The policy of the English government in regard to the Irish question has been, up to this time, a lenient one; and if we believe Sir William Harcourt's late speech, it will continue to be so till the end. Of course we on this side of the water, with our republican institutions, would naturally incline toward such a policy. It has, no doubt, many advantages; yet, like all else in this world, with its advantages come its disadvantages, the principal one of which is that there are times when it entirely fails to meet existing circumstances. Such a time seems to us to have arisen now in Ireland. Agrarian outrages are breaking out again with renewed vigor, and the no-rent manifesto seems to be taking a firm hold on the people, notwithstanding the liberal reductions made by the land court. In dealing with the Irish question, her Majesty's ministers should remember that the Irish peasantry are not a race of reasoning beings, but poor, ignorant, confiding children, more like our American Indians than anything else, only led by the priests and agitators instead of by "medicine men."

The disturbances that are going on at present can hardly be said to have been created by the people primarily, but by the agitators, and carried into effect by the peasantry. The sole aim of the leaders is, by their own acknowledgment, secession. England, however, has no more intention of submitting to the secession of Ireland now than the United States had of submitting to the secession of the Southern States twenty years ago. If this be the case, is the policy of the government a fit one? Some prominent leader of the Land League is arrested and lodged in Limerick jail. His private secretaries, however, have full access to him, and within a week he is released, only to make new inflammatory speeches and be again arrested. The Land Bill has, by this time, fully proven itself to be a failure, showing plainly enough that Home Rule is wanted, and not pure English justice. If this be truly the case, why waste time in useless half-way legislation?

Measures should be taken to suppress the thing once for all, and not let the farce repeat itself as often as it has done within the last hundred and fifty years.

As The Tech can be made of interest to the students only by the assistance of the students themselves, the editors desire to receive at any and all times contributions on subjects relating to the Institute, short items of interest, and especially articles descriptive of original investigation. Any really new jokes will be warmly welcomed.
Communications.

The Sabbath and our Work.

Mr. Editor: — One of New England's great men said, a few days since: "Show me the man whose aspirations do not reach far beyond what he is or ever will be able to do, and I will show you a man who aspires to do little, and who will do less." The days are full of work; and for every duty done, and for every task accomplished, we find two to demand our time and thought, until there are a hundred fields where we long to labor, and from which we are forced to turn away. We have certainly work enough, and that the question of overwork, so lately raised at Amherst, might with advantage be ventilated at the Institute, is altogether probable. But this question is beyond the scope of the present article, in which we wish very briefly to notice a few points bearing on the relation of our work to the Sabbath.

We must not, amid this pressure for time and world of work, do injustice to ourselves, or dishonor an institution which we should respect, by denying ourselves the privileges of the Sabbath, or bringing into it duties which are not its own. Let us for a moment consider this, our twofold relation to the day, leaving aside as far as possible the theology of the subject and looking at the question in its most practical bearings.

First. The Sabbath is an institution which should command our respect, because of the authority with which it comes to us, and its intimate and inseparable connection with the strongest influences for good in the world. Not only does the idea of a Sabbath, as symbolic of rest, present and to come, run like a golden thread through the whole superstructure of Christianity, but has been through the centuries one of the bulwarks of the church.

Second. We will respect it for its history, we will honor it for its friends. Men who held the Sabbath sacred gave liberty to England under Cromwell; warred against tyranny in France under Coligny; planted republican free-

Now it is not merely, mentally, manly what ever a man,

But in the grand has not and we ambition.

dom among the Alps; and laid the foundations of our free institutions.

Second. It is an honored heirloom of our ancestors, hallowed and made more sacred by time. For, in the terse, strong words of Schiller,

"There is a consecrating power in time;
And what is gray with years, to man is Godlike."

"The Sabbath was made for man," and man feels its necessity, in his threefold nature.

First. It is a physical necessity. This has been proven by well-attested experiments all over the world. As the rest of the night is necessary that we may endure the continual tax upon us, so is this seventh day of rest; and a neglect of the Sabbath rest will bring its evil, not less surely, because more slowly, than the other. It has been proved beyond cavil that a man can not only do more, but better work, when resting one day in seven. When in the madness and anarchy of the French revolution, the Commune annulled the Sabbath, they were compelled to establish another day in its stead.

