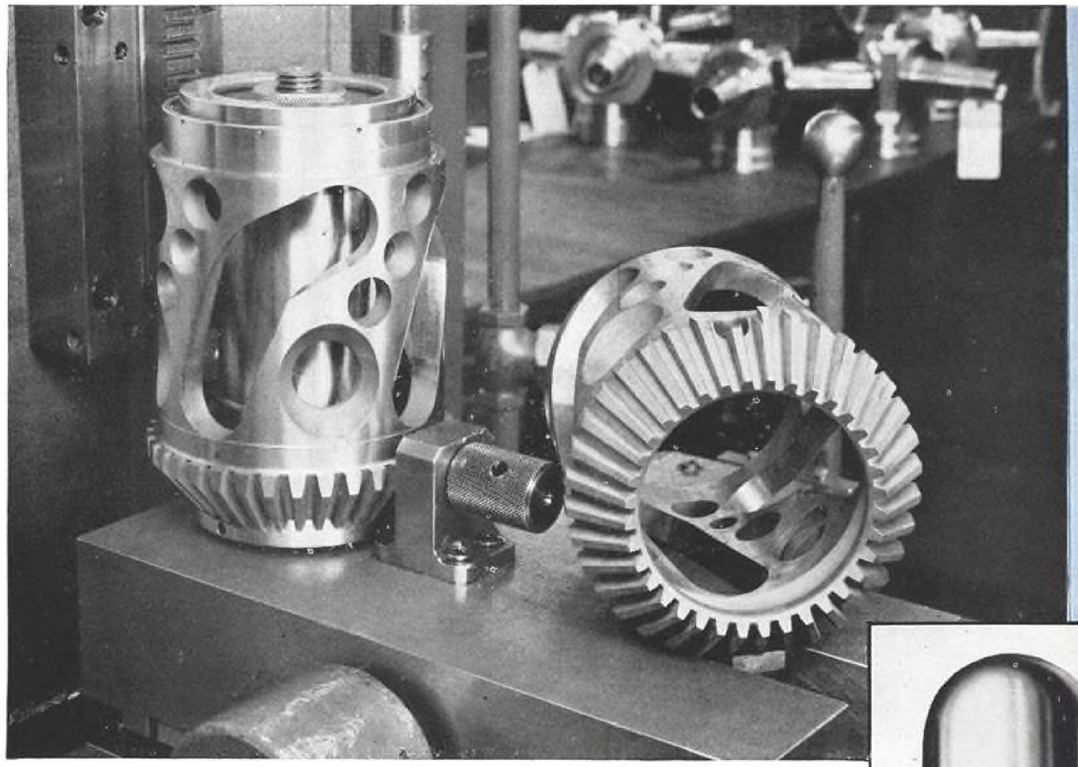
Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC. JUNE 5, 1944

Navy's New Air Chief: *Vice Admiral Aubrey W. Fitch, who for 18 months has directed the joint air operations of Army, Navy and Marine elements in the South Pacific, will soon direct the Navy's overall air picture as Deputy Chief of Naval Operations (Air). The announcement of his appointment comes as preparations are being pushed for large concentrations of land, sea and air forces in the South Pacific for expansion of operations against the Japs.* *(Story on page 9.)*



A Typical Problem

SOLVED BY BROACHING

Many years ago broaching took over the problem of mass production and solved it. Today a much more difficult problem is also finding a solution by broaching. It is the problem of maintaining excessively close tolerances and still using mass production methods.

This is a typical problem — to make a cut on the Cam lug stop for the Hydromatic propeller to a plus or minus .001 and still keep up mass production. With the help of Hamilton Standard engineers, an entirely new idea was evolved whereby guide fingers locked the fixture and broach body in constant alignment in spite of slight slide torque, broach wear or uneven cutting pressure. Tolerances well within limits have been consistently maintained.

One of the greatest aids to modern aviation is the Variable Pitch Hydromatic Propeller whose barrel and cam set-up is shown above.

ARMY E NAVY

The LAPOINTE Machine Tool Company

HUDSON, MASSACHUSETTS, U. S. A.

THE WORLD'S OLDEST AND LARGEST MANUFACTURERS OF BROACHES AND BROACHING MACHINES

Washington Observer

BREWSTER FUTURE—It is a safe bet that Brewster is virtually out of war production except for minor subcontracts. Both the AAF and the Bureau of Aeronautics have washed their hands of the situation and show no interest in giving the company any more plane contracts. Despite the other valid reasons for canceling the "Corsair" contract, the biggest element has been the Brewster labor situation, and if the labor element continues making charges in connection with the cancellation, watch for a verbal broadside from Secretary of the Navy Forrestal, who isn't a man to take it lying down.

★ ★ ★

JET ENGINES—British sources say that the action of the government in taking over Power Jets, Ltd., developers of Group Capt. Frank Whittle's jet propulsion engine, does not mean a government monopoly of that type of engine. Other companies are making the engines and will be permitted to continue, they say, with Power Jets, Ltd., being built up as a national experiment station for research and development work. The British are said to feel that speed in development of the engines is essential and for that reason took over the parent company. American companies, notably General Electric—which incidentally has received small credit for its jet work—are conducting intensified experimental work in connection with jet units, plans for which were turned over to this country by the British who in return were given information on developments here in a fair exchange.

★ ★ ★

TRUMAN COMMITTEE—It probably was inevitable in a campaign year, but the differences among some members of the Truman Committee, which has done such excellent work in investigating war production in all its phases, are causing some concern among non-partisans in the Capital. Senator Truman asserted that Republicans were using disclosures, made as a result of investigations conducted by Democrats, as campaign fodder. Republican members countered that the investigations were not conducted by Democrats alone.

★ ★ ★

PLANES NOT SHIPS—The habit of calling airplanes "ships" is widespread in aviation, but it's being stopped in the Army. A little-noticed order issued by the War Department noted that use of the word "ship" to designate aircraft has led to serious confusion between personnel of the Army and personnel of the Navy, Marine Corps and Coast Guard. Consequently, all Army personnel have been ordered to discontinue use of the word "ship" to designate aircraft. And that's official.

★ ★ ★

NEW "THUNDERBOLT"—Newest use of Republic's P-47 "Thunderbolt" is bombing and strafing enemy installations at tree-top levels. Details of the new version, just disclosed, show that the P-47 carries bomb loads up to 2,000 pounds for operations as a dive bomber. The

New P-47 Fighter-Bomber-Escort

versatility of the plane has been increased and a boost of several hundred horsepower and increased internal fuel capacity, doubling fighter range, are reported. Most noticeable change is the new silhouette featuring an electrically operated bubble canopy giving pilots full visibility.

★ ★ ★

A.E.A.F.—Behind the incredible power of the air assault which continues to rise to new peaks, each one seeming to reach the limit of Allied capacity, only to be exceeded by another, is the Allied air organization which has reached its present set-up by quick adaptability to changing needs and by steady growth. For a while it was the RAF Bomber Command which carried the brunt. To these elements then were added the United States counterpart. And now, another mighty force—little mentioned as a unit—is the Allied Expeditionary Air Force. It is the greatest single air component ever created and its main job is the expeditionary aspects of the war. Commander-in-chief is Air Marshal Sir Stafford Leigh-Mallory and it consists of three separate forces—Air Marshal Sir Arthur Coningham's RAF Second Tactical Air

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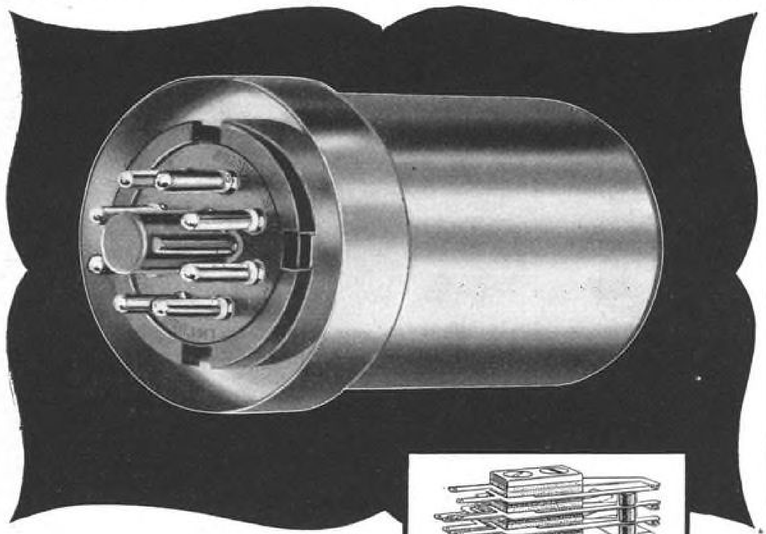
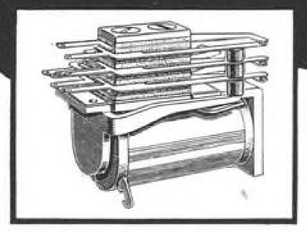
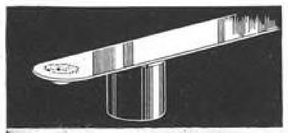
CLARE Type "K" RELAY

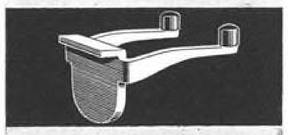
Assure Perfect Operation at Any Altitude



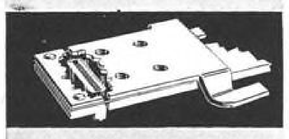




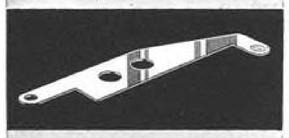
Strong, hard, long wearing Bakelite bushing insulators resist vibration and heavy contact pressures.



Heelpiece of magnetic metal, carefully annealed.



Hinge of "fatigueless" beryllium copper insures long life under vibration.



Nickel contact springs to which contacts are overall welded by special process.

The Clare Type "K" is a precise, small relay widely used in aircraft where inches and ounces are important.

Now Clare offers you this relay, which can be "custom-built" to your exact requirements, sealed into its own sphere of laboratory-controlled working conditions, unchanged at high altitudes or sea level. According to requirements, dry air or inert gas may be sealed in. Dimensions of sealed relay are $2\frac{11}{32}$" long by $1\frac{21}{32}$" wide.

The Clare Type "K" Relay, measuring only $1\frac{1}{2}$"x $1\frac{1}{4}$-x$\frac{13}{16}$", is especially designed for applications incident to vibration—no anti-vibration springs are needed. There are no bearings to rattle loose. Uniform armature movement is maintained by the use of a "fatigueless" beryllium copper hinge, heat-treated and designed to provide a wide margin of safety.

Permanent assembly tightness is secured by binding the spring pile-ups under hydraulic pressure and then tightening to the heelpiece. A coating of Glyptol is an added precaution.

Like all Clare Relays, the Type "K" is "custom-built" to meet your specifications. Now "custom-building" can also provide this relay with ideal conditions sealed in, to assure perfect operation at any altitude.

Let our engineers "custom-build" a relay to meet your requirements. Send for the Clare catalog and data book. C. P. Clare & Company, 4719 W. Sunnyside Ave., Chicago (30), Ill. Sales engineers in all principal cities. Cable address: CLARELAY.

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"CUSTOM-BUILT" Multiple Contact Relays for Electrical, Electronic and Industrial Use

AVIATION NEWS

June 5, 1944

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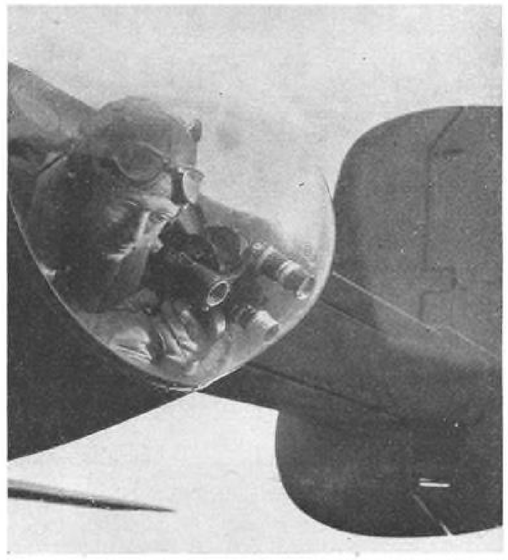
Washington Observer

Force, Maj. Gen. Lewis H. Brereton's Ninth Air Force, and Air Marshal Sir Roderic Hill's RAF Air Defense of Great Britain.

★ ★ ★

SECRET ENGINE—Allison's new powerful 24-cylinder liquid cooled engine, described in detail in "Aviation News" last week has long been on the secret list. Any mention of the power-plant was restricted. But in 1939 at the World's Fair in New York, part of Allison's exhibit in the Aviation Building included two of their 12-cylinder engines mounted together as one to make a 24-cylinder job. Naturally, the new engine is not the same nor that simple, but the general over-all effect was the same and the 24-cylinder Allison was no secret to the millions who visited the World's Fair.



Photographer adjusts camera in B-25 tail

AAF STORAGE—The storage of strategic reserves and war reserves of materials poses a major problem for the AAF. Top officers are asking aggressive cooperation on the part of AAF station commanders and commands to insure fullest utilization of existing facilities. It is pointed out that reductions in personnel assignments at active stations, recently directed or to be effected in the future, will make available post, camp and station warehousing which can be used. AAF commands and AAF station commanders have been asked to report to the Air Service Command the number of square feet of warehousing available for materials storage.

CIO AND CONTRACT TERMINATIONS—Army and Navy want no outside advice in cutting warplane contracts. The Brewster termination by the Navy brought complaints not only from other government sources, including WPB, but from CIO. The union's plaint is that every effort should be made to consider the regional manpower picture before a plant's war work is lopped off. The union expects to protest loudly if it is not consulted in the future, but the services are determined to keep terminations to themselves until formally announced.

★ ★ ★

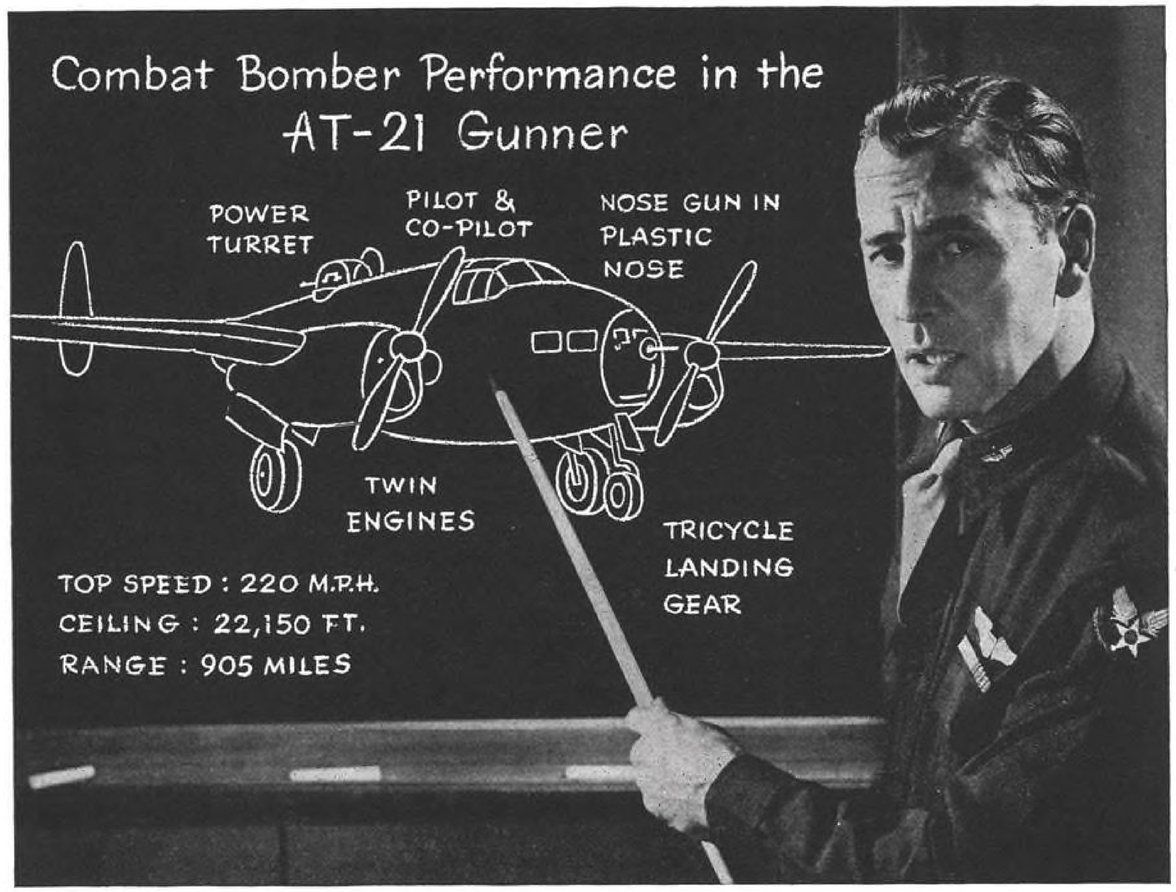
AXIS SECRETS—Generally missed by the public when the Allies moved into Italy was the excellent opportunity we had to learn many German scientific secrets. While the Nazis probably never shared their most valuable developments with their Axis partners, the Italians were well informed on industrial and production problems which were causing worry in the Reich and this information was welcomed by our military services. In general, we learned that German trends, scientific developments and goals are surprisingly similar to those of the Allies.

★ ★ ★

STRATEGIC ICELAND—Typical of the future importance of small but strategically located countries in the post-war air world is Iceland, which has recently declared its independence of Denmark. Diplomatic reports show that Pan American, American, TWA, a Swedish line and a Norwegian carrier have notified that country of their intention to ask for landing rights. Before the war PAA had an exclusive, non-reciprocal agreement with Iceland for landing rights but this expired. It is indicated authoritatively that any future agreement Iceland enters into will carry a reciprocal clause. Two Iceland companies have ambitions to engage in international air service. Both have small government stock interests.

★ ★ ★

NO CUTBACKS—The Navy's cancellation of its contract with Brewster and the reduction on the output of A-20's has resulted in considerable speculation on cutbacks in the entire aircraft program. Production officials emphasize that until the invasion is an assured success there is to be no let-up in production but that there are and will be shifts in emphasis. A sign on the other side comes from WPB officials who are studying the effect of changes in the aircraft program on the automotive industry and the possibility of building some light commercial trucks next year without interfering with medium and heavy truck production. The changing elements in the European theater are bound to result in war production program adjustments.



Classroom for Combat

The feel of the fight is built into the Fairchild "Gunner"—an aerial classroom for combat equipped much like those planes that will fly in the assaults on Tokyo.

Fairchild engineers are expert in designing aircraft to do specific jobs well. So, when the Army foresaw the need for a plane with bomber characteristics to train its sharpshooters of the air, Fairchild built the "Gunner." The men who will ultimately loose "squirts" of death into enemy pursuits and interceptors, today can sharpen their skill in a plane that gives them the *feel* of combat operations.

The "Gunner" has twin guns that fire from a power-operated top turret. Its transparent plastic nose houses a manually operated machine gun. Its "office" has controls for pilot and co-pilot. And in landings and takeoffs, the "Gunner" rolls, like the heavies, on a retractable, tricycle landing gear.

With its two 520 horsepower Ranger V-Twelves for power; with its sleek rivetless surfaces of plastic-bonded plywood fabricated by the famed Duramold process; with the aerodynamic stability inherent in all Fairchild designs, the "Gunner" flies with the Fairchild "touch of tomorrow in the planes of today."

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VOLUME 1 • NUMBER 45

Aviation News

McGRAW-HILL PUBLISHING CO., INC.

June 5, 1944

Nearly 200,000 Planes Produced In U. S. Since Pearl Harbor

Total airframe weight turned out since opening Jap attack is over 1,430,000,000 pounds, summary released by Wilson and Wright reveals; May output estimated at 8,900.

Production of the American aircraft industry since Pearl Harbor is approaching 200,000 airplanes—in units — and total airframe weight is something over 1,430,000,000 pounds, an answer to critics of both management and labor in the nation's top industry.

In a pre-invasion summary of aircraft production progress, released by Charles E. Wilson, chairman of the Aircraft Production Board, WPB, and T. P. Wright, director of the Aircraft Resources Control Office, figures show that the aircraft industry for the first four months of this year totaled 35,009 planes, averaging a plane every five minutes around the clock (excluding Sundays) or 340 every working day. Adding the 8,900 estimates of May output to this figure, the total for the first four months of this year amounts to more than 43,909 airplanes.

100,000 in 1944—Despite production schedule changes, the industry's output for 1944 will still approach 100,000 airplanes and the total cost of the 1944 aircraft program will be approximately $18,000,000,000 although the WPB places the figure about three billion higher.

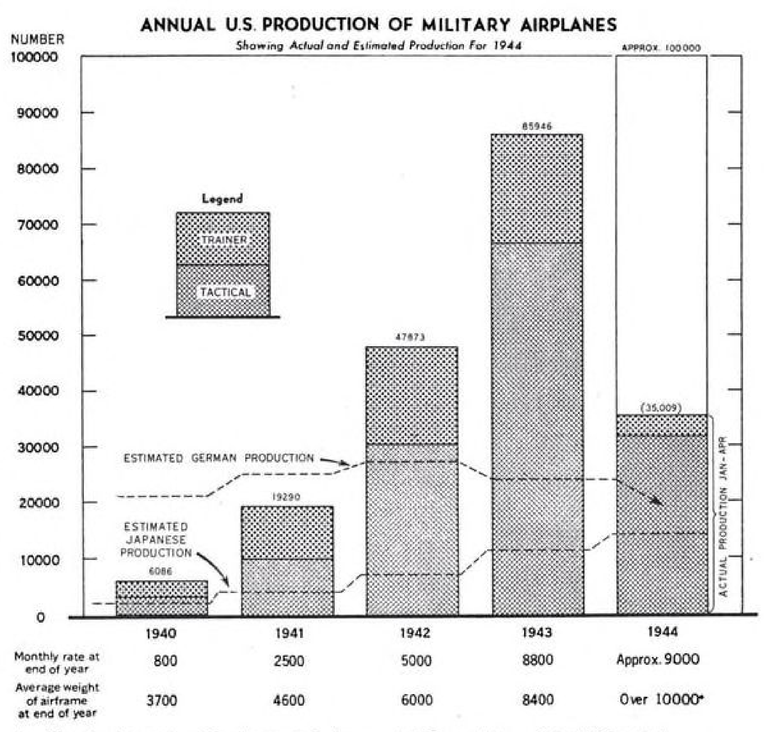
Wilson and Wright recalled in their progress report that, in January of 1940, the United States turned out only 267 planes—weighing 1,500,000 pounds including spare parts—compared with 9,117, weighing 101,400,000 pounds including spare parts, in March of this year.

