



Aviation News Features



Released by the Aviation News Committee, Aeronautical Chamber of Commerce of America

Increasing purchasing power and prosperity in communities from coast to coast, airplane, engine and propeller factories provided jobs for 22,443 additional Americans during the month of July.

Here is the story of one month's progress in the aircraft industry, told in statistics:

	July 1	August 1	Increase
Employees	281,306	303,749	22,443
Floor Space (sq. ft.)	40,096,497	41,896,347	1,799,850
Weekly Payrolls	\$10,605,321	\$11,688,780	\$1,083,459
	June	July	Increase
Man-Hours Worked	46,620,965	52,153,243	5,532,278

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AERONAUTICAL CHAMBER OF COMMERCE Aviation News Committee

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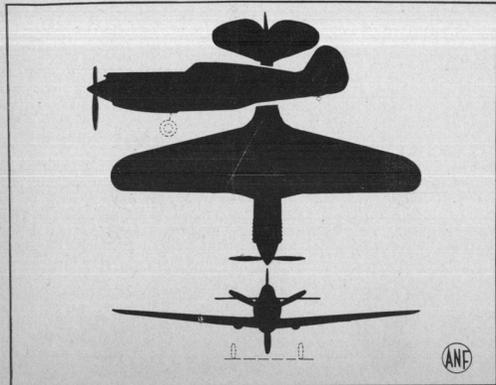
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RELEASE SEPTEMBER 15

Know America's Planes

CURTISS P-40



Already tested on European war fronts, the airplane shown here—the Curtiss P-40—is the standard pursuit of the U. S. Army Air Forces. You can identify this ship by the elliptical tail, the neatly-cowled nose housing the Allison engine and the deep radiator on the underside of the fuselage forward of the wing. A new, faster, more heavily armed version, known as the P-40D, has just gone into production.

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Stearman Turns Out

Its 2000th Trainer

WICHITA, Sept. 15.—(ANF)—Representative of the tremendous production strides being accomplished by the American aircraft industry, the Stearman Aircraft Division of Boeing Airplane Co. recently completed the 2000th Stearman primary training airplane under the U. S. emergency defense program.

A brief ceremony accompanied the turning over of the 2000th plane to Lt. Col. Ray G. Harris, U. S. Army Air Corps representative. Production of the trainers is continuing at the Stearman Plant No. 1 here. Meanwhile, the Boeing Co. is in the process of erecting a new 1,350,000-square foot plant at Wichita to contribute to its Seattle production of four-engine Boeing Flying Fortresses for the United States and Great Britain.

POTS AND PANS

Donations of aluminum pots and pans which American housewives recently made as a patriotic gesture will furnish metal sufficient to build more than 2800 warplanes, OFM officials in Washington have informed the Aviation News Committee. This collection of kitchenware, it was said, will total about 14,000,000 pounds of the essential scrap metal, which should yield about 10,500,000 pounds of aluminum equivalent to about 9 per cent of the consumption last year by the secondary smelters to which the scrap was shipped. The contribution of pots and pans is said to average nearly half a pound of scrap for each occupied dwelling house in the United States.

'A. B. C.' OF ARMY PLANES

All Those Symbols Have a Meaning

An American public, reading with increasing frequency of B-17Es or P-39Cs, may be inclined to be confused by the seemingly cabalistic markings on U. S. warplanes.

Actually, these letters and numbers are the Army's method of identification and provide a key to a warplane and its mission. To help you understand them, the Aviation News Committee, through cooperation of the U. S. Army Air Forces, presents the following explanation:

- A** is for ATTACK BOMBER. (Example, the Douglas A-20A.)
- B** is for BOMBARDMENT. (Example, the Martin B-26.)
- C** is for CARGO TRANSPORT. (Example, the Lockheed C-56)
- FM** is for FIGHTER (multiplace). (Example, the Bell FM-1A.)
- O** is for OBSERVATION. (Example, the Stinson O-49)
- P** is for PURSUIT. (Example, the Curtiss P-40.)
- T** is for TRAINER, primary, basic and advanced. (Examples, Stearman PT-13B, Vultee BT-13, North American AT-6A.)

