

638 RECEIVE DEGREES TODAY

Track House Is Dedicated By Richmond

Alumni Assoc. President
Declares Tech Men
High In Sports

ROCKWELL ACCEPTS KEY

Declaring that the Alumni have led in the movement to improve the body as well as the mind of the Technology students, Harold B. Richmond, '14, president of the Alumni Association yesterday presented the keys to the new Briggs Field House to Dr. John A. Rockwell '96, for transmittal.

He went on to state: "Because of the more rigid curriculum and because engineers as a group are less sports-minded than some other classifications of university students, it is natural to find that varsity competition has not occupied a prominent place in Institute activities. It is perhaps not so well known that in recent years the Massachusetts Institute of Technology stands high in the

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Field House

Bush Is Speaker At Baccalaureate

Largest Audience on Record
Hears Address on
Obligations

The largest audience ever to attend a Technology baccalaureate service heard former Vice-President Vannavar Bush speak on "Opportunity for the Professions" in the Main Hall of Walker Memorial last Sunday afternoon.

More than 300 members of the graduating class were present at the services. Prayers were led by Reverend Frederic B. Kellogg, of Christ Church, Cambridge, while President

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Baccalaureate

Tech Women Students Go Domestic in New Lounge

Technology women students will soon move into the Main Building overlooking the Charles River Basin with facilities for light housekeeping, study, and lounging. Women may receive mail and telephone calls there, and enjoy an atmosphere of quiet and ease.

Plans for this new and enlarged lounge and study quarters were announced by Miss Florence Ward Stiles, newly appointed Advisor to Women, at the annual luncheon meeting of the M.I.T. Women's Association, of which Miss Stiles is president.

Senior Ball Ends Graduating Class' Activities Tonight

Frankie Trumbauer Will Play
As Class of 1939 Dances
At Copley Plaza

Capping Senior Week activities will be the annual Senior Ball, to be held tonight at the Copley Plaza Hotel from 9:00 P.M. to 2:00 A.M. The music of Frankie Trumbauer and his orchestra and the presentation of novel charms and souvenirs to the guests of the Seniors are to be the evening's highlights. A supper will be served from 11:30 to 12:30 in the main dining room and the State Suite. There will be tables around the Sheraton Room, the main ball room.

Trumbauer Comes from West
Frankie Trumbauer has conducted his own orchestra for the past four years, after playing in Paul Whiteman's band for the six years previous to that. His fifteen piece band has played mainly on the west coast in such places as the Biltmore Hotel in Los Angeles. Recently he began his tour of eastern colleges and hotels.

Each one of the Seniors' guests will receive a novel charm in the form of a golden chain and locket containing

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Senior Week

Defense Topic Of Alumni Day

Assistant Secretary of
War, Rear Admiral
Are Speakers

The grim apparatus of war, incongruous in a setting of green trees and white marble, furnished the theme for Alumni Day yesterday. The conference on the "Technology of National Defense" was featured by the speeches of Assistant Secretary of War Louis A. Johnson and Rear Admiral Harold R. Stark.

Presiding at the conference was Gerard Swope, president of the General Electric Company and member of the Corporation, who introduced the subject and the speakers.

Equipment Displayed

A comprehensive exhibition of Army and Navy equipment, designed to show not only the various kinds of material necessary for national defense, but also the industrial organization required for its production, supplemented the day's program.

One of the new Garand semi-automatic rifles and a Thompson sub-machine gun, guarded by a sergeant

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Defense

Over One Hundred At 1914 Reunion

Fiftieth Reunion of 1889
Held at Marblehead
on June 3-4

Over 100 members of the Class of 1914 took part in their twenty-fifth reunion which began at the New Ocean House, Swampscott, Mass., on Saturday, June 3, with a series of events which continued for several days. Mr. Harold B. Richmond, Secretary of the class was in charge of the committees which arranges the reunion.

The Class of 1889 also celebrated an anniversary at the same time. It was their fiftieth reunion, and was held at the Hotel Marblehead in Marblehead on June 3 and 4.

Hobbs and Fiske Represent Classes

The Class of 1889 has shared the place of honor along with the Class of 1914, as the fifty year class and twenty-five year class respectively, at both the Alumni Day and Class Day celebrations held yesterday. Franklin W. Hobbs of Boston, '89, president of the fifty year class and Charles P. Fiske of New York, '14, assistant secretary of the twenty-five year class, officially represented their classes at the two celebrations.

Mr. Fiske, vice-president of the General Motors Acceptance Corporation, was the leader of the New York members of the class of 1914 who arrived on June 3. He is also in charge of the Class golf tournament which is being held at the Tedesco Country Club. Harry S. Wilkins, development engineer of the General Radio Company, is in charge of the housing of class members, while C. A. Corney, chief electrical engineer of the Boston Edison Company, is in charge of local transportation. The entertainment program for the ladies is in charge of Francis C. Atwood, vice president of

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Reunion

Sir Harold Hartley's Commencement Talk Given This Morning

"On the wisdom of your choice of men success or failure may depend," Sir Harold Hartley, vice-president of the London Midland and Scottish Railway, told more than 600 members of the Institute's graduating class in his commencement address at the seventy-second graduation exercises in Symphony Hall this morning.

"Many of you will no doubt enter, as I did," he went on to say, "the service of a great modern corporation, and whether it was formed by the amalgamation of smaller units, or has grown by natural expansion, you will quickly find that the human problems of management become increasingly important with size."

Emphasizes Need of Help

Sir Harold emphasized that "any tendency toward self-sufficiency must yield to a realization of the help that comes from outside and from mutual assistance, without which efficiency is impossible," and ended his speech by warning those graduating not to think that there is left only a little for them to do.

President Karl T. Compton in his address after the awarding of the

(Continued on Page 4)

Commencement

Dean Emerson Is Guest Of Honor At Annual Dinner

Retiring Dean Passes Out
Awards to Architects
at Yearly Dinner

Dean William Emerson of the School of Architecture, who is retiring this year, was the guest of honor at the annual dinner of the school which was held in the great rotunda of the new William Barton Rogers Building on Saturday evening, May 27.

Presiding at the dinner was Mr. Harry J. Carlson, life member of the Corporation and associate architect of the new Rogers building in which the School of Architecture is now located. On behalf of the members of the faculty of the school of architecture, its former students and friends, Mr. Carlson asked Dr. Compton to present to Dean Emerson a bronze bust of the dean, which will be installed in the William Emerson Room of the school. In addition Mr. Carlson presented to Dean Emerson a gift contributed by the same group to establish the William Emerson Prize Fund, the income of which is to be used for prizes in sketch problem exercises.

Awards Announced

During the dinner Dean Emerson announced the annual prizes. The

(Continued on Page 6)

Emerson

Graduating Class Joins The Alumni

Franklin Hobbs, '89 Opens
Class Day Exercises
in Lowell Court

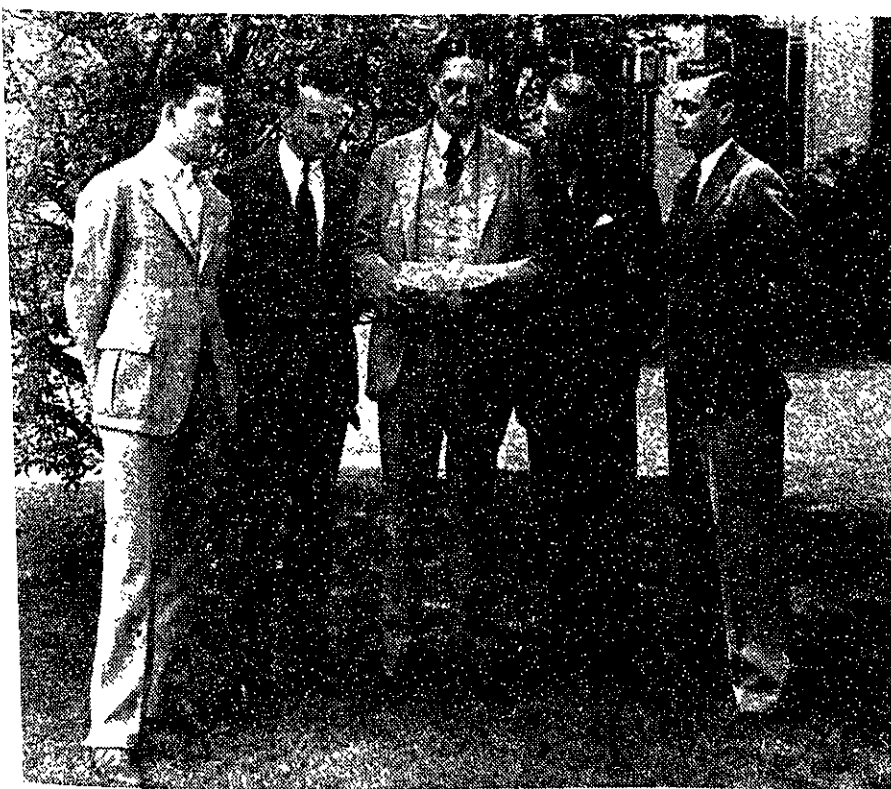
The graduating students of the class of 1939 were formally accepted as members of the M.I.T. Alumni Association at the Class Day Exercises held yesterday afternoon at 2:00 o'clock in Lowell Court.

