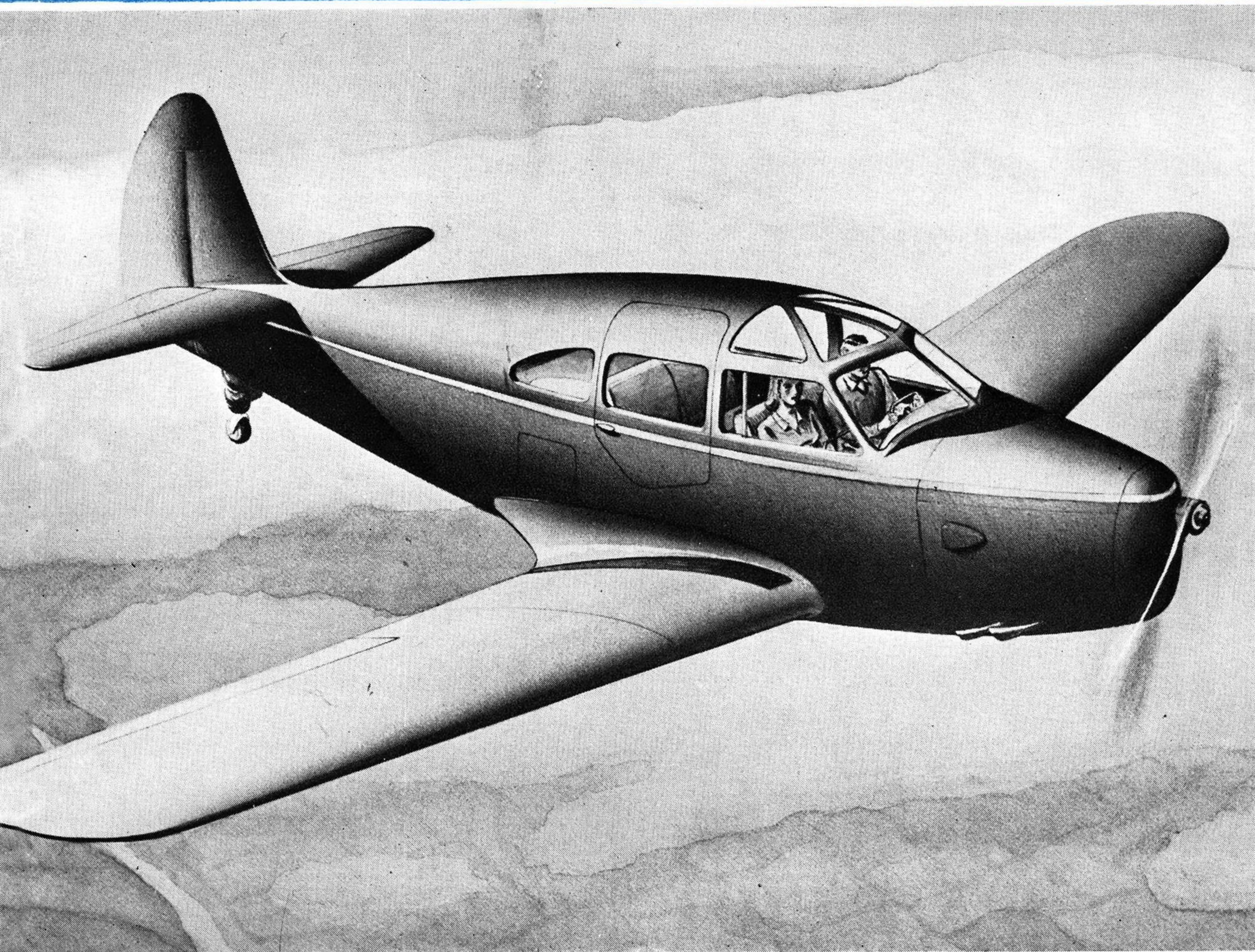


# Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

DECEMBER 11, 1944



**New Fairchild Post-war Bid:** *Already a strong contender in the cargo plane field with the C-82 Packet, Fairchild is building a prototype of the M-84 personal plane and has set up a sales organization to market it. Four-place, it follows the popular trend toward low-wing, high-visibility planes for private flyers. It will be in the medium price range.*

## **Groundwork for World CAA Laid at Chicago Conference**

Main objectives of international aviation parley accomplished, despite inability to attain full agreement for permanent convention.....Page 7

## **Industry's Progress Reflected at NATA—ADMA Meets**

More than 1,000 attend conferences, hundreds with personal planes; over 100 exhibition booths in operation.....Page 9

## **New Globe Swift May be Flight-Tested Next Month**

Experiments continuing on earlier two-place craft, with a third model—a four-place “family plane”—reported in mock-up.....Page 23

## **Eastern Recommended for Great Lakes-Florida Link**

Examiner asks 595 new route miles from Columbia, S. C., to Detroit; urges Board to extend Delta system from Cincinnati to Chicago.....Page 50

## **Constellation's Five-Year Development Is Described**

Results of exhaustive design tests will find extensive use in larger post-war aircraft, C. L. Johnson tells Institute's Los Angeles meeting.....Page 43

## **Fairchild Builds New 4-Place Prototype for Post-War**

Company setting up distributing organization to handle sales of new M-84, low-wing monoplane, for medium-price field.....Page 10





# CHUTING BULLETS

into firing position

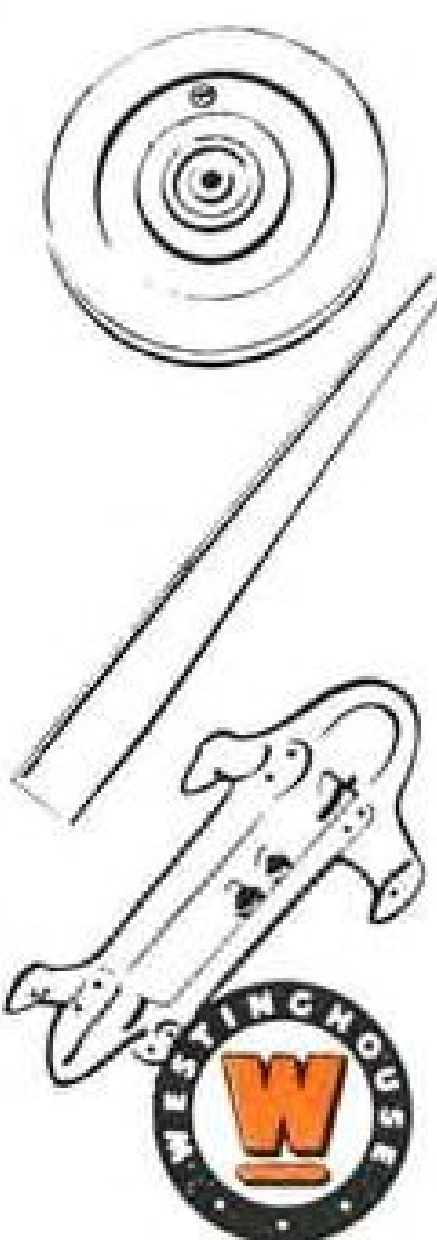
with strong, lightweight

**MICARTA**

**PULLEYS** of Micarta extend life of both pulley and cable. Millions are now in use in Allied aircraft.

**ANTENNA MASTS** of Micarta hold the antenna taut without yield or wobble . . . withstand wide extremes of pressure and temperature.

**BOMB RACKS** have been successfully molded of Micarta . . . furnish an excellent example of Micarta's strength and the skill of Westinghouse engineers in intricate molding assignments.



Bullets for a plane's chattering wing-guns are stored in long, looping belts. To guide each bullet accurately into firing position, plane makers are now using chutes formed of **MICARTA**—"444", the light, strong sheet plastic. Here's why:

**MICARTA** weighs approximately one-half as much as aluminum of equal strength—helps eliminate superfluous weight in the plane.

**MICARTA** rates high in flexural, compressive and impact strength. In high altitude flying, as temperatures decrease, Micarta acquires added tensile strength.

**MICARTA** "444" is easily and quickly produced with inexpensive wooden molds. Sheets are subjected to heat and pressure, and formed into strong, intricate shapes.

This new Micarta "444" was originally developed for the aircraft industry and is now accepted for use as trim tab fairing, accumulator covers, aviator's chart cases, fuselage tailwheel housing, wing-gun ejection chutes. For further information, and a copy of the New Micarta Data book (B-3184-A) write Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., Dept. 7-N.

J-06346

## THE AVIATION NEWS

# Washington Observer

**STATE DEPARTMENT AVIATION**—Nomination of W. L. Clayton as Assistant Secretary of State responsible for aviation among other matters ran into some Senate opposition, although not from an aviation point of view. Generally overlooked in comment on the State Department reorganization insofar as Clayton is concerned was the note that he would report directly to the President. This means, of course, that the White House will direct our international aviation policy.

**BERLE'S RESIGNATION**—Clayton succeeds Adolf A. Berle, Jr., whose resignation was announced in Washington before the completion of the Chicago conference—a procedure that caused some eyebrow raising in the Capital. It was generally agreed in Washington that Berle did a diplomatic job at Chicago and that he was thoroughly cognizant of the widespread implications and economic reverberations coincident with the development of aviation. While some of his views have been criticized, they have been widely known. Although little mentioned, Clayton has had considerable experience in international aviation in previous government posts and almost unmatched experience in international trade as a private business man.

**ASPIRIN DEPARTMENT**—Releases received recently from Wright Field and from the War Department in Washington, both of the same date, concerned the Norden bombsight. From Wright Field—"When the plane has reached the correct point of release as calculated by the computer, the bombsight automatically releases the bombs." From the War Department—"When

the angle of closure reaches the computed dropping angle he (the bombardier) presses an electrical release button which drops the bombs singly or in train." How's that again?

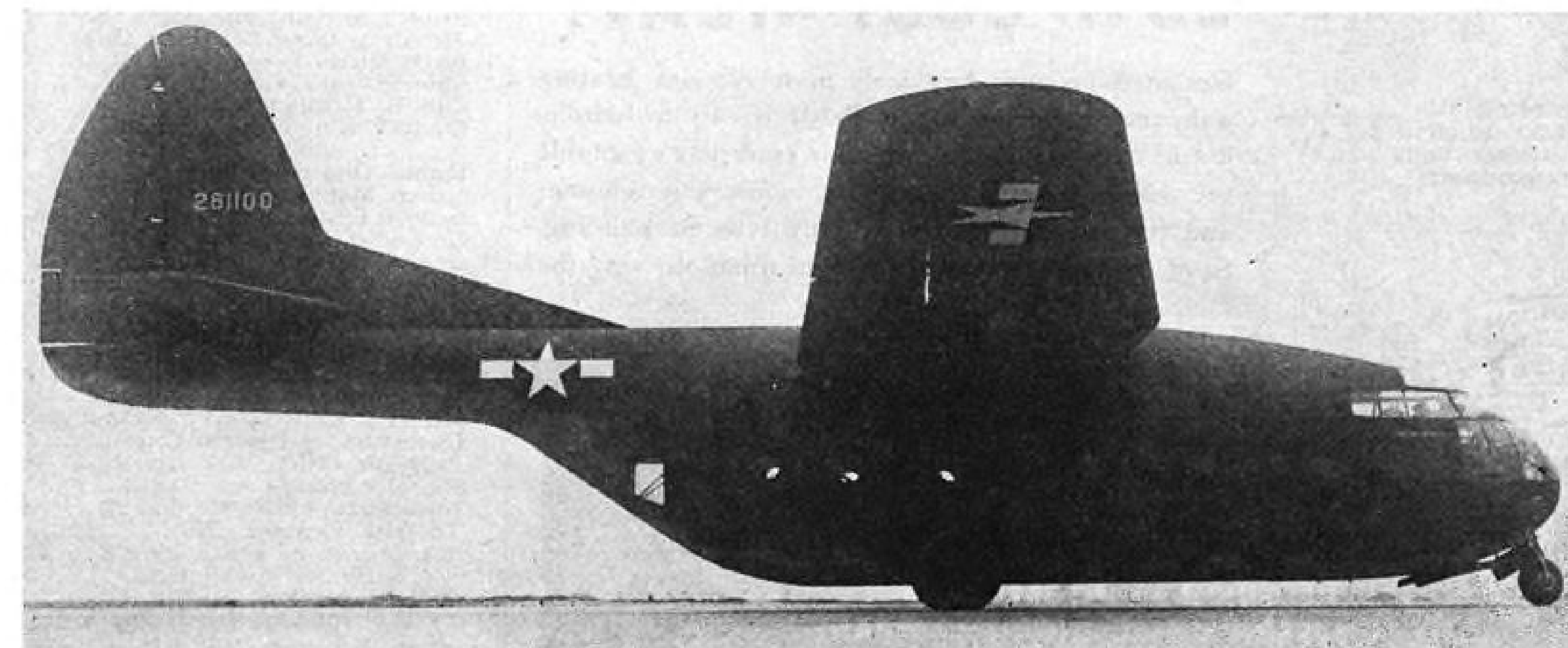
**SURPLUS EQUIPMENT** — Aviation trade school circles are working on a proposal that schools be permitted to acquire surplus engines, airframes and equipment on a low rental basis for training use only. Public schools will get equipment on low-cost or no-cost basis and aviation schools feel they also should get consideration, although they realize it will not be possible for them to get it on the same terms.

**RECONVERSION**—Manufacturers of transport planes are expected to use their modification centers overseas for reconversion of transport and other types of planes sold abroad as surplus. Washington officials met cold reception at first, now say builder participation is looked upon more favorably.

**PLANE NEEDS**—Washington does not want used transports to be turned over to foreign airlines unless they are in top-notch shape and feel it is to the advantage of American manufacturers to be in touch with the people who will use the planes, both to uphold American prestige and to give them a sales "in" for future business.

**COMBAT TYPES**—First equipment for new air forces of liberated nations probably will come from United States in one way or another, and here, too, Washington circles want to make

Latest view of Laister-Kauffmann Aircraft's CG-10A glider







IN THE *Air* —

.. ON THE *Ground*

## GUIBERSON HEATS THE COLD SPOTS

• Whether it's a B-17 coming over the target at 30,000 feet with the outside temperature at 60° below or a flight office or hangar shop on the airport of Middletown America in the dead of winter, Guiberson heaters get the job done more efficiently. The system that supplies and distributes the heat that warms the hands of the gunners in many of America's Flying Fortresses throughout the world is Guiberson built. The same skill that produces the Guiberson Aircraft Heating System is now producing the Guiberson Model R-101 Oil Heating Unit for civilian use in limited quantities.

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## AVIATION NEWS

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sure that planes are in first class condition. France, Belgium, the Netherlands, Denmark, Norway, Czecho-Slovakia, Greece will have to be equipped to maintain some equilibrium. There is even some talk of helping rebuild Spanish air force, but probably not while Franco is in the saddle.

\*\*\*

PLANE RETURNS—Fact that domestic air-  
lines received all of the first batch of C-53's and  
Lodestars available does not mean that this  
will be repeated in subsequent allocations. For-  
eign airlines are going to get planes they des-  
perately need where they will help in the war.

\*

CONFERENCE RESULTS—State Department  
circles are inclined, however, to play available  
transports closer to the chest because of the  
sparse achievements of the Chicago conference.  
It became obvious at the conference, and in  
other negotiations, that a hard-boiled attitude  
is going to be more necessary than ever in deal-  
ing with countries outside the Western Hemis-  
phere. As a result, domestic airlines may bene-  
fit greatly. You don't give blue chips to a man  
who is dealing from below the table.

\*\*\*

WAR PRODUCTION URGENCY — Signifi-  
cance of a recent statement designed to clarify  
current policy and re-emphasize urgency of  
war production and the fact that reconversion  
must not interfere with war production was  
overlooked generally. It was the first time in  
the war that a document on an important matter  
was signed by the four leading war agencies—  
WPB regional directors; War Manpower Com-  
mission regional state and area directors; Army

\*\*\*

## Industry Observer

►If the new CAA airport pro-  
gram is carried out as pro-  
jected, truck and feeder  
airlines would have access to  
traffic potentials several  
times the present market. A  
total of 1708 airports would  
be suitable for commercial  
truck and feeder airliners comparing with 286  
ports now designated as certificated air carrier  
stops. A total of 169 of these 286 bases would be  
improved, with 11 replacements and one supple-  
mental field contemplated. Of 678 points listed in  
applications for certificates, CAA proposes im-  
provements at 478 fields. In addition, places desig-  
nated by CAA as "logical ultimate feeder stops"  
number 849, of which 453 would be improved.  
New airports would be built at 396 "logical ulti-  
mate feeder stops."  
►Air Transport Command now has close to 100  
four-engined transports in regular operation over  
the Atlantic between here and Europe and the  
Far East, and probably 20 or 30 more will be add-  
ed to this fleet by April. All of these are Douglas

C-54s. Plane and ton miles in 1944 probably will  
be five times the 1943 figures.  
►Weather has failed to interfere seriously with  
the ATC North Atlantic operations conducted by  
the U. S. airlines under contract and by regular  
ATC pilots. From last January to March there  
were 846 departures from the U. S., three of  
which were lost. During the same period 859  
combat planes were ferried overseas in this area,  
and 15 were lost. The large difference is charged  
up to difference in training between transport  
and combat pilots.  
►Stinson's newly announced *Voyager* 125 may be  
joined by a two-place ship after the war but no  
attempt will be made to compete in price with  
smaller two-place craft. Like most other light-  
plane firms, Stinson is giving close study to a de-  
sign for twin-boom, pusher model.  
►Latest employment figures from several leading  
airlines show American with 7,614, Braniff with  
1,181, Continental with 424, excluding modification  
plant, Delta with 833, Mid-Continent with 374,  
TWA with 4,372, United with 4,851 and Western  
with 857.

## Washington Observer

\*\*\*

PRICING OF TRANSPORTS—This has been  
the biggest headache of Surplus Property's Avia-  
tion Division. Formula was complicated, but  
was chosen as the best possible under the cir-  
cumstances. It probably will not stand up many  
months because of the rapidly changing picture.  
Barring unforeseen developments, the nation  
will be up to its ears in transports by the middle  
of next year—but there won't be as many as the  
alarmists have been shouting about. Talk of  
20,000 is nonsense. Only that many have been  
built in all in four years, and many of these may  
automatically be written off as uneconomical  
for conversion or operation. Others are war-  
weary, many have crashed, hundreds will be  
needed in Europe for a long time to come, thou-  
sands will be in use in the Pacific, although the  
great need out there is for long-range equip-  
ment.

\*\*\*

TECHNOLOGICAL BANKRUPTCY—It will  
take years for liberated nations to rebuild tech-  
nological resources to enable them to keep up  
with air progress, and the American and British  
markets will be the chief source of planes. Pay-  
ment is something else again—probably modified  
lend-lease will be necessary. The point is that,  
whether this country can get paid or not, the  
countries cannot be left absolutely helpless in  
the air. It will be a situation requiring the  
highest diplomacy.





# The Birdmen's Perch

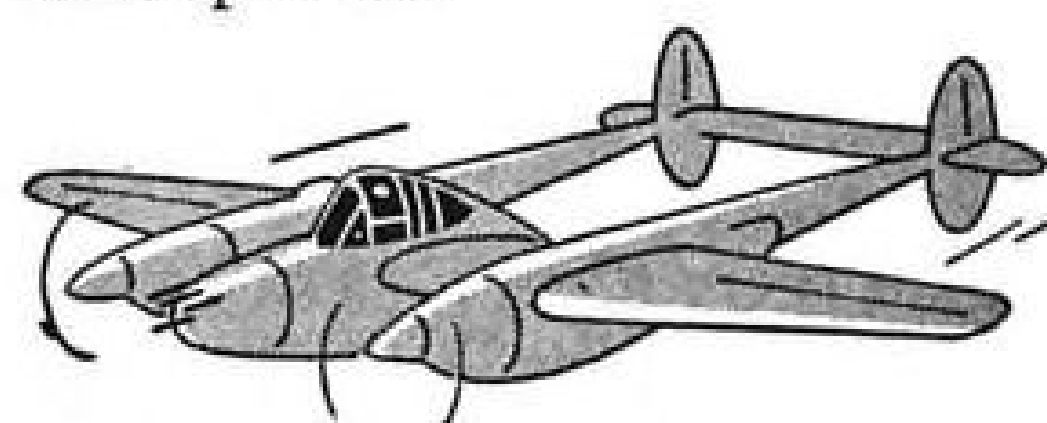
By Major Al Williams, ALIAS, "TATTERED WING TIPS"  
Gulf Aviation Products Manager, Gulf Bldg., Pittsburgh 30, Pa.

Merry Christmas  
from Major Al Williams,  
Flutter, and the  
Gulphawk



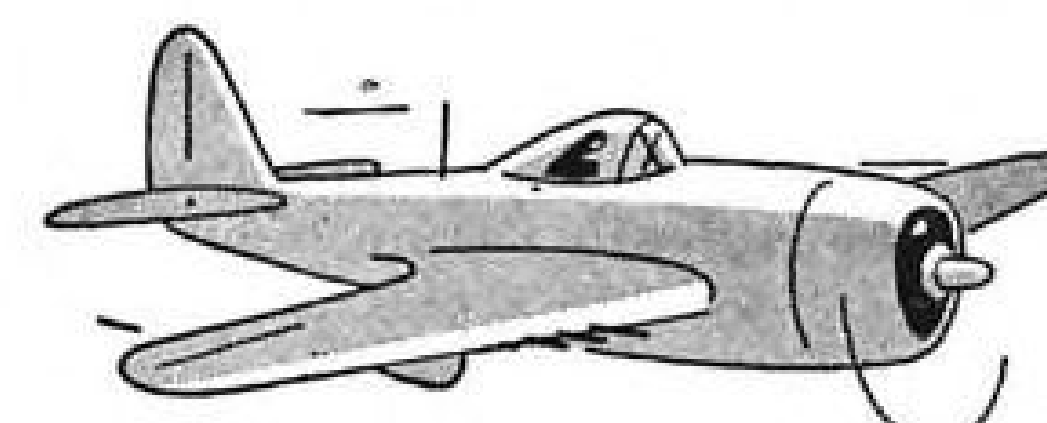
KEEP YOUR EYE PEELED FOR "LITTLE KNOWN FACTS ABOUT WELL KNOWN PLANES." A REGULAR DEPT. IN EVERY ISSUE

And a special Merry Christmas to three new Perch Pilots (br) for the Little Known Facts About Well Known Planes below. Your Commissions are in the mail, boys, and only four more Little Known Facts will get you promoted to Senior Perch Pilot! Send your "Facts" to us at the address up above.



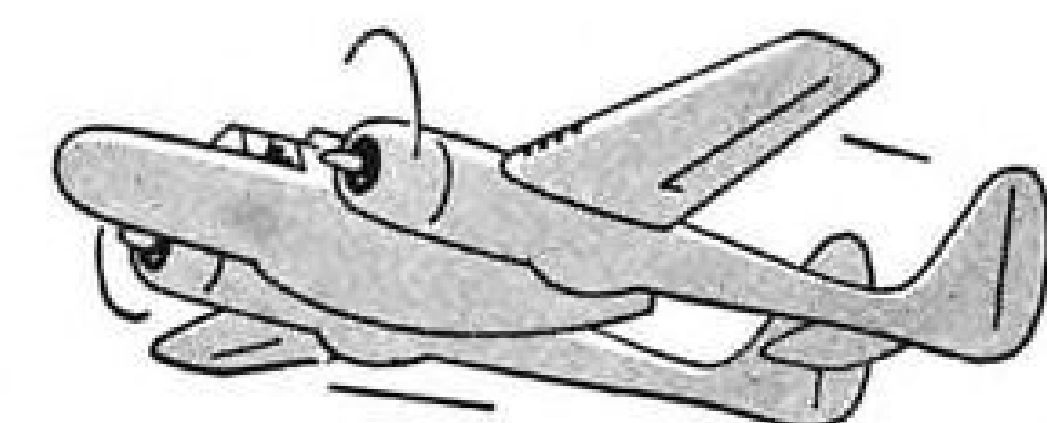
The P-38 J carries a bigger bomb-load than a "Fort"—5200 lbs.!

from JOHN E. SCOVILL, Perch Pilot (br), Box 24, Conneaut Lake, Pa.



The P-47 has an in-line engine. Does too! The 47 was originally given an in-line—the P-47 B was the first to have a radial!

from PVT. EUGENE M. PRZYBYLA, Perch Pilot (br), A. S. N. 16081134, 44-40 H. A. A. F. Bks. #203, Harlingen, Texas.



Plans have already been made to convert the P-61 into a postwar, cargo-passenger job with a new fuselage.

from KARL VOLLMER, Perch Pilot (br) 228 East 71st Street, New York City.

Gulf Oil Corporation and Gulf Refining Company...makers of



**GULF AVIATION PRODUCTS**

OIL IS AMMUNITION—USE IT WISELY

VOLUME 2 • NUMBER 20

**Aviation News**  
McGraw-Hill Publishing Co., Inc.

December 11, 1944

## Basis for World Agreement At Chicago Civil Air Conference

Main objectives of international aviation parley accomplished, despite inability to attain full agreement for permanent convention; interim council set up.

By MERLIN MICKEL

Early appraisal of the accomplishments of the International Civil Aviation Conference, which ended last week at Chicago, indicated that the five-week meeting did most of the things for which it was called. It explored the possibilities of future international agreement on air transport and set up an interim organization to continue its work pending a final treaty.

Observers who termed the meeting success or failure were using relative terms. It was able to go further than was thought possible at the outset, yet was unable, despite long and close discussion, to attain the full agreement for a permanent convention that appeared at least a remote possibility at times during the conference.

► **Provisional Group Set Up**—The provisional international organization, which will have headquarters at Montreal, is established until the permanent convention becomes effective, in no event longer than three years. The interim council will be composed of 21 states, and among other things will establish interim committees on air transport, air navigation and international convention on civil aviation.

Member states elected to the council are in three categories: Those of chief importance in air transport; those not otherwise included which make the largest contribution to provision of facilities for international civil air navigation, and those not otherwise included whose election will insure that all major geographical areas of the world are represented.

In the first category one blank was left, presumably for Russia. Others in this group are the U. S., United Kingdom, France, Netherlands, Brazil, Mexico and Belgium.

In the second group: Canada, Cuba, Norway, Iraq, and Peru. In the third: China, Australia, Czechoslovakia, Egypt, Turkey, El Salvador, Colombia and Chile.

At the last session of the conference Thursday morning, Norway offered to resign its interim council seat in favor of India. Cuba made a counter offer that she resign, since Norway's resignation would reduce the European representation to five. This counter offer was accepted, though it reduced the Latin American representatives on the council to six.

► **Seat to Be Decided**—Canada and France have applied to become the seat of the permanent international civil aviation organization. This is to be determined, however, at the last meeting of the interim body before it goes out of existence, when the permanent convention takes effect.

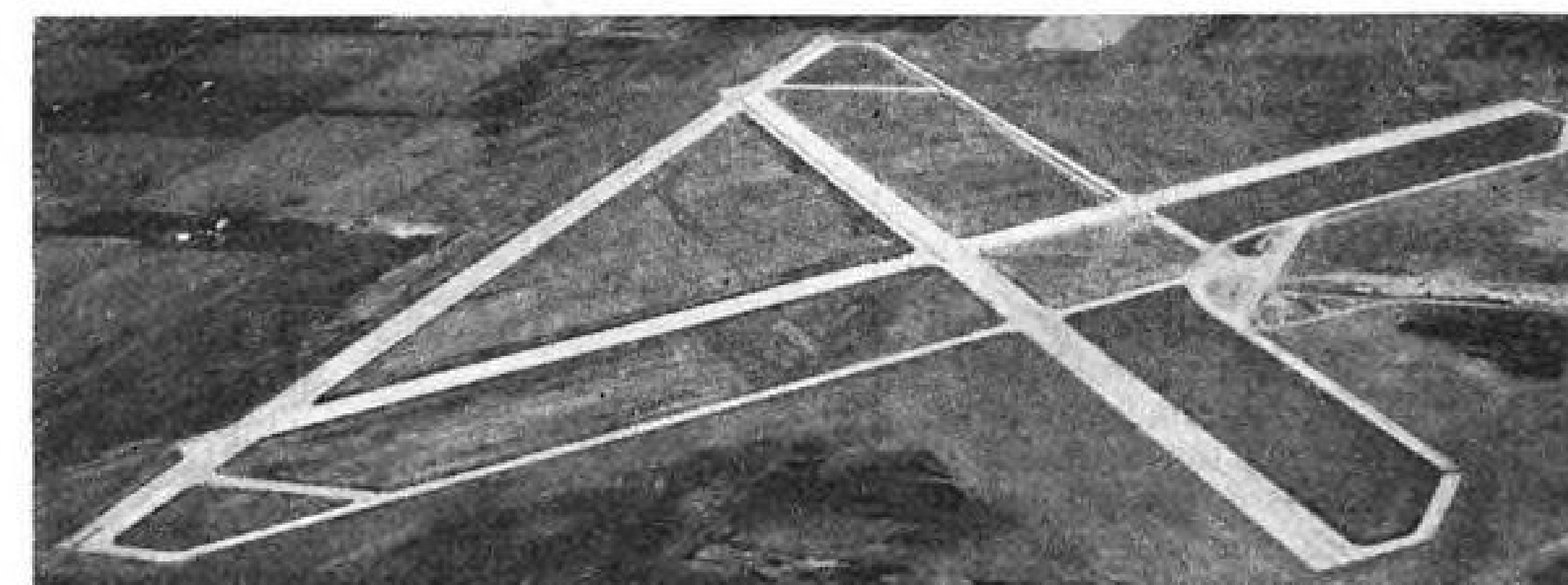
This convention, or treaty, which of course will be subject to ratification by the governments of the

signatory states, is a document of 96 articles, notable for the fact that, despite its length, it omits clauses to govern scheduled air transport, due to the failure of the U. S. and United Kingdom to resolve their differences.

The issues over extent of freedom of the air, which sent the U. S. and Britain into a stalemate, will continue to figure in international discussions; they were not allowed to die. But the British were successful in keeping the freedoms issue in a separate document, and it was on their motion that the interim body takes for study and recommendation all the unfinished business bearing on the convention. The U. S. won its major point, on the other hand, in the main convention, which would set up an international organization with advisory capacities and without broad political and economic powers.

► **Freedom of the Air**—To make those omitted clauses available, two agreements on freedom of the air were submitted. One embodied two freedoms, the rights of free transit and non-traffic landing. The other added three freedoms to these, granting mutual right to commercial entry and intermediate traffic pickup.

Thus there emerged from the conference an interim organization, a proposed permanent convention which would take effect



### UNIVERSITY OF ILLINOIS AIRPORT:

This exclusive view of the airport six miles from the Illinois Union Building on the campus is the center of the University's aeronautical laboratory. It is designed to implement a comprehensive program of aviation education and research and to provide commercial and private landing facilities for the promotion of air transport and national defense. It has an area of 762 acres, three runways 5,300 feet long, 150 feet wide paved with concrete; taxiways 50 feet wide with total length of 12,000 feet. Construction agency was Civil Aeronautics Administration.



30 days after ratification by 26 states, and as separate expressions, the two agreements on freedom of the air, one more limited than the other.

► **Route Form Adopted**—It adopted a standard form of route agreement, recommended for use in bilateral negotiations between countries unable to sign the "freedom" agreements. It also referred to the interim council matters in which it could not reach agreement; recommended early consideration of an international conference on private international air law, looking to a convention on transfer of title to aircraft, and proposed early resumption of sessions suspended by the war of a committee (CITEJA) created at the first International Conference on Private Air Law at Paris in 1925.

Adolf A. Berle, Jr., president of

### Plan World ATA

Thirty-four representatives from 21 nations were present at a meeting of international airline operators held last week at Chicago to discuss formation of a world-wide Air Transport Association.

Held Thursday at Hotel Stevens, headquarters for the International Civil Aviation Conference, the meeting resulted in appointment of an eight-man committee to draft by-laws. The committee will start work this week at Hotel Carlton in Washington.

On it are John C. Cooper, vice-president of Pan American Airways; John Slater of American Export Airlines; Lieut. Col. Ferdinand Flocon, Chief of the Air Transport Section of the French Air Mission in London; Henry K. Gorecki, chairman of the Air Communications Committee of the Polish State Air Council and former managing director of "Lot" Air Lines; Maj. J. R. McCrindle of BOAC; Per Adolf Norlin, general manager of Swedish Air Lines; Col. Pedro A. Chapa, chairman of the Mexican delegation to the conference; and Luis Machado, technical adviser to the Cuban delegation.

Advisers will be Dr. J. Goodheis, secretary general of International Air Traffic Association; F. W. Farey-Jones of the Conference of International Air Traffic Organizations and Edgar S. Gorrell, president of Air Transport Association and Albert Roper, secretary-general, ICAN.

the conference and head of the U. S. delegation, summed up the meeting's work: "If we have not achieved our dreams, at least it is the beginning of the end of the anarchy that has hitherto prevailed." Again, he said the conference had advanced international

aviation 20 years. President Roosevelt wired "heartily congratulations . . . the conclusions reached mark an important step toward the use of air transport for the benefit of all mankind."

## 20 Douglas C-53's Allocated To Domestic Airlines by SPB

Additional planes expected to be available before end of year; about 30 more to be declared surplus and turned over this month including some Lockheed *Lodestars*.

By WILLIAM G. KEY

Twenty Douglas C-53's were allocated to domestic airlines by the Aviation Division of the Surplus Property Board last week. Additional planes will be available before the first of the year, some of which will be assigned foreign airlines. Probably not more than 50 will be declared surplus and allocated this month.

The allocations came less than one week after the planes were turned over to SPB. The planes will be turned over to the airlines to which they have been allocated almost immediately, and without waiting for completion of the details of sale.

► **Allocations** — Airlines obtaining planes were: American Airlines, five; United Air Lines, three; two each to Pan American, Eastern, Northwest and TWA; one each to Pan American-Grace, PCA, Braniff, and Western Air Lines.

At least part of the group in the next allocation will be Lockheed *Lodestars*.

The Aviation Division, headed by Lieut. Col. William B. Harding, also disclosed that type prices have been set for the various transports, with the C-53 type price being \$100,000 and the *Lodestar* price being \$68,000. Other prices are: \$80,000 for the C-47; \$40,000 for the C-39, which is the DC-2; \$56,000 for the Lockheed C-60, which is the *Lodestar*; \$40,000 for the Lockheed AT-18, which is the Lockheed *Hudson*; \$48,000 for the Beechcraft UC-45 and \$12,000 for the Cessna UC-78. The Beech is not expected to be available during the European War, and the Lockheed *Hudson* and the Cessna UC-78 have not been certified for commercial use by the CAA. The *Hudson* is now undergoing tests and necessary modifications are being engineered for the Cessna.