Second. Mentally the rest is needed. We as students scarcely need to be assured of this; for every man who knows the mental strain of six days' close application, must feel its necessity. But of this fact we may be reminded: there is an actual gain in taking the needed rest, and as surely a loss if it be neglected. Our mental constitution is such that we cannot do more than a given amount of work with less than a given amount of rest; and the attempt to force ourselves, by whip and spur, beyond a certain point, is attended by very serious consequences. The secret of success, in cases we might cite, was taking needed rest; thus stopping to grind the scythe, and always working with sharp tools. As a bow which is never unstrung loses its elasticity, so does the mind lose its power under a continual pressure and unbroken toil.

Third. Morally, man feels its necessity. A member of the Faculty said, in some remarks made to students a few days since, "We want symmetrical men"; not men who have develop
unevenly, not gymnasts or students but men who are developed morally, and physically into the symmetry of perfection. This is true; and this is every man, who has aspirations worthy of aspires to.

without the Sabbath and its ordinances, indes and noblest part of our nature its proper development or cultivation, do not reach this goal of our worthiest.

**Patience.**

"Give me some coffee straight," said he, "And beef-steak, if you please;"
Laying his satchel on the floor,
His hat upon his knees.
The smiling waiter man departs
To give the order in;
The while the hungry stranger waits.
I judged he came from Lynn.
The minutes fly away apace;
The car that passed the door
When he came in to break his fast,
Has now gone by once more.
And still this patient man from Lynn
Without a murmur waits;
And softly hums the bill of fare,
To the clatter of the plates.
And when at last his patience fled,
That waiter sought his chair,
And whispered in the sweetest tones,
"Did you say well done, or rare?"

**A Society.**

that an Institute paper has been estab-
lished, and is already a thing of the present, untimely to speak of a society or socie-
an important addition to our existing ons.
uld be a great benefit to the students, he Institute as well. Among the many hat a man is called upon to do, nothing important than to address an,audience, ear words to represent one's ideas of ect under discussion. It is a notable feature of our graduation exercises that enunciation is very indistinct, and lack of confidence universally shown.

This, however, is not surprising, when we consider how little, if any, time is given to elocution and the training of one's confidence before an audience. No better place than a society room is possible in which to get this necessary drill, and at the same time bring fellow-students into friendly and profitable intercourse, and leave many pleasant recollections of *Alma Mater*.

It is the society room, to some extent, which moulds a man's character, and calls into activity those powers of quickness and ready reply. These are gained only in a stubborn debate, which being won, leaves one a step higher in self-confidence, and forms the nucleus of the future successful man of the world. A great deal more might be said in favor of the subject of this article; but if every student will carefully consider the question for himself, it cannot but impress itself upon his mind as an excellent and much-needed thing.

It would seem that to serve the purpose which is intended, this organization should be one regardless of sets or classes, and open to all, — something in which every one could feel a common interest, and from which all could derive a common good.

There is certainly very good reason now for concentrating all the enthusiasm on this subject in one society; and if time and numbers make it necessary, such division may in the future be made as will bring about the best results. With bright hopes before us for the success of *The Tech*, a society will recommend itself as an all-important and pressing consideration, upon which immediate action should be taken.

**T. B. C.**

**EDWARD ATKINSON**, in his address before the Massachusetts Charitable Mechanic Association, made some remarks which are of interest to us sons and daughters of the Institute. He suggested several uses to which the
building of the Association ought to be put. Besides equipping there an inventor's laboratory, in which some of us might, perhaps, be found employed, he proposed that our workshop, which was founded by the Association, should be removed to more commodious quarters there, and be provided with increased appliances; that an industrial museum, composed of technical objects, should be placed there for the use of the Institute; and that the Lowell School of Design should be removed to its art galleries.

The president of the Association appears to have taken exception to the propositions of Mr. Atkinson, because the Association wishes to make the building pay for itself.

The late E. R. Mudge was much interested in a proposal to obtain for the Institute the use of part of the Manufacturers' and Mechanics' Building. He was using his influence to bring this about when death unfortunately interrupted his labors.

Such increased room and appliances are absolutely needed by the Institute. We are a growing college, and must have room and appliances proportionate to our increasing numbers. Present accommodations have been outgrown.

