The bill providing for a system of uniform textbooks in the public schools of Illinois has passed to a third reading in the Legislature. It appropriates $300,000, with which a committee, to be appointed, shall buy these books and re-sell them to the districts.

Special attention is called to our illustrated article on the conjunction of the great planets, occurring almost in consonance, next June. We have gone to considerable expense to procure this diagram, and compile the most important dates, so that this much talked-of astronomical event, which so many regard with intense solicitude, believing it to be fraught with terrible consequences to the earth, may be rendered clearly intelligible so far as strictly scientific facts are involved.

The election of County Superintendents of Schools is impending in Indiana, and there is a good deal of interest manifested in many counties. The Weekly dares to recommend its readers to vote for the best man for the place irrespective of party politics. It was to divorce the choice of County Superintendents from political questions of all other sorts that these elections were set apart, as it were, from others. It is the improvement of the schools that is in issue in this canvass; be sure that nothing else controls your choice. Men who are "stalwarts" in the several great parties of the country at other times can afford to be "independents" at this election.

When important school laws, like those now under consideration in the Legislature of Illinois, are proposed, and legislators are in doubt as to whether it is best to vote for them or not, how many teachers exert themselves to influence the conclusion? It must be confessed that the number is few indeed compared with the great body of teachers. Indeed there are even many of the county superintendents who fail to make any effort to give direction to school legislation. It seems to be taken for granted by these ladies and gentlemen that the State Superintendents will take care of this entire business. When legislation affecting other professions is asked for, they always make themselves felt—not only as bodies, but through their individual members appealing to the representatives from their respective localities to support or oppose the measures under consideration. When laws touching the interests of railroads, commerce or the trades are proposed, the business men concerned address themselves to members to advise them of the importance of passing or defeating the measures. How many county and city superintendents, teachers and members of school boards have appealed to their representatives to pass the excellent institute bill, or the county superintendence bill now before the State Legislature of Illinois? Take this question to heart, and if you have not done anything to affect the result, by all means do so at once.

The practice of graduating students who had completed a scientific course of study, conferring upon them appropriate literary degrees, was initiated in this country years ago. Several of the older classical colleges stood out against the innovation stubbornly; but steadily the spirit of the age reduced one institution after another to the demands of reason, until now the custom of establishing stated scientific courses of study leading to the degrees of Bachelor of Science, Doctor of Philosophy, or other suitable titles, may be said to be universal in American colleges. Oxford and Cambridge, England, have persistently refused to graduate students who have not, along with whatever scientific branches they have pursued, completed the time-honored, classical course. But the world moves, although some of its movements require long cycles of time to render them apparent, and now we have the intelligence that the new English University at Manchester, the Victoria University, has, through its council, formally resolved to establish courses of study in the arts and sciences, and confer degrees on students who complete them, without regard to whether they have any knowledge whatever of Latijn or Greek. It is believed that one effect of this determination on the part of Victoria University will be to extend the study of the sciences, and tend, as it has manifestly done in this country, to give a more "practical" turn (as the industrial and commercial world says) to university instruction. At any rate, it will tend to abolish the false distinction hitherto fostered by the English universities between classical and scientific study, which are entitled to equal honor among scholars. The spirit of Dr. Franklin and his opinion of this subject did not prevail in his lifetime, but the world is gradually overtaking the idea of that grand, old philosopher.

It is unlawful in the State of Illinois to change a text-book in the public schools oftener than once in four years. Whether this law is applicable to the schools of cities organized under special charters, is a question that it is hardly worth while to wrangle over, since neither city nor rural district school boards seem to care a fig for it. Not a year passes without the renewal of the text-book scuffle. The adoption of a certain book one year is no guarantee whatever that it will not be replaced the next. So long as the selection of such books is made without
careful examination, or by incompetent judges, which is the case at present in a majority of instances, it is perhaps fortunate that the law alluded to is virtually a dead letter; since the wasteful cost of such changes, which the law was designed to avert, is even less to be deplored than the waste of time and the discouragement to pupils and teachers incident to the attempt to make use of an obscure, badly arranged or lumbersome textbook, when, as often happens in a great city, from 20,000 to 50,000 children are compelled to suffer for the negligence or stupidity of a few men, charged with the duty of selecting their school books. Take, for example, the school board of Chicago, that last year selected a school history which the textbook committee of this year recommended it to cast aside only to substitute the old one, rightly condemned twelve months ago. Observe this same board about to cast out an arithmetic, compiled, as is well understood, with the aid of certain of its own members, only to be found so impracticable that the most of the teachers have, as far as possible, rejected it in their class exercises, and urged substitution of some other book for it. Does any one doubt that if proper care were exercised in the selection of school books, it would be found entirely wise and a very considerable saving of time and money to adhere to the law and not change such books oftener than once in four to six years? Of the three members of the textbook committee of this city it is now well understood that Mr. Armstrong is the only one who, however busy with his professional work, did not throw off the entire burden of textbook inspection upon the city superintendent. It is fortunate for the schools of Chicago that we have a city superintendent whose judgment in regard to books adapted to the several grades of our schools will not only command, but deserve as high respect as any one man's judgment would be likely to do anywhere. But whether it is just to Mr. Howland to impose upon him the whole responsibility of such selections is a question that most men who have studied this textbook problem thoroughly would answer in the negative. If the Board of Education objects to referring such selections to a committee of school principals, for their recommendations, on the ground of impolicy, as likely to expose the teachers to the charge of book-jobbery, how much more should it spare the superintendent, instead of endeavoring to saddle upon him the entire responsibility, as Inspector Dunne would do. Mr. Howland's voice should be heard in all such changes, undoubtedly. So, we maintain, should the opinions of school principals, but that is a very different thing from what we object to, the neglect of the Board of Education to commit the examination of new books, when a change is under advisement, to a competent committee, who will take time, (not one or two, but all of them,) to examine them, consulting the superintendent and teachers, and to consider the terms on which they are offered to publishers. Other things being equal, the latter is an important consideration; which, if reports are true, is not likely to receive all the attention it deserves in the approaching action of the Chicago Board of Education.

