are not the same as those in Europe, and that training must be different. He added that none of these problems is insurmountable, and that "all will be solved before the movement begins."

It may be safely assumed that by now the detailed planning in the fields of transportation, aircraft production and pilot and aircrew training is well in hand. By putting together some recent straws in the wind, an indication of the trend in airplane types and models may be seen.

▶ **The Need of Range**—To deliver

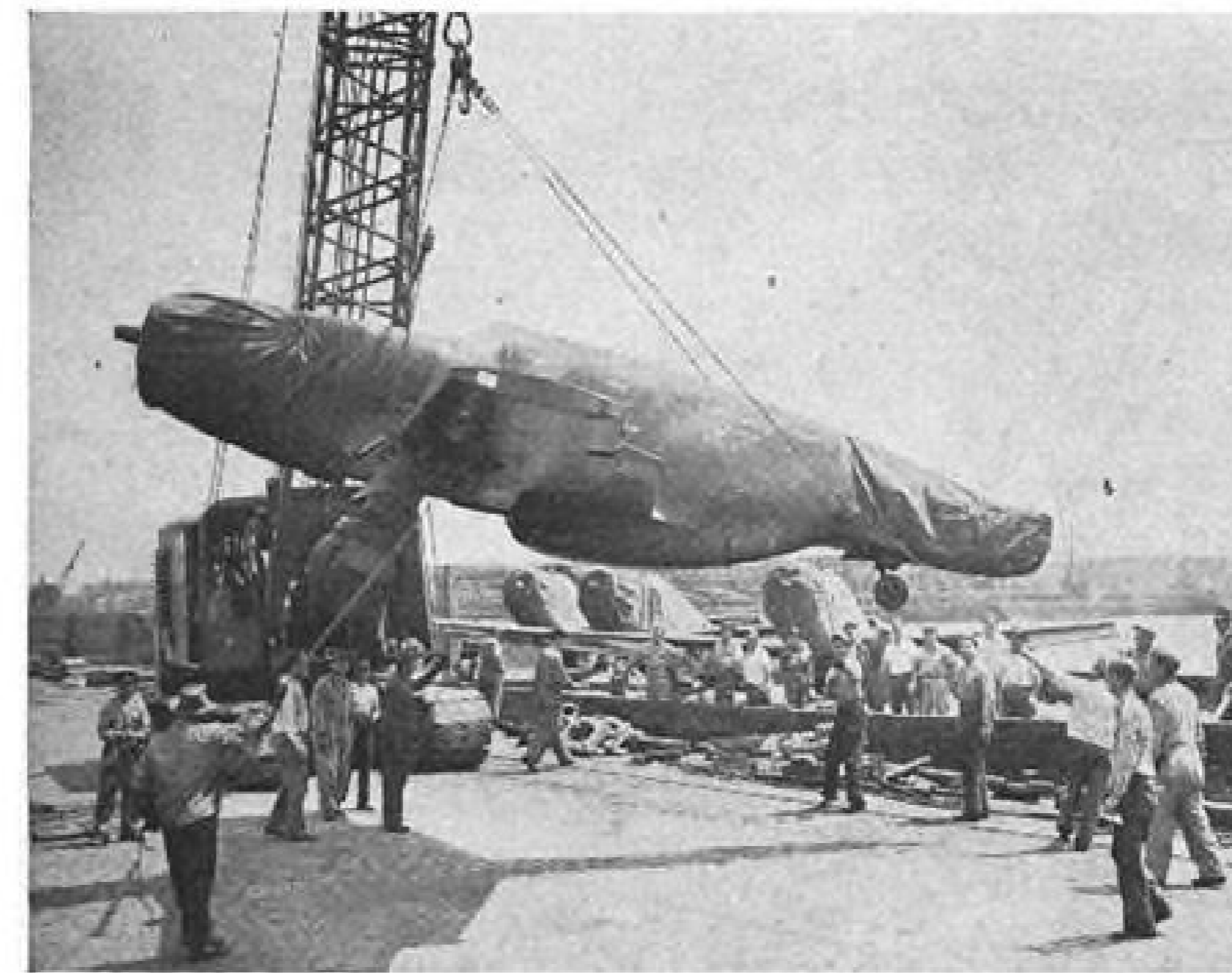
smashing blows at the aircraft, shipbuilding, synthetic oil and hydro-electric plants, etc., located on Japan's main islands of Kyushu and Honshu, long-range super-bombers capable of carrying substantial loads of high explosives and incendiaries from bases deep in China and from the Marianas 1,500 miles away will be required. It is for this reason that the comments of Aircraft Production Board's Charles E. Wilson on B-29 production at his monthly conferences are noted with the keenest of interest.

So far this key item for the Pacific-Asiatic air war has kept up to schedule. Boeing (Wichita) is still carrying the ball, but Boeing's Renton plant, Bell (Marietta) and Martin (Omaha) are now in production; as Boeing, Seattle tapers off on B-17G's, it will swing into production of parts and subassemblies for B-29's to be assembled at Renton. Fisher Body, Cleveland, and the old B-26 team of Hudson-

DeSoto-Goodyear (for Martin, Omaha) are among important producers of B-29 subassemblies. It is no secret to the enemy, as evidenced by Tokyo radio's definite mention of the B-32 as a long-range bomber to be based in China, that Boeing's B-29 will eventually find a stablemate in a very long range bomber by Consolidated, concerning which several references were made in the press during 1943. Properly enough, no details as to production status, performance, time and place of operation, etc., have been released. It is understood that it is roughly the equivalent of the Boeing *Superfortress* and that it will be produced at Consolidated's San Diego and Ft. Worth factories.

▶ **Medium-Range Heavies**—It goes without saying that many important tasks can be performed by *Liberators* based in the China-Burma-India theater, Central and Southwest Pacific against somewhat shorter ranged military objectives, particularly shipping, Japan's most critical item. Improved P. and W. engines (R-1830, new series), plus modifications in armament and other new equipment, will make the B-24 an even greater weapon than hitherto.

Production will continue at Willow Run, Consolidated (FW) and North American, Dallas. Nor should the B-17, which carried the ball in the early Pacific air war against terrific odds, be ruled out of forthcoming operations. This pioneer and prince of the four-engine bombers, probably the outstanding combat plane of the war,

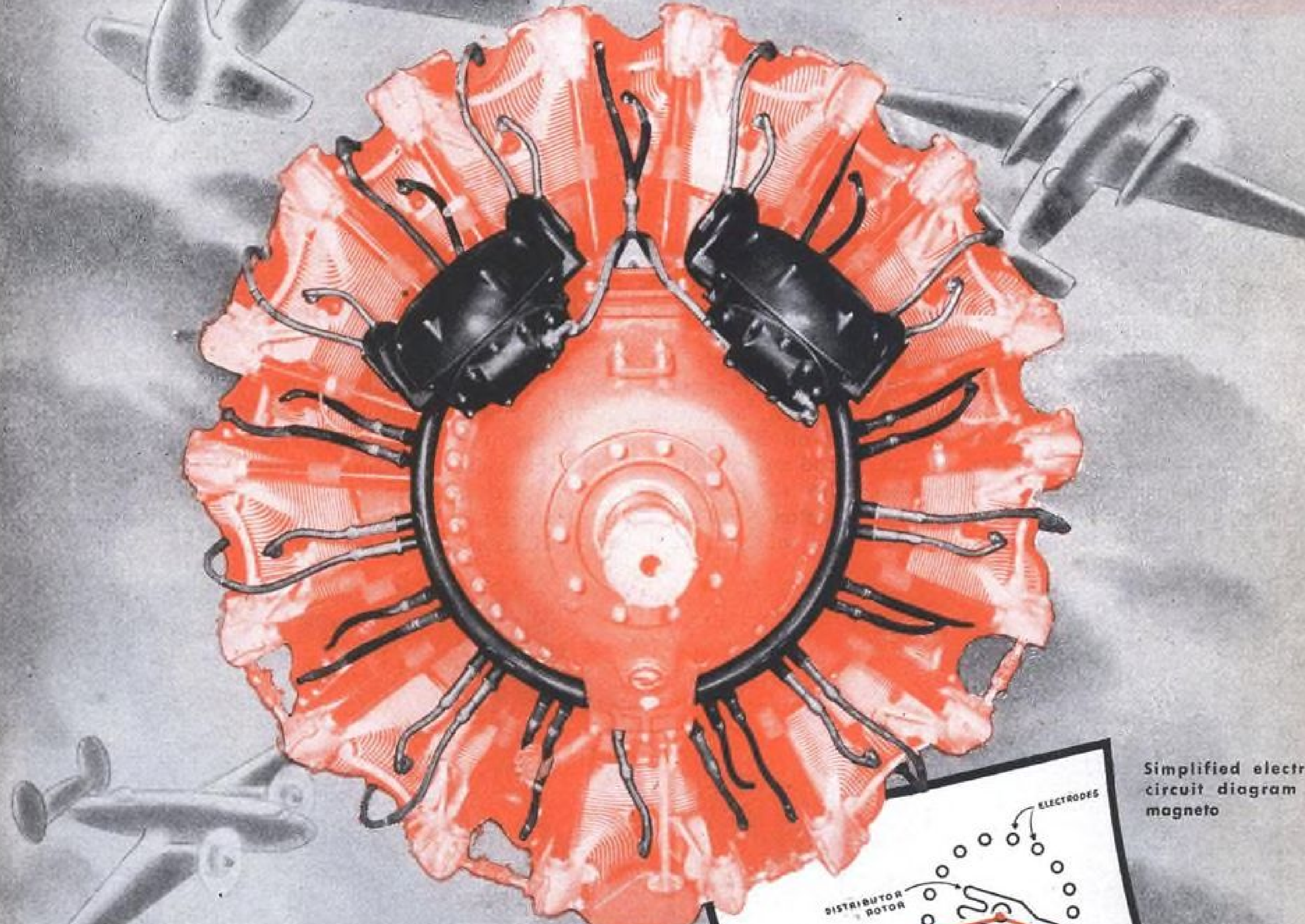


PLASTIC RAINCOATS SEAL PLANES AGAINST SALT AIR:

Photo at left shows a Mustang, sprayed and with heavy canvas bags over nose and tail, being loaded on a barge prior to transfer to a cargo ship. At right a P-47 Thunderbolt is being given a coating of viny-

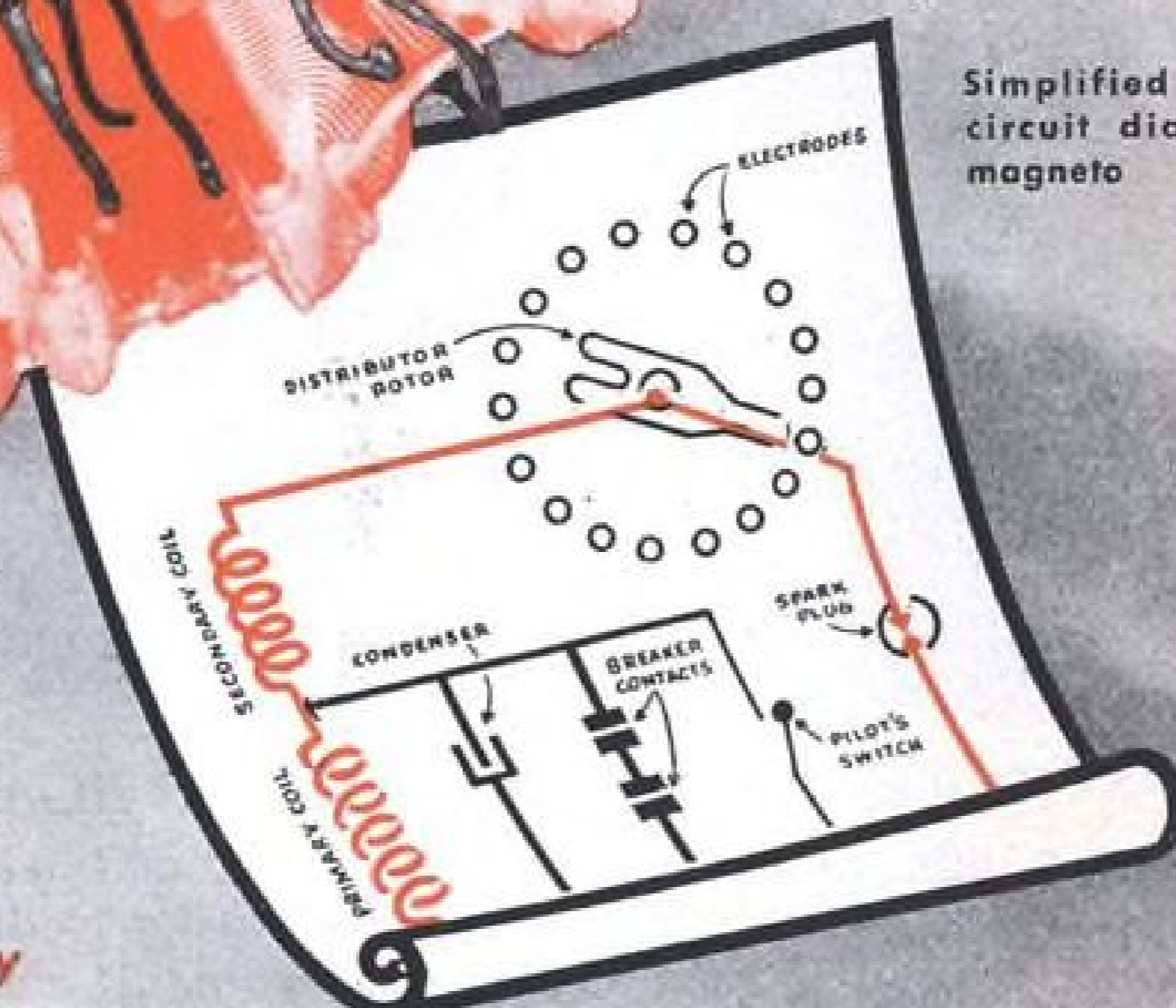
lite to protect it from damaging salt spray during shipment overseas on the open deck of a freighter. All openings are first carefully taped, then the plane is sprayed.

...TOOK AWAY ONE
and DOUBLED



Operating at one-half crank-shaft speed, and having no gears other than the drive gear, the magneto-distributor unit of the G-E system is long-lived. Electrodes are made of moisture-proof ceramic. The plastics used have high tracking resistance.

Buy all the BONDS you can—and keep all you buy



Simplified electrical circuit diagram of magneto

the MARGIN of SAFETY

New G-E high-tension ignition system reduces number of units from three to two—gives the added protection of two magnetos—and doesn't require supercharging

● Skilled pilots who've nursed battered planes back across the Channel warmly praise the combat "staying power" of American aircraft. One thing now contributing to this stamina is the G-E high-tension ignition system, in which the functions of magneto and distributor have been combined into a single, integral unit.

Two of these units replace the three—one magneto and two distributors—found in most conventional systems. Since each magneto is capable of keeping all cylinders firing, both must be put out of action before the engine quits.

SIMPLIFIED MAINTENANCE

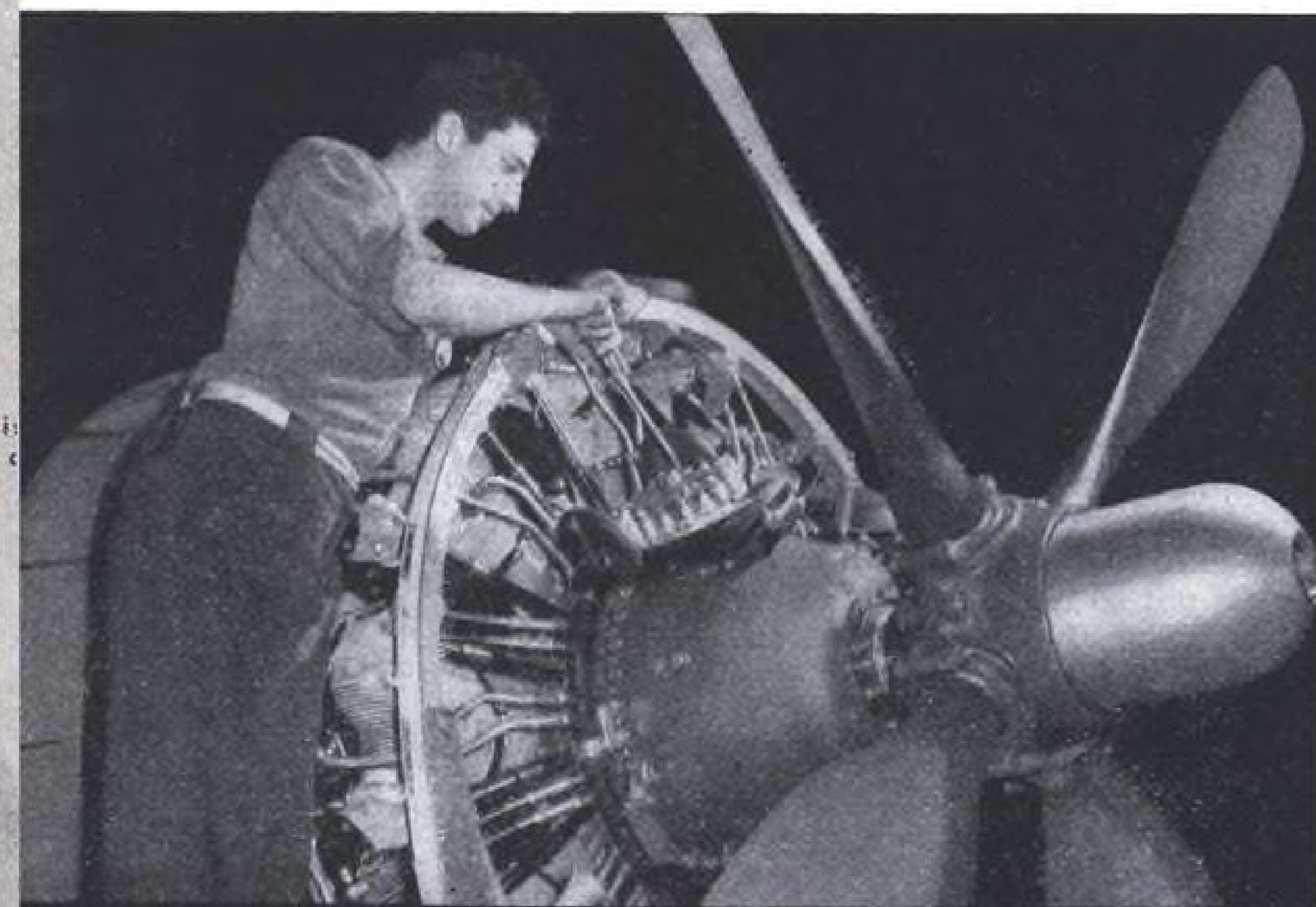
From the ground crew's standpoint, this reduction in the number of units to be serviced is also important. So is the fact that either of the two self-con-

tained, interchangeable magneto-distributors can be detached without removing other parts of the system.

