

# Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

NOVEMBER 20, 1944

★

## 'C Official Cites AAF Support

General C. R. Smith stresses military value of strong, aggressive commercial aviation and its aid in expansion..Page 7

★

## Operators' Parley May Be Called

Meeting to settle world airline problems, rates, frequencies, expected to develop from international conference.....Page 40

★

## Freder Self-Sufficiency Doubted

Coast hearings give little hope; officials believe lines could operate in black only with substantial postal subsidy..Page 42

★

## Long Stratocruiser Test Flown

Prototype of huge Model 377 test around Superfortress with the same wing and tail surfaces, twice fuselage volume..Page 12

★

## Each Plans Revolutionary Homes

Units to be constructed for new type home manufacture, based on aircraft technology and using plane materials, tools..Page 34

★

## ERCO Points Way to New Approach

Sales conference in Washington with view to mapping out post-war merchandising called significant move.....Page 15

★

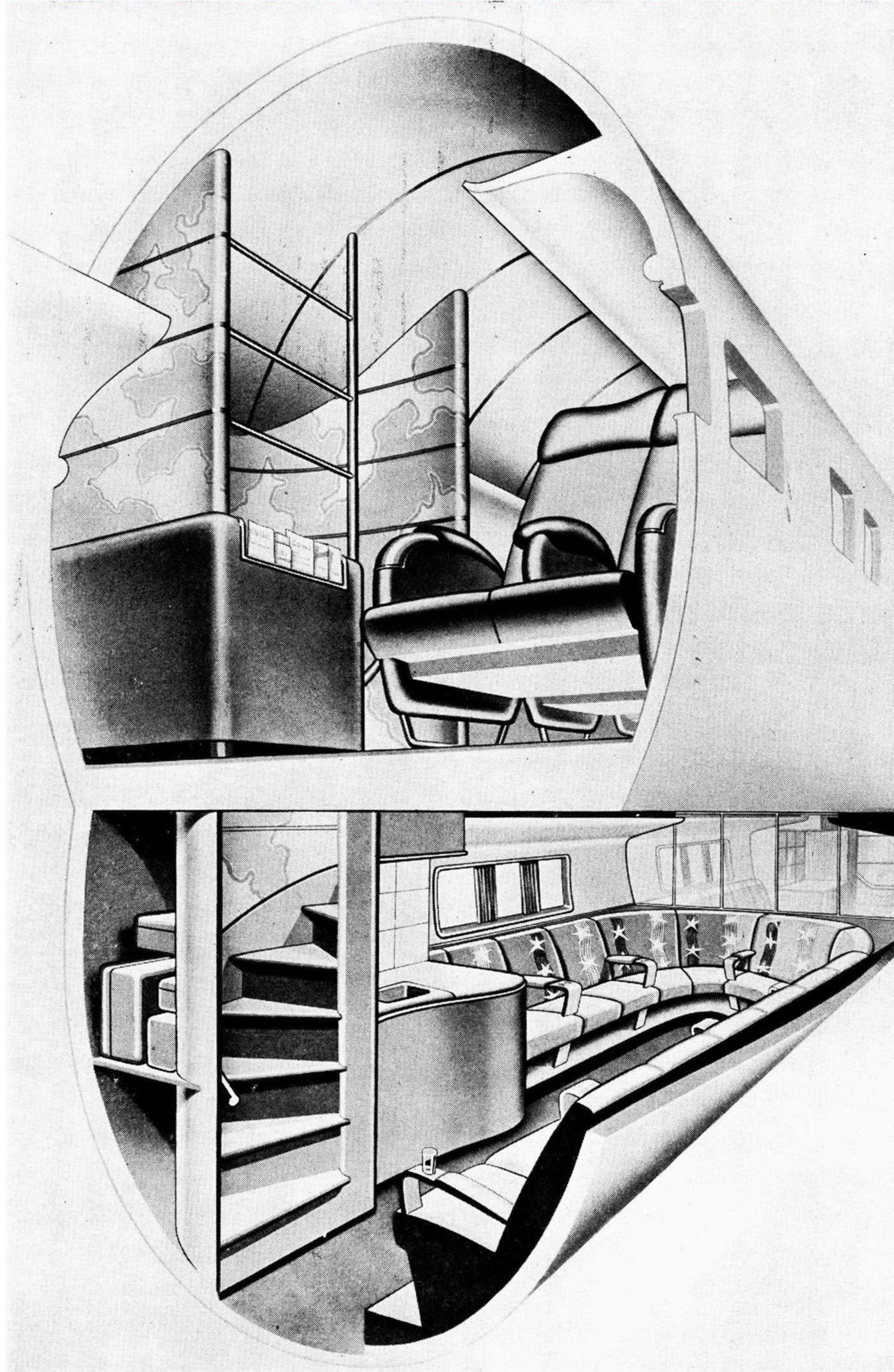
## Personal Plane Seen Key to Growth

William B. Mara, Bendix executive, says industry's future depends on safe, easy-to-fly planes at low prices.....Page 9

★

## Uncertain Return Curbs Stocks

No established rate of return policy yet established by CAB; limited precedent seen hampering Board.....Page 38



**Two-Deck Boeing Luxury Liner:** The two decks of the Boeing 377 Stratocruiser—first of the superairliners of the post-war period to be test flown—is shown in this artist's cutaway sketch showing the lower rear compartment lounge and the stairway to the upper deck, where the main passenger section is housed. Fourteen persons can be accommodated in the lounge, 72 in the day version of the main compartment.



# KEN-RAD

HEART OF AIR COMMUNICATIONS

*for every type of plane...*



METAL RECEIVING



TRANSMITTING



GLASS RECEIVING



MINIATURE

• Write for your copy of  
"Essential Characteristics"  
the most complete digest of  
tube information available

**A BOMBER requires 350 tubes**  
**FIGHTER PLANES 125 tubes**

## KEN-RAD

AVIATION DIVISION  
OWENSBORO · KENTUCKY  
EXPORTS 19 MOORE STREET NEW YORK

TRANSMITTING TUBES  
CATHODE RAY TUBES  
SPECIAL PURPOSE TUBES  
RECEIVING TUBES  
INCANDESCENT LAMPS  
FLUORESCENT LAMPS

## THE AVIATION NEWS

### Washington Observer

**NEW SURPLUS BOARD**—The names of members of the new Surplus Property Board should be announced shortly. If, as reported, Sam H. Husbands, who has been the director of the Reconstruction Finance Corp., in charge of surplus war property, is one of the members, the board will get a top-notch executive. He has been with RFC since pre-New Deal 1932, started as an examiner and has been steadily promoted since.

\*\*\*

**CAMOUFLAGE COST**—Tangled up somewhere in the red tape of Washington are applications from several aircraft companies for permission to remove the camouflage trappings from their plants. Many of them, especially on the West Coast, have elaborate set-ups constructed in the early days of the war, set-ups they would now like to get rid of. Involved, as is often the case in such things, is the matter of cost—whether the company or the government is going to pay for removal.

\*\*\*

**AAF VETERANS**—There is considerable talk in Washington of the organization of an association of Army Air Forces veterans. Current conversations follow the line that the AAF veterans might well be members of other veterans' organizations, but that they would be AAF veterans first and foremost. The setting up of such a group might well have an important influence on the future of both military and civil aviation. The project is still in the talk stage, but the talk is fanning out from Washington around the world.

\*\*\*

**GOVERNMENT PLANTS**—Expansion of government-financed aircraft plants rose slightly in September over the previous month, according to latest available figures, but aircraft plant expansion is expected to drop in the last quarter of the year to around \$63,000,000 according to best guesses of insiders. This compares with a first quarter dollar volume of about \$143,000,000 indicating a definite downward trend.

**FEDERAL WORKS**—The Federal Works Agency has been strangely quiet since the WPA was "honorably discharged" by President Roosevelt early in the war. It has contented itself chiefly with a small program called War Public Works, largely sewer and water facilities and schools for war housing projects. Reason for keeping the organization in order now begins to appear with a request to Congress for funds to assist states, cities and countries in blueprinting public works up to \$5,000,000,000 in the first year of peace. Officials wouldn't say how much would go into air facilities, but it is safe to assume that air field facility construction would have a sizable place in any program approved.

\*\*\*

**STEAMSHIP LINES IN THE AIR**—The awaited report of the House Merchant Marine and Fisheries Committee, expected to back the position of the steamship companies in their campaign for air rights and throw a few daggers at Pan American's chosen instrument proposal appears at long last to be on its way into public light. The report, being written by the Committee's counsel, Irvin McCann, formerly counsel for the Nichols Committee to Investigate Air Accidents, probably will go to the House within a week.

\*\*\*

**RECONNAISSANCE FLIGHTS**—The Japanese are playing a cagey game with those B-29 reconnaissance planes, or haven't anything that will reach them at high altitude. Even the Japs admit that reconnaissance planes have been over the home islands for as long as an hour without being downed.

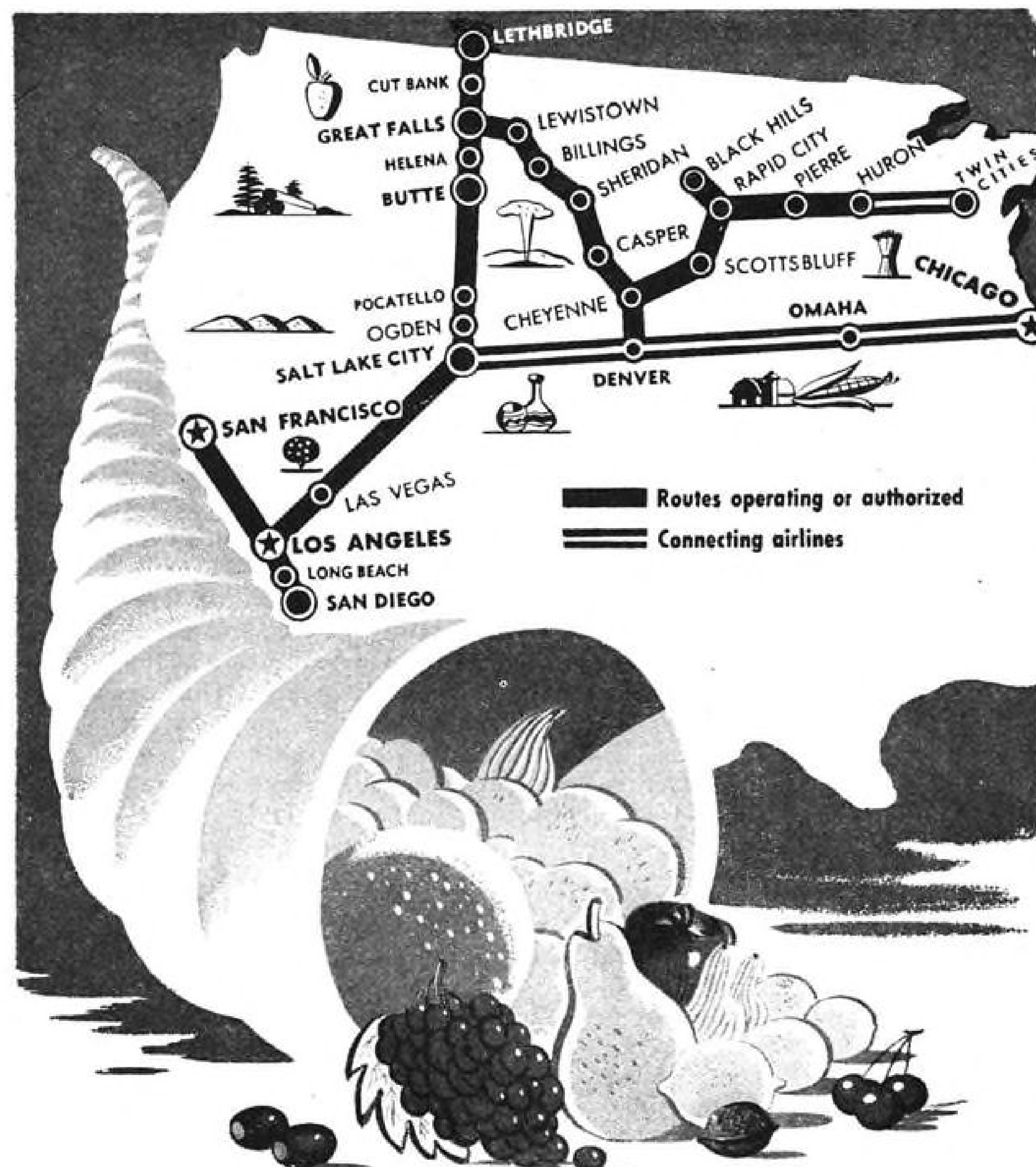
\*\*\*

**ASSEMBLY LINE CONVERSION**—Discount reports that the Surplus Property Board will be party to conversion of new planes "surplus to service needs" by diversion from production lines. SPB officials take the attitude that any such procedure would be a War Production Board question entirely, that the services should get the new planes and release older ones to

Identifying cards tell story of International Conference.







## The Cornucopian West

Market basket of the country, the West produces over one-third of the nation's vegetables and more than one-half of the fruits and nuts. Its production of livestock, dairy products, and other foods is equally important to the diet of the U. S. Much of this production is processed. Half the canned fruit and vegetable supply is packed in the West, all but two per cent of the dried fruits. Fifty per cent of the frozen fruits and vegetables come from western packers. And, in the postwar era, much of this production will reach eastern markets field-fresh, because it will be shipped by air.

Like the wood, mining, power, and manufacturing industries, the food industry is widely scattered over the whole vast area. Like them, it demands close contact between seller and buyer, requires the fastest means of travel.

As the West's own airline, born in the West and owned and operated by Westerners, Western Air Lines knows the special needs of industry in the West. It will serve industry with the finest air transportation as fast as wartime conditions will permit.

GENERAL TRAFFIC OFFICE: 510 W. SIXTH STREET, LOS ANGELES 14, CALIFORNIA

**WESTERN AIR LINES**  
AMERICA'S PIONEER AIRLINE

## AVIATION NEWS

### THE STAFF

GEORGE W. PFEIL.....Publisher  
ROBERT H. WOOD.....Editor  
C. SCOTT HERSHEY.....Managing Editor  
JEROME BUTLER.....Copy Editor  
MERLIN H. MICKEL.....Transport Editor  
DANIEL S. WENTZ II.....Transport  
MARY PAULINE PERRY.....War Agencies  
WILLIAM G. KEY.....Special Assignments  
BLAINE STUBBLEFIELD.....Special Assignments  
MARTIN V. MERRITT.....New York Editor  
SCHOLER BANGS.....Pacific Coast Editor  
ALEX MCSURELY.....Private Flying Editor  
DALLAS MALLARD.....Art Director  
ANDREW B. MARTIN.....Sales Manager

### CONTENTS

	PAGE
Washington Observer	3
Headline News Section	7
Private Flying	15
Air War	25
Personnel	29
Production	34
Financial	38
Transport	40
Editorial	48

### THE PHOTOS

Boeing Aircraft Co., Cover, 13; Aeroplane, 7; U. S. Army Air Forces, 8, 17; U. S. Navy, 11; Studebaker Corp., 15; University of Illinois, 29; Ryan Aeronautical Co., 33; U. S. Marine Corps, 33; Press Assn., 34; United Aircraft Corp., 35; Staff Photo by Del Ankers, 40; Flight, 44.

Editorial Headquarters,  
1357-63 National Press Building,  
Washington 4, D. C.

Publication and Executive Offices,  
330 W. 42nd St., N. Y. 18, N. Y.

Pacific Coast Office, 621 So. Hope St., Los Angeles

Copyright, 1944, Vol. 2, No. 17. Published weekly by McGraw-Hill Publishing Co., Inc., price 50c a copy. Allow ten days for change of address. Subscription rates—United States, Mexico and Central and South American countries, \$5 a year, \$8 for two years, \$10 for three years. Canada, \$6 a year, \$10 for two years, \$12 for three years. All other countries \$9 a year, \$14 for two years, \$18 for three years. Entered as second-class matter July 31, 1943, at the Post Office at New York, New York, under the Act of March 3, 1879. Printed in U.S.A. Cable Address "McGrawhill, New York."

James H. McGraw, Founder and Honorary Chairman; James H. McGraw, Jr., President; Howard Ehrlich, Executive Vice-President for Business Operations; John Abbink, Executive Vice-President for Editorial Operations; Curtis W. McGraw, Vice-President and Treasurer; Joseph A. Gerardi, Secretary; J. E. Blackburn, Jr., Director of Circulation, 330 West 42nd Street, New York 18, N. Y. Branch offices: Chicago, 520 North Michigan Ave.; San Francisco, 68 Post Street, Los Angeles, 601 W. Fifth Street; Aldwych House, Aldwych, London, W. C. 2; Washington; Philadelphia; Cleveland; Detroit; St. Louis; Boston; Atlanta. Return Postage Guaranteed.

### Advertisers Index

Bell Aircraft Corp.	6
Boeing Airplane Co.	24
Eitel-McCullough, Inc.	28
Electronic Laboratories, Inc.	19
Fairchild Engine & Airplane Corp.	32
Firestone Tire & Rubber Co.	30, 31
Goodyear Tire & Rubber Co.	26, 27
Jack & Heintz, Inc.	22, 23
Ken-Rad Tube & Lamp Corp.	2nd cover
Martin Company, The Glenn L.	20
Mercury Aircraft, Inc.	46
Minneapolis-Honeywell Regulator Co.	3rd cover
Republic Aviation Corp.	37
Southeastern Air Service, Inc.	39
Teleoptic Company, The	47
Western Air Lines, Inc.	4
White-Rodgers Electric Co.	4th cover

## Washington Observer

surplus for reconversion if the services really need the planes. If they do not, then facilities can be diverted by WPB and the matter does not come under the province of SPB.

\*\*\*

**SALE OF WAR PLANTS**—Recently published statements that certain war plants owned by the government would be sold when their productive capacity is no longer required have given rise to rumors that these plants would be closed down at once. The under secretary of war, however, assures that no facilities, needed for the supply of the Armed Forces will be disposed of while the need continues.

\*\*\*

**FORWARD STEPS**—There is a general feeling in Washington that whatever the outcome of the International Civil Aviation Conference in Chicago, it will have disposed of many diplomatic conversations that would have to be

held before any agreement could be reached on world air transport policy, thus paving the way for a later conference if one is necessary. Since any international convention must be ratified by the governments involved, some time must elapse before international air machinery can be set in motion.

\*

**U. S. PLANES**—Some comment was roused in Washington by the statement of Assistant Secretary of State Berle in plenary session that the United States does not consider permanent the situation that finds it in possession of virtually the only supply of transport planes or immediate production facilities. The government is prepared to make available on non-discriminatory terms, civil air transport planes when they can be released from military work, to countries "which recognize as do we, the right of friendly intercourse, and grant permission for friendly intercourse to others."

\*\*\*

## Industry Observer

American Airlines believes its sudden filing of low air freight tariffs may have delayed entry into the field of at least one or two new, powerful companies which are outside the air transport industry. Several domestic

lines are working on a money-saving cooperative program to share ground truck services for important cities. United has given formal notice it will not join, however, preferring to develop its own ground service. Industry denies any proposal to cancel REA express contracts.

CAA will use the Personal Aircraft Council's term "airpark" in referring to Class A airfields. . . . B-24 production will be completed at Convair Fort Worth next month, at Convair San Diego in the first half of next year, and at North American Dallas by the end of this month. Ford will continue at reduced pace on Liberators through 1945 regardless of V-E Day.

There will be no Flying Wings or six-engined superbombers fighting in this war. Soonest Northrop's project or Convair's giant could get into production is some time in 1946, although prototypes should fly in 1945. Engineering and development will continue. Martin originally was to produce, with the Northrop home plant, a quantity of Northrop Flying Wings but the eastern contract was canceled.

Naval aircraft factory, producing less than 10 special versions of the PBY monthly, will stop production of complete planes next year. ACCA's Personal Aircraft Council in contending that construction of airparks and landing facilities is a No. 1 job, believes improved, cheaper, light planes will come through normal competition among manufacturers.

Westinghouse jet-turbine systems are under development to compete with the pioneer General Electric jet power plant. Work is progressing with a St. Louis independent aircraft company.

Grumman's light plane was built to test spot welding construction technique rather than as an experimental post-war private ship. The company will remain a leading Navy contractor after the war and officials say no commercial policy has been determined.

American and TWA have been studying the Curtiss Commando as a possible cargo ship. United, however, expresses little interest in big twin-engined planes, even for future cargo service.

Air Transport Association is preparing a report for members only, on "Gasoline Taxes and Surcharges."

One of the assignments of the U. S. Aeronautical Standards mission to England is to determine British government and industry reaction to adoption of the metric system in the near future to standardize production standards in the post-war world market. British aircraft industry already has expressed keen interest in the move.

Out of Stinson's L-5 Flying Jeep may come a safe, slow-flying private plane with added features for the commercial market.

Big moves are under way to step up air transport in the Pacific.

A number of British war-weary Liberators will be converted to transport duty, probably for Con-sairway. A super-shuttle service by a big fleet of Curtiss Commandos is being organized to carry military passengers and high priority freight for close-in attacks on Japan. Navy equipment such as Coronados formerly operated by PAA and American Export on NATS Atlantic contracts are being sent west. Matson Steamship line may win a NATS contract for the Pacific area, and already has a nucleus in four flight captains, with J. P. Squire as chief engineering pilot. The company is now working on a R5D modification for the Navy.

Rotary wing production next year will not be affected by V-E Day, under present plans. Helicopter industry believes it can turn out 500 craft next year if schedules permit.

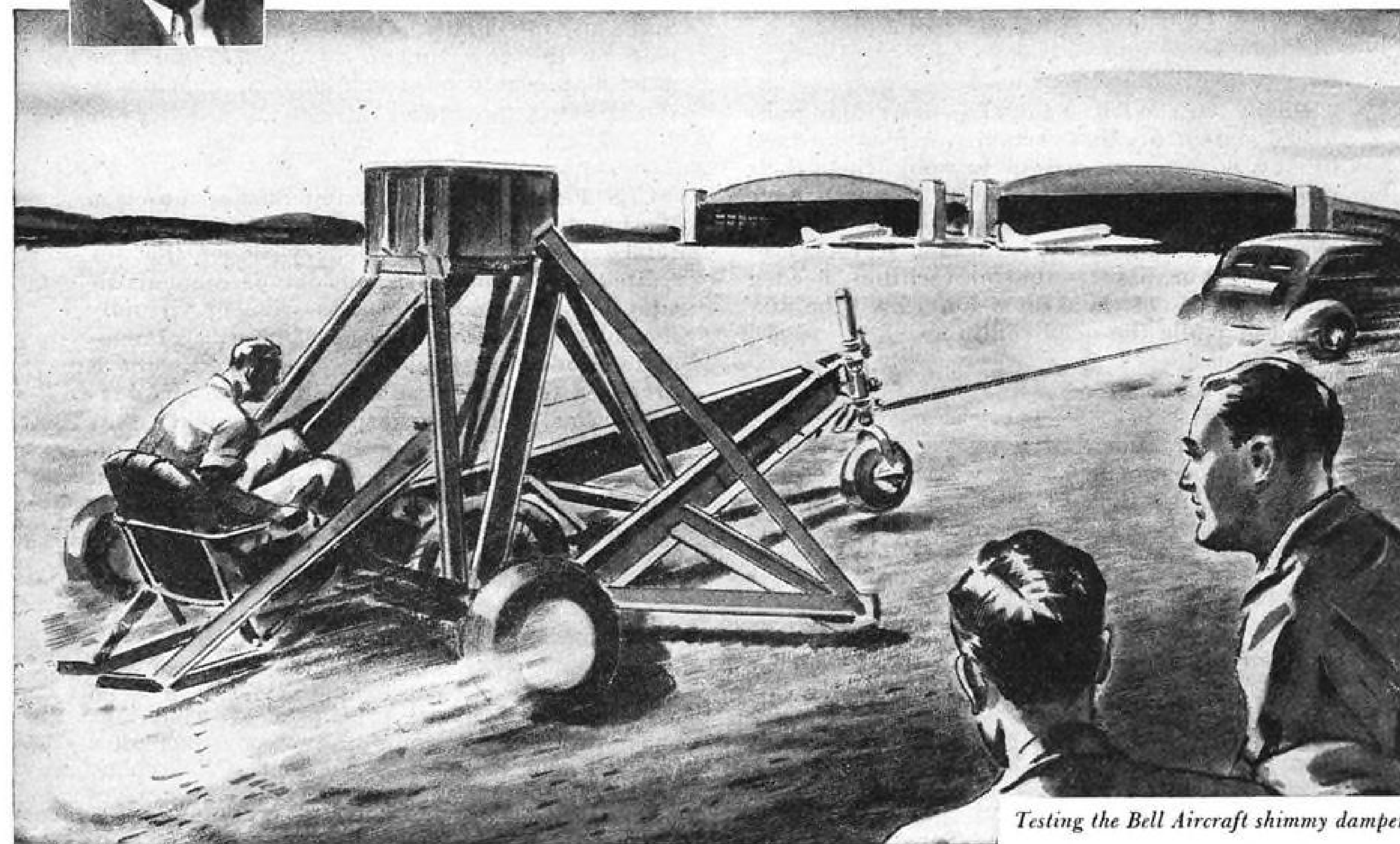


# DESIGN FOR SAFER LANDINGS



BY FRANK A. TICHENOR

Publisher of Aero Digest explains the action of the Bell-designed shimmy damper now in use on many U. S. planes employing tricycle landing gear



Testing the Bell Aircraft shimmy damper

THE tricycle landing gear provides definite advantages—elimination of ground looping, and nose-over hazard, superior ground vision, improved ground handling and maintenance, simplified landing and take-off procedure, increased pilot safety, and easy operation from small, improvised fields.

"However, when first developed, the tendency of the nose wheel to shimmy or caster hampered its use by setting up a vibration so great that there were cases in which the nose wheel strut was literally ripped out of the fuselage.

"A former Bell Aircraft sales executive—now a Lt. Colonel in the AAF who wears the Distinguished Flying

Cross—and two Bell engineers, ingeniously helped to solve this problem with the shimmy damper—a control which helps keep the nose wheel from rotating more than 60° to the left or to the right.

"Located in the bottom end of the nose wheel strut, it consists of two fixed vanes and a wing shaft on which there are two vanes. This assembly is filled with fluid.

"When the nose wheel tends to turn, the pressure of the wings forces this fluid through a metering orifice which in turn is further controlled by a thermal valve—thereby dampening the motion of the nose wheel's lateral reaction. The only outlet for the fluid

is through the valve, which can be adjusted to stiffen or ease up the nose wheel action in accordance with the pilot's requirements.

"The wing shaft can rotate only in a radius of 120°, because of stops which prevent further rotation.

"War planes now land and take off in jungles and from icy steppes as smoothly as at any of our modern airports at home, thanks to this kind of pioneering.

"The shimmy damper is one of the many contributions which Bell Aircraft has made to the progress of the aircraft industry."

★ Buy War Bonds and Speed Victory ★

MEMBER AIRCRAFT WAR PRODUCTION COUNCIL...EAST COAST, INC.

## BELL Aircraft

PACEMAKER OF AVIATION PROGRESS

© Bell Aircraft Corporation

### NIAGARA FRONTIER DIVISION

Buffalo and Niagara Falls, N. Y.

Airacobra (P.39) and Kingcobra (P.63)—Fighters  
Airacomet—America's First Jet Propelled Plane  
The Bell Helicopter

### ORDNANCE DIVISION

Burlington, Vt.

Flexible Gun Mounts and other ordnance materials

### GEORGIA DIVISION

Marietta, Ga.

B-29 Boeing Superfortress

# Aviation News

McGraw-Hill Publishing Co., Inc.

VOLUME 2 • NUMBER 17

NOVEMBER 20, 1944

\*\*\*\*\*

## ATC Official Cites AAF Support For Expansion of Civil Airlines

Gen. C. R. Smith, in Oklahoma Aviation Clinic address, stresses military value of strong, aggressive commercial aviation and declares Army has and will retain direct interest in strengthening resources of civil carriers.

By ROBERT H. WOOD

New evidence that the Army Air Forces is backing an aggressive, expanded commercial post-war air transport system of thousands of planes for the United States because of its military value is seen in an address prepared by Maj. Gen. C. R. Smith, deputy commanding general of the Army Air Transport Command, for the National Aviation Clinic which met last week in Oklahoma City.

The address bolstered recent reports in airline circles that the AAF is the most powerful advocate for the strongest possible domestic and international commercial air network for this country, and that General Arnold has received the promise of President Roosevelt that expansion will go ahead as rapidly as possible, even with subsidies when necessary.

► **Arnold Given Credit**—Airline officials privately give General Arnold generous credit for the speed with which this government has acted since the Civil Aeronautics Board came out last spring with a suggested route system before the British were fully aware of our accelerated plans. This announced the date for the International Air Conference now under way in Chicago.

Smith, who left the presidency of American, the nation's largest airline, to become operating head of ATC, greatest air transport operation in history, not only stressed that transport planes will be increasingly necessary in future warfare, but announced flatly that AAF has and will continue to have a direct interest in strengthening the resources of the civil carriers. His estimate of the military value of a civil transport fleet as against a military fleet, was the strongest

statement made on the subject by a military leader to date.

► **Significance**—"The military significance of the civil airline fleets is nearly directly in proportion to the strength of those fleets," he believes. "Assuming the types to be suitable, an airline fleet of 1,000 aircraft has just ten times as much military significance as a fleet of ten aircraft."

He holds the belief that the air-planes owned and operated by the air carriers must soon be numbered in thousands rather than hundreds.