The Air Forces also use F for Photographic, G for Autogiro, PB for Pursuit (biplace) (not to be confused with the Navy designation PB for Patrol Bomber).

A number after the letter of designation simply means the model number. And a letter appearing after the number shows that improvements or refinements have been made in the original model.

When an "X" appears before the designation letter the ship is an experimental model. When the experimental model is approved, the War Department buys a number for actual service trials. Then the "X" becomes a "Y." And when an airplane is classified as obsolete (and no more ships of that type are to be ordered), the Air Forces substitute the letter Z.

American Planes Soon Will Patrol Entire Atlantic

London Describes Feats of Catalinas Along Convoy Route

Further evidence of the outstanding performance of American-built airplanes under actual war conditions—conditions which are providing an invaluable testing ground for similar aircraft being produced for the U. S. Army and Navy—is contained in the following dispatch received by AVIATION NEWS FEATURES from the British Press Service in London:

LONDON, Sept. 00.—The time will soon come, air experts here predict, when ship convoys will be protected all the way across the perilous Atlantic by escorts of long-range flying boats.

American-built craft are expected to make this possible, and already, these experts state, Consolidated PB-5s known as Catalinas in Britain, have compelled Nazi submarines to operate hundreds of miles farther from the British Isles than six months ago. These American craft operate from bases in Northern Ireland and have, in conjunction with naval forces, driven U-boats farther and farther from Britain's northwestern approaches.

Similarly, Catalinas operating from Newfoundland give protection to stretches of ocean hundreds of miles from the Canadian coast. Thus, the Germans have been forced to conduct their vital underwater program against British shipping largely in the middle portion of the Atlantic.

The Catalina is particularly suited to this vital patrol work because of its amazing 4000-mile range, which is believed to be greater than any foreign type of aircraft in regular war service. It is thus able to scour thousands of square miles of ocean before it must return to base. Whenever it spots a lone U-boat, it is able to head-off and warn convoys in the danger zone.

Recent dispatches from Lisbon told of the exploits of a lone Catalina, manned by an RAF crew, in beating off German bomber attacks on a convoy of 20 vessels during a four-day running battle off the Spanish coast. Whenever the Luftwaffe bombers approached the convoy, the Catalina dived at them, forcing them to scatter and drop their bombs into the sea.

Let's Go! U.S.A.—Keep 'em Flying!

Warplane Engine Across the Sea . . . Rolls-Royce Power Plant in New P-40F

NEW YORK, Sept. 00.—(ANF)—Demonstrating the remarkable adaptability of American-built aircraft, an American pursuit plane powered with a British-designed engine has been turned over to the U. S. Army Air Forces for test flights, the Aviation News Committee reported today.

The airplane is the newly developed Curtiss P-40F, designed and produced at the Buffalo plant of the Curtiss-Wright Airplane division, while the power plant is a Rolls-Royce Merlin, a type now being manufactured by the Packard Motor Car Co. of Detroit.

The P-40F marks the latest development in the famed P-40 series. The others, powered with American-made Allison engines, are in general service with the U. S. Air Forces and British Royal Air Force.

Let's Go! U.S.A.—Keep 'em Flying!

PLANE FACTS:

RAF Accepts New Fighter

Speed counts in aircraft production. Example: the new North American Mustang fighter was constructed, tested and accepted by the British RAF in one-half to one-third the time normally required.

Let's Go! U.S.A.—Keep 'em Flying!

Versatility of American aircraft is illustrated by the fact that the twin-engine Beechcraft Model 18 has been variously adapted by the U. S. Army and Navy as a high-altitude photographic plane, personnel transport, observation and utility ship and a long-range navigation trainer.

Let's Go! U.S.A.—Keep 'em Flying!