If Mr. Mudge's plans had been carried out, the workshop would have been transferred to the Manufacturers' and Mechanics' Building, a large steam laboratory fitted up there, and the present workshop turned into chemical laboratories. We understand that the matter has not been dropped, but that several prominent friends are still working to secure the use of the building.

Health and Exercise.

At the request of a number of students, Prof. Ordway lately made an address to the school on the above subject. Although the attendance was voluntary, Room 4 was well filled. We give below an outline of the lecture.

We should develop our muscles in harmony, not using one part exclusively. Most of us use our brains too much. We want our muscles to grow, and some kinds of exercise help them grow. But growth is not all. Firmness, as well as size, is necessary. Have a resistance in your gymnastics. Don't box without an antagonist. Neither our arms or brains can be developed without something to overcome. Gymnastics are better than calisthenics for making firmness of muscle. We need, in exercise, something to make resistance for us. Walking and trapeze gymnastics are perhaps exceptional cases, the weight of the body giving resistance enough. A good resistant for students' use is the dumb-bells. Remember, not size alone, but tension, firmness, solidity of muscle are wanted. Unequal development of our right or left sides should be guarded against and corrected. Most beginners with the dumb-bells should use their left arms twice as much as their right.

Besides strength, we need endurance. This is largely controlled by the nervous system, the head of which is the brain. But we can do some things without using our brains; dodge a blow, for instance. In exercising, we should make our muscles act mechanically, without the head. This is a way of economizing. A novice in riding uses his brain to make the muscles keep him to the saddle; an accomplished horseman uses his muscles involuntarily. New exercise makes one tired; more muscles are used than are necessary. A rough country walk exercises one very much, and is not tiresome. A compulsory walk, however, makes one very tired indeed.

Added to strength, we want quickness, sympathy of brain and muscle. Fencing and boxing develop this.

An objection to fencing is that one uses the right arm almost exclusively. Ordinary gymnastics do not make one agile; but a word of command or tap of drum helps gymnastics in this particular.

Good exercise should be systematic and regular; excess in all games to be avoided. Football is not the best exercise, but it has the advantage of being out-of-doors. It is unfortunate that you have no teacher of gymnastics.
You ought to be taught what you most need. Drill teaches you to hold your heads up straight, but does not make you agile. Instead of three hours of drill, it would be better if you had two hours of military drill and one of gymnastic drill, under an instructor. Such exercises should be compulsory.

The Athletic Club is a good thing; I hope you'll all join it. I would have you exercise at home. Don't use things that are too heavy. It is a good plan to use the dumb-bells night and morning.

Don't forget to exercise your lungs. Train your articulation. You should be able to speak aloud easily, and without hoarseness. Read aloud and speak aloud slowly. It is a good plan to “holler” occasionally.

There are a number of books on gymnastics. Those by Maclearin, Blaikie, and Dio Lewis are perhaps the best. They all advocate light weights. Agility is not possible with heavy weights. Two-pound dumb-bells are heavy enough. The rings, bells, trapeze, and ladder are the best pieces of apparatus. Parallel bars are good, but don't use them for mere show. Bean-bags are useful for light exercise.

Prizes should not be given for greatest feats, but for the best developed men. Such sports as jumping and boat racing are not good; they develop a man in only one particular. We need men who have confidence in their muscles, and are able to defend themselves.

I should like to see a class in gymnastics compete with the class in military drill at the annual examination. I have not been in the habit of exercising, but I have repented, and am going to use these dumb-bells. "Go thou and do likewise."

The lecture was almost an hour long, and was frequently interrupted by laughter and applause. The close attention of the listeners showed that there is still among us an interest in athletic sports.

The word "crank" is beginning to have more than a mechanical significance.

The first of Prof. Simon Newcomb's lectures in the Lowell Institute course was delivered last Monday evening. The subject was "The Spirit of the Ancient Astronomy." According to Prof. Newcomb, the ancients could predict eclipses and the position of the planets with wonderful accuracy, besides making many intricate calculations. Some of their books are as truly scientific as any we can produce today. That their theories are now exploded is no more an indication of their former worthlessness than the burning of a bridge over which an advancing army has just passed is an indication of the lack in value of the bridge.

Prof. Newcomb's reputation promised an interesting lecture, and those who came expecting one were not disappointed.
THE class in mechanics visited the Watertown testing machine with Prof. Lanza on the 23d.