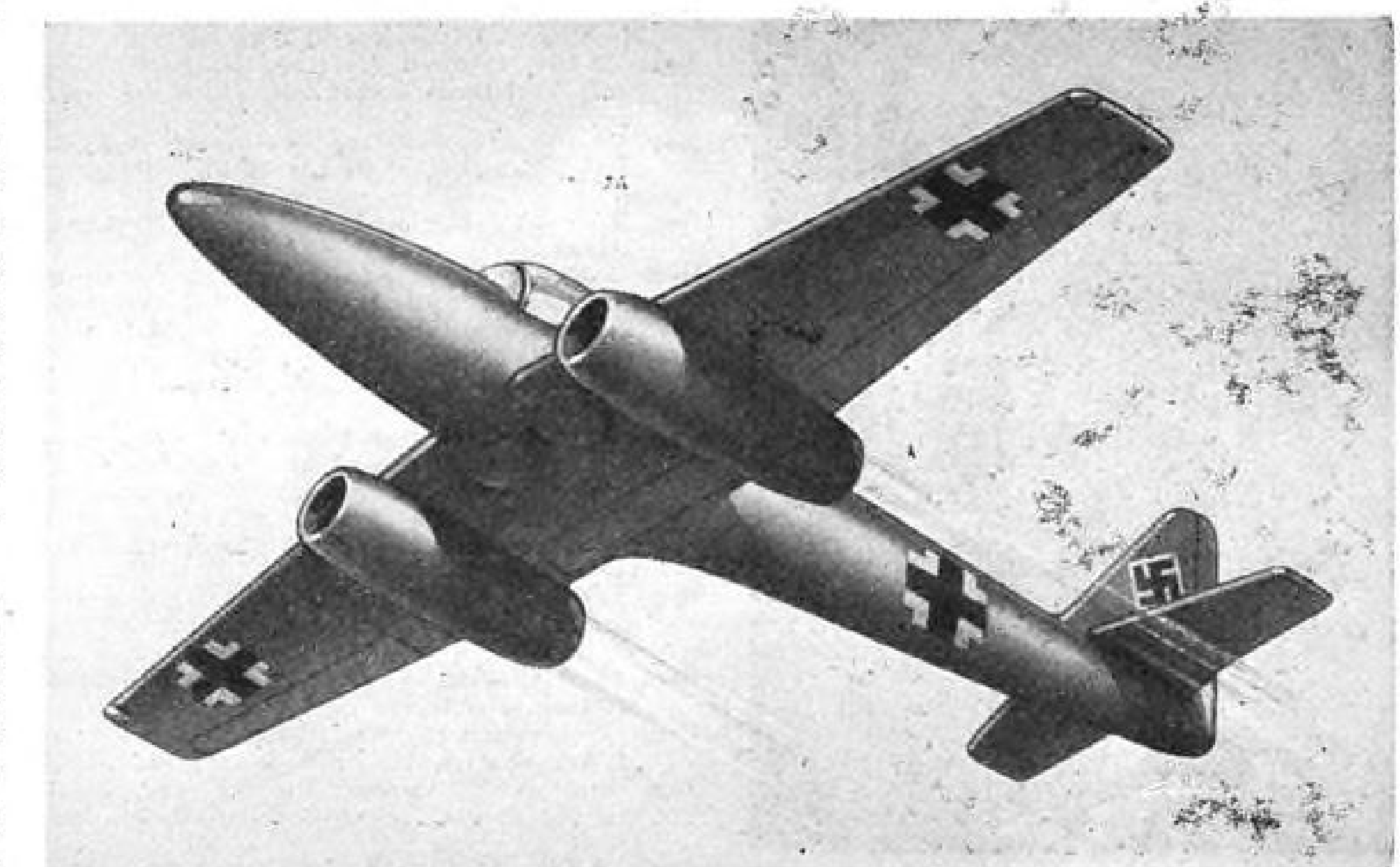
"To operate that number of air-planes without undue strain on the national treasury, the air carriers must devise means of lowering their operating costs and lowering their charges, thus permitting

the extension of air transportation to an ever increasing number of people," Smith's address said.

► **Foresight**—He also called for a forward looking viewpoint by those in government entrusted with development of air transportation. The reference to "undue strain" on the treasury was seen by airline officials at the Clinic as an oblique concession that at least some operations will not be commercially feasible, but would be deemed necessary for national defense.

There is little doubt that the airline industry already has "a forward looking viewpoint," and that it can make even further efficiency records if given enough aircraft and routes to increase traffic and cut costs. The rest is up to the proper government aviation officials, especially CAB, and there are increasing signs that this agency is certainly more expansionist minded than it was a year ago. Its decision-granting Braniff and American additional service last week is the latest evidence.

► **Assurances**—Smith echoed persistent assurances made to the airline by General Arnold since Pearl Harbor that AAF has no intent to



### MESSERSCHMITT ME 262 FIGHTER:

Above is a sketch from the British magazine *Aeroplane* showing the ME 262, single-seat, reaction-propelled fighter, powered by two Junkers Jumo 004 gas turbine units. The craft is now reported operating against Allied troops in Belgium and Holland. "A German broadcast said the plane's armament can consist of four 30 mm cannon.



compete with or take over the industry. The rumors broke out again recently when President Roosevelt approved a plan whereby ATC will carry some paid passengers.

"It is probable that the AAF will always maintain and operate a respectable fleet of transports and troop carrier aircraft," Smith said. "They will be required. It is obvious, however, that in time of peace we should, and must, depend upon civil air carriers to maintain the bulk of the transport fleet required by this country, for air commerce and for potential requirements of national defense. . . . The country will have thousands of transport aircraft and will have an air transportation system of increasing benefit to more and more people, and closely adapted to the need for national defense.

He accorded recognition to the airlines' ATC work, called them an adjunct of the air forces and said ATC now comprises more than 200,000 men and women, including 60,000 civilians, in every country



#### PARADOCTOR:

This is how a U. S. Army 2nd Air Force search and rescue paradoctor looks when ready to jump from his plane to give aid to crash survivors. Medical officers are being trained as parachutists by this unit.

held by the United Nations. ATC has ferried over 50,000 planes overseas.

#### WEST COAST REPORT

### Coast Chamber Sets Promotion Pattern

San Francisco aviation committee operates as completely independent unit with membership of outstanding Bay area business leaders.

By SCHOLER BANGS

Suggestive of a pattern that aviation leaders in all major cities might propose to Chambers of Commerce is the technique of aviation sponsorship employed by the San Francisco Chamber of Commerce.

Its favoring principle is autonomy; freedom from the smothering influence of association with surface transportation committees.

In fact, it is hardly recognizable as a "San Francisco Chamber of Commerce" function, and extends far beyond the city's geographic boundaries as the Bay Area Aviation Committee representing 42 cities and municipalities of the San Francisco Bay region.

►Independent—Although Cham-

#### AVIATION CALENDAR

- Nov. 27-28—Executive Board Meeting, National Aircraft Standards Committee, Hotel Lexington, N. Y.
- Nov. 27-28—Air Traffic Conference, Carlton Hotel, Washington, D. C.
- Nov. 29—Air Transport Association, Annual Meeting, Carlton Hotel, Washington.
- Nov. 29-30—National Meeting, National Aircraft Standards Committee, Hotel Lexington, N. Y.
- Nov. 30-Dec. 1—American Marketing Association, Edgewater Beach Hotel, Chicago, Ill.
- Dec. 4-6—SAE National Air Cargo Meeting, Chicago.
- Dec. 5-7—Second Annual Meeting, Aviation Distributors and Manufacturers Association, Jefferson Hotel, St. Louis, Mo.
- Dec. 6-7—National Aviation Trades Association, Annual Convention, Jefferson Hotel, St. Louis, Mo.
- Dec. 11—Joint Meeting, Industrial Conservation, Aviation and War Production Divisions, American Society of Mechanical Engineers, 7:30 p.m., Engineering Societies' Building, 29 West 39th Street, New York.
- Dec. 12-13—First California Aviation Conference, Hollywood Roosevelt Hotel, Hollywood, Calif.
- Dec. 13—Canadian Aircraft Traffic Managers Meeting, Montreal.
- Dec. 17—Wright Brothers lecture, Institute of Aeronautical Sciences, Washington.
- Jan. 8-12—SAE Annual Meeting and engineering display, Book-Cadillac Hotel, Detroit.
- Jan. 30-Feb. 1—13th Annual Meeting, Institute of Aeronautical Sciences, New York.
- April 4-6—National Aeronautic Meeting, Society of Automotive Engineers, Hotel New Yorker, New York City.
- Apr. 10-11—Airplane Technical Committee, ACCA, New Orleans.
- Apr. 13-14—National Airworthiness Requirements Committee, ACCA, New Orleans.
- May 6-9—International Aviation Fraternity, first annual convention, Miami Beach, Fla.
- May 20-27—Pan-American Aircraft Exposition, Dallas.

ber-sponsored and financed, the committee operates independently with a membership of outstanding San Francisco and Bay area business leaders. It reports only to the Chamber's board of directors.

Its policies are wrapped up in the single objective expressed by its chairman, Edward V. Mills, San Francisco insurance executive and former Chamber director:

"We intend that San Francisco will be the aviation capitol of the West after the war."

Louis Lundborg, manager of the San Francisco Chamber, explains: "We feel that freedom of action not always given aviation committees will serve best the Chamber's intention to gain all facilities needed to meet the Bay Area's post-war domestic and foreign aviation requirements."

►Effected Highway Relocation—Currently the Bay Area Aviation Committee has been active in gaining the relocation of a major highway for expansion of San Francisco Municipal Airport (Mills Field).

### Russell Resigns Chamber Post

Eugene E. Wilson, vice-chairman of United Aircraft Corp. and chairman of the board of governors of the Aeronautical Chamber of Commerce has temporarily taken over the duties of the general manager of the Chamber pending selection of a successor to Scott Russell.

The Chamber announced last week the resignation of Scott Russell as the Chamber's general manager on account of ill health. Russell, who took over the position the first of October has recently been under a doctor's care and Chamber officials said he would be unable to resume his duties.

Wilson probably will serve only until next month's meeting of the Chamber's board of governors.

### Resume Hearings

The Woodrum Post-War Military Policy Committee of the House will resume hearings this week with a three-day session devoted to needs of research and development. Hearings will start at 10 a.m., Nov. 21 and continue on Nov. 22 and 24.

Among those who will testify before the committee are the Army, Navy and Marine Corps and the National Advisory Committee for Aeronautics.

## Mara Sees Personal Plane as Key To Growth of Aviation in U. S.

Market limited only by industry's ability to produce safe, easy-to-fly craft at low prices, Bendix staff executive and vice-chairman of ACC's Personal Aircraft Council says.

The personal plane holds the key to aviation's growth in America, but the competition will be so keen among manufacturers, distributors and dealers that the "lackadaisical selling methods of 1941" are gone forever.

"The market for the personal plane is limited only by our ability to produce safe, easy-to-fly airplanes of greater utility at prices within the public's means. By development of thousands of conveniently located landing facilities, by development of millions of pilots and through creation of a desire by the public to own a personal plane," in the opinion of William B. Mara, staff executive of Bendix Aviation.

►Salesmanship—Production, engineering and management have held sway in war years. The salesmen must again occupy a dominant position if commercial productions is to operate at maximum pace, the pioneer lightplane figure said. He recently left Stinson Division of Consolidated Vultee Aircraft Corp. after almost 20 years with the enterprise founded by the late Edward A. Stinson. He is vice-chairman of the Aeronautical Chamber's Personal Aircraft Council.

Planes will be better, prospect lists will be longer, sales will be more numerous than in 1941, but Mara pointed out these further opinions and facts to the National Aviation Clinic:

►Unlike the auto industry, which is assured of a seller's market for several years, personal aviation must expect to work for its sales and train its dealers and distributors that the future will become more profitable only in direct proportion to the properly directed effort they apply.

►This is a new viewpoint, because before the war, plane salesmanship was usually an adjunct, subsidiary to running a flying field, selling service and renting hangars. That's over. From here on it is a primary business. To back up the sales end, the alert dealer will also sell service, hangar rentals, instruction, and may operate taxi and rent airplane services.

►Before we entered the war factories had found direct selling too expensive and ineffective. The operator pretended he wanted to be a dealer and tied up as much exclusive area as he could. Factory branches were found uneconomic. At Pearl Harbor the pattern was a distributor-dealer setup with smaller but exclusive territories. Then came the CPT program with good income and the dealer, protected by his exclusive territory, waited for business to come to him instead of letting CPT take care of operating expenses and pushing plane sales for extra profit.

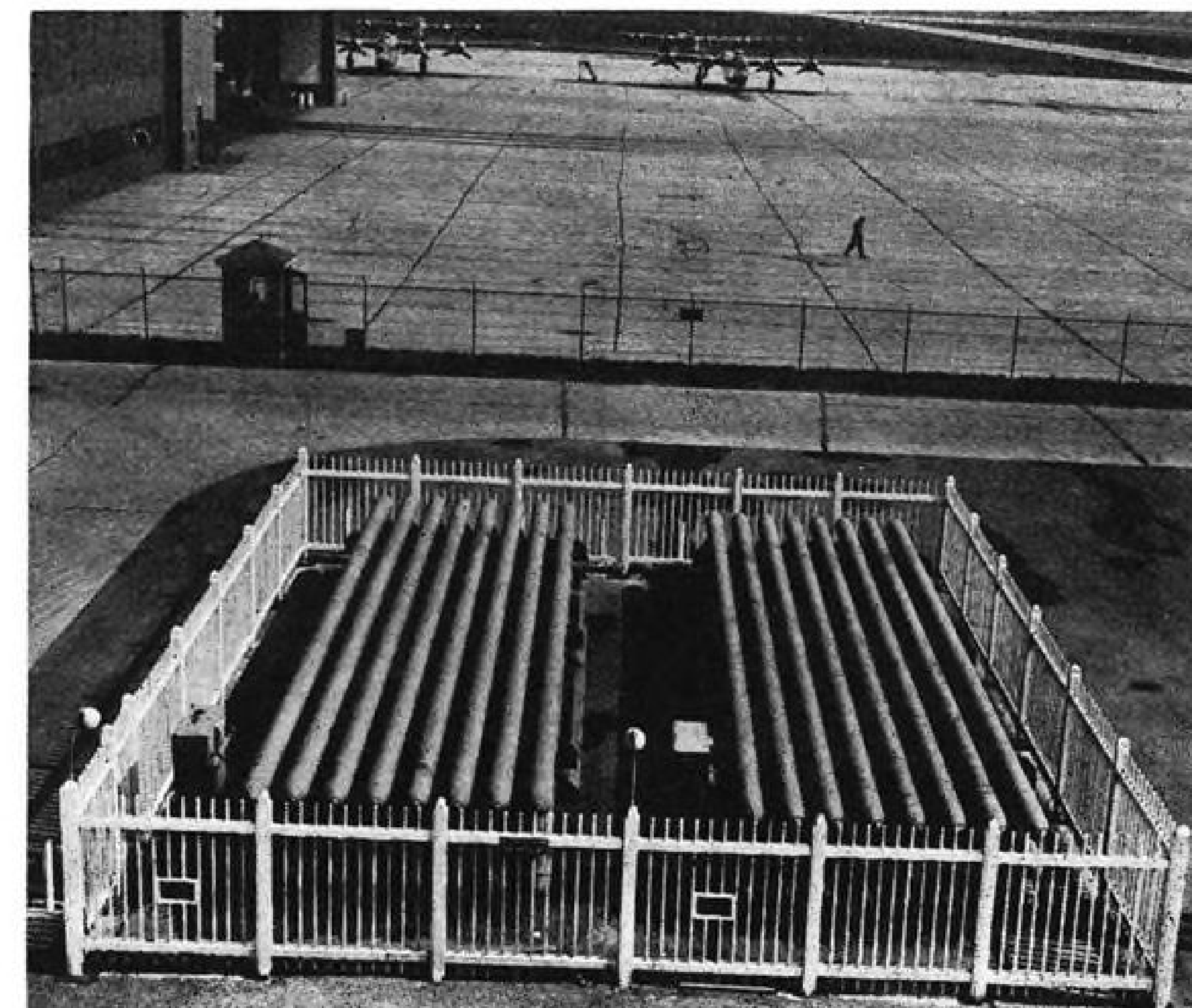
►Auto history was similar. It took about 15 years to get auto sales into high. Good roads costing 25 billions had to be built to prove the motor car's utility. Hence, the need for thousands of airparks and facilities. Early car salesmen came from factories. Then the struggling mechanic entered sales. The distributor with a larger stock ap-

peared, and dealers depended on him. The trend now in automobiles is to eliminate distributors and work exclusively through dealers. ►Relief from strangulating governmental regulation is a must. It starts with aircraft design, goes through production, and discourages the pilot from getting a license and operating his plane. The rest is up to the industry.

►The factory sales manager knows he must locate the prospect, demonstrate his product, and close the sale. Hence, competition will demand intensive training of factory sales and service staffs, men of high caliber. Service properly belongs with sales. The plane owner will expect service in his home town, by a man who understands not only mechanical problems but the planes sales point. An adequate spare parts stock is necessary in every city, but the smart factory sales department will not allow dealer overstocking and will adjust slow-moving inventories.

►Dealers must be given more aid with ad campaign, sales and service manuals, booklets, posters, pins, comparison charts, prospect lists, radio talks, and other promotion. Factory and dealer sales forces must learn to use these tools.

►Factory sales schools may be



#### OXYGEN FOR ALTITUDE FLYING:

Forty-eight cylinders, 42 feet long like these are used at Ford's Willow Run bomber plant to store pure dry oxygen, for high altitude flying. It is used to test oxygen systems and fill oxygen bottles of Consolidated B-24's made by Ford.



## Steers New Head

Maj. Sheldon (Buck) Steers, Michigan aeronautics director, was elected president of the National Association of State Aviation Officials, succeeding Dexter Martin, South Carolina. Other officers: L. D. Schroeder, Minnesota, first vice-president; Joseph E. Bergin, Utah, second vice-president; Arthur H. Tully, Jr., Massachusetts, third vice-president, and E. W. Stanford, Alabama, re-elected secretary-treasurer.

necessary, where pilots can be trained as salesmen and furnished to dealers on request. It may be a condition of franchises that the dealer agrees to send his men to such schools. Some way must be found at once to arrange sales programs in which discharged Army and Navy pilots and ground force men may participate.

►The sales manager must meet the hangar problem. The dealer may sell hangars, at least, he must be prepared to provide hangar service or tell the customer where he can buy a hangar. Private hangars afford privacy, reduce manpower, prevent delay in moving other planes and may cut insurance rates.

►An adequate finance plan, probably on time payments, is another must for the sales manager. Although insurance charges were responsible for part of the high financing cost before the war, hidden finance costs also crept in and the time customer sometimes paid full price of a policy but got only an "insurance certificate which costs less and offers less protection." It is as important to remove \$100 of hidden finance or insurance charges for a customer as to take that sum from manufacturing cost.

►The rent-a-plane system should be studied by sales managers, to serve the thousands of returned military pilots who wish to maintain their licenses.

►Studies must be made on investments necessary for new dealers and the size of stocks. Factories must standardize models to speed output and cut costs, but dealers should be able to add extra equipment desired by the customers.

►The trade-in problem will be important. The industry should join the Aeronautical Chamber of Commerce in compiling a "Blue Book" similar to that in the auto field to establish fair prices for used

planes. It would be invaluable to dealer, finance company or bank.

►Diligent study of territory assignments will end the practice of drawing random lines on a map, and bring detailed information on each trade area, incomes, number of airports, pilots, and students. Fair and mutually profitable quotas will be prepared, and both factory and dealer will be protected by size and shape of territory.

►The dealer knows every manufacturer will have hundreds of dealer applications in its files. Merely because he was a dealer before the war does not guarantee his post-war franchise. Many capable, financially able merchandisers are eager to compete for the long pull. They may be primarily auto, refrigerator or other dealers not entirely dependent on air sales and they may build their own airparks and give the old-line plane salesman new, unconventional competition.

"Thus, the dealer applicant who

## Model Code

Model aviation state code sponsored by the National Association of State Aviation Officials includes four bills: one creates a state aviation governing body or commission and defines its powers; another provides for state regulation and development of airports; third is an airport zoning law fathered by the CAA, and the fourth, not yet complete, is a "non regulatory" act which defines liabilities of pilots, carriers, etc.

The bills were drafted by a committee headed by William Greene, Assistant Attorney General of Minnesota, at the request of the Civil Aviation Joint Legislative Committee composed of representatives of NASAO, NATA, NAA, ADMA, ACCA's Personal Aircraft Council, and the Aviation Insurance Group, Council of State Governments and CAA have cooperated in preparing the code and existing state legislation has been followed where possible.

It follows the broad principle that the Federal government has a major responsibility for airworthiness of planes and competency of pilots and for the broad plan for airports, while the states will assist and assume responsibility for airport layout and regulation and for governing air movements which do not go outside state borders.

can come to the factory with the best analysis of his territory, the best and most attractive airport and housekeeping setup, the greatest amount of merchandising experience and adequate financing is the one who will probably walk out with the franchise," Mara said.

## U. S. State Control Favored at Clinic

Cooperation rather than competition in regulation and promotion would bring aviation greatest benefit, many representatives at Oklahoma City sessions agree.

By ALEXANDER MCSURELY

Agreement was voiced last week at Oklahoma City by many of the representatives of aviation groups at the National Aviation Clinic, on the principle that joint Federal and state promotion and regulation of aviation can do the industry great good, if the two governmental spheres of influence are clearly defined and if the state legislation follows a uniform pattern.

The more agreeable atmosphere was in odd contrast to the major verbal free-for-all which developed at the first National Aviation Clinic a year ago at Oklahoma City over the Lea Bill.

►Model Aviation Code—This year the National Association of State Aviation Officials, meeting two days before the clinic, brought forth a model aviation code which it will sponsor for uniform adoption by all states. Pointing out that nearly every state now has some aviation legislation (all but six), NASAO believes it essential to obtain uniformity of such legislation so that conflicting laws and regulations in the several states will not hamper and stunt the growth of aviation.

In many states, only minor changes will be needed in existing legislation, to meet the model code requirements.

The state code would not affect the airlines materially in the opinion of its NASAO sponsors because "it is not economic legislation." It is reported that representatives of two air lines have indicated their feeling that uniform state legislation may be the best answer to the problem, and that at least they concede that some state regulation of aviation is inevitable.

►State-U. S. Regulation Discussed—Carrying over from the NASAO

meeting into the clinic sessions, the subject of state and Federal regulations was considered at the first afternoon session with Maj. Sheldon (Buck) Steers, Michigan aeronautics director and Dr. John H. Frederick, of the University of Texas, presenting their views.

Dr. Frederick contended that the Federal government "has pre-empted the entire field of control and regulation of air transportation," and that "state laws and regulations are not only unnecessary but unenforceable." He warned of the chaotic condition which he said would result from 48 different standards of aircraft and pilot regulations.

►Asks Cooperation—Major Steers called for state and Federal cooperation in regulating aviation similar to that now existing in law enforcement between state and local police and the FBI. "The state," he said, "can choose between recognizing the Federal licenses of airmen and aircraft and by making it a state violation to fly within the state without them, or issuing its own licenses. Under existing Federal regulations, unlicensed pilots and unlicensed aircraft may operate with immunity within a state so long as they stay within its borders and do not cross a Federal airway," he declared.

Personal aircraft received a major emphasis at the clinic, while surplus disposal, airports and traffic control, air passenger and cargo transportation, feeder airlines and fixed base operations, military aviation, and education in the sciences and arts of the air were other subjects covered in papers and discussion at the four-day clinic sessions.

Besides 98 voting delegates, chosen to represent 14 classifications of aviation groups and allied public interests, attendance at the clinic numbered close to a thousand.

## WPB Aircraft Unit

Aircraft Industry Division of the War Production Board became a reality last week when a small staff was organized to function under the director who has not yet taken over—probably Henry Nelson, formerly with National Aircraft War Production Council, who has not yet been released from his current war production assignment.

►Three Branches—A deputy director will serve under him and



## NATS PASSENGER TRAVEL IN PACIFIC:

*Traveling by Naval Air Transport Service plane in combat zone is speedy but not exactly luxurious. Some of the passengers in this R4D transport have to sit on the cargo, which is sometimes more comfortable than sitting in the bucket seats along the side, as many travelers in military planes these days will attest.*

there will be at least three branches of the Division. The Aircraft Priorities branch and the Project Rating branch will continue and a Planning branch is anticipated.

The division will deal with civilian requirements in aircraft production deemed by both WPB and the military as essential to the war program, and according to present thinking, will assist in reconverting the industry as war contracts are canceled and the manpower situation eases.

## Credit Insurance For Canada's Exports

The Canadian aircraft industry, which may have three major planes for the export market after the war, will have an advantage of insurance against losses in credit risks through the new Canadian Exports Credit Insurance Corp.

The exports credit corporation is being set up under new Canadian legislation—the Exports Credits Insurance Act. It is capitalized at \$5,000,000 with a credit surplus of \$5,000,000, and may sell bonds and debentures.

►Export Trade—Despite the fact that Canada has in the past always imported aircraft and equipment, it is virtually certain that Canada now will export Canadian-Vickers built Douglas DC-4 planes under license to Great Britain, Burnelli type transports that TACA Airways are understood to be buying

from Canadian Car & Foundry, Ltd., of Montreal, and possibly Noorduynd Aviation's *Norseman* small transports, only Canadian designed and built aircraft to date.

## British Tell How Rockets Aid Takeoff

British Royal Navy disclosed how rockets assist carrier-borne aircraft to take off in light winds with heavier loads and at greater speed shortly after the U. S. Navy (AVIATION NEWS, Sept. 18) announced jet-equipped planes take off in one-third to one-half the normal run.

►Simple Mechanism—The British employ a simple mechanism, easy to attach to ordinary aircraft and loaded with explosive charges of cordite. The rockets are mounted on each side of the fuselage. Each group contains from one to four rocket tubes held in a carrier—the number used varying in each case according to type of aircraft and weight of load.

As outlined by BIS, the rocket-launched aircraft starts its takeoff in the normal way. At the optimum point of the takeoff, previously marked and determined from a graph which allows for wind speed, the pilot fires all his rockets simultaneously. This gives the plane just the extra impetus needed for a quick takeoff, lasting about four seconds. Rockets and carriers are then jettisoned.



# Stratocruiser, New Superairliner, Being Test Flown by Boeing

Prototype of huge Model 377 is built around *Superfortress*, using same wing and tail surfaces but with double fuselage 12 feet longer than B-29 and twice the volume.

Boeing is test flying the prototype of its new luxury 377 superairliner to be known as the *Stratocruiser*.

The new plane is built around the B-29, using the same wing and tail surfaces, but with a double fuselage that is 12 feet longer than that of the B-29 and with twice the volume. Direct operating cost is estimated at one cent a passenger mile, five cents per cargo ton-mile. It has a comfortable non-stop New York-London operating range, with normal cruising speed of 340 mph. and top speed of 400 mph. Cabin is pressurized.

The fuselage of the 377 is double-decked, with the bottom section the same diameter as the fuselage of the B-29 and the top section slightly larger with a width of more than 11 feet, so that a cross section resembles an inverted figure "8"—much like the Curtiss C-46 *Commando* now in service. The lower fuselage section streamlines into the upper section, tapering at the rear and rounding up into the nose forward. The mid-wing of the B-29 becomes a low-

mid-wing on the 377, cutting the lower fuselage section into two compartments.

► **Low-Drag Wing**—The wing is the Boeing 117 low-drag design used on the B-29 and tail surfaces are the same high-stability single type used on the *Superfortress*.

The prototype is a military version expected to play a role in long-distance operations of the Pacific, and all present models will go to the Army. But as such it is the first of the super-planes of the post-war commercial era to be completed and flown.

It is smaller than Pan American's Type 10—probably the Lockheed *Constitution*—and the Douglas DC-7, but the normal cruising speed indicated is much higher—340 mph. against 296 mph. for the DC-7 and 288 mph. for the Type 10—and passenger capacity is not much lower although gross weight is considerably less.

► **Held Up By B-29** — Industry sources say the *Stratocruiser* probably cannot be placed in commercial service as quickly as some other types because of the Boeing

commitments on the B-29 production for service against Japan. They do say, however, that Pan American has definite plans to purchase the plane as soon as it can be produced, and indications are that it is designed for quick production once facilities can be released from the B-29 program.

The operating cost of one cent a passenger mile will apply to ranges as great as from New York to San Francisco non-stop when the superliner is used as its "day coach" version carrying 100 passengers in three cabins—as many as two modern railway day coaches. These operating costs, Boeing says, will permit airlines to compete in this traffic field. One lower cabin could be kept convertible for cargo use, which would give the plane a passenger capacity of 86 and cargo space of 750 cubic feet.

► **Sleeper Model** — The luxury sleeper model also would be available for interchangeable use. In sleeper service it provides 36 comfortable berths in the main cabin, or 72 day seats. The lower rear cabin in this version is designed as an observation, dining and cocktail lounge seating 14 persons. For long over-ocean flights, the forward cabin in this version is used for cargo, galley and crew's quarters. By using the lounge for additional passengers, the day-time capacity of the luxury model would be 86 persons.

