

Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

SEPT. 24, 1945

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Adds to Honors: T. P. Wright, Civil Aeronautics Administrator, just announced as winner of the 1945 Daniel Guggenheim Medal "for outstanding contributions to the development of civil and military aviation, and for notable achievement in assuring the success of our wartime aircraft production program."



THE AVIATION NEWS

Washington Observer



WHO WAS AHEAD?—Wright Field and Washington, which have been a little apart on previous occasions, almost collided head-on the other day with this one: Wright Field said in part, in a release, "... we surpassed the Germans in the design and performance of our aircraft." From the War Department in Washington came a release which said in part "German jet planes and rocket weapons appeared in the skies more than a year before the Allies began using them . . . technically they were far ahead of any aircraft the Allies had in action for short range interception, and they are unquestionably the fighter planes of the future."

AIRCRAFT OUTLOOK—Latest unofficial, but authoritative estimates on military aircraft production put the total for the rest of this year between 650 and 700 units and for 1946 a total of around 1,200. The 1947 unit estimate was about 1,500 airplanes. These are considerably under previous estimates and indicate a dollar volume of between \$500,000 and \$600,000. The totals do not include commercial production.

HUGHES FLYING BOAT—The question has arisen in government financial circles whether additional funds will have to be spent after the \$18,000,000 advanced to Howard Hughes for construction of his giant flying boat. Additional money may be needed to move the craft from Culver City to the harbor and also to finance the flight testing. Officials say that no specific application has been made thus far, but that they want to see the project completed.

COMPROMISE—Overlooked in general comment on the switch in aircraft disposal methods by the Reconstruction Finance Corp., is the fact that the new policy is not a complete acceptance of aircraft dealers' original proposal. When the storm first broke last Spring, NATA and others wanted RFC to make dealers the exclusive agents. Even the new policy does not do this. Individuals may still buy direct from RFC sales centers.

SPB ADVISERS—Surplus Property Board is at last moving to follow off-repeated suggestions that it establish industry advisory committees. Membership of committees for consumers' goods is now being selected. Nothing has yet been done in the industrial field, including aircraft, but this phase of the program shortly will get underway. Committees will work with both

SPB and the disposal agencies concerned. SPB Administrator Symington delayed in giving the go-ahead for the appointments until the Attorney General gave his approval.

SURFACE CONTROL—Congressional advocates of surface carriers' entry into air transport may seek to tie their pet project to pending legislation to institute a Federal airport construction program. At the



Close-up of rocket clusters carried by Lockheed P-38, latest and most efficient underwing projectile carriers developed during the war.

House Rules Committee hearing that took up the Lea airport bill, Rep. Carroll Reece (R-Tenn.) argued that the bill is an amendment to the Civil Aeronautics Act of 1938 and that, therefore, in the floor debate general amendments to that act should be permitted. If this viewpoint were to be sustained, Reece could introduce an amendment to permit surface carriers to operate airlines—a proposal that was narrowly defeated when Reece brought it up at the time of Interstate Commerce Committee hearings on the Lea omnibus bill last year.

STERLING AREA—American manufacturers of aircraft equipment are concerned about the operation of British policy in the sterling area which can block the sale of American manufactured aviation goods. Many American manufactured exports which are competitive with products manufactured in the sterling area already have been blocked out. It is understood the State Department has taken the matter up with Lords Keynes and Halifax in the current discussions for a long-term loan. It is reported that we have informed the British that definite commitments to end their currency restrictions must be made if any loan is granted.

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News at Deadline

Arnold—Industry Meet

Problems facing the industry in the production and development of new types of aircraft, readjustment and disposal of surplus aircraft and components, delineation of post-war procurement procedures and present organization of the Air Technical Service Command were discussed at a meeting of aircraft industry leaders last week with Gen. H. H. Arnold and other high ranking AAF officers. General Arnold outlined the aims of the AAF of the future and its part in national and international life and economy.

Loening on Survey

Grover Loening, aeronautical consultant to the National Advisory Committee for Aeronautics, has been directed to survey civil aviation to determine additional future trends of research for NACA in the private plane and air transport fields as well as military aircraft, the previous main research field of NACA. Loening has begun a visit to all major new airline aircraft developments, for a comprehensive report on future development requirements.

Small City Air Service

A measure that would express the sentiment of Congress for expansion of the air transportation system to take in more small cities and towns has been reported out by the Senate Interstate Commerce Committee. A companion resolution is pending in the House.

Boeing Canada Plant Surplus

The factory of Boeing Aircraft of Canada Ltd. at Sea Island, Vancouver, has been turned over to War Assets Corp. as surplus. Employment, once 10,200, is less than 1,000.

CCF Closes Helldiver Line

Canadian Car & Foundry is closing down its *Helldiver* line. It has been producing about 30 SBW's (Canadian Car designation) a month.

Navy Stops SNJ

Navy procurement of North American's advanced trainer, SNJ, ceased with the August delivery of 50 planes.



▶ North American's unconventional twin-fuselage XP-82, resembling a double *Mustang*, has been flying in the West. A pilot can be carried in each fuselage. Controls are dual. It was designed for long-range bombing and escort missions.

▶ As another move toward industry representation in NACA activities, the Aircraft Industries Association and Air Transport Association have been invited to nominate a member from each group for each of four important NACA committees: aircraft power plants, aircraft construction, operating problems, and aerodynamics.

▶ The domestic airlines are considering a central purchasing agency which would buy certain equipment used by all companies direct from manufacturers.

▶ New low express rates for newspapers are likely to be announced in the next few months by several airlines. Delta's recent rate reduction will be met by Continental, Braniff, Eastern, Trans-Canada, Western, TWA and United.

▶ Industry-wide bargaining in negotiating future labor agreements has been proposed to Air Transport Association by some member airlines, whereby basic matters such as wages would be handled collectively with a union and other subjects would be left to individual company negotiations.

▶ Both the C-99, which is the 200-passenger transport, and B-36 bomber version of the same Consolidated-Vultee design should be flying by early next year. The B-36 will fly first. Convair also has a jet bomber project and a jet fighter.

▶ Ryan Aeronautical is making every effort to retain Navy sponsorship for future experimental orders, which explains its lack of commercial designs at this time.

▶ The initial Douglas experimental dive bombers (XBT2D) are expected to be ready soon for flight and operational tests before being accepted by the Navy. One plane is ready for catapult and carrier landings, and a dozen others are in various stages of production. Static tests are being completed.

▶ USSR for several months has been an eager lend-lease purchaser of *Catalinas*, which it used for Red Army and Navy occupation of the Kuriles and other Japanese island outposts fringing Soviet Siberian maritime areas.

▶ Despite the company's recent modification of five B-25's into luxurious personal transports for high Army officers, North American executives say they do not expect to enter the executive plane field.

▶ The Army Air Forces' experimental six-engined bomber recently referred to on this page has been designated the XB-48, with original plans calling for two aircraft from the Glenn L. Martin Co.

▶ Cancellation of all military orders for Beech Aircraft Corp. is understood to include the XA-38, a special light twin-engined bomber which had been ordered by the AAF. Beech has retained about 4,500 of its 11,000 wartime employees and is converting to its popular twin-engine biplane, Model 18, for commercial use. Tooling for production of the Dymaxion house is also underway.

▶ Feeling is growing, despite reports of a Pan American Airways order for more than 20 DC-7's, that the commercial version of Army's Douglas C-74 will never be built. It's likely that any commercial descendant will be radically different.

▶ China's evident ambition to develop an aircraft manufacturing industry has West Coast manufacturers competing for licensing contracts with the Chinese government. Oriental interest appears to center on twin-engine, medium transport designs.

▶ Military aircraft deliveries in August totaled 2,878, contrasted with 4,784 in July. Totals for the other six months this year are: January 6,535; February 6,296; March 7,053; April 6,412; May 6,354; June 5,794.

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Aviation News

McGraw-Hill Publishing Co., Inc.

Sept. 24, 1945

AIRLINE TEMPO QUICKENS

Seven Lines Ask Constellations; AA To Absorb Mid-Continent Line

Survey flights begun for three N. Atlantic routes; National, United, American plan early usage of DC-6 fleets; fast non-stop transcontinental services shaped by two carriers.

By MERLIN MICKEL

Proposal for an airline merger teamed last week with disclosure of four-engine plane orders and announcement of new services to accelerate already rapid developments in current operations and future plans of the airlines.

Within the week:

- ▶ Seven airlines, including five U. S. flag carriers, were reported negotiating for 94 Lockheed Constellations to cost \$75,000,000, with some contracts already signed.
- ▶ American Airlines announced plans to absorb Mid-Continent Airlines, a few days after American had promised that within six

months it will be providing four times as much scheduled service as at present.

- ▶ Survey flights across the North Atlantic were started by the three airlines recently given new Civil Aeronautics Board certificates in that area.

- ▶ National Airlines disclosed that its officers have been authorized to negotiate a \$7,500,000 contract to purchase 11 Douglas DC-6's, elongated version of the C-54, and United Air Lines, describing these planes, said it expects to have 35 of them in service next year. American, which already had an-

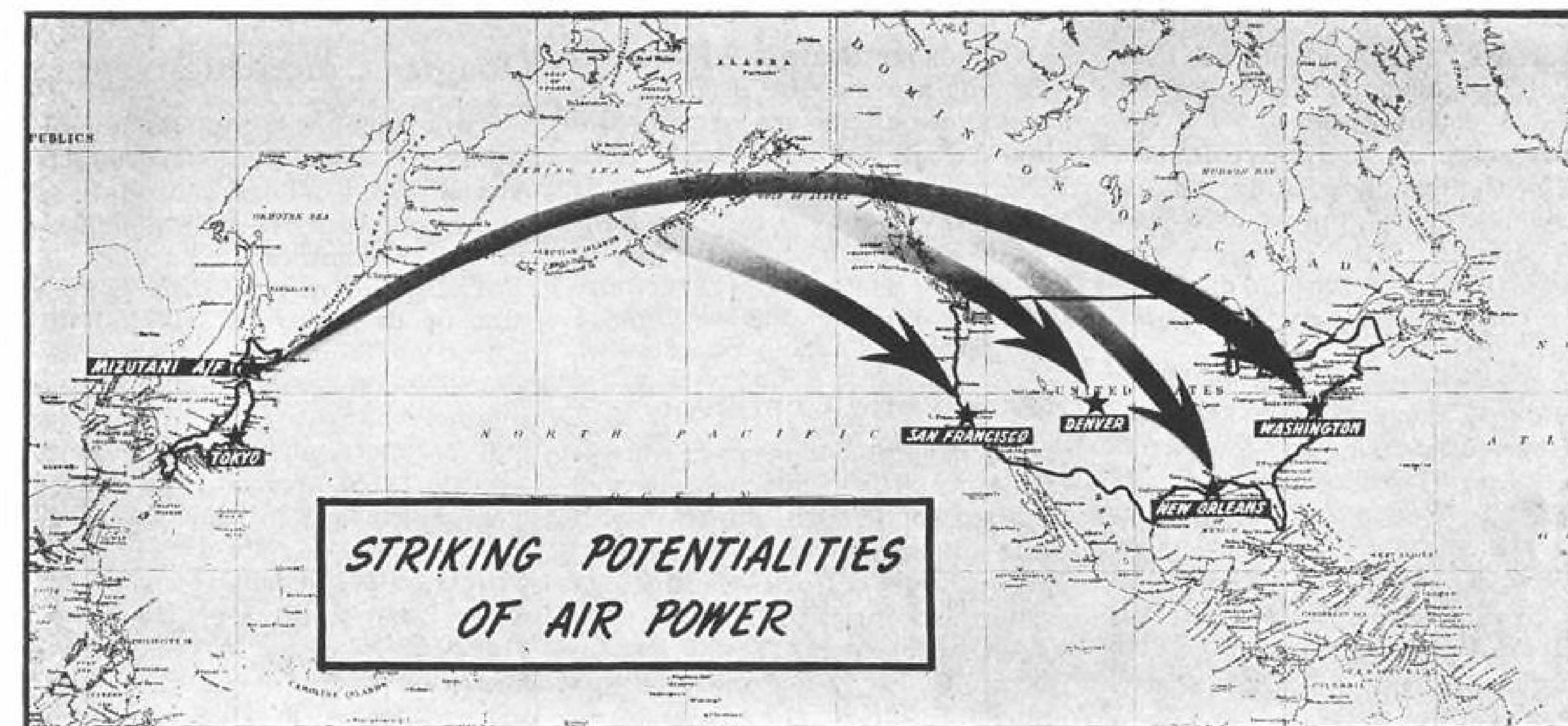
nounced orders for 50 DC-6's, first to be received next year, revealed that it expects to be using 50 C-54's from RFC surplus before the next six months have passed.

Trans World

The initials "TWA" now mean Trans World Airline, as a result of the branching out of Transcontinental and Western Air, Inc., into international commercial air service with its new fleet of Constellations.

A TWA spokesman said last week that the words "Trans World Airline" would be used in reference to the airline both domestically and internationally, although the name Transcontinental & Western Air, Inc., would be retained for corporate purposes. Eventually the corporate name may be shortened to "TWA, Inc."

- ▶ A hint of fast, non-stop service in the offing was contained in applications by both American and Northwest Airlines to consolidate



JAPAN-WASHINGTON:

Chart of the approximate course spanned last week by three B-29's in a 6,645-mile, one-stop flight from Japan. Original intention was to fly non-stop to Washington, but strong headwinds forced refueling at Chicago, after a hop of 5,995 miles in times ranging from 25 to 27 hours. Commanding the three planes

were Lt. Gen. Barney M. Giles, deputy chief of strategic air forces in the Pacific, Maj. Gen. Curtis E. LeMay, chief of staff of the strategic air forces, and Brig. Gen. Emmett O'Donnell, of the Twentieth Air Force. The chart also graphically shows where similar enemy forces could strike.



GLOBEMASTER IN FLIGHT:

New photo of the first test flight of Douglas' C-74 Globemaster, details of which were disclosed in the past two issues of AVIATION NEWS.

two-segment coast-to-coast routes so that each may compete with the through East-West routes presently operated by Transcontinental & Western Air and United, which in all likelihood will see some non-stop transcontinental operation as soon as the Civil Aeronautics Board and acquisition of suitable equipment permit.

The Constellation

Separate airline announcements were being made on the *Constellation* orders. TWA, which long ago spoke for first delivery on these ships, is purchasing 36 for \$30,000,000. Pan American Airways is taking 23, including two for Panagra. Eastern Air Lines has signed for 20, and American Export for an undisclosed number. Two foreign flag carriers involved are KLM, Royal Dutch Airlines, which ordered four *Constellations* for delivery in March, and KNILM, Royal Netherlands Indies Airline, which is negotiating.

TWA expects to receive four or five in October, and 12 by the end of the year. The line gave assurance that "within the next few weeks" it will be flying *Constellations* coast-to-coast and across the North Atlantic.

Pan American will receive in November the first of its *Constellations*, for which the total contract, including Panagra, will run around \$17,000,000. PAA predicts 11-hour service between New York and London, and 10 hours on the New York-California express routes for which it has applied to CAB.

Pan American-Grace (Panagra) will use its two *Constellations* on high-speed express services between the Canal Zone and Buenos Aires, on the line's South American West Coast route. More optimistic than TWA, PAA hopes to have all 23 by the first of the year.

Eastern probably will use its

Constellations, on which it looks forward to delivery around the first of the year, on its Boston-New York to Miami run. First planes will be equipped to carry 50 day passengers or 24 berth passengers. An innovation will be two entrance doors to the passenger cabin. Later, EAL expects to purchase additional *Constellations* to carry 62-64 day passengers. The company, which now operates about 45 DC-3's, probably will not use C-54E's, an official said, but will acquire a fleet of CW-20 Curtiss Commandos, ordered last October.

American Export predicts lower fares and more frequent trans-Atlantic schedules with the *Constellations*. The company, part of American Airlines System, announced previously that it would start landplane operation to Europe on or before Oct. 15 with its C-54's.

While some Pratt & Whitney R-2800 engines may be used for the *Constellations*, the majority of the planes will be powered with Wright Cyclone R-3350's. This is the powerplant for the B-29 Superfortress. It is expected to develop in commercial use more than 300-hp. in excess of its wartime published rating of 2,200-hp.

AA and Mid-Continent

The proposed merger of American and Mid-Continent, which both expect CAB to approve, will unite a major trans-continental operator with a North-South route system, adding 2,510 route miles to AA's present 8,125-mile system in the U. S. Mid-Continent operates through the Mississippi Valley, from Minneapolis-St. Paul to New Orleans.

Involved is the transfer of American stock for that of Mid-Continent on a 1-for-4 ratio. Since MCA has about 389,400 shares outstanding, of a market value of about \$16 per share, this will in-

volve 97,350 shares of American stock, on which market value is around \$64 per share. The merger, if approved, will be the first of its kind since the Board was formed, with the exception of one in Alaska. Other deals in which one line was taken over by another have involved a purchase.

► **Expected Results**—The current negotiation was announced jointly by C. R. Smith, chairman of American's board, and Joseph A. Zock, Mid-Continent board chairman. Lowered operating costs, further fare reductions, and greater frequencies are anticipated results. Another will be the reduction in Mid-Continent's mail pay figure of \$3.71 per ton mile to the 45 cents per ton mile American receives.

New one-stop services to be inaugurated are from New York, Chicago, and Washington to Los Angeles, and New York, Washington and Los Angeles to Mexico City. Nonstop service will be resumed from New York and Washington to Chicago. Frequent four-engine, nonstop service between New York and Washington and New York and Boston also is contemplated.

► **Route Requests**—The carrier has asked CAB to consolidate into one transcontinental route AM 23 from New York and AM 4 from Los Angeles, which now terminate respectively at Fort Worth and Dallas, or, on a cutoff, at Oklahoma City and Tulsa.

Douglas Cancellation

While airlines were announcing orders for *Constellations*, Douglas Aircraft Co. disclosed cancellations amounting to more than \$50,000,000 in its commercial backlog.

When the Army cut back 72 percent of its order for C-74's, the military version of the DC-7, President Donald Douglas explains, the company had to revise upward its cost estimate on the commercial transport. As a result, Pan American Airways will cancel a previous order for the DC-7. This will trim \$39,000,000 off a backlog estimated of Sept. 15 to be \$101,370,000.

► **Surplus Factor**—Additionally, the prospect of a large number of C-54's shortly becoming surplus has brought airline cancellations of orders for 40 four-engine transports. This slices \$15,400,000 more from the backlog.

Partly offsetting these cuts are increases totaling \$11,900,000 in DC-6 orders.

Surplus Service Airfields Bill Asks Free Allocation To States

Proposal introduced as separate legislative measure after failure to insert it in Federal airport plan; prompt consideration promised; CAA, AAF approve principle.

A proposal that surplus Army and Navy airfields be given without cost to states and their political subdivisions has been introduced by Sen. Brien McMahon (D-Conn.), following his attempt to have the proposition accepted as an amendment to the Federal-aid airport bill passed by the Senate.

The principle in the proposal is known to have the approval of CAA and AAF, both having discussed with the Surplus Property Board the feasibility of grant conveyances to states in view of the ban in the Surplus Property Act on giving away government property.

► **Path Cleared**—This conflict between McMahon's proposal and the act was brought up on the Senate floor by Sen. Joseph C. O'Mahoney (D-Wyo.), at the time the amendment was put forth. The amendment then was withdrawn and re-introduced as a bill and referred to the Military Affairs Committee. O'Mahoney, chairman of that group's subcommittee on surplus assured McMahon the bill would get prompt consideration.

While the bill would permit recipients of the airports to sell or lease surplus non-landing facilities adjacent to the landing areas, the landing spaces could not be altered so as to restrict future use. Also, the government would have the power to recapture the fields in time of emergency.

Another provision would permit the Federal Government to make up operating deficits on the fields for a period of five years. At the end of that time, if a field was still running at a loss, and the government declined to meet further deficits, the field would be returned to the government. Object of the section is to assure that the fields would at all times be maintained in a state of readiness for use.

► **Number Uncertain**—Number of fields that would be affected by the bill has not been ascertained. Neither the Army nor Navy has yet indicated how many fields will be needed in their post-war organizations, although McMahon has said he understands about 600

or 700 fields shortly will be declared surplus.

Other observers are inclined to lower his estimates considerably. As of Jan. 1, 1945, CAA listed a total of 987 fields used by the Army and Navy. Of these, the Navy owned 277 and operated under lease 94 others. The Army owned 315, and operated under lease 301. Of these, the majority are concentrated in the area from Delaware to Florida along the East Coast.

First RCAF Meteor

The first RCAF Gloster Meteor, jet-propelled fighter, has arrived in Canada and will be used in connection with research at the government-owned Turbo-Research, Ltd., Toronto.

The aircraft was assembled and test flown at St. Hubert airport, Montreal, and then flown the 100 miles to Ottawa in 15 minutes. Details of the aircraft are still on the British restricted list, but the time for the flight mentioned is considerably under reported Meteor speed.

NACA Forms Industry Unit

An Industry Consulting Committee composed of eight heads of aviation manufacturing and operating companies has been established by the National Advisory Committee for Aeronautics, a move designed to assure full cognizance of the nation's overall aeronautical research requirements.

The committee, which will advise NACA as to general research policy and programs, especially with regards to the needs of industry includes: Lawrence D. Bell, Bell Aircraft; Jack Frye, Transcontinental & Western Air, Inc.; Robert E. Gross, Lockheed Aircraft; H. M. Horner, United Aircraft Corp.; Beverly Howard, Hawthorne School of Aeronautics; J. H. Kindelberger, North American Aviation; C. Bedell Monroe, Pennsylvania Central Airlines, and William T. Piper, Piper Aircraft Co.

Air Parts Disposal Speeded By RFC

Fixed-price agreement becomes bulwark of agency hopes to attain volume clearance of components stockpile.

In its general drive to speed surplus disposal in the next few months, Reconstruction Finance Corp. is banking heavily on the fixed-price agency agreement in the sale of aircraft components and parts.

The new agreement, first mentioned in AVIATION NEWS, Sept. 10, is one of three contracts the components disposal section of RFC's aircraft division is using. One is an experimental engineering agreement under which Ford, Bacon and Davis, and other engineering firms, are seeking non-aviation use of some of the surplus parts.

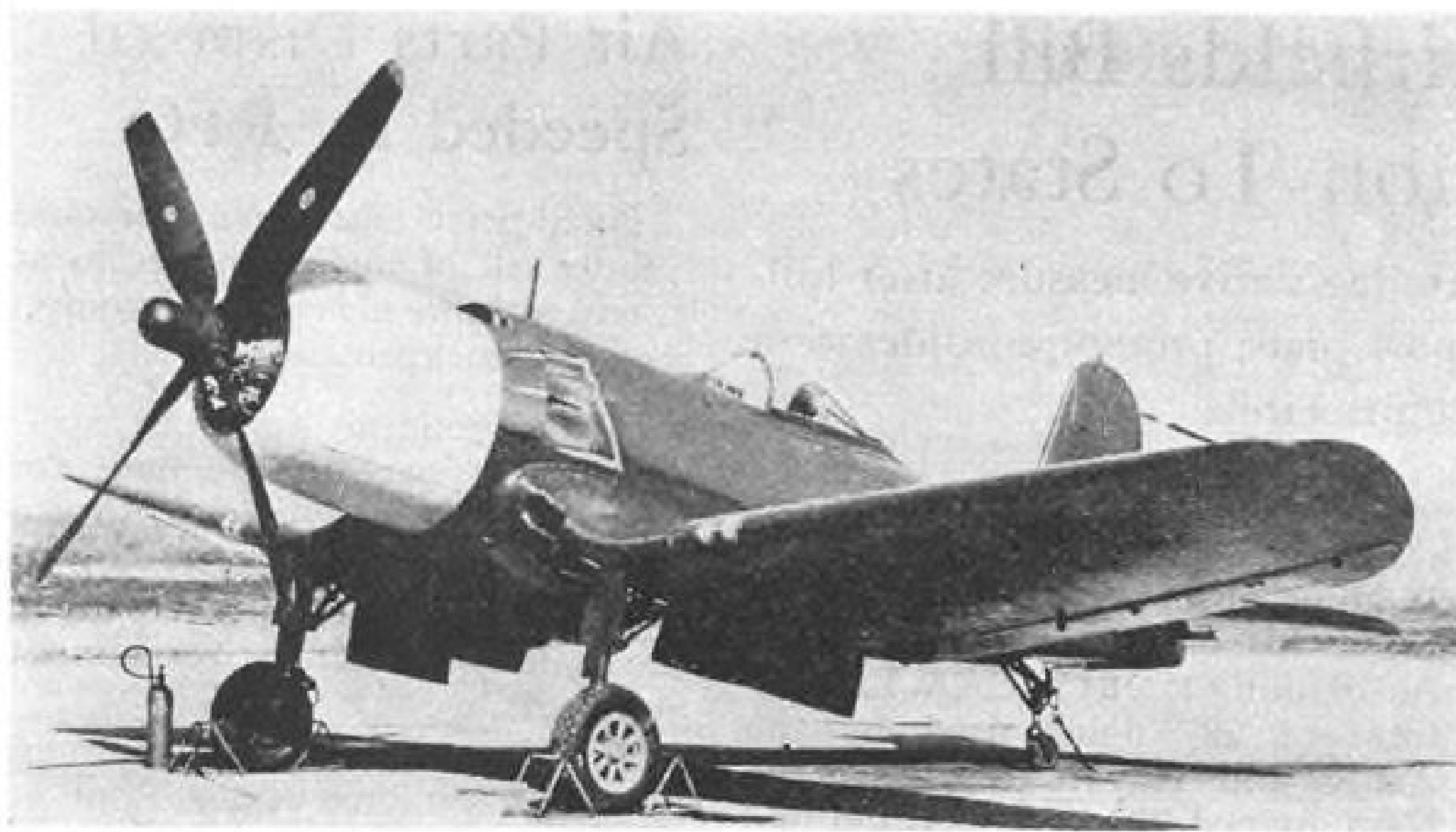
► **In-Trade**—The other two agreements both are designed to take advantage of in-trade distribution. The original cost-plus-a-fixed-fee arrangement is, however, being replaced, where desired, by the fixed-price agreement, which is the type the components section is concentrating upon at present.

Although the number of fixed-price agreements so far concluded is small, Col. A. E. R. Peterka, chief of the section, feels this method is the only one holding potentials of volume disposal. Un-

NACA said the Industry Consulting Committee was formed to provide for a more extensive exchange of ideas between elements largely responsible for America's air strength. NACA, now 30 years old, through the make-up of its numerous technical subcommittees, on which many specialists from both industry and the military serve, is establishing a closer contact with industry's problems.

The new committee should strengthen this important relationship and answer critics who contend that NACA and industry cooperation has not always been as close as it should be. Members of the committee are appointed for one-year terms and the anticipated rotation of membership should insure the broadest kind of representation.

First meeting of the committee will be held at NACA's Cleveland laboratory, Sept. 26.



NEWEST NAVY FIGHTER:

Limited production will continue on the Corsair F2G, designed by Chance Vought and produced for the Navy by Goodyear Aircraft Corp. The plane was unveiled for the first time last week. Powered by a Pratt and Whitney Wasp Major engine, with a military rating of 3,000 hp. which will develop 3,650 combat hp. or more, the F2G is reported to have a rate of climb half again as fast as that of the latest jet plane and is faster than its sister ship, the FG1, which set transcontinental records of better than 420 mph. earlier this year. The F2G is rated at 428 mph. at 16,500 feet without water injection and at 450 mph. at the same height with water injection. It has a 2,500 mile range and can be used as a land-based or carrier plane. The new plane is equipped with a Hamilton Standard Super-Hydromatic propeller, specially designed vertical tail surfaces including automatic auxiliary rudder, and a 370-degree bubble canopy.

der it, an agent will choose the commodities he feels he can sell, and accept them on a "consignment basis." He will deduct from his selling price 40 percent to cover his costs, and remit the balance to RFC.