► **Cost to Airlines**—It is anticipated that net cost to the airlines of the C-53 will be less than \$70,000, of the C-47, about \$50,000. Type price is the price for the planes in good operating condition and equipped, except for radio and automatic pilot, for commercial passenger service. Net prices will reflect allowances for conversion and repair, with the conversion allowance running from \$20,000 upward.

### Duggan Elected

Thomas A. Duggan, Thompson Products, Inc., was elected president of the Aviation Distributors and Manufacturers Association at St. Louis last week, succeeding Ray Snyder, Snyder Aircraft Corp., Chicago.

Other officers: R. V. Trader, of Bob Trader Aero Supply, Pittsburgh, and Richard N. Bomberger, of Sensenich Brothers, Lititz, Penna., vice-presidents; George A. Fernley, Philadelphia, reelected secretary-treasurer.

Snyder was named to the advisory board. New ADMA directors include: H. P. Ladds, National Screw & Manufacturing Co., Cleveland; T. G. Tynan, Electric Storage Battery Co., Philadelphia; George Wilson, Glidden Co., Chicago; R. D. Hicks, Continental Motors Corp., Muskegon, Mich.; Sydney Nesbitt, Lear Avia, Inc., New York; R. B. Kenty, Air Associates, Inc., Dallas; L. G. Mason, Aviation Supply Corp., Hapeville, Ga.; G. B. Van Dusen, Van Dusen Aircraft Supplies, Minneapolis; W. F. Scott, Jr., Supply Division, Inc., Robertson, Mo., and Rudy C. Mueller, Omaha Aircraft Co., Omaha, Neb.

## Air Industry's Progress Reflected In NATA, ADMA Meetings

More than 1,000 attend conferences, hundreds with personal planes; over 100 exhibition booths in operation; landing strip demonstrated in St. Louis' Forest Park.

By ALEXANDER MCSURELY

Greatly increased attendance and enlarged displays at the combined National Aviation Trades Association and Aviation Distributors and Manufacturers Association meetings at St. Louis last week offered tangible evidence of the growth and important strides made by non-scheduled aviation within the past year.

Attendance was well over the thousand mark, and there were more than 100 exhibit booths about the Jefferson Hotel, convention headquarters. Demonstration of the airpark of tomorrow by use of a temporary landing strip at Forest Park called public attention to the gathering, while hundreds of personal planes at airports in the St. Louis area indicated that the gathering was truly a "fly-in" meeting.

Significant points from addresses and discussion in the four days of the convention sessions may be summarized as:

Need for immediate planning for adequate post-war air force.

Warning against over-extravagant expectation of an immediate personal aviation boom until more usable personal planes and more landing facilities are ready.

Louder and more insistent demand for more vigorous slashing of federal red tape regulations which most delegates believe is hampering personal aviation.

Expectation that most personal plane buying will be on the installment basis, with an urgent need for more reasonable financing and insurance plans to make possible volume sales on this basis.

Need for better and more complete servicing of aircraft, and need for cleaned-up, attractive airports.

Appeal for courtesy and consideration by instructors in flight training, and elimination of "barking" at students, as in some military flight school practices.

Most significant talk, probably, was that of William A. M. Burden, Assistant Secretary of Commerce, read in his absence by his assistant, George Burgess, and re-

ported more fully elsewhere in this issue of AVIATION NEWS.

Digest of some other speakers' comments:

**Roscoe Turner**, NATA president: Combined efforts of an association in terminating war training contracts have resulted in a healthy, vital condition of non-scheduled aviation now ready for the future. Public awakening of potentials of aviation as personal transportation is both gratifying and disturbing. There are many problems to be solved before our product can gain usefulness permitting acceptance on a large scale.

**Ray Snyder**, ADMA president: The basic idea manufacturers must keep in mind is utility. Training methods should be simplified. Pilot licensing red tape should be done away with. Weather, smoke and haze problems present a real challenge to engineers. When production increases, our prices will come down.

**A. W. Lewis**, WPB Aircraft Division: Essential civilian aviation requirements will be given every consideration by WPB. Schedules for civilian production have been issued to U. S. Propeller Co., Sensenich Brothers, G. B. Lewis Co., Fahlin Manufacturing Co., Flottorp Manufacturing Co., Grumman Aircraft Engineering Corp., and Schweizer Aircraft Corp. Several more cases are under consideration.

**R. V. Trader**, Pittsburgh Progressive airport operator: must use all airport revenue sources, clean up his airport, direct the public to it with signs, install accounting systems, use an advertising slogan, display his merchandise attractively, set sales quotas and show courtesy and consideration in flight training to his customers.

**Leslie Neville**, editor of *Aviation*: The health of our national economy depends upon willingness of the American people to realize the importance of maintaining our superior air power, together with other elements of national defense. Many of our projected post-war

airplane models are the same as those of yesterday and they had better be different tomorrow.

**R. D. Hicks**, Continental Motors: The wholesaler must give from 12 to 24-hour service to dealers in parts and accessories, thus limiting their areas to a radius of 500 miles maximum from their warehouses. They should confine their lines to supplemental, but not competing products.

**George A. Fernley**, ADMA secretary-treasurer: Today the average aviation distributor handles the lines of 70 to 80 manufacturers, carries in stock from 12,000 to 18,000 different items which are sold to 2,500 to 3,000 buyers. When industry expands after the war and new manufacturers enter the field, the situation will be further complicated by requirements from additional parts and equipment.

**James Garfield**, chief, Disposal Surplus Aircraft Materials, DPC: Failure of manufacturers to cooperate with the government in the disposal of surplus parts, plus public demand for early solution of disposal problem, may result in a chaotic state similar to that after World War I. Transportation planes will be sold or leased where possible to operators opening new air routes to territories not now adequately served.

## Wilson Heads ACCA

Eugene E. Wilson, vice-chairman of United Aircraft Corp., was elected president of the Aeronautical Chamber of Commerce of America at its annual meeting in Washington last week, succeeding James P. Murray, Boeing vice-president and Eastern representative.

Succeeding Wilson as chairman of the board of governors was Donald Douglas, Douglas Aircraft.

Wilson will assume direct responsibility for the Chamber's operations pending selection of a new general manager.

## Wyo.Port Conference

A statewide airport conference will be held Dec. 16 at the Casper Army Air Base, Casper, Wyo., at which representatives of Civil Aeronautics Authority, Civil Air Patrol and various airlines will speak.

Delegates to the conference will be guests of the Army at the air base, and the main luncheon address will be made by Col. Herbert Morgan, commandant at the base.



# Fairchild Builds 4-Place Prototype For Post-War Personal Market

Company setting up distributing organization to handle sales of new M-84, low-wing monoplane, designed for medium-price field.

A new low-wing, four-place personal airplane is being built in prototype by Fairchild and the company is organizing a distributing organization to handle sales of the post-war ship, Fairchild Engine and Airplane Corp. reveals.

The new plane will not be designed for the low-cost market, and the company discloses that it intends remaining, for the immediate post-war period at least, in the medium price field.

The new M-84 is being designed for strength, long-life and ease of maintenance.

► **F-24 to Be Produced**—It also is disclosed that the company is planning to renew peacetime production of the well-known F-24, a high-wing, four-place plane which would be powered with either a 200 hp. Ranger in-line engine or a 165 hp. Warner radial.

The M-84 will be powered with a Ranger 225 hp. engine, indicating higher performance than the F-24, which is now being built in three war models as the C-61, UC-61A and UC-61K. The "K" model is the one now being re-designed for civilian production so that it could be produced in a sales model as soon as the War Production Board releases materials.

The M-84 prototype, expected to be test-flown in early spring, is one of a number of models in the design stage.

► **C-82 Being Built**—Fairchild al-

ready is in the post-war commercial market picture with the C-82, designed and now being built in quantity as a military cargo plane. Fairchild's commercial objective in the cargo field was disclosed only a month ago when the first information on this large, cargo-carrying plane was revealed. The C-82 Packet is in the 50,000 pound class, powered with two Pratt & Whitney 2100 hp. engines. In a passenger version, it can carry 76 passengers and in a model comparable to American commercial airliners, carry 50 passengers in comfortable, reclining seats.

The M-82 is a development of the Cornell PT-19 trainer, of which more than 5,000 were built at the Hagerstown, Md., plant for the Army Air Forces, the British and Allied governments. The design indicates a low landing speed and ease of operation, the company announces, with easy entrance and exceptional visibility in all directions.

► **Personal Aircraft Division**—Indicative of the interest with which Fairchild is approaching this medium-priced personal plane field is the companion announcement of a new Personal Aircraft Division headed by Lee H. Smith to handle sales and other aspects of the smaller-plane field.

Smith has been manager of the Fairchild branch plant at Burlington, N. C., and has been sales manager for two other aircraft companies.

## Air Medicine Course

The College of Medicine at the University of Illinois is offering to the fourth year class the first integrated course in aviation medicine to be given by a college of medicine in the United States. The course is offered jointly by the Departments of Medicine, Surgery, Psychiatry, Ophthalmology, Otorhinolaryngology, and Physiology. The Colleges of Medicine, Dentistry and Pharmacy at Illinois have made important research contributions to fields closely related to aviation medicine for more than a decade.

## WASP Training Program Terminated

The Women's Airforce Service Pilots' training program ends this week, which starts a two-week period during which the entire WASP utilization program will be deactivated, thus terminating a controversial element of the war's aviation program for women.

Utilization of women pilots was projected in 1941 by the AAF to determine whether, in the emergency which then threatened, women could serve as pilots and to perfect a nuclear organization; to release male pilots for high grades of duty, including combat, and to decrease the Air Forces' total demands on the over-all manpower pool. In mid-1941, Miss Jacqueline Cochran, Director of Women's Pilots, was charged with preparation of a plan to utilize trained personnel and to train selected young women.

► **Defeated by Congress**—Efforts to militarize the WASP and make it a part of the AAF failed when Congress declined to act on Gen. H. H. Arnold's suggestion for such procedure.

A ceremony is planned this week at Avenger Field, Sweetwater, Tex., during which the AAF will pay tribute to the WASPs with top Air Force officers participating.

## AVIATION CALENDAR

- 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. 16—State Aviation Conference, Casper, Wyo.
- Dec. 17—Wright Brothers lecture, Institute of Aeronautical Sciences, Washington.
- Dec. 19—Brewer Trophy Award Dinner, National Aeronautic Association, Statler Hotel, Washington, D. C.
- Dec. 20—East Coast Aircraft War Production Council, New York City.
- Dec. 20—West Coast Aircraft War Production Council, Los Angeles.
- Jan. 8-12—SAE Annual Meeting and engineering display, Book-Cadillac Hotel, Detroit.
- Jan. 8-12—SAE War Engineering—Annual Meeting, Book-Cadillac Hotel, Detroit, Mich.
- Jan. 24-26—American Meteorological Society, annual meeting, Kansas City, Mo.
- Jan. 30-31—National Aeronautic Association, annual meeting, Brown Palace Hotel, Denver, Colo.
- 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.

## Wind Tower Tests Spin Characteristics

Other previously impossible experiments undertaken in new 80-foot structure at Wright Field.

Within the 80-foot concrete tower of Wright Field's recently completed vertical wind tunnel are conducted previously impossible tests for airplane spin characteristics, terminal velocity studies, parachute research and experiments with helicopter rotor blades.

Largest and fastest free-flow, open throat, vertical wind tunnel, the Air Technical Service Command's new aeronautical test tube will result in great savings of dollars, working hours and lives of pilots. A 12-foot cylinder which runs up the center of the building serves as the test chamber. An upward airstream is sucked through the test section and returned down an annular air passage between the inner cylinder and the outside walls by a four-bladed wooden propeller 16 feet in diameter. It is turned by a 1100 hp. electric motor mounted above the fan-like prop at the top of the tunnel.

► **Controllable Pitch Props**—Variations in airstream ranging from almost zero to more than 100 mph. are accomplished by means of a controllable pitch arrangement on the propeller, rather than by changes in the motor speed.

Synchronized motion picture cameras located at the top and side of the test section record reactions of the plane models being tested. Wingspreads on the models range from two to three feet. The miniatures are accurate to within 1/100th inch and balanced by weights to within 1/10th gram. Each free flying model contains a complete set of controls, including ailerons, flaps, rudder and elevators and are operated by remote control.

When the test is completed and the airflow ceases, the model drops into a nylon net stretched across the base of the test section.

► **Helicopter Tests Likely**—The vertical tunnel is expected to play an important role in the experiment and development of the helicopter. Mounted on a streamlined hub at the base of the tunnel, model rotor blades can be tested for vibration and stress analysis while subjected to simulated flight conditions created by up-sweeping airflow.

## "Not for Sale"

Officials of Allied Aviation Corp., Cockeysville, Md., have announced that the company is not in process of sale and that no proposal has been made by anyone within or without the Allied Aviation group for the sale of that company.

It was reported in AVIATION NEWS, Nov. 27, that such a move was in process, based on usually reliable industry sources. The company recently constructed a pilot model of a small-twin engine, bonded-plywood amphibian, named the *Trimmer* for its designer, Gilbert Trimmer, who is associated with the company. The *Trimmer* was flown with apparently satisfactory results last summer.

## Allied Denies NWLB Pay Dispute Report

Allied Aviation Corp., Cockeysville, Md., has taken issue with an announcement of National War Labor Board which says the company refused to sign an agreement

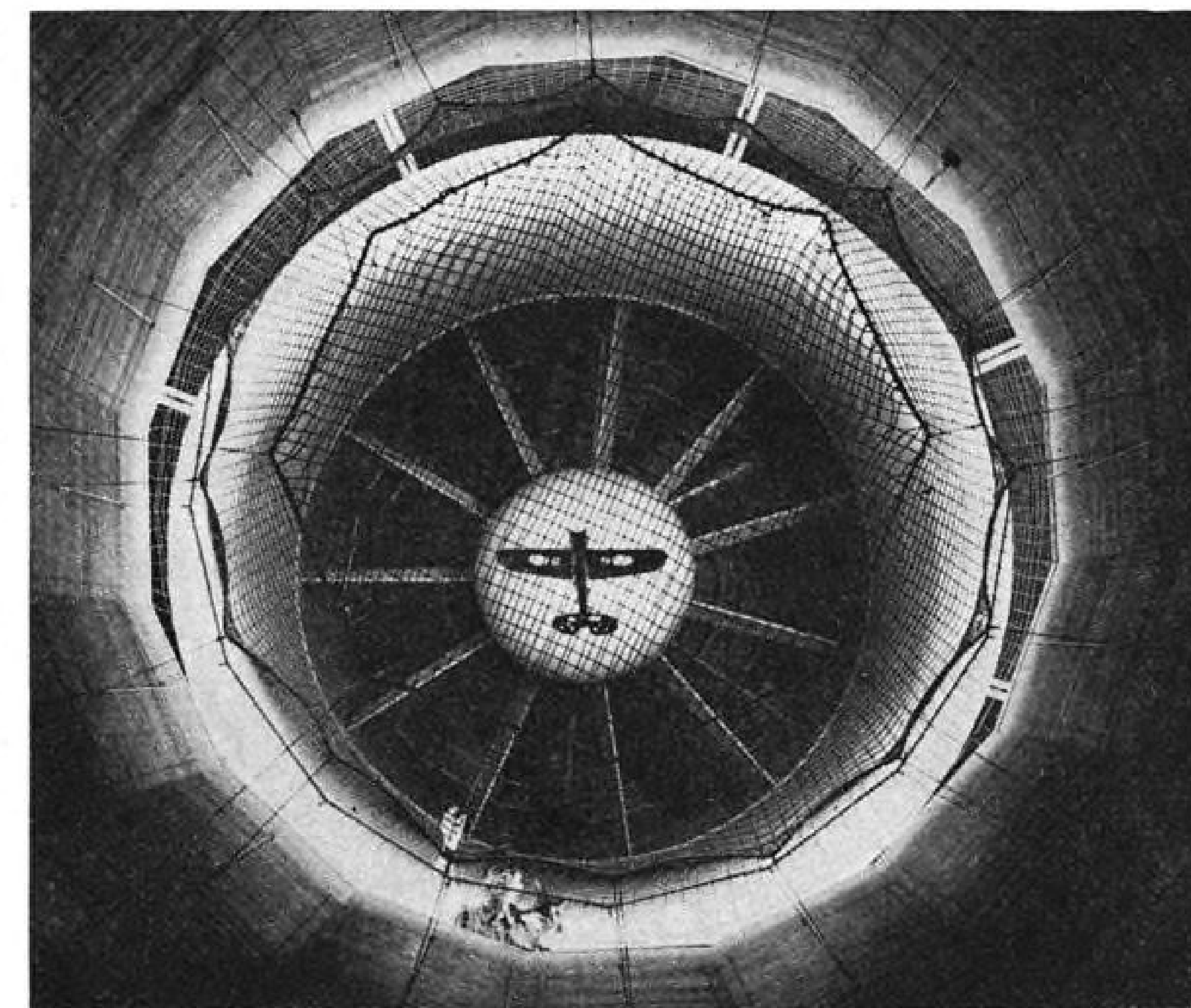
with the International Association of Machinists, AFL, in connection with a case referred to the Board.

The Board said the company and IAM had agreed on all terms of a contract, including wages, when the Navy canceled its contract with the company. The Board added that the company then refused to sign the agreement with respect to wages and the case was certified to the Board as a dispute.

Allied officials report that the Navy, before, not after cancellation of the contract, had directed the company not to sign the agreement. The NWLB wage case, the company said, dealt with wage increases which the 1942 Stabilization Orders required to be submitted to the Board.

► **Wage Request Denied**—NWLB unanimously denied a request of Allied Aviation Corp. that a retroactive wage increase ordered for a six-months' period become effective only after reimbursement by the Navy which had a cost-plus-fixed-fee contract with the company during the period involved.

Allied officials said they had been advised by the Board of receipt of a communication from the Navy declaring it was prepared to reimburse the company.



ATSC'S New Vertical Wind Tunnel: Exact scale models of newly designed planes are launched into the upward airstream of the Air Technical Service Command's new vertical wind tunnel at Wright Field. Looking from the base of the tunnel, this photo shows the polished maple surface of the lower test chamber, the nylon net into which the model falls at completion of a test, the free-flying model plane, and at the top, the vents through which a 16-foot propeller sucks wind at speeds greater than 100 mph.



## WEST COAST REPORT

### L. A. Mayor Opposes State Aviation Body

Protests when asked to indorse plan involving proposed commission's control of port expansion funds.

An indication of what may happen elsewhere is the opposition of Mayor Fletcher Bowron of Los Angeles to the creation of a state aviation commission. Prospect of Randolph Bill airport funds caused Bowron to protest when asked to endorse the commission plan. Bowron wants no commission fetters when he applies for federal money for expansion of Los Angeles Airport. He made the point clear when William H. Rosenthal, chairman of the state assembly interim committee on aviation, insisted that the proposed state commission be the disbursing agency for whatever Randolph money pours into California.

No protests were heard in Los Angeles, however, against Rosenthal's suggestion that the state commission, when and if appointed, concentrate on California's need for an aviation legislative program. He believes the commission should have as objectives the drafting of laws for: 1) airport zoning; 2) airport building in state parks; 3) simple regula-

tion and licensing of commercial and private flying; 4) establishment of aviation mechanic courses in public schools; 5) state purchase of surplus aircraft equipment for school use.

► **Boeing?**—Generally enigmatic concerning post-war plans, Boeing Airplane Co. may be expected to enter the personal airplane market with a "family plane," probably to be built at Wichita with experience gained in production of trainers.

► **Kaiser**—Efforts will be made to persuade Henry J. Kaiser to resume his interest in big flying boats. A variation of a twin hull design he already has considered and put upon the shelf may be suggested as a project to continue, in peace, the activity of his Richmond, Calif., shipyards. His reported withdrawal from the Kaiser-Hughes giant flying boat project is not convincing as an indication that he will leave to others the risks and venture of post-war aircraft building. However, some West Coast observers believe Kaiser is still highly susceptible to the idea of writing his name in the sky.

► **Hughes' Boat**—Howard Hughes' Culver City hangar in which his "world's biggest" flying boat approaches completion is under heavier guard than ever before. Beyond workers on the project, only those personally known to him and bearing passes with his

signature are permitted to view the airplane.

► **Tragic Boost**—Los Angeles taxpayers who soon may be called on to underwrite a heavy percentage of Los Angeles Airport expansion, to make it the city's airline terminal, may be persuaded more easily by the memory of TWA's Dec. 1 crash near Lockheed Air Terminal.

The accident emphasizes the mental (for pilots) and actual hazards of mountains that rim San Fernando Valley in which Lockheed Terminal is located. Precision approaches are required. Airline officials will redouble their support of Los Angeles Airport expansion, hoping it is realized before they begin the use of four-engine equipment. The city's airport offers long, unobstructed approaches.—S. B.

### IAS Plans Units In L. A., San Diego

Regional and headquarters buildings will be focal points of West Coast post-war aircraft research.

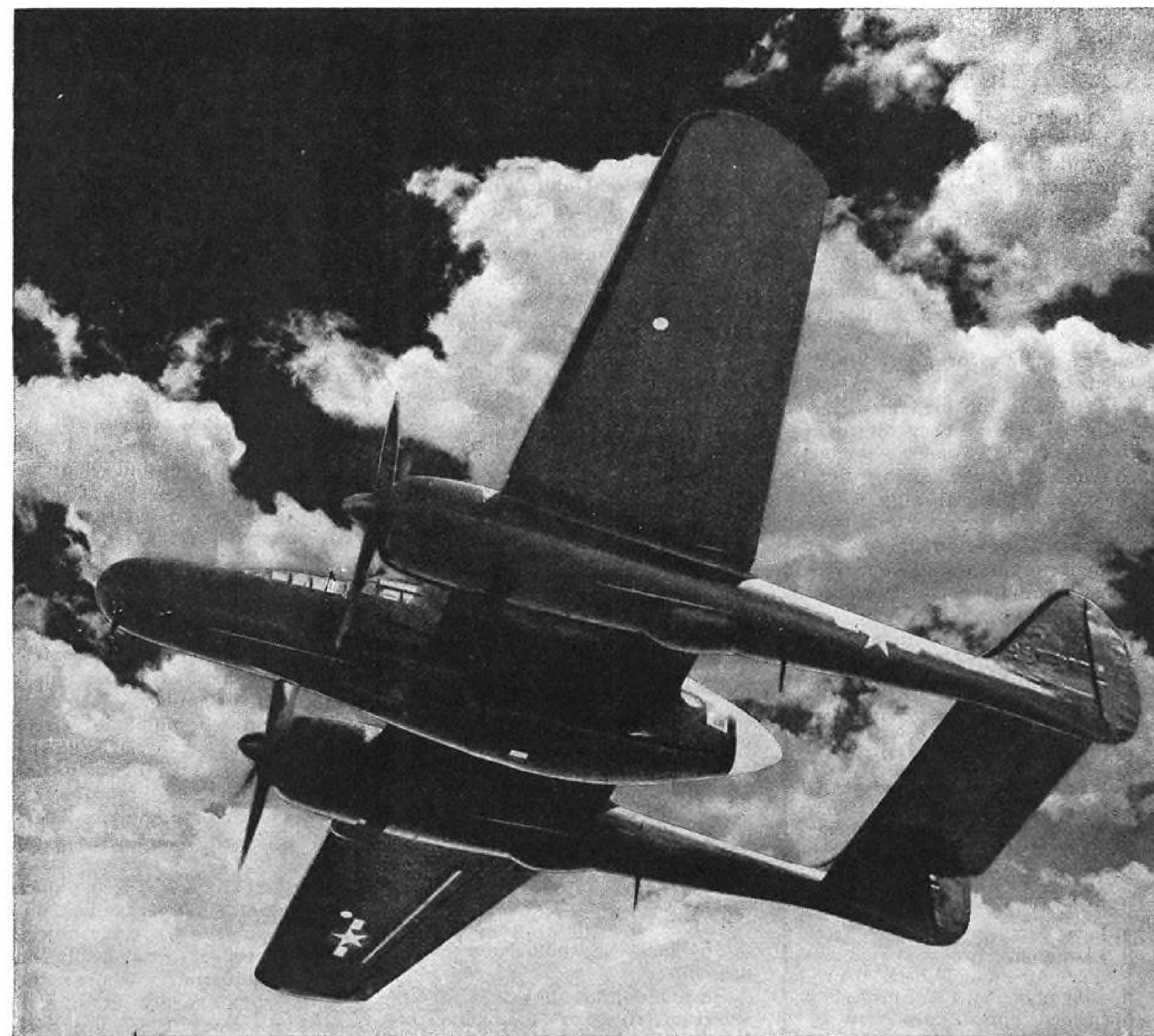
Institute of the Aeronautical Sciences will erect regional and district headquarters buildings in Los Angeles and San Diego with the intention of making them focal points of West Coast post-war aircraft research. Maj. R. H. Fleet, Institute president, made the announcement at a special meeting of the Institute in Los Angeles.

A quarter-million dollars has been raised through industry contributions for the Los Angeles project. A \$160,000 building is proposed for a \$75,000 three-acre site on Beverly boulevard, centrally located among the city's aircraft industries.

► **San Diego**—At San Diego, a \$150,000 structure is planned and \$154,800 has been contributed for the building and incidental costs. The building will be at San Diego's municipal airport, Lindbergh Field.

The buildings will provide auditoriums for engineering meetings, research libraries, technical exhibit rooms and IAS administrative offices.

Major Fleet predicted that in post-war years the Institute will become increasingly important as a research agency wholly sponsored by and representative of the aircraft industry. He said efforts are being made to develop similar building programs on the East Coast, to serve eastern aviation industries.



Northrop Black Widow—world's largest, most powerful pursuit plane

## How fast can De-Icers fly?

**We couldn't go fast enough to find out . . . even in one of our newest fighters**

SOME PEOPLE will be surprised to see B. F. Goodrich De-Icers on the Northrop P-61 Black Widow. They'll be surprised because they never thought De-Icers could stand the terrific strain of this fighter plane's speed.

New Type Eleven B. F. Goodrich De-Icers stood it all right. The fact is, under test, these De-Icers took all the speed the Black Widow could turn up . . . and operated efficiently.

We can't give you this speed. We

can say it was the fastest De-Icers have ever flown. And we still don't know how much faster they can go.

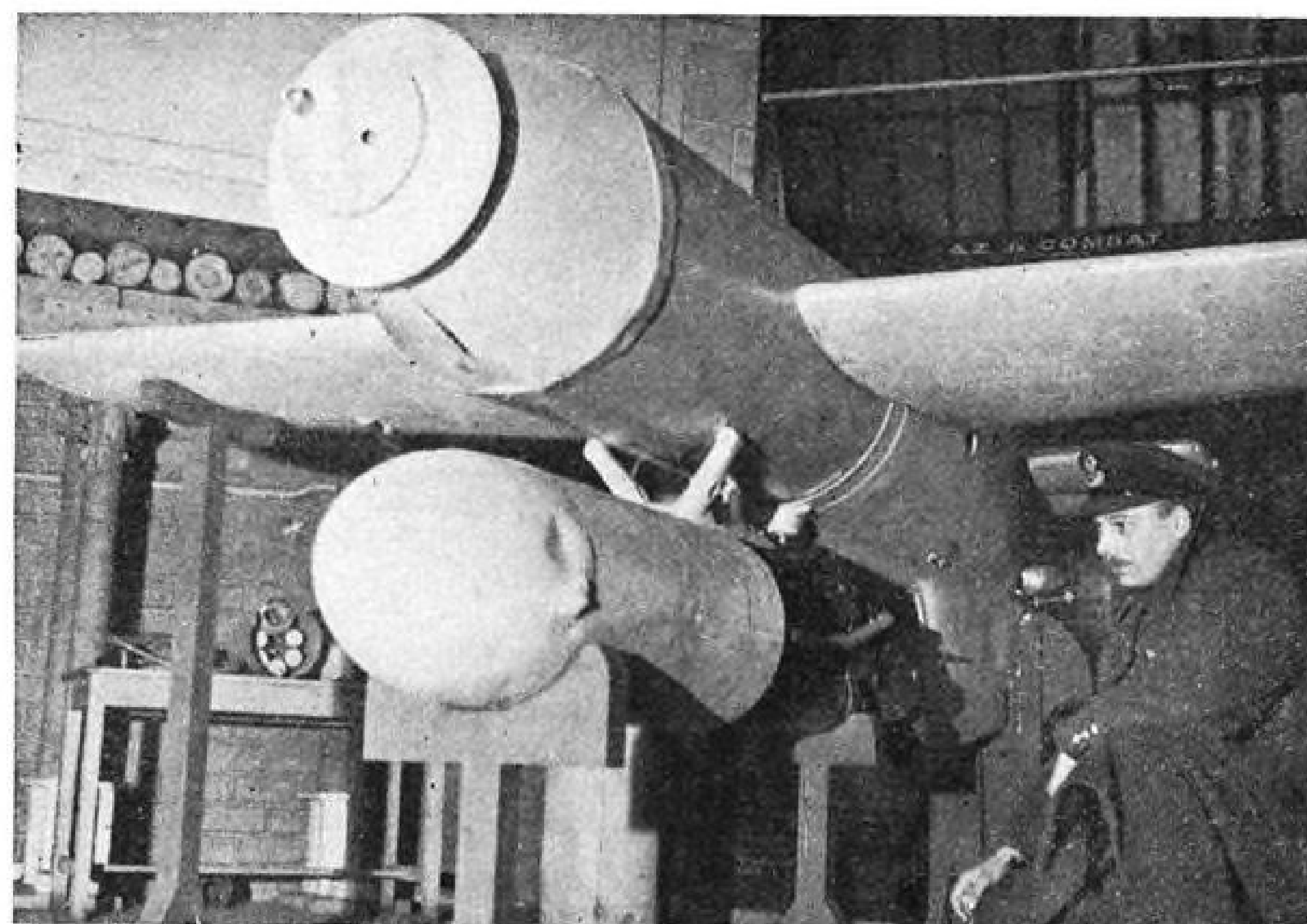
The important thing is that some of our new fighters are now going to have the "insurance" of De-Icer protection. For the Army has approved the use of Type 11 De-Icers for fighters, and they're already in production.

There are many reasons for the superior performance of these new De-Icers. Refinements in construction and

design have resulted in a smoother cross-section, better tubes, greater tear-resistance. These De-Icers are lighter, last longer, remove ice better and cost less to maintain.

Perhaps you would like more complete data. If so, write to The B. F. Goodrich Company, Aeronautical Division, Akron, Ohio.

*Skyway or Highway*  
**B.F. Goodrich**  
**FIRST IN RUBBER**



### RADIO-CONTROLLED GLIDER BOMB:

This bomb was found near Paris and is the type used by the Germans in attacks against Allied shipping. It was first reported used off Salerno and the Anzio beachhead, with some success. The bomb is released from German aircraft and controlled by the pilot of the mother craft.



## U. S. May Finance Civil Pilot Training

Burden discloses tentative plan under which 75 percent of cost would be paid by federal government.

A tentative federal aid program for post-war civilian pilot training outlined by William A. M. Burden, Assistant Secretary of Commerce, would provide 75 percent of the total cost of each trainee who would qualify for a private pilot license.

The plan, outlined in a speech prepared for delivery at the National Aviation Trades Association convention in St. Louis, provides for courses given through colleges. The aid, it was estimated, would amount to approximately \$270 per student for men and women both of college and non-college standing. The tentative program would provide for contracts with non-profit institutions of college grade as sponsors and these would be re-

### Proposed Changes

Summary of proposed modifications of CAA regulations, on which comment is requested by Dec. 20, was presented in William A. M. Burden's paper before the National Aviation Trades Association as follows:

- ▶ Dropping pre-war requirement for annual check of private plane by CAA inspector; instead, annual inspection by certificated mechanic would suffice.
- ▶ Eliminate minimum ceiling requirement for contact flight. Safety would be protected by continued requirement that all contact flights over inhabited areas be at least 500 feet above the ground.
- ▶ Eliminate requirement for private pilot certificate applicants to demonstrate ability to make precision spins.
- ▶ Make logging of flight time optional except time required for certificates and ratings. Eliminate aircraft logs on planes which have mechanical recorder of flight time.
- ▶ Permit private pilot to perform routine minor repairs and maintenance instead of requiring that all be done by licensed mechanic.
- ▶ Eliminate rule requiring a pilot to take check flight before solo if he has not made at least five take-offs and landings in six months.

sponsible for making arrangements for flight training, either at their own fields in the cases of colleges and universities which have them or at nearby private training fields. ▶ **High School Program** — Burden quotes an estimate of NATA Executive Director John Wilson that there are only about a dozen colleges in the country with their own flight training facilities. In states where there are few colleges, the program may be carried out through high schools through extension arrangements with colleges. However, Burden believes aviation instruction at high school levels should be operated along lines of the Wisconsin plan which concentrates on classroom aviation work, supplemented by four hours of dual flight training as laboratory experience.

He reports that many schools themselves appear ready now to meet the cost of such a program, offering immediate business to flight training operators, and opportunity for further sales of flight time to graduates. No proposals for such federal aid have yet been placed before Congress.

▶ **Defends Regulators** — Burden challenges statements that personal flying's growth would be strangled by federal regulation as "loose and dangerous thinking," asserting that the men in CAA and CAB concerned with safety regulation "recognize their responsibility to operate less as policemen than promoters."

He denies that they "dream up arbitrary rules for annoyance of flyers," and calls for better co-operation of the "regulated" in responding to circulated questionnaires on proposed new regulations.

### Expand B-24 Output

Production of Consolidated B-24 Liberators at Ford's Willow Run plant will be stepped up under a new Army schedule which calls for an output only slightly under that of last spring and summer and production at the present rate at least until next spring. This week will see the 7,000th Liberator off the Willow Run line. The first Ford-built Liberator came off two years ago last September.

More than a thousand design changes have been incorporated during the production of these 7,000 bombers, involving, Ford reports, more than a million tooling hours and more than a half million engineering hours.

## Plane Acceptances Drop in November

Bad testing weather, design changes and holiday blamed for decline.

Unfavorable weather for flight testing during the latter part of last month, some loss of production on Thanksgiving Day and design changes on a few types and difficulties in bringing new models into production all contributed to a below-schedule acceptance of aircraft in November.

The unit output was 6,747, approximately 300 below the working schedule and output in terms of airframe weight was 71,600,000 pounds, exclusive of spares, a decrease of five percent from October. Although production by numbers was only four percent below schedule on an overall basis, WPB Chairman J. A. Krug said military requirements are not being satisfied to the extent of 96 percent.

▶ **Long Range Bombers** — Production of four-engine long range transports was particularly disappointing, Krug said. One new carrier-based torpedo bomber and two Navy patrol plane producers missed schedules by a wide margin.

Planned output of these planes is, at present, relatively small, but failure to achieve the early objectives will reflect unfavorably on future production, where the schedule rises sharply. Krug said these three Navy types are considered critical and progress is being watched carefully.

Commenting on other phases of the month's acceptances, Krug called standard bomber and medium transport production satisfactory, while some fighter acceptances were below par as a result of poor test-flight weather and design changes. One naval reconnaissance type was behind schedule because of problems encountered in bringing a new model into production.