The festivities, which featured many prominent speakers and presentations, were begun by Robert C. Casselman, '39, who, as general chairman of Senior Week, has been in charge of all the phases of the Senior Week celebration. In his opening address Casselman welcomed all the Seniors, Alumni, and guests to the Class Day Exercises. The exercises were arranged by Os-

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Class Day

A MEETING OF LEADERS



Faculty and student leaders who planned the graduation exercises of the last week. Left to right are Harold R. Seykota, class marshal; William F. Wingard, President of the class of 1939; Professor Ralph G. Hudson, Chairman of the Committee on Commencement; Stuart Paige, class marshal; and Richard S. Leghorn, class marshal.

Senior Snags Job By Letters Cast Adrift In U. S. Postal Service Sea

A note, sealed in a bottle and cast adrift on the swiftly flowing tides of the United States mails, landed a job for John A. West, Jr., of Chicago, who will be graduated from the Institute today.

Although West had already been placed in an excellent industrial position, he decided advertising would be more to his liking. Adopting the traditional method of the ship-wrecked sailor, he tossed "overboard" 81 identical notes in sealed bottles addressed to advertising agencies throughout the country. Mr. West's appeal for "rescue" was:

'STRANDED!

On an island in Cambridge, Mass. A college graduate-to-be in June. Will work like hell for passage into port. GOLD stored here with me—(Training in arts, sciences, business—including marketing and advertising. Past experience in newspaper office, sum-

mer theatre, steel mill. Best references). You're going ahead and I'm going your way. Have you room in the hole for a man who can prove he's worth his salt?"

Unexpected Returns

The returns from this ingenious application for a position exceeded all expectations based on the law of probability. From various agencies came sympathetic notes indicating bottles had been washed up on the shores of various advertising agencies all over the United States.

"Altering course to pick you up" wrote one agency which offered West the opportunity of an interview.

"Glad to have you come aboard for a talk," was the message from another.

"We may soon have a place on our

(Continued on Page 2)

Job

The Tech

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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TODAY'S BABY

The New York World's Fair is not remarkable so much because it represents the world of tomorrow but because it represents the world of today, as it would be if the science which we today have were fully employed in beneficial directions.

Quite evidently all of the science which we have now is not being employed, nor is the small part which we meet in everyday use being applied beneficially. Perhaps this is largely owed to the fact that the men who create scientific knowledge are rarely the men who make that knowledge available to others. That knowledge is administered and commercialized by men who have little comprehension or respect for the ideals and desires which created it. A baby who is reared by people who neither understand and love it, nor have thought of its potentialities, rarely turns out well.

Such a condition requires either that scientists govern the world, or that those who govern the world be scientists. Obviously the latter is the better alternative. It is nice to believe that if the world were governed by our scientists, the miseries which afflict it would vanish away like phantoms; but that is an absurd belief. It is absurd, though, because so many scientists are not true scientists, but people with a grain of learning and the outlook of an ignorant peasant.

It is the outlook an acquaintance with science makes possible which must rule the world. It is the love of knowledge for its own sake, the critical and aloof way of looking at incident and comment, the deep dependence on iron-bound fact, and the power of vision which must rule the world, and which is so glaringly lacking in it now.

That outlook would prevent war because to the trained mind war is so pitifully futile; the person with an intelligent outlook would not be dragged into it by the actions of a few demented men. That outlook would alleviate poverty and disease because the present prevalence of both is so obviously due to mismanagement; it is illogical. The scientist does not use makeshift and inefficient devices when a properly designed and constructed apparatus can be obtained.

In the laboratory the scientist is taught to distrust emotion, to avoid guesswork and chance, to rely only on that which is consistent with what he can see. He demands that what he believes must be based on fact, substantiated fact.

And above all the scientist is introduced to a tolerant and fundamental viewpoint. He is taught to combat not personalities, but misdeed and untruth, from wherever they originate. He comes in contact with the fact that it is not what people are which is important, but what they do and say, what they will leave after them.

Such is the heritage and the power which for four years has been offered to those who

graduate today from this school. Perhaps the future of this country and of the world will be determined in not too small a degree on how they have received that heritage and power.

THE WORLD OF TOMORROW

With the setting of the sun this evening, another group of scientists has been launched into the yawning maw of industrial need. The machines of tomorrow are contained in the brains and dreams of the men who walked down the steps of Symphony Hall today.

And what will these machines be? Who can tell? There are however a few crying needs which perhaps some of these men will satisfy. Executives in the automotive and aviation industries believe the trend is towards smaller private cars and planes. In this light, the obvious need will some day be for motorized roller-skates with wings — the future man will be a mechanized Mercury, with forty horse-power in his heels.

Machines have done away with much of the drudgery in office work—giving us typewriters and dictaphones. The trend is quite clear here. The engineer of today will have to design dictaphones which will dictate to themselves, and typewriters which will compose and write their own letters.

In ship-building, too, the trend is plain. The ships of tomorrow will be large enough to require highways, freight canals, and air-lines for the convenience of the passengers. They will be self-supporting, growing their own vegetables and grazing their own cattle —this will give the old phrase "sea-going farmer" a fresh and vital significance.

In medicine there will be advances. The baby of tomorrow will upon birth have his teeth, tonsils, appendix, adenoids, liver, stomach, gall-bladder, lungs, and heart removed; and so having nothing to go wrong, will live forever.

Government is marching to a very obvious end. In the U. S. of tomorrow, everyone will be in government employ. Taxes will be no worry, because there will be no one to tax. There will be no election brawls or scandals, because there will be no one to elect anyone. Civic corruption will be reduced vastly, because we will all live in Washington. Congress will become vestigial since there will be no one to obey its laws, or read its speeches, or send it telegrams.

Hail! O World of Tomorrow.

SCIENCE IN BRIEF

by ARTHUR M. YORK, '38

DOUBLE TALK

According to Dr. Dafoe, the Dionne Quintuplets speak in two distinctly different languages; one is an elementary form of orthodox French and the other is a tongue which they have invented themselves for use exclusively within their own quintet. The Doctor believes that the girls reverted to their own language when they were confused by their nurses, some of whom speak French and some English. As a result, the "Quints" are backward about picking up more French, because they get along admirably during their playtime hours, tossing back and forth a string of mumbles and "goos" that mean nothing to anyone but themselves.

ARMS VS. ALMS

Convinced that it is as important to protect citizens against hunger as against military attacks, members of the British Medical Association have started a movement, key-noted last month during a conference, whose purpose is to apply scientific methods to the establishment of a "national nutrition policy linking health and agriculture." The feeling was strongly expressed that there is a wide gap between the available nutritional knowledge and the social utilization of such knowledge. It is believed that further delay would result in higher hospital expenses, lower industrial efficiency, and a general waste of human life and happiness.

Underwater Canyons

Deep canyons in the ocean bottom off the Atlantic and Pacific coasts of the United States were always assumed to have been formed by erosion from streams and rivers when that portion of the sea floor was above water. But now that there is difficulty in proving that the land could have sunk to such great depths, another explanation for the formations becomes necessary. Dr. Douglas Johnson of Columbia University suggests that the canyons might have been carved out by water forced up from the sea bottom in the form of an artesian well.

Reviews and Previews

COPLEY—In New York a few weeks ago we found it very difficult to get standing room for the Federal Theater's *Big Blow*. It is therefore, gratifying to us to see that the local branch of the FTP is presenting this engrossing play about the Florida "crackers" at the Copley Theatre currently. *Big Blow* is now in its last week at the Copley with performances all evenings throughout the remainder of the week and on Saturday matinee. The play is staged by Arthur Ritchie and acted in by Arthur Barry, Clara Ferguson, Emma DeWeale, Paul Sheehan, Cornelius Croson, and a large FTP cast. The next WPA Theatre production which will open at the Copley on June 20 will be *The Trial of Dr. Beck*, a presentation of the Negro unit of the FTP.

