COMPETITION OPENS FOR
TECH SHOW MUSIC

Lyrics Will Be Placed In Cage To-day—Due First Week
After Election.

At one o'clock today, in the Union, the lyrics for the Tech Show will be available. Stage Manager D. M. Hughes has seven complete copies of the lyrics, and directions are directions for writing the music, will be put in the Cage.

The plan is to distribute the lyrics now to as many men who expect to enter the competition, so that they can work on them during the Christmas vacation. The music will be called in some time during the first week after vacation, and after they are looked over by the coach they will be returned to the writers for final revision.

As there are but a few copies of the lyrics, in order to obtain one the man must leave his vacation addresses and telephone numbers at the Cage. If, for any reason, a man is late in applying, or if he fails all the copies have been taken, he should write Mr. Morgan and address with Manager Hughes, so that the lyrics can be sent to him.

SOPHOMORE BASKETBALL

Team Will Meet Fast Winthrop High School Five Tonight.

Yesterday noon Captain Dewson gave his men a final drilling in preparation for tonight's game with Winthrop. The Winthrop aggregation, although handicapped by loss of its captain and several other star players through graduation last June, has developed a speedy well-balanced team. O'Brien, now on the Tech Freshman team, was a regular on last year's Winthrop squad.

Captain Dewson specially emphasized the need of team-work in yesterday's practice. The team has developed wonderfully in this respect, but there is still room for improvement. According to the manager, Captain Dewson is high man in individual playing. Merritt, left forward, has developed wonderfully in this respect, although handicapped by loss of its original captain, Franks. Thrompston. The Winthrop aggregation, having won seven games and lost only one. The Freshman Basketball Team, which was principally an architectural subject, has been practically ever since it was built. For this reason the construction of the Reception Stairs has caused considerable anxiety to the Transit Committee as well as to the members of the church.

The church was built in 1873, excavation being made partly through water, and the structure founded on piles. So far as is known no plan is in existence showing the location of the piles. The tower was bolted to the church by long rods.

After it was partly constructed, it was found that the building was settling and in 1873 the tower was 16 inches out of plumb. Now the deviation from the perpendicular amounts to three feet. This variation is due to unequal settlement. The west side is one inch lower than the east side and the south six inches lower than the north. In the last ten years the tower has settled two inches. This movement has not entirely ceased, for during the past year it has settled 5/16 of an inch. Mr. Worchester attributes this to the soft clay which lies about 70 feet below the level of the street.

Six men were elected. The election took place with Max Lock and Mr. Talbot, who rendered two very pleasing solos at the program last Friday, are interested in singing carols on Christmas Eve, are requested to meet in the Union today at 5.30 P. M. at the church. Cawlin, Gargan, Ricllardson, Miller and M. B. Dalton 30, C. V. S. Clark.

The Freshman Basketball Team leaves North Station at 6:35 tonight for Reading, where they will meet the High School team. Reading High is one of the fastest teams of the Suburban League, having won seven games and lost only one. The Freshmen, however, are determined not to be defeated again this year, and hope to break their record of 12-1 lock and poor playing by winning the game tonight. The 1917 will line up as follows: P. M. Franks 23, J. H. F. Dewson 26, P. L. Werlich 25, J. H. O'Brien 23, C. A. speaker. This is not to be construed as an indication that Boston University favors or sanctions "Damaged Goods." Neither does it mean that the University opposes it. The University has no connection with the address, and some of its officials are concerned except Mr. Talbot. He personally invited Mr. Bennett and assumes full responsibility for the meeting.

As a result of the election for the Junior Prom Committee yesterday seven men were elected. The election was exceedingly close, there being a tie between Franks and Werlich for fifth man. For this reason both men will be on the committee. The men elected, with their voices, are as follows: M. R. Dalton 30, C. W. Howlett 28, E. E. Place 27, J. J. McIntrye 26, P. L. Werlich 25, J. H. O'Brien 23.

There will be an important meeting of the committee at 5 o'clock in the Union today.

CHRISTMAS SINGING

Tech students who are to be in Boston Christmas Eve and who would be interested in singing carols on Christmas Eve, are requested to meet at Tower Stairs, 53 St. The choir will sing on Saturday evening, December 20, at seven o'clock. The plan is to sing carols in the vicinity of Copples Square, and then to join forces with other bands of singers at the city Christian Tree on Boston Common, and sing under the direction of Mr. Richard Cabot.

It took three ballots to elect the American football captain last week.

