WING TIPS
ENGINE RESEARCH

Issued weekly in the interests of the personnel of AERL, NACA

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SMOKER TALK PAINTS "LAB - WAR" PICTURE

Secretary Victory Tells Research Staff Importance Of Research In War Effort

Last Thursday, March 2, 400 members of the research staff heard John F. Victory, Secretary of the Committee and recognized authority on aeronautics, tell them why they must serve behind the scenes in civilian clothes.

Laboratories at War! That was the picture his words painted. A picture of laboratories in Germany and Japan pitted against the laboratories in Russia, England, and the United States. Their objectives, he told them, are the solution of the critical military problems of the Army and Navy. Their weapons are the facilities for research. Their ammunition is the findings of research.

Behind the boys in the cockpits of the planes over Germany is the research work being carried on in the laboratories of the NACA. In Germany research engineers work night and day to find the answers to the devastating attacks by our aircraft. Given time she will find the answers. Time! Before she has that time our research engineers must find the means to enable our air forces to crush her in the air and destroy her production behind the lines.

"It is A Challenge"

"It is a grave and vital responsibility," said Secretary Victory. "It is a challenge."

He took his audience back to the era when Hitler came into power, "when aeronautical leaders in Europe conceded that America was at least 10 years ahead of any European nation in the field

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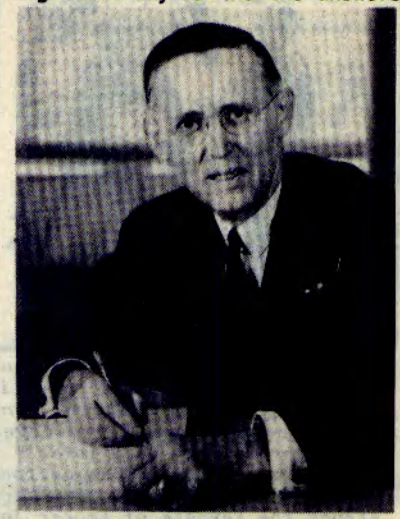


Secretary John F. Victory

SMOKER TALK PAINTS "LAB-WAR" PICTURE

of aeronautics."

How was time measured?

"These leaders said then that if America were to stop its research work on aircraft, it would take Europe at the rate it was making progress 10 years to catch up.

"But Hitler took a lesson from the progress in this country. He multiplied his research facilities to five times the size of ours, and thus greatly accelerated German progress in aircraft development.

Studies NACA War Status

"However we weren't asleep," said Secretary Victory. "We had read the handwriting on the wall." A committee headed by General Westover was already studying the status the NACA should have in time of war . . . and came to the conclusion that the NACA in time of war should serve as a research and engineering facility of the Army and Navy Aeronautical Board. The Westover Committee recommended expansion of NACA research facilities. Today approximately $23,000,000 has been spent in Cleveland alone in this program of expansion.

"The Management is not responsible for the views expressed in Secretary Victory's talk...and the Secretary himself reserves the right to deny them later!" - Adapting the above Press cartoon to the occasion, Manager Sharp struck the keynote of smoker informality in his opening remarks.

"We are now living in the days for which we have been preparing," Mr. Victory stated. "With our country at war, it is incumbent upon us to furnish quickly the answers to a multitude of difficult problems. Between the last two monthly meetings of the Committee 35 new and urgent requests for special studies and investigations came to us from the Army and Navy.

"The problems come to us too fast for us to keep up with them - which leads to the crisis just coming to a head . . . and to the plan, recently announced, whereby essential draft-eligible employees will be inducted, and transferred to the inactive reserve so as to permit their continued effective use in the vital war work of the NACA.

Time Is Vital

"England and the United States are making an all-out effort to crush Germany by air. There never has been an offensive developed for which a defense cannot be devised. Germany has the

intelligence, the resourcefulness, the capacity, and the necessity to devise a defense; she lacks only time. Our purpose in this war is to crush Germany before she has time to develop a defense adequate to bring the air war to a stalemate as the British did in 1940 in the Battle of Britain."