FLIES HIGH WITHOUT SUPERCHARGING

Ample clearances in the magneto and solid, though flexible, impregnation of the harness eliminate the need for supercharging at high altitudes. And—the simplified design of the entire system facilitates effective radio-noise shielding.

This high-tension ignition system is one of several G-E systems which give aircraft manufacturers substantial savings in engineering man-hours and assembly time. We'll gladly consult with you on the possibilities of adapting one of these pre-engineered systems—or of designing something entirely new—to fit the projects you are planning. Just call the G-E office near you. *General Electric Co., Schenectady 5, N. Y.*



Check inspections of the magneto-distributor can readily be made on the engine. The entire system is designed for ease of installation, timing, maintenance, and repair. It is shown here installed on the Pratt and Whitney Aircraft engine of Republic's Thunderbolt (P-47).



PRECISION PRODUCTS
AND
ENGINEERED SYSTEMS
FOR AIRCRAFT

GENERAL  ELECTRIC

will continue in production at Douglas (Long Beach) and Lockheed.

► **Short-Range Bombers**—The eminently successful B-25 Mitchell, one of the most potent anti-shiping and anti-airfield weapons now in the air, will undoubtedly be continued. The shift of all B-25 production (including the 15-gun and cannon carrying B-25H and the B-25J straight bomber version) to Kansas City is a matter of concentration for production efficiency rather than an indication of tapering off on this bomber, at least for the present. Still further improved models, with new engines, may give the B-25 a new lease of life. On the other hand, despite its outstanding success with the Ninth (tactical) Air Force in Europe and good record in Italy, it is doubtful if the Martin *Marauder* (B-26G is the latest model) will see service in Asia or the Pacific. The new Douglas *Invader* (A-26) light bomber has not been announced as in action in any theater as yet; it may see some service in Europe, and if it lives up to its expectations it should find a wide scope of activity in the air war against Japan. The A-20, after four years of successful and widely diversified activity with the RAF, the AAF and the Red Air Force, has been announced as definitely on the way out, finishing with the heavily armed A-20 G and H attack model and a smaller number of the A-20J with bomber nose.

► **Long-Range Fighters**—The long-range *Lightning* (P-38J) has been doing a notable job in General Kenney's Far Eastern Air Forces (New Guinea). Leading-edge wing tanks, otherwise increased fuel capacity, plus bigger drop tanks gives this versatile fighter and fighter-bomber a radius of action of 700 miles. For overwater escort missions, likely to increase in the hops to Halmahera, the Philippines and beyond, the second engine is a highly prized feature. As the logistical problem in China approaches a solution it may be expected that the P-38 will find a more extended use in the Fourteenth Air Force.

The single-engine *Mustang* (P-51D) with its lighter weight, clean lines, laminar-flow wing and high built-in tankage has an even longer range than the *Lightning*, and is in operation in the C-B-I as a fighter and dive bomber. This airplane may well emerge as the ace fighter of the war, and will hardly be dropped out of Asiatic-Pacific planning. The newest *Thunderbolt*



SUPERFORTRESS' EYE:

Giant camera being placed aboard B-29 in India before the trip over the hump to the take-off base in China prior to attack on Japan's steel center of Yawata.

(P-47D-25) has proved a most powerful tactical weapon in Europe, and has done an acceptable job in New Guinea. If there is to be large-scale land fighting in China, in addition to heavy blows and blockade by sea and air, it is quite likely that the *Thunderbolt*, with further improvements, will find an important role in the final defeat of Japan.

► **Other Types**—The P-39 production is over, and P-40 is running out (at last, after a solid record of achievement on most world fronts); the P-63 *Kingcobra*, as General Arnold has indicated will, among other uses, be supplied to the Russians for aid in their many-pronged drive to Berlin. The P-61 *Black Widow* will become the standard night fighter of the AAF and will be used against the Jap air force.

As for genuine, from-the-ground-up long-range fighters (not adaptations of present standard models), escort fighters with 1,200-1,500 mile radius of action, the picture is not so clear. Reports have it that two or three of this class are in the works, in various stages of development, one at least to be powered by the 24-cylinder Allison. It would be safer to reserve judgment on this for the present; if single-seaters, a round trip of 2,500 to 3,000 miles is a lot of flying and fighting for one pilot; if not, will there be sufficient in performance to carry out the required job against notoriously agile Jap fighters?

► **Transports**—To speed up the "staggering" logistical problem referred to by General Arnold, ever increasing fleets of air transports are being thrust into the picture. First of all is the tried and true Douglas C-47 (commercial DC-3, Navy R4D series), a war-winning airplane not to be overlooked when the final score is tallied up, plus the husky twin-engine Curtiss C-46 *Commando*, backbone of present over-the-hump operations.

Add to these the 32-ton 4-engine long-range Douglas C-54 *Skymaster* (Navy R5D1), the *Liberator-Express* (C-87) and a number of Lockheed *Constellations* (C-69). Distinctive Naval transports include Martin *Mariners* (PBM-3, newer version with larger engines on the way), consolidated *Coronados* (PB2Y) and Martin *Mars* (JRM-1). The Curtiss and Douglas transports are in heavy production in several factories.

► **Navy Combat Types**—The fighting planes of the fleet present a much simpler problem. The scrappy Douglas *Dauntless* dive bomber (SBD) has gone out of production at last, replaced by the more powerful Curtiss *Helldiver* (SB2C, Army's A-25 being a land-based version mostly used by the Marines). Douglas has a more powerful dive-torpedo bomber in the mill which may see the light of day in time for Pacific action. Grumman's *Avenger* torpedo bomber (TBF) will "take care" of any Jap naval vessels or shipping which may venture within range. Navy versions of the Mitchell (PBJ-1J) and the British *Ventura* (Army B-34, Navy PV-1 and 2), both fast and heavily armed, will meet all requirements for medium weight search bombers; and the old standby *Catalina* (PBY-5) for utility, and the long-range Navy *Liberator* (PB4Y-1 and 2) for far-roaming eyes and heavy striking power, just about complete the bomber and patrol picture.

Add to these the new models of *Corsair* and *Hellcat* fighters and the brand new twin-engine Grumman F7F, greatly improved version of the ill-fated F5F *Skyrocket*, and we have a well-balanced navy team of aircraft capable of delivering a tremendous punch.

Other models, both of Army and Navy Air Forces, now under the horizon, may appear before the shooting is over, but the above round-up is about the way it looks as at mid-summer 1944.

NAVIGATOR

PERSONNEL

William H. Miller, operations manager for American Airlines, has been elected assistant vice-president, operations and Willis G. Lipscomb, general traffic manager has been



Miller

Lipscomb

elected assistant vice-president, traffic. Both Miller and Lipscomb have been associated with American Airlines since its organization as American Airways in 1930, and prior to that they were associated with its predecessor companies.

In addition American announces election of four regional vice-presidents. The new officials are A. R. Bone, Jr., western region, Los Angeles; M. D. Miller, southern region, Dallas and Fort Worth; L. W. King, central region, Chicago; and W. N. Bump, New England region, Boston. These new offices combine American Airlines Traffic Department with the work of route development for the company. The four regional vice-presidents are pioneer American employees.

Alfredo F. Bottaro Lopez, former chief of the Aeronautical Material division of the Argentine Civil Aeronautics Administration, has arrived in the U. S. Argentine airlines will quadruple the scope of their air route within five years after they are able to buy



U. S. equipment. Lopez predicted, as he arrived to study the operational and maintenance end of commercial aviation.

Thomas T. Griminson, district manager of TACA Airlines in Panama, is in New York City.

William Shepherdson has been appointed staff director of the recently organized Post-War Small Business Credit Commission of the American Bankers Association. He has been chief of the Small Business Unit of the Bureau of Foreign and Domestic

Commerce, U. S. Department of Commerce, since 1941, and more recently in charge of the Management Aid and Finance section.

Arthur Foristall of Hill and Knowlton has been appointed acting account executive for the Aeronautical Chamber of Commerce. Ken Ellington, who has been granted a three month leave of absence from the East Coast Aircraft War Production Council, will serve in a special consulting capacity at the Chamber. Don Ryan Mockler will continue on the Hill and Knowlton staff with special assignment to the Personal Aircraft Council.

Mrs. Thelma Swank Ostrow (photo) succeeds Mrs. Mary S. Jackson as director of counseling for Consolidated Vultee Aircraft Corp.



She heads women's counseling activities for 13 Convair Division. Formerly chief counselor at San Diego division, Mrs. Ostrow has been with Convair since 1942. Mrs. Jackson resigned to return to her business which she left in 1943 to direct Convair counseling.

Maj. Clayton E. Joyce, United Air Lines pilot on military leave, has been appointed chief pilot of the India-China Wing, Air Transport Command. Major Joyce helped establish the center in this country which trains flyers for high altitude operations such as hops over the Burma "hump." Since his arrival in the CBI theater, he has served as assistant executive for operations in the Eastern sector and as sector executive officer. As wing chief pilot he is responsible for distribution of flight crews, development of enroute flight procedures, transitional training and coordination of recommendations as to location of radio stations and visual aids to navigation.



John Standish will become district traffic manager for United Air Lines in Portland Ore., replacing W. R. Thigpen, who is being promoted to a position in the east.

Brig. Gen. Ray L. Owens has been ap-



GETS LEGION OF MERIT:

Maj. Gen. Thomas J. Hanley, Jr., was awarded the Legion of Merit for exceptionally meritorious conduct while serving with the Air Staff in Washington. Maj. Gen. George E. Stratmeyer, who was then chief of the air staff, made the award to his former assistant chief of air staff in charge of supplies. At present both are in the China-Burma-India theater.

pointed Deputy Chief of Air Staff, replacing Brig. Gen. William E. Hall. Just prior to returning to this country General Owens was deputy commander and commander of the Thirteenth Air Force, and then commander of the First Island Command.

J. H. Miller, 49, chief of the aircraft carburetor section of the Bendix Products Division at South Bend for the past 18 years, died recently, following a brief illness. He joined the Stromberg Carburetor Co. in 1927 as chief engineer of the aircraft division and remained when it became part of Bendix.

Maxine Keir has been appointed chief hostess of Braniff Airways to replace Willie Peck, who recently resigned. Miss Keir will have charge of the selecting, training and supervising of all Braniff air hostesses. She joined Braniff in 1940 as an air hostess and for the last



four years has worked under the direction and training of Miss Peck. During her service she estimates she has flown more than a half a million miles on every route of the company.

WHY THE GIANT CONSTELLATION" RELIES ON GOODYEAR

Tires Tubes Wheels Brakes



BIGGEST and fastest transports in operational duty today are TWA's fleet of giant Lockheed-built Constellations, now going into military service with the Army Air Forces. Like so many other big ships, these 40-ton goliaths have 100% Goodyear equipment on their main landing gear. The stalwart dual tires are 17.00-20 Goodyear Grooved All-Weather Intermediates with Goodyear tubes. The double brakes are time-proved Goodyear Hydraulic Disc Brakes, famed for

velvet-smooth, non-fading action—mounted in Goodyear cast magnesium-alloy wheels. *Long experience proves this all-star line-up guarantees utmost efficiency, dependability and safety in landing-gear operation!* Pioneer builder of airplane tires since 1909, Goodyear today produces the most complete, modern line of tires, tubes, wheels and brakes for every type of aircraft—from helicopters and light trainers to the greatest leviathans of the air, now in service or in prospect.

!All-Weather, Airwheel—T.M.'s The Goodyear Tire & Rubber Company

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THERE'S A GOODYEAR TIRE FOR EVERY NEED

- SMOOTH CONTOUR
- HIGH PRESSURE
- LOW PRESSURE
- AIRWHEEL (extra low pressure)
- LOW PROFILE
- ICE-GRIP
- HELICOPTER
- AUXILIARY WHEEL
- BEACHING GEAR

Most types available with choice of smooth tread, channel tread or the famous Goodyear All-Weather non-skid tread.



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Looking toward the future, Goodyear operates the largest privately owned airplane tire and brake testing machine in the United States. Capable of exerting 50,600,000 foot-pounds of energy, it is used in developing equipment for tomorrow's super aircraft.



BRING YOUR PROBLEMS TO HEADQUARTERS

Backed by the resources of the finest research laboratory in the industry, and more than 30 years' experience in developing airplane tires, tubes, wheels, brakes and other accessories, Goodyear engineers are ready to help you in working out any application. Address: Goodyear, Aeronautics Dept., Akron 16, Ohio or Los Angeles 54, California.

Sherwood L. Gish has been appointed district traffic manager for Northwest Airlines in Portland, Ore., where NWA intends to restore service late in the summer.



Gish, who has been with NWA for 10 years, has been assistant district traffic manager in Minneapolis. At one time he was chairman of the Minneapolis Junior Association of Commerce aviation committee and has been in aviation since 1928 when he became associated with an aviation school operated by Universal Airlines.

Robert L. Kincaid, formerly assistant to the chief of the Airway Traffic Control branch of the CAA, has been appointed assistant manager in charge of operations of the Washington National Airport to replace Earl Steinhauer, who resigned to join Fairchild at Hagerstown. Kincaid joined CAA in 1937 as assistant airport engineer in New York, having served ten years as airport manager of Syracuse Airport. He was formerly with American Airlines.

E. O. Locher has been named general manager of the Airplane Manufacturing and Supply Corp., in addition to his duties as secretary-treasurer. He takes over the duties of general manager from Earl Herring, president of the corporation, who continues as head of the organization.



Col. John S. Allard, Curtiss-Wright vice-president on military leave, has been awarded the Legion of Merit for "exceptionally meritorious conduct in the performance of outstanding services." He is the new chief of staff of the Eighth Air Force and received his award



for work as assistant chief of staff of the new 12th Air Force in 1942 and later as deputy chief of the 12th Bomber Command during the North African campaign.

Brig Gen. William J. Wallace has been detached from the Marine Fleet Air, West Coast, and assigned to duty overseas.

THE NEWS VIEWS—



Charles F. Dycer

Charles F. Dycer, nationally respected chief of the Flight Engineering and Factory Inspection Division of the Civil Aeronautics Administration, grew up in aviation. He taught himself flight engineering long before universities deemed the subject worthy of their curricula.

He was born in Elkton, Md., July 27, 1897. After graduation from high school in Washington, D. C., he entered the Field Artillery in World War I. His interest in aviation led him to becoming a Field Artillery Aerial Observer with the rank of Second Lieutenant.

After the war, Dycer migrated to Los Angeles where he established Dycer Airport and Dycer Flying Service, which he operated from 1922 to 1933. Here he learned flight engineering the hard way. Civilian plane models were practically non-existent in those days, a fact which led Dycer to build his own from parts of discarded military planes. These composite aircraft were designated the DY-1 and DY-2. In his experimentation, he designed the first all steel "V" type landing gear and the first all steel motor mount.

In addition to building aircraft, Dycer test-flew a number of experimental planes, logged more than 5,000 hours as a pilot in student instruction, did motion picture stunt flying, and piloted racing aircraft.

He joined the CAA in 1933 as an aeronautical inspector, later becoming an engineering inspector in the Kansas City region. In 1938 he was made Coordinator of Engineering Inspection. He remained

chief of Engineering Inspection when it became a unit in 1939, a section in 1940, and a division in 1941.

While on the West Coast, Dycer was active in aviation groups. He has been a governor of the Professional Pilots Association and a vice commander of the Aircraft Operators Association of California. He now lives with his wife and daughter in Alexandria, Va. According to his secretary, he is an avid golfer and in pre-war days liked to take in the races.

TELLING THE WORLD

• Eagle Parachute Corp., Lancaster, Pa., has announced appointment of Lynn-Fieldhouse Advertising Agency, Wilkes-Barre, Pa., and New York, as advertising and merchandising counsel for his company. Tentative advertising plans include a list of class and trade publications, according to Remus Harris, account executive of Lynn-Fieldhouse, who is in charge of the account.

• American Export Airlines has announced that Robert E. Demme, former associate editor of *Skyways* magazine, has joined its public relations department as editor of *Transatlantic Air News*, company publication. Demme is an aviation journalist of several years experience and is a member of the Aviation Writers' Association.

• Ivan Bullo has been appointed to supervise a passenger sales promotion program planned by Pan American Airways, New York. The program, under general direction of Richard C. Lounsbury, passenger and mail traffic manager, will prepare literature and information of aid to travel agents and sales offices.

• U. S. Marine Corps has announced that dealings with national magazines and book publishers will be carried out through the division of public relations in New York with Capt. Patrick O'Sheel in charge of the newly established centralized service. The division is at 90 Church Street.

• The story of the rise and rapid growth of Reynolds Metals Co., is told in a film, *A Recital of Faith*. The picture is a running narrative of all the operations of the aluminum industry ranging from the mining of bauxite in Arkansas to the actual delivery and use of aluminum.