▶ **Schedules Revised** — It should be pointed out that constant revisions are made in the working schedules so that they might conform as nearly as possible to production probabilities, in order to avoid unbalance in the production and allocation of aircraft material, equipment and component parts. The practical achievement of a schedule in a particular month is not conclusive, WPB says, since at the same time, production may be far



Going...

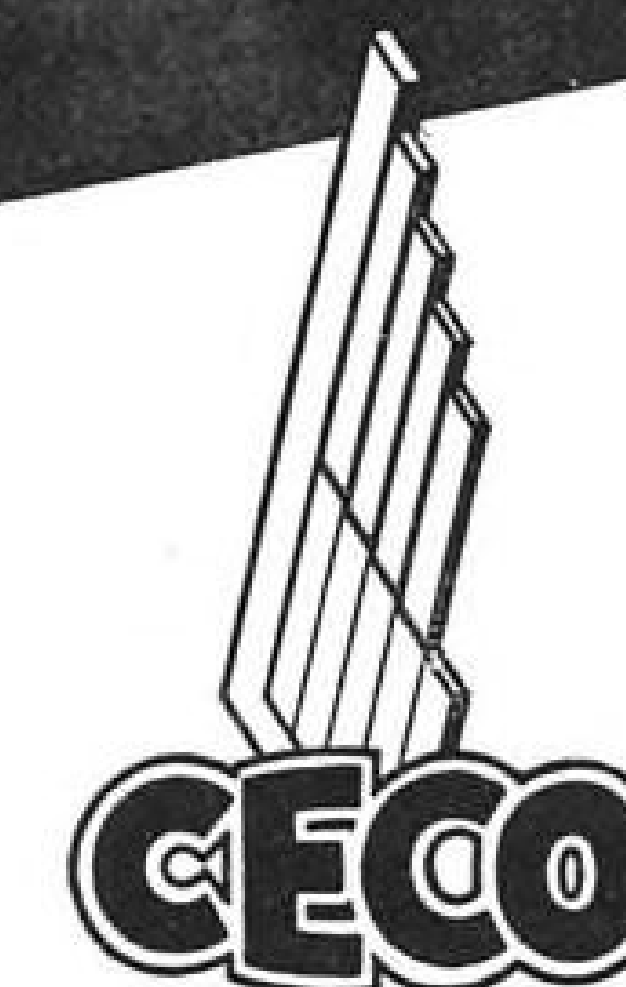
Going...

Trails of smoke and a blanket of flames accompany this Jap flying boat on its final plunge to the sea. Chalk up one more "kill" for a Navy Liberator. Official U. S. Navy Photographs.

Gone!

Our little slant-eyed "friends" are learning, the hard way, how decidedly unhealthy it is to tangle with one of the Navy's big Consolidated Liberators. For these Liberators are not only great ships... they are manned by keen-eyed, straight-shooting, "hell-for-leather" American boys who like nothing better than to get a Nip flying boat, such as the one pictured here, in their sights.

It is gratifying to us here at CECO to know that CECO carburetors and fuel pumps on these newest great Liberators are doing their part in helping our fighting men beat a path to Tokyo. And we pray that the day is not too far distant when once again CECO products will be earmarked for airships rolling off peacetime assembly lines.



CARBURETORS  
FUEL PUMPS  
PROTEK-PLUGS

CHANDLER-EVANS CORPORATION SOUTH MERIDEN  
CONNECTICUT, U. S. A.



short of approved requirements.

As an example, Krug cited November production of Boeing Superfortresses which actually exceeded the recently revised working schedule by a small amount. However, the schedule was roughly 20 percent below the number desired by the AAF last month to maintain the activation schedule of B-29 groups for the war against Japan.

## Lack of Equipment Curbs Flight Tests

Delay in certification of surplus service planes at Bush Field, Augusta, Ga., traced to inadequate facilities.

Flight tests necessary for certification of surplus service planes are under way at the Civil Aeronautics Authority's new base at Bush Field, Augusta, Ga., but are being hampered by lack of maintenance equipment and mechanics. The Defense Plant Corp. has been scheduled to supply the equipment and personnel, but it is understood this has not yet been completed.

One instance of the difficulty in expediting the tests as sought by those in charge of surplus disposal, CAA sources say, is that of a Lockheed 14 that was thrown on its back because of lack of fluid in a brake, and which cannot be repaired until hoists are obtained to right it.

► **Seven Types Tested**—However, seven types of planes are now undergoing tests. They are: Lockheed AT-18A, AT-28 and A-29; Boeing PT-17; North American BC-1A, similar to the AT-6 *Texan*; Douglas RB-18 and UC-67, both mid-wing planes of bomber construction.

There are more than 60 types of some 110 released to surplus that have never been tested, although some of these are experimental, one-of-a-kind types that will not be sold.

Surplus plane sales generally are not moving as fast as they were while the supply of DPC-owned light planes lasted, since the bulk of offerings today are in the heavier trainer category.

► **6,500 Sold**—In all, approximately 6,500 planes have been sold, with less than 40 of the DPC planes out of 5,399 remaining. Some 800 Army planes have been sold. Only 130 of these have been the primary trainers, however, the balance being chiefly liaison types.

Sixteen gliders have been dis-

## Renamed to NACA

Dr. Jerome C. Hunsaker, president of Massachusetts Institute of Technology, and Dr. W. F. Durand, of Stanford University, have been reappointed by President Roosevelt as members of the National Advisory Committee for Aeronautics for five year terms.

Dr. Hunsaker, a scientist of international reputation, has been chairman of NACA since 1941. Dr. Durand, professor emeritus of mechanical engineering at Stanford, is one of the original members of NACA, having been appointed by President Wilson in 1915. He is now chairman of the NACA subcommittee on jet and turbine power plants.

posed of, bringing return of \$6,700 to the government, an average of approximately \$420. Some of those sold are suitable for glider use, others valuable for spare parts for Piper, Taylorcraft and Aeronca light planes.

There is some prospect that additional light planes will be available soon, although not in large numbers.

► **Many to Be Stored**—Experience in offerings of the primary trainers and other heavier trainers indicates that many will be transferred to storage fields to await decisions on post-war training programs.

Industry sources feel that the only answer to the problem of the heavier trainers is their use in a post-war program, since they are not satisfactory for private operation both from a comfort and expense standpoint.

Few of the planes released by the Army to surplus have been of types that find a ready market, and for that reason it may be expected that sales will not be heavy in relation to the numbers of planes listed. Many of the transport types theoretically available for allocation cannot be certificated without modifications and most of them were built either as combat planes or combat trainers. Most can be converted eventually for commercial use, but are not desirable for that purpose.

## Visit Pacific Bases

Nine members of the Naval Affairs Committee of the House left last week on a three-week trip to visit major air and ship bases in the Pacific war area.

A second trip is scheduled to leave after the first of the year. Making the first trip are Rep. Hefernan (D., N. Y.), Rowan (D., Ill.), Price (D., Fla.), Wolvenden (R., Pa.), Blackney (R., Mich.), Ward Johnson (R., Calif.), Grant (R., Ind.), Margaret Chase Smith (R., Maine), McWilliams (R., Conn.)

## Ask Tax Law Change To Ease Conversion

The Aeronautical Chamber of Commerce has recommended a simplification of the federal income tax procedure as a means of enabling the aircraft manufacturing and other industries to better survive the reconversion period.

It is the view of the Chamber that companies whose war production has substantially ceased and who anticipate drastic reductions in earnings should be given the right ultimately to offset against accrued taxes, the benefits to which they will be entitled under the carry-back and post-war credit provision.

► **Procedural Change**—The Chamber feels further that the accomplishment of these aims requires merely a procedural change in present laws and that the amount of taxes ultimately to be paid, and as a consequence the ultimate revenues to the government, will not be altered.

## New Super Planes

Existence of several experimental airplanes, generally known in the industry but not publicized, was disclosed in recent testimony given before the House Appropriations Committee by Dr. George W. Lewis, Director of Aeronautical Research for the National Advisory Committee for Aeronautics.

Dr. Lewis mentioned specifically the B-36, the B-35 and the B-42 and described the B-36 as the largest airplane that has been attempted in this country. He said one wind tunnel at Langley Field has been devoted entirely to the B-35 and the B-36 during the past year.

He testified, too, to investigations and experiments being made in the application of gas turbines and jet propulsion units and said there is a large number of these types. Detailed discussions were off the record.

# Are you planning a flight to or through St. Louis?



## YOU'LL ENJOY YOUR STOP-OVER MORE if you land at the new CURTISS-PARKS AIRPARK

As pilot of your own craft, you are invited to use the facilities of the new Curtiss-Parks Airpark. Our organization, Airpark, hangars, and shops, are at your service. We're to help you get the maximum use, the greatest pleasure and all-around satisfaction out of your plane.

Use our field. It's next door to downtown St. Louis and East St. Louis. Its runways, taxiway, and ramps are all of concrete.

When you land, whether this is your home port or you are enroute, our attendant will meet you and direct you to "the line." He will be attentive to your wishes and see that any service you want performed is expertly and quickly taken care of.

You may want your plane hangared for the night, an instrument calibrated, the brakes adjusted, the engine checked, or any other service up to and including a complete overhaul of both airplane and engine. Whatever your requirements, you will find Parks workmanship expert, facilities adequate, and material the best.

It is our purpose at Curtiss-Parks Airpark to be sure that when you again take to the air, it will be with the complete confidence in your craft that only thoroughly efficient and dependable service can give. Make Curtiss-Parks your St. Louis home.

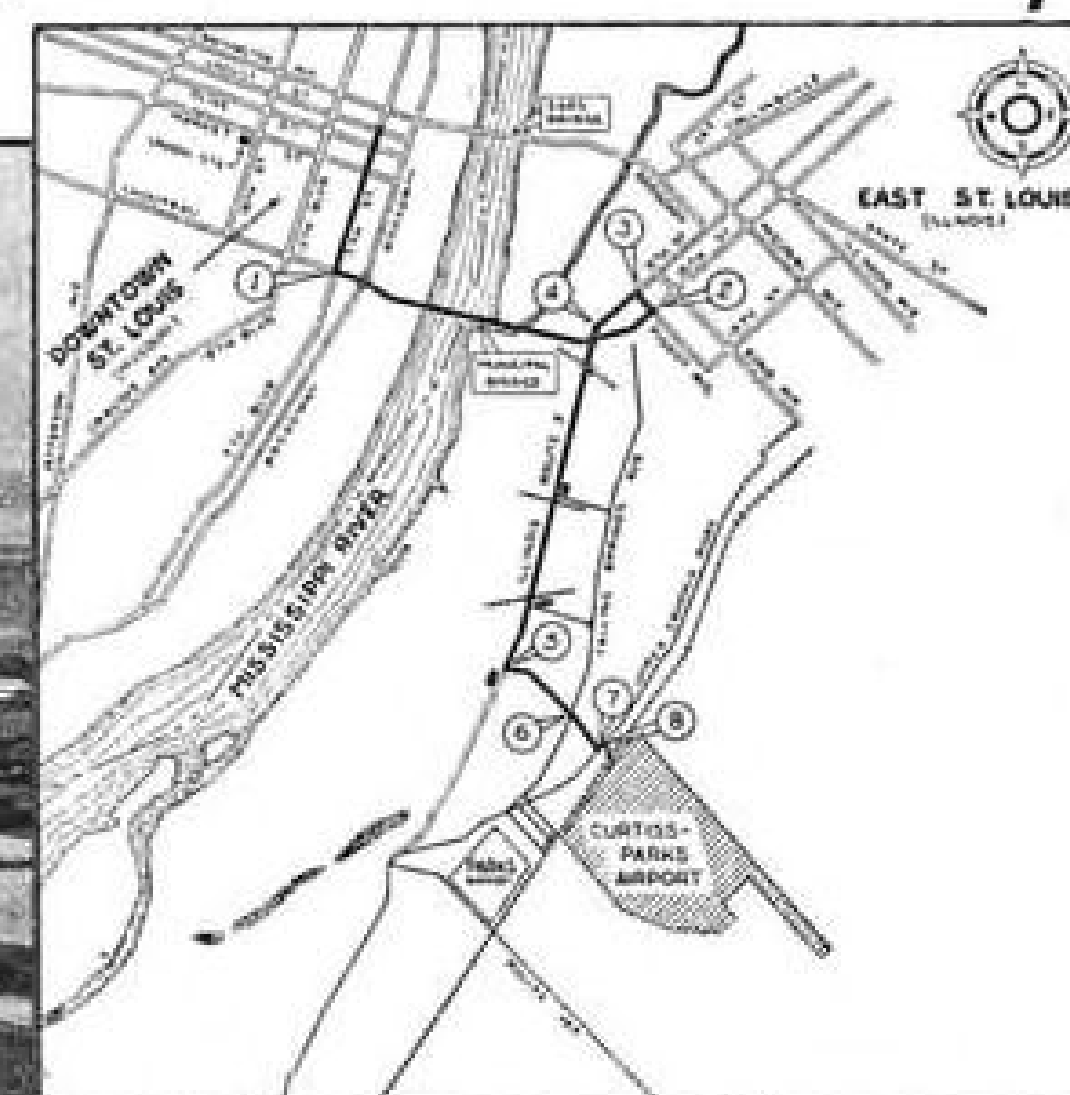
## PARKS AIRCRAFT SALES AND SERVICE

Division of Missouri Institute of Aeronautics, Inc.

St. Louis Division

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P.O. Box 88-E



## THE *Encoupe*

YOUR PERSONAL PLANE OF TOMORROW

The Encoupe, the personal plane destined to bring everyday personal flying into the daily lives of hundreds of thousands of Americans, is to be distributed by Parks Aircraft Sales and Service. The Encoupe, with but a single control, a wheel, is designed for safety, ease of handling, and economy. The Encoupe cannot spin, handles like an automobile, gives 20 to 25 miles per gallon of gasoline, and flies 65,000 miles or more before the engine need be overhauled. Write for details.





## Geuting Sees Port Plan As Inadequate

CAA program meets only most pressing needs of larger cities, General Aircraft official declares.

The proposed CAA national airport program covers only the most pressing needs of the larger communities and represents but a small percentage of landing facilities actually needed throughout the United States, in the opinion of Joseph T. Geuting, vice-president of General Aircraft and chairman of the Personal Aircraft Council, ACCA.

Speaking before members of the Aviation Distributors and Manufacturers Association at their St. Louis convention, Geuting estimated that instead of the proposed 2900 new airports, which would make a total of 4700 facilities open to private flying, every community in the nation of any size—16,750 of them—will require at least one field for personal aircraft.

► **Wants Red Tape Cut**—He reiterated the demand of the Council for sane and sensible relaxation of government red tape which he contends is still hampering and restricting private flying, pointed to increased utility of personal aircraft, and urged that surveys of potential markets should take into account the potential buyer's possible uses for a personal plane for business purposes.

Pointing to discrepancies in

current personal plane market surveys, Geuting emphasized the importance of building up the background of a potential consumer, subject of a questionnaire, to a point where he had some definite idea about personal planes, before asking him questions about his future buying plans.

## Writers Get Short Course in Aviation

Instruction given at East St. Louis by Parks Air College in two-control *Ercoupe* after concentrated ground training.

A short course in aviation given by Parks Air College at East St. Louis last week found about 30 magazine and newspaper writers taking flight training after a concentrated ground school course which included elementary instruction in civil air regulations, meteorology, aircraft engines, navigation and related subjects.

Flight instruction was in the two-control *Ercoupe*, product of Engineering and Research Corp., Riverdale, Md., and many of the writers soloed early without previously having been at the controls of an airplane.

► **Solo Flights**—First to solo among the writers without previous flight training was a representative of *House Beautiful* magazine and others soloing early included representatives of the *Saturday Evening Post* and *The Chicago Sun*, both of whom had flight time previously in conventionally controlled aircraft.

The representative of the *Womans Home Companion*, who had never driven an automobile, much less flown a plane, neared the five-hour *Ercoupe* solo requirement early.

► **Post-War Significance** — These facts and the wide range of interest represented by the magazines and newspapers whose writers took the course pointed up emphatically and significantly the appeal of private flying and its possibilities in the post-war era.

Magazines and newspapers represented in the course, in addition to AVIATION NEWS and those mentioned, were: *Life*, *Country Gentleman*, *Mademoiselle*, *Scholastic*, *Mechanic Illustrated*, *Automotive News*, *Ladies Home Journal*, *Aviation and Yachting*, *American Aviation*, *Flying*, *National Aeronautics*, *Air World*, *Southern Flight*, *Dallas News*, and *Chicago Herald-American*.

## Briefing

For Private Flyers and Non-Scheduled Aviation.

By ALEXANDER MCSURELY

A new aid to sailplane pilots, developed by Laister-Kauffmann, has some possibilities for use on lightplanes also. The "Thermal Sniffer" as it has been called, enables the pilot to determine in what direction he must turn his motorless craft to take advantage of the warm upcurrents. Basically it consists of thermo-couples in each wingtip, connected with a recording dial on the instrument panel which indicates the temperatures at the wingtips.

► **Prophet Parks**—Oliver L. Parks, one of the more optimistic forecasters of aviation's post-war possibilities, anticipates great simplification of the navigation problems which now harass the neophyte personal plane pilot. Within a few years, he argues, "If the price of automatic pilots from bombers has come down, as it has, from \$8000 to \$250, since the war has begun, I believe it can be brought much lower in a simplified form, to serve the personal plane at perhaps \$35."

► **New Planes on Display**—Several post-war personal plane prototypes have arrived and are expected in St. Louis at the NATA-ADMA Convention. Among them: a souped-up revision of the Stinson *Voyager* with a 125 hp engine and a longer fuselage than the pre-war variety; the four-place Republic *Amphibian*, which was expected to give demonstrations on the Mississippi River; the three-place Johnson *Rocket* with 185 hp; the two-place Globe *Swift*.

► **Growth Shown**—Best index to the growth of the personal plane industry in the last year is comparison of the displays at this year's ADMA-NATA show with those of last year. Downstairs lobby of the Convention Hotel displays two planes, an Aeronca and a Luscombe, both groomed to mirror finish, while a Laister-Kauffmann *Yankee Doodle Two* sailplane hangs from the ceiling. Mezzanine and second floors are largely occupied by displays, which far surpass, in quality and individual lavishness, the displays of the 1943 meeting. Forest Park strip: Site of one of St. Louis earliest airfields, in Forest Park, was reopened temporarily, as a personal plane landing strip, for the Convention.

## PAYLOAD IS PEOPLE OR PACKAGES



A most cursory study of the Constellation's performance

records indicates immediately that it can never

be considered a one-job transport. *Versatility* is the word.

Interiorwise, for instance, the Constellation is easily adapted to

meet the commercial demand of the specific route,

to carry its payload in terms of people or packages or both.

Flightwise, it is able to operate most economically

over the specific distance required—whether transcontinentally

or on flights as short as 100 miles. Indeed, versatility is the word.

Express, sleeper or inter-city local, the Constellation is designed

to solve *special* problems of the individual airline.

### New Stinson

A new Stinson plane—the *Voyager* 125 — was demonstrated in St. Louis, Mo., last week. A three-place ship, it is powered with a 125 hp. Lycoming engine, and cruises at 112 mph., using 83 percent of power.

First of the post-war series of the Stinson Division of Consolidated Vultee, the plane combines attributes of the pre-war Stinson *Voyager* 105 and the "Flying Jeep" used by the Army as an observation, utility and ambulance plane.

Takeoff run, with flaps down, is listed at 545 feet, landing roll 265 feet with flaps down, and stalling speed of 51.5 mph. with flaps down.

Wing span is 34 feet, fuselage length, 23 feet six inches. Gross weight is 1,875 pounds, with useful load of 757 pounds. Service ceiling is listed at 14,000 feet.



# *The Lockheed Constellation*

## SETS THESE NEW WORLD STANDARDS

Biggest load-carrying capacity of any transport

Longest range of any transport ☆ Fastest speed of any transport

Greatest rate of climb of any transport ☆ Highest cruising altitude of any transport

*And* these performances make the Constellation

the *safest* of any transport

## *Leadership*

### IN LOAD-CARRYING CAPACITY

Lockheed's Constellation is a big plane—big enough, in fact, to carry 64 passengers and their baggage. In addition, it has adequate space for mail, express and cargo. Two compartments totaling nearly 500 cubic feet are available and may be loaded and unloaded underneath the plane. Revenue loads of approximately 18,000 pounds can be carried easily by the Constellation on medium-distance operations.







## QUESTIONS

Q. Are oxygen masks ever necessary when flying in the Constellation? —M. G., Maplewood, N. J.

A. No. Constellation passengers never go above 8,000 feet even if the plane's altitude is as high as 20,000 feet. Automatic devices control density, heat, purity and circulation of air in passenger compartment.

Q. Why does it take so long to develop a new transport? —John T., Baton Rouge, La.

A. In addition to hundreds of thousands of man-hours of basic engineering, literally thousands of tests are made in the wind tunnel before an airplane is built. On the Constellation, a complete hydraulic system, duplicating the entire functional mechanism of the airplane, was constructed and tested for months to assure perfection of all parts.

Q. Is there a reason for the sharklike profile of the Constellation fuselage? —Tom P., Los Angeles, Calif.

A. Yes. Its airfoil design allows maximum length for full-round pressurized cabin. Down-sloping nose camber gives better pilot visibility—reduces landing gear weight.

Q. You say the Constellation is a safe airplane. Why? —R. L., Springfield, Mass.

A. In the first place four powerful engines mean greater safety. The Constellation will CLIMB on any two of them, land or take off fully loaded with a very short run, and is able to fly over bad weather. In addition to its great power there are scores of other safety features. A few of them are: tricycle landing gear, automatic fire extinguishers and power boosts on operating controls.

Send in your questions . . . Address: Lockheed Aircraft Corporation, Department 69-55, Burbank, California



FOR NEW WORLD STANDARDS IN AIR TRANSPORTATION

LOOK TO *Lockheed* FOR LEADERSHIP

Lockheed Aircraft Corporation, Burbank, California

## PRIVATE FLYING

\*\*\*\*\*

### New Prototype of Globe Swift May be Flight-Tested Next Month

Experiments continuing on earlier two-place craft, while a third—a four-place "family plane"—is reported in mockup.

By ALEXANDER MCSURELY

A new revised prototype of the Globe Swift, two-place low-wing contender in the personal plane market, which probably will sell for around \$3,000, is expected to be flying by mid-January, officials of Globe Aircraft Corp., Fort Worth, disclose.

Meanwhile flight tests are continuing on an earlier two-place prototype, while yet a third model, a four-place "family plane" is reported in mockup stage, but Globe officials would not comment on this last plane.

► **Design Changes** — Main differences between the revised and the earlier prototypes are in construction, the later Swift having an all metal fuselage and plywood wing, as opposed to a fuselage partly of metal skin and partly of fabric-covered steel tubing, and plywood wing, on the earlier plane. The new model also will be slightly longer, providing more cockpit room and will have a sealed zipper closure to the plexiglas canopy.

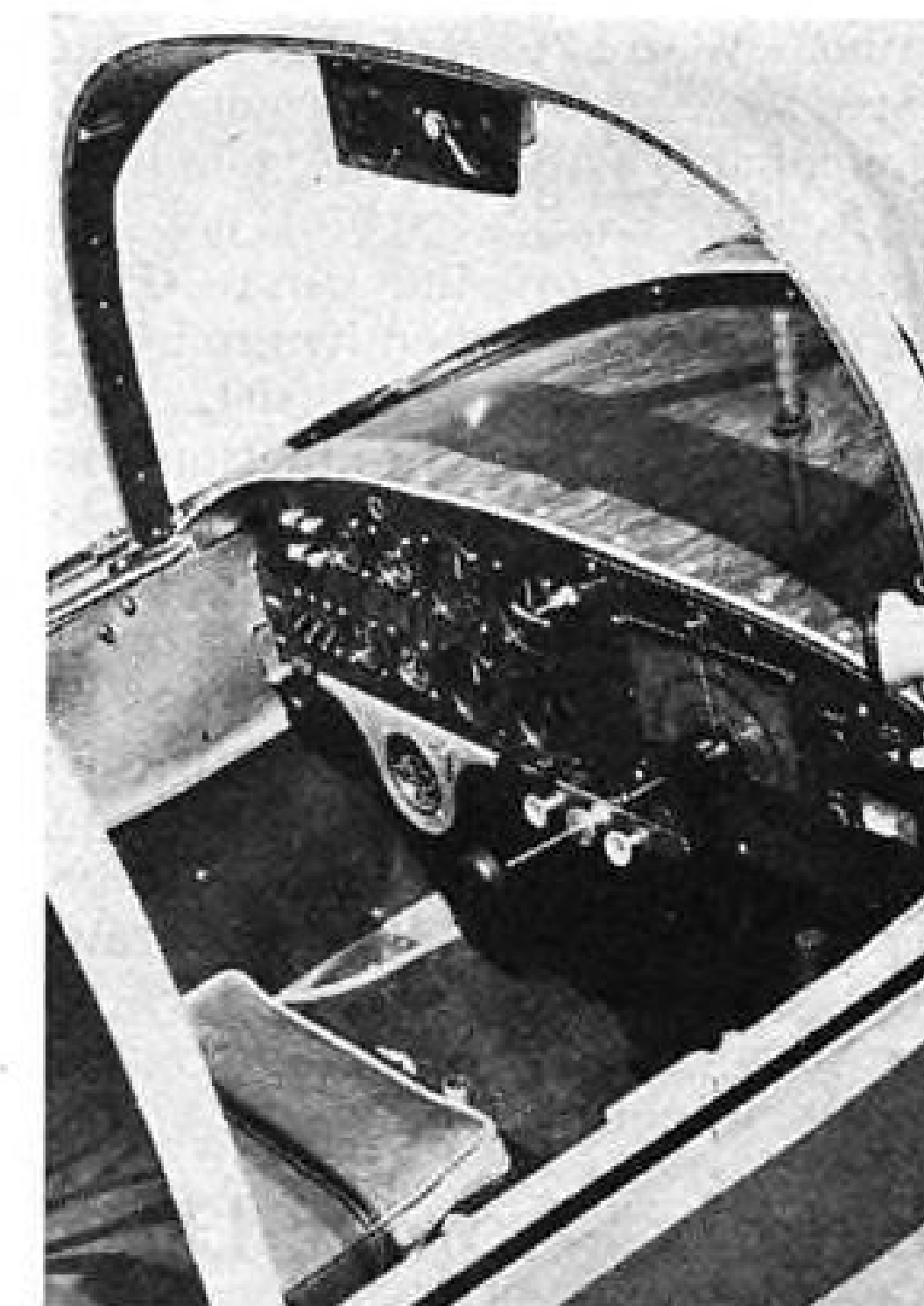
The Swift has a 26-foot wingspan, 20 foot 4 inch length and 6 foot 2 inch height. A wide landing gear tread, 7 feet 6 inches, gives added security in landings. The landing gear is conventional with main wheels fully retractable and operated by a hydraulic system. Wings have split-type flaps, making possible landings at 42 mph. Wings also are slotted, and set at 6 degree dihedral, while horizontal stabilizer is set at 8 degree dihedral. Flaps are operated manually with a lever like an automobile handbrake. Toe brakes on the rudder pedals are similar to those used on Army planes.

► **Speeds** — The Swift will cruise at 125 mph., with a top speed of 135 mph. Standard engine is an 85 hp. Continental, although the plane also will be offered with an alternate 100 hp. Lycoming engine. Prototype is equipped with a Robey controllable pitch propeller, but a fixed pitch propeller will be standard equipment on the pro-

duction plane. Standard equipment also will include battery, starter, generator, fuel pump and standard instrumentation. De luxe extra cost equipment will include the controllable propeller, a manifold pressure gauge, and radio and additional instrument equipment.

Gross weight is 1,569 pounds, weight empty, 1,030 pounds, wing-loading 12.07 pounds per square foot, and power loading (for the 85 hp. engine) is 18.45 pounds per horsepower. The plane has a total wing area, including flaps and ailerons, of 130 square feet.

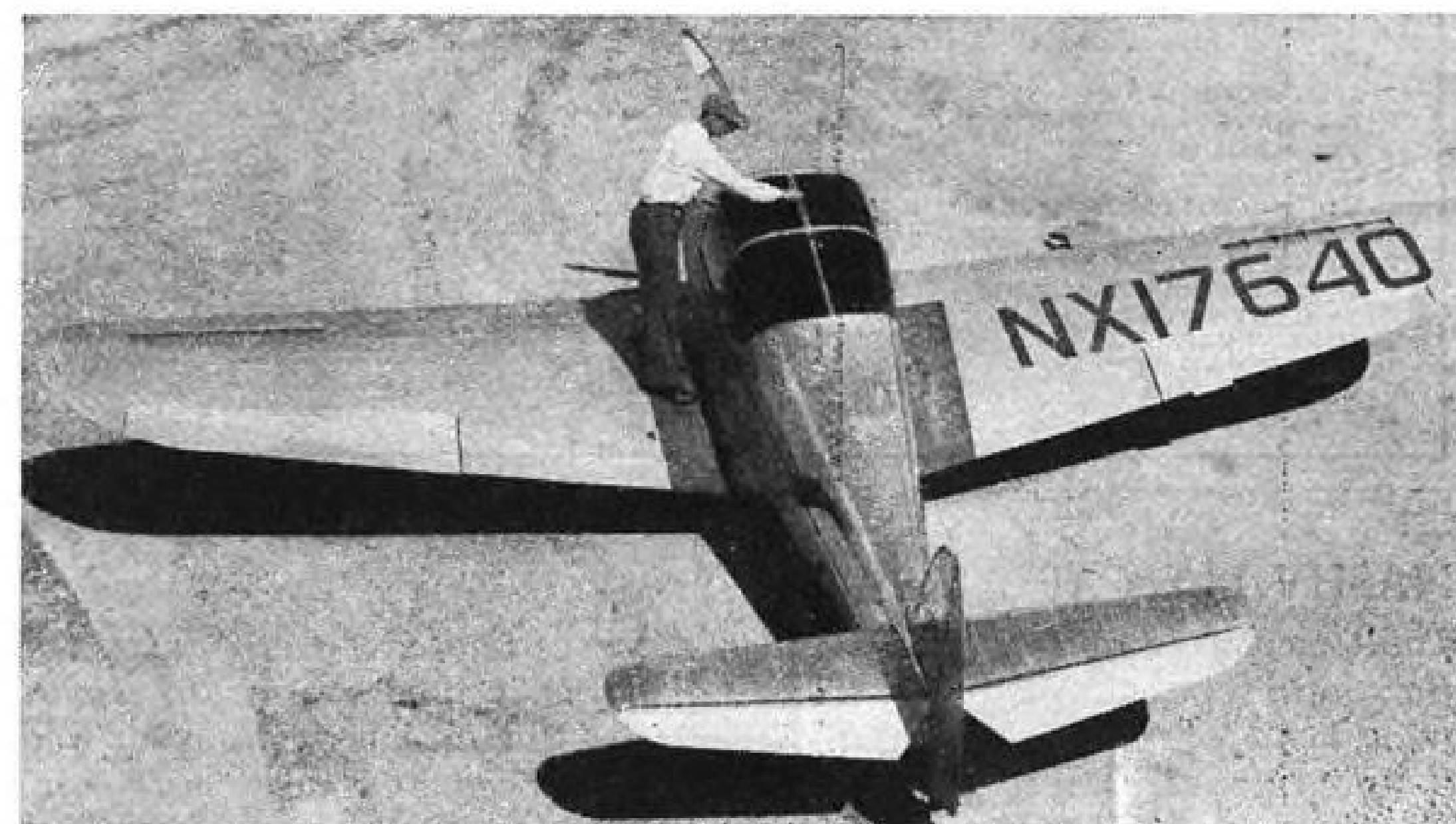
► **Range** — Cruising range is 600



**Swift Instrument Panel:** Instrument panel and interior of Globe Swift prototype's cockpit are shown above. Equipment includes two-way radio, manifold pressure gauge, used when plane uses Robey controllable propeller. Plexiglas sides of cockpit enclosure can be lowered or raised to make open or closed cockpit.



**New Photos of Globe "Swift" Prototype:** Excellent characteristics of Globe Aircraft's re-entry into the personal plane market, the Swift, are seen in above photo, showing the Swift landing with flaps extended. Slotted wings, retractable landing gear, Robey controllable propeller, sliding canopy are visible. Below: Planform photo of Swift gives another slant on plane's trim lines.





miles, with 26 gallons of fuel capacity and a gasoline consumption of five gallons plus, per hour.

Current *Swift* prototypes are descendants of the first Globe *Swift*, which received its final CAA type certification in 1942, but never went into production because of war-time material restrictions.

Instead, John Kennedy, president and general manager, and his engineers and production men went into war production themselves, turned out 600 of Beech-designed A-10 twin-engine training planes, and currently are making sub-assemblies for other military contractors.

## Bendix 'Copter Data

Bendix Helicopter, Inc., has issued new information on what is termed the company's first post-war production model, a 300 hp., four-passenger helicopter. It will have a cruising speed of 120 mph., and a rate of climb of 600 feet

per minute, the announcement said. Other details were reported in AVIATION NEWS (July 31).

## Greater Plane Use Through Rental Seen

R. S. Robie, veteran Cambridge, Mass., "Drive Yourself" auto dealer, predicts wide expansion of "U-Fly It" business in Aviation Clinic talk.

Greater utilization of planes through plane rentals, making possible economically sound rental charges to "occasional" pilots will be one of the biggest assets of the potential "U-fly-it" business. R. S. Robie, Cambridge, Mass., veteran auto rental operator, predicted at the National Aviation Clinic at Oklahoma City.

