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The Athletic Association, as is well known, is severely crippled by a lack of funds, the concert given for its benefit proving a losing venture, the money that the directors had had expected would come from that source failing to materialize.

It is imperative that money be raised from some quarter immediately to meet the expenses of the intercollegiate team. This can best be, and doubtless will be, done by a personal canvass of the Institute. If each student contributes a dollar the total amount would carry the team through in excellent shape.

Until recently each member subscribed to the support of the Athletic Association, as is now the case with the Base-Ball and Football Associations, but for the last two years the annual entertainments given for its benefit have made it in a great measure self-supporting. It was hoped that the money would be raised in the same manner this year, but the concert was a failure, and the only alternative now appears to lie in the over-abused and much-despised subscription paper. In this way it is hoped that the expenses, some of which have already been incurred, may be met, and this can easily be done, if the students see to it that the amount contributed is worthy of the student-body.

To continually keep before the public notice is necessary to the highest success in any line of business activity. The same is equally applicable to this Institute, and in order to attain the greatest success it is essential that the Institute be continually brought before the public attention. One way in which this can be done is by weekly correspondence in the Boston dailies, many of which devote a page or so each week to items of interest regarding the various New England colleges. But how often is it that the reader finds any items regarding the Worcester Polytechnic Institute there contained?

The editors realize the interest taken in such items and are anxious to have regular letters from all the colleges, and indeed there are few, excepting our own Institute, but what are represented in some one, if not in several, of the papers. In most cases the editors are willing to pay well for such items, and it only remains for some student.
who can afford the time and do the thing in shape, to gain advantage, not alone to himself, but to the Institute.

WATER SUPPLY: RESERVOIR CONSTRUCTION.

By John W. Burke, '87.

Read before the W. M. E. S., May 7th.

This paper, apart from the usual historical introductory, is based upon the author's experience in designing and constructing water-works. The paper is short, not so much to equitably divide the time with the one that precedes it, as because the aforesaid experience, covering a practice of only a few years, can be briefly told.

Historical. The history of water-works takes us back to ancient times. The first of the Greek aqueducts were built about 600 B.C., and consisted of open canals and tunnels from the source of supply to the reservoirs, and underground distributing systems of stone or burnt-clay conduits. Part of the original system, built more than two thousand years ago, is still in use in Athens. But the most famous of the ancient aqueducts are those built by the Romans about the beginning of the Christian Era. Generally their source of supply was a mountain-lake or spring, whence the water was conducted through open channels, tunnels, or masonry conduits to the distributing reservoir in or near the city to be supplied, and from the reservoir to the consumers through smaller masonry conduits, or through clay or lead pipes. It may be observed that this is precisely the same general plan used in the gravity systems of the present day, except that for aqueducts of ordinary size iron pipes are now used instead of masonry conduits. The use of iron pipes, however, is an innovation dating back only about one hundred years, so that the method of water-carriage employed by the Greeks and Romans came down through more than twenty centuries without the possibility of any change or improvement, for those ancient masters of the science and art of construction employed the materials then at hand with a wisdom and skill that could hardly be excelled. Many of these ancient aqueducts were of great length. The "Aqua Claudia" was forty-five, and the "Anio Novus" sixty-two miles long, each surpassing in length the great Croton aqueduct, which is only thirty-eight miles. As masonry cannot safely sustain any considerable tensile stress, it was of course impracticable to take the old aqueducts down into the bottom of deep valleys or ravines, where the conduits would be subjected to the bursting pressure due to the head of water above the valley. It was therefore often necessary to elevate the conduit to the general level of the line by means of masonry arches. Many of these aqueduct bridges were more than two hundred feet high and a half-mile in length. All were substantially built and some of them were beautiful in the lightness and boldness of their design. Not only are there numerous ruins in a sufficient state of preservation to attest the former splendor of these ancient monuments and the enlightened civilization of their builders, but there is a large number of the pre-Christian aqueducts yet entire and intact, and yet conveying to the lesser Romans of to-day the same spring's water that slaked the thirst and cooled the brows of their world-conquering progenitors.

"Of the fourteen aqueducts which supplied ancient Rome, three remain in use at the present time, furnishing the modern city with abundance of water." The first of these is the Aqua Virgo, finished in the year 48 B.C., restored by Pope Pius IV.; second: the Aqua Claudia, restored by Sixtus V.; third: the Aqua Trajana, restored by Paul V. These Roman aqueducts were not confined to the present Italy, but existed throughout the empire, notably within the present boundaries of France and Spain. Built before the advent of iron pipe and the pumping-engine, they all, necessarily, were gravity systems. Indeed, they may be taken as a general example or type of the only system in use prior to what may be termed the "iron age" in water-works construction, beginning little more than fifty years ago and still in process.

Different Kinds of Modern Systems. Modern water-works may conveniently be divided into two classes, 1st: the gravity system; 2d: the pumping system. Of these, the first is by far the better, whenever practicable. And it is always practicable where an abundance of good water can be found on the surface at a sufficient elevation above, and within moderate distance from, the town to be supplied. These conditions usually obtain in hilly or mountainous regions. Hence most of the water-works in the New England, Middle and Southern States, and in the vicinity of the Rocky Mountains, are on the gravity system.

The distinctive excellence of this system is due to the fact that the source of supply, being outside of the populous district and at a higher elevation, is found free from pollution or contamination and can easily be kept so. The prime requisite of a water-supply is purity, for upon this largely depends the health and even the lives of the consumers. The thought of filtered water is not a pleasant one; people like that quality
of purity that "is not strained, but droppeth like the gentle rain," and it is oftenest found in the gravity systems. Another advantage of this system is its economy of operation. Once the works are properly built there are no further heavy expenses for an indefinite time, or until they need enlarging or replacing. Gravity does the work; the water commissioners merely collect the earnings.

With a pumping system, on the contrary, there is a constant expense for fuel, oil, wages of engine-men, repairs, etc., which usually constitutes a heavy fixed charge. Yet it often happens that this expense when capitalized is much less than the extra first cost of a gravity system, and recourse is had to pumping. Pumping is rarely employed except in low, flat regions devoid of water-bearing eminences. Riparian cities distant from elevated lakes, springs or brooks, usually pump from the river immediately above the city, and discharge the sewage into the same river below. The next city down stream does likewise, and so on. This is a bad state of things, but the place must at least have fire-protection even if it cannot have drinking-water. Of course in such cases the water is pumped from a filter-gallery built beside the river, as at Lowell and Lawrence, and sometimes it is pumped from driven-wells located a considerable distance from the river, the distance depending on the porosity of the soil and the contamination of the water in the stream. Quite successful experiments have lately been made at Lowell with a view to get a domestic supply from artesian wells located on the bank of the Merrimac river. Some of these experimental wells are pumped by windmills.

A great many cities and towns are so located that they may choose between the gravity and the pumping systems. The former system is always chosen unless the proposed source of supply for it is so distant as to make the cost of the aqueduct excessive. In comparing the estimated cost of the two systems, the expense of operation, renewals and repairs is of course considered. The probable future growth should also enter into the computation. If the population double, the expense of pumping will have nearly doubled also, while the cost of a gravity aqueduct sufficient to supply the prospective population will be very little more than that required for the present population. This leaves out of account the cost of the distributing-pipes in the streets, which is practically the same in both systems. But after making every proper allowance for operation and maintenance it often appears that a supply by the gravity system would really be the more costly, gallon for gallon. Now is the time to consider the quality.

