

Cross Country Men Leave Brown Team Far Behind

VARSITY HARRIERS CAPTURE SIX OUT OF SEVEN FIRSTS

Freshmen Finish Five Men in
Dead Heat to Chalk Up
Perfect Score

BRUINS LEFT FAR BEHIND

Saturday morning the Tech harriers overwhelmed the Brown Bears from Providence in both the Varsity and Frosh races at Franklin Park. The Varsity won by a score of 17-45, placing six men in the first seven places. The freshmen won with a perfect score of 15-44, finishing five men in a dead heat for top honors.

In the Varsity race, both teams started off in a solid group and kept in mass formation for a half mile. Bill Rooney's stride, however, began to tell about this time and he raced ahead, followed closely by Harry Akereley and Ed Chute. As they rounded the mile and a half mark Capt. Rooney had taken the hearts out of most of the Brown men that had tried to match strides with him. The fourteen men that had been so closely bunched at the first mile had by this time thinned out into a long narrow file.

Frosh Win Easily

When the team was well past the way mark, the Tech leader had a comfortable lead of about 250 yards over the nearest Brown man. At this point, he eased up to let Akereley draw up on him. Ed Chute trailed Akereley very closely. Gross was the only one of the Bears to give any real opposition at the end. He challenged Chute to a final spurt, but the latter was too much for him. Smith, Pete Kirwin, and Don Hooper followed the lone Bruin. The way that Bill Rooney and his team mates ran the course augurs well for their success in the New England games and the Intercollegiate.

The Brown Cubs never really had a chance in the freshman race. Worthen of Tech took the lead at the start and set the pace for a mile and a half. For two miles the young Beaver team was in almost perfect group formation. The distance between the first and fifth man during this time was never more than 25 yards.

When three-quarters of the race was (Continued on Page 4)

E. E. SOCIETY WILL HEAR TALK ON TESTS

At the next meeting of the Electrical Engineering Society to be held Friday evening, November 13, Everett S. Lee of the General Electric Company will speak on "What Every Engineer Must Sometime Do." The place of meeting is undecided at present, but will be announced within a few days.

The speaker says that at some time every engineer must measure something, and he intends to discuss the methods employed in the General Electric shops for testing and measuring the performance of generators, cables, and other electrical apparatus.

Lee has prepared several papers for the American Institute of Electrical Engineers on subjects in this field. One of his most recent papers was on the water rate tests on large turbo-generators, in which he described the various methods used in the tests, and the means employed to eliminate human errors and other difficulties. The talk will be open to all who wish to attend.

Paul Donahue '29, who received injuries to the head in the Field Day football game, is reported as resting comfortably in the Brooks Hospital. He was first thought to have sustained concussion of the brain but the physicians found that this was not the case. It is expected that he will be able to leave the hospital in about a day.

COURSE IN BUSINESS ATTRACTS GRADUATES

Nine graduates of Technology are now enrolled in the Harvard Business School, according to information received from the office of the dean of that school. It was also announced that the Institute ranks eighth in the number of students attending the school which offers a two year graduate business course.

Because of inability to care for more than a limited number of students, many men were unable to be admitted for the fall term and another class will be admitted in February to afford opportunity for admittance to those who were unable to enter the fall class. The fall class has an enrollment of 687.

F. A. SCOTT TO BE ALDRED LECTURER

Second Lecture of Series to
Be Given by Prominent
Manufacturer

F. A. Scott, President of the Warner and Swasey Company of Cleveland, Ohio, makers of machine tools and precision instruments, will deliver the second Aldred Lecture of the year this Friday at 3 o'clock in room 10-250.

Mr. Scott is Director of the Cleveland Trust Company, and is well known in manufacturing circles. The company of which he is president specializes in making machine tools for fine work. They also produce all kinds of gauges and measuring instruments of precision for use in work requiring great accuracy and precision of measurement.

Senior and graduate classes will be omitted during this hour as usual, the Aldred series being primarily intended for these students. Although Mr. Scott has not yet announced the subject of his talk, it will be one of general technical interest, and anyone interested is invited to attend.

Freshmen Will Elect Officers On November 18

Nomination Blanks Must Be
Turned in by Next
Saturday

Freshmen will elect their first group of class officers at a special election on November 18, for which nominations are due in the Information Office, room 10-100, before one o'clock next Saturday. A president, vice-president, secretary, treasurer, two representatives to the Institute Committee, and two members of the class Executive Committee are to be selected.

Because this is the first opportunity for the class to express itself by ballot, and because the class is not familiar with election methods at the Institute, the Elections Committee of the Institute, which is in charge of the election is anxious that every freshman study the preferential system of balloting and vote counting as described in the T.C.A. Handbook.

This election is the first important one for the class of 1929, for the officers elected a week from Wednesday will determine the policies of the class until the men elected in the regular class elections in May take office.

As provided in the rules for class elections in the constitution of the M. I. T. Undergraduate Association, each nomination must bear the signatures of ten members of the class and be in the following form: "We, the undersigned members of the Class of 1929 do hereby nominate _____ for _____ of our class." The petition must also bear the acceptance of the candidate: "I hereby accept the nomination" over his signature.

FIRST CONCERT OF MUSICAL CLUBS IS HELD AT FILENE'S

New Programs Will be Pre-
sented by Banjo, Mandolin
And Glee Clubs

CONCERT NEXT THURSDAY

Specialty Acts Consist of Brass
Quartette, Violin Soloist,
And Piano Duet

On Thursday evening the Combined Musical Clubs will give their first concert of the season at the William Filene's Sons Company's store under the auspices of the Filene's Entertainment Association. The hall on the top floor of Filene's Building at Summer and Washington Streets will be used.

Besides the regular program by the Mandolin, Banjo, and Glee Clubs, three specialty acts have been arranged. The first will be a violin solo by G. W. Smith '26 accompanied on the piano by G. W. Bates '26. For the other two specialties there will be a piano duet and a brass quartette made up of two trombones and two trumpets. The personnel for these two numbers has not been definitely selected by the management, but it is probable that C. W. Clay '27 and H. L. King '29 will be at the piano for the duet.