Weight Stressed—In numbers, the output of airplanes increased 3,400 percent between January, 1940, and March, 1944. But in weight, the increase for the same period was 6,800 percent. The average airframe weight of United States planes has increased from 3,600 pounds in 1940 to approximately 10,000 pounds in 1944. It should be emphasized that this is an average and that the emphasis is increasingly on heaviest bombers and long range fighter-escort craft.

The output of airplanes in the United States is now at a rate greater than four to one in comparison to Germany's, a significant figure in connection with the utilization of aircaft in the invasion.

U. S. Output Up, Nazi Off—In 1936, for example, Germany was producing more than five planes for every one we produced. But by early 1942, our output overtook and passed Germany's. Commenting on the present output of the German aircraft industry, the Aircraft Production Board estimated that the Germans are now producing only about 75 percent of their 1942 output, their peak year, when they turned out about 27,000 planes.

The combined output of the United States and the British Empire since the outbreak of war in Europe is more than 300,000. During the same period, Germany's



How U. S. Tops Nazi and Jap Plane Production: *This chart issued by WPB and Aircraft Production Board, an adaptation of one that appeared in* AVIATION NEWS *in January, highlights the progress of our aircraft output, including estimates of German and Japanese production.*

estimated output was 110,000 planes, while Japan produced perhaps 41,000. It should be borne in mind, that the Germans were emphasizing plane production as far back as 1935. This means they started the war with a stockpile of some 24,000 airplanes.

▸**Combat Planes**—Of our output at this time, about 77 percent are combat planes, and combat and transport planes constitute about 87 percent of the total. Four percent are special purpose types. Only nine percent consists of trainers, in contrast to 1941 when the pilot training program was expanding and 48 percent of the output was trainers. The APB disclosed that the high point of trainer output was in April, 1943, when 1,862 were produced. Output in April of this year was 778 trainer planes.

The output of four engine bombers as previously announced in AVIATION NEWS was well over 1,000 a month in January and has risen steadily since that time.

▸**Horsepower**—In examining the aircraft program, engine horsepower, a vital element, is ofttimes overlooked. The month-to-month horsepower increase is pointed up by comparing the horsepower of engine output in December, 1941, which was 6,000,000, with the horsepower produced last March, which was 39.2 million, an expansion of six and one-half times and this output is steadily increasing.

The increase in horsepower output is almost as great as the increase in airfame weight, which expanded eight times from 12 million pounds in December, 1941, to 101.4 million pounds in March, 1944. The average horsepower per engine was 850 in January, 1941, and last March it was 1,300.

About 31 percent of the nation's munitions program this year is aircraft and the production schedule for aircaft in terms of weight continues to rise for the rest of this year.—C. S. H.

Aircraft Job Rolls Up 2400% Since '40

Employees in industry totaled 85,000 four years ago against 2,100,000 currently, APB reveals.

The phenomenal growth of the aircraft industry is no better emphasized than in its employment figures, which show that the aircraft industry, including airframe, engine, propeller industry subcontractors and accessory manufacturers employed 85,000 persons in January, 1940, compared with current employment of more than 2,100,000—an increase of 2,400 percent.

The Aircraft Production Board, in reporting these figures, said the wartime employment of women making airframes, engines and propellers has jumped from an insignificant number in 1940 to more than 720,000 now.

▸**Pre-war Figures**—When the wartime expansion of the industry in terms of total employees is contrasted with the pre-war size of the industry as a whole, the comparison is perhaps more startling.

At present, the aircraft industry, including feeder industries and raw material sources, is three-fourths as large as were the combined United States manufacturing industries in 1940, which at that time employed only 4,100,000 workers. The present aircraft industry and subsidiary industries now employ more than 3,000,000 workers.

▸**Efficiency Rate Up**—The report emphasized again that the output per employee in the aircraft industry has raced ahead with the increase in employees. During January, 1940, each employee averaged 23 pounds of airframe weight per month, while in the first four months of this year, each employee averaged 73 pounds of airframe a month, an important factor in the accelerated production. The same sort of gain in labor productivity is disclosed by the fact that in 1940, it took 156 workers a month to produce one airplane weighing 3,600 pounds, while in 1944 it requires only 137 workers one month to produce an airplane weighing 10,000 pounds.

The increase in labor productivity is clearly seen when expressed in terms of specific airplanes. The first four-engine bomber in one plant, for example, took 200,000 man-hours to produce, while at present, for the 4,500th plane only 10,000 man-hours are required. The same is true of a typical fighter-plane, which took 35,000 man-hours for an early model, but only 4,500 man-hours for the 3,500th.

Aircraft Production Costs

The yearly cost of the United States aircraft program during the period 1941-1944 is summarized below, as given by WPB Aircraft Production Board and the Aircraft Resources Control Office, together with the annual number and weight of airplanes:

	Total Value of Aircraft Output	Number of Planes	Total Airframe Weight
1941	$1,765,000,000	19,290	85,700,000
1942	6,285,000,000	47,873	292,600,000
1943	13,800,000,000	85,946	743,000,000
1944	21,300,000,000	100,000* (scheduled)	1,250,000,000

* 1944 estimate through May: 43,909 planes.

Month	1940	1941	1942	1943	1944	
Jan.	267	1,016	2,980	5,013	8,789	
Feb.	266	962	3,099	5,453	8,760	
Mar.	298	1,135	3,497	6,264	9,117	
Apr.	376	1,388	3,501	6,472	8,343	
May	480	1,331	3,989	7,114	8,900	(est.)
June	602	1,477	3,734	7,094		
July	561	1,461	4,109	7,373		
Aug.	528	1,853	4,281	7,612		
Sept.	515	1,914	4,307	7,598		
Oct.	617	2,273	4,063	8,362		
Nov.	737	2,051	4,812	8,789		
Dec.	839	2,429	5,501	8,802		
Total	6,086	19,290	47,873	85,946	43,909	203.104

Move Safety Offices

Regional safety offices of the Office of Flying Safety, Headquarters, Army Air Forces, are being relocated on a geographical basis and regular surveys have been ordered to reduce the number of aircraft accidents in the AAF.

Gen. H. H. Arnold, AAF commander, has ordered safety officers given access to necessary records at all AAF installations for the purposes of the survey, and reports of safety officers will be given to commanding officers of each installation for remedial action and then forwarded to the Office of Flying Safety in Winston-Salem, N. C., for coordination in obtaining a better overall safety record.

AVIATION CALENDAR

June 5-18—Detroit Army Air Show.
June 14-16—Airport Management Conference, Texas A & M, College Station, Texas.
June 15-16—Permanent Organization Meeting, Feeder Airlines Association, Washington.
June 26—West Virginia Planning Board Aviation Committee Forum, Charleston.
July 10-12—American Association of Airport Executives, Hotel Sherman, Chicago.
July 18-19—Air Traffic Conference of America, Annual Meeting, Denver.
Aug. 2-3—National Business Meeting, National Aeronautic Association, Denver.
Oct. 5-7—SAE National Aircraft Engineering and Production Meeting, Los Angeles.
Nov. 15-16—National Clinic of Domestic Aviation Planning, Oklahoma City.
Dec. 4-6—SAE National Air Cargo Meeting, Chicago.

Unfinished Ports To be Completed

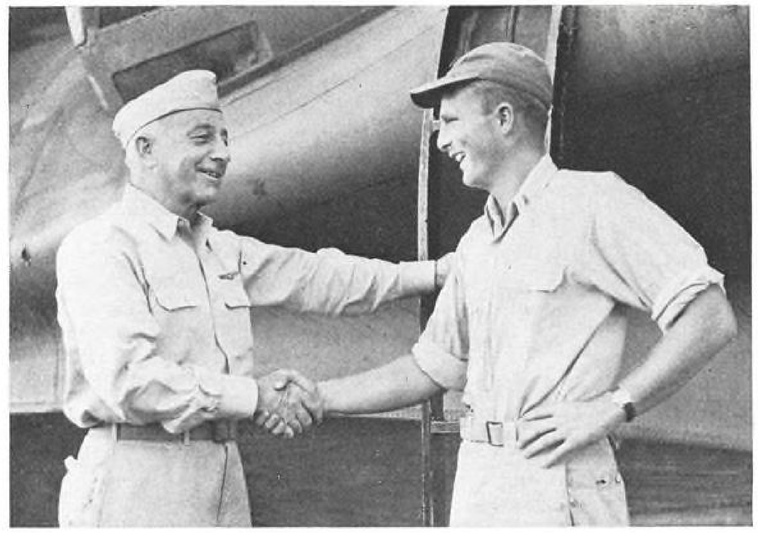
Airports on which construction was stopped when war needs slackened last year, will be completed, it was learned last week.

Resumption of the work is expected to be ordered within the next two weeks as a result of a conference of an informal subcommittee representing 65 Congressmen and President Roosevelt, in which the Congressmen pointed out that the government had incurred a moral obligation to communities.

More than $4,000,000 has or will be contributed by the communities for the airport sites and improvements. Completion of all 28 projects in 17 states will represent an investment of approximately $30,000,000.

▸**Conference**—A committee headed by Rep. Jennings Randolph (D., Va.) and including Rep. Tibbott (R., Pa.) and Rep. Stevenson (R., Wis.) and Sen. Gillette (D., Ia.) and Sen. Burton (R., Ohio), conferred with the President as the aftermath of a meeting of 34 Senators and 34 Representatives called by Randolph to examine the position in which communities found themselves after purchasing sites at the request of the government.

Airports on which construction is expected to be resumed soon are: Alturas, Calif.; Winter Haven, Fla.; Decatur, Quincy and Springfield, Ill.; Dubuque and Waterloo, Ia.; Lawrence, Mass.; Pellston, Mich.; Bemidji and Duluth, Minn.; Springfield, Mo.; Dansville, N. Y.; Greensboro, N. C.; Jamestown, N. D.; Canton, Mansfield and Springfield, Ohio; Johnstown and Wilkes Barre-Scranton, Pa.; Danton and Georgetown, Tex.; Danville, Va.; Martinsburg, Parkersburg, Wheeling and Wyley Ford (Cumberland, Md. airport), Pa., and LaCrosse, Wis.



Fitch and Son in South Pacific: *Admiral Fitch is shown here shaking hands with his son, Ensign Jack Fitch, USN, at Guadalcanal against the background of his PBY5-A. The admiral has two sons in the Navy.*

Fitch Choice as Naval Air Chief Seen Preceding Big Pacific Push

Appointment of admiral comes on eve of large-scale concentration of air strength and other forces for expanding operations against Japs.

Navy's top air post has gone to a man who for 18 months has directed unified air operations of Army, Navy and Marine elements —Vice Admiral Aubrey W. Fitch.

His appointment comes at a time when unified operations in the Pacific are increasing, and as preparations are being made by all services for coordinated operations involving a heavy transfer for Army Air Forces strength to the Pacific for the next large-scale move in the Japanese war.

▸**Awarded DFC**—Fitch recently was awarded the Army's Distinguished Flying Cross for his work in coordinating the joint operations as Commander, Aircraft, South Pacific.

While Fitch might have been a vice admiral and armed with the imposing if unwieldy Navy designation of COMAIRSOPAC, he is known far and wide as "Jakie" Fitch and his command in the South Pacific seldom knew when "Jakie" would drop in by plane. He flew constantly, always as copilot of his transport. Admiral Halsey summed it up in complaining that "Jakie flies all over the place—in fact he flies a lot of places he shouldn't."

▸**In Navy Air Since 1929**—Fitch has been attached to the Navy's air arm since 1929, when he was ordered to flight training at Pensacola. He won his wings early in 1930 and was assigned to several months' duty at the Naval Air Station, San Diego, until he took over command of the *USS Wright* and subsequently the *USS Langley*. From 1932 to 1935 he was commanding officer of NAS, Norfolk. Then he served for a year as chief of staff to the Commander, Aircraft Battle Force, aboard the *USS Saratoga*. The following year he commanded the *USS Lexington*. Later he attended the Naval War College and served as commanding officer, NAS, Pensacola.

At the outbreak of war, he was back aboard the familiar *Saratoga* as commander of Carrier Division One, and it is characteristic of the admiral that the carrier forces were not caught napping at Pearl Harbor when war came.

▸**Sank Jap Carrier**—He had his flag aboard the *Lexington* as commander of an air task group when

Rear Admiral A. W. Radford

the Battle of the Coral Sea was fought and fleet aircraft sank one Jap carrier, seriously damaged a second and sank a Nip cruiser to fend off Jap advances in New Guinea and toward Australia. He lost his flagship in the engagement, the first American carrier loss of the war. He was awarded the Distinguished Service Medal for his outstanding work in that battle.

In September, 1942, he was assigned as Commander, Aircraft, South Pacific, the post he held when recalled to become Deputy Chief of Naval Operations (Air).

Until he assumes his duties, Rear Admiral A. W. Radford will be acting Deputy Chief of Naval Operations for air. Admiral Radford has served as assistant to Vice Admiral John S. McCain, who has been assigned to duties in connection with studies of duplications of Army and Navy functions.

DuPont Develops New Canopy Plastic

E. I. du Pont de Nemours and Co. announced last week that it had devised a new plastic—laminated "Lucite - Butacite" — designed to give added protection to Army and Navy pilots by reducing possibilities of disintegration of clear plastic canopies when pierced by bullets or flak while flying at high speeds under pressurized conditions.

Army and Navy tests have shown that the new three-ply plastic sheeting has a self-sealing tendency, under certain conditions, and bullet holes will close almost immediately. The middle layer is made of Butacite polyvinyl butyral resin which gives the material a rubber-like characteristic.

U. S., Russia and China Discuss Post-War Aviation Policies

Hull announces American plans for consultations among "Big Four" and others later on formation of a world peace and security organization.

The government was engaged last week in selling Russia and China on the principle of freedom of commercial transit for all nations which desire to participate in international flying after the war.

As discussions took place, Secretary of State Hull announced that he was ready to open consultations with these two countries and Britain and later others concerning an international peace and security organization—consultations whose outcome will tell whether the United Nations can lay the groundwork for collaboration in peace as in war.

▸**Other Topics**—Into the mosaic that the Big Four and other Allied countries are endeavoring to lay out, aviation arrangements—commercial and military—will fit conspicuously with those on monetary stabilization, telecommunications, petroleum distribution and other individual inter-nation problems.

It is obvious, therefore, that the degree to which Hull's world organization proposals are accepted by other countries will offer important indications of these countries' intentions in the matter of removing artificial barriers to the advancement of aviation.

▸**Problem**—The question, for instance, of whether Russia will enter enthusiastically into economic and political collaboration with other nations breaks down, on the aviation level, to one of whether Russia will be interested in greater freedom for international air operators, with equitable participation for all concerned on a mutually fair economic basis, or will be inclined to concentrate on development of her own internal services with unilateral action in such international ventures as attract her.

▸**Russian Policy**—Likewise expressions of Russian aviation policy undoubtedly are being scanned for indication of the course the Soviets will pursue in the larger sphere envisaged in the Hull consultations.

Whatever has been produced by the aviation talks with the Russians, or with the Chinese for that matter, is a well-guarded secret as of now.

The wisdom of this course may be challenged in light of the recent furor growing out of the Anglo-American aviation talks. Because Assistant Secretary of State Adolf Berle, Jr., has refused to discuss these talks, against the advice of some of his associates, the public has relied on press reports of statements by Lord Beaverbrook in the House of Lords. An erroneous report that an American-sponsored plan, including right to discharge and pick up passengers anywhere in the world had been approved by the British, caused the State Department considerable anxiety during the past fortnight.

▸**Hull Intercedes**—It resulted in Hull having to take out time from his arduous duties to inform the Senate Aviation Committee that Berle made no commitments while in London. This could have been avoided by a frank discussion between Berle and the press—on the record—in which ground covered at London could have been explained fully. Hull's letter is now in the hands of the committee and seems to have satisfied members.

Conferees

Conferees in the present aviation talks are:

▸America: Ambassador Joseph C. Grew, Assistant Secretary of State Adolf Berle, Jr., Civil Aeronautics Board Chairman L. Welch Pogue, Assistant Secretary of Commerce for Air William A. M. Burden and Chief of the State Department Aviation Division Stokeley W. Morgan.

▸Russia: Ambassador Andrei A. Gromyko, Lieut. Gen. L. G. Rudenko, Maj. Gen. A. A. Avseevich, Maj. Gen. N. I. Petrov and Col. P. F. Berezin.

▸China: Minister and Counsellor of Embassy Liu Chieh, Minister of Transportation Chang Kia-Ngau and Maj. Gen. P. T. Mow of the Chinese Army Air Forces.

The contention with regard to these bilateral talks is that they are nothing more than discussion sessions in which the two countries concerned exchange views. To report what goes on, it is held, would be prejudicial to the interests of both countries, because nothing conclusive is done.

No such fetish hindered public discussion of the Treasury's international money stabilization plan, with the result that reasonably full information was obtained after each discussion with a foreign country when the plan was in preliminary stages. The international monetary conference opening July 1, accordingly will have no air of mystery, and a problem which by comparison with aviation is unspeakably dull has been thoroughly publicized by the officials whose duty it is to provide solutions.

▸**Agendum**—The agendum for the talks with Russia and China is identical with that used by the American delegation in London. The Russians and Chinese brought none of their own.

The conferees are discussing the varying degrees of freedom of the air, desirability of eliminating subsidies and preventing uneconomic competition, standardization of rates, safety measures, weather and other navigation aids, use of airports and related matters. The Americans propose an international air convention embodying freedom of commercial transit, and an international regulatory commission with power only to make recommendations.

▸**Concern Over Russia**—Some concern has been expressed here about the ease with which Russia could outdistance American operators through employment of generous subsidies and utilization of what by American standards is cheap labor. The development of her internal economy and her decision on how far to go in multilateral action will determine Russia's place in post-war commercial aviation competition.

China, it is believed, will be interested in having her air services built up with foreign capital and aircraft, and according to United States officials should find freedom of commercial transit acceptable.

The presence simultaneously of both Russian and Chinese experts may afford an opportunity for three-cornered talks on relaxation of air sovereignty which, officials believe, will be in the interest of American operators flying great circle routes to the Orient.

Navy Discloses Background Of Brewster Cancellation

Officers tell Senate Military Affairs subcommittee Chance Vought and Goodyear efficiency would have been endangered by an equal cutback at all three plants.

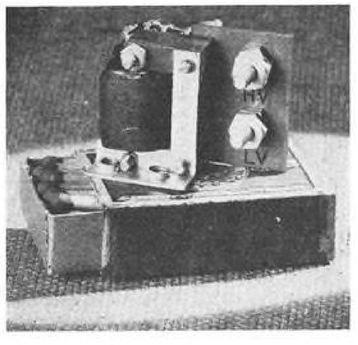
By WILLIAM G. KEY

The Brewster portion of *Corsair* fighter production for the Navy was cancelled because equal cutbacks at all three companies making the *Corsairs* would not have permitted efficient utilization of any one plant. Further, it is imperative that the production personnel of Chance Vought and Goodyear be retained for the newer fighters under development.

Rear Admiral D. C. Ramsey, chief of the Bureau of Aeronautics, gave these facts to members of the War Contracts Subcommittee of the Senate Military Affairs Committee last week.

▸**No Further Orders**—Brewster had no prospect of further Navy orders, had the highest costs, and was the smallest producer, Ramsey informed Sen. James E. Murray (D. Mont.), chairman of the subcommittee, who had said the Brewster case might be considered a "test tube" of reconversion policies. No comparable situation exists in connection with any other aircraft companies, Murray was told.

Ramsey testimony followed bitter protests made before the subcommittee by Preston Lockwood, new president of Brewster, and Richard J. Frankensteen, UAW-CIO vice-president. Both asked extension of the contract until 1,000 *Corsairs* had been produced by Brewster, which they said would enable the management to obtain other work. Adm. Ramsey said such an extension would not be justified in view of the Navy's overall needs, adding that $180,000,000 would be saved by the *Corsair* cutbacks, more than half of which is being obtained by the Brewster cancellation. Ramsey said that the cancellation was the result of a purely military evaluation, based on combat reports that were not completely available until May 13. On the 15th, he said, the Aircraft Production Board was warned that the Brewster cancellation was coming, and the company was notified on May 16. The decision to end the contract with delivery of the 750th plane before July 1 was transmitted to the company on the 19th and formal termination notice was given on May 22.



TRANSFORMERS:

Two-ounce and three-cunce autotransformers designed to furnish a/c voltage to aircraft instruments such as the remote indicating compass, are being produced by General Electric. Dimensions of the new product are shown in relation to a matchbox.

D. C. Peacock, Brewster vice president, said that production on the *Corsair* contract was valued at between eight and nine million dollars a month and that the most the company could expect from subcontracts would be one to two million dollars a month.

▸**Low Efficiency**—Ramsey said that the man-hour efficiency of the Brewster plant was much lower than Chance Vought and Goodyear.

Using 100 at Brewster as an index, he said that Goodyear's man-hour efficiency is 67 and Vought 47. If Brewster could continue production, he said the man-hour index might drop to 90 or 85.

Both Ramsey and Maj. Gen. B. E. Myers, declared that there was no intention on the part of either service to give the Brewster plant new contracts for plane production.

▸**AAF Not Interested**—Myers told the committee that the AAF was notified of the cancellation through the Joint Aircraft Committee, and has endeavored to find prime contractors with subcontracts for

Brewster. But the AAF is not interested in its use as a producer of airplanes, he said. Referring to the labor utilization phase, Myers said there were other aircraft plants in the New York area interested in any labor available as a result of the cancellations and that recruiting agencies had been set up in the Brewster plant for that purpose.

