

Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

NOV. 4, 1946

Services Order 50 New Types

MAF to let more contracts before December; jets dominate Army types; Navy sticks to piston engines.....Page 7

★

PA Eyes American, Eastern

Airline wage committee has no answer to pilot demands; hope for government operation of TWA dim.....Page 9

★

Adding Gear Cessna Attraction

3000 lightplanes sold without failure of spring steel gear; Wichita plant making 28 planes a day.....Page 17

★

Plans To Aid Aircraft Export

Credits to PAA, TACA, Panair do Brasil, Aeronautical Radio de Mexico, granted by Export-Import Bank..Page 23

★

Shares Top V-J Day Record

Group action better than other industrials despite 32-38% slump from year's best prices.....Page 27

★

Nonsched Traveler Slice Small

Commerce survey shows certificated lines fly 98.4% of total; 125 nonscheds make \$2,434 profit.....Page 28

★

CAB Throttles Nonscheds—CACA

Show cause orders, however, produce mild reaction from airlines cited as Board shows it catches field.....Page 30



Airline Smile Girls: Finalists in the "Smile Girl" contest conducted by the International Optimists among airline hostesses are shown above. Colonial Airlines' Jeanne Marie Baumer (top row center) is the winner. Other finalists are: bottom row (left to right) Margaret Jo Humber, Capital Airlines-PCA; Mary Lee Colonel, Colonial; Verla Marks, TWA; middle row: Marijo Brigham and Marinel Skelton, both Chicago & Southern, and top row: Dorothy Fincher, Delta Airlines; Miss Baumer; and Doris Fincher, Delta Airlines.



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THE AVIATION NEWS

Washington Observer



MERGER UP TO WASHINGTON—Industry executives say the proposed Consolidated-Vultee-Lockheed merger now hinges on Washington agencies. Expected shortly are formal or informal reports from Justice Dept. and the Commissioner of Internal Revenue on anti-trust and stock taxable gains issues raised by the consolidation plan. Should answers be favorable, merger machinery will go into high gear. All statements of merger details intended for mailing to stockholders will be submitted to Securities & Exchange Commission. If SEC raises no objections to the proposal as outlined, the companies will take a vote of stockholders, hoping for the required two-thirds approval. Justice Dept. officials say they will have their opinion ready before Thanksgiving but are emphatic in pointing out that even a favorable reply will not guarantee freedom of the new company from anti-trust action.

AAF WELCOMES PURCHASING CZAR—Army Air Forces spokesmen hail appointment of Richard R. Deupree, executive chairman of the Army-Navy Munitions Board and president of Proctor & Gamble, as an important step toward unification of the services. They point out, however, that the decision will not affect aircraft procurement for some time. Initial efforts toward coordinated buying will be directed toward basic items common to both Army and Navy, such as food, fuel, and construction materials.

NACA BUDGET BOOST—Intense Army and Navy pressure for more supersonic research is reflected in the request of National Advisory Committee for Aeronautics for a 25% boost in its budget for the next fiscal year. NACA told Budget Bureau it will need \$36,250,000 to expand its supersonic research program to meet the services' demands. Appropriation for the current year is \$29,000,000. The Bureau's attitude toward the increase has not been made known, however.

ORDNANCE CONTRACTORS SQUAWK—The Army Ordnance Association has loosed a volley at the War Dept. directive giving AAF control of all guided missile research and development. Assistant Secretary of War for Air Symington has sent a letter to the irate ordnance contractors in an effort to soothe them. He emphasizes that the AAF will function primarily as monitor and coordinator of the missiles program. Furthermore, he promises Ordnance, Signal Corps, and Chemical Warfare Service that they will

be called upon to increase their specialized research and development on propellants, launching devices and radio equipment for guided missiles.

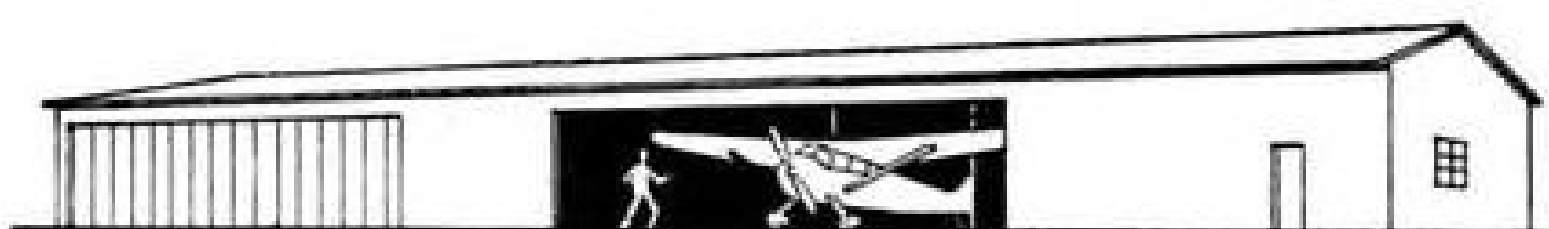
AIRLINES ON THE SPOT?—Airline and traffic control people are wincing over Administrator T. P. Wright's contention in his speech before the Institute of Aeronautical Sciences that CAA's Instrument Landing System will land 30 planes an hour in the near future. Even the most optimistic ILS adherents have never estimated more than one plane every three minutes, while most are aiming at a plane every five minutes. Furthermore, ILS is untested in commercial use, as no airline has yet asked for CAA permission to use it on regular passenger flights. CAA inspectors, who must pass on such requests, are eagerly awaiting them because they feel the system must be introduced soon. When that time comes, CAA probably will lower existing altitude minimum requirements, although nothing lower than 200-ft. can be expected for some time. In practice, most airlines set their own minimum ceilings which are often higher than CAA's. Air transport leaders feel Mr. Wright put them on the spot in virtually promising to the public performance which is not yet in the cards.

LAGGING AIRCRAFT STOCKS—Latest Statistical Bulletin of the Securities & Exchange Commission dramatizes the upward swing of airline securities. While aircraft manufacturing common stocks averaged 7.4% below 1939 pre-war selling prices, as of mid-September, airline commons were up 273.8%. This increase was the greatest among 27 business categories covered in the September report. There were only two other industries reporting common stock prices below pre-war levels—tobacco products and metal & metal mining.

WAA STOPS SOLICITING AGENTS—War Assets Administration's campaign to sign new agents for disposal of surplus aircraft components and parts has slowed to a walk. At present, WAA has 79 agents, and at one time was shooting for 150. Now, while no agency requests are being refused outright, WAA is no longer soliciting prospective agents. It is concentrating on putting material in the hands of existing dealers. As of Oct. 15, \$239,000,000 worth of material had been consigned to agents. Sales were \$13,000,000 in original cost. Main difficulty still is in locating the readily-saleable items.

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AVIATION NEWS

Washington Observer.....	3
Industry Observer.....	5
Headline News Section.....	7
Private Flying.....	16
Briefing.....	19
Production.....	23
Special Air Services.....	28
Transport.....	30
Editorial.....	36

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Volume 6, No. 19

Advertisers Index

Aerial Products, Inc.....	4
Ambrose Aviation Co., Frank.....	25
Beech Aircraft Corp.....	4th Cover
City of Jacksonville.....	33
Consolidated Vultee Aircraft Corp.....	26, 35
Darnell Corp., Ltd.....	32
Foote Bros. Gear & Machine Corp.....	22
Fruehauf Trailer Co.....	34
H. & E. Distributing Co., Inc.....	34
Kidde & Co., Inc., Walter.....	2nd Cover
Lewyt Corp.....	32
Luria Engineering Corp.....	4
McDonnell Aircraft Corp.....	34, 35
Pacific Airmotive Corp.....	33
Phillips Petroleum Co.....	3rd Cover
Pratt-Whitney Aircraft.....	6
Republic Aviation Corp. (Rainbow).....	11
Seebal Associates, Robert L.....	34
Stewart-Warner Corp.....	12
Tade, Fred.....	34
Transcontinental & Western Air, Inc.....	15

News Digest

DOMESTIC

New Assistant Secretary for the Navy for Air is John Nicholas Brown, 46, Newport, R. I. business man. He succeeds John L. Sullivan who was named Undersecretary of the Navy last July.

T. Bowring Woodbury who recently resigned as president and general manager of the Culver Aircraft Corp., Wichita, Kan., joined Aircapital Mfg. Co. of Wichita as manager.

90 surplus Mustangs (P-51) were sold to Sweden as a reward for Swedish war-time co-operation in evacuating allied airmen who were forced down in Sweden or escaped from enemy-occupied countries.

Ainsley Highman, assistant to the president of United Airlines, died recently at his home in Holliston, Mass., after a brief illness.

Fairchild Engine & Airplane Corp. will move its Pilotless Planes Division to Farmingdale, Long Island. The division is currently working on a Navy contract.

Juan T. Trippe, president of Pan-American Airways was decorated with the Order of the Southern Cross by the Brazilian government in Rio de Janeiro.

Lockheed signed a contract for maintenance and overhaul of Air France's fleet of 13 Constellations at Lockheed's new eastern overhaul base on Long Island.

FINANCIAL

A \$5,000,000 increase in its capital stock is planned by Northwest Airlines to pay for 10 Boeing Stratocruisers and 50 Martin 202's now on order and development of its recently awarded routes to the Orient.

Milwaukee (Wis.) county's \$2,400,000 airport bond issue was awarded to the First Wisconsin National Bank of Milwaukee on a bid of 100 for .70s.

FOREIGN

Crash of a French charter company plane in the Egyptian desert killed one person and injured 14. Survivors were stranded for three days in the desert 150 miles south of Cairo.

Argentina will reduce its air mail rates to the U. S. and Canada to slightly less than 9 cents a half ounce compared with the new U. S. rate to the Argentine of 10 cents a half ounce.



► First break in Russia's iron curtain of the air will be made by China. A Sino-Russian joint company will be organized to fly a weekly schedule from Nanking to Alma Alta in Russian Turkestan. Agreement for a Moscow-Stockholm service has also been reached but the Swedes will be allowed to fly only as far as Helsinki with the Russians carrying on from the Finnish capital to Moscow.

► Jet engine production has been spotty during the first nine months of the year ranging from a maximum of 141 made in June to none in February when the General Electric strike was on. Although the services are still getting more reciprocating engines than jets it is significant that the 88 jets produced in September could generate a total of 352,000 pounds thrust while the 132 reciprocating engines could muster only 227,000 horsepower.

► Certification tests on the Douglas DC-6 were concluded last week at Oakland Airport. AAF also tested its version of the DC-6 (XC-112) at Oakland after Douglas determined that fields around Los Angeles were unsuitable for calibrated landing and take-off tests.

► Lockheed still has hopes its special Shooting Star (P-80) will capture the world speed record by flying better than 621 mph. The special has been cleaned up with a smaller bubble canopy, buried air intake scoops flush with the fuselage skin and a greater chord wing. It is now undergoing engine and aerodynamic tests at Van Nuys to determine the cause of its irregular performance in the recent Muroc speed tests.

► Douglas is still cloaking developments of a small executive type transport prototype in secrecy but has no plans for production until the plane has been thoroughly tested—perhaps for as long as a year after the initial test flight.

► AAF all-weather test airway between Andrews Field, Md. and Wilmington, Ohio, will be completed in about two months. GCA equipment is installed at both terminals but work has just begun on selection of sites and installation of CPN-18 (45 mile scope radar) and HVF direction finding equipment along the route.

► AAF will contribute \$500,000 worth of radar equipment for the initial test of GCA by commercial airlines at Chicago, New York and Washington this winter. AAF's contribution will consist of three mobile GCA sets, three remote control tower units and repair kits and spares for the six units. Air Transport Association working through Aeronautical Radio Inc. will shoulder installation costs while CAA will provide operation and maintenance personnel.

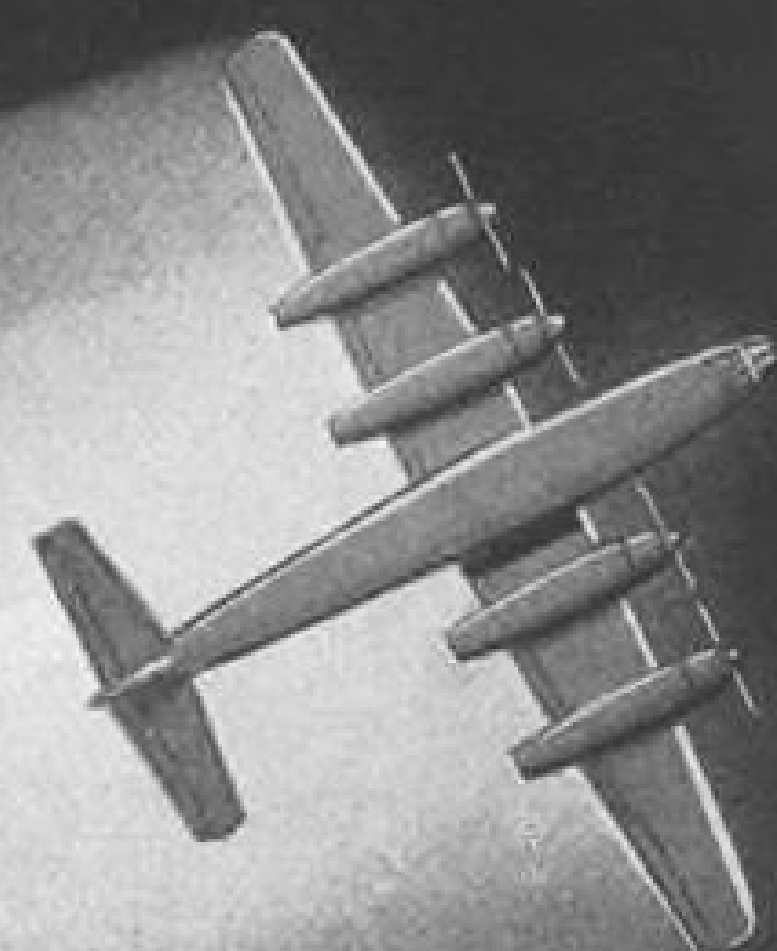
► Martin has changed its plans on disposition of the early 202's. The company will now keep three for test purposes and deliver the fourth to PCA as the initial airline delivery. Martin is sitting on a batch of unannounced 202 orders including a number of cargo versions.

► Cessna has reached a production rate of 28 Model 140s a day and will increase as materials become available. Plans for reopening the Hutchinson, Kan., plant are going forward and Dwane Wallace, president, reports that the new four place all metal Model 190 can be expected early next year.

► 4,000 B-29s, B-17s, A-26s and B-25s have been "pickled" and stored by AAF as an immediate reserve of offensive airpower.

► Consolidated-Vultee will build at least 100 bomber and transport versions of the six-engine B-36 confirming earlier reports that the 10,000 mile bomber eventually would be the backbone of the Strategic Air Command.

WASP MAJORS for the Rainbow



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Aviation News

McGraw-Hill Publishing Co., Inc.

November 4, 1946

Services Order Fifty New Types From 22 Aircraft Manufacturers

AAF will let more contracts before December budget hearings; jets dominate AAF fighters and bombers; Navy sticking to reciprocating engines.

While several of the largest aircraft manufacturing companies are reporting backlogs dominated by commercial orders, the fact that the industry is still deeply engaged in military and naval work is shown by the latest procurement schedules of AAF and Navy's Bureau of Aeronautics which lists more than 50 types on order from 22 manufacturers.

The schedule for the Army, is expected to be greatly enlarged before the end of the year. AAF's fiscal 1948 budget estimates are now in the War Department's upper echelons and are slated to go to the Budget Bureau sometime in December. In order to avoid any criticism at that time by Budget that AAF had not yet obligated most of its 1947 fiscal appropriation, additional contracts probably will be let before December.

► **AAF Orders 41 Types**—Orders now in force for aircraft, while covering practically every airframe manufacturer except the light-plane producers, give only a partial indication of the extent to which the industry depends upon the Government. The contracts listed below do not include a few of the experimental types, nor any guided missiles or other types of research agreements. The AAF has definite orders out with 16 manufacturers for at least 41 types of aircraft; Navy's BuAer has contracts with 14 companies for at least 21 types.

AAF has on order only one type of reciprocating engine fighter and very few reciprocating engine bombers. Only one AAF transport is planned for jet and that is an experimental conversion of a Curtiss-Wright C-46, newly-designed XC-113 and using propjet engines (AVIATION NEWS, Oct. 14)

The Navy's list includes only two jet fighter types and one combination jet-reciprocating bomber, although other Navy jet types are in the works.

The AAF procurement list is:

► **Lockheed**—P-80 Shooting Stars in three models, and the FP-80 photoplane; P-90, combination jet and rocket fighter with a sea level speed of about 629 mph., plus a 60-mph. rocket boost.

► **Consolidated Vultee**—P-81 prop-jet with a speed of about 500 mph. and 3,000-mi. plus range; P-92 rocket-powered with a speed of better than 700 mph for a duration of approximately five min.; B-36 six-engine; B-46 medium jet bomber; B-53, possibly a jet version of the B-36; C-99, transport version of the B-36; L-13, a new liaison powered by a Franklin air-cooled engine.

► **North American Aviation**—P-82 twin Mustang; P-86 jet fighter with speed of about 630 mph.; B-45, multiple jet medium bomber.

► **Republic Aviation**—P-84 and FP-84; P-91, rocket-powered with speed of about 750 mph. and climb of 15,000 fpm.; F-12 Rainbow.

► **McDonnell Aircraft**—P-88 jet fighter with speed of 660 mph. and 2,300 mi. range; P-85 jet-propelled parasite fighter carried in B-36.

► **Northrop Aircraft**—F-15, photo version of P-61; P-89, jet fighter with speed of about 560 mph.; B-35 flying wing bomber; B-49, jet version of B-35.

► **Curtiss-Wright**—P-87, jet-propelled all-weather fighter with top speed slightly over 600 mph., but climb of 6,500 fpm.; XC-113, prop-jet version of C-46.

► **Boeing Aircraft**—L-15, new liaison; B-47, jet bomber; B-50 newer version of B-29; C-97 transport version of B-29.

► **Martin**—B-51, presumably a jet bomber; B-48, four-jet bomber.

► **Douglas Aircraft**—C-74 Globemaster transport; XC-112, military version of DC-6; XC-118, another special version of DC-6.

► **Fairchild E & A**—C-82 Packet.

Helicopters are on order from Bell Aircraft, G & A Aircraft, Kellett and Sikorsky. Only glider contract is with Chase Aircraft.

In addition, AAF has on its procurement list a two-place jet trainer, although the contract has not yet been let.

Navy schedule follows:

► **Grumman**—F7F and F8F.



GIANT PREPARES FOR FIRST FLIGHT:

Lockheed's Constitution is shown being gassed in preparation for its first test flight scheduled for November 9. Built for the Navy, the giant transport is now undergoing high speed taxi test preliminary to its initial flight. (Navy photo)

► **Chance Vought**—F4U.
 ► **McDonnell**—FD-1 and FD-2, both jet-propelled Phantoms.
 ► **North American**—FJ, similar to AAF's P-86.
 ► **Goodyear**—F2G.
 ► **Curtiss-Wright**—XBT2C; SC-2.
 ► **Douglas**—XBT2D, same as the AD-1 and AD-2 Skyraider all-purpose bombers; JD, Navy version of A-26, used for target towing and other purposes.
 ► **Martin**—AM-1 Mauler, all-purpose bomber; PBM-5 Mariner; JRM Mars-type; XP4M, combination jet-reciprocating bomber.
 ► **Edo Aircraft**—XSOE, shipboard observation; XTE, trainer version of same plane.
 ► **Lockheed**—P2V patrol plane such as the Turculent Turtle.

Navy orders for helicopters have been placed with Sikorsky, Nash, Bell and Piasecki.

Decca Navigation Seeks U. S. Operation

Applies to FCC for east-coast radio navigational act; plan commercial use of system.