Shall the people have good water from a distance or bad water near by? Too often it happens that this question is decided in defiance of the laws of health and the natural rights of a self-respecting people. The average city father does not like water well enough to go very far for it, and it usually requires all the influence of an enlightened public opinion to obtain the best result in a case like this.

In designing a system it is first necessary to determine the amount of water to be supplied; this varies greatly. However, in ordinary cases, a safe amount is one hundred gallons per capita daily. The next thing to determine is the watershed of the region, which is done mainly by statistics. If the supply be taken from a stream or pond, measurements should be taken in time of drought to determine the flow. It is often the case that a natural site is found for the reservoir.

In reservoir construction the first thing is to make test-pits to see if the foundation is firm and free from quicksands. If we find that the reservoir can be made to conform to the contour of the region then so much the better. The matter of excavating is an important factor. It is usually the custom for the excavated material to make the embankment. But the embankment is made of selected material, no large stones, etc., being allowed, hence it is necessary for the excavations to exceed the amount of earth used in the embankment. If this be not so, then extra material must be obtained elsewhere. The core-wall is important and should be made of the best sand. Be sure to go down far enough with the core-wall, so that the wall itself will be well protected from the action of the water. The walls should always be built rough, and rough stones employed. McAlpine's theory, that water abhors angles, is most true in reservoir construction. There is a great difference in the matter of waters and their property of developing algalic growth. Surface water is less susceptible than spring water and may be permitted to lie in open reservoirs with perfect safety. The spring water develops algae very rapidly, owing to the action of sunlight, and it is often the custom of covering over reservoirs of such water.

[Owing to illness Mr. Burke had been unable to prepare the whole of his paper, hence the last part of the above is only an abstract of his remarks.—Ed.]

TECH VS. AGGIE.

While the sports were in progress at the Oval on Saturday, May 12th, the ball team crossed bats with the Amherst Aggie nine. The Am-
herst men played a loose game, and were not
dangerous competitors at any stage. But five
innings were played, to allow the visitors to
catch an early train for home.

The game was called at half-past three o'clock
with the visitors at the bat. Leamy was the
first man to face Martin and was retired on a
ground hit to Cullen. Jones knocked a high fly
that Martin caught. Howard made a hit over
second base, but was out while attempting to
steal that base.

For Tech, Philpot hit to Day who threw to
first, but Sullivan made an inexcusable error
and Philpot was safe. He stole second, and
scored on Knowles' three-base hit. Zaeder's
sacrifice was fumbled and so Knowles scored
and the batsmen reached first. Zaeder stole
both second and third base. Gordon's ground
hit was muffed, allowing the Tech fielder to
reach his base. He immediately stole second,
and both he and Zaeder scored on a passed ball.
Bunker made a two-base hit, but was put out at
third. Cullen was an easy out, H. B. Read to
Sullivan. Harris hit to centre and stole second,
skipping on C. Gordon's hit to right. Gordon
reached second on the throw home and stole
third, but there he stayed for Martin struck out.

Score: W. P. I., 5; Aggie, 0.

In the second inning the men from Amherst
were retired in one, two, three order. Clark
went out, Philpot to Zaeder; Sullivan flied out
to Harris and Marshall struck out.

Tech added three more runs to her score in
this inning. Philpot went out on a fly to left.
Read preferred to give Knowles his base on four
balls rather than to run the risk of another three-
bagger. Knowles was as good on the bases as
at the bat, stealing second and third. Zaeder
was given his base and stole second. G. Gor-
don got in a hit by third base, bringing in the base-runners.
Jones threw wild to the plate and Gordon scored. Bunker hit to the short-
stop, but a muff by Sullivan allowed him to keep his base. He stole second and reached
third on Cullen's sacrifice. Harris knocked an
easy fly to Sullivan making the third out.

Score: W. P. I., 8; Aggie, 0.

Day opened the third inning by hitting to
Knowles and was thrown out at first. H. B.
Read struck out. F. H. Read hit a liner to
Cullen, but it was too hot to handle and Read
was safe. Leamy hit to Philpot, who got it to
first in time to catch the man had not Zaeder fum-
bled. With two men on bases Jones struck out.

C. Gordon was the first man up for Tech and
was presented with first on four bad balls. He
stole second, but Leamy threw over Clark's
head while attempting to catch him, and Gordon
went to third. Philpot was out on a pop fly to
F. H. Read. Martin struck out and Knowles
followed suit.

Score: W. P. I., 8; Aggie, 0.

Howard led off in the fourth with a hit past
third, but was put out in attempting to steal
second. Philpot assisted in retiring Clark at
first. Day hit past second and stole second
base, making a beautiful slide. Marshall
was disposed of by Bunker.

For Tech, Zaeder banged out a hit which
proved to be good for three bases. Gordon got
in a single and stole second, Zaeder scoring.
Bunker struck out. Cullen got a hit bringing
in Gordon. Harris flied out to Jones in left and
C. Gordon did likewise.

Score: W. P. I., 10; Aggie, 0.

Aggie made two runs in the fifth inning,
neither of which were earned. Sullivan, the
first man, made a scratch hit and just beat the
ball to first. H. B. Read got his base on balls,
forcing Sullivan to second. F. H. Read made
a hit bringing in Sullivan. Leamy flied out.
Jones made a hit sending H. B. Read home.
Howard hit to Cullen who threw to C. Gordon
in time to catch F. H. Read at the plate. Clark
went out and thus the side was retired.

Martin went out, Day to Sullivan. Philpot
got in a hit and stole second, making third on
Clark's error. Knowles lined out a single, send-
ing Philpot home. Knowles reached third and
scored on Zaeder's sacrifice to Jones. Gordon
finished the inning by being retired at first on
an easy grounder.

Score: W. P. I., 12; Aggie, 2.

At this point the game was called. The score
shows the game in detail.

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Score: W. P. I., 28; Aggie, 12.

Aggie

<table>
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<td>Day, 3b</td>
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Score: W. P. I., 21; Aggie, 6.

The score shows the game in detail.

PHILLIPS ANDOVER vs. W. P. I.

The base-ball team went to Andover last Saturday and there made a very creditable showing during eight of the nine innings played against the Andover nine, making them play ball all the time. In this one inning—the sixth—Tech, with no cause, went all to pieces and for a few moments gave a wretched exhibition of ball-playing. But that fortunately proved to be only temporary and for the rest of the time our team was not out-played by their opponents, who, by the way, are a gentlemanly set of players and who do not kick on the slightest provocation. With such a team it is a pleasure to play, even though we meet defeat.

When the game was called the air was filled with a heavy mist, making the outfielders almost indiscernible from home plate. The field however is excellently drained and so was in no way affected by the rain and moisture.

The umpires, Hazen of Andover and Ware of Tech, did good work. The latter was struck in the nose by a foul ball, causing a delay of fifteen minutes before being able to resume his duties.

The game commenced with Tech in the field. Barnes was the first man at the bat and hit out to Bunker. Jackson knocked up a high fly which Martin gathered in. Sedgwick made a three-base hit into left field but it availed him nothing, for, although Greenway got his base on balls, Drew went out on a line drive to Zaeder.

Paige gave the only Philpot his base. Philpot stole second. Knowles struck out, but the catcher dropped the third strike and while it was thrown to first Philpot reached third. Zaeder was retired by Jackson, unassisted, and Philpot scored on Bement’s fumble of a thrown ball. Gordon banged out a single over second base and stole second. Bunker made a safe hit but the ball was fielded to the plate before Gordon could get in and so the side was retired.