Four groups of dance numbers, three pieces in each, will be played by the Banjo Club. As an experiment, the club will sing the choruses of the pieces. Neither the ribbons nor the banjo lights will be used in this concert. Raymond Mancha, Jr. '26, will lead the club. The Mandolin Club, led by D. S. Cunningham '26, will play "The Song of India," "Cuba," "De Ling," and "O Sole Mio."

The "Techoonians," dance orchestra of the Combined Clubs, will present a specially arranged orchestration of the "Waters of Minnetonka," together with several other dance selections. They will play for the dancing that will follow the concert. This year they are being coached by "Dok" Eisenbourg '12 and led by M. M. Fireman '26.

Members of the clubs will meet at Notman's Studio at 6 o'clock for a picture, after which they will proceed to Filene's in a body.

PASSAMAQUODDY BAY ENGINEER TO SPEAK

Mr. Dexter Cooper to Speak in
Boston Next Friday

An announcement has been made by the Civil Engineering Society that Mr. Dexter Cooper, Chief Engineer of the Passamaquoddy Bay Project, for developing power from the tides of the Main coast, will speak at Huntington Hall on Friday, November 13, at 7:45 P. M. Mr. Cooper was born in Iowa and is a graduate of the Polytechnic School of Karlsruhe, Germany. He has been connected with various engineering projects in this country and in foreign countries and was the engineer in direct charge of building the Keokuk dam across the Mississippi river.

According to Professor Charles M. Spofford, head of the Civil Engineering Department, this is one of the most interesting schemes for the development of water power ever proposed. (Continued on Page 4)

SOPHOMORE CLASS IS THE WINNER IN ANNUAL FIELD DAY ATHLETIC CONTESTS

ARRANGEMENTS MADE FOR INDIAN EXHIBIT

Arrangements have been completed for the display of the miniature specimen of an Indian mausoleum, the Taj Mahal, in the main library. Professor W. N. Seaver, librarian, states that it will be on exhibition either today or tomorrow in the glass case situated on the far side opposite the entrance to the library. Visitors and students are welcome and can view it during library hours. Books discussing its history will be found either in the Technology library or the Boston Public library.

FRESHMEN TO HEAR MEDICAL LECTURES

General Health Advice to be
Given First Year Men
By Dr. Morse

Dr. Morse of the Medical Department will speak to the freshmen Thursday at 4 o'clock in room 10-250. Each year the Medical Department gives a series of three lectures to the first year men on the subject of health.

In the first lecture of this series Dr. Morse will outline what his department is trying to do toward preventing loss of time due to sickness at the Institute. His lecture will be a general health talk with advice on how to live, eat, take care of one's self, and what to do in case of sickness. He will tell what the department is doing toward improving the condition of students found physically unfit to take an active part in athletics as well as the care of the sick and injured. He will also speak on the subject of venereal diseases.

The second lecture of the medical series will be given Thursday, November 9, by Dr. Croke on the subject of "First Aid to the Injured." This lecture will include instruction on bandaging, artificial respiration, and other common practices of first aid. The speaker for the third lecture of the series which will come the following week has not yet been procured, but will be on the subject of "Personal Hygiene."

TALK ON FURNACES GIVEN BY EXPERT

At a meeting of the Boston Chapter of the American Society for Steel Treating held in Walker Memorial Friday evening, Henry Voltman from the W. S. Rockwell Company of New York gave an illustrated lecture on "Heat Applications and Furnaces in General."

Mr. Voltman described in detail both the stationary and automatic types of furnaces giving a number of examples in which each acts as an aid to present day industrial methods. One process in particular subjected a single piece of steel to seven different heat treatments, the steel being run through a series of automatic furnaces on a belt conveyor.

SECOND YEAR MEN WIN IN EVERY EVENT FRIDAY AFTERNOON

Losers Join With Victors For
Customary Snake Dance
—Traffic Stopped

GOAT AND FORD MASCOTS

Overcoming all opposition in the athletic contests, the victorious Sophomores avenged their defeat one year ago by winning the twenty-fifth annual Field Day for the class of 1929 last Friday. Stubborn resistance was offered by the freshmen, especially in football where the two teams were very evenly matched, but the superior training of the second year men brought them out on the top end of the 13 to 0 score for the events of the day.

With their former experience behind them the Sophomores entered the games with plenty of confidence, which the events of the day proved to be well placed. The freshmen were out in force, but during the football game they were somewhat disorganized when someone managed to release a quantity of tear gas in their midst. The weeping freshmen immediately saw fit to evacuate their bleachers.

Parade Across Bridge

At the finish of the football game the Sophomores celebrated the triumph by forming a snake dance. Blocking all traffic in its path, the long line, augmented by a number of freshmen, wound its way over the Harvard bridge and up Massachusetts Avenue.

The parade across the bridge proceeded much more quietly than it has in some previous years, and it was not until they had reached Marlborough Street that the Sophs, dragging the remains of a delapidated Ford behind them, met with any opposition.

Here a closed car attempted to break through the procession and the men decided to include the offender in the parade, pushing it backwards up the street. This addition to the procession was prevented by an officer with drawn revolver, while a patrol wagon hovered ominously near. Contrary to Field Day traditions no one was arrested.

Turning down Boylston Street the line zig-zagged its way to Rogers pausing only to give the well known Station 16 a cheer. After the Ford mascot had been raised to a position of honor on Rogers steps a halt was called to sing the Stein Song and cheer. The Ford was then demolished and the procession wended its way up Boylston to Washington Street (Continued on Page 4)

TECHNIQUE PLANNING AN ARTISTIC NUMBER

AD TECHNIQUE
Planning to arrange the year book on a new idea, the managing board of Technique 1926 has obtained the services of the staff of a Chicago engraving firm, announces A. K. Berle '27 publicity manager. The object is to produce an artistically harmonious book, and it is even more imperative than in former years that the Senior photos are in early.

