

# AIR SCOOP

LANGLEY MEMORIAL AERONAUTICAL LABORATORY

## UNIVERSITY OFFERS EXTENSION COURSES

Registration for University of Virginia college credit extension classes will be held on January 23rd at the John W. Daniel school in downtown Newport News and at Hampton High school in Hampton from 7 to 8 p.m. Classes will be held at the Daniel school and at the Hampton High school.

If eight or more students register, any course in engineering or allied subjects will be offered. Courses taught last year, and which are expected to be repeated this year, include: Trigonometry, analytical geometry, integral calculus, differential calculus, differential equations, functions of a complex variable, vector analysis, operational calculus, mathematical

## THIRTY-SIX LMAL APPRENTICES TO GRADUATE FEBRUARY 9

### West Area Bus Route Changed

Effective Saturday, January 20, the regular Laboratory inter-area bus will change its route in the West Area, it was announced yesterday by Walter Reiser, Chief of Maintenance.

The bus will leave the 16-Foot Tunnel, cross the main road and circle the new Physical Research Laboratory, reentering the main road at the corner of the West Machine Shop Building.

Having successfully completed their prescribed term of apprenticeship, 36 LMAL apprentices will receive certificates for the completion of their training at a special ceremony to be conducted February 9 from 1 to 3 p.m. in the Post Theater. This will be the third annual graduation exercise held by the Apprentice Administration.

The principal speaker will be Gordon Scheain, Chairman of Virginia Apprenticeship Council, who will be introduced by William J. Morre, Assistant National Director Apprentice Training Service. Dr. B. H. Van Oot, State Director Vocational Training For War Production Workers, will make a brief address.

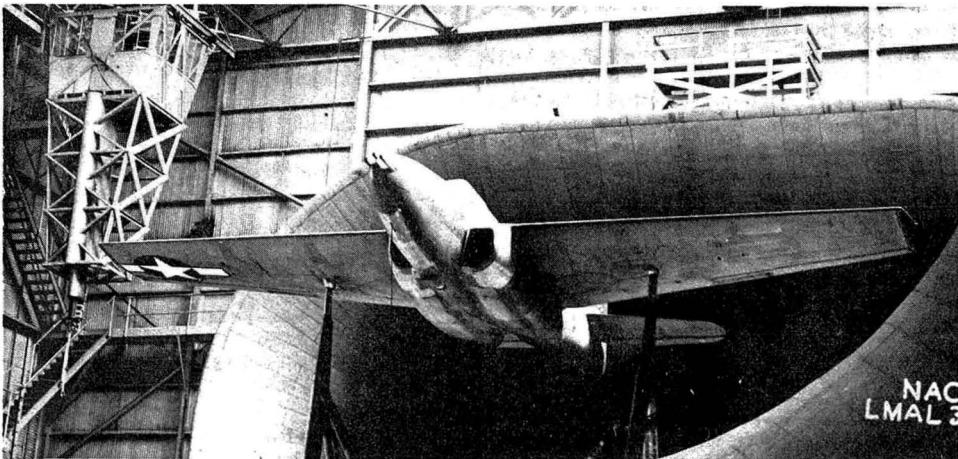
Elton W. Miller, chief of the Administrative Department, will offer the invocation and benediction. Frederick Breisch, toolmaker will speak for the graduating class and Carlton Cecil, an apprentice sheetmetal smith for the student body. Certificates will be presented the graduates by Charles A. Hulcher, Chief of Training Division.

The graduates and their trades are as follows.

Avery, Henry G., Machinist; Batzold, Bertram K., Jr., Aviation Metalsmith; Bernhard, Charles J., Radio Technician; Breisch, Frederick A., Toolmaker; Dawson, James J., Aviation Metalsmith; Deis, Bert C., Toolmaker; Effinger, Robert J., Instrument Maker; Evalenko, George A., Radio Technician; Folk, Charles E., Machinist; Hartmangruber, Eugene J., Aircraft Modelmaker; Hilsdon, Francis J., Toolmaker; Ianuzzi, Anthony P., Instrument Maker; Kabane, Walter P., Aviation Metalsmith; Kinzler, Jack A., Toolmaker; Kirwan, David F., Radio Technician; Kurtyka, Thomas J., Toolmaker; Lada, Joseph R., Toolmaker.