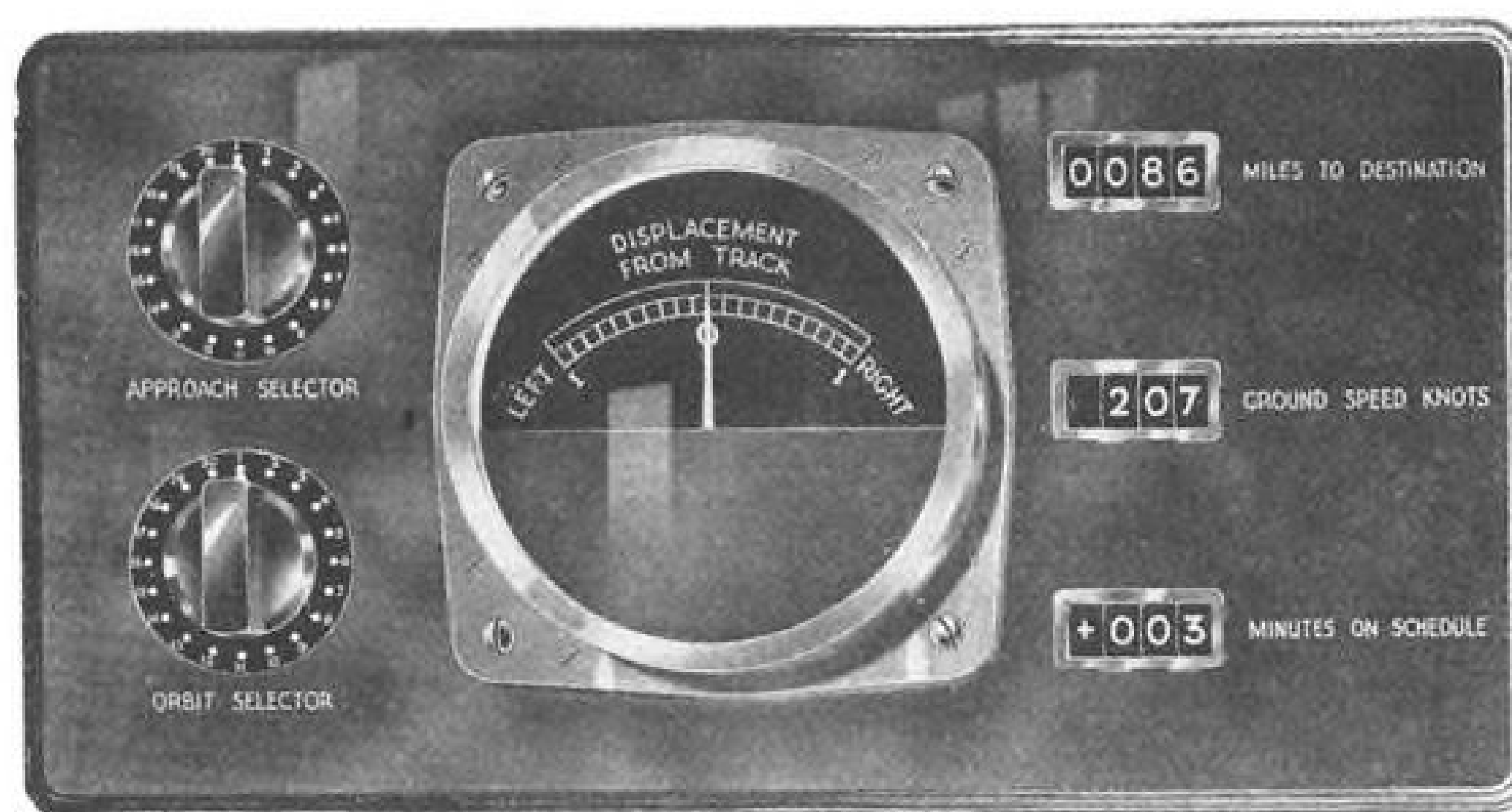
Current efforts to achieve automatic flight and landing have been increased with the application to the Federal Communications Commission of Decca Navigating System, Inc., for permission to demonstrate a war-born radio navigating and traffic control system which in effect sets up "air tracks" for planes to follow.

The navigating system relies upon a master transmitter and two or three "slave" stations which send out continuous signals, the intersections of which indicate a plane's position. Ordinarily, the course is plotted on a map which is overlaid with numbered red and green lines. The radio signals are received in the aircraft on a special set which actuates a red and a green meter, one for each of the two slave stations. A third slave would require a third meter.

► **Fix by Numbers**—On the meters pointers indicate certain numbers. By referring to the corresponding numbers on the map, an instant position fix is given by the intersection of the numbered lines.

Accuracy within 30 ft. up to 50 miles from the transmitting station is claimed. At a distance of 1,000 miles, accuracy varies up to 500 yd.

An extension of this automatic plotting system calls into play a Traffic Control Unit featured by a



Coming in on Track Zero: One of the key parts of the Decca navigational system is this Track Control Unit. Large dial in the center indicates whether plane is on or off the track. Each division traversed by the pointer represents 200 yards. Windows to the right of this dial give a continuing series of data as indicated during the flight. Small dials to the left are used by pilot when approaching an airport. Responding to instructions from the tower, he sets the pointer to a number either for the approach or for a holding pattern. He then reverts to flying by the track indicator.

large dial with a pointer centered on zero. The pointer will swing to the right or left of the dial as the plane goes off course in either direction. The dial is graded in units of 200 yd. To use this device, the pilot must follow a previously assigned track which is one of the numbered courses that ordinarily would be obtained by consulting the map.

Also included in the Traffic Control Unit are two smaller numbered dials, one for a landing approach, the other for a holding course while awaiting turn to land. Upon approaching an airport, the pilot calls the tower and asks instructions. If he is free to land, he is given a numbered track, sets the pointer on his approach dial on that number and then again refers to the large dial and holds the pointer on zero to make a proper descent. If he is to be held the tower gives him a number on the holding dial.

► **60 Lb. for Airlines**—For airline use, the Decca system would call for about 60 lb. of equipment in the plane; for other aircraft use, a lighter, 30-lb. unit can be used. The equipment would be rented, but not sold.

The system is the invention of two Americans, Harvey F. Schwarz, now president of the company, and William J. O'Brien, a director, who worked it out from 1939 until its first demonstration in 1942. It has been developed and built by a British firm, Decca Navigator Co., Ltd., of which the

newly-formed American company is a subsidiary. The U. S. company is located in New York City.

The proposal made to FCC is for the erection of a master transmitter near New York City, and three slaves near Kingston, N. Y., in northern New Jersey, and on eastern Long Island. Chief engineer of the company, D. H. Toller-Bond, estimates that the transmitters could be completed within five months of obtaining frequency assignments for FCC.

Lightplane Jato

JATO for personal aircraft may be offered for Aerojet Engineering Corp., Azusa, Cal., within the next six months.

Experimental test stand runs of a 250-lb.-thrust JATO rocket having a power duration of 14 sec. now are being made, and flight tests with a BT-13 are expected to begin in December. A production prototype is expected to weigh about 38 lb.

The unit probably will be identified as Aerojet's "Baby JATO" for contrast with the company's recently certificated transport JATO engine, which weighs 250 lb. and delivers 1000 lb. thrust for 12 sec.

CAA certification of the JATO engine has resulted in world-wide inquiries from air transport operators, according to E. E. Nelson, Aerojet sales manager. First foreign order has come from Switzerland, where the Swiss Air Force will conduct JATO tests.

ALPA Eyes American, Eastern As TWA Strike Drags On

Airline wage committee has no answer to new pilot demands; hope for government operation of grounded airlines dim.

By BLAINE STUBBLEFIELD

The Airline Pilots Association, having grounded Trans-World Airways cold with a weekend ultimatum to the chin and a solid strike on the jaw, is getting set for a second go with American Airlines and a third with Eastern Airlines.

Thirteen airlines party to the wage negotiating committee, which has power of attorney from all to act for each, met in Washington last week and failed to agree on an effective means of defense against the ALPA, headed by David L. Behncke.

The Committee, formed to present a united front against ALPA's one-at-a-time tactics, is still functioning, but has not wholly achieved its objective: Northwest Airlines jumped the traces and made a separate agreement with ALPA, and TWA may be forced to do so.

► **No Action on MPA**—TWA has made no commitment concerning the Military Pilots Association, whose officials announced, through AVIATION NEWS, that they would furnish pilots to replace the strikers, if called upon by the Company or by the Government. TWA operating heads are said to feel that MPA's estimated checkout time for

its members on Skymasters and Constellations was optimistic.

AVIATION NEWS learned from government lawyers that nothing in the Railways Labor Act, which applies to air transport, would specifically prevent TWA from discharging and replacing its striking pilots. Such improbable action would likely result in proceedings before federal courts, and sources would not risk an opinion as to the outcome. The National Labor Relations Board has no jurisdiction over air and rail transport. NRLB rendered Decision 83, on which pilot pay is still based, before the Civil Aeronautics Act of 1938, which placed airlines labor under the railway act.

► **Govt. Hope Dim**—Hope of government seizure, entertained by TWA, was dim late last week. White House policy has turned against interference except in emergency strikes, which this one is not. However, the State Department is anxious for TWA to get ahead with its development in the Far East, and Administration concern cannot be discounted.

The International Association of Machinists, included in layoff of 15,000 ground workers for lack of revenue to pay them, protested

they were entitled to 10 days notice. TWA lawyers thought the contract called for two-shift (16 hrs.) notice. Company said if wrong they will pay the machinists.

In France the Minister of Labor objected to the laying off of 600 non-American TWA workers, and insisted they be kept on the payroll. TWA officials said they had overlooked the contingency, and announced that all contractual obligations everywhere would be met.

► **Negotiators Deadlocked**—Behncke, who with TWA President Jack Frye has been meeting Frank Douglass of the National Mediation Board, refused to budge on his ultimatum, which Frye said was an incomplete statement of the problem, and which Behncke called a "voluntary rockbottom compromise."

Behncke contends the larger and faster the planes, the smaller the pilot cost. Pilots get 6.1¢ per mile on small DC-3s, he said, and are asking 6¢ on Skymasters, and 5.9¢ on the 100,000-lb. Constellation, 4 times gross weight of the DC-3, and, because of its speed, earning 5 times as much. Pilots cannot come down any more, he stated, to meet the little difference between his and the Company's terms.

TWA pointed out that only the pay of pilots flying 4-engine planes in the U. S. is involved and the \$15,296 top per year which they demand would cover one round trip a week from Los Angeles to New York. About 200 pilots on domestic 4-engine planes are in-



As TWA Pilot's Strike Drags On: Jack Frye, TWA president, (left) and David Behncke, ALPA head (right), confer with Frank Douglas, chairman of the National Mediation Board in a fruitless effort to settle the strike now in its second week. Meanwhile TWA



ground employees on a forced furlough without pay as a result of the pilot's strike picket ALPA headquarters in Chicago protesting the airmen's action which is costing TWA an estimated \$250,000 a day. (Press Assn. photos)

volved. ALPA has not stated its terms on another 200 in overseas service.

Pay Figures Vary—Possible pay under the involved formulas is one thing, and pay received is another. For that reason, figures quoted by both sides are at variance, and are misleading to laymen. AVIATION NEWS finds that actual payments to individuals are known to auditors of the Civil Aeronautics Board, which, however, is not authorized to make them public. These figures can and may be subpoenaed.

TWA says first pilots on Constellations previously could earn \$10,854 per year; are now getting \$11,849 under emergency board's award; are demanding \$15,296. For Skymasters, respective figures are \$10,446; \$10,982; and \$13,366.

For co-pilots, TWA's respective figures on Constellations are \$4,560; \$4,873; and \$6,680. On Skymasters: \$4,560; \$4,727; and \$6,545. Both sets of figures are accompanied by many conditions.

ALPA's ultimatum calls for a Skymaster scale of \$11,763 for first year first pilots, and \$13,164 for most senior (8 yr.) pilots. On Constellations they want, respectively, \$12,849 and \$14,249. For co-pilots flying both Skymasters and Constellations, figures are \$3,715 for most junior men, and \$6,595 for most senior men. Experts can show that both TWA's and ALPA's figures mean something else.

A large portion of TWA's 15,000 furloughed employees offered to work without pay, but company says it did not accept, that all of the 600 working are being paid. TWA cancelled a contract with War Assets Administration to buy 6 and lease 11 surplus DC-4 planes. This, and contemplated cancellation of orders for Constellations, will eliminate many pilot jobs, company spokesmen say.

AVIATION CALENDAR

Nov. 7-8—SAE National Fuels & Lubricants Meeting, Mayo Hotel, Tulsa, Okla.
Nov. 15-24—National Aircraft Show, Cleveland.
Nov. 20-22—National Aviation Trades Association convention, Cleveland.
Nov. 21—Personal Aircraft Council Meeting, Cleveland.
Nov. 22—AIA Board of Governors Meeting, Hotel Statler, Cleveland.
Nov.—International Aeronautic Exhibition, Paris, France.
Dec. 2-4—SAE National Air Transport Engineering Meeting, Edgewater Beach Hotel, Chicago.
Dec. 12-15—International Aviation celebration, El Paso, Texas.
Dec. 17—Anniversary dinner, Washington, D.C. Aero Club, Hotel Statler.
Dec. 17—Wilbur Wright Memorial Lecture—Dr. Theodore Von Karman, Hotel Statler, Washington, D.C.
Jan. 10-11-12—All American Air Maneuvers, Miami, Fla.

AAF Rocket Project Awaits V-2 Results

Artificial meteorites to be fired from giant rocket at White Sands on Jan. 9.

The AAF much-discussed rocket to the moon is expected to gain a high priority project rating if pending artificial meteorite tests are successful.

Jan. 9 now has been set as a definite date for the launching at White Sands of a V-2 which, at an altitude of between 75 and 100 miles will become a "cannon," firing small simulated meteorites at a velocity of 20,000 ft. per second—a speed never previously attained by a man-made projectile.

Pound Meteorites—It is anticipated that the meteorites, each probably weighing not more than one pound and formed of a metal which will produce extreme brilliance at burning temperature, will become incandescent immediately upon being fired from the nose of the V-2 at a predetermined altitude.

Because the average meteorite starts its brief life with a mass of no more than a few ounces, a one-pound mass of metal can be expected to produce an intensely brilliant fire trail; one easily photographed with the use of small telescopes.

AVIATION NEWS is informed that if the artificial meteorite test produces good results the Army will turn immediately toward development of a moon rocket that may be fired within the next eighteen months, and tracked to its destination by radar. One proposal receiving serious consideration is that the rocket carry a chemical producing a dense smoke puff upon contact with the moon's surface; a smudge which should be visible with a large telescope.

Credit for proposing the technique of creating artificial meteorites goes to Dr. Fritz Zwicky, California Institute of Technology, who has worked closely on the project with Dr. J. H. van Allen of Johns Hopkins University.

Use Hollow Charge—The plan is to install in the warhead of a V-2 a high-explosive that will give the artificial meteorites their extreme velocity by employing the "Meredith effect." This effect is gained by cupping the face of an explosive charge with the result that exploding gases are concentrated within the cupped area and their initial velocity compounded

by the concentration. It was the application of this effect that gave the tiny Bazooka projectile its ability to bore through the toughest armorplate of tanks.

Until the rocket is fired, the estimate of the actual velocity at which the artificial meteorites are launched can be considered no more than a speculation.

There is a strong possibility that one or more of the clusters will receive an explosive "kick" that will speed it well above 20,000 ft./sec., and possibly up to the 7 miles-per-second "velocity of escape" which will send it beyond the earth's gravitational pull. Photographs of the fire trails are expected to show whether any of the projectiles are given this velocity.

WAA Slashes Prices On Surplus Planes

With its eyes still fixed on the goal of liquidation of war surpluses sometime next year, War Assets Administration last week placed practically all its remaining planes, except large transports, on sale at what amounts to "bargain basement" prices.

Because of the low prices, WAA is eliminating both the ferrying allowance (27 cents per mile with a maximum of \$90 per plane) and its 20% discount for the purchase of three or more planes. Aircraft may be purchased direct from WAA Sales Storage Depots, with no priorities necessary.

Price changes are:

Primary trainers (except Fairchild PT-26) are from \$250 to \$1,630, depending on condition; were from \$590 to \$2,400. Approximately 500 in stock.

Fairchild PT-26s are \$750 to \$2,150; were \$990 to \$2,800. Approximately 450 in stock.

Cessnas, UC-78, AT-17 and JRC are \$1,000 to \$1,800; were \$1,750 to \$8,500. In stock, 870 although no planes available in the higher price bracket.

Single engine cabin planes: Howard NH and GH, 214 in stock are \$2,000, \$3,000, \$5,000; Beechcraft UC-43 and GB, 89 in stock, are \$2,500, \$3,500, \$5,500; Waco C-72, YKS, VKS, ZKS, six in stock are \$1,500, \$2,000, \$2,500; Stinson SR 12 in stock, are \$1,500, \$2,000, \$2,500; Fairchild 24, three in stock, are \$1,500, \$2,000, \$2,500.

Grumman Widgeons J4F OA-14, 42 in stock, are \$5,000, \$7,500, \$10,000; were \$12,000 to \$20,000. Grumman Goose JRF, OA-9, 32 in stock, are \$15,000, \$20,000, \$25,000; were \$20,000 to \$30,000.

Lockheed C-60: passenger types are \$15,000 to \$25,000; were \$15,000 to \$35,000; cargo types are \$12,500 downward; were \$12,500; navigational trainers are \$5,000 downward; were \$5,000. Price reductions are only on individual planes according to condition. There are no top condition passenger types available and only four C-60 types in stock.

Beechcraft AT-11's on hand, totaling 31, are now \$7,500, although the price range on any that may come into surplus remains the same, from \$7,500 to \$15,000.

Basic and advanced trainers remain the same in price, \$450 for BT-13's and SNV's \$200 for BT-15's, and \$850 for AT-6's and SNJ's, with 2,489 BT's in stock and 743 AT's.

Location of aircraft can be obtained from WAA regional offices, or from Office of Aircraft Disposal, WAA, 425 Second street, northwest, Washington 25, D. C.



HIGH ABOVE ALL IN GLOBAL TRANSPORTATION

THE XF-12 IS A LONG-RANGE, HIGH SPEED PHOTO RECONNAISSANCE AIRPLANE DESIGNED AND BUILT BY REPUBLIC FOR THE ARMY AIR FORCES. (IT IS THE FORERUNNER OF TOMORROW'S RAINBOW... A REVOLUTIONARY COMMERCIAL TRANSPORT ALREADY ON ORDER IN FLEET UNITS BY AMERICAN AIRLINES AND PAN AMERICAN WORLD AIRWAYS. (WHEN THESE GREAT LUXURY LINERS TAKE TO THE AIR... IN THE NOT TOO DISTANT FUTURE... THEY WILL BRING TO GLOBAL TRANSPORTATION NEW CONCEPTS OF SPEED AND LUXURY, LINKING THE CAPITALS OF THE EARTH HOURS... AND DAYS... FASTER THAN THE BEST SCHEDULES NOW IN OPERATION... AT CRUISING SPEED OF OVER 400 MILES PER HOUR.

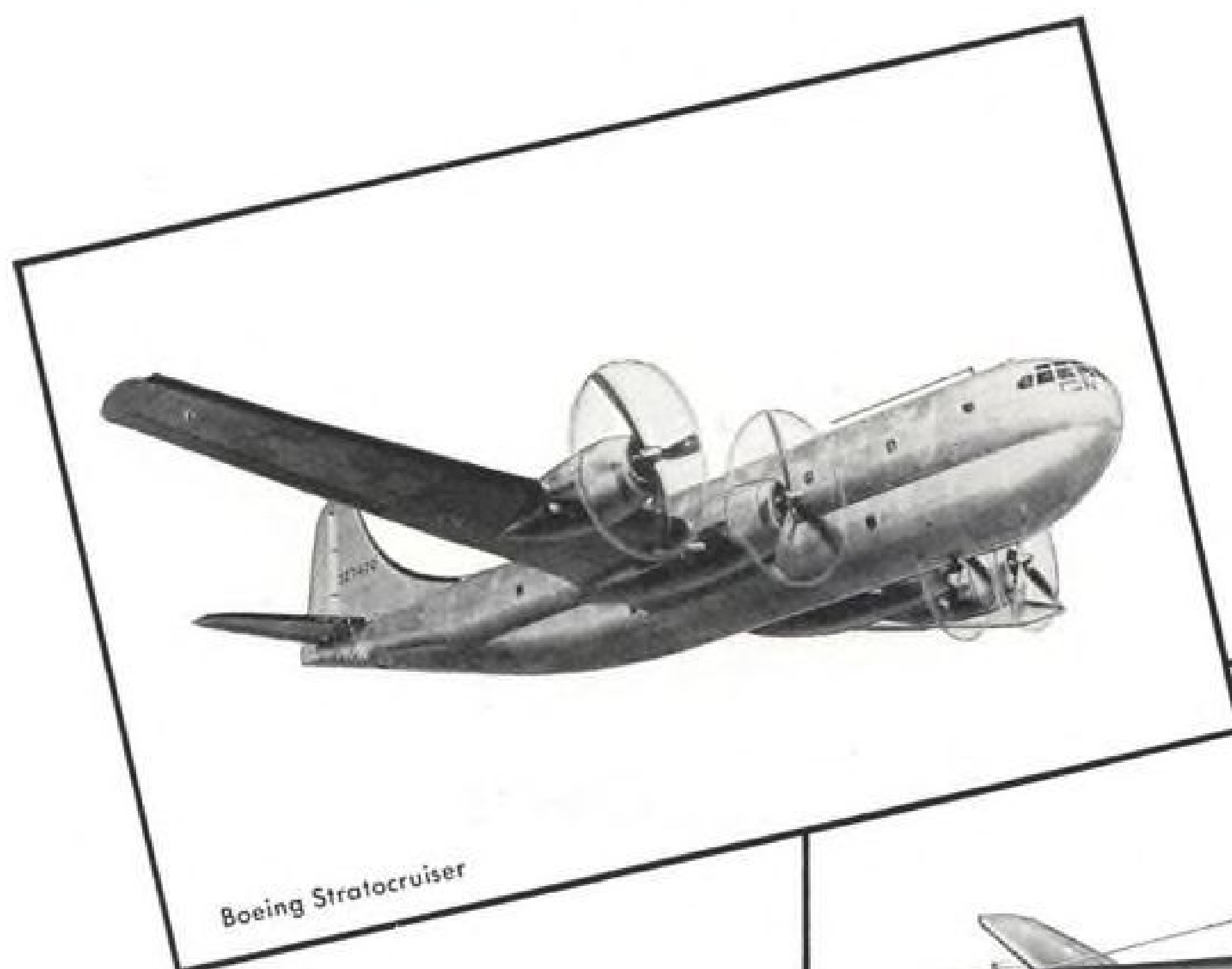


REPUBLIC AVIATION CORPORATION, FARMINGDALE, L. I., N. Y.

