public of the United States, on national defense work. This clip sheet of authentic and accurate information is the means of making the industry's report, twice each month. Your suggestions for bettering this service will be gratefully received.

A card is attached through which you can indicate whether or not you would like to have us send you mats or glossy prints of photographs.

Vol. 1, No. 1

AVIATION NEWS COMMITTEE

LOS ANGELES: 7046 Hollywood Blvd. WASHINGTON:

NEW YORK:

A. M. ROCHLEN Chairman Douglas Aircraft Company

F. R. NEELY

Bell Aircraft Company

HOWARD MINGOS Secretary Aeronautical Chamber of Commerce

United Aircraft Corporation

H. E. LAWRENCE Curtiss-Wright

THOMAS H. CORPE Lockheed Aircraft

HAROLD MANSFIELD

Night Lights of Aircraft Plants

From Coast to Coast, Factories Working Three

When nightfall advances across the broad nation, bright

is working around the clock for national defense. Men—tens of thousands of them—aircraftsmen trained in their respective fields, are working behind these lights in order

QUICK FACTS:

Navy Will Triple Air Force Now

Crisis in the Pacific focuses attention on America's naval air arm. According to Navy Secretary Knox, the Navy in late September had a total of 1,812 aircraft—1,234 of them useful combat planes.

And the Navy Department is losing no time in creating a real

losing no time in creating a real fighting force. On order are 3,000 new planes—1,502 combat, 1,467 training and 32 utility—while contracts are being negotiated for 4,000 additional aircraft.

An illustration of how national defense orders are creating jobs for American workers is reported from Los Angeles County. There an 11-year employment record has been shattered largely due to expansion of the arcrait industry which showed increases of 111 per cent in employment and 123 per cent in payrolls over 1939.

A few years ago the idea of transporting large numbers of troops by air was considered a fantastic dream. The speed of armies, in the opinion of most "experts," was governed by the pace of the slowest "foot slogger." Well, ideas change. Within the last month one aircraft company—Douglas of California — has received War Department orders totalling \$57,000,000 for the construction of a huge fleet of transport planes designed specifically for the swift movement of troops, equipment and

Thousands of rivets are used in the construction of the Bell Airacobra one of our fastest pursuits. Yet for the sake of speed, not a single rivet head is exposed. The surface of the plane is as smooth as that of a grand

Brand new to the U.S. Army is the squadron of parachute troops formed at Fort Benning, Georgia. Already, the commanding officer has been swamped by offers of volunteers who want to

NOVEMBER 1, 1940

30 Rockefeller Plaza Shoreham Bldg.

LAUREN D. LYMAN Vice-Chairman

T. C. SULLIVAN Vultee Aircraft

Boeing Aircraft

Show 'Around-the-Clock' Activity

Shifts to Hasten Defense Production

factory lights testify that the aircraft manufacturing industry

that the day of national security may be hastened.

PREPAREDNESS BEACONS At Long Island, N. Y. . . East Hartford, Conn. . . Buffalo, N. Y. . Pottstown, Pa. . . Troy, Ohio. . . Muskegon, Mich. . . Wichita, Kans. . . Tulsa, Okla. . . Seattle, Wash. . . Los Angeles and San Diego, Calif., and in many other cities the

and in many other cities, the lights go on as beacons signaling "preparedness production." From coast to coast, aircraftsmen are applying themselves earnestly and continuously to the swift accomplishment of the

task assigned them by the gov-ernment—putting wings on America's rearmament. A recent request by the War Department that the aircraft industry go on an "around the clock" basis long had been anticipated by most major plants. They had been on a three shift, or extended two shift basis for

Expert Describes Ideal Air Cadet

The United States Army Air Corps is looking for mentally alert, physically strong young men to be trained as future army pilots. No "stunters" or "screwball" pilots are wanted, according to Col. D. V. N. Grant of the Air Corps.

Piloting a military plane is the world's most trying job, in the opinion of Army and Navy flight surgeons.

The volunteer for this service must be able "to think with his hands, his feet, his brain, and at the same time coordinate all thought and action.'

