STUKAS OUT-STUKAED-The U.S. perfected the technique of dive bombing. Today we have dive-bombers far better than the dread Nazi stukas. (Cols. 3, 4 and 5.)

AID TO BRITAIN-What will the Lend-Lease Law mean, translated into new airplanes? ANF brings you the answer. (Col. 4.)

Vol. 2, No. 6

May 1, 1941

AVIATION NEWS COMMITTEE WASHINGTON:

LOS ANGELES 7046 Hollywood Blvd. Shoreham Bldg. A. M. ROCHLEN HOWARD MINGOS

Secretary Chairman Aeronautical Chamber Douglas Aircraft Company of Commerce

F. R. NEELY Bell Aircraft Company

LEONARD K. SCHWARTZ AVERY McBEE Lockheed Aircraft

H. E. LAWRENCE Curtiss-Wright Corporation

Glenn L. Martin Company

NEW YORK: 30 Rockefeller Plaza LAUREN D. LYMAN Vice-Chairman

Corporation T. C. SULLIVAN Vultee Aircraft Inc.

United Aircraft

HAROLD MANSFIELD Boeing Aircraft Company

U. S. Aircraft Production Called Miracle by Merrill Meigs of OPM

Expert Says American Planes Are Better than Anything Flying in Europe Today

the American aircraft industry is "nothing short of a miracle," in the opinion of Merrill C. Meigs, chief of the aircraft section of the Office of Production Management.

automobile industry.

"It is nothing short of a miracle," he said, "that the airplane industry has risen almost fullywinged in so short a time. We in America have raised aircraft production to above 1000 planes a month-more than Britain was able to do after months of warand we're moving faster and faster along the assembly lines." Mr. Meigs was equally enthusi-

astic about the quality of American

"I wish to state with emphasis that the present American combat planes are not only equal, but better, than any European aircraft and that airplanes now in production—in the hands of trained American pilots—will outfly and outperform any aircraft that has ever been built in all the world.

In the matter of aircraft engines, Mr. Meigs pointed out that the major manufacturers had increased their output over January of last year by 29 per cent.

'American industry has not lagged," he continued. "It has not slumped and is not failing to meet the challenge. This conflict will be the victor will be the nation which has the best, the swiftest and the in the world, we must be that

Airplane Engine Output Hits New High in March

NEW YORK, May 00.—(ANF)— Reflecting the production advances reported throughout the aeronautical industry, a record monthly high in the output of Cyclone and Whirlwind aircraft engines—a total of 1.430,000 horsepower during March—was announced recently by Guy W. Vaughan, president of Wright Aeronautical Corp.

The March production represents a 23 per cent increase over January, 1941, and a 500 per cent increase over September, 1939, when the European war began.

LOS ANGELES, May 00.—(ANF)—Progress made by

In California on an inspection tour of airplane factories, Mr. Meigs pointed out that it took 25 years to develop the American

Axis Airline Menace in South Described U. S. Is Urged to Assist Latin America

WICHITA, Kans., May 00 .-(ANF)—"So long as there is a single German or Italian transport plane, pilot, ground crewman or trace of German financial interest in any commercial or civil aviation activity in the Western Hemisphere we face a threat to our security that is little less dangerous than the German air raiders over Lon-

The Southwest Aviation Conference heard this warning from Irving H. Taylor, manager of the Trade Development Department of the Aeronautical Chamber of Commerce of America.