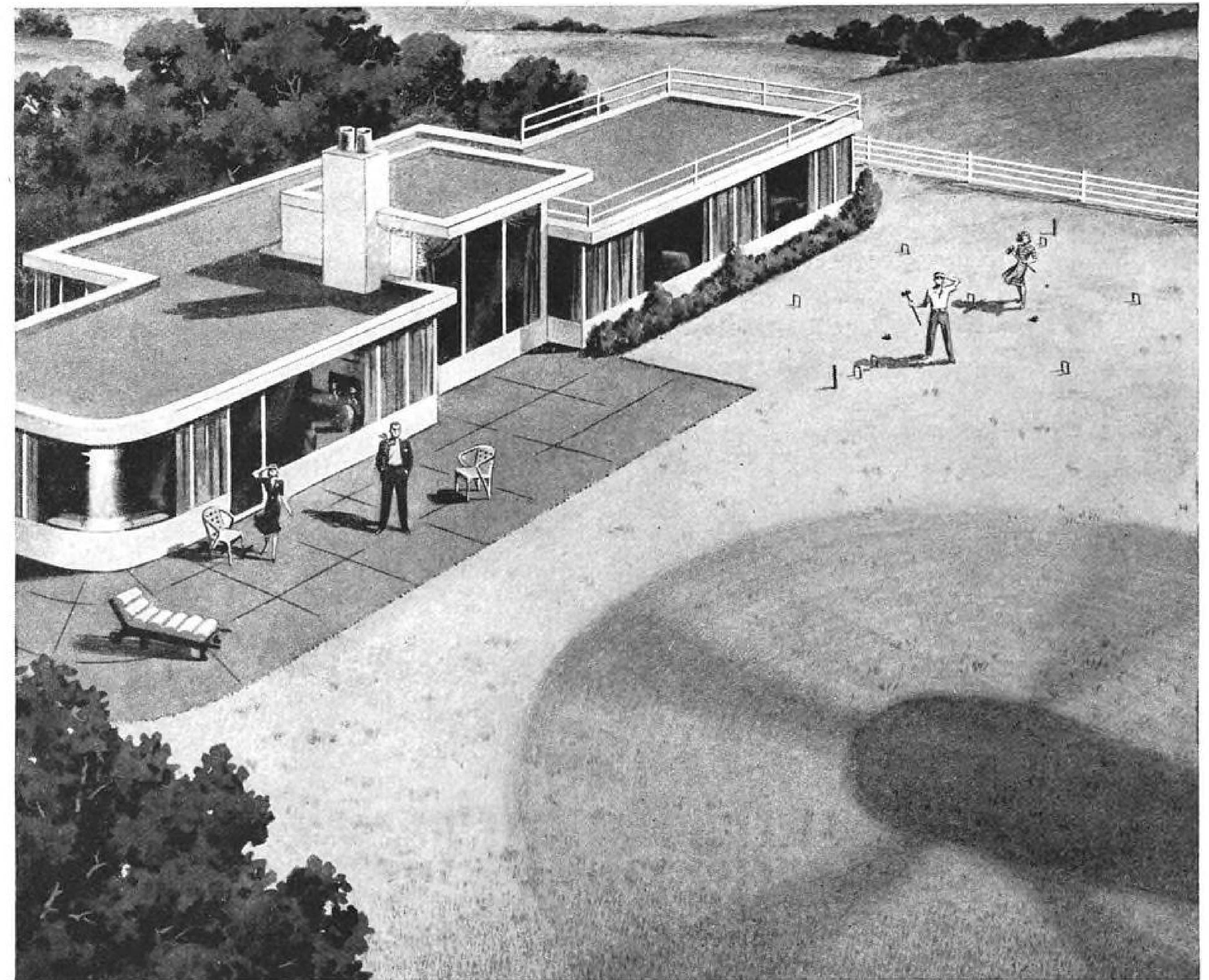
Using the estimate previously supplied by William R. Kent, Southern Air Services, Memphis, that by 1950 there will be a million pilots and 292,500 private air-

craft, Robie pointed out that this was a ratio of 3.4 pilots to a plane, "an excellent ratio" for plane rentals.

► **Drawbacks**—Taking up arguments offered against plane rental service, Robie admitted that plane crackups and other damage to rental planes would be greater because of lack of responsibility of pilots, and that insurance rates would be higher "until the development of a good experience," but pointed out that these factors obtained equally in the auto rental business.

A plan of national operation with individual operators working in a reciprocal organization would take care of returning planes to base stations, and would set maintenance standards for all operators, and would also provide for uniform, checking out of pilot customers, and providing them with credentials good at any member operator's base.

► **Plane Renting**—Robie predicts that plane-renting will follow pri-



## "SIGN IN THE SKY..."

See that shadow! It is symbolic of a new and different type of aircraft. Rapid progress has been made in helicopter development during the war, under Government sponsorship . . . and the modern helicopter can be expected to play a practical and useful part in the great future of air transportation.

The special flying abilities of the helicopter qualify it for many time-saving peacetime applications . . . augmenting conventional air transport . . . serving and saving in uses beyond present limitations.

So look ahead and look aloft. While all present

Kellett facilities are concentrated on military production, the Kellett engineering staff and productive organization are working toward the day when "flying without wings" will take its useful place in tomorrow's skies.

### SEND FOR INTERESTING BOOKLET

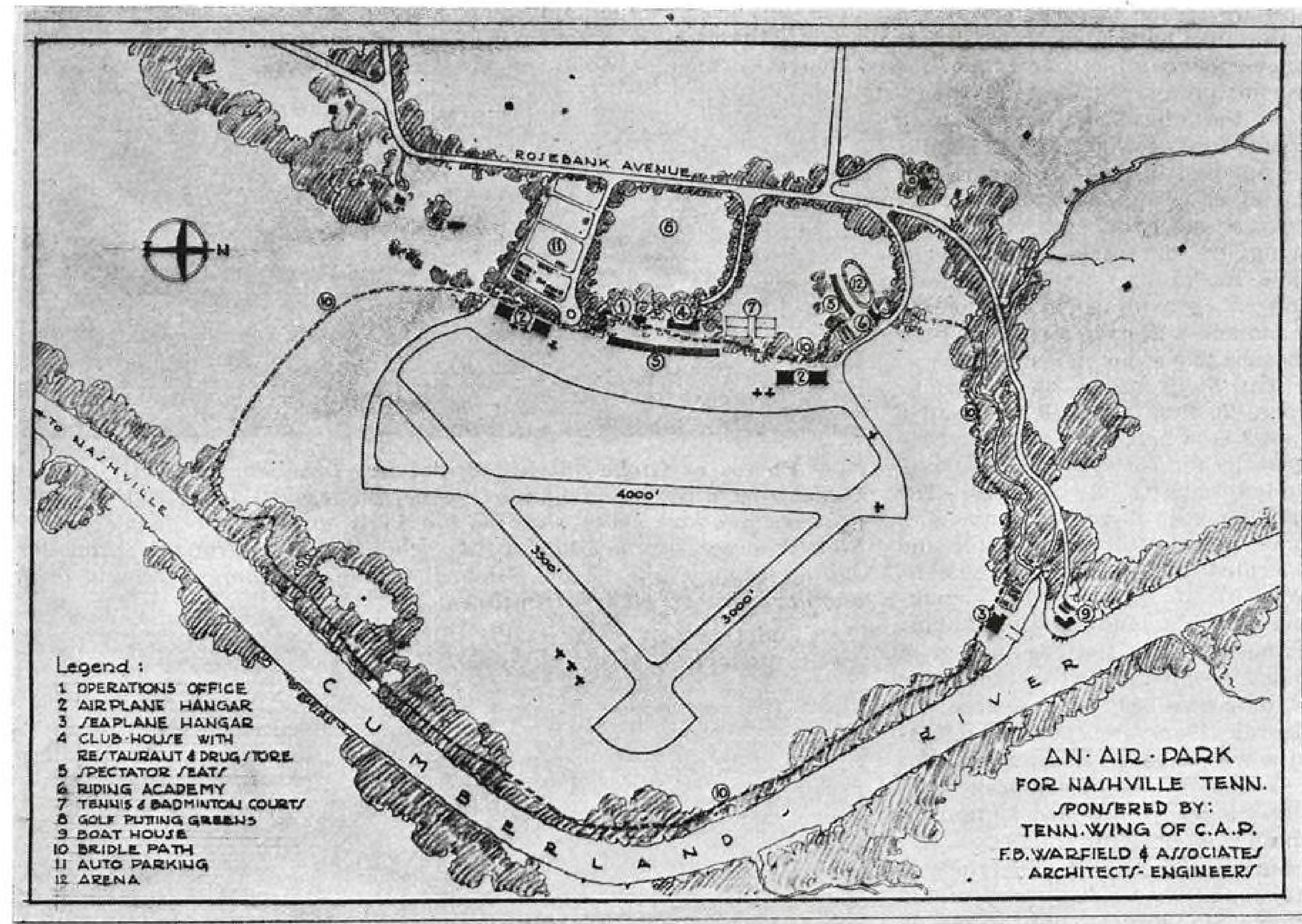
There may be some questions in your mind about the helicopter . . . its capabilities, possibilities, and its probable post-war services. If so, send for an interesting booklet, "Answering Some Helicopter Questions." Write Kellett Aircraft Corporation, Dept. N, Upper Darby (Philadelphia), Pa.

# KELLETT

OLDEST ROTARY WING AIRCRAFT MANUFACTURING COMPANY

AVIATION NEWS • December 11, 1944

25



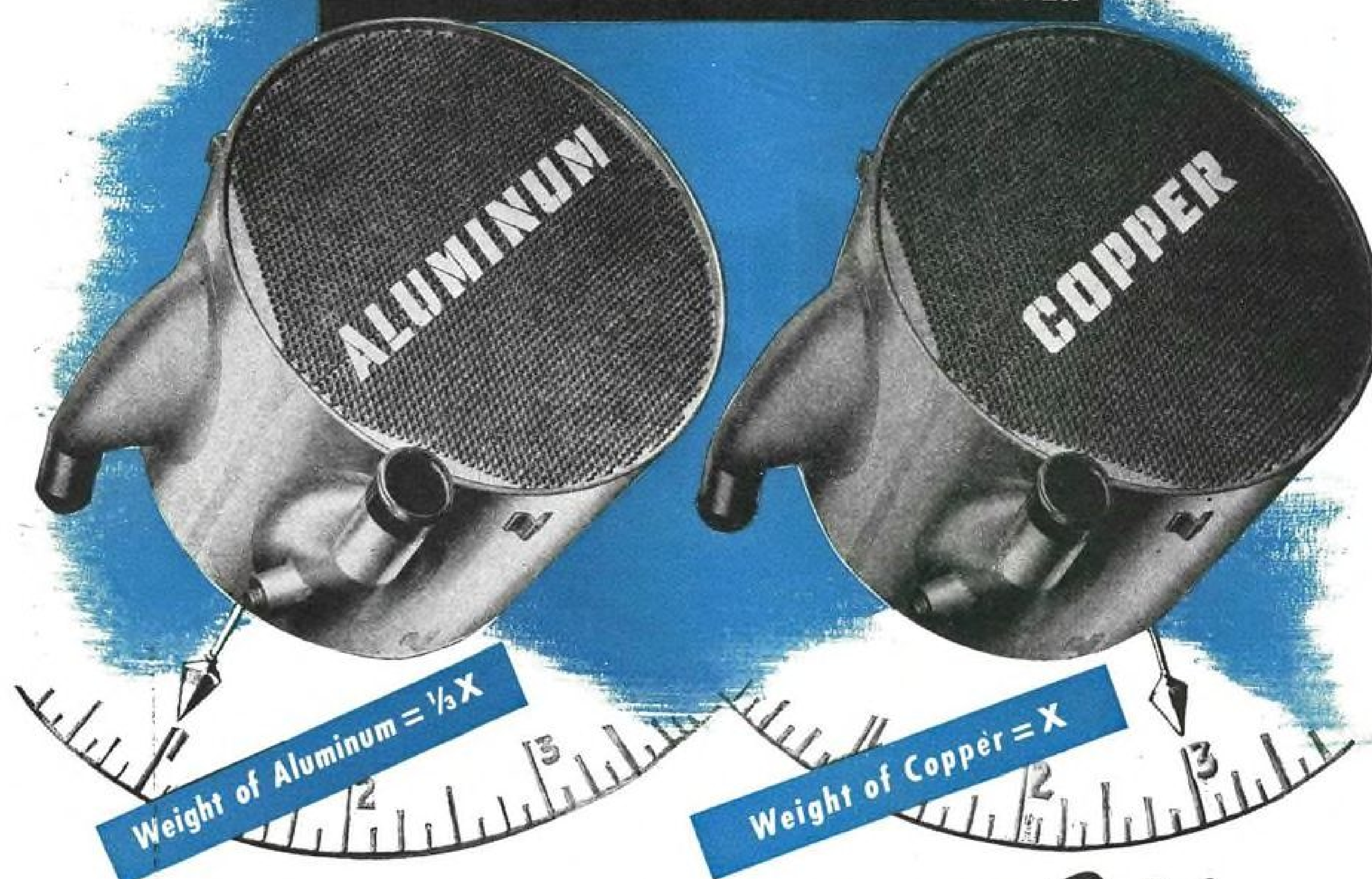
## NASHVILLE CAP AIRPARK:

Total expenses of less than \$150,000 are estimated for the proposed Nashville, Tenn., airpark, located in a bend of the Cumberland River with facilities for floatplanes as well as landplanes. Sponsored by the Tennessee CAP Wing, and the State Bureau of

Aeronautics, the proposed airpark would include sod runways, operations office, hangar, clubhouse with restaurant and drugstore, spectators' seats, riding academy with bridle paths circling the field, tennis courts, golf putting greens, and parking space.



**COOLING AIRCRAFT ENGINES WITH ONLY 1 POUND  
OF ALUMINUM TO EACH 3 POUNDS OF COPPER**



**WITH CLIFFORD  
FEATHER-WEIGHTS }**


**WEIGHT  
SAVING =  $\frac{2}{3}X$**

Feather-Weight all-aluminum oil coolers and coolant radiators . . . made of Hydron extruded tubing . . . brazed by Clifford's patented method . . . represent "one of the greatest contributions in recent years to reduction in weight of equipment items for aircraft." So reports the Society of Aeronautical Weight Engineers in presenting Seal of Approval Certificate No. 44-16.

Battle-tested in two types of USAAF fighters, saving approximately 120 pounds in one and potentially more than 300 pounds in the other, Clifford Feather-Weights are now being developed in elliptical and oblong shapes for new warplane models.

How about Feather-Weights for post-war planes? Although our production is 100% in war work, our engineering department occasionally finds time to do a little looking ahead. Already we're in correspondence with several aircraft manufacturers who have an eye for the future . . . who can visualize the increased payload, speed, range, obtainable by replacing heat-deteriorating, heavy-weight copper with heat-treatable Feather-Weight Aluminum in oil coolers and coolant radiators. Maybe we can do some planning with you? Let's talk it over.

**CLIFFORD MANUFACTURING CO.**  
562 E. First St., Boston 27, Mass.



**CLIFFORD'S**  
"HYDRON" BELLOWS


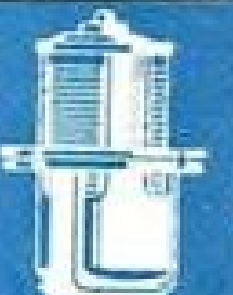

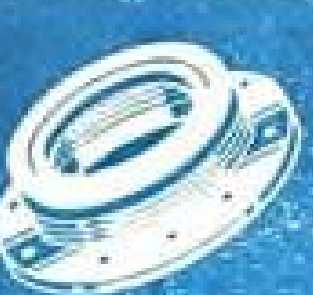
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*FeatherWeight*

**OIL COOLERS  
COOLANT RADIATORS**

Save  $\frac{2}{3}$  the Weight  
... same size and shape

**... INDUSTRY'S FIRST HYDRAULICALLY-FORMED BELLOWS**



vate air cargo lines, just as truck leasing has followed the trucking business, with "Fly-yourself" companies providing the planes and complete service except for the driver, enabling several companies to have use of the same cargo plane, again providing greater utilization and consequent economy. He also foresees that business firms will utilize U-fly-it planes to supplement their own planes, and when their planes are grounded for repairs.

A questionnaire sent out to auto rental operators indicates that more than 50 percent of the operators are anxious to participate in U-fly-it service. Robie believes the percentage would be even greater now, and concludes with the opinion that the automobile renting business is far from reaching its peak, and that automobile renters are expecting "to take to the air" when America takes to the air.

## Indiana Aircraft Trades Unit Revived

Group, inactive since 1941, votes to reactivate organization and apply for NATA membership.

Fixed base operators and other members of the old Indiana Aircraft Trades Association, inactive since 1941, have voted to reactivate the organization and apply for NATA membership.

Members likewise made the following recommendations to the Governor's Aviation Committee, now formulating a program to be submitted to the legislature:

- ▶ Creation of a seven-member, non-paid state commission composed of a private flyer, fixed base operator, airline representative, doctor, lawyer, banker and the governor. With the exception of the governor, all would be required to hold private pilot's ratings or higher, as would a paid director.
- ▶ Assessment of a one-cent gasoline tax to finance the commission's operation.
- ▶ State adoption of all federal regulations so as to avoid duplication.
- ▶ Some state control over location, construction and operation of airports.
- ▶ Federal aid to municipal and privately-owned airports alike.
- ▶ Encouragement of landing strips adjacent to cities, towns and villages instead of along highways.
- ▶ Immediate resumption of town air marking, with no road markings.

## Georgia to Train Civilian Pilots

State vocational education department reveals plans to use Souther Field at Americus, former Army primary base.

The Georgia State Vocational Education Department plans to offer pilot training to civilians, using Souther Field at Americus, recently vacated as an Army primary base, as the initial center, according to M. D. Collins, state school superintendent, who said the United States Vocational Education Service probably would be empowered to provide funds for such activity after the war.

Although the Georgia Department of Education has no funds for such a training program, it is believed they could be appropriated by the legislature.

▶ **Plan to Be Discussed**—It is likely that the Vocational Department's plan will undergo considerable discussion. The state Aeronautics Advisory Board, through Chairman Cody Laird, suggested that the state should give serious consideration to the management and operation problems involved.

Laird pointed out that the Army training at Souther had been done through a civilian contractor (Graham Aviation) and that the Army had found in conducting all its primary training through civilian contractors that this method was "much more successful and economical."

## \$5,500,000 Port Plan For Atlanta Asked

A program for a \$5,500,000 development of the Atlanta municipal airport (Candler Field), is proposed by L. W. Robert, Atlanta architect and construction engineer.

An all-weather instrument runway, a new administration building with observation ramps, a freight and cargo terminal building with radial loading and unloading mat to accommodate 17 cargo planes are proposed. Dual runways are also planned.

▶ **Ready for Expansion**—Airport Manager Jack Gray said the plan would put the airport in a position to meet "every conceivable demand" of post-war expansion.

At the same time, the Fulton County Board of Commissioners

decided to start legal proceedings to obtain a 500-acre tract 20 miles south of Atlanta for construction of a super-airport, capable of handling "converted B-29s."

## U. S. May Expand Vets' Flight Training

Returning service men already are supplying a new source of pilot trainees at some schools.

Returned veterans of World War II are already providing a new source of pilot trainees in small numbers at some flight training schools, and a study indicates that provisions of the "GI Bill of Rights," Law 346, and the Disabled Veterans' Rehabilitation Law, may make government-financed flight training available to a much larger number.

A few aviation schools already have been placed on the approved list by state departments of education and the Veterans' Administration, as eligible institutions for training of returned veterans. Other schools interested in becoming eligible for this training may obtain information about qualifying from the nearest manager of one of the 53 Veterans' Administration field offices.

▶ **650,000 Candidates**—Estimates are that the main group of veterans expecting to seek post-war education at government expense under Law 346, are among the five million men under 25 years old at the time of induction, of whom approximately 37 percent are high school graduates or have taken some college work before entering the army. Indications are that approximately 650,000 will be candidates for full-time educational courses after the war.

With certain limitations, each returned soldier with "other than a dishonorable discharge" may take a year of educational training, paid for by the government up to a maximum of \$500, for tuition, books, and other school expenses. The expenditure must cover a school year of 30 weeks or more, of full-time work if he receives the full \$500. If his course is less than 30 weeks, the maximum is pro-rated at \$16.67 per week. In addition he is entitled to subsistence of \$50 per month if single or \$75 per month with dependents. ▶ **Time Limits**—If he completes the basic year satisfactorily, he is eligible for additional years of education on the same basis up to three years additional, the years



of training not to exceed the years he has served in the armed forces.

While the law provides that veterans over 25 at the time of induction must show that their education was impeded, or interfered with, in order to receive more than one year of training, it assumes that veterans under that age, have suffered.

Disabled veterans seeking vocational rehabilitation may participate under Law 346, if they choose, or under Law 16, which also provides training facilities. It is assumed that most pilot trainees would not come from this group, although with relaxation of CAA regulations concerning physical disabilities, it is probable that some would be eligible, at least for private licenses. However unless their air knowledge was to be of use to them in their vocation, it is not likely that the government would finance a private pilot's course which stopped there, and did not continue on through commercial or instructor grade.

► **Financing**—At present rates, it is extremely doubtful whether the maximum of \$500 a year permitted would be sufficient to finance most full-time aviation courses for a returned veteran, unless a school provided quarters for him, and received part of his subsistence allowance as well. However, it is quite probable that on a part time basis he could take aviation training at a cost which could be met by government allotments. It is conceivable that a flight school able to serve a considerable number of returned veterans as students might arrange a special ser-

viceman's rate. And it is understood that some of the colleges and universities operating flight training courses in connection with their aeronautics departments, have been able to provide some flight training along with their academic courses, to returned veterans under the Law 346 plan.

## Piper Asks WPB OK On Civilian Aircraft

Approval expected on request for permission to build non-military planes in view of manpower surplus in area.

Piper Aircraft Corp. has requested permission to build civilian aircraft on a large scale starting in January.

The Piper application was sent to the War Production Board last week and has not yet been processed. After preliminary screening at WPB, it will be sent to the War Manpower Commission for approval before final okay by WPB. The CMP4B form used in applying for civilian aircraft production specifies that Piper will not need additional manpower to produce 31 Piper Cub J-3's in January and 100 a month in succeeding months.

Since the Piper Lock Haven plant is not in a critical manpower area it is considered probable that WMC approval will be given.

► **Green Light for Grumman**—Grumman has been given the go-ahead signal on the construction of 25 planes for essential civilian use, the first WPB authorization of its kind. The application of Engineer-

ing and Research Corp., of Riverdale, Md., has been turned down by WPB and is now before the Production Executive Committee on appeal. The application of the *Erco* makers was rejected, WPB sources say, because labor is needed in the Glenn L. Martin plant in Baltimore and the *Erco* activity is in the same general area. The company has essential-rated orders for almost 100 planes.

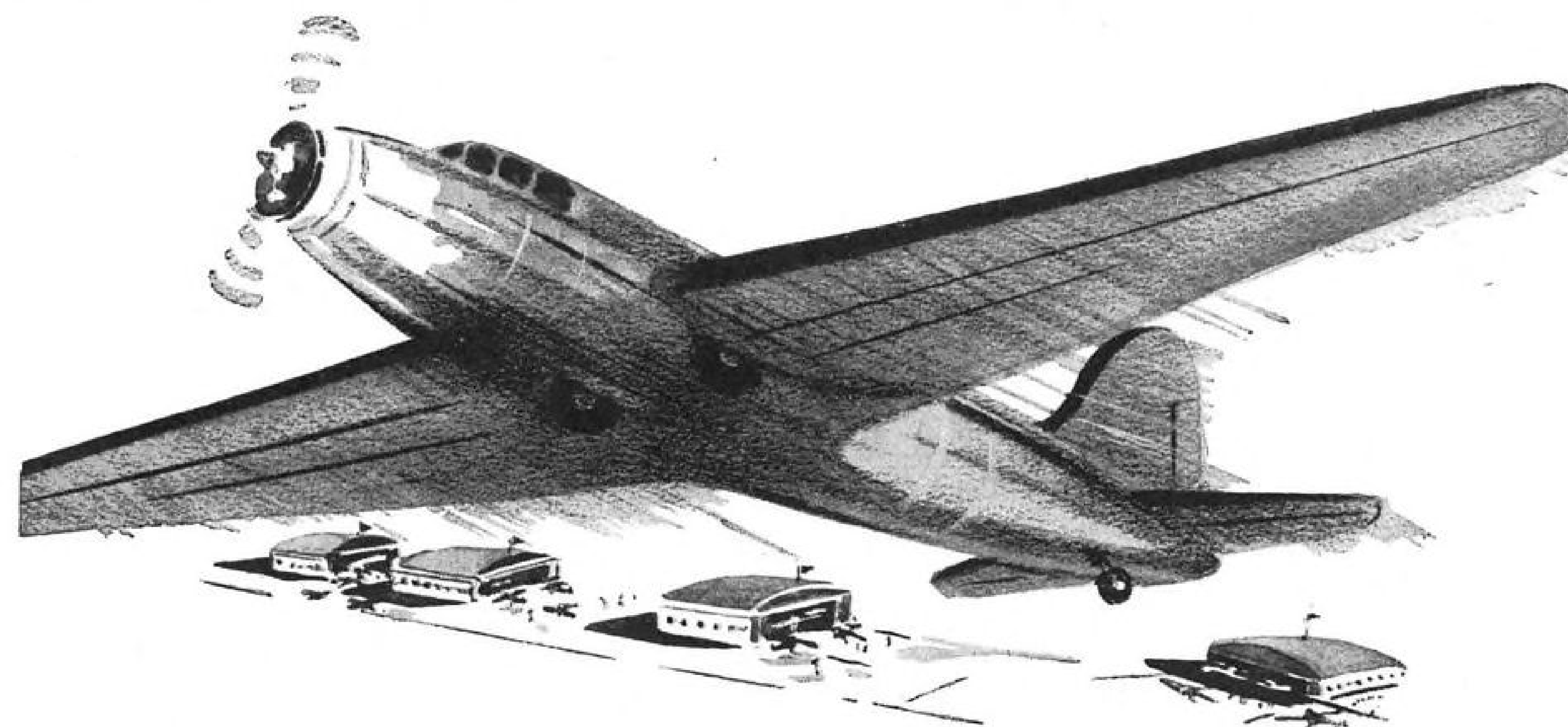
The applications and permission to build, mark a new phase in the provision of airplanes for essential civilian users. Heretofore, some war contractors have been able to secure allocation of planes from service production through the Munitions Assignment Board (Air) and the Joint Allocation Committee, with the services retaining the power to designate essentiality and priority in acquisition of planes.

► **Other Users to Get Planes**—Now the WPB priorities rating branch and the new Aircraft Division is permitting other essential users to obtain planes for civilian production. The WPB is not reconverting the aircraft industry to civilian production through operation of the L-48 order that is applicable, but attempting to provide planes for users who have actual need of aircraft but do not wholly fulfill the requirements of the services.

The priorities rating branch has been attempting since last summer to obtain a yardstick of essentiality under which it could measure applications for planes (which must be submitted on Form 1319). This had not been obtained when the Aircraft Production Board went out of existence, although generally speaking the rating branch has been following its own recommendations in measuring essentiality of applications contained in CMP4B requests for permission to produce for civilian users.

Formalizing of this process will be one of the major tasks of the new Aircraft Division of WPB, which Henry Nelson, formerly of the National Aircraft War Production Council, is expected to head. Morton Wilner, placed on inactive duty status by the Army at the request of WPB Chairman J. A. Krug to act as deputy director of the Division, has begun the work of organization. He has been serving as a major and attached to the Aircraft Scheduling Unit at Wright Field. Nelson, it is understood, has not yet finally accepted the directorship of the Division, but is under considerable pressure to take over the duties.

# Private Pilots: FLY SOUTHEASTERN



## Our ASSOCIATE BASES are opening ALL OVER DIXIE

- Our job today is to look toward new horizons... and to knit together a great pattern of small business in the service of aviation. In so doing we render a greatly needed service to private flyers, to counties and municipalities, to aircraft manufacturers and, in fact, to all who are a part of the aviation industry.
- The organization of Southeastern's Associate Bases is the dominant factor in the execution of our plan, which is simple. Each Associate Base operates as an individual proprietorship or company and provides a local management and local community cooperation. We assist by supplying airplanes, sales financing, insurance and mass

purchasing contact. We also supply our maintenance and service facilities at special rates.

- Individuals who are interested in these franchises throughout Dixie should write to us immediately. We also invite inquiry from manufacturers and others interested in sales or service.
- Because we have spent many months in the preparation of this plan of Associate Bases, because we are experienced in flight operations and because our Associates are controlled by a strict policy of competence in their operations, we believe that we can say with confidence to the private pilot: "FLY SOUTHEASTERN!"

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# SOUTHEASTERN AIR SERVICE, INC.

Executive Offices and Operating Base

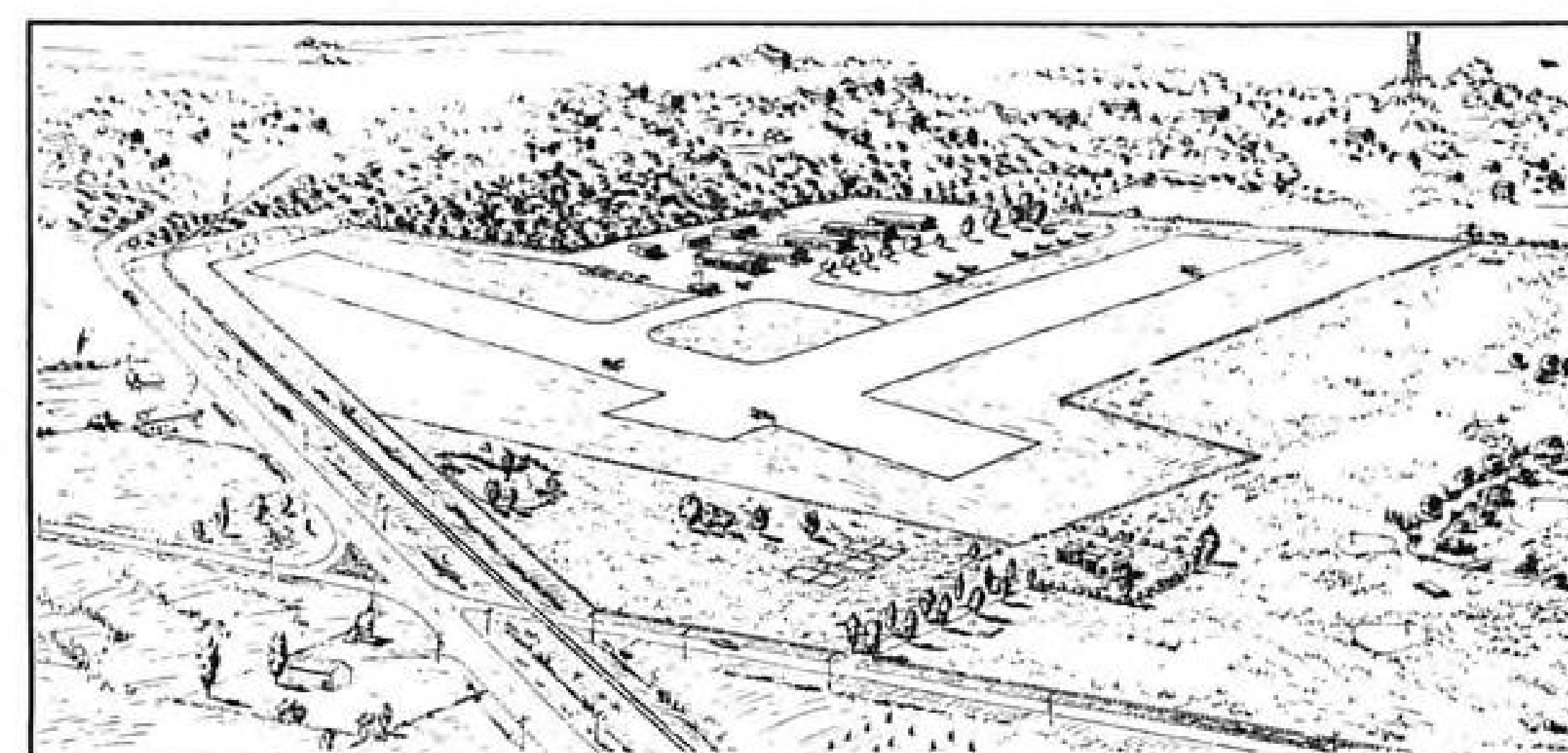
ATLANTA, GEORGIA



ASSOCIATE BASES  
ALL OVER DIXIE

OVERHAUL & REPAIR BASE  
ATHENS, GA.

OPERATING BASE  
MACON, GA.



## MISSOURI'S MODEL AIRPARK AT ELDON:

Model airpark for the state of Missouri is being developed at Eldon, Mo., (population 2,590) as shown in architect's plan above. Financed by the community, on a site at the northeast edge of town and within walking distance of any place in the community, the project is fostered by Missouri state aviation officials, as demonstration of what a small town can do in the Air Age. Runways are turf. Some of the hangars may be erected for demonstration purposes by manufacturers.



## PERSONNEL

\*\*\*\*\*

**Charles W. Perelle**, vice-president in charge of manufacturing of Hughes Tool Co., of Houston, and general manager of the Hughes Air-



craft Plant in Los Angeles, has been elected to the board of directors of Transcontinental and Western Air, Inc.

**Dr. George W. Lewis**, director of Aeronautical Research of the National Advisory Committee for Aeronautics, was awarded the "Spirit of St. Louis Medal," for meritorious service in the advancement of aeronautics, by the American Society of Mechanical Engineers. Other recipients of this medal in the last fifteen years have been: **Daniel Guggenheim**, **Paul W. Litchfield**, **Will Rogers**, **James H. Doolittle** and **John E. Younger**.

**Donald B. Cooper** has been named staff assistant in the readjustment service of the Aeronautical Chamber of Commerce. Before joining the Chamber, Cooper had recently completed a special assignment for Air Cargo, Inc. Prior to that he was principal liaison officer with the Office of Lend-Lease Administration, charged with coordinating the Lend-Lease program with the procurement division of the U. S. Treasury.

**Glenn Gillow** is Western Air Lines' newly appointed traffic representative in Hollywood. He has been in the transportation industry for nine years with airline and railroad companies.

**R. W. Davis** has been named general manager of the Allis-Chalmers Manufacturing Co.'s Norwood, Ohio, works. Prior to his appointment, Davis was assistant manager of the

company's electrical department at Milwaukee.

**E. J. Englebert**, director of service engineering of Marman Products Co., Inc., Inglewood, Calif., is now on leave of absence assisting Bell Aircraft Corp., Marietta, Ga., with their B-29 program. During Englebert's absence he will be replaced by **George Mahoff**.

**Erwin A. Kallenberger**, manufacturing manager of the Caldwell-Clifton plants of Curtiss-Wright Corp., has completed twenty years' service with the company. When he joined the propeller department of the old Curtiss Aeroplane and Motor Co., in 1924, propellers were undergoing the transition from wood to metal.

**Warden Green** has been appointed superintendent of the Newark, Ohio, plant of Goodyear Aircraft Corp. He was formerly general foreman and manager of plant engineering at Newark.

**Robert A. Gaffney** has been appointed associate director of labor relations for Bell Aircraft Corp., and will participate in labor matters throughout the corporation. Until recently on active duty as a lieutenant colonel in the AAF, he was labor relations representative for the eastern procurement district, prior to an overseas assignment. Gaffney also served as commissioner of conciliation in the Department of Labor.



**Robert R. Cole**, Monsanto Chemical Co., St. Louis, vice-president and general manager of the phosphate division, has been elected a member of the board of directors to replace **John C. Brooks**, deceased.

**Jack D. Hughes** is eastern division sales manager for Littelfuse, Inc., and the company has opened a New York office.

**Hobart Hartong**, senior aeronautical engineer at United Air Lines' central maintenance base at Cheyenne, has been appointed assistant superintendent of maintenance at the company's Chicago headquarters. Hartong will be responsible for line maintenance of aircraft radio and electric systems, a function previ-

ously handled by the communications department.