Although ample opportunity has been offered during the last two weeks to make appointments for the Technique Portfolio photos a large percentage of Seniors have not yet made appointments. Definite facts as to the number of pictures must be obtained, and because of this the appointment booth in the main lobby will be open next week at noon from 12 to 2 until 2 o'clock on Thursday. The attention of Seniors is called to the fact that last year several pictures were omitted because of laxity in obtaining appointments.

CALENDAR

Tuesday, November 10
7:30—Meeting of Menorah Society, North Hall, Walker.

The Freshman's Nightmare



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FIELD DAY ENTHUSIASM

THOSE who have denied the existence of class and school spirit have been treated to a surprise during the past few days. The interest taken in this year's Field Day contest is the greatest in many years, and if the enthusiasm with which the rival classes attacked each other is any criterion, each of the two lower classes has a remarkable degree of co-operative spirit.

Beginning with the affair in the hangar Thursday night, the rivalry grew and grew, coming to a head just after the end of the foot-ball game. Then, the question of superiority decided, all classes joined in a huge demonstration of the closeness of the bond which unites Technology men, the snakedance through the streets of Boston in which the defeated freshmen enthusiastically aided in dragging the mascot of their victorious rivals to its resting place on Rogers' steps. There, calling to mind the old days of the "Tech on Boylston Street" all joined in singing Technology's songs. And when the Stein song was announced, all heads were uncovered.

True there was some violence during the unofficial part of the contest. At the hangar Thursday several men were denuded by members of opposing classes, some doors were broken through, and a couple of windows shattered. In the fight over the freshman mascot, the innocent goat was nearly smothered by the mass of struggling humanity which surrounded him. The Sophomore "automobile" was rent asunder by the hands of freshmen eager for a souvenir of the occasion.

In spite of the appearance of animosity, however, there was really nothing but friendly rivalry. Whenever in the struggle a man lost his balance, fighting stopped by common consent in his vicinity until he was again on his feet; and he was assisted to arise by friend and foe alike. There was no actual fist fighting save in one or two isolated instances; and in those cases it was quickly stopped by more sober contestants.

All the apparent roughness was simply the natural exuberance of youth, and is more to be encouraged than condemned. The destruction of property was slight in comparison with the benefit to the freshmen from having instilled into them the feeling of fellowship with each other and with other Technology students. And it is a significant thing that the only serious injury sustained by anyone on Field Day was received, not in the free-for-all fighting but in the regularly scheduled football game.

ANOTHER VIEWPOINT

Civil engineer leaves his transit for a shovel. Claims he can make more money as a day-laborer.

—News Item.

THERE can be but three reasons for doing a thing like this. It may have been a theatrical gesture—which deserves no comment; or an act of childish petulance—in which case he should be ashamed, and probably is by now; or he may really have thought that he was bettering himself by taking a higher wage as a day laborer—which shows a deplorable lack of foresight. How many day laborers ever get anywhere? The few who do have an unusual amount of determination and intelligence; qualities of which this engineer with the vision of a child of ten has hardly enough to mention. Unless he awakens to the fact that he will occasionally have to pay in advance for what he gets, his name has been seen in print for the last time as well as the first.

When a man graduates from Technology he may come out a good ditch-digger, but it is certain that he does not emerge as an experienced engineer. Nor does he expect to. What he does have is an education in the fundamentals of his chosen branch—an education that will enable him to rise rapidly if he has sufficient patience to endure a small wage until his employers discover that he has something in him besides a few theories, the current issue of *Voo Doo*, and a wide acquaintance among the fair sex of Greater Boston. If he can last long enough to demonstrate that he has ambition, perseverance, and a good knowledge of the basic principles of his profession, he will soon find himself in a position of responsibility with a corresponding pay check. The top of any branch of engineering is uncrowded and will remain so as long as there are men who are unable to see beyond the next pay envelope.

The following books have been carefully chosen by the editors of this publication with the assistance of the publishers as being of interest and import to our readers. It is not purposed to discuss books of a scientific nature but ones of amusing and cultural value. Additional information concerning such books will be furnished upon request.

THE OUTCAST, by Luigi Pirandello. New York: E. P. Dutton & Co. \$2.50.

This is the story of innocent woman branded by her husband as guilty. Marta Pentagora, the woman, has been indiscreet enough to keep up a correspondence with a man friend. Her husband finds the letters, reads more in them than there is, and, in a fit of rage, casts her from the house.

She goes to her parents who give her shelter though they too believe her guilty. When Ajala, her father dies and the family is left destitute Marta takes a post as school teacher, but is forced, by the ill-will of her town-men to give it up. Leaving with her mother and sister, the village which has been her home, she goes to Palermo as teacher in a college. Though she manages to keep this position she is still pursued by the anger of society.

Alvignani, her former correspondent, shows up and driven by her loneliness she finally becomes guilty of the sin her husband has accused her of. Coming as an anti-climax is the reconciliation with her husband.

The novel is chiefly notable for its characterization. Marta, the heroine, her husband, her lover, and her mother are all exceptionally well drawn. The character of the town, provincial, narrow, jealous, is also ably shown. As the jacket cover says there is a close study of life in a small Italian town.

The sombre key of the book is well adapted to its tragic plot. Being translated from the Italian it has little of that charm of style to which our native writers aim. It has, rather, a deep sincerity and what is more important,

it leaves us with the feeling of having really known its characters.

Doubleday, Page & Company have added five new titles to their Lambskin Library, a leather-bound, pocket-size, \$1.10 edition of distinguished books. These are Christopher Morley's "Parnassus on Wheels," "Blix," by Frank Norris, "Little Citizens" by Myra Kelly, "Through the Magic Door" by A. Conan Doyle and Joseph Conrad's "Youth." The library now numbers fifty-two titles, among them books by Conrad, Tarkington, Harry Leon Wilson, Edna Ferber, Frank Norris, Alfred Ollivant and many other famous modern writers.

Boni and Liveright announce a new book by Heywood Brown, "Gandle Follows His Nose," to appear in the spring. Mr. Brown is well known as a newspaper columnist and dramatic critic. He is the author of "The Boy Grew Older."

The theory of relativity is given a whole chapter in *The Marvels of Modern Physics*, by Joseph McCabe, just published by Putnam's. The book is said to be extremely interesting.