• The annual report of Pennsylvania-Central Airlines has been designated to receive a merit award by *Financial World*, a publication which annually selects the outstanding reports issued by leading American business organizations.

• *American Pilot*, monthly magazine, will change its name to *Airports* with the September issue.

AIRCRAFT PRODUCTION

Cost of DC-3 Reconversions Average from \$32,000 to \$40,000

Between 12,000 and 15,000 manhours reported required to restore planes returned by Army to airlines; shortage of parts and components, and engine inspections delay work.

Between 12,000 and 15,000 manhours appear to be about the average time necessary for reconversion of DC-3's for airline use, with cost ranging from \$32,000 to \$40,000.

Reconversions are taking more than twice the manhours required for a normal 5,000-hour overhaul and the only possibility of any great reduction appears to rest in the reconversion assembly line now getting under way at the Douglas Aircraft factory in Santa Monica. Previously reconversions were done by the airlines' own shops.

▶ **13 Planes Moved**—It remains a question whether the reconversions will get simpler or more complicated. Douglas has moved slowly in its own initial reconversion. The first such delivery has been made to Delta Air Lines.

Latest reports indicate 13 planes had been moved into the Douglas

plant and estimates in Washington were that most of the 100 additional planes to be returned to the airlines by fall would go through the Douglas plant rather than being reconverted in airline shops. The Delta plane at Santa Monica was followed on the line by a Chicago & Southern DC-3 and other planes from American, TWA and Northeast. Still others will be sent there if overhaul facilities of the various airlines reach a saturation point.

Several factors are operating against speedy reconversion of the DC-3's taken from the airlines and now being returned, and conversion of C-53's and C-47's.

▶ **Parts Shortage**—One is a shortage of parts and components, which still are tight, although no plane yet has been held out of service entirely by inability to get required materials. Another is that Pratt & Whitney is reported to be refusing



Douglas Reconversion "Assembly Line": With new war planes in the background and camouflage overhead, DC-3's are being converted from military use to civilian with "assembly line" technique at Douglas Aircraft's Santa Monica plant. Photos show stripping before installation of seats, sound-proofing and other airline accommodations, and a Delta Air Lines plane

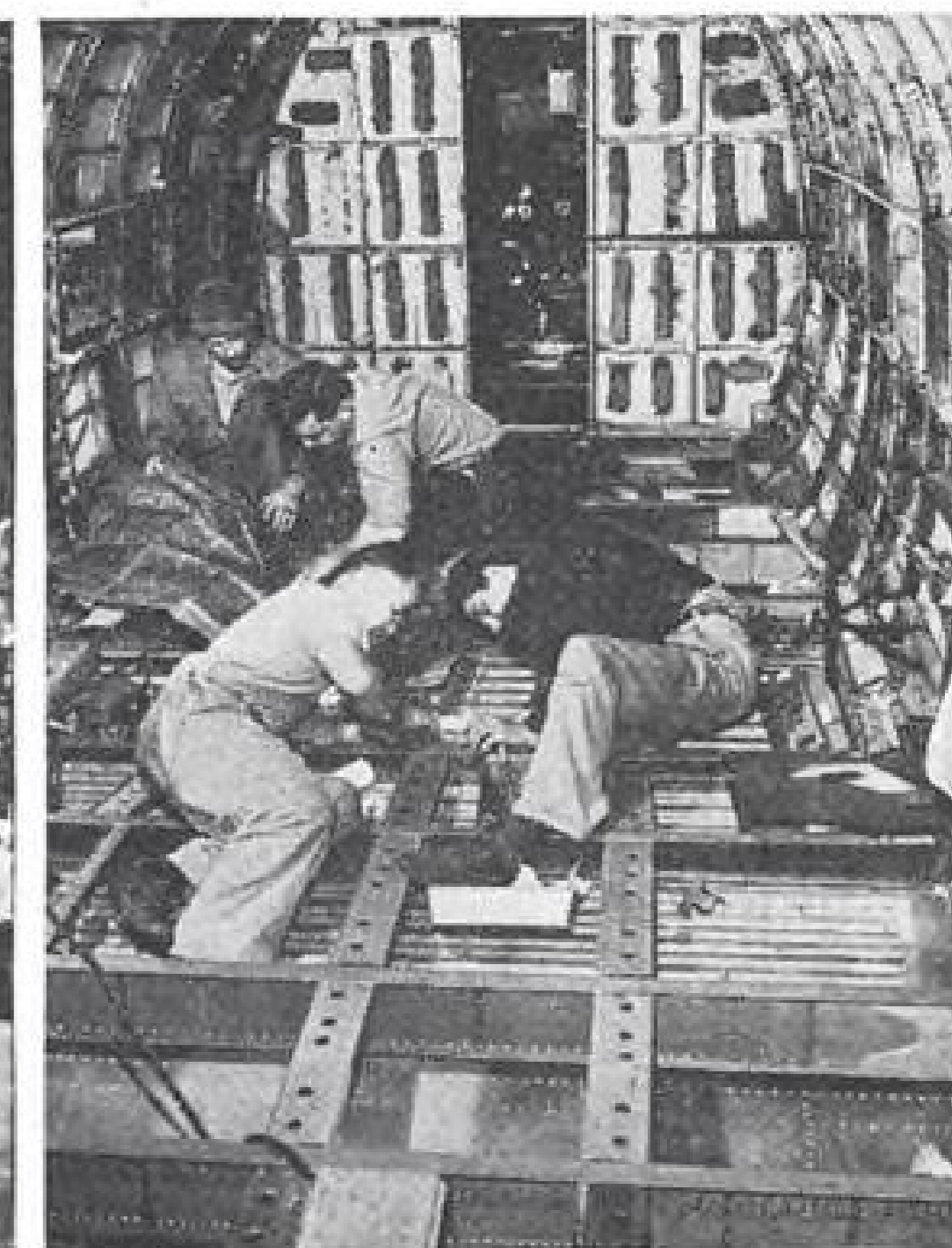
Water Wings

If any airline has a watertight wing flying over the airlines on a DC-3, Pennsylvania-Central Airlines would like to swap.

One difficulty in return by the Army of planes to the airlines has cropped up in the fact that PCA, the only domestic airline with extensive overwater routes—Cleveland-Detroit and Muskegon-Milwaukee—has been getting back planes without watertight wings. The result has been a swapping job. American Airlines received one plane with a set of PCA's wings, while Delta found it had received one of PCA's planes. So PCA had to swap wings with American and Delta to get back their overwater equipment.

to approve engines manufactured by licensees for use in the converted planes until the engines have been checked in the P & W factory. This entirely logical refusal is based on P & W's position that it must stand back of each engine bearing its name in airline service and that it cannot do this unless it is satisfied that the engine is completely up to P & W standards.

In some instances, it was pointed out, licensee manufacturers have been able to secure service approval of modifications in the



heading the line. Douglas estimates four to six weeks for each reconversion, but says the time will be lowered as the Army turns back additional ships and production equipment is installed to handle them. Where former airliners are lost or reconversion is impractical, newer C-47's will replace them for adaptation to civilian use.

engines not approved by the original designer. Wright Aeronautical on the other hand, is reported to be approving engine installations only provided that engines are thoroughly checked and overhauled in airline or other adequate facilities. Another difficulty lies in obtaining use of sufficient manhours from war production, although at the moment this does not appear to be too serious a factor.

► **C-53's Modified**—Some of the newer C-53's have been given to airlines, it was learned, and these are now going through the modification process for airline use. Neither the C-53 nor the C-47 yet has CAA airworthiness certificates, although this is not expected to be a major problem after complete conversions have been made. The C-53 conversions are not difficult, since they are the first, slightly revised versions of the DC-3 manufactured for military use. The principal change was in the installation of a slightly larger door. With the C-47, the problem will be considerably more difficult.

In this version, the larger cargo door was installed and the floor changed to a canted construction for easier cargo loading. Other changes also will complicate the problem. However, Douglas now is understood to be engineering these changes and probably will be ready with a modified assembly line procedure when the Army begins releasing these ships.

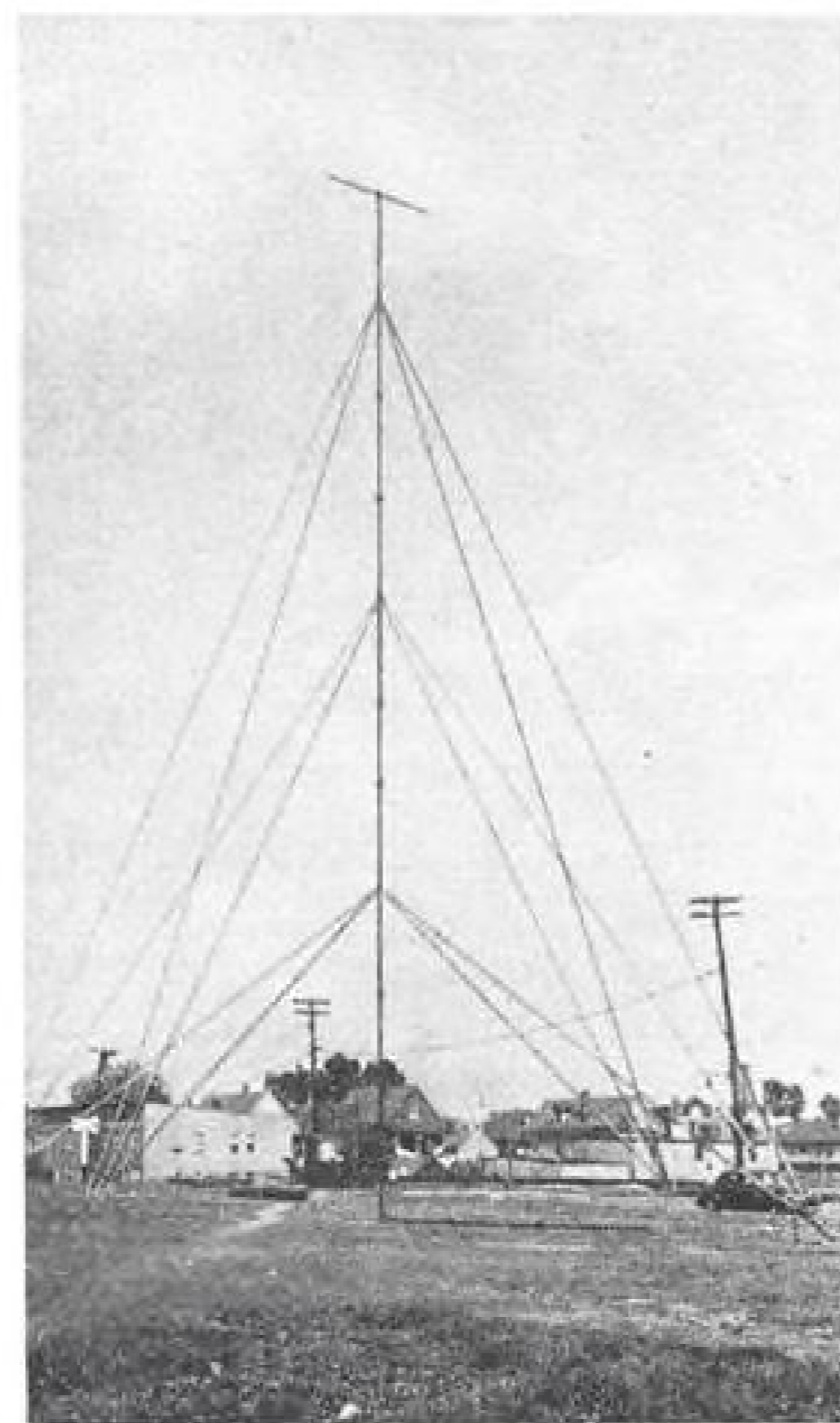
► **Parts Are Time Factor**—Illustrating the difficulty in obtaining

parts, Pennsylvania-Central Airlines completed its first reconversion job in 25 days, the second in 23, the third in the record time of 15 days. But on the fourth plane, the time jumped to 45 days, according to reports, because of the difficulty experienced in obtaining conversion components. Two other planes moving through PCA shops are reported to be moving at a faster pace, but it may be expected at any time that return of planes to service may be delayed by the parts and components difficulties.

Northwest, with considerable experience in modification work through operation of a large modification center for the Army, reportedly is moving reconversion jobs through in 30 days. Douglas now is estimating from four to six weeks for delivery of the reconversion jobs.

Most airlines feel that the time can be reduced as experience is gained, but it does not appear probable that the manhours can be brought below 12,000 hours or the cost below \$32,000.

When the Army converted the planes, it stripped them of all airline interior fittings and passenger accommodations. One particular difficulty reported by the airlines in reconverting is that the seats originally removed either have been scrapped or used in other planes and have not been available for return with the planes. The Army installed solid plywood floors fitted for cargo tie-downs and utilized bucket seats arranged along the



NEW RADIO MAST:

This new type portable radio mast was developed by Harco Steel Construction Co., of Elizabeth, N. J., which claims for it unusually small shipping space and speed and simplicity in erection. A 90-foot model is pictured.

sides to accommodate personnel. ► **Installation Changes**—Reconversion requires removal of these Army installations, shifting or installation of bulkheads, installation of light-weight flooring, adjustments to heating and ventilating systems, installation of new window panels to replace the plug-fitted Army windows, replacing of seats, headrails, interior linings and insulation and soundproofing.

The trend will be toward greater standardization of interiors in contrast with the wide variety of interiors and interior arrangements used by airlines in the original versions.

Plane Distributors

A nationwide warehousing and distributing organization to be known as Clayborne Distributors, Ltd., and headed by Norman F. Clayborne, Chicago manufacturer of aircraft engine positioning equipment, was announced last week.

The new organization, the announcement said, will offer a complete engineering, merchandising and sales service with warehouses at strategic centers for distribution of aircraft products.

Data Listed to Standardize Catalogs

Prepares outline of organization and subject matter desired by members following survey.

National Aircraft Standards Committee has made a survey of existing catalogs and prepared an outline of the organization and subject matter members want in vendors' catalogs.

Necessary requirements are listed as:

- Parts should be identified by name and number.
- Catalogs should carry the date of release. In the case of loose leaf catalogs, the date of the latest page revision should be carried on each page.
- Sufficient information to allow practical application of the part should be shown, such as envelope size, tolerances, location and size of electric, hydraulic, pneumatic, or other connections.
- Changed parts should be given new numbers or dash numbers unless dimensionally and functionally interchangeable.

- Maximum strength or capacity of parts should be specified.
- Type and specification number of the material from which the part is fabricated should be shown. Government drawing or specification numbers to which the part may be manufactured should also be noted when applicable.
- Method of interpreting coded part numbers should be specified.
- All pages should be numbered.
- Parts having general government approval for use on aircraft should be specified.
- Information regarding the proper method of ordering should be included when necessary.
- The accurate actual weight of all parts should be shown. If at any time the calculated weight is used in lieu of the actual weight it should be so specified.

Desirable requirements are listed as:

- Catalogs should have an identifying number.
- Special tools necessary to install parts should be listed.
- Related drawings giving more detailed information should be referenced when available.
- Catalogs should be approximately 8½ by 11 inches in size to facilitate filing.

Further information relative to the cataloguing standards sought by the aircraft manufacturing in-



PARTS STORE IN OPERATION:

With an eye to peacetime distribution of planes and parts, the American Aviation Mart (AVIATION NEWS, June 12, Page 53) has opened in Chicago in the Furniture Mart to supply the growing needs of private flyers. Sales are made in lots of not less than \$500. Photo shows salesman Michael Welch in front of a display board.

dustry can be obtained from G. M. Aron, standards engineer of Northrop Aircraft Inc., Hawthorne, Cal.

Adel Corp. Names Canadian Agents

Adel Precision Products Corp., of Burbank, Calif., has named Canadian Railway & Power Engineering Corp., Ltd., as its exclusive Canadian representative. Ray Ellinwood, Adel president, says the Canadian agency will handle all future transportation industry products of Adel as well as the firm's current production of 300 types of hydraulic and hydro-electric valves and 12,000 types and sizes of line supports.

► **Units in 9 Cities**—Wide coverage of the Canadian market will be facilitated by offices and warehouses in nine principal cities.