The last sentence of 84's column, in our last issue, is applicable to '82. Let this hint suffice.

'82 would like to see the Institute's new president, Gen. Walker. Probably the other classes would also.

If Prof. W—— will chain the tongs to the muffle and combustion furnaces, he will receive the thanks of the order-loving students.

At a recent visit to Prof. Carpenter's display of mesmerism, five from '82 volunteered as subjects. It is needless to say more than that they were not influenced.

Mr. Deering, who was with '82 in the first year, and who is now in business in Chicago, visited the Institute a few days ago.

Mr. French recently read before the miners a 33-page abstract of the various theses relating to jewellers' sweepings. About a week later, Mr. Faunce read a 3-page abstract concerning jigs and copper. The latter deserves the thanks of the miners.

Prof. O—— believes that a great future awaits the inauguration of gas burners, on the Bunsen principle, for common domestic duties. Coal-hods and ash barrels will soon be things of the blissful past.

The miners began on Mr. Faunce's copper tailings from Lake Superior, Nov. 16. The ore is first stamped and then concentrated. The coarse part is concentrated in the spitzkasten and jig, and the finer part on the Evans table recently put in.

It is with special pride and gratification that we are able to count two young ladies in '82. We hope that the "suitable arrangements" (see catalogue) for young ladies of the future will be as adequate as those for young gentlemen of to-day.

ABOUT one third of the class were engaged upon professional work during the past summer; the remainder passed their vacation in various ways. One of our miners, after visiting some mines of magnetic iron ore in North Carolina, accepted the position of chief engineer on a narrow-gauge railroad in Georgia; one of our architects took quite an extended trip over the large lakes; four of the mechanicals, after building some double canoes, paddled over Lakes Champlain and George, and down the Hudson; others of the class were in parties camping out in such places as Lake Ossipee, Mount Desert, Lake Umbagog, etc. In the previous summer there were three canoeing parties from the Institute, one on Lake Sebago, the second on Moosehead Lake, and the third on the St. Lawrence River.

Our old friend Thompson is draughting for the Geo. F. Blake Manufacturing Co.

Litch has entered the Harvard Medical College.

Clyde Hunt is enlightening our Harvard friends this year.

Alexander is Inspector of Dredging for the New England Railroad.

Gilmore is practical mechanic in a factory at North Easton.

Matching pennies is a favorite sport down in the chemical laboratory.

Rutherford Hayes, son of Ex-President Hayes, is attending the lectures of the third year's class in Physics.

The glee of our little friends, the Freshmen, over their pretty new caps, is a pleasant sight to the warm-hearted Junior, although exciting the scorn of the belligerent Soph. It is a shame that the Freshmen cannot have their little brass buttons on their coats.

It is to be hoped that the third-year men will remember "wie es dem Gerichtsrath erging," and will be particular about whose overshoes they take in the future.
'84.

There was a general stampede on last Wednesday afternoon, many of the members of the class leaving the city for Thanksgiving.
The class has five representatives on the football team this year.
The Civils are occasionally seen shouldering their theodolites and starting for parts well known.
We extend our most sincere sympathy to the members of '85, who are deep in the mysteries of a Freshman ball.
The miners are rapidly making way with their salts and minerals.
A young chemist was heard to request a piece of "indignation" tubing a few days since.
Six of the commissioned officers this year are from '84.
It is the sincere request of the editors that all students contribute to the columns of this paper.
"A new broom sweeps clean." Thanks to Mr. W. B. Lindsay, the present director of the first and second year laboratories. The two sulphuretted hydrogen generators, which for the last sixteen years have been the bane of the mining and chemical students, have been replaced by four constant streams of gas from the fourth year laboratory.
We are about to publish a "pony" of the "German Principia," Part II. We clip from the advance sheets the following selection from the life of Demosthenes: "At other times took he little pebbles in the mouth, ran then with un-speakable diligence a hill up, and delivered while running an oration, whereby he himself accustomed every syllable plainly out to speak."
A new member of the 2 G excused himself from work the other day on the ground of not having any "apparati."
What are those strange sounds which proceed from the architects' drawing room every noon? It sounds as if they were "not well."

'85.