Recalling the essential assistance of the NACA to the Boeing Company in the development of the Boeing flying fortress, and that airfoils developed by the NACA are now used by all aircraft in all countries, Mr. Victory spoke specifically of present contributions of the Committee to the war effort.

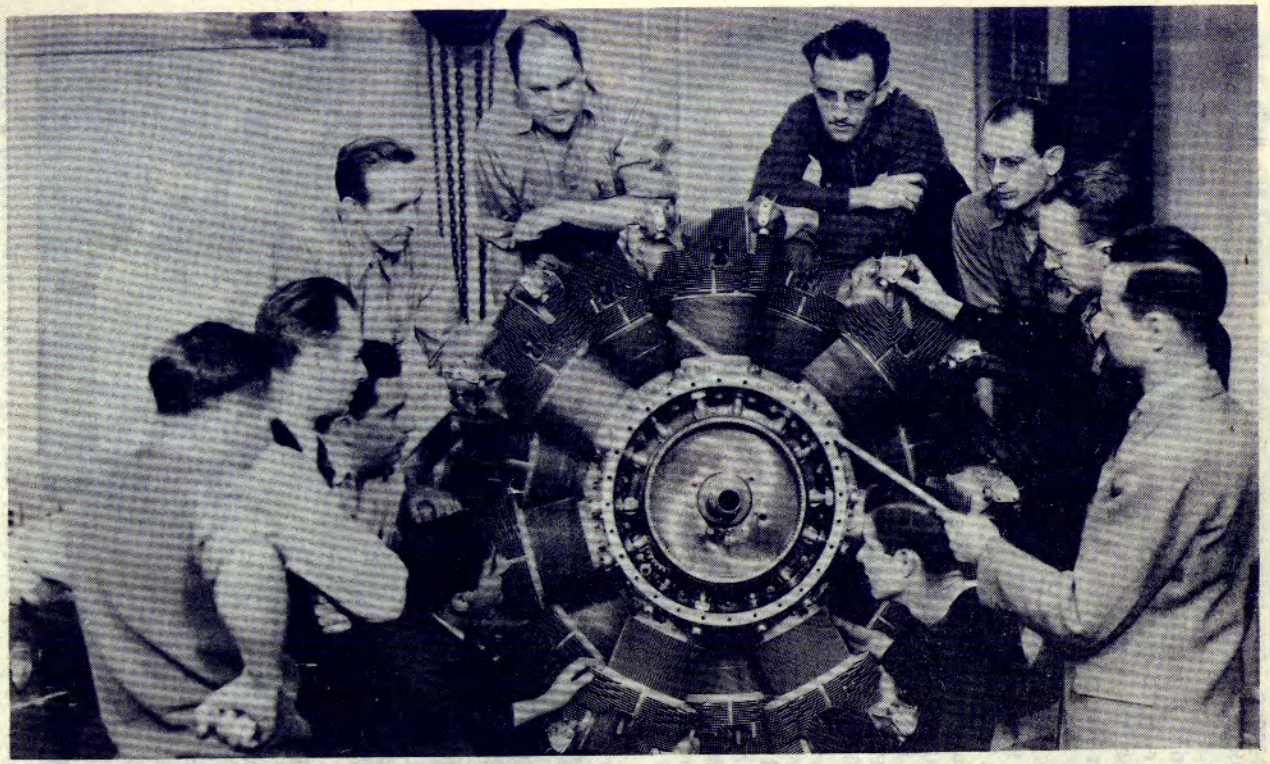
Work Is Essential

"In the judgment of the agencies of the Government charged with the winning of this war, the Army and the Navy," the speaker concluded, "the service that you essential employees are rendering at AERL is of more value to the nation in the winning and shortening of the war than it would be were you in active military service.

"You are doing good work that is becoming increasingly effective and valuable to the armed forces. But they are calling for more answers to more critical technical problems and they need them quickly. This is a challenge to every employee to do his best so as to hurry the successful termination of the war and put an end to the loss of life and expenditures of more than $10,000,000 an hour."