SYMPHONY HALL—The program tonight at the Pops will be "Old Timers' Night." The orchestra will play many of the old songs (Ta-ra-ra boom de ay, The Bowery, etc.) and members of the audience will be invited to sing. Tomorrow night will be Italian night with compositions by the classical and modern Italian composers dominating the program. The programs for the remainder of the week will consist of the regular Pops fare with Paul Cherkassky conducting on Saturday night. The last Sunday concert next Sunday will be an all request night with proceeds going to the pension fund of the Boston Symphony Orchestra.

FINE ARTS — We have seen *Zwei Herzen* twice since it first came out in 1930. The picture is technically inferior but the charm of the story and of the acting and the melody of Robert Stolz's music more than offsets this. It is interesting to note that this homey, and at times even crude, screen operetta has withstood competition from many much more lavish extravaganzas and has consistently come out on top. The story concerns the love affair between the young sister of two musical comedy librettists and their middle aged composer. It is very beautifully told.

UPTOWN—That rather elusive creature, the good double bill, is found here this week. The program includes Fred Astaire and Ginger Rogers in the *Story of Vernon and Irene Castle* and Laurence Olivier and Merle Oberon in Emily Bronte's *Wuthering Heights*.

Prof. Gaudin Appointed As Richards Professor

Professor Antoine M. Gaudin, internationally recognized authority on process metallurgy, has been appointed as Richards Professor of Mineral Dressing at the Institute it was announced last Tuesday by Professor Edward L. Moreland, Dean of Engineering.

Professor Gaudin was formerly a research professor of mineral dressings at the Montana School of Mines where he was particularly active in research on flotation. The Professor's reference book, "Flotation", written in 1932, has become the standard work in English.

In announcing the appointment Dean Moreland mentioned the growing importance of the flotation process for concentrating ores. This method, which involves the floating of finely divided mineral particles on a film of oil while the impurities sink finds application in the fields of ceramics, chemistry, and chemical engineering, as well as in metallurgy.

Job

(Continued from Page 1)

ship for you and your 'gold', one agency replied.

Most of the replies were couched in nautical terms and several bore the signatures of nationally-known advertising authorities.

From several offers of employment, sight unseen, West made his choice and expects to join a Philadelphia advertising firm within a few weeks.

West has completed the Institute's course in general science, specializing in marketing and advertising.

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Excellent Service — Reasonable Rates — Minor Repairs — Socks Darned Free of Charge.

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List Of Those Receiving Degrees