Prussia is so frequently alluded to as leading the world in the matter of public instruction that statistics bearing on this subject are always acceptable to the professional educator. We give the latest statistics of secondary schools in Prussia, from reports recently received at the Bureau of Education. Prussia, it should be borne in mind, had a population of 25,749,404 inhabitants in 1875, the latest census published. It has at present 945 gymnasien classical secondary schools, with 3,794 regular professors, and 1,200 assistant and technical professors. The number of pupils is 73,879 (21,102 Protestants, 14,350 Catholics, 8 Dissenters, and 7,810 Jews.) The elementary, and preparatory classes of the gymnasien have 10,631 pupils. At the last graduation examination 1,147 pupils received the diploma which entitles to admission at a German university.

Besides the gymnasien there are 34 progymnasien, with 266 professors and 3,391 pupils, 84 realschulen of the first order, (non-classical secondary schools,) with 1,400 professors and 27,564 pupils, (22,099 Protestants, 3,157 Catholics, 6 Dissenters, and 3,302 Jews,) and 18 realschulen of the second order, with 422 professors and 1,892 pupils.

THE PUNISHMENT OF PUPILS IN SCHOOL.

As to punishment, as with all other work in education, it can never be abstractly determined beforehand, but it must be regulated with a view to the individual pupil and his peculiar circumstances. What it shall be, and how and when administered, are problems which call for great ingenuity and tact on the part of the educator. It must never be forgotten that punishments vary in intensity at the will of the educator. He fixes the standard by which they are measured in the child's mind. Whipping is actual physical pain, and an evil in itself to the child. But there are many other punishments which involve no physical pain, and the intensity of which, as felt by the child, varies according to an artificial standard in different schools. "To sit under the clock" was a great punishment in one of our public schools—not that the seat was not perfectly comfortable, but that one was never sent there to sit unless for some grave misdemeanor. The teacher has the matter in his own hands, and he well remembers this and to grade his punishments with much caution, so as to make all pass for their full value.

In some schools, even suspension is so common that it does not seem to the pupil a serious thing. "Familiarity breeds contempt," and frequency implies familiarity. A punishment seldom resorted to will always seem to the pupil to be severe. As we weaken, and in fact bankrupt, language by an inordinate use of superlatives, so, also, do we weaken any punishment by its frequent repetition. Economy of resources shall be always practiced.

In general, we might say that, for very young children, corporal punishment is most appropriate; for boys and girls, isolation; and for older youth, something which appeals to the sense of honor.

(a) Corporal punishment implies physical pain. Generally it consists of a whipping, and this is perfectly justifiable in case of persistent defiance of authority, of obstinate carelessness, or of malicious evil doing, so long or so often as the higher perceptions of the offender are closed against appeal. But it must not be administered too often, or with undue severity. To resort to deprivation of food is cruel. But, while we condemn the false view of seeing in the rod the only panacea for all embarrassing questions of discipline on the teacher's part, we can have no sympathy for the sentimentality which assumes that the dignity of humanity is affected by a blow given to a child. It is wrong thus to confound self-conscious humanity with child-humanity, for to the average child, himself, a blow is the most natural form of retribution, and that in which all other efforts at influence at last end. The fully grown man ought, certainly, not to be flogged, for this kind of punishment places him on a level with the child; or, where it is barbarously inflicted, reduces him to the level of the brute, and thus absolutely does degrade him. In English schools the rod is said to be often used; if a pupil of the first class, who is never flogged, is put back into the second, he becomes again subject to flogging. But, even if this be true in the primary in the schools, it certainly has no proper place in the army and navy.

(b) To punish a pupil by isolation is to remove him temporarily from the society of his fellows. The boy or girl thus cut off from companionship, and forced to think only of himself,
begins to understand how helpless he is in such a position. Time passes wearily, and he is soon eager to return to the companionship of parents, brothers and sisters, teachers and fellow students.