Self-Sealing Tank Is U. S. Invention

Attention has been given to the use by Nazi flyers of a self-sealing gasoline tank. The device was in practical use in the United States as early as 1917, although its invention has been attributed to the Germans. An improvement in the original patent was worked out

by Glenn L. Martin, of Baltimore, Md., in 1933, but details

Export Men Pledge Help for Defense

Industry Rounds out Broad Program of Cooperation

LOS ANGELES, Nov.—Aviation industry executives have rounded out their program of defense emergency cooperation with the Federal government, as a result of the recent Export Conference here of the Aeronautical Chamber of Commerce

One significant act of the conference was adoption of a resolution which stated "that this conference pledges its utmost cooperation in the subordination of its export program to the na-tional interest; with complete knowledge that as conditions warrant the export sale of aeronautical products and the training of Latin American aviation personnel should be fostered as an essential phase of hemisphere

While their factories are working night and day to build aircraft for the United States army and navy, industry executives are seeking to coordinate immediate defense needs with the broad horizons of aviation's

PREPARE FOR PEACE

Seeking to be prepared for peace, as well as for war, export executives are giving attention to problems of establishing, maintaining or increasing commercial supremacy of Americanmade aircraft in the markets of the remaining non-belligerents. The aviation industry looks forward to the post-war period when export business will be an increasingly important asset to the industry, as well as to the

nation's economy.

Aviation export is particularly concerned with Latin-America, not only because it is one of the few remaining normal markets, but also because of its strategic position in hemisphere defense. Executives of more than a score of airplane, engine, parts, accessory and instrument manuaccessory and historine in manu-lacturers, participating in the Los Angeles conference, pledged full cooperation with Federal ex-port regulations.

Boeing Engineer Winner of Award

The Musick Trophy, for the most valuable contribution to the safety of life in the air, was awarded to Robert J. Minshall of the Boeing Aircraft Company

Mr. Minshall was the engineer in charge of construction of the Boeing clippers built for the Pan American Airways. These and other American-built clippers pioneered commercial skyways over the Pacific and Atlantic oceans.

In accepting the award, he stated that he was doing so in behalf of all those in the organization who had contributed to

the building of the clippers.
"It took 381,000 man-hours of engineering to design these planes," he said. "That is the work of an engineer for 190 years. In building the ships, 2,-500,000 man-hours of shop labor were expended, enough to keep another man busy for 1,200 years."

Bombers Manufactured

Coast inspection trip by Defense Commissioner Knudsen, the public heard exciting news about the new Lockheed P-38 - described by experts as "the fastest and deadliest pursuit interceptor

This super-streamlined ship is built like a bullet, to conquer air resistance—or, more exactly, three bullets. One is the sleek fuselage, with a one-man cockthe other two are the

500 MILES-PER-HOUR The P-38 has a reputed speed potential of 500 miles-per-hour. It can climb more than 4,000 feet-per-minute to head off hosbombers; its cruising range is 1,100 miles and its armament includes four big .50 caliber machine guns and a one-pound can-non. The P-38 has been in the test stage, and the Army has ordered 687; Britain wants 800.

Already in production at Downey, Calif., is the Vultee Vanguard 48-C interceptor pursuit. Its speed potential is in the 400 mile-an-hour bracket and it is regarded as one of the fastest and most heavily armed

pursuits in production. grow big on the West Coast. Biggest is Douglas' B-19, a \$3,- for America

the usual commercial transport

WILL CRUISE 7,500 MILES

tion also are the big Con-solidated PBY's. Consolidated's plant at San Diego is turning out these big two and fourmotored flying boat bombers for the Navy, as well as four-mo-tored, high wing land plane bombers for the Army. And at Seattle is the Boeing plant, from which emanates the Army's fam-

Attracting considerable atten-

hemisphere defense.

Makers of motors for America's defense planes are meeting the emergency through "line - production'

tion basis. This "line-produc- ried into the final assembly nation.

methods. Above, a scene in tion" method is a far cry rooms of the Pratt & Whitthe new foundry of Wright from the usual conception of ney engine plant at East Aeronautical Corporation at a foundry as a sprawling, dis- Hartford, Conn. There, near-Fairlawn, N. J., shows cast- orderly unit in the construc- ing completion, are some of ing of aircraft engine cylin- tion process. Inset shows the engines to power the der heads on a mass produc- large scale production car- planes which will protect the

(EDITORS: MAT OF THIS CUT WILL BE AIRMAILED ON REQUEST. USE ATTACHED CARD.)

