Two Dollars More Will Secure Check Entitling Holder To Book.

Starting this noon Technique sign-ups will be held in the Union. All those holding the seventy-five cent stubs will, upon payment of their two dollars, receive the check which entitles the holder to book this year’s Tech. The latter check must be presented if the owner desires to obtain a Technique, and will be good from the time of the rush until school closes in June. But, owing to the fact that it is customary to sign up a few more books than there are in the edition, because of the fact that some do not redeem their checks, it is expedient that all those desiring to book one as soon as possible after the day of the rush.

As the rush comes off next week this will be the last week of sign-ups and the board wishes to announce that all those intending to sign up who have not already done so should take advantage of the opportunity afforded to do so at the table in the Union. There will be positively no opportunity to sign up after Saturday noon.

All those entering the rush must pay their two dollars in advance and present their book check at the window at the time of the rush. Those fortunate enough to get one of the first four or the twentieth book will have their money refunded to them after the rush. The board wishes this latter fact to be made clear as of the contents last year resulted from this. In fact, no one paid but about two dollars, receive

Exactly Fifty Men Report At B. A. Boathouse For Tryouts.

Judging from the number of men reported for the first crew practice at the B. A. boat house yesterday it is evident that the newly organized boat club has placed rowing on a solid basis. Over sixty men reported and twelve different make-ups were sent out for one-hour and a half workouts. No attempt was made to separate the men into their classes but they were sent out by Commodore MacNae in the best make-ups for tours that he could arrange.

There was much good material out, especially in the Freshman and Sophomore classes. The Freshmen have many men of previous experience in high schools and colleges.

(Continued on Page Three)

Inter-class Baseball Starts Today At Field.

The opening game of the interclass baseball series will take place at Tech Field this afternoon when the Junior class stands against the Sophomores. At neither team has put in much practice and the chances are that the game will be in the nature of a workout for both teams. Saturday both squads put in a long practice in batting and fielding and the men showed up well for so early in the season. Some of the first stringers have been selected for the配上 for work and for this reason the lineup will not be announced until just before the game. At neither side the Sophomores have put in a little more practice than the Juniors, they are slight favorites. The Juniors, however, have been strengthened by several new men and if these perform up to expectations the team has an excellent chance of winning.

The ballots for the officers of the Chauncy Hall Club for next year are out. The officers as usual are: President, V. F. Wardle, O. B. Freeman, K. M. Sully; vice-president, E. L. Kemp, H. W. Whiting; secretary-treasurer, R. R. Malcolm, R. H. White, K. G. Bayseston.

These ballots must be left at the Cage not later than Friday, April 17. They are to be addressed to F. J. Wall and must be enclosed with them.

As an added incentive to those who are spirited and talented enough to run in the Spring Meet this year, the management is offering over fifty dollars worth of trophies for the winners of firsts, seconds and thirds in the individual events, and the winning team in the relay race.

Four beautiful and valuable cups are on the list, the Class Cup for the winning relay team, the Cup for the winner of the 110 yard high hurdles, the Hesketh Cup for first place in the mile run, and the Rockwell Cup for the capture of the 440 yard run.

The donor of the Cup is Benjamin Hurd, Jr., of New York. He is a member of the Class of 1895, and while in school he held the record in

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THE TECH, BOSTON, MASS., TUESDAY, APRIL 7, 1914.

ENGINEERING AND SCIENTIFIC NOTES

Electricity at the Canal.

The following account given a very good idea of the electrical equipment of the Panama Canal which is so necessary for its successful operation:

In planning the Panama Canal the expert engineer, Colonel Goethals, was fortunate in the choice of a brilliant electrical engineer in the person of Mr. Edward S. Hildebrand, upon whom was placed the vast work of specifications for and erecting the entire electric generating, back-control, and distribution systems. The power system for the operation of the locks, towing locomotives, lights for the locks and buildings, and motors not directly connected with the lock control, is composed of a plant at the Gatun Dam; a plant at Miraflores for emergency, lately used to supply power for construction work; a double 44,000-volt transmission line across the isthmus connecting Cristobal and Balboa, with the two power plants; four sub-stations, stepping down at Cristobal and Balboa, and up or down at Gatum and Miraflores, depending on the nature of the two plants in supply power; thirty-six transmission stations for power, traction and light at Gatum, Pedro Miguel and Miraflores locks, three transformer stations for the control boards at the locks, and stations at Cristobal and Balboa for coal-handling plants, machine shops, and dry docks.

There is a total of thirty-six transformer stations for each lock, each containing transformers for power and one single-phase transformer for lighting. The stations, normally fed from the $330,000-volt lines in the sub-stations, can also be operated from the power plants; the stations at Gatun locks from the Gatun hydroelectric station; and the stations at Miraflores and Pedro Miguel from the Miraflores emergency steam plant.