AAF resident representative for the Buffalo and Kenmore plants of Curtiss-Wright Corp., Aviation division, has been promoted to a full colonel.

**Col. Thomas A. Murphy**, a production executive in aviation before the war, was chief inspector for Huff DeLand Co., then designing the first Keystone bomber for the Army, chief inspector at Sperry Aircraft Corp., and Consolidated Aircraft Corp. He was assistant to the president at Chance-Vought Division of United Aircraft Corp., and became assistant to the president and general manager of Sikorsky Aircraft Corp.



**Dean Swift**, formerly of Seattle, announces the opening of offices in New York City, where he will represent the Western Gear Works' plants at Seattle, Wash., and at Lynwood and Vernon, Calif., and Western Gear's associate plant, the Pacific Gear & Tool Works of San Francisco.

**Harry W. Hahn**, recently plant manager of Die Cast Corp.-Warner Manufacturing Co., in Glendale, Calif., has been appointed vice-president in charge of engineering and production for the H. L. Harvill Manufacturing Co., Vernon, Calif.

**Walter R. Jones** has resigned as Chief of the Operations Branch of the Lumber & Lumber Products Division of the War Production Board to resume his former duties as vice-president of The Mengel Company. Jones is also president of U. S.-Mengel Plywoods, Inc.

**Blanca Palacios** has been appointed by the National Aeronautic Association to take charge of its new activities as the United States Wing of the Inter-American Escadrille, hemispheric private flying organization. Miss Palacios was connected with

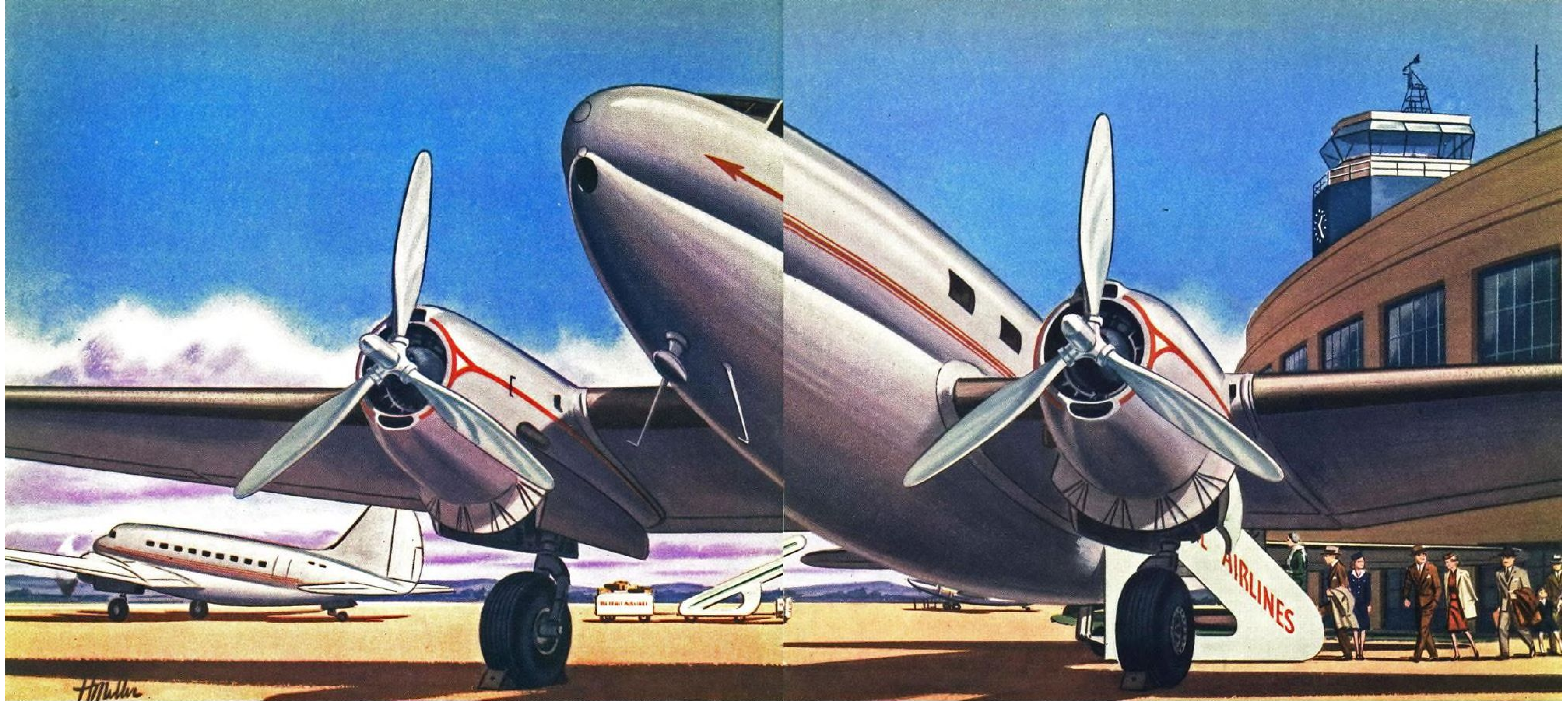


Cia, Mexicana de Aviacion and the western division of Pan American Airways, before she came to Washington to join the division of labor and social information of the Pan American Union.

**Col. Bryant L. Boatner** has been named acting chief of the procurement division in the Air Technical







## WAR PROVED IT WORTHY FOR SKIES OF PEACE

Designed as a peacetime transport, the original introduction of the Curtiss Commando was interrupted by war. It became a military aircraft to fly millions of miles under the severest conditions. It was constantly improved in serviceability and dependability in what constituted a prolonged and far-reaching shake-down test. ★★ Today, Curtiss introduces the peacetime version of this tested and proven passenger-cargo airplane. Richly appointed for passenger appeal, the Commando, with its powerful 18 cylinder Wright Cyclone Engines and Curtiss Electric Propellers, is the world's largest twin-engined transport. It meets a definite demand for larger payload, greater reliability and reduced operating costs—its performance being particularly outstanding on hops up to 700 miles—a range that accounts for over 90% of all domestic air travel. ★★ *"Look to the Sky, America!"* Curtiss-Wright Corporation, Airplane Division, Buffalo, New York.

# Curtiss Commando

★ *Low Bidder for Tomorrow's Air Commerce*



**COMMANDO TRAVELERS RIDE IN COMFORT**

Commando passengers ride in widely spaced, easily adjustable lounging chairs. Cabin temperature is kept at 70° with a complete change of air each minute. Illumination is by indirect fluorescent lighting from the ceiling plus individual reading lights that give glareless illumination in a 20 inch circle without annoyance to other passengers.

**A POWDER ROOM IN THE SKIES**

Toilet facilities of the Curtiss Commando provide conveniences and utilities unknown in pre-war planes. In addition to the ultra modern men's room, there is a smartly styled powder room. Its appointments include all necessary items, plus boudoir table with illuminated make-up mirror, full length mirror and soft lighting.



**NOVEL VESTIBULE AND STEWARDESS' CORNER**

Opposite the entrance vestibule which protects passengers against door drafts, is the stewardess' desk. From it she controls cabin illumination, ventilation and heat. A phone connects her with the galley and pilots' compartment. In addition, her desk is equipped with all material for preparing reports as well as storing accessories for passenger comfort.



**MECHANIZED SKY KITCHENETTE**

A complete sky kitchenette with pantry, the Commando's polished metal galley is a model of compactness and capacity. Equipment, including electric range, grill hot plates, toaster, mixer, bottle warmer, makes possible for the first time a wide variety of menus aloft—a welcome contribution to the improvement of travel by air.





250 CUBIC FEET OF CARGO SPACE FORWARD

Aware of the economic importance to operators of speed and ease in loading and unloading luggage, mail and express, the Commando's cargo compartments are commodious, convenient and accessible through doors large enough to accept a full-size wardrobe trunk.

### THE COMMANDO IS A PILOT'S AIRPLANE

For the pilot, the Commando offers important operational advantages including wide-angle clear vision regardless of weather conditions—excellent responsiveness and inherent stability about all three axes—simplification and convenience of instrument panel controls.

Principal power plant, landing gear, flap and other important controls are grouped on a pedestal equally accessible to pilot and co-pilot. Night and instrument flying are made easier by reflection-free cockpit illumination. Nothing has been spared to provide the finest flight control and ground communication systems in postwar skies.



276 CUBIC FEET OF CARGO SPACE AFT

Both cargo compartments are located beneath the cabin floor in the belly of the airplane. When the airplane is in normal ground position, the aft door is 4' 10" above the ground. In both compartments wire screens protect cargo, accessory equipment, and airplane structure.

# Curtiss Commando

★ Low Bidder for Tomorrow's Air Commerce

Service Command with headquarters at Wright Field, Ohio. Colonel Boatner will serve in behalf of **Brig. Gen. Orval R. Cook**, chief of the procurement division, who is on a special mission.

**Edwin P. Stahl** has been promoted to the position of executive vice president of the J. P. Riddle Co., Miami. Stahl has been general manager of the new Riddle company since its establishment and prior to that was director of the technical division of the Embry-Riddle School of Aviation, Miami. Stahl is presently in Sao Paulo, Brazil, reviewing instructor needs of Escola Tecnica de Aviacao.



Several personnel changes have been made by Northeast Airlines. **Bernard D. Lavoie**, formerly station manager at Boston, has been promoted from supervisor of stations to superintendent of stations. **Charles E. Hunt** has been promoted from station manager at Bangor to supervisor of stations, succeeding Lavoie. **Albert C. Crowder** has been transferred from station manager at Portland to station manager at Bangor. **Albert E. Wyman** has been transferred from Boston to Portland and **Jarvis A. Stebbins** from agent at Boston to assistant station manager at The Logan International Airport.

**James V. Carmichael** has been named manager of the Bell Aircraft Corp.'s Marietta, Ga., plant producing B-29 bombers. Carmichael, who has been assistant manager, succeeds **Carl A. Cover**, killed recently in a plane crash at Wright Field, Dayton. At the same time it was announced that **Ernest J. Englebert** will be placed in charge of production of B-29's. Before joining Bell at Marietta, Englebert was assistant manager of Douglas Aircraft Co., Inc.'s, El Segundo plant. At that plant he was closely associated with Cover, who was an executive of the company prior to coming with Bell late in August.

**Cammy Vinet**, former pilot for All American Aviation, Inc., and a foreign representative of Consolidated Vultee Aircraft Corp., has been named operations manager for TACA Airways in Venezuela.

**M. J. Merrill** has been named head of the Inspection Department of the Tucson Division of Consolidated Vultee Aircraft Corp. replacing **W. C. Mitchell** as chief inspector. Merrill started in aviation 24 years ago with Robinson Aircraft Corp., St. Louis, and has been a Convair inspector since 1936.

**John Edward Schramm**, formerly current operations analyst for the airplane division of Curtiss-Wright Corp., at Buffalo, has become security analyst with the New York stock exchange firm of Sulzbacher, Granger and Co. Prior to affiliation with Curtiss, Schramm was an analyst of aeronautical securities for a Wall Street firm.

**Palmer A. Hewlett**, representative for Consolidated Vultee Aircraft Corp., at Washington, has been appointed export sales director for the company. **Harvey C. Tafe**, service director in Washington, will replace Hewlett, while **O. E. Mecham**, assistant service director, succeeds Tafe. Hewlett joined Vultee Aircraft, Inc., in 1939 as vice-president in charge of sales. A year later he became Washington representative and continued in this capacity after the merger with Consolidated Aircraft Corp. Tafe served as division manager at the Nashville plant and service director at San Diego. Formerly he was sales director for Curtiss-Wright.

**H. W. Crowther** (photo) is system superintendent of maintenance for Transcontinental and Western Air, Inc., with headquarters in Kansas City. Crowther succeeds **William Maxfield**, with whom he served as assistant superintendent of maintenance until



Maxfield's resignation in the fall to join Western Air Lines. He has been with TWA since 1929.

**Dr. Albert E. Lombard, Jr.**, has been named engineering consultant specializing in product development for Consolidated Vultee Aircraft Corp. Dr. Lombard's resignation from his former post as special assistant to the director of the Aircraft Resources Control Office was announced in AVIATION NEWS, Nov. 13.

**Laurie McKechnie** has been appointed director of public relations for the Royal Canadian Air Force, succeeding G. M. Brown. McKechnie has been deputy director for several years, and is the only civilian in the RCAF public relations directorate.

**William McCray Simpson**, formerly stress analyst for the Santa Monica plant of Douglas Aircraft Co., Inc., has become professor of aeronautics and chairman of that department at the University of Kansas. Simpson was instructor in structural design at the University of Missouri before coming to Douglas.

**Donald Still**, San Francisco regional manager of the department of pub-

lic relations of General Motors Corp., was appointed chairman of a new public relations sub-committee of the Bay Area Aviation Committee. Serving with Still is **Will Williams**, manager of the publicity department of the San Francisco chamber of commerce.

**James C. Welsch** has been appointed private sales director for the Stinson Division of Consolidated Vultee Aircraft Corp. A veteran of 20 years in aviation, Welsch joined Stinson in 1938 as eastern sales manager. He was a pilot engineer for two years with the Eighth Air Force and the RAF. Welsch was sales manager for the first company to manufacture light planes in the U. S. After organizing the first combination flying and ground school in Cincinnati, he became business and sales manager for an aviation corporation at that city's Lunken Airport.

**Fred T. Miller**, customer service manager of Adel Precision Products Corp., Burbank, Calif., has been appointed a United States Naval Technician. His appointment was made at the request of the Bureau of Aeronautics and he will serve as a hydraulic specialist with the Pacific Fleet Air Command.



**Lieut. Gen. James H. Doolittle**, commanding general of the Eighth Air Force, was awarded an Oak Leaf Cluster to the Distinguished Service Medal for meritorious service as commander of the Eighth.

**Charles A. Wight**, vice-president of Bankers Trust Co., has been elected a director of Grumman Aircraft Engineering Co. to succeed **B. Allison Gillies**, who has resigned as a vice-president and director.

**Capt. Charles J. Moore**, Navy officer in charge, Post-War Naval Planning Section, Office of Naval Operations, has received the Legion of Merit from Assistant Secretary of the Navy for Air Artemus L. Gates.

**Brig. Gen. W. R. McReynolds** has assumed the duties of Air Quartermaster in the Army Air Forces. He has been director of military training, Quartermaster Corps. As Air Quartermaster, General McReynolds will direct AAF Quartermaster functions and supervise technical operations.

**George Hamm**, manager of the Kansas City District of industrial products sales division of B. F. Goodrich Co., has completed 40 years of service.



## THE AIR WAR

### COMMENTARY

## New Navigation Aids Presage All-Weather Strategic Air Force

U. S. and British release additional data on precision instruments and techniques developed in last three years; round-the-clock bombing of Jap industries forecast.

Another rift in the murky radar blackout broke through last week with brief accounts in the American and British press and radio of the bad weather bombing equipment and techniques which have been developed during the past two or three years by the Royal Air Force Bomber Command and the U. S. Army Air Forces.

(It also may be assumed that the Navy has been active in similar developments). Its importance is evident in the strategic bombing of military and industrial objectives in Europe, by RAF at night and by the AAF through the past 14 months of unfavorable continental weather. However the prospects for 'round-the-clock air attacks against Tokyo's factories and the rest of the concentrated Nipponese sinews of war stagger the imagination. The night attacks of the B-29s were said to have been very nearly as successful as the daylight smashes from the standpoint of bomb damage, with the additional advantages of decreased flak and fighter opposition, return to base in daylight, etc.

**British Developments** — About one year ago, after the first few 2,000-ton night assaults on Berlin, the British Air Ministry announced some details about the development of the work of the "pathfinders," whose techniques had been perfected by intense training and experiment over a period of two years. The first pathfinder units were actually put into operation in August, 1942, the same month during which the first modest but highly significant daylight missions of the U. S. Eighth Air Force Bomber Command were sent over occupied France.

The methods were developed during RAF Bomber Command's battle of the Ruhr, which extended roughly between March and September 1943. During the devas-

tating night attacks on Berlin it was announced that the big Lancaster and Halifax bombers dropped their loads right into the industrial sections of the city. This was achieved by "very precise instrument navigation of the pathfinders" who, once they had found their target, dropped colored indicator flares which were visible through almost 10/10ths of clouds, thus making ground fog no longer the obstacle it used to be. At that time public attention was directed to the "flares" which were dropped by the "pathfinder" aircraft, and now, a year later, a certain amount of information has become available on the "precise instrument navigation" whereby the pathfinder was able to get to its appointed spot with the necessary accuracy.

**Bad Weather Bombsight**—From the published description of its operation, the basic instrument is obviously a radio search set and ranging unit, combined with a bombing computer. As the automatic pilot has been appropriately nicknamed "George" (when the pilot gets a bit tired he can "let George do it"), the American version of the overcast bombing equipment has been called "Mickey."

According to the well-known principle discovered at least a quarter of a century ago when the term RADAR (radio detection and ranging) was coined, Mickey transmits radio waves which strike surface objects and rebound to a receiver in the pathfinder bomber, giving an outline of cities, coastlines, ships, and even groups of buildings, railroad yards, etc. These outlines are thrown on to a circular map-type screen or "scope" and require expert interpretation. It is of course not claimed that for picking up a particular building in a factory Mickey is a match for the Norden

bombsight used in clear daylight, but some of the results have been most remarkable.

**Operational Use by AAF**—The first announced "bad weather" attack by the Eighth Air Force was on Sept. 27, 1943, when some 300 B-17's, escorted by P-47's to the target and back, carried out a successful mission on a 650-mile round trip to Emden, using British type pathfinder equipment. Larger missions against Wilhelmshaven in November, and against Bremen and Kiel in December, with American equipment, were especially noteworthy. Bad weather prevailed during November and December, yet the Eighth carried out more missions in November than it ever had before, and in December broke all its previous records in total bombs dropped—24,000 tons. Early in January, Maj. Gen. Fred Anderson, former chief of the 8th Bomber Command and newly appointed operational deputy for General Spaatz' U. S. Strategic Air Forces in Europe, revealed at a press conference in Washington that most of the missions in November and December had been carried out by means of a "new technique" permitting the daylight bombers to strike through cloud cover.

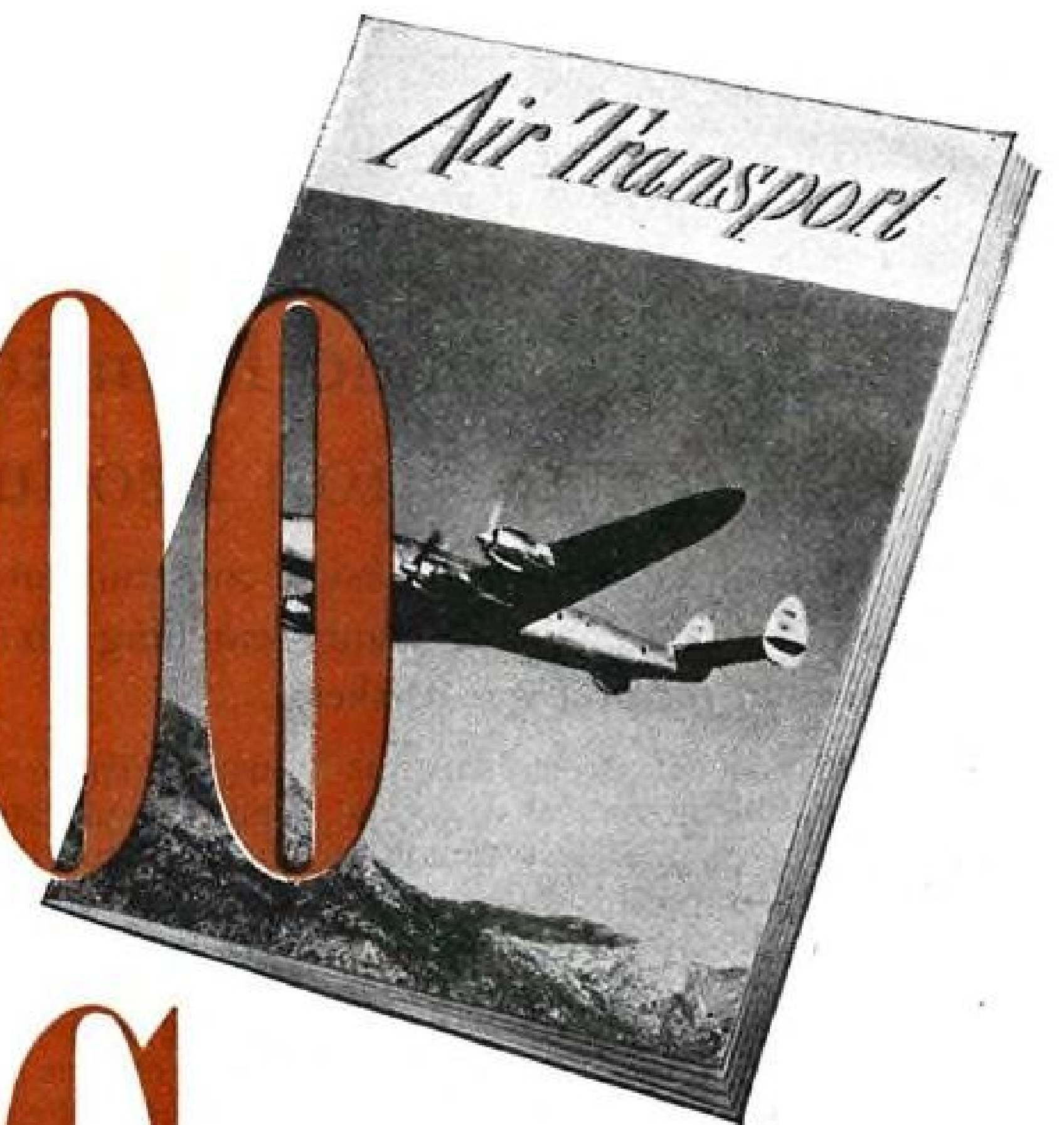
Recent accounts indicate that the use of this equipment has spread to the Fifteenth Air Force in Italy, and that it is not confined to daylight operations in bad weather, but that regular night bombing missions are now carried out. Press dispatches concerning the first night attacks of the Superfortresses from Saipan stating that "precision instruments enabled the bombers to hit war industries despite obscuring clouds" are full of significance and spell the worst possible news for Tokyo.

NAVIGATOR

## Hardin Commanding Pacific ATC Wing

Brig. Gen. Thomas Hardin has been assigned commanding general of the Pacific wing of the Air Transport Command with headquarters at Hamilton Field, San Francisco. General Hardin has been commanding general of the India-China division of ATC and was in charge when tonnage crossing the hump reached its peak. He will have as executive officer Col. Richard Fell who was with him in the China-Burma-India theater.

# 10,000 A.B.C.



*in less than a year*

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A RECORD without precedent in its field. Eloquent testimony from industry leaders of the urgent need for a publication devoted wholly and exclusively to the specialized needs of air transportation.

A RECORD of unusual significance because (1) circulation is carefully confined to airlines men, executives of aircraft and parts manufacturers and civilian, military and government authorities concerned with air transport; and because (2) AIR TRANSPORT's subscription price is \$5.00 a year in a field where \$3.00 is usually top.

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O. M. Mosier, Vice-President, American Airlines, Inc.: "I commend you for the brief, forceful and constructive manner in which you have approached the future program of air transportation."

E. S. Gorrell, President, Air Transport Association and Air Cargo, Inc.: "Congratulations on AIR TRANSPORT. Have enjoyed reading it. You've done a great job."

William B. Stout, Stout Research, Division of Consolidated Aircraft Corp.: "The editorials and very excellent material throughout the magazine express the fundamentals of a policy which may well be of value to an ever-growing industry—aviation!"

K. R. Ferguson, Vice-President, Northwest Airlines, Inc.: "Interesting, instructive and thoroughly worthwhile."

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## FINANCIAL

### Beech First Plane Firm to Shift Into Non-Aviation Production

Company's entrance into home construction field may set pattern for other aircraft plants searching for substitute item to turn out for post-war markets.

The entrance of Beech Aircraft Corp. into the home construction field represents the first tangible effort made by an aircraft builder to utilize its resources in the manufacture of a non-aviation product.

One of the chief reasons why the aircraft industry has been regarded as having poor post-war prospects has been the limited markets it is believed to have for peace-time airplane sales in relation to the huge production facilities available and keyed to war-inflated needs. Even the most pessimistic concede that the demand for aircraft in the years to follow the end of the war will be far greater than the levels obtaining prior to 1939. Nevertheless, overall capacities may not be gainfully occupied if devoted solely to airplane production.

► **Techniques**—A way out is believed to lie in the application of airplane production technique to other manufacturers. A wide variety of household items along with sundry complex machines including automobiles have, at one time or another, been under consideration by the aircraft builders. The big stumbling block has been the lack of a strong dealer or selling organization.

The Beech venture is a joint affair with Dymaxion Dwelling Machines, Inc., who presumably will "merchandise" the houses along with supervising the building of the initial units.

► **Precedent**—There is ample precedent where successful transition from one industry to another has been made. The automobile group, at the outset of its history enjoyed a boom very similar to that of the present day aircraft companies. There were innumerable units all fostered by a new and promising industry. As the initial market demands became satiated and the competition increased, a decided contraction took place in the in-

dustry. There were mergers, companies liquidated and other units turning in other directions. The aircraft group may one day follow the same pattern.

Who today would guess that a leading beer and ale is being produced by one of the nation's auto pioneers. The old Peerless Motor Car Corp. manufactured automobiles from 1901 to 1931. It was very successful but in the late years of the period ran into a string of deficits. It decided upon a bold course of action and converted its facilities into a brewery and became known as the Brewing Corp. of America. The well known Carlings Beer and ale now comes from the production lines once devoted to auto manufacture. Strangely enough, the company earned more money in one year than its progenitor ever did during a similar period in the past.

► **Nash**—Another case is that of the Nash Motor Car Co. The company came into the thirties surfeited with cash and dwindling sales. The founder, Charles Nash, was tired and looking for management skill. The result: Nash-Kelvinator Corp., which combined a leading household machinery producer with a motor car builder. The former was short on cash and resources but long on a successful product and management ingenuity. The combination worked, plant facilities and cash were profitably employed and considerable success attended the new combine.

There are many other cases on record where complete transitions, or the less drastic expedient of diversification to other products, have been attempted with a high degree of success.

The pessimists who portend dark days for the post-war aircraft builders take a very narrow view and come to but one conclusion: there will be more aircraft building capacity than orders. This may

be true but it overlooks some vital considerations. In the first place, this huge capacity will be largely owned by the government and available for purchase on satisfactory terms. Obviously, plants will not be acquired unless needed or where they can not be gainfully employed. As to the plant facilities now owned directly by the industry, substantial amortization and depreciation charges have reduced carrying values to tolerable levels.

► **Cash Position**—It is little recognized, but when war orders cease, it is probable that the aircraft builders will show considerable cash and liquid financial resources. Favorable contract termination and material disposal policies have been established by the government which makes it unlikely that the aircraft builders will find themselves with frozen inventories and unwanted commodities. Once in possession of healthy cash positions, the companies can embark upon various courses and will have considerable freedom of action which would otherwise not be possible. They can either disburse special dividends to stockholders or venture forth in new fields.

Generally, any corporate management is loath to declare itself out of business by disbursing liquidating dividends. A partial cash distribution is more probable with every effort made to function as a going enterprise.

► **Pattern**—This may well be the pattern to be followed by most aircraft builders. Not all companies may choose to remain in the aviation business. Some may diversify in other directions as an adjunct to aircraft manufacture, as Beech is now doing.

All this represents challenging opportunities to the aircraft builders. The industry has shown remarkable ingenuity in meeting ever difficult production goals. Starting from scratch, a tremendous expansion was successfully accomplished, much to the surprise of established industrial production experts. New principles of construction and new materials were introduced at every turn.

The management ingenuity displayed by the aircraft builders is their best stock in trade. This, with healthy financial conditions, precision-tooled equipment and modern plants, along with trained personnel, should place the aircraft builders at no disadvantage in invading the entrenched markets on other industrial fronts.

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*in the quantity production  
of minute precision parts*



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At Wadsworth, such production is customary, and meets the highest critical standards.

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We welcome conversations with all companies who intend to be postwar factors in their fields and will be glad to discuss the matter of applying Wadsworth skills to your special needs.

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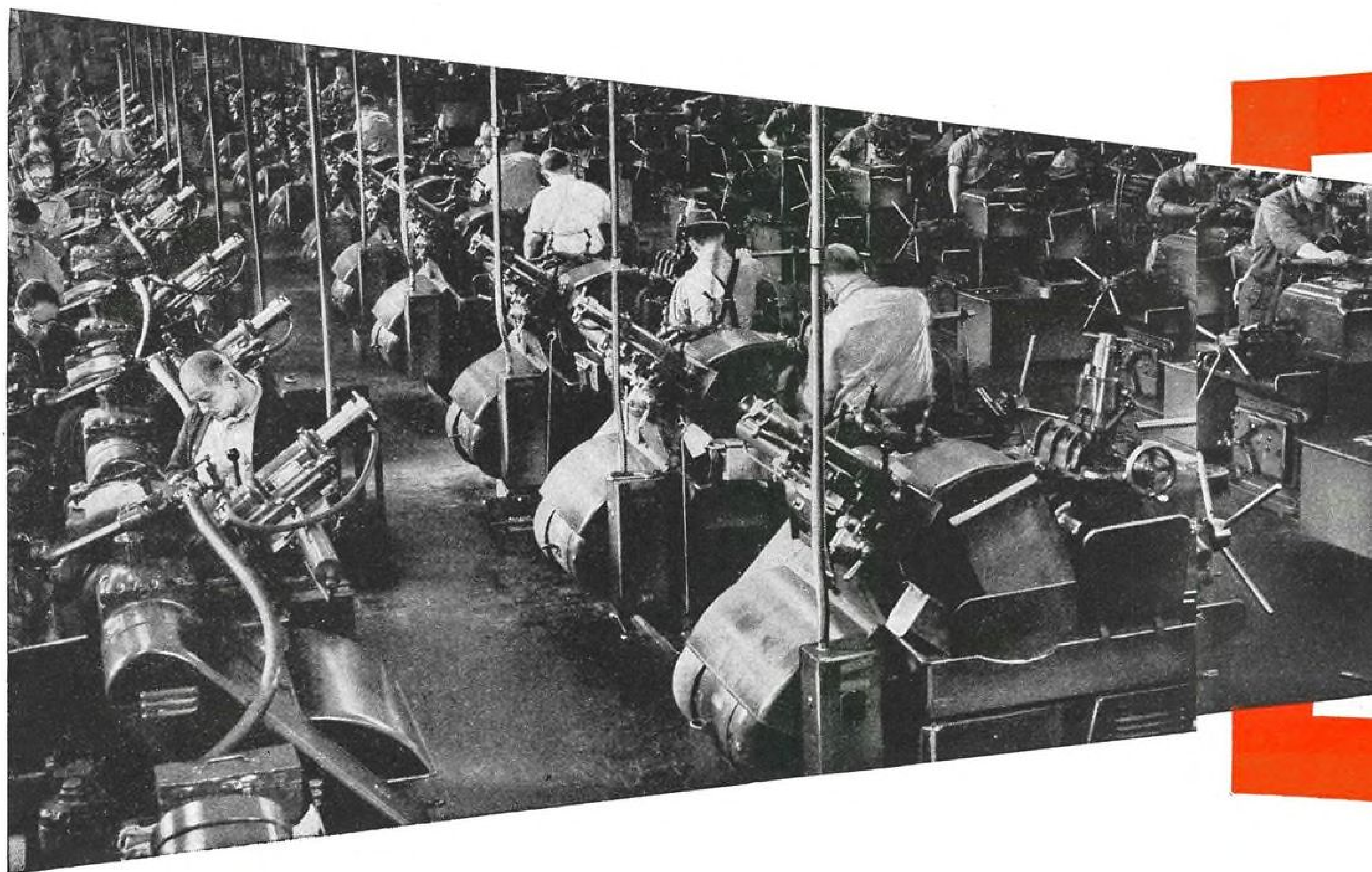
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are contained in Ordnance Specification P.S. 300-4. This deserves your most careful consideration.

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# TEXACO

# Rustproofing Products

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METROPOLITAN OPERA BROADCASTS SATURDAY AFTERNOONS



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The use of Fiberglas XM-PF, sound absorbing insulation, instead of the material previously in- stalled, effects a weight saving of 50 pounds on each 21-passenger plane.

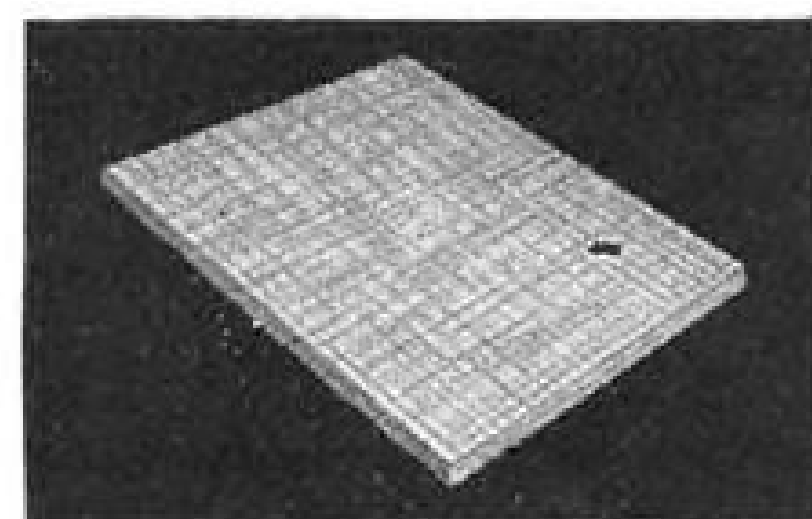
In addition to its high sound absorption, Fiberglas XM-PF, being made of glass fibers, is incombustible. And because it does not absorb moisture, it prevents added weight from accumulating in the inner lining of the ship under conditions of high humidity. It is resistant to vibration and can be applied to curved or flat surfaces. This efficient insulation material is made in large, flexible sheets, of various thicknesses, and is easy to handle, cut, fit and install.

In other forms, too, Fiberglas is serving the military and commercial aircraft industry in both new con- struction and reconversion work. Woven into textiles, Fiberglas provides a fireproof fabric for a number of specialized applications.