Cornell Order Filled

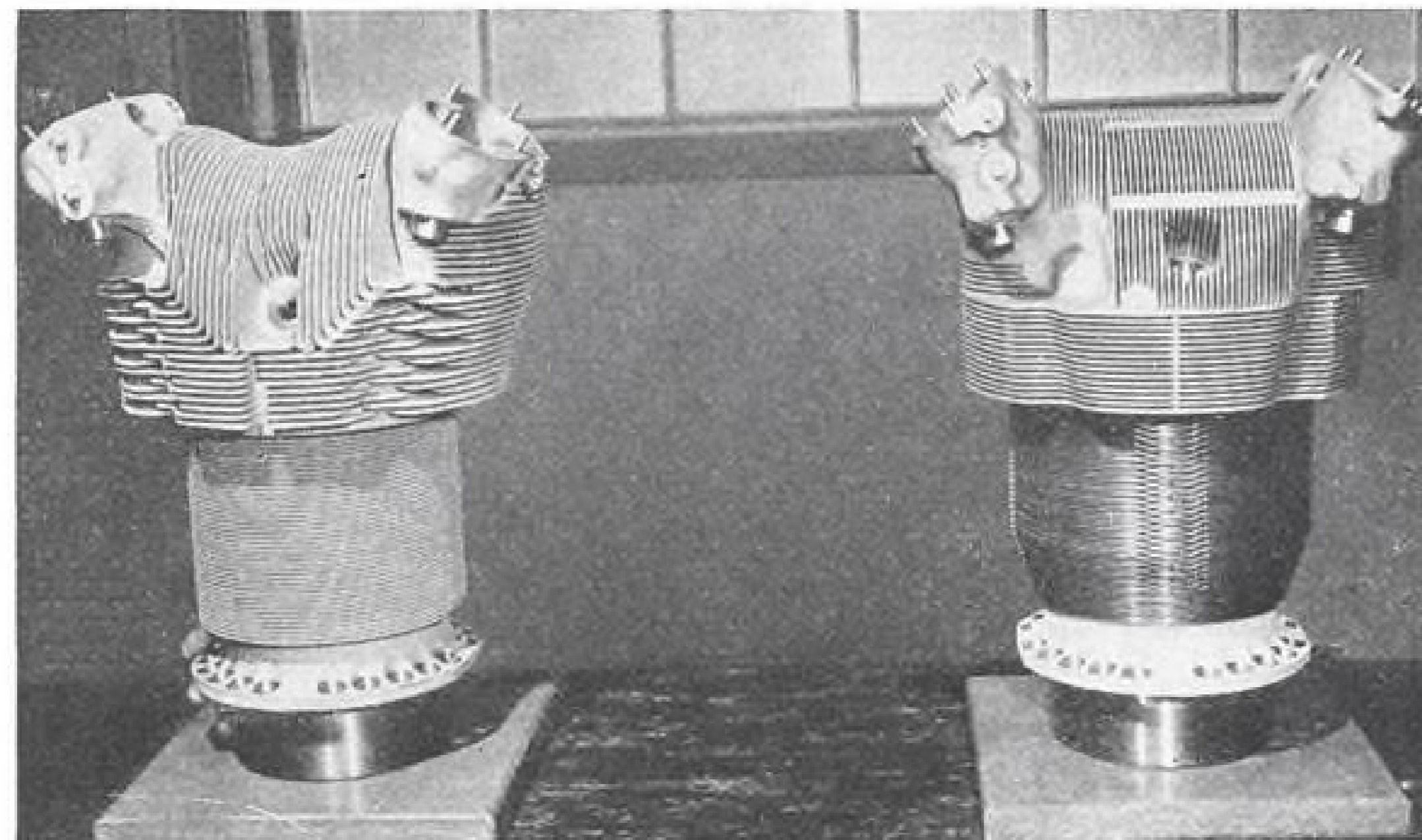
Fleet Aircraft Ltd., of Fort Erie, Ont., has completed its production of the Fairchild Cornell trainer and is again manufacturing wings for the Lancaster bomber, it has been learned. The changeover in the schedule resulted in transfer for 25 percent of the factory staff from one type of job to another.

Civilian Workers Fear Vet Replacement

Aircraft plants are employing thousands of discharged service men, and more thousands are coming. Such is the political and sentimental pressure behind these men for employment in their old jobs, in accordance with the Government's promise that many duration civilians are beginning to worry about being displaced. In fact many, to safeguard themselves, are going to other jobs on which military men have no claim.

► **Production Affected**—These losses, and morale lowered by uncertainty, are damaging aircraft and other production. Right now, aircraft builders are taking nearly all men offered them, from whatever source. But they are turning down some for lack of qualification and such rejections will increase rapidly with inevitable cutbacks.

Employers say that, as manpower regulations and laws now stand, they can exercise free selection as between civilians at work and applying for jobs, and returning service men making application. But they realize that the political power of the veterans could bring a "must" order, and they fear the effect on efficiency.



NEWLY-DEVELOPED WRIGHT FIN:

Greater horsepower output and saving of 24,000,000 pounds of alloy steel are claimed for the new aluminum fins designed by Wright Aeronautical Corp. in cooperation with Scandia Manufacturing Co. The barrel on the right has 60 aluminum fins attached to the steel wall of the cylinder barrel, the one on the left 40 fins cut from the barrel itself. The aluminum fins are credited with giving almost twice the cooling area of the steel fins. Weight of the engine is reduced one pound per cylinder.

Underlying Strength in Aircrafts Indicated in D-Day Performance

Failure of aviation stocks to collapse following invasion may give promise of better market than generally forecast.

Aircraft shares, the worst market performers throughout the entire war period, did not collapse following D-Day, as many observers expected. While the group did not participate in the general appreciation experienced by other industrials, there are unmistakable signs of underlying strength which may soon attain greater prominence.

The unfavorable aspects of the aircraft industry have long been discounted and market levels adjusted by peace-conscious investors so that no further price declines developed.

War Gains Discounted—It is ironical that the aircraft industry which occupies top place in our war production effort and which is mainly responsible for success in battle thus far, has fared so poorly marketwise. It is an outstanding characteristic of the market, however, which has steadfastly refused to recognize war-inflated gains no matter where found.

Shortly after the outbreak of war in Europe, in late 1939, a bear market set in for the entire industrial list. Investor sentiment viewed war prosperity as temporary with no lasting benefits. The aircraft started on their downward spiral at that time. During 1942 and 1943, the general market staged consistent rallies and managed higher price levels. Not the aircrafts—they kept right on declining.

Upturn—An analysis discloses that aircraft shares as a group made their lows for the four-year period during late November and early December of 1943. Significantly, a gradual upturn set in since that time with new highs for the current move made in late February of this year. Lows for 1944 were generally made shortly after D-Day. However, it is particularly noteworthy that, as a group, the lows made this year were conclusively higher than the low points reached in late 1943. To market

technicians this is a most heartening indication of inherent strength. And should the aircrafts now rise above their highs established in February of this year, an unquestionable bullish pattern would be in the making. The accompanying table reveals pertinent market data for the individual aircraft securities and serves as a basis for the conclusions advanced.

Bendix—Group movements are frequently misleading as they tend to cover many outstanding individual situations. For example, Bendix Aviation Corp., which has been closely identified with the aircraft industry, has shown remarkable market strength. The stock is not only selling higher than its high established early this year, but has also topped its peak of 1943. This performance may be attributed to the nature of the company's operations. Now an active producer of aircraft parts, Bendix does not have the same complications confronting the old-line aircraft producers.

Bendix should have little difficulty in reconvertng to its former status of manufacturing parts for the automotive industry. Its strong affiliation with General Motors can hardly be overlooked. Informed sources look for the company to show earnings of about \$7.00 for its fiscal year ending Sept. 30, 1944—about the same (\$6.95) as reported for the previous fiscal year. Current earnings, however, are running slightly ahead, \$4.02 per share for the six months ended

March 31, 1944 as compared with \$3.87 for the like period the previous year. Capital conservation, however, will most likely hold dividends down to the 75-cent quarterly rate paid thus far this year. It is small wonder, on the basis of present earning power and future prospects in the reconversion to come, that Bendix has been able to do so well marketwise.

Sperry—Sperry, which in many respects, has similar characteristics to Bendix, has also shown significant market resiliency and has since passed its 1943 peak. This company, while popularly identified as an aircraft unit, has had the bulk of its operations in other directions. For example, its main activity is in the field of naval devices and installations. In the post-war period, the company expects to be quite a factor in hydraulics. As its naval business is also of a war-inflated nature, the company's equity has not done as well as that of Bendix—but certainly has performed much better than pure aircraft shares.

A month after D-Day finds most aircraft shares but fractions or a point or two from their early 1944 highs. Once these points are penetrated, it will be of interest to see just how far this rally can carry. With most industrial groups experiencing market strength—which in itself—denotes a hopeful general business outlook, it hardly follows that aircraft companies will fail to participate in any prosperity wave.

There are a number of observers who persist in the belief that because the aircrafts are without friends at present, that is the time to purchase them—when no one wants these equities. Successful speculation is premised on this belief. Moreover, no one will deny that present prices for aircraft shares have long discounted the post-war deflation in store for the industry. In almost every instance, aircraft companies can show working capital in excess or equal to the market price of their common shares.

MARKET ACTION Leading Aircraft Equities

	Range For 1943		Range For 1944 to June 5		June 5 1944	July 6 1944	July 21 1944
	Low	High	Low	High			
Bell	Nov. 9 1/2	Mar. 20 1/2	Apr. 25 10 3/4	Jan. 11 15 3/4	12	12 1/2	12
Bendix	Nov. 33	Apr. 39 3/4	Jan. 13 33 1/2	June 1 38 1/2	38	47 1/2	39
Boeing	Nov. 11 3/4	Mar. 21 1/4	June 5 12 3/4	Feb. 29 15 3/4	13	14 3/4	14
Cons-Vultee	Nov. 9 1/4	Mar. 21 1/2	Jan. 3 11 1/4	Feb. 24 15 3/4	12 1/2	14 3/4	13 3/4
Curtiss-Wright	Dec. 5 1/2	Apr. 9 1/2	June 6 4 3/4	Jan. 7 6 1/4	5	5 3/4	5 3/4
Douglas	Nov. 44	May 73 1/2	May 13 47	Feb. 25 57 1/4	48	55 1/4	53
Lockheed	Nov. 12 1/2	July 21 1/4	June 5 14 3/4	Feb. 24 18 1/4	15	16 1/2	17
Martin	Dec. 14 3/4	May 24	Jan. 3 16 1/4	Mar. 27 20 3/4	18	19 1/4	18 3/4
North American	Nov. 8	Apr. 14 1/4	June 5 7 3/4	Feb. 24 9 3/4	7 3/4	9 1/4	8 3/4
Sperry	Nov. 23 1/2	Mar. 35 1/4	May 13 22 1/2	Jan. 6 27 3/4	24	26 7/8	28 1/2
United Aircraft	Nov. 24 1/4	May 40	June 6 25 3/4	Mar. 13 30 1/2	26 1/2	28 1/4	28 3/4

The carry-back provisions of the revenue tax law provide a potent cushion against declining earnings which should stave off immediate deterioration of aircraft financial resources. These elements, in effect, have a tendency to minimize the risk present in aircraft shares at current levels. The big factor lacking, however, is the public glamour and popular support which is so necessary to give impetus to rising market values.

WPB Revises Rating On Plane Supplies

Aviation concerns engaged exclusively in crop dusting, seeding and spraying, and members of the Civil Air Patrol, which participates in target towing and other military projects, were assigned AA-1 ratings for maintenance, repair and operating supplies by the War Production Board. The ratings previously were lower.

Other Ratings Changed—Included in the new assignment are air patrol, survey, and fire protection services operated by the Forest Service, Department of Agriculture; the air services operated by or for police and law-enforcement agencies; and the Bureau of Entomology and Plant Quarantine, Department of Agriculture.

The Board said that, under the new amendment, AA-2 ratings are to be assigned to air services operated by or for governmental agencies, except as otherwise rated.

Warner Salaries

W. O. Warner, president and general manager of Warner Aircraft Corp., was paid \$24,000 during the fiscal year ended Dec. 31, 1943, according to the company's annual report to the Securities and Exchange Commission.

Other salaries paid in that year included \$14,400 to L. A. Majneri, vice-president and chief engineer; \$12,000 to L. A. Faunce, vice-president and sales manager, and \$12,000 to W. J. Jarvie, secretary and treasurer.

Financial Reports

Republic Aviation Corp. reports net operating profit of \$10,602,959 for the six months period ending June 30. After federal taxes amounting to \$7,925,082 and reserve for post-war readjustments and contingencies of \$869,701, amount carried to earned surplus

is \$1,808,176, equal to \$1.84 a share on 982,406 common. These figures are before renegotiation and subject to year-end independent audit. Net sales for the first half of the 1944 fiscal year were \$219,797,334.



INSIGNIA OF AIR FORCES:

Official insignie of the newest and longest-reaching arm of the U. S. Army Air Forces, the 20th, is shown here, with those of the other Air units. The insignie, worn as a shoulder patch by officers and men, symbolizes the globe-girdling range of the B-29 Superfortress. It consists of a disc of ultra-marine blue, marked with white lines of latitude and longitude. The white star has a red disc center, surrounded by a gold annulet and gold wings.



As potent a force in peace as it is in war.....

The speed and efficiency of military air transport to all points on the globe is an established fact. And it has set the pattern of post-war travel.

The aircraft in service on these runs, the pilots and ground crews who are doing this pioneering deserve credit for the successful functioning of today's worldwide air transportation. But there's one other item of equipment that has contributed tremendously to these successes... *the electron vacuum tube.*

Electronic vacuum tubes are the very heart of radio beacons, communications, instrument landing and other now secret aeronautical electronic devices. These are the things which have made air travel safe and efficient... helped man conquer the air.

In this field Eimac tubes are the leaders. Their prac-

tically unanimous acceptance and continued use by the major airlines throughout the world is proof of this fact. Years of practical experience in the field, years of successful performance in aviation have made Eimac tubes first choice of the leading engineers throughout the world.

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PRIVATE FLYING

Culver's New *Victory* Model Puts Firm in Good Post-War Position

Average of 100 inquiries a day received on strength of performance record of company's pre-war aircraft; retractable landing gear and wing efficiency stressed.

By BLAINE STUBBLEFIELD

About 23,000 inquiries have been received by Culver Aircraft Corp., according to the management, on post-war deliveries of its two-place *Victory* model monoplane with retractable landing gear.

If all lightplane builders were graded according to their degree of optimism on the early peacetime market, Culver would stand at or near the top. The company believes its immediate problem will be to produce enough planes to meet the demand.

▶ **100 Inquiries a Day**—Chief reason for the inquiries, which lately are reported coming in at an average rate of 100 per day, undoubtedly is the remarkable performance data on the pre-war model. These data, quoted in the accompanying box, are on the LCA and LFA, with Continental and Franklin engines, respectively. Prospective purchasers, of course, expect even better performance of the *Victory* model.

Culver works toward utility as the main characteristic of a personal airplane, and company aim is to put five ingredients into this utility formula: (1) The plane must be clean; (2) safer than ever; (3) more economical; (4) faster; and (5) more convenient. That's the blueprint of the pre-war Culver, and also of the forthcoming *Victory* model—about which the company will give very few details as yet.

▶ **Quality Plane**—What they do say is that the new design will have conventional flight and control characteristics; that it will be a quality plane — using expensive materials and workmanship, with no attempt to get into the lowest price brackets. Every effort will be made, however, to hold the post-war price as much below \$3,000 as possible. They hope it will be less than \$2,500. Pre-war price

for the LFA was \$3,095, and \$2,895 for the LCA. The \$200 difference was not in the engines; model LFA had a starter and generator.

Prices of post-war planes, Culver and most other manufacturers contend, will be increased by higher labor and materials costs. This can be partly offset by higher production efficiency developed out of war experience. But new efficiency cannot wholly offset high costs except in volume production. Generally speaking, labor costs have gone up from minimums of 40 and 50 cents before the war to minimums of 90 cents and one dollar now. How long they will stay there, no one can say.

▶ **Making Army Planes**—Culver is exclusively engaged in producing specially equipped planes in volume for the Army and Navy, and has been able to increase its efficiency so that one worker now produces more in a day than he formerly did in a week. Company hopes that this performance can be transferred in part to its civilian operations.

Before the war Culver was producing a maximum of ten *Cadets*



Culver "Cadet": This pre-war plane is said to be a rough approximation of what the new *Victory* model will look like. The *Victory* model, incorporating numerous design changes, is expected to exceed the high performance standards of the *Cadet*.



Charles Yankey, president of Culver, and (right) T. Bowring Woodbury, vice-president.

a week. The rate after the war can be many times that rate, probably in the same plant, without expansion. The plant and most facilities belong entirely to the company.

▶ **Design Changes**—Officials told the writer during conferences in the plant at Wichita that they now have war contracts which would occupy their facilities through 1945 if hostilities continue. They already have completed three design changes in their war product and are about to begin a fourth change. The company was in a position to accept large sub-contracts, which would have meant expansion and probably the building of government-owned facilities for its use, but spokesmen said the management preferred to stick by their accustomed line of operations.

Culver engineers say the unusual performance of their plane is due mainly to the retractable landing gear, and to the efficiency of their wing, which is extensively credited to Al Mooney, chief designer. They say their method of making the landing gear has been improved and the cost greatly reduced.

▶ **History**—Culver was organized in 1938 by K. K. Culver, at Columbus, Ohio. Its first output was about 50 *Dart* planes. Production



Al Mooney, Culver chief designer, and (right) Charles Jamieson, chief engineer.

of *Culvers* was started in 1940. After about 75 *Culvers* were delivered, the company moved to Wichita.

In early 1942, a controlling interest in it was purchased by Charles G. Yankey and Walter H.

Grid Marking

Proposed grid-pattern marking of the U. S. for guidance of non-professional flyers is an idea of merit but its problems are difficult. John E. P. Morgan, manager of the Personal Aircraft Council of Aeronautical Chamber of Commerce, before the NAA joint airport conference, cited impracticability of marking off ten-mile squares with white lines, or of marking the corners, because ground lettering of almost any size is difficult to see until the pilot is well over it. The speaker said a lost pilot might as well look for his destination as one of the proposed markers.

It would be feasible, though, Mr. Morgan said, to mark off the country in a grid pattern, not establishing new lines, but dividing the existing latitude and longitude pattern into smaller sections. On that basis, a fixed coordinate map of the United States would be published. With reference to the map, any pinpoint location in the country could be given an "air address" in letters, digits, and decimals, easily located on the map.

The speaker proposed that all or many of the landmarks usually followed by contact flyers, such as towns, hamlets, lakes, reservoirs, mountains, cross-roads, river junctions and so on, be plainly marked with the coordinate air address, and the direction. The pilot then need only look at his map, orientate it, and know exactly where he is. There appeared to be no disagreement with Mr. Morgan's conclusions.

Culver Victory Performance Data

	LCA	LFA
Cruising speed.....	120 mph	120 mph
Maximum speed.....	140 mph	140 mph
Landing speed.....	45 mph	45 mph
Climb, at sea level.....	800 fpm	800 fpm
Service ceiling.....	17,500 feet	17,500 feet
Fuel capacity.....	20 gals.	20 gals.
Fuel, gal. per hour.....	5.0	5.0
Normal cruising range.....	480 miles	480 miles
Gross weight.....	1305 lbs.	1305 lbs.
Useful load.....	555 lbs. max.	457 lbs.
Max. wing loading.....	10.88 lbs.	10.88 lbs.
Power loading.....	17.40 lbs.	16.31 lbs.