Score: W. P. I., 1; Andover, 0.

Burgess started out the second inning by going out, Zaeder to Philpot. Bement hit to Cullen, but reached first on a poor throw. Simmons sent another grounder to Cullen, but it was a hard one to get, so the batsman reached first and Bement was advanced to second. Paige hit to Martin who fielded Bement out at third. Barnes struck out.

Harris hit the ball for one base, stealing second. Cullen fanned the air and Fisher was hit by the ball. Martin followed Cullen’s example, failing to connect with the ball. Philpot’s fly was looked after by Sedgwick.

Score: W. P. I., 1; Andover, 0.

In the third inning Jackson went out at first, Cullen assisting. Sedgwick flew out to Bunker. Greenway reached first on Philpot’s error, stole second and reached third by the same means. Drew flew out to Philpot, leaving Greenway on third.

For Tech, Knowles struck out. Zaeder got in a two-bagger over the second baseman. Gordon was out on a fly to left field. Bunker flew out to Sedgwick.

Score: W. P. I., 1; Andover, 0.

Burgess was the first man up in the fourth inning and reached first on a close decision. Bement sacrificed to Zaeder, sending Burgess to second. Simmons flew out to Zaeder. Paige made a two-base hit sending in Burgess. Paige scored a moment later on Barnes’ hit to left. Barnes stole second but there remained, Jackson being put out by Fisher.

Harris died at first, Sedgwick assisting. Cullen again struck out and Fisher made the third out by driving a liner into Sedgwick’s hands.

Score: Andover, 2; W. P. I., 1.

Sedgwick started the fifth by striking out. Greenway found the ball for three bases, but it did not affect the score for Drew hit to Martin, who, by a clever bluff, held the base-runner at third, at the same time retiring Drew at first. Burgess was out on a fly to Philpot.

It took but six balls to retire the Tech players in this inning. Martin went out, Paige to Jackson, while Philpot was put out in like manner. Knowles struck out.

Score: Andover, 2; W. P. I., 1.

The sixth inning was the fatal one and ruined Worcester’s chances for victory, which, until two men had been put out in this inning, looked excellent. Bement went out at first, Cullen making the assist. Simmons lost his chances of scoring by sending a fly into Philpot’s hands. And here Tech went all to pieces. Paige sent up a fly which should have been an easy out by Martin, but that player misjudged it and Paige was safe. He stole second and reached third on a wild pitch, scoring a moment later on Barnes’ hit. Barnes stole third and scored soon after. Jackson’s high fly Fisher failed to gauge correctly, allowing him to reach first. He stole
second and scored on Fisher's wild throw into centre field. Cullen seemed to have caught the disease at that time affecting the other players, and on this account Sedgwick reached first. He stole second and third, although he would have been out had Knowles held the ball. But it made no difference, for Greenway ended the agony by flying out to Gordon.

Tech looked to be able to score in her half. Zaeder was given his base and stole second. Gordon reached first for the same reason. Bunker, however, was not so fortunate and struck out. Zaeder attempted to steal third but was unsuccessful, Drew making the assist. Harris was retired by Sedgwick.

Score: Andover, 5; W. P. I., 1.

In the seventh inning the sides were retired in short order. Drew struck out. Harris made a circus catch, retiring Burgess. Bement struck out.

Cullen was retired by Bement. Fisher had a good eye and waited until he got his base on balls. Barnes gathered in the fly that Martin hit. Fisher reached second on a passed ball, but went no farther for Philpot was out at first, Sedgwick to Jackson.

Score: Andover, 5; W. P. I., 1.

Martin struck out Simmons. Paige hit to left and was advanced to second on Barnes' sacrifice, Philpot to Zaeder. Jackson made the third out by being retired by Gordon.

Tech scored one run in this half. After Knowles had struck out, Zaeder was hit, reaching first and immediately stealing second. Gordon was given first by Paige. Both were advanced a base by a passed ball; Zaeder scoring soon after on Bement's error. Bunker sacrificed, Bement to Jackson, but Harris spoiled the chances of another run by hitting to Paige, who put him out at first.

Score: Andover, 5; W. P. I., 2.

The last inning opened with Sedgwick at the bat, who was given first by Martin. He stole second and was advanced to third on Greenway's sacrifice grounder to Martin. Drew reached first on a scratch hit and stole second. Both scored on Burgess' two-bagger. Bement went out at first, Cullen assisting, and Simmons for the second time struck out.

Tech went into score in her half of this inning. Cullen was the first man up and got in a base-hit and stole second. Fisher for the second time was hit in the ribs and took his base. Martin struck out but the catcher muffed the ball. That made no difference, however, for according to the rule he was out. Philpot got his base on balls, making the bases full. Knowles made a hit in front of the plate, sending in Cullen and advancing the others a base. Zaeder hit a fly just back of second sending Fisher across the plate. Knowles, on first, thought it might be caught and so hesitated before running. On that account he was forced at second. Zaeder attempted to steal second, but was put out by Barnes, Philpot in the meantime running in from third. But Zaeder was out before Philpot crossed the plate and so the run did not count.

The score:—

**Phillips Andover.**

<table>
<thead>
<tr>
<th>A.B.</th>
<th>R.</th>
<th>B.</th>
<th>P. O.</th>
<th>A. E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnes, s. s.</td>
<td>5</td>
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<td>2</td>
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</tr>
<tr>
<td>Jackson, 1b</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Sedgwick, 2b</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Greenway, l. f</td>
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<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Drew, c.</td>
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<td>1</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Burgess, r. f</td>
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<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Bement, 3b</td>
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<td>0</td>
<td>2</td>
</tr>
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<td>Simmons, c. f</td>
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<td>0</td>
<td>0</td>
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<td>Paige, p</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

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*Martin out on missed third strike.

**W. P. I.**

<table>
<thead>
<tr>
<th>A.B.</th>
<th>R.</th>
<th>B.</th>
<th>P. O.</th>
<th>A. E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philpot, 2b</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>4</td>
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<tr>
<td>Knowles, 3b</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Zaeder, 1b</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Gordon, c. f</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Bunker, l. f</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Harris, r. f</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Cullen, s. s</td>
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<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Fisher, c.</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Martin, p</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

---

*Andover . 0 0 0 2 0 3 0 0 2 7
W. P. I. . 1 0 0 0 0 0 0 0 1 2 4

Earned runs, Andover 4, W. P. I. 2; two-base hits, Paige, Burgess, Zaeder; three-base hits, Sedgwick, Greenway; sacrifice hits, Bement, Barnes, Greenway, Bunker; stolen bases, Greenway 3, Barnes 3, Sedgwick 3, Paige, Jackson, Drew 2, Philpot, Gordon, Harris, Cullen, Zaeder 2; first base on balls, Sedgwick, Greenway, Philpot 2, Zaeder, Gordon 2, Fisher; hit by a pitched ball, Fisher 2, Zaeder; first base on errors, Greenway, Bement, Simmons; struck out, Barnes, Sedgwick, Drew, Bement, Simmons, Knowles 4, Bunker, Cullen 2, Martin 2; left on bases, Barnes, Sedgwick 2, Greenway 2, Philpot, Zaeder, Gordon 2, Fisher 2, Martin; passed balls, Drew 2; wild pitch, Martin. Time of game, 2:05. Umphres, Hazen, P. A., and Ware, W. F. I.

After the Game.

Philpot and Zaeder make an elegant pair of coaches.

Weather seems to favor the ball team—at least to a certain extent.