To operate the lock machinery no fewer than 500 separate motors all provided, like the rest of the equipment, by the General Electric Company, are used, these having a total horsepower of more than 25,000. This is used for raising the leaves of the locks, opening the valves to admit or let out the water from the locks, and also for controlling the great "fender chains" designed to pull up a ship in the lock.

As the flight of locks at Gatun, for instance, extends over, approximately, 2,500 feet, and the principal operating machinery are distributed over a distance of about 5,000 feet, it can be readily seen that mechanical control of machines from a central point would be almost impossible; and to control the machines locally would mean a large operating force distributed practically along the full length of the locks, which has invariably been the practice heretofore. Such a force would be difficult to coordinate and control the machinery in an efficient operating system. The situation, therefore, resolved itself into centralized electrical control, which reduces the number of operators, operating expenses, and liability which will always show the position of the gates or other apparatus, as all are provided with indicators on the control-board. The control-boards are made to be, approximately, operating miniatures of the locks themselves, and are arranged with indicating devices which will always show the position of valves, lock gates, etc.

(Continued on Page Four)
TO TELL OF TRAVEL
AROUND JERUSALEM

Rev. W. A. Knight Will Describe Biblical Scenes At Last
T. C. A. Talk.

Next Tuesday's T. C. A. talk is the last of the season, will deal with travel in the Holy Land. The Rev. Wlliam A. Knight, Litt. D., will speak on "A Ramble Outside the Walls of Jerusalem," and will describe scenes connected with the last days of Christ.

The Rev. Mr. Knight is pastor of the Brighton Avenue Congregational Church in Allston. He has traveled extensively in Palestine, and has visited many of the places mentioned in the Bible. He is especially known as the author of several books based upon his travels. One of the most notable of his books is "The Song of Our Syrian Guest." Others of his works are "Outside the City Walls," "No Room in the Inn" and "On the Way to Bethlehem."

TO TELL OF TRAVEL
BIBLICAL SCENES AT LAST

Mr. Knight, Litt. D., will speak for the last time largely because he believes his literary train of thought will have been completed many of the places mentioned in the Holy Land, and has thus been able to keep people closely and become thoroughly familiar with their customs.

SHOW REHEARSALS
First Dress Rehearsal Friday At The Opera House.

The rehearsals of "A Royal Johnnie" have been improving rapidly. Friday there is to be a dress rehearsal at the Boston Opera House from four until eleven o'clock. Saturday there will be another at the same place from two in the afternoon until eleven at night. The program is as, a rule, been good, although a few men do seem to realize that they are expected to report every afternoon from now on without any special notice.

CREW PRACTICE
(Continued From Page One)

The sophomores have many new men besides the few that made up the first crew last year. Coach R. L. Stevens of the B. A. A. yesterday signified his intention to coach the crew in the time of 16 1-5 seconds. His cup was won by A. B. Curtis, 1915, Massachusetts. In last year's Spring Meet the present record holder is E. A. Trewell, 1914, Harvard University. The record this year is held in Eight Days.

INSPIRING REHEARSAL

The Technique Band held a very inspiring rehearsal yesterday afternoon in C Lowell until evicted by the Junior. Two new selections were put out, and played with great enthusiasm. Another rehearsal will be held Monday if no injunction is issued against it before that date.

REHEARSAL TODAY

The Glee Club will meet for rehearsal tonight at five o'clock sharp at the coach's studio. Jefferson Hall, Trinity Church Chambers. The usual flow of fifteen cents will be levied on those that absent themselves.

The Illinois Hills Team has attained a percentage of one thousand in this season's work.
S P R I N G M E E T

(Continued from Page Three)

run, is given by Dr. T. Arnold Rock-
well '96 of Cambridge, Dr. Rockwell,
who as the chairman of the Advisory
Council and Institute Medical Ad-
visor is well known to all followers of
athletics at the Institute, also held
the record in his event, his time be-
ing 51.56 seconds. Last year's cup
was won by T. H. Guething in 50.45
seconds, which is also the Tech rec-
cord made by Capt. Guething the year
previous.

Mr. John L. Batchelder, Jr., of the
Class of 1899 and former holder of
the half mile record of 2 minutes.
12.15 seconds, is the donor of the
cup given to the winner of the mile
run. Last year's cup was won by C.
T. Guething in 4 minutes, 32 seconds.
The present holder of the Tech record
for the mile, of 4 minutes, 27
seconds is Normal T. Ger-
mat, captain of last year's Track
Team.

Dr. Rockwell and Mr. Batchel-
der will be at the Spring Meet this
year to see their cups contested for,
and to hold the watch on the win-
ers.

For first place in every event the
E's were awarded, and the winners of
events not contested for those which
cups are given, receive an M. T.
A. medal ofDorchester. In 2 minutes
and thirds and thirds are to receive
their class numerals and in addition
second place silks. Silks of red and
third silk black badges of white are
awarded.