Beech. Mr. Yankey is president of Culver and vice-president and counsel for Beech Aircraft Corp. Mr. Beech is vice-president of Culver and president and board chairman of Beech.

Parks Air College Opens K. C. Agency

Plans Chicago, Indianapolis and other branches for sale of *Ercoypes* in expanded post-war operations.

Parks Air College has opened a branch at Kansas City as one of its first steps in a contemplated plan of expansion for aircraft demonstration and sales purposes. While negotiating for a private airport of its own, its office is at the Kansas City Airport.

Parks has become the distributor for the *Ercoype* in the Middle West and parts of the South. Thomas H. Beck, president of Crowell-Collier Publishing Corp., stated publicly in Kansas City recently that Parks had taken orders for more than 1,200 *Ercoypes* for post-war delivery.

► **Other Agencies** — Meanwhile, company plans other branches at Chicago, Indianapolis and Tuscaloosa, Ala. Frank Struif, former manager of the now discontinued Parks plant at Jackson, Miss., is manager of the Kansas City unit. Jack Nichols is chief pilot for the new Kansas City base.

Main purpose of the expansion move is the distribution of the *Ercoype*. Parks is demonstrating the plane and giving flying time to prominent citizens.

At Kansas City, for instance, director of public works Kenneth K. King is taking time with Parks and the *Ercoype*. So is City Manager L. P. Cookingham and many other well known Kansas Citians.

► **Instruction**—Parks plans little

actual *Ercoype* flight instruction at Kansas City. Most of it will be carried on at its main base at East St. Louis, Ill.

Struif, manager of the base, and Nichols, the base pilot, currently comprise the Kansas City personnel, along with a mechanic, secretary and stenographer. However, the company contemplates expansion to a far larger staff upon acquisition of its own Kansas City airport.

Parks is distributor for *Ercoype* in Missouri, Kansas, Iowa, Nebraska, Illinois, Indiana, Mississippi and Alabama. Parks also will handle accessories.

The company has acquired another airport in the St. Louis area and also has purchased an air base at Indianapolis. Negotiations are reported to be under way for an airport at Chicago. The company owns a field at Tuscaloosa, Ala., but the Army is continuing its use of that tract.

New Plane Compass Made of Plastics

New developments in plastics will permit incorporation of new features in popular-priced aircraft compasses, the Sherrill Research Corp., of Peru, Ind., claims in announcing that a new liquid-type plastic compass would be offered the private flyer in the post-war market.

The new Sherrill compass will be light in weight without sacrifice of sturdiness to give years of service, according to B. E. Sherrill, president of the company, which is now producing precision compasses made largely of plastics for the post-war market. Sherrill said he envisaged a greatly expanded interest in popular priced direction finding equipment for the private flyer.

TRANSPORT

Progress of Air Mission to Spain Rouses Optimism in Washington

Ryan returns to U. S. after "busy trip"; Stanton and Novinger to stay two weeks longer to study landing facilities; Madrid reported friendly and cooperative.

By MERLIN MICKEL

Washington aviation circles are optimistic over reports concerning the technical mission sent to Madrid by the State Department after an air "agreement in principle" was reached between the government of this Nation and that of Spain.

The delegation consisted of Oswald Ryan, Civil Aeronautics Board member; Charles I. Stanton, Civil Aeronautics Administrator, and Fred B. Novinger, chief of the New York region of CAA's Air Carrier Inspection Division.

► **Inspect Landing Facilities**—Although Ryan has returned, while Stanton and Novinger remain for another fortnight to make technical inspection of landing facilities in Spain, presumably the report of all three will be made to the State Department. The Board member's

comment was that he "had a busy trip." He was gone two weeks.

Despite official reluctance to discuss details, however, there are substantial indications that Spain's attitude of complete friendliness placed full information on her air facilities at the mission's disposal, both generally and technically. The Spanish Air Ministry made a plane available in which the envoys visited facilities they wished to see in person.

Spain has made good progress in domestic aviation as to airports, landing facilities, airways and equipment. She operates her own airline, from which German interests have been excluded.

► **Preliminary Agreement** — The "agreement in principle" that exists merely establishes the willingness of Spain to permit U. S. car-

Ocean Records

Overseas flying time is undergoing constant reduction.

Early in July an American Export Airlines pilot flew the 3,075 miles from Foynes, Eire, to New York in 18 hours, 16 minutes on a scheduled flight, bettering the old record, also claimed by American Export, by 27 minutes. The month had a week to go when another American Export pilot, Capt. Edward A. Stewart, announced he had made the flight in 17 hours, 57 minutes.

A Canadian-built Lancaster of the Royal Air Force Transport Command established a record for a non-stop distance flight of 1,500 miles from Nassau, Bahamas, to Dorval Airport, Montreal, in 5 hours, 35 minutes. The craft flew according to flight plan over the North American continent, within normal long-range cruising speed.

Air Transport Command reports a C-54 flew 3800 miles non-stop from London to Washington in 18 hours.

riers to enter its borders, and is only preliminary to the completed details of complete agreement on such matters as landing rights, use of facilities, and similar problems.

The very fact that Ryan and his



SOUTH CAROLINA HOLDS FIRST AIR FORUM:

First South Carolina Aviation Forum was held at Charleston, under sponsorship of the City of Charleston, its Chamber of Commerce, and the South Carolina Aeronautics Commission. Airline representatives shown in the picture are left to right, standing, Mil-

lard S. Davis, Southeastern Air Express; E. S. Ridley, Colonial Air Lines; Robert F. Nelson, States Air Line; Vic Little, Delta Air Lines; George Gardiner, Pan-American Airways; seated, H. C. Alsop, Colonial Air Lines; Maurice Lethbridge, Eastern Air Lines; MacDonald Bryan, National Airlines, and R. Stanley Webber, Delta Air Lines.

colleagues visited Spain leads to the conclusion, nevertheless, that proposed routes to that country will be among the earliest to which the Board will give consideration in its deliberations on overseas route applications.

► **Spaniards Air Minded**—There is intense interest in aviation among Spaniards, particularly in official circles, an interest that extends to its international aspects as well as its domestic.

This interest is shared by the Portuguese who, it is assumed, are watching closely negotiations between this country and Spain. The acutely competitive relationship between Spain and Portugal hints that arrangements with one may bring parallel dealings with the other.

► **May Supersede PAA Accord**—This circumstance conceivably could lead to a revamping of the situation that finds Pan American Airways with individual landing rights in Portugal, in favor of one whereby the State Department might procure rights for U. S. carriers that would supersede those of PAA.

One thing which has an important bearing on any negotiation with Spain is public opinion of the Franco regime. The mission, because of its technical nature, is not directly concerned with this.

LaGuardia Field Key To Atlantic Airways

More than 500 trans-ocean cargo and passenger planes cleared at New York airport in a recent month.

Newly disclosed figures on operations at LaGuardia Field, New York, emphasize its place in the aviation sun as a key gateway to trans-Atlantic destinations.

Within one recent month, it now may be revealed, more than 500 trans-Atlantic crossings were made by cargo and passenger planes between New York, the United Kingdom and Africa.

During that same month, Air Transport Command handled at LaGuardia more than 4,000 war-important passengers and more than 2,500,000 pounds of cargo.

► **1943 Record Cited**—These facts added to the field's 1943 record, have led Brig. Gen. Lawrence G. Fritz, commanding officer of the North Atlantic Wing of ATC, to comment that "LaGuardia Field has attained a position in trans-

Live Crabs by Air

Believed to be the first notice shipment of seafood by air, Chesapeake Bay softshell crabs shipped from Washington early one day last week arrived alive in Los Angeles late the same day aboard American Airlines' Flagship *Skyfreighter*. They were shipped in a thin veneer wirebound box, and served at a hotel luncheon given by A. R. Bone, Jr., American's western traffic manager.

oceanic, intercontinental air service even more impressive than were its domestic operations before the war."

During 1943, 10,420,800 pounds of airmail and 6,030,749 pounds of air express—in more than ½ million shipments—were handled through the airport. Comparative figures announced by Railway Express Agency reflect an upward trend. The first six months of this year saw more than 1,700 shipments a day go through LaGuardia's air express office to reach a total for the half-year period of 320,479 shipments, a 23 percent gain over the 260,536 in the first half of 1943. Gross revenue was also higher, by 18.3 percent.

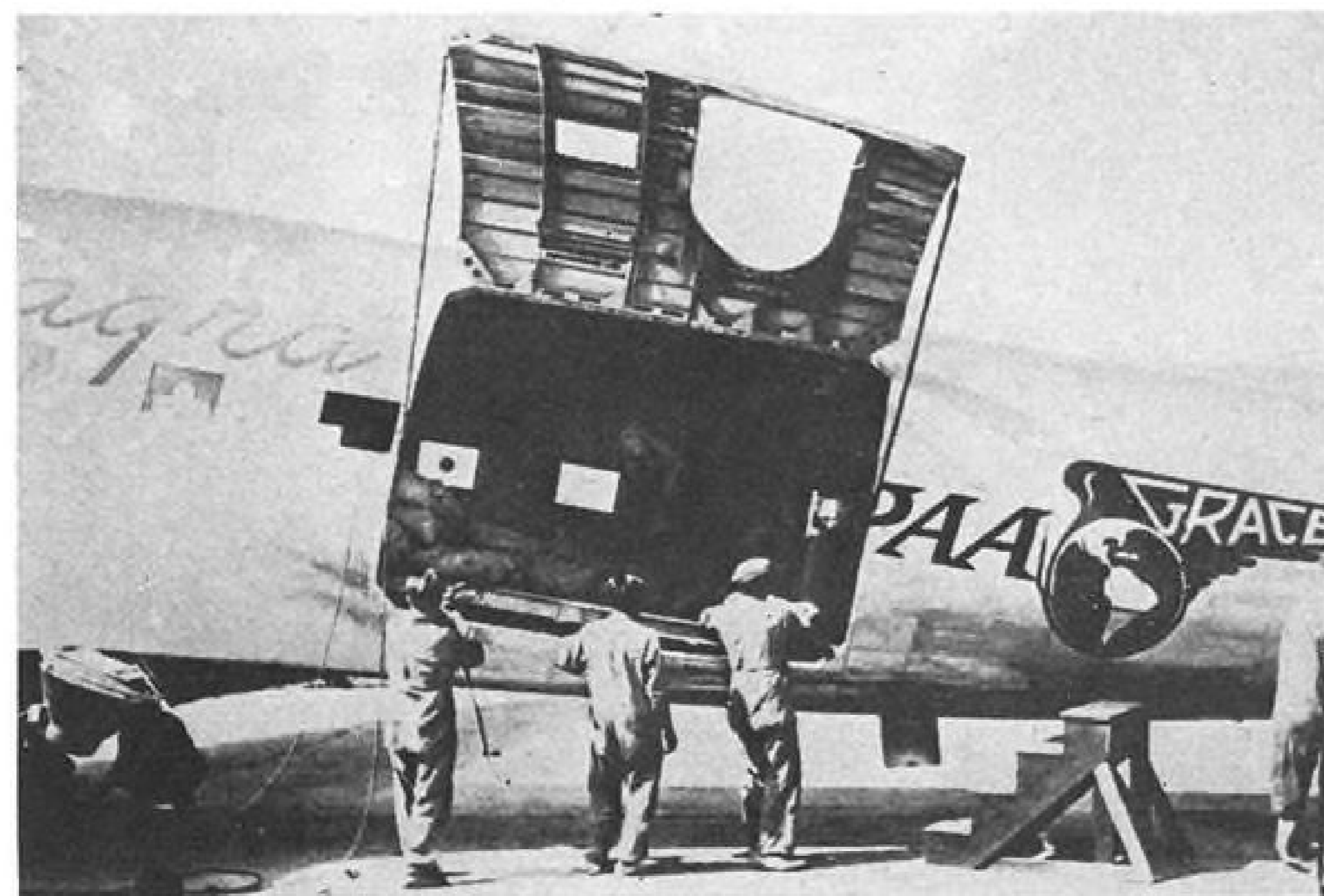
► **Air Express**—Air express handled at LaGuardia in June was 22.4 percent above June last year,

amounting to 51,650 compared with 42,184, while gross revenue exceeding \$260,000 was 25.7 higher than that for June, 1943.

The field experienced its peak year in 1941 when it handled 103,080 incoming and outgoing aircraft. On a few occasions, there were more than 400 planes a day, the busiest being April 22, when there were 454 arrivals and departures. The year saw 46,700 airline revenue flights with an average of 20 passengers each, or a total of 934,000 passengers carried.

► **400 Mark Passed**—Already in 1944 the 400-per-day mark has been exceeded numerous times—16 in the first four months. In January there were 7,700 arrivals and departures, in February 8,386, in March 9,144, and in April 8,973. Of the 34,203 arrivals and departures for those months, 14,996 were air carrier operations. Projected for the year, this would mean 102,609 arrivals and departures in 1944, or only 471 fewer than the 1941 peak, and an estimate of 44,988 air carrier operations in 1944, or 1,712 fewer than in 1941.

The field's lowest traffic day this year was March 20, when weather bureau records show intermittent snow and rain, a high wind, ceiling less than 1,000 feet almost all day, and visibility less than 3 miles all but a few of the 24 hours. Traffic for the day consisted of one lone United Airliner.



PANAGRA ENLARGES DC-3 HATCH:

Panagra has built an 80x90-inch hatch in one of its DC-3's to accommodate bulk shipments on South American routes. Picture shows how hatch is located to prevent interference with regular door and window when not in use. When closed it is bolted so fuselage is not weakened. Panagra says the new hatch, which it believes is the largest of its kind ever cut into a DC-3, has been approved by Civil Aeronautics Administration.

Fifteen days before, on a Sunday, was this year's busiest day, with 454 operations to tie the heaviest day in 1943.

Canada Warns Vets On Used Warplanes

Canada has advised its returning war veterans in the air force not to buy used military aircraft for use in starting commercial air routes.

In answer to a question during debate on the Aeronautics Act whether used aircraft would be made available to returning airmen on time basis after the war, C. D. Howe, Munitions and Supply Minister, said it would be "unwise" for them to buy such craft.

► **Commercial Planes Favored**—While Canada is selling used aircraft when they are no longer needed, Howe suggested that the veterans would be wiser to buy suitable commercial planes built for the purpose.

The new Air Transport Board could recommend to the government assistance to any airline with operating subsidies, a method under which the government could help finance returning airmen in the establishment of feeder line service. But, Howe warned, such capital assistance could not be expected by the veterans as a matter of right.

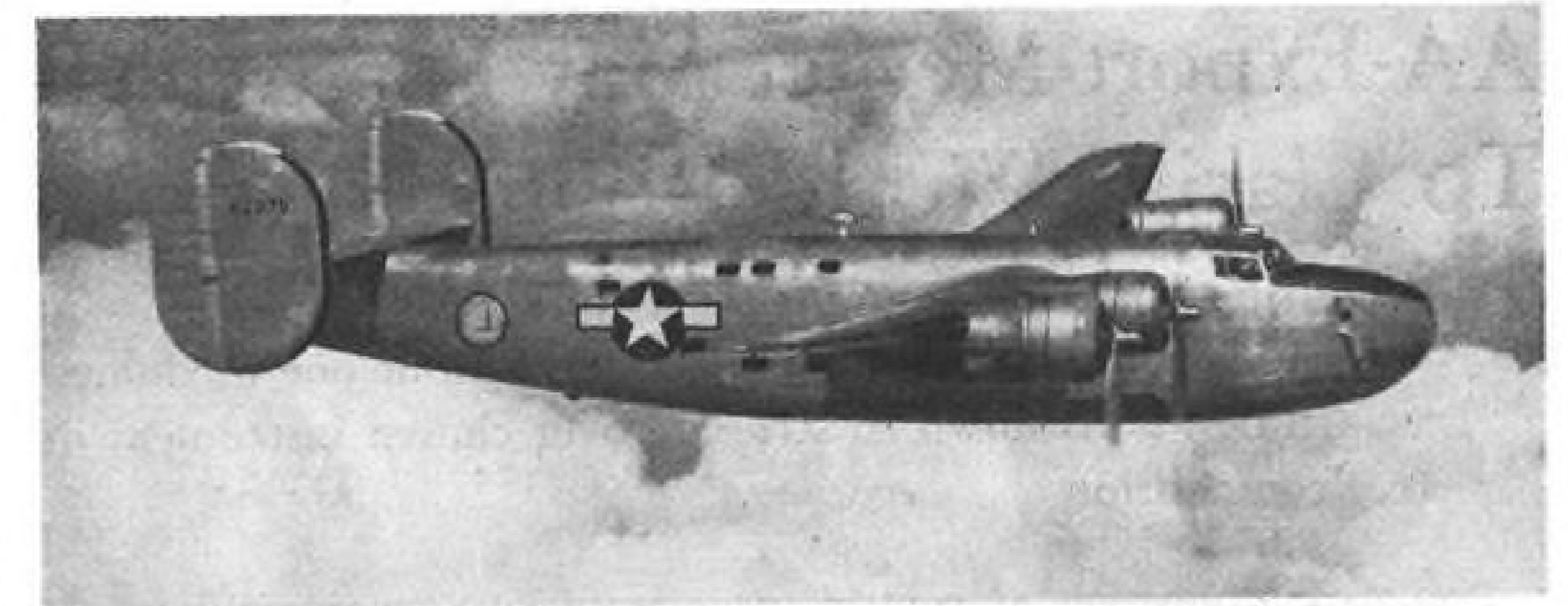
Canada Act Revised

The new Canadian Aeronautics Act setting up an Air Transport Board gives the Board the power to fix maximum hours of work for pilots and co-pilots. The authority was granted through amendment during the bill's third reading and discussion in the House of Commons this month.

The discussion dealt mainly with rights of appeal and extent of authority of the Minister of Transport. Right of appeal to the Supreme Court of Canada on questions of jurisdiction or law or both was finally included, but the government defeated attempts to limit the Minister's power, saying authority was necessary for full efficiency of operation.