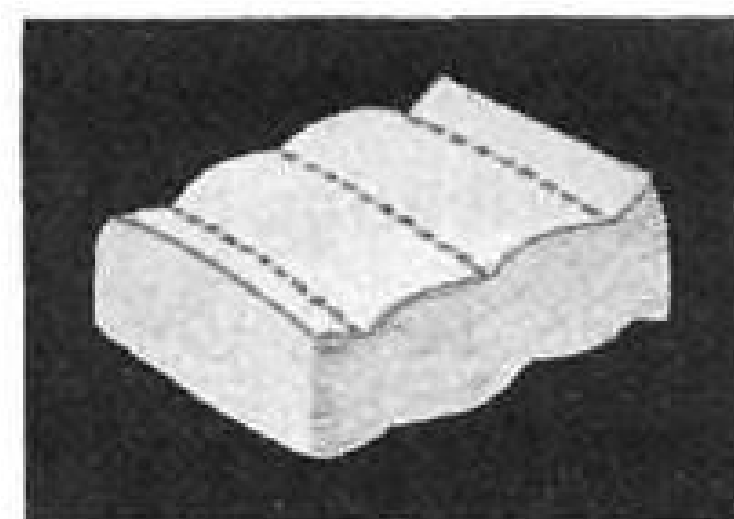
Still other types of Fiberglas textiles are impreg- nated, treated or coated to provide materials possess- ing a unique combination of mechanically, chem- ically and electrically important characteristics.

And, when used to reinforce certain types of plastics, Fiberglas permits the fabrication of excep- tionally strong, lightweight, easily formed struc- tural parts.

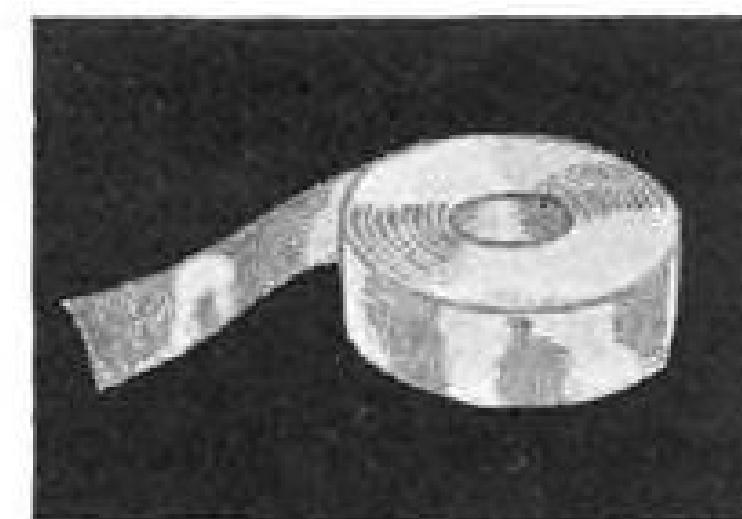
If you do not have complete data on Fiberglas in its various forms, write: Owens-Corning Fiberglas Corporation, 1892 Nicholas Bldg., Toledo 1, Ohio. In Canada, Fiberglas Canada Ltd., Oshawa, Ontario.



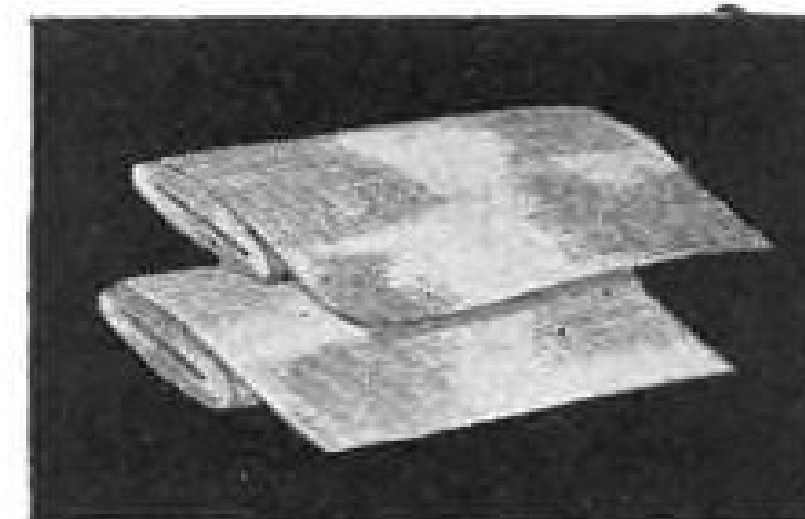
**AIRCRAFT REINFORCED PLASTIC PARTS**—fabricators are combining certain low-pressure resins with Fiberglas fabrics. Light weight, impact strength, sound damp- ening. Used for panels and formed parts.



**AIRCRAFT BLANKETS**—for thermal in- sulation. Fireproof. Made of Fiberglas insulating wool, faced and attached with Fiberglas cloth and thread. Avail- able in 1½ lb. and 3 lb. densities.



**AIRCRAFT TAPES**—another all-glass product, woven from Fiberglas yarns. Incombustible. Used for insulating motors, generators, etc., for lagging of thermal insulations on ducts and pipes.



**AIRCRAFT COATED FABRICS**— used as a base for rubber, vinyl compounds and other coatings. Dimensional stability, high strength, humidity resistance. Used in flexible connections, etc.



# FIBERGLAS

\*T. M. Reg. U. S. Pat. Off.

## PRODUCTION

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## Constellation's 5-Yr. Development Described by Lockheed Engineer

Results of exhaustive design tests will find extensive use in larger post-war aircraft, C. L. Johnson tells Institute of Aero- nautical Sciences in Los Angeles meeting.

By SCHOLER BANGS

Constellation design objectives were detailed for the first time by C. L. Johnson, Lockheed Aircraft Corp.'s chief research engineer, in a paper read before a special meet- ing in Los Angeles of the Institute of the Aeronautical Sciences, at- tended by 400 Institute engineers and their guests. Johnson re- viewed the five-year development of the airplane and indicated de- sign characteristics that may be expected to be carried into larger post-war transports.

It is his belief that use of hy- draulic control boosts has been proved in the Constellation and that the system will be vital to the success of post-war high altitude turbo jet transports.

► **Wind Tunnel Tests**—He said, also, that wind tunnel tests devised for the Constellation had indicated procedures which will find exten- sive use in testing of future de- signs.

Particular attention was given to spin recovery tests, made with a small model in a spin tunnel, and compressibility effects studied with a steel model in a high-speed tunnel.

Johnson said good results in lab- oratory study of ground effect in landings and takeoffs were ob- tained in Lockheed's wind tunnel by inserting in the tunnel throat a flat deck directly beneath the bal- anced model of the Constellation.

"To say that we conducted hun- dreds of tests of a single feature would be an understatement," Johnson said in describing power plant, frame structure, external de- sign, control, and destruction tests conducted at the company's Bur- bank, Calif., factory and in labora- tories throughout the nation.

► **Exterior Design Retained**—He estimated that laboratory tests were 95 per cent effective in simu- lating actual flight conditions, and cited as an example the fact that, since the test flight of the proto-

type, not one change has been necessary in the airplane's exterior design beyond modification of the pilothouse windows. As has been the case of aircraft of other manu- facturers, the Constellation's origi- nal curved glass windows were re- placed with flat windows for better optical results without any in- crease in drag.

He said six separate nose designs were studied in the approach to the Constellation's present pilot- house design. A dual "bug eye" canopy for the heads of pilot and co-pilot was abandoned, despite its offering of minimum drag and ex- cellent visibility, in consideration of the susceptibility to claustro- phobia of some flight personnel as well as the need for a cabin in which pilot and co-pilot might converse easily.

► **Power Plants**—The audience was particularly interested in the power plant philosophy applied to

## Main Design Aims

Lockheed's Constellation was developed with a designed top speed of 405 mph, C. L. John- son, chief research engineer, revealed for the first time in his Los Angeles address before the Institute of the Aeronauti- cal Sciences.

Quick recovery from a spin was a major design demand predicated on the ever-present possibility that even a large airliner might, under unusual storm conditions, be thrown into a spin.

Johnson's strong support of the control power boost for large aircraft will require the test of time to determine in- dustry enthusiasm.

The extreme opposite of big plane control philosophy is shown in Boeing's Model 377 Stratocruiser 100-passenger air- liner, which uses conventional controls effectively. Following a test flight, Test Pilot Elliott Merrill announced that the big plane responded easily to "one hand" control.

the Constellation and reasons for the final selection of the larger, heavier 2200 hp engine when 1800 hp engines would have sufficed.

He cited the need for a com- paratively complex two-stage su- percharger for use of the smaller engine and said the saving in weight of the smaller engine would be consumed in 2.86 hours of flight at 17,000 feet by increased



## SCRAP ALUMINUM BALED FOR STORAGE:

Scrap aluminum is beginning to move in heavy quantities from aircraft plants to open storage depots provided by the Army and operated by the Metals Reserve Co., RFC subsidiary. It will be held in storage for an indeterminate period. Other quantities will come from scrapped sur- plus combat planes, and not all will be pressed and baled until man- power and machinery are available. Photo was taken at the Northrop plant, and the scrap will be shipped to the Air Technical Service Com- mand depot at Camp Haan, Calif.





HARRIS

## A-N SHOCK MOUNTS

HARRIS A-N standard shock mounts are made in two types, steel and dural (non-magnetic) and conform to the joint Army-Navy specifications AN-1-16 and drawing AN-8008.

They have been approved by AAF (Wright Field) and are used extensively by the Army, Navy and aircraft manufacturers.

Made in the full range of load ratings in all standard sizes and types.

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fuel consumption of the smaller engine operating at a higher percentage of power output. The larger engine, operated at a lower percentage of power, offered a fuel consumption of 0.44 lbs./brake horsepower/hour, whereas the smaller power plant indicated a fuel consumption of 0.56 lbs./brake horsepower/hr.

Final adoption of straight, frontal ventilation of engines, and air intake followed numerous tests of experimental designs with intakes in the sides of nacelles and in the wing leading edge, the latter requiring an unsatisfactory double bend of the airflow from intake to exhaust. Prior to the selection of the larger power plant assembly, two full-size units were tested in flight by mounting on a Lockheed Ventura, which company test pilots promptly named the "Ventilation."

► **Hydraulic Control Boost**—Nationally prominent in engineering circles as a prophet of the hydraulic control boost, Johnson recounted painstaking development of the system to its present perfection. A full year's work by a mathematician was required to develop to the point of practical application the company's theory that the power boost could be used successfully to dampen control surface flutter, he said.

In the course of control boost development, Lockheed technicians experimented with force ratios up to 33 : 1, finally modifying the ratios variously to provide desirable pilot "feel" in applying cockpit pressures to rudder, elevator and aileron controls.

Johnson's address will be printed by Lockheed for clients and interested airline officials.

## New Type Fairlead

Development of a new type of fairlead for airplanes, made of plastics and two small pieces of rubber, which is snapped into panel openings instead of bolted in the conventional manner, is reported by the Cycle-Weld division of Chrysler Corp. It is being manufactured in the Chrysler California plant.

It is known as Cycle-Weld Snap Lead, weighs only five grams and Legler Paxton, manager of the operation says the new device can be installed in ten to 30 seconds compared to two to ten minutes for the present 26.2 gram type of fairlead made of bolted phenolic laminated plates.

► **How It Works**—Two tiny rubber

strips which serve the dual purpose of holding two companion plastic pieces together, and providing an elastic grip as the lead is snapped into panel slots, are held in place at four opposite points by an exclusive process of cement binding developed by the company.

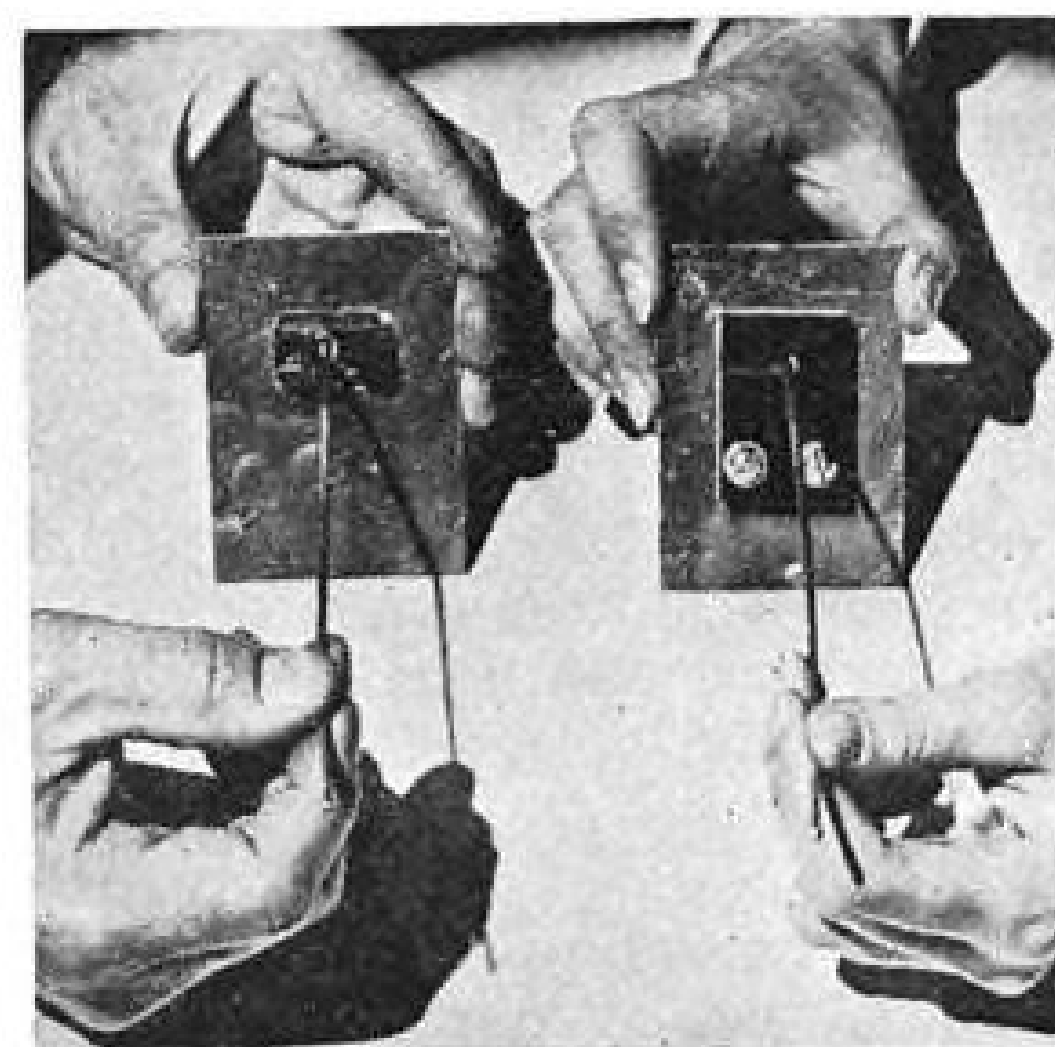
Several hundred fairleads are used in guiding control cables in most aircraft. Paxton said that in addition to saving in weight and installation costs, the device in tests has withstood more wear than present types.

## De-Icers on P-61's

Disclosure that rubber De-Icers, the pulsating type which break off wing-edge ice as the tubes expand and contract, are now being used on fast fighter planes was made by James S. Pedler, manager of the Aeronautical Division of B. F. Goodrich Co.

One of the fighters on which the De-Icers are being installed, after exhaustive tests, is Northrop's P-61 Black Widow night fighter. The De-Icer is a new type, reported to be thinner and lighter than earlier models, but with a heavier ice-breaking quality.

► **Tested on B-24**—Pedler said the new type also has been tested on a Consolidated B-24 Liberator which spent more than a year on a search for icing conditions during which it never had hangar protection and had the De-Icers operating during almost half of the ship's total flying time.



**New Fairlead:** Airplane control cables are shown above being inserted in two types of fairleads. At left, cable goes into the hole with clearance allowed by a bell-shaped mouth which minimizes friction and wear, newly developed by the Cycle-Weld division of Chrysler. At right, cable is passing through a similar hole of a different type.



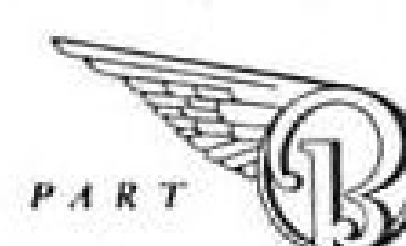
Official U. S. Army Forces Photo

BEECH CRAFT AT-11 BOMBARDIER TRAINER

A bombardier's training is not easy. It demands long days and nights of intensive study and work. That is one reason why American bombardiers have made such excellent scores over enemy targets. Since 1940 most AAF bombardiers, and a large percentage of our country's navigators and pilots as well, have been trained in Beechcrafts. The high regard that these officers have for Beechcrafts is one of our most valued assets.



# Beech Aircraft



CORPORATION

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# THE FAR EAST

## Frontier for American Enterprise

IN THE great tradition of America, our frontier lies to the West. But for a United States that stretches from the Atlantic to the Pacific, to Go West is to arrive in the Far East. The feet of literally millions of our young men are now set upon that route.

Accomplishment of their objective—the defeat of Japan—will not end our responsibilities to the Orient any more than the defeat of Germany will end our responsibilities to Europe. This time we mean to see the venture through.

The first sketch of a political program for enlisting the strength of nations of good will to enforce the peace was drawn at Dumbarton Oaks. That is a good start. But those who participated know how much work remains before the blueprint becomes a fully matured plan, the plan becomes a structure, and the structure takes life and effective being in the living imagination and will of the peoples of the world.

No political accord, however high its purpose, can endure for long if it depends upon the loyalty and support of populations embittered by hopeless poverty that is offered no promise of relief. The poisonous dust of mass despair makes inevitable an ultimate explosion, whether it be sparked by a torch supplied from without or by its own internally generated heat. Much of the Far East is sufficiently close to that position to pose a grave problem to the Western world. It is of particular importance that American business men and workers alike recognize the nature of their responsibility in the matter, for to them the great area of the East presents also an opportunity and a challenge.

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The Orient—stretching in a vast semicircle from Manchuria and Japan to India and Ceylon—is the home of more than a billion people, the world's greatest potential market. In its mountains are the earth's richest stores of tin and mica; its deposits of iron ore, coal, and manganese rival those of France, Russia, and the United States. Its rice paddies are the most productive in the world, its coconut and rubber plantations the largest, and its cotton production is of major volume.

And yet, this fabulous region—with its riches of manpower and raw materials—suffers from living standards at the lowest rung of the world scale. With as much as 85 per cent of the populations of this great area devoted to the production of farm products, starvation has been an endemic plague to count-

less millions of its inhabitants, and will remain so until they graduate from the crudely primitive methods of the crooked stick and the bamboo plow to the use of the implements of a modern world in both agriculture and industry.

The improvement of agricultural methods and the burgeoning of industrial development depends upon tools—a preponderance of simple tools, no doubt, at the beginning, for modernization of economic processes is a development that cannot be forced at a rate faster than the ideas upon which they depend can be developed. If we, in the United States, are to hope to supply a major portion of the implements upon which the salvation of the East depends, we must be prepared to export also the skills and technologies which will make their effective use possible.

The possibility of a world market for machinery and manufactured products is a challenge that American industry cannot afford to ignore. The United States will emerge from the war with almost half of the world's industrial capacity within its borders, with much more than half of the heavy industries. Drastic and painful readjustments are inevitable; but they can be mitigated to the extent that we can find outside markets for the products for which we have excess capacity.

We shall find ourselves, at war's end, in a singularly favored position to compete in any equipment markets which are open. It is not merely that we shall have the productive capacities crying for outlets. Aside from Germany and Japan, which for some time will not be in a position to compete, our two major industrial Allies, Great Britain and Russia, will face enormous tasks in providing for their own rehabilitation. Neither of them is likely to be in a position to export more capital than they absorb; and although Canada, Sweden, and Switzerland will be, the United States will stand alone as the one major creditor nation in the world. If the potential advantages of this position are managed with wisdom and imagination, they will enormously enhance our opportunities for supplying a great share of the capital goods demand of undeveloped areas.

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What is the dimension of the Far East's potential demand? What are some of the difficulties standing in the way of its being realized?

If needs were the only measuring stick, the Far Eastern market would

provide a bottomless pit into which even the great stores of our exportable capacity could be poured with room to spare.

China, alone, with its teeming population of 450 millions, has spelled out needs in dimensions large enough to stir the imaginations of the equipment producers of the world.

Business Week (February 5, 1944) supplements Dr. Sun Yat-Sen's spacious first estimates of the requirements for a thorough-going industrialization program with figures provided by current Chinese planners—25,000 locomotives; 300,000 freight cars; 20,000 passenger coaches; 20,000,000 tons of steel; and 90,000 power driven machine tools for the first five years of reconstruction. An American manufacturer of farm equipment, who recently surveyed the agricultural requirements of China, estimates an ultimate Chinese market for 20,000,000 tractors.

India's drawing-board plans are equally expansive. According to the bold pattern drawn up by a group of Bombay industrialists—some of whom are due to visit the United States early in 1945—India, after the war, will require a capital investment of \$2,000,000,000 a year over the next 15 years, of which \$250,000,000 per year for the first seven years will be in the form of imported capital goods.

Included on the huge import order list of the Bombay executives are mining, roadbuilding and power station equipment, heavy locomotives, metallurgical plants, agricultural machinery, and a long list of machine tools.

There can be no question of the need of these countries for the industrial equipment—and for many items of manufactured goods—which we are so eminently in a position to supply. But realism requires that we measure this demand against the Far East's probable capacity in the relatively near future to absorb industrial goods.

A Chinese economist has estimated that China, in 1937, had a total industrial capital investment of about \$1,000,000,000 in American values, or something like \$2.50 per capita of population. In contrast, the American investment, in manufacturing facilities alone, is now more than \$600 per capita.

What it could mean in terms of capital goods requirements if China alone carries out this dream of modernizing, not to the utopian level of the United States but to the present modest level of the less developed Soviet Union, is typified by measuring just three lines: 500,000 tons of steel a

year, for five years, to add 12,500 miles to the railroad system; 2,187,500 motor vehicles; 3,300,000 telephones.

But it is one thing to cite mountainous figures demonstrating needs. It is another, and far less optimistic exercise, to find assurance that practical opportunities for satisfying such needs can be made to materialize. Let us face some of the major difficulties and see if they are insurmountable.

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The first hurdle to be cleared is the question of whether or not we want to promote the industrialization of the Far East. The wisdom of doing so has been vigorously challenged. The negative argument, on the economic side, generally runs thus: If we provide industrial equipment to backward economic areas, we deprive ourselves of the greater long-run opportunity of selling them manufactured articles which our aid has enabled them to produce for themselves.

It is only fair to say that such a thing might happen—that it has happened in isolated instances in the past. But the overwhelming weight of economic history demonstrates that the broader attitude is also the profitable one.

The United States itself is the living refutation of the fear which now cramps the outlook of many of its own citizens.

From 1790 until 1850 the foreign trade of our new fledged Nation had many of the characteristics which pertain to the trades of China and India today. We imported manufactures and we exported raw materials, agricultural products, and newly mined gold. Our imports exceeded exports, the difference being made up partly by payments to us for shipping services and partly by industrial development loans. It is relevant to inquire how the trade of the lenders was affected by this policy of supplying us with industrial capital and machinery.

From 1850 through 1939 the pattern of America's foreign trade changed. Slowly at first, and then at accelerated pace, our import ledger showed a percentage decline in manufactured goods and a percentage rise in raw materials to feed our expanding industrial facilities. But while finished manufactures declined percentage-wise in our import budget, so great was the increase in our total foreign trade operations in the century from 1830 to 1930 that our imports of manufactured goods increased more than twentyfold, and they more than doubled between 1900 and 1939.

Clearly industrial Europe gained rather than suffered from the industrialization of the United States, and it is equally clear that we, in turn, shall benefit from the industrialization of the world's undeveloped territories. Further evidence is provided by Canada which, with its high industrial development but only 12 million people, buys

from us each year almost as much as the relatively unindustrialized 130 million people south of the Rio Grande.

If it be granted, as I believe it must, that the development of Far Eastern countries will be to our advantage as well as theirs, the second question that we should face is the speed with which it can be accomplished. Is there genuine promise in the proximate future of opportunities for American enterprise of the magnitude set forth in the estimates quoted above?

In all fairness, I am forced to state my conviction that the road is longer than is indicated by Chinese and Indian leaders. It is natural, and far from censurable, that their eyes should be focussed upon the urgency of national needs, rather than upon obstacles in the way of their fulfillment.

On the other hand, it is possible that our own long process of industrialization may lead us to conclusions of undue conservatism. Ideas, once they break the crust of resistance are the most contagious of bacteria, and the tempo of their infiltration seems to increase by geometrical progression in a world of swift communication.

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In an interesting recent study of The International Labor Office, it is suggested that the general economic level of the rest of Asia outside Japan in the late 1930's was not dissimilar to that of Japan in 1900. Between 1900 and 1936, Japan increased its total capital investment more than threefold devoting between 10 and 17 per cent of its annual income to capital outlays. A comparable tempo of development for China, India, and other Asiatic areas would result in a capital expansion that would dwarf to insignificance the most optimistic blueprints that have been put forth to date. I am not suggesting this as a likely possibility, but rather as a caution lest we, in the name of hard-headed realism, underestimate Asiatic potentials as much as their own nationals exaggerate them.

Finally, in appraising the outlook for American enterprise in Far Eastern markets, we collide, head-on, with the problem of how we are to be paid. Here, hard-headedness can be only a virtue, for the lack of it will breed inevitable disaster for the Asiatics as well as for us.

In the last analysis, the dimension of the American market in the Far Eastern countries will be determined by the dollar exchange at their command, obtained through the products, goods, and services which they are able to provide to us, with due allowance for multilateral trade arrangements. It is true that the balance temporarily can be distorted through the extension of developmental loans. There is little question but that such loans will be in order after the war, and if they are wisely made, for productive projects that eventually will increase the ex-

porting capacities of the countries to which they are extended, they can be thoroughly justified. But the best loans provide only a temporary expedient. In the long run, the balance of current payments must be restored with sufficient margin to provide interest payments and finally amortization of principal.

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How, then, are we to attack the problem of increasing our imports from the Orient?

In 1937, the total exports of the Far East amounted to something over \$5,000,000,000—a little less than \$1,500,000,000 in foodstuffs, a little more than \$2,500,000,000 in raw and partly manufactured materials, and better than \$1,000,000,000 of manufactured articles. Of this total, the United States purchased only about 20 per cent—approximately 10 per cent each of the foodstuffs and manufactures, and 30 per cent of the materials.

Despite changes in our technologies which will probably reduce our future takings of such important items as rubber and silk, the achievement of a high level of economic activity in this country after the war will provide a basis for increasing our Eastern imports, but only if it is an accepted part of our national policy to do so.

This means an alert and aggressive exploration of two-way trade possibilities on the part of both American business and our governmental agencies. It cannot be done by either alone.

The war has dislocated many of the trade patterns that prevailed in the past. The East is hungry for the type of products which we, uniquely, are situated to supply, but it will make its bargains with those who will not only fill its needs but will also provide outlets for its produce. Even the prewar magnitude of the exports from this area provides ample margin for the most meticulous and imaginative shopping of Eastern markets with the aim of increasing the modest share of our prewar purchases. And a farsighted program of development loans can greatly increase the capacity of these countries to produce what we want.

In general, we can trust American enterprise to explore rigorously all likely export opportunities. But the equally vigorous investigation of import possibilities will require a break from past traditions on the part of American business and American government.

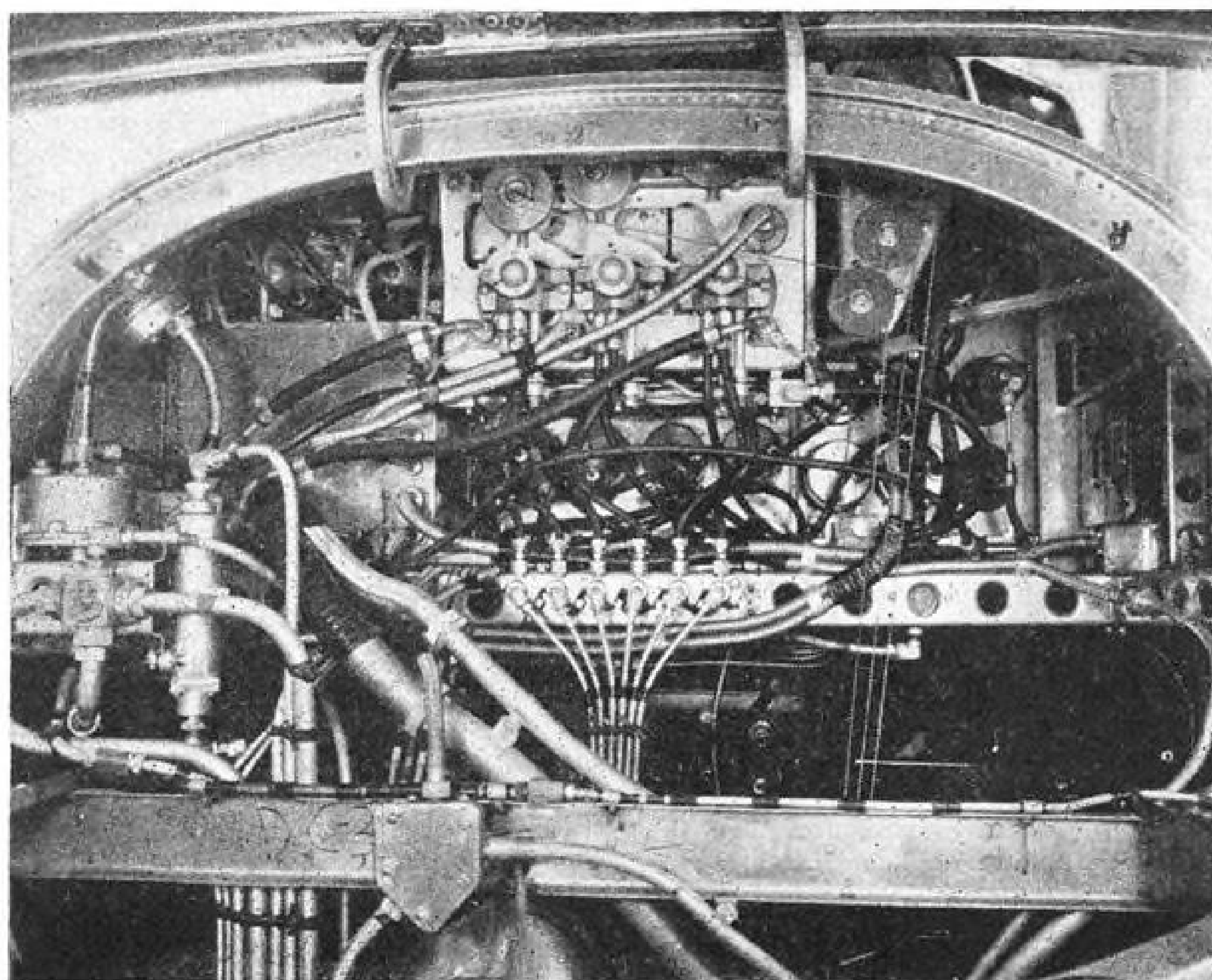
Both East and West must learn to think in new patterns for the successful opening of a new frontier.

*James H. McGraw, Jr.*

President McGraw-Hill Publishing Co., Inc.

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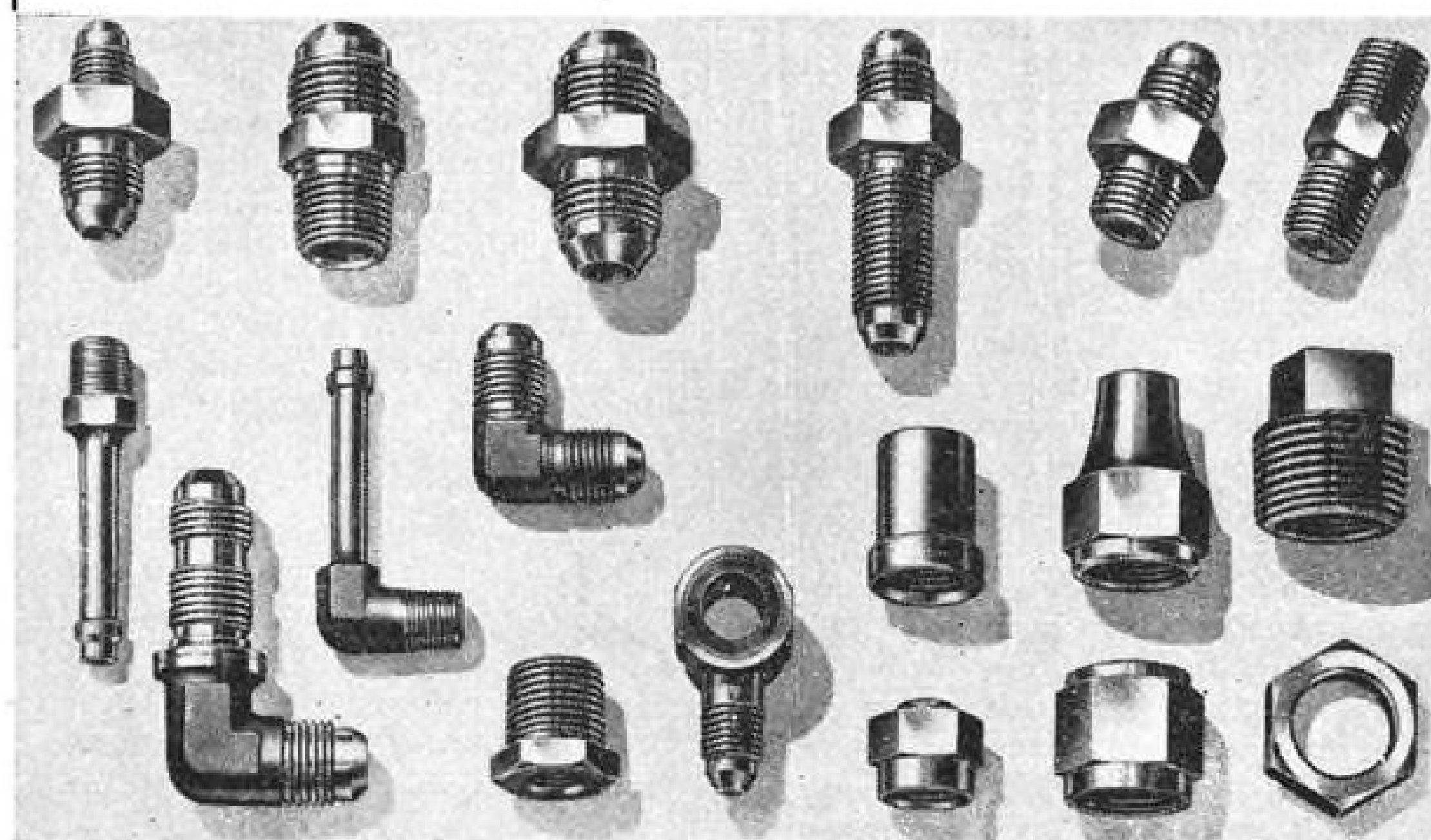
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## Cancellations Curb Fairchild Sales

Production shifts also a factor in decline in shipments for 1944.