South Wind MODEL 921 AIRCRAFT HEATER

REG. U. S. PAT. OFF.

is STANDARD EQUIPMENT on the latest post-war transports!



Boeing Stratocruiser

● Among the new planes soon to see service on domestic and international air lanes are the Boeing Stratocruiser, the Martin 2-0-2, and the Lockheed Saturn.

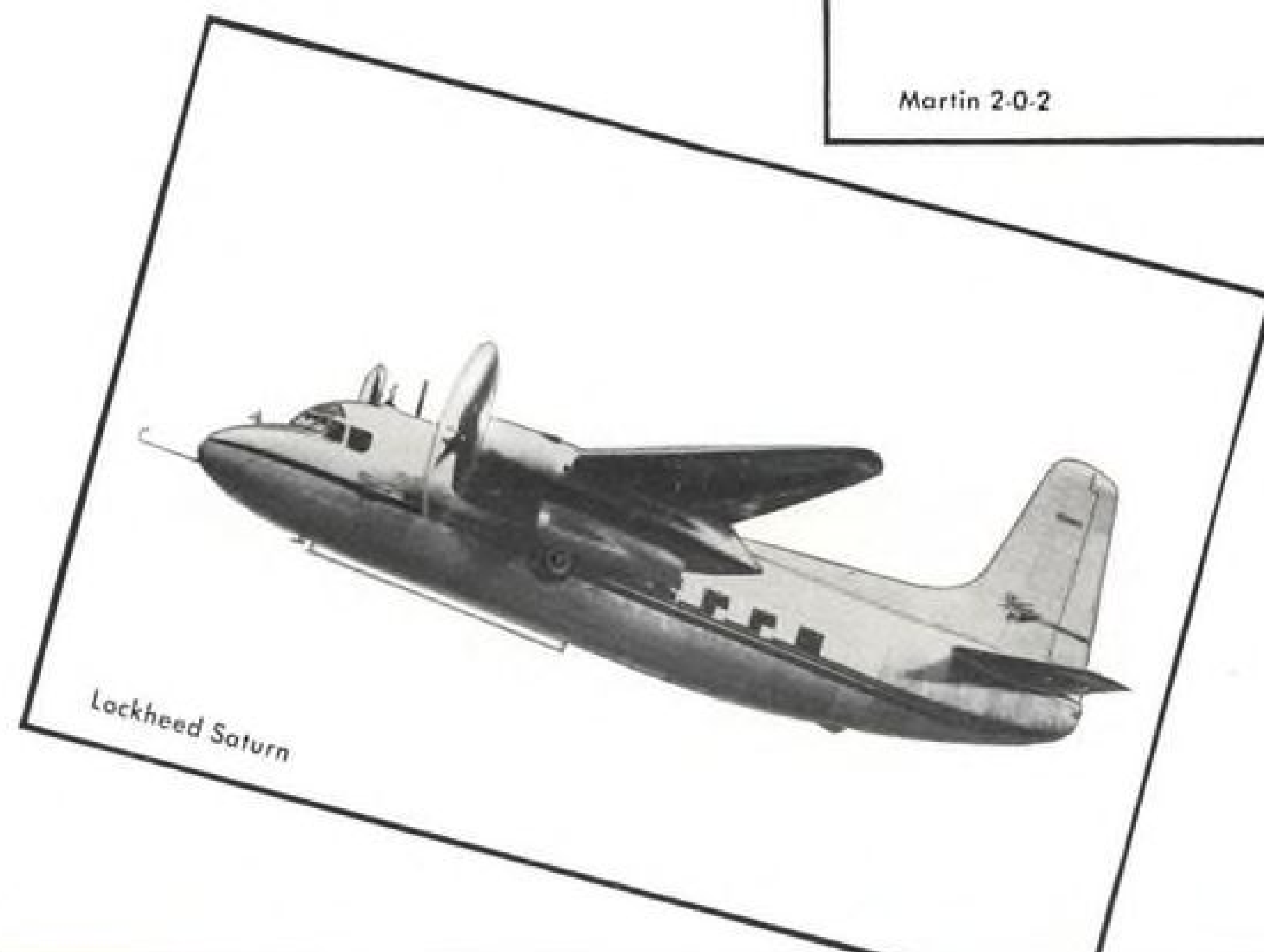


Martin 2-0-2

● Dependability and superlative performance proved by thorough tests have resulted in the selection of the new South Wind Model 921—200,000 BTU's per hour—heater as standard equipment to supply all heating requirements, including thermal anti-icing and cabin comfort, on the most modern air transports.

● While these most modern aircraft are designed to meet widely different operational requirements, they are alike in using only the finest and most highly developed aircraft components, and they all include the South Wind Model 921 Heater as standard equipment.

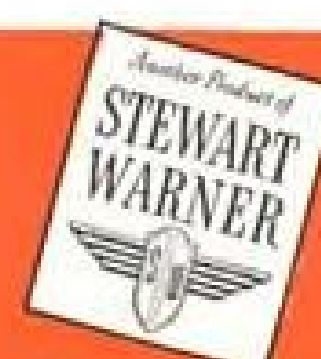
Military Aircraft. In the latest high performance military aircraft, too, this new South Wind heater is specified. Among the new combat airplanes to standardize on the Model 921 heater are the Boeing B-50, the North American P-82 E, and the Lockheed P2V-2.



Lockheed Saturn



South Wind DIVISION
STEWART-WARNER CORPORATION
INDIANAPOLIS 7, INDIANA



Glenn Martin Urges Private Airports

Solution to the problem of insufficient and overcrowded airports will not be achieved until adequately-financed private corporations are in a position to take over the development and management of major commercial air terminals facilities, according to Glenn L. Martin.

Speaking before the Baltimore Association of Commerce's annual aviation dinner, Martin declared that such terminal corporations, if started now, would need three to five years to get into full operation. Meanwhile, he continued, states and municipalities should go ahead with development of adequate facilities for the immediate future lest their communities fail to realize their proper share of new business activity as the country-wide volume of air cargo and passenger traffic increases.

Martin predicted that air cargo ultimately will exceed the transportation of passengers in volume and economic importance to the air carriers, adding that only the surface of the airfreight business has been scratched. He announced that a \$100,000 Martin pilot plant at Chestertown, Md., is well along with experiments in process pre-packaging of garden-fresh vegetables for air shipment.

In another phase of his speech, Martin forecast a bright future for the various types of pure jet and turbine power plants for aircraft, but cautioned against over-optimistic predictions of early practical use of such means of propulsion in ordinary commercial air travel. "The pure jet transport is probably at least five years away from regular service," he said, "and even then it will only be used for extremely high-speed operation."

Douglas Net Profit Totals \$3,154,142

Douglas Aircraft Co. realized a profit of \$3,154,142, equivalent to \$5.26 a share, for the nine months ending Aug. 31, on sales of \$84,449,609, President Donald W. Douglas has reported.

Included in the net income is an estimated \$900,000 to be recovered from unused excess profits tax carryback on excess profits taxes paid in previous years. Douglas also announced a dividend of \$2.50, payable Nov. 23 to stockholders of record Nov. 8. Douglas has already paid a \$5.00 dividend on Sept. 20.

As of Aug. 31, company's backlog was \$186,877,000, of which 61 percent was made up of orders for commercial products. Net working

capital on that date was \$70,368,000.

Other manufacturers' financial reports:

► **Republic Aviation Corp.**—Profit of \$479,716 for the nine months ending Sept. 30, on sales of \$24,414,650. Included in the income figure is a tax credit of \$475,000. Sept. 30 backlog was \$77,608,000, made up of \$29,810,000 worth of orders for Seabee amphibians and Rainbow commercial transports, and \$47,798,000 worth of military orders.

Republic's lightplane engine subsidiary, Aircooled Motors Corp., Syracuse, had a loss of \$718,107 for the first three quarters of the year on sales of \$1,682,025. President Carl F. B. Roth attributes this to extraordinary reconversion and engine development expenses. Aircooled's backlog as of Sept. 30 was \$7,715,000, of which orders totaling \$3,810,000 were from manufacturers other than Republic.

► **Beech Aircraft Corp.**—Sales of \$21,304,598 during the fiscal year that ended Sept. 30. Profit and loss figures are being withheld temporarily pending the final results of contract termination and renegotiation, although a full report is expected to be made in about 60 days.

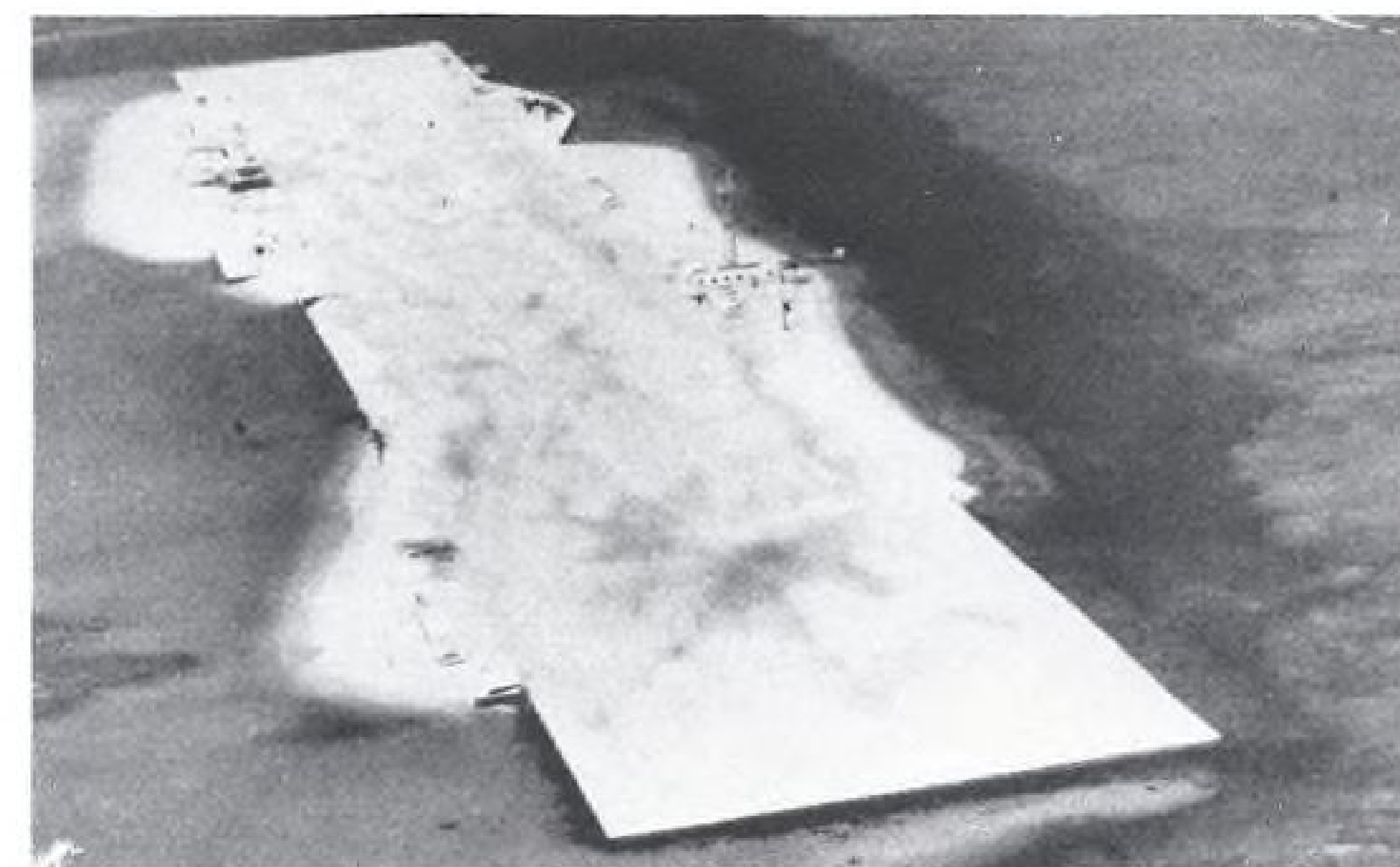
Beech started the fiscal year with a backlog of \$7,000,000 and delivered practically no aircraft during the first quarter, president Walter H. Beech stated. Present backlog is about \$30,000,000.

Engine Overhaul Time Boosted on Rolls-Royce Jet

Overhaul period of the British-built Rolls-Royce Derwent I jet engine has been increased to 270 hours from the previous limit of 180 hours, the company has announced. This action follows an examination of six engines that had been operated in service for the former time limit. Condition of the engines was such as to warrant the time between overhauls to be raised 90 hours.

As soon as six more engines complete 270 hours of operation they will be stripped and examined to determine whether the Air Ministry will raise the time another 90 hours.

Meanwhile, Rolls-Royce has announced that a Derwent I on a test bed has completed 1,000 hours. This engine was built in June, 1944. At the end of the first 500



LAND-BASED CARRIER:

Monument to the short-range fighters with which the U. S. started the war is this \$2,000,000 artificial carrier deck built in the early days of the war on the coral of French Frigate Shoals, 552 mi. northwest of Hawaii. Purpose was to provide a refueling spot for land-based planes, but before it realized fully that object, droppable fuel tanks had made it unnecessary. Now it is being offered as Navy surplus to a puzzled Territory of Hawaii that ponders a possible commercial use for its 3,100 ft. runway.

hours, replacements required were a set of flame tubes, one air casing, some turbine blades and a fuel pump.

North Atlantic Fare Cuts Are Effective

North Atlantic air fare reductions to which CAB recently gave its approval (AVIATION NEWS, Sept. 30) have been made by carriers of the U. S. and five other governments.

International Air Transport Assn. said the cuts approximate 12½ percent. The new fares will continue until Feb. 28, 1947. Governments who approved them are the U. S., Canada, France, Great Britain, the Netherlands and Sweden. Participating lines are American Overseas, Pan American, TWA, Trans-Canada, Air France, BOAC, KLM Royal Dutch, and SILA, Swedish Intercontinental.

The new schedules include discounts of 10 percent on round trips, 90 percent for infants not more than 2 years old, and 50 percent for children from 2 to 12.

Sir William Hildred, director general of IATA, pointed out that cost of trans-Atlantic passage, which five years ago was nearly \$600 and just before the cuts was \$375 one way between New York



MISSOURI POLICE PLANE:

A surplus army liaison Stinson L-5 plane, reconditioned for use by the Missouri state highway patrol to augment surface patrol cars, is now being operated out of Heart of America airport, Kansas City, by Trooper Hugh Wallace, former AAF pilot, center, and Sgt. R. N. Eidson, both pilots. Col. Hugh Waggoner, superintendent, right, said the plane was purchased for \$2,700, was preferred to heavier planes because of its ability to get in and out of small fields.

and London, has been brought down to \$325 one way and \$586.70 round trip between those points.

Reductions also will apply to air express rates, now \$1.17 per lb. between New York and London.

100 Missouri Towns Now Marked for Pilots

Unionville (Pop. 2,052) has become the 100th Missouri community to report completion of an airmarker, since the opening last February of a campaign to airmark the state, conducted by the Missouri division of resources and development, aviation section. Much of the marking has been done by high school senior classes as class projects, with assistance of local civic organizations. The program will continue until the aviation section determines that every community in the state is properly airmarked.

Idaho Operators Score Use of Untrained State Police

Opposition to use of state police in enforcing regulations prohibiting reckless flying was voiced by Idaho fixed base operators at a recent meeting at Ontario, Ore. of the Southern Idaho-Eastern Oregon Aircraft Operators' Association. Phil Cox, Bradley Field, Boise operator, spokesman for the operators, told the meeting that state police are not properly trained to understand or control aviation matters. A three-man committee was named to study

the present state aviation administration and recommend changes.

Meanwhile Oregon operators criticized state regulations on establishment of flying schools as discriminatory and restrictive. The Oregon state board of education was charged with taking a political role, in the GI aviation training program, by influencing establishment of minimums harmful to the small operators.

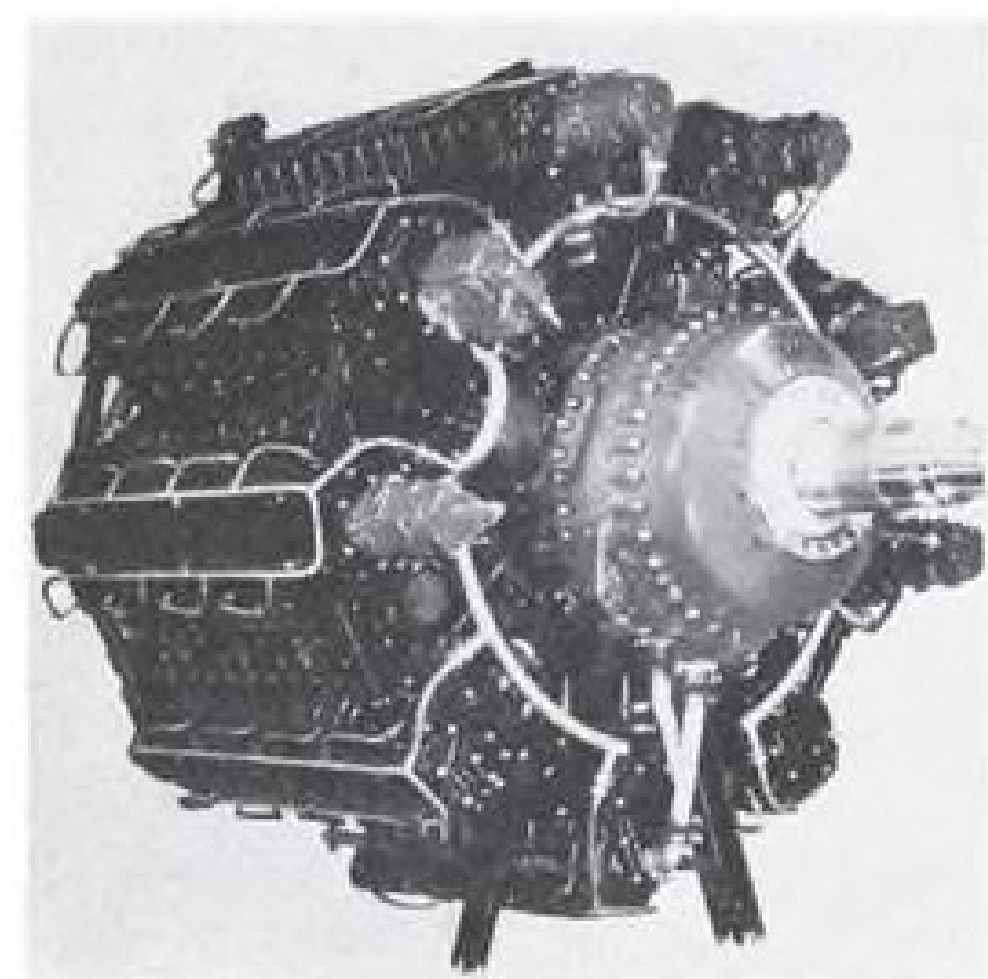
Fleet Makes Floats

Broadening its field of operations, the Fleet Manufacturing & Aircraft Ltd., Ft. Erie, Ont., has started production of a new aluminum float for personal airplanes, General Manager Thomas Smith announced.