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

Aircraft Industry Meets War's Challenge

Motor Makers Speed Their Work, Keep Abreast of Nation's Needs

NEW YORK, Nov. ...- Possibiliy that the Federal government's plan for mass production of fighting planes will encounter a bottleneck by reason of engine shortage appears tour of William S. Knudsen, production head of the National Defense Advisory committee, through the major airplane

FOR DEFENSE

35-Acre Engine

Plant Is Started

Guy W. Vaughan, president of Curtiss-Wright Corporation, seat-

ed in a big scoop tractor on Oct.

23, at Lockland, Ohio, broke

ground for the huge new Wright

aircraft engine plant.

The main building is 1,380 feet by 1,064 feet with 35 acres under

one roof. It is the largest single-story building of any type yet constructed in the United States

and it will be devoted exclusive-

The total Wright building pro-

gram involves 1,700,000 square

feet with capacity for 12,000 high-powered Wright Cyclone aircraft engines annually.

by Aircraft Manufacturers

Republic Aviation Corporation

of Farmingdale, Long Island, es-

timates that it saved something

like 10,000 man-hours or the equivalent of the time required

to turn out one airplane by the

novel method it adopted in get-

ting its men of draft ages registered on Oct. 16. Instead of shutting down the

plant for half a day, as had or-iginally been planned, the regis-

tration papers were brought to

the employees at their work benches and the work of plane

production was not interrupted.

Sixty registrars accomplished the

task of listing the 1,200 eligible

The Republic firm has \$60,

000,000 worth of contracts for

interceptor planes for the United

States Army and has contracts for war planes to be delivered to England.

STANDARDIZED PLANES

cooperating with Army and

Navy officials in their attempt

to speed production by standard-izing certain types of American and British military planes.

Standardized aircraft, now being

built for Britain, could be taken over by the United States if needed for the national program.

have been in production since

1918 is a godsend to the coun-

try. Before April 1, 1942, the

industry will have tripled its

present floor space to 30,000,000

Aircraft manufacturers are

men within a few hours.

10,000 Man-Hours Saved

ly to national defense.

engine plants.
Aircraft engine companies are rapidly coming into mass output —using "line - production methods." The augmented aircraft armament program calling for 25,000 fully equipped military and naval planes by July 1, 1942, is progressing in a completely satisfactory manner, according to Mr. Knudsen.

1,400 ENGINES MONTHLY Pratt & Whitney and Wright Aeronautical, the two leading manufacturers of high-powered air - cooled aviation engines, turned out about 1,400 motors during September, and present schedules call for a step-up in the output of these two plants alone to 2,700 engines per month by the middle of next year.

Pratt & Whitney has contracted to supply the government with 17,000 engines during 1941 and 1942, and is now con-structing new buildings which will add 400,000 square feet of working space to its plant near Hartford, Conn.

Unlike some plane factories which are still on a five-day week though operating in two or more shifts, the Pratt & Whitney plant is running seven days a week with each day divided into three eight-hour shifts. The plant is said to be well ahead of its current production schedules

FORD TO MAKE "WASPS" The Ford Motor Company has completed arrangements with

the Hartford firm whereby it will produce 4,000 Pratt & Whitney "Double Wasp" engines under a licensing agreement which calls for a nominal royalty of \$1.00 per engine. The Ford aircraft engine factory, to be constructed at the company's River Rouge plant, will contain 800,000 square feet of floor space and is expected to cost \$7,000,000, with an additional \$8,000,000 going for machine tools (necessary to turn

out the airplane engine).
At the Wright plant at Paterson, N. J., Mr. Knudsen found 13,500 workmen engaged in building airplane motors. Production there, according to Guy Vaughan, president of the Wright Aeronautical Corporation, totalled 560 engines for September, and in October the number was scheduled to rise to By spring, he told Mr. the 1,000-a-month

mark will be reached. TO EMPLOY 300,000 MEN

"It is cheering to defense leaders," Mr. Knudsen declared, "to realize that the nation's program is being carried out for the most part by the expansion of longestablished factories.