Mr. Taylor told how German and Italian airlines are, without economic justification, operating and maintaining ground establishments over almost 22,000 miles of strategically located routes in South

Calling that situation "the greatest threat to the Americas," Mr. Taylor proposed unstinted United States assistance to Latin American airline development, urging

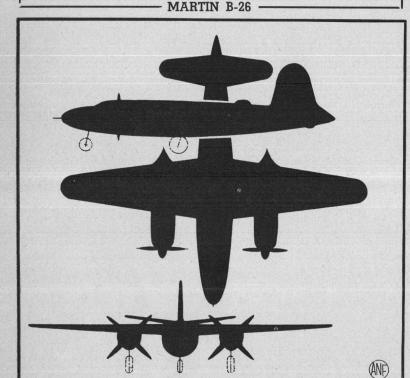
(1) Our Government recognize the necessity of providing against further aviation aggression by the Axis; (2) U. S. airline operators cooperate freely in advancing aviation throughout the hemisphere; (3) Manufacturers be granted encouragement and authority by the Government to produce advanced types of transport planes which will assure commercial air supremacy; (4) There be ample production of light airplanes for air transport and pilot training needs.

EMPLOYMENT

Employment at the Inglewood, Calif., plant of North American Aviation, Inc., has reached a record high of 11,000 workers.

RELEASE MAY 1

Know America's Planes



Described by its designers as faster than most of the pursuit ships now fighting in Europe, the B-26 (three views of which appear above) is the U.S. Air Corps' newest and most advanced bomber. This product of the Glenn L. Martin Co. is striking proof of the American aircraft industry's ability to produce the most modern combat airplanes, for the B-26 has armor plate, self-sealing fuel tanks, a power-driven gun turret and a tail turret. You'd be able to recognize this medium bomber by its tricycle gear, large tail structure, four-bladed propellers, all-plastic nose and the sleek nacelles housing the two Pratt & Whitney engines. (EDITORS: IF YOU ARE NOT RECEIVING AVIATION NEWS FEATURES' MATS OR GLOSSY PRINTS. WRITE TO AVIATION NEWS COMMTTEE,

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Aviation News Features



Science Winning

Aerial Mastery,

Government, Industry

Praised for Their

Research Work

LOS ANGELES, May 1.—(ANF)

-New mastery in the air, with all

its military and economic implica-

tions, is being won in the research laboratories of American aviation. Latest developments on this front

1—A new type airplane wing with

2-Continuous improvement in

the field of engines and engine

supercharging to permit higher per-

3-Active research on propeller gear drives designed to widen the

These were the statements made

here today by Frank Caldwell,

president of the Institute of Aero-

nautical Sciences and research di-

rector for United Aircraft Corp.

Mr. Caldwell has just completed an

inspection of western aircraft

RESEARCH PUSHED

for increased plant capacity and

swift production, Mr. Caldwell

found that aeronautical research

has been speeded to a point assur-

ing that the United States will not

only build the greatest number of

airplanes but will also build the

best airplanes of any in the world

progress being made in the East

on improved engines and propellers

and feel no hesitation in saying

that this work is moving far ahead

of anything I have seen in Eu-

rope," Mr. Caldwell declared. "Now

I have seen first hand how the

large airplane plants are similarly

progressing with research and im-

provement of their products.'

"I have been fairly close to the

In spite of emergency demands

formance at greater altitudes.

tremendous potentialities in the

realm of increased speed.

range of aircraft.

P.M. RELEASE MAY 1

Expert Declares

Assembled and Released by the Aviation News Sub-Committee of the Public Relations Committee, Aeronautical Chamber of Commerce of America

AEROQUIZ

More Expansion for U. S. Plane Plants

Q-Is further expansion of the American aircraft industry's productive facilities contemplated by

the Government? A—Yes. A substantial portion of the \$750,000,000 in the Lend-Lease appropriation for defense plant expansion probably will be used to build new aircraft factories.

Q-Does the U.S. Navy have its own types of training planes?

A—Yes. The newest of these is the Curtiss SNC-1. a two-place low-wing monoplane powered by a Wright Whirlwind engine, designed for the final step in training before pilots transfer to high-speed com-bat ships.

Aircraft Plants **Take No Chances**

U. S. Factories Guarded Against Sabotage and Espionage

NEW YORK, May 00.—(ANF)-Their plants ringed by high walls and fences and floodlighted during the hours of darkness, American aircraft manufacturers are taking extraordinary precautions against sabotage and espionage.