Name of Graduate	Name of Course	Numeral	Name of Graduate	Name of Course	Numeral
Ackoff, A. K. (S.M.)		X-A	Krause, B. L. (B.Arch.)		IV
Adams, C. M.		XVI	Kuhr, W. A.		XVI
Akin, T. B. Jr. (B. Arch.)		IV	Kulbersh, N.		II
Aldridge, J. F., Jr. (S.M.)	No Course		Kupelian, V.		II
Alexander, J. D.		XVI	Kusters, N. L. (S.M.)		II
Alexander, R. M.		VI	Laird, R. S.		XV
Allen, J. F.		VI	Laker, A. R.		I
Andrew, G. W.		VI	Landwehr, H. R.		X-V
Anthony, R. E., Jr.		II	Langs, T. E.		II
Arentson, R. W. (S.M.)		XV	Larson, E. E.		I
Arnold, S. V.		XIX	Lautbach, J. H., Jr.		XV
Arns, R. W., Jr.		X-B	Leavitt, M. A. (S.M.)		VI
Atwater, R. M.		X-B	Lee, Y. N. (S.M.)		X-A
Auwerter, J. P. (S.M.)	No Course		Leighorn, R. S.		VIII
Babcock, W. F.		I	Lehman, F. G. (S.M.)		J
Badenoch, B. W.		XVI	Lender, A.		II
Bailey, G. W. (S.M.)		XIII-A	Lenk, C. G.		X
Baker, F.		XV	Leonard, F. R.		XIX
Baker, S.		X	Leps, T. M. (S.M.)		I
Baldwin, W. W., Jr.		XV	Leslie, H. B. (S.B., S.M.)		II-A
Banzett, H. (S.B., S.M.)		II-A	Levinson, L. M.		XVI
Batal, L. (S.M.)		X-A	Levy, C. N.		XVI
Batanowski, W. E. (S.M.)		XIII-A	Liang, S. (S.M.)		XVI
Batista, R. T.		II	Lin, S. N. (Sc.D.)		XVI
Batenberg, P. W. (C.P.H.)		VII	Lindberg, D. N.		VI
Battlett, D. A.		III	Lindenberg, M. S.		VI
Batton, J. W.		XV	Loesch, R. L., Jr.		IX-B
Bassett, W. V. (S.M.)		II	Lord, J. G.		XIII
Batcheller, E. H. (S.M.)		XIII-A	Lord, E. F.		XIX
Bayer, J.		X	Love, W. C.		I
Beaman, D. W., Jr. (S.B., S.M.)		II-A	Lovely, J. W. (S.M.)	No Course	
Bebbie, H.		XVI	Lucas, P.		X
Beer, G. W.		XII	Luchner, L. F.		II
Beesley, G.		X	Lundy, H. W. (Dr.P.H.)		VII
Behring, C. R.		VI	McClelland, C. K., Jr. (S.M.)	No Course	
Bell, C. F., Jr. (S.B. XVI; S.M.)		VI	McComica, I. H. III (Sc.D.)		X
Bell, K. G.		XII	McCrodden, H. J. (S.M.)	No Course	
Bellinson, H. R. (S.M.)	No Course		Macdonald, N. M.		I
Bender, W. W., Jr. (S.B. XVI; S.M.)		VI	Macdonald, S. L. (B.Arch.)		I
	Econ. & Eng.		McGregor, J. E.		IX-B
			McKeag, M. F.		IX-B
Bendi, L. (S.M.)		VI	MacKenzie, I. M.		X
Bent, F. N.		X-B	Macke, E. J., Jr. (M.Arch.)		IV
Berthold, P. (S.M.)		II	MacKinnon, C. E.		XIV
Berntan, Miss R. A.		V	McLean, J. D. (S.B., S.M.)		VI-A
Bernays, P. M.		V	MacLeod, D. E. (S.M.)		II
Beyna, S. R. (S.M.)	No Course		MacLeod, R. A.		VII
Bhatt, N. B. (Sc.D.)		VIII	McMillan, B. (Ph.D.)		XVII
Binton, B. (S.M.)		VI	MacMillan, L. W., Jr.		VI
Bjork, W. M. (S.M.)		I	McMullin, D. R. (M.Arch.)		IV
Bjorkman, T. A. (S.M.)	No Course		McRoberts, C. A. (S.M.)		VI
Biss, A.		VI	Maeder, A. S. (S.M.)		VI
Bloomberg, R. A.		VIII	Magruder, L. B., Jr.		X
Blochenthal, H., Jr.		VI	Maida, F. X. (S.B., S.M.)		VI-A
Bogart, N. T., Jr. (S.M.)		X-A	Marchisio, R. G.		VI
Bodbury, K. F. (S.M.)		XV	Marshall, H. D.		XIII
Bonner, M. M.		VI	Martin, J. C. R. (S.M.)		III (Min.)
Bowster, W. S.		II	Martin, R. D.		X
Bradgardner, D. J. (S.M.)		X	Mason, H. S. (Ph.D.)		V
Brooks, E. M. (S.M.)		XVI (Meteor.)	Massengale, J. T. (Ph.D.)		V
Bross, R. B.		VI	Mautner, L.		VI
Broughton, D. B. (S.M.)		X	May, W. M.		II
Brown, E. D., Jr. (B. Arch.)		IV	May, W. M.		II
Brown, E. M.		VI	Mazur, J. G.		VI
Brown, J. R., Jr. (Sc.D.)		X	Meagher, B. E. (S.M.)		VIII
Brown, G. A.		XV	Meals, R. W. (S.M.)	No Course	
Brown, H.		VIII	Meier, J. H. (Sc.D.)		I
Brown, W. W. (Ph.D.)		VIII	Mercer, C. S.		XIV
Brown, P. D. (S.B. XIV; S.M.)		XIX	Merrill, B. D.		IX-A
Brown, H. H.		II	Merrill, L. A., Jr.		XV
Brown, H. H.		X-A	Merriman, T. S.		XIX
Brown, R. S.		XV	Merritt, W. A.		X
Brown, C. B.		X	Metzger, M. I.		II
Brown, D. H.		II	Meyer, M. A.		VI
Brown, M. A.		IX-B	Mihailoff, N. V. (S.M.)		XVI
Brown, H. N.		VI	Miller, A. J. (Ph.D.)		V
Brown, G. E.		II	Miller, A. N. (S.M.)		III (Min.)
Brown, W. R.		X	Minorsky, V. U.		XIII
Brown, R. W. (Sc.D.)		I	Mitchell, G. R., Jr.		X
Brown, N. E., Jr.		X	Mohlman, J. W.		X
Brown, F. H. (Ph.D.)		V	Monderer, B. A.		VI
Brown, J. C.		V	Morabito, S.		I
Brown, R. C.		XV	Morales, F. J., Jr. (S.M.)		I
Brown, L. S.		XIX	Morgan, W. H.		XV
Brown, R. T.		IX-B	Morgenthaler, F. W.		II
Brown, A. M. (S.M.)		XIII-A	Morin, E. G. (S.M.)		X-A
Brown, W. M., Jr.		XVII	Morningstar, O. (Ph.D.)		VIII
Brown, H. S., Jr.		II	Morrell, G. A., Jr.		XV
Brown, M. C. (S.M.)		X	Morrill, M. C.		X
Brown, J. A. (S.M.)		XV	Morrison, G. P.		X
Brown, J. C. L.		III	Muckley, H. J.		XIX
Brown, A. H.		III	Mueller, R. A., Jr.		IX-B
Brown, M. (Ph.D.)		VIII	Mullin, D. W.		V
Brown, W.		I	Murphy, D. J. (S.M.)	No Course	
Brown, A. H. (S.M.)		X-A	Murphy, W. A., Jr.		XV
Brown, E. D. (S.M.)		II	Murray, G. E. (Ph.D.)		V
Brown, S. M.		VII	Myers, R. H.		VI
Brown, E. W., Jr. (S.M.)		X	Mykytow, W. J.		XVI
Brown, C. W.		VI	Nichols, M. H. (Ph.D.)		VIII
Brown, J. F.		X	Nicholson, M. E.		XIX
Brown, I.		XV	Nordling, C. G. A. (S.M.)		XVIII
Brown, M.		V	Novak, R. A.		XV
Brown, R. C. (S.B., S.M.)		VI-A	Oettinger, S. J.		X-B
Brown, K. W.		VI	Ohlson, J. L.		V
Brown, P. W.		X-B	Olson, A. R.		V
Brown, G. J. (C.P.H.)		VII	Orrell, F. L., Jr.		IX-A
Brown, A. H. (B. Arch.)	No Course		Pacini, H. P.		VI
Brown, K. L.		VIII	Paige, S.		XV
Brown, F. A. F.		XV	Pan, S. T. (S.M.)		VIII
Brown, A. L.		III	Pancake, R. E.		III
Brown, E. M.		II	Parcel, R. W. (S.M.)		XIX
Brown, R. H. (S.M.)		I			
Brown, J. H. (S.B., S.M.)		VI-A			
Brown, P. O., Jr.		XV			
Brown, G. D.		IX-B			
Croschere, A. B., Jr.		XVI			
Cushnie, J. L.		X			
Cutler, M. L.		VIII			
Cutten, W. K.		III			
Dadakis, G. S.		VI			
Dana, J. K.		XV			
Danenberg, E. M.		X			
Davies, W. E.		XII			
Davis, W. A.		V			
De Aragon, O. C.		II			
Deering, R. C.		V			
Deering, W. H.		II			
DeLia, B.		I			
de los Reyes, T.		XVII			
Denham, W. S. (S.M.)		XVI (Meteor.)			
De Simone, B. J.		XIX			
De Tere, E. F., Jr.		XV			
Detlefsen, J. D.		II			
Diokno, A. W. (S.M.)		III (Min.)			
Dodge, J. A.		XVI			
Donatello, D. G.		X			
Donohoe, R. J.		II			
Donovan, J. J.		V			
Doten, C. W.		XV			
Douglass, A. S., Jr. (B.Arch.)		IV			
Dow, N. F.		XVI			
Dowling, L. F. (S.M.)		X-A			
Downs, W. R. (Ph.D.)		V			
Dunn, O. R.		XVI			
Duntley, S. Q. (Sc.D.)		VIII			
Early, Miss M.		IX-A			
Edel, W. L. (S.M.)		I			
Elkin, B. P.		I			
Emerson, B. C.		XV			
Emery, Miss F. G. (B.Arch.)		IV			
Epifano, C. P.		XVII			
Estabrook, V. T. (S.M.)		XV			
Estes, G. L., Jr.		XVI			
Evans, J. W.		XVII			
Faatz, A. C., Jr. (S.M.)		X-A			
Fabens, A. L., Jr.		II			
Fairbrother, H. W., Jr. (S.M.)		X-A			
Falkof, M. M.		V			
Farrell, J. K.		X			
Farwell, P. B. M.		XIX			
Felix, S. P., Jr.		XV			
Ferreira, N.		II			
Ferris, J. A.		XV			
Ferry, J. H., Jr.		VI			
Feynman, R. P.		VIII			
Fineman, A. (S.B., S.M.)		VII-A			
Finkelstein, I.		XV			
Finlay, R. L.		I			
Fish, E. R., Jr.		XV			
Fisk, T. H.		IX-B			
Flanagan, R. (S.M.)	No Course				
Fletcher, H. G., Jr.		V			
Fober, H. L.		X			
Fogliano, A. A.		XVI			
Fransson, K. E. (S.B., S.M.)		II-A			
French, F. L.		VI			
French, F. W., 2nd		XIX			
Freyfogle, C. F., Jr.		XV			
Friedman, C.		VI			
Frondel, C. (Ph.D.)		XII			
Gabel, M. W. (S.M.)		XV			
Garber, T. (S.B., S.M.)		VI-A			
Gemmill, F. Q. (S.M.)		VI			
Gerlach, C. H. (S.M.)		XIII-A			
Gesmer, S. S.		XV			
Girardi, A. R.		XV			
Glasson, W. J.		VI			
Gleason, D. G.		VI			
Gluck, S. G. (S.B., S.M.)		VI-A			
Goldberg, A.		II			
Goldberg, M. N.		XIV			
Goodheim, H.		X			
Goodhue, W. V.		II			
Gordon, R. B. (Sc.D.)		XIX			
Grafano, A. J.		II			
Graham, R. B.		XV			
Grant, F. B.		XV			
Granville, M. F., Jr. (S.M.)		X			
Gray, B. P.		IX-A			
Gray, W. H.		XVI			
Greely, J. W. (S.M.)		I			
Green, J. B.		X			
Greenhalgh, J. E.		XV			
Griffin, G. (S.B., S.M.)		II-A			
Griffin, G. M.		X			
Gross, J.		IX-A			
Grosselinger, F. B. (S.M.)		X-A			
Grossman, A. S.		VII-A			
Gumprich, W. C.		II			
Guthrie, R. H.		IX-B			
Guy, C. W.		XVI			
Haible, W. E. (B.Arch.)		IV			
Hall, L. S., Jr.		XV			
Halstead, W. K.		VI			
Hamilton, J. S.		X			
Hammell, D. K., Jr.		XIII			
Hanau, R.		VIII			
Hansen, F. A. (S.M.)	No Course				
Hansen, T. L. (M.Arch.)		IV			
Hanson, H. H.		XV			
Hargreaves, W. A.		VIII			
Harris, C. A. (Ph.D.)		V			
Harris, T. R.		X			
Harrison, J. W.		II			
Hartman, W. N., Jr. (S.B.VI; S.M.)		II			
	Econ. & Eng.				
Hawkes, J. E.		XVI			
Haworth, R. D., Jr.		XIX			
Hawthorne, W. R. (Sc.D.)		X			
Henry, A. P.					