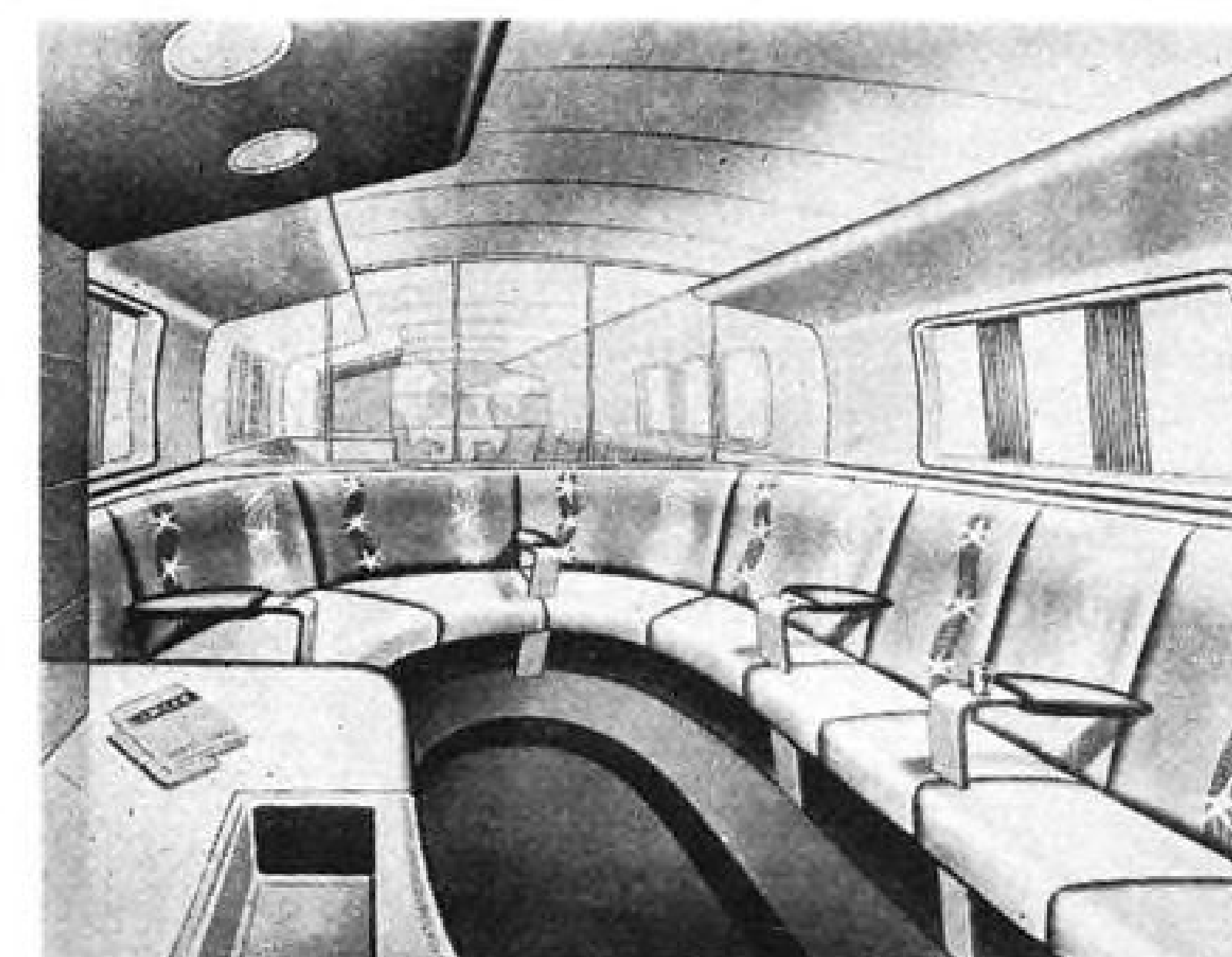
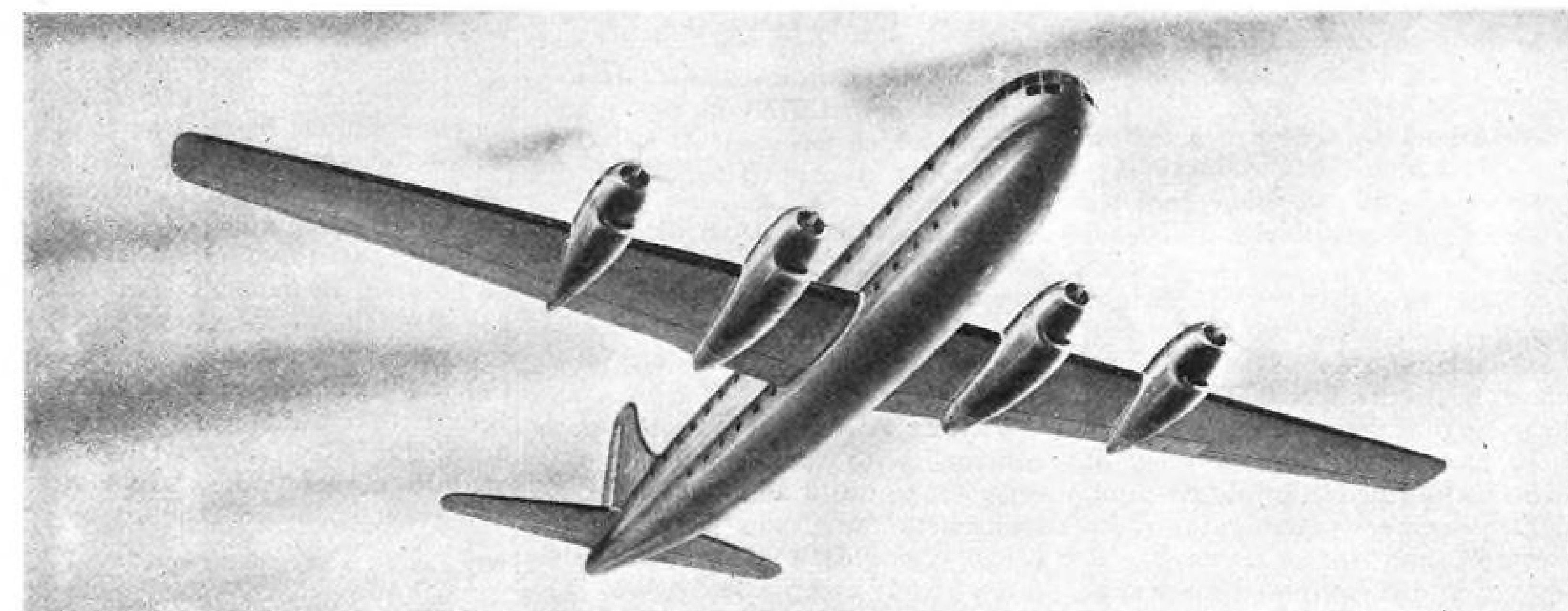
Boeing has designed the plane in a third version as an all-cargo plane with drive-up ramp in the rear and internal cargo-handling equipment. This version has a usable cargo volume of 3,000 cubic feet and a maximum cargo payload of 35,000 pounds. Direct operating costs on this model approximate five cents a ton-mile.

The passenger plane versions are equipped with galley and separate lavatory accommodations. The sleeper has dressing rooms.

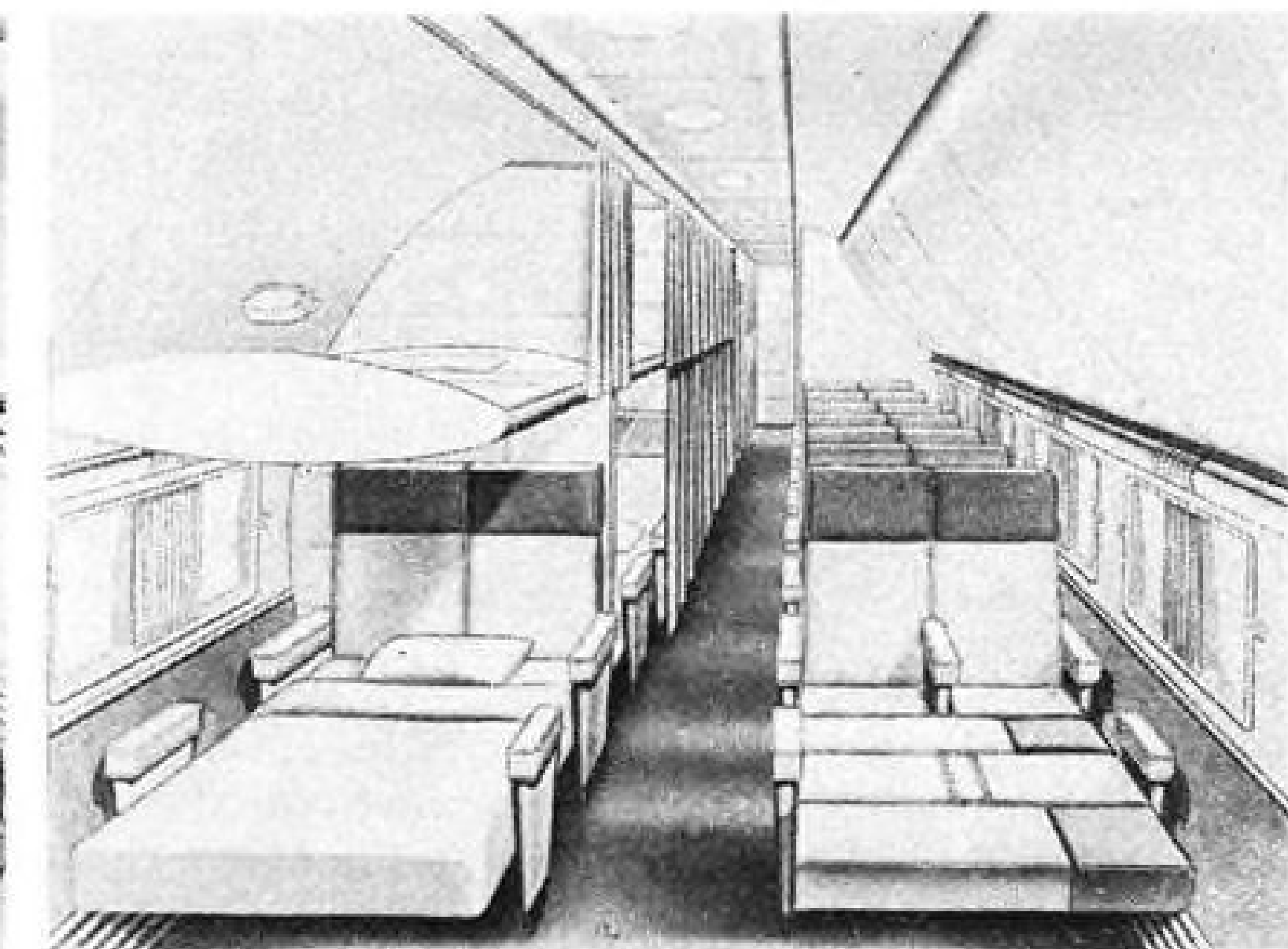
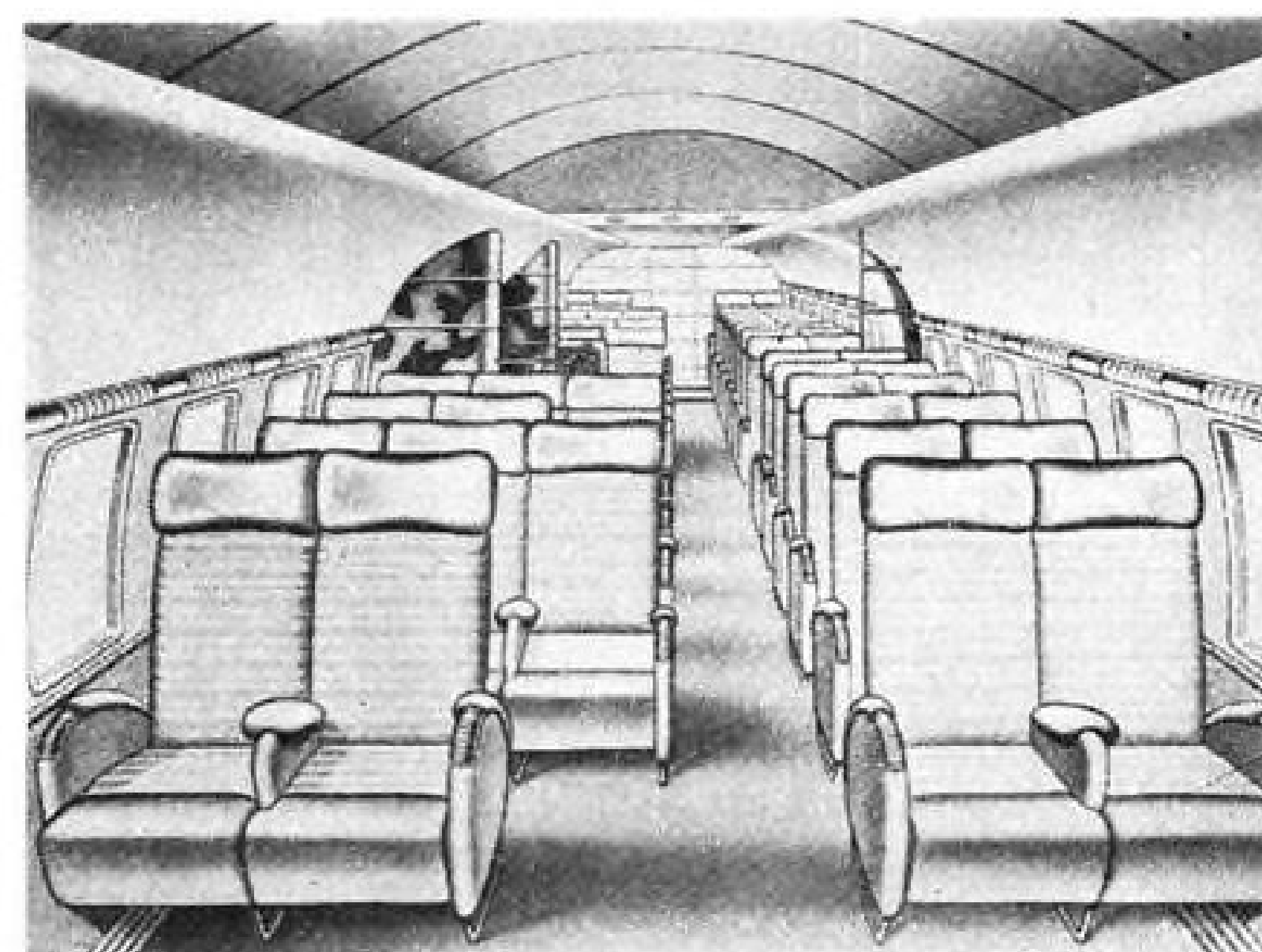
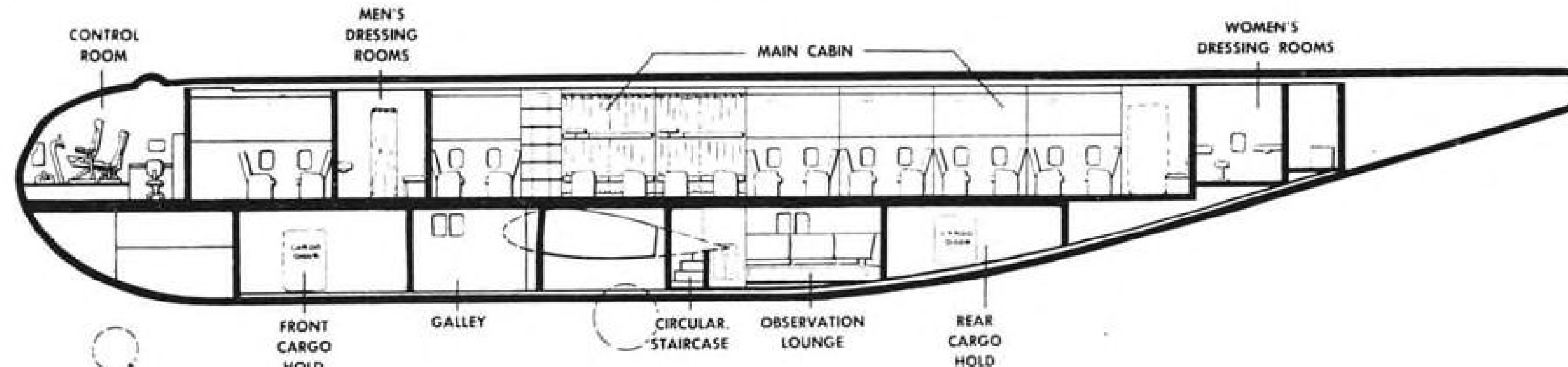
► **Fourth 4-Engine Plane**—The 377 is the fourth four-engine plane built by Boeing. Military types are the B-17 series and the B-29's. Commercial types are the Boeing *Stratoliners* used by TWA and Pan American, and the Boeing *Clippers* used in trans-oceanic operations by Pan American. The *Stratoliners* are now being recon-verted for TWA by Boeing, being equipped with B-17 wings and lengthened fuselage.

Empty weight of the 377 is 70,000 pounds, gross weight 130,000 pounds and landing weight 105,-

## Boeing's Post-War Super Transport Based On B-29 Design



Shown on this page are various detailed views of Boeing's transport designed for high-speed, long range, large passenger capacity and low operating cost, the Boeing 377. Included is the cut-away view showing cabin arrangement of the luxury sleeper model, the observation and cocktail lounge, the interior seating arrangements for the day-coach model and the accommodations on the night sleeper version.



## Boeing 377 Specifications

The Boeing Model 377 is a four-engine, low-wing, two-deck, pressurized cabin passenger transport.	
Wing spread.....	141 feet, 3 inches
Length.....	110 feet, 4 inches
Height.....	33 feet, 3 inches
Weight, empty.....	70,000 pounds
Weight, gross.....	130,000 pounds
Weight, landing.....	105,000 pounds
Power.....	4 engines of 3,500 hp. each at takeoff
Maximum speed.....	400 mph.
Cruising speed.....	340 mph.
Operating range.....	3,500 miles
Operating ceiling.....	30,000 feet
Passenger capacity.....	Special day version: 100 passengers Luxury sleeper: 72 day passengers, 36 berths, plus 14 lounge seats
Cargo capacity.....	Passenger version: 750 cubic feet All-cargo version: 3,000 cubic feet usable space; 35,000 pounds
Propellers.....	4-blade, 16 feet 7 inches in diameter
Landing gear.....	Tricycle gear with dual wheels throughout
Wing.....	Boeing "117" (Same as Boeing B-29)
Tail surfaces.....	Same as Boeing B-29 <i>Superfortress</i>
Fuselage.....	Maximum cross-section: Height—15 feet 9½ inches; Width—11 feet
Main passenger cabin.....	Length—60 feet
Cabin.....	Completely supercharged except for tail storage area. (When flying between 8,000 and 30,000 feet, atmospheric conditions in the cabin are maintained at an 8,000 foot basis.)
Furnishings.....	Upholstered seats for day passengers. Each seat equipped with individual reading light, ash tray and push-call button. Roomy berths for night sleepers.



000 pounds. Wing spread is the same as the B-29—141 feet, three inches. It is 12 feet longer—110 feet, four inches. Controls are aerodynamically balanced, and do not require power boost.

► **Pressurized** — The pressurized cabin is designed to maintain atmospheric levels of 8,000 feet up to an operating altitude of 30,000 feet.

Engines probably will be Wright Cyclones of 2,800 rated hp. and 3,500 takeoff hp. The 377 can maintain flight at 20,000 feet with three engines operating.

On long ocean hops, a crew of seven is required—pilot, co-pilot, flight engineer, navigator-radio operator, and three stewards. A crew of five is estimated for trans-continental operations—pilot, co-pilot, flight engineer-radio operator, and two stewards.

Fuselage construction of the *Stratocruiser* is such that equipment and mechanical operating devices are easily and quickly reached from the ground and in flight. All four power plants on the 377 are quickly interchangeable.—W. G. K.

## Canadian Vickers Stock Purchases

U. S. and Dominion aircraft interests reported buying into company which has contract to build 50 DC-4 transports for TCA.

Reports that American and Canadian aircraft interests are buying into Canadian Vickers, Ltd., Montreal, are current in Ottawa and have not been officially denied.

Vickers Aircraft Division has a contract with the Canadian government to build 50 Douglas DC-4 transports for Trans-Canada Air Lines. Douglas and other American aircraft companies as well as Canadian groups are reported in the deal. Douglas' contract with Canadian Vickers permits building DC-4's for export to Great Britain.

► **Political Issue**—Control of Canadian Vickers was a political issue some months ago when the Canadian government announced the DC-4 post-war building program, for which the company is now tooling up. At that time Belgian in-

terests owned about one-fourth of the stock, which has since been reported purchased by Roy M. Wolvin, Montreal shipbuilder.

There were some complaints in Canada some months ago that the contract should have gone to government-owned Victory Aircraft, Ltd., Montreal, which is now building Lancaster bombers. The DC-4 program at Canadian Vickers is understood to be tooling up in the government-owned plant of that company, with Ottawa paying for the tooling on a separate basis of actual cost. Canadian Vickers will build the DC-4 transports on a fee of two percent, the target price being \$350,000 for each plane.

## Northrop Stock Call

Stockholders of Northrop Aircraft voted to call in all present A and B stock and to issue in exchange one new class of stock on a share-for-share basis, with the transfer effective Dec. 1.

John K. Northrop, president and director; LaMotte T. Cohu, general manager and chairman of the board and all present officers and directors were re-elected.

## PRIVATE FLYING

# ERCO Sales Conference Points Way To New Plane Marketing Approach

Meeting of staff in Washington with view to mapping out post-war merchandising program regarded as significant move in private plane industry.

By ALEXANDER MCSURELY

A two-day distributors' conference held in Washington by Engineering & Research Corp., Riverdale, Md., manufacturers of the two-control *Ercoupe*, points the way to a new and more scientific approach to the problem of marketing personal aircraft, an approach which may pay increased returns to manufacturers who utilize it.

Pre-war sales of private aircraft, in the vast majority of cases were made on a take-it-or-leave-it basis. Unless the sales prospect wanted an airplane so badly that he sold himself, he was much more likely to end up listening to the automobile salesman who was far advanced in the art of merchandising, and end with a new car, instead of the plane he originally had wanted.

► **Conference Significant**—ERCO's conference, presumably the first meeting called by a personal plane manufacturer to map its post-war selling strategy with its distributors, is significant to the industry for a number of reasons.

Of the distributors present, a large number were men with considerable experience in automobile sales and service, with a group of outstanding aviation men, to complete the organization. Entering of the aviation sales field by experienced automobile sales personnel has been anticipated and discussed with mixed feelings by many aviation people, some fearful of the "high-powered competition," and others eager to introduce big business merchandising methods into aviation sales. ERCO's distributor list clearly indicates that this company is already lined up to use automotive-type merchandising, and the competitors will watch its sales progress with keen interest. The distributors are:

Oliver Parks, Parks Aircraft Sales and Service, St. Louis; R. E. McKaughan, Aviation Enterprises,

Ltd., Houston, Tex.; Douglas Robinson and H. O. Nelson, Tucson, Ariz.; C. C. Moseley and O. D. McKenzie, Grand Central Airport, Glendale, Calif.; E. M. Anderson, Anderson Air Activities, Milwaukee; W. J. Weddell and G. H. Shepler, Weddell Aviation Co., Detroit; Cody Laird and Gus Leazar, Southeastern Air Service, Inc., Atlanta; W. E. Schmidt, Wilkes-Barre, Pa.; Merrill Christopherson, Provo Flying Service, Provo, Utah; John R. Keefe, Safeways Aircraft, Miami, Fla.; W. D. Tipton, W. E. Mainville and Lester Sibe, Baltimore; Ralph Stemmons, Connecticut Aviation Co., Hartford, Conn.;

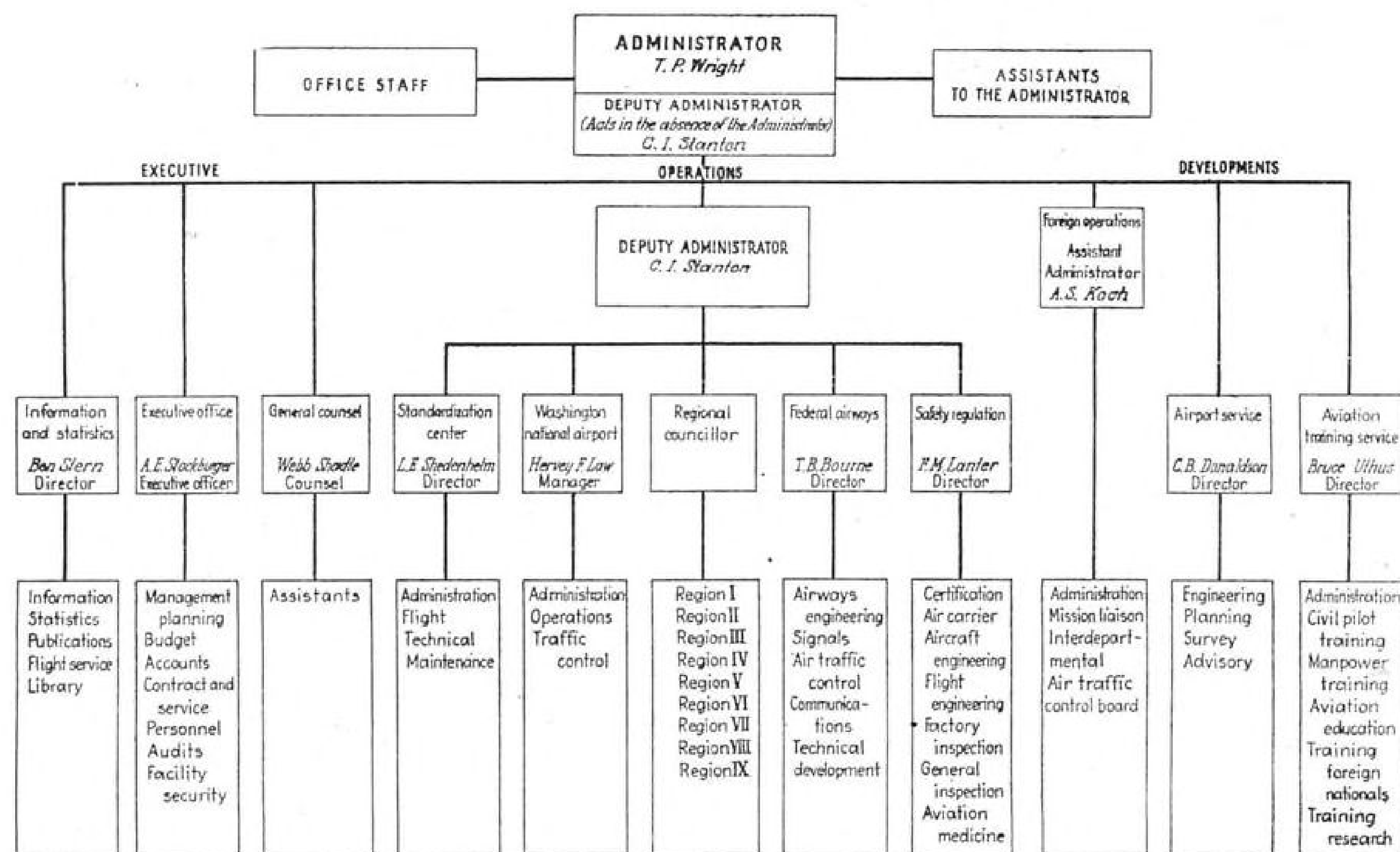
R. C. Davis, Union Motor Co., Little Rock, Ark.; G. H. Kensinger, Memphis, Tenn.; L. W. Mack, Jr., and Willard Bridgeman, Aero Enterprises, Inc., Denver; George Patterson, Cincinnati; J. Wayne Stewart, Parkersburg Flying Service, Parkersburg, W. Va.; and Fred C. Clarke, Northwest Aviation Co., Rochester, Minn.

► **Problems Discussed**—During the two-day conference the distributors heard discussions of engineering problems and future possibilities in design from Fred Weick, chief engineer, heard discussion of production problems by L. A. Wells, president, and an address on company policies by Henry Berliner, chairman of the board.

Oliver Parks, *Ercoupe* distributor for eight states, who has been conducting some newsworthy flight training group tests with the *Ercoupe* at St. Louis, pointed out the importance of the "selling job" necessary through demonstrations to political business and labor leaders in each community, to make clear the potential utility of the private plane if suitable airparks are provided in the heart of residential and shopping districts.

Mr. Parks stressed the importance of convincing Congress and

## DEPARTMENT OF COMMERCE - CIVIL AERONAUTICS ADMINISTRATION



## NEW CAA CHART SHOWS REORGANIZATION:

Rearrangement of the Civil Aeronautics Administration's functional organization announced by Administrator T. P. Wright, is shown in the above chart, grouping activities into three divisions, Executive, Operations, and Developments. Among interesting

changes is the setting up of a new foreign operations division, headed by A. S. Koch, former deputy administrator, as forecast in AVIATION NEWS, Oct. 23. Chart also shows provision for assistants to the administrator, which positions have not yet been filled.



## INDIANA'S ADVISORY COMMISSION ON AVIATION:

Holding a series of public hearings throughout the state to get Hoosier ideas about airport needs and air service requirements, the commission (above) meets at South Bend to examine conditions there and receive reports. Left to right: kneeling, John Dyer, Frank Bodwell, both of Indianapolis; W. Vincent Youkey, Crown Point; and Robert H. McIntyre, Indianapolis, secretary; standing, Burton Swain, Seymour; E. B. Reeder, Indianapolis; K. B. Elliott, South Bend; Col. Roscoe Turner, Indianapolis; Charles L. Egenroad, South Bend; Herschel A. Hoppeter, chairman, Indianapolis; L. Hewitt Carpenter, Marion; Samuel C. Hadden, Indianapolis; J. D. Beeler, Evansville, and W. W. Winslow, Indianapolis.



the nation's political leaders of the necessity for making adequate federal appropriations available immediately to develop airparks in the nation's communities as a means of providing post-war employment and at the same time to build a permanent contribution to the welfare of each community. He also urged the necessity for selling local communities to convince them that they must take advantage of available federal funds for airpark construction.

► **Predicts Huge Market**—If these selling jobs are carried out, Mr. Parks contends that aviation sales organizations have a potential market for five million personal airplanes between now and 1960.

With the exception of a few modifications, the *Ercoupe* to be offered at the end of the war will be the same plane brought out shortly before the war as a radical departure from the other lightplanes then on the market, equipped with tricycle landing gear, and two controls, eliminating the rudder pedal controls. Increased gas capacity, improvements in appointments and a minor change in the landing gear will be found on the new models.

Company officials are silent on reports that a model with increased power and another model possibly a four-place family job, are projected for future production.

As one official expressed it, "We are looking ahead in design like everybody else, but we feel that our standard airplane is our best drawing card; it has already proved itself, and we can turn it out in quantity production to meet the orders already piling up."

## Geisse to Resign

John H. Geisse, CAA consultant on personal planes, and well known designer and authority on lightplane problems, expects to resign Jan. 1, and plans to submit his resignation to Civil Aeronautics Administrator T. P. Wright when the administrator returns from the International Aviation Conference at Chicago.

Geisse has made no secret of his dissatisfaction with CAA regulations on private flying, and was particularly critical of CAA physical requirements for a pilot's certificate, in an address at Wichita, last week. He has been with the CAA eleven years, and is presently serving as aeronautical engineering analyst in the airman development division.

## Morgan Outlines 5-Point Program

Asks clearing away of obstacles impeding full development and enjoyment of personal flight in Oklahoma City speech.

Action on the part of the aviation industry and the American public to eliminate the obstacles which now hamper the full enjoyment of personal flight by the public was urged by John E. P. Morgan, manager of the Personal Aircraft Council, Aeronautical Chamber of Commerce, in a speech prepared for the National Aviation Clinic at Oklahoma City last week.

Morgan outlined a five-point program of objectives to be sought to make possible full realization of the personal plane's potential utility:

► Every community will need landing facilities specifically planned for personal aircraft, modest in cost, modest in maintenance, in the form of airparks, within communities, flight stops adjacent to highways and air harbors for seaplanes and amphibians. The dusty, dirty ill-kept small landing field is

passing out of the picture, to be succeeded by the well-designed landscaped airpark, a community center.

► Improved aircraft performance is required, and Morgan believes will be a result of normal competition between manufacturers, whether tomorrow's planes are standard airplanes with two or three controls, or helicopters or roadable planes.

► Liberalizing present Civil Air Regulations must be had, to overcome "the greatest obstacle to full freedom of personal flight for the average citizen." Morgan called for a sane relaxation of regulation, now grown to be an onerous burden hampering the public right to fly and imposing additional unnecessary costs on flyers. He urged importance of uniformity of state aviation regulations, warning that failure to recognize the interstate traveling characteristics of the airplane would seriously handicap personal aviation.

► A simple air market system established throughout the country to enable air travelers, if lost, quickly to orient themselves is an essential requirement.

► A program to educate the public in safe flying practices, the proper uses of planes and facilities through grade school, high school, and college courses is necessary.

Morgan appealed for a more rational viewpoint on stunt flying.

"Referring to the personal plane's earthbound counterpart, the automobile, do any of us endeavor to emulate the death-defying stunts of the county fair daredevils? Do we try to drive our family cars through hoops of fire, crash them through burning buildings, play leapfrog, hurdling a group of obstacles—of course we don't! Why should a personal pilot emulate the stunts of a professional acrobatic flyer? The answer is plain—he should not!"

► **Lauds Liaison Planes**—The PAC manager paid tribute to the work done by personal planes, dressed up in Army paint, and renamed liaison aircraft, in China, Russia, Italy, Sicily, Normandy, Burma, without proper landing facilities, hangars or supplies, controlling artillery fire, spotting enemy concentrations, scouting terrain, rescuing lost men or units, evacuating wounded, carrying messages, and even in some cases as bombers. He also cited the work of CAP using similar plane types.

"If the army has been so thoroughly sold on the military utility

of these personal aircraft, certainly the public should prove no less receptive to their civilian utility," Morgan concluded.

## Port Plan Studied For New York City

Government officials work with Regional Plan Association and other groups on establishment of landing facilities in metropolitan area.