House Naval Affairs Committee, which investigated the Brewster situation, commended the Navy and said the committee "approves every detail" of its handling.

▸ **Stress Labor Problem** — Adm. Ramsey answered Sen. Murray's suggestion that the production troubles of Brewster were due to poor management by saying that labor troubles were also a factor. He said that Brewster had been told it could use the Johnsville DPC-built plant if it obtained contracts requiring its use, but that if it could not, he was sure the Bureau of Aeronautics could use it. Army witnesses said some consideration was being given to the use of the Johnsville facility as an ordnance plant, but that it "may be that the Navy will have some other use for that plant."

At the time of the committee hearing, workers at the Brewster plant were conducting a "sit-in" demonstration protesting cancellation of the contract, remaining in the plant at night and working on the 150 planes still scheduled for delivery during the day.

▸ **Hits "Wall Streeters"**—Frankensteen charged that politics was behind the cancellation, and said that labor feels that "the top Navy is a Wall Street Navy." He granted that efficiency in the Brewster plants was lower than that of other companies, but claimed that it would have equalled others by the end of the year.

FEDERAL DIGEST

Additional Funds For Airport Outlay

Summary of week's activities in U. S. and war agencies.

By MARY PAULINE PERRY

Largest authorization for construction of improvements at Army Air Forces installations let by the War Department during the week was for the airfield at the Fort Crook Aircraft Assembly Plant, Fort Crook, Neb. The expenditure for improving the airfield has been authorized in the amount of $1,288,640.

Construction of hangar, paving, and gasoline storage at Dalhart Airfield, Tex., will cost approximately $593,000.

▸ **Muroc Base**—Two authorizations have been granted for essential utilities and improvements at [illegible] Army Air Base, Muroc, Calif. One contract calls for expenditure of $720,000 and the other for $500,000. The latter is for airport and airfield additions.

The Chief of Engineers has let contracts amounting to aprpoximately $1,072,000 for additions to AAF installations. Included is a contract for $262,670 for extension of apron and raising of taxiway at Gravelly Point, Va., and one for $246,518 for construction of an engine test building at Brookley Field, Mobile, Ala.

The Army-Navy "E" has been awarded to the Ford Motor Co., Ford Glider Plant, Iron Mountain, Mich., and General Motors Corp., Detroit Transmission Division, Detroit.

▸ **Defense Plant Corp.** has increased its contract with Goodyear Aircraft Corp., Akron, to provide additional facilities at a plant at Litchfield Park, Ariz., at a cost of approximately $415,000, resulting in an over-all commitment of about $9,260,000.

▸ **War Production Board** said shipments of nearly all major forms of fabricated aluminum increased in February. U. S. primary metal production dropped to 148,800,000 pounds, 12 percent below January, but the drop was expected. Total aluminum product shipments to consumers amounted to 206,700,000 pounds, 41 percent higher than a year ago and four percent lower than January, peak month.

Sale of surplus motors in foreign markets was advocated by the Integral Horsepower Electric Motor Manufacturing Industry Advisory Committee. The committee said such a step also will lessen the competition which manufacturers of new integral horsepower electric motors will have to face from surplus equipment accumulated in the interest of the war effort.

A Plywood and Veneer Branch of the WPB Lumber and Lumber Products Division, in place of the former Plywood and Veneer Section of the Marketing Control Branch has been established, with Clifford P. Setter as chief. Setter, formerly chief of the Plywood and Veneer Section, was in charge of production of aircraft plywood used by Curtiss Aircraft Co. during the last war and was president of Setter Brothers, Inc., before joining the Board.

Samuel W. Anderson, who has been serving as deputy vice chairman for metals and minerals, has been appointed Program Vice-Chairman and Chairman of the Requirements Committee of WPB.

Richard Perkins, who served as a consultant to WPB's former Aircraft Production Division and later to the Aircraft Production Board, has been appointed deputy director of the Facilities Bureau of WPB.

▸ **Defense Plant Corp.** increased by approximately $155,000 its contract with United Aircraft Products, Inc., to provide additional equipment at a plant in Dayton. Over-all commitment of the company is about $460,000.

▸ **National Labor Relations Board** ordered North American Aviation, Inc., Grand Prairie, Tex., to cease and desist from interfering with, restraining or coercing employees in their self-organizational rights; to rescind immediately its Rule 20 insofar as it prohibits union activities at the plant on employees' own time; and post compliance notices for 60 days. At the same time, the Board dismissed complaint alleging that the company discriminatorily discharged one employee.

Hughes Tool Co. was ordered to bargain collectively, upon request, with United Steel Works of America, Locals 1742 and 2457, CIO, as exclusive representatives of production and maintenance employees at the Main plant and Aircraft Strut plant, and the Dickson Gun plant, with certain specified inclusions and exclusions; cease and desist from interfering with employees' self-organizational rights; notify employees included in the appropriate units that grievances will be adjusted only through negotiations with the Union and that deductions of dues will be made pursuant to contract with the Union; and post compliance notices for 60 days.

Production and maintenance employees, including tool designers, at the Lycoming division, Aviation Corp., Williamsport, Pa., will vote for UAW-CIO; Aviation Corp. Employees Association; or neither.

MARS CARRIES GREATEST AIRMAIL LOAD:

These sacks stacked near the Martin Mars *contain 25,000 pounds of mail from the Pacific—800,000 letters at an average of one-half ounce per letter. If paid for at prevailing rates postage would total $160,000. While this load broke all previous records for airmail, it is 10,000 pounds short of the all-time record payload of 35,000 pounds which the* Mars *carried from Belem, Brazil, to Port of Spain, Trinidad, on its first war mission for the Naval Air Transport Service.*

Western Hemisphere Air Regulation Seen

Early action expected following appointment of American delegates by Hull.

Now that United States representatives on the Permanent American Aeronautical Commission have been appointed by the Secretary of State with the President's approval, action may be expected soon by this group looking toward uniform air transportation regulation in the Western Hemisphere.

Called CAPA for Comision Aeronautica Permanente Americana, the organization was conceived at a Lima conference in 1937. Ultimate participation by the 21 American republics is expected, but fewer than that have ratified the plan thus far. Date and place for the first meeting probably will be set soon.

▸ **Headed by Ryan**—The United States membership is headed by Oswald Ryan, member of the Civil Aeronautics Board, as chairman. Others on the U. S. national commission are Rep. Alfred Bulwinkle, of North Carolina; William A. M. Burden, Assistant Secretary of Commerce; Senator Bennett Champ Clark, of Missouri; Lieut. Col. Louis A. Johnson, formerly Assistant Secretary of War; Arnold W. Knauth, expert on international air and admiralty law at the Department of Justice; Stephen Latchford, air law expert at the Department of State; Stokeley Morgan, chief of the Aviation Division at the State Department; Dr. Francis W. Reichelderfer, chief of the U. S. Weather Bureau; and Theodore P. Wright, director, Aircraft Resources Control Office, Aircraft Production Board, War Board, War Department. These are new members of the U. S. commission, terms of members of a similar group set up in September, 1941, having expired.

▸ **Uniform Air Law**—CAPA activities will aim at achievement of uniform air law, regulation and procedure in the hemisphere, and coordination of international air service with the national air patterns of the various countries. This probably will cover codification of public and private air law, uniform standards of air navigation, immigration, customs, repatriation, aviation taxes, airport fees, air traffic rules, airways and control of traffic, airworthiness standards and similar subjects.

Delays Ahead for Legislation On Terminations, Surplus Disposal

No action now expected to be taken on contracts before late July and on excess goods until the end of summer.

It appears fairly certain that there will be no contract termination legislation until late in July, and no legislation enacted to control the disposal of surplus goods until the end of the summer.

While even Congress would admit that this is way off the timetable and far from what is even reasonably satisfactory, the fact remains that both House and Senate are still too far away from a final agreement on termination legislation to get anything whipped into final shape and passed before July 15.

▸ **Delays**—Several weeks ago Capital strategists were confident that termination would be passed by both houses before June 1. This date was set unofficially as the deadline, and both houses were working toward enactment of termination legislation at that time. But the strategists overlooked the fact that Congress is consistent only in its unreliability, and several last minute changes by the House Judiciary Committee in the Senate-approved S.1718 appeared this week as a new delaying factor.

If nothing else, the House Judiciary Committee bill will mean that the measure will have to go to conference since there are now differences between the two measures which will have to be reconciled. Conferences move quickly, but even the least cautious in Congress will acknowledge that little can be expected from a conference on this measure in less than a week or perhaps longer. Weeks add up rapidly in Congress.

▸ **Differences in Bills**—The House Judiciary Committee bill was expected to be reported about June 1, and will differ from S.1718—the Murray termination bill—in two important respects: it will contain a simplified appeals procedure, and provisions will be made for standards of accounting to guide procurement officers and contractors.

The Judiciary Committee bill is not expected to change greatly the language of S.1718 with respect to authority of the comptroller general. This has been perhaps the most bitterly contested issue in the entire termination discussion, and it is not unlikely that a bitter floor fight will develop when the Judiciary Committee bill is brought before the House. As it is expected to be reported, the Judiciary Committee bill will limit the comptroller general's authority to the determination, after final settlement, whether the settlement payments were made in accordance with the settlement, and whether the records warrant a reasonable belief that the settlement was induced by fraud.

▸ **Clayton Works on Program**—From the standpoint of legislation, the disposal issue lagged far behind termination. However, it appeared this week that Will L. Clayton, Surplus War Property Administrator, had completed his "experience program" when he announced that he would have ready to present to Congress in another week his recommendations for disposal legislation.

Although several disposal measures already have been introduced, largely designed to regulate the disposal of certain specific items, Mr. Clayton's blueprint undoubtedly will form the basis of whatever disposal legislation is finally enacted.

▸ **Disposal Problems Studied**—Up to now, the Surplus War Property Administration has been familiarizing itself with disposal problems

Bomb Deliveries

Army Air Forces will blast the Nazis and Nips with 700,000 tons of bombs this year.

War workers of the country will see the chart for bombing in a new AAF film, "Army Air Forces Report," which gives official estimates of the "punching power" being meted out this year.

The AAF dropped 200,000 tons last year in flying 350,000 sorties. This year it will fly 1,500,000 sorties to drop the 700,000 tons.

The picture, given its premiere for the press in Washington recently, is based on the official report of Gen. Henry H. Arnold and will be shown only to war workers.

and gaining experience to use in drafting legislation. This is in line with recommendations of the Baruch-Hancock War and Post-war Adjustment Policies report, which urged that "the Surplus Administrator report to Congress as soon as possible on legislation needed."

Meanwhile, it appeared that the War Production Board was getting ready for the deluge of cutbacks which have been threatened since the beginning of the year when Chairman Donald M. Nelson announced that he was assigning chief responsibility for program readjustment to the Production Executive Committee, headed by Vice Chairman Charles E. Wilson. Program readjustment will consist largely of handling the vast problems which will grow out of the release of facilities and manpower.

S. Paul Johnston Gets Navy Duty

S. Paul Johnston, Washington representative for Curtiss-Wright Corp., has been assigned to active duty with the Navy, in which he has been a reserve officer for several years. It is understood he will serve as a lieutenant commander.

Mr. Johnston attended Carnegie Institute of Technology and received a degree in mechanical engineering at Massachusetts Institute of Technology. His early experience was with Aluminum Co. of America, which he finally served as staff chief engineer at Pittsburgh.

He became associated with *Aviation* Magazine in 1931 and was editor in chief in 1940 when he went to the National Advisory Committee for Aeronautics as coordinator of research. When that job was completed in 1942 he joined Curtiss-Wright. He is the author of numerous articles and five books on aviation, most recent of which is *Wings After War*, an estimate of post-war aircraft and air transport activity.

Ports of Entry

Redesignation of three airports as ports of entry for civil aircraft and the cargo carried on such planes was announced by the Treasury Department.

The municipal airports at Havre, Mont., and Watertown, N. Y., and the John G. Hinde Airport, Sandusky, Ohio, were redesignated.

ACCA Maps Public Education Drive

An immediate result of the revitalization of the Aeronautical Chamber of Commerce will be the launching of a broad program of public education under the direction of the Chamber's new Public Relations Committee operating through Hill and Knowlton with Lee and Losh as the West Coast outlet.

The program will be developed under four general headings, including a recital of the achievements of the aircraft industry, discussions of the reconversion problem with its many factors such as termination, taxation and labor, promotion of America's place in the air future based on a solid aircraft manufacturing industry and the advancement of a firm air policy on the contention that a strong air commerce will result in a strong international position for the United States.

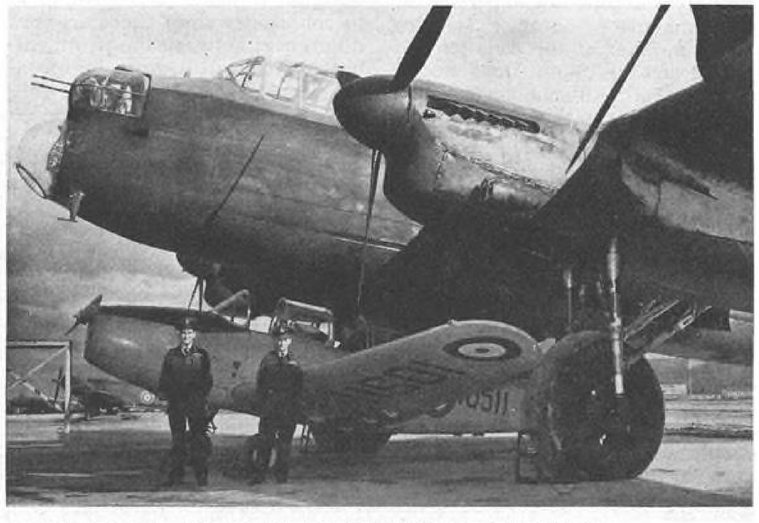
▸ **Media**—The program will be based on standard accepted media, such as newspapers, magazines and radio and probably will include motion pictures. In addition, a speakers' bureau will be established in the Chamber to provide top industry leaders for speaking engagements and through which all speakers, whether from the industry proper or from the Chamber staff, will clear in order to keep all pronouncements directed at the overall educational program.

Eugene E. Wilson, of United Aircraft; Avery McBee, of Glenn L. Martin Co., acting chairman of the Public Relations Committee in the absence of L. D. Lyman, of United Aircraft, conferred in Washington last week with John Lee, who has taken over the Chamber reorganization job on a three-months basis, after resigning as manager of the aircraft War Production Council, West Coast.

▸ **Campaign** — The informational campaign program will be submitted to the Chamber's regional boards of governors in Los Angeles June 16 and in New York June 21.

The advent of Lee in Washington points up the operation within the Chamber of the Aircraft Manufacturers Council, as a Chamber division. Members of the Aircraft War Production Council on both the East and West Coasts are also members of the Aircraft Manufacturers Council, which deals with subjects outside the jurisdiction of the Aircraft War Production Council. Lee will coordinate the work nationally.

This division deals strictly with aircraft manufacturers' problems of the Chamber membership, which in its entirety covers many other phases of aviation. The Aircraft Manufacturers Council, it is indicated, will play an increasingly important role in the affairs of the National Trade Association.



CANADIAN AIRCRAFT INDUSTRY PRODUCTS:

Canada's largest and smallest manufactured aircraft are shown here together. In the background is the four-engine Lancaster *bomber made by Victory Aircraft, Ltd., Toronto, and tucked away between the bomber's wheels is the Cornell elementary trainer made by Fleet Aircraft Ltd., Fort Erie, Ont.*

WEST COAST REPORT

U. S. Eyes Mexican Cabotage Problem

Policy supported by Pan American is opposed by American Airlines.

By SCHOLER BANGS

State Department officials undoubtedly are watching for results of the test of two opposed principles of international airline operation in Mexico.

The attitude of the Government of Mexico, when given, may prove influential in determining whether the United States officially will frown upon or encourage cabotage in the extension of U. S. air commerce into foreign lands.

▸ **Fostered by PAA**—Pan American Airways System, pioneer of service to Mexico City, has been an exponent of cabotage in a benign form through domestic Mexican subsidiary routes involving participation of Mexican capital.

PAA officials have good reason to feel that they are entitled to Mexico's governmental good will by having fostered domestic aviation south of the border.

▸ **Opposed by American**—At the other extreme is American Airlines de Mexico, also flying to Mexico City. American is certain that its expressed "No cabotage!" philosophy, one of leaving the development of Mexican domestic air service up to the Mexican Government and Mexican capital, will serve best the furtherance of post-war international good will—and Mexican good will toward American Airlines.

Says Hollis R. Thompson of New York, who has lived in Mexico for the past two years as president of American Airlines de Mexico and who has just been appointed vice-president of American Airlines in charge of route development:

"In the projection of our foreign services we want no local business, no domestic routes operated by American Airlines within the foreign countries we reach with international trunk lines. We do not want cabotage in foreign countries, and we feel that foreign airlines should not have cabotage rights within the United States."

▸ **MEXICO**—Douglas Aircraft Co. recently sent a spokesman to Mexico City to investigate the possibility of successful operation of a branch factory there. A potential Mexican market for cargo and passenger planes seemed alluring. However, following the investigation, Douglas grew cool toward the idea, which now is on the shelf.

New 'Copter Design Tested at Detroit

The second helicopter design to be announced in this area in recent weeks is the new H-100, an aircraft distinguished by counter-rotating rotors and pusher propeller arrangement, developed by Arthur C. Schouw, local aeronautical research engineer and member of the Detroit Engineering Society.

The new helicopter is said to resemble a Focke-Wulf machine flown successfully in Berlin in 1937. The German ship was aloft one hour and 20 minutes and climbed to 11,000 feet.

▸ **Pusher Type**—The Detroit designer pointed out that the Nazi craft had a tractor propeller, however, whereas the H-100 is a pusher type and superior in performance.

"The Germans were close to the right answer," he said, "but wind tunnel tests show that unstable conditions result from placing the prop in front. The slipstream of the propeller is thus forced into the downward slipstream of the main rotors, causing turbulence. With the prop located in the rear, this doesn't occur."

▸ **Built Wind Tunnel**—A wind tunnel has been constructed by Schouw. Of his own design, it is unique in that a flow of air can be exerted on the test craft from any direction.

A two-passenger side-by-side craft, the H-100 has a height of 8 feet 6 inches, is 12 feet 8 inches in length, and, with both rotor blades extended, has a width of 24 feet. Rotor blades are 10 feet long and fabric-covered. In addition to the two passengers, the craft will carry 70 pounds of baggage. Instruments are conventional, and there are lights and parking brakes. Of all-metal construction, the ship is streamlined and capable of dual-control operation.

▸ **New Type Blades**—Entirely new rotor blades have been developed for this 'copter, Schouw explains. He says he believes they will "revolutionize" helicopter development, since, on conventional types, controls have been too sensitive.

The H-100 is powered by a four-cylinder 105 h.p. Continental engine. This, Schouw says, will enable it to reach 10,000 feet and cruise at 95 mph, with top speed of 110.

▸ **Tests Made**—Schouw, who was formerly with the Curtiss and Stinson firms, and who has been a licensed pilot for 10 years, says experimental tests have been "extremely successful" to the extent that plans are being made to manufacture the craft in this area at an estimated cost of $2,800. He will publish a book on helicopter aerodynamics soon. He will be chief engineer for the, as yet, unnamed firm.

C-54 Tests Asked

The airlines have asked the Army to make a C-54, cargo version of the Douglas DC-4, available for Civil Aeronautics Administration tests. In the meantime, design studies are going forward against the time the DC-4 may become available for passenger traffic.

While cargo performance of these ships is well known through their Army use, CAA tests are needed, it is said, before their adaptation to passenger use. The airlines hope these tests may be completed by the time the big ships are available commercially.

Similar requests have been made as to the C-47, cargo plane of the DC-3 type, and the C-46 Curtiss *Commando*.

Two-Week Courses For CAP Cadets

The Civil Air Patrol emerged last week as a modified Citizens Military Training Camp program when the Army Air Forces issued a directive permitting selected groups of Civil Air Patrol Cadets to visit AAF installations for periods of approximately two weeks during the summer months.

The directive also revealed that a pre-flight text book has been prepared for the CAP, and AAF training liaison officers are directed to make available to the CAP various training aids and materials and field and technical manuals where needed. Advice also will be given in various phases of instruction.

▸ **Open to Youths**—The CAP Cadet program has been operating for more than a year and is open to youths between 15 and 18.

Two Taylorcraft Models Ready For Production After War Ends

Two more designs, a 4-5 seat plane and new side-by-side, 2-seat cruiser to be offered within year after conflict.

By BLAINE STUBBLEFIELD

Taylorcraft plans to start production, as soon as release from war work will permit, on two existing models: the side-by-side trainer and the side-by-side deluxe, for initial post-war delivery.

But company engineers are developing a 4-5 seat design, and a new side-by-side two-seat cross country plane to be offered within a year, more or less, after war contracts are terminated.

Busy on War Work—At present, Taylorcraft's capacity is mostly devoted to production of highly-restricted military aircraft and components, on which there will be an interesting announcement in a matter of months. Present work will expand and occupy a new 630 by 108 foot steel and brick factory addition now nearing completion.

The company owns outright all of its plants, on the city limits of Alliance, Ohio, with an adjacent airport. It is planned to use all space and facilities in peacetime for aircraft production, but these are well suited to the manufacture of other durable goods in case the airplane market is smaller than anticipated. Officials estimate their plant can turn out 3,000 planes a year running one shift, or 5,000 on two shifts.

Safety and Utility—The engineers and management of Taylorcraft, known world-wide as a pioneer in the design and production of light planes, are primarily interested in safety first, then utility and durability, and they will take all the speed they can get as a further consideration.

They are sold on certain non-stall, non-spin characteristics already proven, and on certain applications of the simplified two-control system. They are interested in the advantages of pusher power. They believe there will be a limited market for single-seater economy planes, more or less in the motorcycle class, but do not commit themselves to production of one.

Conservative on Outlook—Taylorcraft is less optimistic than the average light plane producer concerning the post-war market. Officials do not believe there will be any sudden phenomenal acceptance of personal flying. They anticipate a better than pre-war market, steadily rising, over a long period, to final realization of mass use of small non-scheduled aircraft. Perfection of safety, utility, economy and speed probably will have to be developed the hard way, a step at a time. They do not look for practical personal use of helicopters for several years.