Dallas Bond Sale

A second bond sale of \$1,000,000 is planned by Dallas, Texas, for expansion of aviation facilities. Nearly all the first million of a



CONSAIRWAY LIBERATOR SETS RECORD:

This specially revised Consolidated Vultee Liberator transport, differing from the usual Liberator and C-87 in its nose and ports, is reported by Conairway to have logged 6,552 hours, and flown an estimated 1,152,944 miles in passenger and cargo service. Conairway, which operates an Air Transport Command service between California and Australia, reports that seven other of its Liberators are million-milers, with logs showing more than 5,000 flying hours each.

\$5,000,000 bond issue approved by Dallas voters last year has been spent on improvements to Love Field. Of the initial authorization, \$140,000 was spent for land for a new field for private flyers.

Air Priorities Curbed in Mexico

Action limits plane travel to persons on official business.

Mexico's restriction of air travel priorities to persons on official business will mean suspension of those formerly given private businessmen for flights within the country, according to the office of Coordinator of Inter-American Affairs. The restriction was announced by the Mexican Communications Ministry.

CIAA reported that unduplicated route mileage of Mexico's 13 passenger-carrying lines was increased 2,558 miles during the year ended in March, 1944, an increase of more than 15 percent over the 16,664 in March, 1943.

► **Port Work**—Airport development also is being pushed, with the central airport at Mexico City being enlarged to almost twice that of LaGuardia Field, New York. A new port at Nuevo Laredo, just across the border from Laredo, Tex., also is being built.

Two U. S. flag carriers in Mexico are Pan American Airways, with 1,743 unduplicated route miles, and American Airlines, with 1,521. Braniff Airways has a permit from the Mexican Government for an international operation through Mexico.

Barnes Heads CAB's Economic Bureau

Irston Roberts Barnes, 40, an economist in the anti-trust division of the Department of Justice, where he has worked since 1940 will head the Civil Aeronautics Board's Economic Bureau assuming his new duties about Aug. 15. He will succeed Raymond W. Stough. A graduate of Yale, as



Irston R. Barnes

Ph.D. in economics, Barnes taught that subject there. He has written books and contributed to legal and professional journals on economics and utility problems.

The new director will be assisted, as was Stough, by Russell B. Adams, assistant director. Stough, now special assistant to the Board, and his staff are in Alaska, where they are opening CAB's new territory office.

AA-Export Merger May Force CAB To Clarify World Route Policy

Acquisition hearing, ranging UAL and PAA, interveners in case, against American and Export and all but one of domestic airlines, boils down to struggle over chosen instrument or free competition.

Proposed acquisition of control of American Export Airlines by American Airlines on which examiners of the Civil Aeronautics Board held hearings last week, became the foundation for a no-quarter struggle in which those two companies, representing the views of all but one of the domestic U. S. airlines, met squarely the attack of the proponents of the "chosen instrument" theory of international aviation.

Ranged against American and Export were Pan American Airways and United Air Lines, both interveners in the case.

The evidence may eventually require CAB to take a definite stand on the international aviation question. That body's recent announcement of a projected world route pattern, obviously with the approval of the administration, leaves little doubt as to what that decision will be.

Open Competition Policy—In the absence of further Congressional action, the open competition policy of the Civil Aeronautics Act as it now stands can be expected to continue.

Details of the acquisition seemed to diminish in interest as the case became a forum for the discussion of international air policy.

Briefly, American Airlines proposes to acquire a 51.4 percent controlling interest in American Export Airlines through purchase of 120,000 shares of the latter's treasury stock for \$25 per share or a total of \$3,000,000. The proposed purchase agreement between American and American Export grows out of a CAB order that Export divest itself of control by American Export Lines, Inc., parent steamship company. Should the purchase plan be consummated, the interest of the surface carrier will shrink to 25 percent, and the management of American Export will pass to American Airlines. There will be no transfer of the temporary certificates of convenience and necessity held by American Export, and CAB approval of the acquisition of control probably would mean that

the certificates eventually would be made permanent.

Effects of Stock Sale—Testimony by John E. Slater, executive vice-president and director of American Export Airlines, showed that the stock sale to American Airlines would accomplish a threefold purpose. It would eliminate control by the steamship company as required by CAB; it would provide Export with a vast network of domestic routes to feed its overseas operations; and it would accomplish additional financing for the trans-oceanic airline.

A. N. Kemp, president; Ralph S. Damon, vice-president and general manager, and Charles A. Rheinstrom, vice-president in charge of traffic, all of American Airlines, built up their company's case for entering the trans-Atlantic field through the instrumentality of American Export.

Coordinated Operations—Operations of the two carriers would be coordinated, with the eventual possibility of trans-oceanic flight originating at interior points of the United States such as Chicago or Detroit. They foresaw the use of DC-6 (the improved DC-4) equipment, capable of carrying a 10,000-pound payload eastbound to Europe and a 6,500-pound payload westbound. During the third year after the war three daily round trips for eight months and two daily for the other four months probably would be operated.

Similar equipment might be operated over both companies' routes, through some form of interchange agreement, giving single-company through-plane service to Europe. American's witnesses agreed that the North Atlantic route likely will become the most profitable trans-oceanic air route in the world.

Advantage for U. S. Carrier—Rheinstrom viewed the acquisition as opportunity for the United States to give a U. S. flag air carrier a definite advantage over foreign lines by creating a link with interior traffic generating points.

Pan American Airways, chief

advocate of a "chosen instrument," said that if any domestic airlines should acquire overseas extensions, either through an acquisition as proposed by American and American Export or through outright certification, Pan American would require entry to the traffic generating centers in the United States. Witnesses indicated that an internal operation roughly similar to American Airlines' present routes, touching the largest U. S. cities, would be a necessity if Pan American were to compete in over-ocean traffic. This domestic route system would need to be permitted to handle domestic traffic also.

Chosen Instrument—V. C. Chenea, vice-president of Pan American, propounded the theory of a chosen instrument airline as the only international operator under the U. S. flag. Only by this means, he said, could America hope to hold her own competitively among similar instruments of other countries.

United Air Lines, the only domestic carrier siding with Pan American on the "chosen instrument" question, supported Pan American's case with a comprehensive economic survey of trans-Atlantic travel, both in the past and, by projection of trends, in the future. This might dampen the enthusiasm of some who foresee extensive commercial trans-Atlantic air operations, but a weakness lay in the fact that it was based on past experience with surface transportation.

Favors Single Line—W. L. Patterson, president of United, stated that on the basis of this survey he does not believe trans-Atlantic

traffic will support more than one U. S. flag airline in competition with the foreign flag carriers. Rather than divide the efforts of the United States by wasteful duplications, he said, all our international air transport should be vested in a chosen instrument.

Transcontinental & Western Air had intervened in the case but was not represented at the hearing, and its withdrawal was announced during the proceedings.

Interveners—Other interveners were Air Line Pilots Association, concerned with its contract with American Export, and the United States Lines, a steamship operator. The attorney for the latter assisted Pan American's lawyer at several points, but A. J. McCarthy, witness for U. S. Lines, testified that his firm had not entered the case at Pan American's request. The United States Lines hold 27,050 shares of Pan American stock, and offices of the steamship company represent Pan American Airways in 46 cities of 20 foreign countries.

Civil Aeronautics Board examiners hearing the case are Thomas L. Wrenn and Ferdinand Moran. Department of Justice, which customarily intervenes in CAB proceedings which may involve restraint of trade, was absent from the case. Representatives of the State and Navy Departments were observers. Three days were required to hear the case.

PCA To Seek Routes To Nine Countries

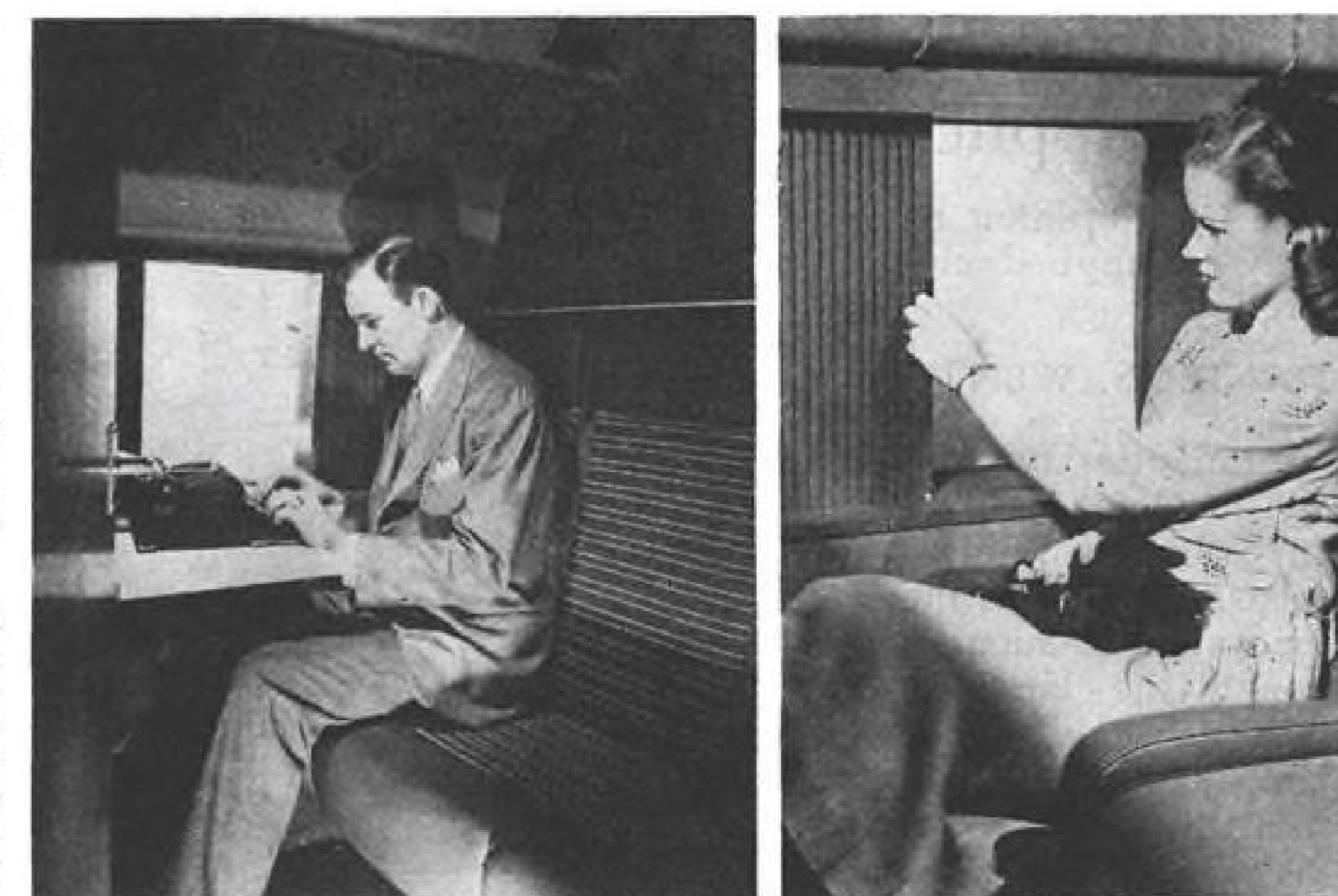
Pennsylvania-Central Airlines, in one of the big overseas air route applications since the Civil Aeronautics Board announced its tentative post-war international route pattern last month, is to ask the Board today for authority to fly to nine foreign countries from U. S. terminals.

PCA's plan consists of three proposals:

A New York-Moscow route from Eastern Seaboard points to Newfoundland or Labrador, Greenland and Iceland, and thence to Oslo, Stockholm, Helsinki, Leningrad and Moscow, Teheran and Basra.

A U. S.-Africa route from Washington and New York to San Juan, Trinidad, Paramaribo, Belem, Natal to Dakar, Trinidad, Casablanca, Angier, Madrid and Paris, with an alternate from Natal and Dakar to Monrovia, Lagos or Accra, Brazzaville, Johannesburg and Capetown.

A U. S.-Far East route, from



INSTALLATIONS IN CONSOLIDATED'S MODEL 39:

Interior of passenger mockup of Consolidated Vultee Aircraft Co. test Model 39 shows opaque plastic sliding window shade on large windows and club-car seating arrangement. Sliding bulkhead and port wall enclose the first three seats forward to form a private section

Chicago, St. Paul and Minneapolis, via Alaska and Siberia to Vladivostok, Mukden, Shanghai, Hong Kong, Panoi and Calcutta, with a leg from Mukden to Peiping and Chungking, and an alternate from Alaska to Unalaska, Kiska, Paramushiru, Tokyo, Shanghai and Hong Kong.

Nine Countries—Together these constitute a proposal to go from Washington, New York and Chicago to Russia, Finland, Sweden, Spain, France, Africa, China, India and Japan.

The applications were not expected to mention seadromes, the "floating islands of steel" on which PCA placed so much emphasis in last year's application for a route to Europe. Another 1943 PCA application, for an 8,000 mile network in Central and South America, was withdrawn last Spring.

PCA's request was not the first in the category of world route applications filed since CAB's announcement of a suggested pattern. The line's application for a South Atlantic route to points in Africa, incidentally, is predicated on this pattern.

Link to Orient—Hawaiian Airlines recently asked a link to the Orient. TWA, just before the Board's announcement, filed an amendment to previous applications that would give it a "round-the-world" route. Other international applications have come in lately from non-operators.

Another operating airline which filed application with the Board

last week is Eastern Air I which asks extension of its A from Chicago to Minneapolis-St. Paul. Routes sought to serve Rockford, Ill., Milwaukee, Wis., and Rochester, Minn., a intermediate points. In addition giving Eastern a Miami-Minneapolis route, the proposed one would parallel the operation Northwest Air Lines and suit the latter to point-to-point petition between Chicago and Twin Cities.

Delay NAA Meeting

Executive Committee of National Aeronautic Association decided tentatively to hold its annual business meeting at a later date in January. Originally scheduled for Aug. 2 and 3 meeting was postponed because of the request of the Office of Defense Transportation that transportation facilities be kept clear for traffic until the year end.

World Routes

The first two international route proceedings based on the Civil Aeronautics Board's pattern suggested world route pattern begin this week with a prehearing conference Tuesday for North Atlantic applicants, followed by a similar session Wednesday for the South Atlantic.

Solution Seen

Testimony in the American-American Export hearings hinted that opposing parties on the chosen instrument question are closer in their thinking than might be generally apparent. W. A. Patterson, president of United Air Lines, expressed the opinion that domestic lines might be assigned to conduct such an instrument's operations on various overseas routes. There is no basic divergence between this and the thought of exponents of regulated competition that not all the domestic carriers can possibly be certificated to operate on every international route.

Feeder Report Fails To Deter Applicants

Realistic CAB opinion regarded generally as applied chiefly to other fellow.

By DANIEL S. WENTZ II

Civil Aeronautics Board's opinion on the local-feeder-pickup air service investigation did not dampen enthusiasm of most of the prospective operators of such services, even though the language employed was cautious to the point of pessimism. Most of these would-be airlines view the Board's opinion as "sound," but a majority seem to feel it applies chiefly to the other fellow. Thus it would seem that the Board failed, in part, to accomplish its purpose. That purpose—and the language of the opinion makes it bluntly obvious—was to lay bare the hard foundations of economic fact upon which any successful airline operation must rest. The Board hoped by so doing, to make it clear to the hundreds of applicants for routes that a mere desire to do so was not enough to support an airline operation.

► **Retrenchment**—What the Board didn't point out was the fact that immediately after the war the Government probably will be required by public pressure to pare its expenditures to the bone. With this strict economy in prospect, the Board cannot be expected to certificate many new operations dependent upon mail pay from the public treasury for their sustenance.

The nurture of air carriers has occupied the Board increasingly in the past few years. A survey of its recent decisions shows conclusively that it is endeavoring to lift the smaller carriers out of the "need" class, thereby reducing the cost to the government. It does not seem at all likely that, having barely finished raising one crop of youngsters, it will take many more under its wing.

► **Safeguards**—For this reason it established the "safeguards" under which it proposes to allow feeder operations. These are temporary (3 year) certificates, and authorization only of those operations which show a reasonable expectation of success. By these means, the CAB will insure against "static or increasing dependence upon the government." This is fair warning that the Federal



SPEEDS TICKET SALES:

Tests of a pneumatic tube cashier system in United Air Lines' Los Angeles office proved its value as a time-saver, and United is making installations in other traffic offices. Counter agents send money and auditor's coupons by tube to a central cashier, who returns correct change in 30 seconds and assumes burden of record keeping formerly done by ticket sales persons.

Treasury cannot be expected to underwrite local airline operations in the founding of which enthusiasm has overwhelmed sound economics.

The Board said nothing at all on the question of route patterns, leaving this presumably to be decided in individual cases. This was a disappointment to many who looked to the Board for some pronouncement on this problem. The "clover leaf," "circle route," and many other types of layout were considered at the hearings, and Examiners William J. Madden and Albert F. Beitel discussed them in their report. It seems probable, however, that in view of the strict operating economies demanded by the Board, many feeder operations will be limited to point to point service rather than "clover leaf" or "circle" routes. Passengers certainly will not use a feeder airline whose roundabout routes consume more time than would their journey by surface means.

► **Surface Carriers**—The opinion was clear and to-the-point on surface operators in the airline field. The Board reaffirmed its established position that surface carriers shall be permitted under the Civil Aeronautics Act as it now stands to operate "only those limited air transport services which are aux-

iliary and supplementary to other transport operations.

The words of the CAB on competition to be expected by feeder lines from surface transportation require no commentary: "In going into the small-city, short-haul market, the airplane will be faced with the most intense kind of competition, with its principal selling point, speed, greatly diminished in value."