Key to successful operation of this system, Col. Peterka says, is

AVIATION CALENDAR

- Oct. 2—Air Navigation Committee, Provisional International Civil Aviation Organization (PICAO), at Montreal.
- Oct. 3—Air Transport Committee, PICAO, at Montreal.
- Oct. 4—SAE Southern California Section, Aeronautic Meeting, Los Angeles.
- Oct. 4-5—Institute of Aeronautical Sciences, Light Aircraft Meeting, Detroit.
- Oct. 6-14—Detroit International Air Show.
- Oct. 8-14—Fourth Michigan Aviation Week.
- Oct. 12-13—Soaring Society of America, Annual Conference, Polytechnic Institute, Brooklyn, N. Y.
- Oct. 15—Interim Council, PICAO, at Montreal.
- Oct. 16—International Air Transport Association, Annual Meeting, Montreal.
- Oct. 17-18—CAA Non-Scheduled Aviation Advisory Committee Meeting. City not yet designated.
- Oct. 25—Institute of Aeronautical Sciences, Meeting, Washington, D. C.
- Oct. 31-Nov. 3—Tentative depending on ODT regulations, 1945 National Aviation Clinic, Oklahoma City.
- Nov. 1—SAE Southern California Section, Aeronautic Meeting, Los Angeles.
- Nov. 5-6-7—National Association of State Aviation Officials, Annual Meeting, Coronado Hotel, St. Louis, Mo.
- Dec. 17—Institute of Aeronautical Sciences, Wright Brothers Lecture, Washington.
- Dec. 17—Award of Robert J. Collier Trophy, auspices of National Aeronautic Assn. Place to be announced.
- 1946
- Jan. 4-5-6—All-American Air Maneuvers, Florida Air Races.

largest, fastest craft of its kind afloat, said it took little imagination to realize the carrier's role, nor was he revealing any secrets when he said that carriers will be adapted to the new weapon.

P-V 'Copter Firm Gets New Support

Increased Navy awareness of the value of research and development in its post-war aviation program soon is expected to take dollars-and-cents shape in the granting of additional funds and facilities to the P-V Engineering Forum, Inc., Philadelphia, helicopter manufacturers.

Small in size and resources, the company has already developed, under naval contract, a radically new helicopter prototype capable of carrying a crew of two and ten passengers (AVIATION NEWS, July 23), and utilizing a novel tandem rotor arrangement.

► **New Plane**—Designated XHRP, the helicopter is believed to be the main reason behind reported impressions of Navy officials that the company has the engineering ability and imagination to develop "an entirely new type of aircraft."

Just what the "new type" would be is not revealed, but it is widely recognized that the Navy is placing considerable emphasis on the use of helicopters for sea rescue work and for delivering cargo to undeveloped landing areas.

First Plane Sales Listed By ANLC

Aircraft Division of the office of the Army-Navy Liquidation Commissioner reported sales and leases of seven overseas surplus airplanes, one glider, and parts of a plane, during the first month of its operation. Total sales amounted to \$167,359.

Two Douglas C-53 transports were sold to the China National Aviation Corp. in Calcutta, and two others leased to Danish Airlines at Cairo and Casablanca. Sales of other aircraft and aircraft parts were made in England, Colombia and India. The transport planes were allocated by the Surplus Property Board.

► **Dollar Basis**—Thomas B. McCabe, Army-Navy Liquidation Commissioner, said all sales were made for American dollars. The

two transports were sold for \$120,000 or about half their original cost. McCabe pointed out that the standard price of these planes when surplus is \$60,000 "as is and where is," regardless of condition.

Two other transports leased to Danish Airlines brought \$16,000. Other purchases included: an R30-2 aircraft, located in England, by B. E. Smith in New York City for Sidney Cotton of England, for \$20,000; a TG-5 glider, by E. W. Loane, of Calcutta, for \$351; and B-17 aircraft parts by the ABA airlines in Stockholm for \$5,507. In addition, a wrecked C-47 transport was sold to the Colombian government for \$5,500.

All surplus transports, when declared, are allocated by the Surplus Property Board on the basis of need. A total of 207 Douglas DC-3 type transports have been allocated by SPB, of which domestic airlines received 139; the rest went to foreign airlines.

New Flag Line Bill Seeks "Showdown"

Senate aviation jurisdiction decision also sought as McCarran revises legislation strategy.

A showdown on the still unsettled issue of aviation jurisdiction in the Senate and the highly-controversial issue of a "community company" for overseas air transport operations may be forced in the near future by Nevada's Democratic Sen. Pat McCarran, the author of legislation that would create an "All American Flag Line."

McCarran's strategy for forcing the showdown on the two issues would be to introduce a "new, revised, and improved" bill creating a single company for overseas aviation, which would be so designated and framed as to highlight the interstate commerce aspects of the measure and make its reference to Senate Interstate Commerce unavoidable.

► **Contest Certain**—This action would, of course, be contested by Senate Commerce Committee Chairman Sen. Josiah Bailey (D-N.C.), forcing a Senate test on the aviation jurisdiction question. McCarran, it is felt, would subsequently push for another showdown on his single instrument bill, which failed to get a favorable report from Commerce, in June, by a tie vote.

The Senator told AVIATION NEWS

T. P. Wright Gets Air Award

T. P. Wright, CAA administrator, has been awarded the Daniel Guggenheim Medal for 1945 "for outstanding contributions to the development of civil and military aircraft, and for notable achievement in assuring the success of our wartime aircraft production program."

The medal was established for the purpose of honoring persons who make notable achievements in the advancement of aeronautics. Provision for the award was made in 1928 by the gift of a fund from the Daniel Guggenheim Fund for the Promotion of Aeronautics.

► **Another Honor**—Wright is an outstanding figure in aviation both in the United States and abroad. His work in the aircraft production program as a member of the Aircraft Production Board and as director of the Aircraft Resources Control Office contributed to his selection for the Guggenheim award. For the same achievement he received the War Department's award for civilians, the Medal for Exceptional Civilian Service.

Other factors involved in the Guggenheim Medal Award were his many technical contributions as a leading aeronautical engineer and executive, including develop-

ment of the airplane which won the \$100,000 award in the Guggenheim Safe Aircraft Competition of 1930.

Wright, last May, delivered the Wilbur Wright Memorial Lecture at the invitation of the Royal Aeronautical Society. He is also known abroad for his services as technical secretary of the International Civil Aviation Conference, at Chicago, Nov. 1944 and for his participation in the U. S. Strategic Bombing Survey.

► **Air Posts**—He is a member of the National Advisory Committee for Aeronautics and chairman of the committee on aerodynamics of the NACA, past president and fellow of the Institute of Aeronautical Sciences, honorary fellow of the Royal Aeronautical Society and a member of SAE and other scientific societies.

Wright was vice-president and director of engineering of the Curtiss-Wright Corp., before entering government service in 1940 when he became a member of the National Defense Advisory Commission. He continued with OPM, WPB and finally the Aircraft Production Board, prior to his appointment as administrator of civil aeronautics.

that he has delayed action on the "community company" proposal because he cannot make up his mind whether to introduce a revision he has made of the legislation as a new bill for reference to Interstate, or as a substitute to the Flag Line bill.

McCarran's revision of the single company bill, it is reported, makes changes in the stock construction of the proposed company which might eliminate the opposition of some Commerce committeemen.

► **Members Moved**—Meanwhile, a shuffling of that committee's membership raises a question as to which way the balance of weight would fall if and when the single instrument proposition is again put to a test.

Newly-appointed Sen. William Knowland (R-Calif.) has been selected to fill the position of the late Sen. Hiram Johnson (R-Calif.) on Commerce. Knowland is generally expected to take the same position as his successor, who on absentee votes joined with the Republican bloc in favor of an "All American Flag Line."

Sen. Harold Burton (R-Ohio),

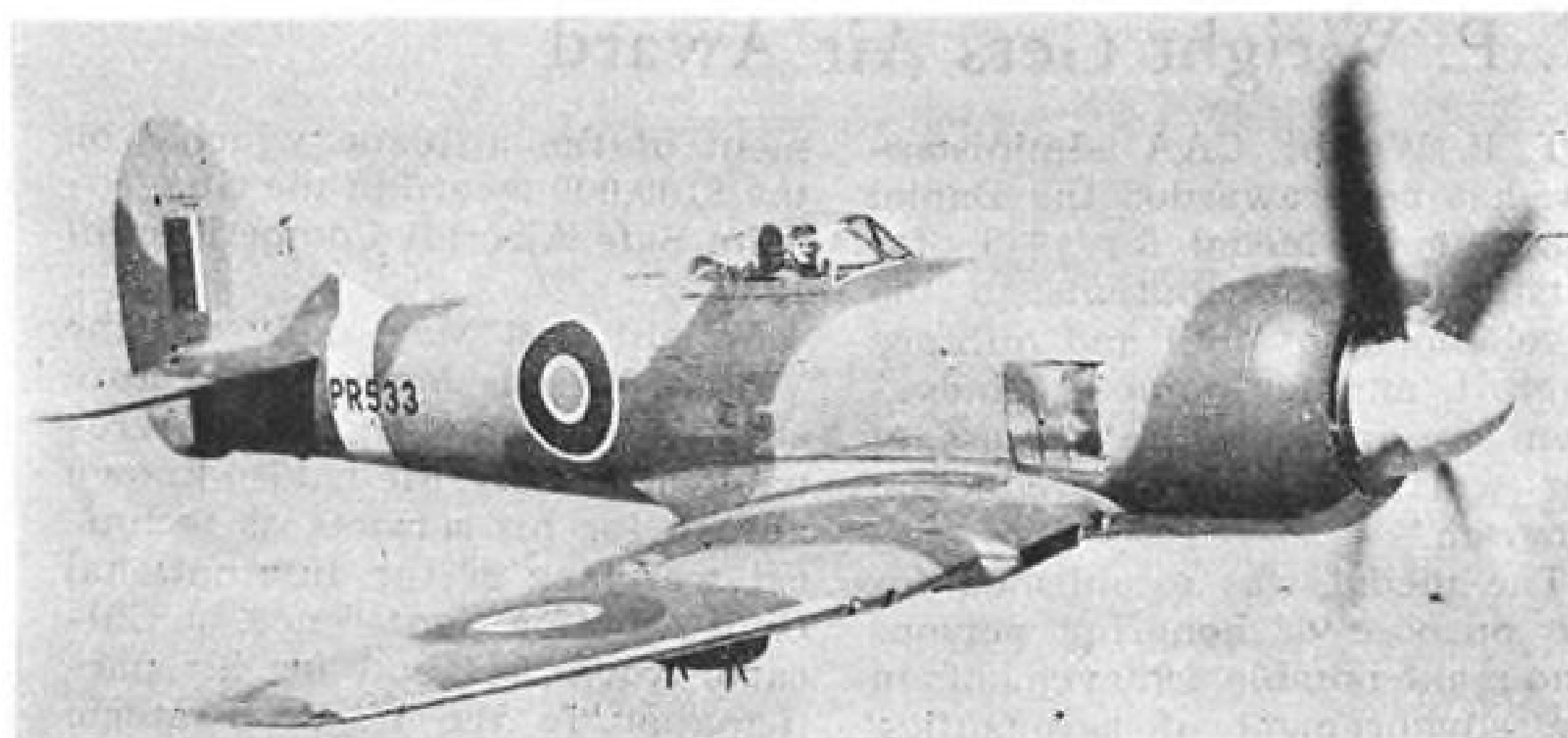
one of the two Republicans (the other: Sen. Guy Cordon of Oregon) who opposed the McCarran community company will vacate his position on Commerce when the Senate confirms his nomination to the Supreme Court. Burton's vacancy will not be filled.

► This may mean that the opposition to a "community company" has lost the decisive vote on the committee.

Munitions Board Gets Aircraft Role

Important authority has been delegated to the Army and Navy Munitions Board by the War Production Board in the assignment of preference ratings for military, naval and aircraft experimental projects.

This means specialized assistance in obtaining materials and facilities for the aircraft industry working on experimental and development projects under the National Advisory Committee for Aeronautics and for special pro-



NEW BRITISH TEMPEST:

Just-released picture of the Tempest II, designed by Hawker Aircraft, Ltd. Craft is powered by a Bristol Centaurus V engine of more than 2,500-hp., driving a Rotol four-bladed constant speed propeller. Span is 41-ft.; length 33-ft. 6-in.; height 14-ft. 6-in.; wing area 302 square feet and weight about 11,000 pounds.

grams of the Civil Aeronautics Administration.

The directive of this matter, just issued, marks the starts of the Army and Navy Munitions Board comeback to control over military production in advance of the demise of WPB. A major controversy early in the war production program resulted in WPB stripping ANMB of these powers. The directive now permits the munitions board to engage in limited assignment of priorities for NACA and CAA, for activities performed at the request of or under sponsorship of the Army, the Navy and the Office of Scientific Research and Development.

Air Meets Return

Plans for resumption of two of the most noted peacetime air meets have been announced.

► For the first time since 1941, the All-American Air Maneuvers will be held January 4, 5 and 6, 1946, at Miami.

► The National Air Races, last staged in 1939, will return to Cleveland some time next summer, it is stated by Albert J. Weatherhead, Jr., president of Weatherhead Co., and vice-president of the Cleveland Chamber of Commerce. It is expected that at least one of the events will feature jet-propelled aircraft. Arrangements for participation of Army and Navy pilots have been discussed by Weatherhead with Lt. Gen. Ira C. Eaker, deputy commander of the AAF, and with Vice Admiral Marc A. Mitscher, deputy chief of naval operations (air).

C-W Conversion Shifts Announced

Airplane division at Buffalo to be closed for transfer to Columbus; top executives given new assignments.

Important moves in Curtiss-Wright conversion plans have been announced by Guy W. Vaughan, president, including the closing of its airplane division plants at Buffalo, N. Y., and movement to the Columbus, Ohio, facility.

In connection with this move, one of several in consolidation of the manufacturing facilities of the division, Vaughan announced realignment of certain key corporation executives. He described the changes as part of an overall plan to convert as rapidly as possible to an economic basis consistent with peacetime requirements.

► **Ending Date**—The Buffalo plants will be closed upon completion of current commercial contracts for the CW-20 *Commando* transport being produced there. Transfer of the headquarters and such key personnel and manufacturing facilities as are necessary will be made to the Columbus facility, probably, early next year. This is contingent upon satisfactory arrangements with the Defense Plant Corp., for re-utilization of the Columbus plant.

Vaughan said the move to Columbus was decided upon after careful consideration of all factors involved, important ones being: Location of the plant in the interior of the country; adaptability to either a small or large operation; better year-round weather

conditions, and overall economy of operation at Columbus.

Production at the Columbus plant was concentrated on the *Helldiver* SB2C, the SC1 *Seahawk*, scout-observation plane. The Buffalo facilities produced some 15,000 P-40's as well as C-46 *Commandos* and miscellaneous trainers and utility planes.

Changes included:

Robert L. Earle, vice-president, has been placed in complete charge of the airplane division as well as the propeller division of which he has been general manager since 1938. He joined Curtiss-Wright in 1929, became Washington representative in 1933, was made assistant to the general manager of the airplane division plant in Buffalo in 1937, and became vice-president of the corporation in 1939. He was elected to the board of directors in 1941.

Burdette S. Wright, vice-president of the corporation, in charge of the airplane division since 1940, will move from Buffalo to company's headquarters office in New York to assist in reconversion programs. He joined the organization in 1928 as manager of the Washington office of the Curtiss Aeroplane and Motor Co., and became vice-president of the Curtiss-Wright Corp. in 1929, general manager of the company's Buffalo plant in 1926, and general manager of the entire airplane division in July, 1940.

G. M. Williams, senior vice-president of Curtiss-Wright and executive vice-president of the Wright Aeronautical Corp., joined the organization on a war-time basis in 1943. He has been on leave of absence as president of the Russell Manufacturing Co., since December, 1941 and will return to that company about Dec. 1.

F. H. Harrison, vice-president, has been named general manager of the airplane division. Harrison was borrowed from the International Harvester Corp. for the war period.



Earle



Wright

PRIVATE FLYING

North American Lightplane Revealed; Low Price Seen

Surprise announcement of completed mockup for four-place, low-wing monoplane brings speculation of cost below any other comparable craft; turbine may be eventual powerplant if plan is approved.

By SCHOLER BANGS

North American Aviation, Inc., at Los Angeles Airport, may push a four-place, low-wing monoplane into production immediately to compete in the personal aircraft market.

A wood mockup has been completed, finished ten days after work on it was started.

► **Green Light**—J. H. Kindelberger, company president, probably will carry mockup photographs and conception sketches to New York this week and on Friday (Sept. 28) ask directors in their first post-war meeting to give a formal green light to what apparently would be the company's first commercial manufacturing venture.

If production is authorized, the plane may be built to undercut the selling price of any comparable personal plane now built or under development.

As indicated in AVIATION NEWS, July 16 and 23, the North American lightplane may be the General Motors entry into the personal plane market and also may be the first gas turbine-propelled personal plane.

► **Very Secret**—Only a few North American executives and workers have seen the mockup, and its existence may well be a surprise to most of the aircraft industry. On September 3 an AVIATION NEWS survey of the post-war trends of West Coast manufacturers disclosed that the company had begun "an intensive sifting of several logical commercial designs."

Up to this time, Kindelberger has been able to convince heads of other companies, competitively interested in his post-war plans, that his objective is to perpetuate North American as a military producer.

First quasi-open indication of the company's commercial ambitions was gained when Kindelberger pep-talked before a meet-

ing of North American foremen recently, hinted at plans for early commercial production, and said he hoped that the company again would have a heavy production force at work by the end of next year.

► **Long Planning**—Actually, North American's explosive production of a personal plane mockup—which still must be regarded as a tentative design and subject to revision—was no sudden inspiration.

For months, company engineers have been firing at Kindelberger and his immediate administrative consultants a barrage of doodle-sketches ranging from design details to overall rough drawings of lightplanes and transports.

For at least three months a small group of North American marketing analysts have been busy attempting an evaluation of the countless personal aircraft market

forecasts which have been made during the past year.

► **Cabin Space**—The present mockup is known to have spacious cabin accommodations and a reinforced sliding plastic canopy entrance but little information is available concerning other features.

It is known, however, that at least one alternative design being studied by North American engineers would call for a gas turbine-propeller powerplant of much smaller size and power than are generally being considered for planes of the future.

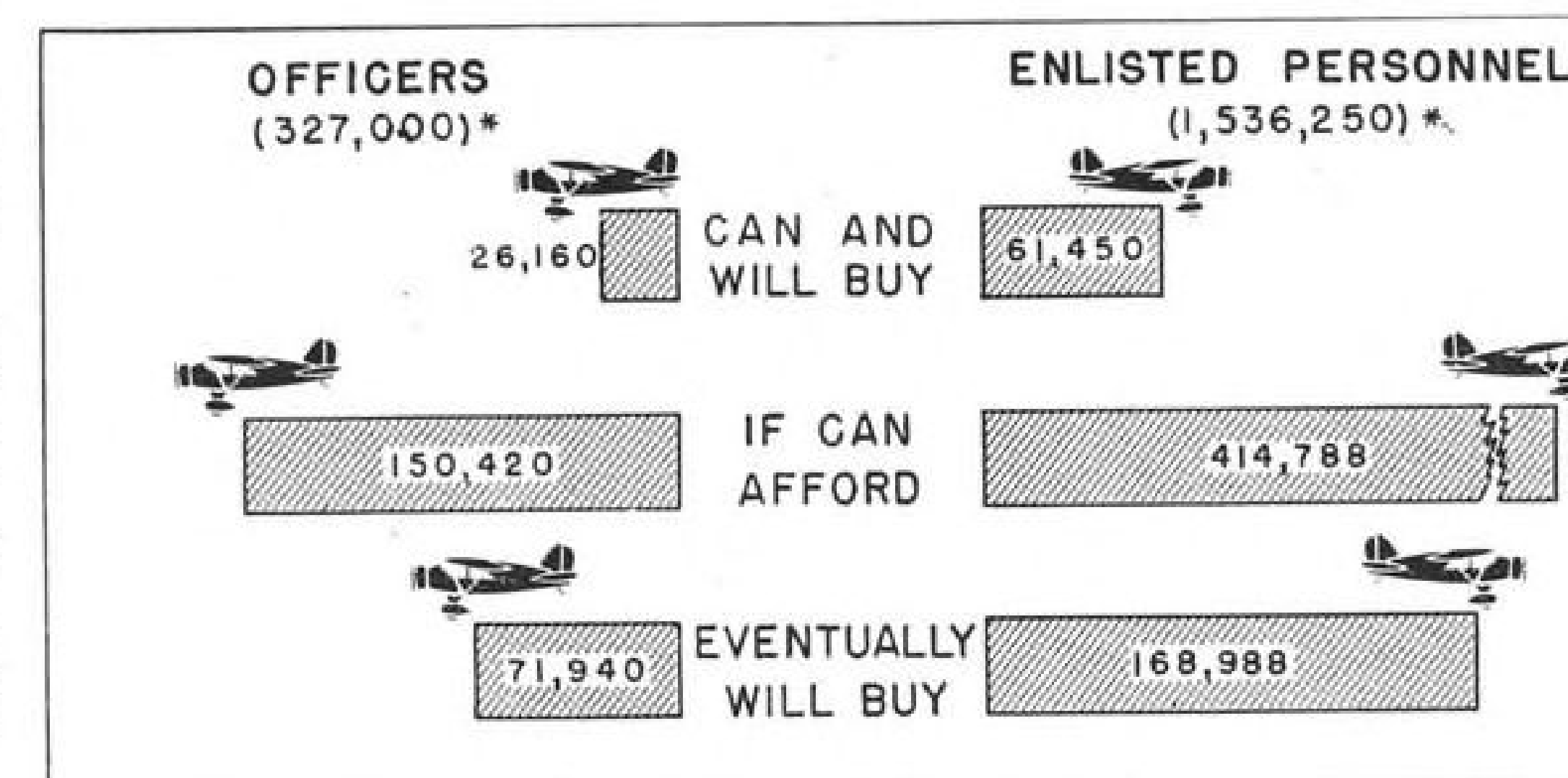
In view of the General Motors Corp. holdings of North American stock it would be logical also if the North American family plane offered a place for the much-discussed GM 200-hp. liquid-cooled engine, which would be well-suited to a plane of this size.

► **Development Problem**—Since many engineers believe the gas turbine-propeller and jet propulsion are still several years from practical commercial or personal plane use, it is possible that the GM engine would be the first powerplant for North American's entry into the personal plane market.

Detailed information concerning the design probably will be guarded by the company for some time to come, partly because plans to build it have not been "frozen" as a definite project, and partly because of the strong design competition now existing among light-plane builders.

Although the assumption that North American wants to enter

PLANE PURCHASE PLANS BY AAF RETURNEES



* SOURCE: AIRCRAFT YEAR BOOK 1945

Statistics announced by the Civil Aeronautics Administration disclose that 87,610 Army Air Force officers and men have indicated they can and will buy personal planes. A larger group of 565,208 returnees indicated they would buy planes if they can afford them, while 240,928 returnees indicated they eventually expect to buy planes.



HIGH ALTITUDE TAKEOFF:

To demonstrate performance of the Stinson Voyager 150, in high altitudes, Consolidated Vultee Aircraft Corp., recently tried out the new four-place personal plane, at Creede, Colo., described as the highest CAA-designated airport in the United States. As the photo indicates, the plane was airborne after a short run despite the "thin" air at 8,700-ft. Service ceiling of the Voyager is 14,000-ft.

the low-price market is speculative, it is believed reasonable in view of the numerous makes of three and four-place personal planes already under construction to retail for four and five thousand dollars.

► **Lockheed Rival**—If North American engineers have hit upon a small plane fabrication process that will reduce materially the manhours going into aircraft of conventional construction the result may be a product which will compete strongly with Lockheed Aircraft Corp.'s proposed lightplane in size and price.

Lockheed's much-publicized one-place *Little Dipper* experimental plane is expected by many to emerge commercially in two and four-place production, and with production costs brought to a new low by an original method of over-wrapping the plane's metal skin around a light and quickly fabricated framework.

Arizona Air Parley

Realizing the importance of an orderly and cooperative development of private flying facilities, the Tucson Chamber of Commerce will

sponsor Arizona's first statewide aviation conference, Nov. 15-16.

Main function of the sessions will be to gather and disseminate the latest information on air activities within the state so that overlapping and useless duplication will be avoided, making way for a concentrated development program. Pilots, operators, mayors, and county officials, plus members of chamber of commerce aviation committees throughout the state, have been invited to what, it is hoped, will become a regular method of advancing aviation within the state.

Canadian Aviators Ask Medical Policy

Canadian pilots held a protest meeting at Toronto recently against lack of definite declarations of policy on medical standards by the Department of Transport, Ottawa.

Some 60 pilots, including many well-known bush pilots and veterans of the First World War attended the meeting, brought about by tightening of medical standards. Civil pilots have to be examined every six months, and now must submit to electro-cardiographs of their heart condition, and meet new visual accommodation requirements reported to have been recommended to the civilian aviation section of the Department of Transport by medical officers of the Royal Canadian Air Force.

► **High Standard**—Some of those attending the meeting pointed out that civilian pilots must meet stiffer visual standards than combat pilots of the RCAF.

At Ottawa, A. S. Graham, assistant director of civil aviation, Department of Transport, stated that reports of license cancellations for civilian pilots are exaggerated, that only a couple of prominent Toronto pilots have had their licenses revoked.

A committee was formed at the meeting to find out what is happening to civil aviation in Canada. On the committee are Jack Austin, Austin Airways, Ltd., Toronto; Clare Leavens, Leavens Bros. Air Service, Toronto; George A. Ponsford, director of the Ontario government's Provincial Air Service, Sault Ste. Marie; and Air Commodore Norman Irwin, recently released by the RCAF, and operator of a charter service at Toronto.

Lightplane Power Increases Overshadow Design Changes

Possibility of accomplishing performance advantages through aerodynamic exploration and controllable props advanced as roundup shows many contenders in "family plane" market are raising engine ratings to gain desired characteristics.

By KARL HESS

Added engine power, as an answer to operational problems, is becoming more markedly a lightplane design doctrine. A roundup shows at least eight contenders in the "family plane" market are planning horsepower hikes for their post-war products.

All the planes definitely swinging toward larger powerplants as a basic design feature, are believed slated for below—but close to—a \$5,000 selling price. The final prices, it is said, will represent an increase over past estimates but will provide increased speed and takeoff performance.

► **Power Vs. Design**—Despite these performance advantages, many observers have posed the possibility that equal results could be obtained by sticking to lower horsepower ratings (with the resultant operation economy) and exploring and utilizing more fully the use of improved fuselage and wing design and controllable pitch propellers.

Many controllable propeller manufacturers, both here and abroad, have announced numer-

ous versions of their products specifically designed for use by low horsepower aircraft. Use of such props has already proved an axiomatic way of stepping up performance on larger ships but, so far, has been but slightly applied to lightplanes.

Similarly, the application of larger powerplants to lightplanes has emphasized the fact that basic aerodynamic designs have remained in many cases largely the same as pre-war versions. The power usage has been chosen as perhaps the easiest answer to adding "selling point" performance advantages.

► Stinson has announced an increase from 125 to 150-hp. for its peacetime *Voyager*, four-place plane. Design changes stressed by the company emphasizes greater

safety—wing slots and better brakes—with only one change, a new all-metal tail design, pointed directly at bettering maneuverability.

► Taylorcraft's Model 15 will go on the market offering a choice between a 125- or a 140-hp. powerplant.

► Piper, having first announced a 125-hp trainer prototype of its *Skysedan*, jacked the engine rating up to 165-hp. to accomplish better flying characteristics.

► One of the largest power increases came for the Republic *Seabee*, raising the amphibian's original design power from 125-hp. to 175-hp.

► Globe's increasingly watched *Swift* went recently from 85 to 115-hp. to pull its all-metal frame through the sky at higher levels of speed and performance.

► One of the new planes, the Johnson *Rocket*, has been designed for flight behind a 185-hp. engine but, unlike most of the others, stresses aerodynamic advantages along with the added power and an automatic prop.

► At least one of Culver's experimental models is testing a 185-hp. powerplant compared to pre-war standards of 75-80-hp. for the company's ships. Other de-

Disaster 'Cripples' Florida Aviation

What is described as "the worst disaster" to civil aviation in the Miami, Florida, area, one that will probably set back private flying and civil aircraft operations in that area for many months, was a little-publicized result of the recent hurricane and fire damage which destroyed more than 150 private planes at Richmond Naval Air Station.

The commandant of the station had invited the operators and private plane owners in the area to store their planes in the three huge hangars at the lighter-than-air station, to protect them from the impending hurricane, and 153 civilian planes were lodged in the "hurricane-proof" wooden hangars. Besides the civilian planes the hangars housed 25 blimps, 213 navy planes and 100 ground motor vehicles.

► **Gas Blaze**—Force of the hurricane destroyed part of the hangar, crumbling roofs hurling down huge timbers on the planes inside.

It is believed that the timbers smashed gasoline tanks, allowing gases to escape. These became ignited and all three hangars and their contents were destroyed by fire, which could not be fought successfully because of the storm.

The elimination of 153 civilian planes from the Miami private flying picture poses several complex problems, among them:

► Insurance coverage and possibility of Navy liability for the destroyed civilian aircraft.