The first floats are primarily for the company's personal plane, the Fleet Canuck, but can be used on other planes, said Mr. Smith. "We are planning others of various sizes for all types of personal aircraft," he said. The company plans to step up its production of the Fleet Canuck to eight a day by January 1.

Fire Destroys Plant

The plant of the White Canadian Aircraft, Ltd., Grimsby, Ont., was totally destroyed by fire October 5th. Officials of the company estimate the loss at approximately \$125,000. The fire, of undetermined origin, spread so quickly that firemen could do little. A new 800-ton hydraulic press was damaged while most of the other plant machinery was a total loss.



5,000 HP ENGINE:

World's largest reciprocating aircraft engine is the XR-7755, Lycoming-built 5,000 hp., liquid-cooled power plant, taken off the AAF's secret list last week. Containing nine banks of four cylinders each, a coolant pump that circulates 750 gallons of coolant per minute and propeller drive through a two-speed dual rotation reduction gear with a hydraulic shift, this experimental giant consumes 280 gallons of gas per hour. (AAF photo)



At Home

SIGHT FOR SOARING EYES

If you're homing on Manhattan in the world's fastest commercial airplane. And whether your TWA Starliner journey is measured in hundreds of sky miles or thousands, you find its last glorious moments as stimulating as its first ones. In pressurized cabins at "overweather" altitudes, time passes so smoothly, so restfully. This is flying as only a Constellation can make it—as only TWA provides it in this country. One flight like this makes you sure that flying is the way to travel and TWA the way to fly.






and Abroad

LISBON'S LOOKING UP

There's a new look in the sky over Portugal's colorful capital. It's the sparkling new TWA Constellation Starliner, introducing New World Airlines to the Old World airports below. Here the shades of blue and white wings salute the most gaily painted flocks in all the world. Here people look up out of Moorish buildings and pause in their work to watch you come in from far-off America—now but a day away. This is spectacular flying at its best—with a world-wide air crew to attend your comfort and with piloting polished after 14 million miles of international flying. Your travel agent or Trans World Airline office will start you on your way.




The word is spreading:
"Flying is the way to travel and TWA the way to fly"

PRIVATE FLYING

SALES

FIXED BASE OPERATIONS

SCHOOLS

Spring Steel Landing Gear Proves Attraction on Cessna Models

3,000 Lightplanes sold without failure report on novel gear designed by Steve Wittman; Wichita plant making 28 planes a day.

By ALEXANDER MCSURELY

Exhibiting a toughness which belies their fragile appearance, the slim spring-steel landing gear legs of the two-place Cessna personal planes, Models 140 and 120, are rapidly winning acceptance as an important development in the lightplane field.

Since Cessna Aircraft Co., Wichita, began mass production last April, approximately 3,000 of the two models have gone out into the field. Yet the company is still waiting for its first report of a serious landing gear failure. This is a record not, to our knowledge, equalled by any other fixed landing gear.

► **Wittman's Design**—Adapted from a design by Steve Wittman, well-known racing pilot, the undercarriage is simple to make, requires virtually no maintenance, and offers less drag than most fixed gears. Cessna saws out both legs from a single piece of chrome molybdenum alloy steel. Three saw-cuts, two bends at the ends, some holes drilled and the manufacturing is completed, except for a two-hour heat treating process.

Cessna has reports from planes which have landed so hard, the wingstruts showed black rubber marks from the wheels, yet no failure was experienced. Norman Blake, Oklahoma City, Cessna dealer, told the writer that he had demonstrated the landing gear by dropping the 140 plane in from 50 ft. altitude, with no damage.

However the company was convinced it had something through tests before the gear went on the new plane. Drop tests equivalent to 100,000 landings, many more than the plane would experience in an ordinary service life, were

made on a typical gear. The drop tests were extended to a 33-inch drop, after completing the required 18-inch drop. Also, fatigue tests equivalent to 1,961,000 normal landings were made on the spring gear.

► **Correct Toe-in**—Cessna spokesmen say they experienced some unusual tire wear on the first six planes, which has now been corrected by using shims to correct the toe-in of the wheels, and by using lower air pressure in the tires.

The landing gear was demonstrated to advantage in a recent flight we made with Al Michaud, Vancouver Cessna distributor, from Oklahoma City to Wichita. The gear had no trouble despite gusty wind conditions both during takeoff and landing. The flight incidentally was our first behind the McCauley Met-1-prop, all-aluminum fixed pitch lightplane propeller built by C. G. McCauley at Dayton, Ohio, in the plant where he turned out solid steel propellers for military trainers during World War II.

The Met-1-prop's very thin blade offers a considerable advantage over wood blades of comparable strength in aerodynamic efficiency. Both Continental and Cessna engineers are enthusiastic about the boost in performance it gives without variable pitch complications.

► **Excellent Layout**—A walk down Cessna's production lines shows excellent layout of the 420,000 sq. ft. plant, and very complete machine tooling for all-metal production.

As of October 18, schedules called for 28 planes a day, and

there appeared no reason why production could not be stepped up to at least double this level if desired. There are 1800 employees in the Wichita main plant, and 200 others at the Hutchinson, Kansas, plant where wings are built.

Two new experimental all-metal versions of the pre-war four-place Cessna Airmaster, using heavier spring-steel landing gear than is installed on the little two-place planes, are presently under development.

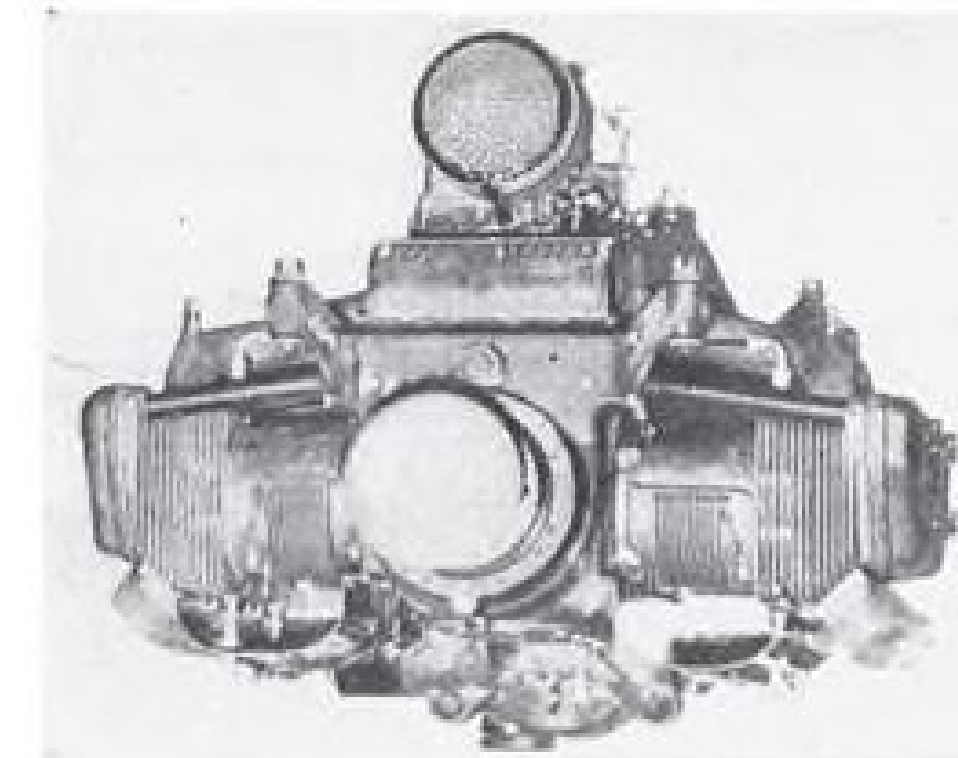
The larger planes are still many months from production and the company is not releasing any detailed information concerning them.

Don Flower, sales manager, has allotted 15 percent of 140 and 120 production for export and has completed arrangements for distribution in Alaska, Hawaii, Canada, Argentina, Brazil, Chile, Mexico, Panama, Uruguay, Venezuela, Belgium, Holland, Switzerland, Norway and Sweden, and already has some planes in many of these countries. The manufacturer requires all its distributors to handle only Cessna planes, and is seeking to put as many of its dealers as possible on the same exclusive basis.

► **Management Shift**—Dwane Wallace Cessna, president, recently took over his brother Dwight's interest in the company. They are nephews of Clyde Cessna, founder of the company. Clyde Cessna flew his first plane at Enid, Okla., in 1911. Dwane Wallace, a young aeronautical engineer, bought controlling interest in the company in 1933, and the same year won the Detroit News trophy with a Cessna plane.

The dependable, full-cantilever highwing Airmaster, was the company's mainstay in prewar days, although a large portion of the company's present position is due to its marketing of the twin-engine plywood advanced trainers and utility transports which it built for military use by the Canadians, British and the American government.

The company sold nearly 4,000 of these to the U. S., in addition to thousands more for export. The company no longer makes this plane, first developed as the T-50, and later known variously as the Crane, Bobcat, AT-8, AT-17, and UC-78 but due to conversions of military planes for civilian use, it is one of the most widely-used small twin-engine transports now in operation.



Chrislea Four-Placer and Engine: The British-built four-place Chrislea Ace, now undergoing first flight tests in England, is attracting considerable attention in India, and may be manufactured there if demand warrants. Tentative price of 8,500 rupees (about \$2,800) has been set in India. Prototype is powered



with 125 hp. Lycoming engine. Production version is to use new British-built Monaco four-cylinder engine shown in front view, rated at 100 horsepower for takeoff at 2,800 rpm. or 75 horsepower at 2,200 rpm. (McGraw-Hill World News and British Combine photos)

Bright Future Seen For Indian Flying

Government subsidized flying clubs stimulate production of private pilots; Mistri Air enterprises expanding.

By JOE VAN DENBURG, JR.

Bombay (McGraw-Hill World News)—Personal aviation in India is expected to grow rapidly from its present small size as Government-subsidized flying clubs in each of India's eight major cities get additional equipment and instructors.

Each club receives an annual subsidy of 40,000 rupees (about \$13,000) plus five rupees an hour for total club time flown in excess of 1,000 hours a year, and 250 rupees for each member who gets a private pilot license. Flying time costs the club member 30 rupees per hour, but members under 28 years old get a direct subsidy of 15 rupees an hour, while older members get a 5 rupees an hour subsidy.

Exclusive of military pilots, at the half-year mark, India had only 100 private pilots and 105 transport pilots. Most club flying is done with surplus Tiger Moths and U.S. L-5s. Twenty-seven fields are open to civil aircraft, with commercial lines using the same fields. With the exception of the Karachi airport, commercial traffic amounts to only a few flights daily and flying club activity is suspended during these periods.

► **Vigorous Leadership**—Asian Air Associates, wartime development of 29-year-old Rusi Mistri, is taking a vigorous leadership in promoting India's personal aviation. Mistri is associated with Chrislea

Aircraft, Ltd., of Heston, England, manufacturer of the new four-place Chrislea Ace. AAA also is the exclusive India-Burma-Ceylon representative for Bendix products, having manufactured Bendix communications equipment during World War II. Aeronautical Corp. of India, another AAA subsidiary, is exclusive India-Burma-Ceylon agent for the British four-place Percival Proctor, and is looking for additional lines. Yet another subsidiary, Mistri Airways, has a fleet of 12 converted Douglas C-47s and 18 Noorduyt Norsemen.

Mistri is making arrangements to establish a manufacturing plant for the Chrislea Ace in India, as soon as demand there warrants mass production. Priced at 8,500 rupees (about \$2,800) the Ace is preparing for initial test flights in England. The prototype is powered with a 125 hp. Lycoming engine, but the production model is to be equipped with a new 100 hp. Monaco engine. The high-wing tricycle-gear monoplane, which has simplified control is credited with 110 mph. cruising speed, 43 mph. stall speed, 510 ft./min. climb and 390 mile range. (Additional details on the Chrislea plane were published previously in AVIATION NEWS, May 20.)

The Ace can be packed in a shipping crate 21 x 6 x 6 ft. with 1,500 lb. gross weight. AAA officials are enthusiastic about the Ace's chance in the Indian market as well as in Great Britain. They expect to have its components tropic-proofed for India, as much as possible. Experience with plywood-construction, Percival Proctors delivered in India has shown a tendency for exterior surfaces to swell and warp under Indian rains and sun, the agency reports.

► **Design Transport**—Another aircraft in design stage sponsored by AAA, is a twin-engine 6-7 passenger executive transport, expected to have a good market among Indian business men. Air travel represents the most comfortable and best means of travel as well as the quickest in India, since few of the highways measure up to second-class U. S. roads, and the railway system offers many delays and inconveniences.

Eight months in the year there is almost uniformly clear weather, while in the other third, the rainy season seriously curtails any contact flying. Since private licenses are available in India as soon after solo as the pilot is able to pass his flight test, this offers an added inducement for rapid growth of personal aviation in India.

Softening Market Trend in Lightplanes

Possible indication of a "softening" of the market for personal aircraft was seen in the Census Bureau figures of plane deliveries in August. While deliveries jumped appreciably over July, observers were quick to point out that new sales had not kept pace as the backlog for two-place planes dropped 971 and that for three- and four-place aircraft was off 367.

Another index of a decreasing domestic demand for lightplanes (see Briefing), are reports from manufacturers export sales representatives that they are able now to obtain greater allotments for sales overseas. Until very recently, practically all production was pre-empted by domestic distributors.

Deliveries of completed aircraft

in August totaled 4,790 valued at \$22,403,502, the Census Bureau reports. Of that, military planes numbered 107, valued at \$9,738,385. Total August shipments increased 39 percent over July, although value increased only 7 percent.

Backlog on Aug. 31 was 49,604, a decrease of 3 percent during the month, although dollar value of the backlog, \$1,121,016,501 was slightly over the July 31 figure of \$1,120,408,218.

Of the 4,683 civilian planes shipped, by far the largest proportion, 4,658, were single-engine personal-type aircraft of from two to four places. Two and four engine planes produced during the month totaled 25. At the end of the month, backlog of two-place planes was 31,504, and of three- and four-place, 14,897.

Census Bureau figures showed an increase of employment in aircraft plants of 6,948, from 149,313 in July to 156,261 in August. However, the August figures include more plants than were covered in the July report.

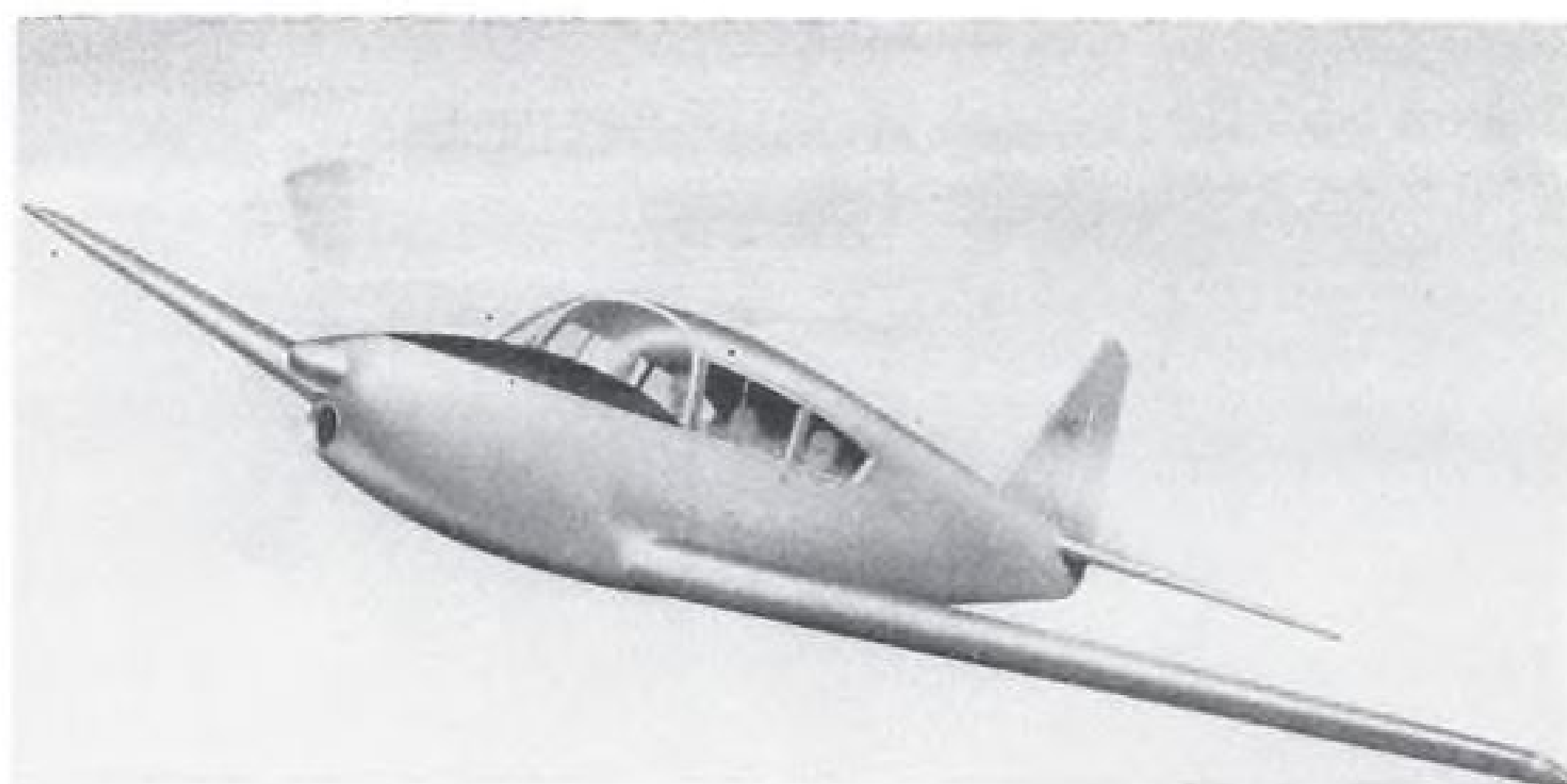
Michigan Flying Farmers Are Organized at Lansing

Despite poor weather, 150 rural pilots and passengers arrived at Capitol City Airport, Lansing, Mich., recently, in 45 planes to form the "Michigan Flying Farmers" organization. They were greeted by officials of Michigan State College, which with the



1947 STINSON VOYAGER 150:

Stinson division of Consolidated-Vultee Aircraft Corp. has re-designed interior of its four-place Voyager 150 in the 1947 version. Photos show control panel and luxurious upholstery of deluxe model to be available in November. A "station wagon" version for farmers and ranchers, with removable seats for cargo carrying, will be available next spring. Another 1947 innovation is cabin airconditioning controlled from the panel.



FAIRCHILD ENTRY:

Artist sketch of the new Fairchild all-metal personal plane, tentatively designated F-47, to be built at the Fairchild Personal Planes division plant recently acquired at Strother Field, Windfield, Kan. shows conventional low-wing monoplane with retractable landing gear, and single tail. Plane bears some resemblance to the Fairchild M-84, experimental prototype testflown but not manufactured. The F-47 is to be powered with a Continental 185 hp. engine and to have a cruising speed of around 150 mph. reports say.

Michigan Department of Aeronautics and the *Michigan Farmer* magazine, sponsored the gathering.

William B. Stout, aeronautical designer and chairman of the Michigan Department of Aeronautics; Col. Floyd E. Evans, department director; Dr. John A. Hannah, president of M.S.C.; Bert A. Hansen, secretary-treasurer of the National Flying Farmers Association, and Ernest L. Anthony, M.S.C. dean of agriculture, addressed the group.