We are fast finding out that the geometry is solid.
The Annual Freshman Ball has become to be regarded as one of the sacred festivals of the Institute. There will therefore be "a sound of revelry by night," in Odd Fellows' Hall, Dec. 22, with '85 as host. We pride ourselves on forming the largest class that has ever entered the school. It behooves us, therefore, to do our best to make this ball an improvement on all that have preceded. Subscription lists are in the hands of the committee; walk up, '85.
The Tech needs an infusion of the young blood of '85. Any contributions — of ideas, not blood — or communications on matters of class or school interest will be gladly received by the editors.
According to an '85 man, the only difference between an apple and an army is that the core of one contains the seed, while that of the other contains the colonel.
Dr. Johnson — no relation, we believe — has said: "There is nothing which has yet been contrived by man by which so much happiness is produced as by a good tavern or inn." He might have added, "or confectionery store"; so, for the benefit of '85, let us recommend Dooling's from half past twelve to one.
Familiarity breeds contempt. Especially is this true of sulphuretted hydrogen.
The near approach to Christmas calls to mind Charles Lamb's remark that "Presents often endear Absents."

Song of the Freshman.
Drill, drill, drill,
With the double step to start;
And drill, drill, drill,
Till you reek in every part;
While hanging round the door
The Chauncy-Hall youth grin,
And call their friends to see the grind
The Tech freshmen are in.
Mineral and Chemistry.

The lectures in mining are much enjoyed by '83.

E. A. Clemens, a special miner of '83, and a member of the 2 G, is doing assaying work at Silver Cliff, Col.

The third year laboratory is receiving the improvement of new steam cups, which ought to be perfect, if the time occupied in putting them in counts for anything.

Of the regulars of '84, mining and chemistry claim eighteen, other courses thirteen. The eighteen are equally divided, nine devoting their attention to mining and nine to chemistry.

'83's geological excursions with (?) Prof. Crosby have ceased. We have, however, examined the Roxbury conglomerates, including the "water-worn specimens." We have thoroughly explored the Hosaac Tunnel and vicinity, the fossilic formation being studied to great advantage in a North Adams dinner. We have also started for Nahant, it being even rumored that a part of the students got there.

The 2 G, in a meeting held early in the term, elected the following officers for the ensuing year: President, Frank Tenney; vice-president, Henry M. Mansfield; treasurer, G. H. Gustin; secretary, C. H. Tompkins, Jr. Three new members have been elected this year, and as we go to press, await initiation. The novices are E. T. Sturgis, W. H. Bunce, and F. F. Johnson, all from '84. The 2 G supper at Young's, last year, was a success which, we hope, will be often repeated.

Tickets to the Institute Fair have been distributed to the students by the managers. A few tickets to the Mechanics' Fair were also given away.

There was a young lady of Vassar,
Who allowed no young fellow to sassar;
When she met any beaux,
She would turn up her neaux,
And thereby would cause them to passar.

Science Notes.

An electrical exhibition, similar to the recent successful one in Paris, is soon to be held in the London Crystal Palace.

The Chinese government has been obliged to call out troops to protect from the attacks of superstitious agriculturists the new line of telegraph from Soochow to Shanghai.

Mr. Charles Darwin's last work, a very interesting one, on "Earthworms," concludes with these words: "It may be doubted whether there are many other animals which have played so important a part in the history of the world as have these lowly organized creatures."

A sealed box, containing two watches of peculiar mechanism, was intrusted to the authorities by a Swiss watchmaker, on Jan. 19, 1879. The box has just been opened, and both watches were found going. The inventor claims that they will run for years without winding.

The death of Prof. M. J. Schleiden, an eminent German botanist, occurred quite recently. He was born in Hamburg in 1804, was professor of botany in the university of Jena from 1839 to 1862, and professor of vegetable chemistry and anthropology at Dorpat during 1863 and 1864.

A new process of working sulphur is as follows: The sulphur in its gangue is boiled in a solution of chloride of calcium, containing sixty-six per cent of the solid salt, and having its boiling point at 120° C. The solution attacks neither the sulphur nor the gangue, and by its aid the sulphur is extracted in a state of great purity, at a cost of five francs per ton.