But to leave a child entirely by himself, without any supervision, and perhaps in a dark room, is wrong as to leave two or three together without supervision. It often happens when they are kept after school by themselves that they give the freest rein to their childish wantonness, and commit the wildest pranks.

(3) Shutting children up in this way does not touch their sense of honor, and the punishment is soon forgotten, because it relates only to certain particular phases of their behavior. But it is quite different when the pupil is isolated from his fellows on the ground that by his conduct he has violated the very principles which make civilized society possible, and is, therefore, no longer a proper member of it. This is a punishment which touches his sense of honor, for honor is the recognition of the individual by others as equal, and by his error, or by his crime, he had forfeited his right to be their equal, their peer, and has thus severed himself from them.

The separation from them is thus only the external form of the real separation which he himself has brought to pass within his soul, and which his wrong-doing has only made clearly visible. This kind of punishment, thus touching the whole child, and not just the youth and not easily forgotten, should be administered with the greatest caution lest a permanent loss of self-respect follow. When we think our wrong-doing to be eternal in its effects, we lose all power of effort for our own improvement.—Rosencrantz: Pedagogie als System.

THE SOUL OF THE SCHOOL.

Teaching is becoming more of a fixed profession among us. Many young people seek it as a permanent occupation. The idea that any one can be successful, provided he has been over a certain course in school, is slowly dying out. Peculiar aptitudes and peculiar training are required, and high positions are given to those who have shown their capacity in lower grades.

When one has by patient care prepared himself fully for the duties of the station, and has shown himself qualified to conduct a school or a department, we believe it will be found conducive to the best interests of the work to give him large liberty of action. His special training ought to make him better prepared to decide questions of management than friends who have had no such experience. Young teachers are wisely restrained by the immediate supervising care of committees; and all are encouraged to give advice, and their instinctive and general matters. But having found a reliable man, to whom the work of the schools is to be entrusted, it is poor policy to hamper him by restrictions in small details. His ways are the best for him, and to cause him to adapt them to the ideas of an outside body is frequently to interfere sadly with his success. It is too often like a "gentleman farmer" instructing his laborer how to swing a scythe, or his carpenter how to drive a nail.

This leads us directly to the necessity of strong personality and enthusiasm on behalf of the teacher. Every intelligent observer must have noticed how much, after all, depends upon the individual. Fine houses, expensive surroundings, many books, much apparatus, may all be good, but they do not insure success. The soul of the school is the teacher. His must be the steady flame at which other torches can be lighted. If he is careless and indifferent, the scholars will be like him. If he is noisy in his work, they will insensibly become so. If he is energetic and pains-taking they will imitate his methods.

A good, live teacher will do much toward overcoming the difficulties which surround him. It is mind, after all, which is both the means and measure of success. There are true teachers in some of our schools, with limited appliances, producing excellent results; there are others with every want supplied, and yet inferior results. Considered purely as an investment, there is nothing which yields surer returns than a conscientious teacher with a talent for his special work.—The Student.

EXPERIMENT FOR PUBLIC SCHOOLS.

EDITORS EDUCATIONAL WEEKLY:

DECATUR, ILL., April 22, 1881.

During the present year I have been working on a line of class-room experiments that may interest some of the readers of THE WEEKLY. Last fall the authorities put city water into my recreation room on the third floor, the idea being to supply a "water air-pump" similar to the one constructed by Prof. Seymour, of the Normal University. The pump is constructed of three-eighth inch lead pipe and is fed by an iron pipe of the same size, which also supplies drinking water. It works on the principle that water falling freely through a long, narrow tube carries more or less air down with it. A mercurial gauge attached to the pump shows the degree of exhaustion, and the whole arrangement is connected by a flexible tube to the receiver plate, which is placed anywhere it is wanted in the room. To use the apparatus I have only to connect the vessel to be exhausted and turn on the water. Its action is almost noiseless, and, although it is not quite so rapid as a good piston air pump, it is better for most experiments on account of its smooth and regular action.

Its degree of exhaustion is sufficiently good to give the effects of the electric spark in vacuo quite successfully.

While the class were studying Acoustics I had occasion to use the illustration in which a bell is rung in a vacuum. I used a small alarm clock, setting the alarm so as to allow twenty minutes for the exhaustion, as the receiver was a rather large one. The clock rested on a cushion so that the plate could not conduct any vibration. I then set the pump to work, and while the vibration progressed we listened for the alarm. The hour passed, however, and the bell did not sound, but at the close of the time when the clock was examined, we found that the alarm had run down, although the silence was so complete that we thought the experiment had failed.

At another time I may give some suggestions concerning the use of a water motor in the class room.

Yours truly,

GEO. H. HENDRICK.

SCHOOL SUPERINTENDENCY REDUCED TO AN ABSURDITY.