Moscater, Ralph E., Aeronautical Laboratory Technician; Nutter, Harry A., Jr., Aircraft Modelmaker; Panz, Claud R., Aviation Metalsmith; Parmenter, Frank L., Machinist; Poythress, George W., Machinist; Schaeffer, Herbert, Machinist; Sladek, Richard R., Aircraft Modelmaker; Smith, Henry A., Aeronautical Laboratory

## BELL JET PROPELLED P-59 TESTED HERE; USED AGAINST ROBOTS BY RUSSIANS



An Associated Press story with a Moscow dateline, buried in the middle of most newspapers, last week carried the first news that any of the Allies have put a jet-propelled airplane into action. The AP quoted Fred Suprun, Red Air Force engineer, as saying that the Airacomet, otherwise known as the Bell P-59, recently had been in use against

German robot bombs.

The new JP (short for jet-propelled) which looks like a cross between a P-63 and an A-20 (without propellers of course), dates back to 1933 when Frank Whittle, an RAF cadet now a wing commander, designed the prototype of the highly specialized power plant. Whittle's

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# In Our Opinion—

'THE VOICE WITH A SMILE' IS NOT ENOUGH

For several weeks the Training Division, through the cooperation of the Army, has been showing a film 'Telephone Efficiency', to various members of the staff who have the opportunity to use the telephone many times daily. The film stresses nine important points that should be remembered by all those who use the little black instrument that saves many steps and a good deal of writing.

After being assured by the Training Office that practically everyone who answered the phone in any of the activities had had an opportunity to see the movie, we began to make a check to see how much they had profited by it.

A total of ten calls were made, numbers being picked at random, to a combination of offices, tunnels, and shops. The results are shown in comparison with points of efficiency outlined in the film.

1. Answer telephone promptly. Of the ten calls that we made, six were answered on the first ring, two on the second, one on the fifth, and the other was unanswered. The telephone should be answered after the first ring to avoid bother to those nearby.

2. Establish your identity. Three persons answered by giving their name only. This is all right if you're sure that everybody at the Lab knows you and your position, but remember how many new people are hired each day. Four others answered with only the name of their activity. This is fine, except that there are some peculiar people who like to know to whom they are speaking. One fellow simply picked up the phone and said 'Hello.' The one remaining young lady came through with a perfect score by first stating the name of the office and then her name.

3. Keep telephone attended properly. All except three of these phones were answered by the persons who usually do it. One of them is located in an office where there are only two persons working. Evidently, both were out as there was no answer. The second was answered by a boy at the next desk who didn't seem to know anyone or anything. The third was answered by a girl in the shop. Her boss had gone out and she didn't know where or when. One word answers and no offer to take a message were her specialty.

4. Handle calls to completion. All except one person to whom we talked either found the person whom we asked for or offered to take a message.

5. Develop a pleasing telephone manner. One man was definitely blunt, and one girl was toosing-songy, but all the others were extremely pleasant.

The remaining four points apply particularly to those who make calls.

6. Make calls correctly. Don't trust your memory. We recently have put in a new exchange for the West Area, and many of the old numbers have been changed. Get them right before you start dialing.

7. Plan conversation in advance. If you're the type who is apt to forget whom you are calling, or why you are calling him, make notes beforehand on what you want to tell him and what you want to find out. Remember, he is probably as busy as you.

8. Ask questions tactfully. No one likes to hear, 'Get me Joe Blow!' Neither do they like 'Where's Smith?' The word 'please' never hurt anybody.

9. Coming appropriately at the end is the thought-End calls Courteously. This applies to both parties. If you made the calls, make certain that you found out everything you wanted and that someone was thanked for it. If you handle the call on the other end, make certain that the person who called was treated courteously and all his questions answered.

Countless hours are lost daily by persons who pay no attention to their telephone manner. Time so lost can never be regained. The telephone is an important part of war communications. It has a big job to do.