Warren went up as a substitute, but his services were not needed.

The treatment of the team by the Andover men was perfect.

At the recent '94 class vote, Paige was voted to be the laziest man in the class. How about that, Knowles?
Five of the hits made by the Andovers should have been easy outs, had they been properly judged.

Fisher has lots of room for improvement in the matter of foul flies. He is too slow in starting.

Knowles bought a new bat in Boston, but discovered after the game that he had been cheated, as it was apparently full of holes.

With the exception of the first baseman, the Andover players were the same as those who were defeated by Harvard that week, the score being seven to eight.

NINETY-FIVE WINS.

The annual spring field-day of the Athletic Association was held on Saturday, May 12th, at the Oval. Between the sports and the ball game with the Aggies fully five hundred persons, including a large proportion of ladies, were attracted to see the fun.

The sports were not up to the standard of most of those of past years, either in performances or enthusiasm; in fact, had not the freshmen secured a drum corps (?) which managed to torture several well-known airs there would have been hardly any show of class spirit, notwithstanding that '95 ventured one or two cheers to encourage her representatives in the contest.

It is needless to say that '95 won. In fact they did not have the slightest difficulty in performing the feat. No dark horses materialized and the events were won in almost every instance by the men named in the last issue of the W P I as most likely to secure the places. In justice to '96, although it is doubtful if the final standing would have been changed thereby, it should be said that her most likely athletes were taking part in the ball-game, an account of which will be found elsewhere.

The sports were started at quarter before two and were conducted so well that the last event was over before five o'clock. The first of the track events was the high hurdle race in which were 14 men entered. Only three, however, Gallagher, '94, Lun gren, '97, and Field, '95, appeared. At the start Lun gren took the lead with Gallagher in second. It was a pretty race, until the next to the last hurdle was reached when Gallagher fell and was passed by Field. Lun gren's time was 19½ sec.

Next came the 100-yard dash, which was run off in two trial heats and a final. Allen, '94, Stone, '95, and L. Killam, '94, were the starters in the first heat. It was nip and tuck all the way, but Allen reached the tape first in 10½ sec. with Stone a close second. The second heat had for starters, Killam, '95, Brown, '96, and Harris, '96. Harris dropped out immediately, and Killam and Brown simply loafed over the course in 13½ sec. The final took place as soon as the men were rested. It was a close and exciting race from the start to the tape, but Killam had just a little more speed than the rest of the party and won by a neck in 10½. Allen, Brown and Stone ran together until a few yards before the finish, when Allen managed to forge slightly ahead of the other two. Stone was awarded third place by the judges, although it appeared to many of the spectators to belong to Brown.

The next event was the mile run. Only four men showed up out of the large list of entries. Wellington immediately took the lead and opened out a big gap between himself and the field. On the third lap he slowed up and at the beginning of the last lap the field had closed up the gap and they passed the stand well bunched. Wellington kept the lead till the beginning of the stretch, when he was passed by O'Connor. About five yards from the tape Wellington collapsed, run completely out, and was passed by both Young and Brown. O'Connor's time was 4 min. 50½ sec.

Immediately after this the 220-hurdle was run. In the first heat L. Killam won with Field second. Time, 30½ sec. The second heat was won by Morse, '97. Lundgren and Harris, '94, had a hot fight for second. Lundgren getting the place. Time, 29½ sec. The final was an easy thing for Field; he cut out a long lead, but quit perceptibly in the last two flights and thus failed to break the record. His time was 29½ sec. Morse was second and Lundgren third.

The two-mile bicycle race proved to be Higgins' event, as every one expected. The starters were Whitney, Magaw, '94, Polk. Higgins, '96, and Day, '97. Day cut out the pace until the last lap, when he was easily passed by both Higgins and Polk. Later Higgins rode two miles for a record, cutting under the intercollegiate record for the distance.

The 220-yard run did not prove the sensational race it did last year, when Philpot ran away from the field and won, to every one's surprise. This year the winner lay in Gallagher, although Killam was looked to win, but the clip was a faster one than he could carry and so got second place. The Seniors had a man who finished third.

The half-mile run called out Lun gren, '97, Denny, O'Connor, '95, Eastman, Harris, '94. At the word the field went away at a slow pace, which pace was kept up to the end, as the time shows. They remained well bunched until the stretch was reached, when Harris drew away only to be passed by O'Connor, who won the
event in 2 minutes. 20 1-5 seconds. Harris was second and Lungeil third.

The mile walk was devoid of interest. The starters were Barbour, '96, McFarland, '94, Walsh, Van Ostrand and Tilden, '95. Ninety-five had the winner in Tilden, who at once took the lead and had no trouble in staying there and in taking first in 8 minutes, 3 seconds. McFarland finished a fair second, with Barbour third and away behind.

In the 440, Stone, Harrington, Field and Vaughn toed the mark. They started off at a 220 pace, but slowed up on the last half. Harrington won easily in 54 4/5 sec., with Field second and Vaughn third.

The two-mile run brought out the largest field of the day. Young, Fuller, '94, Brown, '97, Braman, Harris, '94, Poore, Howe, '95, Chambers, '94, and Brooks, '95, started. The race soon developed into a procession and Young kept the lead throughout the race. He ran a good race and came sprinting down the stretch at the finish with lots to spare. Braman had a long lead for second at the beginning of the last lap, but Brown set out to catch him, and caught and passed him just at the tape. The time was 11 min. 17 sec.

By far the most interesting event of the afternoon was the team race between the classes. Ninety-six did not show up, and it looked at one time as though the Juniors would do likewise. With two minutes to get a fourth man, Hapgood was hustled into a suit, and so the race was started. Edwards, '97, Harrington, '95, and L. Killam, '94, made the first relay. The pace was not very strong, and while Edwards was some distance behind. Hapgood started out with the advantage his classmate had given him, and until the straight was reached held his own; here the pace began to tell on him, and Whipple closed up the gap, sending Allen away on even terms with Stone. Allen ran a good quarter, gaining slowly but surely on the Junior. At the finish he had gained ten yards for a lead to turn over to Gallagher. O'Connor, the last Ninety-five man, had a hopeless task to cut down the lead, however he finished about three yards behind "Midge." The time was 3 minutes, 44 seconds. Ninety-seven was out of the race from the start, and men only ran to secure the point for the class.

While the track events were in progress, the field events, the first of which was the high jump, were called. The only contestants who showed up were Whipple, '94, Stone and Warren, '96. Whipple cleared the bar easily at 4 feet, 11 3/4 inches, and could have gone higher

had necessity required. Stone was second and Warren third.

The pole vault was Leland's ('95) event from the outset, the only other competitors being Whipple, '94, and Cunningham, '96, who simply vaulted once to secure third place for '96. Leland won on his vault of 8 feet, 9 inches.

The hammer and shot events were postponed till after the ball game was finished. Both these events were conceded to Leland before the games and he fulfilled the expectations of his friends. He won the hammer throwing contest with a throw of 66 ft. 5 in. Killam, '95, was second, and Sibley was third. In putting the shot, Leland won with 31 ft. 6 in., with Killam, '95, second, and G. P. Davis third.