Carlton Kemper, Executive Engineer, will speak at the next smoker, March 23.

Refreshments, group singing, and just plain talk created a spirit of conviviality following the meeting, as shown in this picture.



From left to right, standing: Andrew Balzi, Emil Naton, Frank Berta, William Egan, Jack Dempsey, Al Myers, Harley Roberts, Fred Fredricks, and Carl Darby (Wright instructor); stooping: Gus DiNovo, and Ed Payne.

NACA MECHANICS' SCHOOL GRADUATES RECORD GROUP

First Class In New Course Makes Average Of 99.25%

A class of 10 mechanics completed the first three-weeks course on February 26 in a new series of courses now underway in the NACA Engine Mechanics' School. Outstanding among all classes to date, the class recently graduated averaged 99.25 per cent on final examinations.

The present course features the Wright engine. Instruction was outlined by George Jarvis of the Wright Aeronautical Corporation, and Carl Darby, also of Wright, has been serving as instructor. Earlier courses featured the Allison Engine; other engines will be studied in future classes, with the Pratt Whitney next on the list.

Sets An Example

Of his record-making pupils in this first Wright course, the instructor says: "This class has set an example for subsequent classes . . . Examinations were more difficult than the examination we give to Army mechanics in our Army Air Forces Factory Training School."

The high average is especially noteworthy in view of the fact that Mr. Darby himself had no previews of the questions to be asked, since the examination was prepared by Mr. Jarvis and mailed to AERL just in time to reach here for the final class period.

Of those who took the course, John Dempsey and Harley Roberts have been receiving additional instruction to prepare them for conducting succeeding classes in this course.

Lists Honor Men

The Allison course consisted of what is known as Allison Basic Engine - that is, complete tear-down procedure of the entire engine and all its units, complete engine timing, etc. As it was given, it is exactly the same course as that given at Allison Service School in Indianapolis to all Army and civilian personnel. Honor men in the six Allison classes were: *A. G. DiNovo*, 94; *A. F. Reader*, 95; *Frank Dunn* and *Merritt Caton*, 90; *Fred Fredricks*, 90; *E. Perchonok*, 95; and *A. J. Myers*, 96.

SAYS "THANK YOU"

A "bread and butter" letter came in this week to those ERB folks who helped put over the Open House and Party February 26. As follows:

"To all those who so willingly and effectively helped out on the Engine Research Building Open House and Party, the committee extends a heartfelt 'Thank you!'

"The favorable comments of the management, your coworkers, and their guests are a credit to your efforts."

Harold C White
(for the committee,
ERB Open House and Party.)

WOMEN WORK, TOO, IN TODAY'S LAB-WAR

Office Worker Sets Up Own Military Objective; Seeks Personal "Enemy"

In the war between the laboratories of the warring nations, the Molly Pitchers of today are doing their part. In the machine shop, in the stockroom, in the laboratories of the Fuels and Lubricants Building - wherever the work can be done by feminine brains and brawn, there are women doing their bit.

That the office workers are also cognizant of their part in this war between laboratories is exemplified by the sentiment expressed by one of the members of the Correspondence Section last week. Said this worker:

"I have worked out my military objective this way . . . I try to imagine the girl in a laboratory in Germany who is doing the same type of work that I am, and challenge myself to do a better job than she is. This picture of my work makes mine a personal war which I've got to win because I have so much more to lose than has the girl under Hitler's domination."

AERL women at work in the - Thermocouple Section

War in Europe

NACA created by Act of Congress — 1915

First building at LMAL completed — 1918

Depression - No NACA employee discharged for lack of funds

War in Europe

Start of expansion program — 1937

AAL goes into operation — 1940

Construction started at AERL

First unit completed — 1942

AERL dedicated — 1943

Expansion

1914 1916 1917 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1938 1939

Chart showing how war has emphasized the necessity for superior aircraft - and how the NACA has kept pace with this necessity. For the duration of the present war the NACA has one, and only one purpose - that is, through research and development to provide the means for increasing the striking power of the war airplane.