Contract cancellations of training planes and engines and shifts in production have prevented continued expansion of sales and shipments in 1944 by Fairchild Engine and Airplane Corp. and they are not expected to equal those of last year.

J. Carlton Ward, Jr., president, indicated that, because of lack of cost experience on products not previously manufactured, it had been considered advisable to take a large proportion of 1944 orders in the form of cost-plus-a-fixed-fee contracts.

► **Profit Margins Cut** — Although this has adversely affected profit margins on 1944 business, Ward said, it was the intention of Fairchild to convert its cost-plus-a-fixed fee contracts to a fixed-price basis as promptly as practicable.

Fairchild directors recently declared a dividend of 20 cents a share common payable Dec. 23, to stock of record Dec. 12. The corporation paid its first dividend of 20 cents a share on Dec. 16, 1943. The dividend declared recently is its second, and in accordance with management policies, reflects the consideration given to the conservation of cash for war production and to meet the uncertainties of post-war financial requirements.

Operations of the corporation include manufacture of airplanes by Fairchild Aircraft Division, aircraft engines by Ranger Division and plastic-plywood aircraft components by the Duramold Division. A subsidiary, the Al-Fin Corp., and an affiliate, the Stratos Corp., are engaged in other engineering and mechanical developments.

► **\$25,000,000 Credit Arranged** — Ward announced that Fairchild Engine and Airplane had concluded arrangements for a Regulation V revolving credit of \$25,000,000 with four commercial banks in New York City to meet current needs and those caused by termination of contracts.

Loans under the credit will be guaranteed to the extent of 90 percent by the Army and will bear three percent interest. A commitment fee of one fourth of one percent will be charged on the unused amount of the loan.

All the banks have participated

in previous loans to Fairchild. They are Bankers Trust Co., Chase National Bank, Bank of the Manhattan Co. and Grace National Bank.

## Plan Packard Test Unit at Willow Run

Allocation of \$725,000 for project approved by DPC and additional grant of \$100,000 is now being negotiated.

Permanent aircraft engine flight testing facilities to be operated by Packard Motor Car Co. at Willow Run Army Air Base will be built under Defense Plant Corp. auspices. DPC has approved allocation of \$725,000 for the project and an additional \$100,000 grant is now being negotiated. The new buildings will include a large hangar, a three-story engineering laboratory and an attached power plant.

Announcement of the project is believed in informed circles to reflect the Army's intention to maintain the airfield at Willow Run as an Army base and to indicate that the mammoth Ford bomber plant will be engineered for standby aircraft production.

► **Ford Program** — Ford Motor Co. has announced it would convert the plant after the war for production of farm machinery and has offered DPC \$93,000,000 for the plant, reputed to have cost in the neighborhood of \$100,000,000.

Since Packard has announced that the new project "need not be considered a temporary Packard operation in the aircraft engine field," it is believed probable that the field will be kept in operation to provide for future emergencies.

The experimental activity of Packard at Willow Run will give that company facilities comparable to those of the large old-line aircraft engine manufacturers.

Packard has been producing Rolls-Royce Merlin engines of original British design. They are used in the North American P-51 Mustang and other warplanes.

► **Plane Engine Development** — Last summer, however, Packard began an aircraft engine development program at the company's Toledo division. This division is developing advanced aircraft engines which will be installed in planes and flight tested at the Willow Run project. The new allocation brings investment in Packard experimental work to \$4,000,000. That the company is nearly ready with the new engines is indicated

by disclosure that immediate experimental work will be housed in the Ford Willow Run plant.

The new project, to be built at the east end of the Willow Run field, will include engineering and modification shops for installation of engine mounts and auxiliary equipment such as coolant and fuel systems, photographic facilities to record engine test performance and instrument readings, radio devices for ground-to-air contact with test pilots.

Packard has long been interested in aircraft engine manufacture through its association in production of Liberty engines in the First World War. Before the start of this war it was brought into the liquid-cooled engine production field by license-manufacture of the British Rolls-Royce engine. It has been manufacturing the Merlin, and no disclosure has been made of transfer of facilities to production of the later-model Rolls-Royce Griffon, strengthening the belief of industry circles that the company intends to develop its own types of advanced, liquid-cooled models for war and postwar production.

## Tax Ruling to Speed Contract Settlement

Recent ruling by the Commissioner of Internal Revenue clarifying the tax effect of "no-cost" settlements of terminated fixed-price contracts is expected to speed the settlement of such contracts, in the opinion of government and industry observers.

The Commissioner's ruling brings out the fact that contractors who waive their right to termination compensation have no accurable income therefrom and may deduct for Federal tax purposes any related costs or expenses which are allowable as deductions under the Internal Revenue Code. This means the same treatment will be given to these items for renegotiation purposes to the extent that such items are allocable to the performance of renegotiable contracts.

► **Joint Statement** — A joint statement by Secretary of the Navy Forrestal, Under Secretary of War Patterson, Admiral Emory S. Land, chairman of the U. S. Maritime Commission, and Robert H. Hinckley, director of the Office of Contract Settlement, said in part that the Commissioner's statement "clarifies the tax treatment of such settlements so that a contrac-

tor is now in a position to decide definitely whether in the light of his particular situation he may utilize the no cost settlement procedure to dispose of his backlog of unsettled terminations."

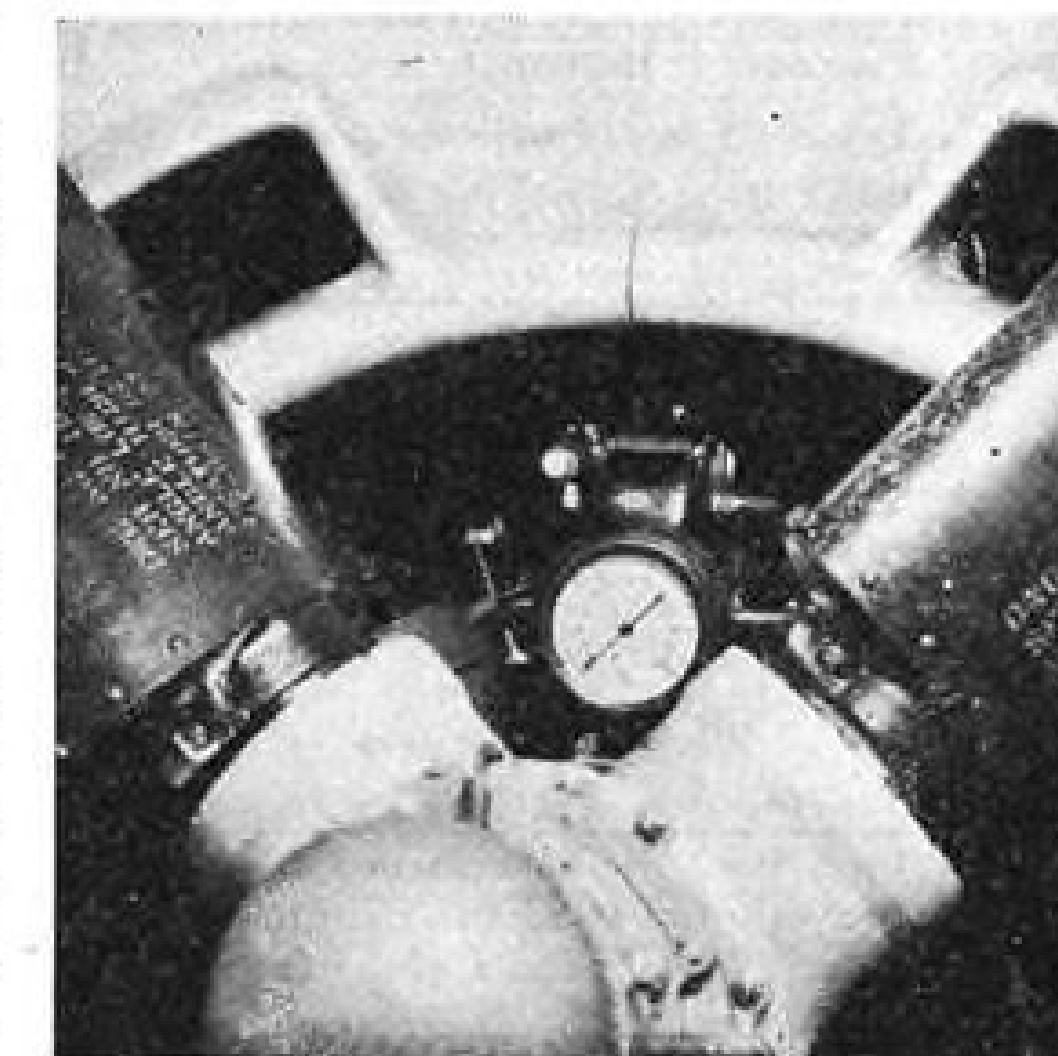
The no-cost settlement procedure, where appropriate, would simplify the contractor's settlement problems, since it makes unnecessary the preparation and filing of detailed claims.

The joint statement emphasizes the importance for industry and the contracting agencies that the backlog of unsettled terminated war contracts be cleared away before terminations occur on the defeat of either Germany or Japan.

## P & W Schedules Up

Engine manufacturing schedules through 1945 at Pratt & Whitney's Kansas City plant have been revised upward by the Navy Bureau of Aeronautics.

More than 1,200,000 horsepower was shipped last month from the Kansas City plant, compared with more than 1,000,000 in October. Bureau of Aeronautics informed L. C. Mallett, general manager, that the plant must jump its peak an additional 250,000 horsepower over previous commitments by November, 1945, and maintain those schedules until the Japs are beaten. ► **4,000 Workers Needed** — Original schedules called for a leveling off in August of 1945. Mallett said at least 4,000 workers must be added to meet new schedules in coming months.



## PRESSURE GAUGE:

Installation of a pressure gauge on the governor pad of the nose section permits quick check of any block in the oil system during pre-oiling of engines before their initial start. A correct reading on the gauge insures that all parts are lubricated. The gauge can be installed and removed in a few minutes.



## TRANSPORT

# Eastern Air Lines Recommended For Great Lakes-Florida Link

Examiner asks certification for 595 new route miles from Columbia, S. C., to Detroit; urges Board to extend Delta Corp.'s system from Cincinnati to Chicago.

By DANIEL S. WENTZ II

The Civil Aeronautics Board received recommendations from its examiner in the Great Lakes-Florida case last week, which if granted, would throw a north-south route across a large section of the Appalachian region hitherto served only by east-west carriers. Examiner Ross I. Newmann proposed that the Board certificate Eastern Air Lines for 595 new route miles from Columbia, S. C., to Detroit, via Charlotte, Winston-Salem and Goldsborough, N. C.,

Roanoke, Va., Charleston, W. Va., and Columbus and Toledo, Ohio, and extend Delta Air Corp.'s route system from Cincinnati to Chicago, via Muncie-Anderson-New Castle, Ind.

The report presented findings on one of the most complex route cases to come before the Board, in which nine applicants sought a network of routes between Miami, Chicago and Detroit.

Among applications Newmann recommended be denied were:

American Airlines, Detroit to Miami.

Colonial Airlines, Detroit and Chicago to Miami.

Parts of Delta's application for routes between Detroit, Norfolk and Miami.

Eastern's request for a Norfolk-Chicago route.

National Airlines—Jacksonville to Detroit.

PCA for various routes between Miami, Chicago and Detroit.

Southeast Airlines, Inc., a non-operating applicant, for a network of routes between Jacksonville, Norfolk and Cincinnati. The examiner recommended that the Board find this applicant not fit, willing and able.

State Airlines, Inc., for a large system of routes between Detroit and Jacksonville.

Virginia Central Airlines, Inc., routes sought between Chicago, Norfolk and Atlanta, not required. It was also stated that the record probably would not support a finding that the applicant was fit, willing and able.

The examiner pointed out that the 595 miles recommended for

Eastern would entail duplication of only 64 miles between Detroit and Toledo, 5 percent of the total new route mileage required. The proposals of all other applicants for the Detroit-Miami link involved duplications ranging from 52 to 57 percent of the new mileage requested.

In addition, Eastern's proposals would accomplish service between Detroit and Miami, found to be required by the public convenience, with a considerably smaller expenditure of capital and addition of personnel than those of the other applicants.

The new service recommended for Delta between Cincinnati and Chicago, although it would install parallel competition with American and TWA over the route, was found required because of the connection it would provide between Savannah, Charleston, Columbia, Augusta, Knoxville, and Chicago.

The examiner found that extension of Delta's AM 54 from Cincinnati to Chicago would strengthen that route and at the same time provide Muncie, Anderson and New Castle with one-carrier service to Chicago and Cincinnati.

## \$25 Million PAA Financing Proposed

Stockholders to vote early next year on underwriting agreement, approved by board with Atlas Corp.

The board of directors of Pan American Airways Corp. last week adopted a program of new financing, which, if approved by a special stockholder's meeting scheduled for early next year, is expected to provide a minimum of \$25,000,000 new capital funds during 1945. According to Pan American's president, Juan T. Trippe, the plan is the most ambitious in the history of air carrier financing and will be the first step toward underwriting the line's vast route and equipment expansion program.

The project, if adopted, will operate as follows: outstanding stock of Pan American will be split on a two-for-one basis; stockholders will be offered the privilege of purchasing one share for each two shares held, together with a two-and-one-half-year option warrant to buy an additional share. The price of the unit of one split-up share and one option warrant will be approximately the price of one of the split-up shares at the time of offering, probably next June.

## ATC Operations

Army's Air Transport Command is now using 2,000 transports and flying 15,000 hours daily over its 160,000 miles of routes, Col. Harold R. Harris, chief of staff, told the Air Cargo Meeting of the Society of Automotive Engineers in Chicago. Other ATC statistics revealed by Col. Harris: there were but nine fatal accidents for every 100,000 hours in international transport in the first eight months of 1944; one fatality in every 8,000,000 passenger miles, excluding over-the-hump runs; average ATC plane utilization is now 7 hours per day.

B. Odum, Atlas' president, as somewhat unusual in that it runs for approximately seven months rather than only for the period of offering to stockholders, and in the fact that Atlas will not be paid a cash fee for the underwriting.

Instead of cash, the underwriter will receive a limited number of option warrants. Atlas Corp. will make a secondary distribution of the stock it may acquire in connection with the transaction, but it can retain 200,000 shares, approximately 3 percent of Pan American's stock, for investment.

**Holds Northeast Stock**—Other aviation activities of Atlas Corp. include an 18 percent stock ownership in Northeast Airlines.

Completion of the financing plan, assuming that Pan American stock remains at \$34 per share during the next several months, reportedly would secure nearly \$34,000,000 in capital funds, with nearly \$36,000,000 worth of option warrants outstanding. Presently outstanding stock of Pan American totals 1,993,261 shares, with Trippe holding the largest block, some 12 percent.

The directors also voted a dividend of \$1 per share payable Dec. 23 to stockholders of record Dec. 16.

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**TWA is ready now** with 4-engine Stratoliners to fly from the United States to Calcutta and to double present transatlantic service at half the present rates.

**TIMETABLE** showing flights to Europe and the East as projected for TWA's "trans-world" airline connecting 10 of the world's 26 major economic areas into a route that will completely encircle the globe.

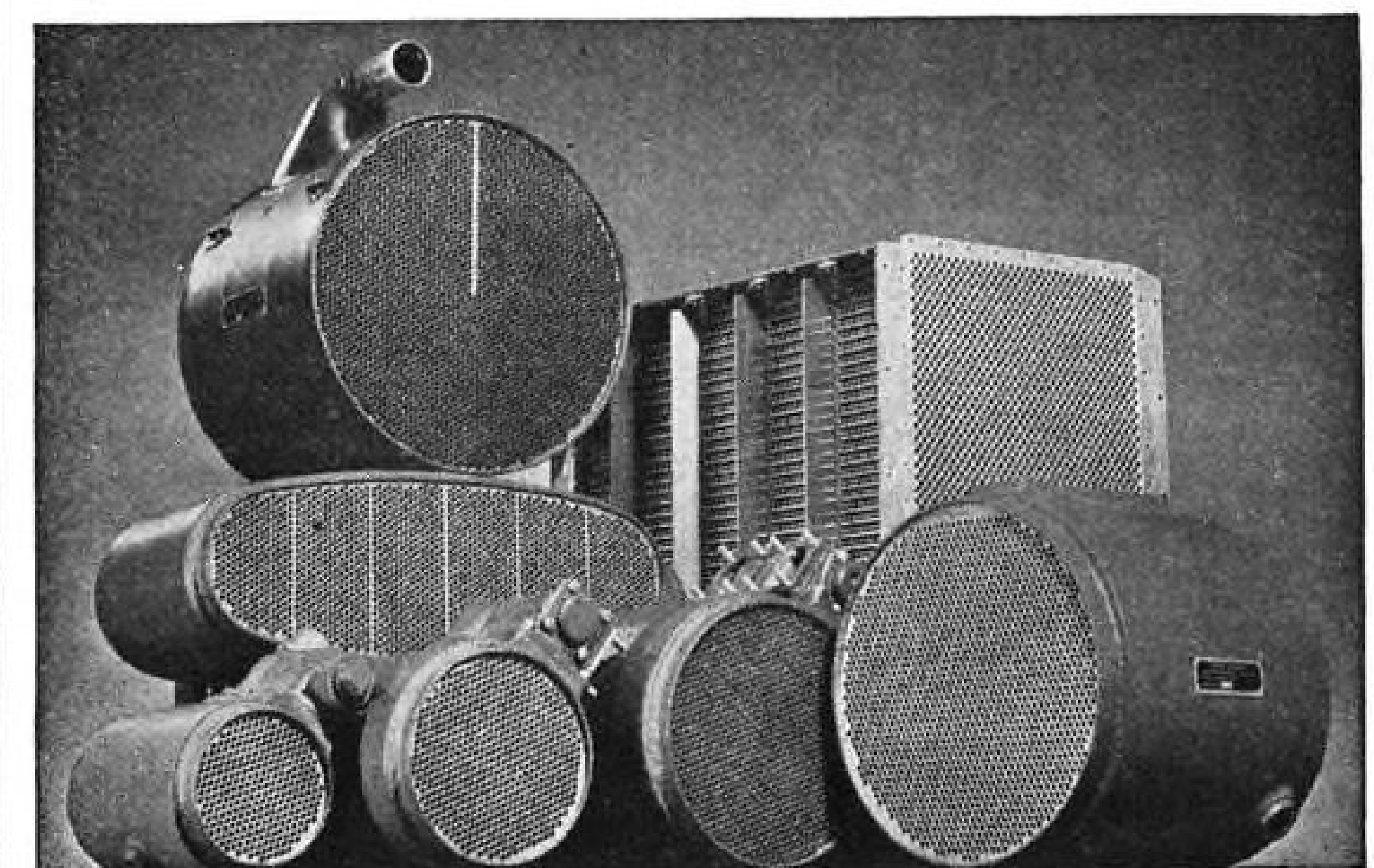
Classed Time	WASHINGTON—CAIRO	Flight 100 Daily	Flight 102 Daily	Flight 104 Daily
WASHINGTON	AM 8:30	AM 8:30	PM 4:15	
PHILADELPHIA	9:55	10:20	5:30	
NEW YORK	11:00	11:30	6:30	
BOSTON	11:30	12:00	7:15	
NEWFOUNDLAND	12:00	12:30	8:00	
ICELAND	12:30	1:00	8:30	
SCOTLAND	1:00	1:30	9:00	
LONDON	1:30	2:00	9:30	
PARIS	2:00	2:30	10:00	
BRUSSELS	2:30	3:00	10:30	
ZURICH	3:00	3:30	11:00	
BERLIN	3:30	4:00	11:30	
MILAN	4:00	4:30	12:00	
VIENNA	4:30	5:00	12:30	
BUDAPEST	5:00	5:30	1:00	
BELOGRADE	5:30	6:00	1:30	
ATHENS	6:00	6:30	2:00	
ISTANBUL	6:30	7:00	2:30	
CAIRO	7:00	7:30	3:00	
CAIRO—CALCUTTA	Flight 106—Daily	Flight 108—Daily	Flight 110—Daily	
CAIRO	AM 8:30	AM 8:30	AM 8:30	
EL-DIVY—JERUSALEM	10:00	10:30	11:00	
BEIRUT—DAMASCUS	11:00	11:30	12:00	
BAGHDAD	12:00	12:30	1:00	
BASRA	1:00	1:30	2:00	
TEHRAN	2:00	2:30	3:00	
KARACHI	3:00	3:30	4:00	
NEW DELHI	4:00	4:30	5:00	
CALCUTTA	5:00	5:30	6:00	

Time of departures and arrivals is shown in the existing local standard time. TWA Constellations will be used on all flights out of the U.S.A. with sleeper and complimentary meal service available at appropriate times. \* Indicates service twice a week only.

## TWA MAPS NORTH ATLANTIC SERVICE:

This advertisement, run in 23 papers in 14 cities by Transcontinental & Western Air, gives a hint of what TWA wants the public to expect in the way of service across the Atlantic and beyond. The projected timetable, complete to flight numbers and elapsed time, was accompanied by a map. Based on information presented at Civil Aeronautics Board's North Atlan-

tic hearing, the ad is to be followed by others of a similar type. The statement that TWA is "ready now" to fly 4-engine Stratoliners from the U. S. to Calcutta brought good-natured banter from other airlines, but TWA contends that if wartime restrictions were removed, and it had a certificate, it could start such service by Jan. 1.



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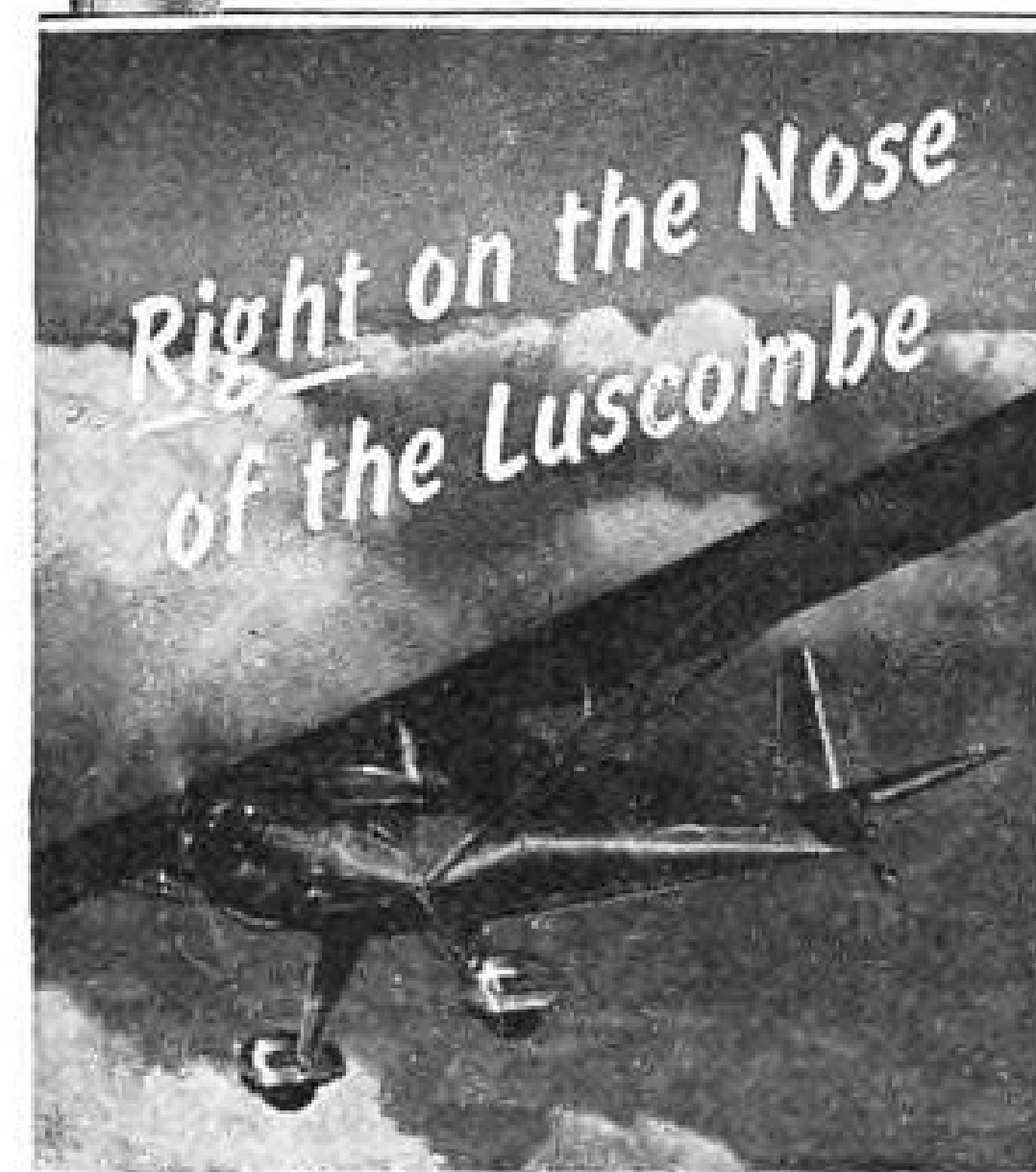
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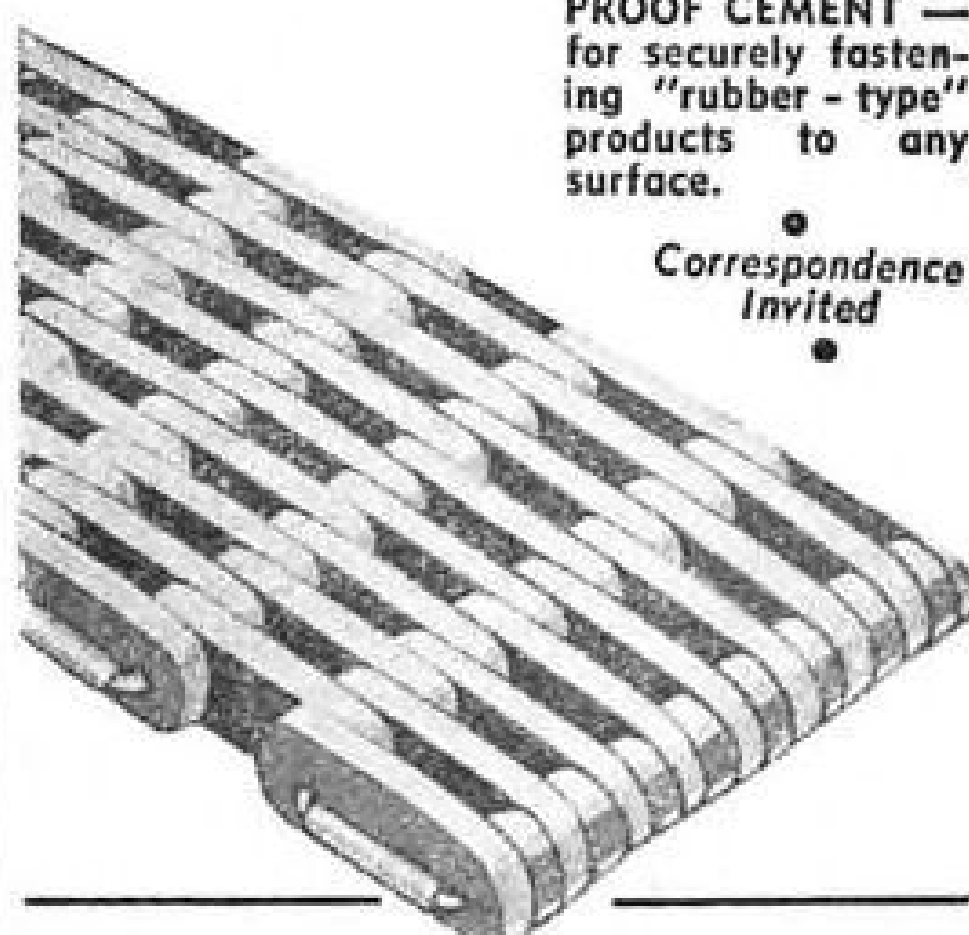
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## SAE Told of Need For Cargo Rate Cut

WAL vice-president Wolfe says surplus Army DC-3's could operate at 22 cents a ton-mile.

Repeated insistences that air cargo rates must be reduced were pointedly emphasized last week with an estimate by Thomas Wolfe, vice-president in charge of traffic of Western Air Lines, that in 1950 only 12 all-cargo planes will be needed to handle goods that will be shipped if the present tariff of 59 cents per ton-mile still prevails.

On the other hand, Mr. Wolfe told the Air Cargo Meeting of the Society of Automotive Engineers in Chicago, surplus Army DC-3s could be employed at approximately 22 cents per ton-mile. At that rate, 1950 cargo volume could be 600 million ton-miles, requiring 350 airplanes and 17,000 employees. A post-war plane making possible a 14.6 cents per ton-mile rate would result in 1950 use of 2,100 all-cargo planes and employment of 70,000 in air cargo operations alone.

► **Conditional**—Use of the DC-3 to realize his estimates is conditioned on raising the allowable operating weights, Mr. Wolfe said. "No other means of establishing a full-fledged air cargo industry . . . is apparent under present circumstances," he warned.

Col. Harold R. Harris, chief of staff of the Air Transport Command, cited Army experience with the weight limitations of the DC-3. "From our experience," he said, "it would appear that CAA limitations are too conservative. The DC-3 is licensed by CAA for a gross weight of 25,200 pounds. We use this plane at a normal takeoff weight of 29,000 and thousands of takeoffs have been made at 31,000."

The meeting was given insight into possible future pick-up operations by Arthur B. Schultz, chief engineer of All American Aviation, Inc. While present pick-up units have a 60-pound capacity, he explained, the immediate future will see use of units of 200-pound capacity. Ideal plane for this operation would be a high-wing, bi-motor type with a hatch 50 inches by 30 inches in the belly.

► **One-Ton Units Feasible**—Pick-up units of one ton capacity are feasible, Mr. Schultz declared and this makes possible the much-discussed glider train. Series pick-ups

of gliders has been developed, he revealed, in which the glider tow rope is reeled in and secured to the tow plane, thereby freeing the pick-up rope for a repeat operation.

As a possible guide to the future, Capt. C. H. Schildhauer, of the office of the chief of naval operations, disclosed performance figures of the Martin Mars now flying between San Francisco and Honolulu. Average time is 13.8 hours as against an average of 12.2 hours for an R5D. Mars' maximum load westbound has been 27,836 pounds. Current utilization is 6.1 hours daily.

In the light of Wolfe's remarks, a report by C. P. Graddick, air cargo director for United Air Lines, on taht carrier's use of all-cargo planes was of particular interest. United considers the operation a success, financially and otherwise. It has seven "cargo-liners" in cross-country operation, and their average block speed has turned out to be five miles an hour faster than passenger-cargo planes because the cargo planes can descend more rapidly and make fewer scheduled stops.

► **Broader Scheduling**—Departures at hours that would be inconvenient for passengers lead to broader scheduling. Diversion of cargo to all-cargo planes means faster ground loading for passenger-cargo flights. More than 1,000 pounds per plane was gained in stripping the planes for cargo service, an operation performed at United's Cheyenne base.

Craddick said United now handles on its all-cargo flights 40 to 50 percent of the mail and a fourth of the air express on its transcontinental routes.

### CAB SCHEDULE

- Dec. 12. Exhibits due in South Atlantic case. (Docket 1171 et al.). Postponed from Dec. 10.
- Dec. 18. Briefs in the North Atlantic proceeding due (Docket 855 et al.).
- Dec. 18. Oral argument in the Washington-Ottawa-Montreal case. (Docket 609 et al.).
- Jan. 8, 1945. Tentative hearing date Texas-Oklahoma case (Docket 337 et al.).
- Jan. 10. Hearing date for South Atlantic case. Postponed from Nov. 1. (Docket 1171 et al.).
- Jan. 10. Briefs in Florida case due. (Docket 489 et al.).
- Jan. 12. Deadline for exhibits in the Pacific route proceeding. (Docket 547 et al.). Postponed from Dec. 23.
- Jan. 15. Briefs in West Coast case due. (Docket 250 et al.).
- Jan. 22. Prehearing conference on applications within the general area of Virginia, North Carolina, South Carolina, Georgia, Alabama, and Tennessee.
- 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.).
- Feb. 12. Tentative hearing date for investigation of non-scheduled air services. (Docket 1501.)

## U. S. and Spain Sign Bilateral Air Pact

Commercial aviation agreement provides for operation of three routes between countries.

Based on last summer's "agreement in principle" and subsequent work by a CAB-CAA technical mission, a bilateral commercial air agreement has been signed by the U. S. and Spain for operation of three routes between the two countries.

Representing the joint effort of the Civil Aeronautics Board and State Department, final negotiations were expedited after withdrawal of Russia from the Chicago international civil aviation conference. Presence of Spain was given by Russia, which at first accepted, as one of the reasons it could not attend the Chicago parley. The Moscow radio pointed out that "countries like Switzerland, Portugal and Spain, which for many years have conducted a pro-fascist policy hostile to the Soviet Union, have also been invited." This was followed by an immediate acceleration of the negotiations already under way with Spain.

► **Favored By CAB**—The new pact was hailed at Civil Aeronautics Board, which always has favored bilateral negotiations for commercial rights, as contrasted with the original U. S. attitude at the Chicago convention, where first intention was to set up provisional routes, through conference action. This stand later was relinquished when conferees failed to agree on the degree of freedom to be accorded international air transport.

The agreement with Spain, effective Dec. 2, the day it was signed by U. S. Ambassador Carlton J. H. Hayes and Spanish Foreign Minister Jose Felix de Lequerica at Madrid, permits U. S. air carriers to operate, pick up and discharge passengers, cargo and mail in Spain in operations from New York through Lisbon to Madrid and Barcelona, and therefrom to Marseilles and points beyond; from New York through Lisbon to Madrid and therefrom to Algiers and points beyond, from New York or Miami through South America, West Africa, Villa-Cisneros and French Morocco, to Seville, Madrid and Barcelona, and therefrom to Paris and points beyond, and return on all three routes.

► **Further negotiations**—Each country will designate its own carriers.

Points of access for Spanish carriers in the United States will be determined by further negotiation when Spain is ready to begin service.

There were reports that the first operation from this country to Spain under the agreement would be by the Air Transport Command, but ATC officials denied this. No commercial company, however, has yet been certificated for the routes, which follow closely those outlined by the Board last summer as commercially desirable.

## TWA Crash Inquiry Opens This Week

CAB inspectors scheduled to start hearings in Los Angeles in second West Coast fatal airline accident in less than month.

Civil Aeronautics Board accident inspectors begin hearings in Los Angeles Dec. 12 seeking the cause of Transcontinental & Western Air's second fatal West Coast accident in less than a month. The latest mishap seemed as inexplicable as the first, with some informed opinion holding pilot misjudgment attributable to thick overcast as a possible cause.