The Relay Cup is a new departure
this year, and if the expected hap-
pens it will grace the trophy case in
the Union with a new record en-
craved upon its surface.

O F F I C E R S E L E C T E D

(Continued from Page One)

Editor of Technique 1914. He is tak-
ing Course One, is a member of the
Civil Engineering Society, and was
Baseball Manager in his freshman

"Chollie" Fiske is a member of
Delta Tau Delta and Osiris. His ac-

民国 MORRISON, the reputed class

\( \text{COMMUNICATION}
\)

To the Members of the Society:

At our Society, held a few weeks
ago, the singing of Technology Songs
was one of the features of the eve-
ting. It was a decided success and
those of us who attended regretted
that the student body did not meet
more often for a similar purpose.

On Thursday, at the Undergrad-
uate Mass Meeting, we shall have
another opportunity and we must
be present at this big convention to
show that in spirit and enthusiasm,
the Class of 1914 is second to none.
It is hoped that all students will
make a special effort to attend because,
from lack of time, most of them are
unable to keep in close touch with
student activities. Here is an excel-

tent chance to hear brief, interest-
ing accounts of the work of the In-
stitute Committee, the Track Team,
and Technique.

Remember the date, Thursday th-
four-thirty and do your part to make
this Mass Meeting the largest and
most enthusiasm we have ever held.

A R T I S T  C. DORRANCE.

E N G I N E E R I N G  A N D  S C I E N T I F I C  N O T E S

(Continued from Page Two)

"The Brand at the "Round Up" is "Bull"

The cowboys of the West long ago discovered in
"Bull" Durham tobacco the "Makings" of the most sat-
ifying cigarettes in the world—the kind they rolled for
themselves with their own hands, to suit their own
taste, from this ripples, mellow tobacco.

That homely Western term, "the Makings," has be-

come the most famous smoke-phrase in the world.

Today millions of men of all classes and occupa-
sions—but of the same clean-cut, ready type—find the
same supreme satisfaction in the fresh, hand-made cigarettes

They roll from

G E N U I N E

B U L L  D U R A M E

S M O K I N G  T A B A C C O

(Enough for forty hand-made cigarettes in each 5c and

There is a unique aroma to "Bull" Durham that all
men like. It is produced by a secret process known
only to the makers of "Bull" Durham, it is deliciously fre-
quent and adds one or more enjoyable qualities to this su-
prehbably tobacco.

F R E E

An illustrated booklet, showing how to "Bull" your
Vane Owl, and how to roll your cigarettes, will be
billed free, on any order in 5c, or on par for this.
Address "Bull" Durham, Durham, N. C., Room 1210.

THE AMERICAN TOBACCO COMPANY

\[ \text{CLASSIFIED ADS.} \]

\[ \text{CHAMBERLAIN} \]

\[ \text{PEARL SOFT HATS} \]

\[ \text{Oil is the latest word in Hats.} \]

\[ \text{Cotton-made and suitable to your way to look over our spring whirligs, cravats and gloves.} \]

\[ \text{It will be worth your time if you are a penny saver.} \]

\[ \text{367 Washington St.} \]

\[ \text{Cor. of Boylston} \]

\[ \text{659 Washington St.} \]

\[ \text{Under the Gallery Theatre} \]

\[ \text{ORCHER, DUNN, TATTO, BLOCKINE,} \]

\[ \text{CO, DUNN, Edward, Bours, Barry, Page,} \]

\[ \text{CLAYTON, Freeman, Keller, Moody, Berts-
\[ \text{TON, HAYES, PATTON, RICHARDSON,} \]

\[ \text{TRAVEL, HARRINGTON, MCDONALD, WAT-} \]

\[ \text{CHALLONER, GRAHAM, CRANE, TOL.-} \]

\[ \text{THE TECH, BOSTON, MASS., TUESDAY, APRIL 7, 1914.} \]

\[ \text{THE ORIGINAL} \]

\[ \text{PROJECT FLYING SHOP} \]

\[ \text{585 Boylston Street} \]

\[ \text{Stapled Square} \]

\[ \text{BOOTBLACK SECOND FLOOR} \]

\[ \text{COPLEY} \]

\[ \text{369 Columbus Avenue} \]

\[ \text{NEAR DARTMOUTH ST.} \]

\[ \text{HIGHEST PRICES PAID FOR SAME} \]

\[ \text{TUES.} \]

\[ \text{6:00 o'clock} \]

\[ \text{COMMUNICATION} \]

\[ \text{and other personal effects brought by} \]

\[ \text{KEEGER} \]

\[ \text{AND OTHER PERSONAL EFFECTS BROUGHT BY} \]

\[ \text{KEEGER} \]

\[ \text{AND OTHER PERSONAL EFFECTS BROUGHT BY} \]

\[ \text{KEEGER} \]