Putnams issue this month a philosophical work, *Mind and Matter*, free from all metaphysical jargon and written in simple language. It is an examination of the most important theories that are current today regarding the nature of mind, the nature of matter, and the relationship between them. An excellent supplement to technical work!

"America's Entrance in the World Court A Necessity"

(Courtesy of the Yale Daily News)

The political disputes over the World Court and the League of Nation have so confused the issue by discussion of details that the fundamental reasons why America should join have been to often overlooked.

Let us, then, go back to first principles. I believe that anyone who would forget the bitter political discussions and devote one hour's honest thought to the subject would see that if America is to do anything to co-operate with others nations for world peace the least we can do is to join the Court. There is much more we can do, but we can scarcely do anything less and participate at all in the world-wide effort to prevent war.

That ancient institution which we call a Court is really the supreme and basic invention of all civilization. It is the only device which has been found to prevent war when quarrels become acute. Without it, civilization itself would soon disappear; in fact, it could never have existed. It is the Court which everywhere has kept peace and this has been true in ever-widening circles. Even our humblest Court is that of the "Justice of the Peace."

When people talk loosely, as they so often do, they are flying in the face of history. They overlook the fact that we have already, in spots, abolished war. We have abolished war, in fact, wherever we have applied the proper remedy, that is, wherever we have instituted a strong court. We have abolished war between individuals, families, cities, states, and now are abolishing it between nations.

Before the institution of the Court was devised even individuals settled their disputes as Cain and Abel settled theirs. When a dispute becomes acute and cannot be settled diplomatically, there remains just two ways of settling it. One is to fight it out, in which case the stronger man wins irrespective of the justice of his case. The other is to referee it, that is to put it into the hands of a disinterested third party who is not so excited or prejudiced and who is more likely to make a just decision. That is the fundamental idea of a Court.

This is a very simple invention and a very old one and the fact that it has become so universal demonstrates that at heart man loves peace rather than war, that he prefers to let a judge decide rather than to resort to fighting.

The first Court was the patriarch, who kept the peace within the family. The family was the first "peace group". But to keep peace within the family was not enough. As population grew and families crowded each other it was necessary to keep peace between the families in order that clusters of families might live together in a community or village. The justice of peace, or his equivalent in ancient civilization, was the second step in the institution of Courts.

But it was not enough to keep the peace within a village. Inter-village

war was still possible, and in primitive regions, such as the Philippines before the United States entered, there was no peaceful method of settling disputes between villages. The next step was to cluster the villages into a state, as Massachusetts grew from its town meetings, and to institute State Courts to keep the peace between communities. The next step was to cluster the States together into a Nation and to settle the disputes between the States by a Supreme Court. Our Supreme Court has settled eighty-seven disputes between our States, and without the Supreme Court our States would certainly have more than once been in war. Now the hour has struck for enlarging the peace group one stage further to involve the whole earth by setting up a Court between the nations and clustering the nations into a League.

We might almost describe the progress of civilization as consisting in this gradual enlargement of the peace group from the family community, to the State, to the Nation, to the World. Only the last step has not yet been fully taken and cannot be, until the United States co-operates. When the step is fully taken, when the whole world is organized for peace, when the World Court is as authoritative as our Supreme Court, we shall have abolished war as an institution wholly and forever. Each previous step of enlarging the peace group has left something outside and, therefore, was incomplete. Occasional war was inevitable. But when the peace group involves the whole earth there is nothing left outside and the only war possible is civil war, which by the nature of the case seldom happens and is outlawed.

Now at last we have a World Court with forty-seven adherents and lacking only the United States to give it full prestige. Let us not talk about creating some substitute Court and let us not pretend that the so-called "Old Hague-Tribunal" is a Court. It is only a list of names on paper! There never was any other World Court than the Court of International Justice at The Hague, and the other nations of the world would never consider disbanding that Court to please those few

(Continued on Page 4)

THE OPEN FORUM

To the Editor:
 I have heard around the track house lately that the custom of running handicap mets on Saturdays is going to be continued this winter. The men that go into these meets really derive a large amount of benefit out of them. They not only get excellent training, but also the point leaders in each event are awarded silver cups. I do not understand the way the men consider these meets because last year the number of men out for them was not particularly large. The cups are really worth while, and I see no reason why more men should not come out. (Signed) H| A. Burnell, Jr., '28

Intercollegiates

Surprising information was unearthed regarding current affairs, through recent tests conducted by the *Review of Reviews* among high school and college students. As far as the results of the tests are concerned they show a miserable lack of information on the part of the average student regarding the affairs of the world. The tests, which are conducted annually, were given to men at educational institutions throughout the entire country.

Some of the students placed Muscic Shoals in Italy while others considered its location in the Pacific Ocean. Teapot Dome was defined as one of the new buildings in Washington. The report also states that eleven per cent of the students failed to recognize the photograph of President Coolidge and another 42 per cent could not give the name of the inventor of wireless telegraphy. Ma Ferguson, governor of Texas, was identified as the president of Mexico.

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SOPHOMORES WIN FAST FOOTBALL GAME

Freshmen Fail to Score After Carrying Ball to Soph Two Yard Line

In a hard, cleanly fought game, the Sophomore football team triumphed over the freshman eleven 7-0 in the annual Field Day battle on Tech Field Friday afternoon. Three times did the frosh carry the ball within the shadow of the Sophomore goal posts, only to be held for downs or thrown for a loss. The Soph touchdown came when Wofford intercepted a poorly directed frosh pass, and raced down a clear field for the only score of the game. Gray kicked the goal for the extra point.

Playing a harder game than was expected of them, the frosh held the heavier Sophomore team for downs consistently. Several times the Soph machine carried the ball down the field only to be penalized when within a few yards of scoring distance. Both teams relied upon the overhead route often to gain ground, the frosh being the only one to succeed in this method of attack. Many of the frosh passes were intercepted by the Sophs, and were a source of considerable gain.

