PRODUCTION of military airplanes is zooming . . . 1476 in one month, 7423 in six months, 11,647 in 12 months. For details of how this industrial miracle is being accomplished, see the story and pictograph in Cols. 7 and 8.

PICTURES tell the story of production. Your readers will be interested in the photographic layout (Cols. 4, 5 and 6). If you're not already receiving this service, mats or glossy prints are yours without cost for the asking.

PROPELLERS for American warplanes are in quantity production. The story of the building of these "tailormade" accessories is a fascinating one. You'll find it in

Cols. 3, 4 and 5.

Vol. 3, No. 6

August 1, 1941

AERONAUTICAL CHAMBER OF COMMERCE **Aviation News Committee**

NEW YORK: WASHINGTON: LOS ANGELES: 30 Rockefeller Plaza 7046 Hollywood Blvd. Shoreham Bldg. LAUREN D. LYMAN A. M. ROCHLEN HOWARD MINGOS Vice-Chairman

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NOTE TO EDITORS: We want every publication to get an even break on articles and photographs appearing in Aviation News Features. Unless otherwise indicated, all material is released on and after the 1st or 15th of each month. Strict observance of these release dates will mean that everyone gets that even break.

Output of 3000 Planes per Month in 1942 Is Predicted by Knudsen

OPM Chief Says U. S. Will Be Making 50 per cent More Aircraft than Any Other Nation

LOS ANGELES, Aug. 00.—(ANF)—American craftsmen, engineers and management—pulling together as a team in the nation's aircraft factories—in 1942 will be making more airplanes by 50 per cent than any other nation in the world.

William S. Knudsen, OPM's director general, made this prediction after an inspection of western aircraft factories-part of a national tour of defense industries.

"We will have enough airplanes to go around next year," Mr. Knudsen said. "We are making about 1450 a month now. (Official June production figures showed 1476 planes.) By the second half of next year, we'll be making 3000 planes a month—50 per cent more than any other power on earth."

Time is the only bottleneck and man-hours is what counts on the scoreboard, said the man whose career has been that of a production expert.

"Money doesn't mean anything, unless it is translated hours," said Knudsen. "Man-hours is what we want."

Man-hours—a total of 45,588,286 -was what the OPM got from the aircraft industry in May, a 9.1 per cent increase over April. June man-hour figures are expected to show an even more substantial in-

Evidently reassured by what he observed in the defense plants, Mr. Knudsen said:

"When I saw your airplane assembly lines, your shipyards, your toolmakers and your workers hustling around, somehow I had a safe feeling inside." Let's Go! U.S.A.—Keep 'em Flying!

Endless Chains Speed Pursuit Plane Output

A feature of the Bell Aircraft Corp.'s new 240,000-square foot assembly plant at the Niagara Falls airport are two endless chain conveyors on the assembly line, typifying one of the many methods for speeding up production evolved by the aircraft industry.

Dollies in which the famous Airacobra pursuit planes are cradled during final assembly are attached to the endless chain by a large hook. Recessed in the floor, the chain moves forward at the rate of about 5/8 of an inch per minute past the various assembly stations.



Aviation News Leatures



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

38 Million Feet of Floor Space for U.S. Planes!

Such Is Expansion Record Accomplished by Our Aircraft Plants

WASHINGTON, Aug. 00.—(ANF) -As American aircraft and engine plant space passed the 38,000,000 square feet mark in July, Phase II of the industry's record-breaking plant expansion for defense was

In this second expansion phase, beginning July 1, 1940, floor space was increased from 17,216,410 square feet to more than 38,000,000

square feet on July 1, 1941. During that year, floor space where the nation's warplanes are built more than doubled! (The figures include propeller as well as plane and engine plants.)

During that year, while accomplishing the expansion task, the industry built 11,647 military air-And during that year, the indus-

try trained 160,000 new employes! 16,000,000 MORE TO GO These were highlights today of a report by Col. John H. Jouett, president of the Aeronautical Chamber of Commerce of America,

to Aviation News Features. With more than 38,000,000 square feet completed, said Col. Jouett, the aircraft manufacturers have approximately 16,000,000 square feet inder construction - expanding toward a goal of nearly 54,000,000 square feet.