Some manufacturers are convinced that future distribution and sale of light planes must be turned over to trained salesmen. They do not believe pilot-minded men are good salesmen. If a good salesman can fly, that is fine, or he can have the ship demonstrated by a professional pilot. But Taylorcraft feels differently.

Sales Methods—They intend to stay with their existing sales organization, which is pretty much intact. Most dealers are fixed base and airport operators, adding to their revenues by sales of parts and services to planes in operation. Taylorcraft reasons that the word of a professional pilot, who has established his reputation in the community, is more impressive than any amount of skillful sales talk by a non-flyer. They admit that no doubt many pilot dealers need sales training. They believe that airplanes will have to be put on display in downtown showrooms; the public has not yet demonstrated sufficient interest to go to display rooms at airports. They are uncertain whether or not airplanes can be displayed in conjunction with automobiles.

Taylorcraft will make an effort to hold the price of its planes no higher than the proportionate prices of other goods. Prices will be higher than they were before the war, mainly due to wage rates, which cannot be reduced substantially if prosperity prevails.

Market Limited—The company is not intent on achieving the very lowest price brackets, because its officials believe the bulk of light plane sales will be to persons of some means, over thirty years old. These purchasers will not have time to take protracted lessons; they will prefer to pay for the best in safety, utility, and comfort. Of course, thousands of youngsters will want airplanes, but few can afford them. The question whether returning military pilots will want light planes after having flown war demons, even if they could afford them, is an open one.

Company History — Taylorcraft Aviation Corp. was established in September, 1936, by C. C. Taylor, who previously had designed and built the Taylor *Cub*, which company spokesmen say was the first airplane successfully produced and sold for less than $1500. W. T. Piper became associated with Taylor, and when they separated, Piper formed another company. In the years that followed, the Model A, Model B, and B-12, side-by-side seating, were built and marketed, with horsepowers ranging from 40 to 65, in Franklin, Continental, and Lycoming engines. Demand from the Civil Pilot Training program in 1941, brought out the Model D tandem trainer, with student in front for better visibility.

Out of the D series came the military liaison L-2 Model for Army and Navy, and the TG-6 glider, which had an extended nose section carrying a third man replacing the weight of the engine. Taylorcraft was one of the light plane builders who took their ships and pilots, at their own expense, to the Louisiana maneuvers which resulted in convincing the Army of the value of the liaison plane program.

War Version of "Taylorcraft": *This craft, of 65 horsepower, has a closed engine cowl, improving streamlining, and movable spoilers in the wings which are operated by the pilot to facilitate landing in confined areas. Note the observer facing the rear has exceptionally wide range of vision through transparent blister. These L-2 planes are being used in place of observation balloons for spotting enemy positions and directing artillery fire.*

"Taylorcraft's" Top Executives: *Taylorcraft's production, now devoted to the output of highly-restricted military aviation components, will be turned to two existing models for initial post-war delivery. Behind the program are, left to right, James C. Hart, president; K. W. Tibbits, vice-president in charge of manufacturing, and R. H. Wendt, vice-president in charge of engineering.*

Student Air Reserve

A post-war training plan utilizing colleges and universities with permanent training fields to be built at these institutions, students to be enrolled in the air reserve, starting in high school, was advocated by the Board of National Aviation Trades Association, Vice-President Roscoe Turner presiding, at a meeting held in Kansas City.

There was discussion of plans for an NATA system of approved air stations and publication of a manual listing facilities available to the flying public by approved operators. The proposed manual would be distributed by the association to all cross country pilots at cost.

Convention in December—The NATA convention was planned for the first part of December. It will include a large accessory and service show with aircraft distributor and manufacturing associations participating. Exact time and place of the convention will be announced June 1.

Lightplane Trend

Almost every lightplane design that has ever been seriously considered by trustworthy engineers is now in the post-war plans of one or other of the personal plane manufacturers.

Most noticeable trend is toward the two-control non-stall combination pioneered by Weick, Hammond, Geisse and others years ago. At least a half dozen manufacturers have some version of this type on their programs.

They also have pushers as easy to climb into and out of as an automobile; four-seat cruisers for the family or for taxi service or company runabout; single seat midgets in the motorcycle class for super economy. At least one has been trying castering wheels for cross-wind landing.

So far no producer has announced a time when he will be ready to offer rotary wing machines or roadable planes to private flyers.

Gasoline Rationing Conferences Continue

Gasoline for light planes is only a drop in the vast bucket of liquid fuel under control of the Petroleum Administrator for war. Yet hundreds of executive hours are being burned up in Washington over the rationing of gas to personal flying and base operations, mainly because the matter is an inter-bureau contest.

In an effort to settle the controversy Charles I. Stanton, Administrator of the Civil Aeronautics Administration, is reported to have written a letter to the War Production Board, requesting that WPB's directive under which the Office of Price Administration is authorized to ration gas to non-scheduled air operators, be amended so that this authority would be transferred to CAA.

Would Eliminate Joyriders—If this action were taken CAA would determine how much fuel is required for all non-scheduled operations and would certify the amount to PAW for allocation. This would have little effect on legitimate flying but would stop diversion of aviation gasoline to automobile owners and it would ground the weekend joyriders who are regarded as the chief cause of the trouble.

Legitimate Flying—Gas for non-scheduled flying is now obtained on coupons from local ration boards, who have no authority to limit distribution. The system proposed by CAA would take the local ration boards clear out of the picture. The required allocation of fuel would go to each airport. It would be up to the fuel distributor to see that none of it went into automobiles. The distributor would not have authority to refuse gasoline to any airplane operator, but the CAA local inspector could forbid joyriding. The government still regards the maintenance of skill on the part of all categories of pilots, through putting in hours in the air, as legitimate flying.

OPA Holds Full Control — Whether CAA would get the rationing authority away from OPA was unpredictable late last week. Some observers were optimistic, but they admitted that any one of many high officials could step in and change the picture. OPA of course regards such a split-off of ration power as a precedent which other special groups might insist on following.

RCAF Group Forms Private Flying Unit

Light Plane Air Service Inc., organized to operate fields and feeder routes in Canada.

A group of Royal Canadian Air Force personnel has formed Light Plane Air Service Inc., to operate fields for private flying and feeder routes in Canada. The company, capitalized at $1,000,000, already has obtained options for sites at Sudbury, Ont., the Muskoka region of Ontario and elsewhere in Northern Ontario.

Two of the organizing groups already have been released from the RCAF and will carry on the preliminary functions of the business. The others, spurred on by the aim of owning their own business, will become active in operations on their discharge. The group has decided to build a chain of small airfields, sell light planes, provide field, hangar, hotel and service accommodation.

Veterans Hold Control—Capital is being supplied by the veterans and by business interests, with the veterans holding majority stock. Veterans joining the company will be required to own shares in order that each will feel the organization is his own business, the backers say.

The field already planned at Sudbury will have a country-club atmosphere. There will be two half-surfaced runways, each 3,000 feet long and 450 feet wide, a grass field for instructional purposes 2,550 feet long and 1,050 feet wide. Buildings are to be of ultra-modern design, and the hotel accommodations are to include dance floors, bars and other recreational facilities for the tourist private flyer.

State Air Marking

Thousands of roof markings which were defaced when the war started must be replaced if private flyers are to have as many identification aids as in pre-war days.

One of the first campaigns to restore markings is being launched by Kansas wing of Civil Air Patrol, which hopes to mark every town in the state.

Port Construction — The wing also went on record at its recent state-wide meeting that the first need with respect to airports, "both now and in the immediate post-war period, is for ordinary, unobstructed sod fields suited to training the many student pilots who must learn to fly before there can be a maximum mass market for airplanes."

Such fields are "comparatively inexpensive and make possible the conservation of public money for airfields until the time when more is known about the airplane of the future, both as to type and quantity."

ACCA Group Maps Airpark Program

The Personal Aircraft Committee of the Aeronautical Chamber of Commerce met this week in Washington to organize a program for the promotion of the construction of airports, airparks, flightways and air harbors.

Small Fields — The committee plans to emphasize airparks, flightways and air harbors as against large, expensive airports and feels that the utility of personal aircraft can best be promoted in that way.

John Morgan, manager of the Chamber's personal aircraft department, has been surveying the industry for plans which will be incorporated in the Chamber's program.

Acker Named

Steadham Acker, manager of Birmingham Municipal Airport and nationally known air carnival manager, has been named aviation consultant for Oklahoma City, to direct the management of the city's airports, and serve as executive officer of a newly established seven-man aviation commission.

Flight Strip Excess Opposed by Stanton

Scoring plans to blanket the country with flight strips for use by private pilots, Charles I. Stanton, Civil Aeronautics Administrator, speaking at Oklahoma City, characterized this type of landing area as a "useless expenditure of money in the name of aiding aviation."

Favors Small Ports—To be really useful, Stanton said, such strips should be near a community and equipped with refueling and other facilities required by the private pilot—actually a small airport.

He pointed out that the average post-war pilot will land to refuel, spend the night, or get a meal, and an injudiciously located flight strip, with no additional facilities, would fulfill none of this flyer's needs.

NAA Backs Program

Furthering its new national program to place greater emphasis on private flying, the National Aeronautic Association has announced that leaders in private flying are to receive places on its national council.

Such representation is viewed as an important step in preparation for NAA's post-war private flying plans and a recognition of the place of the private pilot after the war.

1470 Surplus Training Planes Sold

Latest reports on sale of surplus training planes by the Civil Aeronautics Administration show 2103 bids have been received, 502 have been rejected, and 1470 planes have been sold. CAA is selling the planes because its War Training Service, which was giving initial courses to pilot students entering the military air forces, is being discontinued. Army and Navy's blacklog of pilots is now regarded as sufficient to finish the war.

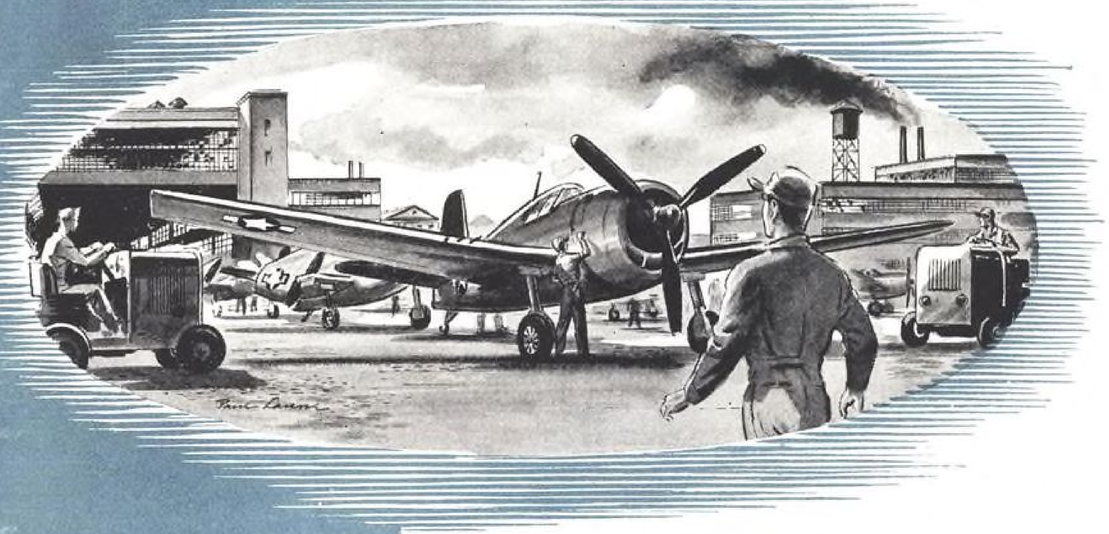
Nearly all planes used by War Training Service were on loan from the Defense Plant Corp., a part of the Reconstruction Finance Corp., which purchased them under a requisition order last year. Total DPC planes is 5,000 and all are to be sold.

CAA says the cross-country type planes have been most in demand and they are nearly all gone. Second in favor are the elementary types, which are selling nicely.

The secondary types are not so popular. They are designed for acrobatics, are open to the weather, and some are heavy on fuel consumption. These planes are selling at comparatively low prices. There were about 500 of them in all; no record was immediately available to show how many remain unsold. CAA has accepted no Army liaison planes for some weeks.

There is no shortage of

DZUS* FASTENERS



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Georgia Air Service, Inc., Jackson, Tenn.
Graham Aviation School, Americus, Ga.
Greenville Aviation School, Ocala, Fla.
Hancock College of Aeronautics
Santa Maria, Calif.
Hawthorne School of Aeronautics
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Mira Loma Flight Academy
Oxnard, Calif.
Morton Air Academy, Blythe, Calif.
Rankin Aeronautical Academy, Tulare, Calif.
Raymond-Richardson Aviation Company
Douglas, Ga.
Riddle Aeronautical Institute
(Carlstrom Field) Arcadia, Fla.
Riddle Aeronautical Institute
(Dorr Field) Arcadia, Fla.
Southern Aviation School
Camden, S. C.
Southern Aviation Training School, Inc.
Decatur, Ala.
Southwest Airways, Inc. (Thunderbird I, Thunderbird II and Falcon)
Phoenix, Ariz.
Tuskegee Flying Training School
Tuskegee, Ala.

"They ought to get a citation . . ."

"If anybody in this war deserves recognition, it's the civilian instructors and mechanics at the flying schools."

More than one Army Air Force veteran with a chest full of decorations has said that and meant it. For Army fliers know that the training of the world's greatest flight personnel would never have been possible without the skill and devotion those "forgotten men" of the war effort have given to their task.

On every sky-front where U. S. Army Air Force bombers and pursuit ships strike the enemy, there are airmen who sprouted their wings in Boeing Kaydet training planes, under the instruction of civilian primary flying schools.

The list of such schools is an "honor roll of the air."

MORE THAN 10,000 PT-17 KAYDET PRIMARY TRAINERS HAVE BEEN BUILT AT THE BOEING WICHITA PLANT **BOEING**

COMMENTARY

Soviet Bases for Allies May Open Eastern Reich to Bombers

Many of Nazi's decentralized industries moved into areas considered safest from air attack; shuttle bombing would cut U. S. and British losses on return trip over heavily defended Western Europe.

Since the Moscow Conference last fall a hardy perennial during the open question period at various press conferences is "Are we going to get bases in Russia for Allied bomber operations?" General Arnold's was no exception, but the only response was the characteristic smile and a cryptic, "I guess I'd better not answer that one." It makes so much sense that it just won't down.

Since last summer the Nazi government has been moving aircraft factories and other critical plants from bombed-out cities far to the east into areas considered safest from air attack. Some of the aircraft plants have been broken up into units too small to make good targets; these, as well as the regular systems in the west, are called "complexes," e.g., JU-88 wings, Halberstadt; fuselages, Aschersleben; final assembly, Bernburg. Other units making component parts may have gone underground into caves and abandoned coal mines, while factories making other articles have been commandeered under Nazi regulations and have been utilized for the all-important fighter aircraft manufacture. However, there are many prize targets in the eastern Reich now getting off scot free.

Shuttle-Bombing—The successful Regensburg mission last August demonstrated the feasibility of shuttle bombing between bases in Britain and North Africa. There was further mention of this in the press when the line was shortened by the full occupation of the important base in Foggia. However, it has not been done, and the most likely reason is that the top coordination of the bomber operations of the Eighth and Fifteenth Air Forces under General Spaatz' Strategic Air Forces makes shuttle bombing unnecessary. Bases in Russia, however, would be something else again, enabling British-based RAF and AAF heavy bombers, the latter escorted by long range *Mustangs,* to strike telling blows at the present no-man's-land in the east, and then to speed on to Soviet bases, instead of the long grind back to England through flak-filled and sometimes fighter-filled skies. After servicing, bombing up and gassing up, a return engagement could be played. Considering the fact that all this would require several months for the necessary arrangements, and equipment of the bases with supplies, spare parts and facilities, it is not at all unlikely that something along this line may yet be seen as part of the overall plan for the defeat of Nazi Germany.

Night Fighter Teams—The difficult but important task of intercepting enemy bombers at night is as yet but little understood. After the battle of Britain, the *Luftwaffe* went into night raiding on a fairly large scale, and the RAF developed night fighter teams, and by May, 1941 was ready for action with adapted Blenheim light bombers and *Beaufighters,* carrying two-man crews—pilot and radio observer. On the night of May 10, 33 German bombers were blasted out of the sky by these night fighters. It was the last mass raid. Later on, the fast, easily handled Douglas A-20 was adapted for this service, the British calling this version the *Havoc* and the day version the *Boston.* (The AAF's P-70 is a similar adaptation of later models of the A-20.) At present, the light, speedy *Mosquito* carries the bulk of the British night fighting. Conversely, as the big RAF night missions got under way in 1943, the Germans were compelled to modify some of their ME-110 (and 210/410) twin-engine fighters and JU-88 and DO-217 bombers into night fighters.

American Developments—In the

KIDDE OXYGEN TANKS FOR AIRMEN:

High altitude bombing and escort flying have stepped up the need for the steel bottles which give out life-sustaining oxygen to air crews and mass production of the tanks is big business at the New Jersey plants of Walter Kidde & Co. Picture shows thousands of them stacked up awaiting further assembly operations.

Tunisian campaign, a number of A-20's were converted into night fighters, and a small number were similarly adapted in New Guinea, that far-flung outpost of Wright Field, where a former commander of that great experimental center (General Kenney) runs the air war. Lockheed *Lightnings*, although single-seaters, have been successfully used as night intercepters in some theaters. The training of night-fighter units in the United States was begun at the AAF Tactical Center, Orlando, with picked pilots from the B-25 flight schools breaking in on P-70's.

The other half of the night fighter team, the radio observer, starts his training separately, comes to Orlando for more and then links up with the pilot for the final stages at another field. This whole night-fighter program has recently been transferred to the West Coast, and in addition to P-70's, the Northrop *Black Widow* (P-61), the first night fighter built as such from the ground up, comes into the picture.

▸**Night Fighter Characteristics**—What is the nature of the "adaptations," "modifications," etc. which have been referred to in the case of all the other aircraft hitherto so used? First of all, the bomber nose is made solid and heavy firepower is provided (British, .303-cal., 20-mm; German, 15/20-mm; American, .50-cal. machine guns, or 20-mm. cannon). The other items is the world's best known military open secret: radio detection equipment. Until such electronic apparatus was perfected as a weapon of aerial warfare, interception of enemy aircraft at night was practically impossible. Details are properly and necessarily safeguarded, but the general principle has been announced, as commonly used by all belligerents.

Night interceptor missions are planned to provide a blanket cover over military target areas. Night fighters patrol specific sectors from dusk to dawn waiting for enemy aircraft to enter their area. Ground detector stations plot courses of all enemy aircraft coming within their range and notify the night fighter radio operators when to prepare for an interception of an enemy plane that is approaching their sector. Thus alerted, the radio operator advises his pilot to move to a certain area, after which they are on their own. Teamwork of the ground controller, the radio operator and the pilot enables the night fighter to seek out the enemy plane and destroy it.

▸**New Fighters in Europe's Sky**—Recently the new Focke-Wulff 290 has been positively identified and announced. Equipped with an 18-cylinder BMW-802 engine of 1900/2100 hp., with improved supercharger, it has corrected one of the 190's definite defects—a falling off in performance above 25,000 feet. As check and countercheck, however, a new model of the *Thunderbolt* is now in action, with more adequate water-injection, faster climb, longer range and "bubble" canopy. The new *Mustang*, with improved Merlin engine, six .50's and tear-drop canopy is also now in action.

There is also increasing mention of the new British fighter, the Hawker *Tempest*, although no official details have been announced. The famous *Hurricane* was designed in 1934, and more powerful successors in the Hawker line were inevitable. The first of these was the *Tornado*, powered by the 24-cylinder *Vulture* (doubled Rolls-Royce Peregrine), which was not a success. The second was the Typhoon, equipped with the 24-cylinder Napier Sabre, a great success at low and medium altitude. The third is the *Tempest*, powered by the 18-cylinder Bristol Centaurus radial engine, and this we shall have to watch; the word "sensation" has been applied to it in preliminary reports. Another version of the *Tempest* is reported as fitted with the Sabre engine. It sounds like a couple of more top-flight fighters on our side.

NAVIGATOR

Fair Exchange

The United States taught the Germans how to make high-octane gasoline, but in return learned how the Germans hydrogenate coal. It was a good exchange, according to Interior Department officials.

Congressmen in appropriations hearings were told that German aviation gasoline is not so good as that of the United States. The Germans made a gas of 50 octane rating with the Fischer-Tropsch method. In 1938, American processes were installed that take the primary gasoline and reform it to a rating of 75 octane for use in automobiles. The synthetic aviation gasoline is made from coal by the Bergins hydrogenation process, yielding a 75 to 85 octane gasoline which, with the addition of tetraethyl lead, has an octane value of 90 to 95.

Helicopters Used In Burma Invasion

Disclosure that helicopters are being used in connection with the air-borne invasion of Burma was made from Southeast Asia headquarters. There is no record of previous war use.

Neither the dispatch nor AAF officers here would elaborate on the announcement other than to say the craft were used in support of Allied landings in North Burma. The planes were Sikorskys, flown by volunteer pilots trained at the Sikorsky division of United Aircraft and presumably were used either to evacuate wounded, or for reconnaissance or perhaps to land needed supplies.

▸**Six Designs in Operation**—Although about 50 firms either have helicopters in production, on drawing boards or are planning production, only six helicopter designs are known to be operating with any degree of success in this country. These are Sikorsky's R-4's, R-5's and R-6's, the Platt-LePage XR-1A, Bell Aircraft's recently announced model and the small Piasecki PV.

It was assumed that the Helicopter's operating in Burma are the R-5's. It is powered by a 450-hp. Pratt & Whitney engine and has seating space for two persons in tandem. It has a three-blade rotor 48 feet in diameter. It first flew last August and is said to have excellent performance.