A board of directors was elected for the new unit as follows: Dave

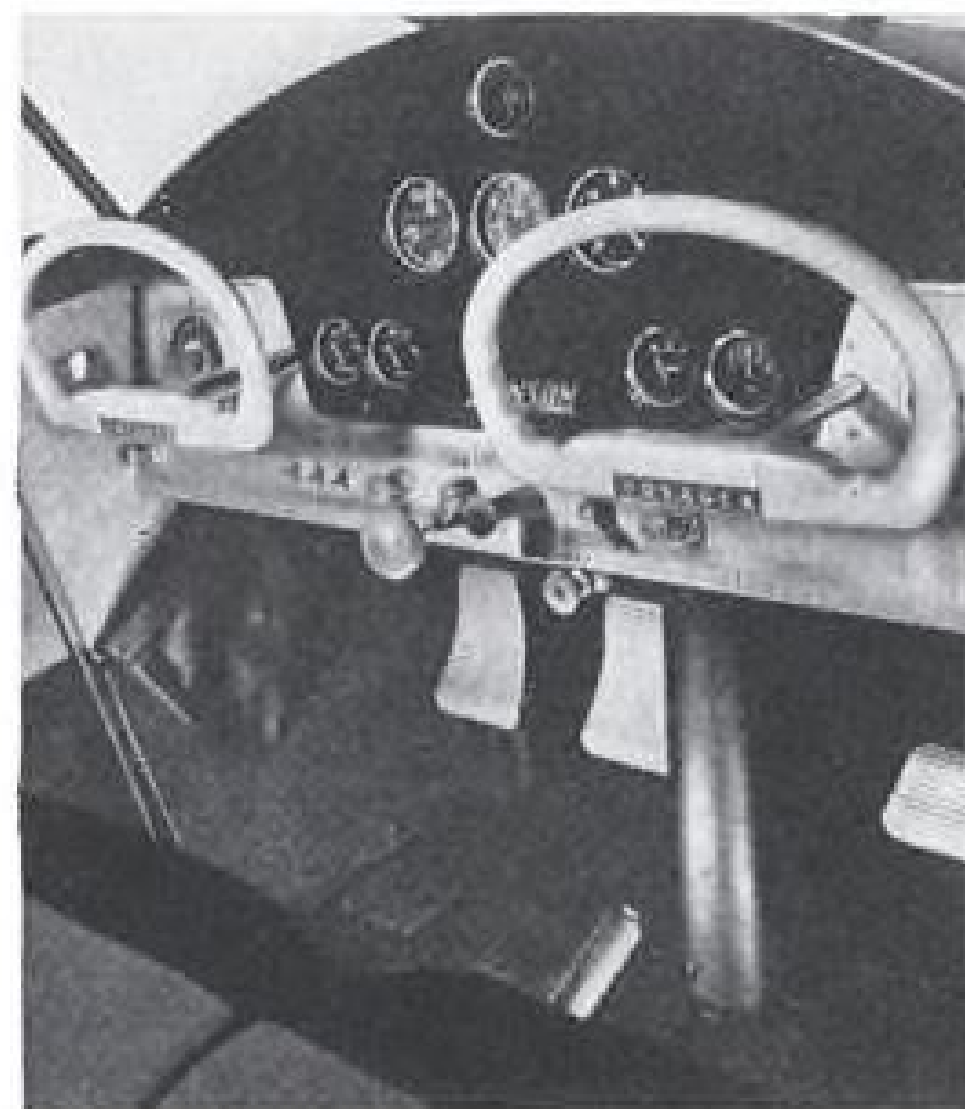
Friday, Hartford; Ernest Irwin, Clare; Earl Gehman, Vermontville, and Randy Russell, Battle Creek. Officers chosen were: Lee Talladay, Milan, president; George E. Boydson, Adrian, vice-president, and Carl Murtomaki, Baraga, secretary-treasurer.

Fairchild Trainer Meets New Need

First of a planned postwar crop of service training planes which will be larger and faster than those used by the Army and Navy during the war has been flown by Fairchild Engine & Airplane Corp. which built the XNQ-1 for the Navy.

Fairchild was awarded the contract for three of these planes in competition with other manufacturers. North American Aviation is also building a somewhat similar Navy trainer. AAF has likewise called for bids on a new training plane, heavier and faster than the XNQ-1. While the Fairchild plane is a primary trainer, AAF's proposed plane will replace primary and basic trainers.

Behind the plans for new training planes is the fact that during the war aircraft speed and maneuverability jumped so sharply that the transition to combat planes from usual training types is too sharp. It is significant that AAF expects to give advanced instruction in P-51 fighters and B-



25 light bombers, two of its hottest aircraft. Also illustrating the trend toward higher performance trainers is an AAF schedule for two-place jet-propelled trainers.

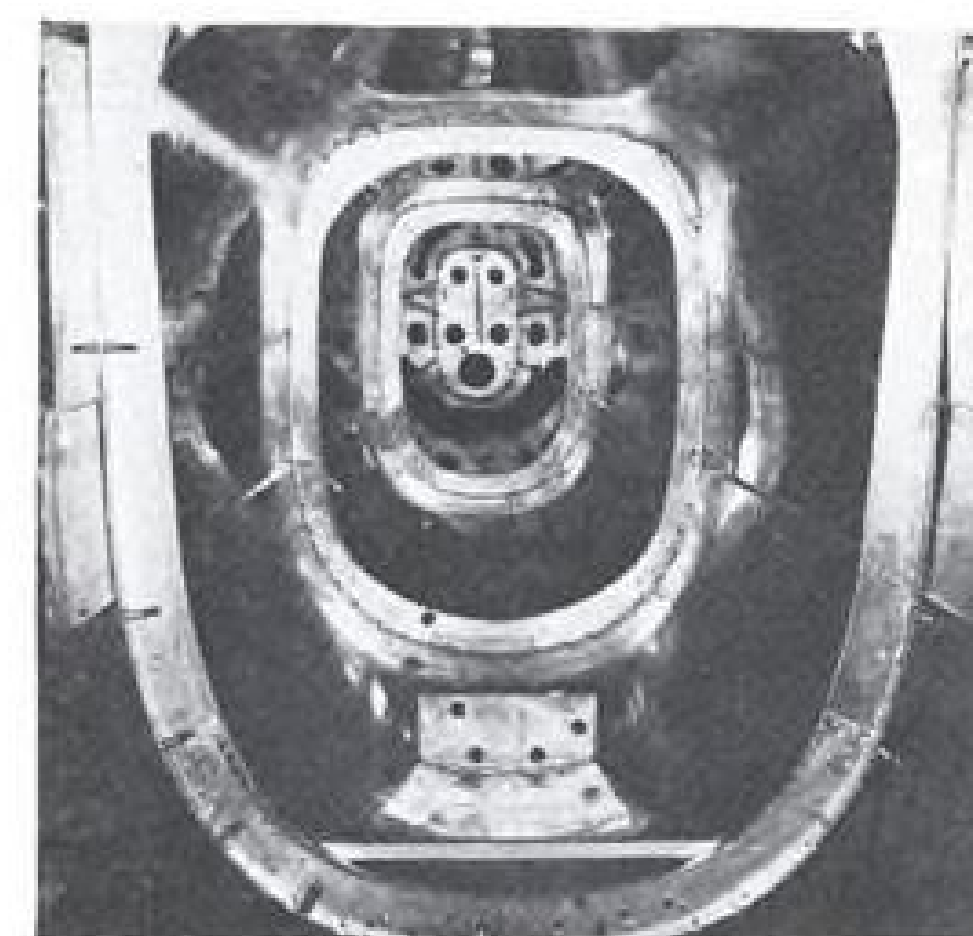
The XNQ-1 for the first time in a primary trainer has retractable landing gear, operated electrically, and a Hamilton Standard controllable pitch propeller. Its bubble-type canopy, covering both of the seats, is also an innovation and is claimed to give increased visibility that should reduce collisions.

Powered by a Lycoming 320-hp. engine, the plane has a top speed of 170 mph., a stalling speed of 53 mph. and climbs at about 1,200 ft. per minute. Weight is 3,700 lb., span, 41 ft. and length 27 ft.

In drawing specifications for the new trainer, Navy studied closely experience with primary trainers during the war and established requirements with a view toward minimizing chances of pilot error and other accident causes arising from design.

New Drain Valve

A new type oil drain valve announced by Koehler Aircraft Products Co., Dayton, Ohio, provides a shortcut for mechanics servicing lightplane engines. The CAA-approved valve is a permanent installation, safety-wired, the company says, and permits draining of the oil sump by simply opening the valve, eliminating the messy job of unscrewing the sump plug whenever an oil drain is needed. The valve is threaded to fit all light Continental engines.



CESSNA FABRICATION:

Interior of fuselage of Cessna's two-place all-metal personal plane showing the stressed-skin construction. No internal stringers are used, the aluminum skin being wrapped around the bulkheads and crimped together.

Briefing For Private Flying

1500 BONANZA ORDERS—Beech Aircraft Corp. last week announced receipt of more than 1500 purchase commitments for the four-place Model 35 Bonanza, which is expected to be in production "within 30 days." Deliveries will be made in sequence that purchase orders are received, with production expected to reach 12 a day by next Spring. On a basis of the \$7,345 price announced for the butterfly-tail personal and executive plane, this would mean a backlog of over \$11 million for an airplane which at last reports had not yet completed CAA certification.

GATY PHILOSOPHY—John P. Gaty, Beech executive vice-president, sees the Bonanza 35 as an executive transport primarily, rather than a private plane, although naturally Beech isn't turning down any personal plane orders. On the basis of the company's sales of twin-engine Beech 18s, Gaty sees a much larger potential market in industry for planes in the Bonanza price and performance class. There are thousands of business executives who can use high speed personal transportation to business advantage, but who can't afford the \$70,000 it takes to own a twin-engine Beech, or to operate it after they get it. But they can well afford to buy and operate the Bonanza, Gaty says.

QUIETER PLANES IN '47-'48—Judging from research going on among the personal plane manufacturers, the 1947-1948 crop of personal planes ought to be considerably quieter, inside and out, than the first hurry-up postwar jobs. Continental Motors is reported running a series of tests on various mufflers on their engines, for several manufacturers to determine operating characteristics and effect on the engine. Cabin-soundproofing is becoming increasingly important now that the first seller's market is beginning to cool off a little, and the distributors and dealers are actually having to put up some sales arguments to the customers. This still leaves the propeller, blackest villain in the noise picture, unaccounted for. But after a series of talks with manufacturers of planes and propellers, we still have been unable to find one who thinks that the proposed NACA eight-blade prop can be manufactured, at less than a prohibitive cost, to say nothing of repairs in case of a nose-over. Isn't there some easier way?

CANADA MARKET—A recent study of the personal plane potential in Canada, by the Financial Post, Toronto, showed nearly 400 lightplanes had been purchased since last November, with a value of approximately \$5,000,000. This was against a prewar average sale of approximately 100 a year, of \$300,000 total value. The number of Canadian pilots has increased to 2500 from 1400 in 1938. Dealers estimate they will sell 600 planes in 1947, but could easily double this volume if there were more airports. Aircraft sales at the recent three-day Toronto air show amounted to \$250,000, the study showed. The Aeronautical Institute of Canada is urging the Canadian government to sponsor an airport program for developing 400 Canadian flying fields, which is expected to increase greatly the utility of personal and business planes in Canada.

BILL ONG REPLIES—In answer to some of the accusations made by J. B. Hartranft, general manager of Aircraft Owners and Pilots Association, in his talk at the recent National Aviation Clinic (AVIATION NEWS, Oct. 21) about exorbitant charges, Bill Ong, Kansas City fixed base operator, and former NATA president, came back with a sturdy defense of many operators. Ong attributes most of the unbusinesslike dealings, failures to estimate costs, etc., mainly to the "shade-tree" operator who does not have an established base of operations. He urged flyers to go to established operators for fair treatment. The question of return of deposit would be aided, he declared, if the manufacturers would take off some pressure on their dealers and distributors to provide a big backlog of orders even if they can't deliver the planes. Once an operator takes deposits, and spends them, it is much harder to pay them back. He attacked a flat-rate charge proposed by Hartranft, as "less than we pay for labor."

—ALEXANDER MCSURELY

DEPRESSION IN '47?

...controls can bring one

IT IS CONVENTIONAL for the American business man, who values freedom, to protest against government regulation. On this account, many people who do not know the facts in detail are inclined to discount current business protests against the post-war application of wartime economic controls. This is particularly true since in his report for the third quarter of this year, the Director of War Mobilization and Reconversion implied that business is in fine health by remarking that "business profits, after taxes, are at the highest point in history."

In complaining about government controls, however, the American business man is not crying wolf. These controls were an essential war weapon. Now, however, they are contributing decidedly to a twisting and distorting of the American economy in a degree which, if not soon corrected, may well start production and employment down the toboggan.

One general indication of how badly twisted our economic system has become is found in the wide disparities in the amounts by which different groups of prices have increased. Since 1941, for example, farm prices have advanced an average of about 125%. Industrial prices, more tightly controlled than any other group except rents, have increased only about 32%. Meanwhile, straight time hourly earnings of industrial workers have gone up about 60% and the cost of living about 43%.

The advances of individual prices within these groups have also varied enormously. Among industrial prices, that of finished steel has gone up only about 14% since 1941, while lumber has gone up over 50%. Hourly wage rates in the women's garment industry have gone up 116%, while those in the brewing industry have gone up only 33%. That share of the cost of living due to rent has gone up only 4%, while that due to the cost of clothing has gone up over 60%.

Well, What Of It?

At least four things of major importance:

1. Production, under the influence of price control, has been heavily concentrated in some

lines to the neglect of others. Result—unbalanced production, unbalanced inventories, and a serious cut in the flow of goods to consumers.

2. More or less uniform post V-J Day wage increases, promoted by the federal government, have imposed a far more serious cost problem on some industries than on others. This is particularly true of some of the most basic industries.

3. While, as a whole, "business profits, after taxes, are at the highest point in history" (due in part to a temporary excess profit tax rebate arrangement) there are enormous disparities in the profits of different industries. Some key industries are making little or no profits.

4. If not corrected, the distortion of prices, wages and production, which has resulted in such a wide disparity of profits, can contribute decisively to a major business upset.

The most striking example of the distortion of production by controls was, of course, that provided by a metropolitan meat famine at a time when beef cattle crowded the ranges. This has now been recognized. But there are many other distortions. Abundance of sports clothes, acute shortage of more essential clothing made from the same kind of cloth. Successive shortages of critically important products like baling wire and nails as the price lid on steel is jiggled first this direction and then that.

Some of these distortions of production are due to material shortages. But a major contributor is uneven application of controls, and the total removal of some while others are held firm. Among the results are bulging inventories of partially completed assemblies and shut-downs while waiting for parts.

Wage Complications

While price controls, unevenly applied, have shunted production first this way and then that, the federal government has further complicated the situation by promoting uniform wage rate increases without regard to varying capacities to pay them. The greatest single contribution to this distortion was made by the President himself. In the course of

unsuccessfully trying to mediate the dispute over steel wages last January he recommended a wage rate increase of 18½ cents an hour. Immediately that increase was accepted by organized labor as par for the first round of wage adjustments, having the sanction of the White House itself. The game then became to beat par.

But the capacity of different industries to pay wage increases varied greatly. During the war some had hiked their pay much more than others. Moreover, in some industries wages are a much larger element of total cost than in others. In 1939 (last year for which figures are available) wages ranged all the way from 2½% of total sales in cigarette manufacturing to 34.3% in hosiery manufacturing and 65.2% (for wages and salaries combined) in soft coal mining.

Under these circumstances, some industries were far less able to meet a uniform wage increase than others. Nonetheless, many of them had uniform wage increases imposed upon them. Then the price lid was held firm. This, coupled with material shortages and production difficulties which also choked output, squeezed the profit right out of those industries.

A Study In Contrasts

Some of the most important industries are making little or no profits while they bump along on a production volume which fails to meet consumer needs and prevents attainment of maximum efficiency. The automobile industry affords one conspicuous example. Another is electrical manufacturing, and rail equipment is yet a third. All of them are crucially important. Many other lines of business, of course, are extremely profitable. For example, the profits of a group of large retail stores were 150% higher during the first half of this year than they were a year ago; the profits of a group of motion picture companies were up 140%.

In the meantime, the workers in some of those low-profit industries are in no bed of roses. The increase in the cost of living since 1941 is now outstripping the increase in the hourly wage rate of workers in a number of industries, where wage rates have not risen as much as the average. On a weekly basis, a shorter work week, with less overtime, has combined with the recent upsurge in consumer prices, to place the living standards of some of these workers below the wartime level.

Such circumstances obviously create pressure in the ranks of these workers for another round of wage increases. But as long as the profit remains squeezed out of their industries wage increases, if

any, must be translated either into higher prices, or, if the government sits tight on the price lid, into losses which will discourage production and ultimately cost workers their jobs.

What To Do?

Salvation both for the workers and for employers in the relatively profitless section, a peculiarly important group of industries, must be looked for primarily by increasing productivity, thereby decreasing the cost per unit. Part of this higher productivity can come only from individual efforts of the workers themselves. Another part can come from an elimination of bottlenecks in materials and parts which prevent the labor force from working most efficiently. Only by greater output per man-hour can workers and management solve their common problem.

Until productivity has been thus increased, it is hard to think how the federal government could do a greater disservice both to labor and to industry than to repeat its performance of promoting a uniform national wage increase. With the present distortion of the national economy, some industries might again take such an advance in their stride. With many others it would raise even greater havoc.

While avoiding like the plague promotion of another uniform wage adjustment, the federal government must make it a primary objective to relieve distortions caused by the uneven application of other controls, primarily price control. Nature has given a lift to the elimination of distortions by providing bumper grain crops which should in time reduce that staggering disparity between a 125% increase in farm prices and a 32% increase in industrial prices. But that process must be speeded as a matter of conscious policy. No element of such a policy is more important than expediting the decontrol of industrial prices. Such a course is clearly essential to achieve that balance in the production of materials and parts required for maximum output.

Business and labor both want a sustained prosperity in which all will share. Sustained prosperity can be achieved only if we eliminate the distortions in wages, prices and profits which now restrain so much vital production.



President McGraw-Hill Publishing Company, Inc.

THIS IS THE 52ND OF A SERIES

Why the Aircraft Industry calls on **FOOTE BROS.**

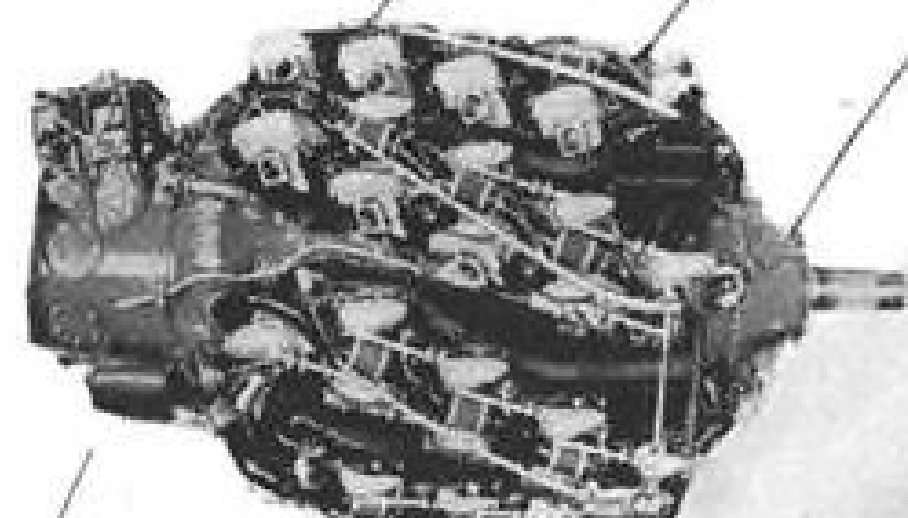
Many manufacturers today look to Foote Bros. for gears that closely approach theoretical perfection. These "A-Q" (aircraft quality) gears were produced by the millions during the war for use in Pratt & Whitney aircraft engines and for other applications. They permit operation at extremely high speeds, assure light weight and great compactness and bring the advantages of lower noise level and maximum efficiency.

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field and vast experience in manufacturing power transmission equipment led aircraft and engine manufacturers to call on this company for specially engineered Power Units, employing the precision gears Foote Bros. developed. These units assured the extremely accurate mounting so essential if the full benefit of "A-Q" gears is to be realized. The satisfactory service this equipment is rendering is evidenced by the large number of ships on which Foote Bros. equipment is included.