The summary of points was as follows:

**Track Events.**

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<thead>
<tr>
<th>Event</th>
<th>'94</th>
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<th>'96</th>
<th>'97</th>
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<tr>
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<td>1</td>
</tr>
<tr>
<td>220 yards hurdle</td>
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<td>4</td>
</tr>
<tr>
<td>Two-mile bicycle</td>
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<td>1</td>
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<tr>
<td>220 yards dash</td>
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<td>880 yards run</td>
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<td>One mile walk</td>
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<td>Two-mile run</td>
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<tr>
<td>Team race</td>
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**Field Events.**

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<th>'95</th>
<th>'96</th>
<th>'97</th>
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<tbody>
<tr>
<td>Running high jump</td>
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<td>4</td>
<td>0</td>
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<tr>
<td>Putting shot</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>Pole vault</td>
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<td>0</td>
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<tr>
<td>Throwing hammer</td>
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<tr>
<td>Running broad jump</td>
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</tbody>
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**The Officers of the Day Were:**

Field Marshal and Referee: Zelotes W. Coombs.

Clerk of Course and Judge of Walking: Harry L. Dadmun, '91.


Starter: William F. Donovan.


W. P. I. vs. TRINITY.

A small crowd saw, at the Oval, Wednesday, the Tech nine win an easy victory from Trinity. The Tech men batted well, while in the field their work was of the same sort as in former games this season.

In the first inning, with Trinity at bat, Broughton made a hit and was thrown out at second base. Penrose took his base on this throw, was advanced to second by Dingwall's hit, and stole third. The next two men flied to Knowles. In the Tech's half no runs were made, although Knowles got a two-base hit and Zaeder a base on balls.

In the second inning, the Trinity men went out in order, but the Tech scored three runs, Cullen, Harris, and Fisher each making a single and being brought in by sacrifices by Philpot and Martin.

Trinity then scored two runs on Knowles' errors and a hit. Tech scored two more runs on hits, errors and two stolen bases.

In the fourth inning, three Trinity men went to bat and were retired on short hits. Tech was also shut out.

Trinity men knocked up three flies in the fifth inning, which were easily captured. In Tech's half three runs were scored on errors and a base on balls.

In the sixth inning, Trinity scored her last run, by two stolen bases and two singles. At this point Trinity had a general shaking up, though no new men entered the game. Tech took kindly to the new pitcher and scored five runs on four bases on balls, a two-base hit, an error and two passed balls.

Trinity went to bat for the seventh time, but did not score and, as it was raining hard and past noon, the game was called by the mutual consent of the captains, Penrose and Zaeder, with the score 13 to 3 in favor of W. P. I.

The score follows:

<table>
<thead>
<tr>
<th>W. P. I.</th>
<th>A.B.</th>
<th>R.</th>
<th>B.</th>
<th>P.O.</th>
<th>A.</th>
<th>E.</th>
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<tr>
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<tr>
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<tr>
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<td>1</td>
<td>1</td>
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<td>Bunker, l. f.</td>
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<td>1</td>
<td>1</td>
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<td>0</td>
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<tr>
<td>Cullen, s. s.</td>
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<td>2</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Fisher, c.</td>
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<td>1</td>
<td>2</td>
<td>2</td>
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<td>21</td>
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<table>
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<tbody>
<tr>
<td>Broughton, s. s.</td>
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<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Penrose, 2b.</td>
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<td>2</td>
<td>2</td>
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</table>

Buell, p., l. f., 3 0 1 0 4 1
Williams, c., 2 0 0 2 3 1
Young, c. f., 3 0 0 0 0 0
Gage, r. f., 3 0 1 1 0 0
Langford, 1b., 3 0 1 8 0 1
Coggleshall, l. f., 2b., 3 0 1 2 0 0

Totals. 28 3 3 18 12 6

W. P. I., 0 3 2 0 3 5 -13
Trinity, 0 0 2 0 0 1 0-3

Two-base hits, Gordon, Knowles, Cullen; sacrifice hits, Martin, Philpot; stolen bases, Philpot, Knowles, Zaeder, Gordon, Harris, Penrose, Buell; double plays, Gordon and Philpot; first base on balls, Philpot, Zaeder 4; hit by pitched ball, Knowles, Williams; first base on errors, W. P. I.; Trinity 3; struck out, Fisher, Bunker, Broughton, Young; passed balls, Fisher, Williams 2. Time of game, 3 hours. Umpire, McAleer.

THE INTERCOLLEGIATE.

In spite of the fact that last Wednesday was a disagreeable and rainy day, fully fifteen hundred college students and enthusiastic friends made their way to the Oval, the scene of the New England Intercollegiate meet for this year.

Excepting the weather and the fact that the Worcester Tech failed to score a single point, the games were a great success, and indeed it is doubtful if the sports are held elsewhere in future years, for no city has the advantages and inducements to offer of the city of Worcester.

No attempt at decoration or display of colors, more than personal adornment, was made by the colleges, the grand-stand not being decorated as in former years, owing to the inclemency of the weather. No one, however, had any difficulty in locating the different colleges in the stand, for a cheer or yell from one or another of the many colleges was ever in the air.

The standing of the colleges in the summary was a big surprise, almost every body believing Dartmouth would win the pennant, with Amherst or Brown the contending factor. Mass. Institute of Technology was known to have several good men, but even the most enthusiastic admirers of that team would hardly have ventured to predict a place for them. Brown, as in former years, was strong in the field and it is here that most of her points were scored. Last year Williams finished one-third of a point behind our Institute, but this year she was a good third, with twenty-four points. The comparison only shows that not only has Worcester decidedly fallen since last year, but it is also clearly evident that Williams has taken a long step forward, beating out both of the other members of the triumvirate, so to speak.
While the ball game in the morning was in progress, the trial heats in the quarter-mile run were run off. This plan was tried this year for the first time, but it worked very successfully.

The first heat in the quarter had Harrington as the only Worcester man. The winner of the heat proved to be Rockwell, who ran the distance in 52½ sec. Harrington was fifth. Worcester's representative in the second heat was Vaughn, but he was not in the race for any of the distance. Eldred won easily in 52½, and would undoubtedly have secured a place in the finals had he not met with an accident. Allen and Stone were in the third heat, but although Allen was near the front for a portion of the way neither made a really good showing. Claggett proved to be the winner in 52½ sec.

The afternoon sports opened with the 100-yard dash. There were seven preliminary heats, in the second of which was Stone of Tech. The time of the heat was 10½, but Stone was not placed in it. W. S. Killam was in the fourth heat against a slow field, but he did not have the speed to win. The event was finally won by Patterson of Williams, while Deyo, hailing from the same college, was second.

The next event was the half-mile, with Tech represented by Gallagher, Field, Harris, O'Connor, Lungren, and F. L. Stone. It was a big field, still Tech placed considerable hope on Gallagher or O'Connor. But Jarvis, to the surprise of many, won from Rockwell in 2 min. 1¾ sec.

The 120-hurdle was run off in two heats, in the first of which was Lungren, but the men against him were all stars and he was not placed. Chase, as was expected, won in 16 sec., reducing last year's record.

The two-mile bicycle had little interest for either Dartmouth or Worcester, as the representatives of both these colleges had been suspended by the L. A. W. for competing in races that did not have the sanction of that league. The winner of the final was Marmon of M. I. T. with Burns of the same institution second. Time 5 min. 50½ sec.

The finals in the quarter were run off. Rockwell of the M. I. T. was the winner, with Claggett of Dartmouth and Marvel of Brown in the order named. The time was the fastest of any of the heats, being 51½ sec.

Young started in the mile, but, although failing to get a place, ran a good race. Clapp, M. I. T., won, Bugbee and Parker, both of Dartmouth, second and third respectively. Time 4 min. 39½ sec.