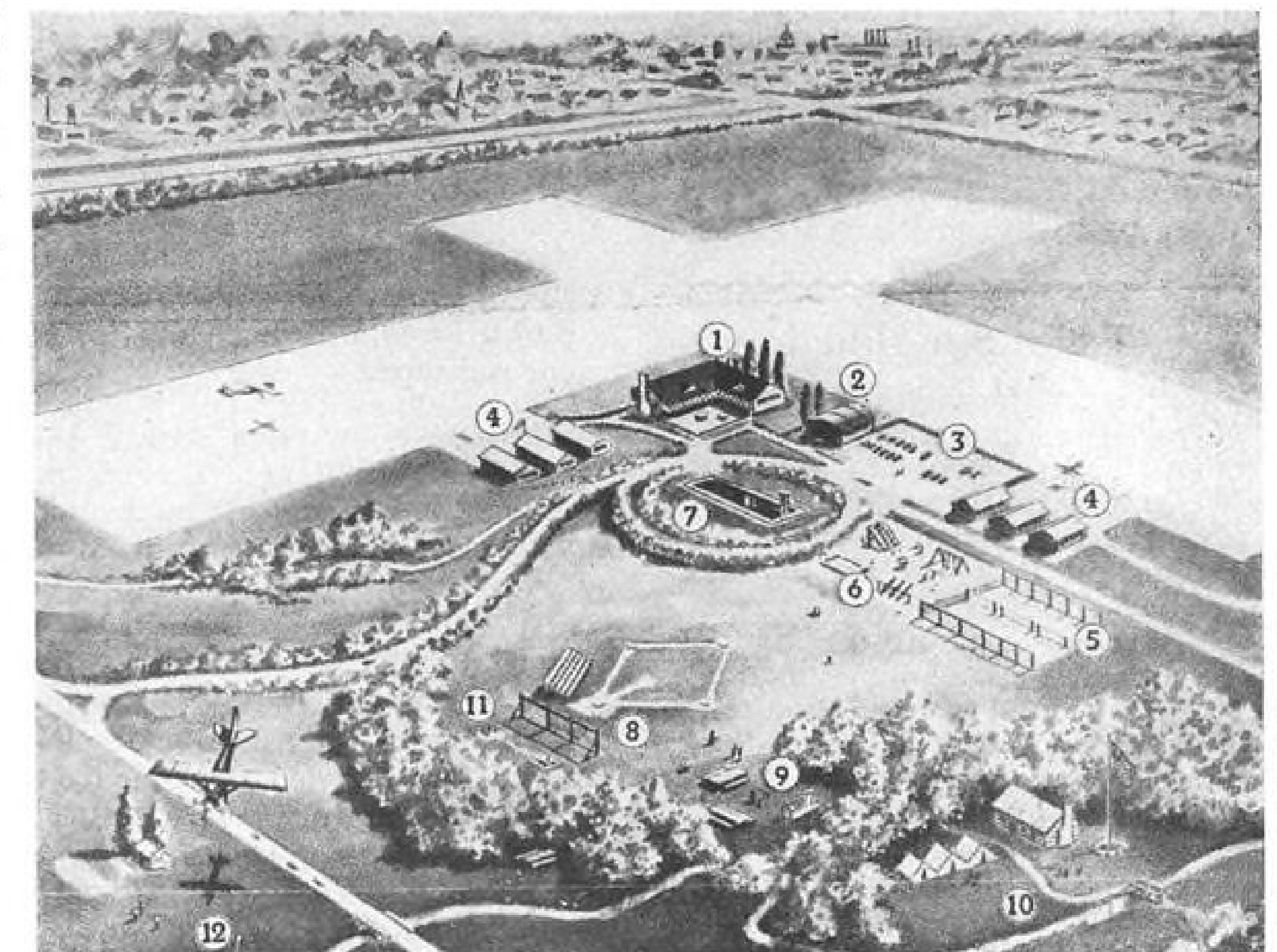
► Replacement of the equipment at a time when new post-war planes are just beginning to trickle off assembly lines of a few manufacturers, and when customer deliveries on most planes are probably six months away.

► Lack of planes is especially unfortunate at the beginning of the first post-war Florida winter tourist season when an unusually busy season for flight schools, plane rentals, charter flights and flying tourists had been expected.

Macy's *Ercoupes*

Macy's New York department store has contracted to sell the *Ercoupe*, two-control, spinproof personal plane, and will display one of the planes in a sixth floor sales department shortly after the first of October.

The purchase price of the plane will include instruction up to solo flight at the Teterboro, N. J., airport. It is understood that the Macy's arrangement differs from an *Ercoupe* sales arrangement with Marshall Field in Chicago, in that Macy's will provide its own sales staff. The New York store is expected to establish a larger aviation department later and to affiliate with other private flying bases in the New York area.



AIRPOWER AIRPARK:

How an airpark may be developed as a community center is suggested by a bulletin of the Air Power League reproduced above and showing: 1. Club house; 2. Hall; 3. Parking; 4. Hangars; 5. Tennis courts; 6. Playground; 7. Swimming pool; 8. Baseball diamond; 9. Picnic ground; 10. Scout camp; 11. Horseshoe court; 12. Golf course. Such a development will enable many community interests to enjoy the community center and share the cost with the private flyers, it is pointed out.



POST-WAR CHIEF:

Less publicized and pictured heretofore than its Aeronca stablemate, the Champion, is the post-war version of the Chief, soon to parallel the Champion on the production line. Landing gear, wings, tail surfaces and engine installation are interchangeable on the two planes, but the Chief, a side-by-side version, with more "deluxe" equipment will be "slightly higher in cost" than the \$2,095 quoted for the tandem Champion.

sign changes are less publicized.

Even pre-war, the use of enlarged powerplants rather than changed designs was typified by the Stearman Hammond with models of the same ship being planned for 90, 125, and 150-hp. engines. In this case, however, the revolutionary design of the craft was seen as justification.

► Use of added power to compensate for added equipment, becoming more and more important as a peacetime selling feature, is typified by the *Ercoupe*, spin-proof plane, still almost alone in its particularly advanced field of simplified control and safety. Addition of 10-hp. to the craft's pre-

war 65-hp. engine will take care of a starter and generator.

As the impact of reconversion and the need for speed in preparing for the hungry post-war market lessens, many persons in aviation believe that horsepower will necessarily become secondary to new designs as a means of improving performance, particularly as many builders approach the power limits their present models will handle.

CAA Inspection Revisions Pushed

Statistical report of steady civil flying growth springboards campaign to enlarge licensing force, cut red tape.

Statistics showing a steady expansion of civilian flying, reported by the CAA General Inspection Division for the year ending June 30, are being used as a springboard for a campaign within CAA to enlarge the division.

The report shows that the number of student pilot certificates increased month-by-month from 1,390 issued in July, 1944, to 6,733 in June, 1945, approximately a 500 percent increase. In the same period private pilot certificates issued increased from 733 to 1,355 a month, and commercial pilot certificates jumped from 315 in July, 1944, to 6,664 in June, 1945.

► **Service Pilots**—Many of the new commercial certificates were issued to service-trained pilots, an abnormal condition resulting from the war, but which is likely to continue until most of the service

pilots who expect to continue flying obtain their commercial licenses. After this the private pilot certificates will again be in the majority.

Number of mechanics certificates issued has increased four-fold in the last year, from 70 in July, 1944, to 287 in June, 1945, the report shows. Written exams given have increased from 4,654 to 10,677, and aircraft registrations from 315 to 1,863 for the same months.

Only a small increase is reported in aircraft inspections; from 2,579 to 2,703.

► **Staff Status**—The division reports that the staff of inspectors has not been increased for more than a year, which is causing delay in certification of pilots, mechanics and planes. Changes permitting qualified flight examiners, not CAA employees, to flight test private pilot applicants, have partially alleviated the condition, yet it is reported there are still thousands awaiting CAA inspectors at the nation's airports.

Curtailment and elimination of some of the voluminous reports which are still required in connection with certifications, and which make up such a large part of the inspection division's duties, is being suggested in aviation circles outside CAA as a prelude to the increase in inspection personnel which is being advocated by the division. It is believed that creation of additional private pilot flight examiners and revising regulations to permit them to issue more permanent private certificates would ease the situation.

Eventually it is agreed that the division may require some enlargement. But, a streamlining of forms and reports and elimination of all possible red tape is regarded as a necessary forerunner to such a move.

Canadian Flight Bans

An early end to remaining defense regulations limiting the use of private aircraft in Canada, is expected by Dominion aviation circles. Pre-war status has been gained for most phases of private flying there, already, with private members of civilian flying clubs allowed to acquire a flight license, after wartime bans against new licenses.

Permission to fly any particular aircraft, however, is still dependent upon permission from the Minister of Transport. Night flying bans also are still in effect.

CROWD MAGNET



Philadelphia Evening Bulletin Photo

Men and women stop to marvel at a helicopter. There is something miraculous about a machine that hangs or moves in the sky without wings or propeller. And flies forward, sideways or backward—hovers in one spot—rises or descends vertically, linking air travel with the ground, to make flying an easy step to anywhere.

The helicopter's high crowd appeal was shown (above) a few months ago in a demonstration of the Kellett XR-8 military model at Fairmount Park, Philadelphia, under sponsorship of the U. S. Army Air Forces.

With the ease of a hummingbird, the XR-8 flew in, high over the crowd, and settled to rest in a space only 100 feet square. Then the helicopter soared straight up, backed, swung from side to side like a pendulum, whirled, hovered. Finally it sped forward, at a faster clip than a motor car let loose on an express highway, in complete mastery of speed, height and direction.

Just what the public's keen interest in helicopters will mean in future industrial and commercial uses for this unique type of machine is more than we at Kellett Aircraft can forecast. As the oldest American designers and producers of rotary-winged craft, we consider one of the helicopter's most valuable features something we did *not* design or make—its inherent "crowd appeal," even to a nation which accepts modern streamlined trains and 400 mile-an-hour airplanes without a second glance.

Operating details, including cost and payload, may postpone the widest practical application of the helicopter. However, specialized money-making applications seem close at hand. Kellett Aircraft and other important organizations in the helicopter field are devoting time, money and experience to hasten the day when these craft will meet the expectations of their most loyal boosters—the American public. Kellett Aircraft Corporation, Upper Darby, Pa.

KELLETT HELICOPTERS

Lightplane Meeting Sets Varied Agenda

Widely varying lightplane technical subjects will be discussed in the two-day light aircraft meeting of the Institute of the Aeronautical Sciences at Detroit, Oct. 4 and 5.

►First-day papers will include: "Elimination of Direct Reading Compass Errors by Proper Aircraft Design," by J. Manildi, of G. M. Giannini & Co.; "Itinerant Aircraft Radio," by H. T. Sagert, Lear, Inc.; "Structural Failures and Defects of Light Aircraft," by Burdell L. Springer, CAA structures engineer; "Probable Materials of Post Reconversion Lightplane," by F. B. Lane, Engineering & Research Corp.; "Unified Approach to Private Aircraft Design," by George H. Tweney, Detroit University.

►Second-day papers include: "Ground Vibrations of Helicopters," by M. L. Deutsch, Wright Field; "Roadability and Landing Requirements in Aircraft Undercarriages," by Reinhardt M. Rosenberg, Consolidated-Vultee Aircraft Corp.; "Control Operation of the Spratt Wing," by George Spratt, Consolidated-Vultee, and "Simplified Design for Low-Cost Airplanes," by Alfred Marchev, president, Republic Aviation Corp.

Chairmen of the four sessions will be Prof. Arnold M. Kuethe,

4,000 Swifts

Plans for production of 4,000 Swifts by the end of 1946 have been disclosed by Globe Aircraft Corp., at Ft. Worth, Tex., and the company has already issued firm purchase orders for the engines to power these planes.

The company's planning and tooling has been partially based on more than 90,000 inquiries which have been received during the past nine months in response to publicity and advertising about the two-place, low-wing monoplane.

►Dealer Response — Another guide to planning has been the receipt of more than \$6,000,000 worth of purchase orders from distributors, dealers and independent customers, now held by the company.

First production all-metal Swift was scheduled to be completed early this month with a line of others following it.

University of Michigan; Peter Altman, Detroit aeronautical engineer; Walter Jamouneau, Piper Aircraft chief engineer, and William B. Stout, Graham-Paige Motors Corp.

Department Store Sale Set For Cub

Mandel Brothers' Chicago department store has announced placement of a post-war Piper Cub two-seat plane on display in the store's new airplane department. The store will accept orders for spring delivery.

Customers will be permitted to use their regular charge accounts or a deferred payment plan in making plane purchases. Purchase price for delivery at nearby Palwaukee airport is \$2,010.

►Expansion Planned—While the Cub is the first plane to be displayed by Mandel, the company expects to add other types and makes of planes to its airplane display room when they become available.

With every plane purchased, the company will include eight hours of free flight instruction, to be given by Dwight Morrow, World War I flyer and former Army instructor, at Palwaukee airport.

Mandel Brothers also reports it is the first department store in the United States to have filed application with the Civil Aeronautics Board to use airplanes in deliveries of retail purchases.

William D. Strohmeier Joins Gale Associates

William D. Strohmeier, veteran lightplane pilot and aviation writer, has joined the firm of Charles H. Gale Associates, New York, to handle public relations accounts for several aviation organizations.



A former editor of *Sportsman Pilot* magazine, Strohmeier has been a frequent contributor of aviation articles to many other magazines. To accept his new assignment he is leaving the Hawthorne School of Aeronautics, Orangeburg, S. C., where he has been instructor and assistant squadron commander of American and French Army aviation cadets,

and public relations director for the Hawthorne chain of airport operations.

►For five years, previously, he was associated with Piper Aircraft Corp., Lock Haven, Penna., in sales and public relations work, part of the time as sales promotion manager. Active in various private flying activities and tours since his Amherst College days, when he was the first president of the National Intercollegiate Flying Clubs, Strohmeier now has 4,800 pilot hours.

Airport Firm, State Increase Air Roles

A state and an engineering firm last week entered strong bids for leadership in the development of peacetime landing facilities for the private and commercial flyer.

Linked together in their latest effort the state, Michigan, and the engineering firm, Giffels & Vallet, Inc., of Detroit, were planning expansion of the Ann Arbor airport into a Class III field capable of handling an anticipated increase of traffic from such nearby generating points as the University of Michigan. The field will also be made ready to share in funds allocated under a national airport program.

►Steps Forward — For Giffels & Vallet the new project raised to 87 the number of airports the firm has developed, and for the state it meant another step forward in a program that has already attracted nationwide queries to its Board of Aeronautics for advice in planning similar air expansions.

At the Ann Arbor field, space will be provided for several fixed base operators, air clubs, feeder services, and private craft basing. Among the sources of increased traffic is an expected rise in the use of planes by persons attending reunion and athletic functions at the university.

Spokane Flight Boom

More than 300 residents of Spokane, Wash., now are enrolled in flying schools, according to a survey of fixed base operators of the area.

Some operators have indicated their inability to handle instruction requests with their existing fleets of planes, and are looking forward to new plane deliveries expected to begin the first of next year.

CURTISS SEAHAWK



HERE'S the fastest traveling, highest climbing, heaviest armed, most maneuverable "eye" the Navy has ever had! It's the Curtiss *Seahawk*, versatile one-place scout whose specialty is pin-pointing enemy ships and shore installations for naval attack.

The Seahawk can even sock them itself for it carries both depth charges and bombs.

Paradoxically, this swift bird of prey is all set for missions of mercy, too. Rescue work is facilitated by bunk space in the fuselage.

With twice the speed, nearly three times the horsepower and many times the firepower of any airplane in its class, the *Seahawk* is another Curtiss-Wright contribution to a vastly superior Naval air arm.

From now on, the Navy's way of saying "I'll be seeing you" will be to catapult a Curtiss *Seahawk* into the skies.



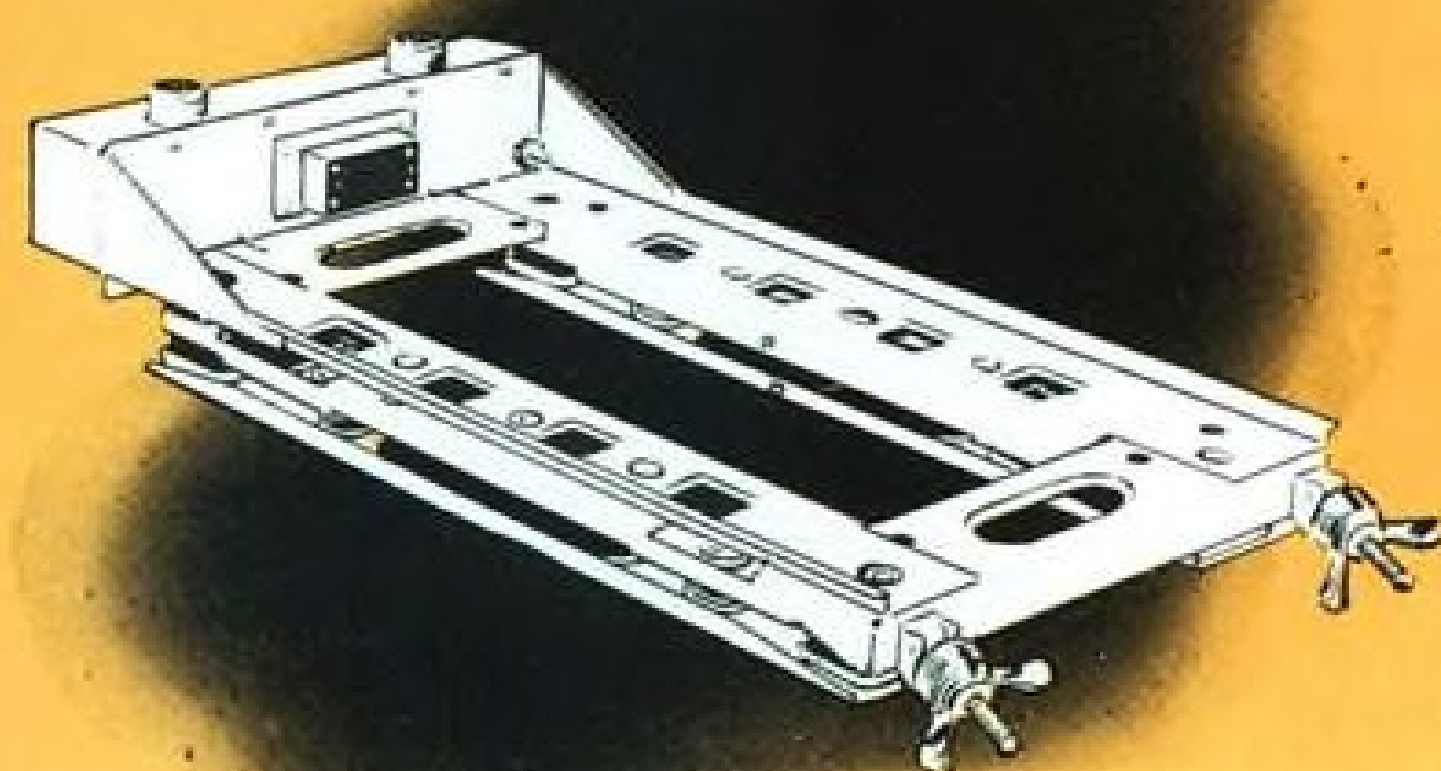
MISSION OF MERCY: With its extra horsepower and fuselage bunk space, the SEAHAWK facilitates rescue of men forced down at sea.



MISSION OF DESTRUCTION: The SEAHAWK can deal out punishment. This new plane carries depth charges. Under each wing is a bomb rack.



Now VIBRASHOCK* SERVES THE AIRLINES



This Robinson Vibrashock suspension (Model W-386) supports all the ARC-1 radio transmitter-receivers. Originally designed for the Bell Telephone Laboratories, these Vibrashock suspensions are being supplied to both Western Electric Company and Westinghouse Electric and Manufacturing Company, the manufacturers of the ARC-1 transmitter-receiver.



These 14 airlines, through Aeronautical Radio, Inc., recently ordered a large quantity of the famous Navy ARC-1 radio transmitter-receivers, equipped with Robinson Vibrashock suspensions, which have helped to make this unit an outstanding success.

The significance of this order is that these airlines, alert to equip their airplanes with the most advanced airborne equipment available, are the first commercial companies to use the combat-proven Robinson Vibrashock suspension to support important radio communication equipment.

Vibrashock suspensions are the only complete, fully engineered suspensions guaranteed to absorb over 90% of all vibration within the operating range of aircraft. This is an efficiency rating far beyond previous shock mount standards.

Robinson engineers are available to aircraft radio and electronic manufacturers and users to help solve any vibration problem in connection with mechanical or electronic units requiring protection against vibration and shock.

ROBINSON AVIATION, INC.
730 FIFTH AVENUE, NEW YORK 19, N. Y.
3757 WILSHIRE BLVD., LOS ANGELES 5, CALIF.

Canadian Charter Rules Established

Pattern for Canadian aircraft service operators who want to operate charter air services into unsettled parts of northern Canada is set in the first two licenses for such service which have been granted by the Canadian Air Transport Board.

They were issued to T. P. Fox, doing business out of Edmonton as Associated Airways, and to the partnership of Alphonse Danes and F. B. Wilson, who will provide charter service to prospectors, and haul freight out of Yellowknife, on Great Slave Lake.

► **Safety Bond**—Guarantees of rescue and search in case of accident or forced landing, with a minimum of \$5,000 bond to insure the performance of the guarantee, are required.

"It would be unreasonable to expose the public to the undoubted risks of their operations without some security for rescue work, including search. If the applicant's plane suffers a mishap there must be some assurance that another plane and gasoline can be procured promptly to rescue the occupants and to conduct a search for them if need be," the board ruled in the Yellowknife decision.

The Yellowknife service will operate a custom-built Waco with a charge of \$50 per flying hour, and is purchasing a second Waco for standby. Canadian Pacific Air Lines showed it was operating four Noorduyn Norseman planes and a Bellanca Airbus on scheduled flights, with the same planes available for charter service when not on schedules.

► **High Cost**—However, evidence was given that these planes were not always available in the peak summer prospecting season, that charter rates were \$75 an hour for the Norseman and \$110 an hour for the Bellanca, and that these planes were too large for a single prospector to charter, at these rates.

Fox will operate a four-place DeHavilland Dragonfly equipped with wheels and skis, and is buying another Dragonfly, float-equipped, for his service out of Edmonton. A similar \$5,000 rescue and search bond is required for Fox, who, for three and one-half years, served as staff pilot and assistant operations manager in the British Commonwealth Air Train-

Briefing *For Private Flyers and Non-Scheduled Aviation*

The tedious S-turns which the pilots of most conventional landing gear planes have had to make when taxiing in order to see around their plane's blind spots may soon be designed out of existence, in the private plane field, except for back seat pilots in tandems. Tricycle landing gear planes, like the *Ercoupe*, the new Culver, the Johnson *Rocket* and the *Skyfarer*, don't require the S-turn taxiing procedure and now the new Aeronca *Champion*, although it has a tailwheel, provides such good visibility from the front seat, that it too makes it possible to dispense with the S-turns, except for the backseat pilot. This is not idle publicity chatter. It was demonstrated to our satisfaction this summer at the Aeronca plant. We have heard no claims for similar visibility from Piper and Taylorcraft, but when one of the big three lightplane builders gets as good a selling feature as this visibility, it isn't long, usually, before the other manufacturers fall in line. That's the reasoning behind this advance obituary for the S-turn. And, incidentally, somebody might get some interesting data from a time and cost study, on a plane which taxis in S-turns, as compared with one which taxis straight, if the comparison was carried over a considerable time. We believe the credit in both time and fuel saved over a year's time for the plane with better visibility would be worth having.

► **PRICE MARKUP**—Now that the hard facts of post-war manufacturing costs are beginning to come out, a general trend toward higher personal plane prices than were quoted in the crystal-globe gazing days a year ago, is noted. However, this isn't entirely due to manufacturing cost increases. Many of the manufacturers have decided to equip their planes a little more completely for the convenience of their customers. Starters are going to be more plentiful than they were pre-war. Several of the planes carrying more than two persons will use larger engines than were originally planned, and the extra cost of these are included in the markups. But the average American's dream of a two-place plane for \$1,000 or less is still a long way from realization. From prices already reported it looks as if the price floor for the two-place plane will be around \$2,000. And, if you take reports of advance orders for personal planes at their face value, it looks as if the established companies, with good dealer-distributor setups, can sell all the planes at this price they can make and more, at least for the first 2-3 years of the post-war period.

► **CONTROLLABLE PROPELLER**—Canadian Car & Foundry Co., Ltd., Montreal, has announced a new line of lightweight, low cost, hydraulic propellers for lightplanes in the 65- to 350-hp. class. All elements of the mechanism except a cockpit control are contained within the propeller, and its oil supply is independent of the engine oil system. The line includes both two-position controllable, and constant speed designs, and weights are reported at 2/10's pound per hp., not much in excess of fixed pitch propeller weight ratio. Blades are of laminated hardwood, plastic bonded. The company has been manufacturing these propellers under U. S. military contracts, but they are now to be made available to personal plane users.

► **MAKES OWN HANGARS**—Difficulties in obtaining lumber for hangars, caused Berks Airport, Inc., near Reading, Pa., to buy an abandoned sawmill and a three-acre timber tract. The airport organization is now cutting heavy lumber from the tract to use for uprights and studding for new hangars. The corporation already has four hangars on the field housing seven planes, including three of its own. It is on this field that 72 Reading Civil Air Patrol cadets have already soloed as a result of scholarships sponsored by CAP squadron 22. Nineteen of the cadets have formed a flying club to buy one or two planes to continue their flying.

—Alexander McSurely

ing Plan's air observer school, at Edmonton, and a year as a pilot in the Trans-Atlantic RAF Transport Command.

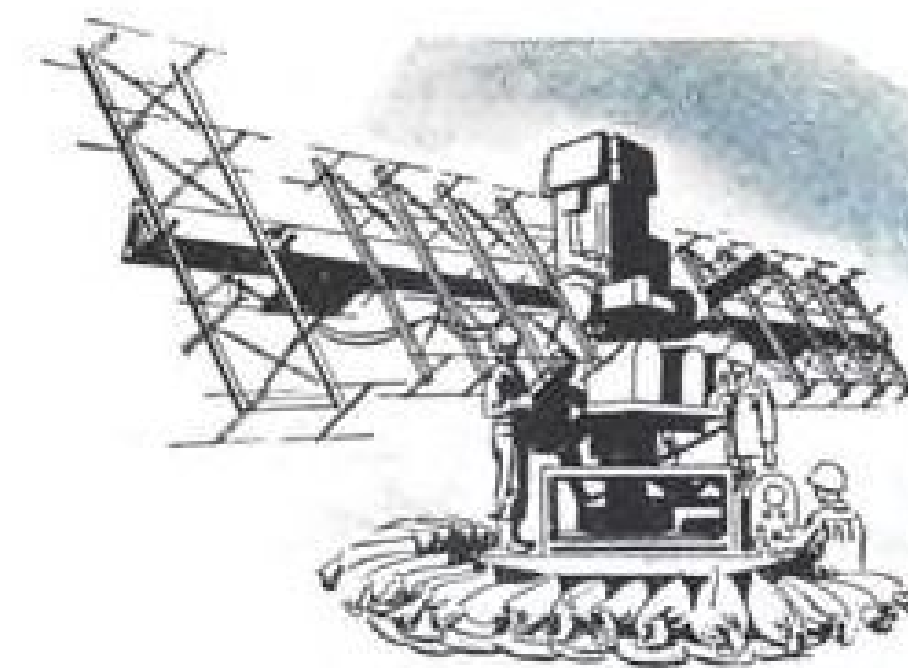
The licenses do not permit estab-

lishment of scheduled services nor give precedence in obtaining licenses for scheduled service. Adequate passenger and aircraft insurance are required.

All of the big guns on Navy ships and a majority of their smaller guns are directed by radars designed by Bell Telephone Laboratories and made by Western Electric.



From the very beginning, ground radars made by Western Electric played an important role in all theatres of war.



What *TEAMWORK* did for **RADAR**



Bomb-directing radars used on B-29s were designed by the Laboratories and made by Western Electric.

Bell Telephone Laboratories and Western Electric were "naturals" for the leading part they played in the radar program. For years they've worked as a team in developing and producing complex electronic equipment.

Here are some unadorned facts about what their teamwork made possible.

Up to the end of the war, Western Electric had furnished the Army, Navy and Air Forces with more than 56,000 radars of 64 different types, valued at almost \$900,000,000.

In 1944 alone, Bell Laboratories worked on 81 different types of radar systems and Western Electric produced 22,000 radars of 44 different types — of which 20 were new in production that year.

Western Electric was the largest producer of the cavity magnetron and other essential vacuum tubes for radar. Number of tubes required for Western Electric radar systems varied from less than 100 to nearly 400 per system.

Complexity of radar manufacture is indicated by the fact that even a simple type may require 4,000 labor hours to manufacture and the larger types as much as 40,000 labor hours.



This team developed and produced low altitude radar bombsights widely used against the enemy's merchant shipping.

Bell Laboratories developed more than 100 different radar test sets. In 1944, Western produced over 40,000 test sets of 68 types.