Comprehensive plans for establishment of airports and landing facilities in the New York metropolitan area are being considered by a committee of government officials in cooperation with the Regional Plan Association, Inc., of New York. The committee is composed of representatives of twelve counties in the New York metropolitan area, the Civil Aeronautics Administration, Port of New York Authority, Regional Plan Association, and the States of New York and New Jersey.

At an organization conference in New York City several weeks ago, the representatives discussed estimates of air travel in New York, development of light planes and other technological developments in the industry, scheduled service vs. private flying, government subsidy, and the length of time into the future for which planning is to be made.

► **Data Studied**—As a result of that first meeting the county representatives have been given data on applications filed with CAB, the recommended standards for various types of fields, and material for local newspaper use, planned to create widespread public interest. The counties will supply to the committee information on existing airports and other landing facilities. After this information has been gathered a second meeting will be called, according to C. Earl Morrow, acting executive director of Regional Plan Association.

Represented at the first meeting were the City of New York, Putnam, Ulster, Westchester, Nassau and Suffolk counties, New York; Bergen, Essex, Hudson, Middlesex, Morris, Passaic and Somerset counties, New Jersey, and Fairfield County, Connecticut, as well as New York State Department of Commerce, New Jersey State Department of Economic Development, New Jersey State Department of Aviation, New York Port Authority, Civil Aeronautics Ad-



### LIGHTPLANES EVACUATE WOUNDED:

Use of Piper Cub liaison planes to move casualties from battlefront areas, is shown in these photos from the CBI theater, along the Ledo road in Burma. Above: the Cub takes off from a landing strip along the road, while the strip is still under construction. Below: Sgt. Alex Pavushik, Sioux City, Ia., pilot, brings a wounded Chinese soldier in his plane to a hospital behind the lines.



ministration and the Regional Plan Association.

## Amend CAR to Ease Pilot Certification

Amendments to Civil Air Regulations facilitating issue of civil private and commercial pilot certificates to Army and Navy pilots and WASPS have been enacted by Civil Aeronautics Board.

Civil pilot certificates will be issued to military pilots or WASPS who have served on solo flying status for at least six months prior to application, if they pass written examinations on Parts 20 and 60 of Civil Air Regulations, and present documentary evidence of their service records as pilots. They must show a rating "at least equivalent" to CAR requirements for the type of certificate sought.

► **Reduces Delay**—The amendment as to military pilots will make it possible for them to fly civil aircraft legally while still in service, and also is expected to lessen con-

fusion and delay expected during the flood of applications from military pilots for civil certificates at the end of the war.

## Aircraft Comprise Over 50% of Surplus

Of \$564,418,000 in surplus goods on Reconstruction Finance Corp. books, approximately \$327,000,000 represents airplanes and aircraft equipment. Sales have been less than \$10,000,000, chiefly derived from CAA-WTS trainers.

► **No Glider Sales**—Latest available data, which bring acquisitions and sales through Oct. 15, reveal that there have been no sales of 785 surplus gliders, 10 aerial targets, or five autogiros. Of 11,070 Army planes, chiefly trainers, declared surplus, only 96 had been sold. Only 217 of the CAA-WTS planes remained of 5,399 in the pool.

All this material is carried on RFC books at cost, not current value. Much of it is virtually worthless for the civilian market.



## SPB Prepares Public For Scrap Disposal

Speeches of two executives seek to explain need to chalk up losses on items apparently useful but not actually so.

Aviation Division of Surplus Property Board has started its program of education to prepare the American people for "scrapping items which seem to be useful but are not actually so," with two speeches of top executives of SPB last week.

Aviation Division and the organization of the Surplus War Property Administrator W. L. Clayton have been cognizant for some time of the need for a well-balanced program by which the American people can be informed on the facts of the inevitable liquidation of surplus planes once the war is over. The initiative on the program has remained with SPB almost entirely, and the speeches of Mason Britton, assistant administrator in the Clayton organization, and Lieut. Col. William B. Harding, who heads up the Aviation Division on assignment from the Army Air Forces, might be said to be the opening of a concerted effort to bring the facts before the people.

► **Search for Markets**—Mr. Britton said in a widely-quoted speech delivered before the American Management Association in New York, that the intensive activity of the surplus organization on non-aviation uses for surplus warplane material had failed to disclose a possible market for combat aircraft except to break them for gadgets

that would "clutter every desk in the United States with ashtrays." He warned that a tremendous public relations job would have to be done to make the people of the country aware of the need for scrap metal salvaging of the enormous investment in planes.

Colonel Harding, in a speech before the National Aviation Clinic in Oklahoma City, told aviation people there that "experience has already proved there will not be much monetary recovery in the resale of items built for specialized uses at high cost under emergency conditions." He did tell the Clinic that "we feel this property belongs to the citizens of the United States who paid for it and we intend to make it available for those who can find a use for it in industry, in the home and on the farm." Asking for suggestions, he said the National Academy of Sciences was studying technical feasibility of all suggestions for non-aviation uses of materials.

## New Bendix Units For Light Planes

Bendix Aviation Corp. "is greatly interested in the future of the personal plane and will develop special 'packaged instruments,' starters, generators, radio, brakes, shock absorbers, and other units for small aircraft at lower prices for better products," William Mara, staff executive of the company announced to the National Aviation Clinic at Oklahoma City. The official announcement verified the previous report to this effect in AVIATION NEWS.

► **Research**—Although Mara said

Bendix has begun separate engineering research work for light plane equipment to take advantage of production and engineering lessons learned during the war, he would not comment on rumors of recent efforts of Bendix to purchase Aeronca Aircraft nor on reports that the company may start its own light plane manufacturing.

Mara "will make studies and recommendations as to any other steps Bendix can take to accelerate development of the personal airplane industry," the company said recently in announcing his change from Stinson to Bendix.

## Private Plane Noise Factor Is Cited

Aviation industry is not considering the noise factor in private aircraft as seriously as it should, in the opinion of Civil Aeronautics Administrator T. P. Wright.

Addressing the National Aviation Clinic in Oklahoma City, Mr. Wright pointed out that, while aviation enthusiasts "talk very glibly" about placing airparks in residential areas to develop private flying, they have given little thought to the possibility that residents won't have any part of them.

► **Washington Project**—He pointed to the recent dropping of an airpark project in Washington for this reason. Noise in aircraft is also a psychological deterrent to the potential flyer and a nuisance to the private flyer in the cockpit.

Saying that the private airplane seems to be the forgotten area of aviation, Mr. Wright termed it a challenge to designers and engineers.

## Ranklin Awards

Ranklin Aeronautical Academy, Tulare, Calif., reports its box score of awards and decorations for gallantry in aerial combat to its graduates during World War II now stands at 5,145 after a tabulation covering 70 percent of the 7,000 cadets graduated in the four years of operation.

The academy, headed by J. G. (Tex) Ranklin, former international aerobatic champion, lists among the awards to its graduates three Congressional Medals of Honor, four Distinguished Service Crosses, 765 Distinguished Flying Crosses, 1,022 Air Medals, and several French and Chinese decorations.

COLONEL JOHN CASEY, Manager,  
Chicago Municipal Airport . . .

Colonel Casey said, "The growing complexities of airport traffic make it ever more important that private planes and regular operating passenger aircraft be equipped with up-to-date, reliable two-way radio, if high standards of safety are to be maintained. One important factor is . . ."



## "A FOOLPROOF POWER SUPPLY FOR AIRCRAFT RADIO OPERATION"

Colonel Casey. Electronic Laboratories has long been aware of the need for reliable power supplies especially adapted for aircraft use. One of E-L's exclusive developments along this line involves vibrators operating in parallel which assures a reserve power source for extra protection. These Vibrator Power Supplies—both light and heavy duty—are specially designed for complete reliability at very high altitudes.

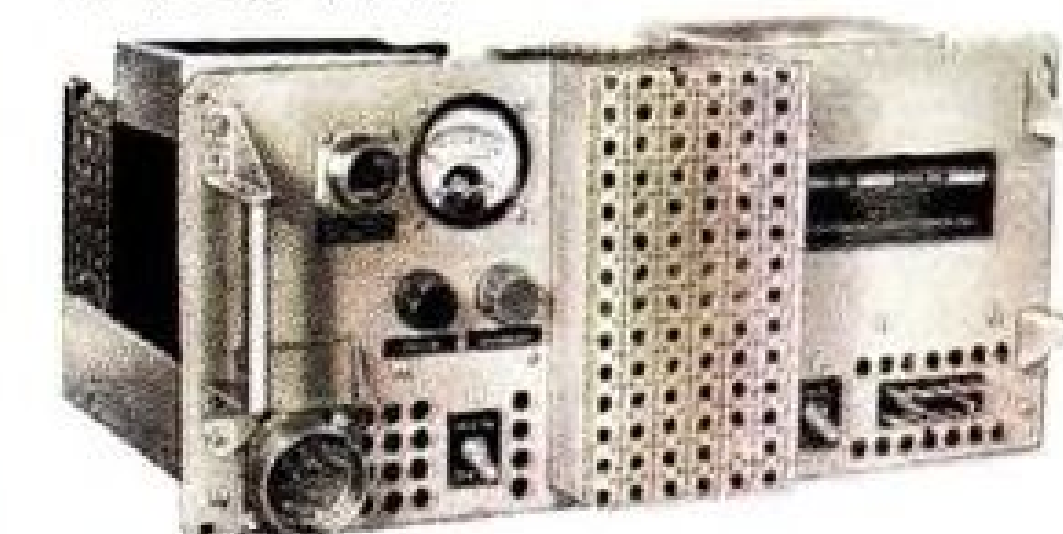
The life of E-L Vibrator Power Supplies is far beyond the customary overhaul requirement. With these units maintenance time is cut to a minimum—only a small fraction of the time previously required.

Other E-L developments for the aircraft field include units for flashing wing lights and for instrument panel illumination. This equipment has wide application for the light plane field as well as for large aircraft.

The economy and versatility of Vibrator Power Supplies are also available to the marine field—where units have been designed to provide fluorescent lighting, radio-telephone operation and electrical appliance use—as well as many other fields where it is necessary to convert current to specific voltage and type requirements . . . Let E-L engineers consult with you on your power supply problem.

### STANDARD POWER SUPPLY MODEL SC-1096

Model SC-1096 is a typical E-L Vibrator Power Supply which meets the requirements of aircraft radio use. This unit was designed for the Canadian Signal Corps to operate radio transmitters. Input voltage: 12 volts DC, or 110-117 volts AC at 50-60 cycles. Output voltage: 2000 volts at 125 ma., 400 volts at 25 ma., 250 volts at 10 ma., 250 volts at 5 ma., 10 volts at 5 amps., 12 volts at 1 amp. Output power: 480 watts. Dimensions: 17" x 12 1/2" x 7 1/4".



**Electronic LABORATORIES INC.**  
INDIANAPOLIS

VIBRATOR POWER SUPPLIES FOR LIGHTING, COMMUNICATIONS, AND ELECTRIC MOTOR OPERATION • ELECTRIC, ELECTRONIC AND OTHER EQUIPMENT



### AERONCA SPORT MODEL:

Designed to appeal to the same class of customer who likes a sport roadster, the Aeronca Arrow, shown in an interesting ground view, is slanted to interest Army and Navy pilots when they come home. Equipped with dual controls, landing gear that retracts, and a neat hinged canopy, the prototype is made of plastic plywood, but production model will be mostly metal.





## the Martin Mars means

*Payload!*

World's greatest airmail load, these 25,000 pounds of mail were carried from Hawaii to California by the mighty Martin Mars a total of 62,500,000 pound miles for a single non-stop flight. At an average of  $\frac{1}{2}$  ounce per letter, that's 800,000 letters . . . and if they were all paid for at prevailing rates, they would carry \$160,000 in postage.

This load not only smashed all previous records for airmail, but

more than doubled the 23,750,800 pound miles traveled with the all-time cargo record of 35,000 pounds which the Mars carried from Belem, Brazil to Trinidad on its first war mission for the Naval Air Transport Service.

Thus in payload, as in economy of operation, the Mars far outstrips all rivals. And her 20 sisterships, now being built by Martin, will

offer even greater payload, lower ton-mile costs, and higher speed. Best of all, war's end will find Martin production lines fully tooled and manned by experienced workers to assure early delivery of commercial versions of the Mars. It's no wonder the Martin Mars is known as "the answer to an airline's prayer!"

THE GLENN L. MARTIN COMPANY  
BALTIMORE 3, MARYLAND, U.S.A.

The Glenn L. Martin-Nebraska Company—Omaha

**Martin**  
AIRCRAFT



Builders of Dependable Aircraft Since 1909

## Survey Shows Vets To Continue Flying

70% of men in war aviation plan to operate private planes in peacetime; 40% hope to own aircraft.

Keen post-war interest in aviation is indicated among personnel of U. S. military aviation units by a sampling survey of Army and Navy flyers and ground crews, by a former airline pilot now with the Air Transport Command.

During his travels the ATC interviewer, who undertook the survey as a hobby, interviewed individual Army and Navy aviation servicemen in Great Britain, Africa, South America and intermediate landing fields, including 33 percent pilots, 29 percent operations, 22 percent ground crews, and 16 percent flight crews.

Seventy percent of those polled expect to fly private planes after the war, and 40 percent hope to own their planes, while 25 percent expect to fly commercially.

► **45% to Enter Aviation Industry**—Of those not interested in post-war flying as pilots, 45 percent wish to enter the aviation industry, and 34 percent more are somewhat interested depending on available opportunities. Occupations and preferences, indicated were: airlines, 11 percent; airport manager, 9 percent; tower operator, 5 percent; mechanic, 7 percent; executive, 5 percent; sales, 3 percent; distributor, 3 percent; administration, 1 percent, and engineer, 1.

Only 22 percent expect to take flight lessons after they leave military service, and only 26 percent indicated any interest in serving in a "World Air Force" in the event this was established as a peacetime international policing agent.

► **Other Data**—The survey showed 52 percent wanted a private plane with speed range of 100-140 mph., and 51 percent would pay between \$1,000 and \$2,000 for a post-war plane. Asked for expression of preference of planes by manufacturer, the servicemen gave the following replies: Fairchild, 7 percent; Beechcraft, 6 percent; Cessna, 6 percent; Culver, 6 percent; Stinson, 6 percent; Waco, 6 percent; Piper, 5, and Taylorcraft, 3.

Interviews were made while some of the men were en route home for a rest, others were wounded, others were in the transport commands, and others were just a few hours away from action over enemy territory.

## Briefing

For Private Flyers and Non-Scheduled Aviation.

By ALEXANDER MCSURELY

CAA's Glen Gilbert, chief of air traffic control, expects a collision warning indicator about the size and weight of a compact aircraft receiver, with an indicator screen about the size of an artificial horizon, to be a requirement on all aircraft used in instrument flight conditions, as soon as they can be manufactured after the war.

► **Helicopter Rules**—Gilbert also foresees new air traffic rules for contact flight when helicopters come into more widespread use. Visibility between one mile and one-half mile might require reduction in speed to 50 mph., and below one-half mile a reduction to 25 mph. Such regulations will require channels into busy landing areas to avoid interference between the slow craft and higher speed instrument flight planes.

► **Dallas Makes Plans**—Plans are shaping up for a Pan American Aircraft Exposition at Dallas, next May 6-12, as an outgrowth of the Southwest Exposition last April at Mustang Airport, Dallas, with two personal plane manufacturers already having made reservations for space to demonstrate post-war prototypes.

► **Smaller Oil Companies**—While major oil companies are making plans for developing the personal plane fuel markets, as recently reported in this section, a number of the smaller companies, which principally are producers of lubricating oils and greases, are likewise casting around for their share of distribution at the airports. Word is that they are interested in the more modest airports, as well as the big ones, and communities and individuals interested in opening new airports might do well to investigate this possibility.

► **Three American Types**—Two American-built planes, the Fairchild *Argus* and the Piper *Cub*, and a third American design, the Taylorcraft *Auster*, built in England, are expected to be among the favored surplus planes finding a place in personal aircraft markets, when available. The Avro *Anson* may be adapted to light cargo and feeder line routes.

► **AOPA in England**—Without so much as a by-your-leave to the American Aircraft Owners and Pilots Association, which has been

probably the most active spokesman for American personal aviation for years, a British writer in *Flight* magazine recently suggested the formation of an Aircraft Owners and Pilots Association in Great Britain to champion private flying there, and even used the AOPA initials as well as the name. We wonder whether the writer blandly assumed he had coined a new original name, or whether he merely ignored the American organization in his article.

► **If She Can**—Granting student flight privileges to Mrs. Alverna Babbs, 26, legless since a childhood accident, offers new hope to other handicapped persons, that they can be pilots, too. Mrs. Babbs recently soloed her two-control plane at Cincinnati, also drives an automobile. Her case is one of first under new liberalized CAA regulation regarding handicapped applicants for flight training.

► **PF Information for NAA Chapters**—A new NAA service department to provide to local chapters general and technical information stressing private flying and landing facility development in local communities is announced by NAA Manager Lowell Swenson. The services include chapter bulletins, a monthly airport digest and an airport consultation service.

► **PAC Revision Likely**—Personal Aircraft Council of the Aeronautical Chamber of Commerce may revise its membership status at the next general meeting. Although the council now has eleven members, interest in personal planes has snowballed to a point where there are approximately 35 manufacturers of planes, engines and accessories, in the Aero Chamber membership who are interested. New setup may be a general council with representatives from all interested member companies, and a smaller executive committee. Recent addition to PAC membership is William L. Wilson, assistant to the president of Kellett Aviation Corp.

► **274 New Michigan Fields**—Using Aviation gasoline taxes expected to provide \$1,000,000 or more annually, Michigan's State Board of Aeronautics projects a program calling for 274 new airports, including 205 in towns of less than 5,000. State tax will be used to match municipal and county appropriations. When program is completed, in five years, Michigan will have a network of 400 airports, including those already operating, or in construction.



# The 5-Week Miracle

## THAT SPEEDS AID TO CHINA

### CAN ENGINEERING SPEED LIKE THIS HELP YOU?

**S**TRANGE contrast to China's teeming millions and primitive hills, the Superforts are speeding vital aid for a gallant ally. To a patient, long-suffering people, these sky giants symbolize freedom and new hope . . . and America poured forth many a miracle of ingenuity to hasten their coming. For example, when the original retraction motors used on the first B-29's proved inadequate to raise and lower the huge landing wheels, something had to be done—and in a hurry.

In three weeks, Jack & Heintz engineers designed and built a test motor for the job. Specifications called for 5,000 cycles of operation without

stop; the Jack & Heintz unit delivered 20,000. In two weeks more, *production* models were delivered for installation. Today, thousands of these Jack & Heintz motors are in service. This is only one of the 20 Jack & Heintz products used on the B-29.

This ability to solve a tough precision engineering and manufacturing problem quickly has been of great value in war production. It can be equally effective in attacking the complex technical problems that must be solved almost overnight if reconversion is to be speedy and successful.

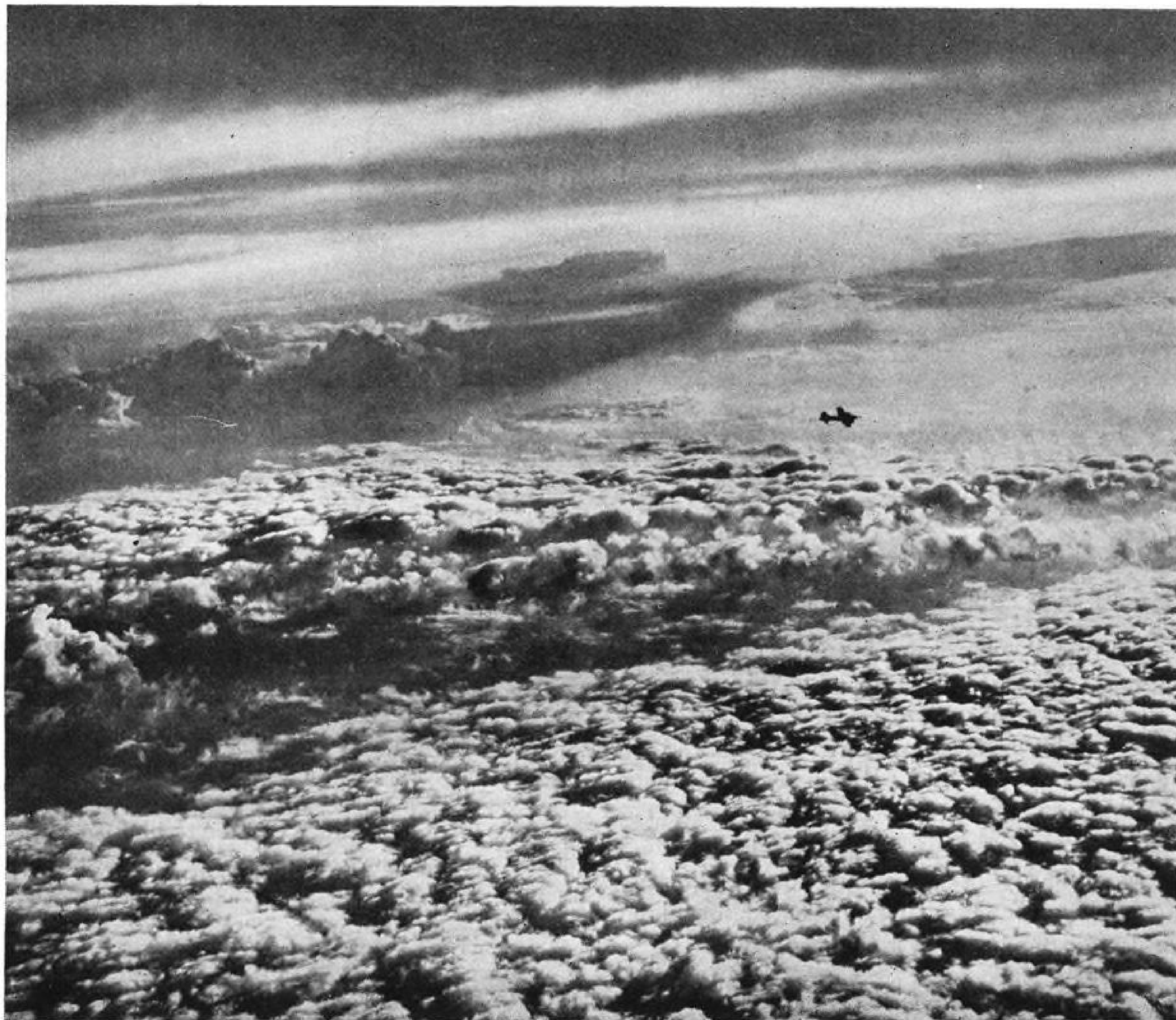
★ ★ ★

*Jack & Heintz, Inc., Cleveland, Ohio, manufacturers of aircraft engine starters, generators, gyro pilots, gyro flight instruments, magnetos, motors.*



**JACK & HEINTZ**  
*Incorporated*





Finish the Fight with War Bonds

## Storm trooper—American style

As full of fight as every Boeing Flying Fortress is, there are some which have seen plenty of action, but have never fired a shot or dropped a bomb.

These are the B-17's chosen to perform vital but little-known roles out over the Atlantic during the days while Germany still held firm grip over France and Belgium.

Instead of bombs, they carried a staggering load of fuel—tons of it.

Two-thousand-mile flights were routine. They stayed out over the stormy Atlantic for fifteen hours at a time. When they returned they had priceless information.

For these Flying Fortresses were used to scout the weather.

What winds could be expected at what altitudes? What pressure areas were stirring up what air currents? What about cloud formations? The answers to these and other questions had much to do with bombing operations over Europe, and with the successful invasion of France itself . . . because they accurately foretold the weather in the European battle sky!

Boeing Flying Fortresses were chosen because of their exceptionally long range, and because the importance of the information required dependability

such as theirs. For these famous fighting ships have the same heritage of *Boeing dependability* as the Stratoliners and Transocean Clippers, which have hung up so many performance records, and the new Boeing B-29 Superfortresses now darkening Japanese skies.

*The war record of Boeing planes speaks for the vision and skill of Boeing research, design, engineering and manufacture. Tomorrow these will be turned to new and remarkable airplanes of peace for your use . . . and they are your assurance that any product "Built by Boeing" is bound to be good.*

DESIGNERS OF THE NEW B-29 SUPERFORTRESS • THE FLYING FORTRESS  
THE KAYDET TRAINER • THE STRATOLINER • PAN AMERICAN CLIPPERS

**BOEING**

## THE AIR WAR

\*\*\*\*\*

### COMMENTARY

## Growing Pacific Air Offensive Outstanding Example of Teamwork

Flaring of activity in west-central area believed to indicate important developments are in the offing; heavy bomber strikes softening up new areas on road to Tokyo.

Recently stepped up activity in the west-Central Pacific area indicates important developments in immediate prospect. Straws in the wind include persistent enemy rumors of heavy bomber strikes against various strategic points, such as Wake, Marcus and the Bonins; enemy reports of B-29 reconnaissance planes, "based in the Marianas"; Jap air offensives, the first in three months, against our bases in the Marianas; and of an entirely different nature, but hardly less significant in its military bearing, the setting up of an NBC on-the-spot report from Guam, periodically included in the daily world-news round-up.

In this war each theater has its own peculiar problems. In Italy it may be terrain; on the western front, lack of ports; in China, land and sea blockade. In the Central Pacific the tremendous distances and scarcity of bases have held up our progress. Predominantly a Navy theater, the Army Air Forces make up the strategic air arm of the combined operations. Navy land-based planes perform valuable reconnaissance and patrol missions, with an increasing number of strike missions as well. Carrier-based planes are the tactical air arm, having already practically knocked out the Jap Naval Air Force, and also providing powerful cooperation (more than just "support") with invading troops.

► **Chain of Command**—In the Central Pacific the broad plans of the American Joint Chiefs of Staff are carried out by Admiral Nimitz, Commander-in-Chief, Pacific Fleet and Pacific Ocean Area (CINCPAC). His deputy is pioneer flying officer Vice Admiral John H. Towers. Nimitz' boss of Naval air is Rear Admiral George D. Murray, Commander Air Forces, Pacific Fleet (COMAIRPAC). His

Army air chief is Lieut. General Millard F. ("Miff") Harmon, who for several months after Pearl Harbor was Chief of the Air Staff, Washington, and from August, 1942, to June, 1944, commanding general of Army forces, South Pacific, including Maj. Gen. Twining's 13th Air Force.

General Harmon as Commander of the Army Air Forces, Pacific Ocean Area, (AAFPOA), coordinates on the highest theater staff level the activities of the Seventh Air Force in the Marianas and the Eleventh in the Aleutians. Maj. Gen. Willis Hale, former CG of the 7th, as COMAIRFORWARD has charge of all shore-based air forces, Army-Navy-Marines, in the forward area.

► **Seventh Air Force**—Ever since its giant strides in the spring of 1943 from Hickam Field, Oahu, to Canton in the Phoenix Islands (2,000 miles), and then to Funafuti in the Ellice group, South Pacific (1,000 miles), the Seventh Air Force has been on the move—toward Tokyo, and fast. A year ago they were just settling down on bases at Tarawa and Makin in the Gilberts. Four months later they had prepared new nests in the Marshalls, and by the end of March had flown the 500-mile hop to Kwajalein, with its 6,500-foot runway, and storage and maintenance facilities, quarters, etc.

A few days later and the important staging area of Eniwetok (350 miles to the west) was ready for the *Liberators* and *Mitchells* of the 7th Bomber Commander, Brig. Gen. Truman H. Landon. Headquarters of the 7th was still at Hickam Field, Brig. Gen. R. V. Douglass, Jr., having taken over when General Hale moved into the forward area with Admiral Spruance's 5th Fleet. From these Marshalls bases the Seventh Air Force,

together with carrier task groups, kept hammering away at Jap air and naval bases flanking the move into the Marianas, including Truk, Ponape and Kusaie.

► **Hard-Won Saipan**—The triphibious operation which won Saipan began June 15. One week later Seventh Air Force P-47's with their eight .50-calibre machine guns and two 3-tube rocket-launchers landed on the Aslito airfield, hurriedly and expertly repaired and enlarged by a Naval construction battalion (Seabees).

► **Stepping-Stones to Tokyo**—With the occupation of Saipan, and successful landings on Tinian, it became moving day again for the Seventh, and the 1,500-mile leap to Saipan was made in late July. Another 1,500-mile jump would land them in Tokyo, but don't look for this just yet. In taking Saipan, however, and setting up air power there, American forces have effectually broken through the barrier into Japan's inner empire. Her groups of southern islands, the Marshalls, Carolines, Marianas and Bonins were a barricade blocking our path. They have now become our stepping-stones to Japan.

Only the Bonins and nearby Kazans (Volcanos), within 600 miles of Nippon's industrial section stretching from Tokyo to Nagasaki, remain in our way. Early in July, and again in early September, carrier task groups heavily attacked shipping, airfields and other installations at Haha Jima, Chichi Jima and Iwo Jima, principal bases in these islands. Seventh Air Force *Liberators* have attacked them steadily several times per week since Aug. 10. Considerable numbers of Japanese planes have been reported destroyed and damaged. At present, only Iwo Jima remains a threat. If these bases are captured later on, *Liberators* and *Mitchells* could be based there.