Yesterday afternoon Mr. J. R. Worchester, consulting engineer, spoke at the M. E. Smoker on "Smoke Foundations and Pier Work." Men from Courses I, II and X were present.

President Treat of the M. E. Society introduced the speaker, Mr. Worchester took for his address the Old South Church Tower, which he said was principally an architectural subject, but was also interesting from an engineering point of view. The tower is out of plumb and has been practically ever since it was built. For this reason the construction of the Reception Stairs has caused considerable anxiety to the Transit Committee as well as to the members of the church.

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The building has been secured under the Public Library as much as eight (Continued on page 3)

WEATHER

For Boston and vicinity: Fair and colder; moderate northwest winds.

CALENDAR

Friday, December 19, 1913.
12:00 M.—Professor Cross talks on Course VIII—11 Walker.
1:00.—Professor Miller confers with students on Course VIII—Eng. B.
1:30.—Professor Sedgwick talks on Course VIII—27 Pierce.
2:00.—Senior Portfolio Ballots due Cage.
8:00—1916 Basketball vs. Winthrop 9:30.—Basketball—Game Expected.
H. S.—Winthrop

9:00—1916 Basketball vs. Reading
H. S.—Reading

Saturday, December 20, 1913
1:30.—Junior-Club Ballots due Cage.
8.00—Wrestling Meet—Tech vs. Marblehead Y. M. C. A.—Marblehead.
THE TECH

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FRIDAY, DECEMBER 19, 1913.

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ENGINEERING AND SCIENTIFIC NOTES

At the present day X-ray photography has become so much a matter of ordinary routine at all big hospitals that it is no longer regarded with the wonder it originally called forth. The remarkable properties of the X-rays when they first became known were locked up as invaluable leading to still fresh discoveries, but except from the standpoint of physical science little of general interest has developed, and the main progress made in their applications to technical purposes. Today a radiograph can be taken through the thickest parts of the human body instantaneously—in the 20th second or a second. A few years ago an exposure of twenty minutes for a radiograph of a knee-joint or elbow was not remarkable. The methods of locating radiographic, for which skin diseases, of isolating the rays and directing only where required have all attained a high point, hardly of perfection, but of technical soundness. The field of X-ray apparatus has grown to a surprising extent, and an industry has sprung up of the extent of which the general public has little or no idea.

A typical modern apparatus consists of a heavy iron tube, mounted on a table provided with castors, so that it can be wheeled about from one ward to another in a hospital if necessary, and heavily insulated leads connect the terminals of the coil with the X-ray tube, which can be touched without danger of shock. The tube-stand of today is in itself an ingenious piece of mechanism, and is usually provided with a mask or cover for the tube which prevents extraneous rotation in order to minimize the danger of dermatitis. Compression diagrams are also employed for "through the body" exposures; these diagrams are clamped down upon the patient, and prevent the movement of the part being radiographed, for which the breathing would ordinarily be responsible. The heaviness of the discharge, the hardness or softness of the vacuum in the tube, and every technical point can be controlled in order to produce the heat possible; thus a soft tube, low in vacuum, will give wealth of detail, while a high vacuum in the tube will give penetrating power suitable for thick parts of the body.

There still remains scope for experiment in the direction of finding a trustworthy meter for measuring the strength of the rays and the necessary time for exposure of the parts. Various methods are in use, all more or less convenient, but the X-ray tube is essentially a factor which is variable and uncertain, and a perfect means of control and measurement has yet to be discovered.

Following the announcement that Harvard had placed Washington and Jefferson on her football schedule next year comes the news that Yale has also taken the Red and Black.

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**THE TECH, BOSTON, MASS., DECEMBER 19, 1913.**

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**BRITISH NIGHT**

*(Continued from page 1)*
this salutary influence was the Boer War, which was brought on in this

The English and Americans in the Boer territories were a much more aggressive kind of people than the Boers, and gained possession of itself and valuable gold mines of the country. This aroused the jealousy of the Boer government, which proceeded to harass the much smaller "Uitlanders" by imposing upon them a heavy and burdensome tax. The tax finally became so odious that a petition signed by twenty thousand foreigners was laid before the English Parliament asking for British intervention in the matter. The result was that the British government asked the Boer government to reduce the troublesome tax, a request which was promptly ignored by that country, with disastrous results. After the war was over, South Africa was again free to expand; in 1910 the four southern colonies were united under one parliament. That is still a strong faction desiring Boer soverignty, but the likelihood of its actually displacing the British government grows smaller from year to year.

--After Mr. Mason's discourse, Mr. S. A. Martin delighted the audience with two selections upon the bagpipes.

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