Unprecedented in American industry, this expansion program was spurred in Phase I by French and British orders, with the result that from January 1, 1939, to July 1, 1940, factory space was in-creased from 9,454,550 square feet

79 PER CENT INCREASE This phase, financed entirely by the aircraft industry itself with the aid of foreign orders, saw an expansion of about 79 per cent. New expansions of huge propor-

tions were ordered by the Federal government after July 1, 1940, resulting during the ensuing twelve months in an increase of 111 per cent. During the first six months of 1941, the aircraft manufacturvirtually completed construction which, as of last December, had been expected to require a considerably longer period. Let's Go! U.S.A.—Keep 'em Flying!

END QUOTE

"Of one thing we can be certain -come what will, the aircraft industry will meet the challenge, and the will and courage of our Army pilots will guarantee that American airplanes will continue to dominate free American skies." Donald Douglas, president, Douglas Aircraft Co.

Let's Go! U.S.A.-Keep 'em Flying! "Ample evidence has been provided by the Douglas Havoc, the Boeing B-17, the Lockheed Hudson and other types used both in Great Britain and the Middle East that American aircraft are often superior to enemy aircraft."-Manchester (Eng.) Guar-

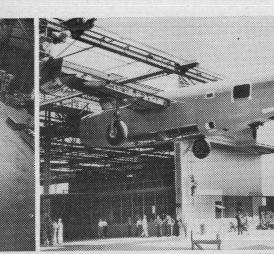
Let's Go! U.S.A.-Keep 'em Flying!

Aircraft Employes

Give up Vacations Giving up their summer vacations in the interest of national defense, 2700 employes at the Republic Aviation Corp. plant at Farmingdale, N. Y., are working through the customary holiday periods, the company has announced. The workmen receive an extra week's pay as bonus for relinguishing their vacations.

NEW PLANES ROLL FROM U.S. PLANTS

U. S. BUILDS 7,423 PLANES IN SIX MONTHS RELEASE AUGUST 1





Zooming American aircraft production is illustrated by these photographs from the Aeronautical Chamber of Commerce which show: Upper left—dozens of Lockheed Lightning interceptor planes on the final assembly line. Lower left—completed Lightnings (P-38s) ready for delivery to the U. S. Air Corps. Upper right—the fuselage of a giant Consolidated B-24 four-engine bomber entering the factory on a roof-high monorail system. Lower right—mass production of North American B-25 medium bombers.

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Aviation's Who's Who

- RALPH S. DAMON -

Ralph S. Damon, recently elected president of the Republic Aviation Corp. at Farmingdale, L. I., was graduated from Harvard with the class of 1918 and celebrated that event by immediately enlisting in the U.S. Army as an avi-

He learned to fly and received his commission a week or so before the Armis-

tice was signed. Although there mand for military pilots in the months which followed, he decided he was going to remain with the aviation industry. So he joined the longforgotten firm of G. Elias & Brother Aircraft Co. at Buffalo. N. Y., as a millwright as-

sistant. After a year he went to the Curtiss organization as anRalph S. Damon

engineering technician and rose rapidly with that company. In 1928 he became factory man-

ager for the Curtiss-Robertson Aircraft Co. in St. Louis, which was at the moment manufacturing the famous Robin planes.

Following the merger of the Curtiss and Wright companies in 1929, he was named assistant to the vice president in charge of production of all C.-W. plants. Then he became vice president and general manager in charge of the St. Louis factory. which was then working on Curtiss-Wright Juniors, Thrushes and other commercial aircraft. He was made president of the Curtiss-Robertson Co. in 1932, and the following year this group became the Curtiss-Wright Airplane Co. While heading this division, Mr. Damon

developed the Condor, the first all-sleeper plane in the world. In January, 1935, he was elevated to the post of president of the Curtiss Aeroplane & Motor Co., pro-

field in 1936, as vice president in charge of operations of American On May 1, 1941, he succeeded his friend, W. Wallace Kellett, as

He entered the air transport

ducing military aircraft.

president of Republic, Mr. Kellett the board of directors. Mr. Damon is a native of Franklin, N. H., and makes his

ome at Garden City, L. I. Let's Go! U.S.A.—Keep 'em Flying!

Fiber Glass Decreases

Airplane Noise Levels Glass in fibrous form is being used in military and commercial airplanes to lower noise levels, according to the Aviation News Committee. The new "wooly" glassanother example of the aircraft industry's constant research efforts to speed production and improve performance-also tends to cut vibrations and insulate against extreme variations in temperature when it is packed about the ship at strategic points.

In addition to being non-combustible, fiber glass is of particular importance because it weighs half as much as insulating materials previously used and does not absorb moisture in wet weather.