The educational column of the Lansing Republican, edited by Deputy State Superintendent Smith, publishes the following examples of letters received from township superintendents of schools in Michigan. That State, it must be remembered, abolished the county superintendency a few years ago, and adopted township superintendency as a substitute.

The following are verbatim copies of two letters received by the Superintendent of Public Instruction from township superintendents of schools. They are specimens of many such that come to hand:

April 4th, a. D. 1881,

Superintendent of Public instructions,

Sir: As it is impossible for me to find assurance to the qneches and their heirs, that I can get you for the same, I am not qualified to answer the questions which have been asked of me in the Lansing school. Thank you.

April 6th, a. D. 1881,

Superintendent of Public Instruction,

Sir: I have this day received the following letter from the Lansin Public Instruction:

Dirt from the school. I have no doubt that the children are well instructed. They have the same knowledge of the subject that I have. I have heard that the school is not a very good one. The children are well instructed. They have the same knowledge of the subject that I have. They are well instructed.

Yours very respectfully,

Public Instruction Lansing Michigan.

To the superintendents of Public Instruction Lansing Michigan:

April 6th, a. D. 1881.

Sir: I have this day learned the facts of a most extraordinary statistical report of the school. I have no doubt that the children are well instructed. They have the same knowledge of the subject that I have. They are well instructed.

Yours very respectfully,
GENERAL NEWS OF THE WEEK.

The deadlock in the United States Senate was broken last week and a large number of nominations have been confirmed. The treaties with China and Japan were ratified. Among the appointments confirmed are those of Robert E. Chitt, of Illinois, to be Assistant Secretary of State, William Walter Phelps, to be Minister to Austria, and Leland A. Sheldon, to be Governor of New Mexico. The confirmation of Judge Robertson, to be Collector of Customs at New York was objected to, and under the rule adopted in the Republican caucus, was passed over for the present. The President retaliated on the New York senators by withdrawing the nominations of Stewart L. Woodford, Aar W. Tenney, Lewis F. Payne, Clinton McDougall and John Tyler, to federal offices in New York.

It is gratifying to read that Mr. McConnelley, of Quincy, Mass., whose child was bitten by a rabid dog and died of hydrophobia, has obtained a judgment of $1,900 against the owner, Deborah Weston. The useless ears kept around peoples’ houses for playthings, not only cost this country their meat and ten per cent, annually of the product of its sheep farms, in the sheep destroyed, but every year they infect the agenies of hydrophobia on not less than four-score victims. And all for what?

Hon. Ansel Briggs, first Governor of Iowa, died in Omaha, last Thursday.

The Mississippi river has been on the “rampage” for more than a week past. The American, on the bottom side, one hundred miles long and averaging seven miles in width, covered with magnificent farms, is nearly all under water. The river has cut a diversion channel for itself twelve miles long across the great bend at the mouth of the Ouachita, near Chester, Ill., forming a large strip of Illinois land to Missouri, and converting St. Mary’s Mo., formerly a river port, into an inland town.

Eighty-four thousand immigrants poured through Chicago into the northwest and west, during last month.

The immigration from foreign countries to the United States in the past twenty years, has been as follows:

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<thead>
<tr>
<th>Year</th>
<th>Immigrants</th>
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<tbody>
<tr>
<td>1861</td>
<td>91,023</td>
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<tr>
<td>1862</td>
<td>176,015</td>
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<td>1863</td>
<td>272,761</td>
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<td>1864</td>
<td>219,231</td>
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<td>1867</td>
<td>265,929</td>
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<td>1868</td>
<td>278,906</td>
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<tr>
<td>1869</td>
<td>275,706</td>
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</tbody>
</table>

Prof. W. T. Piper, of Chicago, has given a positive hint in the Whitaker court martial going to show that the “note of warning” could not have been written on a piece of paper torn from the sheet on which Whitaker had previously written a letter to his mother, because the two pieces of paper are of different chemical composition. This goes to overthrow the testimony of the expert Southworth, which was to the opposite effect.

The total debt of the United States, according to the public debt statement for April, is $2,980,246,048; total interest accumulated and unpaid $17,655,241. The total cash in the treasury on the 1st instant, was $23,532,731,405; leaving the debt less the cash in treasury, $1,864,072,693. The decrease of the debt during April, was $3,600,000, and the total decrease since June 30, 1860, was $78,009,601.

The antiquarian and archaeological explorer, Maspero, has opened two more of the Saikara pyramids in Egypt, and discoveries made are said to surpass in importance anything of an archaeological character since the finding of the Rosetta stone in 799. Certain of the inscriptions explain the religious tenets of the founders, and the significance of many of the mystic rites and symbols found on Egyptian monuments. Among other things, these inscriptions completely abolish the masonic theory in regard to these rites and symbols, and overthrow very many other theories of Egyptologists.

Fresh excesses have been commenced against the Jews at Arganet, West Prussia, but the gendarmerie have restored order there, and are now preserving it. A number of Jewish families have fled.