A school to train military personnel to operate and maintain radar was established by the Laboratories. Over 100 courses were given to some 4,000 officers and men.

The same team is working for YOU!

The unique combination of brain power and manufacturing facilities that made Bell Laboratories and Western Electric the nation's largest source of radar, is now devoted to bringing you the best in communications equipment for a world at peace. In peacetime off-shoots of radar—and in FM, AM and television broadcasting—in radio telephone equipment for every type of mobile service—this team can be counted on to lead the way.



Western Electric built up a Field Engineering Force of more than 500 specialists. They served with all branches of the Armed Forces on all fighting fronts.



BELL TELEPHONE LABORATORIES
World's largest organization devoted exclusively to research and development in all phases of electrical communication.



Western Electric
Manufacturing unit of the Bell System and nation's largest producer of communications and electronic equipment.

PERSONNEL

Veteran Air Writer Joins Research Firm'

George F. McLaughlin (photo), well known technical aviation writer for more than 30 years, has been named director of technical publications for McLaughlin-Carr Associates, Inc., New York research and engineering firm. Beginning with



Aerial Age in 1915, he shifted to a 16-year stint as editor of *Aero Digest*; for more than two years he was vice-president and technical director of Jordanoff Aviation Corp., and previously was associated with Glenn Curtiss and other early airmen as their public relations representative.

Col. Thomas C. Gentry, surgeon of the 14th Air Force and chief surgeon for the



original *Flying Tigers* in China, has been appointed medical director of American Airlines. Colonel Gentry holds the Legion of Merit for his work in establishing emergency hospitals in China, the Distinguished Flying Cross and the Air Medal for his participation in the evacuation of sick and wounded over the Hump into India. He succeeds Lieut. Col. Edward C. Greene, U. S. Army, retired, at American Airlines.

John D. Warren has been named to the board of directors of TACA Airways, S. A., parent company of the TACA airlines in Central and South America. Warren is a partner in G. H. Walker and Co., investment bankers, New York. Other TACA directors are: Jack Frye, president of TWA; John M. Lockhart; Charles E. Mathews, vice-president of engineering of TACA; Herbert A. May, vice-president of the Union Switch and Signal Co., Swissvale, Penna.; Kenneth H. Murray, of the Donald M. Murray Co.; Benjamin F. Pepper, president of the Pennroad Corp., Wilmington, Del. and Triumph Industries, Elkton, Md.; Frederick M. Peyser, partner in the Wall Street firm of Hallgarten and Co.; Webster B. Todd, chairman of the board of Todd and Brown Engineering

Corp., N. Y.; T. B. Wilson, chairman of the board of TWA, and Lowell Yerex, president of TACA Airways.

Continental Cargo Task Assigned Gerald Kitchen

Gerald S. Kitchen (photo), formerly research analyst for Continental Air Lines, Inc., has been appointed to the newly-created position of cargo traffic representative for the company. In this capacity, he will be charged with the development and expansion of Continental's cargo and air express activities. Kitchen, who joined the airline in 1943 as junior traffic agent, has been traffic dispatcher, supervisor of passenger service at Denver, and senior traffic agent.



Chicago Branch of Aero Insurance Underwriters announces that Richard C. Loar, former underwriter, has returned and Gus A. Palmquist, former staff engineer, will rejoin the company Oct. 1. Loar qualified as an instructor at a civilian Navy contract school when the war broke out, remaining there until the summer of 1944 when he became a preflight instructor for Douglas Aircraft. Palmquist went to Howard Aircraft factory as a test pilot, during the war, and more recently has been pilot on a Navy-owned Grumman *Widgeon* assigned to the Nash-Kelvinator Corp.

B. Allison Gillies announced his resignation, September 1, as vice-president of Ryan Aeronautical Co. Gillies, who had arranged previously to be with Ryan for the duration only, will return to private practice as consulting engineer.

Percy Cole, formerly publicity director of Canadian Pacific Air Lines, Montreal, and recently special assistant to vice-president W. N. Neal, Canadian Pacific Railways, has been named publicity director for eastern Canada division of the Canadian Pacific Railways.

W. V. Hanley, widely known in the aviation technical field throughout the United States, has been appointed assistant manager of the aviation division of Standard Oil of California, a unit of the marketing department.

Clark M. Kee, for twelve years airway engineer for American Airlines, has joined the firm of Airways Engineering Consultants, Inc., Washington, D. C. Prior to joining American, Kee was engaged in airway and airline construction and operation in Mexico, Cuba, Costa Rica and other Central and South American countries.



Alexander M. Wright (right), manager of Chandler-Evans' Dayton plant since the start of its construction in 1942, has been named assistant general manager of the corporation. Floyd C. Gustafson (left), director of field and service engineering, has been appointed to the post of sales manager for Chandler-Evans.

Al W. Conover has been made chief test pilot and flight research manager of Ryan Aeronautical Co., San Diego, Calif. Conover, who learned to fly at Cleveland in 1939, is a veteran of flight testing with Bell Aircraft, Curtiss-Wright and Ryan.

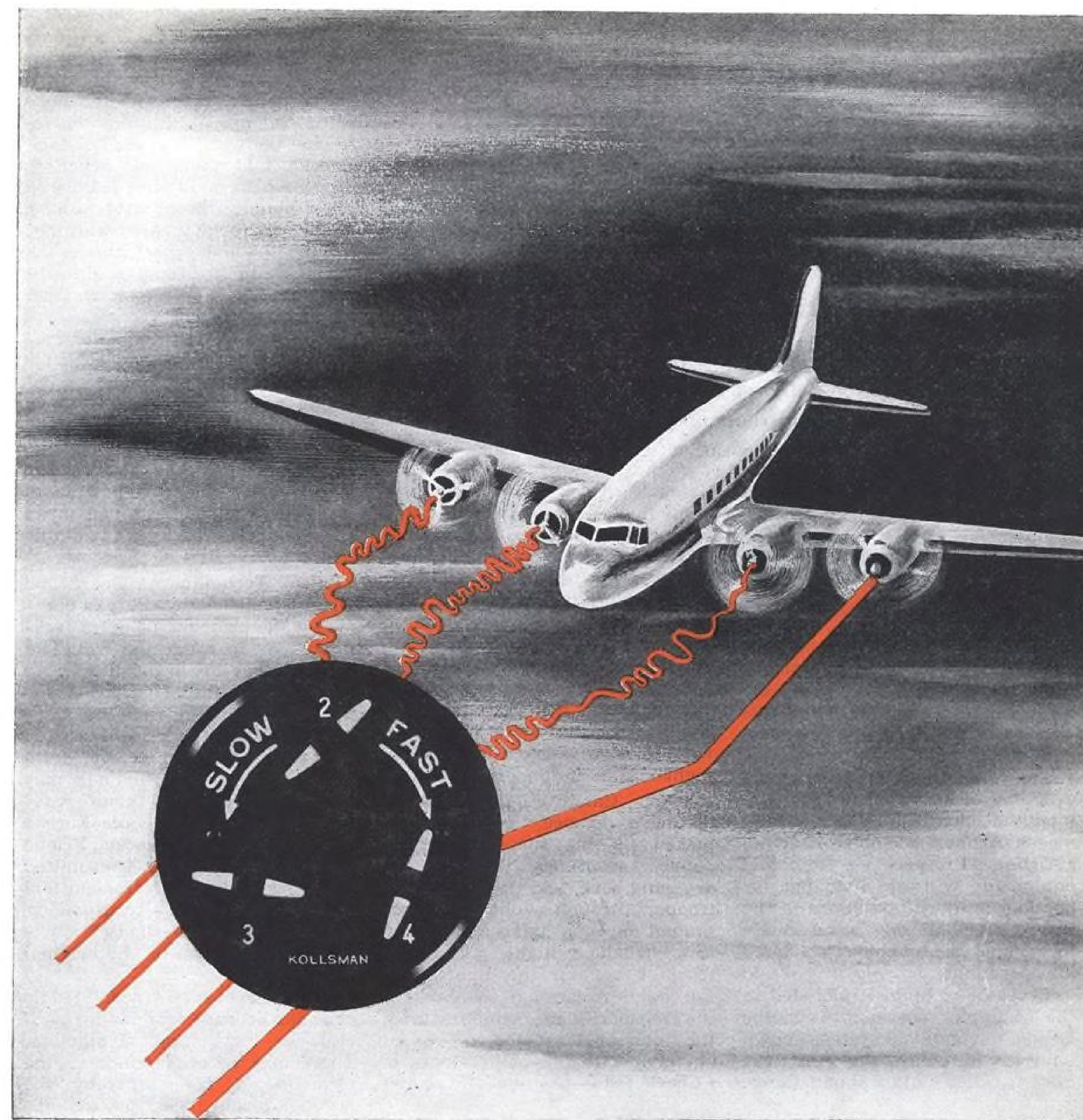
Dr. Shao Wen Yuan (photo), who for the past 20 months has been in



charge of research aerodynamics in the Helicopter Research Division of McDonnell Aircraft Corp., has joined the staff of the Polytechnic Institute of Brooklyn to be research

adviser for an important new program on the helicopter and to introduce the first academic course on the helicopter incorporated into the regular curricula of an engineering institution in this country. Dr. Yuan, as consultant for the aviation industry, also is presently engaged in a study of flutter analysis for the Edo Aircraft Corp.

Frank B. Howe, for the past six years public relations manager for the aviation enterprises of Major C. C. Moseley at Grand Central Airport, Glendale, Calif., has reopened his own publicity office in Los Angeles. While with Major Moseley, he represented Cal-Aero Academy, Curtiss-Wright Technical Institute, Grand Central Airport Co., Polaris Flight Academy, and Mira Loma Flight Academy.



THE NEW KOLLSMAN FOUR-ENGINE SYNCHROSCOPE enables the pilot or flight engineer to bring all engines quickly to the same r.p.m. for the uniform power output required by economy and correct operating procedures. Designed at the request of AAF to cover military needs, these synchrosopes also have their application to transport aircraft, where they contribute to passenger comfort as well as to proper operation of the plane. The accuracy and dependability of these synchrosopes, together with their simplicity of operation, are characteristic of all Kollsman Aircraft Instruments.

KOLLSMAN AIRCRAFT INSTRUMENTS

PRODUCT OF

SQUARE D COMPANY

ELMHURST, NEW YORK • GLENDALE, CALIFORNIA

AIR FORCES

COMMENTARY

Airborne Army Radar Aids Fit New Commercial Roles

Relatively light-weight radio or radar beacon systems for general air navigation believed answer to all-weather flying; uncanny accuracy of paratroop invasion equipment in guiding planes through zero-zero weather revealed.

Top military leaders are agreed that powerful units of airborne troops and equipment will be necessary at the start of possible future wars, or (we hope) of concerted military action to prevent such wars.

In such operations, various radar devices and electronic equipment using pulse technique will be indispensable. The pattern for this was set in the Normandy invasion and greatly improved in the invasion of Southern France and the dropping of an airborne army behind the enemy lines in the Nijmegen-Arnhem sector of Holland.

► **Airline Prospect** — Improved equipment will be available for possible military operations in the future, and will also be adaptable to commercial and non-scheduled air operations.

Types of equipment included in the examples specified were the British navigational system known as Gee, to which the American system called Loran (Long Range

Navigation) is related; an airborne microwave search set with a PPI scope (Plan Position Indicator) which served as a radar map; small marker beacons used in connection with the search set; low altitude absolute altimeter, and, in some ways most important of all, the Rebecca-Eureka interrogator-beacon system, largely a British development. By the use of this equipment large-scale operations were carried out in the dead of night and in spite of thick fog.

Troop Carrier *Pathfinders* in Southern France, for example, picked up the successive check points, accurately located the dropping zone, and dropped paratroopers through a solid blanket of ground fog, only half a minute late after a 3-hour flight. The paratroopers set up the lightweight Eureka beacons, and the bulk of the transport planes equipped with the interrogator Rebecca, homed on them with pin-point accuracy.

► **Check Uses**—Gee and the search

set were useful on the main journey for time checks, position checks and for locating the initial check points; the altimeter indicated the proper altitude for releasing the paratroopers; Rebecca-Eureka told them just when to drop. As an additional feature of the Holland airborne drop, a huge MEW (microwave early warning) set in England "saw" the entire operation in its scope, despite the darkness and the bad weather which developed.

It should be clearly understood that all this is not radar, although it is all electronics.

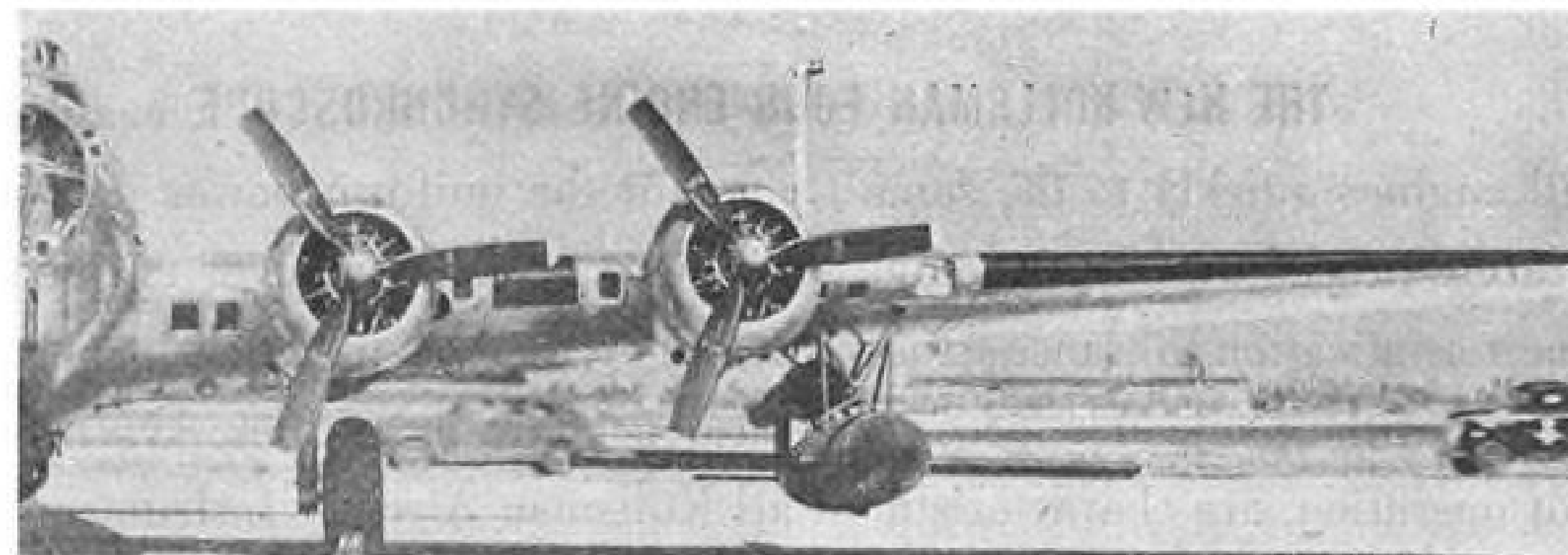
The microwave search set and the absolute altimeter are true radar in that they transmit waves of radio energy and also receive and visually record a portion of that energy which has hit an object and bounced back—a two-way trip.

► **Pulse Technique** — Gee (and Loran) and Rebecca-Eureka operate on the principle of pulse technique. As in radar the waves of radio energy are transmitted in a highly concentrated beam—this is the "interrogation." In the navigation systems the pulse is recorded by an airborne receiver from two or more beacons, and a fix may be obtained; no radio "echo" is returned. In the Rebecca-Eureka and the IFF (Identification, Friend or Foe) systems the transmitted radio beam triggers a transmitter-receiver known as a transponder, which returns a "response," obviously not an echo of the original beam.

The value of such "racon" (radio or radar beacon) systems for general air navigation is obvious. There may be adaptations on the principle of IFF, whereby the ground racon picks up an approaching aircraft and obtains a proper response from its airborne transponder. However, there appears to be more likelihood of utilizing the Rebecca-Eureka method, in which the airborne interrogator-responder (Rebecca) triggers the ground racon transponder (Eureka). This is IFF in reverse, and under either system range may be determined with uncanny accuracy.

Rebecca-type equipment weighs about 85 pounds, and improvements may cut even this relatively light weight to some extent. With a network of Eureka-type racons throughout the country a tremendous boost would be given to all-weather flying.

NAVIGATOR




B-17 BUZZ BOMBS:


American AAF experiments with launching robot bombs included attaching wing racks to a B-17 Flying Fortress, pictured for the first time, which made it possible for the JB-2 ram jet missiles to be released in mid-air. Two racks were attached, under the wings beyond the outboard engines, and the releases were accomplished with a standard bomb shackle. Wing racks reduced speed of plane about 15-mph. and gross weight of the plane with bombs was approximately 30 tons.


ROSÁN INSERTS AND STUDS

revolutionize fastening in SOFT METALS • PLASTICS • WOOD

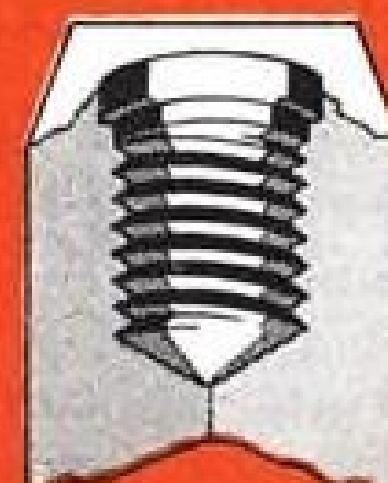


ROSÁN INSERT MOLDED IN

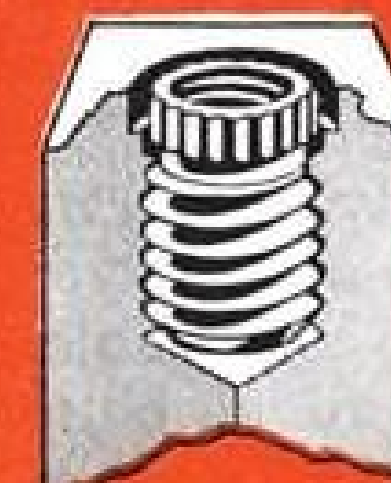





INSTALLATION OF INSERT WITH LOCKING RING




1. Drill, counter-bore and tap



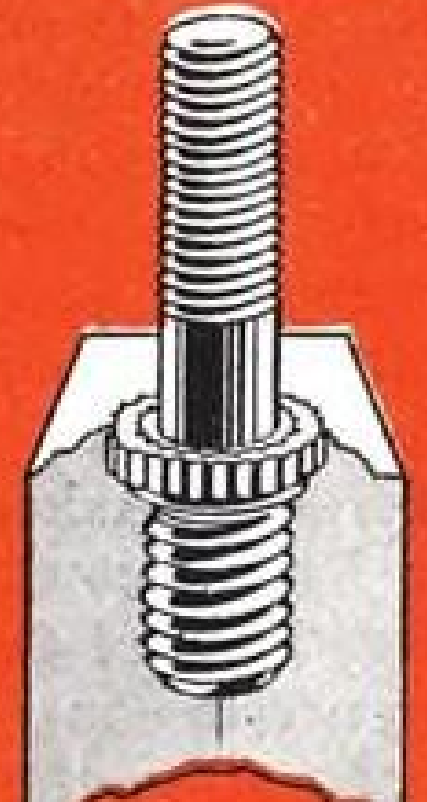
2. Screw insert flush with surface



3. Drive in locking ring



ROSÁN STUD



Permanent because locked in the material.

May be molded in, or installed later for repair or replacement purposes.

Removable by drilling without disturbing the parent material.

The heart of the Rosán Locking System is the locking ring. Its serrations are broached into the parent material and prevent turning or loosening under vibration or torque.

Rosán Inserts and Studs are easily installed, can be easily removed. They do away with the need for oversize replacements, and so effect great savings in parts inventory, in addition to the savings in parts salvaged.

Leading aircraft companies have adopted the Rosán Locking System. The automotive industry and others are also recognizing the advantages of this revolutionary method of fastening.

Write or wire for full information.

THE NATIONAL SCREW & MFG. CO., CLEVELAND 4, O.



National

PRODUCTS

HEADED AND THREADED

Plant Disposal Rule Skips Point For Aircraft, Industry Declares

Long-awaited SPB regulation considered of little benefit to plane builders without inclusion of more important, and tightly linked, policy of national air power; purchasing priority also stressed as necessary.

Issuance by the Surplus Property Board of its long-awaited plant disposal regulation leaves untouched larger matters which should be determining factors in the disposals, it is felt in the aircraft industry.

Until there is decision on a national air power policy, with its subsidiary problem of dispersal, industry does not see how the plant disposal program can be of any particular benefit to aircraft builders.

Preference Asked — Although SPB's Regulation 10, and accompanying Special Order 19, forbids preference to contractors who have been operating the plants, the industry takes the attitude that in fulfilling a national air power policy, it will be necessary to give priority to the aircraft industry as an integral part of air power.

A recommendation to that effect, as well as a proposal that leases to aircraft manufacturers be based on a percentage of sales, has been sent to the Reconstruction Finance Corporation, disposal agency for surplus plants. There has been no indication of RFC's attitude.

Similar proposals are expected to be presented by the industry to the O'Mahoney War Contracts Subcommittee Military Affairs in the Senate when it resumes hearings about November 1.

Veteran Consideration — Only preferential treatment granted under Reg. 10 is to veterans and small business, with the RFC directed to pay particular attention to offers from local or small firms "preferably those owned or controlled by veterans."

Accordingly, RFC may sell or lease a plant at "a lower monetary return if the applicable objectives of the Act will be better attained thereby."

In its negotiations to date on the sale or lease of plants, RFC has been trying to make the best deal possible for the government, generally basing its terms on a proportion of the reproduction cost, plus a percentage of the installed cost of equipment, plus depreciation, interest, and taxes. Under Special Order 19, the agency is directed to get a written estimate of the fair value of the property, which is defined as "the maximum price which a well-informed buyer

Willow Run Bids

Use or ownership of the B-24 plant at Willow Run is open to the highest bidder with the relinquishing by the Ford Motor Company of its option to continue in possession of the facility. Although waiving its rights under its wartime lease to decide within 90 days whether or not it was interested in the plant, Ford retains the right to top any bid for the next six months.

The action by Ford is commonly seen as opening the way for an offer by the Kaiser-Frazer Corp., formed by Henry J. Kaiser and Joseph W. Frazer, automotive manufacturer. Kaiser sometime ago said he would like to operate Willow Run. Reconstruction Finance Corp., disposal agency for the plant, points out, however, that there has been nothing to prevent Kaiser from beginning negotiations, which at the time of a recent check at RFC, he had not done.

acting intelligently and voluntarily, would be warranted in paying if he were acquiring the property for long-term investment or for continued use. . . . Neither the original cost to the government, nor the characteristics or readiness to buy of any particular prospective purchaser shall be taken into account." Also, the estimate shall be based only on such properties and equipment as would be of use to a buyer.

DC-8 Engine Plan Uses Proven Idea

Unique tail-mounted, counter-rotating props fed twin-engine power by shaft system similar to *Airacobra*.

The "buried" engine installations in the Douglas DC-8 (AVIATION NEWS, Sept 17), while striking a completely unconventional note and arousing deep interest in manufacturing circles, utilizes a well-tested and proven principle.

The extension propeller shaft which makes possible the unique tail mounting of the two counter-rotating propellers is similar to the shafting used in the Bell *Airacobra* and *Kingcobra* during the war, it is revealed by Allison Division of General Motors, makers of the shaft, and the two V-1710 engines to power the DC-8.

Installation — Those two war-

Electro-Mechanical Actuation of Airplane Controls

Lear, Incorporated is one of the leading manufacturers of electro-mechanical control mechanisms. Its actuation and control systems have thus far served in over 750 applications on warplanes.

Lear produces parts and components which do the complete job—from converting electricity taken from the airplane's circuits to actual movement of controls, wing surfaces, landing gears and doors. Listed here are some of the applications served by Lear equipment.

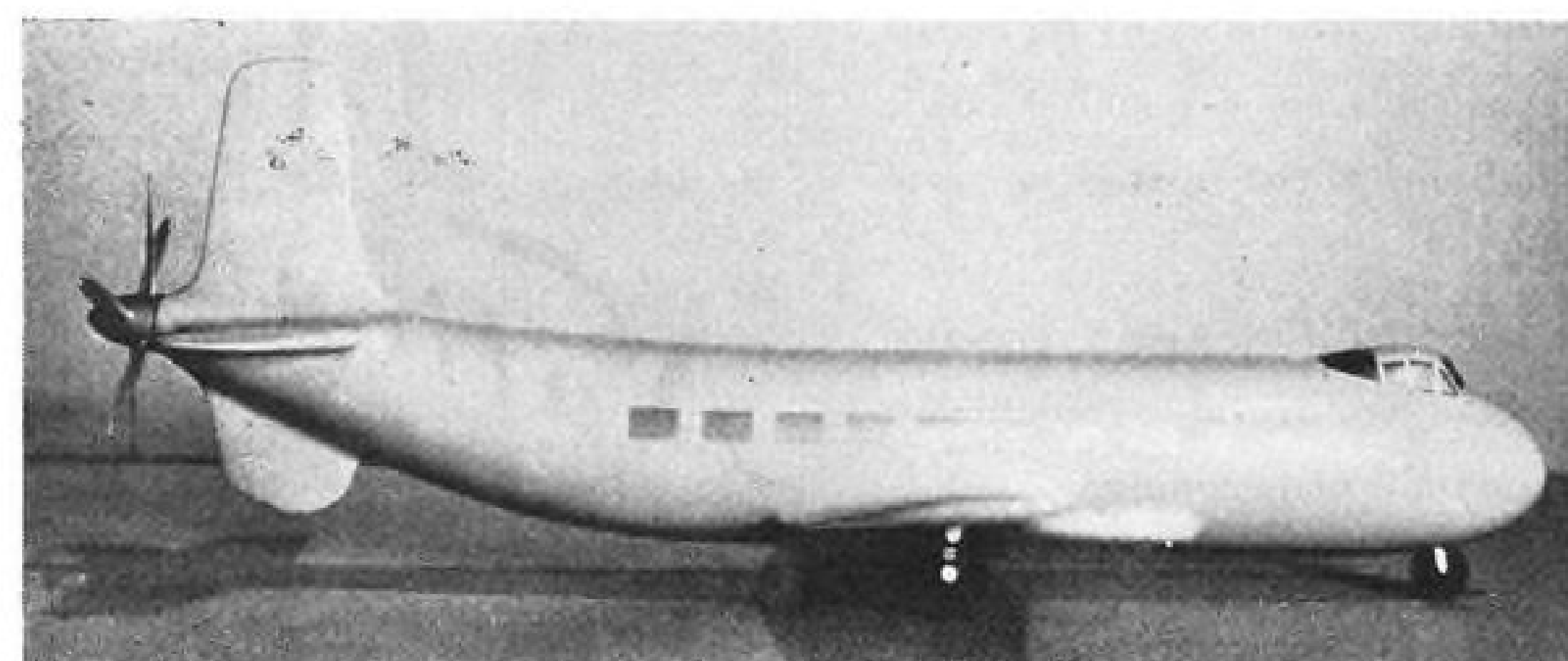


Among the planes using Lear designed and produced electro-mechanical actuating mechanisms are:

BELL: B-29 (Superfortress), P-63 (Kingcobra), XP-77 • **BOEING:** AT-15 (Crewmaker), B-29 (Superfortress), XB-39, C-97 (Stratocruiser), XPBB-1 (Sea Ranger) • **BUDD:** RB-1 (Conestoga) • **CONSOLIDATED:** B-24 (Liberator), B-32 (Dominator), C-87 (Liberator Express), LB-30, PB2Y-3 (Coronado), PB4Y-2 (Privateer), RY-3, TBY (Seawolf), Model 39 • **CURTIS-WRIGHT:** C-46 (Commando), XP-55 (Ascender) • **DOUGLAS:** XB-19A • **EASTERN:** TBM (Avenger) • **FAIRCHILD:** AT-21 (Gunner), C-82 (Packet) • **FORD:** B-24 (Liberator) • **GENERAL MOTORS:** P-75 (Eagle) • **GOODYEAR:** F2G • **GRUMMAN:** F6F (Hellcat), F7F (Tiger Cat), F8F (Bearcat), TBF (Avenger) • **LOCKHEED:** P2V (Ventura), P-80 (Shooting Star) • **MARTIN:** BTM, B-29 (Superfortress), JRM-2 (Mars), PBM-5 (Mariner) • **NORTH AMERICAN:** B-24 (Liberator), C-82 (Packet) • **NORTHROP:** P-61 (Black Widow) • **REPUBLIC:** P-47 (Thunderbolt).

Address all inquiries to: Home Office, Piqua, Ohio. Plants at Piqua, Ohio and Grand Rapids, Mich. West Coast Subsidiary: Lear, Inc. of Calif., Los Angeles, Calif. Research and Development: New York, N. Y.