List Of Those Receiving Degrees

(Continued from Page 3)

Spencer, F. M.	.....X
Spencer, R. C. (S.M.)	.....X
Squire, A. J.	.....XIV
Sreethaputta, V.	.....XII
Stacey, C. J.	.....II
Stamatos, P. N.	.....II
Stearns, S. G.	.....X
Steele, W. M.	.....VIII
Steiner, R. L. (M.C.P.)	.....IV-B
Stephens, H. L.	.....II
Stenberg, R. A.	.....X
Stewart, O. H.	.....II
Stull, J. F.	.....X
Stumpson, Miss M. K. (C.P.H.)	.....VII
Stone, R. A.	.....II
Strout, R. D.	.....II
Stuart, A. J., Jr. (S.M.)	.....No Course
Sullivan, S. F., Jr.	.....XIII
Swain, K. W. (S.M.)	.....II
Swan, G. H. S.	.....XVI
Swanson, C. K.	.....XVII
Swartz, R. W.	.....VI
Sze, M. C.	.....X
Tapscott, R. J.	.....XIII
Tarman, L. S.	.....XV
Taylor, D. J.	.....X-B
Taylor, S. A.	.....VI
Thakara, A. S.	.....XV
Thomas, L. M. (S.M.)	.....XIX
Thomas, G. J.	.....X
Thomas, W. C. (S.M.)	.....XV
Thompson, D. M.	.....XVI
Thompson, R. H.	.....X
Thompson, A. E. (S.M.)	.....No Course
Thourne, E. K. (S.M.)	.....XIII-A
Thurston, H. W., Jr.	.....VI
Tibbitts, L. S.	.....VI
Tobin, T. W., Jr.	.....XVI
Tollbach, L. B.	.....VI
Tolin, F. K.	.....II
Toppa, R. M.	.....II
Toussaint, K. E.	.....II
Towers, A. A., Jr.	.....IX-A
Triller, D. P.	.....II
Trout, H. E., Jr. (S.M.)	.....X
True, E. K.	.....IV-A
Tsien, W. H. (S.M.)	.....II
Tucker, K. W., Jr.	.....II
Usher, E. M.	.....XV
Uttal, J. A. (S.M.)	.....VI
van Nieu, K. L. (M.Arch.)	.....X
Vasanth, D. J.	.....XIII
Vaughan, J. C., Jr. (S.M.)	.....XV
Venable, I. B., Jr.	.....X
Ver Plank, W. E., Jr.	.....XIV
Vina, J. (S.M.)	.....XIX
Vogel, A. W.	.....XVI
Vyverberg, J. C., Jr.	.....X
Walsh, W. L. (Ph.D.)	.....V
Wang, C.	.....X
Wang, T. (Sc.D.)	.....XIX
Wardle, M. C.	.....XVI
Warner, W. P.	.....IX-B
Waterman, D. W.	.....IV
Weaver, F. L. (S.B.S.M.)	.....VI-A
Weeks, J. R., Jr.	.....X
Weiss, I. K.	.....II
Weich, L. W. (S.M.)	.....XVI (Meteor.)
Wells, G. C. (S.M.)	.....XIII-A
Welton, T. A.	.....VIII
West, J. A., Jr.	.....IX-A
Wetterer, C. S.	.....IX-B
Wexler, H. (Sc.D.)	.....XVI (Meteor.)
Wexler, R. (S.M.)	.....XVI (Meteor.)
Whitcher, S. L. (Ph.D.)	.....V
Whitcomb, Miss M.	.....IX-A
White, A. D.	.....VI
White, A. M.	.....XIX
Wholey, J. F., Jr.	.....X-B
Widlansky, W.	.....IX-B
Wilkinson, E. B., Jr.	.....II
Willard, W. R.	.....XVII
Williams, G. L. (S.M.)	.....XV
Williams, S.	.....XVI
Wimpress, R. N. (S.M.)	.....X
Wingard, W. F.	.....IX-B
Wingate, R. H. (S.M.)	.....No Course
Winters, C. E. (S.M.)	.....X-A
Withington, H. W.	.....XVI
Wochos, W. M., Jr. (S.B.S.M.)	.....II-A
Woertz, B. B. (Sc.D.)	.....X
Wood, J. E., III (Ph.D.)	.....V
Wood, W. H. (Ph.D.)	.....V
Woolaver, L. B.	.....V
Woolford, D. A.	.....XV
Wooster, R. B.	.....X
Wright, E. A. (S.M.)	.....XIII-A
Wroblewski, T.	.....VI
Yee, W. K.	.....XIX
Yetter, E. W.	.....VI
Yurgelun, E. C.	.....VI
Zallen, J.	.....V
Zeitlen, J. G.	.....I
Zeldin, C. A.	.....III

Commencement

(Continued from Page 1)

diplomas brought out those factors behind the graduation.

"The point which I wish to make," Dr. Compton said, "is simply that there is far more involved in your graduation than the simple fact that you have studied and passed examinations for four years and today received your diploma. Attached to this simple event is a great background of home and school and society which represents the best effort of our civilization to prepare its youth to carry on the work of living in a society."

Awards 638 Degrees

President Compton awarded 638 degrees to 614 candidates, 24 of whom having completed five year courses, received both bachelor's and master's degrees. The total number of bachelor's degrees awarded was 440, of which 13 were in architecture and the remainder in science.

The 198 advanced degrees included 30 doctors of philosophy, 18 doctors of science, one doctor of public health, five masters of architecture, one master of city planning, and 143 masters of science. In addition to the academic degrees, three certificates in public health were awarded.

8 Naval Men Get Degrees

Among the candidates receiving the degree of master of science were eight naval constructors, graduates of the United States Naval Academy, who have completed the course in naval construction at Technology, where all naval constructors are given their graduate training in ship design and construction.

Today's graduating class included 75 members of the Reserve Officers Training Corps, who were awarded commissions by General J. A. Woodruff, Commanding General of the First Corps Area.

Honor Guests in Procession

In the procession of the guests of honor, led by Chief Marshal Alexander Macomber, who has headed Technology commencement processions for many years, were President Compton and Russell Wood, State Auditor, representing Governor Leverett Saltonstam, Dean Edward L. Moreland of the school of Engineering with Sir Harold Hartley, Dean William Emerson of the School of Architecture with Canon C. P. Trowbridge of St. Paul's Cathedral, who opened the invocation; Professor Henry H. W. Keith, head of the department of Naval Architecture, and Admiral W. T. Larrant of the First Naval District; Major Harold A. Nisley, professor of Military Science, with General J. A. Woodruff, commanding general of the First Corps Area.

Dean Henry M. Goodwin of the Graduate School and Mayor J. W. Lyons of Cambridge, were also in the procession, as were Professor Charles E. Locke, secretary, and Harold B. Richmond, president of the Alumni Association; Harold E. Lobdell, dean of students, and Professor W. Spencer Hutchinson, retiring head of the department of Mining Engineering; Professor Henry E. Rossell of the department of Naval Architecture and Captain C. L. Brand, in charge of the Instruction Corps of the United States Navy; Professor George W. Swett, secretary and Professor James E. Norris, chairman of the faculty; Joseph C. MacKinnon, registrar, and Professor Ralph G. Hudson, chairman of the Committee on Commencement.

Mr. Horace S. Ford, Institute Treasurer, was marshal of the Corporation division in which marched 27 members of the Institute's governing board. They were Vannevar Bush, Harry P. Charlesworth, Gordon S. Rentschler, Gerard Swope, William H. Bovey, W. Cameron Forbes, Rufus E. Zimmerman, Marshall B. Dalton, Redfield Proctor, Franklin W. Hobbs, J. W. Powell, Willis R. Whitney, Donald G. Robbins, Bradley Dewey, Harlow Shapley, William R. Kales, Harry J. Carlson, Godfrey L. Cabot, Willis F. Harrington, Charles R. Hook, William S. Newell, Edwin S. Webster, Francis J. Chesterman, Ralph E. Flanders, John J. Pelley, B. Edwin Hutchinson and Walter Humphreys.



Conception

There is in the Institute a secretary of one of the multitudinous American Societies of Useless Engineers whose time at times hangs heavy on his hand. Surveying a pile of unused though antique announcements of meetings of the A.S.U.E. he pondered in rapt silence; there must be a use for everything, he reasoned, even seasoned announcements. So he sent them to an old girl friend in Schenectady. Came the following day bright and sunny and with it a telegram from Schenectady saying, "Dearest (we'll call him) Freddie come quick. Baby coming. Father insists on marriage." But Freddie was slow on the pickup; he missed his cue on the following Sunday when he forgot to send a Mother's Day greeting to Schenectady.

Pensive Prexy

"Some years ago, when Dr. Karl T. Compton, now president of the Massachusetts Institute of Technology, sought a bride, he and his fiancée were being entertained in the home of her most admired and respected friend — the pastor of her church. After dinner, the minister, by nature more poet than scientist, asked the scientist and bridegroom-to-be to explain to him in simple language the essentials of the Einstein theory of relativity. He listened with apparently absorbed interest to the efforts of his visitor to explain the Einstein ideas in non-technical language. Next morning he took the bride to one side and remarked: 'I approve of your young man in all but one respect: he has no sense of humor. I asked him to explain to me Einstein's theory of relativity and he really tried to do it. You are taking a long chance in marrying a man who has no sense of humor!'"