Two hundred persons were injured in the riot at the Jews at Elisabethgrad. Detachments of cavalry now patrol the streets. The approaching fair at that place has been indefinitely postponed at the request of the Town Council.

Public executions are to be discontinued in Russia, because they serve to keep up the excitement aroused by the acts of the nihilists, and feed the fever of passion and crime, already far too dangerous.

A timber tract on the Kippowa river, Canada, has just been sold by the Dominion Government at the rate of $1.500 per 60 acres.

The Princess Stephanie, of the royal family of Belgium, has gone to Vienna, to consummate her contracted marriage with the Crown Prince of Austria. The city is handsomely decorated, the dome of the Cathedral of St. Stephen will be brilliantly illuminated with electricity, and one hundred and fifty young girls will strew rose-leaves in front of the bride’s carriage as she crosses Elizabeth bridge.

Rochefort and other revolutionists arranged a meeting in Paris to protest against the execution of the woman, Hesse Hetmann, convicted of abetting the assassination of the Czar, but resptited until the birth of her babe. The police have forbidden the meeting.

Victor Hugo is dangerously sick. His advanced age adds to the anxiety of his friends.

STATE NEWS.

ILLINOIS.

A Fourth of July celebration by the schools of Joliet is now in contemplation.

The board of education of the city of Joliet, has recently tried county superintendent Perry’s examination, and eighteen of them passed satisfactorily. Southtown high school will probably have four graduates. Professor T. C. Stevens will deliver an address at the commencement.

Fulton county will have no institute this year, unless somebody who has never tried the experiment there wishes to risk it.

The annual commencement exercises of Monticello high school occurred Friday, April 29.

Saturday, April 26, was set for the Elwood institute that was snowed out about a month ago.

The graduating class at the Lincoln high school, this year, will be composed of four young ladies, Minerva Amarose, Lena Kahn, Louisa Sims, and Anna Creswell. It is strange that so boy in Lincoln has pluck enough to graduate in the high school. There are now about fifty-six pupils attending the high school.

The annual commencement of the high school will probably have four graduates. Professor T. C. Stevens will deliver an address at the commencement.

The concert recently given by the Wrightonian Society netted $15. The annual commencement exercises of Monticello high school occurred Friday, April 29.

At a meeting of the faculty of Berea College, held April 4, 1874, the following resolutions were adopted.

Resolved, I. That we sincerely mourn the death of one who endeared herself to all who knew her best by her superior qualities of mind and heart.

Resolved, II. That in no formal manner, but from our hearts, we sympathize with our bereaved brother in the gloom which has clouded his life, and we will always hold that the God to whom he trusts may bless to the highest degree of mind and heart.

Resolved, III. That the Gleaner be requested, to give these resolutions an insertion in their columns.

Miss Frances Preston died at her home in Aumby, May 1st. Miss Preston graduated in the class of ’73, finishing both the Normal and High School courses. She was a woman of remarkably strong mind, taking rank among the best in the class, and one of the leaders of the school. The first year after her graduation she taught in Centralia. She then held the position of assistant in the High School on the west side of Mendota. Her failing
health obliged her to give up this place at the end of her fourth term, the last Christmas holidays. A short time before her death she united with the Episcopal Church.

J. E. W. Neubauer has returned to school.

D. S. Buterbaugh has finished his school at Niobrara, Nebraska, and is at home again.

Section C has appointed D. W. Reid to receive pedagogics from section A. Section C has an "organ," "The Philadelphian." Vol. 1, No. 1, was read in the societies at the last regular meeting, by Miss Hattie Scott and D. W. Reid.

B. S. Shearer visited school this week.

Monticello schools graduated a class of eleven, April 29. Superintendent Burgess has issued a neat catalogue for the year.

We think from the papers that Principal Bates will not return to Lewiston next year. It is an unfortunate thing for Lewiston.

Principal Boyer, of Astonia, probably want to find some place where they will be able to complete their experiments.

The teachers of Whiteside County have appointed a committee to examine and report upon the merits of various text-books with a view to the adoption of uniformity.

The Paxton School Board have fixed the Superintendent's salary at $700 or less, and voted that he shall take charge of a room and teach as well as superintend. Don't all apply at once, brethren.

The commencement exercises of the Clinton High School occurs Tuesday, May 10.

The Normal Alumni Association will hold a business meeting at the University, to make arrangements for a quarter-centennial in setting next year. It is hoped that every alumni who can attend will do so.

The early date of commencement puts great difficulty in the way of a successful school year, and in his new position Mr. Wilson, of the State authorities, asks for a prolongation of the Normal courses to four years.

B. T. Stocks, of Normal, has been chosen one of the four commencement orators of the Wesleyan law school.

George N. Snapp leaves the Sullivan schools next year to take the principalship of Mansfield, Pitt County.

T. G. Cleaveland, of Bennett, has accepted from Areda an offer of $100 per month for the year.

Superintendent Slade conferred the diplomas on a graduating class of five at Highland, May 3.