Now Use Rockets On Five Fighters

Five types of fighters used in India-China and Pacific theaters now are equipped with rocket projectiles, the War Department revealed last week. Using this equipment are the Curtiss P-40 *Warhawk*, Republic P-47 *Thunderbolt*, Lockheed P-38 *Lightning*, Bell P-39 *Airacobra*, and North American P-51 *Mustang*. The rockets have been highly efficient against enemy bivouac areas, rail and highway bridges and ammunition dumps. They also are being employed successfully against barges and light shipping, the AAF said.

PERSONNEL

★ ★

Hollis R. Thompson, vice-president of American Airlines, Inc., has been appointed head of the company's route and development department with headquarters in New York City. Former city manager of Berkeley, Calif., Thompson is also president of American Airlines de Mexico.

James L. Wright, Jr., of Wright Engineering, Indianapolis, is a newly appointed engineering representative for Cannon Electric Development Co., of Los Angeles. Until recently he was a first lieutenant with the AAF Materiel Command at Wright Field, charged with aircraft electrical equipment development.

S. H. Gordon Lee of Toronto has been appointed controller of White Canadian Aircraft Ltd., Hamilton, Ont., makers of Anison V nacelles. He succeeds **J. McKay Clements** of Montreal, who has resigned.

Mrs. Mary S. Jackson is the first woman to be made an executive of Consolidated-Vultee Aircraft Corp. She is director of the Department of Counseling. She began organizing the counseling program seven months ago and started it in Miami, Louisville, and Nashville after first installing it in San Diego. The program is to be extended to all other Convair divisions since it now has full department status.

Comdr. W. R. Hollingsworth, USN, head of the training and literature section in the Office of the Deputy Chief of Naval Operations for Air, has been promoted to the rank of captain.

Comdr. John H. McElroy has been attached to the photography division of the Navy's Bureau of Aeronautics.

Erle M. Constable, formerly of Transcontinental and Western Air, Inc., is assistant treasurer of TACA Airways South America, and TACA Airways Agency, Inc. He was executive assistant under the executive vice-president at TWA, after having served the airline in many capacities. Shortly after TWA purchased an interest in TACA, Constable was lent to the latter company to make a survey of accounting procedures and handlings in Central America.

Constable

Comdr. Roland G. Mayer, formerly assistant manager at Consolidated Vultee's Fort Worth division, was recently named manager of the plant by **I. M. Laddon**, executive vice president of the corporation.

A. W. Morgan, after fourteen years' experience in the automotive industry and in aircraft production, has been appointed factory superintendent of Consolidated Vultee Aircraft Corp.'s Vultee Field.

Alton MacDonald formerly assistant to the treasurer of National Airlines,

MacDonald

Bash

Inc., has been elected treasurer. **D. G. Bash**, who was treasurer, has been named director of research and development for the airline. These executive changes were made advisable because of the amount of research in connection with applications for new routes. Bash has been treasurer since 1937 and prior was a civil engineer with the Interstate Commerce Commission and their Bureau of Air Mail.

Edward L. Warner, Jr., has been appointed manager of the aviation division of Automotive and Aviation Parts Manufacturers, Inc. For the past four years he has been associate editor of *Automotive and Aviation Industries* magazine. The aviation division will provide information on aviation activities to its 400 member plants.

Pennsylvania-Central Airlines announces that **Paul Joseph Dennehy** has joined the photgraphic department in Washington, after serving on the photographic staff of Acme News Photos. **J. Y. Bryant** has been promoted to engineer in the buildings and facilities section. Bryant has been an assistant engineer with the airline. **Dr. L. G. Lederer**, PCA's medical director, has been appointed to the rescue operations committee of the National Safety Council.

Capt. George T. Owen has been confirmed by the Senate for temporary rank of commodore while serving as commander, Fleet Air Wing 15, and commanding officer, Naval Air Station, Port Lyautey.

Rogers M. Combs, Jr. has resigned from Erwin, Wasey and Co., Inc., where for the past five years he has been account executive on Air Transport Association, Air Express Division of Railway Express Agency, Kollsman Instrument Division of Square D Co., and Republic Aviation Corp. Combs was instrumental in formation of the first joint national advertising program instituted by the Air Transport industry in 1938-39, which rose from a budget of $138,000 in 1939 to a peak of $650,000 in 1943.

Carl Eschedor has been promoted from assistant factory employment manager to factory employment manager of Willys-Overland Motors, Toledo. He is succeeded by **Edwin J. Otte**, who was formerly doing personnel work with the United States Employment Service.

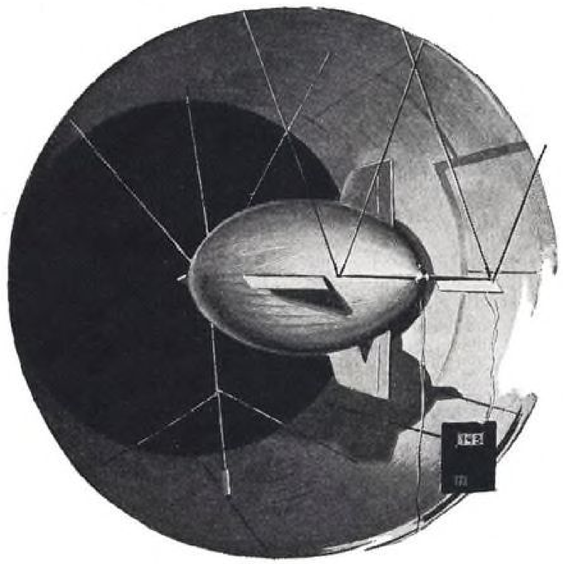
Jesse M. Van Law, special assistant to the manager of the Atlantic division of Pan American Airways, with headquarters at La Guardia Field, has joined the ranks of the 15-year veterans of the airline. He joined Pan American in 1929 in Lima, Peru, being assigned to the traffic department where he han-

Trail Blazing in the Skies

HOW GOODYEAR AIRCRAFT CORPORATION SERVES THE AIRCRAFT INDUSTRY

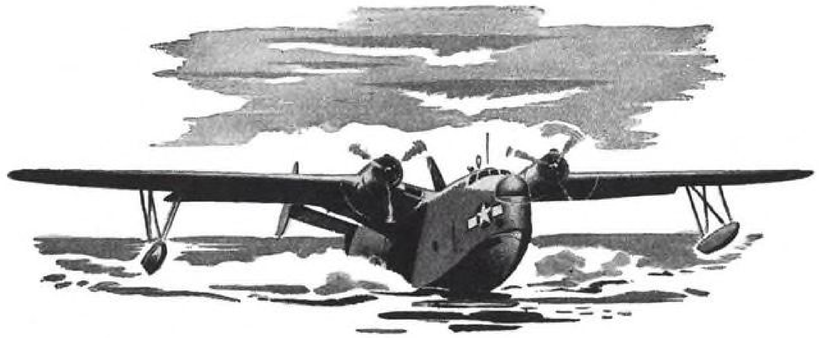
1. *By constructing subassemblies to manufacturers' specifications.*
2. *By designing parts for all types of airplanes.*
3. *By re-engineering parts for quantity production.*
4. *By building complete airplanes and airships.*
5. *By extending Goodyear Research facilities to aid the solution of any design or engineering problem.*

PIONEERING NEW METHODS



GUST EFFECTS ON AIRSHIPS were extensively studied and tested by Goodyear and the Navy long before their importance in building heavier-than-air craft became evident. Special wind tunnel equipment was initiated to simulate, upon scale-model airships, the aerodynamic forces created by gusts of varying intensity. These tests provided the basis for computing stresses resulting from gust disturbances on ships in flight. This long and tedious research contributed importantly to present-day knowledge of the effects of atmospheric disturbances on aircraft — increasingly important today as larger airplanes are being built. This is another example of the breadth of Goodyear's background in aircraft development.

BUILDING PROVEN AIRCRAFT PARTS



THE FAR-RANGING MARTIN PBM-3 is another of America's dependable planes built in part by Goodyear Aircraft. Large numbers of these long-distance patrol bombers now in service are equipped with ailerons, flaps and empennages fabricated by Goodyear. In building components for the PBM-3 and other famous aircraft Goodyear has the advantage of its long experience and extensive research in all branches of aeronautics — a background that goes back to the very early days of aeronautics. This time-proved skill is further attested by Goodyear's standout record in building complete aircraft, including both the superb Corsair fighter and naval patrol airships.

BUY WAR BONDS BUY FOR KEEPS

GOODYEAR AIRCRAFT

IN the misty dawn along an English street roll the day's newly arrived Thunderbolts. Tear off the "wrappings," condition them for flight—and they're *battle-ready!* For changes and improvements to meet the Army's latest fighting techniques were built into them as they rolled along the Republic assembly line.

All such alterations in design and equipment are hard to make. The re-design or re-location of even a small element in the airplane may sometimes affect the design of a much larger section. And to build such changes into the plane *without halting production* poses the severest problem of all.

Republic anticipated this critical problem. It was determined that no change in battle tactics would ever find the Thunderbolt unready. Republic accordingly created a new kind of production system in which high speed was combined with extreme flexibility in assembly methods. When something new is to be added to the Thunderbolt, or a strategic change is to be made, the production line doesn't *stop* for the changes. It simply *absorbs* them! The line keeps *moving!*

There is nothing easy about maintaining a production system which is at once fast *and* flexible. It only *sounds* easy. But it *does* deliver Thunderbolts in quantity, and on time, to all theaters of this war, equipped and *battle-ready* to meet the latest tactical requirements. *Republic Aviation Corporation, Farmingdale, Long Island, New York, and Evansville, Indiana.*

WRITE THAT BOY TODAY ... V-MAIL!

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

REPUBLIC AVIATION
CORPORATION
Specialists in High-speed, High-altitude Aircraft

dled the first air mail between the U. S. and Peru. He aided in designing the airport at Brownsville, Tex., key base for Pan American's operations from the West Coast through to Mexico and Central America.

Two Pan American Airways officials from South America recently flew to this country. **Antonio Zalduondo**, executive in Rio de Janeiro, Brazil, spent two weeks in New York. **Alfredo C. Martin** from the Buenos Aires office was also in this country.

William C. Hoff has been appointed assistant technical director of Jordanoff Aviation Corp. Before joining Jordanoff last year he served as aviation editor for William H. Wise & Co., and from 1936 to 1938 was manager of the Jersey City airport.

Garet W. Denise is now general manager of Littelfuse Chicago Plant Operations. Littelfuse, Inc., manufactures aircraft fuses and a wide range of instrument fuses and accessories. Denise has been with Republic Aviation Corp., and prior to this connection was an industrial consulting engineer.

Comdr. R. S. Quackenbush, Jr., USN, has assumed duties as director of the photography division, Navy Bureau of Aeronautics, having relieved Capt. L. A. Pope, USN, detached.

Lieut. Col. Eugene F. Syms, USMC, has reported for duty in the aviation division of Marine Corps headquarters.

Juli Daves, operations agent in the Delta Air Lines New Orleans office, has been transferred to the public relations department in Atlanta. Formerly a free-lance writer and artist, she succeeds **Betty Almand**, who is going into Red Cross foreign service.

W. Robert England (photo), office manager and traffic representative for Northwest Airlines at Seattle, has been named district traffic manager at Spokane, succeeding **Alex Reid**. Reid has become assistant traffic manager at Chicago after two and a half years at Spokane. England was graduated from the Boeing School of Aeronautics before joining NWA as supervisor of field traffic and reservations at Seattle.

VISIT CONTINENTAL MODIFICATION CENTER:
Maj. Gen. Charles E. Branshaw (second from left) commanding general of the Materiel Command at Wright Field, and Brig. Gen. Ray G. Harris, commanding the Midwestern Procurement District of the Materiel Command, Wichita, recently inspected Continental Air Lines' heavy bomber modification center in Denver. While there, they conferred with Stanley R. Shatto (left) general manager, and Terrell C. Drinkwater, executive vice-president of Continental.

Doris Langher of United Air Lines' Chicago office has qualified for her instrument rating through the Civil Aeronautics Administration. She has 585 flying hours which she has accumulated during her nine years with United. She operates a Link trainer for the airline.

William Christopher Robinson, president of National Electric Products Corp., has been elected a member of the board of directors of Westinghouse Electric and Manufacturing Co. Westinghouse also announced appointment of **Dan M. Galvin** as field representative for the division's Southwestern district, with headquarters in St. Louis.

Rae C. Murray, Civil Aeronautics Inspector in the Canal Zone, has arrived in this country from Panama City.

Comdr. Max Schwitzner, USNR, has assumed new duties with the Supply Section, Naval Air Transport Service.

A. W. Morgan has become factory superintendent at Vultee Field Division of Consolidated Vultee Aircraft Corp.

Lieut. Col. Stephen R. Barker has been named Materiel Command representative for the Douglas plants at Santa Monica, Long Beach and Daggett. He was Materiel Command representative at North American Aviation before he replaced **Col. Oscar F. Carlson**, who has been transferred to new duties with the Air Service Command.

Comdr. William H. McClure has reported for duty in the engineering division of the Armament branch of the Navy's Bureau of Aeronautics. He will serve in the experimntal section.

"Duke" Andrew Reid has become assistant chief inspector of aircraft division at the Willys-Overland Co. Reid has been in the aviation industry for 31 years and has been connected with Curtiss-Wright, Standard, Aeromarine, Brewster and many others. He is a member of the Early Birds, the Institute of Aeronautical Science, and Wings Club.

Jack Stanley, Arthur Hazen and **Frank LeMasters**, mechanics for Pennsylvania-Central Airlines at the Detroit Municipal Airport, have been commended by Gen. H. H. Arnold in a personal letter for their courageous action several months ago in saving an Army bomber from destruction by fire.

Lester F. Johns has been named budget director of the accounting department of Fairchild Aircraft Division of Fairchild Engine and Airplane Corp., succeeding **Edward K. Garrett**, who has resigned. He has been factory accountant and will retain those responsibilities in addition to his new ones.

★ ★

Arnold's Program Shifts Emphasis To Long Range Fighters, Bombers

Developments indicate reduction in number of combat types with consequent tapering of output on some present models and increases in others.

By SCOTT HERSHEY

In light of current developments, General Arnold's recent statement that he would like to see a reduction of the number of combat types of aircraft to a minimum has more than usual significance in connection with the forecast made here last week of impending changes in aircraft production.

The Army's program will see increasing emphasis now on long-range fighter and bomber types with a corresponding trimming of the output of some present aircraft models. This reduction in production of some aircraft is not expected to result in any substantial differences either in schedules or in aircraft plant employment before early next year, but definite reductions are on the way.

▸**Escort Fighters**—The immediate result will be renewed concentration on long-range escort fighters and the heaviest bombers together with concentration on new secret types still on the restricted list but either in or approaching quantity production.

It is probable that light and medium bombers also will be tapered off in favor of new types now ready which combine combat plane functions which fit into new tactical operations. In this connection, it should be recalled that Gen. Arnold termed the B-17 and the B-24 the last of the small bombers.

▸**Halt B-25 Production**—Another straw in the wind is that North American is going to cease production of Mitchell B-25 medium bombers at its Inglewood, Calif., plant the first part of July and concentrate on the output of the P-51 **Mustang,** highly successful long range fighter much in demand, as is Lockheed's P-38 **Lightning.**

The B-25 will be built at the Kansas City plant and it appears that the output will be replacements for the most part. The B-26 *Marauder,* too, despite its great success in the European theater, is being tapered off. The trimming on the output of our two medium bombers does not mean we will be left without aircraft in that general category, but rather that they fall into the general reduction program.

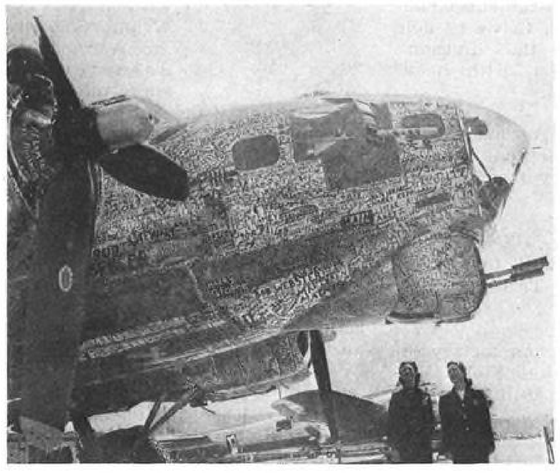
▸**Indication of Trend** — North American's concentration on the P-51 at the expense of their B-25 is indicative of the trend of the entire program.

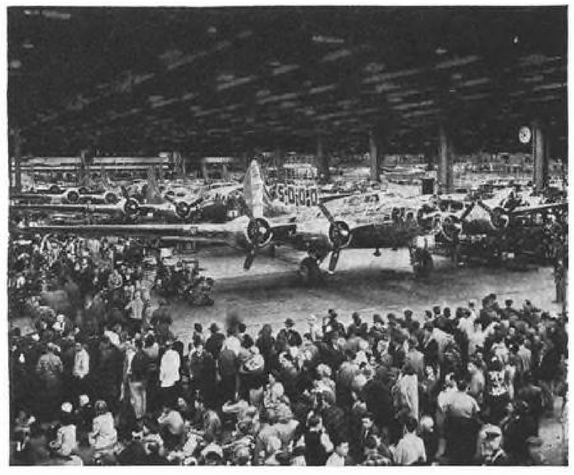
Navy's outright cancellation of Brewster's contract for production of *Corsair* fighters, after announcing a general cutback in fighter output for 1944, halting production of the A-20, and leveling off at Bell Aircraft on production of its new fighter plane, successor to the P-39 *Airacobra,* are all part of the same pattern and indicative of the change in production emphasis.

Output of new heavy bombers is being stressed, as indicated by the fact that Boeing is concentrating on the B-29 *Superfortress*—a program in which other companies are joining—while the B-17 *Flying Fortress* will be made only by Douglas and Lockheed. There are indications, in addition, that the output of our current heavy bombers may be trimmed to almost a replacement basis in favor of still heavier types.

▸**Replacements**—In some plants, production of current types will be restricted almost entirely to replacements. A factor, of course, is that up to now, aircraft attrition, both from combat and other causes, has been considerably less than was expected.

The results of the invasion, of course, qualify plans for the future, but the military has taken into account all eventualities and as a matter of sound military strategy must prepare its plans entirely on the basis of maximum losses.





Five Thousandth "Flying Fortress:" *Workers at Boeing gather during a lunch-hour ceremony to witness the roll-out of the 5,000th B-17 produced since Pearl Harbor. Boeing's entire facilities will be engaged in output of the new B-29* Superfortress *as that program reaches its peak, with Douglas and Lockheed continuing the B-17 program. The 5,000th* Fort *was covered from nose to tail with signatures of employees at the Seattle plant where it was built and the names will remain on the plane when it goes into combat.*

NASH-KELVINATOR'S 100,000th PROPELLER

Company officials and Army officers saw a milestone passed when this Liberator was fitted with the 100,000th Hamilton propeller assembly made by Nash-Kelvinator. Left to right are A. M. Krech, Ford official; Col. Alfred H. Johnson, AAF Central Procurement district supervisor; Campbell Wood, general manager, propeller division, Nash-Kelvinator: R. A. DeVlieg, Nash-Kelvinator vice president; Col. Harley S. Jones, AAF representative at Willow Run, and H. G. Little, Nash-Kelvinator executive.

Chevrolet Retools In 17 Plants

Chevrolet last week was reported re-tooling and re-scheduling facilities in 17 plants for production of the new 18-cylinder Pratt and Whitney R-2800 engine. Already in quantity production of the 14-cylinder model, Chevrolet will build a large addition to its Engine Plant No. 1 in Tonawanda, N. Y., and both engines will be assembled in the enlarged plant. A complete new layout of equipment is required, since parts of the two engines are not interchangeable. The new building will be completed in September.

Ickes Offers Bill On Plant Disposal

Measure, if passed, would place all U.S.-built aircraft factories in his hands for ultimate disposition.

Secretary of the Interior Ickes is making a bid for control of all surplus government real property —which if approved by Congress would place all aircraft plants built by the government in his hands for ultimate disposition.

Ickes submitted a proposed bill to the War Contracts Subcommittee of the Senate Committee on Military Affairs, and it is now under study by the members, Senator Murray, chairman, and Senators Truman and Revercomb. Committee members said that, so far, no hearings had been contemplated—that the subcommittee had been given copies of the proposed legislation and presumably was studying it.

▸**Terms**—Under terms of the proposal, the Interior Department would take control of surplus war plants, land and improvements, as they are certified as surplus by agencies engaged in war production. It also would vest control of strategic materials in stockpiles in the Interior Department.

Ickes suggested that property would be classified by the Interior Department, transferred to government agencies if they wanted it, or retained under control of the Interior Department if it is determined "on the basis of certain factors" that retention is desirable.

▸**Sale**—The bill would permit sale of property publicly or by negotiation, with former owners given preference in sale or leases. Public agencies and cooperatives would be given second choice.

P-47 Production

Production of Republic P-47 *Thunderbolt* fighters at the Evansville (Ind.) plant is averaging 250 a month or better, data released in connection with the award of an Army-Navy "E" reveal.

The first *Thunderbolt* was delivered in December, 1942. Within less than a year, 1,000 had been produced and in the succeeding four months a second thousand had been delivered.

The *Thunderbolt* also is produced at the Farmingdale (L. I.) plant of Republic Aviation Corp.

"traffic cops" for busy airports...

The problem of commercial flying is not a question of the mechanics of flight but a problem of landing safely... rain or shine... on a busy airport. The weather and the amount of traffic are the major factors. Solving these problems required something besides a better airplane... in fact, a superhuman "traffic cop" was needed.

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Navy May Acquire Brewster Plant

Johnsville, Pa., unit would be used as modification center.

There was conjecture in aviation circles last week that the Navy eventually hopes to make the Johnsville, Pa., plant now operated by Brewster Aeronautical Corp., a permanent adjunct of the Philadelphia Naval Aircraft Factory.

The Navy has been discussing plans to take over the Johnsville plant now that Brewster contracts have been canceled. It is doubtful that the company could operate this plant as well as its original factory at Long Island City. As planned now, the Johnsville plant would be used as a reconversion or modification center for the planes produced at the Naval Aircraft Factory.