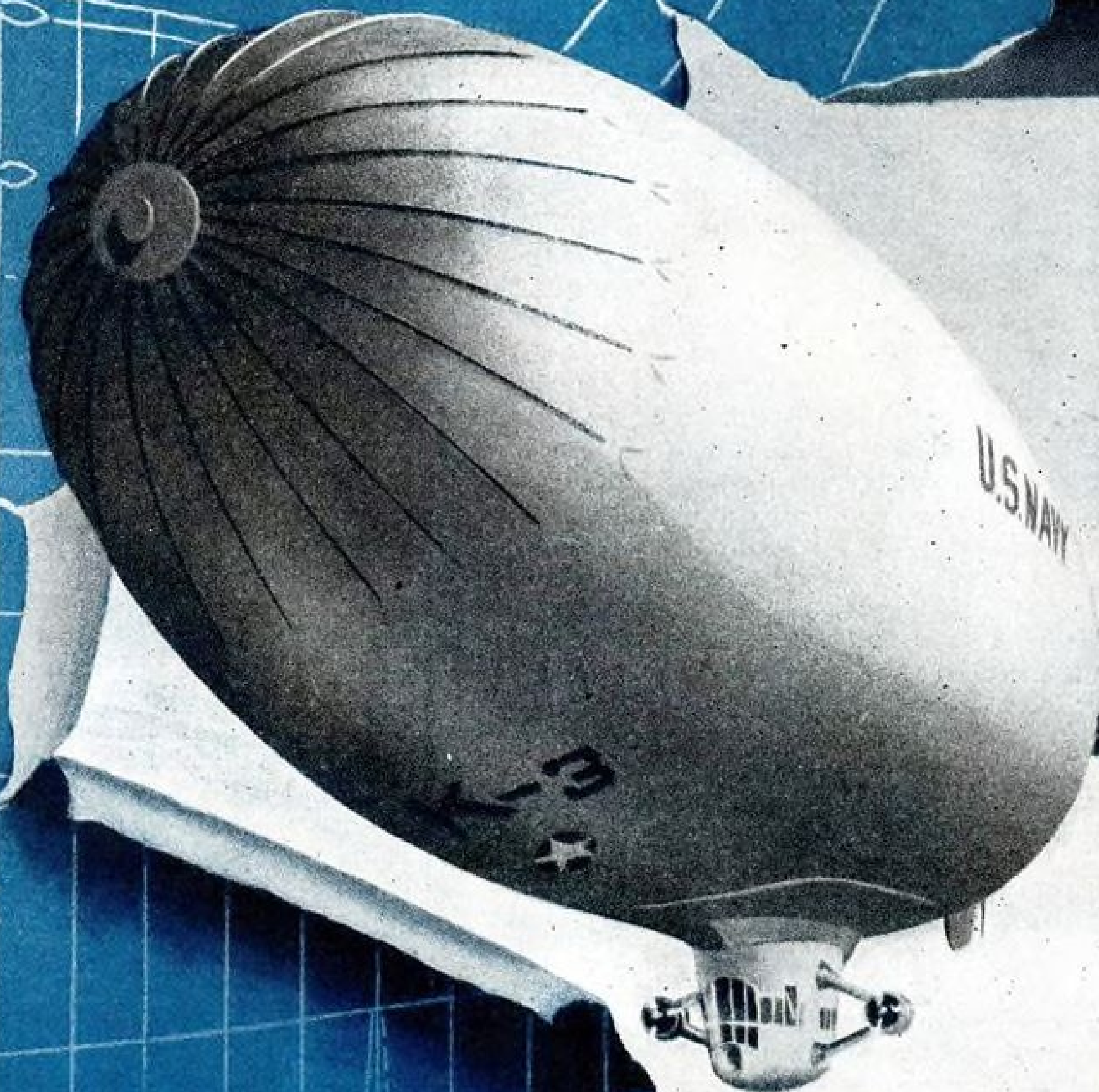
► **Big Four in the Marianas**—The 15 principal islands of the Marianas form a north-south chain of 550 miles. The northern group of ten are volcanic; the southern five are coralline limestone and fairly flat—the best islands in this part of the Pacific for air bases.

Aviation Engineers and Seabees have been working like beavers for several months on all these islands. A typhoon of land-based air power from the Marianas will be the first installment fulfilling General Arnold's promise that the military power of Japan will be bombed to destruction.

—NAVIGATOR



# GOOD YEAR AIRCRAFT PRODUCTION REPORT



CONTRACTS: 78121, NO. (S) 257, N 288s -17654

## NAVY "K" TYPE AIRSHIP

133 COMPLETED AIRSHIPS

DESIGN CONTRACT RECEIVED: OCTOBER 1940  
FIRST PRODUCTION UNIT DELIVERED: SEPTEMBER 1941  
50<sup>TH</sup> PRODUCTION UNIT DELIVERED: MARCH 1943  
CONTRACTS COMPLETED: APRIL 1944

Remarks: These contracts marked first use of production-line technique in airship construction. Only company with veteran staff of airship-construction engineers, Goodyear was able to use thirty years' aeronautical experience to develop structural innovations making for greater speed, strength, range in these guardians of the sea lanes. No escorted vessel has been lost to submarines while convoyed by "K"-type airships.

Goodyear builds components for 16 different Army-Navy-type aircraft, including complete Corsair fighters and airships.

## HOW GOODYEAR AIRCRAFT CORPORATION SERVES THE

1. By constructing sub-assemblies to manufacturers' specifications.
2. By designing parts for all types of airplanes.
3. By re-engineering parts for quantity production.
4. By building complete airplanes and airships.

## AIRCRAFT INDUSTRY

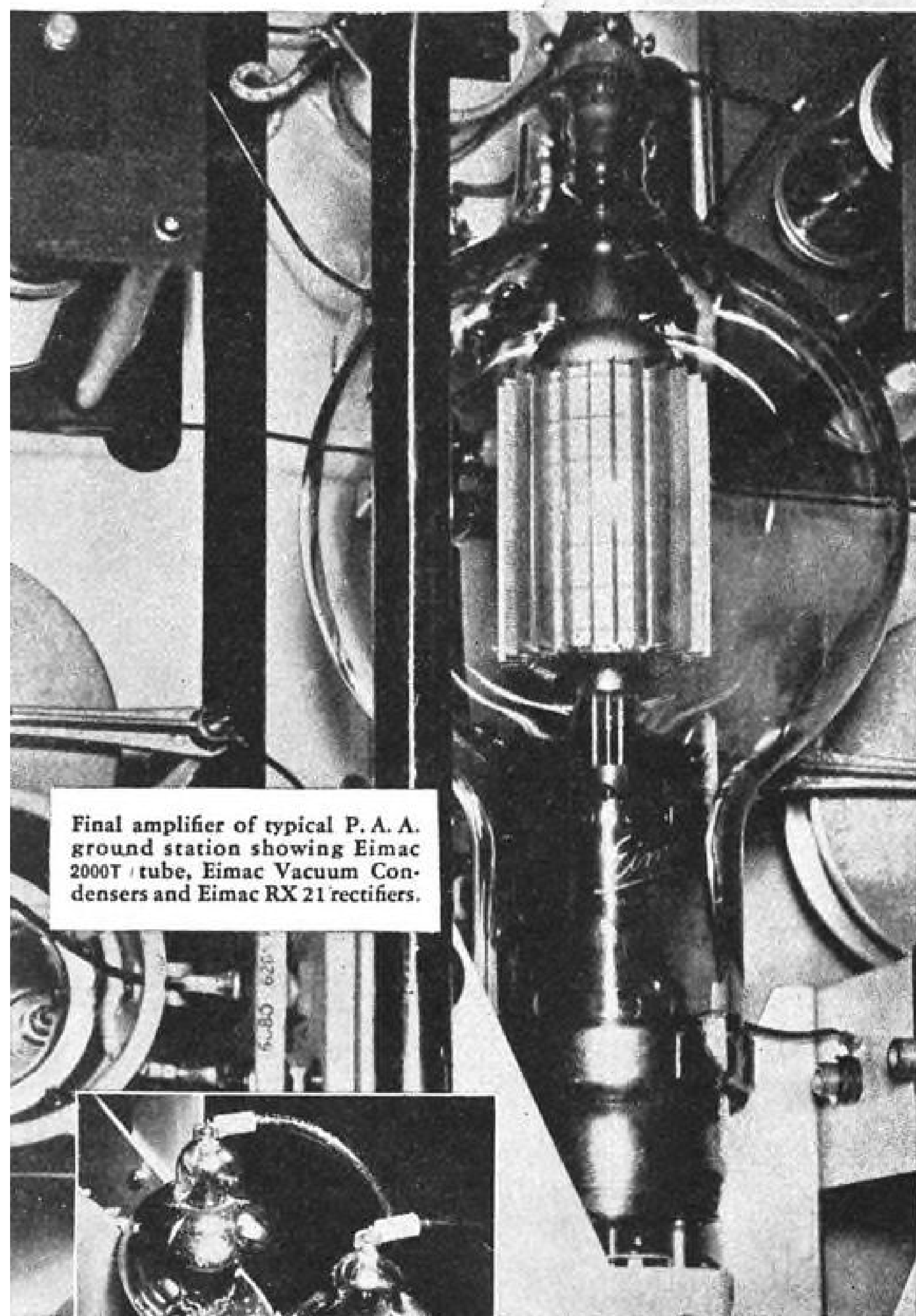
5. By extending the facilities of Goodyear Research to aid the solution of any design or engineering problem.



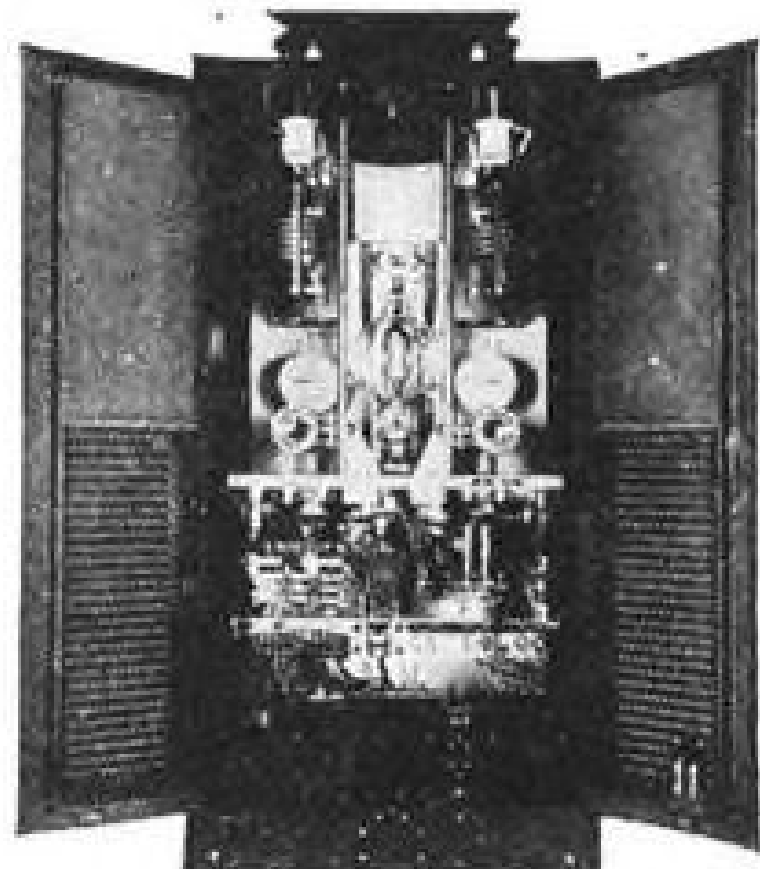
GOODYEAR AIRCRAFT CORPORATION  
Akron, Ohio • Litchfield Park, Arizona



# PAN AMERICAN USES EIMAC TUBES



Final amplifier of typical P. A. A. ground station showing Eimac 2000T tube, Eimac Vacuum Condensers and Eimac RX 21 rectifiers.



Write for your copy of *Electronic Teletype*—a 64 page booklet fully illustrated—covering fundamentals of Electronics and many of its important applications. Written in layman's language.



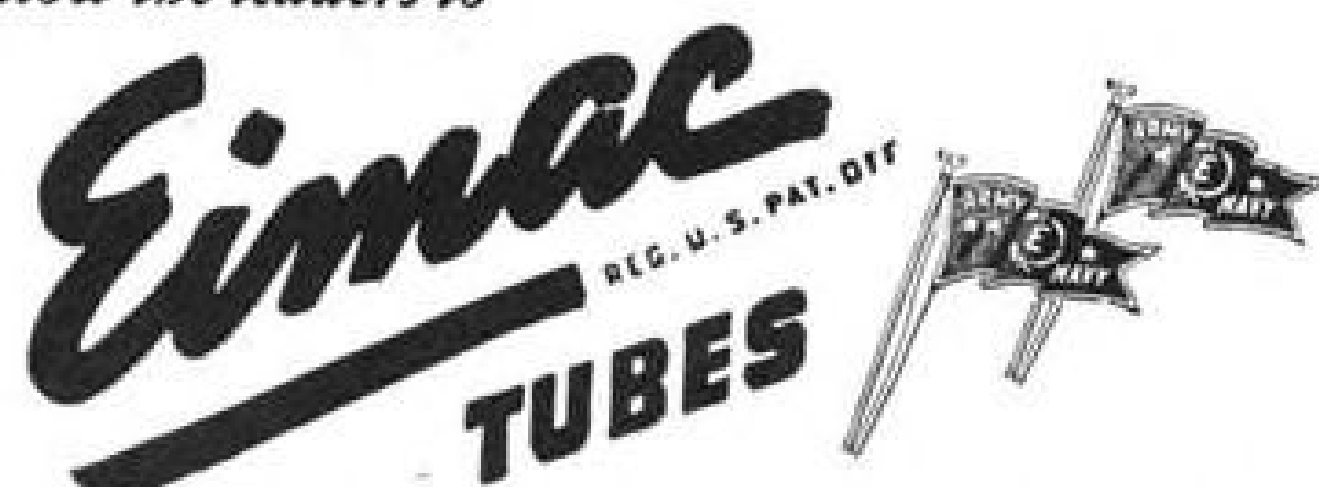
Pan American World Airways, which has done so much to advance the war-time goals of the nation, has just announced a plan for a new service to South America. Employing a fleet of stratosphere planes, carrying 108 passengers, flying at more than three hundred miles an hour, Pan American proposes to take travelers from New York to Rio de Janeiro in less than twenty hours instead of the present sixty-six hours, charging \$175 for the trip, as against the current rate of \$491.

Pan American Airways and all its associated and affiliated companies, which comprise the P. A. A. World System, have been using Eimac tubes in the key sockets of all ground stations for a number of years.

Because of the extensive operations of Pan American World Airways, these tubes have been subjected to about every test possible—altitudes; ground level; extremely cold climates and high temperatures found at the equator; conditions of high and low humidity; and in some instances, when new bases are being built, perhaps somewhat trying power conditions. The high regard which P. A. A. engineers have for Eimac tubes is clearly evidenced by their continued and more extensive use, as the years roll by.

The fact that Eimac tubes are the number one favorite of the commercial airlines is important evidence to substantiate the oft repeated statement that "Eimac tubes are first choice of leading electronic engineers throughout the world."

Follow the leaders to



EITEL-McCULLOUGH, INC., 947 San Mateo Ave., SAN BRUNO, CALIF.

PLANTS LOCATED AT: SAN BRUNO, CALIFORNIA AND SALT LAKE CITY, UTAH

Export Agents: FRAZAR & HANSEN, 301 Clay Street, San Francisco, California, U. S. A.

## PERSONNEL

\*\*\*\*\*

**William B. Moore**, operations manager for All American Aviation, Inc., has been named vice-president in charge of operations. Moore joined All American in 1942 and soon became operations manager of the military cargo division. Prior to that he was manager of the State Airport at Harrisburg, Pa., and has been active in aviation since 1927.



**Robert W. Tuttle** has been appointed assistant to Herbert J. Lyall, eastern traffic manager for American Airlines. He has been acting as liaison in Selective Service and manpower relations for American and will now assist in sales and traffic functions in the eastern region.

**Col. Laigh C. Parker**, former general traffic manager of Delta Air Lines, is now overseas serving with the European division of the Air Transport Command in France as assistant chief of staff in charge of priorities and traffic. Colonel Parker,

on the staff of Brig. Gen. Earl S. Hoag, recently served in the priorities and traffic office at Washington headquarters of the Command.

**H. Arthur Dunn**, formerly with the U. S. Government, has formed the firm of H. Arthur Dunn and Associates with Washington offices. The firm will assist in the negotiation for the disposal of surplus war materials for corporations.

**A. N. Kemp** (photo), president of American Airlines, Inc., has been



elected a member of the board of directors of Chase National Bank. Kemp was elected a director of American in 1941, and was asked to serve as president for the duration of the war when C. R.

Smith was called to active service in the Army. Smith is now a major general in the Air Transport Command. Kemp has been prominent in public utility, insurance and banking enterprises as well as aviation.

**E. M. Martin**, on loan from the B. F. Goodrich Co., as special assistant to the administrator of Surplus War Properties Administration and later with the War Production Board, is in Europe on a new government assignment. Goodrich also announces appointment of **W. A. Smith** as manager of suspension sales of the Industrial Products Sales Division. Smith has been technical representative in the Washington offices.

**Guy H. Harper** was named president of Columbia Aircraft Industries, Inc., Portland, succeeding **J. S. J. Hlobil**, president since the company's founding four years ago. Hlobil resigned to devote his time to aviation research and designing. Other officers elected by the stockholders include: **R. H. Glassley**, executive vice-president and secretary; **Ralph T. Montag**, vice-president and chairman of the board; and **J. C. Landrud**, assistant secretary-treasurer.

Air Lines Terminal, Inc., announces election of **Herbert J. Lyall**, eastern traffic manager of American Airlines, as president, and **D. A. O'Connor**, northern division manager of Eastern Air Lines, as vice-president.

**Robert E. Ringle** has joined Scott Aviation Corp. as field engineer to



cooperate with aircraft manufacturers in coordinating Scott accessory designs with their requirements. Ringer comes to Scott from Bell Aircraft Corp., where he was chief of planning in their experimental division. He has been in aviation engineering, sales and administration since 1932.

**Robert Kinkead**, assistant to **James P. Murray**, vice-president and Eastern representative of Boeing Aircraft Co., is spending a month in Sarasota, Fla., recuperating from an illness that has kept him away from his office in Washington for several weeks.

**Col. William Westlake**, assistant to the director of public relations, Army Air Forces, has returned from a special public relations mission to England, France and Italy for Gen. H. H. Arnold. Colonel Westlake visited the Eighth, Ninth, Twelfth and Fifteenth air forces during his month's trip.

**Capt. Arthur E. Smith** has been transferred from the San Antonio air service command to Ogden air service command, Hill Field, Utah, as special information officer. **Capt. A. B. Wanamaker**, formerly at Ogden, has been transferred to the San Antonio air service command.



### ILLINOIS U. AERONAUTICS ADVISORY COMMITTEE:

Members of the committee which met recently at the University of Illinois to discuss their post-war aviation training program are standing, left to right: **W. J. Blanchard**, general manager, Aeroproducts Division of General Motors Corp.; **L. R. Inwood**, executive assistant of Transcontinental and Western Air, Inc.; **Col. A. D. Tuttle**, medical director of United Air Lines; **J. E. Schaefer**, vice president of Boeing Airplane Co.; and seated: **Comdr. A. F. Bonnalie**, formerly of United Air Lines; **B. M. Woods**, professor of mechanical engineering of the University of California and chairman of the committee; **Bruce Uthus**, director of aviation education service, Civil Aeronautics Administration.



# Firestone

PRODUCING FOR WA . PREPARING FOR PEACE



## YOU CAN PARK YOUR PLANE "ON A DIME" with this New Steerable Tail-Wheel

FOR MANY YEARS, Firestone Tires have been the standard of safety for aircraft on the ground. Now, Firestone makes another contribution to greater ground reliability—a new steerable tailwheel strut assembly for light planes. It has a solid tire vulcanized to a plastic hub. Sealed-in lubrication requires repacking only at major overhaul periods. Tapered roller bearings carry vertical loads in the strut and in the wheel. Needle roller bearings in both strut and wheel take side thrusts. The steering mechanism has 75% greater cam area to insure maintenance-free perform-

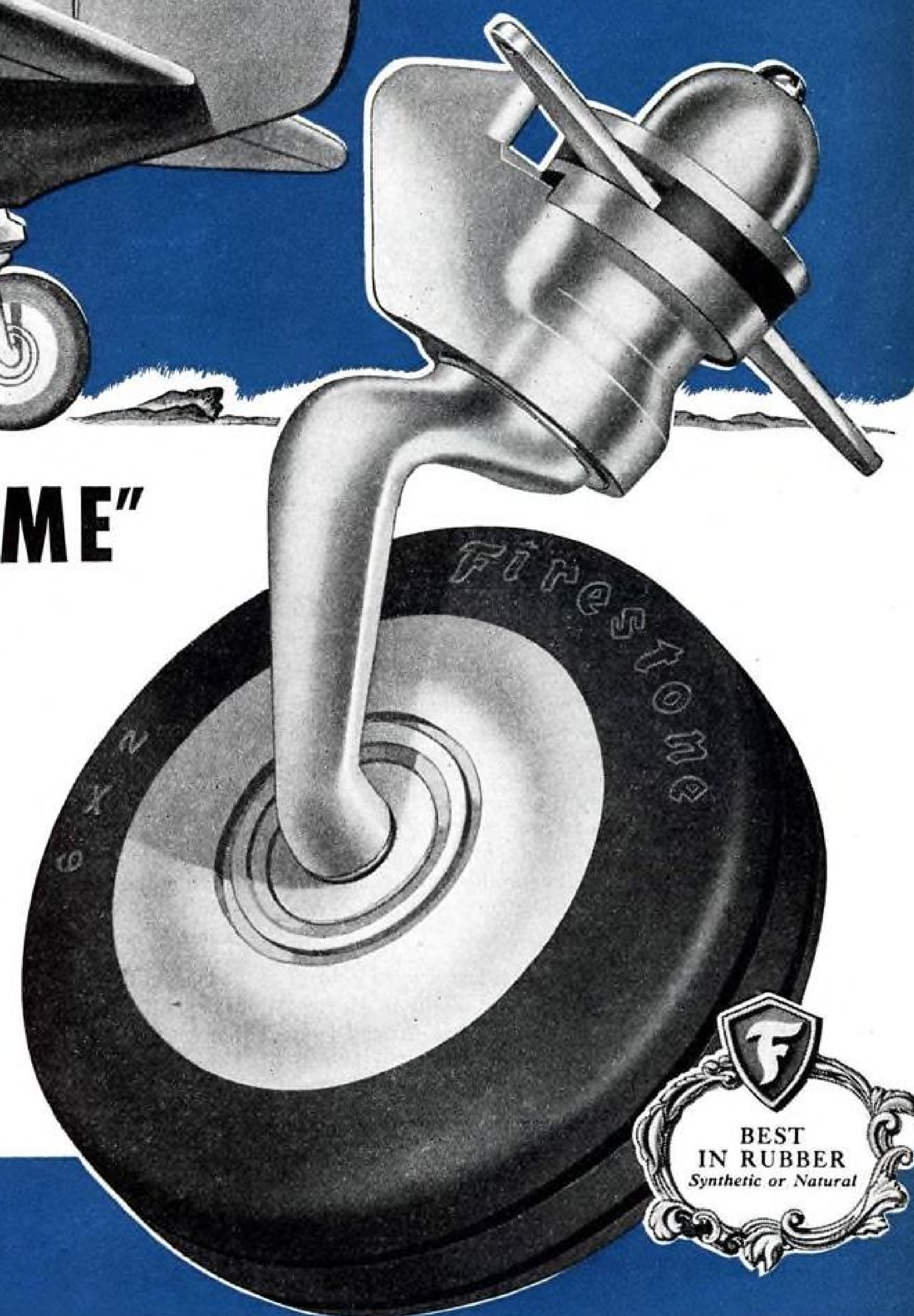
ance. Beyond the controlled steerable range, simple rudder pedal operation permits automatic free swiveling action without gunning the engine or applying brakes. Throughout the entire steerable range, steering is positive and independent of tension in the rudder control connectors. The complete assembly is light in weight and low in price and the entire assembly or wheel only can be interchanged with present original equipment units. For prices and additional data write, wire or phone Firestone Aircraft Company, Akron, Ohio; or Los Angeles, California.

The bearings designed into this new assembly are the direct result of test experience with tailwheels made to comply with specifications of the United States Navy for carrier-based fighters. This is but one example of the quality of design and materials built into this newest Firestone Aircraft product.

☆ ☆

For the best in music, listen to the "Voice of Firestone" with Richard Crooks and Gladys Swarthout and the Firestone Symphony Orchestra conducted by Howard Barlow every Monday evening over NBC network.

Copyright, 1944, The Firestone Tire & Rubber Co.

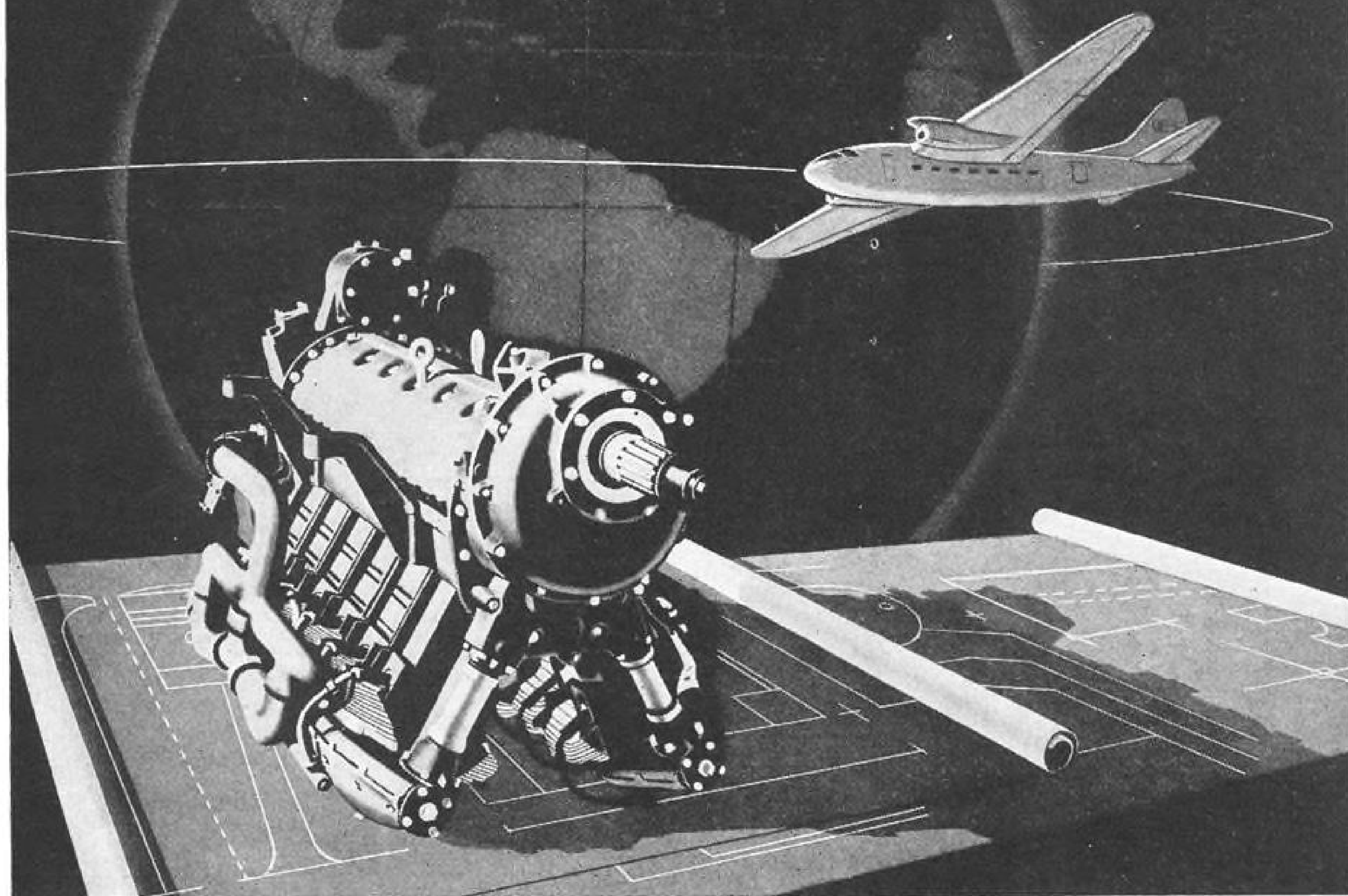


**FIRESTONE AIRCRAFT COMPANY, AKRON, OHIO · LOS ANGELES, CALIF.**

MAKERS OF  
TIRES, TUBES, WHEELS, BRAKES, AIR SPRING LANDING GEARS, BATTERIES, SPARK PLUGS, HOSE CLAMPS, VELON  
SEAT COVERING, FOAMEX CUSHIONING, FUEL AND OIL CELLS, BUSHINGS AND MANY OTHER AIRCRAFT SUPPLIES



## THE TOUGH OF TOMORROW IN THE PLANES OF TODAY



### RESEARCH PAYS a 30,000 Mile Bonus

Clean cut and durable as a gem, Ranger engines deliver their dynamic punch under the toughest year-round flying assignment in the book.

Normally, engines in service are "pulled" for major overhaul after 600 hours. But Rangers have consistently paid a service "bonus" up to 50 per cent. It's common for a Ranger engine to reach the 900-hour check point, purring sweetly, delivering full power . . . 30,000 and more extra miles of flight.

Ranger-powered planes cut through the rugged cold of Canada, the dust-laden heat of deserts; they fly in Mexico, throughout South America—and in South Africa. They do their flight job, sturdily, under all sorts of field conditions.

The twelve cylinder Ranger, for example—aircooled for weight economy, inverted for a better field of vision, inline for better streamlining—logs hours and hours of time in rigorous wartime operations. Yet Rangers continue to pay a bonus—hundreds and hundreds of extra hours in the air.

In use only on military planes today, Ranger engines on commercial airline and private planes tomorrow will provide those extra hours of service for efficient and economical operation.

Fairchild research—the constant quest for better materials, better methods, better results—has made this Ranger bonus possible. It springs from Fairchild engineering knowledge and experience that lends the "touch of tomorrow to the planes of today".

BUY U. S. WAR BONDS AND STAMPS



AIRCRAFT ENGINES

Division of Fairchild Engine and Airplane Corporation • Farmingdale, Long Island



#### DISCUSS RYAN ORDER:

T. Claude Ryan, president of Ryan Aeronautical Co., San Diego, and Omer L. Woodson, new vice president and general manager for Ryan, discuss their additional order for over \$40,000,000 to build a new Navy fighter. The company's contract with Defense Plant Corp. has been increased by approximately \$1,000,000 for new equipment needed to build the plane which is still on the secret list. Total commitment between Ryan and DPC now is about \$2,750,000.

Paul W. Pate has been named superintendent of a newly created air cargo department of Delta Air Lines. Pate joined Delta's planning and research department in 1943 after several years' experience in motor transportation. The new department will handle all phases of air express and air freight for the company. Pate is a member of the tariff sub-committee of the Air Transport Association air express committee.



Withers Woolford, information chief of the Washington area War Manpower Commission, has joined the Veterans' Administration where he will do informational work for Brig. Gen. Frank T. Hines. Woolford has been a newsman on the New York World, New York Times, New Orleans Daily States and other well known newspapers.

Paul H. Eckstein has become assistant sales manager of the new radio receiver division of Westinghouse Electric and Manufacturing Co.

Verner D. Vale is new technical director of Embry-Riddle School of Aviation, Miami, to prepare new training programs for veterans and civilians. Vale has an extensive background in the aviation field, including work as a civilian training

administrator with the Air Service Command and connections with such aeronautical companies as Curtiss-Wright, Fisher Aircraft Corp., and others.

R. J. Moulton, Jr., formerly director of research, schedules and traffic for Continental Air Lines, has resigned to become assistant to Josh Lee, member of the Civil Aeronautics Board. Moulton replaces James W. Batchelor who has opened offices in Washington as an aviation consultant and attorney.

James S. Farra, formerly assistant to the manager of Douglas Aircraft Co., Inc.'s Chicago plant, has been promoted to service manager of the national and international Douglas service operations. He was appointed to succeed Don S. Sprague, who

has been given a new assignment. Farra started with Douglas Aircraft Co., in 1936 and served at the El Segundo plant and the Northrop Division before his transfer to the Chicago position.

Virgil Peterson has taken over the duties temporarily of Robert Kinkead, assistant to James P. Murray, vice-president of Boeing Aircraft Co. Kinkead is on leave of absence, due to illness.