H. Gordon Garbedian: "Albert Einstein"

A Young Man's Thoughts Turn

It was one of those things that happen in the movies but never, well, hardly ever in real life. The scene takes place on the romantic (?) drill field where the freshman march (again?) around to the tunes of the ever popular R.O.T.C. band. The time is the Friday before spring vacation when the thoughts of all the little freshies were on home and (ah!). Our main character of this heartbreaking drama enters the plot as a tall, lanky

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Lounger

Dr. Samuel C. Prescott, Dean of Science, was the marshal of the Fifty-Year Class, the graduates of 1889, who were given a place of special honor in the academic procession. They were Dr. Zenas W. Bliss, Luther W. Bridges, Nathan Durfee, J. Parker B. Fiske, Edward V. French, Earl W. Gannett, Franklin W. Hobbs, Henry Howard, Lewis E. Johnson, Walter H. Kilham, Arthur D. Kinsman, William W. Lewis, George A. Orrok, Frank W. Smith, William Lincoln Smith, Frank A. Smythe, George W. Stone, Jasper Whiting and Arthur L. Williston.

Two from Class of 1914

Also marching in the division were two representatives of the class of 1914 which is celebrating its twenty-fifth anniversary, C. P. Fiske, assistant secretary of the class and L. S. Hall of Concord, N. H., first member of the class of 1914 to have a son graduated from Technology.

Professor George E. Russell was marshal of the faculty, and Professor Jesse J. Eames was faculty marshal of the procession of candidates for degrees, which was led by William F. Wingard, president of the class, and the class marshals, Richard S. Leghorn, Stuart Paige, and Harold R. Seykota.

This afternoon President and Mrs. Compton will be hosts to the graduates and their parents, as well as the alumni of the Institute, at a reception and tea dance at Walker Memorial.

The Senior Ball at the Hotel Copley Plaza tonight will end the commencement activities of Technology's Class of 1939.

Highlights of Address By Sir Harold Hartley

President Compton, Ladies and Gentlemen:

If I may venture to suggest not a reason but an excuse for the honor you have done me in asking me to speak here this morning, it is that nearly forty years ago I landed at Boston on my first pilgrimage to your country. This occasion gives me a more than welcome opportunity of expressing my thanks to my many friends in the United States for their encouragement, their help, their open-hearted confidence, their welcome, and their hospitality. To them I owe a debt, which I can never hope to repay, but which their generosity is always willing to increase.

When I came here first I was in the crucial stage of my first research, and as a physical chemist in Oxford in those days I enjoyed what Jewett considered the advantage of "a little wholesome neglect," but in Harvard I had the good luck to meet Theodore Richards, who was just as ready to give of his best to an unknown beginner as to a distinguished colleague. Richards was a physical chemist with a genius for exact measurement. From him I learnt that accuracy is not an art to be acquired by long and painful experience or the privilege of a gifted few, but a matter for scientific analysis and planning, by which it could be made almost independent of the human element. Richards himself was a great experimentalist, but he had a remarkable gift for devising simple methods that his students could carry out almost as well as he could himself. With his rigid scrutiny of all the details of a measurement, his isolation and control of each of the factors concerned, and his uncompromising attitude towards the possibility of hidden errors, the attainment of accuracy was no more difficult or time-consuming than a crude result—in fact, by the certainty of a well-planned measurement, time and effort are saved. From Richards I learnt a technique of measurement that has been invaluable to me in many fields.

If you think for a moment of the great changes that have occurred in industry during this century, apart from new inventions and discoveries, they are largely in the direction of transforming traditional methods that depended on the personal skill of the operator to scientifically controlled processes in which measurement has largely taken the place of craftsmanship. Many years ago Lord Kelvin said that in order to understand anything you must measure it, and industry on the whole was rather slow to learn the lesson, but today there is a new standard of certainty based on scientific measurement which has invaded every branch of the industrial and engineering field. To take a few examples from my own field—the comfortable riding of rail coaches, the sources of noise, the movement of a wheel along the rail, the vertical movements of the rails when under load, and the resistance of materials to wear—these are no longer left to personal impressions, which are so liable to error and leave no record for subsequent comparison, and measurement provides a new basis for progress.

But in your technical enthusiasm do not forget that the human problems of management which you will have to face before long are much more difficult than the choosing and working of inanimate material. With the infinite varieties of human temperament there is no figure of merit to guide you in your choice. There are so many qualities you must weigh in your judgment of a man in which you must be dependent on your own awareness—decision, initiative, leadership, generosity, human understanding, sense of values, courage to meet a situation that does not admit of compromise, co-operation, and eag-

erness to learn. As you go on, and responsibilities accumulate, these are the qualities even more than technical ability, that you will need around you. And on the wisdom of your choice of men success or failure may depend.

Many of you will no doubt enter, as I did, the service of a great modern corporation, and whether it was formed by the amalgamation of smaller units, or has grown by natural expansion, you will quickly find that the human problems of management become increasingly important with size. I need not dwell on the factors that have produced these great organizations, the economy of large scale production, the elimination of uneconomic competition, the pooling of technical resources, the advantage of diversity of output, and above all the need for the specialization of function.

The very word organization implies a structure or constitution, the object of which should be to unite order and freedom; order in the distribution and co-ordination of the functions of the separate parts, and freedom for the individuals within their sphere of action.

You remember the conversation between Alice in Wonderland and the Duchess—"It's love, it's love" said the Duchess "that makes the world go round". "Someone said", whispered Alice, "it's done by everyone minding their own business". That may have been a natural opinion seventy years ago, but I think if I had had to choose a single title for my remarks to you today it might have been "On the importance of not minding one's own business". For today there is a different outlook, since the effectiveness of each of the sections of a large community depends so much on its knowing what the others are doing. This is far too important to be left to chance, and my own railroad has just built a School of Transport to ensure that wider outlook.

We are living in a power age—Our modern civilization has been made possible by the substitution of mechanical power for human labor, and many of the most remarkable achievements of the engineer lie in this field. I have spoken of the intricate human machinery of a great corporation. What is its motive power? What is the individual drive on all the human units it contains? These are problems for the human engineering that is so urgently needed to-day to make the great social structures of these modern corporations secure, and to safeguard their effectiveness.

We hear very often of the Industrial Revolution which made possible the great developments of the nineteenth century that have affected the human race so profoundly. But I maintain that the twentieth century has had its own revolution in the application of science and engineering to the daily needs of the home, which has meant leisure, greater comfort and better health to many millions. This domestic revolution may be regarded as the repayment by the technician of a deferred debt long overdue for some of the social consequences of the mechanization of industry in the last century.

Do not think that little remains for you to do. Each generation will have its own problems to be solved; there is no prospect of a lotus-eating land, and the incentive of progress will remain. You will have your difficulties, your disappointments and your failures, as well as your successes. May you meet them in the words of Dante

"Borne on the swiftly beating wings of great desire".

Housing Seminars Is New Elective

Committee of Faculty Heads Modern Housing Plan For Next Year

Graduate seminars in which students will have the opportunity to discuss housing in its relationship to sociology, economics, architecture, city planning, construction and public health under the leadership of authorities in these fields, is to be established as an elective subject next semester.

Seminars will begin with brief discussions by specialists in the above fields and will then be continued by the students on the basis of the knowledge gained through required reading.

Individual Research Required

After a general introductory discussion of the housing problem the program calls for the intensive development of relationships in housing from the social, technical, economic, and administrative points of view. It will be concluded by an historical survey of recent solutions of housing problems in Europe and the United States, followed by consideration of the present social and economic trends and their implications. In addition, each student will be required to conduct a piece of individual research in one of the specific problems of housing which particularly interests him.

This new seminar is the first result of studies by a joint faculty committee on housing which has been examining the most effective way of bringing the collective forces of the Institute to bear on this problem.

The committee is under the chairmanship of Professor Frederick J. Adams, in charge of the Division of City Planning and Housing of the school of Architecture.

Baccalaureate

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Carl T. Compton gave the lesson. Organ music was presented by Mr. Hrid Tremblay.

Speaks on Professional Obligations
In the principal address, Dr. Bush, who is now president of the Carnegie Institution, emphasized the changing obligations now facing professional men.

First outlining the "nature of the era in which science has proceeded," he said, "it has primarily furnished three things: protection against environment, interdependence, and intercommunication. These have brought a greatly increased average standard of living; they open up still wider opportunities for the race; they have introduced grave transitional problems to which civilization succumb before it can reap the benefits."