WING TIPS

Wing Tips is prepared and published at the Aircraft Engine Research Laboratory of the National Advisory Committee for Aeronautics, Cleveland Airport, Cleveland, Ohio, in the interest of AERL employees. Contributions should be sent to the Editor, Room 108, Administration Building.

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DR. GEORGE W. LEWIS RECEIVES NEW DEGREE

Dr. George W. Lewis, NACA's Director of Aeronautical Research, received a new honor recently. At its 50th anniversary convocation, he was awarded an honorary doctor of engineering degree by the Illinois Institute of Technology. The citation given Dr. Lewis reads:

"*For outstanding achievement in advancing our knowledge of the fundamental principles and practices of mechanical flight; and for leadership and encouragement of practical research by governmental agencies in cooperation with industry-researches which have insured a solid technical foundation for the greatest aircraft production program in history.*"

Dr. Lewis started his career in engineering as an instructor in this subject at Cornell University in 1908. In 1910 he accepted the post of professor of engineering at Swarthmore College where he remained until 1917, when he went to the Clarke Thompson Research as Engineer-In-Charge. He became Executive Officer of the NACA in 1919, advancing to the post of Director of Aeronautical Research in 1924, which he has held since that time.

Dr. Lewis was honored in 1929 by the American Society of Mechanical Engineers as one of the 10 men most responsible for the advance made in aeronautical science in the U.S. In 1934 Norwich University conferred upon him the honorary degree of doctor of science. In 1936 he was awarded the Guggenheim Medal by the Institute of the Aeronautical Sciences; in 1937 he was sent by the President as pleni-potentiary delegate of the U.S. to the Inter-American Technical Aviation Conference at Lima, Peru; and in 1939 he was honored by delivering the Wilbur Wright Memorial Address before the Royal Aeronautical Society of Great Britain.

This brief resume of Dr. Lewis' career and the honors that have been conferred upon him exemplifies the ability which merits the confidence and trust of those who are privileged to work under his direction. His life is an example of dedication to the furthering of the science of aeronautics, and is an inspiration to young engineers who enter this field of service to their country.

Under his inspired leadership the NACA has achieved its prestige and its high place in the scientific world.

SERVICE STARS

By Kay Hovanec

Buddies while at the lab and buddies still, despite Uncle Sam's intervention, are former apprentices A/S BILLY HARRISON and A/S FRANK HOLT. Basic training at Jefferson Barracks, Missouri, was a simultaneous affair with them and now both are in pre-flight training at Creighton University, Omaha. They would like to hear from their AERL friends and will answer all letters sent them.

Not wishing either Frank or Billy a case of writer's cramp, but urging their AERL friends to write that letter that has been so long forthcoming. You know what a lift to one's spirits a friendly letter can be!

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Crime doesn't pay, but blasphemy paid off to the tune of $2.35 "collected through a 'cuss box' in the Electric Shop, Utilities" for the postage "kitty."

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JOHN KRIEGER (Engineering Drafting) serving overseas, is wearing an additional stripe - rank of Staff Sergeant. Congratulations, Johnny! "Give my best to the guys and gals in the drafting room," he writes.

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Air-minded PFC. JOSEPH M. APIDONE is at present in a replacement depot in Tampa, Florida "awaiting assignment to a combat crew so I can go into tactical training."

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LOBBY LINES

By Mary Louise Cooney

Dr. Jerome C. Hunsaker, Chairman of the NACA, making an official visit . . . *Dr. W. F. Durand* and *Dr. George W. Lewis* arriving in a snow storm to attend the Power Plants Committee meeting on Wednesday . . . and *J. W. Crowley* on an official visit from LMAL.

J. F. Victory (NACA Secretary) leaving the cafeteria in a borrowed overcoat that didn't fit when he found his missing. . . *Group Captain G. E. Watt*, RAF, London, and *Major J. N. D. Heenan*, of the British Air Commission, recent visitors.