▸ **Owned by DPC**—The Johnsville facility is owned by Defense Plant Corp. and was built and equipped early in the war under Navy sponsorship at a cost of $6,500,000. It was leased to Brewster for operation, and represented the bulk of government investment in Brewster facilities, although DPC has spent some other funds at the Long Island City plant for equipment. Contracts for equipping and construction were signed in 1941, commitments being $8,000,000.

Lending substance to the conjecture that the Navy had taken a long-range view of the Johnsville plant—one of the first of emergency facilities built — was the revelation by the Federal Public Housing Authority that the Navy had insisted that war housing for Johnsville be of a permanent character, which led to the construction of a $5,000,000 project termed a model of its kind. FPHA said the National Housing Agency had protested building of anything but temporary housing, but that the Navy had held out for the permanent development subsequently constructed. Only 160 families live in the 1,200-unit development.

▸ **20 Miles from Philadelphia**—The Johnsville plant is ideally situated to be utilized in conjunction with the Naval Aircraft Factory, being approximately 20 miles north of Philadelphia.

The Naval Aircraft Factory is the first government-owned plane plant, built some years ago as a "yardstick" to check on industry's cost figures. Testimony before the House Appropriations Committee brought out recently, however, that *Catalinas* built at the Philadelphia plant cost $50,000 more than the same type turned out by Consolidated Vultee at San Diego and New Orleans.

Moreover, the plant failed by 50 percent to meet its *Catalina* schedule. The factory, however, has not been a high-capacity producer because of lack of facilities. Addition of the Johnsville plant to its facilities would enable a considerable stepping up of production at the Naval Aircraft Factory and would enable higher peacetime production of naval planes in the government facility.

Workers Protest

Workers at Brewster Aeronautical Corp. last week were engaged in a series of demonstrations protesting cancellations of *Corsair* fighter contracts by the Navy.

First of the series was a "sit-in", ended after appearance of Richard J. Frankensteen before a congressional committee and dispatch of the letter from the UAW-CIO to the President protesting the cancellation. The President implemented action already taken to give Brewster whatever subcontracts might be available. In the course of the "sit-in", a group of workers marched to the New York City Hall in a demonstration. When the "sit-in" was ended by order of national union leaders, a picket line was thrown around the Long Island City plant.

Meanwhile, representatives of 17 top-priority war plants in the New York area were seeking to recruit the Brewster workers. Frankensteen, however, had told workers they would be paid 60 or 70 cents an hour against the $1.06 an hour at Brewster.

Canada May Produce More British Planes

The British aircraft industry wants Canadian plane plants to produce up to 20 percent of the RAF's peacetime needs to permit the Canadians to keep in active touch with British types and development rather than becoming entirely patterned on United States design and technique.

This view of the British attitude toward Canadian manufacture is reported in a recent issue of the Toronto *Financial Post* by K. R. Wilson, who said he found little encouragement for the oft-reported possibility of Great Britain's moving her aircraft design and development work to Canada after the war. While this was considered a logical view from a security angle, it is not considered a likely move.

One manufacturer, deHavilland, with production capacity in Canada, is said to feel that there should be more encouragement of Canadian-designed aircraft, but others felt that Canada should not do any design or development work, leaving that to parent British companies.

14,000 at Republic To Get 37.8% Bonus

Payment for four weeks ended May 12 is eighth since WLB approval of incentive plan.

Fourteen thousand employees of Republic Aviation Corp.'s Farmingdale plant will receive for the four weeks ended May 12 a bonus of 37.8 percent. It will be the eighth payment since approval of Republic's incentive plan by the War Labor Board last October.

Both shop and office workers share in the payments and Alfred Marchev, president, says plant efficiency has so improved that in meeting the quota deliveries of P-47 *Thunderbolts* to the AAF during this period, Republic workers saved 1,000,000 man-hours, compared with doing the same job in the first four weeks' bonus period six months ago.

▸ **Work Week Reduced**—The company recently reduced its work week for factory workers from 58 to 53 hours and the May bonus more than offsets the individual worker's reduction in pay. For example, a Republic worker whose base pay was $1 an hour on a 58-hour week received $67 a week or $268 for four weeks. For 53 hours of work his base pay plus overtime is now $59.50 a week or $238 for four weeks. Offsetting this reduction of $30, his May bonus will amount to $89.96. This is a gain over the April bonus of 16 percent, to give him about $18 more for 20 hours' less work.

Marchev says Republic's present schedules, now at peak levels, are not expected to be changed during 1944.

A-20 Cancellation Adds to Labor Upset

Douglas cutback puts 8,000 more workers on West Coast market.

Cancellation of Douglas' A-20 contracts, formally announced last week, and the resulting necessity for trimming 8,000 workers from the rolls, injected a new factor into a muddled and spotty labor situation in West Coast plants.

In brief, the situation is this:

- Douglas expects turnover to help in the employment cut, taking up to 75 percent of the 8,000.
- Consolidated Vultee at San Diego could use an extra thousand employees.
- Northrup needs 2,000 additional employees and officials of the company say "our need is desperate."
- Lockheed will require 2,000 per month for the next several months both for production and for skilled output in trades such as jigmaker, etc.

North American reports that it has no labor shortage and has halted all newspaper and radio advertisements for new workers. It is indicated some cuts in manpower may be necessary as production of the B-25 at Los Angeles ends, and is moved to Kansas City so that *Mustang* production at Los Angeles can be stepped up.

Douglas expects that the plant's normal turnover rate, with new hiring halted, will make it impossible to reduce formal lay-off notices to 2,500 at the outside.

- **Bulletin**—An executive bulletin, signed by Donald Douglas, president of Douglas, posted throughout the Santa Monica and branch plants on May 31, announced formally the cancellation that had been a common rumor on the production floor for more than a week.

West Coast factories will watch anxiously for the effect the Douglas cancellation has upon their intense "stay on the job" campaign. Some are concerned over the possibility that Douglas layoffs will start a quit-work panic and exodus of aircraft workers into lower paid civilian jobs that offer post-war job security.

- **Priorities**—It is doubted that the Douglas layoffs will benefit the other Southern California aircraft plants in dire need of additional workers. For one thing, priorities in employment are being given other war industries such as high octane gas plant construction.

Consolidated officials last week feared that the company would miss meeting production quotas for the first time in 18 months because of absenteeism, but that now has dropped to a little over 5 percent.

In connection with the A-20 cancellation at Douglas, it is understood that production schedules for the four-engined C-54 transport have been stepped up.

LANCASTER ASSEMBLY LINE:

More and more Lancaster *bombers are being turned out for Air Marshal Harris, chief of Britain's bomber command for the great air offensive now being waged in collaboration with the USAAF. Here is an assembly line at one of the Ministry of Aircraft Production's* Lancaster *factories.*

Republic Reports On Salaries, Income

Republic Aviation Corp. paid Ralph S. Damon, president, a salary of $49,999 plus $600 director's fees for 1943, according to the report to the Securities and Exchange Commission.

Damon resigned Aug. 31, 1943, and as director Mar. 17, 1944, being succeeded by Alfred Marchev, who received $38,333 as president and $500 director's fees in 1943.

C. Hart Miller, vice-president and director, got $24,893, plus $450 director's fees, the report showed.

- **Officers' Salaries**—Salaries paid to eight officers of the company, including the above, totaled $126,880. The law firm of Bleakley, Platt and Walker, of which Livingston Platt and Horace N. Taylor are Republic directors, was paid $25,000 legal fees. Salaries include bonuses totaling $28,000.

Company reports net operating profit of $22,497,300, plus $142,654 other income, making the balance of $22,639,954 before federal taxes. Normal tax surtax amounted to $174,000 and excess profits taxes $18,440,000, leaving balance of $4,025,954.

- **Earnings for Year**—After giving effect to a post-war refund of federal excess profits tax in the amount of $1,844,000, profit before provision indeterminate costs inherent to wartime operations totaled $5,869,954. Net for the year, after allowing $1,000,000 for indeterminate costs, was $4,869,954. After appropriating $1,844,000 to post-war reserve, balance to earned surplus totaled $3,025,954.

Financial Reports

- **Ford Motor Co.** showed net profit of $45,528,898 in addition to $40,521,100 added to its reserves in 1943, a balance sheet filed with the Massachusetts Commissioner of Corporations indicates. The profit is in addition to any dividends distributed on the closely held 3,452,900 shares of $5 par value capital stock. What part of the profit came from the production of B-24 *Liberator* bombers of Pratt & Whitney engines is not indicated in the report.

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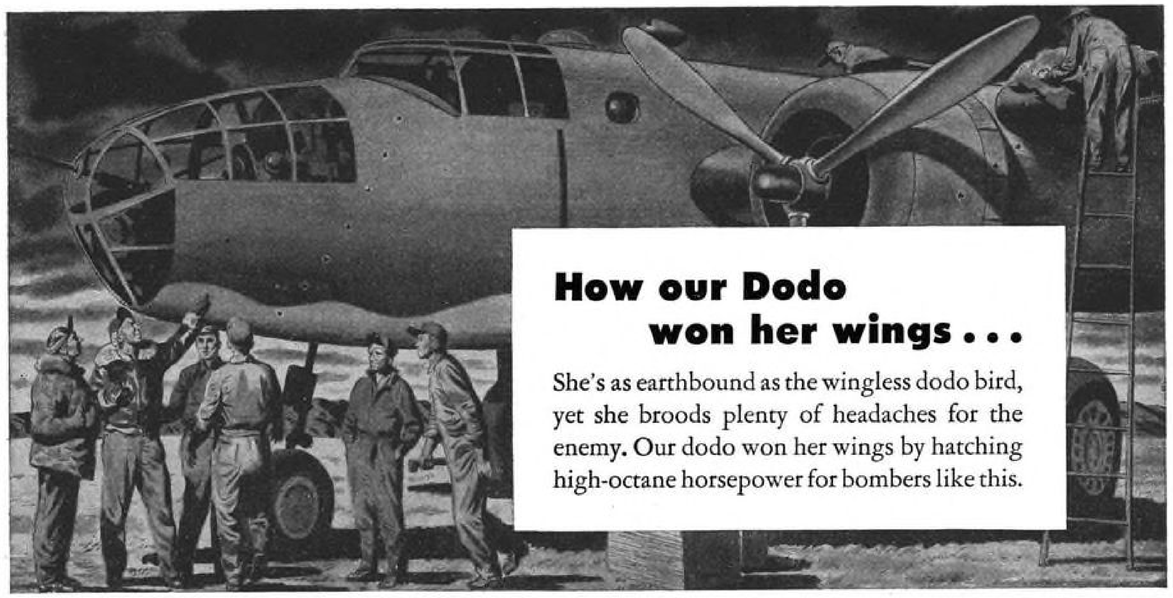
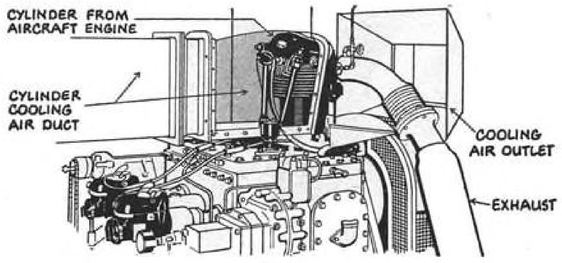


How our Dodo won her wings . . .

She's as earthbound as the wingless dodo bird, yet she broods plenty of headaches for the enemy. Our dodo won her wings by hatching high-octane horsepower for bombers like this.



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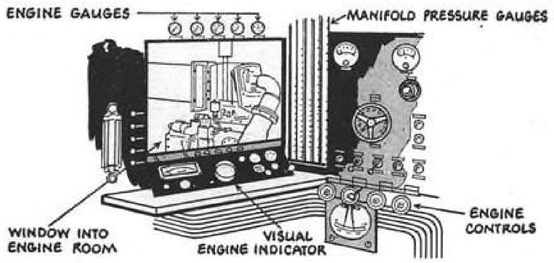

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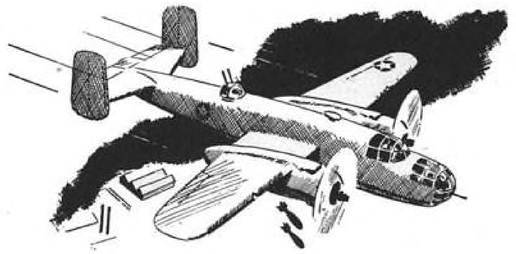


MANY NEW FUELS have won their wings on Standard's "dodo." Many more have flunked this final test in the laboratory grind. And we're prouder, perhaps, of the failures . . . because they hint at how really good aviation gasoline must be before it's good enough to wear Standard's "wings."

STANDARD OF CALIFORNIA

Intrastate Air Developments Rouse ATA and Federal Circles

Concern shown over growing inclination of states to formulate their own policies of regulation and certification.

By MERLIN MICKEL

Concern is growing in federal aviation circles and the Air Transport Association over intrastate air developments, particularly as they are involved in unsettled state aviation policies.

Intrastate operators have an eye to expansion into the interstate field, judging from applications on file with the Civil Aeronautics Board. This applies to prospective operators as well as those already providing service.

▸ **State Policies**—But the immediate concern lies in the apparently growing inclination of the states to formulate their own policies of regulation and certification.

CAB people list Michigan, Wisconsin, Alabama, Texas and Colorado as a few of the states so inclined. Colorado recently held hearing on a proposed draft of regulations that was criticized as duplicating or conflicting with federal regulation. The Colorado Public Utilities Commission, however, has given time for the filing of briefs and promised further hearing, and there is little doubt that changes will be made.

▸ **Denver Meeting**—The meeting at Denver was the first of its kind in which the CAB has appeared formally, though representatives of the Board's legal staff have attended similar conferences. George Neal, general counsel, made the Colorado trip, and protested the regulations as drawn.

ATA feels that any state regulation is bad in a top notch setup. This airline organization, an ardent supporter of federal jurisdiction over all U. S. aviation, argues that the need for uniform safety regulations can not be questioned, and that it is obvious that air traffic rules must be uniform.

▸ **U. S. Watches Developments** — Generally, there is a question as to just where the line may be drawn on the effort warranted to avoid interstate complications. No doubt the federal government, despite CAB's hesitation to state policy on this matter, will keep a watchful eye on intrastate operations to make sure they do not infringe on interstate commerce. In such cases, injunctive action could be expected.

There is much doubt, in fact, that an intrastate operation can remain so for long. It is pointed out that air travel shows its main advantage in long haul service, and that sooner or later a passenger or package ostensibly intrastate actually will be found to be in interstate commerce.

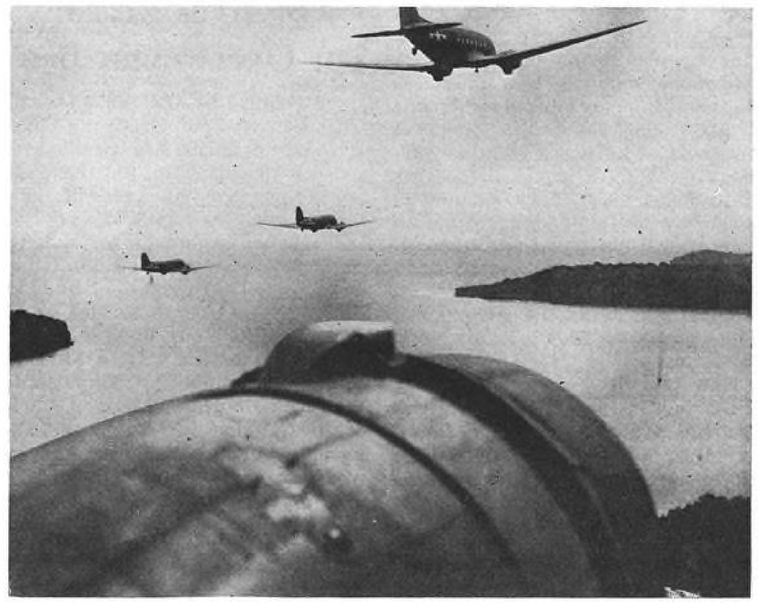
▸ **Feeder Lines**—Another problem lies in the relationship between intrastate and feeder lines. Many applicants have filed for routes in the latter category and the question of what will happen if the CAB certificates them and they are in the same area as the intrastate operators is yet to be solved. A partial answer, however, lies in the fact that here again is an overlapping in applications, with many filed for both types of route by the same applicant.

There is also the federal policy against the entry of surface carriers into air transportation. Some are wondering whether the states will follow this policy. Michigan has granted a post-war helicopter certificate to a bus company subsidiary.

▸ **Integration**—Some point out that the federal government has spent a lot of time and money building up a national air transport system, and still is doing so. These persons argue that each independent intrastate operation, and each state regulation, will have its effect on that system unless it is carefuly integrated with it. And such integration, they contend, can best be handled by Washington.

Certain it is that the interstate operators will protest to the utmost any state rulings that give advantage to lines within the states. The former have been put to considerable expense by federal regulations as new safety developments came along. Unless the states have similar requirements for intrastate services, they may be at competitive and economic disadvantage.

▸ **Data Incomplete**—These, coupled with the fact that information on



SKYTRAINS CARRY SUPPLIES OUT, CASUALTIES BACK: *Operating under the South Pacific Casualty Air Transport, these Navy R4D's (Douglas* Skytrains) *fly to the front over regular routes, carrying supplies as they go out, and bringing back wounded.*

intrastate developments is scattered and incomplete, are the factors behind the expressions of concern by Federal and ATA officials. They are the reasons so much interest has been displayed in such incidents as the Colorado hearing.

The disputed regulations there were drawn, it is reported, after S. N. Drumm received a state certificate to operate on schedule between Denver and Durango via Alamosa and Pueblo. Drumm, who operates a truck line from Durango and is a private pilot, is co-owner of the line with Ralph Burress.

▸ **Operations Begun**—Under the name Colorado Air Lines, Inc., the line has started operation, but not without difficulty. The opening flight was due a month ago, but the single-engine *Waco* the line had bought and was having reconditioned was not delivered in time, so the first flight was carried out with a borrowed plane.

Colorado Air Lines is prevented from carrying purely local passengers between Pueblo and Denver as Braniff and Continental serve this segment. Now reported operating three single-engine planes, it has an application before CAB for a route to Los Angeles.

▸ **Permit Granted**—Colorado's PUC also has granted permission to Mountain State Aviation, Inc., of Denver, to operate an intrastate service which may begin functioning in July. Its routes would cross the Continental Divide four times, one segment being between Durango and Alamosa. This line plans to use single-engine *Beechcrafts*.

Maj. Ford Williams, general manager, who was executive officer of a fighter group before his retirement in January, comments that "we are simply an intrastate operation. We feel that there's a job for feeder airlines and a job for major airlines. We're not in competition with the major airlines and hope they'll let us alone to do our job."

▸ **New Service Projected** — The PUC in that state also has given Massey & Ransome Flying Service, Inc., of Fort Collins, until June 20 to start daily schedules between Denver and other Colorado cities.

Henry S. Sherman, Commission chairman, has been quoted as saying that "We are starting an era of aerial pioneering. Doubtless a comprehensive and satisfactory service will evolve, including both intrastate and interstate flying, when the many plans now on paper become realities."

Intrastate Airlines

While Colorado Public Utilities Commission was considering a proposed draft of air rules and regulations, these developments arose in other states:

▸ Michigan State Board of Aeronautics disclosed that three intrastate airlines were expected to start coordinated service throughout the lower peninsula about June 1. They are Francis Airways of Lansing, Bishop Flying Service at Flint, and Northern Skyways Service at Grand Rapids. Because a recent special legislative session failed to take up the matter of jurisdiction over intrastate aviation, certification of the lines by the state board was said to be unnecessary.

▸ Wisconsin's Secretary of State, Fred R. Zimmermann, has granted an incorporation charter to Wisconsin Central Airlines, which has applied for state and federal permission to operate a commercial air service between Clintonville, Wis., and Chicago.

▸ Minnesota's State Supreme Court received the question of constitutionality of the Metropolitan Airports Commission, created by the 1943 state legislature. Oral arguments were made in a taxpayer's suit.

CAB Gives Reasons For Overweight Ban

On request by the Aeronautical Chamber of Commerce, the Civil Aeronautics Board has specified its reasons for disapproving the proposed increase of take-off and landing weights for DC-3's.

The chief argument for raising the limits was shortage of planes and greatly increased demands for passenger and cargo service. The Board pointed out that, as plane return progresses, this reason becomes increasingly less important.

▸ **Safety Margin** — Airline pilots contended that increasing the allowable weights for old equipment would greatly diminish the safety margin. The Board was unwilling to create a "psychological hazard in the cockpit" by increasing the weights over pilots' protests.

The Board also stressed the fact that should the weight limits be raised over the protests of the pilots' association, a resultant fear in the minds of the traveling public might develop.

Denver-Los Angeles Route Debate Heard

United, Western, TWA and Continental present arguments before CAB.

By DANIEL S. WENTZ II

The question whether United Air Lines should be certificated for a Denver-Los Angeles route, as a Civil Aeronautics Board examiner recommended, was the chief consideration last week as the Board heard oral arguments by the four applicants.

United, Western Air Lines, Transcontinental & Western Air, and Continental Air Lines, the four participants, agreed on the necessity for the route, which would close one of the largest gaps remaining in the national air transport pattern.

▸ **Great Circle Route**—United contends the route is a natural portion of a Great Circle route connecting New York, Chicago and Los Angeles. While it would give United a transcontinental route 38 miles shorter than TWA's, United's position is that no serious damage would result to TWA because the latter, with the *Constellations* it plans to use, still could maintain the fastest coast-to-coast schedule.

Counsel for Western pivoted his argument on the desirability of lifting his line from the "need" classification by giving it access to transcontinental passengers at Denver as well as at Salt Lake City, which it now serves.

▸ **Agreement** — Before the war, Western, under interchange agreement with United, carried traffic from Salt Lake City directly to Los Angeles. Denver, Western argued, would be a more natural interchange point than would the Utah capital. United, however, expressed doubt as to its willingness to undertake another interchange agreement with Western, should the latter be certificated into Denver.

Western contends that award of the route to Continental would expand that company at Western's expense, and argued that to give the route to any carrier other than Western would divert so much traffic from Western's most lucrative route, AM 13 from San Diego and Los Angeles to Salt Lake City, that Western would be forced back into the subsidized class.