LEAR, Incorporated



Invisible Engines: Power plant installation in the projected Douglas DC-8 is completely inclosed within the fuselage. Twin extension shafts, each 60-ft. long, connect engines and the 15-ft. pusher propellers, shown in this photo, at the tail of the airplane. Advantages are aerodynamic; better streamlining, less drag.

planes employed conventional tractor propulsion, with the engine mounted behind the pilot, and the shaft running under the cockpit to the nose. In the DC-8, the installation is reversed. The engines are placed forward of, and below, the passenger compartment, with two shafts passing to the rear to drive pusher propellers mounted at the tail.

Despite fears of military and civil aeronautical engineers, who first examined the *Airacobra*, that the extension shaft would frequently snap, more than 12,000 airplanes using the installation were built, without a single case of shaft failure.

In the DC-8, the extension shafts are considerably longer than those employed in Bell's fighters. In the Douglas plane, the shafts measure 60-ft., but are in several sections, with the joints supported by ball bearings. A bevel gear box, two-thirds of the distance between engine and propellers, directs the shafts upwards to the propellers which are mounted high off the ground.

► **New Props**—The propellers, too, are something new. Curtiss-Wright Corp., their manufacturer, explains that while the ordinary dual propeller has two hubs and two sets of blades driven from a single power source, the installation on the DC-8 is powered from two en-

Ignition Television

An apparatus which tele-views the location and nature of engine ignition faults without direct access to the engine has been developed by D. Napier and Son and English Electric Co. The ignition performance is thrown pictorially on a screen while the engine is running. The picture consists of a row of peaked figures, one for each spark plug, arranged in the firing order of the engine, starting from a selected cylinder. Perfect ignition gives a steady row of identical figures, but any fault in the system alters the shape of the figures.

► **Defect View**—A faulty plug affects the corresponding figure and can be identified from its position in the row, while a defect in the magneto or the distributor alters the shape of the whole row of figures. Intermittent defects cause the figures affected to flicker in step with the defect.

gines by two shafts, which merge into a coaxial shaft in a gear box.

The engines are the same as those used in the *Airacobra*, the *Mustang*, *Lightning*, *Warhawk* and *Kingcobra*. A 12-cylinder, V-type, each engine has a takeoff rating of 1,630-hp. at 3,200-rpm., at 3,000-ft., and maximum cruising horse-

power of 1,000 at 2,700-rpm. up to 19,000 ft. Allison claims the engines have the lowest weight per horsepower of any engine now in commercial transports.

Although showing only a single propeller installation, the DC-8 actually is a two-engined airplane, with single engine performance probably more satisfactory than any other. The two propellers may be feathered independently, and single engine flight may be maintained without any adjusting of control surfaces to compensate for loss of power on one side of the airplane.

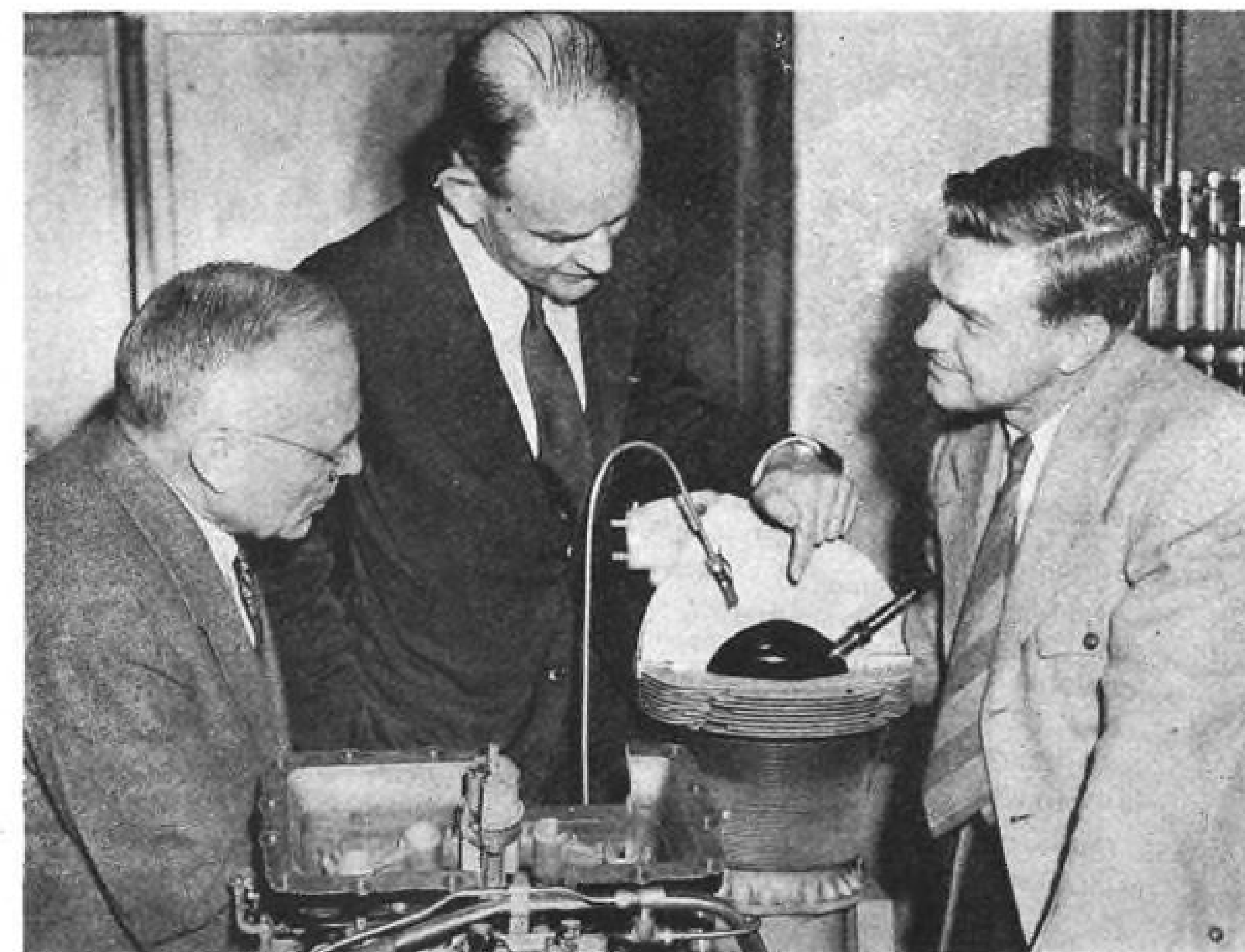
Secret Fuel Spray Revealed On B-29

Bendix direct injection system shoots pressurized gas into individual cylinders; new accuracy standards developed.

Details of new fuel-feeding systems which shoot pressurized sprays of gasoline directly into the cylinders of the Wright engines powering Boeing's B-29, have just been disclosed by Bendix Aviation Corp., developers and producers of the systems.

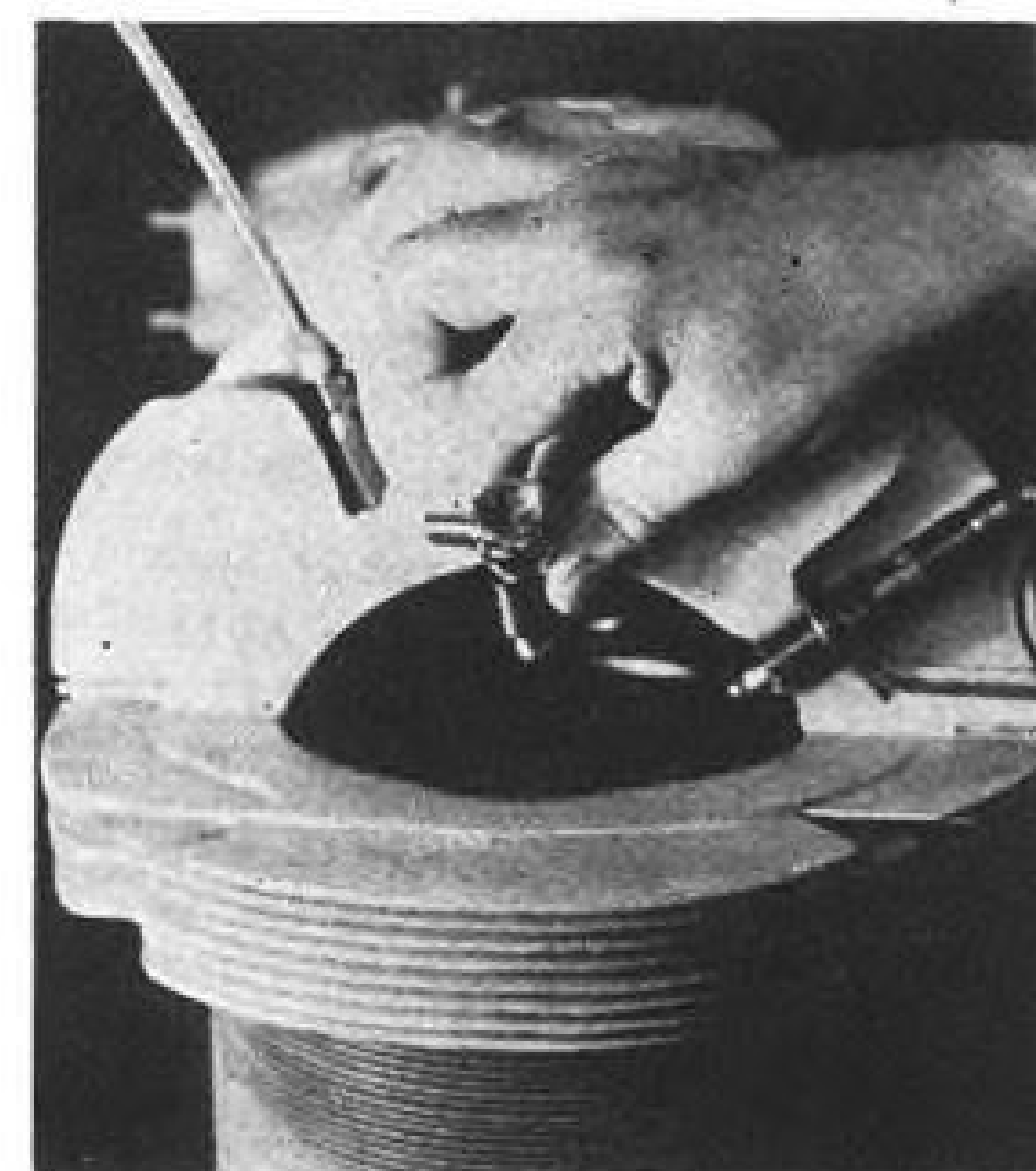
Malcolm P. Ferguson, in announcing the heretofore secret equipment, said the "direct fuel injection" system climaxed more than 13 years of research by the corporation's engineers and intensive laboratory tests conducted in cooperation with engine manufacturers and Army and Navy experts.

► **Milestone** — They developed a system which, for the first time in



Reveal Direct Fuel Injection: Cutaway model in larger picture illustrates inner working of the new direct fuel injection systems developed for the Wright engines which power Boeing's B-29, by engineers of Bendix Products division of Bendix Aviation Corp. Left to right are Frank C. Mock, manager of Bendix-

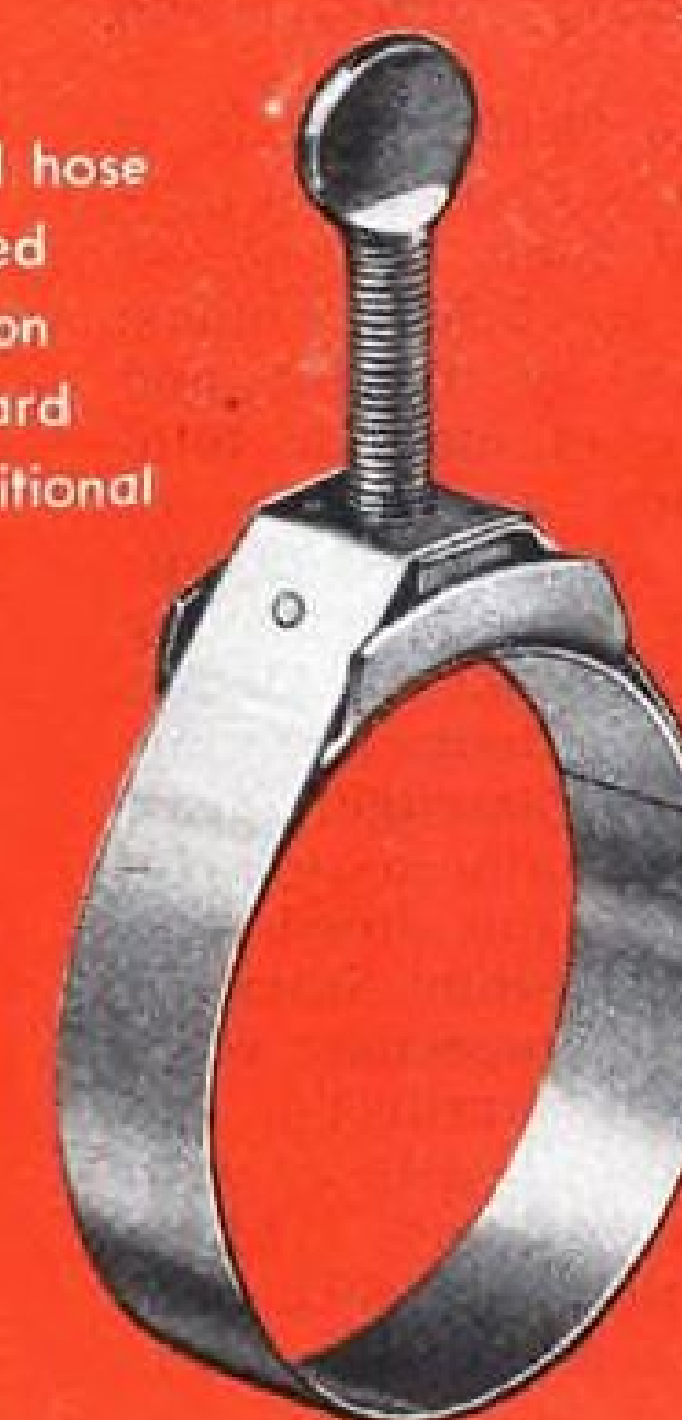
Stromberg aircraft carburetor engineering sales and service; John Marshall, direct injection project engineer, and C. D. Manhart, manager of aircraft fuel equipment sales. Smaller picture shows laboratory cutaway of cylinder; the technician's hand holding the fuel spray nozzle.



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TYPE WWD—an adjustable worm drive hose clamp made of stainless steel and designed to take full advantage of the superior physical properties of that material. Note the compact streamlined housing... the hardened one-piece thumbscrew—PLUS a new exclusive Wittek feature—an inner band of Stainless Steel accomplishing the two-fold purpose; (1) protecting the hose from the serrations in the outer band, and (2) distributing the load uniformly to provide greater strength and superior sealing characteristics.

TYPE FBSS—an improved Stainless Steel version of Wittek's basic FB design—now incorporating a bridge extender—in all sizes. This is the most effective hose clamp for all applications where an adjustable clamp is not necessary.

Hose Clamps for all requirements, made by Wittek—specialists in hose clamps and their applications.

a large air-cooled engine, combines the most effective elements of advanced fuel and air measurement and metering with the principles of accurate, pressurized injection of fuel directly into the individual engine cylinders.

Explaining operations of the systems, Frank C. Mock, director of the corporation's aircraft fuel equipment engineering and sales, pointed out that large spark ignition air-cooled engines had long posed a particularly difficult fuel distribution problem, that of obtaining even mixtures of fuel and air in the different cylinders. As the size of air-cooled engines was increased, new ways had to be found to deliver equal charges of fuel and air to the individual cylinders in order to ensure more stable, efficient and economical operation.

Direct fuel injection into individual cylinders is one workable solution. In the case of the B-29 engines, another immediate solution stemming from years of research was at hand, to obtain the "accurate "master control" of fuel-air measurement so vital in aircraft fuel-feeding equipment.

► **Control Plan**—To achieve this master control, Bendix-Stromberg engineers adopted for new use in direct injection the automatic metering devices already perfected and tested in widespread combat use on the company's aircraft "injection carburetor."

Mock said these fuel-air master control devices, not only meter the fuel feed according to the mass rate of engine air consumption but they also provide for automatically controlled variations of fuel air ratios as desired for different conditions of engine operation, including automatic mixture enrichment for high power requirements.

Working with the Air Technical Service Command and Wright Aeronautical, engineers successfully blended the master control devices with new and improved developments in fuel injection pumps, stemming from Diesel engine principles.

► **Two Pumps**—On the B-29 engines, two small compact injection pumps, each synchronized with the main engine drive shafts, accurately divide fuel into equal parts and pump it at high pressure into individual cylinders via airtight stainless steel lines. Each pump contains nine finely-machined "plungers" which spray fuel into the cylinders in a series of tiny shots at the rate of one spray from

each plunger every twentieth of a second.

Fuel accurately metered by the master control is injected directly into the engine cylinders at pressures ranging from 500-lbs. to 2,500-lbs. per square inch. This tremendous increase in pressure has been made possible by special selection of new steel alloys and precision machining of plungers to tolerances of ten millionths of an inch, through newly simplified production and gaging techniques.

Northrop, Grumman File War Sales Data

Northrop and Grumman aircraft companies have submitted reports to the Securities and Exchange Commission listing total sales, percentage of war business represented by such sales, as well as the amount of unfilled war contracts on the books at the beginning and the end of the period covered by the reports.

► Grumman, reporting for the three-month period ended June

Stirling Converted

The Short Stirling bomber is being converted into a passenger and freight transport, powered by four Bristol Hercules XVI air-cooled, sleeve-valve radial engines, each of 1,600-hp. driving three-blade full-feathering deHavilland propellers.

Loaded to 70,000 pounds, it can carry a payload of 18 passengers and their baggage—equivalent to 3,960 pounds; 1,300 pounds of freight and 3,600 pounds of mail, to total 8,860 pounds—a distance of 1,300 miles at a speed of approximately 207-mph., leaving a fuel reserve for a further two and a half hours of flying.

► **Seat Plan**—Passenger seats are arranged nine-a-side on each side of the lined and sound-proofed cabin. Immediately aft of the passenger compartment is a wardrobe, and aft of that a galley with vacuum flasks and other kitchen equipment. Still further to the rear are two lavatories.

The freight compartment, which has a capacity of 124 cubic feet is in the nose. Mail is carried in the bomb cells in specially designed containers.

The plane has a span of 99-ft., one inch; is 87-ft., three inches long and 22-ft., nine inches high.

30, listed total sales of \$74,000,000 (estimated) all of which were represented by war orders. At the beginning of the period, on April 1, the company had on its books unfilled war orders totaling \$253,000,000, and on June 30 a total of \$370,000,000 worth of war orders. ► Northrop, reporting for the 12-month period ended July 31, reported total sales estimated at \$87,000,000, of which \$86,920,000 represented war contract sales. On Aug. 1, the company had on its books unfilled war orders amounting to \$93,592, while unfilled war orders on July 31, 1945 totaled \$112,703,000.

Nine Air Engineers Get High SAE Posts

Nine aeronautical engineers have been named to a Society of Automotive Engineers' technical board of 23 high-ranking technicians to coordinate and supervise all technical committee activities of the society.

In addition, the board will direct the development of a new cooperative engineering program designed to implement the request of Lieut. Gen. Levin H. Campbell, Chief of Ordnance, for broadening and intensifying the war-time "functional teamwork" of SAE and Ordnance engineers to retain motorized military equipment superiority.

► Among those named to the board were: Rex B. Beisel, general manager, Chance Vought division, United Aircraft; R. M. Hazen, chief engineer, Allison division, General Motors; R. D. Kelly, superintendent of development, United Air Lines; William Littlewood, engineering vice-president, American Airlines; Erle Martin, engineering manager, Hamilton Standard Propellers division, United Aircraft; Arthur Nutt, director of aircraft engineering, Packard Motor Car; Mac Short, vice-president, Lockheed Aircraft; R. W. Young, chief engineer, Wright Aeronautical, and A. T. Colwell, vice-president, Thompson Products.

Boeing Terminations

Boeing Airplane Co. has reported war contract terminations aggregating \$120,000,000 to the Securities and Exchange Commission. These figures include costs and fees under cost-plus-fixed fee contracts, but do not include any data for the company's Canadian subsidiary.

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Have you ever considered what high frequency might do for us in reducing size and weight in our air conditioning unit?

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Ed

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has been whipped! Now, large, complex aircraft can have all the long-sought advantages of alternating-current main power. They can have it without the extra weight and nuisance of separate auxiliary engines, or d-c to a-c inverters.

ANOTHER G-E "FIRST"

The 400-cycle a-c system, first developed by G.E. with important co-operation from Sundstrand Machine Tool Company, offers a saving in weight over former systems that, alone, is highly significant. Added to this are the important advantages of having 400-cycle a-c motors throughout the ship. The elimination of

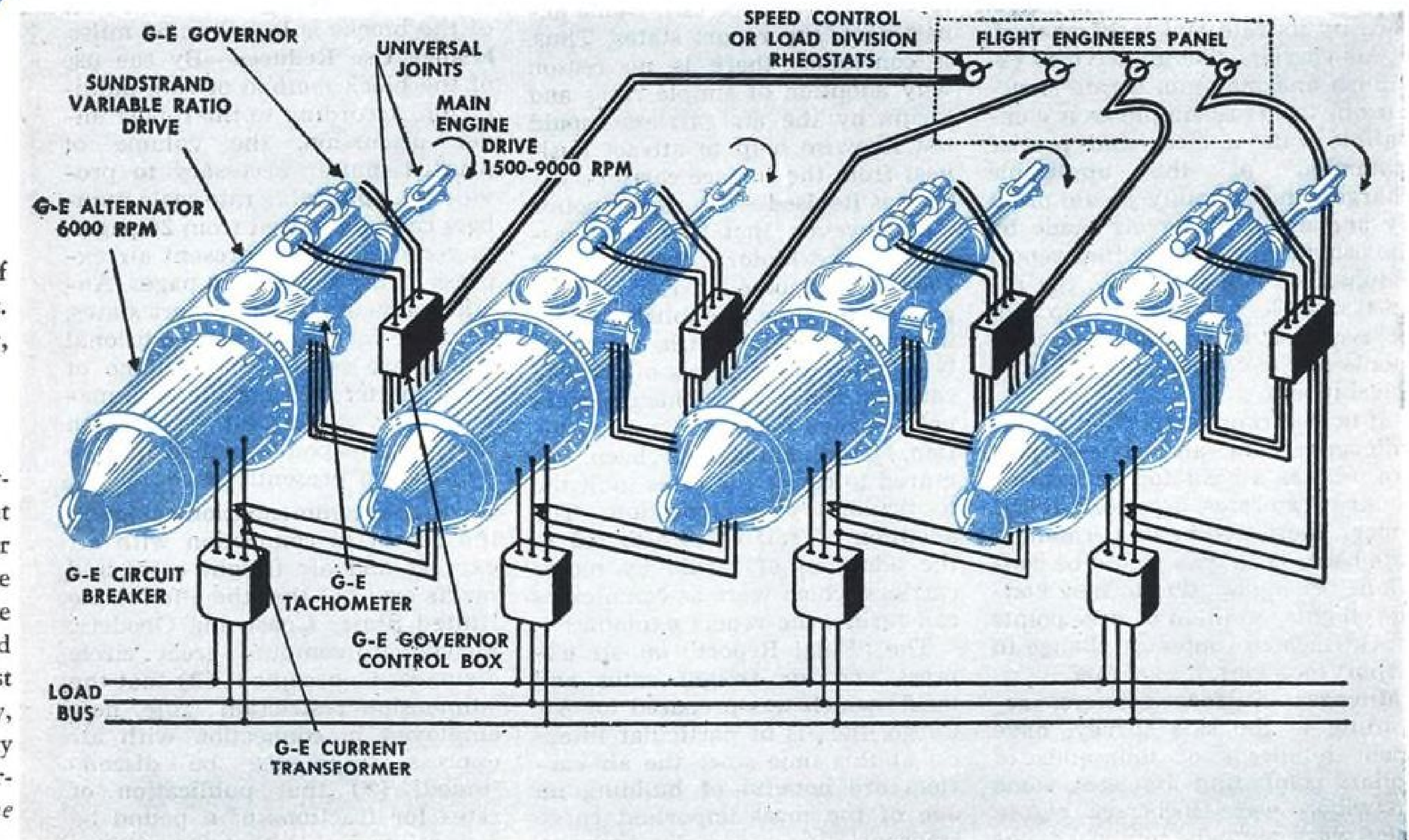
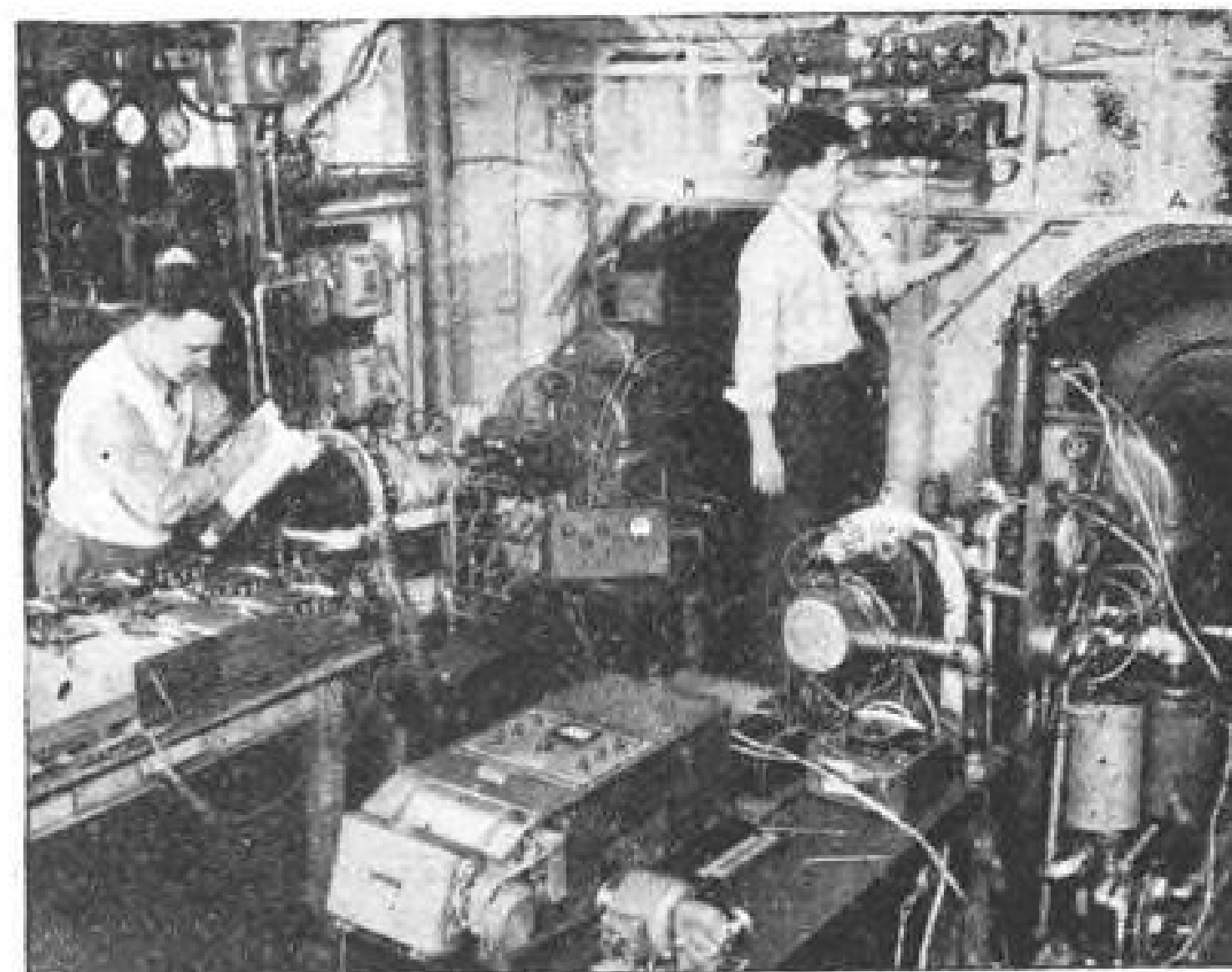
motor brushes means elimination of the problems of commutation and brush wear encountered with d-c. Maintenance is reduced and simplified. You get better, more reliable performance at high altitude.