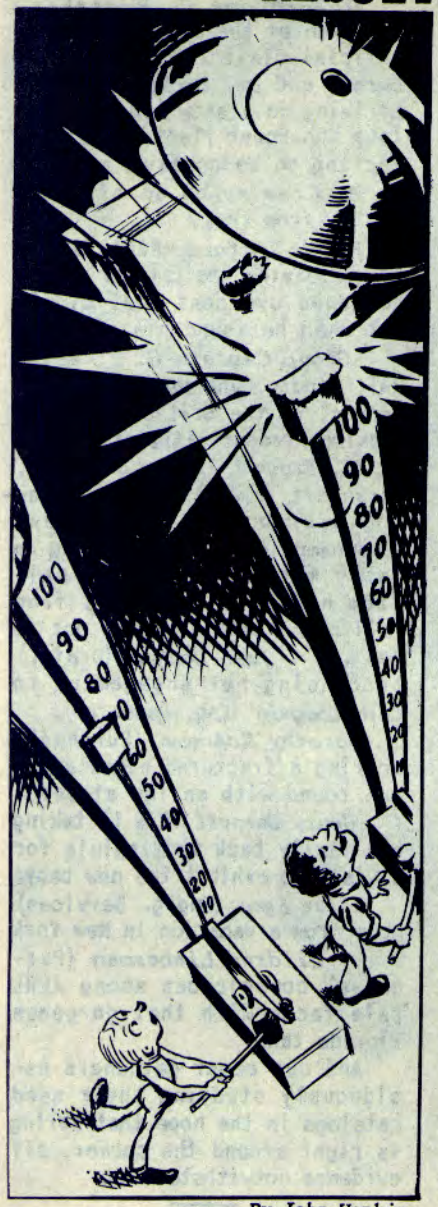
Dr. Bruce L. Hicks and *M. A. Hirshfelt* (F & L) both announcing baby boys . . . *Theresa Frischman* (Corres.) receiving an early morning telephone call from her sailor husband from California before he set out to sea . . . *Jean Denham* (Draft.) announcing her engagement to *Glen Goodwin* (Eng. Research).

Dorothy McAdams (Purchase) scoring a fractured elbow after one round with an icy street . . . *Henry Barnett* (F & L) taking his family back to Virginia for a visit to exhibit the new baby.

Alice Egan (Eng'g. Services) home from a vacation in New York . . . *Mildred Lieberman* (Purchase) conspicuous among AERL pale faces with that gorgeous Florida tan.

And our eager gardeners assiduously studying their seed catalogs in the hope that spring is right around the corner, all evidence notwithstanding.

WAR BOND CAMPAIGN RESULTS SUMMARIZED



By John Hopkins

By Russ Dobrin, Chairman

To date, with the Fourth War Loan Drive well over the top (and reports still rollin' in) AERL has sold 1364 bonds to the heady tune of $83,450 face value. This sum represents bond purchases by 1124 employees.

Contacting of fellow workers was done by 105 BONDadiers scattered throughout the laboratory. Since the campaign was one of those high-speed, self-selling programs, they did not have too hard a time in going over the $58,600 mark set for them.

Stunt Nite Leads

There were three separate phases of the drive as conducted here. The first was the War Bond Game Rally, which did not do so well. The second was a series of War Bond Stunt Nites. A general poll of the personnel puts these gala entertainments at the top of the list, both as to the fun had by those attending, and as to the number of bonds sold. The Bomber Naming Contest was the third idea, and some 600 persons subscribed to it by submitting entries.

In addition there were some clever posters scattered about, and Charles Cooper (Expediting) boosted sales with his offer to purchasers of $50 bonds of nifty nameplates for desks.

In summing up the campaign, let's not forget the real dividend earned by all of us - that old AERL pride in doing what we have to do RIGHT!

"OFF TO GOOD START" SAYS RED CROSS HEAD

Early Returns Heartening But Goal Still In Distance

Red Cross Drive workers are being constantly reminded that that War Bond track champ "passed this way." They're crowding his heels rather closely, but there's a goal to be reached, and they're forging ahead in spite of the hurdles left in the wake of the War Bond race.