▸ **Local Traffic** — Continental, on the other hand, looks on Denver-Los Angeles traffic as local in character, and holds that the route should go to a regional carrier.

TWA, which claims the shortest, fastest transcontinental service, contended that to give the route to United would be a serious threat to TWA's position.

Among those who attended the arguments were Presidents W. A. Patterson of United and William A. Coulter of Western. All members of the Board were present.

OK AA Extension to Tulsa, Oklahoma City

Action, recommended by two CAB examiners, would put stops on alternate trans-U. S. route.

Recommendations which, if adopted, will place Tulsa and Oklahoma City on an alternate transcontinental air route, have been made by two Civil Aeronautics Board examiners after route hearings embracing the area from Atlanta, Ga., to El Paso, Tex. Neither city is now a stop for transcontinental flights.

Examiners Berdon M. Bell and Barron Fredricks found that American Airlines should be permitted to extend AM 4 and AM 23, which together form its coast-to-coast flight path, to include the two Oklahoma cities. The first would be extended from El Paso, Tex., to Tulsa via Lubbock and Wichita Falls, Tex., and Oklahoma City, and the second from Little Rock to Oklahoma City via Fort Smith, Ark., and Muskogee and Tulsa.

▸ **Delta Extension**—In the same report, recommendation was made that Delta Air Lines be allowed to extend AM 24 from Birmingham, Ala., to Memphis, Tenn., via Tupelo, Miss., although the examiners advised the Board not to grant Delta's request to go on from Memphis to Oklahoma City via intermediate points.

They found that public necessity, independent of war conditions, warranted permission to Chicago and Southern to stop at Little Rock, now a stop under temporary authorization, on AM 53, and also recommended that the Board remove Birmingham restrictions on Eastern Air Lines' AM 5. These provisions prevent Eastern from operating local flights between Atlanta and Birmingham or Atlanta and Memphis via Birmingham, and the line has contended that the restriction has prevented its integrated operation in the territory it is authorized to serve.

▸ **Restrictions**—Apparently the restriction was first imposed in January, 1941, to protect Delta from diversion of revenue on Atlanta-Birmingham traffic.

It is worthy of note that the examiners, after commenting on Delta's subsequent passenger revenue increases, commented that while the figures reflected revenues "realized during a period of war when revenues accruing to all airlines have skyrocketed, it is not unlikely that these figures may be maintained after the war."

▸ **Braniff Application Opposed**—"As the Board has stated," their report pointed out, "the end of the present war should see development in the field of air transportation with a widespread increase in volume of both passengers and property carried by air."

Bell and Fredricks, in their closing recommendation, advocated denial of application by Braniff Airways for designation of Oklahoma City as intermediate point on AM 15 and extension of that route to Atlanta or a separate route between those points, and a request by Continental Air Lines for a route between Tulsa and Hobbs, N. M., and alternate routes between Tulsa and Memphis.

TWA Reports Loss For First Quarter

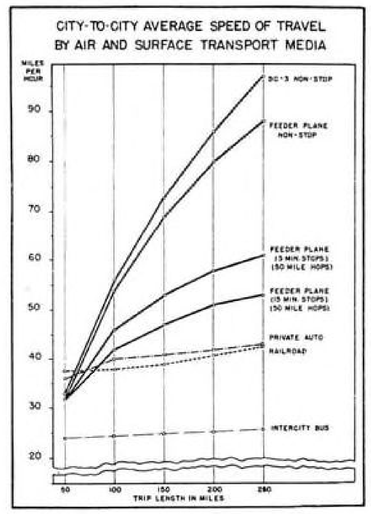
Despite a heavier mileage schedule, Transcontinental & Western Air experienced a loss of $92,419 for the first three months of 1944, against net income of $357,351 for the first three months of 1943.

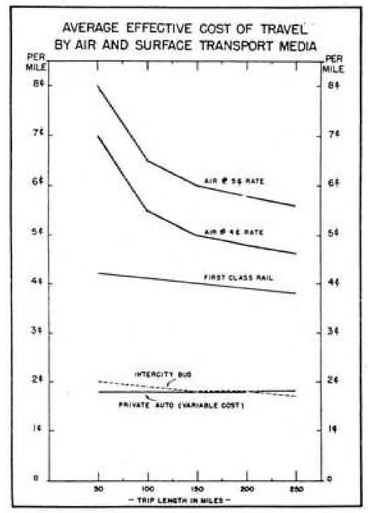
Because of unfavorable weather, only 88.2 percent of the 4,531,684 miles scheduled for the first quarter this year were operated, according to Jack Frye, president. Schedule for the first three months last year was 4,000,210 miles.

▸ **Ton-Miles Up** — Revenue ton-miles per plane for the 1944 period averaged 305,349, an increase of 20,224 over 1943 quarter.

Frye explained that operating costs had risen faster than operating revenues. More stops were made to attain maximum payload, and virtually all stations have been staffed for 24-hour service. He expects, however, that revenues may increase more rapidly than operating expenses as planes are added.

His report showed that operating revenues for the first three months this year were $4,449,121, a 14 percent gain over the $3,902,767 in the 1943 period. Operating expenses, on the same comparison, rose from $3,364,676 to $4,536,108.





UNITED CHARTS SHOW SPEED AND COST MARGINS:

These United Air Lines charts show why UAL has not jumped into the feeder line picture with the alacrity that has characterized some other applicants. They reveal that, with 15-minute stops every 50 miles, feeder planes will have an average speed of little more than a private car or train. With stops as brief as 5 minutes, the speed would be about 20 mph faster, averaging approximately 60 mph. And so low is the cost by private car and intercity bus on relatively short hops, such as the feeder operators contemplate, that air costs, even at a 4-cent rate on a distance basis, are substantially higher.

THE COST OF
Tomorrow's Peace

Today peace-loving Americans are united with thirty-three other nations in a common objective of destruction.

Millions of our fine, young men and women find themselves invading foreign lands in order that their own shores may be spared, and their free way of life preserved.

Their sacrifices will be great. Their job will be well done.

But what of the job they will expect of us when they have finished theirs . . . the job of turning their hard-won victory into a lasting pattern of peace?

Can we come up to their great expectation? We must realize that this is the last opportunity of our generation. We must do a better job of it than we did in the Twenties and the Thirties.

We have our backs to the wall, and the scars or World War I and a thirteen-year depression still are upon us. The final test of our way of life is at hand!

As we look over our shoulder into the immediate past, we see little to encourage us. But we also see much to make us pause. We see a tremendous fighting machine, created in a matter of months by the miraculous organization of our resources.

We, the largest of the peace-loving nations, have overnight become masters at the business of waging war. Today, as a result of the coordination of industry, labor, and government, we are producing *for war alone* as much as our total normal production for peace.

* * *

We have amply demonstrated our ability to harness the vast productive capacity we possess. Why cannot these resources, which we have organized so efficiently for the destruction of life and property, be directed toward the destruction of the causes of war?

May not the patriotic and emotional strength and the unity of action which have been stimulated for the purpose of winning the war be directed, at least equally well, toward the attainment of world peace and international harmony?

If they are not so directed, what lies ahead but another war? And how can America, in a world that is so rapidly shrinking in size, avoid involvement in *any* of tomorrow's conflicts?

International peace is an ambitious dream and its price is high, but the price of war is even higher. Our world cannot long survive the periodic waste of its human and material resources.

Our country can be the most potent single force in bringing about the international understanding that leads to peace, in developing the unity that will make the most of the ample resources nature has provided everywhere.

* * *

There is no unity in selfishness. There can be no unity if any one of the great powers fails to do its part in determining and eliminating from the world the basic causes of aggression.

These basic causes stem from greed and the suppression of opportunity for individual progress; for self-preservation is the first law of nature.

Mussolini's dramatic march on Rome in 1922 was made possible by disillusioned veterans of World War I who could find no jobs and whose future held no promise. Some of Hitler's most determined followers came from the same ranks.

Men denied the opportunity to make a living, for themselves and for their children, are easy prey to false doctrines and dangerous "isms."

In any realistic appraisal of our domestic problems—economic, labor, racial—it is clear that we can solve them, not by waiting until we reach some utopian accord, but by making a series of compromises. We do this because we know how discord can impair the very roots of private enterprise, self-government, and self-discipline—the essentials of a dynamic democracy.

Similarly, peaceful reconstruction of our world economy depends on the ability of nations to reconcile their differences in a series of working agreements.

If we in the United States want lasting peace and if we want to preserve our democratic way of life, we must take over our full share of the task of initiating these compromise measures. Acknowledging our inescapable responsibility as the greatest economic and military power in the world, we must attempt to insure the free flow of world trade, and develop—with profit for both parties—backward areas abroad as well as at home. And we must do this by making all nations share the responsibility, not by allowing ourselves to be manoeuvered into being an international Santa Claus.

With our allies, we will have to see to it that the devastated portions of the world rehabilitate themselves as quickly as possible; that practicable and realistic trade and economic relations between nations are developed; and that the energies and productive capacities of these nations are set free to function in a climate that is favorable to the growth of free enterprise and individual initiative. As the most powerful economic force on earth, we have the most to gain and the most to lose at the peace table; and we must never forget that with our power comes responsibility.

We cannot hope to solve all of the problems of all nations—nor even all of our own—but our way can become the way for more of the world's humanity. Our strength can become the guiding spirit of the smaller nations.

* * *

In the development of a sound American foreign policy, let us take care not to attempt to control the destinies of other nations. Let us remember that we must set the example of self-determination of independent, free peoples.

Freedom is essential to international peace; and free competition—whether it be between individuals, between businesses, or between nations—is the mainspring, the synchronizer, and the preserver of freedom. For competition always is synonymous with private enterprise.

We are not a covetous nation. We have no territorial ambitions. Our international commercial aspirations are dominated by the conviction that we have a great stake in world unity and world prosperity. We know that we can no longer live apart from other nations and that we cannot ignore the fundamental elements which affect the well-being of other countries.

Our foreign policy must encompass a world of trade, and help develop it.

We dare not blunder in the execution of that foreign policy if the American way of life is to survive. A democracy resolved upon isolation is doomed in the world of tomorrow.

Let us resolve that out of this devastating catastrophe we shall emerge with fuller understanding and greater determination to build the kind of world which can materialize only if this country has the vision and the will to see it through.

We still are free to decide our own fate—still free to shape our own future. We still are free to preserve the liberty and happiness that has made our country the hope of the world.

President, McGraw-Hill Publishing Company, Inc.

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Space for this advertisement contributed by AVIATION NEWS

Feeder Airlines Chart Program

Feeder airlines will gain a more powerful voice in post-war aviation with permanent organization this month of Feeder Airlines Association, its backers believe. Twenty-five charter members are prepared to develop a program activating the policies of the association and adopt a budget for its operations.

Harry R. Stringer, chairman of the FAA organization committee and vice-president of All American Aviation, Inc., has called a meeting in Washington for June 15 and 16 to perfect the organization and elect permanent officers. An office may be opened in Washington.

▸ **United Voice**—While All American Aviation, Inc., has been a member of the Air Transport Association for several years, the company has indicated it has not been satisfied with the ATA's attitude on feeder lines. The new FAA will give the feeder lines a united voice in matters affecting the smaller lines.

While 25 lines or prospective lines are listed as charter members, one of the charter member companies actually represents a merger of 14 additional operators, making a total of approximately 40 operators, among whom are some of the strongest in the field.

▸ **Firms Represented**—The merged company is Consolidated Airlines, Inc. In addition to Consolidated and All American, Stringer said the following companies would have representation at the permanent organization meeting: Automatic Air Mail Inc., Aviation Enterprises Ltd., Central States Aviation Corp., Clear Ridge Aviation Inc., Coast Aviation Corp., Dixie Air Transport Co., Inc., Hawthorne Airways, Hylan Flying Service Inc., Kansas Aviation Co., Land Water Air Service, Mercury Development Corp., Mountain States Aviation Inc., Otto Aviation Corp., Parks Air College, Inc., Racine Flying Service, Inc., Ryan School of Aeronautics, Southair, Inc., Southeastern Air Express, Inc., Southern Aviation Corp., Southwest Airways Co., State Airlines, Inc., Virginia Central Airlines, and West Coast Airlines.

In addition to these, the 14 fixed base operators in Consolidated, some included as individual companies above, are: E. W. Wiggins Airways, Inc., Iowa Airplane Co., Inc., Aircraft Sales Co., Central States Aviation, Inc., Summit Airways, Inc., Springfield Flying Service, Inc., Kratz Corp., Mahon's Flying Service, Buffalo Aeronautical Corp., Ong Aircraft Corp., Kansas Aviation Co., P-T Air Service Inc., Lehigh Aircraft Co., and Roscoe Turner Aeronautical Corp.

Consolidated companies have applied for 64 routes totaling 23,723 miles, while the total for all companies represented in the FAA is 140,561 miles of routes either operated or applied for.

Examiners Assigned Four Feeder Cases

Assignment of Civil Aeronautics Board examiners to four recently opened regional feeder service cases was announced last week by Chief Examiner C. Edward Leasure.

The addition of a new examiner, James S. Keith, to the CAB staff was also revealed.

Examiners have been detailed to conduct those cases formerly handled by Examiner Albert F. Beitel who resigned June 1.

▸ **New Assignments** — Oklahoma-Texas case (Docket 337 et al.) Examiners Thomas L. Wrenn and James S. Keith.

Florida feeder service case (Docket 489 et al.) Examiner William F. Cusick.

New England regional feeder case (Docket 399 et al.) Examiners Berdon M. Bell and Vincent L. Gingerich.

North Central States case (Docket 415 et al.) Examiner F. Merritt Ruhlen.

▸ **Beitel Cases**—The two cases on which Examiner Beitel was working before his resignation are:

The Hawaiian cases (Docket 851 et al.) Assigned to Examiners Thomas L. Wrenn and Lawrence J. Kosters.

Acquisition of China National Aviation Corp. stock by Pan American Airways, Inc. (Docket 1351) Examiner H. Heinrich Spang.

▸ **Aerovias Braniff**—Acquisition of Aerovias Braniff S. A. by Braniff Airways by purchase from T. E. Braniff (Dockets 1360 and 1373) has been assigned to Examiner Vincent L. Gingerich.

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THE HELICOPTERS ARE COMING

By C. B. F. Macauley, former managing editor of Aviation and editor of Air Tech. 165 pages, 4⅞ x 7⅜, illustrated, $2.00.

Here is a readable, intensely interesting discussion of helicopters—what they are, what they can do, how they may be developed as commercial and family vehicles of the near future, and what this may mean to individuals and to aviation and other transportation industries. Important industrial aspects are covered, in sections dealing with the relationship of helicopters to other forms of transportation, the supplementary technical requirements of widespread helicopter operation, considerations underlying mass production and marketing of helicopters, etc.

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CAB Gets 36 Route Applications in May

Thirty-six route applications were filed with the Civil Aeronautics Board during May. This compared with 25 in April. Pan American Airways has asked the Board for an exemption order permitting them to substitute Santiago de Cuba for Antilla, Cuba, as an intermediate point on their Miami-Buenos Aires route.

The request seeks authority to suspend service at Antilla, which PAA says generates far less traffic than would Santiago, fourth largest Cuban city. Santiago would be used as a seaplane base.

Oklahoma Feeder Line—Central Airlines, Oklahoma City, applied for a permanent or temporary certificate for scheduled feeder operation carrying mail, passengers and express between Oklahoma City, Fort Worth-Dallas and Tulsa.

The Board was told the line is placing in operation that part of the route within the state of Oklahoma. Non-scheduled operations with a single-engine five-place Stinson Reliant will connect Oklahoma City with Lawton (Fort Sill) and Duncan, Okla. Keith Kahle is president.

Two More Seek Routes—Other local feeder applications were filed by Sterling M. Clark, Pine Bluff, Ark., and Thomas E. Gordon, Orlando, Fla.

Clark, now a Marine aviator, proposes a corporation to operate five feeder routes radiating from Pine Bluff into Mississippi, Louisiana and Oklahoma, carrying mail, passengers and property. He owns and operates Clark Field in Pine Bluff, which would be base for the proposed operation.

Planes for the line will be purchased from 1,100 civil aircraft recently released for sale in the Central States, Clark said.

Gordon, who operates a charter service in Florida, proposes to carry mail, passengers and express over five feeder routes out of Orlando, connecting with trunk-line carriers at various points.

The operations Gordon contemplates will eventually use helicopters. Gordon owns a taxi service in Orlando, Fla.

Gulf Airlines, Houston, Texas, applied for a permanent or temporary certificate for scheduled mail, passenger and express service in Texas. Gulf plans to use *Beechcraft* 18-S planes, none presently owned. The routes asked connect El Paso, Laredo, Brownsville, San Antonio, Austin, Dallas, and other Texas cities, with spurs to Shreveport, La., and Tulsa, Okla.

Reilly Appointed To D. C. Post

President Roosevelt has transmitted to the Senate for approval the appointment of J. Francis Reilly, assistant to Civil Aeronautics Board Chairman L. Welch Pogue, to be a member of the Public Utilities Commission of the District of Columbia. Reilly became Pogue's assistant last September after serving as a CAB trial examiner since 1940. He was in the office of the corporation counsel of the District for two years.

J. Francis Reilly

The appointment probably will be referred to the Senate District of Columbia Committee before it reaches the Senate itself.

Lauded by Pogue—Reilly's nomination, on which confirmation was anticipated, brought a commendatory expression from Pogue.

"I cannot speak too highly," the CAB chairman said, "of the contribution made by Jim Reilly to the Civil Aeronautics Board during his term of service as trial examiner and as my executive assistant as well. I have come to rely upon his rare good judgment and fairmindedness.

"I believe that the experience Mr. Reilly has gained with the Board will stand him in good stead in the performance of his duties as a Member of the Public Utilities Commission."

Southwest Cites Schedule Record

Southwest Airways officials cite their schedule record to bolster their application for the California feeder route certificate they are seeking. April figures covering Southwest's California-based Air Transport Command feeder service showed completion of 99.6 percent of scheduled mileage.

Near Perfect Record—The fact that one plane was forced by weather to land before reaching its destination marred what would have been a perfect record for flights covering 70,000 miles. Southwest's ATC contract requires delivery of high-priority cargo from central west coast supply depots to individual AAF bases.

The near-perfect record was announced as Southwest was celebrating the completion of 1,000,000 hours of flight in military pilot training at its Arizona schools at Thunderbird, Thunderbird II and Falcon Fields and Sky Harbor Airport at Phoenix. The schools have trained 15,000 pilots, including cadets of 30 foreign countries.

POST WAR TRADE with SPAIN

Mr. Harry Walker, President of Harry Walker Sociedad Anonima will arrive in New York City sometime in June to meet old friends; to make new connections and to plan for future business.

Mr. Walker's company is the Irvin Air Chute representative in Spain and is well equipped for service and maintenance of parachutes as well as aviation instruments. A division of the business is devoted to automobile garage and service station equipment and is the oldest enterprise of its kind in the country.

For contact, awaiting his arrival, address HARRY WALKER Sociedad Anonima, c/o McGraw-Hill, 330 West 42nd Street, New York 18, N. Y.

CAB SCHEDULE

June 5. Prehearing conference on the acquisition of Aerovias Braniff S. A. by Braniff Airways.
June 5. Oral argument on mail compensation paid Pan American Airways and its Colombian affiliate Uraba, Medellin and Central Airways.
June 6. Briefs due in the Memphis-St. Louis-Detroit case. (Docket 303 et al.)
June 6. Hearing on Pan-American's acquisition of CNAC stock.
June 6. Briefs due in Colonial Airlines' reopened rate case.
June 7. Prehearing conference on Oklahoma-Texas local service cases.
June 9. Prehearing conference on proposed service in New England.
June 10. Exchange of exhibits in American Airlines' proposal to acquire control of American Export Airlines.
June 12. Great Lakes-Florida case hearings before Examiner Ross I. Newmann. (Docket 570 et al.)
June 19. Tentative date for oral argument in Memphis-St. Louis-Detroit case.
June 20. Prehearing conference on proposed Florida air service case.
June 20. Deadline for filing amendments to applications included in the Rocky Mountain feeder case.
June 27. Prehearing conference involving applications for proposed air service in the North Central States.
June 30. Tentative deadline for exhibits in the applications of Alaska Airlines and Woodley Airways for mail service between Fairbanks, Anchorage and Kodiak, Alaska.
July 1. Deadline for exhibits in the West Coast case. (Docket 250 et al.)
July 17. Tentative hearing date for Fairbanks-Anchorage-Kodiak mail case before Examiner Lawrence J. Kosters.
July 20. Deadline for rebuttal exhibits in the West Coast case. (Docket 250 et al.)
July 24. Hearing before Examiner Thomas L. Wrenn on American's proposed acquisition of control of American Export Airlines
July 31. Date for exchange of exhibits in the Rocky Mountain local service case.
July 31. Exhibits due in the West Coast-to-Hawaii case.
Aug. 1. Hearing in West Coast case before Assistant Chief Examiner Francis W. Brown and Examiner F. Merritt Ruhlen.
Aug. 20. Rebuttal exhibits due in Rocky Mountain case.
Aug. 30. Rebuttal exhibits due in the Hawaiian case.
Sept. 5. Hearing date for Rocky Mountain feeder case.

CAB ACTION

● A report on the Rocky Mountain Case prehearing conference by Civil Aeronautics Board Examiners Madden and Moran outlines issues and sets Sept. 5 as hearing date. Applicants will be called on to prove citizenship, public convenience and necessity of the services they propose, and their fitness, willingness and ability. Public Counsel Paul Reiber has requested applicants operating other forms of transportation to seek CAB approval of such relationships. The Department of Justice is interested in this aspect of the case. Applications involve 190 cities. Most applicants have asked that hearings be held in Denver, but the Board has not selected a place.

● CAB has lifted a portion of the suspension order on Northwest Airlines' AM3, and the line resumed service between Spokane and Yakima June 1. AM3 between Yakima and Portland, Ore., remains suspended. The route, as now flown, extends from Spokane via Yakima to Seattle. Two planes released by the Army have recently been allocated to Northwest by the CAB.

● The Board dismissed at Western Air Lines' request an application by that carrier for feeder routes in California, Washington and Oregon. Western announced its intention to withdraw the application at the prehearing conference in the West Coast case.