Let's Go! U.S.A.—Keep 'em Flying!

BACK TO SCHOOL!

College professors are "going to school" at the aircraft engine plants of United Aircraft Corp.'s Pratt & Whitney division at East Hartford, Conn. Members of the faculties of a number of universities spend their vacation periods at the plants, being assigned to various departments, according to their interests and, if they wish, actually working on production and engineering problems.

From Brooklyn to Pasadena...

Western Firm to Produce **Sperry Equipment**

Typifying the nationwide character of the American aeronautical industry, announcement was made last week of an agreement under which a California company will take over the work of a famous New York instrument firm in production of vibration and

strain measuring equipment. Signing the agreement were the Sperry Gyroscope Co. of Brooklyn, headed by R. E. Gillmor, and the Consolidated Engineering Corp. of Pasadena, of which Herbert Hoo-

ver, Jr., is president. Development of vibration and strain measuring equipment, ploneered by Sperry, has made it possible for aeronautical engineers to study scientifically the causes of vibration, to measure the extent of strain, to diagnose the sources

and to proceed to eliminate them. day is expected by November. GROWING IMPORTANCE Let's Go! U.S.A.-Keep 'em Flying!

This equipment has become increasingly important with the development of larger and faster airplane carrying engines of very high horsepower, according to Mr. Gillmor, who added: "As there is no place for an ex-

hausted pilot in modern warfare, similarly there is no place for a tired piece of metal. When a pilot tires, he can tell us something of his reactions. But when a piece of metal nears the exhaustion point it can give little warning of approaching collapse. "It is the function of vibration

and strain measuring equipment to help in preventing such collapse by practicing, scientifically speaking, a little 'preventive medicine.'"

FAMILIAR WITH WORK

The Consolidated Engineering Corp., well known for its work in the field of geophysical exploration, has developed reflection seismographs and its engineers are therefore entirely familiar with the field of sound wave studios, reflections and vibration measure-

Under the agreement Sperry will extend every possible engineering aid and cooperation, according to Mr. Gillmor.

"By relieving Sperry of this work and releasing a number of Sperry engineers to production of aeronautical, marine and antiaircraft equipment, Consolidated is giving us material assistance in carrying out the phases of the national defense program assigned to us," he added.

Let's Go! U.S.A.-Keep 'em Flying!

AEROQUIZ

\$10,000,000 for Plane Turrets

ican warplanes keeping pace with latest developments in Europe A-It is. An example: The War Department recently announced issuance of letters of intent calling for the expenditure of \$10,000,000 for construction of aircraft machine gun turrets. Q-Does the U.S. Army, as well

Q-Is the armament of Amer-

as the Navy, employ dive bomb-

A-Yes, several types are now in production. The Army is receiving a number of Douglas A-24s adapted from the SBD-3A dive bomber already used exclusively by the Navy and Marine Corps. Q—How many pilots will be trained by the U.S. Army and

Navy for the present emergency? A—The two services have a program calling for the training of 40,000 per year.

Production of Aircraft Hits Record High in June

Entire Output for 1940 Already Has Been Eclipsed; 11,647 Ships Produced in 12-Month Period Ending July 1

A. M. RELEASE AUGUST 1

11,647 PLANES

record of rising warplane pro-

duction in the United States

during the 12-month period end-

Total......4224 Total7423

U.S.Warplanes

Prove Mettle

American-built aircraft in actual

As an example, the British Air Ministry has announced that Cur-

tiss P-40 warplanes are taking a

heavy toll of the best types of

German and Italian aircraft in

the Middle East campaign. In a

review of current operations in

that theater of war, the Air Min-

istry declared that these up-to-

date American fighters are tak-

ing a notable part in the fighting.

Let's Go! U.S.A.—Keep 'em Flying!

Balances which weigh tiny parti-

cles of aluminum alloy and other

aircrait materials to within one-

in the Glenn L. Martin factories.

twentieth of a milligram are used

Let's Go! U.S.A.—Keep 'em Flying!

America's newest dive bomber,

the Brewster XSB2A-1, will be

produced at a new plant at Johns-

ville. Pa. The plant will be com-

pleted in mid-September and a

Manufacturers of light airplanes

are keeping pace with the in-

creased production tempo of other

branches of the aircraft industry.

Monthly production of the Aeron-

ca Aircraft Corp. of Middletown,

O., is four times greater than it

production rate of six planes a

ing July 1, 1941:

1940

GRAND TOTAL.