## MEMO REQUIRED FOR LEAVE ON HOLIDAY

Generally reliable as to which days are construed to be national holidays (on which days employees must write memorandums in order to have absences approved except Christmas which comes on December 25), the United States Government calendar has had a few people fooled this year. Because of this it seems advisable to clear up this question of 'Is you is or is you ain't a holiday?'--referring to January 20, of course.

In case you haven't spent at least several hours discussing same, January 20 is marked in red on the calendar, a distinction that is shared only by Legal Holidays and Sundays.

For two weeks the Air Scoop Office has been besieged with telephone calls inquiring the status of the rouge twentieth. A conclusion has been reached that everybody at the Laboratory is either going to take leave on Saturday or is just plain curious.

We checked with the Personnel Officer, asking a simple question, 'Is January 20 considered a holiday?'

Giving his usual straightforward answer, Butler came back with, 'Yes, and then again, no.'

'Please explain'.

'You see, it is considered a holiday only for those employees in Washington, but even they have to work now.'

A bit disappointed at this dual answer, we decided that the best thing to do was to check the other red letter days (excluding Sundays) on the calendar, and find out whether or not they are all legal holidays.

Of course we don't have to worry about January 1. That was New Year's Day - if you remember. As if you could forget.

January 20 is - well, let's not get into that again.

On February 22 we celebrate, at work as usual, Washington's birthday.

The thirtieth of May is Memorial or Decoration day.

July 4 is when we celebrate the Fourth of July.

Labor day comes on September 3 this year.

You get Thanksgiving on November 22 whether the Governor of Virginia likes it or not.

At the last report from the White House, Christmas is still planned for December 25.

If you plan to be absent from the Laboratory on any of those days, you'll have to request it in writing, in advance, with the exception of Christmas because there would be nobody around to make you work anyway.

(Editor's Note: November 11, Armistice Day, comes on Sunday this year.)

WANTED: Forester '29 or similar. Stan Brigham, Hampton 6009.

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# How To Take A Contest Photograph

by Leroy Spearman

The Air Scoop Photo Contest closes the end of this month but there is still time to take a prize-winning picture. If you desire a little instruction beforehand, and you have an open mind - or better still, a blank mind - then here is your chance to learn photography in 3 easy lessons or 1½ hard lessons. Study this information and you should be able to produce a contest picture comparable to those taken by Babe Ruth, Charlie McCarthy, Socrates or other famous photographers.

Choose a camera from your supply, preferably one with f:2, 50 mm., anastigmatic, anamorphoscope, orthoscopic, anti-dichromatic, orthochromatic lens and a superheterodyne, hydromatic, diabolic shutter, and a coupled range finder, built-in synchronizer and hot and cold running beer.

Then go to a store and say, "Gimme a roll of film to fit this thing." If you secure it (unlikely) you are ready to load the camera. First it will be necessary to remove the camera's back. Select a likely looking knob and pull on it. Nothing will happen. Then try pushing it and you will get the same result. After you have lost three thumbs and your patience, hurl the camera to the ground and the back will come off.

With this problem solved, the next step is to place the film in the camera. There are two ways to do this - frontward and backward. The correct way is just the opposite of what you do first. After three rolls have slipped out of your hands and unrolled, insert the fourth one with the help of both hands and your teeth.

Replacing the back of the camera is very simple except that it is generally impossible to remove your thumb. That is of no consequence. Just leave it alone as it would only be getting in front of the lens later on when you're trying to take a picture.

Now you are ready to start after setting an odd dozen (or dozen odd) gadgets, wheels, levers and gears that control such matters as shutter speed, lens opening and focus. For help in adjusting these devices, use range finders, exposure meters or the advice of a bystander who will invariably be looking over your shoulder.

Now you must select a subject or, if it is to be a person, a victim. There are many types of pictures you will find suitable. First, there are action pictures. This type could be taken at the exit of any NACA building at 4:45 p.m. Then there is still-life photography. Excellent examples of this can be found in any building where a graveyard shift is in operation. (This is

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# SPORTS



Referee Harry De Voto looks on as Jack 'Zorina' Paulson, Free-Flight, gets a tip-off from Hal Johnson of AWT. Other players, from left to right, are Bernie Smith, Herman Ankenbruck, Eddie Polhamus, and Bernie Maggin.