The only Tech representative in the 220 hurdle was Morse, who got second in his trial heat in 28 sec. Ben Hurd, Jr., of Boston Tech won the final heat, his time being 26½ sec. Lyon of Dartmouth was second.

The 220-yard dash had Allen in one of the preliminary heats, but that was all, for he failed to win. The final heat was won by Deyo of Williams in the fast time of 23½ sec.

The mile-walk went to Houghton of Amherst in record-breaking time. Time 7 min. 15½ sec. Tilden and McFarland started in this race, the former being ruled off and the latter securing fifth place.

The last track event was the two-mile run, Tech being represented by Lungren, Brown, Braman and Fuller. All of these failed to get near the front in any part of the race. Soule of Bowdoin was an easy winner in 10 min. 28 sec.

The field events were won as follows:—
Pole Vault. M. D. Dunning, Amherst, H. L. Towne, Williams, tied, 10 ft. 2½ in., divided 8 points, Towne won first medal on toss; E. L. Morgan, Amherst, G. G. Russell, Brown, and A. H. Smith, Dartmouth, tied for third, divided the point, 9 ft. 5 in.

Putting 16-lb. shot. F. E. Smith, Brown, 37 ft. 3½ in.; S. Carter, Trinity, 36 ft. 3 in.; F. E. Mason, Dartmouth, 35 ft. 7½ in.

Running high jump. S. A. McComber, Brown, 5 ft. 7¼ in.; H. M. Tyler, Amherst, 5 ft. 6 in.; C. Borden, Bowdoin.

Throwing 16-lb. hammer. F. E. Smith, Brown, 109 ft. 10 in.; G. S. Ellis, Brown, 104 ft. 10 in.; G. H. Parker, M. I. T., 96 ft. 4 in.


The final standing was:

<table>
<thead>
<tr>
<th>Position and Names</th>
<th>Points.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mass. Tech.,</td>
<td>38</td>
</tr>
<tr>
<td>2. Brown,</td>
<td>25½</td>
</tr>
<tr>
<td>3. Williams,</td>
<td>24</td>
</tr>
<tr>
<td>4. Dartmouth,</td>
<td>18½</td>
</tr>
<tr>
<td>5. Amherst,</td>
<td>15½</td>
</tr>
<tr>
<td>6. Bowdoin,</td>
<td>6</td>
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<tr>
<td>7. Wesleyan,</td>
<td>5</td>
</tr>
<tr>
<td>8. Trinity,</td>
<td>3</td>
</tr>
<tr>
<td>9. Worcester,</td>
<td>0</td>
</tr>
<tr>
<td>10. Vermont,</td>
<td>0</td>
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</tbody>
</table>

A MAGNETIC OBSERVATORY.

At the United States Naval Observatory, on Observatory Hill, above Georgetown, D. C., is the one station in the United States where magnetic "storms" are observed and studied. There is a similar observatory at Toronto, and for a time there was one at Los Angeles.

The laboratory itself is an underground brick vault, twenty feet square, with a five-foot air...
space between its double walls. It is floored deep with cement and concrete. The escape ventilation of the vault is through a still air chamber, so there is no direct connection with the outer air. The fresh air which is brought into the place is carried through a box in which there is sulphuric acid, which absorbs all moisture. The temperature is so constant that there is a variation of less than one degree in the course of the year.

In the centre of the vault there is a dark-box mounted on the top of a granite pillar, and in this are three cylinders on which is wound sensitive paper, such as is used by photographers. These cylinders revolve by clock-work once in twenty-four hours.

On the three sides of this dark-box are three other granite pillars, on the top of each of which is mounted a magnetic needle. One of these is to measure the declination, or the amount which the magnetic north varies from the true north, and the other two are to measure the horizontal and vertical variation, or "dip," of the needle. This is accomplished by means of mirrors and reflected light. On the top of each granite pillar and directly under the needle, there is a semi-circular mirror, somewhat larger than a dollar, and a ray of light from a shaded gas jet reflected from this mirror is thrown through a long tube into the dark box, and rests on one of the sensitive cylinders. This mirror is as steady as the earth itself, so the pin point of light resting on the revolving cylinder, draws a perfectly straight line around it as the cylinder makes a complete revolution. Every two hours a shutter falls and cuts off this light for five minutes, so there is a break in the line.

Just above the stationary mirror is another, similar to it, attached to the end of the needle, and as the latter moves, the ray of light reflected from this second mirror traces upon the sensitive cylinder a curve which corresponds exactly to the movement of the needle. The breaks in the base line, as the line drawn by the stationary mirror is termed, give the time at which each variation of the needle occurred, and by comparing the two lines and measuring the distance between the base line and the needle line the exact variation of the needle is obtained.

The principal fact which is definitely known now in regard to the variation is that it is intimately connected with the appearance of the aurora and the presence of sun spots. It is thought with good reason, that the meteorological work of the future will depend largely on observations of the magnetic needle, and Prof. Frank Bigelow, of the Weather Bureau, has plotted a curve of needle variations for a series of years past, which has been found to correspond in a remarkable degree to curves of temperature, barometer readings, and wind velocities, for the same period. It is certain that there is much to be gained by continuous observations at the present station, and it is the earnest wish of Lieutenant C. C. Marsh, who is in charge of the observations, that the government should establish a station in Alaska or elsewhere in the North, to study needle variations under the very arch of the aurora, where disturbances of this sort are most marked. Between simultaneous observations taken at Washington, Toronto, and Los Angeles, there has been the most remarkable coincidence of variation, the different curves from the recording instruments falling almost exactly upon one another when laid down together.

The work has proved the utter unreliability of compass surveying, over which so many law suits are now pending in the older States, where this system of land measurement was formerly much in vogue.

In regard to the value of the experiments to navigators, it may be seen that as the variation of the needle corresponds closely with the reading of the barometer, there may in this way be a check established on the variation of the needle in high latitudes, where now it is practically useless to the seaman.

During the latter part of February a storm raged over Washington, and from what is known of such disturbances it is likely that it extended over pretty much the whole world. It began on the afternoon of February 20th, and lasted with varying intensity for several days. The greatest variation in the needle was about one degree and ten minutes of arc in fifty minutes of time. The greatest horizontal variation for a short interval was .00400. Usually the variation for a single day is slight, resulting in a slightly wavy line, but during this storm the needle kept up a continual motion, resulting in a line resembling the five points in the aurora, with whose appearance the variations of the needle are in some way connected.

A Washington Alumnus.

THE N. E. I. P. A.

On the evening of the intercollegiate sports, the annual meeting and banquet of the New England Intercollegiate Press Association was held at the Bay State. The representatives from the various college papers gathered in the parlors early in the evening, and spent some time in social intercourse before the meeting to conduct the routine business was called to order.
At eleven o'clock the company adjourned to the dining-hall and there partook of a course dinner.

Robert S. Furman, of the Williams Weekly, served very acceptably as toastmaster of the occasion, and introduced as the first speaker G. W. Fiske, of the Amherst Student, which paper is the present president of the Association. Mr. Fiske, in his remarks, congratulated the Association on its objects and purposes.

Andrew Gillies, of the Wesleyan Argus, was next introduced, responding to the toast, "Conservatism vs. reform in editorials." Mr. Gillies spoke of the reforms that have recently taken place at his college due, in the main, to the Argus, which openly expressed the sentiments of the student-body upon the subjects. He did not believe that the editorial column should be one devoted to fault finding, but, on the contrary, that it should represent the college and college sentiment in so far as lies within its power.