According to the Aviation News Committee, these safeguards against the possible activities of foreign agents are growing daily as the tempo of national defense production heightens.

All plants have large staffs of uniformed guards, sometimes larger than the police forces of the communities in which the factories

24-HOUR PATROLS These guards patrol the prop-

erties day and night. They idenindividuals passing in and out of the plants. They examine all incoming and outgoing freight cars and trucks and in some cases even inspect every package which enters the plant.

The men are assigned to regular posts, each of which is equipped with some form of quick communication. Men stationed outside the buildings are generally armed and can shoot straight, for nearly all companies require regular practice on nearby pistol ranges.

The importance of these safeguards was stressed recently by announcement of the Glenn L. Martin Co. at Baltimore that E. A. Schurman had resigned as superintendent of uniformed guards of the U.S. Treasury Department to become chief of protection for the

MUST BE CITIZENS Identification of workers at aircraft plants is particularly thorough. The first prerequisite is absolute proof of American citizenship, as only citizens are allowed

inside any plant. All employes have badges, usually containing the name and photograph of the wearer. The badges are issued only after careful investigation and a continuing record is kept of each badge.

Britain to Get 10,000 - 15,000 **More Warplanes**

Industry Ready to Meet Lend-Lease Program

Requirements

WASHINGTON, May 00.—(ANF) A detailed plan under which Great Britain will receive \$2,054,-000,000 worth of warplanes under the Lease-Lend Law is nearing completion, the Aviation News of the Aeronautical Committee Chamber of Commerce of America, trade association of the industry which builds the planes, was informed today.

Under the Lease-Lend Law, the \$2,054,000,000 appropriated for aircraft may be translated into new orders to the American aircraft manufacturing industry, or may be used to pay for warplanes already contracted for either by the War Department or the British, and now

Washington observers expressed the opinion that the procedure being worked out will encompass both

15,000 MORE PLANES
It is estimated that, whatever procedure is decided on, the \$2,-054,000,000 will provide the British with between 10,000 and 15,000 planes, depending on the fighterbomber ratio finally determined. Bombers cost considerably more than fighters; therefore, if the British require a high percentage of bombers, the overall number of planes sent overseas will be low-

A board, headed by former Secretary of Commerce Harry Hopkins, working in liaison with British authorities in Washington, is working out the Lend-Lease program under which Britain will receive up to \$7,000,000,000 worth of war materials, including aircraft.

INDUSTRY READY Until the completed program is announced, the extent of new orders to be placed for the British with the aircraft manufacturing industry will not be known. However, Col. John H. Jouett, president of the Aeronautical Chamber, has affirmed the industry's readiness to undertake any new building program laid down by the Adminis-

"Working under the extreme pressure of the emergency the aircraft manufacturing industry doubled production in 1940, at the same time undertaking a vast expansion and labor training program," said Col. Jouett. "The industry will more than

again in 1942, under the present program. The new programs now being formulated will call for further herculean effort by the industry. It is ready for the effort." To expedite production of warplanes both for Britain and the

double production in 1941, and

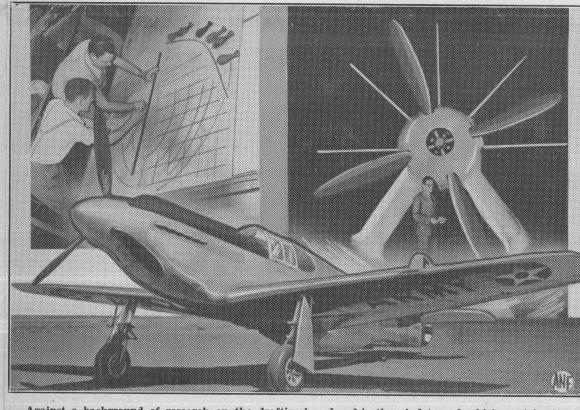
United States air services, conferences on standardization problems have been held. The Lease-Lend appropriation included \$750,000,000 for further expansion of defense plants. A substantial portion of this fund will be used to build new aircraft plants,

