

THE TECH

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BOSTON, MASS., MONDAY, NOVEMBER 25, 1907

PRICE THREE CENTS

BE AT BACK BAY STATION, 5.30 P.M. TO-DAY

TECH WILL RACE B.A.A. RELAY TEAM.

MEET AT PARK SQUARE STATION.

Other Tech Men Will Enter Open Events.

The Relay Team is to run the B. A. A. in a one-mile relay race at the meet of the Park Square Association Dec. 4th. The first man on each team is to run two laps of the track and the following runners will cover three laps apiece. This makes a total of eleven laps and is equal to a mile.

The arrangements have been made by George V. Brown of the B. A. A. and Manager D. C. McMurtrie of the Tech Track team. The object in view was to provide a race as nearly as possible equal in distance to the regular one-mile relay with quarter mile divisions and also to have the relays made up of even number of laps. As it is the first man will have to run about 360 yards and the remaining relays will be 480 yards long.

The B. A. A. runners have done almost no work this season and the Tech team is in very poor condition. The race will serve as a tryout for the men and as a starter for later work. Many of the high-class men on the Tech team have recently been paying a great deal of attention to cross country work, and for this reason the team will have very little time for practice.

Several men of the Tech team will be entered in the open events. In the sixty yard handicap the most promising entrants will be W. J. Seligman 1911, F. D. Stewart 1910, C. W. Gram 1909, K. D. Fernstrom 1910, G. Wilbur 1911, H. Lockett 1910, E. M. Potter 1911, and J. S. James 1911. The high jump will be contested by R. H. Allen 1909, R. L. Bartlett 1910, A. R. Nagle 1910, and C. W. Wilson.

The relay team will be picked from the following men: C. W. Gram, B. L. Gimson, H. W. Blackburn, W. C. Salisbury, W. J. Seligman, E. M. Potter, H. Lockett, A. A. Gould, G. Wilbur, P. Hart, and K. D. Fernstrom.

WHITNEY WINS TOURNAMENT.

M. T. Whiting, '08, defeated P. M. Wentworth, '09, in the finals of the singles of the fall tennis tournament. Whiting proved himself to be undoubtedly the better man, winning straight sets, 6-2, 6-1, 6-3.

HOLD LAST RUN.

In final preparation for the annual handicap cross country run a small squad ran over the eight-mile course on Saturday. The men lost the regular course after they had gone about four miles, so no trail could be laid. The trail will be laid on Wednesday afternoon, and those desiring to acquaint themselves with the course can walk over it at that time. The first five men finishing on Saturday were Pearl 1910, Mills 1910, White 1911, Howe 1909, and Ames 1908.

SHOW LYRICS OUT.

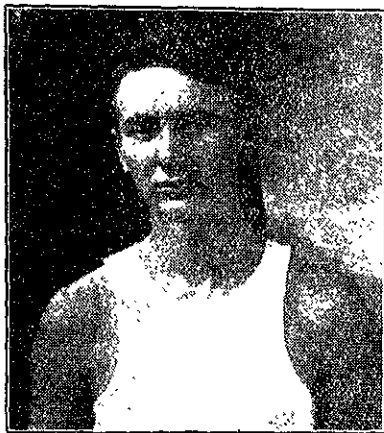
Subjects for the songs to be sung in this year's Show were sent out on Friday to the thirty men in the music and lyrics competition. The list contains over twenty suggestions for lyrics which can be used in "Over the Garden Wall," the majority of these being of a humorous or topical nature. The suggestions give wide field for selection and originality and, with the usual large number of candidates out for this department of the Show work, some excellent results can be expected. The Show management has made special appeal for original specialties in the song and lyric line not covered by the lists sent out, and welcomes all suggestions on any other phases of the Show development.

TECH'S HOPES FOR CROSS COUNTRY LAURELS WEDNESDAY LIE IN EVENNESS OF TEAM.

THIS YEAR'S RACE OUGHT TO BE CLOSER THAN FOR YEARS AS NO TEAM SEEMS TO BE BEST, ALTHOUGH CORNELL IS THE FAVORITE.