The toast, "Does the world need Mrs. Lease?" was responded to cleverly by G. R. Hazard, of the Brown Magazine. Mr. Hazard also spoke briefly of Brown athletics, which he affirmed were free from professionalism, notwithstanding the fact that many of the eastern papers would have it appear otherwise.

"Love for the printer," was capably handled by E. G. Randall of the University Cynic. He stated that he believed that the printer was the hardest man on earth to be convinced of his mistakes, illustrating this assertion by relating two or three of his own personal experiences with the Cynic printer.

Mr. A. A. Macurda, editor of the Brunonian, was called upon to inform his hearers "What is news?" His treatment of the subject was excellent and much benefit was derived therefrom.

The last of the toasts was "Co-Education matrimonially speaking," responded to by Alba H. Warren of the W P I.

The gathering then dispersed, all pleased with the success of the meeting and the benefit derived therefrom. The papers represented were: Trinity Tablet, Brown Magazine, Brunonian, The Tech, Aggie Life, Amherst Student, Amherst Lit, Wesleyan Argus, University Cynic, Williams Weekly, Wellesley Magazine, Mt. Holyoke, W P I.

Y. M. C. A. MEETINGS.

It has frequently been remarked that the Tech Y. M. C. A. should provide some means for the gathering together of Tech men for religious service on Sunday afternoons. Such a gathering would be very beneficial to the spiritual life at the Institute; it would also provide entertainment for students away from home, and would thus advance the social intercourse which is somewhat neglected here. The usual noon meetings are very interesting while they last, but the limited time allows absolutely no opportunity for social intercourse between the classes.

Accordingly, the Tech Y. M. C. A. has commenced holding a series of Sunday afternoon meetings at 3:30 in the local Y. M. C. A. building. These are conducted by Institute men and are exclusively Tech throughout. A cordial invitation is extended to all members of the Institute, and it is hoped that a large number will avail themselves of this opportunity for religious and social improvement. It will be endeavored to make good music a feature of the meetings and a profitable and interesting time is assured all those who attend.

The first meeting, Sunday, May 13, was led by Bryant, '95. Last Sunday's meeting was conducted by Nye, '94.

The noon meetings will be continued as usual, every alternate Tuesday and Thursday. The meeting last Thursday noon, May 17, was led by Wilmarth, '97.

TENNIS TOURNAMENT.

After much hesitancy the Tennis Club connected with the Institute has decided to hold a tournament this spring. In former years the tournaments have been exclusively club affairs and open only to the members, but this year it has been decided to have the tournament open to Worcester County and to offer suitable trophies to the winner. It has been several years since a tournament has been held in Worcester, and the committee in charge believe that the proposed tournament will be a success in every respect.

The first prize is a silver cup, suitably inscribed. The second prize is a '94 racquet, offered by Edward B. Clapp, while a pair of tennis shoes, offered by Mr. Kelley, of the firm of Bemis & Co., is to be given as third prize.

The tournament will be commenced on the 29th inst., on which date the preliminaries will be played. On Wednesday, Memorial Day, the committee hopes to run off the tournament. Certain it is that the courts are in excellent shape, and if the weather is fine on those days there is no reason why the tournament should not be a success.

The entrance fee is 75 cents and all entries should be made with the committee, which consists of Jas. B. Mayo, J. J. Coburn, A. E. Fay and C. H. Dwinnell.
THE WAY IT HAPPENED.

It was a clever piece of detective work. And this is the way it happened. The world did not know that '96 was going to have a class supper the other night, but these two were on a trail, and they thought they were aware that there was to be a celebration. The simple fact that one Sophomore did not appear at the supper table, and that another ate sparingly of the evening repast, was what set these two to thinking. They were Juniors, and must know of all Sophomore revellings, even before they occur. So the still hunt commenced. Chancing to meet one of the fasted Sophomores, these two detectives carefully shadowed him. But, alas, the former, informed of the facts of the ease by a wicked Senior, who wanted a laugh on the two banquet-busters, led them a long chase and finally disappeared. Not to be thwarted, the Juniors made a tour of the principal hotels in search of the seat of festivities. Late at night they returned to their rooms. They had found all there was to be found—nothing. Any one, wishing further particulars concerning this exciting search, will be accommodated on application to the Junior Bureau of Detectives.

ONLY ONE IN A THOUSAND.

A writer in a recent American Machinist, in speaking of the different classes of draughtsmen, sizes up the Tech as is given below. Comment seems unnecessary and superfluous.

"Then we have the bright 'Tech' who figures things out, and isn't a little bit of a machinist, and is in a state of chronic surprise because his newest books are about five years behind current practice. He puts in little things where big ones would be better and cheaper, and occasionally trips up the chief by putting things really right which have been wrong so long as to pass unquestioned until the youthful doubter applied the rules to them. A good, bright, ambitious, young, inexperienced 'Tech' in an old established drawing-room is about like a pet terrier left alone in a parlor. You are sure to find the stuff pulled out of some long cherished object when you look up the product of his industry during your absence. The 'Tech' may make some queer things at first, but after awhile he begins to learn that 'whatever is is right,' no matter how wrong it is, and to disregard his books, and finds out that machines are built in machine shops, and then when he finally falls over himself, his ability to think and deduce conclusions from widely differing related facts, makes him useful. We old gray heads who have come up through the livery of blue denims and machine oil and smutty noses and black hands, may turn up the corners of our grizzled mustaches at the 'Tech's' collars and cuffs and patent leather shoes and the flower in his button hole, but I guess he has come to stay."

NINETY-FIVE ATHLETIC TEAM.

The class of '95 at a recent class-meeting voted to enter a team of eight men to represent the class at the handicap meeting of the Clinton-Lancaster Athletic Club which will be held in Clinton next Saturday afternoon. The class expects her men to make a good showing and indeed it would not be surprising if they captured two or three firsts. O'Connor, who is captain of the team, has entered the following men in these events: 100-yard dash, W. S. Killam; 220-yard dash, F. L. Stone, W. S. Killam; quarter-mile run, C. A. Harrington, W. E. Hapgood; half-mile run, T. F. O'Connor; one-mile run, F. E. Wellington; running broad jump, F. L. Stone; 120-yard hurdle, H. E. Fields.

PRIZE FOR HEAVY HITTING.

A well-known member of the Institute has authorized the W P I to state that he offers to the player on the nine, who shall this year have the highest batting average, a suitable souvenir. The only restrictions or conditions of the offer are firstly, that the winner shall have played in one-half of the regular games, and secondly, that the W P I will publish the batting averages, revised to time of going to press, in each issue, which averages are to be made from the scores of the games as given in the W P I, and the souvenir will be awarded according to the final average made from those scores.

The average for the games so far played, not including practice games nor the Trinity game, which has not been played at this writing, is as follows:

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<tr>
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<td>.500</td>
<td>Harris,</td>
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<td>Knowles,</td>
<td>.348</td>
<td>Fisher,</td>
<td>.181</td>
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<tr>
<td>Bunker,</td>
<td>.272</td>
<td>Gordon,</td>
<td>.166</td>
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<td>Philpot,</td>
<td>.250</td>
<td>Martin,</td>
<td>.133</td>
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<tr>
<td>Cullen,</td>
<td>.250</td>
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THE EXECUTIVE COMMITTEE OF THE N. E. I. A. A.

The Executive Committee, of which F. W. Parks is a member, of the New England Inter-collegiate Association met, in the Bay State parlors on the evening preceding the sports, to take action upon the protests received and to
transact any other business that might be presented. The matter of Brigham, who had been protested by Brown, was first considered. Mr. Parks stated Brigham's position and standing in the Institute, and a vote was then taken as to whether the protest should be sustained, Brown alone voting in the affirmative.