Defines Professionalism
The speaker then explained that a professional man has two inherent characteristics—the possession of specialized knowledge and adherence to the professional philosophy. Describing professional philosophy, he remarked, "It has many attributes, and . . . involves much more than the spirit of service. . . . The word ministrations is central to the heart of the matter. . . . It is the professional philosophy." Dr. Bush continued, "is access to this primary function of ministrations. The professional man puts requisition and rendering available of the truth first; and he derives satisfaction from the knowledge of influence, and from the acclaim of his colleagues. It is not necessary that he forego the material rewards of the world; but if these occupy the place in his thoughts or furnish controlling incentive, he is not

Six Honor Graduates of R.O.T.C. Chosen Today

Six cadet officers of the Institute's R.O.T.C. units were designated today as honor graduates of the advanced courses in Military Science. The honor is conferred upon seniors in recognition of their outstanding proficiency in the mastery of military techniques and disciplines.

Those named as honor graduates were: Alphonse J. Graffeo, '39, in the ordnance department; Wallace P. Warner, '39, and Albert H. Chestnut, '39, of the coast artillery unit; Warden N. Hartman, Jr., G., of the corps of engineers; Gail H. Swan, '39, in the signal corps; and Franklin N. Bent, '39, in the chemical warfare service.

Reunion

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the Kraft-Phenix Company, and Mrs. Atwood.

Five Year Classes Celebrate

Besides the classes of 1914 and 1889 twelve other classes have held and will hold reunions in and around Boston at various clubs and inns.

Eight of them represent "five-year classes," or the classes which have graduated at five year intervals from 1889 to the present. Except for the class of 1904 which will hold its reunion with the class of 1905 on June 23, 24 and 25, at Boxwood Manor, Old Lyme, Connecticut, these reunions will take place during the week preceding Alumni Day.

Many informal reunions of the off-year classes have also been held. The alumni of all the many classes all joined together in one grand reunion yesterday when nearly 1000 assembled at the Institute on Alumni Day.

truly a professional man. Some of the ancient monastic orders placed service to mankind so far above all else that they denied themselves all material comforts, and all the solace and distraction of family life. They have earned in all ages the profound respect due to their courage and devotion as they have brought light into the darkest corners of the earth. Their modern successors carry on the work in just the same spirit, and to them be all honor. Professional men generally have not thus subjugated all else to their main objective. Much can be said in support of the thesis that the professional man is justified in insisting on a reasonable competence in order that he may work most effectively. We have had many admirable examples of individuals of great wealth who have exemplified the truly professional spirit as scientists of note or in other ways. The young man, just starting upon his career, quite properly places great weight upon his responsibility to his dependents; and aims, as he advances professionally, to secure an adequate income. Yet it cannot be repeated too often: the individual whose primary objective is material acquisition, no matter what degrees he may append to his name, no matter how prominent he may become in the public eye, no matter what the world at large may think, is not entitled to admission to the select company of those who truly possess the professional philosophy.

Philosophy is Independent

"Again, it is sometimes stated that only the independent consultant is really a professional man, but this too is entirely a secondary matter compared to the principal criteria.

Prof. Mead's Reserved Exterior Belies His Hidden Energy As Expert Geologist

Quiet, genial, usually smoking a pipe with serene contentment, Professor Warren J. Mead, certainly does not appear, on first meeting, to be the active, energetic man that his work proves he is.

One gets the impression of his restful oblivion to all outside disturbing elements almost immediately. But beneath that outer surface of peaceful calm lies the will, personality, and ambition that has made him head of the Institute's department of Geology.

Member of National Academy

The latest honor to be bestowed upon Professor Mead was his election to the National Academy of Science. Membership in this society is very selective and is given only in international recognition of outstanding work in various scientific fields.

In the capacity of engineering consultant, Professor Mead has been engaged in work for the Panama Canal Commission in connection with the problem of earth slides in Gaillard Cut. He has also served on various projects of the United States Engineers Corps. Appointed to the Colorado River Board by President Coolidge, he aided in securing a report on the feasibility of the Boulder Dam Project. Earlier, he conducted an investigation of iron and coal deposits in Manchuria for the South Manchurian Railroad.

At Radium Deposits

Besides this work, Professor Mead's professional practice has also taken him into South America, Cuba, Mexico, and Canada. His work in the last-named country included an airplane trip to the radium-silver deposits of Great Bear Lake and Coppermine River. Immediately following the close of school this year, he is leaving for Alaska where he will spend the summer as a consultant in a project concerning gold deposits there.

Apparently, the most striking fact about Professor Mead's journeys is that they are usually uneventful and without mishap. When asked if any exciting occurrences had ever taken place on these trips, he replied that the exact converse was true and that he hoped it always would be.

Many Professional Societies

Professor Mead holds membership in a number of professional societies. He belongs to the Geological Society of America, of which he was Councilor in 1930, the American Institute of Mining and Metallurgical Engineers, the American Association for the Advancement of Science, the American Association of Economic Geologists, the American Society of Civil Engineers, the American Academy of Arts and Sciences, the Sigma Nu fraternity, and the national honorary scientific fraternity, Sigma XI. He is the author of numerous papers on geological subjects, and collaborated with C. K. Leith on a volume entitled "Metamorphic Geology," published in 1915.

Photography is Professor Mead's hobby, and, in fact, he has become very expert at it, employing it to great advantage in his research work. He considers photography as "literally the most important notebook of field work."

Graduated from Wisconsin

Born in Plymouth, Wisconsin on August 5, 1883, Professor Mead is the son of Major C. and Rose (Robinson) Mead. In 1906 he was graduated from the University of Wisconsin with a bachelor of science degree. It was here also that he received his master's degree in 1908 and his doctorate in 1926. In the same year of his graduation, he became a member of the Wisconsin faculty, and served there for the twenty-eight years previous to his appointment to the Institute. He was made a professor of geology in 1918.

The possession of a sound philosophy is not dependent upon any particular relationship to the organization of society, although it may be more readily acquired under some circumstances than under others. During apprenticeship nearly all professional men are employees, and many will always thus remain. The question as to any individual is not, what is the particular contractual or other relationship which he maintains with the society of which he is a part and which supports him in his work, but what is the intellectual relationship which he bears to all those to whom he renders his special knowledge available. Many, of course, never attain professional status for the simple reason that their superior knowledge of a field never exists or never becomes recognized. When the knowledge and recognition are present in fact, the essential independence of the individual is assured, provided he maintains his philosophy and does not sacrifice it to a mere struggle for the maximum possible income. . . .

"This is the professional man," Dr. Bush said, adding, "today he operates in a changed and changing world. This is a world in which protection, interdependence, and intercommunication have introduced challenging problems for all civilization. It is a world in which the professional man needs to revise his outlook and adapt his methods if he is to maintain his traditional position of respected adviser. It is a world in which he has an unprecedented opportunity of ministrations of the highest order. . . .

"In the confusion of the modern world," the speaker concluded, "there must be a rock in the stream, unmoved by the turbulence about it, a

haven of refuge for the troubled, a vantage point from which the course of the torrent can adequately be surveyed, a bulwark which can dam the current or force the flow aside. It can be furnished in modern society only by men of good will, having the reason to understand, the courage to oppose, the steadiness to resist. Such a group is found only among the professional men."

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Prof. Rossby Appointed to U. S. Weather Bureau

Professor Carl G. A. Rossby, head of the course in meteorology, will become assistant-chief for research and education in the United States Weather Bureau in Washington this month.

In order to accept his new position, Professor Rossby has been granted leave-of-absence from the Institute for three years. He is internationally known for his work in the application of advanced meteorological methods to weather forecasting.

Dr. Petterssen to Head Department

During Professor Rossby's absence from the Institute, the course will be in charge of Dr. Sverre Petterssen, noted Norwegian meteorologist. Dr. Petterssen is a native of Norway and was educated at Oslo University.

From 1925 to 1932 he served as meteorologist in the Norwegian Weather Forecasting Service at Oslo, Tromso, and Bergen. From 1932 until the present he has been head of the Forecasting Institute in Bergen.

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Defense

(Continued from Page 1)

and an armed corporal, were shown. Among the other equipment on display was the new high-speed, three-inch, mobile anti-aircraft gun with sound locator, comparator, searchlight, height-finder, and director; a 75-mm. field gun and howitzer; one of the new 150-mm. howitzers on a high-speed carriage together with its power unit, an 81-inch mortar; and machine guns of the type that are used against aircraft and troops.

Artillery Instruments Shown

Instruments used for controlling and directing artillery fire were shown both complete and in cut-away sections. Shells and other ammunition, showing complete rounds and other component parts, whole and sectioned, were also exhibited. Flares, practice bombs, demolition bombs, hand grenades, aircraft signals, cartridge cases, high explosives, propellant powder, leaden for cartridge bags and projectiles, and projectiles from trench down to the smallest canoes were among the exhibits.

The Navy exhibited the manufacture of die-rock chain, ropemaking, the paravane, Ford range-finder, deep sea diving equipment, the Momsen submarine lung, periscope, and torpedoes, as well as many models of naval vessels. Some new airplane equipment was also displayed.