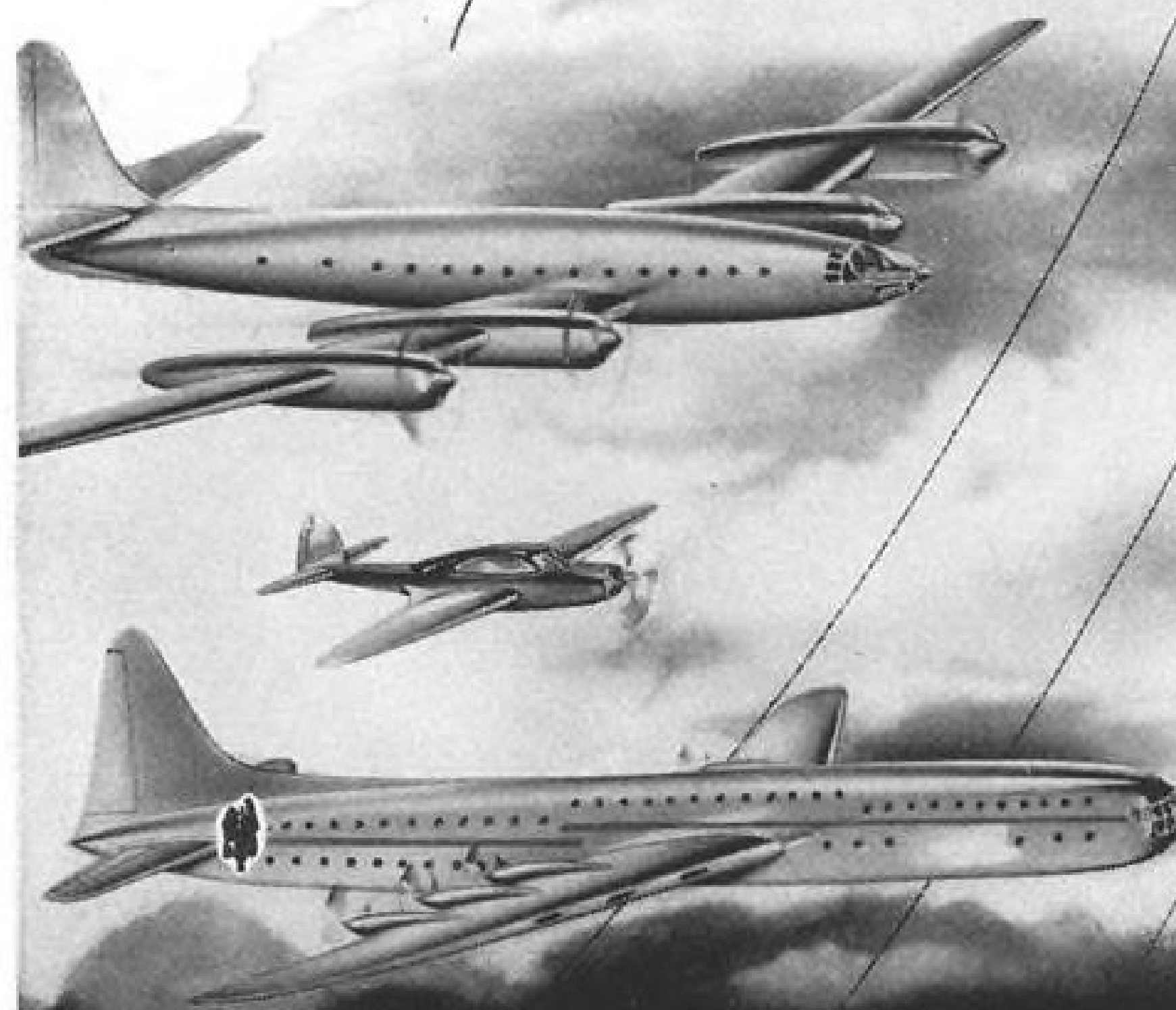


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PRODUCTION

U. S. Dollar Loan Program Seen Bolstering Export of Aircraft

Latin American credits to Pan-American, TACA, Panair do Brasil and Aeronautical Radio de Mexico granted by Export-Import Bank.

The U. S. has embarked on a program of dollar loans to foreign countries that is seen as having considerable long-range importance to the domestic aircraft industry. With the cessation of lend-lease, many countries found themselves lacking the exchange necessary to buy products essential to their recovery. Extension of credit will ease this foreign exchange shortage and increase the possibility of their becoming even larger customers of the U. S. aircraft industry at a future date.

The U. S. is best equipped to help set these countries on their feet and already has made available large sums. However, a comparatively small amount of these credits will be used directly for the purchase of aircraft, according to a survey and analysis prepared for AVIATION NEWS by John D. Wilson of McGraw-Hill's Economic Staff.

► **Eight Billion Credit**—"The grand total of such credits to date," Wilson says, "is approximately \$8.47 billion. But a large part of this has gone to finance the disposal of surplus property (\$950 million) or to wind up the delivery of lend-lease goods that were left in the pipe line when lend-lease was abruptly terminated (these loans total \$2,149 million).

From the standpoint of expenditures yet to be made, the important credits are those listed for reconstruction and development. Great Britain, France and the Netherlands are the largest holders of these credits, although most of Western Europe also has received them. Saudi Arabia and Turkey in the middle East, and Chile and Brazil in Latin America are other recipients of important credits."

In some cases U. S. aircraft producers are benefiting directly from this loan program, Wilson points out; in other instances benefits

arise indirectly through the easing of the general shortage of dollar exchange.

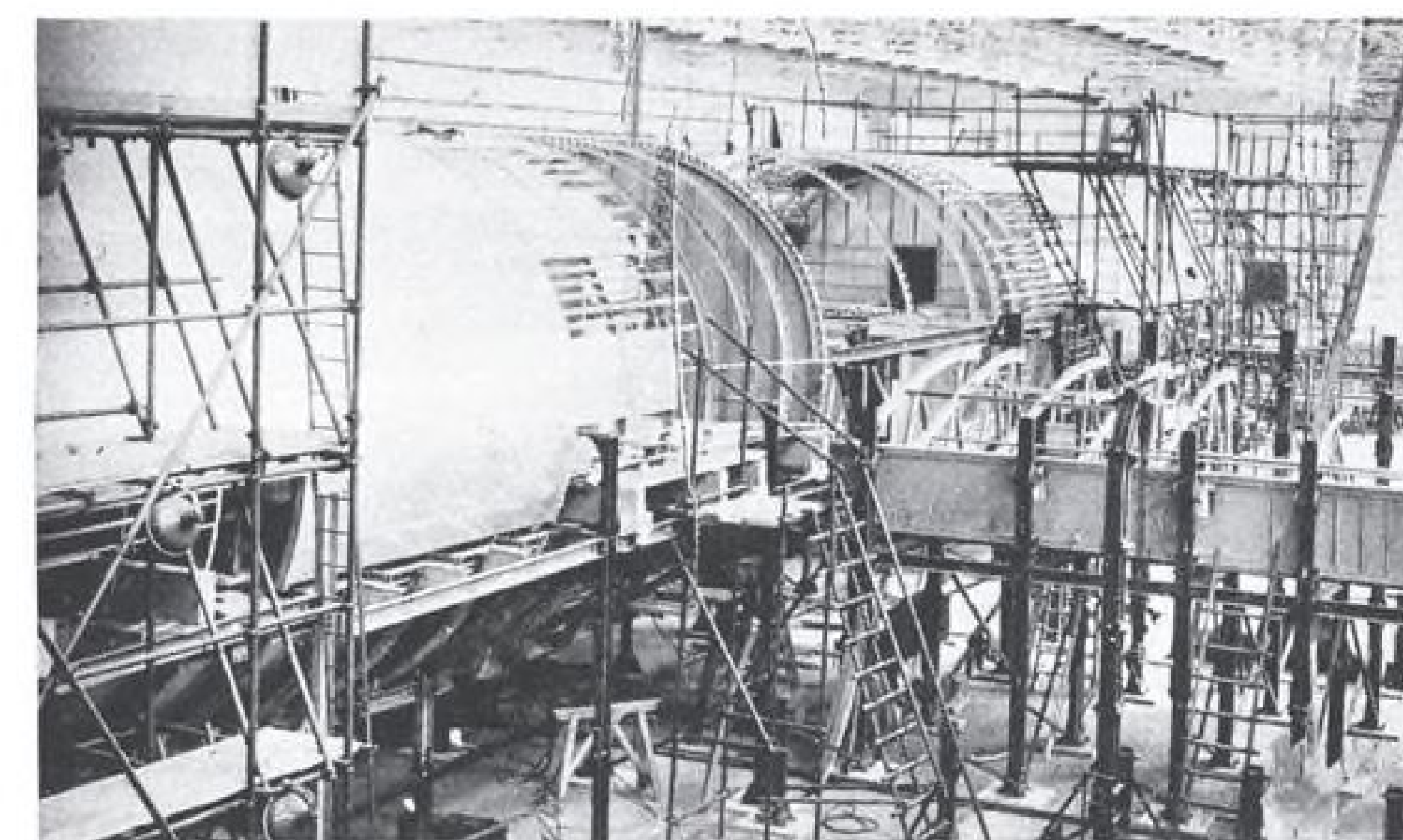
► **Loans Earmarked**—A few loans thus far made for reconstruction and development are earmarked for aircraft and accessories, Wilson's data shows. The most recent report of the Export-Import Bank lists only five purchases authorized as of October 1. Four of these are for Latin-American operations. They include \$25 million to Pan-American Airways for materials, equipment and services; \$3 million for Panair do Brasil to spend on Airline equipment; \$912,000 to be spent by TACA Airways for aircraft, engines, and accessories; and a credit of \$3 million to Aeronautical Radio de Mexico for an airway meteorological and communications system in Mexico. In

addition, a proposal of the Turkish State Airways to purchase aircraft equipment at a cost of \$3,060,000 has been approved.

Neither the British nor the French are spending much of their large loans on aircraft. By the very nature of the credits they are more likely to purchase equipment for their own aircraft plants. The Dutch, however, are purchasing a number of civil aircraft here, a recent order having been placed for 12 Convair 240 transports. Details released regarding reconstruction loans thus far made to China, Finland, Greece, Italy, Poland, and Saudi Arabia indicate that none are to be used for aircraft purchases, Wilson states.

The \$4,400,000,000 British loan also is important to U. S. exporters. Wilson explains that Britain's financial position has been such as to make necessary the maintenance of exchange controls that prevented many Empire countries from buying extensively in the U. S. These controls now are to be relaxed, and India, Australia, South Africa, and other Empire countries will be more free to buy from this country.

► **Large Sterling Balances**—On the other hand, a number of countries now hold very large pound sterling balances in London (chiefly the Empire countries, Norway, Netherlands, Egypt, and Argentina). These arose from huge wartime purchases by the British which



PROGRESS ON THE BRABAZON:

Last photo AVIATION NEWS published of the mammoth British-built Bristol Brabazon I eight-engined airliner, on June 24, showed the fuselage skeleton in the construction dock. Here is the latest picture of the 120-passenger behemoth with most of the metal skin on the skeleton. Soon the fuselage will be moved from the present 300 by 100 ft. hangar to a new building, claimed to be the largest hangar in the world. (INP)

were paid for with British currency. The only way most of these balances can be "worked off" in the long run is through the export of British goods. These countries, therefore, will have an extra incentive to buy aircraft and other goods in British markets.

The manner in which Export-Import Bank loans are utilized varies only in detail from ordinary commercial practice. Reconstruction loans are granted for specific purposes, and the borrower must indicate the products he requires and offer a full economic justification for their purchase before the Bank grants the loan. Moreover, the Bank must approve and authorize any expenditure.

It is the announced policy of the Bank that wherever possible, purchases should be made through ordinary commercial channels. Government purchasing missions, which sprung up during the war, are discouraged and they are now being decreased. Private concerns that use Export-Import Bank funds submit specifications for the products in which they are interested and receive bids from competing manufacturers, as was the practice in prewar days.

► **\$135,000,000 Exports**—Export of U. S. aircraft and parts this year has been steadily increasing, and during the summer months (the latest for which data are available) exceeded an annual rate of \$135 million. Great Britain has been exporting aircraft and parts at an annual rate of about \$40 million. Most of these exports have gone to Norway, Denmark, France, Turkey, and Argentina.

The availability of dollar exchange is likely to continue to influence potential purchasers of U. S. aircraft. At present, U. S. exports are almost twice the value of imports. This disparity is possible because of the U. S. loan program. But foreign loans are by no means completed. The Export-Import Bank is expected to request additional funds of Congress beyond its present authorization of \$3,500,000,000—perhaps as much as \$1 billion. Moreover, the Bank will have funds available as older loans are repaid.

Curtiss-Wright Has 80% Civilian Backlog

A ratio of civilian to military business which is far different from the overall industry experience has been reported by Curtis-Wright president Guy W. Vaughan to stockholders. Of the corporation's \$93,000,000 backlog, about 80% is for civilian production. Overall industry ratio is slightly more than 50% military.

While not disclosing the company's financial position in detail, pending a semi-annual report next month, Vaughan stated that six months' sales totaled approximately \$29,000,000.

In the first full year of postwar operations, the firm's sprawling 17-plant set-up has been sifted into manufacturing at three sites, Columbus (airplanes), Wood-Ridge, N. J. (engines) and Caldwell, N. J. (propellers). Settlement of all terminated war contracts has now been concluded.

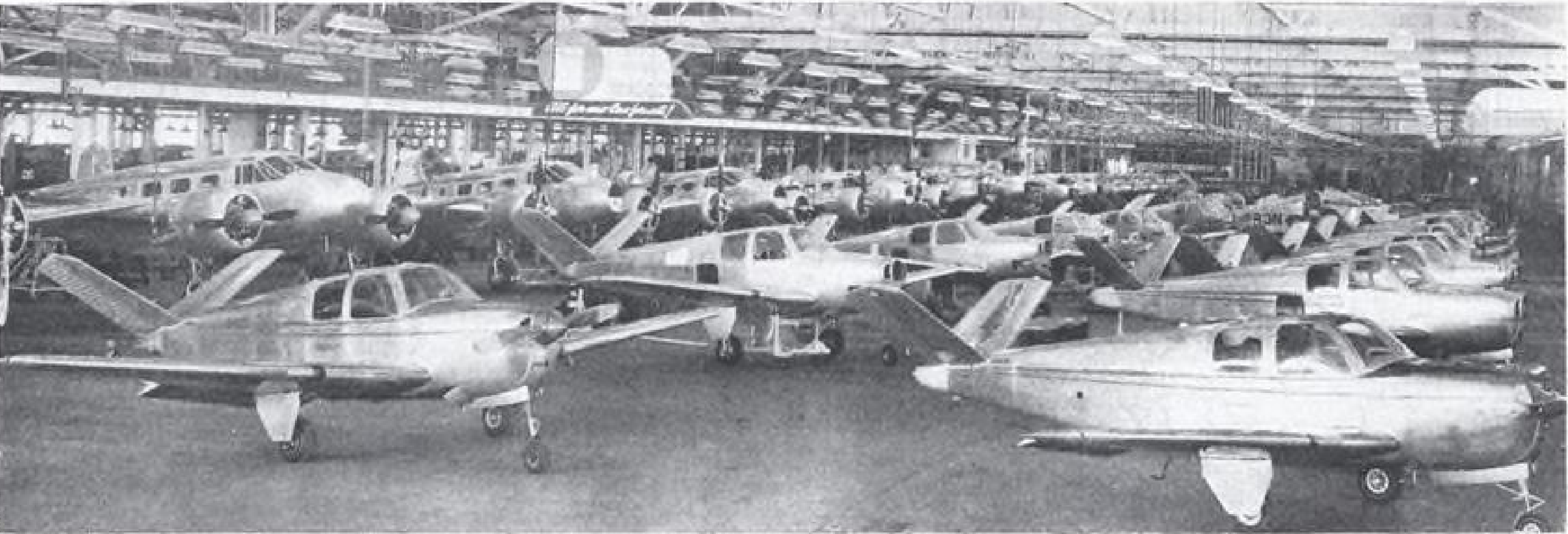
Vaughan emphasizes that his company is thoroughly exploiting research in new fields of propulsion, but stated "this looking into the future should not be construed to mean that the aircraft, propellers and engines now in production, particularly for commercial transports, are obsolete or that they are likely to become so very quickly."

British Building Military Version of 170 Freighter

(McGraw-Hill World News)
LONDON—Sixty Bristol type 170 Freighter aircraft are now on order according to company officials. The majority are for overseas markets, with Argentina taking 18, and British European Airways Corporation 14. First deliveries are expected before the end of 1946.

B.E.A. intends to use two specially equipped Freighters as "flying workshops." They will be designed primarily to deal with grounded or damaged aircraft and will carry a lathe, pillar drill, air compressor, special containers for spares, and lifting equipment. An auxiliary engine will be fitted to drive the machinery.

Meanwhile, Bristol has begun construction of a military version of the Freighter. This will have normal gross weight of 37,000 lb., slightly more than the civilian model, but its useful load of 8,759, will be about 1,000 lb. less. As an ambulance plane, the military Freighter will carry 32 patients and six attendants.



BEECH BONANZA PILOT PRODUCTION LINE:

While Beech Aircraft's four-place Bonanza 35 has not yet been certificated, by CAA, the Wichita manufacturer has already manufactured a number of the planes, partly by hand; tooling, jigs and fixtures are being prepared rapidly, for quantity line production

as soon as plane and Continental engine E-165 are certificated. Photo shows pilot production line for the butterfly-tail Bonanza at the Beech Wichita plant, paralleling a line of twin-engine Beech Model 18 executive transports.

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Type 04	Eclipse —100 Amp., 24 V	P/N 128250-901-9		104.68
Type E7A	Leece Neville— 50 Amp., 12 V	P/N 24500		62.37
Type M2	Leece Neville— 50 Amp., 24 V	P/N 24225		90.00
STARTERS				
Type JH3R	Jack & Heintz	24 Volt	P/N 280R3	281.25
Type J1	Eclipse	24 Volt	P/N 756-21B	95.29
Type H6	Eclipse	12 Volt	P/N 444-4F	186.75
Type G6	Eclipse	24 Volt	P/N 915-4E	228.00
Magneto—American Bosch		P/N MJN14K-301		139.25
Magneto—American Bosch		P/N MJN14K-307		105.00
Cable Assy.—Ignit. Shld. for R2000-7; Titeflex		P/N 22922		333.75
Manifold Assy. for R-2800; Titeflex		P/N 22450		328.41
Ignition Assy. Shld. for R-975-11 Eng.; Breeze		P/N E616-4P-AN		78.29
Conduit for R-2000-7 Engine; Titeflex		P/N 28007		6.77
Conduit for R-2000-7 Engine; Titeflex		P/N 28008		6.77
Conduit for R-2000-7 Engine; Titeflex		P/N 28009		6.77
Inverter Assy.—Type MG149F—Rotary 750 V.				57.75
Vibrator—American Bosch—24 Volt		P/N VJR24 B5X		7.50
Armature Assy. for Delco Remy—Type 01 Gen.		P/N 5365-786		29.17
Hamilton Standard Blades				6507A-0 \$262.50
Hamilton Standard Blades				6353A-18 157.50
Hamilton Standard Propeller				2D-30-233-6101A-12 656.25
Governor, Reconditioned				4GB-G23G 150.00
Also, parts for Hamilton Standard Propeller				
Compass—Type B-16; Pioneer				P/N 1818-4A 32.50
Compass Indicator, Remote; Ternstedt				P/N T95660 17.55
Airspeed Ind.—Type B-8, 20 to 2000; Pioneer				P/N 1426-2J-A1 9.27
Rate of Climb Indicator—Type AN5825-1; 0 to 6000 ft/min; Pioneer				P/N 1636-6H-B1 51.35
Directional Gyro; Jack & Heintz				P/N JH5500 117.00
Gyro Horizon; Jack & Heintz				P/N 6500A 131.30
Pitot Tube for DC-4; Kollsman				P/N 781-02 7.80
Manifold Pressure Gage—Dual 1 & 2, Range 10 to 75; Ranco				P/N 31854-12 58.50
Oil Pressure Gage—Type B8A—0 to 200 lbs.; U. S. Gauge				P/N AW1-7/8-14-CL 3.75
Generator Tachometer—Pad Type; G.E.				P/N 2CM5BAL 17.55
Thermometer Cylinder Head Temp—Range 0° to 350° C Dual; Dejur-Amsco				P/N Z-22.22 20.84
Thermo. Oil—50° to 150° C—Dual; Auto-Lite				P/N 10499-A 29.25

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PART NUMBER	DESCRIPTION	PRICE	PART NUMBER	DESCRIPTION	PRICE	PART NUMBER	DESCRIPTION
1122	Gear	\$ 2.23	24173	Shaft	\$22.40	33641	Rod
8323	Nut	.87	24192	Scavenger	.94	33813	Bushing
8363	Cam	51.22	24195	Strainer	1.45	33901	Gear
9514	Screw	1.12	24248	Bolt	3.69	34207	Gear
10449	Nut	.04	24306	Nut	4.10	34212	Bearing
14537	Coupling	1.18	24701	Screen	6.25	34850	Cap
15496	Cover	.82	24919	Pin	4.53	34851	Insert
16274	Screw	.25	24966	Bearing	19.38	35961	Cover
17363	Guide	.76	25022	Bearing	2.77	36163	Case
18236	Liner	13.98	25616	Housing	2.60	38314	Master Rod
18471	Gear	5.11	25861	Shaft	4.23	38460	Pinion
18554	Button	.82	26193	Gear	15.79	40835	Strainer
18629	Guide	3.83	26199	Bearing	.91	43893	Tubing
19575	Screw	.43	26475	Ring	.31	46152	Segment
19667	Ring	.56	26484	Spacer	3.41	46798	Shaft
19667-P10W	Ring	.56	26485	Adaptor	25.60	48362	Shaft
19778	Gear	11.24	26763	Bolt	1.85	49956	Flange
19878	Support	3.33	27060	Pipe	3.77	50512	Ring
20117	Bushing	1.03	27192	Nut	20.55	50724	Valve
20416	Bearing	3.82	28356-P10	Ring	.58	55226	Valve
20506	Rod	20.58	28781	Body	1.53	59941	Rocker
20763	Gear	4.85	28848	Gear	6.62	59942	Rocker
20764	Gear	4.88	28953	Spacer	10.82	59986	Spring
20986	Spacer	12.19	31419-P5	Bushing	6.75	76159	Gear
21104	Nut	.31	31406-P10	Ring	.56	82442 or	
21577	Plunger	.51	31626	Anchor	41.56	90170	Cylinder
22406	Adaptor	1.45	31941	Plug	4.19	82444 or	
24073	Bushing	5.88	32331	Valve	6.44	90165	Cylinder
24075	Ring	1.05	32363	Pump	22.75	82445 or	
24077	Stud	2.30	32737	Tappet	3.46	90167	Cylinder
24078	Gear	24.94	32820	Cam	10.63		

MN-31—Bendix Automatic Direction Finder—Complete	(New)	\$950.00	Fairchild 24 with 145 Warner—No time since recovered and engine major; re-licensed	\$ 7,500.00
MN-26K—Bendix Receiver	(New)	250.00	PBY-5A—Catalina Amphibian	15,000.00
ART-13—Collins Transmitter—Complete with Power Supply	(New)	240.00	Lockheed Hudson—with P & W R-1830-67	5,000.00
HTS4GE—Dennison Hydraulic Test Stand— Gasoline Engine Driven	(New)	450.00	755-9—Jacobs Engines—No Time Since CAA Shop Major	1,000.00
T-12—Transmitter and Radio Receiver—Complete	(Used)	850.00	R-2800-31 Engines—Low Time	1,350.00
A-3—Sperry Automatic Pilot—Complete	(Used)	850.00	23E50-473-6477-A-12—Propeller—Low Time	500.00

Accessories for R-2800-31

The above items are offered subject to prior sale, F. O. B. Flushing, New York



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Frank Ambrose Aviation, S. A., Panama City, R. P.