Government officials said

P.M. RELEASE MAY 1

NEW FIGHTER FROM CRADLE OF RESEARCH

U. S. Develops New High-Speed Wing and Bigger, Faster Warplane Engines



Against a background of research on the drafting board and in the wind-tunnel, which went far towards making its existence possible, you see the United States' newest pursuit airplane, the NA-73, produced by North American Aviation, Inc. That this swift ship incorporates the new laminar flow wing (a tremendous contribution to warplane speed) is due to the ceaseless aeronautical research conducted by the U. S. Government and the American aircraft industry.

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Congressman Lauds Aircraft Industry Pennsylvanian Hails

SANTA MONICA, Calif., May 00. -(ANF)—America and the other democracies of the world "owe a debt of gratitude to the aircraft manufacturers of the United States," in the opinion of Con-

gressman J. Buell Snyder of Penn-

Accomplishments

sylvania. Congressman Snyder, chairman of the House committee on Army appropriations, paid tribute to the nation's airplane and engine manufacturers during a visit to aircraft plants in the Los Angeles

"It is doubtful that industry has ever recorded a greater achievement than the accomplishments of national defense emergency," he declared. "Not only have our aircraft manufacturers been able to accomplish in two years what has taken other nations five, six and seven years to do, but, technically, they have given America a rank second to none in military craft."

Congressman Snyder toured the Douglas, Lockheed, North American and other plants in this area, inspecting such famous airplanes as the B-19, world's biggest bomber. and the P-38, twin-engine inter-

Aviation's Who's Who

Eugene Edward Wilson reversed Horace Greeley's famous advice to young men. Born in Dayton, Wasn., he went East after graduating from Seattle high school. And that move started him on a career that included the U.S. Naval Academy, 25 years with the Navy and eventually the presidency of one of the nation's major aeronautical firms -United Aircraft Corp. After he'd cleared Annapolis with

honors, Mr. Wilson served as ensign on a tor-



off to go to Columbia University for his masengineering. Obtaining this, he went to sea again, this time as chief engineer on the old U.S.S. Arkansas With the World War, the Arkansas joined the British Grand Fleet in the North Sea and for a time was

Eugene Wilson stationed near the English aircraft carrier Argus. Mr. Wilson watched the activity aboard this pioneer plane carrier with a new interest and learned much about carrier operations. When the war ended Engineer

Wilson was transferred to the Great Lakes Naval Training Station at Chicago to command the aviation mechanics' school. There he became closely associated with the late Rear Admiral William A. Moffett, who soon afterward organized the Bureau of Aeronautics and became its first chief. In 1934 he made Mr. Wilson—a lieutenant commander by that time-chief of the engine section of the bureau, and here the young commander played an important part in fostering the development of the aircooled engine.

Although beyond the official age limit, Mr. Wilson got himself assigned to the naval air station at

Pensacola and learned to fly. He thereafter qualified at deck lendings on carrier ships, during a period when few pilots were so quali-In 1930, having attained the rank

son accepted the offer of Frederick B. Rentschler to become associated with United Aircraft as president of the Hamilton Standard Propellers Corp., then a subsidiary of the pedo boat and then took time

United group. Subsequently he was elevated to the presidency of another of the corporation's subsidiaries-the Sikorsky Aircraft Corp., and a year later became president of the Chance Vought Corp., also allied with United In 1937 he gave up these duties to devote his entire time to the

of commander and with 25 years'

naval service behind him. Mr. Wil-

post of senior vice-president of United. On May 6, 1940, he was elected president of the corporation to succeed his friend, the late Donald L. Brown

QUOTE END QUOTE

"We are going to meet German production and go beyond it. We aim to furnish the most and best airplanes that anyone, anywhere, can produce."-William S. Knudsen, director general, Office of Production Management.