square feet and will be employ-ing 300,000 men instead of "The fact that many plane and aircraft engine manufacturers

New Progress in **Engine Factories** Airplane Motor Plants Add Men, Increase Space

NEW YORK, Nov.-Contributing to the engine manufacturers' part in the nation's

aerial armament:
The Aviation Manufacturing Co., Lycoming Division, at Williamsport, Pa., which some time ago took over the building of the Lycoming airplane motor, is now operating two shifts of workmen in the production of this ninecylinder radial engine which ranges from 200 to 300 horsepower. The Lycoming motors are used in U. S. army trainers, air corps liaison observation planes and in numerous commercial

ships.
The Packard Motor Company, at Detroit, Mich., is preparing to build the 9,000 Rolls Royce Merlin 12-cylinder plane motors which the Ford group had declined to handle. Of the total order, 3,000 will be retained in the United States.

The Continental Motors Corporation, at Muskegon, Mich., is working on a \$4,828,500 order of airplane motors from the Federal government.

LYCOMING CONTRACT The War Department has announced that a contract totalling \$6,703,539 has been awarded for airplane engines to the Lycoming division of the Aviation Manufacturing Company of Williamsport, Pa. The contract has been cleared by the National Defense Advisory Commission.

AIRCRAFT ENGINES ON PRODUCTION LINE U. S. Plane Efficiency **Advanced Since 1938**

Manufacturers Develop New Models that Fly Faster, Higher and Farther than Any Others in the World

NEW YORK, Nov.-In a land of peace, the men who design and build and fly American airplanes have in the last 18 months met the flaming challenge of a world at war.

A nationwide survey by the Aviation News Committee today showed the tremendous scientific, technological and industrial accomplishments of American aircraft construction. These accomplishments mean that, while preparing to build planes quickly in large numbers, the manufacturers have developed models which fly faster, higher, farther than any others in the

EFFICIENCY ADVANCED Here is a quick summary of advances in efficiency of Amer-ican aircraft in the last 18

SPEED—Since 1938, the speed of American-built fighting planes has increased on an average of 30 per cent. In the case of several of our pursuit planes, speed has advanced far beyond that percentage. It has passed 400 miles per hour and continued clear off the graph.

ALTITUDE — With high altitude combat highlighting

Europe's aerial war, America has increased the optimum altitude of many types of military aircraft 15 per cent and more since 1938. Today, fighting planes built in this country can climb to 35,000 feet.

RANGE—Cruising range, so important in the defense of a nation four-fifths the size of all Europe, has been greatly extended. The 1940 long range hombers built here are translational to the second state of t bombers built here can travel 4,000 miles or more non-stop.
Soon the War Department will be testing a bomber with a range of more than 7,000 miles.

ARMAMENT—Some of the

pursuit planes and bombers developed in this nation in the last 18 months will be among the most heavily armed, if not the most heavily armed in the world.

Developed in American facflames high are no less than 20 new military types-bombers, pursuit interceptors, and trainers for the Army Air Corps; shipboard fighters, scouts, bombers and patrol bombers for

Keeping pace with this development in aircraft has been the creation of more powerful motors, bigger, more efficient propellers and unsurpassed aviation instruments. Among the latter are the radio equipment developed by Bendix and the amazing new Flightray, an aid to blind flying produced by the Sperry Gyroscope Company.

Defense Board Clears Large Engine Contracts

The War Department has announced that contracts totalling \$81,569,140 for airplane engines have been cleared by the National Defense Advisory Commission, and awarded to the Wright Aeronautical Corporation of Paterson, N. J.

Part of this order is allocated for the Navy, under the policy of the War Department, whereby the army will deal exclusively with the Wright group for Wright engines for the combined Army and Navy requirements. Such engines as go to the Navy will be paid for by transfer of

AEROQUIZ

Try to Name Most Potent Air Motor

Through the medium of the following questions and answers, readers will find it easy and interesting to familiarize themselves with many flying

Q. What is the world's most powerful airplane motor? A. The new Wright Duplex Cyclone. It develops considerably more than 2,000 horsepower.