With the national per capita quota placed at $4, AERL boasts a quota so far running about $3.75, according to E. J. Baxter, Drive Chairman. Says Mr. Baxter, "This is a good indication that we are off to a good start."

Liz Balint and Agnes Esses, Administrative Division, donned tricky little caps emblazoned with a red cross, symbol of the national mercy organization, and hit up their coworkers early this week. Their enthusiasim wasn't to be resisted - the Manager's Office came through 100 per cent the first day, and donations and pledges in other sections were heartening.

Goal Not In Sight

"But the goal is far from being in sight," says the Chairman. "Workers in all Divisions are doing their part, but returns are so far rather slow. With the War Bond Drive finally closed, returns should show a definite up-trend."

The workers and the Divisions they represent are as follows:

Administration, *Elizabeth Balint*; Auditing, *Helen M. Acker*; Building and Grounds, *Dorothy P. Morris*; Construction, *R. A. Elliott*; Engine Components, *Clara M. Dornon*; Engine Installation, *George V. Darchuk*; Engine Research, *Erva C. Nelson*; Engineering Services, *E. Daniel Williams*; Expediting, *Robert W. Schmidt*; Fabrication, *Robert W. Reich*; Flight Research, *Phillip C. Pragliola*; Fuels and Lubricants, *Phyllis M. Arscott*; Icing Research, *R. B. Olson*; Instrument, *S. G. Kelsey*; Executive Engineers Office, *D. M. Barr*; Managers Office, *Charles E. Cooper*; Supercharger and Airflow Research, *Mary A. Brown*; and Thermodynamics, *C. Montgomery*.

"C'mon, fellas - let's make it a lot - from the boys over here, to the boys OVER THERE!"

YOUR RED CROSS IS AT HIS SIDE

SPORTS

BOWLING

Bowling scores are due a review again -

In the White section of the NACA league, Construction tied with King Pins, which team has held top place since early in the season. These Construction hot-shots feel very proud over this feat even though it is in a tie and may be for a short time only.

The Would Choppers are still leading the Red section by two games over the second-place Deicers. The Blue section Strikers have a fairly safe margin of five games over the Thermo team. Judging by the bragging going on there is going to be many changes in the present standings during the remaining 27 games in this season.

RIFLE CLUB

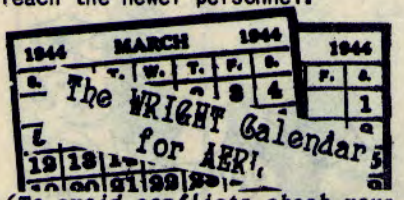
The Rifle Club will hold their annual election of officers next Wednesday, March 15, at 7:30 p.m. in the Auditorium. All members are urged to attend. Plans for a range will be discussed.

BASKETBALL

Our NACA basketball team won another league victory last week by defeating the Knickerbockers 31 to 26. This team defeated our team earlier in the season by 13 points.

Call Shoop, 3138, for dates.

SMOKER TICKETS for March 23 will be distributed as previously, every effort being made to reach the newer personnel.



(To avoid conflicts check your proposed dates with Mark Wright, dial 3109.)

Mar. 18 - Tech Service Party
6 p.m. - Auditorium

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Mar. 23 - AERL Smoker
7:30 - Auditorium

WANT ADS

FOR SALE: Gas range, 57 inches overall, left-hand oven, 18 inches, broiler oven, 18 inches, Lorain oven regulator; white nickle trim, black top, four burners; like new. LA 6202.

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FOR SALE: Stenotype machine, good condition. Call M. Tucker, 2284.

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FOR SALE: Western riding horse. Cheap. Call Beryl Boile, 3136 or Berea 6777.

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WANTED: Washing machine. H. L. Olsen, 3142.

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FOR SALE: 1937 Ford 60, 2-door sedan. Good running condition, three very good pre-war tires. $175. Bill Trail, 3168.