● Transcontinental & Western Air started non-stop service on AM2 between Phoenix and Albuquerque June 1 in accordance with recently granted CAB permission.

● Eastern Air Lines has asked CAB to dismiss its application requesting addition of Knoxville, Tenn., as intermediate point on AM10. The application is consolidated with the Great Lakes-Florida case (Docket 570 et al.) scheduled for hearing June 12.

● Pennsylvania-Central Airlines filed notice of intention to start non-stop service between Youngstown, Ohio, and Washington, D. C., on AM14 beginning June 15.

● American Airlines announced that it will begin service to San Antonio on FAM26 about Aug. 1, in accordance with the recent CAB decision granting the stop. Service will begin as soon as ground installations and facilities for handling U. S. Customs are complete.

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All war contractors today own very considerable amounts of surplus materials. We want to help industry get these usable surplus materials back into production, while they can still be used to help win the war. And it is good business to move these materials now.

With the very comprehensive Master Inventory Record established at our headquarters, we offer to holders of unneeded materials an aggressive and convenient "Disposal Service" and to would-be purchasers an unequaled "Finding Service." General experience indicates clearly the wisdom of placing the responsibility for surplus sales in one place, to achieve the greatest efficiency and avoid interference with the major job of building equipment for the armed services.

Material Distributors, Inc. has pioneered a solution to the problem of moving surplus materials back into production, at or near current market prices, through maintenance of constant contact with the production needs of a large group of contractors nationally.

The months to come, while the war is still on, are the most precious months for disposal. Market conditions will never be better. Effective action now will reduce enormously the likely surpluses that will be left for after the war

The following operating procedures have been fully cleared with appropriate agencies of the United States Government:

1 Current lists of available surplus materials located throughout the United States and changes thereto, sent to us by contractors are consolidated into our Master Inventory Record, at no cost to the contractors.

2 As production requirements arise, contractors' purchasing departments submit them to us for a "locating check" against the Master Inventory Record. We locate the required materials and coordinate shipment between buyer and seller. Quotation requests are promptly handled, with critical telephone or wire requests receiving special attention.

3 No registration fee is required and no charge is made to buyers using our service. Buyers incur no obligation by inquiring about their needs

4 Shipment, invoicing and collection are accomplished directly between the buyer and the seller.

5 For sales arranged by Material Distributors, Inc., for a seller, a service fee of 10% or less is charged, based upon volume.

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FINANCIAL

★ ★

New Survey Sees 1950 Air Traffic 750 Percent Over 1940 Volume

Curtiss-Wright study predicts domestic total will reach 897 million ton-miles and world transport increase 2,100 percent to 292.1 million ton-miles, with U.S. share 188.6 million.

Domestic post-war air traffic may reach 897 million ton-miles by 1950—a volume seven and one-half times greater than 1940 business—while international air transport may expect a 21-fold expansion to 292.1 million ton-miles, with U. S. flag carriers' share estimated at 188.6 million ton-miles. By 1955, foreign air traffic may expand to 666.8 million ton-miles, with U. S. carriers taking 405.3 million ton-miles of business.

To handle this estimated flow of air traffic in 1950, domestic airlines would require 571 airplanes with a total seating capacity of 16,200, as compared with 338 airplanes of 6,200 aggregate seating capacity in 1940. On the foreign routes, U. S. flag carriers would need 158 airplanes with a total seating capacity of 4,900. By 1955, U. S. flag carriers would require a fleet of 276 airplanes of more than 11,000 total seating capacity to handle traffic forecasts.

▸ **Survey**—These estimates of air transport business are contained in a survey *Air Transportation in the Immediate Post-War Period,* prepared by B. A. McDonald and J. L. Drew of the Business Research Department of Curtiss-Wright Corp. Airplane Division.

Labeling their domestic estimates as "reasonable possibilities," the authors believe 1950 business will consist of 700 million ton-miles of passengers, 110 million ton-miles of cargo, and 87 million ton-miles of mail (assuming no surcharge after the war). The pattern of growth is seen in Table A.

In arriving at their estimates of foreign traffic, the authors recognize the political uncertainties, but believe "sound policies" will be worked out within and between nations which will allow international air transport to follow a natural course of growth. They assume that foreign landing rights will be secured rapidly enough to keep pace with traffic requirements, and that the rate of mail pay to U. S. international operators will be sufficiently higher than that received by domestic operators after the war to compensate for certain airways, navigation facilities and airport expenses.

The greatest increase in international traffic is expected in passenger business principally because of the benefits of speed and the fact that the cost of traveling by air is expected to be much closer to surface rates than air cargo and air mail will be to their competitive surface rates. Large scale air cargo development is expected to take a "much longer time" than passenger traffic growth, while the expansion of first-class air mail traffic is "largely" a matter of "political determination."

▸ **Post-War Traffic**—An analysis of international post-war air traffic (U. S. carriers expected to take roughly 65 percent) shows the trend indicated in Table B.

In estimating equipment needs, the Curtiss-Wright survey assumes that utilization (hours flown per year) will be improved beyond pre-war levels, but will not be up to war-time airline standards. This would mean average utilizations ranging between 2,500 and 3,600 hours annually for various types of equipment at different periods. In light of pre-war trends and war-time operating experience, the study assumes a pay-load factor of 65 percent to be generally applicable to future operations, both domestic and international.

Four general types of equipment are listed in the report as follows:

Post-War Transport Types

	Size Class	Type of Route For Which Suited	Gross Weight Pounds
1.	Small	Feeder	10– 15,000
2.	Small	Trunk	20– 30,000
3a.	Intermediate	Trunk	40– 75,000
3b.	Intermediate	Trunk	75–100,000
4.	Large	Trunk	100–150,000

The equipment requirements of the domestic airlines to handle estimated 1950 post-war traffic call for 571 airplanes of the types shown in Table C.

On the foreign routes, the equipment chart for United States flag carriers shows the trend indicated in Table D.

In an analysis of the cost of operation, the survey presents a comparison of "Economic Rate Basis" for various operations along with estimated rates for similar operations, as follows:

Estimated Rate Basis and Rates For Post-War Air Transport Operations

Classification	Period (a)	Rate Basis (b)	Estimated Rate	Estimated Year
Domestic Passenger	Transition	3.5–4.5c/pass. mile	4.5c	1946
Domestic Passenger	2nd	3.0–4.0c/pass. mile	3.5–4.0c	1950
Domestic Cargo	Transition	35–50c/ton-mile	40c	1946
Domestic Cargo	2nd	30–40c/ton-mile	30c	1950
International Passenger	Transition	3.5–7.5c/pass. mile	7.0–7.5c	1946
International Passenger	2nd	3.0–6.0c/pass. mile	4.5–5.0c	1950
International Cargo	Transition	35–65c/ton-mile	50c	1946
International Cargo	2nd	30–50c/ton-mile	40–45c	1950

(a) Transition and secondary post-war periods.

(b) Cargo rate basis is based on combination passenger-cargo plane operation; ground handling costs (pick-up and delivery, terminal operations, etc.) are included.

The survey points out that domestic passenger rates should tend to follow the rate basis figures fairly closely, since domestic operations were the source of much of the statistical material. In 1946, however, it is not believed that rates will be down to the theoretical level indicated by the rate basis, since much of the equipment probably will be new, expansion may tend to make operations somewhat expensive, and operators may be cautious regarding excessive rate decreases. By 1950, the authors of the study believe rates should be somewhat closer to the figures listed under rate basis.

"It is assumed," the survey states, "that domestic cargo rates, unlike passenger rates, will tend to cut under costs to some extent in order to develop the business and in order to test the effect of reduced rates on cargo traffic. From traffic estimates made later, it appears that this considerable decline from present rates will have to come quickly if an appreciable volume of cargo business is to be transacted by the airlines in the near future.

"International Passenger and Cargo expenses may be expected to run somewhat higher than the figures indicated by the rate basis analysis. However, it is assumed here that this additional expense will be compensated for by a greater degree of government aid in international operations. Thus the rate basis analysis provides a reasonable foundation for estimating international rates."

(A) Estimated Domestic Post-War Air Traffic
(Million Ton-Miles)

	1940		1946		1948		1950	
Passenger (a)	104	(89%)	470	(80%)	611	(80%)	700	(78%)
Cargo	3.5	(3%)	38	(7%)	65	(9%)	110	(12%)
Mail	10	(8%)	78	(13%)	82	(11%)	87	(10%)
TOTAL	117.5		586		758		897	

(a) One ton-mile equals 10 passenger-miles (assuming a weight—including baggage—of 200 pounds per passenger).

(B) Estimated Total U.S.-International Air Traffic
(Million Ton-Miles)

	Total—All Carriers				U.S. Carriers' Share			
	Passengers (a)	Cargo	Mail	Total	Passengers (a)	Cargo	Mail	Total
1940	11.5	1.0	1.0	13.5	11.5	1.0	1.0	13.5
1946	100.0	18.0	5.0	123.0	66.9	14.0	5.0	85.9
1950	247.5	36.0	8.6	292.1	155.0	25.0	8.6	188.6
1955	480.0	167.0	19.8	666.8	287.5	108.0	19.8	405.3

(a) Passenger-miles are converted to ton-miles on the basis of 200 pounds per passenger.

(C) Estimated Post-War Equipment Requirements
(Domestic)

	Number of Planes			Total	
	Feeder Type	Small, Trunk Type	Intermediate, Trunk Type	No.	Seat Capacity
1940	101	232	5	338	6,200
1946	84	196	220	500	14,000
1948	93	212	250	555	16,000
1950	91	216	264	571	16,200

(D) Estimated Post-War Equipment Requirements
(International)

	Number of Planes				Total	
	Feeder Type	Small, Trunk Type	Intermediate, Trunk Type	Large Trunk Type	No.	Seat Capacity
1940	70	39	15	—	124	2,070
1946	55	32	39	—	126	3,050
1948	63	38	48	2	151	4,000
1950	60	36	55	7	158	4,900
1955	100	59	77	40	276	11,000

SEC Gets Bell's 1943 Statement

Bell Aircraft Corp. paid its president, Lawrence D. Bell, total compensation of $100,850 for 1943, according to its annual report to the Securities and Exchange Commission.

Other high bracket salaries paid included $60,750 to Ray P. Whitman, first vice president, and $50,029 to Omer L. Woodson, another vice president. In addition, $32,531 was paid to Price, Waterhouse & Co. for accounting services, and Dudley, Stowe & Sawyer was paid $42,750 for legal services.

▸ **Stock Agreement**—Mr. Woodson, under a stock purchase agreement with the company, purchased during 1943 400 common for $4,000. At the time the purchase was made by Mr. Woodson, the market value of this stock was reported to be approximately $7,500.

The corporation's statement of profit and loss for the fiscal year showed sales and billings under cost-plus-fixed-fee contracts of $232,134,628. Cost of goods sold was $219,925,387, leaving operating profit of $12,209,240. Other income, such as discounts on purchases, interest and license fees, boosted this to $12,499,453, from which was deducted $1,187,039 of interest expense, leaving $11,312,413 as the net income for the year.

▸ **$8,500,000 Set Aside**—The company set aside $8,500,000 as provision for estimated federal income and excess profits, less $850,000 for post-war refund. After providing $600,000 for contingencies, profit for the year transferred to earned surplus was $2,462,413.

Earned surplus at the beginning of the year was $2,667,804, and at the end of the year, $5,509,378.

United Gives Data On 1943 Income

United Air Lines, Inc., paid its president, W. A. Patterson, $36,908 for 1943, according to the company's annual report filed with the Securities and Exchange Commission. J. A. Herlihy, vice-president in charge of operations, was paid $22,641, and Harold Crary, vice-president in charge of traffic, $15,358.

The law firm of Mayer, Meyer, Austrian & Platt was paid $86,000 for legal services during 1943. Paul M. Godehn, a director, is a member of the law firm.

▸ **Auditors**—Arthur Andersen & Co., general auditors for United, got $53,723 for services during 1943.

United's statement of income for itself and its consolidated subsidiaries for 1943 showed operating revenues of $27,650,544, of which $18,760,101 was for transportation. Total operating expenses were $20,425,759, leaving net earnings before taxes of $7,224,785. Income from other sources amounted to $458,665.

North American Reports on Salaries

North American Aviation, Inc., paid its president, J. H. Kindelberger, $140,299 for the fiscal year ended Sept. 30, 1943, it was disclosed in the company's annual report to the Securities and Exchange Commission.

J. L. Atwood, first vice president, was paid $75,300, and R. A. Lambeth, vice president and treasurer, $36,300 for the same period. All are directors of the company.

▸ **3 Officers Get $84,383**—Three officers of the company, not otherwise identified by name, were paid a total of $84,383. An assistant chief engineer was paid $24,000.

Attorneys for the company, Chadbourne, Wallace, Parke & Whiteside, were paid $59,183 in legal fees. Haskins & Sells, independent public accountants and auditors, were paid $25,500 for the fiscal year, while $39,343 was paid to R. L. Kautz & Co., as a service fee in connection with workmen's compensation self-insurance.

▸ **Stock Ownership**—General Motors Corp. owns 1,000,061 shares of the company's $1 par value capital stock, representing 29.11 per cent of that class.

EDITORIAL ★

The CAP League

ANY NEW legitimate organization formed to advance the cause of aviation deserves strong support from those who have faith in the future of American flying. Nationwide skepticism and confusion in aviation circles are evident, however, over the new Civil Air Patrol League which should be met with a forthright public statement clarifying the facts surrounding the League's formation and its entire long-range program.

The League's founding was announced in March, with endorsements by the President, General Arnold, and an impressive list of leaders in business, industry and labor.

The non-profit, non-partisan League announced that three of its main purposes at that moment were to launch a membership drive, start a campaign to cooperate with state and local CAP units in interesting 250,000 cadets to study aviation, and to start an educational campaign to interest communities in building airfields and airports after the war.

According to Thomas Beck, League chairman, the group is committed not only to supporting CAP but the general education of the American public "in maintaining the number one position in the air for our country for all times—in war and in peace."

CAP, which has done a remarkable wartime job, is to remain operating as heretofore. The League, however, will not operate state or local units but serve as a means whereby many citizens who do not have the time or the qualifications to be effective as CAP members can nevertheless give support to the program.

Financing CAP, whose members have dug down into their pockets repeatedly for barest operating expenses, arouses no argument. But throughout the League's publicity matter there has been a failure to list the other long-term plans or exactly how the League will operate, and who will control its policies. The top-heavy emphasis on nationally known names of persons who cannot possibly have the aviation background to take an active part in the League's program give some basis for widespread questioning of the actual policy-makers. Will they be civilians or Army officers?

If the League hopes to push local aviation improvements how can it work without local chapters? If CAP wings are to substitute for local League representation, where exactly is the distinction between CAP, which is an AAF auxiliary, and the League, which apparently is a civilian controlled group? What is to be the relationship between the League and already functioning local and national aviation associations with similar objectives? Throughout League statements to date has been the indication that other main purposes will be announced in the future. What are these? These questions are being asked widely. They do not originate on this page.

So far, the data given on the League's formation have not satisfied the ranks of aviation's public. As commendable as it is to strive for general education of the American public "in maintaining the number one position in the air for our country for all times," a more complete explanation of the program would be welcomed before soliciting more memberships ranging from $3 to $100. It would stifle ugly rumors that the League is merely a post-war pressure group for the military.

"Radical" Utility

ENGINEERS in the automobile industry make the frequent statement that the public is slow to take to wide variations from conventional motor car designs. They have gone on the record on this score for years. They cite as evidence the failure to sell in this country large numbers of miniature cars such as the Crosley and Austin. They remember the several body designs of about ten years ago which resembled the teardrop. They cite other sales failures, and make it clear that they can do no more than make gradual changes from year to year in accordance with the evolution of the public's ideas.

The designers of the post-war private plane now are debating the same general subjects, but they are urged not to take Detroit's arguments too seriously.

Actually, the motor car makers seem never to realize that they have never put their complete facilities to work to give so-called radical designs a chance to sell. They have failed to put into their new designs all of the comforts and economies which the older models possessed. Parts distribution and service problems were never really solved with the perfection of widely sold models. The customer felt he was penalized because his car was different, and he traded in his novelty on a conventional but more serviceable model—not because he shrank from being different.

The makers of tomorrow's lightplanes can take no better lesson from the motor car industry. The success of the radical no-spin, no-stall *Ercoupe* just before the war was an encouraging indication that the plane-buying public will get radically changed models which can be operated with relative economy and utility.

ROBERT H. WOOD

"SEAT-OF-THE-PANTS" FLYERS LAUGHED — BUT

Dick Merrill stayed with the Link!

Chief Link Trainer Instructor Harry Martin, of Eastern Air Lines, discusses recent improvements in the Link with Capt. Dick Merrill

When Eastern Air Lines standardized on Link Training for pilots in 1937, Capt. H. T. (Dick) Merrill had been flying the big "Silverliners" for eight years.

Merrill was quick to evaluate the remarkable ability of the Link Trainer to reproduce conditions of actual flight. He became an untiring student of instrument flying. His enthusiasm got a laugh from some flyers of the "seat-of-the-pants" school, but Dick continued to spend much of his spare time in the Link.

Now sixteen years with Eastern, Merrill has nearly three million miles to his credit. For the Military Transport Division of Eastern Air Lines, he has flown military personnel and materiel around the world. Among Merrill's feats are two outstanding records: *first* to fly the Atlantic Ocean both ways; *first* to fly the Atlantic round-trip with payload.

On the return leg of that round-trip flight to London, the weather was bad; with low ceiling, poor visibility, rain. Thanks to instrument flying skill, the crossing was "routine."

Dick Merrill has probably spent more time in the Link Trainer than any other pilot of his length of service.

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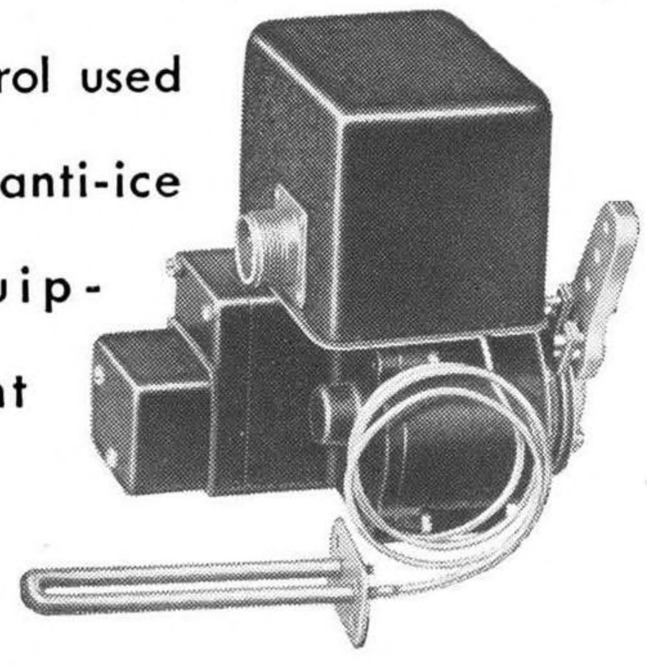
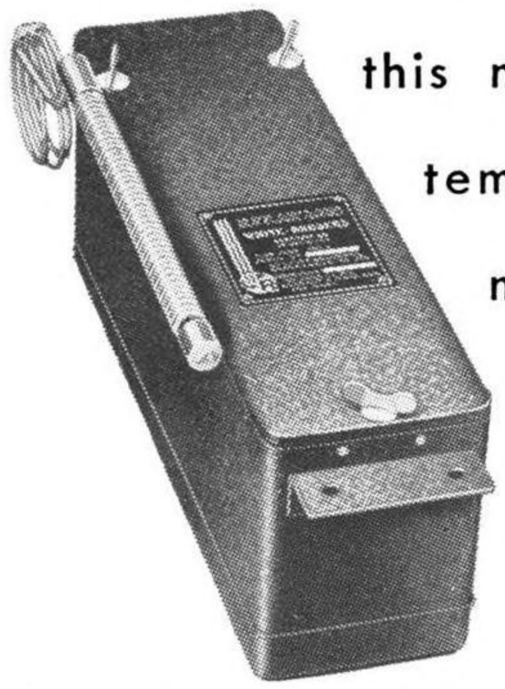
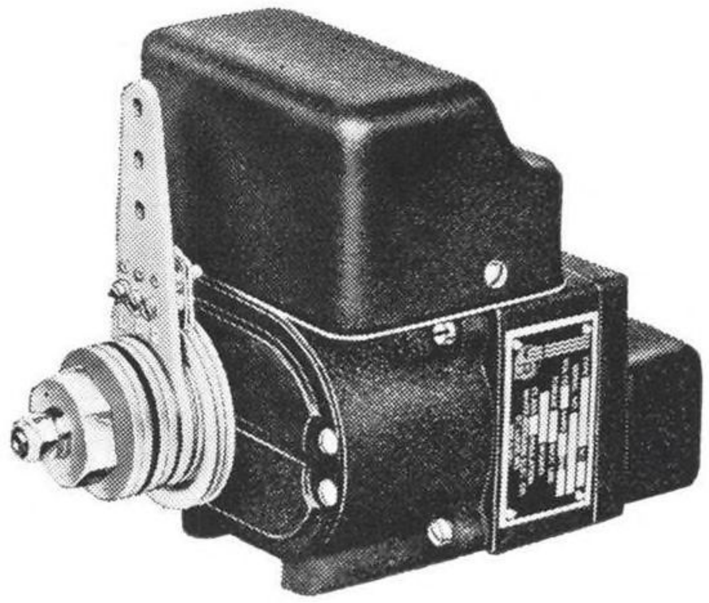


bombing planes. Another product built for our flying forces is



this motorized temperature modulating control. It is used for maintaining cabin, cockpit, carburetor, or air intake temperatures, where close control is required. It may be adapted for other temperature controlling requirements.

In addition, for use as "muscle motors" in many types of applications requiring automatic or electrically controlled power, our workers make several types of Servos, such as the one illustrated below. Its operation can



save planes and pilots when called upon to act!

If you build aircraft and this type of equipment will help make your planes better or safer to fly, we will be glad to supply engineering data and application information on request.

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