Johnson Emphasizes Engineering

In his speech, Mr. Johnson emphasized the importance of engineering to national defense. Praising technology's service to the Army, he said, "... I say without reservation that many of our most conspicuous technological gains in national defense have resulted directly from the training and the education afforded our officers at this shrine of science and engineering."

The speaker then reviewed the contributions of the engineer to warfare, giving examples from over 2,000 years of military history. Particular emphasis was laid on the role of science in aviation.

Aviation Is Conspicuous Service

"Perhaps the most conspicuous service of the engineer, the Army has felt in the development of aviation," Mr. Johnson said, continuing, "the law of aerodynamics may not change, but the aeronautical engineer is learning more about it every day. . . . Is the time approaching when we shall have to plan for troop movements by air? Will the revolution in supply and transportation that our engineers effected in the use of the railroad in 1861-1865 now be repeated in the lanes of the air?"

Rear Admiral Stark, substituting for Assistant Secretary of the Navy Charles Edison, '13, who was recuperating from a recent illness, discussed the relation of the Navy to industry.

Would Abandon Democratic Ideal

"... We must abandon completely the democratic ideal of preparedness, in so far as our Navy is concerned," he said, since "the combatant ships that we have when war breaks out are the only combatant ships that we will have during the first year or years of the war. . . . Today the Navy's own facilities and design staffs can produce only a small part of the highly specialized equipment that goes into our ships and, as never before, industry is being called upon to produce that equipment," the speaker added.

As did Mr. Johnson, Rear Admiral Stark emphasized the importance of technology to aviation. "... technology is the very backbone of aviation," he added, saying, "that applies not to aeronautical engineering but to operating as well. . . ."

Class Day

(Continued from Page 1)

wald Stewart, II, and Peter M. Bernays, both Seniors.

Hobbs is Fifty Year Speaker

The actual exercises were begun with the address by the fifty year speaker, Franklin W. Hobbs of Boston, president of the class of 1889. Mr. Hobbs, president of Arlington Mills, stated that the Seniors now graduating face a far different situation than his own graduating class did, but none the more difficult.

Following Mr. Hobbs' address, William F. Wingard, president of the Senior Class and permanent class president presented a symbolic 10 inch replica of the Senior Class ring to the Junior Class president and next year's Senior Class president, Walter H. Farrell.

Fiske Speaks for 25 Year Class

It was at this time that Casselman introduced the twenty-five year speaker, Charles P. Fiske of New York, assistant secretary of the Class of 1914. Now vice-president of the General Motors Acceptance Corporation, Mr. Fiske emphasized the many scientific and engineering advancements that had been accomplished after his class had graduated, much of which had been done by members of his class, to show the Seniors that there is still a chance for them to make good in the world.

Wingard then presented the Class Gift to Doctor Karl T. Compton, who in turn accepted it with a short statement. The Senior Class Gift was originated many years ago by Track Coach Oscar Hedlund, who is always in charge of its yearly collection. It is in the form of a fund, which is invested by the Institute for a period of twenty-five years. After this time the accumulated sum is returned to the class, which then decides the fund's destination.

Seniors Pass Examination

The humorous touch was added to the exercises in the form of a mock examination, as if the Seniors hadn't had enough exams already. In the test, one man elected from each course was asked a question by Mr. Harold B. Richmond, and Professor Charles E. Locke, president and secretary respectively of the Alumni Association. The courses which answered the questions correctly were admitted into the Alumni Association.

Mr. Richmond then conferred upon Dr. Dugald C. Jackson, professor emeritus and retired head of the department of Electrical Engineering, the rank of Honorary Member in the Alumni Association of Technology, in recognition of his interest in the welfare of students before and after graduation.

Rebori is Beaver Orator

The traditional Beaver Oration was presented to the assembled group by Senior Andrew P. Rebori, first prize winner in the Stratton Prize contest.

The final event on the program was the presentation of the Class Banner by Mr. Richmond to President Wingard and the acceptance of the banner by Wingard.

Tea Dance After Exercises

The Class Day Tea Dance took place from 4 to 6 P.M. in Walker Memorial. Leon Meyers and his orchestra played at the informal affair.

Senior Week

(Continued from Page 1)

a miniature picture of the girl's escort. The Institute seal and the numerals of the class of '39 will be engraved on the locket.

Symphony Hall Packed for Pops

Symphony Hall was filled to over capacity last Saturday for Tech night at the Pops. The Glee Club rendered five numbers and two encores, under the direction of Mr. Henry J. Warren. The songs were "The Chorus of Soldiers" from The Damnation of Faust by Berlioz; "The Morning Hymn" by Henschel, who is first conductor of the Boston Symphony Orchestra; "Summer Evening" by Palmgren, in which the soloist was F. Lewis Orrell, Jr., '39; "Adoramus Te" by Palestrina, Take Me Back To Tech and the Stein Song.

Humor Schaefer Style

The Senior Week Banquet which took place last Friday in the Renaissance Room of the Hotel Touraine, was the only scheduled stag event on the program.

The toastmaster was Professor Albert A. Schaefer. The other guests present, who also spoke briefly, were Dr. Compton, Dean Harold E. Lobdell, Nathaniel McL. Sage, Delbert L. Rhind, and B. Alden Thresher.

Emerson

(Continued from Page 1)

Travelling Fellowship, which carries a stipend of \$1,500 for study abroad, was won by William E. Haible of Denver, Colo. Mr. Haible also was announced as the winner of the American Institute of Architects Medal, a School Medal, and the Freehand Drawing Prize. The Boston Society of Architects prize of \$100 was won by John G. Kelley of New York City, who also was awarded one of the School Medals. The Chamberlain Prize was won by Alfred Sweeney, Jr., of Auburn, Maine.

School Medals were won by Bernard S. Edelman of Cleveland, Ohio, and Matthew L. Rockwell of Highland Park, Ill., and the Alpha Phi Chi Medal was awarded to Walter H. Pulsifer, Jr., of Whitman, Mass. The Three Class of 1904 Prizes were awarded to James H. Boulger, Jr., Salem, Mass.; Myron D. Phillips, Quincy, Mass.; and Richard H. Gould, Jr., of Douglaston, N. Y. The five F. W. Chandler Prizes were won by Charles A. Lawrence, Jr., of Seattle, Washington.; Richard M. Samuel, Newton, Mass.; B. Leonard Krause, Grand Rapids, Mich.; and Ieoh M. Pei, Shanghai, China, who was given two of these prizes and was also awarded the Freehand Drawing Prize for life class drawing. The Library Prize of a handsome book was won by N. P. Anderson of Chicago, Ill.

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**Paper Museum Is Open
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One of the few museums dealing exclusively with paper and its uses, the Dard Hunter Paper Museum was opened yesterday on the third floor of the new Rogers Building.

Mr. Dard Hunter, a world authority on hand-made papers, has brought his collection of rare papers dating from the first piece of printing, a Japanese ceremonial prayer scroll, up to the present.

The collection includes numerous specimens of primitive paper-making equipment from all parts of the world and models of paper mills never before seen outside of Japan, China, and India.

Field House

(Continued from Page 1)

percentage of students taking part in recreational activities."

Rockwell Receives Keys

At the finish of his speech he handed the key to Dr. Rockwell who received it on behalf of the Alumni Advisory Council on Athletics and for the student body.

The new track and field house, which was named in honor of the late Major Frank H. Briggs, '81, were started early last winter and recently completed.

It was Major Briggs who, together with the late Dr. Allen Winter Rowe, '01, did so much to foster athletics at the Institute, both through their work on the Advisory Committee and individually.

Lockers For 450

The track house, built with funds raised from Alumni and students has locker room facilities for 450 men, besides showers, a rubbing room, two offices for coaches, a dressing room for officials, and three rooms for visiting teams.

Lounger

(Continued from Page 4)

rookie with an air of domesticity. The heart interest in this affair of ours was the freshman co-ed of wide renown who unknowingly belongs in this passionate drama. It all began when this co-ed decided to play some tennis a little early in the season on the concrete courts beside the drill field. At the same time, the company commander had our soldier boy's platoon marching toward the reviewing stand in fine array.

All went well, with our hero's gaze fixed rigidly on the swift agile movements of our heroine, until that nasty old company commander (the villain of our little tale) gave the order squads right. At that moment our hero was far away in his dreams so continued to march blissfully down the field, unaware of the excitement that he was arousing among his compatriots. Now, amid thoughts of being court-marshalled and flunking the course, the wayward frosh sees the folly of succumbing to the enticing attractiveness of women and swears to be a bachelor.

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