Under construction at the Moffett Field (Calif.) laboratory of the National Advisory Committee for Aeronautics is a wind tunnel which will generate speeds of 600 mph.

Let's Go! U.S.A.—Keep 'em Flying!

To speed up the job of getting aircraft engines into action as quickly as possible, American manufacturers coat engines for delivery with a new dehydrating substance known as "silica gel," which protects the machinery against corrosion and renders the unit ready for almost instant installation without laborious cleaning processes.

Aviation's Who's Who

J. CARLTON WARD, JR.

"Don't tell Carl Ward anything unless you're prepared to tell it all!"

That's the recent remark of a long-time associate of the six-foot-five-and-a-half-inch president of the Fairchild Engine and Airplane Corp. It bespeaks a reputation which has followed J. Carlton

Ward, Jr., from his student days at Cornell, through the O. & W. locomotive shops at Middletown, N. Y., and through a long series of engineering and production management jobs in paper making, wire rope and machine tools, to aircraft engine and planes, his present post.

"Mention a seemingly casual fact," the friend went on, "and out comes the familiar yellow pad and pencil. When Carl Ward gets through you may be sure he knows all you know about the subject and that he'll worry it like a terrier worries a bone. And, if that's not enough for him, he'll get more data from other sources."

Hence, Carl Ward is looked up to as an expert not only in the field of aeronautics but in such things as the finish of the Colonial woodwork and the original hardware of the 300-year-old house which he and Mrs. Ward occupy at Farmington, Conn.

It was perhaps because of this trait of thoroughness that Mr. Ward, then a vice-president and director of United Aircraft and general manager of Pratt & Whitney, was chosen in 1940 to head the official mission sent to the French government in an effort to help bolster engine and aircraft production before the collapse of that nation. In consequence, he has since his return been regarded as source material by military, naval and industrial authorities in the United States.

In July, 1940, following his return from France, he joined the organization which, under Sherman M. Fairchild, has been successfully producing and selling airplanes for twenty years. Mr. Fairchild became chairman of the board and maintains a close day-by-day contact with the company.

Under Mr. Ward's direction, production of the low-wing, cantilever Fairchild training plane at the company's Hagerstown, Md., plant has kept pace with and ahead of the most strenuous army demands. Just now the plant is producing as many planes each month as it did in a year back in July, 1940, the while turning out the familiar Fairchild-24 cabin monoplane for government and foreign use when military schedules permit.

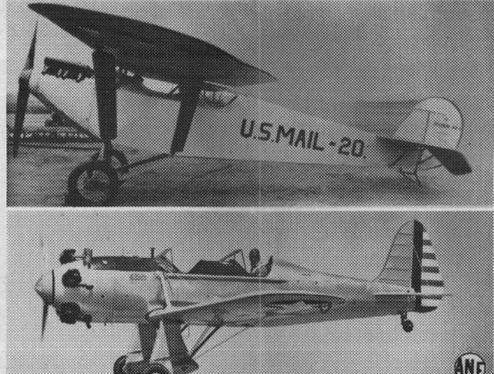
The Ranger engine—manufactured at Fairchild's Farmingdale, L. I., plant—powers all but a few of these trainers. A twelve-cylinder version of the Ranger producing more than 500 horsepower has been adopted by the Navy for air-cooled inline power in a combat plane, the Curtiss SO3C-1.

Under Carl Ward's leadership the company's Duramold process of molded wood and synthetic resin is being brought to the production point for stabilizers and other components of Fairchild and other planes.

Mr. Ward was born in Brooklyn, N. Y., 48 years ago and received his mechanical engineering degree at Cornell in 1914. He is now a member of the engineering council of Cornell and a member of the board of directors and the executive committee of the Aeronautical Chamber of Commerce.