The re-election of Superintendent Dougherty, of Peoria, occurred at the April meeting of the board.

Superintendent Pike and Professor Murphy, of Jerseyville, have both been re-engaged to continue the present positions.

Otterville has had a struggle in the courts for many years over the attempt to get a private school with its debt on the hands of the public School Board.

The end is not yet.

The many county superintendents who were expecting to get out, and the more others who were expecting to get in, have about made up their minds to remain as they are another year. In most cases it will be.

The success of the institute bill is not so well assured. There may be too much nonsense, like the following, which we clip from papers usually very sensible.

"The Illinois State Senate, Thursday, passed the bill taxing school teachers $1 for certificate to teach. This is a tax on labor, and therefore mischievous, Let the House "set down" on it.

MICHIGAN.

T. C. Clayton, of Howard City, has accepted the principalship of the Petoskey schools, and Mr. Watt, of Alaska, takes his place at Howard. Prof. Clifford, of Chicago, has been appointed principal. Mr. sun and will do the work of a principal in his new position.

Prof. J. W. Smith has resigned the principalship of the Monroe Union schools.

Prof. Winchell, of the University, is to take charge of the geological department of the summer institute at Martha's Vineyard, Mass.

Ganges, Towbridge, Manlius and Clyde, Allegan County, elected women for school superintendents this spring.

Prof. D. A. Allen, has been unanimously re-elected principal of the Quincy schools. The Herald says: "Prof. Allen has been an earnest worker in promoting the highest interests of our school, and the result is shown in a large attendance and a prosperous school."

Prof. Robertson and all the teachers of the Manchester school have been invited to remain another year.

Bela May has been appointed member of the State Board of Education by Gov. Jerome.

Milan wants a graded school.

Mr. Edward Israel, of Kalamazoo, a senior university graduate, has received the appointment of Astronomer to the Jeannette Expedition, which the General Government has undertaken. Mr. Israel was highly recommended by Prof. Harrington, and is well qualified for the position.

Fourteen members of the senior class of the Courtland, N. Y., State Normal School came in a body and joined the Michigan Normal.

The Manistee people intend to enlarge their High School building and to heat it by May 25th, to make arrangements for a quarter-centennial in setting next year. It is hoped that every alumni who can attend will do so.

Elgin has issued a neat catalogue for the year.

Enrollment at recent schools, The re-election of Mr. Israel was highly voted that he shall take charge of a room and teach as well as superintend. Don't all apply at once, brethren.

THE FIRST MEETING OF THE SAGINAW COUNTY ASSOCIATION TOOK PLACE MAY 7TH.

The first meeting of the Saginaw County Association took place May 7th at the Saginaw City High School. An address was made by the President, Mr. Fisher, of Bridgeport. In the afternoon the subject of the teaching of reading and arithmetic was the leading one. Prof. Mrs. Williston of Bay City, and Mr. Cassimara, of Tawas. The association closed with a masterly treatment of the subject of discipline from Superintendent Tomas.

Monday night, May 9th, in executive session, the Michigan Senate confirmed the appointment made by Gov. Jerome, of R. V. Cochran, as Superintendent of Public Instruction, to fill the vacancy caused by the resignation of Mr. T. C. Goodwin. Mr. Cochran is pronounced to be an able and experienced educator.

SCHOOL LAW.

IN IOWA.

Sundry rulings by C. W. Von Coellin:

1. A special meeting by the electors of a district township can be held only as provided by section 1,717 Statutes. 1886, affording a remedy in case a district has been deprived of a school-house, by fire or otherwise. At such a meeting only the special business of providing the means to build a new house can be transacted.

2. There is no remedy, if the electors fail to vote a school-house tax, as provided by law. The power to determine whether a school-house tax shall be raised cannot be delegated to the board.

3. In awarding a contract to build, the board are required to accept the lowest bid, if in advertising they have reserved the right to reject any and all bids. In determining who is the lowest bidder, the board have great power in the matter. In case of a tie, the board have the right to determine which bid shall be accepted. In awarding an injunction restraining the board from completing the contract, is the only remedy.

4. School orders presented to the treasurer, and not paid for want of funds, can not bear a higher rate of interest than 6 per cent., nor can the board authorize the payment of a higher rate by mentioning such rate in the order. [Iowa, 53 Iowa, 102.]

5. Our Supreme Court has lately held that the board may secure access to a school-house not upon a public highway by using a portion of the contingent fund to purchase a road to the house. But all new sites, except in incorporated towns, must be located on a public road.

NATURAL HISTORY.

DIVISIONS OF THE CLASS MAMMALIA.

In some articles in this department, published some weeks since, we enumerated the various classes into which all animal life is divided. We mentioned the various divisions, the class Mammalia, the highest class of the animal kingdom. This classification is essentially the same as that given by all standard works on natural history.