Parallel Alternator Operation

Until now, there has been no way of driving alternators from the main aircraft engines at constant frequency, and paralleling them on a common power line. Engine horsepower on many planes may be 100 times the alternator rating. The individual engine speeds may vary over a 4 to 1 range, with very rapid acceleration. Yet the alternator on each engine must run at constant frequency, must parallel reliably, divide load equally, and maintain electrical stability despite disturbances. To do this, paralleled alternators must be driven, under all conditions, *within one or two mechanical degrees of perfect synchronism.*

Extensive tests, under severe conditions duplicating those encountered on modern bombers, have convinced critical aircraft engineers that an airworthy solution of this tough problem has been found. The sketch at the right shows, schematically, how the new system works. *Apparatus Dept., General Electric Co., Schenectady 5, N. Y.*

← **TEST LABORATORY** where the new G-E 208-volt, 400-cycle, parallel system was proved practical. Two 40-kva alternators are driven from 450-hp aircraft engines under typically severe conditions of varying engine speeds, fluctuating electric load, and line faults, and their successful parallel operation is a routine every-day performance.



INTERPOSED between each engine and alternator is a hydraulic, variable-ratio drive developed by Sundstrand with G.E.'s co-operation. A G-E governor on each drive acts as a "master-mind," adjusting the drive to maintain constant alternator speed and to divide the load equally among the alternators. Circuit breakers (which will be remotely controlled from the flight engineer's panel) connect each alternator to the power line at the engineer's discretion. No special synchronizing controls or indicators are needed.

Accessories, such as voltage regulators, differential current relay, exciter ceiling relay, and reactive load-division transformers, are provided, although not shown on this sketch.

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Great Circle Distance Basis Asked For Air Carrier Tariffs

Air Cargo, Inc. rate and tariff analyst urges new computation for express and freight to avoid errors made by surface firms; permanent charge basis believed possible.

A recommendation that air carriers adopt the use of Great Circle distances as a basis for air express and air freight rates is contained in a report prepared for Air Cargo, Inc., by its rate and tariff analyst.

Air carriers should strive to establish and maintain a rate structure in tariffs as simple as is compatible with a clear and precise statement of the applicable charges, and certainly should profit by and avoid the errors made by the surface carriers, the report emphasizes. In that way, the report says, less technical help will be required in the tariff departments of the carriers as well as of the shippers.

If non-stop or certificated airline mileages from airport-to-airport are used as a basis for air express or air cargo rates, according to the report, there will be no permanent rate base. The base would be constantly changing, due to new non-stop flights, addition of new points on certificated routes, or change in airport locations, it explains.

► **Mileages**—Surface carriers, according to the rate survey, have spent hundreds of thousands of dollars computing mileages, some of which were incorrect before they were actually published because of abandonment of old routes or construction of new routes.

The report goes on to explain that there appears to be more logic in basing rail and motor rates upon the actual distance via route of movement or via the shortest available route than on great circle distance because those modes of transport are restricted to the use of a fixed route, which in many instances is circuitous, whereas an airplane may use the most direct route between two points.

The simple tariffs or systems of charges used by motor carriers prior to passage of the Motor Car-

rier Act of 1935 attracted a substantial volume of traffic from the railroads, particularly from shippers whose business did not justify the maintenance of a traffic department, the report states. Thus, it concludes, there is no reason why adoption of simple rates and tariffs by the air carriers should not likewise help to attract business from the surface carriers.

► **Rates Revised**—The report points out, however, that following passage of the Motor Carrier Act of 1935, the motor carriers, being pressed for time to publish charges in compliance therewith, practically adopted the charges of the rail carriers. Since such charges were not designed for motor transportation, great effort has been required to revise the rates to fit the particular type of operation. The adoption of rail rates also led to the adoption of tariffs by motor carriers which were as complex as rail tariffs, the report explains.

The "Final Report" on air express and air freight rates and tariffs which was prepared for Air Cargo, Inc., is of particular interest at this time since the air carriers are hopeful of building up one of the most important cargo transportation systems in America. While passenger fares have been slashed to figures well below pullman rates on many routes, little has been said in way of postwar cargo rates.

The Air Cargo report says "it is almost axiomatic that the air carriers will have two types of service, one an express service by which packages will be transported on combination passenger-mail-cargo planes; and the other a cargo or freight service by which commodities will be transported on all-cargo planes. Such services will require two types of rates * * *"

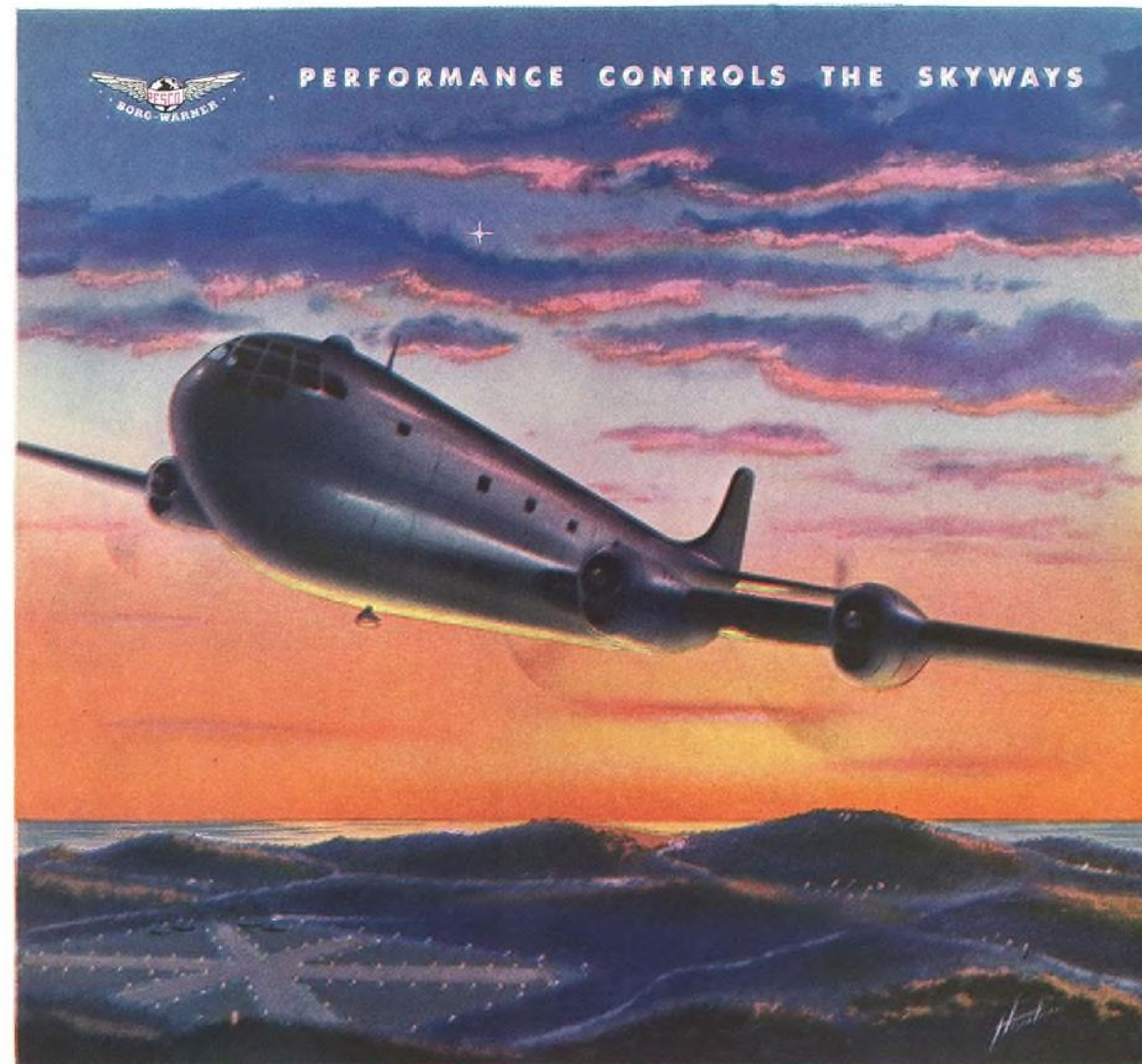
► **Urge Industry Tariff**—For the publication of these tariffs, the report recommends the adoption of

an industry tariff for both express and freight service and use the block method of tariff publication.

The block method of rate publication as explained in the survey was devised by the Interstate Commerce Commission. The United States was divided into 950 blocks along the lines of longitude and latitude—one degree of longitude and one degree of latitude representing one block. The degrees of longitude vary within the United States from 45 miles in the north to 62 miles in the south, while the degrees of latitude are constant at 69 miles. The mathematical average size of the blocks is 53.5 miles in width and 69 miles in length. Because of the contour of the east and west coasts of the United States, however, the average size of the blocks is less than 53 miles.

► **Paper Use Reduced**—By the use of the block method of rate publication, according to the report under discussion, the volume of printed matter necessary to provide the applicable rate scale numbers can be reduced from 20 pages, as required in the present air express tariff, to about 10 pages. Another advantage, the report states, is in the fact that when additional points are served, the volume of tariff matter will not increase materially as would be the case with the point-to-point method of rate publication presently used.

Other recommendations made in the report in connection with air express and air freight rates and tariffs are: (1) that the offer of the United States Coast and Geodetic Survey to compute great circle distances be accepted; (2) that the "dimension restriction" rule, now employed in connection with air express shipments, be discontinued; (3) that publication of rates for fractions of a pound be discontinued; (4) that the airlines give consideration to provision for minimum revenue to be allocated to each participating carrier on interline shipments; (5) that negotiations be entered into with the Railway Express Agency for agreement to apply other than local rates for rail express haul on air-rail shipments; (6) that any scale of rates or charges should be based upon a gradation of 50 miles instead of 100 miles; (7) that the scales of charges should be extended to cover all distances rather than ending at 2,350 miles; (8) that an industry rate and tariff bureau be established; and (9) that a shipper's discount plan not be adopted.



Boeing Stratocruiser

GIANT PLANES that will speed across tomorrow's skyways are dreams no longer. You will be seeing them more and more frequently . . . great ships like Boeing's new Stratocruiser now in service as the C-97. When peace comes, it becomes a high-speed, low-fare transport for more than 100 passengers. As a luxury sleeper plane, it will have 72 seats or 36 berths on the upper deck, and a lounge, dining salon, crew quarters and cargo space below. It has a top speed of 400 miles per hour and can fly 3500 miles.

Planes like the Stratocruiser, equipped with PESCO precision-built products, are typical of many military developments which will be ready to serve in other fields. PESCO experience in meeting the exacting demands of military aviation will be available not only to commercial aviation, but also to industry in more effective applications of Pressurized Power and Liquid Flow. For descriptive literature, write PESCO Products Company, (division Borg-Warner) 11610 Euclid Avenue, Cleveland 6, Ohio.

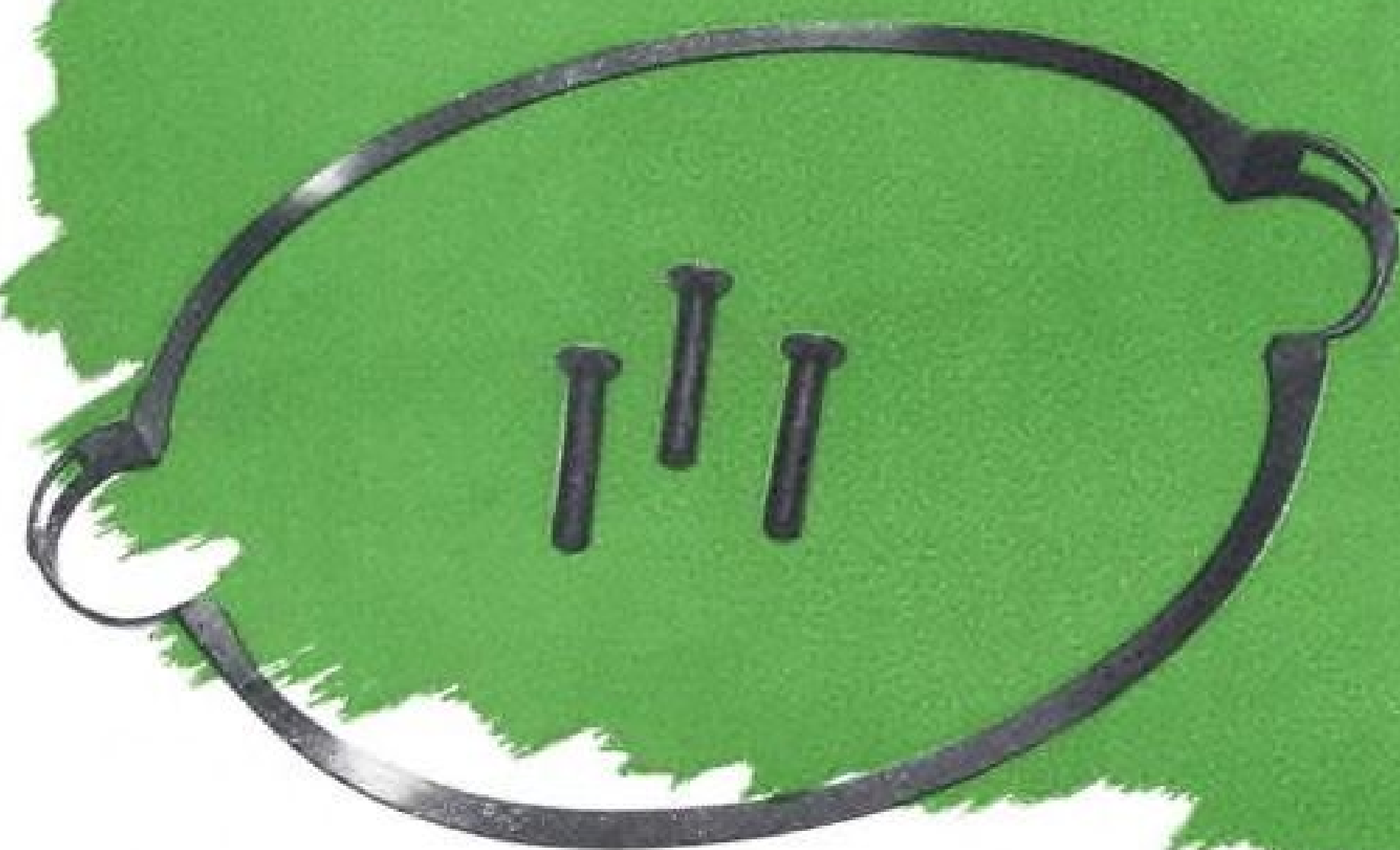
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Air Pumps, Related Accessories . . .



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● When the pressure is low, at high altitudes, American Bosch magnetos deliver faultless performance. . . . And Sirvene gaskets and cable boots are on the job to help maintain that dependable service. Take the Sirvene gasket, for instance. In order to avoid the effects of reduced air density the interior of the magneto is pressurized. A *positive* seal is necessary around the entire distributor block and Sirvene engineers worked with American Bosch to perfect a special Sirvene formula and gasket design. A compound was developed which was soft, yet which had a good compression set, so that it gave the required positive sealing with a minimum of pressure. Another special Sirvene compound was engineered for the cable boots. In this instance, besides sealing against moisture, air and fluids, the boot serves as a solid insulation material between the cable piercing screw in the distributor and any external parts. As with all Sirvene products, extreme care is exercised in making these boots and gaskets. No flaw, however minute, is permitted, and all production procedures are executed under laboratory-type methods. All this is worth remembering when you have a problem concerning pliable parts which must operate in exceptional service conditions. You are invited to call upon Sirvene chemical engineers, whose backlog of experience and research is unsurpassed. They will be glad to help you.

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TRANSPORT

CAB Orders Avco Inquiry To Determine AA Control

Investigation highlights 1938 ban against air carrier affiliation with non-carrier aviation interests; action is first threat to long standing role of Aviation Corp. in American Airlines picture.

The Civil Aeronautics Board has ordered an investigation to determine whether Aviation Corp. has acquired or now holds control of American Airlines, Inc.

The impending inquiry reaches back to the air mail cancellations of 1934. The community of interest among aircraft manufacturers and air carriers holding mail contracts was severely criticized and served as a basis of the 1934 action. As a result, one of the main provisions written into the Civil Aeronautics Act of 1938, prohibits any air carrier to be controlled by or affiliated with "any person engaged in any phase of aeronautics other than as an air carrier."

► **Sale Ban**—This stipulation was designed primarily to preclude an aircraft manufacturer from selling equipment to an affiliated air carrier at inflated prices with the cost being borne by higher charges to the public.

It was this philosophy which, in 1934, led to the dissolution of the old United Aircraft and Transport Corp. and the formation of three separate and independent enterprises, the present United Airlines, Inc., United Aircraft Corp. and Boeing Airplane Co.

North American Aviation Corp., which had managed through a technicality to maintain ownership of the properties now comprising Eastern Air Lines despite the 1934 action, was finally forced by the enactment of the CAA in 1938 to dispose of its air transport subsidiary.

Now comes the CAB with its order instituting an investigation to determine "whether the Aviation Corp. has acquired, and holds control of American Airlines, Inc., within the meaning of Section 408 of the Civil Aeronautics Act of 1938 . . . and if such control has been acquired . . ." will it be con-

sistent with the public interest. ► **Varied Interests**—Among other things, the Board asserts that the Aviation Corp. is largely engaged in the manufacture of aircraft, aircraft engines, aircraft propellers and aircraft parts. Also that the Aviation Corp. is the largest stockholder in Pan American Airways Corp., holding approximately 8.32 percent of the outstanding shares.

At present, Aviation Corp. owns 287,538 shares or 22.28 percent of the outstanding common stock of American Airlines and as such is represented as the largest individual stockholder of the carrier.

While Aviation Corp. has been in the American Airline picture ever since that air carrier's inception, the 1938 act never became a serious element until recently.

The present investigation might have been held in July, 1941, when Aviation Corp. converted American Airlines debentures and received 193,769 shares of the old American \$10 par common stock. At that time, such stock represented 33.7 percent of the total. Recognizing that there might be a conflict as to what represented control, Aviation Corp. arranged to trustee these shares with Jesse Jones.

Evidently, the government acquiesced in view of the airline's participation in the national defense program. This non-voting trust arrangement, as subsequently amended, is to expire six months after the termination of the national emergency.



STRATOCRUISER MOCKUP:

Interior of the Boeing Stratocruiser as it might look in commercial transport use are shown here in these first pictures of a mockup at Boeing's Seattle plant. One is of the lounge, on the ship's lower deck, the other a view toward the rear of the main passenger



compartment, in which all seats face forward whether berthable or non-berthable. Top passenger capacity of the C-97 will be 114 passengers. All-cargo model would carry a 39,000-lb. maximum payload.

► **Stock Sold**—Shortly after this stock was placed in trust, Aviation Corp. sold 50,000 shares to the public. When American split its shares two for one in December, 1944, this brought Aviation Corp's holdings to 287,538 of the new common stock. Along with dilutions resulting from American selling additional shares to the public, Aviation Corp's present interest aggregates 22.28 percent of American's common stock.

No member of the Aviation Corp. board sits on American Airlines' directorate. But two individuals closely associated with the Aviation Corp. interests are members of American Airlines' board. Further, the chief counsel for American Airlines, Raymond Pruitt, has been closely associated with Aviation Corp. from its inception to the present date.

As a matter of interest, the annual reports of American Airlines make no reference as to the trusteeship of Aviation Corp's stock interest. The latter's report, of course, has carefully noted the nature of this arrangement.

► **Convair**—In addition to its investments in American and Pan American, Aviation Corp. has the controlling interest in Consolidated Vultee Aircraft, a leading contender in furnishing air transport planes. Aviation Corp. recently acquired control of Crosley Corp., manufacturers of radios and owner of a radio station.

The leading figure in Aviation Corp. is Victor Emanuel who acquired control in 1934 from E. L. Cord and brought the corporation to its present position.

American Recommended For Nonstop Services

American Airlines will be authorized to serve Oklahoma City-Tucson and Oklahoma City-Phoenix nonstop on AM 4 if the Civil Aeronautics Board accepts the recommendation of its examiner in the case.

In a brief report last week, Examiner James S. Keith found that the proposed nonstop operations would improve American's trans-continental traffic by making possible both time and mileage savings.

Such improvement, he said, outweighs possible injury to Trans-continental & Western Air, since TWA will still maintain mileage advantages between major traffic centers which are competitive with American.



NEW EXAMINERS:

The Civil Aeronautics Board examiner staff, with these two latest arrivals, now stands at 17. The new men are J. Earl Cox (left), former trial examiner with the Federal Trade Commission, and Frank Trelease, former assistant secretary of All American Aviation.

Page Plea Protested

The Civil Aeronautics Board was asked last week by Public Counsel, in its economic investigation of Page Airways, to refuse further consideration of Page's motion (AVIATION NEWS, SEPT. 10), for dismissal of the case which seeks to determine whether the company operated scheduled flights without proper certification.

In opposing the motion, Public Counsel charged that Page operated Rochester-Miami service "to a large extent for the vacation and other traffic it might bring out of Florida." Page's planes, they maintained, "were not devoted exclusively" to fulfillment of contracts with six Rochester war industries.

J. F. Reilly Opens Office

James Francis Reilly, former executive assistant to L. Welch Pogue, Civil Aeronautics Board chairman, has resigned as a member of the District of Columbia Public Utilities Commission to enter private law practice in Washington, specializing in aviation work. He will be counsel for United Air Lines, among others.

From March, 1940, until September, 1943, Reilly was a trial examiner for CAB. At the latter date he became executive assistant to Pogue, a post he held until his appointment to the District PUC in July, 1944.

Tariff Discount Case Considers OPA Protest

Whether the reduced government travel discount tariff filed by Pan American Airways; Pan American-Grace Airways; Uraba, Medellin and Central Airways, and Cia Mexicana de Aviacion, is lawful under revised tariff rules and, at the same time, constitutes a fare increase "inconsistent with the stabilization program" will be the main issues at a Civil Aeronautics Board hearing, Sept. 28.

The board suspended the tariff and on June 25 ordered an investigation. Protests against "increases in rates," as a result of reducing the discount from 25 to 15 percent, came from the Office of Price Administration and the Central Labor Union and National Trades Council of the Panama Canal Zone.

► **Discount Elimination** — Pan American contends that the discount reduction will not raise its rates above the stabilization base level. The proposed tariff was said to be a step toward eliminating all discounts on its system, on which only those for Latin American service remain. Supporting evidence showing history of discount eliminations on Pan American's system, fare reductions and their effect on total revenue, and loss sustained on government discounts will be presented at the hearing.

Atlantic Air Crossing Boom Forecast By AA

Single-company air transportation of 36,000 passengers and 600 or more crossings of the Atlantic in a single month are foreseen by American Airlines on the basis of new records set in August under its Air Transport Command contract.

American believes this could be done with the same number of planes, if DC-6's were used at the same utilization ratio as flown in its trans-Atlantic operation last month for the ATC, when 27 Douglas C-54's averaged 15 hours a day per plane.

► **New Record**—American's one-way crossings in August totaled 508, compared with a previous high of 465 in June, and its record for route miles flown was 1,930,000. American Export Airlines, part of American Airlines System, completed 150 one-way Atlantic crossings during the same month, for 522,066 miles flown.

THE COUNTERSIGN OF DEPENDABILITY IN ANY ELECTRONIC EQUIPMENT

Electronics

A SALES ADVANTAGE AT POINT OF PURCHASE

The pressure of postwar competition will force many changes in manufacturing methods. For example, the food processor who uses electronic heat to sterilize packaged goods will have a potent sales advantage over the one who does not. In addition, other electronic processing methods may result in economies which will affect selling price and profits.

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Possible PAA African Service Would Use Domestic Fare Base

Line contemplates 35 hour trips to Union of South Africa at rate comparable to 4½ cents per mile, if recommended route is awarded by CAB; *Constellations*, DC-7's are equipment alternates.

Thirty-five hour air service between this country and the Union of South Africa, at rates comparable to the 4½ cents per mile on domestic lines, is contemplated by Pan American Airway if certificated for the route recommended by Civil Aeronautics Board examiners in the South Atlantic case.

Two alternative plans are under consideration. If, as Pan Am hopes, *Constellations* can be obtained, the following one-way schedules would be operated:

May 16 to Nov. 15—weekly service.

Nov. 16 to Dec. 31—twice a week.

Jan. 1 to Mar. 31—three times a week.

April 1 to May 15—twice a week.
PAA is now using *Constellations*

on its transcontinental project for the Army.

Under the second plan, using DC-7's, service would be provided twice weekly from April to December and three times a week during January, February and March.

Proposed fares, ranging from 5 to 4.25 cents per passenger mile, are based on a sliding scale, with lower rate applicable to longer trips. One-way fare from New York to Johannesburg would be \$368. A berth would cost \$92 more.

Cargo rates would vary according to three classes of commodities:

Class 1, (high value), 20 to 40 cents a ton-mile.

Class 2, (low value), 15 to 25 cents a ton-mile.

Class 3 (little or no intrinsic value), 10 to 15 cents a ton-mile.

In their report to the board, Examiners William J. Madden and James S. Keith narrowed the field of applicants to Pan American and American South African Line, operator since 1926 of a steamship service between the U. S., south and east Africa, and Indian Ocean islands, who proposed using the *Martin Mars* flying boat if granted a certificate.

The favorable consideration given the surface carrier in the final determination resulted from the examiners' finding that these two applicants stood out in their ability to develop U. S.-South African commerce, the basis for justification of the route.

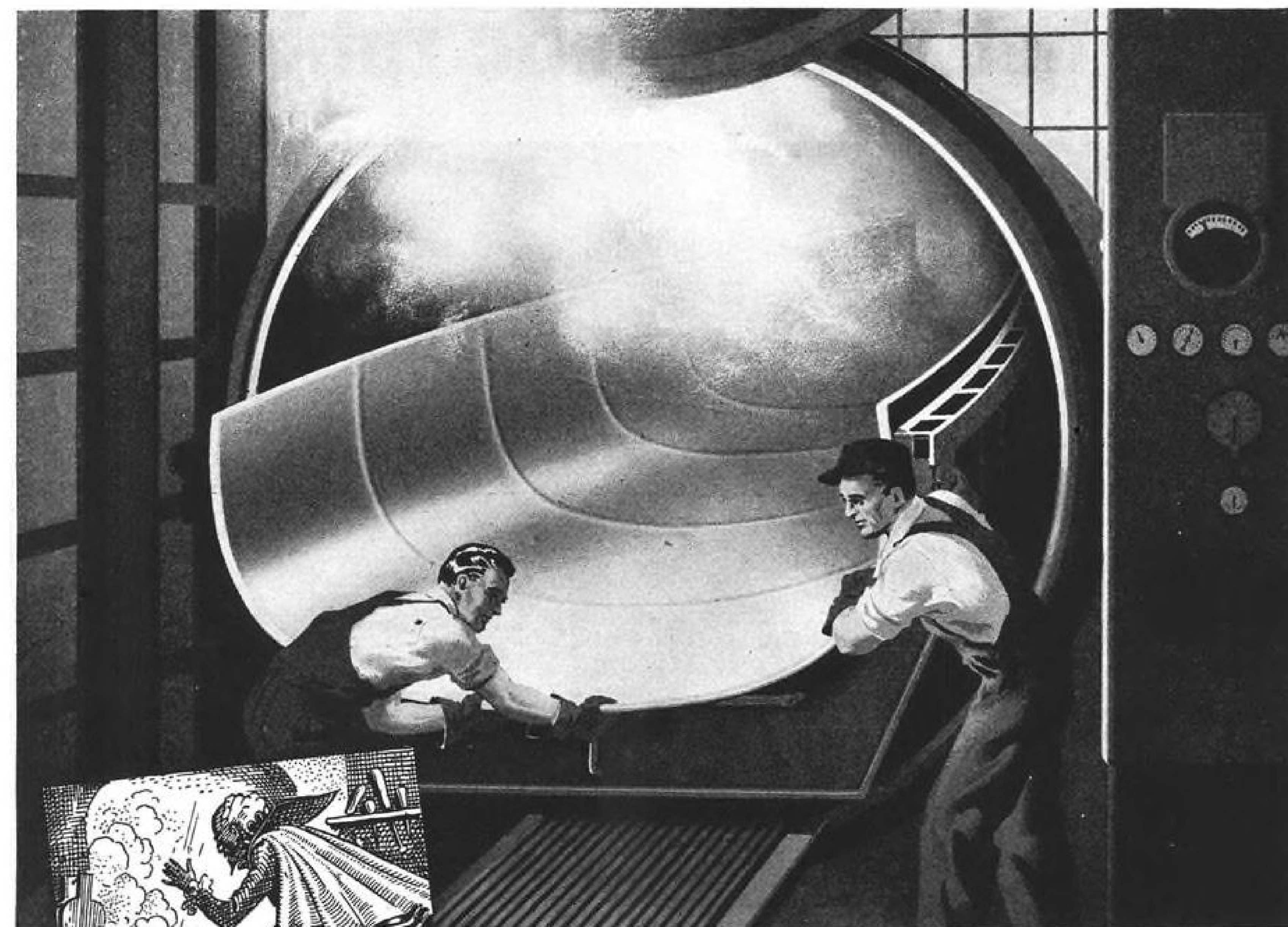
▶ 'Dictated' Decision—Designation of Pan American was "dictated" by the board's interpretation of the Civil Aeronautics Act, excluding surface carriers from airline control unless supplementary to their surface operations.