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## BASKETBALL

Eddie 'The Kid' Polhamus, captain of AWT's Characters, stole the show in the basketball league during the last week with the season's high score of 22 points against PRT. Tony Proterra was high man for PRT with 16. AWT won the game 40-27.

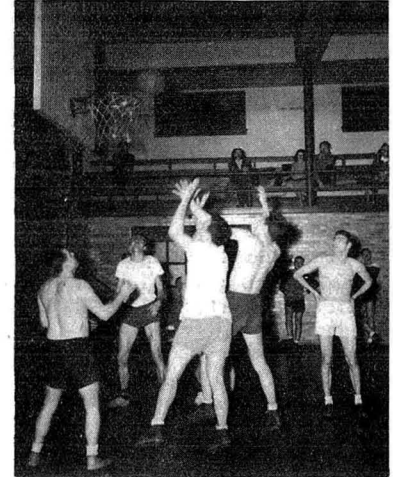
Ray Hansen provided a last minute victory for IRD over last year's champs, 8-Foot, with a rebound shot that won the game, 32-31, in the last 15 seconds of play.

The scores of the past week were:

AWT 27; Free-Flight 14  
 19' P.T. 35; Flight Whites 4  
 PRT 28; 16-Foot 19  
 IRD 32; 8' HST 31  
 East Shops 26; Structures 19  
 Flight Blues 24; West Shops 6  
 AWT 40; PRT 27  
 8' HST 27; 19' P.T. 24  
 Structures 26; Flight Whites 9

### The Standings

Team	W	L	Pctg.
AWT	3	0	1.000
East Shops	3	0	1.000
Low Turb.	2	0	1.000
Flight Blues	2	0	1.000
8' HST	3	1	.750
IRD	2	1	.667
19' P. T.	2	1	.667
Structures	3	2	.600
Loads	1	2	.333
PRT	1	2	.333
Free-Flight	1	3	.250
Tank	0	2	.000
16-Foot	0	3	.000
West Shops	0	3	.000
Flight Whites	0	3	.000



Bunny Klawans and Pat Cancro (white jersey) fight for a rebound under the basket. Others, from left to right, are John Gardner, Stan Spooner, and the especially interested Jim Thompson.

Photos by Dick Everett

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## BOWLING

by Si Diskin

Free-Flight and Structures are tied for the lead in the Thursday Night Men's Duckpin League with 13 wins and 2 losses apiece.

John Campbell, Free-Flight, is the leading keglar in the loop with the high average of 113 and the high game of 145. Chuck 'Fireball' Dobrowski has high set honors with 359.

### The Standings:

Team	W	L	Pct.
Free-Flight	13	2	.867
Structures	13	2	.867
Spin Tunnel	9	6	.600
Erection Shop	9	6	.600
Electric Shop	7	8	.467
Full-Scale	5	10	.333
Engineering	3	12	.200
ICL	1	14	.067

High Game		High Set	
Campbell, FFT	145	Dobrowski, Str.	359
Kamm, Spin T.	134	Campbell, FFT	356
Dobrowski, Str.	133	Diskin, Str.	352

Averages	
Campbell, FFT	113
Dobrowski, Str.	107
Leshane, FFT	111
Diskin, Str.	107
Kamm, Spin T.	108

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by Roger Peters

The Gutter Rats of Structures have piled up a perfect record in the first five weeks of bowling in the Wednesday Night Mixed Duckpin League. They have won 15 games and dropped none.

Chuck 'The Arm' Dobrowski, Structures, and Irma Twyman, Full-Scale, are leading in high game, high set, and high average.

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Take heed all ye who enter into the Land of Langley, into the Valley of the Blank Forms and Six Copies Of Everything Harken to the words of one who has endured tribulation - one who is wiser than thou.

When first thou entereth the Personnel Office, be not affrighted by the information thou must divulge. They who inquire of thee care not whether thy wives have numbered one or twenty, nor are they concerned with the extent of thy learning. They but fulfill directives from Above.

And when thou art presented with thy badge, scream not, nor faint, though it resembleth thee not, though it maketh thee look like a monster. Yea, even though it pulverizeth thy ego, wear it in patience, for all are in the same boat with thee.