We said that the animals of the class Mammalia are characterized by the production of young while the young are in any case, the offspring of female animals, that is, producing their young alive and fully formed. There is a partial exception to this in the case of a few animals, of whom the kangaroo and the opossum are examples. These are born to their young in a half developed state, the infant animal having the rudiments of all organs, no organs of sight and hearing when first brought forth. It is then carried by the parent in a pouch formed of her outside skin, until it has attained its complete form. This small class of animals are said to be ovoviviparous.

Further subdivisions of the Mammalia are founded upon various characteristics, principal among which are, the formation of the extremities and the form and arrangement of the teeth. The former divides them into the Ungulata, or hoofed animals, and the Unguliculata, or clawed.

We mentioned in a previous article some of the differences in the structure of the teeth, called for by the use of animal or vegetable food, or both.

There are eight orders of the Unguliculata.

The first order is known as Bovids. This includes man only, whose most striking characteristic is the erect posture, belongs to no other animal. Nor are the perfect hands on the superior extremities to be found in any other instance, though the animals of the second order, the Equids, are possessed of four hands. This order includes the apes and monkeys of various kinds. Their four hands are nearly equally well adapted for clutching; the upper hands in 85 instances even approaching those of man in perfectness of form and use. There are a few apes and monkeys which have tails.

The third order, Cetacea, includes all of the bat tribe. In these the upper extremities are expanded into wings, while the lower have claws. Each tooth in the bovine order is known as the "shepherd's bit," the eagle, hedgehog, and some other similar animals. They are distinguished from the other orders by having conical points on their teeth, these being designed to aid them in chewing the hard skins of insects, upon which this order subsists almost exclusively.

Carnivores is the name of the fifth order, a very large and important group. In it are found the cat, dog, bear, weasel, and other tribes. They all have very sharp teeth, with which they tear the pointed ones near the front of the jaw known as the canines, designed to aid them in tearing flesh. The Ovis, or sixth order, includes the whale tribe, the mammals that live in the water and feed upon animal substances. Their posterior
limbs are united in a tail; their superior limbs have the form of flappers for aid in swimming.

The seventh order is known as Rodentia. In this are found rats, beavers and rabbits. Their teeth are peculiarly arranged, the canine being very long and placed far forward, for in these animals all the different are animals of the Rodentia, or eighth order. They have no front teeth, often no canines, sometimes no molar teeth. They have long, slim tongues which they thrust out to draw in food. Of this class, bats, ant-eater, armadillo, etc.

In the second division of the Mammalia, the Ungulata, there are but two orders. These are, 1. the Pachydermata, an order of animals with tough, sometimes hard, hides. The elephant, horse, and hog belong to this order. They live mostly upon vegetable food, and often are without canine teeth. The other order, 2., is known as the Ruminantia, and includes the ox, sheep, and deer; all the animals which the Jewish law permitted for food of man, because they both "part the hoof and chew the cud." These animals have cloven feet, have no front upper teeth, their other teeth all being ridged for purpose of grinding their food, and they are all characterized by a compressed stomach, that is, a stomach divided into four parts. They live on vegetable food solely, of course.

The above classifications should be accurately learned by any class, at this stage of natural history, and to assist the memory, the teacher should make some such table as this:

MAMMALIA.
1. Bimana.
2. Quadruped.
3. Chiroptera.
5. Rodentia.
6. Ruminantia.

Ungulata.
1. Soricin.
2. Carnivora.
3. Insectivora.
5. Ungulata.
6. Ruminantia.

The etymological meaning of these names should be called for, as these will aid in making the minds of the pupils the distinguishing characteristics of each order.

We shall give a full description of each of these orders, and the tribes included in each, in succeeding articles, for the help of teachers who may wish to give their pupils oral lessons in this very interesting study of natural history.

THE SCHOOL ROOM.

HASTE MAKES WASTE.

Nowhere is this proverb proved truer than in the work of the schoolroom. To attempt to "rush," after the manner of our modern steam-pressure work, is to defeat all progress. The motto of the German philosopher and poet, Goethe, "without haste, without rest," should be the teacher's maxim. His efforts must be unceasing, but he must not expect to accomplish much without allowing himself time in which to do it. To hasten children through a book is to permit them but a superficial knowledge of it, a knowledge which they will soon lose, when their minds are led from it to other studies. The teacher should assure himself, before any subject is passed as learned, that every pupil in the class thoroughly understands it. If this takes time and much repetition, a tireless, "line upon line, precept upon precept," no matter; it is the only way to accomplish good and lasting work, and,you must be content to "hasten slowly." There is no royal road to learning, you know, no short cuts to the summit of the hill of knowledge; if you desire to guide your pupils to that goal, you must be content to follow the one only sure, laborious path. Do not try to hurry them over its stones unless you would make them limping travelers for all the rest of their lives.

DISCIPLINE.

The success of disciplinary methods undertaken by the teacher must depend largely upon his knowledge of children and their needs, but far more than this upon the force of his personal character, upon what he himself is. The teacher must not only understand what he has to contend with in the effort to mould the children into the pattern of well-behaved, self-respecting men and women, but he must himself be a pattern to them of what he wishes them to become.