► **Caution**—By the terms of the Act, the Board is charged with fostering the development of air transportation in all its phases. For this reason, it is fully willing to authorize feeder line operations experimentally, to gather a body of fact and experience on which to base more lasting conclusions. It knows that every hastily undertaken airline operation which becomes bankrupt will affect the integrity of the industry as a whole, and it has no intention of permitting this.

The Board's opinion probably will be condemned as over-cautious and unnecessarily pessimistic. It indicates, rather, that the CAB

Dependability

An air passenger or cargo plane on the ground being serviced, isn't earning any money. Realizing this fact, airline engineering personnel are calling more persistently for trouble-free and easy-to-maintain equipment.

One hard-headed practical airline research director says he expects that in the not distant future an airliner should be able to run from one overhaul period to the next without service other than gas and oil and check over.

Engine reliability already is approaching this point, for seldom is it now necessary to "pull" a transport's engine between overhauls. Similar dependability will be required of instruments, heating systems, hydraulic systems, etc.

Importance of engine accessibility, and quick changeability grows with the size of the engine and the number of cylinders. It will be much simpler to change one of the big engines of the future, and let the maintenance crew shoot its trouble in a big overhaul depot, than it will to keep the plane grounded while the trouble-shooters try to find the cylinder that is misbehaving.

will not be high-pressured by excessive enthusiasm into accepting the responsibility for creating numerous small airlines of which a majority would wither and die.

Planes May Widen Publishing Markets

Speed expected to extend range of delivery and news coverage in post-war period.

One of the interesting results growing from the war-born development of air transport is the effect air shipment may have on newspapers, magazines and other publications: Both air cargo men and publishers have been devoting some time to exploring the aspects of this problem, and there seems to be definite interest among the publishers as to what air transport may do for their business.

The airlines' chief commodity is time, which is also the controlling factor for newspapers and news magazines, whose value declines rapidly if immediacy of delivery is lost.

► **High Rates Factor**—On the other side of the ledger is the high air express rate which will keep printed matter in bulk off the planes for some time to come, chiefly because the higher per pound value of other commodities recommends them for air shipment in far greater degree. The reconciliation of these two aspects has already been partly accomplished. Further improvements seem assured.

► **Early Experiments**—Newspapers in the United States, until the outbreak of war, experimented sporadically with planes. They were used to obtain photographs rapidly from locations where news suddenly developed as couriers and for advertising and promotion. Actual delivery of newspapers by air was extremely restricted, and was possible only where the cost could be absorbed as publicity expenditure. The *Chicago Daily News* used this method to deliver papers by air to Chicagoans vacationing in Wisconsin and nearby resorts.

The trans-Atlantic edition of the *London Daily Mail* is shipped on microfilm by air and printed in the U. S., but as yet is only a "goodwill gesture." Should the idea take root, the publishers say they may attempt a wider circulation.

► **"Time" and "Newsweek"**—In the magazine field, *Time* led the way,



AIRLINES USING ATC COMMANDOS:

Some airlines are using C-46 Curtiss Commandos in their Air Transport Command operations. Picture shows one, without camouflage paint, used by Eastern Air Lines, which also flies two others like it for the ATC. Northeast Airlines is operating C-46's. Until recently Northwest Airlines had some on its ATC runs, and up to two months ago Colonial Airlines and National Airlines likewise used them.

followed by *Newsweek*. The former is distributed widely in Latin America by air express in special thin paper editions. Pan American Airways carries these magazines at a special half-charge rate. In other instances, plates are sent by air and printing is done in foreign countries. Usually production costs outweigh profit in this type of operation. "Pony editions" of *Time* and *Newsweek* travel by air as first-class mail, but again, mailing charges are almost prohibitively high.

Publishers of newspapers in the East are hoping to extend their distribution west by air shipment. It is possible that if some cut-rate air express charges were worked out by the domestic carriers, a sizable volume of business might result. Papers shipped in this way would, of course, have a limited audience, willing to pay the extra cost.

► **Wider Markets**—Feeder line operations probably will expand the spheres of influence of many smaller papers, expediting delivery over a wide area.

While numerous similar possibilities exist, it seems likely that the publishing industry, for some

Chinese Edition

China's largest daily newspaper, the *Ta Kung Pao* (literally, "Big Public Paper") has an airmail edition which is printed in Chungking and carried to India and other foreign countries over the "Hump." The air edition is a two-page sheet containing editorials, news reports and special articles from the Chungking edition.

time to come, will confine its use of air shipment to transportation of plates or mats to be used in decentralized printing of the publication in several widely scattered distribution points.

Name Royce Counsel For Policy Group

Airlines Committee announces acquisition of New York attorney and aviation enthusiast for special assignment.

Special counsel selected by the Airlines Committee for U. S. Air Policy to help spread the doctrine of regulated competition in post-war international aviation is Alexander B. Royce, New York attorney and aviation devotee.

The committee took considerable pride in announcing acquisition of his services, since he is a member of the legal firm of Chadbourne, Wallace, Parke and Whiteside, and recently has done considerable work of an international character.

► **North African Job**—In 1943 he was director of wartime economic operations in North Africa, a job that took him to Algiers as representative of the State Department. For three or four months before that assignment he was in London on a tour of duty for an RFC subsidiary. In 1941 and 1942, Royce visited South America on three trips of two months each for Defense Supplies Corp., working with William A. M. Burden, now Assistant Secretary of Commerce, in elimination of Axis interests from South American airlines.

Nothing in these government assignments, which entailed leave of absence from his law practice, was connected with aviation. In pursuance of the work, however,

Royce made many trips by air and witnessed first hand the job being done by the airlines in their capacity as contract carriers for the ATC. His closest connection with airlines was some years ago as legal representative.

► **New International Assignment**—Royce sees his new job, which he expects to take about half his time, as another assignment with international implications.

Despite the new organizational setup under which an executive committee is at the committee's helm, in lieu of former chairman Sam Solomon, there are signs that new special counsel will be active in directing the work. The five-man executive group is without a permanent chairman, although plans are for the chairmanship to revolve among its members.

Heads Tax Study

The duty of directing Civil Aeronautics Board's study of multiple taxation of persons in air commerce has been assigned to Member Oswald Ryan, who also had an important part in the Board's insurance study.

After preliminary plans are made, the Board probably will call on state tax officials for information.

ATA Bid to Sorrell

Dr. Lewis C. Sorrell has been asked to remain as research and planning expert for the Air Transport Association, but has the matter still under consideration.

Dr. Sorrell went with ATA in January, 1943, on a year's leave from his work as Professor of Transportation at the University of Chicago, with which he has been associated 25 years. Extension of the leave expires Oct. 1.

Report ATC Charges For Some Passengers

Certain commercial travelers said to pay 12 cents a mile rate.

It was learned from authoritative sources in Washington last week that the Air Transport Command is charging fares for certain commercial passengers.

The War Department withheld comment on the move except to say that "charges are not made for travel except in a few cases when directed by the War Dept." It is known, however, that the Adjutant General's office decides who shall pay fares.

► **Rates**—These fares have been established at 12 cents per passenger mile, computed on the basis of the mileage between the airport of departure and the airport of destination via the shortest regularly flown route. Payment is made in advance.

Commercial firms whose employees travel via ATC pay these charges unless they have contracts with the government specifically providing for travel expenses. Charges for representatives of foreign governments are allocated to lend-lease. Personnel of government agencies do not pay. Baggage is carried at \$1.00 per ton mile.

ATA Group Calls Engineering Meeting

First engineering and maintenance conference since November, 1941, will be held under Air Transport Association auspices in Chicago Aug. 8 and 9.

The program, arranged by ATA's Engineering and Maintenance Committee, calls for separate group meetings on the first

day, one of which will consider aircraft and line maintenance and the other engines, propellers and accessories. The second day will be devoted to a general meeting for discussion of general problems. Chairman of the committee is R. L. Anderson, superintendent of engineering at Chicago & Southern.

CAB SCHEDULE

- July 31. Date for exchange of exhibits in the Rocky Mountain case.
- July 31. Exhibits due in the Hawaiian case.
- Aug. 1. Deadline for exhibits in proposed acquisition of control of Aerovias Braniff by Braniff Airways.
- Aug. 1. Prehearing conference, international route applications via North Atlantic.
- Aug. 2. Prehearing conference, international route applications via the South Atlantic.
- Aug. 7. Briefs due in the Hughes Tool-TWA control proceeding. (Docket 1182.)
- Aug. 8. Briefs due in the Chicago-New York route case. (Dockets 629 et al.)
- Aug. 9. Oral argument in combined Joplin-Tulsa-Oklahoma City (Dockets 413 and 1300) and Memphis-Oklahoma City-El Paso cases. (Docket 503 et al.)
- Aug. 10. Deadline for amendments to applications in Florida Cases (Docket 489 et al.).
- Aug. 14. Prehearing conference on Panagra's application for local routes in Peru (Docket 1496).
- Aug. 14. Briefs due in the Great Lakes-Florida case. (Docket 570 et al.)
- Aug. 15. Hearing in the Fairbanks-Anchorage-Kodiak mail case (Docket 864 et al.) in the CAB's Alaska office.
- Aug. 15. Tentative hearing date for the Fairbanks-Anchorage-Kodiak mail case. Postponed from July 17. Hearing will probably be held in Alaska.
- Aug. 18. Briefs in the New York-Chicago case due (Docket 629 et al.).
- Aug. 20. Rebuttal exhibits due in the Rocky Mountain case.
- Aug. 21. Exchange of rebuttal exhibits in the Latin-American proceeding. (Docket 525 et al.)
- Aug. 25. Deadline for exhibits in the Cincinnati-New York proceeding.
- Aug. 26. Rebuttal exhibits due in the Hawaiian case.
- Aug. 28. Oral argument in the New York-Chicago proceeding (Docket 629 et al.)
- Sept. 1. Prehearing conference, international route applications via the North Pacific.
- Sept. 5. Hearing on West Coast to Hawaii applications (Docket 851 et al.)
- Sept. 5. Hearing date for Rocky Mountain feeder case.
- Sept. 5. Tentative hearing date for Braniff Airways proposed acquisition of control of Aerovias Braniff.
- Sept. 12. Cincinnati-New York hearings before Examiner Frank A. Law, Jr., and Barron Fredericks.
- Sept. 15. Prehearing conference, international route applications via the Central Pacific.
- Sept. 18. Latin-American route hearing before Assistant Chief Examiner Francis W. Brown. (Docket 525 et al.)
- Oct. 1. Tentative date for briefs in the Oklahoma-Texas cases.
- Oct. 1. Deadline for exhibits in the Oklahoma-Texas feeder case.
- Oct. 2. Exchange of exhibits in the Florida Cases (Docket 489 et al.).
- Oct. 2. Prehearing conference, international route applications, Australia.
- Oct. 16. Tentative hearing date for West Coast case before Assistant Chief Examiner Francis W. Brown and F. Merritt Ruhlen. (Docket 250 et al.). Postponed from Aug. 1.
- Oct. 16. Tentative hearing date, North Atlantic routes.
- Oct. 20. Date for exchange of rebuttal exhibits in the Oklahoma-Texas case.
- Nov. 1. Rebuttal exhibits in the Florida Cases due. (Docket 489 et al.).
- Nov. 1. Tentative hearing date, South Atlantic routes.
- Nov. 27. Hearing date for the Florida Cases before Examiner William F. Cusick (Docket 489 et al.).
- Dec. 13. Tentative hearing date, North Pacific routes.
- Jan. 10, 1945. Tentative hearing date, Central Pacific routes.
- Feb. 1, 1945. Tentative hearing date, Australian routes.

SHORTLINES

► Trans-Canada Air Lines has installed what it claims is the first ultra-high frequency modulated radio system in Canada or the U. S. on its Vancouver-Victoria route.

► From Havana comes word that La Compania Cubana de Aviacion has doubled its schedule between Havana and Cienfuegos and opened daily passenger service to Varadero Beach on the same route.

► The first landing of a TACA plane at La Guardia Field was made early this month as one of the Central American line's Lockheed's arrived in New York on a charter flight from Tegucigalpa, Honduras.

► An air taxi service between Rio de Janeiro and interior Brazil, known as Aerea Transcontinental Brasileira, has been authorized by the Brazilian Minister of Aeronautics.

► Braniff Airways' maintenance department is conducting advanced courses in Aircraft Electrical Systems at Chicago, Dallas, and San Antonio, as a part of the War Training Program in cooperation with the Illinois Institute of Technology and Southern Methodist University.

► Pan American Airways claims a world record for commercial air transportation on a scheduled clipper flight from Africa to Natal, Brazil, on which 51 passengers and 500 pounds of cargo were carried on the 1870-mile trip.

► Transcontinental & Western Air recently turned in for overhaul a propeller that had a total flying time of 13,881 hours and 44 minutes, or more than 2,750,000 miles of flying since Feb. 22, 1939. The propeller, a Hydromatic, was turned over for its 24th overhaul to the Hamilton Standard Propeller division of United Aircraft Corp.

► Northwest Airlines is equipping in Chicago what it predicts will be one of the largest and most modern airline city ticket offices in the nation. Located a block east of Northwest's present downtown Chicago office, the new quarters will give about five times as much work space, in line with Northwest's hope and anticipation of an extension to New York City.

► Ogden, Utah, plans to continue operation of the control tower at Hinckley field despite its inclusion among those Civil Aeronautics Administration relinquished June 30 at Army instigation. City commissioners have acted to lease equipment and borrow a CAA control operator to assist in certification of local personnel to continue day time tower operation at least.

► The United States will relinquish

control of six airports in the Mackenzie River region of Northwest Canada to the Canadian Government Oct. 1, according to James A. MacKinnon, Minister of Trade and Commerce. The airports are at McMurray, Embarrass, Fort Smith, Port Resolution, Hay River and Providence, along the Northwest Staging Route to Alaska and at the Canol oil field.

CAB ACTION

● CAB has consolidated applications of Western Air Lines and Inland Air Lines with those of 15 non-operating applicants in the Rocky Mountain proceeding, but no date for hearing has been set. Included in the proceeding is an application of Braniff Airways or approval of its relationship with Frontier Airways, Inc., one of the "trade area feeder airlines" it has sponsored. Petitions of American Airlines, Continental Air Lines, Transcontinental & Western Air, United Air Lines and the Department of Justice to intervene were granted. The Board refused similar petitions of Mid-Continent Airlines and Northwest Airlines.

● Southair, Inc., was refused CAB permission to intervene in the Memphis-Oklahoma City-El Paso case, scheduled for oral argument Aug. 9.

● Pan American Airways received CAB permission to substitute Santiago de Cuba as an intermediate point on its Miami-Buenos Aires route in place of Antilla, Cuba. The substitution will give PAA access to the greater traffic potential of Santiago, Cuba's fourth largest city, on its north-south operation, and will eliminate the expense of maintaining stations at both places. Santiago is now an intermediate point on a PAA Caribbean east-west route.

● National Air Lines filed notice of non-stop service on AM 31 between West Palm Beach and Tampa, Fla., to begin Aug. 1.

● Royal Dutch Airlines (KLM) has applied to CAB for a three-month extension of the temporary permit under which it operates into Miami, Fla. The permit expires July 31. The new permit, if granted, also will be for three months, to expire Oct. 31. It has been the practice of the Board to grant extensions of this permit as requested.

● South Carolina Aeronautics Commission has asked permission to intervene in the Latin American Case (Docket 525 et al.).

● Applications of Landon Lawson Clevinger, consolidated with the West Coast case, have been dismissed at his request. Clevinger sought dismissal because of illness.

● Pan American Airways petition to have the Hawaiian Cases postponed and consolidated with the Central Pacific route proceeding failed to meet with the Board's approval. The Hawaiian case is now under way with hearing scheduled for Sept. 4.

● Northeast Air Lines has asked the Board to defer the opening of service authorized by its decision in the New York-Boston case until Northeast can obtain the planes required to operate the extension it was authorized from Boston to New York.

● At the request of Greyhound Skyways, Inc., those portions of its application consolidated in the West Coast case (Docket 250 et al.) have been removed and returned to the original docket (917). Greyhound feels that its case can be more forcibly presented as a whole, rather than having certain severed portions heard in the regional air service proceedings now in progress.

● CAB determination of a mail rate was asked by Pan American Airways to cover its Alaskan operations from Aug. 1, 1944. Since Sept. 1, 1942, these routes have been operated under a contract expiring July 31. A recent CAB decision provided mail compensation for a period prior to the contract operations. Terms of the contract covered compensation for carrying mail over certificated routes. The application for determination states that PAA does not anticipate that revenues from the Alaskan operation will cover expenses.

● Hearings in Rocky Mountain Case (Docket 152 et al.) will be held in the Brown Palace Hotel, Denver, beginning Sept. 5. Examiner William J. Madden will conduct the proceedings in which 17 applicants seek routes in the Rocky Mountain area.

● CAB issued a special civil air regulation permitting any pilot of Chicago & Southern Air Lines competent to fly certain of that carrier's routes on Jan. 1 to operate into and out of Peoria, Ill., and Greenwood, Miss., under contact weather conditions. Similar special regulations are issued from time to time to permit pilots to resume operations at fields formerly served by an airline without normal familiarization procedure.

WANTED AERONAUTICAL ENGINEER

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More Air Attaches

WASHINGTON'S MOUNTING CONVICTION that commercial aviation will be one of the most potent instrumentalities of foreign policy is at the bottom of the State Department's decision to appoint civil air attaches in strategically located embassies throughout the world.

Some officials in the Department advocated this action as long ago as two years when it appeared that aviation was on the road to accomplishing in wartime what might otherwise have required a decade.

The point now has been reached where it is urgent from the standpoint of a heavy load of aviation work for the embassies and desirable from the standpoint of national prestige to designate high-ranking air experts to represent the nation abroad.