Q. Which state has the greatest number of airplanes? A. California, with 1,442 registered aircraft.

Q. Who holds the international speed record for airplanes? A. Germany. The Messer-schmitt 109 made 466 miles an hour in 1939. (New American models now under construction are expected to beat this mark

Q. In the designation of plane types, what do the letters and numbers signify?

A. Letters are the initials of such words as "scout," "pursuit," "bomber," etc. The letter X means experimental. Numbers indicate a particular design or con-

Q. How much fuel do the large planes use? A. The large two-motor trans-

ports consume approximately 100 gallons an hour.

Business Recovery Aided by Aviation

Due in part to unfilled orders of the aviation industry, busi-ness activity in California has climbed again to the peak reached in the winter of 1936-1937, according to the research department of the Security-First National Bank of Los Angeles. Aviation is playing a part in similar advances elsewhere.

More than 55,000 persons are employed in the manufacture of airplanes in California, an increase of 25,000 since Jan. 1.

Expansion programs now in progress, plus those contemplated for the near future, will more than double present facilities. The construction program will raise the employment level here to more than 100,000 during the coming year.

TRAIN MORE PILOTS

Development of the so-called "light plane", priced for the average man, has received widespread attention from American aircraft manufacturers because private flying, coupled with the government's program to train 50,000 pilots a year, will help to create a reservoir of trained men to man America's fighting aircraft—should need arise.

THE AIRCRAFT INDUSTRY REPORTS:



Since the start of the European war, Sept. 1, 1939, and through Sept. 30, 1940, the Aeronautical Chamber of Commerce reports, direct aircraft and engine manufacturing employ-

ment has increased more than 170 per cent. There were 46,200 men at work in the plane and motor plants on Sept. 1, 1939. On Sept. 30, 1940, 125,000 men were at work in these plants.

(EDITORS: MAT OF THIS CUT WILL BE AIRMAILED ON REQUEST. USE ATTACHED CARD.)

were kept secret until recently. New Types of Military Aircraft

High Performance Models Developed for Defense Production

LOS ANGELES, Nov. -New types of military aircraft, developed by American builders and now being produced for national defense, jolt the imagination with their potentialities of speed, altitude, range and arma-

While eastern plants are building the Bell Airacobra, pursuit interceptor, the Curtiss XSBC2-1, dive bomber, the Grumman Skyrocket, shipboard fighter, the Martin XA-22 bombers, the Stearman 100 bombers, the United Aircraft's new Vought-Sikorsky scout observation and other models, plants on the West Coast are working on a variety of new models including the fastest of interceptors and largest of NEEDS ALL MODELS Military aviation, of course, depends chiefly on no single

model. There must be trainers-

such as North American, at Los

Angeles, and Ryan, at San Diego,

are turning out in large quanti-

ties. There must be observation

planes and transports. But the

spectacular performance of the pursuits and bombers captures the imagination. Exact performance figures of the nation's new war planes are closely guarded by the Army and Navy. But, during a West (Note: This is the first of two articles dealing with America's defense plane development. The first article describes new types of military aircraft in production on the West Coast, while the second will tell of products of eastern plants.)

in the world.

liquid-cooled motors with a rated take-off horsepower of 1,090 each.

Bombers, as well as oranges,

Speedy Fighters, Biggest

000,000 aerial dreadnaught being made ready for ground tests in a few weeks. The 80-ton B-19 is the largest and most powerful airplane ever built. Its size is difficult to describe, but may be realized from the fact that its tail assembly is larger than

The B-19 has a cruising range of 7,500 miles, or more than three times that of the United States Navy destroyers used in World War I. Its four Wright Duplex Cyclone engines develop 8,000 horsepower. It will be heavily armed with machine guns and cannon and will have tremendous bomb load capacity. While, in a military sense, the B-19 is a gigantic fighting plane, available for air corps use after its tests, its builders regard it as a "flying laboratory" — a pioneering effort to establish a type of bomber suitable for