U. S. Export License No. 191

KLM ROYAL DUTCH AIRLINES

orders a fleet of

12 New Convair-240's!

KLM Royal Dutch Airlines, with its vast network of air routes serving five continents, is the fifth major airline to order a fleet of America's most modern twin-engine airliners—Convair-240's.

KLM selected the Convair-240 to fill its need for an intermediate-range transport-plane to supplement its 4-engine planes, and to offer the advantage of 300-mile-per-hour speed and such ad-

vanced comfort features as *air conditioning and pressurized cabin*.

The new Convair-240 airliner will be in service by mid-'47, on KLM, as well as on American Airlines, Pan American World Airways, Western Air Lines, and Continental Air Lines. It will carry 40 passengers with a new high standard in air-travel comfort and convenience. Watch for it!



**Why
you'll enjoy
flying in the
Convair-240**

1. Air-conditioned comfort! Completely air-conditioned. Cool air, with controlled humidity—and radiant-wall heating—insure your comfort winter or summer.

2. 40 Passengers—at 300 m.p.h.! With two 2400-h.p. engines you cruise at 300 miles per hour.

3. Auxiliary jet-exhaust thrust—for added speed! The Convair-240 is the first commercial transport plane to utilize this modern principle.

4. Reversible-pitch propellers for smoother landings! In addition to hydraulic wheel brakes and wing flaps, the Convair-240 has reversible-pitch propellers, can come to a full stop in a much shorter distance.

5. "Low level" flight comfort at high altitudes! Cabin air pressure is automatically controlled for passenger comfort regardless of altitude.

6. Heated wings prevent icing! The Convair-240 uses the anti-icing safety system developed for combat

planes by Consolidated Vultee during the war. Wings and tail are heated—ice and snow melt on contact.

7. Lands level! The Convair-240 lands level, and is still level when it comes to a stop.

8. You relax in easy-chair comfort! A newly designed type of reclining seat gives you all the leg room you want. There's no bumping your knees against the seat ahead.

Consolidated Vultee Aircraft Corporation

San Diego, California • Downey, California • Wayne, Michigan (Stinson Division) • Fort Worth, Texas • Nashville, Tennessee

Aircraft Shares Top V-J Day Level Despite Market Slump

Group action better than other industrials despite drops of 32 to 58% from year's best prices; shares selling below liquidating value of working capital positions.

Aircraft shares have participated in the general market decline that has affected all securities but nevertheless remain at higher levels than those prevailing on V-J Day. The 1946 market action of twenty aircraft and aircraft equipment stocks reveals declines that range from 32 percent to 58.8 percent from the year's best prices.

As a group, aircraft shares have acted much better than other industrials. A prime reason has been that the aircraft manufacturing stocks did not fully participate in the wild, inflationary movements that accompanied the other groups. Most aircraft shares are selling at substantial discounts to the liquidating value of their working capital positions. The postwar outlook of the industry is no longer considered barren and adjustments have been made from the thinking which visualized the industry profitable only when it had boom orders.

► Martin Smallest—The Glenn L. Martin Co. shows the smallest decline from its best 1946 price, 32 percent. This is undoubtedly a reflection of the large scale commercial orders the company has received in its bid for transport business. It is also interesting, that at current levels, Martin is selling about 49 percent higher since V-J Day. The company has also been maintaining a quarterly dividend of 75 cents a share in recent years, which if continued, gives the investor an income of better than 8 percent on his money.

One of the worst performing aircraft stocks is Beech which fell 58.8 percent from its top 1946 price. This company attracted a good deal of speculative flavor through non-aviation activities. Association with house construction and the discovery of oil on its properties, stimulated a good deal of speculative buying. In the final analysis, however, earning power will determine stock price values. It is probable that the earnings of \$9.31 per share reported for 1945

will stand as a peak for many years to come. The company only earned 26 cents a share for the nine months ended June, 1946. Beech has also been confronted with wholesale cancellations on its new model D-18 C. Delay in getting this model into production may have missed important markets for the company.

► No Pattern—There has been no particular pattern established by the aircraft accessory companies. Virtually all of them sell their products to other industries and have diversified lines. Ex-Cell-O, specializing in machine tools, has been relatively stable. It has major outlets in the automotive trades. The company's stock declined but 41.2 percent from its best 1946 price. Interestingly enough, this price is about 15 percent below that prevailing on V-J Day. In other words, it is quite probable that the company was viewed as postwar beneficiary in automobile production and its prospects amply discounted prior to the end of the war.

Square D, specializing in broad electrical equipment lines, and having greater diversification, has fared much better. The Kollsman line of instruments are, of course, represented in the company and provide entry into the aviation industry. Square D has, nevertheless, displayed remarkable stability. Its decline has been less than 39 percent from the top 1946 price but is above 31 percent on its V-J price. Earnings promise to attain stable levels in the period ahead.

Bendix and Thompson Products have both declined about the same, 46.4 and 44.6 percent, respectively. It is interesting to note that Bendix is off some 30 percent from its V-J price while Thompson declined only about 10 percent. Presumably the greater association with the auto industry has accounted for Bendix taking on the characteristics of that group. Thompson was fortunate in refunding its 5 percent preferred stock issue with a 4 percent rate when market conditions were

right. This has been of direct benefit to the common equity.

► Deficits Shown—Lockheed and Convair, under active consideration for merging, have had almost similar market action, declining 44.4 and 43.5 percent, respectively. Both stocks also are on an average of 15 percent above their V-J prices. Further, both companies showed substantial deficits thus far this year. Lockheed lost \$424,502 during the first six months of the year. This was largely due to the modifications found necessary on the Constellations. However, a backlog of \$183,800,000 as of Sept. 30, 1946 affords the company with excellent prospects of returning to profitable operations during the second half.

Convair has not revealed its first six months results, but is known to have had a loss. The merger of the two companies will provide a number of interesting problems in the exchange of securities and will no doubt give the investment fraternity many opportunities for arbitrage and trading. The capitalization of the two companies will also be combined to make one of the largest in the aircraft industry. Lockheed currently has 1,076,000 shares outstanding compared with 1,570,000 for Convair. The latter company previously had a preferred stock issue outstanding but by forcing conversion retired the entire series.

North American Aviation, with the largest number of shares outstanding in the aircraft industry, 3,435,000, has declined but 36 percent from its 1946 top price. It is also about 22 percent above its V-J point. About one-fourth of the company's stock is owned by General Motors which in effect removes such number of shares as an active market factor. It is probable that as the company's postwar prospects were never optimistically projected; hence the deflationary adjustment was less severe.

► Adjustment Period—As the various maladjustments are corrected and earning possibilities more correctly appraised, more stable market prices should be established.

Ryan Backlog

Ryan Aeronautical Co.'s backlog of orders for exhaust manifolds now stands at \$2,750,000 following recent additional orders amounting to \$500,000. Douglas, Boeing, Lockheed and Consolidated Vultee placed the bulk of the new orders.

SPECIAL AIR SERVICES

CHARTER NONSCHEDULED INTRASTATE

Nonscheduled Carriers Get Small Slice of Air Passenger Business

Commerce Dept. survey shows certificated airlines flying 98.4 percent of all air travelers; 125 uncertificated operators make total profit of \$202,434.

By CHARLES L. ADAMS

In striking contrast to surveys showing that uncertificated cargo carriers have captured the lion's share of the airfreight business, a new government study reveals the small degree to which nonscheduled operators have penetrated into this country's passenger transport field.

An analysis completed last month by the transportation division of the Department of Commerce shows that during May and June 252 nonscheduled carriers emphasizing passenger service flew about 1.6 percent of the passengers and 1.8 percent of the passenger miles recorded by the certificated domestic airlines in the same period. The study, part of an overall survey of domestic air passenger transportation, was based on reports filed with CAB prior to Sept. 1 in accordance with amendment No. 2, section 292.1 of the Board's economic regulations.

► **Data Incomplete**—Data on which the nonscheduled phase of the

study is based admittedly are incomplete, but it is believed the picture obtained would not be changed materially by more inclusive statistics.

Of the 252 reports analyzed, 41 were by carriers using transport planes of Lodestar type or larger and the remainder by lines using small twin-engine and single-engine equipment. Among the operators of the larger transports, about 80 percent owned fewer than four planes. Fifty-seven percent of the companies operating the smaller craft owned less than four planes.

With more equipment now available to the certificated airlines, prospects are that the uncertificated operators will carry a steadily diminishing proportion of the total passenger volume even if CAB does not crack down further on nonscheduled services. The seller's market, which furnished a lucrative nonscheduled business on some routes early this

year, has vanished in most instances. Certificated airlines are again pushing sales and advertising efforts which uncertificated companies cannot match, because of smaller resources and CAB restrictions.

► **Urge Second Class Service**—The Commerce survey suggests that nonscheduled carriers will probably find their most effective area of competition in the promotion of a second-class "day coach" type of service offered at proportionately lower fares. Without meals, reservations and various passenger "extras," such services would require only a minimum of ground facilities and personnel and thus would fit in with the type of organization developed by most nonscheduled carriers, the study states.

One hundred and sixty-four essentially passenger-carrying operators reported both revenue and expense data for the two-month period requested by CAB. Of these, 125 disclosed profits aggregating \$202,434, while 39 showed losses totaling \$176,231. The proportion of profitable operations was much higher among the small fixed-base carriers than for the operators of Lodestar and larger equipment. More than 80 percent of the fixed-base operators using small equipment showed a profit, compared with 55 percent of the companies using large transports.

Many of the profitable companies in the small-plane category also were engaged in non-transport aviation activities, and it is not known to what extent their favorable financial reports may be attributable to the consequent sharing of overhead and other expense.

► **More Data** — Additional data compiled in the analysis show the predominately small size of the passenger-carrying nonscheduled companies in terms of employment. More than half of the carriers reporting such data had fewer than five full-time employees.

Of the approximately 500 nonscheduled carriers registered with CAB as of Sept. 1, about 35 were eliminated from the commerce study because of exclusive or primary emphasis on cargo services or because of exclusively international operations. Also omitted were approximately 215 reports which contained data too incomplete for satisfactory analysis.

More Safety Rules For Nonscheduleds

Additional safety requirements for nonscheduled air carriers using planes with 600 hp. or more have been drawn up by CAB in the form of proposed amendments to Part 42 of the Civil Air Regulations and are being circulated to the industry for comment.

The changes specify in more detail standards which the Civil Aeronautics Administrator would place in operating certificates issued under Part 42. Since it will take many months to process the large number of applications pending for operating certificates, the Board's Safety Bureau believes it necessary to incorporate additional requirements in the Regulations.

CAB's proposed amendments to Part 42 would require that multi-engine aircraft be used for night or instrument operations when carrying passengers, except as otherwise authorized by the Administrator and specified in the operating certificate. Such multi-engine planes would have to be equipped so that, with one engine inoperative, a climb of 100 ft. per minute at 5,000 ft. above sea level can be maintained with maximum authorized load.

Pilot flight time limitations prescribed for scheduled domestic airlines would be made applicable to nonscheduled operations and would specify maximum daily, weekly, monthly and yearly hours to be flown by a pilot. First pilots on aircraft of 600 hp. or more in which passengers are carried would be required to hold an airline transport pilot rating. A second pilot would be required to have an instrument rating in addition to a commercial pilot rating.

Stronger emphasis would be placed on proper maintenance of all equipment, including engines, propellers and appliances; and it would be the pilot's responsibility to hold or cancel a flight until repairs are made in all cases where he deems it advisable in the interest of safety.

Freight Case Change

Complaints by some parties to the proceeding have resulted in a shift in plans for the airfreight hearing this month. Two sessions now are scheduled. All parties wishing to present their cases in Fort Worth will be heard starting Nov. 18 at the Hotel Texas. All

remaining parties will be heard at Atlantic City, N. J., where sessions will be held at the Chalfonte Hotel, beginning Nov. 25.

10% Dividend Is Paid By Pacific Overseas

Declaration of an impressive 10 percent cash dividend—an action almost without precedent among uncertificated carriers—has marked the first anniversary of Pacific Overseas Airlines' incorporation.

Stockholders receiving the payment of \$1 a share on Nov. 1 were, with two exceptions, employees of the Ontario, Cal., company, which flew 4,728,493 plane miles in the Pacific between Mar. 15 and Sept. 30.

During this period, POA completed 202 roundtrips to Tokyo for the Army Air Transport Command, 12 roundtrips to Shanghai for UNRRA, and three roundtrips to Manila for Consolidated Steel Corp. POA operates Army planes on ATC's Tokyo run and uses its own fleet of three C-54s for other flights. A fourth C-54 was purchased last month and will be in service soon.

Latest charter operations scheduled by POA are three trips between Washington and Manila for the Philippine War Damage Commission. Thirty-two officers and staff members of the commission and a plane crew of eight made the first flight to Manila last week, with stops at Ontario, Honolulu, Kwajalein and Guam. Second trip is slated for Nov. 10 and the third for Nov. 18.

Machinists Union Signs Pact With U. S. Airlines

Employee unionization among uncertificated airlines moved forward last month with designation of the International Association of Machinists as collective bargaining representative of the mechanics, cargo handlers and ground service personnel of U.S. Airlines, St. Petersburg, Fla. U.S. is the second major contract carrier to be organized by IAM, an independent union formerly affiliated with the AFL.

IAM won certification at U.S. following a National Mediation Board check of 148 employees which showed 98 in favor of the machinists union. Negotiations on a



FREIGHTER FOR A DAY:

When a transportation breakdown recently interrupted deliveries of automobile trunk lids from the Hayes Mfg. Co. in Grand Rapids, Mich., Kaiser-Frazer Corp. expeditors pressed the company's Beechcraft passenger transport into cargo service to prevent a production slowdown. Here Kaiser-Frazer employees unload the plane at the Willow Run airport adjoining the automobile plant.

contract are now underway. IAM organized Air Cargo Transport Corp. last February and signed an agreement with the company in May.

Teterboro Development For Air Freight Sought

A resolution proposing development of Teterboro, N. J., airport as the principal airfreight terminal in the New York area has been approved by the Aviation Section of the New York Board of Trade recently.

The plan for expanding Teterboro's facilities, with the Port of New York Authority footing the \$200,000 cost, was presented to the trade group by Charles F. Willis, Jr., president of Willis Air Service, Inc. Principal improvement contemplated is lengthening the runway an additional 1,000 ft. to permit the field's use by four-engine cargo planes.

Willis said development of Teterboro as the New York area's major freight terminal would help relieve congestion now seriously hampering passenger traffic at LaGuardia field and other airports. Designation of Teterboro as a cargo field would be in line with plans for separate airfreight terminals now being pushed at Chicago, New Orleans and Washington.



SLICK'S 'FAMILY':

Under the wing of a Slick Airways C-46E Commando are two planes used by carrier executives or sales personnel—a two-place Erco and a seven-passenger Beechcraft Model 18 transport. The Erco is used almost entirely within Texas, while the Beechcraft is flown to all points on Slick's transcontinental airfreight system.

TRANSPORT

Air Carrier Group Charges CAB Strangling Nonschedules

Show cause orders produce mild reaction from airlines cited as Board serves notice it is watching the field.

By MERLIN MICKEL

The chain reaction touched off by CAB's show cause orders against five uncertificated operators brought a complaint last week that the Board was tightening its "strangle hold" on charter and nonscheduled operators.

Criticism of CAB's demand that the five show why they should not be found in violation of the Civil Aeronautics Act for operating as scheduled common carriers without certificates came not from the lines directly involved but from the Contract Air Carriers Assn. of Miami, to which two of the five belong.

► **Violators Named**—The Board's orders (AVIATION NEWS, Oct. 28) were directed at American Air Export and Import Co., Miami Springs, Fla.; Caribe Airways, Miami and San Juan; Trans-Caribbean Air Cargo Lines, New York; Trans-Luxury Airlines, New York, and Texas Air Lines, Houston. AAXICO and Caribe are CACA members.

Association spokesmen professed lack of alarm at the action, but the group held a special board meeting and its attorney, Emmett Choate, declared thereafter that "CAB apparently is advancing the economic strangle hold on charter and nonscheduled operators" and "seems determined to make contract carriers get out of business." He added that "no one can operate under the regulations they now express and stay in business, and CAB knows this."

Charles Carroll, pres. of AAXICO, believed his company had been selected as a guinea pig. It has been operating for nearly a year and is among the largest of the uncertificated passenger carriers. He declared in a formal statement that the Board's show cause order directed at his carrier "has extended the invitation for a hearing for which we have long

been waiting. I'm glad we will soon be given the opportunity to express our views." He pointed out that AAXICO previously had sought a hearing to clarify CAB's interpretation of the Act as it affects nonscheduled carriers.

► **Caribe Moves**—Even less concern was expressed by Caribe Airways, which operates out of San Juan, P. R., as well as Miami, with central headquarters in the former city. Caribe recently sold most of its equipment and operates in South America with the balance.

Trans-Caribbean will apply for a hearing. Trans-Luxury is not contemplating immediate action. Much of the interest in the orders centered in that against Texas Air Lines, only scheduled intrastate airline among the five. Like the others, Texas appears to the Board to be engaged in scheduled common carrier air operation, without a certificate of public convenience

and necessity from the Board or an air carrier operating certificate from CAA.

► **Board Contention**—But where the others operate interstate or outside the U. S., the Board's complaint against the Texas operator lies in the contention that it carries persons and property moving in interstate commerce. The line's routes go through about seven points at the edge of the state, all but one of which also are served by certificated interstate air carriers.

Whatever its ultimate effect, the Board's wholesale action notified all ostensibly nonscheduled operators that CAB has not relaxed its close watch on uncertificated activities despite the pending status of several studies of the general situation, including the proposed amendment of the exemption order under which the nonscheds now operate, the forthcoming hearing on air freight applications, and the combined investigation and hearing of the freight forwarder case, set for early next year.

Russians Will Emphasize Commercial Air Transport

Passenger transport will be emphasized in U.S.S.R. air development during the first stages of the present Five-Year-Plan, *Foreign Commerce Weekly* reports, though a shift will be made later to cargo.