Leonard C. Truesdell has been appointed general sales manager of the Home Radio Division of Bendix



#### GETS NEW AIR COMMAND:

Maj. Gen. Louis E. Woods received his second star and at the same time a new assignment for his command, the Fourth Marine Air Wing. The Wing will have control of all shore based Marine, Army and Navy aviation in the Gilbert and Marshall Islands and adjacent waters. Gen. Woods received the Distinguished Service Medal for his activities as commander of Marine aircraft during portions of the Guadalcanal campaign. He was director of Marine aviation until he assumed command of the Fourth Air Wing in August.

Aviation Corp. He has been sales manager of Crosley Corp.'s radio and appliance division.

Ernest Wenigmann, works manager of the Nashville division of Consolidated Vultee Aircraft Corp., has been named acting division manager to assume the duties of J. W. Hennen, resigned. C. W. Thompson, former assistant to the chief of contracts at the Nashville division, has been transferred to the Allentown, Pa., division, where he will serve as assistant to the works manager.

A. J. Schmitz has been named Pacific regional manager for Allis-Chalmers Mfg. Co. He has been in charge of the Seattle office.

#### TELLING THE WORLD

• Engineering Research Corp., Riverdale, Md., designers and manufacturers of the Ercoupe and machine tools now being used widely in the aircraft industry, appointed Pettingell and Fenton, Inc., New York advertising agency, to do consumer copy on the Ercoupe. Ads will appear in national weeklies and monthlies and key newspapers throughout the country.

• J. L. Stuart has joined the technical staff of Sperry Products, Inc., and will supervise all technical writing concerning the firm's products.

• Georges Faurie, formerly with Delco Appliance Division of General Motors, has been named manager of advertising and sales promotion of the newly created Radio Receiver Division of Westinghouse Electric and Manufacturing Co.

• Col. Kenneth R. Collins, vice-president of Arthur Kudner, Inc., before he joined the AAF in 1942, was appointed commanding officer of the Eastern District of the Air Forces Technical Service Command, with headquarters in New York. He will be in charge of district procurement and termination of contracts.

• Employees of the Rankin Aeronautical Academy, Tulare, Calif., have issued Volume 1, No. 1, of their house organ, Rank 'in' File. This monthly magazine, started in September, will replace class books previously published by all primary, basic, advanced or specialized schools, which the Army has ordered discontinued. Editor is Walt Bohrer.

• A new booklet issued jointly by Army and Navy entitled "War Films for War Workers" is devoted to illustrating the methods successfully used in showing special battle-front films in thousands of war plants.

• Air Lines Committee on U. S. Air Policy has retained Fred Eldean and his public relations organization. It is a new firm and is located at Rockefeller Center, New York. Eldean was formerly with General Motors.



## PRODUCTION

# Beech to Use Reconverted Plants For New Type Home Manufacture

Units to be constructed in cooperation with Dymaxion Dwelling Machines, Inc., and International Association of Machinists, based on aircraft technology and using plane materials, tools and facilities.

Application of principles of aircraft construction to other products has been widely discussed in connection with reversion and now comes Beech Aircraft Corp. with a program to utilize part of its facilities in the building of houses, based on aircraft technology and using aircraft materials, skills, tools and facilities.

First of these houses is under construction as an experiment at Krehbiel Plastic Products, of Wichita, one of Beech's sub-contractors. John P. Gaty, Beech vice-president and general manager, announced that an arrangement has been made with R. Buckminster Fuller, inventor of the "Dymaxion house," to construct the units at the Wichita plants. Fuller is now in Wichita with other officials of Dymaxion Dwelling Machines, Inc., to supervise building of the initial units.

► **Joint Enterprise**—The project will be a joint affair among Beech, Dymaxion, and the International Association of Machinists, who have issued a joint statement explaining the tie-up: "Our enterprise, joining together management, labor and science for their mutual profit, is the first project of its kind in the country. It is hoped that hundreds of thousands of dwelling machines will be built for both war and post-war use once the original prototype has been 'Ground-tested'."

This program is receiving close attention of the aircraft industry whose executives realize that their expansion from peak war production must return to a smaller operation and who have given study and consideration to fields outside of aircraft production for their facilities and personnel.

► **Dwelling Machine**—Fuller calls his house a "dwelling machine" and it has been widely discussed in the building construction trades.

He explains that the "dwelling

machine" now under construction at Beech Aircraft "is not the old box-type house of heavy tonnage built on the site. Nor is it a prefabricated panel house." Rather, it is a new house, made possible by technological strides made during the war, largely in aircraft construction.

The houses are built chiefly of aluminum, steel, rubber and plastics and its makers contend it justifies mass production. It is composed of units capable of assembly-line production in any modern aircraft factory. The backers contend that, assuming equivalent floor area, it can be shipped in less than one-quarter the space now used in shipping materials for an ordinary house, or in less than one-half the space used in shipping a prefabricated house. Its parts, they say, including foundation, can be assembled on the site, with the house ready for occupancy in a matter of hours.

► **Price**—While no definite price has been quoted, the manufac-

turers believe that mass-production methods will make it reasonable.

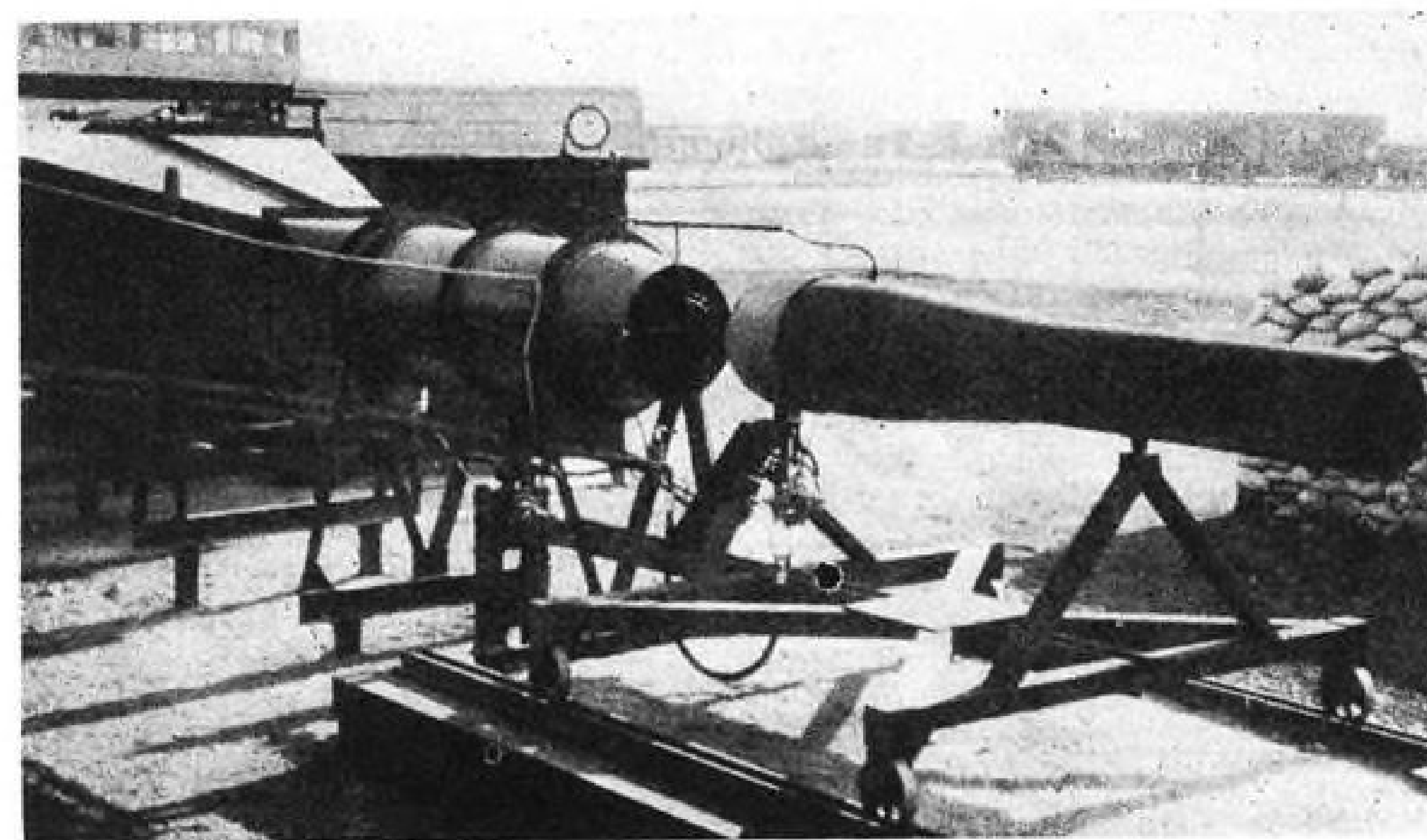
Gaty said it was his belief that aircraft manufacturing is unsuitable for production of prefabricated houses, his company had hopes that Fuller's project may be the answer.

"There is a need for modern living facilities which can be met only by mass production methods," Gaty said. "There are no guarantees anywhere of post-war jobs, but our exploration of the housing field is one more way of helping protect the incomes of our employees, stockholders and the people of Wichita."

► **Plane Prospects**—The new project does not preclude the continuation of Beech in the aircraft manufacturing business, since the company has definite plans for new and improved airplanes to be built after the war. It is Gaty's view, however, that post-war airplane sales possibilities will be inadequate to permit employment of all the people now engaged in aircraft manufacture.

The Wichita situation is somewhat different than in some other war manufacturing, since airplane building has been more or less a community project, backed by civic organizations and the people of the community generally.

It will be several months before the first of the new dwellings will be displayed. Outcome of the project will be closely observed in the industry for a possible trend in activities of aircraft plants which plan to combine aircraft manufacture with that of other goods.



### TEST FORD ROBOT ENGINE:

Jet propulsion robot-bomb engine built by Ford Motor Co. for AAF is shown being tested at mouth of wind tunnel capable of expelling air at 400 mph. to equalize engine speeds.

## Hamilton Standard Parts Unit Enlarged

Branch opened in Hartford to meet demands of armed services.

Spare parts department of Hamilton Standard propeller division of United Aircraft has been enlarged, including the opening of a branch in Hartford to meet the demands of the armed services for spares.

There are more than 1800 different kinds of Hamilton Standard spare parts, varying from a cotter pin about an inch long to a spinner 26 inches long and 32 inches in diameter. In addition to spare parts, about 35 different kinds of spare blades are required to supply Hamilton Standard installations, together with many complete assembled propellers which are sent to supply depots as spares.

► **Packaging** — The company has devoted considerable attention to the packaging of spares looking to appearance, preservation, boxing efficiency, inspection, checking, fast handling, inventory control and dependable identification.

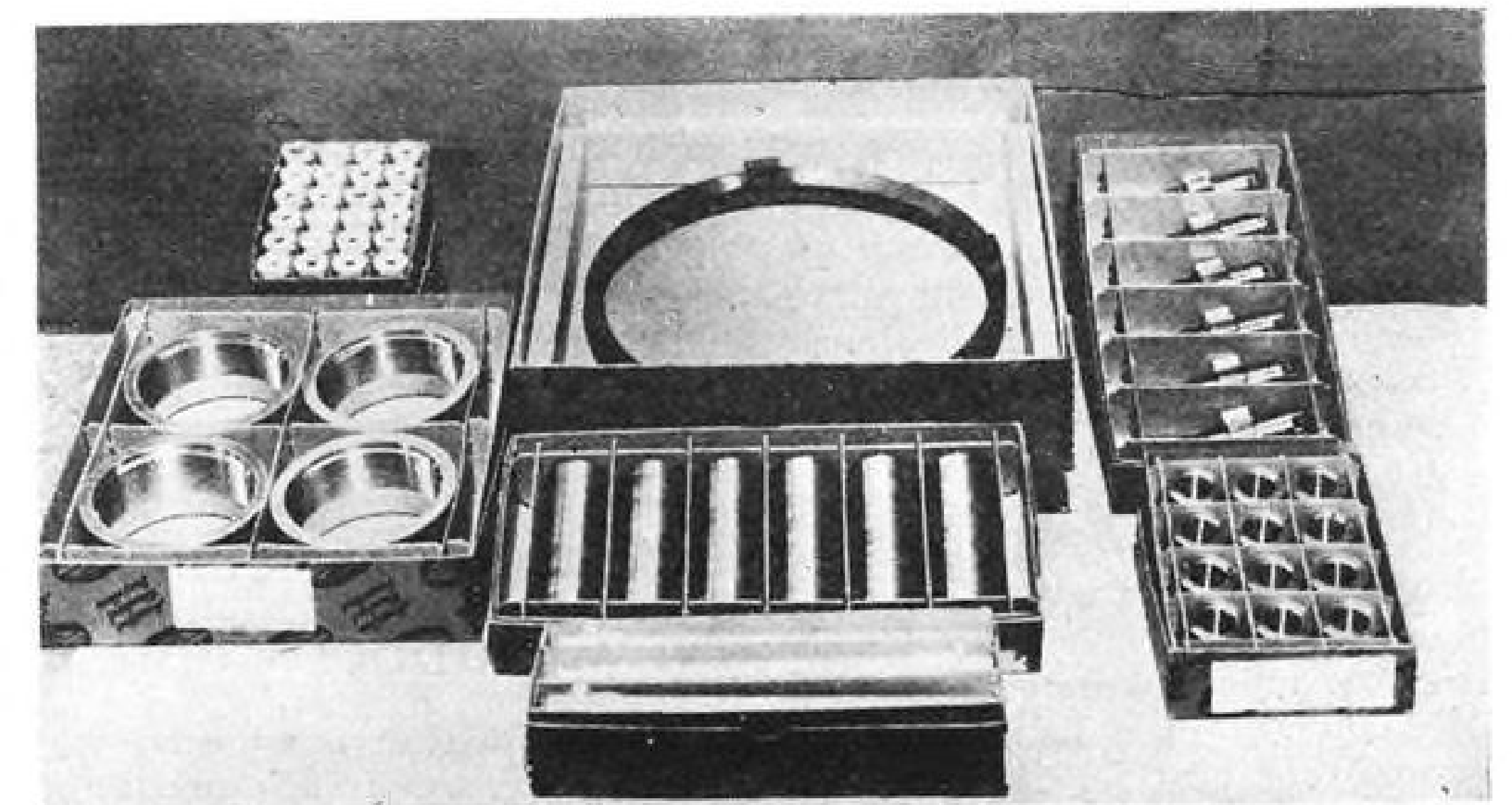
The crush proof, oil-proof boxes are of sturdy fiber board, externally braced with metal-edge stays. Each part is wrapped in special papers, and put in a separate compartment of the box. Boxing efficiency is attained by the use of more than a score of different inserts, dividers and filler pads in combination with 135 different size boxes. This permits an almost unlimited number of packaging arrangements.

The company has adopted a distinctive label with the identification of Hamilton Standard propellers, name of the part, the part number, quantity, two inspectors' certifications and the engineering change on the part, if any.

### Vocational Training 25% for Air Program

More than one-fourth of war production vocational training has been conducted for the aircraft program, a new federal survey reveals.

Aviation services drew the highest percentage of trainees from direct vocational training, and, while no estimates are available, it is believed that an even higher percentage would apply in the case of foreman training, engineering and management training and training



Hamilton Standard Expands Spares Department: Seven of the 135 different size spare parts boxes with various types of inserts, dividers and filler pads used by Hamilton Standard in their packing of spare parts are shown above, each part boxed to fit its own compartment.

within industry, the last named being a program designed to train supervisors and instructors.

► **Training for Jobs**—Pre-employment training for direct aviation services has been given 648,778 workers, some 24.9 percent of the total in this category. No breakdown is available to determine what proportion of those given machine shop training—750,859—entered the aviation field. The same is true in radio, sheet metal, forging, foundry, welding and other classifications.

Supplementary training was given 1,030,360 in the direct aviation classification—24.8 percent of the total. In this classification only 418,024 were given machine shop courses, indicating a substantial drain into other classifications from this field.

### Soundproof Material Tested by Douglas

A specially-constructed "quiet room" at Douglas Aircraft is used to test all types of noise-smothering materials in an effort to achieve soundproofing within passenger compartments of Douglas transports.

Aluminum, asbestos, fiberglass and kapok are tested before microphones with the object of locating and eliminating any extraneous noise. These sound-dampening materials are scientifically investigated in the upholstered quiet room to determine combinations that most effectively cut out objectionable frequencies of engine and propeller hum.

► **Loud Speakers Used**—Specimens are mounted before a battery of

loud speakers and subjected to "manufactured" noises covering the entire range of fatiguing or irritating sounds. A sensitive microphone placed opposite the material relays vibrations penetrating the noise-resistant specimen to sound-analyzing equipment that make a graphic or permanent record.

## Chinese to Make Lycoming Engines

Provision for licensing for manufacture, assembly and sale of Lycoming O-435-1 and O-435-2 six cylinder horizontally-opposed air-cooled aircraft engines and spare parts in and throughout the Republic of China is made in agreement just announced.

As a part of the program, 30 Chinese nationals, all graduate engineers, are to be given a year's training and production work and specialized occupations at the Lycoming Division of Aviation Corp., Williamsport, Pa.

► **Agreement**—Training of the Chinese is covered by an agreement and contract between the Commission on Aeronautical Affairs of the Republic of China (Chinese Air Forces); the AAF Air Technical Service Command and the Lycoming Division. Following the year's training, the group returns to China to supervise the manufacture and assembly of Lycoming engines there.

The arrangements are the result of negotiations between Maj. Gen. P. T. Mow, Lieut. Col. S. C. Wang, and Capt. W. Z. Hwa of the Chinese Air Forces and William F. Wise, vice-president of Aviation Corp. and the Lycoming Division.



## De-Icers Tested On Mt. Washington

B. F. Goodrich Co. research on airplane ice removal taken to location which affords almost continuous icing conditions and wind velocities.

The summit of Mt. Washington in New Hampshire has been selected as a testing ground for airplane De-Icers by the B. F. Goodrich Co., whose research physicist, Dr. Dwight L. Loughborough, pointed out that the site afforded almost continuous icing conditions and wind velocities that equal or approximate airplane speeds.

► **Wing Overshoes Used**—An airplane wing, mounted like a weather vane so that it will head into the wind has been erected on a tower 18 feet above the geographical summit of the 6,288 foot mountain. On this wing are installed experimental De-Icer models—overshoes containing tubes that are inflated and deflated in sequence to break off ice, being powered by a compressor located inside the tower.

Purpose of the tests, Dr. Loughborough explained, is to study further the physics involved in airplane ice removal. He said ice-removal research has always been

hampered by the difficulty of reproducing, where they can be conveniently studied, the great variety of icing conditions experienced in flight. Through the Mt. Washington tests he hopes to add to the data accumulated through extensive wind tunnel studies at the Goodrich plant and recorded from actual flights.

## Firestone Perfects New Rubber Cement

Development of an adhesive that is increasing service of aircraft and combat vehicles is reported by Firestone Tire and Rubber Co., whose executive vice-president, L. R. Jackson, describes it as the only one that will bond any synthetic rubber to metal.

This means savings of man-hours and elimination of steps in many manufacturing processes where rubber must be bound to metal. He explained that many metals formerly had to be brass-plated before they could be bonded to synthetic rubber and that the new cement not only eliminates this step but provides a more uniform adhesion than is possible through the brass-plating method. Spots of water or rust film, both of which destroy the effectiveness of many cements, are said not

## List Specialists

The Aeronautical Chamber of Commerce has submitted the names of five technical specialists to serve with Supreme Headquarters, AEF, at the suggestion of the Army, one of whom will be chosen to serve at headquarters.

His duties will include the sifting of information coming out of Germany on aircraft and aid in determining how it may be applied to future war plans and its usefulness to the aircraft manufacturing industry.

The man selected will not represent the aircraft industry as such, but will be an expert on which the industry's trade association has agreed will generally represent industry's viewpoint.

to affect Firestone's new adhesive. ► **Sticks to Aluminum**—Jackson said the adhesive is particularly valuable in bonding rubber to aluminum, which can not be successfully brass-plated. Since aluminum and magnesium are key metals in the aircraft industry, the new adhesive should play an important part in that manufacturing field.

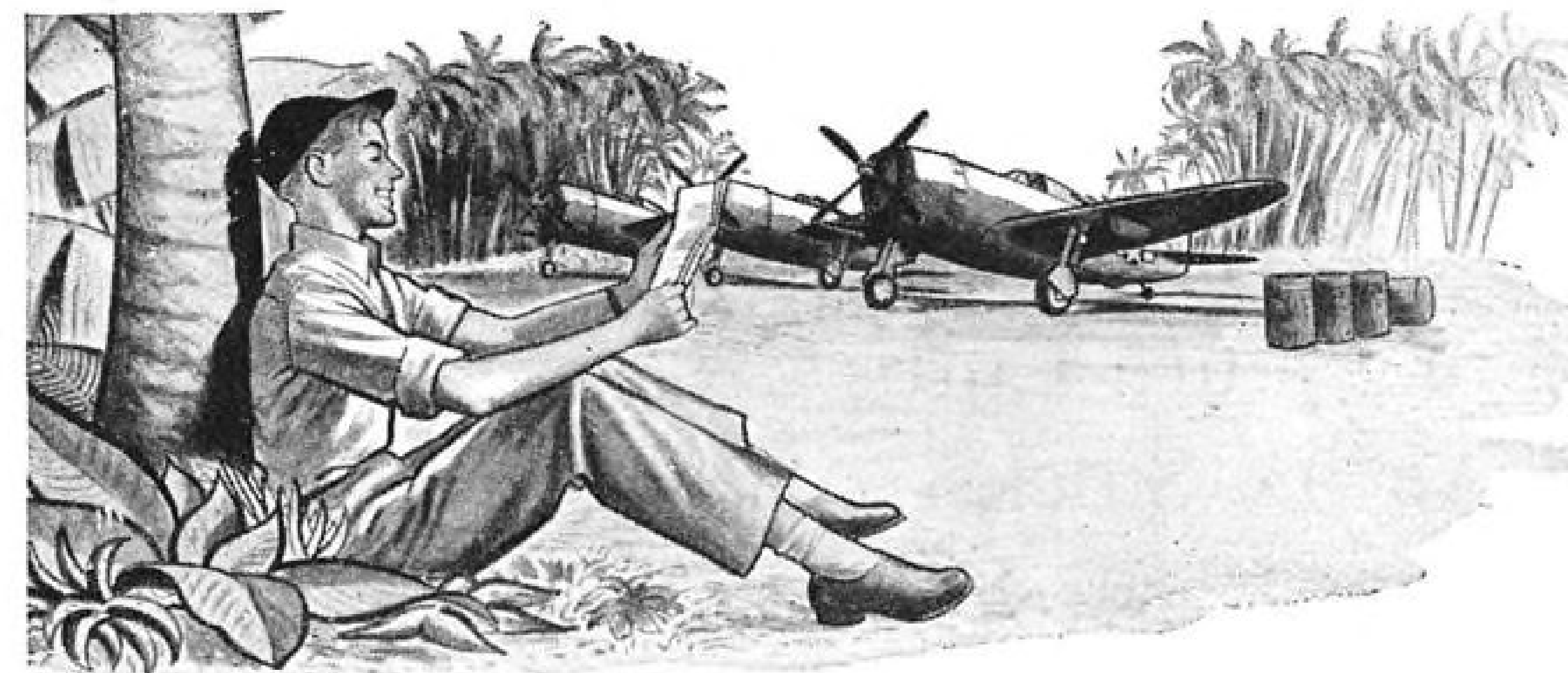
## P-W (Mo.) Output To 1,000,000 hp in Month

Pratt & Whitney Corp. of Missouri, one of the last of the big plants for war production, turned out more than 1,000,000 hp. last month in engines, power sections and spare parts.

This Kansas City plant, designed especially for mass production of the new R-2800-C engines with a designated rating of 2,100 hp., not only builds complete engines, but also manufactures power sections for its sister Pratt & Whitney division in East Hartford. It has been only 10 months since the first engine was produced at Kansas City.

► **Used on Secret Planes**—The engine is used in the Grumman Hellcat, the Vought Corsair and the Republic P-47 Thunderbolt. In addition, the engine also will go into navy planes, still on the restricted list.

L. C. Mallet, general manager, pointed out that the plant is being operated for the Navy without profit either for Pratt & Whitney Aircraft Corp. of Missouri or United Aircraft.



Dear Bro. Joe:  
As a Thunderbolt-maker to a Thunderbolt pilot, I just wanted to tell you how we in the Republic plant feel about you guys.

Sometimes we think we're pretty good. We build one of the toughest fighters of this war. We build 'em fast - more than 10,000 so far. We see them go out of here headed for every front. We read about them in the newspapers. This is why we bust out now and then with a big hurrah for ourselves.

But...and this is the reason for this letter...when the shouting and the back-patting are all over, we know a Thunderbolt is only eight tons of fancy machinery until one of you guys takes her up into the blue. Only then is it a fighting plane.

And let me tell you this: there's a prayer in just about every bolt and rivet of those 10,000 Thunderbolts - prayers that are sort of dropped in by us folks along the assembly line for the one particular guy who's going to fly her and fight in her.

So this is the way we feel about you, Joe. It is a small thing we do beside the big thing you do.

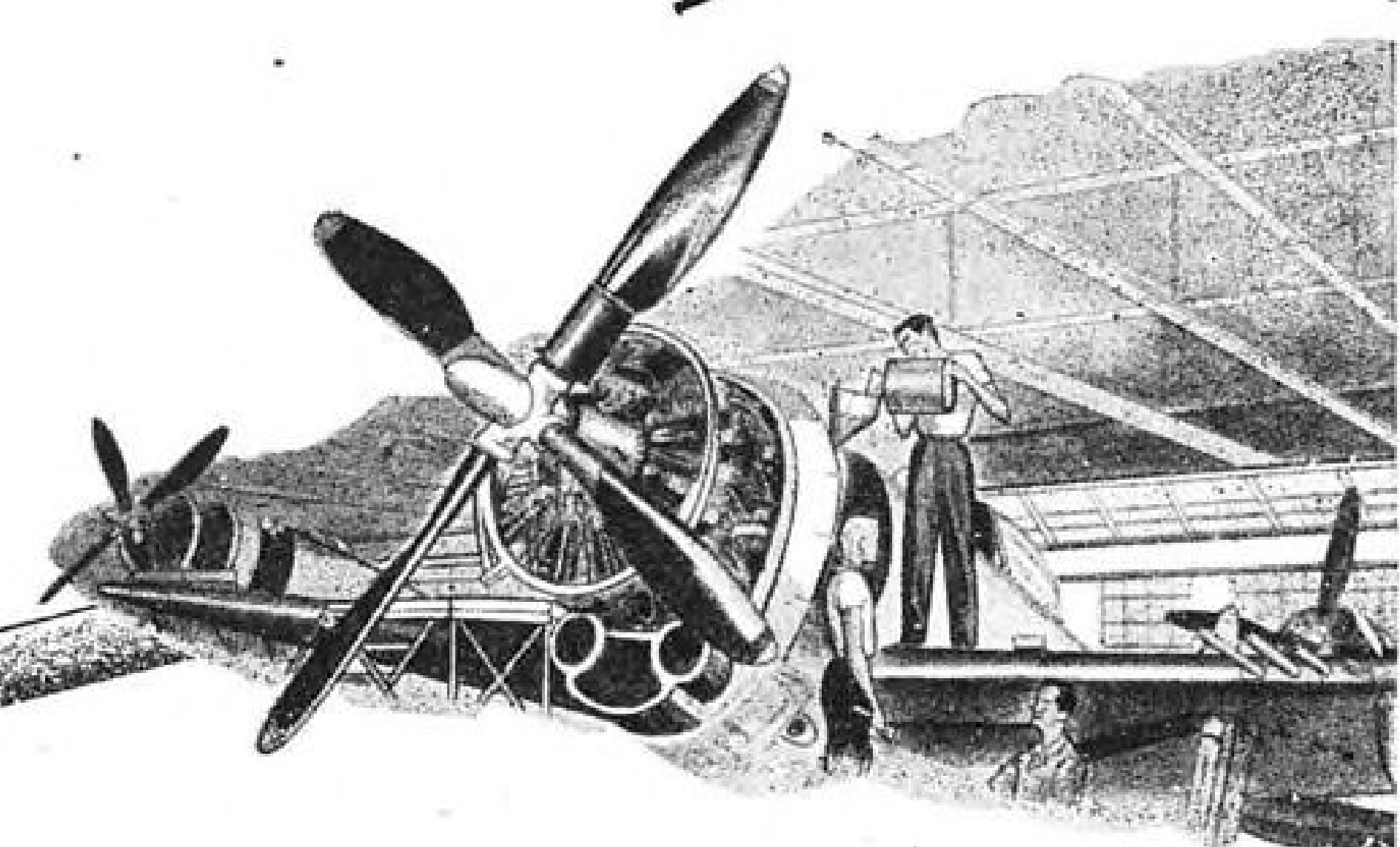
Write soon.