American South African Line's proposal, the examiners said, was not a service "which would be auxiliary and supplementary and therefore incidental to its steamship operations."

Other factors placing PAA "on an approximately equal basis" with the steamship company as far as public interest is concerned and thereby favoring its selection were experience in a variety of world markets gained by pioneering routes across the Pacific to the Orient and New Zealand, the North Atlantic to Europe, and to most Central and South American countries, and the "roots" it has in Africa.

▶ Advantages—Cited in the latter connection were acquisition in 1941, of operating rights in Liberia and Belgian Congo; a traffic agreement with the Belgian airline, Savena; and Pan American's temporary certification for Miami-Leopoldville service, terminated, since, except for the Monrovia-Leopoldville segment which is now temporarily suspended only because no aircraft is available to Pan Am to replace a plane lost in an accident.

With respect to the proposals of American Export Airlines and Pennsylvania-Central Airlines, only other operating carriers in the case, Madden and Keith apparently found little to justify recommending either for the proposed service. PCA's argument that it could provide single-carrier service to African points from the many important eastern cities it serves was



This is no Alchemist's dream

Alchemists of old, in long-labored attempts, tried vainly to change common ores to precious metals.

While Duramold hasn't changed lead to gold, in essence, Duramold's engineers have achieved the alchemists' goal. They impart new character to common materials.

In light, pliant materials—cloth, paper, glass fiber, wood veneers, cellular rubber and many others—the Duramold process *creates* a backbone of strength. Laminations of these materials are bonded with thermosetting resins under heat and pressure, frequently using synthetic, lightweight core materials between laminations.

Duramolding gives them new qualities. Their pliancy is gone. They assume rigid strength, molded to precise

specifications in intricate and complexly curved patterns.

Here, then, in an industry now devoted entirely to production for the Air Forces, lies the promise—and the reality—of new materials for builders of peacetime products. Here, as in all Fairchild research and engineering, lies "the touch of tomorrow."

YOUR PRODUCT—AND DURAMOLD. Your need for strong, lightweight materials—for parts impervious to extremes of weather, fungi or corrosives—may well find its answer at Duramold. Fairchild engineers are specialists in exploring the possibilities for new applications of Duramolded materials. For further detailed information about Duramold, send a letter on your business stationery. Write Department 10.



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ATC Sets Global Route Pattern

Inauguration of the first regular round-the-world scheduled flight by the Air Transport Command, Sept. 28, will commemorate the 21st anniversary, to the day, of the first globe-encircling flight by Army Air Force planes.

First of the Douglas C-54 *Sky-masters* to start the weekly flight will leave Washington on a route that represents a consolidation of former international ATC routes. Plane changes will be made at three points—Karachi, Manila and San Francisco.

▶ Flight Stops—Crew changes will be made at other stops along the route, which goes to New York, Bermuda, the Azores, Casablanca, Tripoli, Cairo, Abadan (Iran), Karachi, Luliang (China), Manila, the Marianas, Kwajalein, Johnston Islands, Hickam Field (Honolulu), San Francisco, Kansas City and back to Washington.

Passengers, mail and cargo will be carried, in proportion to War Department needs. Maximum passenger capacity will run about 30.

(The ATC also disclosed, at the same time it revealed the round-the-world flight, it will begin soon a regular service between Paris and Tokyo via the U. S.

Equipment for the service will be C-54 types.)

In contrast to the original AAF world flight of 26,345 miles in 1924, which required 155 days, time on the 1945 round-the-world schedule will be an estimated 151 hours (6½ days) to cover 23,147 miles.

▶ "Globester"—The starting plane will be christened "Globester" by the wife of Lt. Gen. Harold L. George, ATC's commanding general, at inaugural ceremonies at 5 p. m., Sept. 28, in Washington. The flight, 21 years ago, was also made in Douglas planes. Four two-seater biplanes called *World Cruiser*—one is now in the Smithsonian Institution—started the trip. Three finished it.

Several pilots who participated in the original mission are still assigned to the AAF. They are Col. Eric Nelson, Col. Lowell Smith, and Col. Leigh Wade. A fourth, Col. Leslie P. Arnold, is on inactive status and is vice-president of Eastern Air Lines. Colonel Nelson and Colonel Arnold, with General George, will participate in the ceremonies.

On board for the first trip will be several ATC observers and an ATC public relations man.

New, better synthetic rubber in B F Goodrich airplane tires



Another tire "First" that means longer wear; greater safety

A B. F. GOODRICH development so important that it was kept a strict military secret until just recently, can now be disclosed. It's a new kind of synthetic rubber, better for tire making than the ordinary synthetic rubber which is in general use by the tire industry.

This new rubber is a B. F. Goodrich development. Tires made of it give longer wear than those made of ordinary synthetic. They also run cooler under heavy loads, which is especially important as the trend continues to heavier planes.

B. F. Goodrich is making this new rubber in plants operated for the Government. It has been tested in all kinds of tires on all kinds of vehicles from passenger cars up through big bombers. Every tire containing it will stand up better under heat or constant flexing, will

wear longer, and will have increased bruise-resistance.

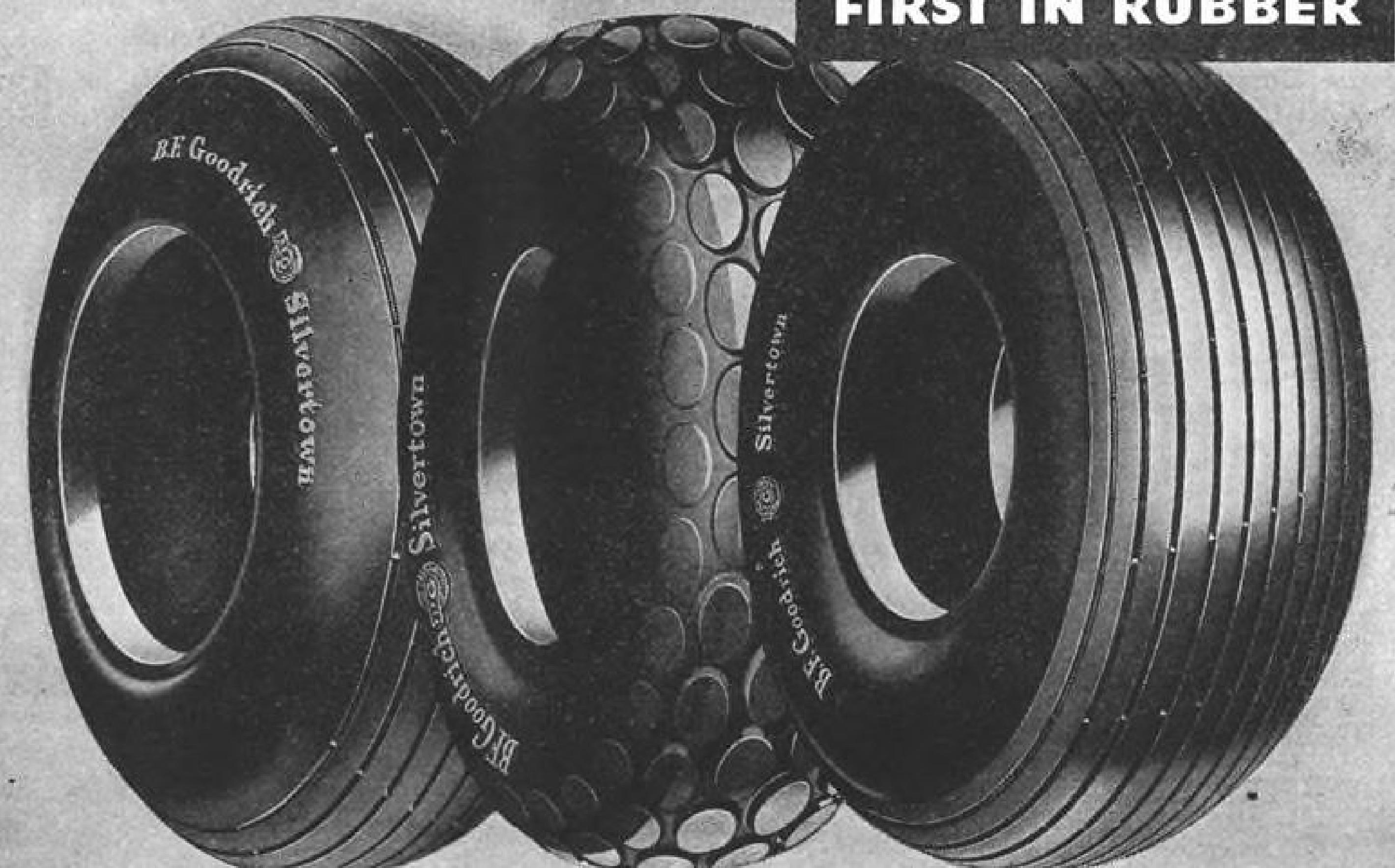
This new rubber development is one more example of the kind of work going on constantly at B. F. Goodrich—the kind of improvement that will bring American aviation far better products after the war than we ever had before. It's one more indication that you get something extra in value and economy whenever you buy a B. F. Goodrich product.

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Skyway or Highway

B.F. Goodrich

FIRST IN RUBBER



not "persuasive," while Export's experience in international operations did not fulfill the "more controlling reason" based on the route justification mentioned above.

In addition, the examiners pointed out that both PCA and Export relied heavily on a New York-Puerto Rico segment as support for the African service, which might conceivably become incidental to Puerto Rican service. The latter is before CAB in the pending Latin American case.

Air Snapshots Allowed

Wartime ban on use of cameras by airplane passengers has been lifted by Civil Aeronautics Board repeal of Section 43.82 of the Civil Air Regulations.

The action, also obviating search of baggage and removal of cameras, was taken with the approval of the War and Navy Departments. Only remaining restriction is against photographing military installations.

DC-6 Development Gains New Orders

National to buy 11; UAL plans ground facilities expansion to handle new ships; first nears completion.

With construction of the prototype of the Douglas DC-6 about two thirds completed, this four-engine, 300-mph. plane was receiving increasing airline attention last week.

National Airlines announced that it was about to purchase 11 of the ships at a cost of \$7,500,000. United Air Lines, which has 35 on order, disclosed that it has under way a \$10,000,000 expansion program for airport and ground facilities to accommodate them.

► **Flight Date**—First plane of this type is to fly shortly after the first of next year. An Army version known as the XC-112A is being constructed at Douglas' Santa Monica plant, and it is on this that

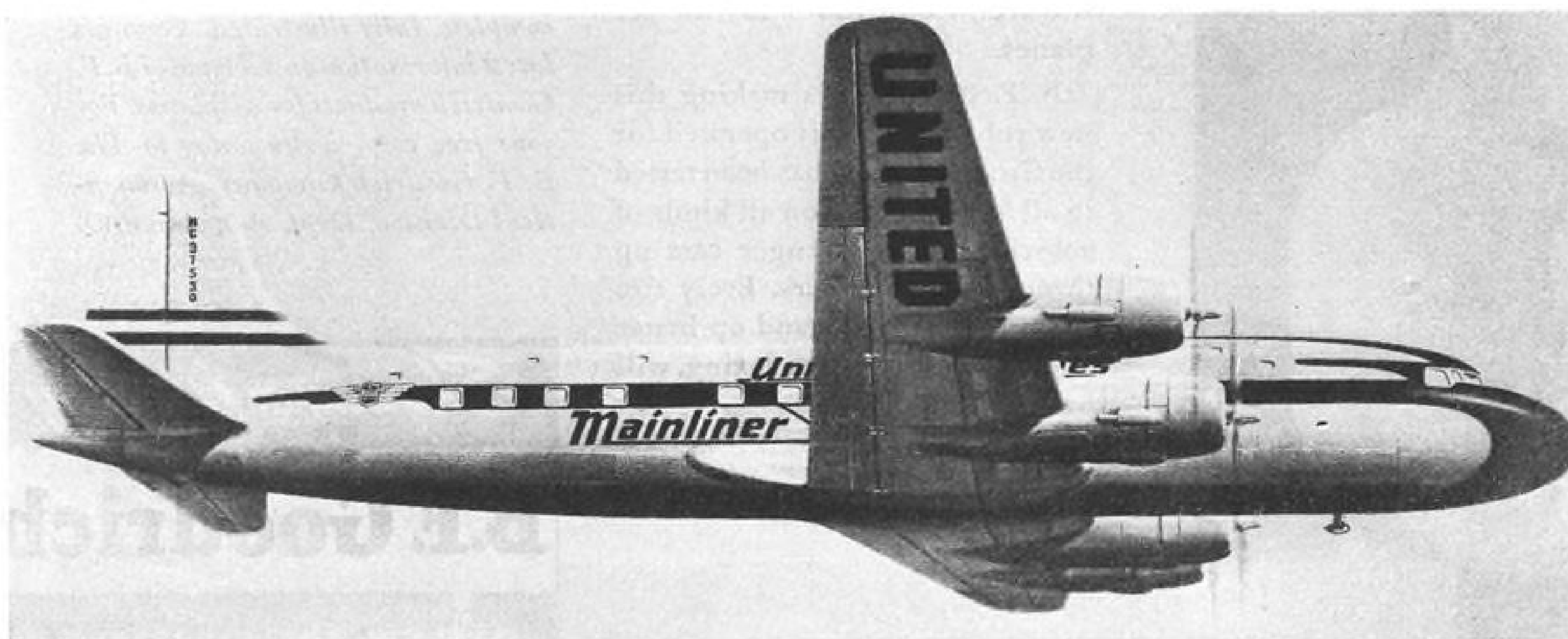
work is about two thirds finished. Just how many DC-6's will be built, Douglas does not know. Company officials say airline orders are not definite, and may not be for some time, depending on the surplus situation as it regards four-engine equipment.

United issued drawings and description of the DC-6, which the line expects to have in service next year, showing that it would carry 52 passengers or more, plus 5,500-lbs. of cargo. National, in announcing that its board of directors had authorized its officers to negotiate the purchase, said it expected the plane to carry 70 passengers.

► **Time Slasher**—United will use the DC-6 on its coast-to-coast and Pacific coast operations. They are expected to cut trans-continental travel time to 9½ hours or less.

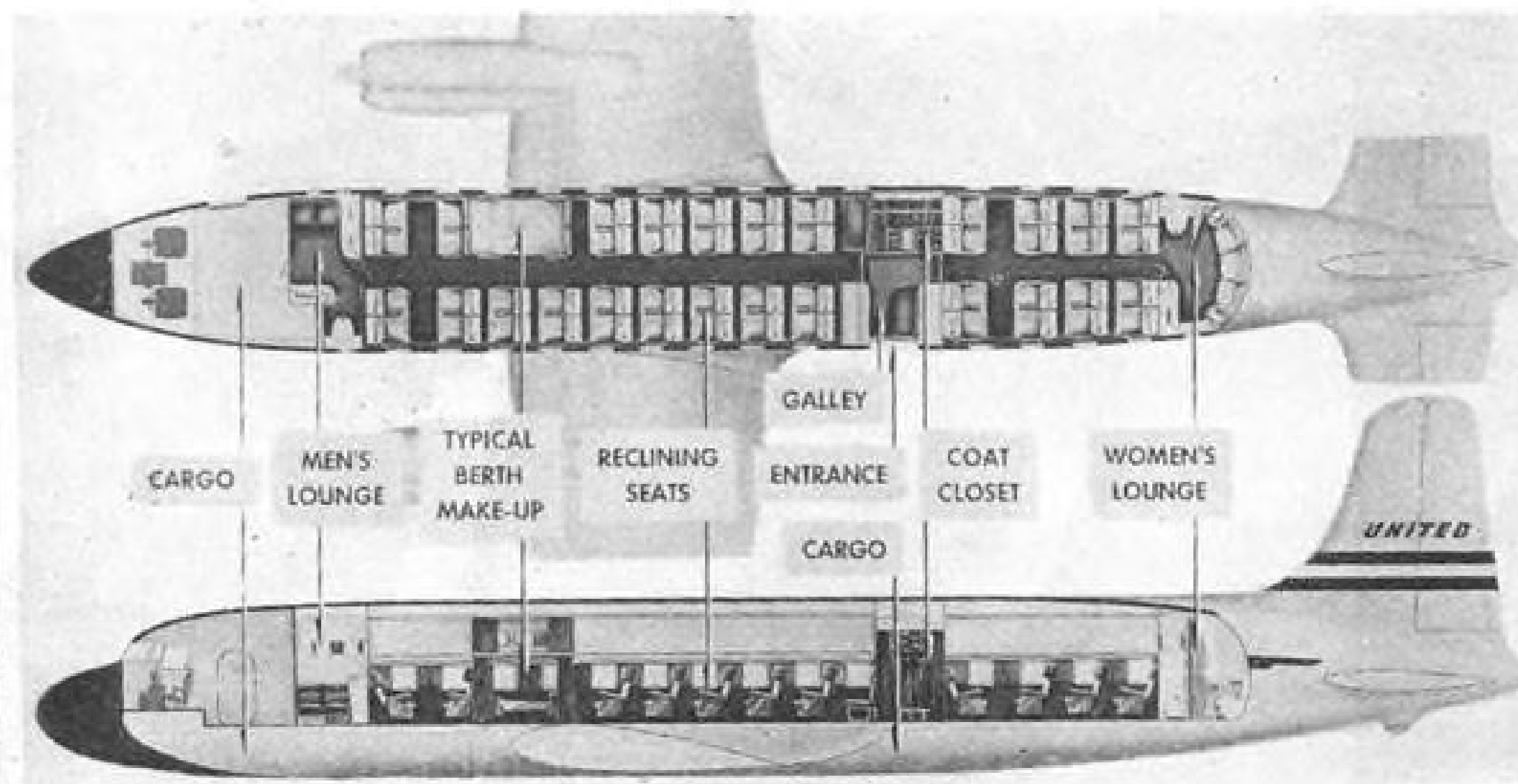
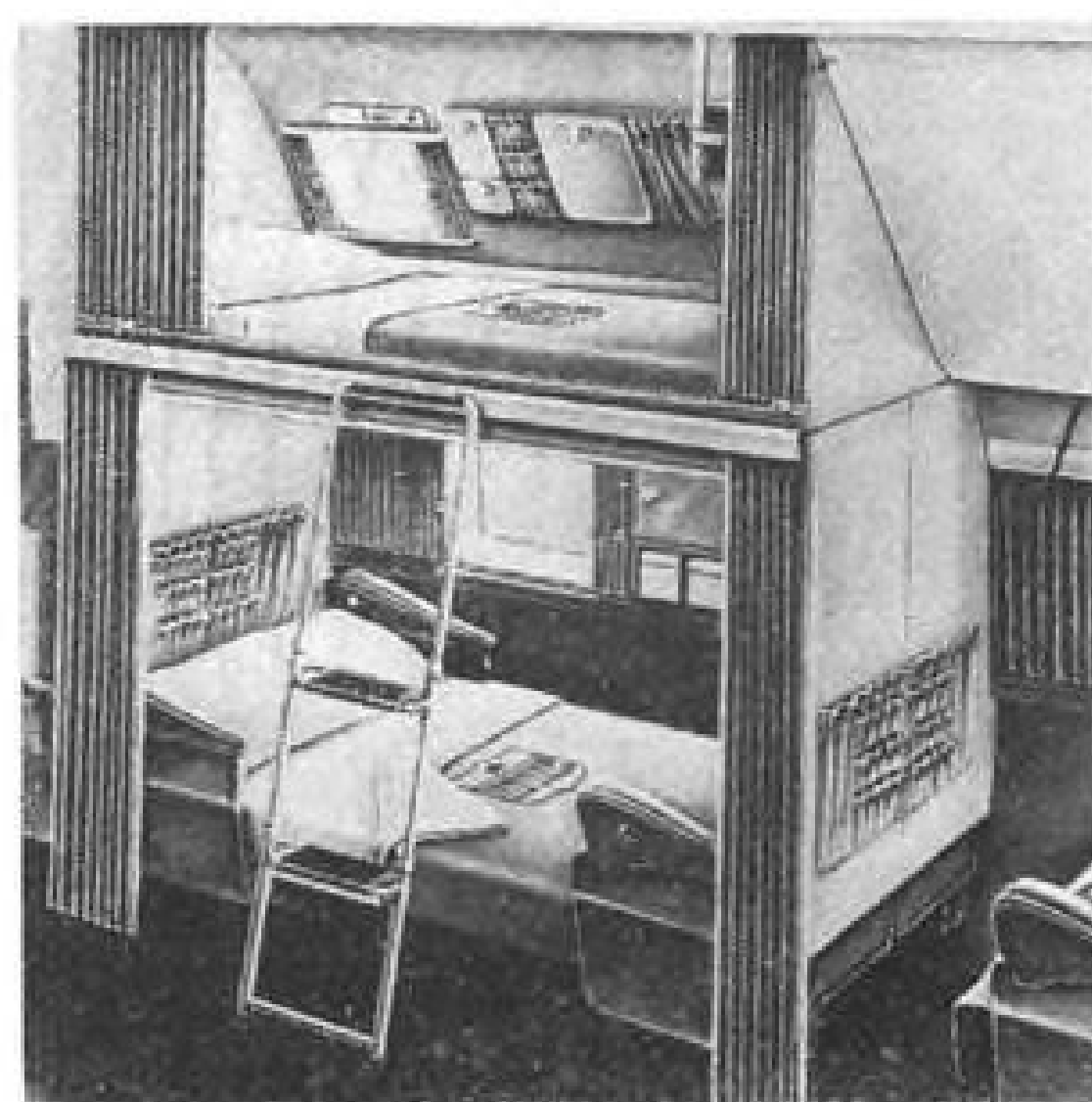
The 64-ft. pressurized cabin will be divided into two sections, of which United suggests one could be used for berth arrangement and the other for day seats.

The company's expansion pro-



New Drawings of Douglas DC-6: These sketches of the Douglas DC-6, now nearing completion on the West Coast, show exterior appearance, interior seating arrangement, and closeup of proposed berth ar-

rangment as pictured by United Air Lines. Upper berth (note window) will be 6-ft., 7-in. long and 32-in. wide; lower berth, 6-ft., 3-in. long and 41-in. wide.



They want plane talk from you



Fellows who like flying like Mechanix Illustrated. It helps them. Suppose they're interested in learning to fly, but think it's too expensive. Articles like this one - "Start a Flying Club" - on Page 45 of the July, 1945, M.I., show how a bunch of fellows can learn to fly the cheapest, most practical way. Anybody with his head in a helmet and heart in the clouds has been looking for stuff like that. Mechanix Illustrated is filled with it.

Mechanix Illustrated tells them how to fly, how to buy, how to make, how to care for the airplanes they have — or will have some day.

Mechanix Illustrated's monthly feature, "The School Shop," gets technical about flying, and the fellows love it. In July, for instance, there's a simple, understandable explanation of the radial engine. It's Chapter 28 of "The School Shop" series, by the way — Mechanix Illustrated has been helping out a long time.



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Talk plane talk to America's future flyers and future plane buyers in Mechanix Illustrated, the newsbeat magazine in the mechanical field. Here's where they look for the facts they've got to know. Mechanix Illustrated carries more aviation advertising - a look through the book will tell why. It's essentially an aviation magazine, even to the airplane on most covers. Your future market reads it now. Reach that future market now by using Mechanix Illustrated regularly. Make it a part of your postwar plane-selling plans.

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gram in anticipation of acquisition of the planes, which will be similar to the DC-4 except for an extra 80 inches on length of the fuselage, includes \$250,000 in projects now in progress and \$3,000,000 for major projects to begin soon. The former entails revision of traffic offices and passenger facilities, installation of enlarged gasoline storage and cargo handling equipment and reinforcing of ramps and runways. The latter will include new hangars at Chicago, Seattle and San Francisco, new traffic office and airport terminal facilities at Los Angeles, enlargement of passenger facilities and a new flight kitchen at Portland.

► **Other Development**—This is the second sum of this size announced for future expenditure by the company. W. A. Patterson, United president, disclosed recently that the line is ready to spend \$10,000,000 for "purchase, development and adaptation" of electronic

and other technological war-developed aids.

Cargair Enterprise Swings Into Action

Non-scheduled air freight shipping agency makes first public appearance with National Skyway contract.

One of the most quietly developed enterprises in the air transport industry, Cargair, Inc., whose Los Angeles backers would like to corner non-scheduled air freight shipping agency business, made an unobtrusive first public appearance a few days ago at Fresno, Calif.

The firm contracted with National Skyway Freight Corp. to air ship from Fresno's Chandler Field to New York a consignment of 224 cases of wine, including a gift assortment for Mayor La Guardia, and another of vine-sweet grapes. ► **Space Shopping** — Cargair has been shopping nationally during the past six months for exclusive franchises which will give it space at major airports for construction of warehouses and perishable goods precooling sheds.

Airport managers approached by

Cargair agents have been assured that the company stands ready to invest \$10,000,000 in perfecting its shipping agency organization. The financial sponsor of Cargair, Inc., is Lawrence Harvey, aggressive vice-president of Harvey Machine Co. of Los Angeles, who has a reputation for heavy and successful investments in a variety of real estate and industrial enterprises.

Cargair was launched more than a year ago with preliminary planning sparkplugged by George Noville, formerly associated with Adm. Richard Byrd. In prospect at one time, but unmentioned recently, was the marketing of a cargo loading device designed by Noville.

► **Service Leases**—Another Cargair project has been that of leasing ground handling devices and handling crew services to major airlines at terminals and important stopping points. So far, however, the airlines have displayed no interest in abandoning their present operation of individual station crews and equipment.

Over-Ocean Emergency Equipment Tested

Emergency equipment for over-ocean air operation, including life rafts and vests, was tested last week before representatives of the airlines, manufacturers, Civil Aeronautics Administration and the military, at the Coast Guard's test base at Cape May, N. J.

Several types of experimental equipment, under study by Air Transport Association's subcommittee on standardization of such items, were tried. The committee met at Cape May Sept. 18. The experiments began Sept. 19 and were to continue until the end of the week.

► **Raft Types**—The trials included 20, 15, and 10-man rafts of various types, and several types of light-weight life preservers.

Airline representatives attending: William F. Hall, American; Walter Flynn, PCA; R. O. Jacobson, PAA; A. J. Salmon, United; F. E. Davis, Eastern; G. E. Hurd, American Export; J. E. Herrington, TWA.

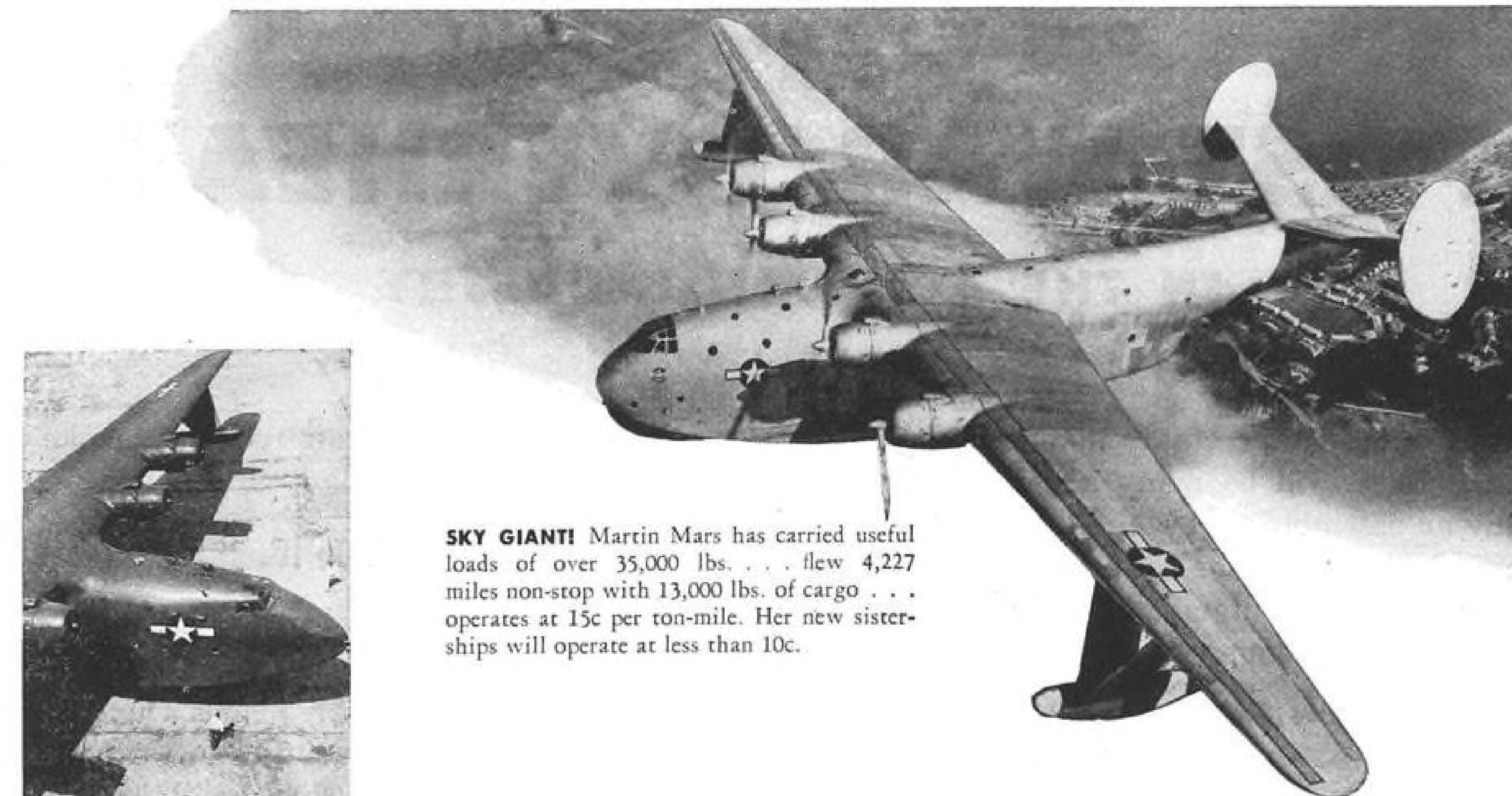
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offering opportunity for advancement to responsible job by young man (28) currently employed in large aviation plant as superintendent of inspection; 6 years aircraft experience; some flying; 5 years college engineering.