The smallest steam engine in the world is probably one constructed by an ingenious clockmaker in this country. It weighs only about a gramme, and can be covered by a thimble. The stroke is two millimetres, and diameter of cylinder one and one half millimetres. It is built of one hundred and forty distinct pieces, fastened with fifty-two screws; while three drops of water suffice to fill the boiler and set the mechanism in motion.
### Sporting Notes

The games given Nov. 5 by the Athletic Club passed off very successfully, there being quite a large attendance.

A fencing match headed the sports. The first bout was between Harriman, '83, and Hunt, sp. '84, and was won by the former. — 7 to 1.

The "hitch and kick" taken part in by Heins, '82, Sturgis, '84, and Dupont, sp. '84, was won very prettily by the '82 man at eight feet two inches. Sturgis, who was a close second at eight feet one inch, would undoubtedly with practice do much better.

In the second and final bout of the fencing, Leonard, '83, came out ahead of Harriman, '83, by the score of seven to four.

The "running high" called out some eight or nine names, but only five appeared. All the men showed lack of preparation, and with the exception of Heins, jumped in poor form. Gibbons, sp. '83, won at four feet eleven and one half inches, with Heins, '82, second at four feet ten and one half inches. Ripley, '82, and Dupont, sp. '84, tied for third.

The next on the programme was the half-mile walk, the man making the best time to be awarded the prize. The first race, between Harriman, '83, and Tenney, '83, resulted in a tie to the time of 4.27. The second race, between Ripley, '82, and Pratt, '85, was very squarely walked, and proved very exciting. Ripley won by six inches in 4.10. The third race, between Baldwin, '84, and Snelling, '82, as a running match was poor, considering the time, but was nevertheless very laughable. At the outset Baldwin fell, but on regaining his feet a slight run put him ahead of Snelling, which position he held. Time, 4.21 and 4.25. Ripley, '82, having made the best time, was given first prize, with Pratt, '85, second.

A potato race, won by Leonard, '83, with Haines, '84, second, concluded the day's sports.


### Locals

**Number Two.**
Where did you spend Thanksgiving?
Our telephone system is itself again.
How about that class in gymnastics?
There was no need of a Thanksgiving petition this year.

The newsboys had their annual dinner in the gym. on Thanksgiving day.
Why can't we have an Institute double-runner on the Common, this winter?

*The Tuftonian* is the first college paper to acknowledge the existence of *The Tech.*
Thank you, brother.

The *Tech* is becoming aristocratic, and has opened an office at Room 36, in the Institute building. The directors have established their office hours; viz., from 2 to 2.30 every afternoon except Saturday and Sunday. Office hours of the fighting editor are yet to be announced.

The Institute's battalion numbers one hundred and thirteen. The men are above the usual size, and are doing first-rate. The division into companies has lately been made.

We thought that advertising was something modern, but we find in the records of antiquity the following account of an interview between an agent and an advertiser:

"And I thought to advertise thee, saying, Buy it before the inhabitants, and before the elders of my people. If thou wilt redeem it, redeem it: but if thou wilt not redeem it, then tell me, that I may know; for there is none to redeem it beside thee; and I am after thee. And he said, I will redeem it."—Ruth iv. 4.

There are three hundred and seventy-seven students in the Institute. Last year's catalogue contained three hundred and thirty-five names; increase, forty-two.

Our artist friend, Mr. Shepley, seems to be a great stumbling-block to our journalistic friends. One paper makes him belong to the "Agricultural" department; while another refers to "the cover designed by Mr. Shepley, a student, which, without being pretentious, is attractive and creditable."
SOME tender young Freshmen suspected
That their interests were being neglected:
For brass buttons they pinned,
So a paper they signed,
Which the Faculty promptly rejected.

IT is said that Yale will drop base-ball from
its list of sports.
An exchange says, "All pretty girls are hardhearted." Why should n't they be, when we
all cast-eye-on them?
The Cotton Manufacturers' Association recently held a meeting in our building. The
Atlanta Exposition was discussed.
The clock in the mechanicals' recitation-room
is running very regularly indeed. "Rest is
uniform motion with zero velocity."

There was a young man from the West,
Who rejoiced in a large spotted vest
And a very large hat,
And who tried to grow fat,
Just to show off the spots on his vest.

Query by a member of the Athletic Club who
is not taking mechanical engineering: Why can't
a walking-beam enter a pedestrian match?

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