If the Placement Officer shall see fit to assign thee to a far-off land of desolation, a land of marshes and mosquitoes without number known as West Area, curse him not. But equip thyself with hip-boots, take heed that thy hospitalization is paid up, and go forth on thy safari into the wilderness



## Extension Courses

From page 1

analysis, numerical mathematics, mechanics, physics, quantum mechanics, strength of materials, theory of elastic stability, mathematical methods in engineering, thermodynamics, vibration problems in engineering, aerodynamics, naval architecture, marine engineering, electronics, advanced electronics, direct and alternating current systems, and other courses as demanded.

Elijah Baker, III, Faculty Chairman, says the purpose of establishing these courses was to enable the able and ambitious student, otherwise handicapped by lack of facilities, to obtain the fundamentals of a higher technical education while remaining in his present employment. "The maintenance of university standards," Baker comments, "has

and be not bitter over thy sad fate.

After thou art assigned to thy task, harken not to thy tormentors who will send thee on fruitless missions, who will confuse thee with meaningless symbols, who will fill thee full of tales about the eccentricities of thy Section Head and thy brethren in the Analytical Sections. They are foolish and lowly-bred and rejoice in thy youth and thy ignorance.

Beware him who shall fall on thy neck and call thee brother and promise to fix thee up, for he is a Big Time Operator and speaketh not the truth. He borroweth thy money and maketh himself scarce on payday. He muscled in on thy girl, and moocheth thy cigarettes even unto thy last butt. Shun him, for he is for thy downfall.

And if thou art female and comely to the eye, beware those who shall, with winks and whistles, attempt to beguile thee and flatter thee. Spurn them, and encourage them not, for their name is "Wolf"

If thou are given the title 'Junior Engineer' do thy task with ever-increasing vigor so thou wilt make an impression and may someday be called upon to affix thy signature to a Technical Report. When this day cometh, thy name will be upon the tongues of thy fellow men as an Authority. But watch that thy efforts are not overdone, for then thou shalt be spoken of as 'Eager Beaver.'

established the credit status of those courses already offered and there is no reason to anticipate a change of policy. Thus, should any student decide to pursue his studies in the higher branches of civil, electrical, mechanical, or aeronautical engineering at the university or elsewhere, these evening class credits may be applied toward a degree, provided full entrance requirements are satisfied."

No specific qualifications for entry into these evening classes have been laid down. The ability to take advantage of the instruction offered is all that is needed. For each course a fee of \$15 is charged, which partly defrays the expense of the course

Further information may be obtained at the Laboratory from the Training Division, 2300.

## Jet Plane

From page 1

engine was running in 1937 and the first British Air Ministry order for an airplane using it was made two years later. The airplane was flown in May, 1941.

The NACA set up a Subcommittee of Jet and Turbine Power Plants under the leadership of Dr. William F. Durand to study jet-propulsion. Copies of the British engine were sent over here in July, 1941, and in September, an engine was delivered to General Electric for duplication. On September 8, Bell Aircraft was assigned to build the airplane for the power plant. The first test flight was made on September 30, 1942, with Robert M. Stanley, then Bell's chief test pilot, at the controls.

On its way from the factory to the front, the Airacomet visited the Laboratory. The Full-Scale Tunnel ran a series of clean-up tests on the airplane and were able to assist in getting its its speed to a point where it is "more than 400 miles per hour," which is as much as the Army will say. It is also known that the P-59 has surpassed the old pre-war U. S. altitude record of 43,166 feet. Although the top speed and ceiling are not known, enemy jet ships have been reported to do more than 500 miles an hour and engineers admit that the jet engines do not reach their operating efficiency under 400 m.p.h.

One of the more remarkable features about the airplane (and there really seems to be no end to them) is the engine's adaptability to temperature extremes. It has gone through terrific climbs up to a point where the thermometer, read 68 below zero. It is equipped with a pressurized cabin, but the pilot still takes along his oxygen equipment. When the airplane is flying at 40,000 feet, the inside pressure is equivalent to that at 20,000. Oxygen is needed at 12,000 feet.