"Air freighters for commerce are being born out of the huge national orders for military aircraft, enabling industry to produce ships at a continually lowering unit cost. After the war there will be a tremendous upsurge in aviation. The terrific loss of ship bottoms will bring a call for the quick manufacture of commercial freighter planes to carry cargo to and from food-starved nations, with the demand still heavy for passenger and military craft."-Glenn L. Martin, president Glenn L. Martin Co.

In summarizing for the Aviation News Committee of the Aeronautical Chamber of Commerce the fruits of research work and their meaning in terms of warplanes, Mr. Caldwell said greater speed,

increased rate of climb, higher service ceiling and longer range are the major military objectives. NEW PLANE WING Here are some of the research contributions to attainment of these objectives

SPEED-The laminar flow wing is the newest development in airfoil construction and is exemplified in the North American NA-73, swift American-built pursuit ship The National Advisory Committee for Aeronautics, which conducts research in its vast laboratories at Langley Field, Va., and Moffett Field, Calif., closely guards the secrets of the laminar flow development. However, it can be said that it is a wing which increases the area of smooth air flow. This moves back the point where the air "breaks away" from the wing surface. This breakaway decreases "lift" and causes air turbulence which increases "drag" or air resistance.

Jet propulsion, which streams exhaust gases from the engine back along the fuselage and wings, is opening up an important new approach to additional speed. MORE POWER

Power is being increased through engine development. Motors of more than 2000 horsepower are now in use. Experimental work is under way on engines at least 50 per cent more powerful than at present CLIMB—Development of engines in excess of 2000 horsepower is the answer. Propellers must be of as large diameter as possible, to in-

crease the rate of climb. CEILING—Present airplanes of several types have service ceilings in excess of 30,000 feet and up to 33,000 feet. Researchers are working on a 40,000-foot level. Two types of engine superchargers are being developed. One uses engine exhaust gases to drive a turbine which in turn drives a centrifugal compressor which compresses air into the engine. The other utilizes gearing from the engine itself to drive the compresso

GREATER RANGE RANGE-Development of larger

aircraft and larger engines is going forward. "The great flying laboratory, the B-19 bomber, is of tremendous value in this field," Mr. Caldwell said. A two-speed propeller drive gear

is a present subject for active research, he added. This gear shift operates much as the overdrive of an automobile does. In level flight the propeller turns at a high speed, but, due to the gear, the engine turns at a much lower speed, permitting a very low fuel consumption in miles per gallon.

TWO-ENGINE TRAINING To familiarize student pilots with

the operation of multi-motored military aircraft, the American aircraft industry is now producing twin-engine trainers for the United States and Great Britain. The Cessna Aircraft Co., Wichita, Kans., is delivering large numbers of twin-engine trainers to the U.S. Air Corps and the Royal Canadian

U. S. Dive Bombers Out-Stuka the Stukas Nation which Perfected American-Built Planes

Technique Maintains World Supremacy

America, the nation which years ago perfected the technique of dive bombing, has maintained world supremacy in the aircraft it. produces for this type of aerial attack, the Aviation News Committee declared today.

Despite the wide attention focused on the Nazi air force by its dreaded stukas, the United States today has at least five types of aircraft which can out-perform the much-publicized dive bombers of Hitler's Luftwaffe, the Committee

Exact figures on speed, range, etc., of individual ships are restricted for military reasons. But, as a method of illustration, the Committee reported the following average performance figures on the American ships:

Average maximum speed—282 miles per hour. Average cruising range - more than 1300 miles.