At 3 a.m. Dec. 1, Flight 18 operating in scheduled passenger service between San Francisco and Los Angeles on AM 37 was approaching Lockheed Air Terminal on an instrument letdown through an overcast which was reported to have an acceptable ceiling at the Burbank terminal.

► **Crash Unexplained**—Several miles from the airport and exactly on course, with no radio report of any difficulties, the DC-3 slashed through a group of trees and

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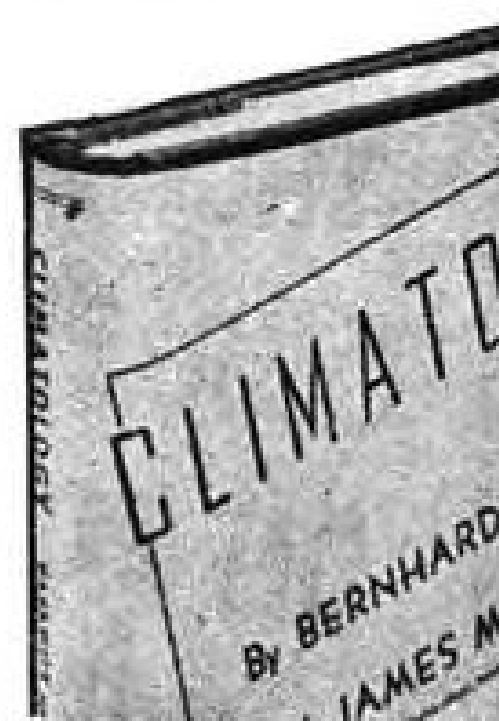
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By Bernhard Haurwitz and James M. Austin, Associate Professors of Meteorology, Massachusetts Institute of Technology, 410 pages, 6 x 9, illustrated, \$4.50

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#### THE COMING AIR AGE

By R. M. Cleveland, Director of Aviation Advertising, New York Times, and L. E. Neville, Editor, Aviation, 350 pages, 5 1/2 x 8, illustrated, \$2.75

This book gives a concise, logical presentation of the steps by which aviation will arrive at its real maturity. The material includes discussion of the probable status, both technical and financial, of the industry when the war ends, geography of the air age, freedom of the air, airlines of tomorrow, and sky freighting, together with information on future aircraft and air age education.

#### AVIATION DICTIONARY FOR BOYS AND GIRLS

By Leslie E. Neville, Editor, Aviation, Pictures by Gregorio Prestopino, 192 pages, 6 x 9, 200 illustrations, \$2.00

A dictionary for budding young aviation enthusiasts giving a wealth of aviation definitions and information in pleasing and understandable style. Gives most of the words needed to understand the important facts about planes, how they work, and why they fly; terms of military aviation and those used in navigation and the science of weather.

#### ESSENTIALS OF AERIAL SURVEYING AND PHOTO INTERPRETATION

By Talbert Abrams, Abrams School of Aerial Surveying and Photo Interpretation, 289 pages, 5 x 7 1/2, 210 illustrations, \$3.00.

Brings together the many outstanding lectures and demonstrations conducted by the Abrams School staff in their capacity as instructors in photogrammetric training schools organized for the U. S. Marine Corps and the ESMWT program. Gives a practical description of present-day methods of map making and of the operation of photogrammetric equipment. Offers complete information on photo interpretation, mathematics, surveying, mosaic, planimetry, and topographic map making, the construction of relief models, etc.

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crashed near San Fernando valley homes. Capt. John P. Snowden, the pilot, Thomas L. Bamberger, co-pilot, and five passengers were killed, and a sixth passenger died later. Fifteen other passengers were injured.

At last reports there was still no indication why the pilot had let down at the location of the accident. Available information showed that the top of the San Fernando valley overcast was at 2400 feet, giving the crew an excellent view of mountain landmarks in the area for a precise lineup of the course before dropping into the overcast.

TWA's Hanford, Calif., accident Nov. 4, in which another San Francisco-Los Angeles plane disintegrated at 10,000 feet, presented the possibility that the plane had flown into the top of an unreported thunderhead and had been destroyed by extreme turbulence. A preponderance of testimony at hearings on the Hanford accident indicated collapse of the airliner's left wing from an unknown cause.

### Feeder Airline Case Opens in Boston

18 of original 32 applicants out of race; Saturday sessions may be held to expedite proceedings.

Eighteen of the original 32 applicants were out of the race as the Civil Aeronautics Board's hearing on the New England feeder airline case began last week at Boston. Examiner Barron Fredricks, estimating the hearing would require two weeks and possibly part of a third, proposed Saturday sessions to speed the proceedings.

Pleas for better air service from community representatives, including mayors of Springfield, Mass.; Newport, R. I.; New Bedford, Mass.; Montpelier, Vt., and Keene, N. H., were augmented by Sigmund Janas, president of Colonial Airlines, an applicant, who testified that "New England is fighting for its very economic future," and warned of a trend "toward establishment throughout the United States of purely intrastate airlines." Declaring some communities are paying for air-mail service but not getting it, Janas said a majority of communities prefer a federally supervised airline, but if they cannot get it, "they still must have an airline."

► **Additional Carrier Urged** — An echo of the Boston-New York case

developed when Janas expressed the opinion that operating results between those centers will indicate need for "an additional carrier in the area such as ourselves." Colonial's application was denied in the June 13 decision.

James P. Wilmot, president of Page Airways of Rochester, N. Y., fixed base operator and another applicant, said a Rochester bank was prepared to advance his firm a half million dollars to help finance scheduled operations, and that there were plans for a million dollar stock issue. Wilmot told Hamilton O. Hale, American Airlines attorney, that Page airways "will compete with American where we can," when Hale asked about possible parallel competition between Buffalo and New York and Buffalo and Albany.

► **TWA Counsel Testifies**—Henry P. Bevens, Transcontinental & Western Air counsel, said some of the proposed routes would duplicate present certificates of both TWA and American, and raised the question whether they would be economically sound.

Among the factors believed to have figured in the withdrawal of 14 of the original applicants are unavailability of helicopter equipment and doubt as to when it may become available, and CAB's promise to make a searching inquiry into the aeronautical experience and ability of all seeking routes.

### NEA Orders 3 DC-4's

Contract has been signed by Northeast Airlines, Boston, for three 60-passenger, four-engine Douglas DC-4 Skymasters.

Paul F. Collins, Northeast president, signed the contract in the presence of Nat Paschall, domestic sales manager, and Ray C. Foote, attorney, representatives of Douglas Aircraft Co. Collins indicated Northeast contemplates purchase of six additional DC-4's, if pending applications with CAB for over-ocean routes are approved.

► **Favored for N. Y.-Boston Route**—Northeast officials say that for domestic use they regard the DC-4 type as ideal for service on the Boston-New York route which Northeast has been certificated to fly and plans to operate with its available twin-engined equipment next spring.

The Skymaster is powered by Pratt & Whitney 1450 hp. Twin Wasp engines turning Hamilton Standard hydromatic propellers.



### AIR TRAFFIC CONFERENCE ELECTS OFFICERS:

New officers of the Air Traffic Conference, elected recently in Washington, are, left to right, N. B. Fry, assistant traffic manager of United Air Lines, president; Willis G. Lipscomb, general traffic manager of American Airlines, first vice president; and P. J. Carmichael, general traffic and cargo manager of Continental Air Lines, second vice president. M. F. Redfern, of Air Transport Association, is secretary. Fry moves up from first vice presidency to succeed Charles E. Beard, of Braniff, retiring president. Carmichael replaces Tom Wolfe of Western, former second vice president.

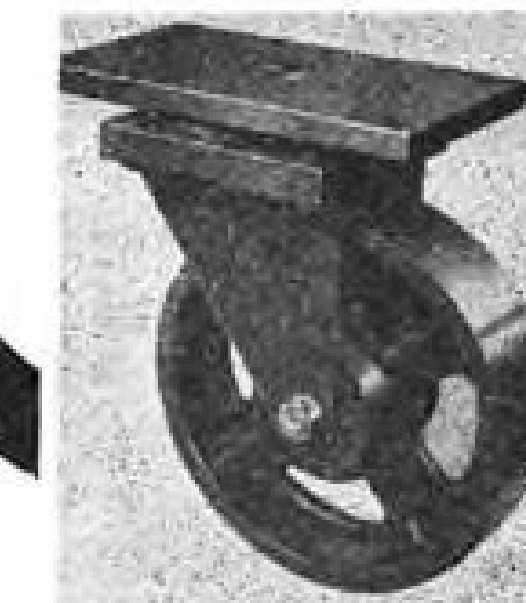
### Airline Revenues Off

Financial statistics prepared by Civil Aeronautics Board's Economic Bureau, covering domestic airline operations for the year ended Aug. '31, indicate that, despite heavy increases in operating revenues, the net revenue from operations for 18 carriers (including All American Aviation and Hawaiian Airlines, Ltd.) dropped from \$29,838,911 for the year ended Aug. 31, 1943 to \$29,364,886 for the period just closed.

Considerably increased costs of flight and maintenance operations, traffic and sales, and general and administrative expenses cut sharply into the revenues, which totaled \$141,523,856 for the 1944 period, compared with \$116,707,840 in 1943. Operating revenues increased in all departments except freight and express.

### Frye Best Man

Jack Frye, president of Transcontinental & Western Air, Inc., was best man at the wedding of Col. Elliott Roosevelt and screen actress Faye Emerson last week. The ceremony was performed in an observation station on the rim of the Grand Canyon in Ariz.



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## SHORTLINES

▶ A new westbound trans-Atlantic record of 11 hours and 26 minutes is claimed by Trans-Canada Air Lines. The flight was made in mid-November between the United Kingdom and Montreal by a *Lancaster* carrying 6 passengers, 2,996 pounds of mail and 161 pounds of express in addition to the crew.

▶ National Airlines' application to have its stock listed on the New York Stock Exchange is reported under consideration by exchange officials.

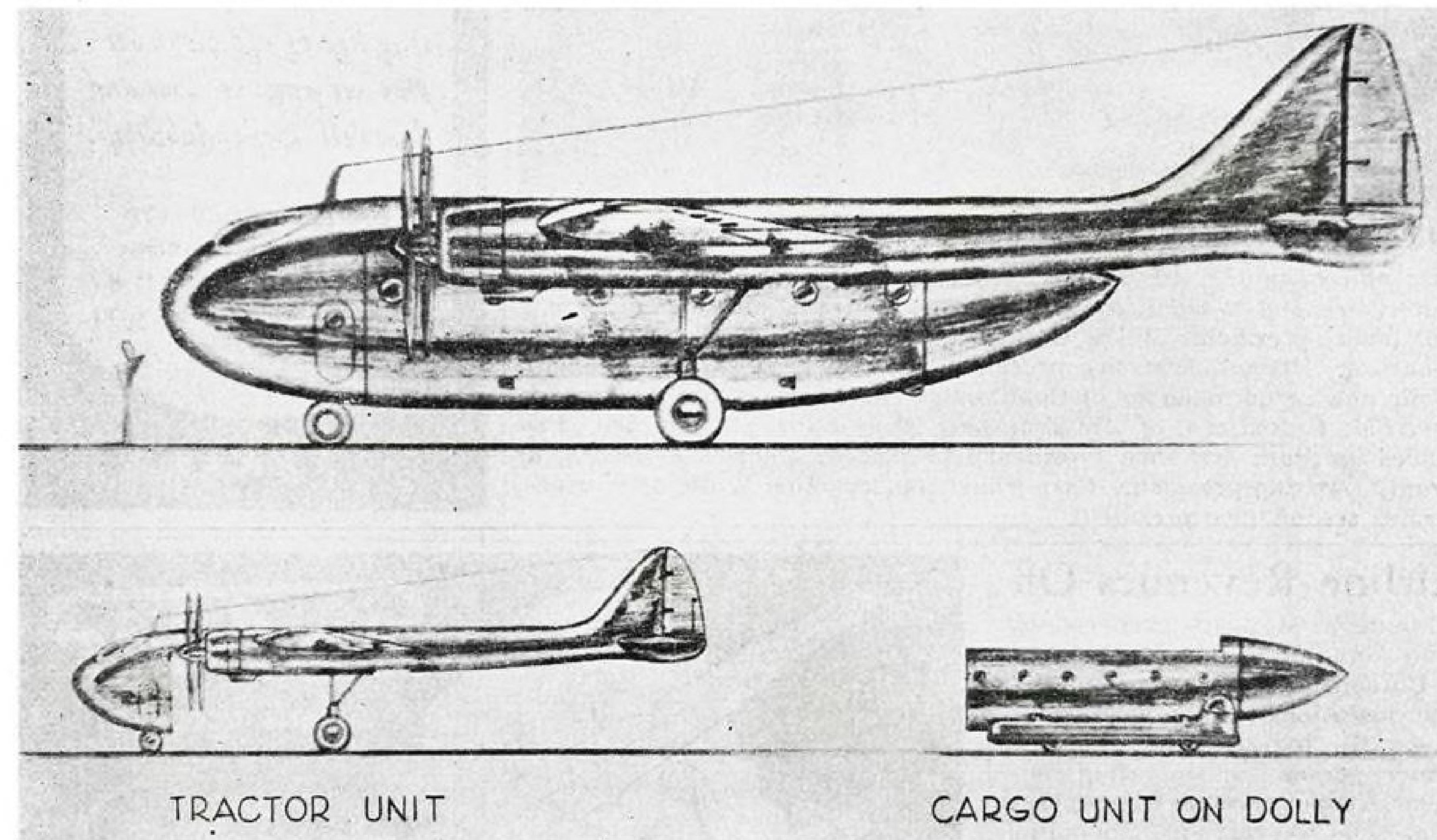
▶ The first two of the C-54's Amer-

ican Export Airlines will operate in trans-Atlantic service under contract with the Air Transport Command have been delivered to the airline's operating base at La Guardia Field to be modified for winter service. Other deliveries, to complete a fleet of unspecified size, are in progress. The company has announced that after Jan. 1 it will be in a position to accept business on its New York-Foynes certificated route from "a broader category of commercial passengers and ship-pers."

▶ The Meteorological Committee of the Air Transport Association has begun publication of a quarterly *Journal of Aeronautical Meteorology*,

which will publish articles of interest to pilots, meteorologists and others concerned with the bearing of weather conditions on safe aircraft operation. Volume I, No. 1, contains a foreword by Col. E. S. Gorrell, president of ATA, and an editorial entitled "Let's Get Acquainted" by E. J. Minser, TWA's Chief Meteorologist and editor of the *Journal*.

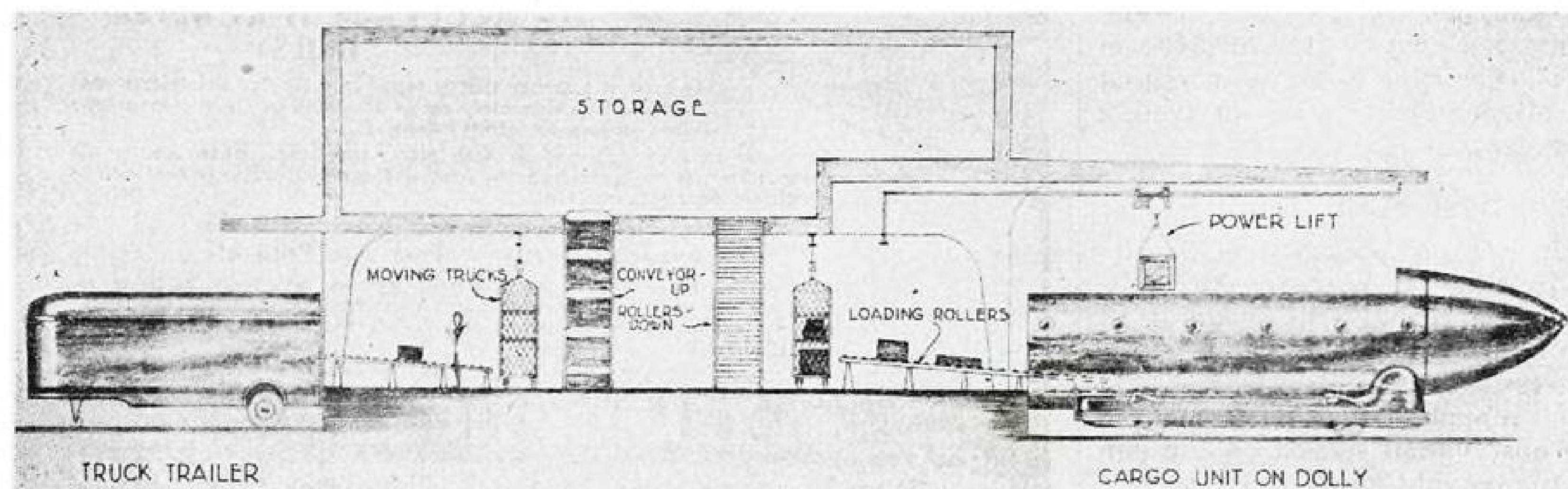
▶ Operating with a load factor of 87.99 percent, National Airlines carried 10,758 passengers in October, an increase of 50.75 percent over October, 1943. H. S. Parker, Jr., National's vice-president, announced. Revenue passenger miles flown in Oct. 1944 were 84.37 percent higher than the same month last year.



### PCA PROPOSES DEMOUNTABLE CARGO FUSELAGE:

Design for a twin-boom cargo plane, with demountable fuselage to expedite ground handling of freight, has been evolved by Pennsylvania-Central's functional engineering department. Drawing above shows plane, not unlike Fairchild's recently announced C-82 Packet, ready for flight, and with "tractor" and cargo units separated, the latter on a dolly for movement to

the freight terminal. Idea is that cargo units could be interchanged with resultant high utilization factor for the tractor unit. Picture below shows terminal section, with conveyors on an endless track carrying cargo between plane cargo unit and truck or freight car. Harry S. Pack of PCA presented these designs at last week's SAE National Cargo section meeting.



## Airlines Favored In CAA Port Plan

Get lion's share of benefits from improvements proposed under nationwide program.

Air transport stands to receive the lion's share of the airport improvements proposed by the Civil Aeronautics Administration in the comprehensive airport plan presented to Congress last week. A total of \$623,022,512 is recommended by CAA to be allotted to improving fields at presently certificated transport stops and for constructing new airfields at points not now served. This total represents 60.98 percent of the CAA program.

Should the Congress adopt the program as outlined, and translate it into actual construction by adequate appropriations, the transport industry would acquire ready entree to a passenger and cargo market vastly broader than that now tapped by commercial lines at the 285 points presently certificated to be served.

▶ **Expansion** — The program sketched by CAA makes ample provision for air transport expansion; not only does it recommend airports at 678 locations now named in applications for new routes pending before CAB, but it also suggests installations at 849 "logical ultimate feeder stops."

Improvements to 1,100 existing fields at an estimated cost of \$329,106,661 and construction of 608 new airports of class III or better costing \$293,915,851 are included to reach CAA's total proposed figure of 1,708 airports suitable for commercial traffic.

Fields for military planes—the

report points out that, in addition to providing a comprehensive network of airfields on which to found greatly expanded transport operations, completion of the projected plan ALS would provide a system of auxiliary fields usable by military aircraft.

Both transport and private pilots will welcome CAAS recognition of the necessity of creating separate facilities for these types of aviation in some of the larger metropolitan centers where safety requirements make this advisable.

## ATC Doubles Cargo Carried Over "Hump"

Back in December, 1943, President Roosevelt cited the Indo-China Division of Air Transport Command for "outstanding performance" in carrying approximately 10,000 tons of cargo across the Himalayas from India to China.

During one recent unnamed month, the Command flew better than 23,000 tons of cargo "over the hump," more than twice as much tonnage being carried as in December, 1943. The record month cargo included aviation gasoline, munitions, trucks, jeeps and other war material.

▶ **"Tom Hardin Day"**—This feat was marked by a particularly outstanding day designated "Tom Hardin Day" in honor of Brig. Gen. Thomas O. Hardin, who commanded the Hump route until recently. During this single 24-hour period, more than 2,500,000 pounds of vital cargo, better than 1,300 tons were carried over the Hump. In that day, 589 sorties were flown over the route, an average of one Hump crossing every 2.5 minutes.

## Transport's Share of CAA Airports Program

Shown in the table below are estimated costs of improvements to existing fields and construction of new airport facilities of classes suitable for air transport use as projected by the Civil Aeronautics Administration's airport plan.

		Improvements			New Construction		
Locations	Total No.	No. Imp.	Estimated Cost	% of Prog.	No. New	Estimated Cost	% of Prog.
Designated Stops							
In service (a).....	185	98	\$ 51,298,859	5.02	—	—	—
Suspended (b).....	101	71	22,633,247	2.21	—	—	—
Replacements.....	—	—	—	—	11	21,506,800	2.10
Supplemental.....	—	—	—	—	1	8,904,000	.87
Total.....	286	169	\$ 73,932,106	7.23	12	\$ 30,410,800	2.97
In appl. C & N.....	678	478	143,615,556	14.06	200	117,160,026	11.47
Logical Ultimate Feeder stops.....	849	453	111,558,999	10.92	396	146,345,025	14.33
Total.....	1,527	931	\$255,174,555	24.98	596	\$263,505,051	25.80
Total designated & Ultimate.....	1,813	1,100	\$329,106,661	32.21	608	\$293,915,851	28.77
Grand Total—Air Transport facilities (c).....					1,708	\$623,022,512	60.98
(a) Improvements at four existing airports totaling \$3,805,300 deducted from total because of replacement fields proposed.							
(b) Improvement of one existing airport totaling \$142,000 deducted from total because of replacement field proposed.							
(c) Most of which are also usable for private flying.							

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These positions offer good working facilities in a modern plant and have excellent opportunities for advancement together with a high degree of permanency for men interested in the private airplane industry. Flying Club facilities are available to those interested in learning to fly and those who wish to continue their present flying activities. The airport facilities are adjacent to the factory.

Applications containing complete information on training, experience, and salary desired, should be sent to the attention of Chief Engineer's Office.

Arrangements for Personal Interviews Will Be Gladly Made

**AERONCA AIRCRAFT**  
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MIDDLETOWN, OHIO



## Pioneer Model Airport

THE PIONEERING TOWN of Eldon, Missouri, is making aviation history. It is building its own model airport when other communities several times its size are content with debating gravely whether aviation will be worth some kind of local landing area in the dim, postwar era. Other towns have not reached even this vague discussion stage.

While the idea of a laboratory airpark is not new—it was advocated editorially by AVIATION NEWS a few months ago, for example—we know of no other community that has overcome its own inertia to the point of breaking ground for such a project. Certainly, the bold choice of local financing in preference to lolling back to await government handouts is unique and refreshingly reminiscent of American initiative before Uncle Sam donned his Santa Claus whiskers.

Eldon is at work on a field with two turf landing strips 300 feet wide and 2,000 feet long. Entrance to the airpark is five blocks from the Post Office and City Hall. A main highway parallels the field. Financing is guaranteed by the city. There will be a small park, a nine-hole golf course, tennis and horseshoe courts, picnic grounds, and trees, shrubbery and lawns. Opening date is set for June.

Outstanding citizens of Eldon, including Mayor Reed, Banker Collins, Merchant Lauderdale, and Movie Owner Edwards, who is also Airpark Commissioner, estimate the first cost at \$20,000 with extras for park and golf course, hangar buildings and service.

Eldon is in Central Missouri, with a population of about 2600. But its live-wire civic leaders are confident that they will continue to draw at least the previous annual average number of more than 100,000 tourists and vacationists to the Lake of the Ozarks, which is only 12 miles away. They believe that thousands more will come by air if given the opportunity.

But this rare populace is not restricting its plans merely to civic welfare and improvement. It is thinking as well about the thousands of other communities in the country whose thinking has not reached this stage of advancement, and it is interested further in contributing to the development of personal aviation.

It has agreed with the Missouri State Department of Resources and Development that it will furnish without cost airpark research facilities and records for at least five years. It will maintain a complete record from the site selection to data on property acquisition, development plans, management arrangements, financing; construction, maintenance and operating costs, and revenues. While the State agency under E. V. Fryhoff, head of aviation development, will furnish technical assistance and serve as liaison with the aviation industry, the community will invite aviation manufacturers to install permanent exhibits of hangars, service buildings and various test equipment on the field.

"We are asking the entire aviation industry to participate and cooperate with us in promoting this model airport and to encourage similar airport construction for all communities in the United States," Fryhoff says. "We hope to demonstrate to them that they can have attractive, adequate airport facilities without great expense and that the operation can be on a self-supporting basis."

If aviation does not take advantage on this opportunity and beat a path to Eldon's door, let there begin a moratorium on speech-making for airports and airparks. It is time to go to work. This is the kind of spontaneous, effective leadership we have been waiting for.

## End of The Wasps

**H**IGH ARMY AIR FORCES officers last week paid tribute to the hard-working Women Airforce Service Pilots whose organization will be deactivated Dec. 20. AVIATION NEWS joins in the praise for these young women. None denies their industry, and devotion to service. At least 37 have died in training or on duty.

At no time in the Wasps' stormy history was criticism leveled at the women themselves. This fact is frequently twisted. Jacqueline Cochran herself continues to deplore what she contends is prejudice on the part of men against women in aviation. This is silly, and the documentary evidence proves it.

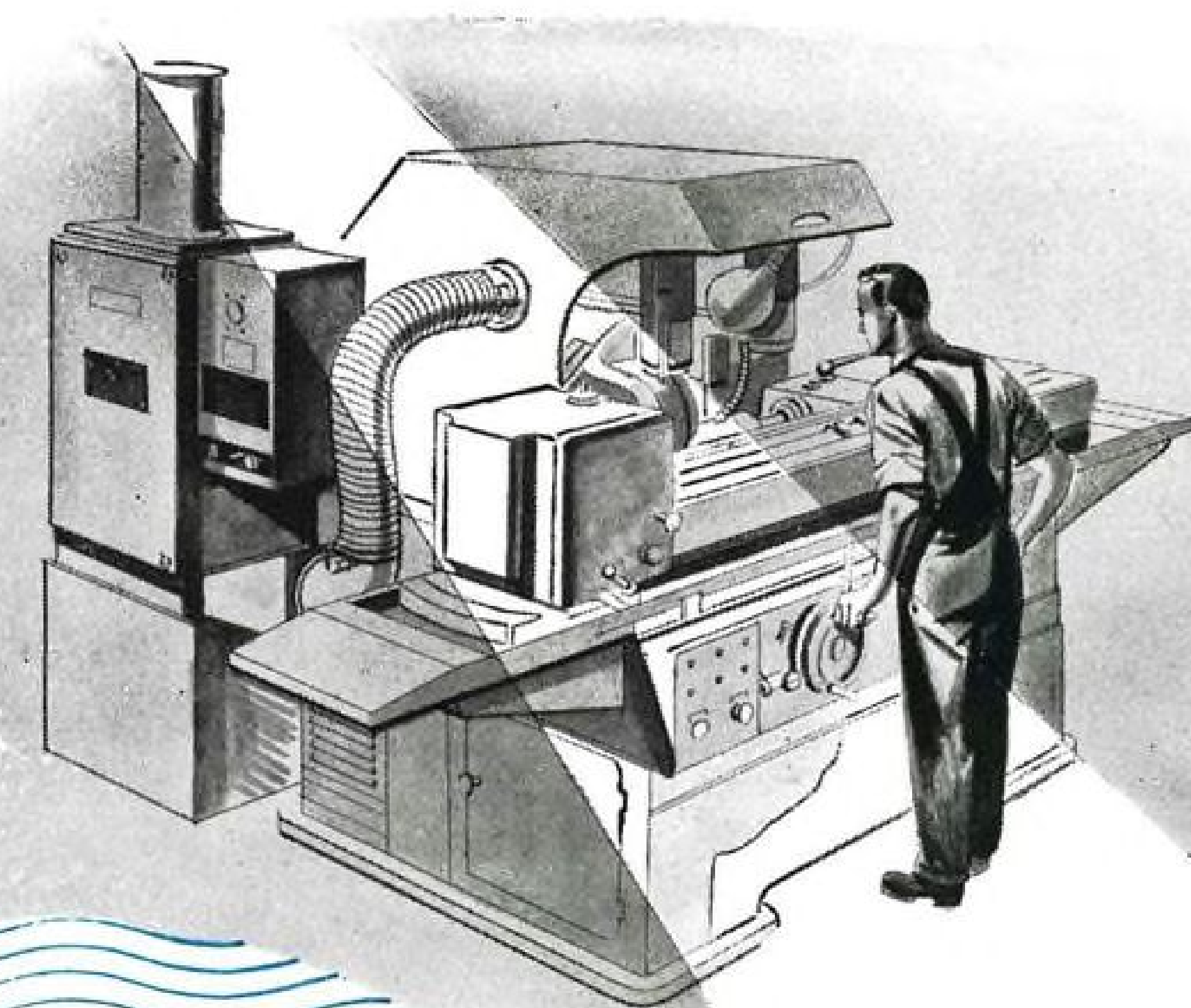
But the entire Wasp project was presented to the public as a military necessity. It was never a military necessity, and the aviation fraternity knew it. A Congressional committee proved it in a painstaking report.

Aviation publications, including the NEWS, deplored the Wasp activation as a costly unnecessary frill which had all the earmarks of a Washington deal, apparently designed especially to fulfill some personal ambition in high places. Airmen were never fooled by the press releases. There was never any shortage of men pilots.

Actually, men pilots lost valuable training facilities and flying time because of the Wasps. Wasp training was much more costly, yet comparatively few Wasps ever flew the heaviest aircraft. Hundreds of idle ex-instructors in the War Training Service could have been brought to training levels attained by graduate Wasps in a fraction of the time, and cheaper. The other counts against the formation of the program were clearly stated by the House Committee, and do not need repetition.

Now that they are trained, the Wasps will be welcomed into civilian aviation, which needs everyone who will learn to fly. The Wasps' records in the Army will furnish valuable data about the capabilities of women in flying, yet never were the Wasps presented as a research or experimental group, but under a guise of emergency need which never existed.

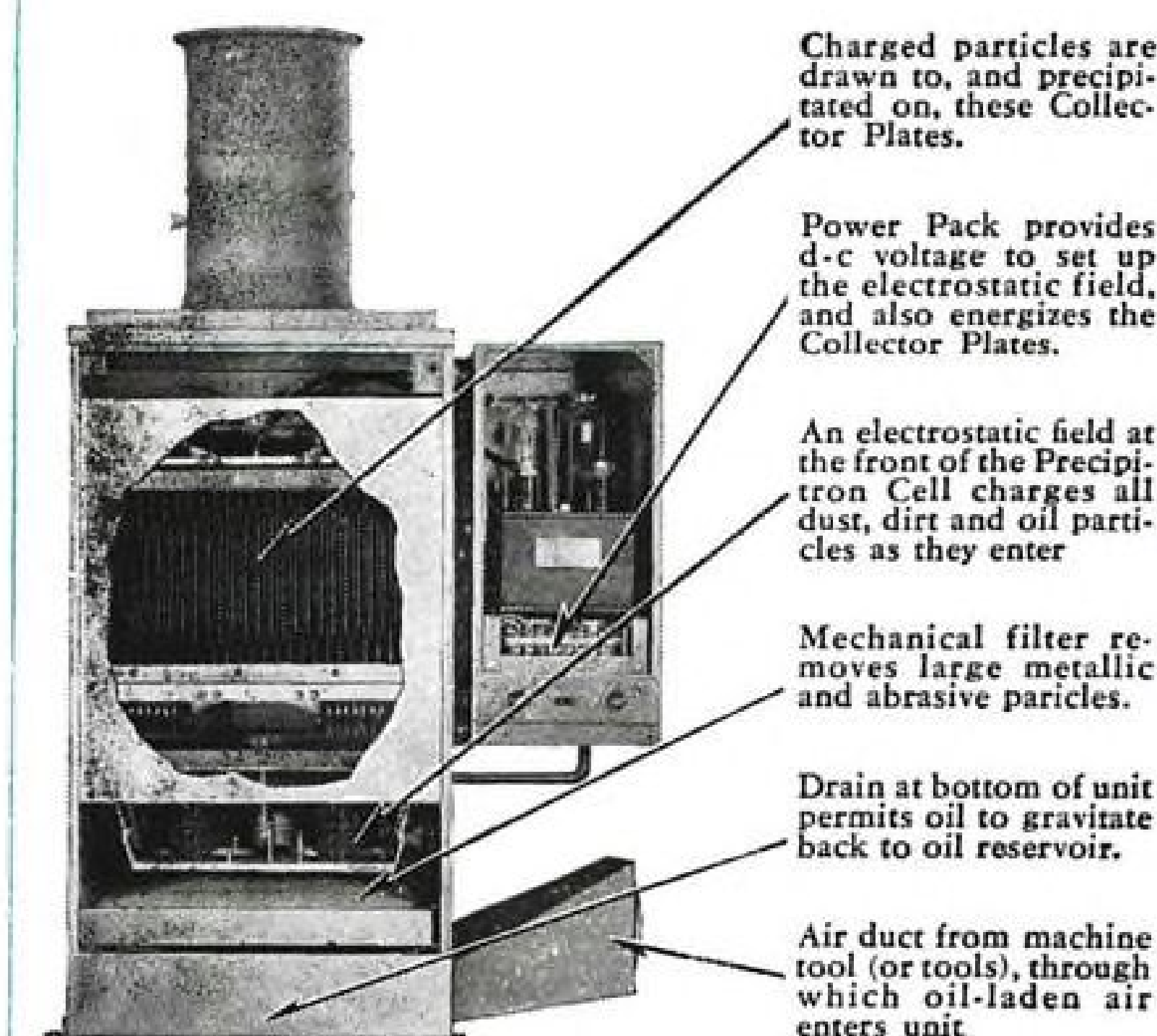
ROBERT H. WOOD



# Precipitron "INHALES" OIL MIST TO END FIRE

## HAZARD . . . SALVAGE COOLANT

## A NEW PRINCIPLE FOR CLEANING AIR



Charged particles are drawn to, and precipitated on, these Collector Plates.

Power Pack provides d-c voltage to set up the electrostatic field, and also energizes the Collector Plates.

An electrostatic field at the front of the Precipitron Cell charges all dust, dirt and oil particles as they enter

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Air duct from machine tool (or tools), through which oil-laden air enters unit

Oil mist caused by high-speed machine tools has created a dangerous hazard in many plants. The oil mist collects on lighting fixtures, bus duct, wiring and floors, creating a serious fire and personnel safety hazard.

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Because it cleans air electronically, Precipitron is able to trap air-borne particles as small as 1/250,000 of an inch in diameter...it removes 90% more dirt particles from the air than mechanical air cleaners.

Precipitron is available for either single or multiple tool installations. Operating cost is low and maintenance simple. Westinghouse engineers will be glad to show you how Precipitron will end oil mist hazards in your plant. For more information or engineering assistance write Westinghouse Electric & Mfg. Co., Dept. 7-N, East Pittsburgh, Pa. J-04008

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## THE BLACK WIDOW

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