Present plans call for civil air offices in the London, Rio de Janeiro, Ottawa, Mexico City, Cairo, and Lisbon-Madrid embassies. The latter two are included as one for purposes of aviation, the tentative plan being to appoint one official for both.

Livingston Satterthwaite, a career diplomat, already has been appointed civil air attache in London. Satterthwaite, a licensed private pilot, has specialized in aviation matters for the State Department for five years in both Washington and London. His new title merely formalizes his functions in London.

Indications are that the civil air attaches will be given high rank in the embassies. Under direction of Ambassadors, they will handle all aviation matters affecting the United States in the country of their appointment.

They will do the spadework in negotiations for landing rights and in working out various agreements and conventions that will be reached with increasing frequency. They will aid aircraft manufacturers and producers of related equipment in locating markets for their products.

The attaches will keep Washington abreast of developments in the principal world aviation centers. There has been criticism lately that the embassies are deficient in understanding of the enormous importance of aviation to post-war America.

This is attributed partly to overwork in other fields and partly to Washington's failure to dispatch adequate information. Now, with specialists in the field, the State Department hopes to be kept current on traffic and market potentialities, domestic air service, foreign competition and such matters in all important areas. Likewise the embassies will be informed of up-to-the-minute developments elsewhere.

There already is informed speculation that attaches may eventually be appointed in France, Russia, the Far East, Australia and perhaps one or two more Latin-American countries.

Finally, U. S. aviation is to be represented officially in the world's main capitals and the nation is to have a tightly-knit information system by which it will keep track of significant developments affecting its international commercial operations.

Surplus and The Public

NOW THAT A VIRTUAL UNANIMITY of opinion has been translated into a policy for disposal of surplus aircraft, another major task lies ahead—to make certain that the nation understands the wisdom of the policies formulated after serious and intensive consideration by the Surplus Aircraft Advisory Subcommittee. Without a painstaking, lucid explanation of the general plan, and why it attained its present form, much of the earnest study and constructive thought that has gone into it will be wasted.

Industry has too often seen that policies carefully and conscientiously conceived and put into execution become worthless because of the failure to translate the policy into terms that the American people both understand and accept. Thus, heedless and unthinking criticism can divert a project initiated by wise policy into unsound channels, resulting in the very evils which were to be avoided.

The task of education falls largely to the aircraft industry, but it is as important that the airlines join in. It is vital to the progress of both groups, and the nation, that the surplus problem be settled as quickly as possible with as little loss to the government, the taxpayers, industry and to technological progress that is the key to America's future security.

Americans are essentially thrifty. They are wasteful only in that the huge surpluses of nature make it possible for them to be wasteful in small things, when it appears more economic to waste than to save.

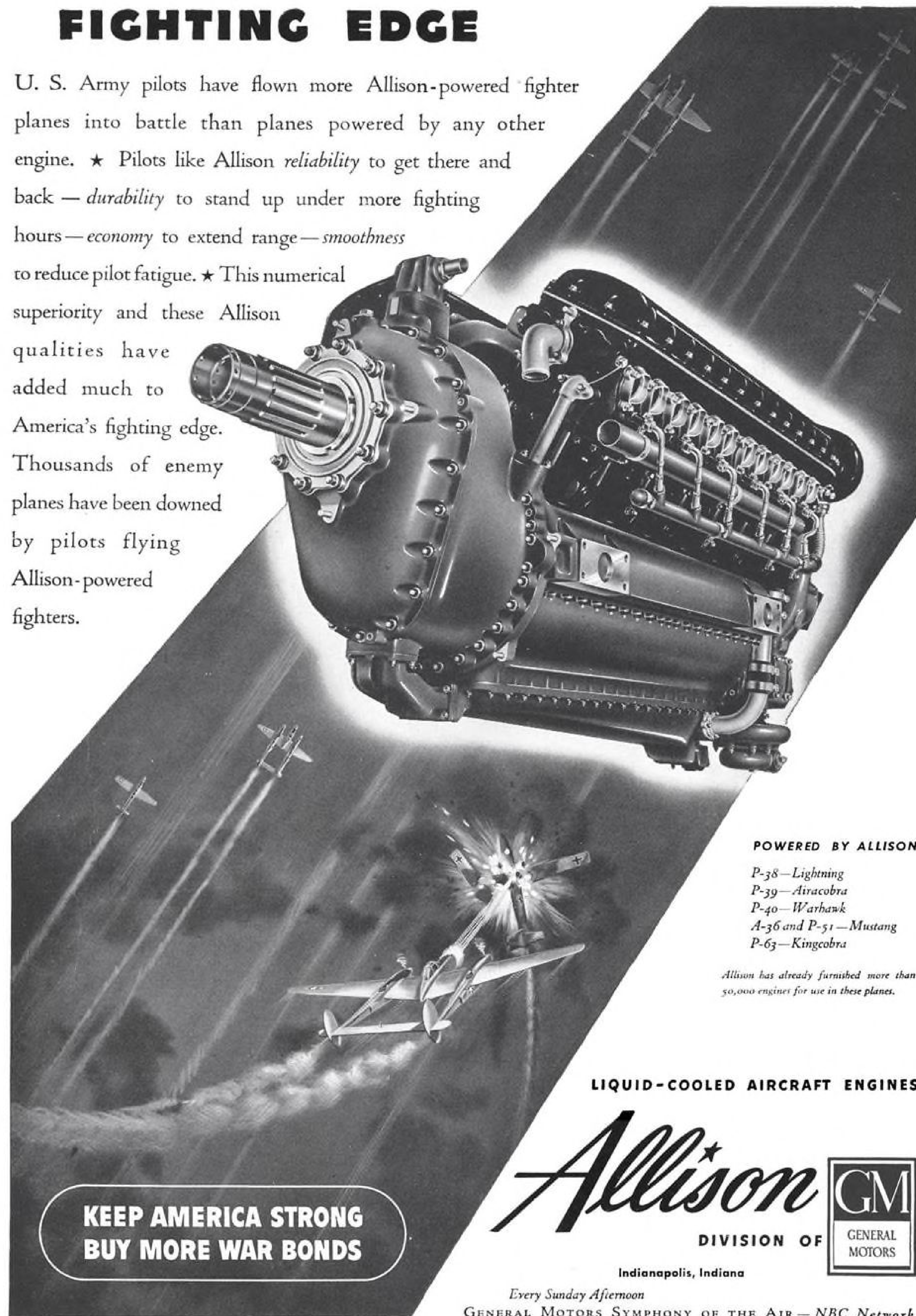
But the lesson of the last war taught that there will be a natural revulsion toward what may seem prodigal waste and destruction of uneconomic units of war. A catchphrase that has gained great circulation is that, inherently, war is wasteful. But tangible surplus disposal will come after the war, at a time when it will be more difficult for the public to face the fact that their wealth represented in the aircraft surplus is not being wasted, but disposed of in the manner thought out in advance by the best authorities as most desirable from the long-range view.

To convince the American people of the soundness of the aircraft surplus disposal policies will be a major public relations task. It should start at once.

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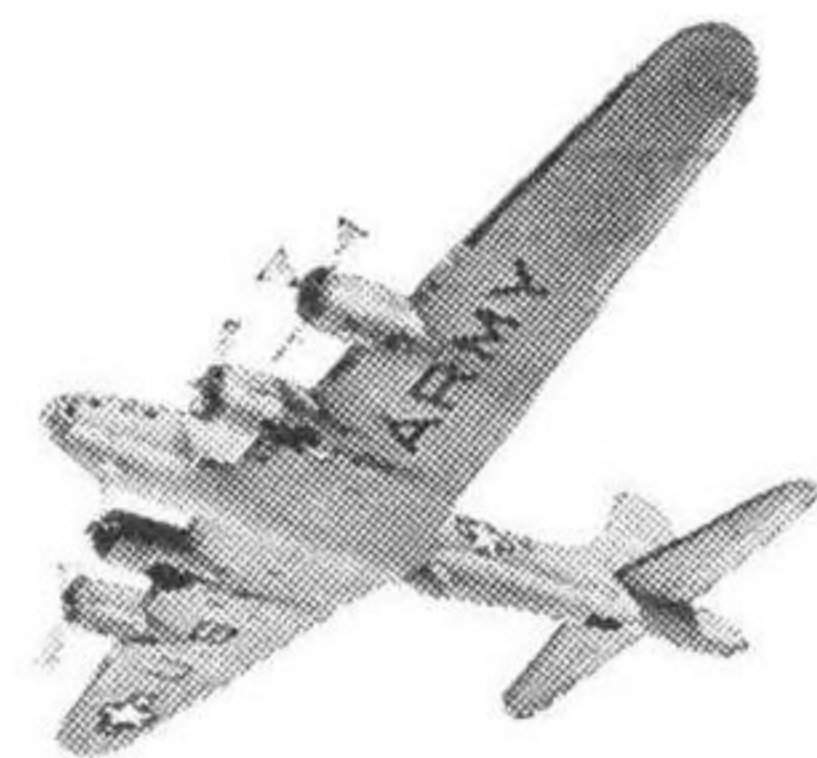
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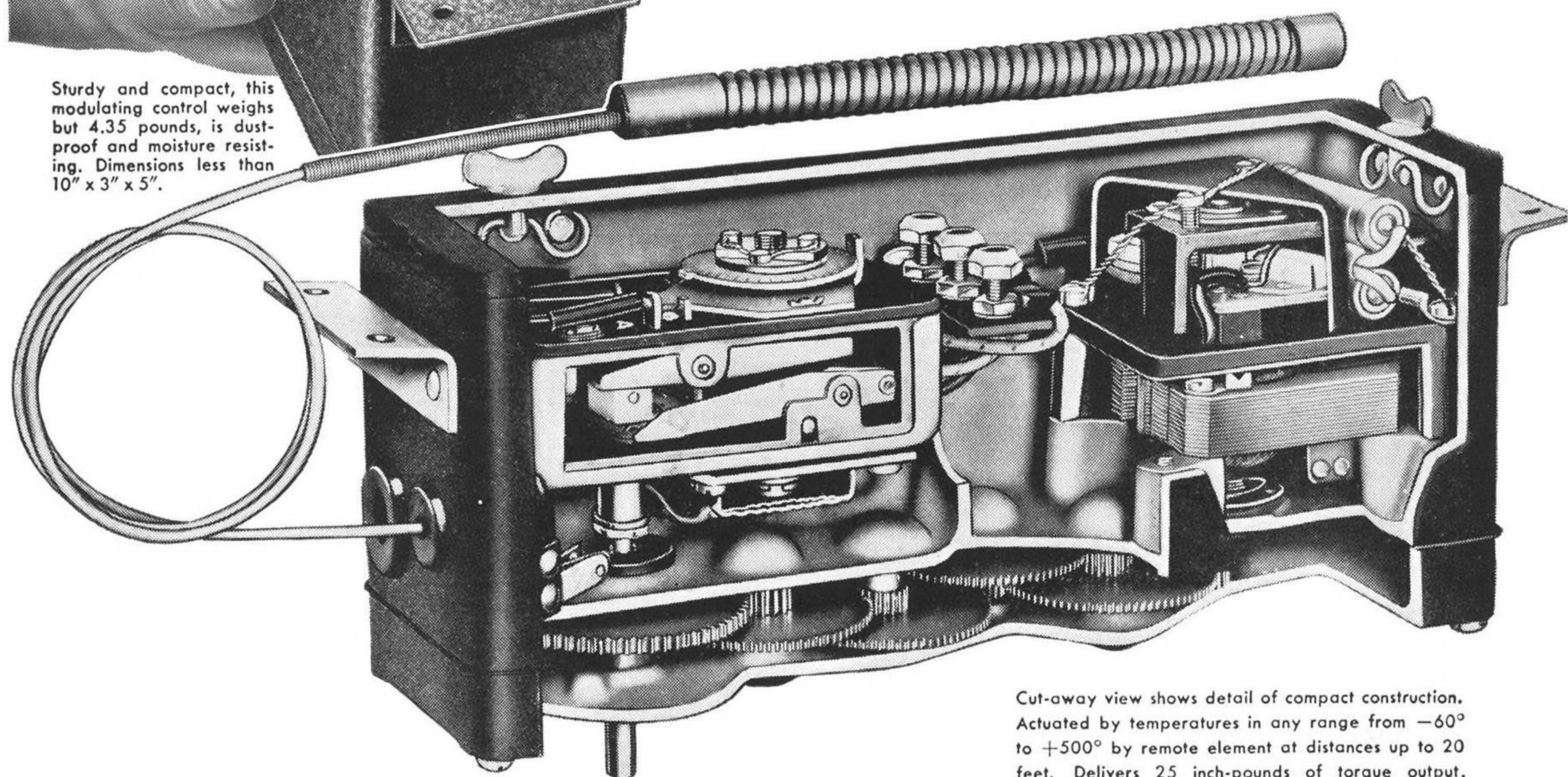
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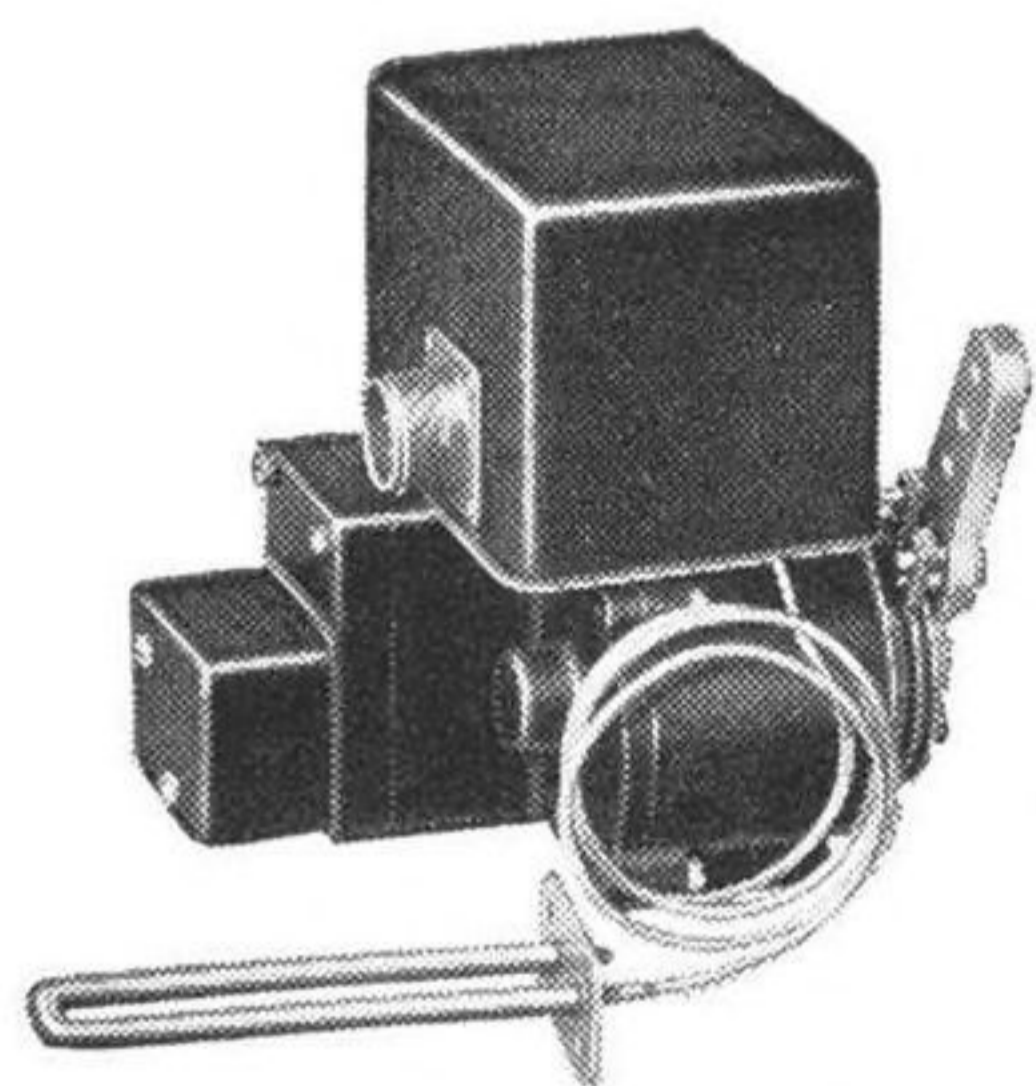
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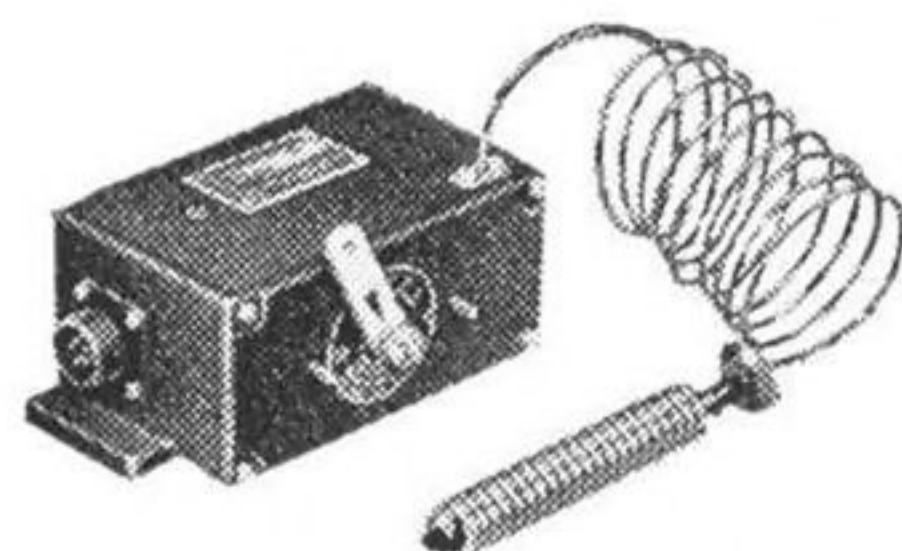
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