Average bomb capacity-considerably more than 1000 pounds. Contrasted to these averages are a 242-mph top speed, a 498-mile range and a bomb load of less than 1000 pounds credited by international aeronautical publications to the Junkers Ju 87-B, the stock sin-

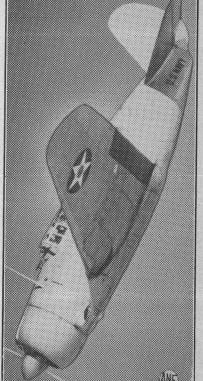
man air force. No little credit for the supremacy of the American ships is due, the Committee stated, to the remarkable improvements made in recent years in the big Pratt & Whitney and Wright engines which power all U. S.-built dive bombers

gle-engine dive bomber of the Ger-

As the U.S. Navy pioneered dive bombing, most of the American types are designed for operation off aircraft carriers. They include: Curtiss SBC2-1, which is said to

be 100 miles faster and with a bomb capacity twice as large as any existing dive bomber. Brewster 340, a heavy dive bomber with exceptional speed and

range, two vital factors in sea op-Douglas SBD-1, large numbers of



This airplane has been described as the world's newest, most for-midable dive bomber. It is the Curtiss SBC2-1, now in production for the U.S. Navy.

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which are now in service on Navy carriers. In acceptance tests the SBDs established records considerably in excess of performance figures attributed to German and British dive bombers

Designed for land operations is

the Republic Guardsman, a two-

seater fighter equipped to carry a

1350-pound load as a dive bomber.

Still another dive bomber is the

and Range Vought-Sikorsky 156, large numbers of which are being built for Great Britain. American manufacturers also excel, the Committee reported, in producing torpedo planes, the worth of which has been demonstrated by

Have Greater Speed

the British in attacks against the Italian Navy in the Mediterra-The stock U.S. Navy torpedo plane is the Douglas TBD. Scheduled for production this summer is the powerful Grumman TBF-1. Already in production for overseas is

PLANE FACTS: Here's How They

Build a Bomber

the Northrop N3-PB.

During its mass production of the new B-26 medium bomber, the Glenn L. Martin Co. of Baltimore is assembling 30,000 parts (exclusive of nuts, bolts, rivets, etc.) into some 650 minor sub-assemblies. These are worked into the 32 major sub-assemblies which, in turn, are fabricated as the complete air-

The modern airliner today carries some 50 instruments with a total value of about \$15,000. Ten years ago transport ships had less than 15 ms.ra... \$1000 to \$2000. han 15 instruments, valued at from

Construction of another primary training center for Army Air Corps flying cadets has been started at Oxnard, Calif., by Cal-Aero Academy.

So important are the problems caused by the forming of ice on airplane wings that a special subcommittee to study them has been organized by the National Advisory Committee for Aeronautics.

U. S. Aircraft Production Speeded by Work of Plant Safety Experts Many Hours Lost through Accidents Kept Down

Despite Increased Employment

aircraft factories of the nation his efforts are as vital to the success of FIRST OF America's vast de-A SERIES fense program as the aeronautical

rivets in the wings of swift new combat craft. He is the safety engineer. His task is a many-sided one. He must direct a campaign of education He must make certain all possible hazards are eliminated from a factory where thousands of workers and hundreds of machines are busy

each accident and devise methods of preventing its recurrence. The fruits of his efforts are twofold-protection of the lives and well-being of thousands of wage earners and increased production of the American airplanes which

day and night. He must analyze

He neither designs bombers nor How efficiently this nationwide builds pursuit planes. Yet, in the accident prevention work is progressing is disclosed by a survey just completed by the Aviation News Committee of the Aeronautical Chamber of Commerce. The rate of exposure to accidents

has risen sharply in airplane and

engineer or the men who drive the engine plants, due to the rapid hiring of thousands of new employes, many of them unskilled or only semi-skilled in aircraft work. Yet the survey showed that the frequency of accidents in the same plants, instead of taking a corresponding rise, has decreased The result has been that men who might otherwise have been

laid up have been on the job—a substantial contribution to the tremendous acceleration of national defense production. Future articles of this series will discuss the methods and results achieved in various plants now en-

gaged in producing planes, engines are vital to the safety of the world's and accessories for the United States and Great Britain.