PLANE FACTS:

Here, month by month, is the

WASHINGTON, Aug. 1.—(ANF)—Seven thousand four hundred and twenty-three military aircraft in six months, eclipsing by more than 1000 the entire U.S. warplane output for 1940!

Such was the American aircraft industry's production record for the first half of 1941, according to official reports gathered by the Aviation News Committee.

June was a record month, with 1476 warplanes rolling off assembly lines, sending the January to July output well above the estimated production for all of 1940, when about 6000 planes were built. 11,647 IN 12 MONTHS
 July
 547
 January
 1036

 August
 586
 February
 972

 September
 670
 March
 1216

 October
 742
 April
 1389

 November
 779
 May
 1334

 December
 900
 June
 1476

And the record for the 12 months since volume orders were first planned under the national defense emergency was even more impressive, the industry turning out 11,647 military airplanes since

Estimates in official Government quarters indicate a total production in 1941 of from 18,000 to 20,000 planes. Production of 18,000 planes would, it is pointed out, triple the 1940 record and would

> SEE PICTOGRAPH Bottom Cols. 7, 8

increase by 650 per cent the 1939 output of 2400 planes. Recent dispatches from the war fronts tell of fresh triumphs for

Government restrictions prevent disclosure of exactly how many American airplanes have been shipped to aid Britain in its battle against aggression, but official British statements indicate that thousands of American planes have been received and are in action on all fronts.

FLOWN ACROSS OCEANS

Hundreds of these planes fighting for Britain were, and are, being delivery-flown not only across the Atlantic but across the Pacific to England's great far eastern fortress at Singapore, and to other Dominion outposts.

British opinion regarding the fighting qualities of American aircraft has crystallized into unanimous praise. One British aircraft leader recently commented:

"The Luftwaffe certainly is gostate the case—when the new American types are ranged alongside our British fighters.'

The British expect to secure and maintain numerical as well as performance superiority over Germany beginning early this autumn, it is officially stated.

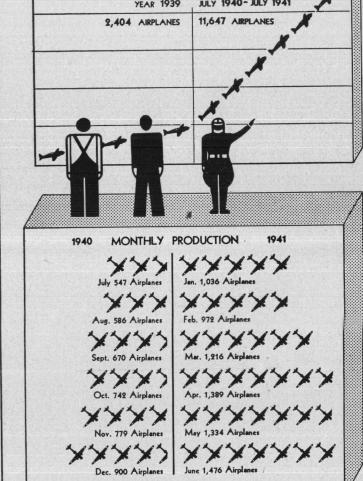
Let's Go! U.S.A.-Keep 'em Flying!

POTS INTO PLANES Housewives' donations of used aluminumware during the recent scrap collection campaign should, the OPM estimates, permit construction of 2000 more fighters or 500 additional four-engine bomb-

A. M. RELEASE AUGUST 1

was in 1940.

U.S. WARPLANE OUTPUT ZOOMS TOTAL PRODUCTION JULY 1940- JULY 1941 YEAR 1939



Crucial period in the American defense emergency was the year between July 1940 and July 1941. During that period American aircraft manufacturers produced 11,647 military airplanes, nearly five times as many as were built in 1939.

Source: AVIATION NEWS COMMITTEE (AND)

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An export version, the DB-7, is going to the British, who have been so impressed by the speed, maneuverability and firepower that they are utilizing the DB-7s (nicknamed the Havocs) as night fighters to beat off Nazi raids and attack enemy air fields. Characteristic of the A-20A and DB-7 are the sleek plastic-enclosed bombardier's position in the nose. the tricycle landing gear (retracted in this view) and the long, streamlined nacelles housing the powerful Wright or Pratt & Whitney engines. (EDITORS: IF YOU ARE NOT RECEIVING AVIATION NEWS FEATURES'

to 17,216,410 square feet. 'American Planes May Turn the Tide' New Year Book Praises

U.S. Production WASHINGTON, Aug. 00.—(ANF) -"The next few months should witness a great reversal in air supremacy in this war. . . The tremendous (aircraft) production from the United States, added to the greatly increased production in England, may have a decisive influence on the trend of the war

in the coming months . . These are the excerpts from the Aircraft Year Book for 1941, 23rd QUOTE Aircraft Year Book for 1941, annual edition of the standard reference book published by the Aeronautical Chamber of Com-

merce, which has just gone on sale. Declaring that from now until the end of the European war, air power will play an even more decisive part than it has in the phases, Howard Mingos,

editor of the Year Book, writes: "From all accounts . . . the British combat plane production combined with the American output is superior to Germany's in those highly important categories such as fast pursuits, long-range