A JP engine that will cruise an airplane at 400 m.p.h. weighs about one-third as much as a conventional type airplane engine of equal horsepower. Contrary to the average airplane, the jet ship generally operates more efficiently as the speed increases. Its speed apparently will be limited only by its flying so fast that the air moving around the wings approaches the speed of sound. Above this point, shock waves leading to tremendous increases in drag, begin to form and troubles, which the entire aeronautical profession is working to solve, begin.

Pilots of our Fifteenth Air Force in Italy report that they have seen two types of German JP's, the twin engined ME-262 and the single jet ME-163, both of which they claim can top 500 m.p.h. Their tactics to date have been to lurk above 30,000 feet "make only one dive at our bombers and then zoom right up at terrific speed on an angle as steep as 45 degrees and maintain their climb."

## ASSISTANT SCOUT MASTER NEEDED

An Assistant Scout Master is wanted for Hampton Troop No. 21, Boy Scouts of America, First Methodist Church, Hampton, Va.

The present Scout Master, Coburn Hull, expects to be transferred to another state very shortly and an assistant who can take over his position when he leaves is needed.

Any persons who would be interested in this appointment can secure further information from D. D. Smith, Electrical Office, 4411, or W. C. Morgan, East Engineering Section, 2251.

## BOWLING

From page 3

The Standings:

Team	W	L	Pct.
Gutter Rats	15	0	1.000
Dim Wits	9	6	.600
Keen Teem	9	6	.600
Bowl Cats	8	7	.533
No Names	6	9	.400
Jerks	6	9	.400
19-Foot	5	10	.333
Holy Rollers	2	13	.133

Men		Women	
High Game		High Game	
Dobrowski, G.R.	134	Twyman, K.T.	112
Barritt, N.N.	128	De Sander, H.R.	107
High Set		High Set	
Dobrowski, G.R.	339	Twyman, K.T.	300
Barritt, N.N.	329	Twyman, K.T.	279
Averages		Averages	
Dobrowski, G.R.	103	Twyman, K.T.	90
Hickman, G.R.	99	Wilson, K.T.	88

## PLAN DANCE FOR VALENTINE NIGHT

The Engineering Social Club is planning a Sweetheart Dance for Valentine Night, Wednesday, February 14 from 9 'til 12 at the Hampton Armory. Red Overton and his band will be on hand with the music.

A novel twist will be added to this dance, in that fellows who want to get a Sweetheart Corsage for their girl friends, wives or what have you, will be able to buy them at the door for a dollar.

Planned primarily for the members of the East and West Engineering Sections, 100 additional tickets will be placed on sale for other members of Laboratory personnel. Tickets are \$1.50 and may be obtained from Jack Jenkins, East Engineering, or Nick Jevas, West Engineering.

WANTED: An automatic record player or amplifier, speaker, or record changer. Charles Seacord, Free Flight Tunnel.

FOR SALE: Light oak bed, price \$25. Leo Rogin, Air Loads Calibration Laboratory.

## LIFE at the LABORATORY

Nancy Shelton, Personnel Services....

is still walking on air. Her feet haven't touched the ground since she heard that her boyfriend, First Lieutenant Robert St. Germain, is back in the states after eight months overseas. Bob, who is in the Army Air Corps, will make his three point landing on the Peninsula next Monday.

Word has just reached the Air Scoop Staff....

that Louise Cox, FRD, is sporting a new sparkler. The lucky guy is Harold Crane also of FRD.

From all reports, it is obvious....

that Becky Boykin and Oleta Church had quite a linen shower for Margaret Farmer last Saturday night. Margaret will take the final step tomorrow when she walks down the aisle with Reece Ivy.

At last Kenneth Harper, Classification....

has revealed his hidden personality, but who wouldn't after a trip to Washington, the Haven for Men. When asked about the womanpower situation, Harper enthusiastically exclaimed, "It's mighty powerful!" Harper is seriously considering a transfer to the Washington Office. He declares that this is no slam on the LMAL belles but the odds here are 4 to 1 in favor of women, while in Washington they are 4 to 1 in favor of men.