Syracuse Will Run This Year, So That Seventy-Two Men Will Face The Starter. Nine Men Will Start For Tech.

Teams from eight colleges meet at Princeton Wednesday afternoon to decide the intercollegiate cross country championship of America. The race, which is the ninth annual event of the kind, is always the climax of the cross country season and never fails to attract a star field of distance runners. This year it is no exception to the rule. In fact the number of entries is considerably larger than ever before due



H. R. CALLAWAY.

to the entry this year of a team from Syracuse, and the new rule allowing each college to run nine men instead of seven as heretofore. With each college entering its full quota of men, 72 men will face the starter.

Tech will be represented by Captain H. H. Howland 1908, H. R. Callaway 1908, B. L. Gimson 1908, C. S. Clapp 1908, C. L. Batchelder 1908, R. Ellis 1909, J. N. Stephenson 1909, W. T. MacCreddie 1911, P. D. White 1911, Manager R. W. Ferris 1908, Coach Frank Kanaly.

Cornell is very naturally the favorite for the team prize. The Ithaca university is without any question the foremost producer of distance runners in this country. Schutt, Newman, Magoffin, Munsen, all wore the big red C and these are only a few out of a host. What the team is capable of this year can only be surmised, but it is reasonable to suppose that Moakley will come down with his usual bunch of stars and add another cross country championship to the seven already captured by the Red and White.

Of last year's winning team only Colpitts and Seelye are running again this year. H. S. Jones, who has been running in remarkable form this fall and is generally considered the pick of the Cornell team, has sprained a tendon and will be unable to compete.

S. Keenholts, Jr., a new man, has shown up well in the preliminary work and ought to push Colpitts and Seelye. Even with Jones out of it the Cornell team will be a well balanced aggregation running well together.

Pennsylvania, who surprised everybody by capturing second last year, only three points behind Cornell, ought to be a strong contestant. Captain Jones, who holds the individual title, is running again, as is Haskins, who finished fourth and who made such a remarkable showing in the intercollegiate meet at the Stadium in the spring.

The only other man from last year's team who is now on the squad is Morris who finished 21st in the race last year, nearly three minutes behind Jones. With these men as a nucleus Mike Murphy should have a strong team to line up for the race.

Technology's team landed third place last year largely through the splendid

running of MacGregor, who came in sixth.

Howland, Batchelder, and Callaway of last year's team are again in harness. MacCreddie, Ellis, and Gimson are remarkable for their steadiness, while McCarty and Stephenson have shown good ability and will have a chance to make good in the race Wednesday.

What the team will do at Princeton is a good deal of a gamble. On the form shown in the race with Harvard no better than a sixth place can be expected while if the team performs as well as they did in the trials at Readville they ought to bring home a third for the Institute.

Yale has two of last year's team running again, Spitzer, and Luther. These two with Reynolds, Vilas, and Haskell make the most probable point winners for the Blue. Although victorious over Harvard the Yale team was soundly trounced by Princeton and thus looks good for little better than fifth.

Harvard has the good fortune to be led by as game a runner as ever put on a shoe. Capt. Crosby has displayed his capacity for punishment in many a hard race and if the rest of the team come up to his standard, the Cambridge lads would be a hard proposition for any team.

As it is, however, Harvard looks anything but strong. Although their first race resulted in an easy victory over Tech's disorganized team, the week following Yale had no trouble defeating the Crimson team. Crosby is the only veteran running and the new material has not shown any very surprising amount of speed as yet.

Columbia has never had a team that has proved dangerous although several individual runners of championship calibre have hailed from Morningside Heights—notably Charley McDonald who ran third to Hale and Magoffin two years ago. The loss of Capt. Sanders is a serious one. He is easily the best distance man sporting the Blue and White. Last year he was 11th.

Zink, the track captain, is however running again and his presence adds materially to the team's strength. He did not run last year. The best thing about the Columbia team is its recent race with Princeton, when the Tiger cubs only won by the close score of 37-43.