Parks Punts Out of Danger
Captain Gray of the Sophomores won the toss and chose to receive the ball. The game started with Walsh kicking off to Riley who advanced the oval to the Soph 40 yard line. Parks and Sealy made first down on line rushes. On the next play, Walsh scooped up a Soph fumble and evading all opposition, raced 38 yards to the Sophomore 2 yard line, where he was downed with a flying tackle by Joe Parks. This was the first scoring threat by the frosh.

The frosh were held for downs and Parks punted out of danger. The yearlings were successful on a forward but failed on second attempt, as Wofford intercepted one of Walsh's passes and gave the Sophs the ball. The frosh line strengthened and the red jerseys were held for downs. Parks booted to Cullinan who fumbled but Donahue recovered. The frosh were offside and the Sophs were given the ball on their own 40 yard line. Parks kicked to Peterson who was forced out of bounds. Again the Sophomore line held and Walsh kicked to Sealy on the 50 yard line who was downed in his tracks. Parks was forced to punt and booted to Donahue on the 14 yard mark who advanced 6 more before he was downed. After gaining 8 yards on line rushes, Walsh punted to Sealy in midfield. After making first down the Sophs were penalized 15 yards for pushing. Not being able to make up the loss Parks was forced to punt and Wofford fell on the ball to end the first quarter.

Cullinan made 4 yards through cen-

ter for the frosh. Walsh was forced to kick and booted to Gray. Two passes by Sealy were grounded. On the next play Walsh broke through the Soph line and blocked Parks's kick. The frosh were again held for downs. The Sophs made first down twice on bucks through tackle and end runs. A forward, Parks to Sealy netted another first down. For the second time the Sophs were penalized 15 yards. Parks failed on a forward. Wofford made a bad pass which went over Sealy's head and the latter was nailed for a loss of 12 yards. On the next play, Wofford made up for his miscue by snaring one of Walsh's passes and ran 48 yards through an open field for the only score of the game. Gray kicked the goal.

Luby kicked off to Walsh on the 42 yard line. Walsh tried a pass and Farwell intercepted. The frosh regained possession of the ball when Giles repeated the same trick by catching one of Farwell's passes. The frosh started a march down the field which brought them to the Soph 32 yard line. A long pass Walsh to McKenna earned 22 yards for the frosh. The half ended with the Sophs in possession of the ball on their own 41 yard line.

Neither Score in Last Period
The second half started with Luby kicking off to Cullinan. Unable to make their downs, Walsh punted to Farwell. Runs by Farwell and Parks resulted in another Soph first down. On the next play Sealy ran around left end for 2 yards and was forced to leave the game on account of injuries. The Soph machine slowly rolled down the field within striking distance of the goal but failed to carry the oval across. Captain Gray then tried to drop-kick the goal but the kick went wide. The frosh were given the ball on the 20 yard mark. Donahue and Peterson advanced the pigskin 8 yards on 3 downs and Walsh kicked to Gray who fumbled but Farwell recovered for the Sophs. Gains by Parks and Farwell resulted in first down. Farwell then skirted around left end for 11 yards and another first down, being stopped by Donahue who was injured in the play and forced to leave the game. Proctor gained 5 yards and again Gray attempted to drop kick the goal but the kick was blocked.

Brown Scores Day for Sophs
The last quarter started with Walsh booting to Proctor after the frosh were unable to make any headway. Parks also kicked after losing the ball on a bad pass. At this stage of the game, the aerial attack of the gray jerseyed boys worked to perfection. A pass, Walsh to Crosby netted 12 yards for first down. A lateral pass Young to Walsh failed. Then Walsh threw a long forward to Crosby who by clever broken field running negotiated 60 yards, being downed on the Soph 12 yard chalk-mark. The freshmen were able to gain but a yard. Peterson was hurt but continued playing.

On the next play, Young tried a forward to Crosby who was over the Soph line but Brown saved the day for the Sophs when he intercepted the pass on the Soph 2 yard line and gained 16 yards. Line bucks by Farwell and Brown netted first down for the Sophs. Unable to gain further Farwell booted to Young. Walsh failed on two passes one of which Farwell intercepted. The game ended as Brown picked a hole through left tackle for 12 yards leaving the pigskin on the frosh 40 yard line as the final whistle blew.

Sophomores		Freshmen		
Wilson, le.	re.	Crosby	re.	
Luby, lt.	rt.	Glass	rt.	
Dean, lg.	rg.	Brown	rg.	
Wofford, c.	cg.	Giles	cg.	
Bartlett, rg.	lg.	Logan	lg.	
Metcalfe, rt.	lt.	Funk	lt.	
Caputo, re.	le.	McKenna	le.	
Gray (capt.), qb.	qb.	Donahue	qb.	
Riley, lhb.	rhb.	Cullinan	lhb.	
Sealy, rfb.	lfb.	Peterson	lfb.	
Parks, fb.	fb.	Walsh (capt.)	fb.	
Score by Quarters		Total		
Sophomores	1	2	3	4
Freshmen	0	7	0	7
Substitutions:				
Sophomores: Mock for Caputo, Larson for Mock, Farwell for Riley, Proctor for Sealy, Brown for Parks, Benson for Gray.				
Freshmen: O'Neil for Logan, Newhouse for O'Neil, Young for Donahue, Newhouse for Giles.				

SOPHS WIN FIELD DAY RELAY RACE BY SEVEN YARDS

Frosh Lose Early Lead Almost Immediately, When Moggio Passes Keough

CLEAN PASSING FEATURES

Contrary to all of the advance dope on the relay race, the Soph spiked slipper artists finished with a good eight yards to spare over the yearling team, in the Field Day race on Friday. According to the results of the two sets of time trials which were held last week, the freshman had a decided advantage over the Sophs, but when the crucial test came on Field Day they could not meet the warm pace set by their older brothers.

Churchill and Speller were the lead-off men for the Sophomores and freshmen respectively and as the gun sounded Speller shot ahead of the Soph flyer. At the first corner the yearling had held this advantage until he passed the about four yards over Churchill and he baton to Keough the second frosh runner, who was forced to the rear as Moggio let loose in a fast burst of speed on the turn. Moggio had three yards over his opponent at the end of his lap. Bass the next runner for the Sophs increased this slight lead to a substantial advantage of six yards on C. B. Smith who was running for the yearlings.