Don Foster, our erstwhile photographer is still a bit puzzled....

over his experiences of Saturday last. Don does a bit of work for a local commercial photog in his spare time and he was assigned to cover a wedding at the Langley Field chapel at 5:15 on Saturday. Then he was to go with the wedding party to the U. S. Hotel Chamberlin at Old Point to shoot the reception. Don arrived at the chapel a bit early and was grabbed off by a Warrant Officer who was awaiting his arrival with bated breath. Don got last minute instructions and he proceeded to start popping off the flash bulbs. After the ceremony he asked about the Chamberlin and was told that all that had been changed and that they were going to some Major's home. He went along and finished the job and then returned to Hampton, minus some twenty-four flash bulbs and an equal amount of film. The folks at the studio wanted to know where he had been. He told them. Then it developed that he had shot the wrong wedding - that the right one had taken place fifteen minutes later, and that the latter party was still waiting at the Chamberlin. He took those pictures too.

## GRADUATION

From page 1

Technician; Sparks, William E., Aeronautical Laboratory Technician; Stewart, Robert N., Toolmaker; Storbeck, Robert C., Toolmaker; Swaney, Edward F., Machinist; Taub, J. Frederick, Toolmaker; Taub, Willard M., Toolmaker; Trout, Otto F., Jr., Toolmaker; Veryzer, Andrew, Instrument Maker; Vogel, Benjamin, Engineering Design Draftsman; Weiner, Martin A., Engineering Design Draftsman; Wilson, William R. F., Aeronautical Laboratory Technician.

## WAR INFORMATION CENTER NOW AT PX

Colonel E. W. Raley, Commanding Officer of Langley Field, has informed the Laboratory that a War Information Room has been set up directly in the rear of the PX building.

The personnel of the Laboratory are invited to use this room. Maps are displayed which are kept up to date, much additional information is posted, and a visit to this room provides an excellent method of keeping abreast of the war and the progress in various theatres of operation.

## Photo Contest

From page 3

frequently referred to in informed circles, as "table-top" or "desk-top" photography.)

Another appealing picture is the human-interest shot - for example, an NACA ex-soldier running down an MP at the gate. Also consider the wierd, or freak type, as exemplified by any identification badge. And don't overlook scenic shots such as Hampton Creek as seen by an oyster.

"Spot news," or "On the scene" pictures are also much esteemed. For instance, the inside of a burning building as the walls are collapsing, or the close-up of a mad rush to a gutter in which a cigarette butt has been discarded.

Then there is the "art study" picture. This consists of photographing nak....WOW! Why didn't I think of this before? Where's my camera? Gimme some film - lemme go!

(Ed. Note: by carefully following the above directions, you can make certain of not winning the War Bond first prize, \$10 second prize or any of the three third prizes of a carton of cigarettes each.)

\* \* \*

## MEET THE COMMITTEE

\* \* \*

To be appointed Chief Physicist of the National Advisory Committee for Aeronautics would be considered, by most men, to be the crowning achievement of a long scientific career. Yet Edward Pearson Warner achieved that distinction when he was but 24 years old. And even at that comparatively early age, he had already served as an aeronautical engineer in World War I. Obviously, Warner was a master-mind of aviation from the first, and his entire career has been a series of successes in his chosen field.

Edward Warner was born in Pittsburgh in 1894, and apparently his early interests were not completely scientific, for he graduated from Harvard with a Bachelor of Arts degree in 1916. But Science soon marked him for its own and he went to M.I.T. for his Bachelor of Science degree which he soon capped with an M.S. and an invitation to stay on at M.I.T. as instructor.

Meanwhile, the newly organized NACA had fallen into difficulty. Aeronautical Engineers were scarce and trained research men were scarcer. So John F. Victory, Committee Clerk, went on a scouting expedition to find suitable men. On his visit to M.I.T., Professor E. B. Wilson called his attention to Warner, who had already done outstanding work in aeronautics. Victory was delighted with his find and reported it to Dr. Ames. Negotiations were soon under way and on January 29, 1919, Edward Warner became Chief Physicist of the NACA.