Princeton looks on paper to be the strongest team outside of Cornell and Penn, having beaten both Columbia and Yale and thus having victories by proxy over Harvard and Tech to her credit as well. The team is composed largely of veterans, Magie, Capt. Kelley, and Vernon having run last year. Whitely, who won the Yale race, covered the intercollegiate course in 35 minutes 52 seconds only 24 seconds slower than Jones's time. Ralph and Campbell who finished fifth and seventh against Columbia are also to be counted on.

The Orange and Black runners have the further advantage of having gone over the course until they know it by heart, and this is no small matter. Everything considered, Princeton should be right up with the leaders.

Syracuse is an unknown quantity as this is her first appearance in cross country circles. However it may be taken for granted that the Orangemen are not travelling way to Princeton for their health and they will probably have something to show next Wednesday.

Taken altogether, the race this year ought to be closer than for some time as no team seems on paper to be out of the running and no others seem so very much superior to the rank and

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TECH RESEARCHES FILL USEFUL SPHERE.

KNOWLEDGE BEING EXTENDED.

Professors Also Write Many Magazine Articles.

A survey of the researches completed or in progress in the laboratories of the Institute illustrates strikingly one sphere of usefulness of a great scientific school, in extending the horizon of human knowledge, and in applying natural law to human needs.

Chief among the researches in the field of pure science are the investigations carried out in the Research Laboratory of Physical Chemistry, maintained by a contribution from the W. E. Hale Research Fund, by an anonymous private gift—continued now for several years—of \$3,000, and by the grant to Dr. A. A. Noyes of \$2,000 from the Carnegie Institute.

The place as director of the laboratory is taken by Prof. G. N. Lewis, who is assisted by sixteen collaborators, of whom ten devote their entire time to research. Of these collaborators three received last year, and another is now seeking, the Institute degree of doctor of philosophy.

The results of the numerous investigations which have already been completed in this laboratory have recently appeared in a comprehensive memoir published by the Carnegie Institution.

A new form of conductivity bomb, capable of withstanding very high pressure, has recently been constructed. In this bomb the vapor pressure, density, and compressibility of water up to the critical point are being studied, as well as in the influence of pressure on the electrical conductivity of solutions.

Closely allied investigations are being made upon electric transference in mixed salt solutions, the solubility of salts in water at high temperatures, and the dielectric constant of water up to its critical point.

Further investigations are directed toward the determination of the common electrode potentials, and of the free energy of important chemical reactions. Indirectly, but vitally connected with these, is an investigation of the specific heat of gases at very high temperatures, which is now being undertaken by Prof. H. M. Goodwin and Dr. H. T. Kalnus.

Dr. C. A. Kraus, who is carrying on the last-named investigation, has succeeded in finding the missing link between the metallic and the electrolytic conductor and has thus obtained a new point of attack for the problem of the electron.

Dr. Carl Von Ende, who obtained his degree under Nerst and Balauder at Goettingen in 1899 and was recently assistant professor of chemistry at the University of Iowa, is continuing in conjunction with Prof. Lewis a research begun by Prof. Lewis and Mr. Sargent on the free energy changes involved in certain typical chemical reactions, as determined by the measurement of electrode potentials.

Dr. John Johnston of Perth, Scotland, who was for twelve years a student and for two years a Carnegie research scholar under J. Walker, a leading physical chemist of Great Britain, at the University of St. Andrews, and who has since 1905 studied at Breslau under Auegg, will be occupied in one of the principal fields of research developed in this laboratory, the measurement of the electrical conductivities of aqueous solutions at high temperatures.

Mr. R. B. Arnold, S. B. from the Rose Polytechnic Institute at Terre Haute, Ind., chemist with the Kentucky Tobacco-Product Company of Louisville and Richmond, and investigator of the utilization of the by-products of tobacco manufacture, is determining the heat of neutralization of acids and alkalies at the temperature of boiling

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