Your devoted brother,

Charlie

Republic Aviation Corporation, Farmingdale, Long Island, New York, and Evansville, Indiana

Republic firsts in war point to firsts in peace

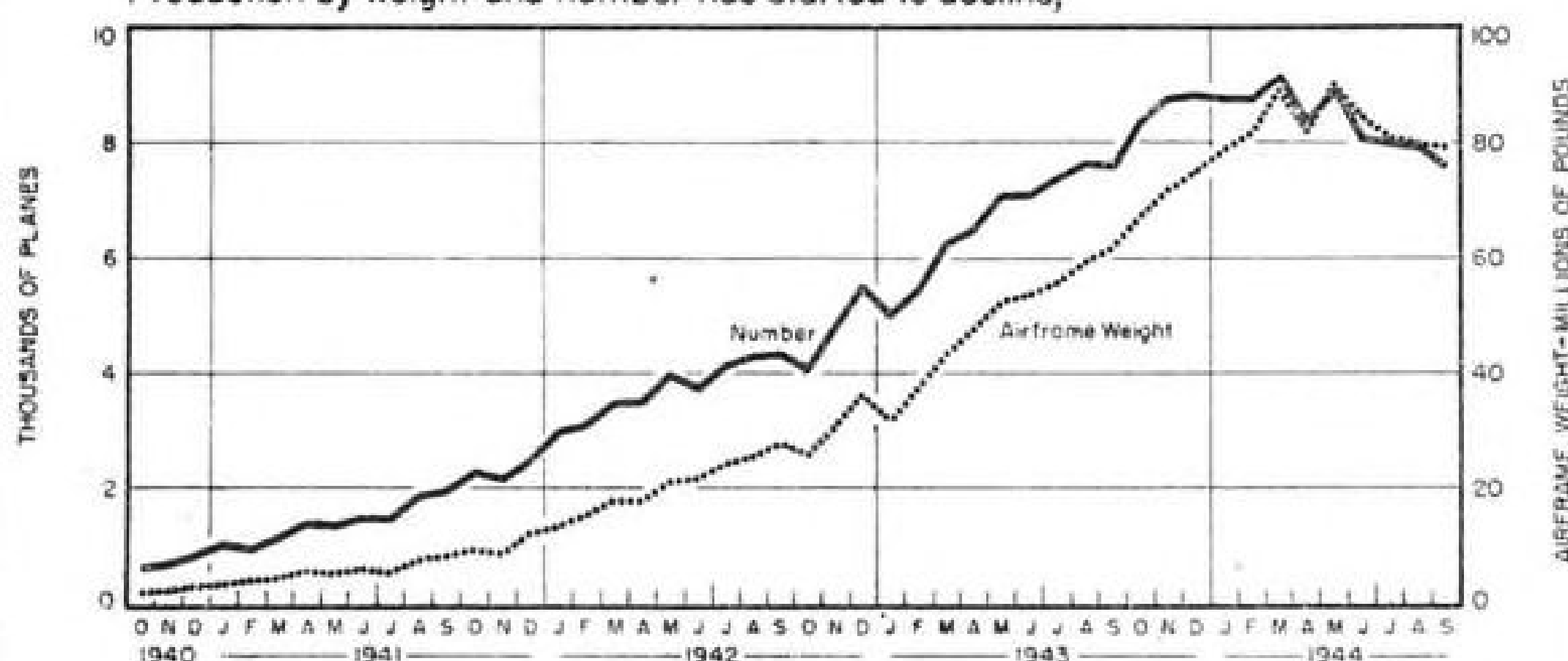


# REPUBLIC AVIATION

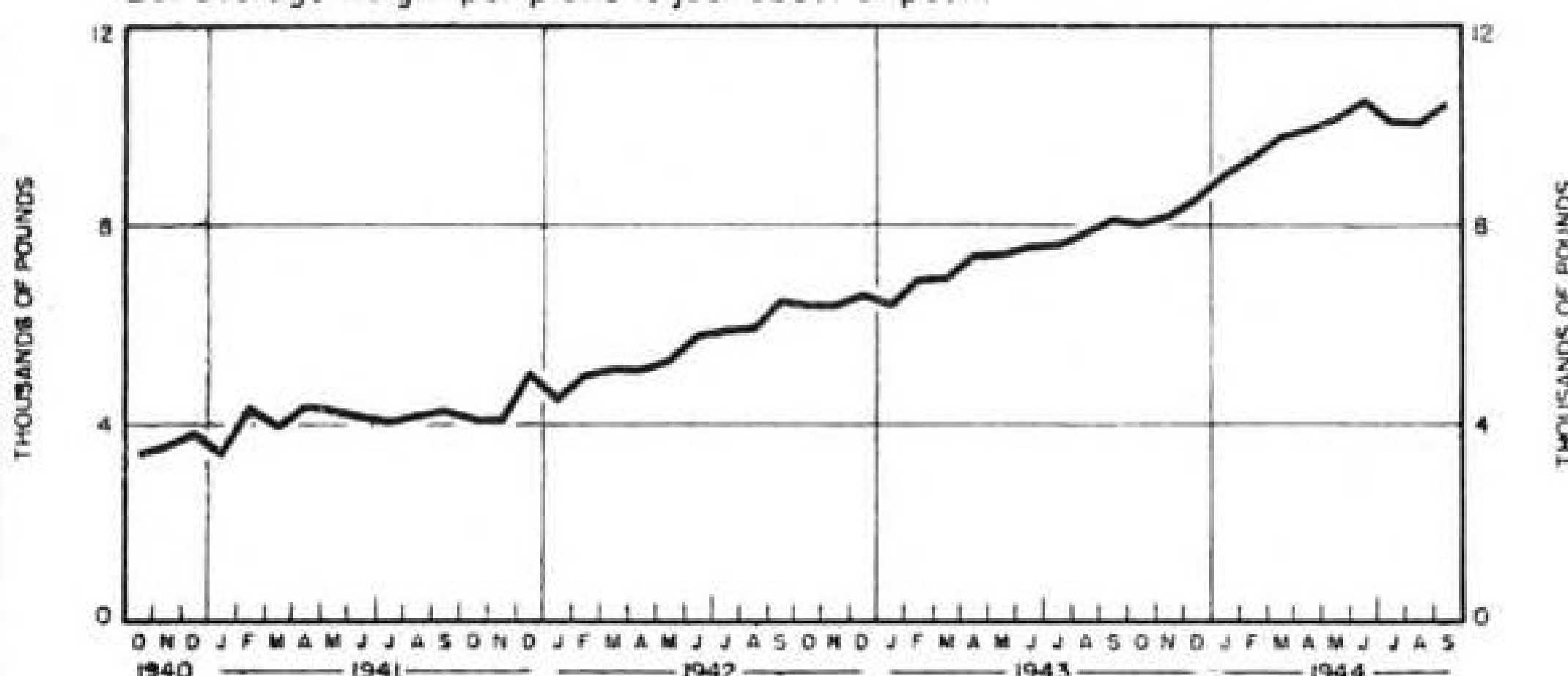
CORPORATION  
Specialists in High-speed, High-altitude Aircraft

## FOUR YEARS OF WAR PLANES

Production by weight and number has started to decline,



But average weight per plane is just about at peak.





## Uncertain Rate of Return Curbs Enthusiasm for Airline Stocks

No established policy yet defined by CAB in proceedings; limited precedent hampers Board in reaching definite figure, although 10 percent is generally regarded as fair and equitable.

Currently looming in the background is the rate of return that the airlines will be permitted to earn on their investment. It is the fear that the regulatory powers may limit earnings to a static figure that has always qualified investor enthusiasm in the industry.

The Civil Aeronautics Board in its rate proceedings has always cocked an eye on earnings and their relationship to a return on investment. But nowhere has the board defined an established policy. This has not been simple to do as the CAB has been confronted with pioneering in a virtually new field. The air transport industry is a public utility unlike any other and the application of precedent is very limited.

► **10 Percent**—In its past mail rate decisions, the Board has shown a tendency in viewing earnings of about 10 percent on invested capital as fair and equitable and has attempted to set rates with this criterion. At present, earnings have been running at substantially higher levels. With air mail cases presently dormant there is little occasion to give immediate attention to this factor. Yet, because of higher earnings, the carriers were forced to reduce their passenger and freight tariffs last year by action of the board. There is nothing to prevent a repetition of this action.

The airlines are constantly aware of the vital importance of this fundamental regulatory problem. As a result, the Air Transport Association was directed to undertake research in this field. A report has now been issued by one of its research assistants and is being examined. (AVIATION NEWS—Nov. 6, 1944). In a highly academic manner, the problem has been examined with no conclusive results other than the advancement of four recommendations. It has been suggested that further study be made to determine the status of

working capital, investment in the rate base, status of the rate of return and cost analysis factors.

All these elements are interesting but highly conventional and more suited to a consideration of the old-line utilities such as railroads and power companies.

► **Capital Turnover**—The airlines turn over their capital at a far greater rate than any other utility. In other words, they generate more revenue on a given capital than for example a railroad. This is because the airlines have less of a permanent investment. Railroads have their rights of way, roadbeds, tracks, terminals and other enormous fixed properties. The air carriers do not have any such encumbrances—the largest investment being in the airplane itself.

This larger turnover of capital is directly related to profit margins and their ultimate effect on the rate of return realized on invested capital. For instance, if a department store with a profit margin of 3 percent turns its capital over four times a year or say has annual sales of \$200,000, it will have realized a profit of \$6,000 and will have earned 12 percent on its investment. On the other hand, should another store with but the same capital and identical profit margin, turn its capital over but twice a year, its yearly profit would be only \$3,000 and but 6 percent on invested capital. This same principle is present in comparing the railroads and the airlines.

► **Stability**—The long established utilities have considerable stability of operations. The air carriers are constantly expanding and are very much in the growth category. The same measures in evolving a rate of return on the investment will not work as different factors are at play. Capitalizations and financing plans clearly recognize this distinction but regulatory powers have been slow to do so. For ex-

ample, based on a background of sound, conservative earnings, a power company can do considerable bond financing.

Further, the air carriers are not public utilities in having a monopoly on services as do power companies. Competitive routes exist and have been fostered by CAB action. It would appear that some weight should be accorded this fundamental difference. This is also another way of saying that markets for a power company are relatively assured and attached with little risk. The airlines, on the other hand, are faced with many hazards and are in no protected market zone.

► **Federal Aids**—The touchy question of federal aids to aviation also enters the picture. At one time, air mail payments were considered a subsidy. This is no longer true. But airway and radio aids, weather facilities and similar federal installations have been a great boon to aviation. The railroads are inclined to accuse the air carriers of having an unfair advantage by virtue of these facilities being made available. The steam carriers simply close their eyes to the huge land grants and direct cash appropriations of an earlier century when national policy aimed to forge transportation links throughout the country. Certainly, the needs of commerce, postal service and the national defense have been given tremendous impetus to justify whatever aid that has been given aviation—and with far less waste and plunder than that which attended the railroad construction era.

The rate of return question is probably the most complex regulatory problem faced by CAB. The board is charged on one hand to foster aviation and if it appears to permit carriers to operate at highly profitable levels so that the industry can be advanced, motions for greater restraint appear from the post office department and certain members of congress. Should the board cut rates, the accusation is then made that the agency is retarding the progress of aviation and aims to stifle an infant industry. This is the dilemma faced by CAB. This entire problem may appear academic at present but in the post-war period when the air carriers plan to expand and earnings may be spread rather thin, the rate of return to be realized on invested capital and how it is to be applied will become of utmost importance.



# Parts For Sale

Large stock of miscellaneous parts for aircraft and engines—NEW AND USED

**WACO UPF-7 PARTS...** A large stock at attractive prices.

**PARACHUTES...** \$50 and up. Pioneer—Switlik—Irving  
Seat packs and back packs are both included. Will be sold repacked and ready for use.

**ENGINES**

- 5 Continental W 670—6A
- 1 Continental A 75—9
- 1 Ranger 6—440—C 3
- 1 Lycoming R 680—B 6
- 1 Lycoming O—145—B 1
- 1 Lycoming 215 H P
- 4 Menasco C 4 S
- 1 Warner 125 H P

Above parts immediately available at the Athens, Georgia, base of Southeastern Air Service, Inc. Write, wire or phone for prices and further information.

**Prompt Service—Satisfaction Guaranteed**

**OVERHAUL AND REPAIR WORK INVITED**

**SOUTHEASTERN AIR SERVICE, INC.**

OVERHAUL AND REPAIR BASE AT ATHENS, GA.  
OPERATING BASE AT MACON, GA.  
ASSOCIATE BASES ALL OVER DIXIE  
EXECUTIVE OFFICES ATLANTA, GA.



## TRANSPORT

# Operators' Parley May Be Called To Settle World Airline Problems

Meeting to discuss rates, frequencies, etc., is expected to develop from International Civil Aviation Conference at Chicago.

By MERLIN MICKEL

Sentiment in favor of international airline operators' conferences to thresh out such knotty problems as rates and perhaps frequencies, in close coordination with whatever world air authority may be set up by nations represented at the International Civil Aviation Conference at Chicago, was growing last week as the meeting reached its crucial stages.

Whether the economic preview of the international body would extend beyond the consultative role envisioned by the United States to that of definite arbiter over routes, frequencies and rates advocated by Britain and Canada was being debated in close-knit conferences between the heads of

delegations from those three nations, with fair prospects for settlement of the issues before the week is out.

► **Operators' Conferences Favored**—A high conference source stated that, whatever the outcome of these discussions, and whatever sort of interim council and permanent international air authority is attained, there is a definite tendency favoring operators' conferences at which matters within the scope of activity of an international body could be considered.

This was given impetus by reports that some congressional members of the United States delegation had emphasized that any interim agreement that went be-

yond the admittedly broad limits of the Civil Aeronautics Act toward determination of routes, rates and frequencies got into the realm of treaty and must have a two-thirds Senate vote for approval.

► **Committees Wind Up Work**—Technical subcommittees, meanwhile, unburdened by major political considerations, were concluding their work on recommendations for international aviation practices—programs virtually certain of conference adoption as basis for universal usage. Designed for flexibility in anticipation of whatever amendment might be required as international aviation develops, these apparently were broad enough to allay the fears of the U. S. aviation industry, outlined in AVIATION NEWS some weeks ago, that the international technical code might receive too hasty treatment at conference hands or emerge in an unduly rigid form.

The plan is that the technical work now nearing completion in Chicago shall be sent by the United States to participating nations, in corrected editions of draft documents, as soon as the conference is over. This will enable the various nations—in a procedure assuredly to be followed by the United States—to circulate the recommended practices to the industry so that comment may be obtained by the proposed May 1 deadline.

Thereafter, steps will depend on the nature of the international interim organization, now under discussion, functioning between the close of the conference and ratification by the various governments of the multilateral draft convention that is its prime objective.

► **Technical Meetings Likely**—Technical experts say there may be a series of general meetings on the more technical subjects, perhaps, for example, an international conference on airworthiness next summer. As an alternative, interim council subcommittees could do a job of restudy and revision, if necessary, looking toward consummation of a final technical convention for inclusion or attachment to the overall multilateral treaty.

It is safe to say that the codes are intended to recommend an absolutely binding force only where necessary, such as in rules of the air. In airworthiness, a degree of freedom is being retained, and here assuredly there would be nothing to hamper American prac-

tice. Attempts are being made to avoid repetition of experiences of the past in which airworthiness requirements of various nations have been completely unrelated.

Significantly, the proposed codes, which of course are subject to conference approval, are all minimums, and contain nothing to prevent any nation from setting higher standards than those therein outlined. Briefly, they create a floor below which international technical standards might not go. Thus it is not surprising that American technical experts, particularly, hope that with these characteristics the recommended practices may receive world approval.

## Air Cargo Prepares Coordination Plan

Program distributed to stockholders as alternative should present Air Express agreement be canceled.

A skeleton plan for proposed coordination of air and surface carriers on an industry basis has been prepared by Air Cargo, Inc., and distributed to all stockholders as an alternative plan of operation should the present Air Express agreement between the airlines and the Railway Express Agency be canceled.

The report contains detailed blueprints for maintaining the functions of air express and freight, both on the ground and in the air, by a coordination of airlines and surface carriers without the "integration" which has been advocated by railroad interests.

► **Rate Program**—Procedures are outlined whereby necessary information on joint rates and tariffs might be collected in the shortest possible time so that air and ground carriers could establish joint or proportional rates should the present agreement be seriously modified.

The plan presented to Air Cargo, Inc., envisages freight and express rates established on the block system basis which has been successfully used for many years in surface transportation. By this method the country is divided into blocks bounded by degrees of latitude and longitude. Rates are calculated between blocks rather than between individual points. Air Cargo's report suggests adapting this same method to air freight and express. It would be particularly useful in determining rates for

shipment to points not served by air carriers. In such instances joint rate fixing would be considerably simplified by the block system.

► **Procedure**—The overall plan suggests a standard procedure whereby each airline establishes its own program of coordination with surface carriers through the area it serves. This, of course, is the same plan American Airlines has followed in setting up ground facilities for its air freight program.

Considerable ground work on such a coordinated plan already has been completed. Conferences between Air Cargo, Inc., and the American Trucking Association have laid the foundation for future cooperation.

As the author of the suggested plan states, it establishes machinery whereby the airlines, should they adopt it, would be able to take rapid and adequate action to preserve the air cargo system under any of a number of contingencies which might develop.

## Braniff Awarded Okla. City-Memphis

With members Harllee Branch and Oswald Ryan dissenting, CAB last week extended Braniff's route 15 from Oklahoma City to Memphis via Tulsa, Muskogee, Fort Smith and Little Rock, and at the same time extended American Airlines' AM 23 from Nashville to Oklahoma City via Tulsa. While Branch and Ryan asserted American could provide local service between Memphis and Oklahoma City along its transcontinental route, the majority held that development of traffic between those points should "be entrusted to a carrier whose operations are of a more local nature." Braniff was favored because its "operations center at Oklahoma City to a much greater degree" than those of the only other regional carrier in the case, Continental.

► **American**—In addition to the AM 23 extension, American was granted an extension of AM 4 from El Paso to Tulsa via Oklahoma City, bringing American's total new mileage to 1,073. The two extensions completely revamp a huge segment of American's coast-to-coast run and for the first time give Tulsa and Oklahoma City through air service to the East.

In the same decision, involving service in an area roughly from El Paso to Atlanta, Ga., American was ordered to add Joplin, Mo., as a

stop on AM 30, and Eastern Air Lines was authorized to operate direct between Memphis and Atlanta via Birmingham provided no shuttle service was undertaken between Birmingham and Atlanta.

► **Chicago and Southern**—As part of the overall pattern to provide better service in the area between Tulsa and Memphis, Chicago and Southern Air Lines was granted permission to stop at Little Rock, on AM 53 between Pine Bluff and Memphis. This also figured in the minority opinion which pointed out that extending Braniff's route put three carriers on the run between Little Rock and Memphis.

## Replaces Railey

Civil Aeronautics Board has appointed a former Army Air Corps pilot, Capt. John Sherman, of Cleveland, as liaison consultant replacing Howard B. Railey, recently



Capt. John Sherman

named U. S. Civil Air Attaché at Paris. Capt. Sherman's aviation experience includes flying over the "Hump" between India and China and service as co-pilot on Pan American Airway's Latin American division. He is a graduate of Yale University and Yale Law School, and recently was honorably discharged from the AAF.

Railey, whom he supplants, is now serving as a committee secretary at the International Aviation Conference at Chicago.

## Branch Renominated

Civil Aeronautics Board Member Harllee Branch of Georgia was nominated by President Roosevelt last week to succeed himself as CAB member for a six-year term beginning Jan. 1. The nomination has been referred to the Senate Commerce Committee.



## NEWEST CAB TRIAL EXAMINERS:

Latest additions to the Civil Aeronautics Board's staff of examiners are shown above, grouped around Chief Examiner C. Edward Leasure (seated, center). L. to r. are Ferdinand D. Moran, formerly with the Department of the Interior and R. F. C.; James S. Keith, previously in the Treasury Department and the General Accounting Office; Curtis C. Henderson, an experienced trial examiner of the Bureau of Motor Carriers, I. C. C.; and Charles J. Frederick, a former hearing officer of the War Labor Board.



# Coast Hearings Give Little Hope For Self-Sufficiency of Feeders

Lines could operate in black only through substantial postal subsidies, despite sizeable airmail and cargo potential in new routes, officials believe.

Whatever hopes existed for early self-sufficiency in feeder air line operations vanished last week in the closing of the Civil Aeronautics Board's West Coast feeder hearings in San Francisco.

At the end of sessions testimony apparently had established that:

- ▶ No airplane exists that will produce a profit from the passenger and express potentials estimated for any of the four score feeder routes proposed by applicants.
- ▶ No feeder applicant will be able

to break even on the going trunk line air mail pay of .3 mill per pound mile.

▶ The one or more carriers which may be certificated by CAB will require a comparatively high air-mail subsidy to show a "reasonable profit."

However, the case for the feeder airline program, nationally, may be said to have been strengthened by showings that soundly developed routes should generate new air mail to a degree that the sub-

sidy pay required will not necessitate post office deficits covering those particular operations.

Also, there was ample evidence that the Western states possess passenger traffic potentials sufficient to warrant the granting of at least temporary certificates to test public reaction to the air transport industry's newest venture.

Variations in estimates of passenger and cargo potentials were as numerous as the formulas used by applicants, and led to the assumption that guessing the probable success of the feeder business was a risky business.

▶ **Estimates Vary Widely**—In their estimates of potential business, feeder line witnesses had declared the need for mail pay subsidization ranging from 7.71 cents per revenue mile to break even to as high as 21.03 cents.

Generally attacking the proposals of the feeder companies, the major air carriers, United, American Airlines, Western Air Lines and Transcontinental & Western Air, voiced fear that certification of feeder routes may lead directly to the establishment of new and unwelcome competition for terminal-to-terminal trunkline business.

Cross examination of witnesses developed the major carrier view that a feeder company certificated for numerous short haul stops might by degrees seek elimination of unprofitable stops and eventually become, in effect, a "through" carrier.

▶ **UAL President's View**—W. A. Patterson, United's president, summed up this belief when he said, "The day may come, after five to ten years of operation, when feeder applicants will not be so enthusiastic. I can visualize hearings in which feeder lines will express financial losses and the only solution will be the creation of new trunk lines and competition that I do not think the territory can stand."

Patterson insisted he was not a participant in the hearings to condemn feeder lines, and added: "I do think them to be economically unsound. But, if public service outweighs economies, United Air Lines will cooperate. We're not here to choke anyone."

▶ **WAL Opposition**—Feeder opposition from a different viewpoint, however, came from Leo Dwerlkotte, president of Western Air Lines.

"I feel that the CAB should postpone the certification of new carriers until established carriers

are on a self-sustaining basis," he said.

Testifying for Western's own application for one feeder route and eight new West Coast "trunk" routes, Thomas Wolfe, vice-president in charge of traffic, said that "carriers who have pioneered air transportation should have their routes corrected until their business becomes stable."

Feeder line attorneys countered with insistence that the major air lines already are well established and showing profits. And that the time is ripe for small company, short haul ventures that will give air service to hundreds of communities untouched by trunkline operations.

## 2 Mexican Airlines Granted U. S. Entry

CAB authorizes operations into American ports at Brownsville and Eagle Pass, Tex., and Nogales, Ariz.

Civil Aeronautics Board, with Presidential approval, has granted temporary permits to two Mexican air carriers, Aero-Transportes, S. A., and Lineas Aereas Mexicanas, S. A. (LAMSA), authorizing operations into U. S. airports at Brownsville and Eagle Pass, Texas, and Nogales, Ariz. In both cases, the permits are issued for 90 days and are renewable at the Board's discretion for an aggregate period of 180 days.

Aero-Transportes, one of the newest Mexican carriers, asked permission to use the two Texas fields because the airports at their companion cities across the border are inadequate for the Boeing 247-D equipment the line recently acquired.

▶ **Improvements**—Airport improvements at Matamoros and Piedras Negras, Mexico, to which Aero-Transportes has Mexican government operating permits, are now under way, and the U. S. airport authorizations represent temporary arrangements until the Mexican fields are completed. The line has filed application with CAB for a permanent certificate to operate into San Antonio, Tex.

LAMSA, United Air Lines Mexican subsidiary, likewise facing an inadequate airport situation at Nogales, Sonora, Mexico, received permission to use the airport at Nogales, Ariz., which adjoins the Mexican city. Like Aero-Transportes, LAMSA has applied for a permanent Los Angeles route.



**Feeder Witness:** James G. Ray, vice-president of Southwest Airways, on the witness stand in CAB's West Coast hearing said he believed there would not be room for two feeder operators in the territory his company proposes to serve. A single feeder system, he declared, could operate in a given area more economically than several.

## Multiple Taxation Relief Forecast

A strong indication that airlines soon may be relieved of the threat of multiple taxation on flying and other equipment was given by CAB member Oswald Ryan last week to the Aviation Clinic in Oklahoma City.

Reviewing the history of Northwest Airlines vs. State of Minnesota case and the subsequent Congressional order to CAB to study and make recommendations before Dec. 30 on airline taxation, Mr. Ryan cited the Board's duty to develop air transportation. "It would be inconsistent," he said, "if the federal government remained indifferent to developments in any field, taxation or otherwise, which might impair the achievement of this important national policy."

▶ **Reassurances**—As further reassurance, Mr. Ryan reported that in conversations with a number of state tax officials he found "full recognition of the importance of avoiding any burdensome multiple taxation." He declared that CAB has appointed an advisory board of persons having expert knowledge of taxation of air carriers, and that the airline industry has offered splendid cooperation.

## CAB Awards WAL Denver-L.A. Route

Move confirms Board's policy of strengthening regional carriers; UAL, TWA and CAL applications denied.

By DANIEL S. WENTZ II

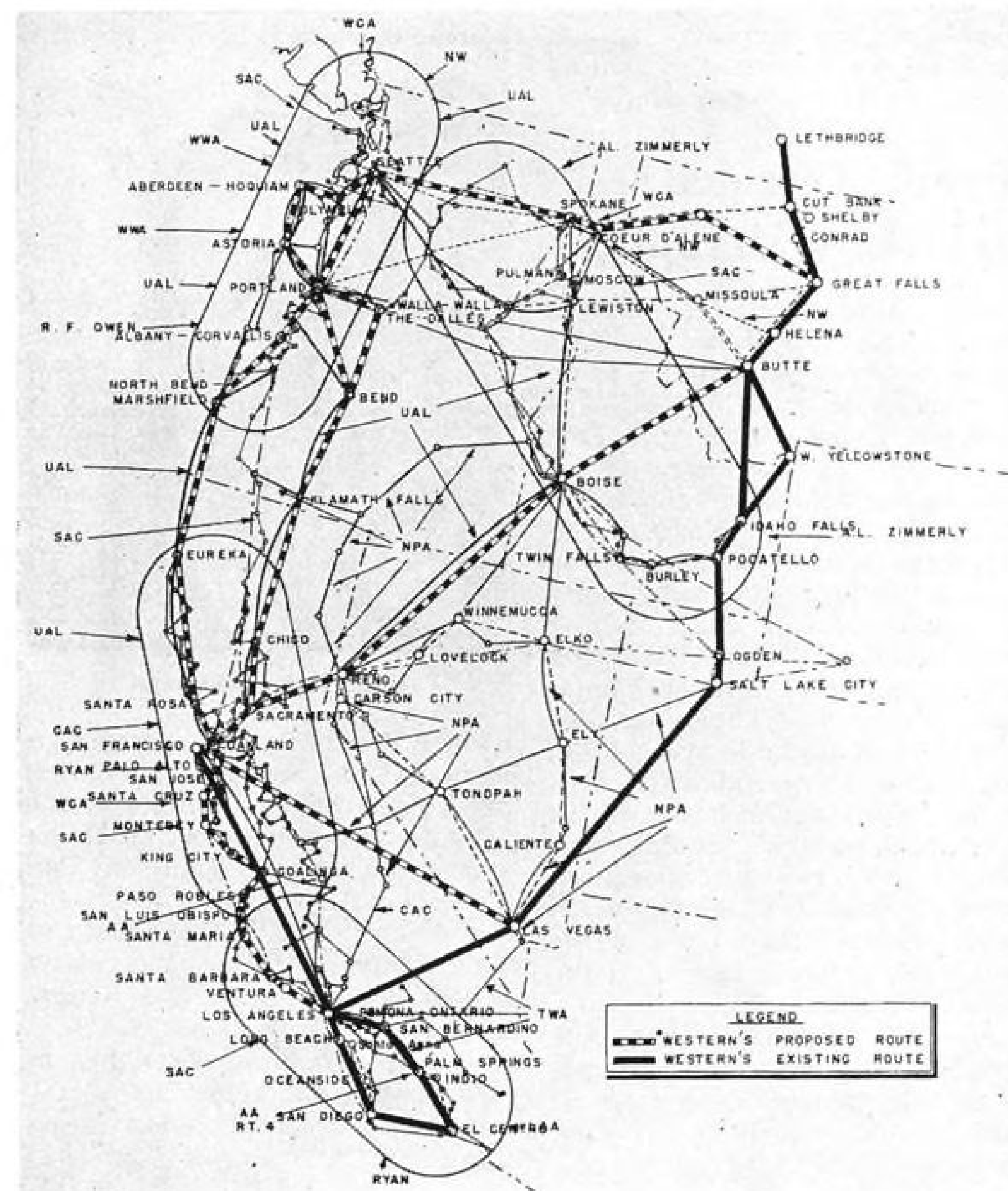
Civil Aeronautics Board last week awarded to Western Air Lines the coveted 831-mile route between Denver and Los Angeles in a decision which strongly confirmed the Board's established policy of strengthening regional carriers. The Board denied applications of United Air Lines, TWA, and Continental Air Lines for the route, pointing out that the desirability of maintaining Western as a strong regional carrier outweighed the benefits of one-company service which would accrue from granting the link to a transcontinental carrier.

Operating costs and revenues as estimated by applicants all testify to its economic promise. Western, with eight daily round trips using DC-3's, estimates and operating profit for the first year of \$974,875. With four daily round trips flying DC-4's, this profit would be slightly increased, the carrier believes.

▶ **Western's Case**—Theory of the case, as outlined by Western, involves the substitution of Denver for Salt Lake City as interchange point on the transcontinental connecting service operated conjointly by Western and United. Should United or any carrier other than Western be awarded the route, the Board stated, the main function of Western's AM 13 (Los Angeles-Salt Lake City) as a segment of a transcontinental route would be eliminated. AM 13 "has always been the backbone of Western's system" the Board declared, and awarding a competitive link to another carrier would seriously impair Western's "ability to continue as a strong independent air carrier in a position to compete for traffic in the western section of the country."

Although not mentioned in the Board's decision, the new route serves as a strong factor to integrate the Western-Inland combination by providing an additional link between the two systems.

▶ **Four-Engine Equipment**—CAB Vice Chairman Edward Warner, in a concurring opinion, held that, in addition to the reasons set forth by the majority in support of the



### PROBLEM FOR CAB:

If feeder airlines are to be certificated on the West Coast, it will be the Civil Aeronautics Board's task to redraw the above map in an orderly fashion. The map indicates overlapping of existing and requested routes, and was prepared by Western Air Lines' research staff. It seeks to indicate areas of influence with identification of respective applicants in each. From applications now on file with CAB, it appears the Board will have a similar unscrambling job in each of its regional feeder hearings.



decision, the new route also would improve Western's ability to utilize four-engine equipment. Western's Los-Angeles-San Francisco route, he said, is so competitive that large high-speed aircraft will be a requirement. Until the Denver-Los Angeles award, Western had no other route segments which could support such equipment. Dr. Warner feels, therefore, that the carrier can operate both routes with multi-engine planes and the same type of operation to more advantage than hitherto was possible.

The Denver-Los Angeles route includes Las Vegas, Nevada and Grand Junction, Colo., as intermediate points and will be known as AM 68. Service will not begin until requirements of the national defense no longer necessitate delay.

### Contract to Export

The Air Transport Command confirmed last week that American Export Airlines would receive a contract to operate multi-engine

ATC landplanes in trans-Atlantic service. Actual contract has not been signed, but Export's flight crews already are undergoing transitional training.

The European terminals were not disclosed, but it is believed operations will be conducted over routes now flown by ATC to the British Isles or North Africa. The new contract will replace Export's former contract operation for the Naval Air Transport Service, due to expire Dec. 31.