In March of that year, Warner came to Langley Field as head of aerodynamic research and he took with him Fred H. Horton who later succeeded him. His brilliant contributions to the early work of the NACA included design of wind tunnels and flight research. And an integral part of Langley Laboratory history is the story of Warner's many mad dashes from the administrative building to the hangar astride an undersized motor scooter.

Warner stayed at Langley Field a year and then spent several months as the NACA representative in the Paris office which had been established some years before by Dr. Durand. He remained there until a permanent European representative was appointed and he then returned to America to teach at M.I.T.

In the years that followed, Warner made repeated trips abroad to investigate European aviation progress, particularly its commercial development. He believed that a strong military air force could only be achieved by nations that encouraged peacetime progress. As early as 1920 he stated, 'There is no European nation which has not clearly seen that airplanes can be kept in readiness for use in war only through development of their use in commerce.



The development of an air traffic under the control of its nationals is felt to be more important than the development of a similarly controlled merchant marine.'

In 1926, Congress enacted a law establishing assistant secretaryships for aviation in the War, Navy and Commerce Departments and President Coolidge appointed Warner the first Assistant Secretary of the Navy for Aviation. He held this position until 1929 at which time he assumed the editorship of 'Aviation' magazine.

When he resigned in 1934, it was to become vice-chairman of the Federal Aviation Commission, and he also served as engineering consultant to many of the country's largest aircraft manufacturers until he joined the Civil Aeronautics branch of the government in 1939. And in 1941 he was sent to England as part of W. Averill Harriman's staff to expedite Lend-Lease and act as advisor on aeronautical equipment. He has since returned, and is now vice-chairman of the Civil Aeronautics board.

Warner has been a member of the Committee since 1929 and has served with distinction as chairman of the Sub-committee on Operating Problems and as a member of the Sub-committees on Aerodynamics and Aircraft Construction. In addition to hundreds of papers he has written for technical and trade publications, he has authored such authoritative works as Aerostatics, Airplane Design-Aerodynamics (which won him the medal of the Aero Club de France as the leading aviation work of 1927), Aviation Handbook, Airplane Design and Performance, Aeronautical Engineering and Economics of Air Transportation.

His many honors include an honorary Doctor of Science degree and the Wright Medal in addition to the Aero Club de France decoration. He is a member of the American Academy, honorary fellow of the Royal Aeronautical Society, past

## PLAN THREE ART CLASSES PER WEEK

J. J. Lankes has announced the schedule of the Art Classes being conducted by him at Symes-Eaton Community Center, Hampton. Three classes will be held each week, on Tuesday, Wednesday and Friday from 7 to 10 p.m. A flat fee of \$2.00 per week will be made, but this will not be payable until actual work is begun. In other words, the art student will not be charged for evenings when he attends for the purpose of securing information about necessary equipment, etc.

The group intends to function also as an Art Club. Art magazines will be provided and discussions on art and criticism of work submitted will supplement the actual practice of the arts being taught. The class room on the first floor of the Symes-Eaton building has been made available to students even on evenings when classes are not in session so additional work can be done if desired.

Since all instruction will be individual, it is possible to start or discontinue attendance at any time.

## RED CROSS FIRST AID CLASS OFFERED

A course in Red Cross first aid training is being made available to all Laboratory employees. The course, which will be held twice weekly in the Hampton High School, will consist of ten two-hour classes for the standard course, and five additional classes for the advanced course. Qualified instructors will be provided through the Red Cross and classes will begin as soon as sufficient applications have been received. Safety Coordinators are urged to take advantage of this opportunity.

Starr Truscott, Chairman of the Executive Safety Committee announces that locked first aid equipment will be installed in appropriate units and keys issued to persons best qualified to administer first aid.

Arrangements for these classes have been made possible through the cooperation of Mrs. George McAllister, head of the local Red Cross Chapter; Luther Machen, Director of the War Training Program; and the Training Division. American Red Cross first aid certificates will be issued to those satisfactorily completing the course.

Registrations will be taken by the Training Office, telephone 2300.

president of the American Society of Automotive Engineers and a member of the American Society of Mechanical Engineers. He also was selected to deliver the Wright Lecture in 1943, and on Jan. 31 he will be presented with an Honorary Fellowship in the Institute of the Aeronautical Sciences.