RELEASE SEPTEMBER 15

1926---Then and Now---1941



September marks the 15th anniversary of the inauguration of commercial airline service on the Pacific Coast. These photographs, from the Aviation News Committee of the Aeronautical Chamber of Commerce, show (top) the type of plane used in this pioneering service, a Ryan M-1, vintage of 1926, contrasted (bottom) with the 1941 all-metal, low-wing monoplane trainer now in mass production for the U. S. Army Air Corps by Ryan Aeronautical Co. of San Diego.

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AIRCRAFT INDUSTRY'S TASK DOUBLED; PLANE ORDERS TOP \$5 BILLION MARK!

RELEASE SEPTEMBER 15

New Air Arms for Defense of the Pacific



The situation in the Pacific has centered attention on the American aircraft industry's production of warplanes to arm the U. S. Navy, Great Britain and the Netherlands East Indies against possible aggression in that area. These photographs, from the Aeronautical Chamber of Commerce Aviation News Committee, show one phase of that production effort—the building of dive bombers and shipboard fighters by Brewster Aeronautical Corp. The upper photographs show two views of the SB2A-1, the U. S. Navy's newest high-speed, long-range dive bomber, which carries a 1000-pound bomb entirely enclosed within its fuselage and has a power-operated gun turret. An export version, called the Brewster Bermuda, will be built for Great Britain and the Netherlands East Indies. The lower photograph is of a squadron of Brewster Buffalo fighters delivered to the Netherlands East Indies.

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Airplane Engines Go

Into New U. S. Tanks

NEW YORK, Sept. 00.—(ANF)—Because of their small size, relatively light weight, low fuel consumption and general all-around performance records, aircraft engines are to be utilized to power some of the United States Army's M-3 medium tanks, the War Department has announced.

A contract has just been awarded to the Wright Aeronautical Corp., Paterson, N. J., for a quantity of Whirlwind engines for use in the tanks now being built at six tank arsenals in the United States.

The use of aircraft engines allows more room for the crew, fuel and ammunition.

AEROQUIZ

U. S. Plane Has Highest Power

Q—What is the highest-powered airplane in the world?

A—The American-built B-19 Super Bomber, which has four 18-cylinder Wright Cyclone engines of more than 2000 horsepower each. The almost-forgotten Dornier DO-X, which was flown to the United States in 1931, held the title until 1941. This German flying boat was powered with 12 American Curtiss Conqueror engines of 600 horsepower each, furnishing a total of 7200 h.p. at take-off. But the DO-X could not carry a payload any great distance, while the Douglas B-19 has a bomb load capacity of 18 tons for extensive flights.

Q—What are some of the national defense uses to which light airplanes can be put?

A—Military observation and liaison, plus pilot training, pipe line and other patrol work, equipping of home guard units, police and fire patrol work, etc.

Q—What type of aircraft is the Cant Z.501?

A—The Cant Z.501 is a four-place Italian bombing and reconnaissance flying boat.

Q—Is the aircraft industry utilizing sub-contracting to speed production?

A—Yes, extensively. In some cases sub-contracting runs as high as 60 to 80 per cent on each plane.

Q—Is the American Airacobra pursuit ship being produced for Great Britain?

A—Yes, in large quantities. The British also call the fighter the Airacobra. There is also a U. S. Navy version of the Airacobra, known as the Airacobra.

Let's Go! U.S.A.—Keep 'em Flying!

NEW AIR TRANSPORTS

The U. S. War Department announces the testing of two new transport airplanes—the Lockheed C-56 and C-57—military counterparts of the Lodestar commercial transport.

Let's Go! U.S.A.—Keep 'em Flying!

U. S. AIRCRAFT IN BRAZIL

American aircraft are to be manufactured in a factory to be built at Logoa Santa, Brazil.

22,000 New Jobs Created in July; Payrolls Mount

Big Man-Hours Increase Shows Rising Tide of Production

P. M. RELEASE SEPTEMBER 15

WASHINGTON, Sept. 15.—(ANF)—The task assigned America's aircraft industry—that of arming World Democracy in the air—was doubled during the first seven months of 1941, the Aviation News Committee reported today.