Earle the next fresh runner decreased the Soph lead to about 1 yard. At the end of the next lap which was between Hall and Keyser the Soph lead was about the same and the next Soph runner Fleming added a yard. Barbour running against Hayes left him far in the rear, leading by ten yards as he passed the baton to the next runner.

From then on the Soph lead was not threatened except when Danner of the drew up on Dick Arf running next frosh uncovered a burst of speed and to anchor man for the Sophs. The second year man had too much of a lead however and at the finish of the race the Sophs were about seven-yards in the van of their rivals. The race was run in 4 min. 57, 1-5 seconds.

BOXING TEAM TO START PRACTICE

New System is Adopted by The Boxing Management To Attract Men

After several false starts, the boxing team will get under way in earnest this afternoon, when Coach Rawson will meet all men interested in boxing in the Hangar. At this time, it will be necessary for the frosh that substituted boxing for Physical Training to report, and start training. Manager Moore has arranged a system for those men that do not expect to come out for the team, to get instruction from Coach Rawson on the afternoons that they do come out.

In order to interest the greatest possible number of men in the sport, the men that come out will be divided into three squads: the men out for the Varsity, the men out for the freshman team, and all those that are just out in order to learn how to defend themselves. According to a new ruling of the M. I. T. A. A., all lessons given by the coaches during their coaching hours must be free.

Few Varsity Men Back

Those men that wish to come for the third class need only to report when they have the time and so desire, so will not be considered as Varsity candidates. However if they find that they possess ability enough, they may sign up for the Varsity and report regularly.

At the present time, the boxing team has few of last year's Varsity men back, so are depending upon a fine freshman class that was developed last year by Coach Rawson. There are a few veterans back that are almost certain of making the team again. Captain Epstein will however probably be among the missing when the first meet comes around, due to and operation he had during the summer.

At the present time, little or nothing is known of the calibre of the incoming frosh. If there is any likely looking material among the men that report tomorrow, Coach Rawson should turn out a first class freshman squad.

The system of having men come out for the sport in their spare time, without trying out for the team is a new policy of the boxing management.

Sophomores Defeat Freshmen Boat In Hotly Contested Field Day Race

Varsity Defeats J. V.'s and 150's Pound Crews in Practice Skirmish

Scarcely a yard separated the bows of the Sophomore and freshman shells last Friday afternoon as they swept across the finish line in one of the closest finishes seen in a Field Day race for these many years. Had the course been several boat lengths longer, yes even one length might have sufficed, there might have been an entirely different story to tell. Previous to the feature race of the afternoon the Varsity, Junior Varsity, and the 150's rowed a practice race over the same course with the Varsity leading the J. V.'s at the finish line by about 1/2 a length. The 150 pound Varsity was about the same distance behind the J. V.'s.

Promptly at one thirty P. M. the two Field Day crews took to the water for the mile brush down the Charles. The water and weather were all that could be desired with a slight ripple stirring the water but not enough to cause any catching of "crabs." As Coach Bill Haines of the Varsity crew gave the word both eights got off to a good start with the Sophs rapidly forging into the lead.

Sophs Hold Lead
After the first spurt died down, both crews settled down for the long pull which was in store for them. The Sophs could maintain a lead of about half a length over their younger rivals but they could not get another yard. Just before the two boats went under the bridge it seemed as if the frosh were tiring a bit as their stroke did not have the pep which had characterized it the first part of the race.

It was just below the bridge that the real battle for first place began. The frosh attempted a spurt but made little headway for the first six or eight boat lengths. The Sophs were maintaining their long slow stroke of about 30 pulls to the minute. About halfway between the bridge and the finish the yearling shell slowly but surely gained on the Soph boat. It looked as if they would beat the second year men to the finish line after all but the Sophs not willing to be denied this year, called on their reserve, if there is any such thing in a crew race, and staved off imminent defeat by less than a yard. Whether or not there would have been a different result, had the freshmen started their spurt a little sooner, is all a matter of opinion but they were gaining rapidly at the finish.

In the first race of the afternoon the Varsity had things pretty much their own way throughout the entire course, with the real contest coming between the 150's and J. V.'s. When the Varsity started its spurt at the bridge, the senior boat shot ahead of the other two shells as if they were tied. One of the features of the race was the powerful stroke of the Varsity men.

SOCCKER TEAM MEETS HARVARD WEDNESDAY

Engineer Chances for Victory Over Crimson Seem Poor

With chances for an Institute victory slim, the Beaver Soccer team meets Harvard Wednesday afternoon on Tech Field. The Institute kickers will endeavor to avenge themselves for the defeat last year at the hands of the Crimson.

Having been idle last week, the Beaver booters should be in good condition to put up a good showing but comparative scores point to another defeat. Harvard was beaten by Dartmouth 5 to 1 while Tech lost to the Green team by the score of 10 to 1.

The soccer team has not won a game yet this year so they are ready to give the Crimson a stiff fight in order to pull their first victory out of the fire. The team has been handicapped somewhat all season due to a lack of a coach and to the fact that a number of last year's stars were lost to the team. It has been necessary to practically develop a new squad this year and the showing thus far was somewhat to be expected. Captain Arana has been working the team hard the last few days, trying to get them in shape for the Crimson battle.

They felt that there were many men in the Institute that did not come out for the team because they did not possess Varsity calibre, and yet felt that they would like to learn to defend themselves. In order to give these men an opportunity, the coach will give them instruction on the days they report.

SOPHOMORES WIN TUG OF WAR EASILY

Only Two Pulls Are Necessary To Decide Supremacy Of Rope Men

Outpulling the frosh with ease, the Sophs romped away with the Field Day tug of war honors and thereby tucked away two points of the freshman debacle last Friday. Two pulls were all that the second year men required to garner the necessary victory.

The teams presented a colorful picture as they trotted on the field in two queue formations, the Sophomores in red jerseys and the freshmen in grey. After parading before the stands the two teams took their positions on the rope and awaited the signal of the gun.