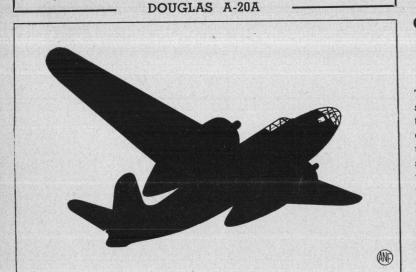
and medium bombers and patrol flying boats. "At the same time, American dive bombers and upward of a score of newly designed combat airplanes soon will be leaving the factories in large numbers. . .

Commenting on American production, the Year Book says: "The increase in American aircraft production under the national defense program is recognized . . . to be an industrial miracle and one destined to become a decisive factor in ultimately ending the struggle between democ-

racy and totalitarianism." The Aircraft Year Book is a 608-page volume containing 11 chapters on various phases of the aviation picture today.

RELEASE AUGUST 1

Know America's Planes



Here is a silhouette of a bomber so swift and so deadly that it is being used as a fighter in Europe's war . . . a transformation which illustrates the superiority of American aircraft. The ship shown is the Douglas A-20A attack bomber, in production for the U.S. Air Corps. MATS OR GLOSSY PRINTS, WRITE TO AVIATION NEWS COMMITTEE.
7046 HOLLYWOOD BLVD., LOS ANGELES, FOR THIS FREE SERVICE.)

U. S. Propeller Makers Speed Production

Output Keeps Abreast of Air Program Requirements

Through farsighted plant expansion and the training of several thousand new workers, production of airplane propellers—that particularly "tailor-made" aircraft accessory—has reached a point which seems to preclude any potential bottleneck in the nation's 1941. aerial defense program, the Aviation News Committee reported to-

Manufacture of propellers, the Committee pointed out, is one of the most highly-skilled operations in the entire aeronautical industry. In most instances, the prop is specifically designed for the particular plane-engine combination it is intended to complement. And because certain key processes must be done by hand, months are often required for the training of propeller workers.

Scientific research has advanced

the 1941 propeller, with its two,

three and four metal blades, far

beyond the props of World War I,

which, being carved from several

layers of wood and then glued to-

gether, were extremely vulnerable

Research and development of new methods form the life blood of aircraft production. This article, thirteenth of a series, describes how propeller manu-facturers have applied these factors to keep their output abreast of national NEW YORK, Aug. 00.—(ANF) defense requirements. to machine gun bullets, hail storms or even flying stones on a runway.

According to Guy W. Vaughan, president of the Curtiss-Wright Corp., the prop of World War I contained but five to six parts, as against more than 600 parts in Today propellers shift gears automatically, the pitch of the blades being changed to take larger or

smaller "bites" out of the air, according to take-off, climb or cruising needs. And in the event of engine failure—something of a rarity these days—the propeller does not continue to spin wildly, but comes to a complete stop, with

of United Aircraft Corp. and the Curtiss Electric Propeller division

the blades in a position which will eliminate vibration. Today two American companies furnish the great bulk of props for the thousands of high-powered ships being built for the United States and the other democracies

the Hamilton Standard division of Curtiss-Wright Corp. With production still well below

Paved Way for Many **Improvements** peak, the two organizations are re-

portedly producing in the neighborhood of 2500 to 3000 props each

lers per week, today employs nearly 3500 persons and is utilizing more than a million square feet of manufacturing space in four plants. fifth plant is being built in Pennsylvania. Peak employment has been set at 15,000 workers. For the two fiscal years ending

indicated requirement of 60,000 propellers of all types. It was Hamilton which pioneered the controllable pitch prop, marking the initial application of the gear shift principle, an achievement which won the 1933 Collier Trophy. Hamilton produces a duralumi-

for this purpose.

Scientific Research Has

Curtiss, which 'way back in 1915 was producing two wooden propel-

June 30, 1942, Hamilton has an

num prop with a solid blade. Curtiss also makes dural props, but is concentrating more and more on a hollow steel blade. In each case the actuating mechanism is different, Hamilton employing an oil hydraulic system in the nose to alter the pitch of the blade, while Curtiss utilizes an electric motor