Estimates are that more than 1,000,000 passengers will be carried this year by the Soviet Union's Civil Air Fleet, Govern-

ment-owned and operated trust, and more than 5,000,000 during 1950. About 80 domestic and 24 international lines are operating, against 30 a year ago, plus numerous local lines. Civilian airmail was resumed in mid-year, and passenger and freight traffic are at new highs.

CAB Asked to Close Latin American Case

Motion cites Court opinion in Hawaiian proceeding; Landis to hear new Pacific Overseas Airlines evidence.

Two scheduled airlines awarded routes in CAB's Latin American decision have asked the Board to revoke its order reopening that proceeding, basing their motion on a recent court memorandum questioning CAB authority to reopen a case decided with Presidential approval.

The request by Braniff and Chicago & Southern reached the Board as it prepared to take new evidence from Pacific Overseas Airlines, whose application to intervene in the Hawaiian case CAB previously had denied.

The U. S. Court of Appeals for the District of Columbia stayed further proceedings in the reopened Hawaiian case and remanded POA's action so the Board might hear its reasons (war contract commitments) for tardiness in filing its application (AVIATION NEWS, Oct. 14).

► **Authority Questioned**—In doing so, it suggested that the Board examine its authority to reopen the Hawaiian case after it had been decided with the approval of the President.

The Court's observations had an obvious bearing on the Latin American case, which the Board decided May 17, with White House sanction, and on July 12 ordered reopened to determine need for additional services. The motion by Braniff and C & S quoted the memorandum, and asked that CAB revoke the order of July 12 and take no further action in the Latin American case.

► **Landis to Hold Hearing**—That CAB considers the remanded POA case significant is apparent from the fact that Chairman James M. Landis will conduct the hearing, set for Nov. 6 but likely to be postponed to permit POA to bring a witness from overseas.

Whether the Board accepts or



CONVAIR'S DESIGN FOR LIVING:

Consolidated Vultee Aircraft Corporation is considering mass production of this prefabricated two-bedroom home. Designed by Convair's staff, the homes would be constructed of aluminum and plastics, contain refrigerator, range, heater, bathroom and kitchen fixtures, and sell for \$7,000-\$8,000 including cost of lot.

rejects POA's petition to intervene in the Hawaiian case, its decision is expected to clarify its stand on reopening procedure and answer the questions raised by the Court.

Air Link to Orient Broken by P.A.A.

The only scheduled commercial airline link between the U. S. and the Orient was broken late last month when Pan American Airways temporarily suspended service from Honolulu to Manila via Midway, Wake and Guam as a result of "deterioration in wartime communications facilities."

PAA, which had been operating the service for a little over a month with one round trip weekly, said it found that radio communications and aids to navigation in the west-

ern Pacific have suffered from postwar manpower shortages to the point where they no longer meet airline safety standards. The carrier said it was conferring on the problem with CAA, whose ultimate responsibility it will be to operate trans-Pacific radio aids.

Meanwhile, PAA has dispatched a 35-day route survey flight from San Francisco to the Orient covering new links certificated to the carrier in CAB's Pacific decision last summer. Officials of Pan American's Pacific-Alaska division and government representatives are making the 24,000-mile trip, which includes stops at Midway, Wake, Guam, Tokyo, Shanghai, Canton, Calcutta, Rangoon, Bangkok, Saigon, Singapore, Batavia and Manila.

New services announced by other carriers:

► **Delta**—On Nov. 1 began nonstop Chicago-Miami flights with DC-4s and recently started daily service to Lexington-Frankfort, Ky.

► **TWA AND PCA**—Former intended to serve Wheeling, W. Va., beginning Nov. 1 and the latter starting Nov. 6.

► **United**—On Nov. 1 instituted Washington-Chicago nonstop flights with DC-4s. Inauguration of service to Twin Falls, Idaho, is set for Dec. 1.

► **Colonial**—Began service to Glen Falls, N. Y., Nov. 1 and intends to stop at Wilkes-Barre/Scranton, Pa., starting about Dec. 1. Carrier recently increased New York-Montreal nonstop flights to ten daily.

► **Eastern**—On Nov. 1 began first DC-4 flights to Memphis and recently started daily service to Lexington-Frankfort, Ky.

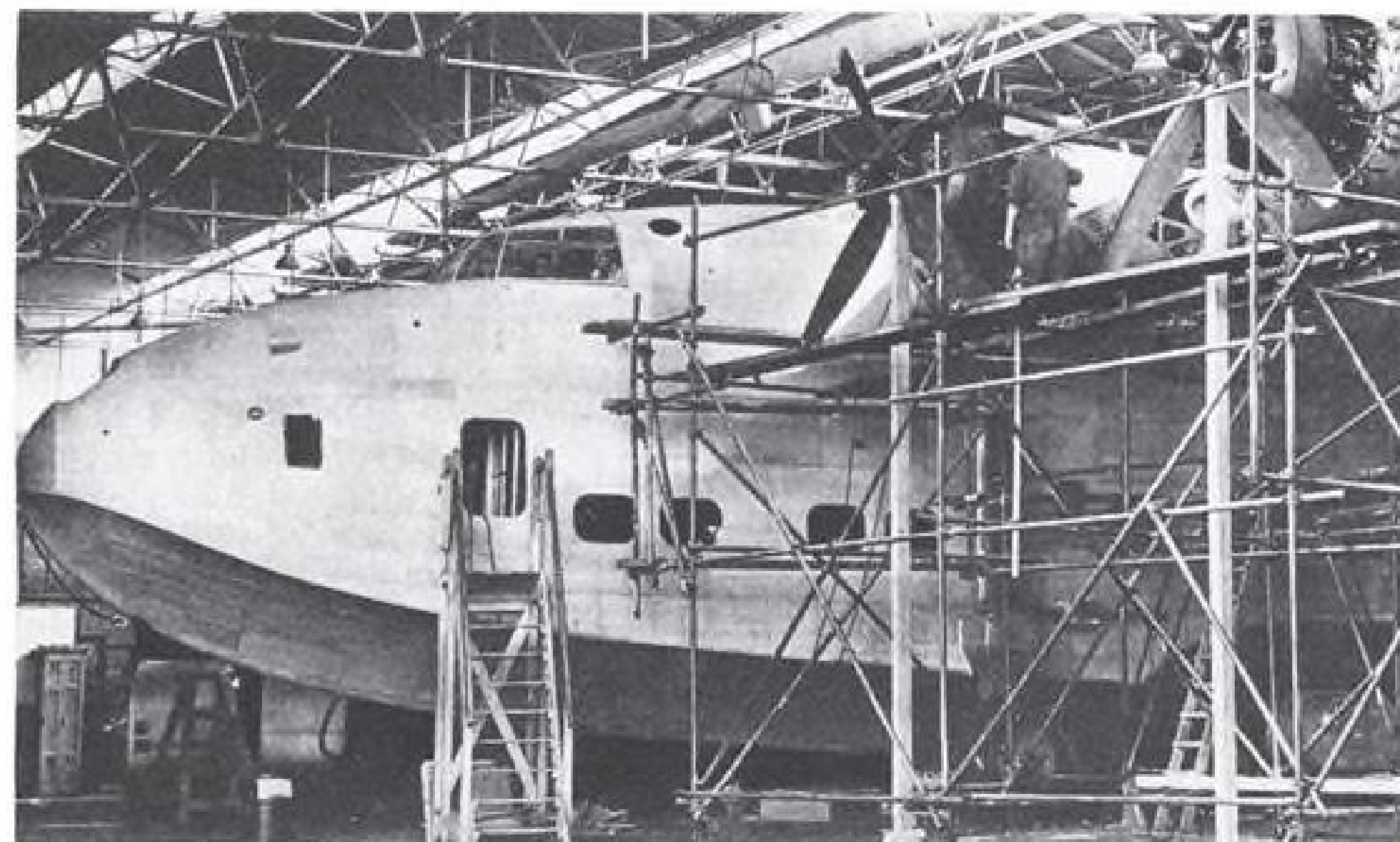
► **Western**—Intends to start service to Yuma, Ariz., around Nov. 8.

► **Northeast**—Planned to inaugurate service to Portsmouth, N. H.; Springfield, Mass., and Keene, N. H., last week.

► **Scandinavian Airlines System**—On Nov. 1 increased its trans-Atlantic schedules to three roundtrips weekly.

Colonial Excursions

Colonial Airlines will offer sharply reduced excursion fares on all schedules over its entire system between Nov. 15 and Feb.



BOAC FAR EAST CRAFT:

The 30-passenger, four-engine Short Solent flying boat shown here nearing completion at Short's Rochester, England, factory will be the first of 21 being built for BOAC use on its Far East extension to Hong Kong and Shanghai. Order amounts to between \$4,000,000 and \$5,000,000. (British Combine photo)

14. The one-day excursion rate will be fare and a quarter—a reduction of 37½ percent from regular roundtrip tariffs. Seven-day excursions will be fare and a half—a 25 percent cut.

Airlines Are Moving To Los Angeles Field

Major airlines now using Lockheed Air Terminal at Burbank, Cal., will move to Los Angeles Airport Dec. 9. Temporary terminal facilities at the latter will be accepted by United, American, TWA, Western and Pan American with assurance that the airport ultimately will be extended beyond its present mile-square boundaries to provide separate landing and takeoff runways and a large terminal building.

Principal advantage of the new terminal will be its long, low unobstructed approaches and the absence of mountains which hem in Lockheed. Plans call for extension of at least one runway to 6,000 ft. next year by underpassing a major highway.

Pilots generally are pleased with the prospect of the move, with its opportunity to use glide path ap-

proach aids in bad weather, but airline ground force administrators anticipate losses in shop personnel and ground crews who own homes near Lockheed and will be unable to find residence near Los Angeles Airport.

Across the country, plans were speeded for commercial use of Floyd Bennett Field at New York City, with indications that National and Eastern would be the first ones to set up operations there. Announcement by a city official that LaGuardia Field must be closed for repairs in nine months or two years because it is sinking at the rate of 6 in. a year—3 to 5 ft. since it was built in 1939, came as no surprise to the airlines, who have been aware of the problem for some time. One airline source suggested that the best remedy would be to fill the channel between the field and Riker's island, which would permit at least two additional runways but would cost about \$20,000,000—about half of the cost of the field thus far.

Other airport developments:

► **Buffalo, N. Y.**—A large flight hangar, snow-removal and fire-fighting equipment, and about 60 acres of land are included in surplus airport property earmarked for transfer to the city.

► **Kansas City, Mo.**—A 70 percent increase in passenger business at the Municipal Air Terminal for the first eight months of this year over the same period in 1945 was reflected in payment to the city of \$46,458 by the airport restaurant, representing 5 percent of its gross business. Comparative turnover was \$28,000 last year and 17,000 in 1944. Operation of a cafeteria in the TWA building increased this year's receipts.

► **Oklahoma City**—City planners recommended three commercial airports by 1960, including expansion of Will Rogers Field and development of two secondary airports, and in addition proposed nine minor fields to handle private flying and five to seven close-in landing fields for helicopters. Survey given the city planning commission for study also proposed establishment of an independent airport agency.

► **Dallas**—A City Council policy statement declares that "it is time the commercial airlines should pay reasonable

CAB ACTION

The Civil Aeronautics Board:

- Granted Pan American Airways temporary exemption permitting service to Damascus, Syria, in lieu of Beirut, Lebanon, on route to India.
- Permitted Colonial Airlines, Panagra and the Post Office Department to intervene in Pan American Airways' domestic route case (Docket 1803).
- Denied request of Chicago and Southern Air Lines for exemption authorizing flights between St. Louis and Little Rock, Shreveport and Houston over AM 8 and 53 without stopping at Memphis.
- Dismissed route application of Clarence W. Ludwig (Docket 1674) at applicant's request.

CAB SCHEDULE

- Nov. 4. Hearing on Royal Dutch Air Lines' (KLM) application for service to Ciudad Trujillo, D. R. (Docket 2348).
- Nov. 6. Hearing in Pan American Airways' domestic route case at Atlantic City, N. J. Postponed from Oct. 30. (Docket 1803.)
- Nov. 15. Exchange of exhibits in freight forwarder case. (Docket 681 et al.)
- Nov. 18. Hearing in Compania Mexicana de Aviacion foreign air carrier permit amendment case. (Docket 2383.)
- Nov. 18. Hearing in air freight case at Fort Worth, Tex. Postponed from Nov. 13. (Docket 810 et al.)
- Nov. 25. Hearing in air freight case at Atlantic City, N. J. (Docket 810 et al.)
- Dec. 20. Exchange of rebuttal exhibits in freight forwarder case. (Docket 681 et al.)
- Dec. 20. Exchange of exhibits in case involving additional Florida area service. (Docket 997 et al.)
- Jan. 10. Hearing in freight forwarder case. (Docket 681 et al.)
- Jan. 20. Hearing in case involving additional Florida area service. (Docket 997 et al.)

fees for service they are receiving and that the taxpayers should no longer be called upon to subsidize the operation of the airlines' use of Love Field." From October 1, 1945, to issuance of the statement, airline payment for landing fees totaled \$6,049, including \$2,209 from American, \$2,050 from Braniff, and \$1,790 from Delta.

► **Houston**—Proposal for a \$14,000,000 airport project to be located on a 4,000-acre tract west of Bellaire has been made by a group of Houston businessmen. The suggestion involves an \$8,000,000 bond issue and creation of an airport commission to direct the project, which would be developed over a 14-yr. period.

► **San Francisco**—Airport's passenger-out total for the January-June period was 215,306, just 44,233 behind the 1945 12-month out-going total of 259,539.

► **Oakland**—TWA officials have indicated Oakland Municipal Airport may have round-the-world air service when the company inaugurates an air route from Dahan, Saudi Arabia, to Shanghai, China. TWA is negotiating with the Chinese government for landing rights.

► **Sacramento**—Municipal Airport officials have asked the city to attempt to induce the Federal government to pay

for "restoration" of the field to prewar condition, claiming it was so neglected while under Army control that it now presents a "very costly problem to the city."

Air Travel Is Gaining On Pullman Volume

Air travel increase is reflected in comparisons between air and rail travel for the first six months of this year, at the end of which the domestic airlines were flying more than a fifth of the passenger miles travelled by Pullman and more than a fifth of the passenger railroad total excluding commutation traffic.

Figures compiled by the Aircraft Industries Association show that through the years the proportion of air to Pullman travel has varied from as low as 5.2 percent in 1937 to a high of 14.8 percent in 1941, with indications that the latter ratio will be far exceeded in 1946:

Year	Million passenger-miles Dom.	Airlines	Pullman	Air as percent of Pullman
1937	177	9,170	5.2	
1938	558	8,270	6.7	
1939	750	8,485	8.8	
1940	1,147	8,214	13.9	
1941	1,192	10,070	14.8	
1942	1,482	19,072	7.7	
1943	1,643	25,891	6.3	
1944	2,264	28,267	8.0	
1945	3,500	27,276	12.9	
1946 (6 mos.)	2,625	12,145	21.6	

A similar comparison between revenue passenger miles for the air carriers and total rail traffic, excluding commutation, reveals that the air-to-rail ratio for the first half of this year grew from 4.8 percent at the beginning of the period to 11.5 at the end:

	Class I Steam Railways (millions)	Domestic Air Carriers (millions)	Air as % of Rail
1946			
Jan.	6,977	332	4.8
Feb.	5,629	332	5.9
March	5,466	406	7.4
April	4,965	462	9.3
May	4,276	513	12.0
June	4,912	562	11.5

The proportion of air passenger revenue to rail is shown in the following table, in which rail figures again exclude commutation traffic and are for rail passage tickets only, excluding space charged for in parlor and sleeping cars:

	Class I Steam Railways (millions)	Domestic Air Carriers (millions)	Air as % of Rail
1946			
Jan.	\$132.4	\$15.3	11.6
Feb.	109.8	15.6	14.2
March	109.3	19.0	17.5
April	100.7	21.7	21.6
May	87.4	24.1	27.6
June	101.6	(Unavailable)	

AIA also presented a comparison of passenger mile revenue from 1939 through 1945 as interesting

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SA-219, AVIATION NEWS
330 WEST 42nd ST., NEW YORK 18, N. Y.

SAVE WASTE PAPER

"in view of the recent controversy between airlines and railroads on the cost of service." The figures are as follows.

Year	Average Revenue Per Passenger-Mile (Cents)		
	Domestic Airlines	Pullman	Railroad coach excluding commutation
1939	5.10	2.98	1.80
1940	5.07	2.94	1.67
1941	5.04	2.88	1.64
1942	5.27	2.95	1.77
1943	5.35	2.94	1.74
1944	5.14	2.99	1.70
1945	4.77	2.95	1.71

Minnesota Levy

The Minnesota department of taxation has levied an assessment of \$11,321 in annual taxes against Northwest Airlines property and \$7,500 against Mid-Continent Airlines. The assessment covers 22.36 percent of NWA and 25.07 percent of MCA equipment, percentage the two firms keep in the state on an average. The Northwest levy was based on flight equipment assigned a true value of \$293,432, and that for Mid-Continent on a value of \$194,398.

SHORTLINES

► **Alaska Airlines** has taken delivery at Anchorage on the first of two Douglas DC-4s converted at the Matson Navigation heavy aircraft and maintenance depot at Oakland Municipal Airport.
► **BOAC's** Boeing Stratocruisers will

Grumman Model G-44 Widgeon

Serial #1218, powered by two Type 6-440-C-5 Rangers 200 hp. Ship licensed for four passengers and pilot for land/water operation. Amphibian with hydraulically operated flaps, retractable landing gear, tail wheel.
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FS-223, AVIATION NEWS
330 W. 42nd St., New York 18, N. Y.

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be named after British wartime C-class flying boats.

► **Braniff** has installed a new reservations procedure which permits any station to give immediate confirmation of a request for space between any two cities on its system.

► **Chicago and Southern** has abandoned plans to move its executive offices from Memphis to Chicago. Reasons: shortage of housing for personnel and scarcity and increasing costs of remodeling materials at Chicago.

► **Colonial** carried 119,725 passengers in the first nine months of this year, 79 percent more than the 66,613 in the same period of 1945. Passenger revenue miles were up 69 percent, mail pound miles 48 percent and express pound miles 27 percent.

► **Eastern** will pay a semi-annual dividend of 25 cents a share to stockholders of record Nov. 21, 1946. Last similar dividend was paid June 28. . . . Now flying more than double the seats available a year ago, EAL has 70 DC-4s and DC-3s. Lockheed Constellations and Martin 202s are to go into service next year.

Scandinavian Airlines Will Use Stratocruisers

The three partners in the Scandinavian Airlines System will be prepared to put their own Boeing 377 Stratocruisers on their trans-Atlantic operation as the result of sale of two of the four ships ordered by Swedish Intercontinental Airlines (SILA) to Danish Air

FLIGHT RESEARCH DIRECTOR

Flight Research Engineer employed by leading electronic and instrument manufacturer desires position where recent administrative, military, and prewar airline and C.A.A. operational background is a prerequisite. A college graduate qualified to establish and administer an aeronautical research or flight operations department for concern or organization whose postwar requirements make establishment of such a department mandatory. Excellent references covering eighteen years continuous contact with industry. Present salary \$10,000 per annum.

PW-224, AVIATION NEWS
330 West 42nd St., New York 18, N. Y.

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Lines (DDL) and Norwegian Air Lines (DNL).

SAS started scheduled operations last month on a twice-weekly basis between the U. S., Denmark, Norway, Sweden and Scotland. Schedules are to be increased soon to three a week. The partnership, now using Douglas DC-4s, expects Boeings in '47.

Americans' Cargo Division Flies to Hawaii, Alaska

Three daily round trips between Seattle and Anchorage were established by American Airlines' Contract Air Cargo Division to carry urgently needed supplies during the Maritime strike. The C-54s are carrying 17,500 lb. each and return to Seattle practically empty. CACD charges 11¢/ton-mi.

Newest venture of the division will be contract flights to the Hawaiian Islands for a Los Angeles freight forwarding group, Domestic Air express, subsidiary of Los Angeles Consolidators. In contracting for one CACD C-54, the forwarder will charge shippers 45 cents per lb. to Honolulu and inter-island points.

\$100,000 CAPITAL WANTED

Owner of well-known, moderate-sized established aircraft company seeks an associate or partner to help finance production of a new private plane; a two passenger, dual control, single engine, high wing type. Tooling and jigs are nearing completion—engineering and static tests have been completed and only await C.A.A. approval. First plane now flying and being tested. Many domestic and foreign dealerships have been consummated. Company has complete hangar, shop and manufacturing buildings under 5 year lease. Hangar and shop completely equipped. \$100,000 required. Associate take active or inactive part in management. A real opportunity.

BO-221, AVIATION NEWS
330 West 42nd St., New York 18, N. Y.

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