E. H. Weeks of Brown was protested by M. I. T. on the grounds that he was teaching, and this case next came before the meeting. The Brown delegate stated that, although Weeks was teaching, he was a regular student at Brown, having a statement from the faculty there to that effect. The protest was not sustained. No action was taken on the bicycle riders at present under suspension.

**BASE-BALL ITEMS.**

Next Saturday Boston University will play at the Oval, and on June 13th Tech will play Williston at Easthampton.

Manager Gordon is anxious to secure a game with some college team for the 16th of June at the Oval, and on the 9th the Manager desires to arrange an out-of-town game with some strong team.

On May 30th, Memorial Day, the nine will play two games with the Clinton-Lancaster Athletic Association on their grounds in Clinton. The team will leave on the 8.07 train, and it is hoped a large number will accompany the team.

The following men have sent Manager Gordon contributions towards the base-ball debt:

- J. H. Wallace, '92
- A. A. Pelton, '92
- E. L. Smith, '92
- M. W. Grimes, '92
- G. D. Ball, '92
- A. N. Smith, '92
- H. W. Bracken, '92
- H. N. Paige, '92
- C. O. Smith, '92

The base-ball team played a practice game with the Holy Cross Reserves, last week Tuesday. The game was called at the end of the fifth inning, the score being ten to three in favor of the Institute nine. The features of the game were a one-handed catch by Bunker, and a triple-play by the Holy Cross men.

In response to his request that he, although conditioned, be allowed to continue on the ball team for the remainder of the year, Captain Zaeder received this reply:

> Worcester Polytechnic Institute,
> Mr. F. J. Zaeder,
> My Dear Sir: Replying to your request that you be allowed to play on the base-ball team, the Athletic Committee believes that you should have been prohibited from joining the base-ball team under the rule of the Faculty. As your case was overlooked until so late in the season the committee has decided to allow you to continue on the team the remainder of the term, with the distinct understanding that this permission is given for special reasons which are not likely to exist in any other case and that, on this account, is not to be regarded as a precedent.

I am, yours very truly,

GEORGE I. ALDEN, Chairman.

By

Z. W. COOMBS, Secretary.

**COLLEGE NOTES.**

The ball nine of the Stanford University will take a trip through Hawaii and Australia this summer.

The annual intercollegiate Tennis Association tournament will be held in Portland, Me., the first week of June.

At Leland Stanford, the faculty have organized among themselves a base-ball nine, which have defeated every team the students have founded.

On Friday, May 18th, the bachelors and benefactors of the Phillips Andover faculty had a ball game for the benefit of the P. A. Base-ball Association.

The base-ball association at the Maine State College have a unique way of selecting their scorer. The position is sold at auction, and this year brought $18.75.

At Williams there is an inter-fraternity base-ball league, having seven members. The schedule requires twenty-one games to be played before the championship is awarded.

At the University of North Dakota the professors amuse themselves while overseeing examinations, by engaging in friendly games of chess.

Mr. Wilson, chairman of the Ways and Means Committee, is a college graduate and was president of the University of Virginia when elected a member of the House of Representatives.

The Chicago Athletic Association is endeavoring to arrange an athletic meet at Chicago in June, similar to the Mott Haven games. Favorable answers have been received from several colleges.

Professor Wiggins, of Ottawa, claims to have solved the problem of how to trisect a given rectilinear angle. Since the time of Euclid the solution of this problem has been regarded as impossible.
At a recent meeting of the executive committee of the college athletic association of Wesleyan, it was voted that a list of all football subscriptions unpaid by June 1 should be published in the Argus.

Mr. Charles C. Harrison, who, it is expected, will succeed Dr. William Pepper as provost of the University of Pennsylvania, is a man of enormous wealth, and in addition belongs to the most exclusive social set of Philadelphia.

A new magazine will shortly appear as the official organ of the American Republican College League. It is to be published monthly in New York City, and will be edited by a board of editors selected from the leading colleges of the country.

Harvard won the intercollegiate fencing contest by the narrow margin of five bouts to four. The Racquet and Tennis Club offered a perpetual challenge cup to be fenced for each year by teams of three men representing the colleges in the new intercollegiate association, and this contest was the first for this trophy.

In the New Jersey Legislature, on Thursday, April 19, a bill to punish hazing in colleges was defeated. This action was taken on the recommendation of the presidents of Princeton and Rutgers colleges, who said that they preferred to enforce the college rules against hazing, and that the statute laws already covered hazing cases.

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TECHNICALITIES.

Professor:—“This substance can be obtained in any desirable way, or in any way that is desired.”

Harry L. Dadmun, '91, had a three-column article on the intercollegiate sports in the Boston Sunday Journal of May 20th.

We are pained to announce the death of Betram H. Arnold’s father, which occurred last week at his home in Norwich.

The chapel exercises, a week ago last Monday morning, were conducted by Rev. C. H. Pendleton of the Main-street Baptist Church.

Instructor Coombs intends to go to Europe after the Institute closes, and spend a year in study and recreation there.

The Base-Ball Association cleared about fifteen dollars on the programs, while the concert itself came out about an equal amount in the hole.

Before this reaches the reader the musical clubs here will have given a concert in Clinton, under the auspices of the Clinton-Lancaster Athletic Association.

Somebody recently said, and not without reason, that it began to look as though A. B. attached to a college man’s name would no longer convey the idea of Bachelor of Arts, but rather Bachelor of Athletics.

Some ardent student of Natural History recently favored the W P I. by dropping a tropidonotus natrix in the mail-box. We regret that we have not yet started a museum, nevertheless the kind donor has our thanks.

Owing to the fact that both Intercollegiate and Memorial Day fell on Wednesday, the Faculty have decided to omit next Tuesday’s lessons and in their place substitute those usually coming on Wednesday.

Junior A, accompanied by Dr. Fuller, spent Friday afternoon, May 11th, visiting the Quinsigamond plant of the Washburn & Moen Co., and on the following Tuesday, division C went over the same ground.

It is with pleasure that we learn that Mr. Knight, formerly bookkeeper in the Shops, has been greatly improved in health by the climate of Redlands, California. It is, however, doubtful if he returns East for some time to come.

Some individual accommodatingly opened last week a package of W P I’s left unintentionally in the hall over night, and walked away with about thirty, in consequence of which the last week’s issue has been made slightly smaller than is necessary to meet the demand.

Last week the men entered for the Intercollegiate sports trained at the Fair Grounds, preferring that place, although the conveniences are not so good, rather than to wait until the ball games are over before going upon the track, as has been the case at the Oval, to say nothing of the time spent in transit.

---

THAT DEPENDS.

When a pair of red lips are turned up to your own,
With no one to gossip about it,
Do you pray for endurance to let them alone?
Well, maybe you do—but I doubt it.

When a sly little hand you're permitted to seize,
With a velvety softness about it,
Do you think you can drop it with never a squeeze?
Well, maybe you do—but I doubt it.

When a tapering waist is in reach of your arm,
With a wonderful plumpness about it,
Do you argue the point 'twixt the good and the harm?
Well, maybe you do—but I doubt it.

And if by these tricks you should capture a heart,
With a woman’s sweetness about it,
Will you guard it, and keep it, and act the good part?
Well, maybe you will—but I doubt it.

—Yale Lit.
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1894.

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