### Urge Inter-American Transportation Office

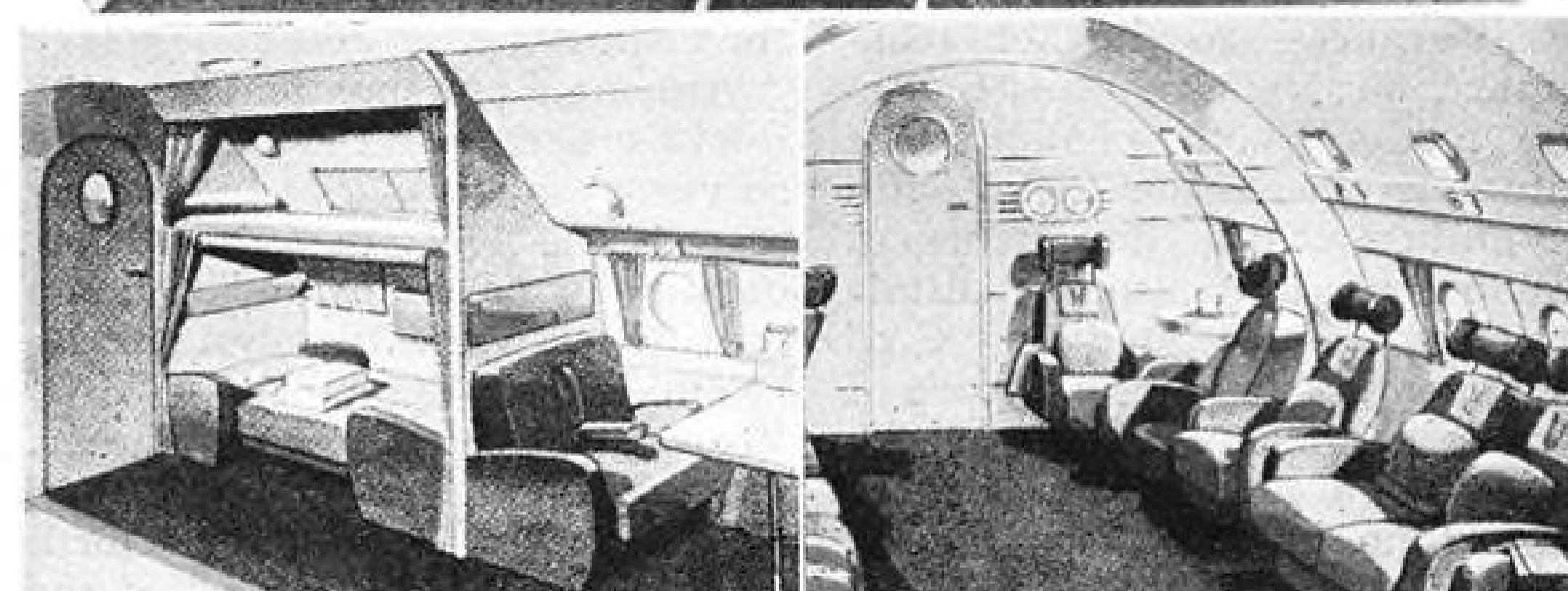
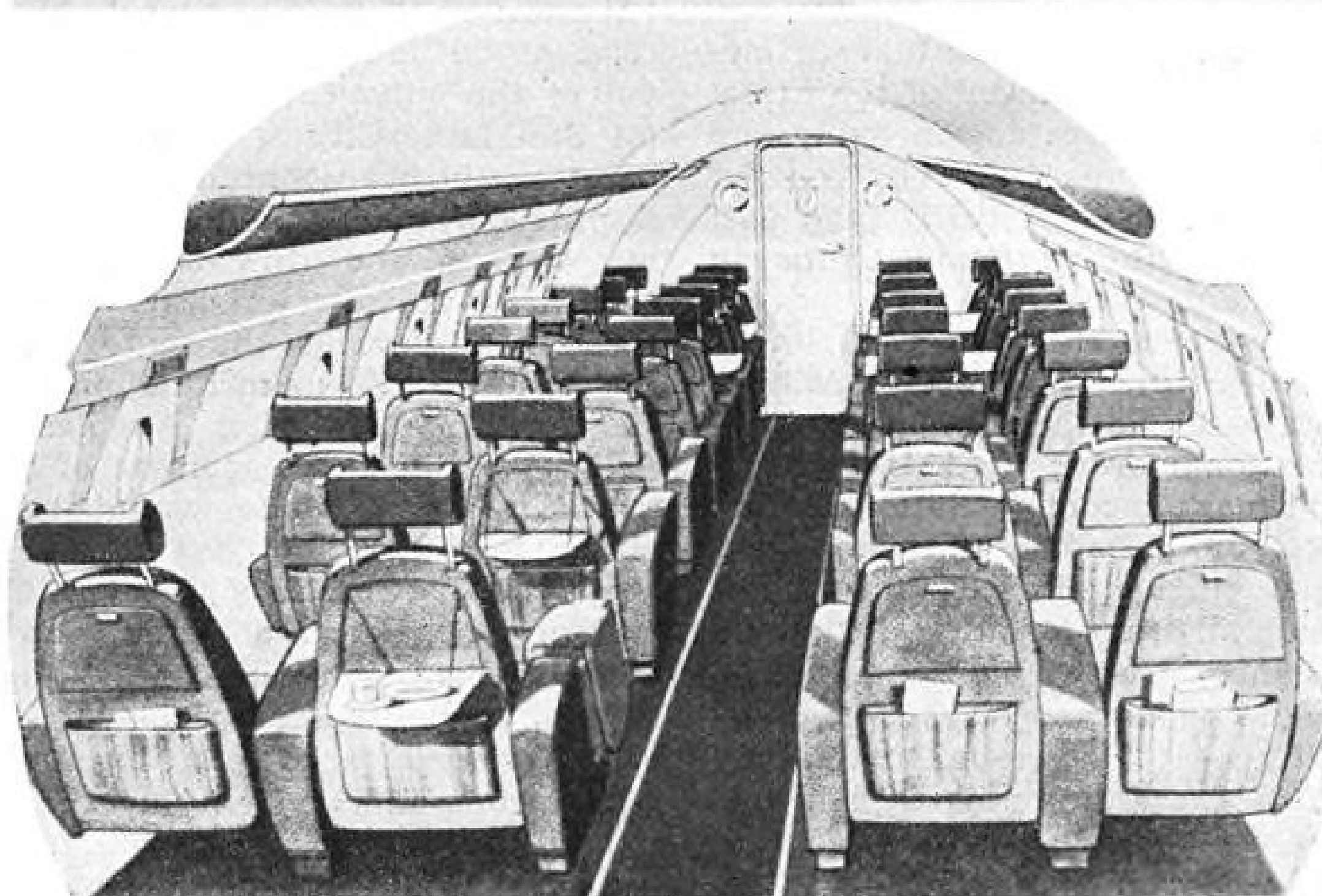
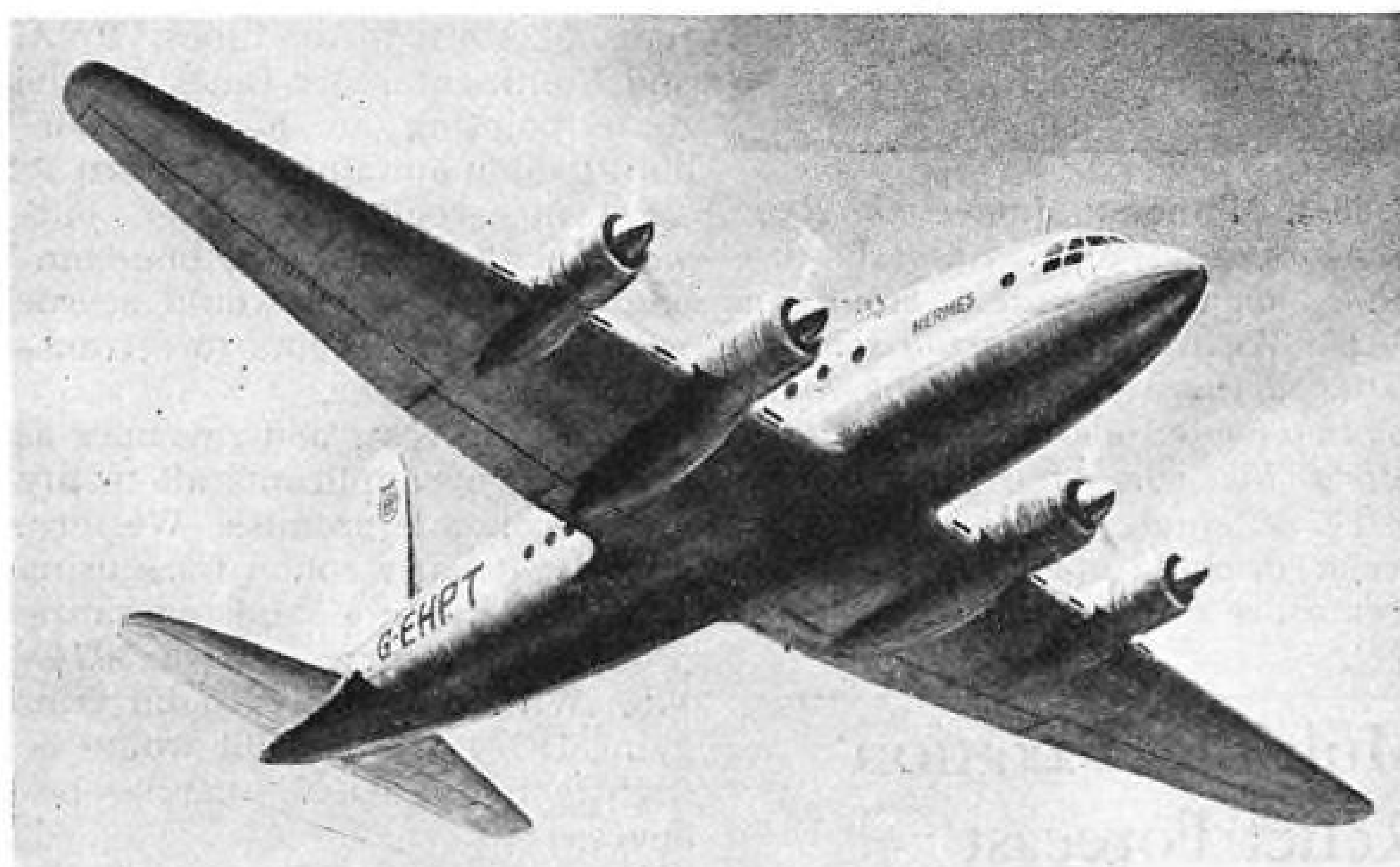
Hemisphere Defense Board makes proposal to 20 Latin American republics; standardized equipment on airlines recommended.

Anticipating any world-wide aviation authority that may come out of the Chicago conference, the Inter-American Defense Board has recommended to the 20 Latin American republics the formation of an Inter-American Office of Transportation which "should not, of course, be inconsistent with the establishment of a general international organization in this field."

Also recommended by the Board's Committee on Inter-American Transportation was the suggestion that all airlines in the hemisphere use aircraft "which will always be available in this hemisphere." Observers interpreted this to mean aircraft manufactured in the U. S., as it followed a discussion of the difficulties which confronted Latin American lines using foreign equipment when war cut off replacements and parts.

► **Military Measure**—The study of Inter-American transportation was undertaken strictly as a military measure and the consequent report is based on possible future military necessity. It proposes an integrated transportation system—land, water and air—to link the American Hemisphere so that no country would be dependent upon a single form of transport. While urging that air transportation be greatly expanded with many new, larger and better equipped airports, it declares these should be laid out in a strategic pattern. "Each landing field should be considered, not as an independent unit," it says, "but as part of an airway which probably would be international in character." Commercial operations would be facilitated by each country's granting

### The Handley Page *Hermes* Transport



# WAR SURPLUS AIRCRAFT NOW BEING SOLD

by

## DEFENSE PLANT CORPORATION

A subsidiary of

### **Reconstruction Finance Corporation**

On November 1, 1944, the Civil Aeronautics Administration withdrew from the war surplus aircraft disposal program and the services heretofore performed by that agency have been taken over by the Defense Plant Corporation, a subsidiary of the Reconstruction Finance Corporation.

The change in procedure does not involve any change in sales policy. Surplus planes owned by the armed services will continue to be sold at OPA ceiling prices or on sealed bids. For complete information as to location, description of aircraft and conditions of sale please communicate immediately with . . . .

## DEFENSE PLANT CORPORATION

Room 1210-A • 811 Vermont Avenue, N. W. • Washington, D. C.



freedom of transit and technical stop.

Should the report be accepted by all governments, U. S. airlines would be the only foreign operators permitted in Latin America. Purpose again would be military, the prevention of any future situation such as prevailed at the start of this war when German and Italian lines were deeply rooted in the Latin American air field.

► **Subsidies Recommended**—To develop an air network of possible future military importance, it is recommended that subsidies be granted for routes which are not commercially feasible.

In line with its proposal for a hemispheric transport office to coordinate the work of various national agencies, the Defense Board stresses the necessity of setting up one or more institutions to train pilots and ground personnel for all the American republics. It envisions such standardization of aircraft, ground equipment and training as to permit interchange of personnel throughout the Hemisphere. A joint program of research and experimentation should also be undertaken.

The report, previously confidential, was drafted by a five-man

committee on transportation of the Inter-American Defense Board. Members included Maj. Gen. J. G. Ord, U. S. A., Chairman; Col. Juan Jones-Parra, Venezuela, *rappporteur*; Col. Armando Revoredo, Peru air transportation; Col. Stenio Caio de Albuquerque Lima, Brazil, land transportation; and Lieut. Guillermo Hernandez Sagarra, Mexico, water transportation.

## Detroit Port Suit

Another addition to the growing number of judicial decisions on the problem of land use for airport purposes has been handed down by the Michigan Supreme Court in a case which involved efforts of the city of Detroit to obtain land for an airfield by condemnation. The court refused to issue injunctions against condemnation proceedings brought by the city solely on a showing that an airport might possibly constitute a nuisance in its operation.

Owners of adjoining property had asked the injunctions on the ground that the proposed airport would depress land values and annoy residents in the neighborhood. The Court followed earlier precedents in finding that an airport cannot be considered a nuisance *per se*.

► **Public School Involved**—The case was further complicated because one of the complainants was a public school, and the opinion of the court has been interpreted in some quarters as a warning to the city that, should the airport eventually prove a nuisance, the public interest represented by the school would outweigh the necessity of the airport.

## Auditors Off for Rio

A four-man group of auditors, headed by A. H. Gilbert, chief of the Audits Division of Civil Aeronautics Board's Economic Bureau, left last week for Rio de Janeiro, Brazil, where they will spend approximately two months engaged in an audit of the financial relations between Pan American Airways and its Brazilian affiliate, Panair do Brasil.

This is the first trip CAB auditors have made to Rio, although a similar group returned recently from auditing the books of Caribbean-Atlantic Airways in San Juan, P. R.

Assisting Gilbert are Perry R. Baker, Benjamin Frank, and William A. McCallum, all of the Audits Section.

## 4-Engine Planes

Use of four-engine equipment (Douglas DC-4) on United Air Lines' Pacific Coast route with a 2 hours 20 minutes flight from Portland to San Francisco was promised by Harold Crary, UAL traffic vice - president. Justifying United's application for a stop at Salinas, California lettuce center, Crary said: "We could be carrying cargo lots today if we had the planes."

► Douglas Aircraft Co.'s revised "Skybus" appeared in the hearings as an \$80,000, 24-passenger plane which will have an "after the war" delivery date.

► While other carriers talked of "public convenience and necessity," TWA's chairman of the board, Thomas Wilson, when asked if his company's interest didn't resolve itself to "profit for TWA" answered with disarming candor: "Certainly."

"When Nick Bez puts \$100,000 into anything, he goes in after it," said Nick Bez, Seattle president of West Coast Airlines, Inc., feeder applicant, when cross-questioned on the amount of personal attention he will give his company's feeder routes if certificated.

## TWA Crash Hearing Scheduled Nov. 20

Public hearings are scheduled for Nov. 20 at Los Angeles to investigate the accident to a TWA airliner which occurred in flight near Hanford, Calif., early this month. Preliminary on-the-scene investigation is understood to have developed information which may permit assigning a specific cause to the unusual accident.

Civil Aeronautics Board officials recalled that the only other recorded instance of a transport plane disintegrating in mid-air occurred at McCool, Ind., Oct. 10, 1933, when a plane operated by National Air Transport lost its entire tail section in flight, apparently due to a violent explosion.

Witnesses of the TWA accident reported that shortly after an explosion, fragments of the aircraft and mail pouches landed over a wide area. The plane is reported to have been flying at 10,000 feet, with a 3,000 foot ceiling. A routine radio check made by the pilot shortly before the occurrence did

not report any unusual conditions or mechanical difficulties.

The plane was being flown in scheduled service between San Francisco and Los Angeles.

## RAFTC Pacific Line

A trans-Pacific military airline which is seen as a possible forerunner of post-war commercial operations, has been opened by the Royal Air Force Transport Command between Montreal, Canada, and Sydney, Australia. The route was surveyed by the RAF in 1941 and for a time was used to ferry aircraft to Australia prior to U. S. entry into the war.

► **Flown By "Liberator"**—The first trip over the 11,520 mile route was flown by a *Liberator* bomber carrying 20 passengers and required five days, chiefly because of long stopovers. Intermediate points included California, Honolulu, Canton Islands, Fiji Islands and Auckland, N. Z. Two weekly round trips carrying passengers, mail and express are scheduled.

For the present, the route will serve the increasing demands of the Empire's armed forces as British participation in the Pacific war expands. It is believed to be a direct result of the recent Empire Air Conference in Montreal.

## CAB ACTION

● Procedural steps for the Pacific case, as outlined in a letter issued by Examiner Ross I. Newmann, indicate that the various applications will be heard in regional groups. These will be U. S.-Alaska, North Pacific, Central Pacific, and Australia. The division has been made in order that applicants interested in only one portion of the case need not be present at all sessions. Applications now consolidated in the case include those of Alaska Airlines; American President Lines, Ltd., (steamship operator); Chicago and Southern Air Lines; Francis L. Duncan; Hawaiian Airlines, Ltd.; Northwest Airlines; Pan American Airways; PCA; Prairie Airways, Inc.; TWA; U. N. Airships, Inc.; United Air Lines; Western Air Lines; and Woodley Airways. Wien Alaska Airlines, Inc., is an intervener. The case will be heard beginning Feb. 1.

● The Board approved Eastern Air Lines' request to operate two additional New York-Miami round trips daily. The new schedules were added, with temporary approval, Oct. 20, making a total of eight daily round trips scheduled by the carrier. For military reasons, the number of stops Eastern is permitted to make at Savannah, Ga., and Charleston, S. C., is limited to the number scheduled as of Sept. 15, 1944.

● The Board rescinded its suspension order on service to Idaho Falls, Idaho, over Western Air Lines' AM 19. The carrier was scheduled to resume service Nov. 15 with one northbound and one southbound flight daily.

● A motion of Public Counsel that Northeast Airlines' application for consolidation of its route system be included in the New England Case has been denied by the Board.

● The Board's Alaska office was scheduled last week to hear the applications of Alaska Coastal Airlines for new routes between Juneau and Skagway via Berner's Bay and Haines, and between Juneau and Gustavus, Alaska. Both applications had been consolidated for hearing. Scheduled for Nov. 20 was a hearing on applications of Ellis Air Transport and Ketchikan Air Service for additional service in southeastern Alaska. George S. Schwamm, doing business as the Petersburg Air Service, was authorized to intervene in the latter proceeding.

## SHORTLINES

► Pan American Airways claims a world's record number of passengers transported on one of its clipper on a flight between Fisherman's Lake, Liberia, and Natal, Brazil, early this month. The plane carried 52 passengers, 12 crew members and more than 1800 pounds of freight on the 1870 mile crossing. Interesting as an indication of directional traffic flow was the fact that 24 of the passengers embarked at Lisbon bound for Brazil. The plane was making a scheduled flight between the British Isles and New York via the winter route.

► Western Air Lines reports a 78.41 percent increase in revenue passenger miles flown for September over the same month in 1943. This year's mileage totaled 5,653,649 compared with 3,168,926 for September 1943.

► Pan American Airways is circulating a new promotional booklet entitled "Let's Get Better Acquainted," containing statistical and cultural information on Latin America. Aimed at the general public as well as business men and shippers, the booklet includes data on areas, populations, history, climate, terrain, commercial prospects, and general travel information in the Latin American countries.

► Netherlands Air Transport Com-

mand has disclosed that it is operating scheduled service over a 1500 mile route in the Pacific islands, ferrying mail, freight and passengers. From its home base at Hollandia, New Guinea, the Command operates to Morotai, Biak, Wakde, Sanzapor and Numfoor, averaging nine hours daily in the air.

## CAB SCHEDULE

Nov. 20. Hearing at Ketchikan, Alaska, on application of Ellis Air Transport and Ketchikan Air Service for additional service in southeastern Alaska. (Docket 876 et al.). Postponed from Sept. 25.

Nov. 23. Deadline for rebuttal exhibits in New England feeder case. (Docket 399 et al.). Postponed from Nov. 13.

Nov. 24. Prehearing conference in National Airlines' reopened rate case for AM 31 and AM 39. (Docket 824).

Nov. 27. Hearing date for the Florida case before Examiner William F. Cusick. (Docket 489 et al.).

Dec. 4. Preliminary briefs due in Latin-American proceeding. (Docket 525 et al.).

Dec. 4. Hearing in the New England feeder case (Docket 390 et al.) at Washington, D. C.

Dec. 10. Exhibits due in South Atlantic route case. (Docket 1171 et al.). Postponed from Oct. 16.

Dec. 18. Briefs in the North Atlantic proceeding due (Docket 855 et al.).

Jan. 16, 1945. Hearing date for South Atlantic case. Postponed from Nov. 1. (Docket 1171 et al.).

Jan. 8. Tentative hearing date Texas-Oklahoma case (Docket 337 et al.).

Jan. 12. Deadline for exhibits in the Pacific route proceeding. (Docket 547 et al.) Postponed from Dec. 23.

Jan. 26. Rebuttal exhibits in Pacific case due. (Docket 547 et al.).

Feb. 1. Hearing in the Pacific cases before Examiner Ross I. Newmann. (Docket 547 et al.).

Feb. 6. Tentative hearing date for North Central case (Docket 415 et al.).



**MERCURY AIRCRAFT**  
The Cradle of Aviation  
HAMMONDSPORT, NEW YORK

Mercury skill, developed by long experience in fabricating sheet aluminum, has made this company a favored source of supply for auxiliary fuel tanks, both for bomb bay and exterior mounting.

**MERCURY AIRCRAFT INC.**  
AIRCRAFT SURFACES • FUEL TANKS  
PARTS • ACCESSORIES  
AT The Cradle of Aviation  
HAMMONDSPORT • NEW YORK



**Tel-air**  
"MEANS ACCURACY"

**ACCURACY THAT NEVER FAILS**

The kind of accuracy that is found in every Tel-air aircraft component part—and in every one of the small precision timing fuses we are making for aerial bombs. . . .

The same kind of accuracy—in both plane and bombs—that enables our flying fortresses to accomplish the long and exacting missions that are so effectively destroying our foes.

**Tel-air Engineering and Fabrication are Available for your Post-war Products.**

Now is the time—whether for uniform precision component parts or for complete assemblies—to investigate our complete and expanded facilities—and our experience in fabricating and tooling the toughest steels and the newest alloys.

Your inquiries will have immediate attention.

In the Air it's **The TELEOPTIC Company** On the Highway it's **Teleoptic**  
720 MARQUETTE ST. RACINE, WISCONSIN







# ***Designed for*** ***SAFETY***

White-Rodgers temperature modulation equipment and servo actuators provide the safety of complete automatic control of:

**CABIN TEMPERATURE**

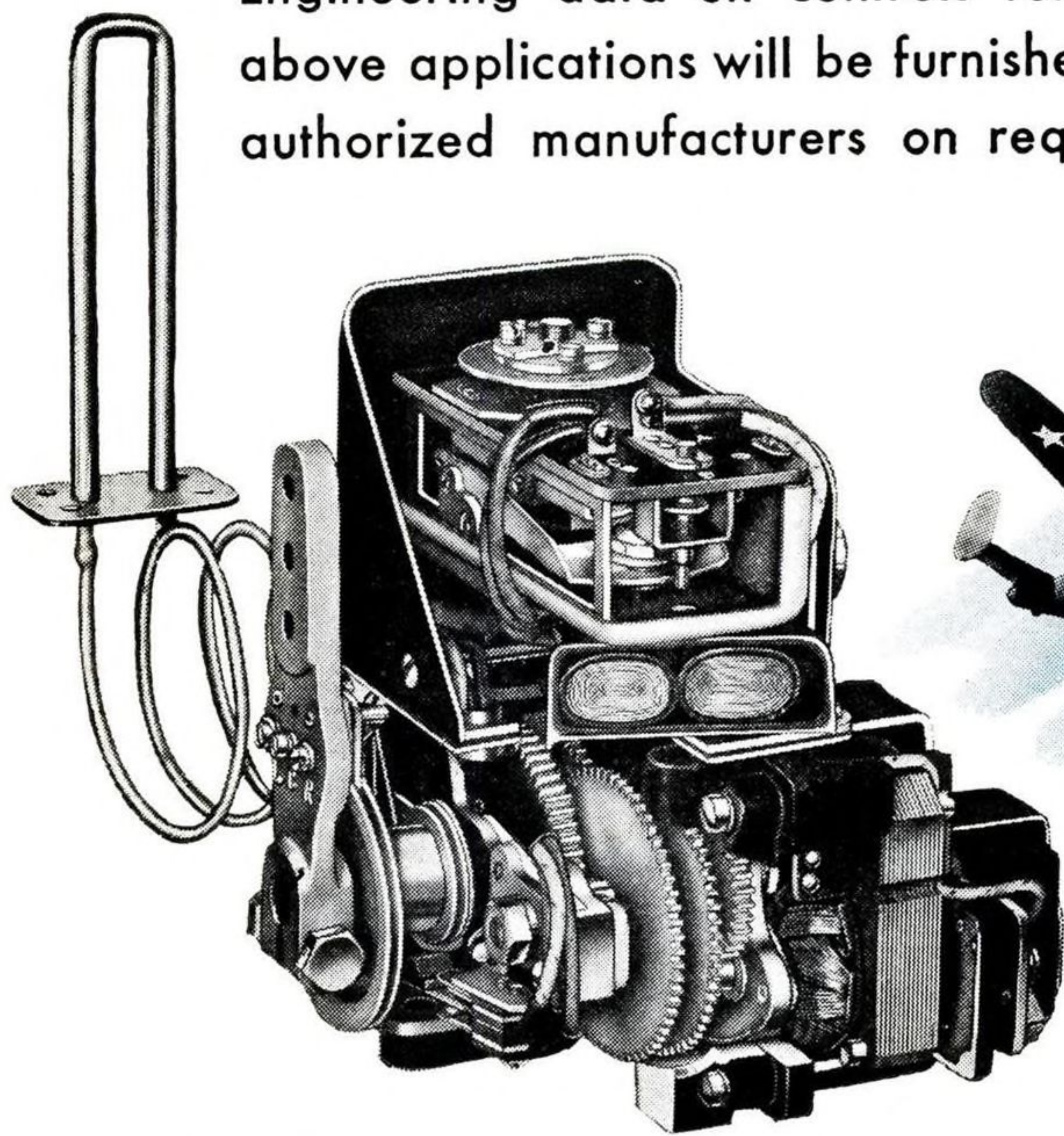
**ANTI-ICE TEMPERATURE**

**CARBURETOR AIR TEMPERATURE**

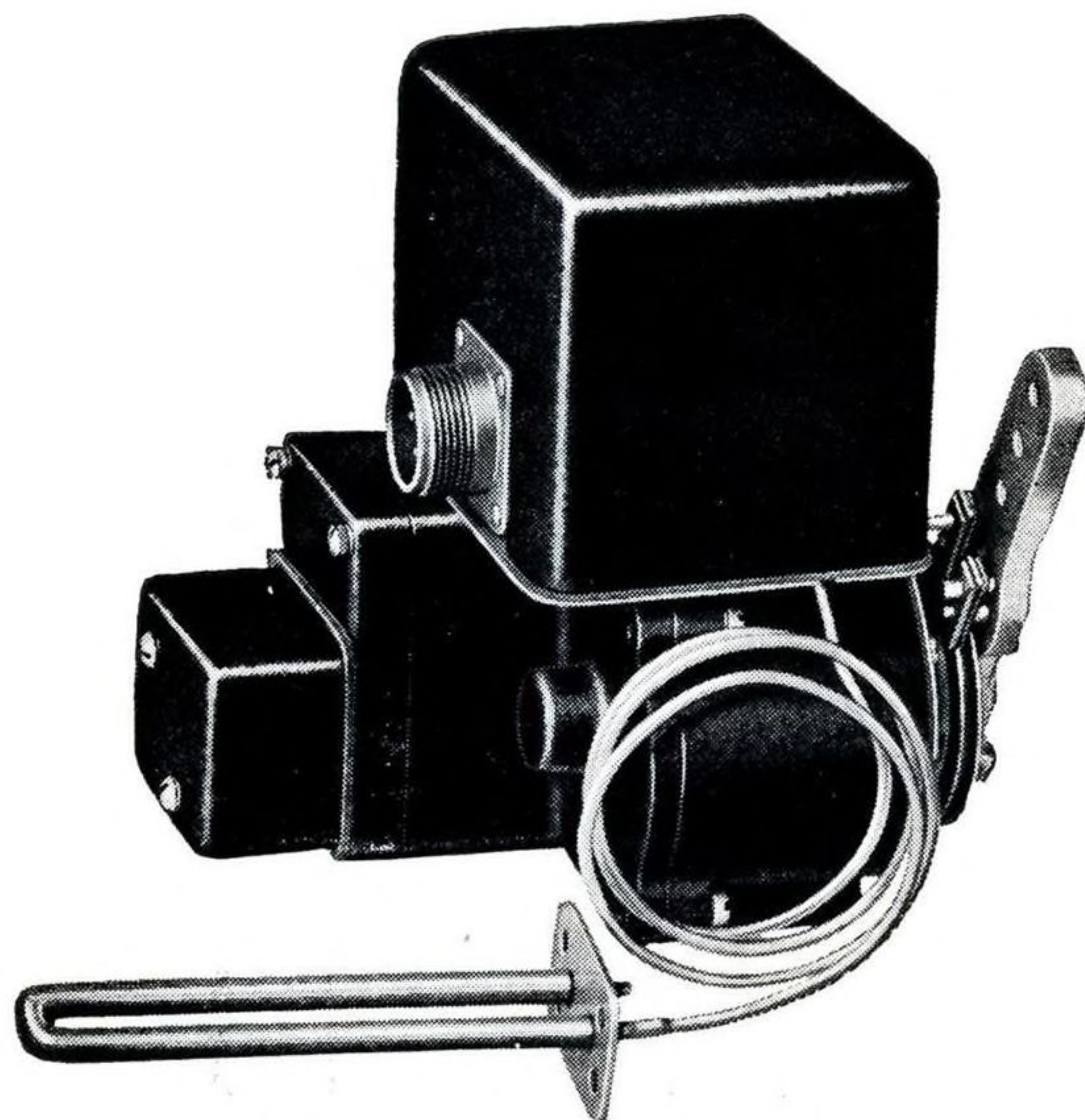
**CARBURETOR MIXTURE**

**CARBURETOR THROTTLE**

Engineering data on controls for the above applications will be furnished to authorized manufacturers on request.



Cutaway view of temperature controlled actuator showing compact arrangement of motor and gear case assembly.



Compact temperature controlled actuator especially adapted for anti-ice applications. Arm rotation adjustable within range of 30 to 120 degrees. Torque output up to 75 inch-pounds.



**WHITE-RODGERS  
ELECTRIC CO.**

**SAINT LOUIS**