On January 1, 1941, the industry faced the job of building \$2-831,665,159 worth of planes, a figure which some quarters believed would tax the ultimate capacity of the aircraft builders to the limit.

TASK IS DOUBLED

Yet in the seven ensuing months new orders brought this figure to the staggering total of \$5,586,319-334, almost exactly double the industry's assignment at the year's start.

As the industry is estimated to have produced something more than \$700,000,000 worth of planes during this January-August period, the new orders placed amounted to approximately \$3-450,000,000.

This data highlighted the regular monthly survey of the Aeronautical Chamber of Commerce of America, a survey which revealed that the aircraft industry—plane, engine and propeller makers—worked 5,532,278 more man-hours in July than it did in June.

(OFM Director General William S. Knudsen has described man-hours worked as the best index of defense production effort. Two weeks ago the Aeronautical Chamber reported on man-hour and other accomplishments during July of the airplane section of the industry alone. Data assembled since on the engine and propeller divisions of the industry, revealed the increase in man-hours worked from 46,620,965 in June to 52,153,243 in July.)

PAYROLLS, PERSONNEL, ETC.

The August 1 survey also showed that:

1. Weekly industry payrolls rose from \$10,605,321 on July 1 to \$11-688,780 on August 1, an increase of \$1,083,459.

2. The industry put into operation during July, 1,799,850 additional square feet of floor space to bring the total to 41,896,347.

3. More than 22,000 new employees were hired during July, bringing the total number of employees to 303,749.

Significant was the disclosure by the survey that the aircraft engine manufacturers virtually have completed their plant expansion program. Beginning with 1-726,307 square feet of floor space on January 1, 1939, the engine companies on August 1, 1941, had 10,150,701 square feet in actual operation, with only 638,500 square feet under construction.

X-Ray Plays Its Part in Speeding Production of American Warplanes

Inspection Is Accelerated by Machines Which Find Hidden Faults in Metals

Sixteenth of a series on scientific research and its application to accelerated warplane production, this article describes the use of the X-ray in high-speed inspection.

Human beings have themselves X-rayed after they have cracked up—to determine what has been broken. But America's busiest national defense industry has found a new use for the X-ray . . . the prevention of crack-ups.

And in so doing it has warplanes for democracy's defense. Out of all this has emerged a comparatively new occupation in the American aircraft industry—the metallurgical X-ray technician who determines, before a part is built into a fighter, bomber or trainer, whether that part carries any hidden flaws.

Not only does the X-ray technician add to the safety of flight, but he speeds up production—an important factor in national defense. In plants using the X-ray inspection and correlated tests of materials going into airplanes, the Government permits the use of castings in place of many forgings. Due to the fact that castings can be produced faster than forgings, and in some cases reduce the number of parts needed per plane, this concession works to the advantage of the aircraft builder both in time and expense.

"There are from 600 to 800 Class 1 and stress parts in the average warplane that must be X-rayed to make sure that no unsound parts are used," explains Tom Triplett, pioneer in this work. "The X-ray eliminates all guesswork. It reveals the presence of flaws that are not evident on the surface. Since the safety of a plane may depend on the detection of these flaws, it is important, in the interest of speed, that it be done as rapidly as possible. We can now X-ray more than 20,000 parts a day at Lockheed."

Lockheed gave it a try, permitting Triplett & Barton to operate their own "concession" within the factory grounds in Burbank, and from a small beginning the X-ray and other metallurgical tests applied to airplane parts have grown to considerable proportions. At present there are some 35 X-ray technicians at work in the laboratories at Lockheed, and four new machines, each capable of X-raying as many as 5000 small parts a day, have been installed.

These machines ferret out hidden cracks, fissures, blow holes, and other invisible faults in dural, aluminum, bronze and other metals, both castings and forgings. Each machine is a self-contained unit, the high-voltage X-ray tube being housed in a lead-lined cabinet about ten feet high and four feet square. The operator can work alongside the cabinet without exposing himself to the dangerous X-rays.