Sophs Win Second Pull

It was apparent at the outset of the first pull that the Sophomores were superior to their opponents but they had to pull for every inch. At the crack of the gun the indicator on the rope started to move towards the Soph white mark and it never reversed its direction. The first pull was won in the short time of 57 seconds.

The first victory filled the Sophs with confidence and they were full of pep as they trotted on the field between halves of the football game to line up for the second pull. This tug was an exact duplicate of the first, the rope never heading in the direction of the frosh white mark. The time was 59 seconds.

Major Briggs '81 refereed the contest. The judges were J. C. McKinnon, D. L. Rhind, J. R. Lambirth, H. S. Ford, and H. E. Lobdell '17.

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RATES ARE REASONABLE

Sidelights

Elizabeth Ford, mascot of the Sophomores, ended a long and, for a brief time, glorious existence as an ornament to the steps of Rogers building, with most of her innards gone and various parts of her anatomy scattered through the length of Boylston street.

There was really no need for any gun-play when an over-bold Chevrolet coupe got caught between the lines of rope by which the Field Day celebrators were pulling the flivver mascot. The Metropolitan policeman who pulled a gun on the marchers then was the only officer encountered who offered any resistance to the parade.

No respect was paid to clothes during the heat of the battle Friday most of the participants losing at least some part of their attire. One man who was guarding the 1928 mascot was stripped to the waist, while from the outskirts of the mob came a cry, "Keep your shirt on!"

The snake-dance following Field Day was the most effective in some time, as well as being the longest. While audiences looked down from the windows of surrounding buildings the crowd stopped frequently before hotels and in front of City Hall to give Technology cheers.

Seven-year locusts swarming into a corn-field had nothing on the freshmen swarming out of the grandstand when the Sophomores released some tear gas into the stand. The seats were untenable for some minutes after the gas was released.

A shocking young lady was following the snake dance for some distance down Boylston Street near Copley square. She was carrying a suitcase which bore her initials—E. M. F. One of the marchers was heard to comment that she might have been expected to appear with the change in the state of flux of Boston's traffic induced by the marching Institute men.

SWIMMERS HOLD FIRST PRACTICE SESSION

Swimming practice for the coming season gets under way at the Institute this afternoon at five o'clock when candidates for the Varsity and the freshman teams hold their initial workout at the Cambridge Y.

Prospects for a winning season are bright with only two of last year's regulars lost to the Varsity. Armstrong, a dash man, is not in school this year and Kerns, a breaststroker, is lost by the graduation route.

The large number of candidates attending the mass meeting held Thursday, October 29, augurs well for the sport this year. A great number of these were freshmen and if the majority of them report for practice, the yearlings should boast of a winning team. Coach Dean, who was the swimming mentor last year, will have charge of the water men, captained by Carl Wies, again this year.

An investigation of a rumor has revealed the fact that the Daily Northwestern (Evanston, Ill.) and the late President Harding's own paper are products of the same press.

The Howard News, the present publisher of the Northwestern Daily, has purchased a press that for nearly fifteen years was used by the Marion Star. The Star was for many years the paper edited by Warren G. Harding, and was the outgrowth of a long political and journalistic career.

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Proclaims U. S. Should Enter In The World Court

(Continued from Page 2)

United States Senators who talk so absurdly of creating something of their own.

The situation, then, is that a World Court is a fundamental necessity and that there is only one World Court available. Moreover, unless or until America joins the League of Nations, there is no practical way in sight for our joining the World Court except that which was worked out by Secretary Hughes and approved by Presidents Harding and Coolidge as well as supported by the party platform of both political parties. There is no excuse, therefore, for making a political issue out of the Court, and any man who, like Senator Borah, talks about repudiating the part pledge and refusing to support President Coolidge is simply an obstructionist and nothing more. It is utterly impossible for them constructively to give us what we fundamentally need in any other way, but it is possible for Borah and others in the strategic position in the Senate to obstruct and thwart in most fundamental project. There is genuine danger that they will do so unless the practically unanimous approval of the United States becomes sufficiently vocal. I believe the students of our universities, many of whom are already voters and the erst of whom will soon become so, can assert a tremendous influence with the Senate especially by writing personal letters to their own Senators and in other ways bringing to public attention their support of the World Court proposition.

The matter is slated to become before the Senate on December 17, and in order that any individual's influence shall be brought to bear in favor of the Court, it is desirable that the effort should be made in the immediate future.

The record of the Court thus far is good. It already has more authority than our Supreme Court acquired in the same space of time. It is not necessary to argue the question of the League of Nations, to discuss its various efforts to stop wars including its most recent one to stop the war between Greece and Bulgaria. Nor is it necessary to discuss the Locarno treaties. These are not the question before the Senate in December, but the Hague plan. Under that plan we can join the Court without committing ourselves to anything further and after we have done so we shall be in a better position to judge how much further, if at all, we wish to go.

The great necessity to-day is to back up the President in the greatest step forward toward peace America has yet taken.

Irving Fisher, A. B. Yale, 1888; Ph.D., Yale 1891. (Professor of Political Economy at Yale, 1898-1925; Editor of Yale Review, 1896-1910; member of Roosevelt's National Conservation Commission; author of "The Nature of Capital and Income", "Stabilizing the Dollar", "The Making of Index Numbers", "League of War?", etc.)

MENORAH SOCIETY TO HOLD JOINT MEETING

Members of the Menorah Society of Technology will hold a joint meeting with the Simmons organization tomorrow evening at 7:30 o'clock in North Hall. This is one of the joint meetings that are held between the two organizations throughout the year, and all students are invited to attend.

Harry A. Wallison, professor in the department of Semetic Languages in Harvard University has been secured to speak. The address will be followed by dancing and a general social.

EVERY EVENT GOES TO SOPHS ON FIELD DAY

(Continued from page 1)

carrying the pieces. The parade ended by rushing the gates at the Boylston Street subway providing the weary marchers with free transportation.

A few of the Dormitory men continued the celebration on into the night, making a great deal of noise and keeping everyone awake, but no organized attempts were made to revive or replace Tech Night this year.