PW-158, AVIATION NEWS

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SKY GIANT! Martin Mars has carried useful loads of over 35,000 lbs. . . . flew 4,227 miles non-stop with 13,000 lbs. of cargo . . . operates at 15c per ton-mile. Her new sister-ships will operate at less than 10c.

BIG BOW of a JRM Mars gives idea of their vast size. Great 120-foot hulls contain 32 ports, 17 hatches, including the 8 by 7½ ft. cargo doors. Wing spread exceeds 200 ft.

WHY is the Martin Mars America's No. 1 transport plane? Let's look at the record! In her first 15 months of service the Mars carried 3,000,000 lbs. of cargo, nearly 2500 passengers, flew the equivalent of 10 times around the earth at the equator. During one month alone, she made 20 trips between Pearl Harbor and California for a utilization of 9.4 hours per day.

NEW MARS TRANSPORTS

On the basis of this outstanding performance, the Naval Air Transport Service ordered a fleet of these highly efficient cargo carriers. Bigger, faster than the original Mars, these new transports will rush supplies to Pacific outposts at a rate of approximately 3000 ton-miles per hour . . . will operate at less than 10c per ton-mile . . . will be quickly convertible from cargo carriers to hospital ships accommodating 84 litter cases and 25 attendants or to transports seating 132 passengers. These huge 82-ton flying ships will soon be entering service.

COMMERCIAL VERSIONS

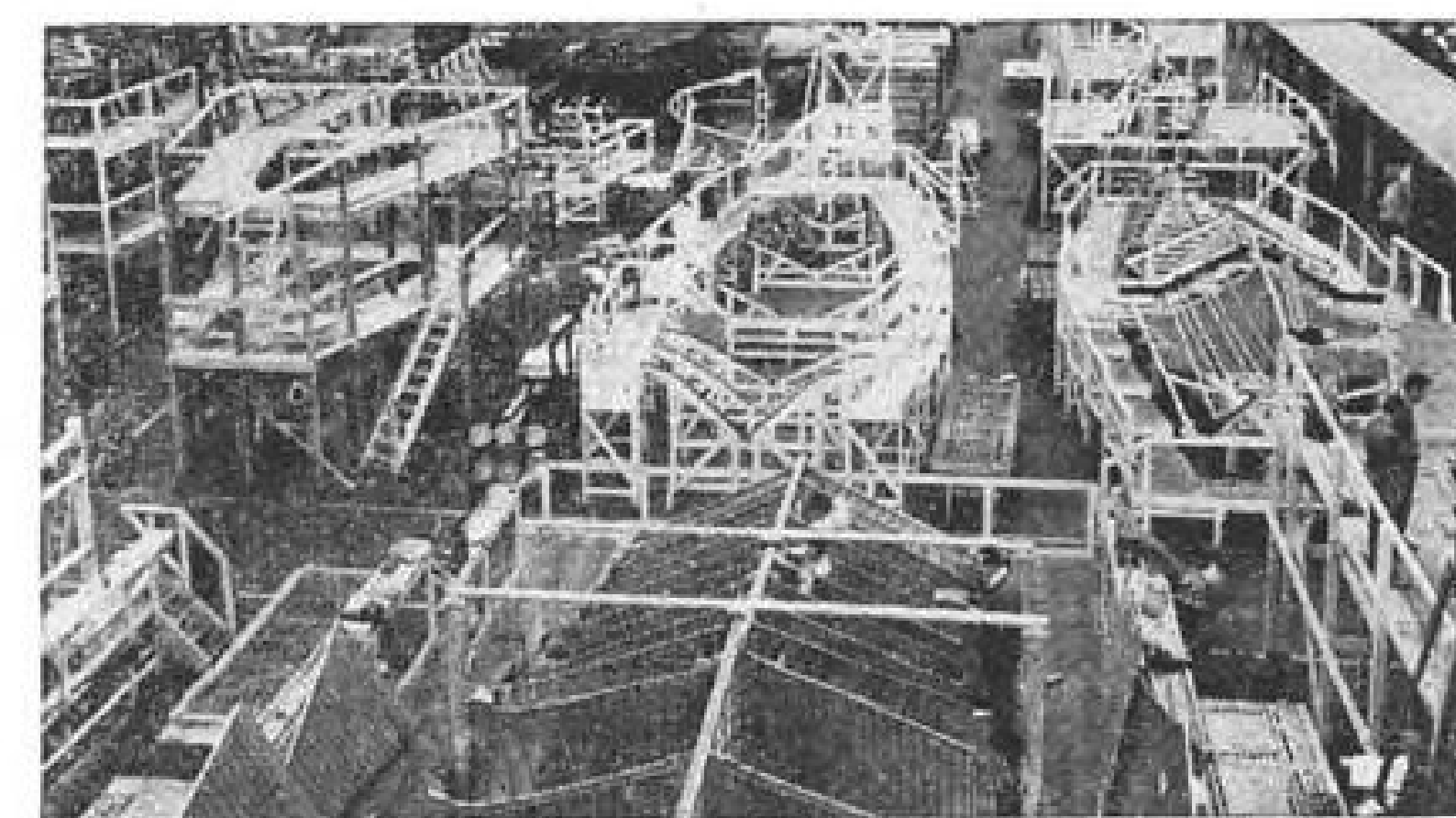
Commercial versions of the new Mars, offering great freight facilities and unsurpassed luxury to tomorrow's transocean travelers, are ready to build as soon as war conditions permit. With Martin plants tooled for and in quantity production of Mars flying ships, delivery of commercial models will be prompt.

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LUXURIOUS LOUNGE of postwar Mars. No cramped seats or narrow aisles here! Passengers will stroll about, visit bar, enjoy hot meals, sleep in private compartments.

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Sale of Government Surplus Property

Aircraft engines that have been declared surplus property by the Army, Navy and other agencies are being sold through Reconstruction Finance Corporation.

HOW TO BID—Write, wire or phone your nearest local RFC Disposing Agency for the WA LIST No. A-1—"Aircraft Engines" which gives information as to bidding method, payment procedure, description of engines, inspection of sample engines, and other pertinent data. RFC Disposing Agencies are listed below.

BIDS MUST BE RECEIVED IN TIME FOR OPENING
AT 12 O'CLOCK, NOON, NOVEMBER 15, 1945

RECONSTRUCTION FINANCE CORPORATION

A Disposal Agency Designated by the Surplus Property Board

Disposing Agencies located at: Atlanta • Birmingham • Boston
Charlotte • Chicago • Cleveland • Dallas • Denver • Detroit • Helena
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Richmond • St. Louis • Salt Lake City • San Antonio • San Francisco
Seattle • Spokane

94

★ ★ ★ ★ ★

ONE WAY OF CUTTING POST-WAR OVERHEAD IN THE AVIATION INDUSTRY

As peacetime volume takes its effect in plane plants, there will be many a part and even many an assembly that will fall below an economical quantity for in-plant production. Overhead on these items will be prohibitive in a competitive economy.

Huge plants that were a necessity in war-time may soon become a burden. Investment of available capital in the purchase of DPC or other leased properties might be less productive than if such capital were used in the building of markets for sale of more planes.

Sub-contracting even more advisable in peace-time

Instead of providing plant space and overhead for the production of all formerly produced assemblies, why not make a selective study to determine which ones might be put in the hands of a reliable sub-contractor?

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for a good sub-contractor can frequently make the parts faster than your plant can make them.

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BUY VICTORY BONDS

Non-Schedule Rules Spark State Parley

Growing interest in pending action by the Civil Aeronautics Board affecting non-scheduled air carriers was pointed up last week when the Pennsylvania Aeronautics Commission announced that airport operators in the state have been asked to meet Sept. 25 to discuss safety rules and their enforcement and economic regulation in this field.

On the agenda are the proposed new part 42 of the Civil Air regulations, affecting non-scheduled air carrier certification and operation, and the report by Civil Aeronautics Board Examiners William J. Madden and Curtis C. Henderson in the Board's non-schedule investigation.

► **Government Delegates**—Representatives are to be present at the afternoon session of the meeting, being held in the Senate caucus room of the capitol at Harrisburg, from the safety rules and economic sections of CAB and the safety regulations section of CAA.

The Commission advised the operators that the proposed regulations would have a "sweeping effect" on their business, and said "now is the time to act and express yourselves."

Meanwhile Civil Aeronautics Board sources said there was little doubt that the Board would grant requests for an oral argument on the examiners' report. Date was originally suggested for Nov. 5, but it appeared last week that the argument would be held later in that month.

► **Response Roster**—Around 50 responses to the report have been

received by the Board, many of them coming in since the Sept. 11 deadline, but the majority of them were said to be simple requests for oral argument rather than criticism of the examiners' findings and recommendations.

Sees Steady Drop In Air Cargo Costs

While air cargo shipping costs now are less than double ordinary freight, they will equal normal transportation costs within two years, according to Gilbert F. McKeon, vice-president of the Manhattan Storage and Warehouse Co. of New York. Expressing this belief in a recent radio talk, Mr. McKeon added that the great saving in time and insurance rates made possible by air cargo materially compensates for the higher cost.

"Both manufacturers and farmers are looking to sky routes to fly their products to markets and consumers," said Mr. McKeon. "Within the past few weeks we have shipped two plane loads of household furniture from New York to Los Angeles, chartering huge transport planes for the purpose. One load included enough fur-

nishings to equip an eight-room house. There were nearly ten tons of household goods in that plane. It took just twelve hours from La Guardia Field to Los Angeles."

Mr. McKeon says he plans to condition his customers to air-mindedness. Recently he had aeronautic engineers survey the roof-top of his company's plant at 52nd St. & 7th Ave., New York, to plan for the accommodation of helicopters so that air freight may be flown directly to nearby landing fields. Manhattan Storage has made applications to the Civil Aeronautics Board for licenses to operate helicopters.

Mexico Fare Cut

Pan American World Airways' Los Angeles-Mexico City passenger fares have been cut by 14 percent.

The fare was dropped from \$180 to \$167.40, round trip, last March, and now has been reduced to \$154.80.

Aircraft Structural Engineer

Must be familiar with weight and balance procedure, repair of aircraft structure and aircraft overhaul. Must have some knowledge of aircraft and structural design. Airline experience.

P-151, AVIATION NEWS

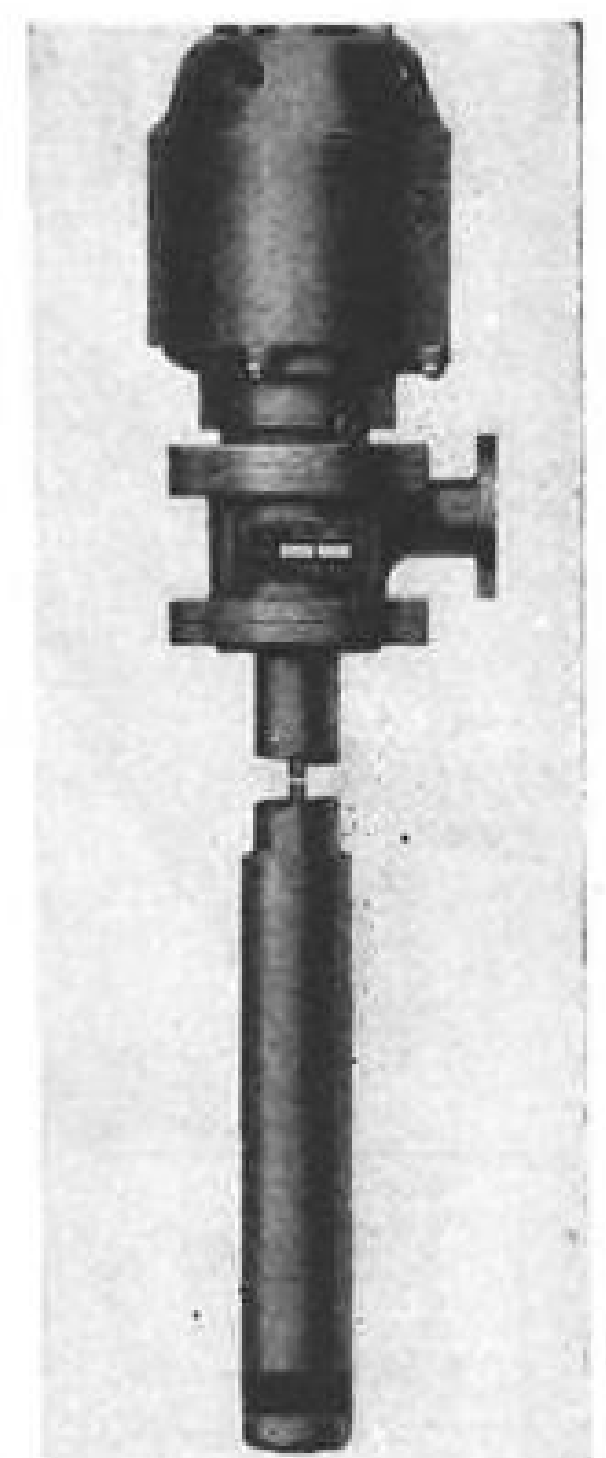
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THIS specialized turbine pump features a compact sturdy design that permits installation and servicing through a 4" tank opening. It is available in two series. Capacities up to

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Aviation Oil
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Lea Airport Bill Nears Senate Floor

The \$1,300,000,000 Lea airport construction bill is expected to be cleared by the House Rules Committee late this week, or early next week, for floor action.

General approval of the measure was expressed by Republican and Democratic members of the House Interstate Commerce Committee at a hearing before the rules group last week. Rep. Alfred Bulwinkle (D-N.C.), was the key witness. Republican Reps. Carl Hinshaw, Calif., and Charles Halleck, Ind., joined him in urging clearance of the bill.

The granting of a rule for consideration of the legislation, however, is being postponed until Interstate's chairman, and sponsor of the bill, Rep. Clarence Lea (D-Calif.) returns to Washington.

Proponents of state-federal direction of the airport program, it is understood, will make an effort to get Lea to seek Rules clearance for the Senate-passed McCarran airport bill—which decides the controversial city versus state issue in favor of the states—instead of his own. Lea is not ex-

pected to agree to this course.

However, several states proponents are prepared to offer amendments to the Lea bill when it hits the floor, switching the emphasis in the airport program from city participation to state-federal control.

Priority Travel Shrinks Rapidly To Record Low

Experience of United Air Lines since priorities were cut down Sept. 15, has led Harold A. Crary, vice-president in charge of traffic, to predict that within 10 days not more than 5 percent of passenger space available will be used for priority travel.

Priorities are to be abolished Oct. 15. Revision of the system Sept. 15, telescoping the previous four classes of priorities into one, has dropped the percentage of travel of this type from 85 to less than 10 on United's system.

► **Cargo Factor**—A sharp reduction has occurred also in volume of priority air express, and the line's 18 transcontinental round-trips and those on the Pacific Coast now are carrying all express offered.

CAB ACTION

The Civil Aeronautics Board:

- Granted Alaska Airlines temporary exemption from section 401(a) of the Civil Aeronautics Act in order to authorize transportation of mail between Unalakleet and Anchorage, via McGrath and persons, property, and mail between Akulurak and Mountain Village, Haycock and Golvin, and Koyuk and Golvin.
- Authorized Western Air Lines to inaugurate service to and from El Centro, Palm Springs, and San Bernardino, Calif.
- Denied Trans-Marine Airlines permission to intervene in Northeast Airlines consolidation of routes case (Docket 1607 et al.).
- Authorized Continental Air Lines to suspend service temporarily at Hutchinson, Kan., on AM 60; Las Vegas, N. Mex., on AM 29; and La Junta, Colo., on AM 43; and to immediately inaugurate non-stop service between Denver, Colo., and Albuquerque, N. Mex., on AM 29.
- Approved agreement between United Air Lines and Transcontinental & Western Air for

TWA's use of United's plane cleaner at Washington.

• Granted National Federation of American Shipping permission to appear and be heard in oral argument in Hawaiian case (Docket 851 et al.).

• Ordered investigation of suspensions of, and failure to provide, service at Clarksburg and Morgantown, W. Va., by American Airlines, Pennsylvania-Central Airlines, and TWA.

• Rescinded order of May 25, 1945, approving agreement between Pan American Airways and Panair do Brasil, S. A., relating to furnishing services and facilities to Pan American, and ordered investigation of the agreement.

CAB SCHEDULE

Sept. 24. Oral argument in Hawaiian case. (Docket 851 et al.)

Sept. 25. Prehearing conference on American Airlines' application for consolidation of AM 18, AM 23, and AM 4. (Part of Docket 932.)

Sept. 26. Briefs due in Southeastern States case. Postponed from Sept. 15. (Docket 501 et al.)

Sept. 27. Hearing on Baltimore's application for designation as a co-terminal on North Atlantic routes. Postponed from Sept. 21. (Docket 1975.)

Sept. 28. Exceptions due to examiners' report in South Atlantic route case. (Docket 1171 et al.)

Sept. 28. Hearing in investigation of government travel discount reductions proposed by Pan American Airways; Pan American-Grace Airways; Uraba, Medellin and Central Airways; and Cia Mexicana de Aviacion. (Docket 1941.)

Oct. 1. Exchange of exhibits in the Mississippi Valley case. (Docket 548 et al.)

Oct. 1. Oral argument in Rocky Mountain Area proceeding. Postponed from Sept. 10. (Docket 152 et al.)

Oct. 1. Hearing in Great Lakes Area case at Indianapolis, Ind. (Docket 535 et al.)

Oct. 1. Briefs due in Cincinnati-New York case. (Docket 221 et al.)

Oct. 4. Oral argument in Florida case. Postponed from Sept. 5 and 17. (Docket 489 et al.)

Oct. 15. Briefs due in Pacific case. Postponed from Oct. 1. (Docket 547 et al.)

Oct. 15. Briefs due in Northern Airways-Harold Gillam transfer case (Docket 1928.)

Oct. 15. Briefs due in Copper River (Alaska) case. (Docket 1814 et al.)

Oct. 18. Briefs due in South Atlantic route case. (Docket 1171 et al.)

Oct. 22. Oral argument in West Coast case. Postponed from Oct. 8. (Docket 250 et al.)

Oct. 22. Rebuttal exhibits due in Mississippi Valley case. (Docket 548 et al.)

Oct. 25. Briefs due in Pan American's Juneau-Ketchikan local service case. (Docket 1972.)

Oct. 29. Oral argument in Pacific case. (Docket 547 et al.)

Nov. 1. Briefs due in Bristol Bay case. (Docket 1309.)

Nov. 5. Hearing in Mississippi Valley case. (Docket 548 et al.)

Nov. 20. Rebuttal exhibits due in Middle Atlantic case. (Docket 674 et al.)

Nov. 30. Exchange of exhibits in Middle Atlantic case. Postponed from Nov. 1. (Docket 674 et al.)

Dec. 3. Kansas City-Memphis-Florida hearing. (Docket 1051 et al.)

Dec. 3. Tentative hearing date in Middle Atlantic case. (Docket 674 et al.)

Dec. 7. Exchange of exhibits in Kansas City-Memphis-Florida case. Postponed from Nov. 1. (Docket 1051 et al.)

Dec. 24. Rebuttal exhibits due in Kansas City-Memphis-Florida case. Postponed from Nov. 20. Hearing, previously set tentatively for Dec. 3, postponed to unspecified time in January. (Docket 1051 et al.)



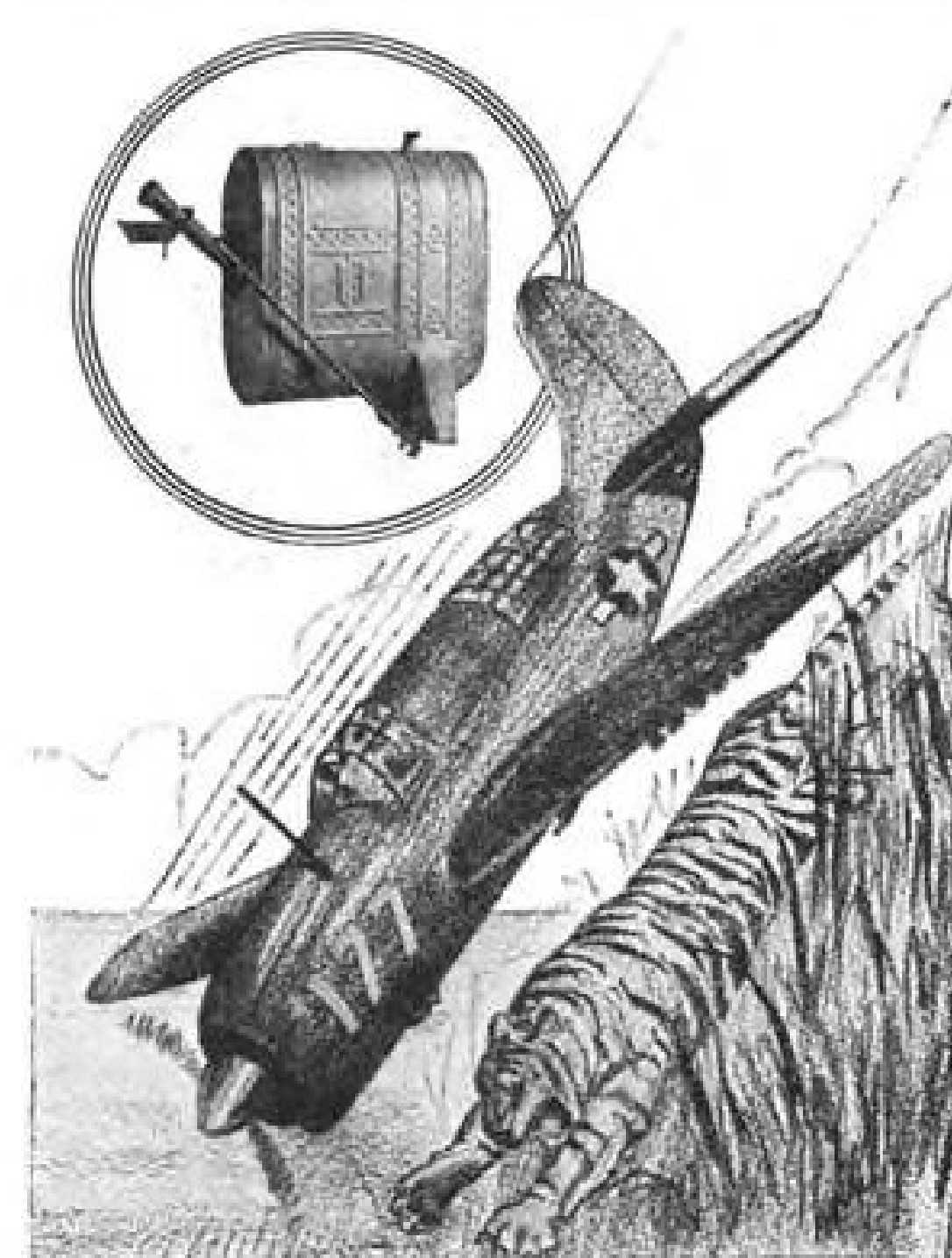
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P-157, AVIATION NEWS
330 West 42nd Street
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Neglecting Local Air Services

THE ASTONISHING ACCELERATION of pace being set by our U. S. flag airlines wins almost daily headlines in the press. Mergers are announced and others are contemplated. Purchases of giant, long range equipment continue, with deliveries near reality. Foreign routes will be operating soon. More frequent service is proposed between our greatest cities, many schedules to be on a non-stop basis. All of this the airlines have hoped for throughout the war years.

Meanwhile, however, the established air transport industry is neglecting many local services and at least 40 communities which they once succeeded in having added to their certificates. Inauguration of service at new points is virtually unheard of. In fact, certificated airline stops are even being dropped.

While the glamor goes to the big ships, the routes across the seas, non-stop New York-Chicago and one-stop coast to coast operations, the airlines apparently fail to realize that public opinion in the grass roots is turning against them.

For example, Michigan Congressmen had a field day at the expense of PCA at a Bay City meeting recently. Result was formation of the Michigan Air Transportation Association. Rep. Fred. L. Crawford, addressing 51 civic leaders and mayors of 18 Michigan cities, charged PCA's failure to reopen Detroit-Sault Ste. Marie as "continuous stalling." He claims that "we learned PCA at no time intended to re-establish this service. It's up to us in Michigan to get needed extension of air service to our cities before the airlines and federal agencies in Washington." Rep. Roy Woodruff blamed CAB for "a complete lack of cooperation on our Michigan air transportation picture." Need of adequate North-South feeder lines to bring tourists into Michigan from Ohio, Indiana, Illinois and the rest of the Midwest was cited by Grant Arnold, transportation manager of the Detroit Board of Commerce. The new association passed a resolution protesting to CAB discontinuance of airline service without prior public hearings.

Meanwhile, in West Virginia, where airline service has been reduced to one stop, a group of prominent citizens filed an application with the Public Service Commission for an intrastate air service feeding traffic into the one remaining trunk line stop at Elkins. "Failure of trunk airlines to give adequate service" was the reason announced. Eventual expansion into other states is contemplated by the new company.

Late last week the CAB took cognizance of public opinion and in an unprecedented action ordered an investigation into the West Virginia

suspensions. PCA discontinued operations at Clarksburg and Morgantown without awaiting CAB approval. American earlier had dropped Clarksburg. TWA was notified by CAB Sept. 15 that national defense requirements no longer required delay in starting service at Morgantown but the company has given no indication of when it will include this point on AM 61. CAB's inquiry will seek to determine whether these service failures are in the public interest, or in violation of the Civil Aeronautics Act and the terms of the airlines' certificates.

This is believed to be the first such investigation by the Board. If the major trunk lines continue to show indifference to local services, the Board could well look into the surprising number of additional certificated airline stops which are not, and never have been, served by the trunk lines. An informal compilation from government records discloses that none of the certificated cities shown below were receiving certificated passenger service Aug. 15. The great majority of them have never been served, yet some were certificated by the CAB as long as 1939. These cities include:

Anderson-Muncie-Newcastle	Lexington, Ky.
Ann Arbor	Marianna, Fla.
Atlantic City	Marion, Ind.
Binghamton	Mason City
Bloomington, Ill.	Muskogee, Okla.
Charleston-Dunbar	Paducah
Cheboygan	Parkersburg
Columbia, Mo.	Pine Bluff, Ark.
Duluth-Superior	Prescott, Ariz.
Eau Claire	Quincy, Ill.
El Centro	Saginaw-Bay City
Frankfort	Salina, Kan.
Grand Canyon	San Bernardino
Grand Junction	Sault Ste. Marie
Green Bay	Scranton
Gulfport	Springfield, Mo.
Hot Springs, N. D.	Tacoma
Huntsville, Ala.	Traverse City
Jamestown, N. Y.	Trinidad, Col.
Kalamazoo	Wausau, Wis.
Kingman, Ariz.	Wheeling
Lancaster, Pa.	White River Junction, Vt.
Lawrence, Mass.	Wilmington.

The Board's action in ordering an investigation into suspension and lack of service in West Virginia is in the public interest. We hope there will be other such orders if the trunk lines continue to fall down in serving the thousands of citizens they requested and received the right to serve. If they maintain this lack of interest they should hardly expect to find public opinion on their side if they seek to keep out new non-scheduled or intrastate operators who are willing to set up air service even though they lose money initially in doing so.

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