On the whole Field Day this year was quieter than it has been other years. Fire hoses played no important part in the victory and the snake dance after the athletic events was more of the nature of an orderly parade.

Integrating Machines Discussed By Professor Bush Of Course VI.

Professor Wiener Also Speaks At Meeting of Math Club Last Thursday

On last Thursday evening Professor Vannevar Bush, of the Electrical Engineering department, gave a talk to the Mathematical Club on various methods of solving integral equations. Professor Bush said that the mathematician is primarily a philosopher and is continually trying to throw off the burden of figures and calculation in order to leave his mind free for other things.

Computing devices have considerably lightened the labor of getting results, but these machines are applicable only to arithmetic and can handle numbers only. The engineer deals continually with curves and functions.

Two machines to integrate curves are in common use, the planimeter and the harmonic analyzer. The planimeter will integrate a simple function between limits and the harmonic analyzer will integrate a simple function multiplied by a trigonometric function between limits. To solve a great many problems with either of these devices we would have to proceed point by point, a very laborious process. A machine was needed which would plot the product of two functions against any one limit.

A great many men at the Institute have worked on this problem and finally a machine was developed in the electrical research laboratory, largely by H. R. Stewart, then a research assistant. This is an electrical instrument and embodies ingenious applications of the potentiometer and the watt-hour meter principles. It works as follows: Two stationary potentiometers are mounted over a movable table, each with its axis perpendicular to the motion of the table. Each potentiometer has one fixed and one movable contact, the fixed contacts are in line and the movable contacts follow the curves, placed on the table

with ordinates parallel to the motion of the table. In this way a variable potential is subtended on each potentiometer, proportional respectively to the height of its respective curve. These variable potentials are connected one to the armature and one to the stationary coil of a watt-hour meter. There thus results a torque on the armature of the watt-hour meter proportional to the product of the ordinates of the two given curves. The resulting motion of the watt-hour meter controls, by an ingenious arrangement, the motion of a pencil which traces on the moving table the product of the two functions. Many ingenious mechanical and electrical means have been used to overcome or neutralize friction and other mechanical and electrical difficulties.

According to Professor Bush, ingenious mechanical restraints enable several kinds of problems to be solved on this instrument, such as, the integration of the product of two functions with constant parameter and the solution of an integral equation for an unknown function.

However, this machine will only solve certain types of problems. Professor Bush described a suggested device, operating by light, which will solve certain other types of problems.

A third device, operating on electrical and mechanical principles, which was discussed by Professor Bush is more of less in the hypothetical stage. According to Professor Bush, this possibility, if worked out, would enable us easily to solve a wide variety of integral problems, including the product of two functions with variable parameters.

Professor Norbert Wiener of the mathematics department, in discussing these devices, said that progress in engineering and physics in many directions depends on the solution of now insoluble integral equations. The solution of these equations depends, he said, on the development of integrating machines.

PASSAMAQUODDY BAY ENGINEER TO SPEAK

(Continued from Page 1)

posed. The Passamaquoddy Bay provides a very large storage area, and it is estimated that between five and seven hundred thousand horsepower can be constantly generated here.

A company to develop this project has obtained a charter from the state of Maine and has been authorized by a popular referendum to export power in excess of state requirements. According to Professor Spofford this project will probably cost between seventy-five and one hundred million dollars; between seven and one half and ten million dollars will probably be spent for engineering alone. It is expected that many Technology men will be engaged in this engineering work. Of additional interest to Technology men is the fact that Passamaquoddy Bay is not far from the Institute Summer camp, Camp Technology.

The Tufts Weekly reports the results of an investigation of smoking in a Western college. The number of smokers and non-smokers was about equal but a much larger percentage of the smokers failed to attain passing grades. Twenty out of the twenty-three men dismissed for low scholarship were friends of the weed. Smokers in college fall steadily in rank but the non-smokers maintain a nearly uniform average. Smoking had no apparent physical effect although it seriously impaired mental efficiency.

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NOTICES

OFFICIAL

P. T. BEGINS TODAY

P. T. Classes will begin today.

UNDERGRADUATE

SENIOR PORTFOLIO PHOTOS

Appointments with Notman's Studio for Senior Technique pictures must be made before 2 on Thursday. The booth in the lobby is open daily from 12 to 2.

ELECTIONS

Nomination blanks for freshman class officers are due in the Information Office, Saturday, Nov. 14, before 1 o'clock. The form is outlined in the T. C. A. handbook.

DANCES

In addition to tickets received for the Girls' City Club Dances Friday evenings, the T. C. A. Social Division has received tickets for the Saturday night Dances of The Blue Triangle. The tickets may be obtained at the T. C. A. office, and when presented at the door with 35 cents will admit a student.

THE COMBINED MUSICAL CLUBS

Will have the annual pictures taken at Notman's Studio, Harvard Square, Thursday, Nov., 12, at 6. Members will come in Tuxedo.

CHRISTIAN SCIENCE SOCIETY

There will be a meeting of the Christian Science Society in room 4-132 tomorrow (Tuesday) at 5.

FRESHMAN BASKETBALL

Practice starts November 10, at 4 o'clock in Walker gym. All men signed up to substitute basketball for P. T. must report at that time.

FRESHMAN BASKETBALL ASSISTANTS

Competition is now open for freshman assistant manager of basketball. Report in Hangar any night at 5 o'clock. Three men are wanted.

TECH SHOW

There will be a cast and chorus rehearsal of Tech Show in North hall of Walker at 7.30 o'clock on Thursday, November 12.

HARRIERS WIN OVER BROWN ON SATURDAY

(Continued from Page 1)

over, McClintock forged ahead. In a short time, he had opened a gap between himself and the other runners. Coming in sight of the finish however, he changed his tactics. He looked behind and seeing that it was four Tech men that followed him, slowed down giving the others a chance to catch up.

The finish of the race from the Tech point of view was a fine climax, for coming into the last stretch five wearers of the cardinal and gray matched stride for stride to break the tape in a dead heat. It was the prettiest finish that has been seen on the Franklin Park course for quite a while. The five men tied for top honors were: McClintock, Payson, Worthen, Burgess and Walters.

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