There is no escaping this necessity which lies upon the teacher, of training himself in the way wherein he would make the children walk. He would not attempt to teach children the geometry or grammar, unless he had first mastered its primary principles and had THEN taught himself, to TEACH discipline, when he has not yet instituted himself by the laws of self-restraint? The object of discipline in schools is not merely to make the children follow out a prescribed method of action and speech while in the school room; to compel them to step to music, to crook elbows and knees at the tap of a bell, but to accustom them to a propriety of deportment that they shall pursue everywhere; to teach them that self-control, which alone can enable them to hold perpetually in check their base natural tendencies, and to become happy men and women, as well as worthy members of society. That the discipline of the school room may accomplish this worthy object, it is necessary that the teacher shall be its example as well as its mere expounder of precepts. Whatever he should discourage or forbid, that fault or weakness he should himself be free from. Whatever virtue he could encourage or command, that he should show from his own daily walk and practice. For teachers can be perfect, perhaps, all ought to be, or if this is impossible, surely each ought to strive, with utmost effort, toward perfection, so as to lead all his pupils with him in the same path.

COMPOSITIONS—SO-CALLED.

It is not an unusual thing for teachers to set their older pupils to write a composition; it may be it is an essay for the "closing exercises." Now, the pupil has no thoughts, but instead has a collection of words and phrases in his head; and these are summoned out and put in rows. There are two or three mistakes about this procedure. The pupil is set to do what he has had no instruction in, and consequently what he cannot do. The product, if capable of composition or essay, is unmeaning. If received by the teacher and pupil are deceived.

"Compositions" are nothing more nor less than the thoughts of the pupil expressed in the clearest, strongest, and simplest manner possible. Many mistakes are not the positive conclusions of the pupil. And he must maintain his position by logic—hard-headed logic. "Fine-writing" is generally sought after, and then discovered and not so much from an "Essay" of a graduate from an institution of no mean rank:

"He looks upon the lofty mountain with indifference, but his mind is possessed and abashed with the wonderful magnificence of its scenery and grandeur." (If any one knows what this means let him tell the rest of us. But read on.) "He beholds the inaccessible pinnacles; the vivid gashes of ravines and precipices; the howling of the lofty trees, and the rushing of billows!" (Of course he does.) "His works will be written on the gilded pages of history for the edification of those who may live after long years shall have rolled away!"

A dissection not only wastes paper, ink, but brains. It costs brains to do that sort of thing. That girl could have written something worth while if her teacher had taught her in a proper manner. But it is not uncommon to write concerning the "Triumphs of Milk," tho' most persons think so; nor a mark of the "Triumphs of Genius," though many people so consider on writing it.

Let the teacher give lessons in composition-writing on the same principles he does in mathematics—such as are suited to the age and capacities of the pupils. — N.Y. School Journal.

SOME RULES FOR DISCIPLINE.

Avoid making rules that shall suggest mischief that might never have occurred. Do not let the children feel that you expect naughtiness from them.

The principal of a training school, on making her usual round of inspection, caught one of the head boys standing on the platform. Wondering what new piece of mischief his brain had devised and his fingers worked out, she gravely approached the little sinner:

"Why, what are you here for, in particular, with the gilded pages of history for the edification of those who may live after long years shall have rolled away?"

"Cos she was afraid I would be!"

"Who put you there?" "She !" (with a wag of the head toward a young teacher.)

"Yes, Johnny, tell me why you put her here if you were not naughty."

"Cos she was afraid I would be!"

The teacher can be a little blind, occasionally. Sometimes it would be better not to see some naughty little things that a very naughty boy does. I believe in keeping the eyes in the back of the head closed. If the scholars feel that they are watched, they will keep up a little game with the teacher. Show a sympathy for the pupils. We must not measure them by a man's standard. They are young, and need our compassion and care. Some are slow, and need encouragement, which calls for patience, that great quality so necessary to fit one for the position of teacher.

In teaching obedience, as well as authority, the teacher ought also to cultivate the conscience, which shall enable him to observe his own character.

Teach him duty. Establish correct principles of action, that he may discern the right. Incidents will often occur for illustrations, when the pupils may be called upon to decide which is right and which is wrong. Give him his moral standard. In order to do this, consider the move as everything. A teacher may stimulate the child's performance by the offer of prizes; but he should also appeal to some higher motive than the mere attainment of a reward. The teacher may know of some desire which is a stronger motive power than any other, and many accomplish everything through it; but every time he obtains a right action through its means, the desire increases, and the right motive being inactive, weakness.

Grievings of a higher sort of this kind often act done in school are not wrong. Strive to cultivate a school conscience.
How to Secure Obedience.

You cannot get it by demanding or claiming it; by declaring that you will have it; or even—by explaining to your scholars how useful and indispensable it is to them. You do not need to be an army, or a family, or a school, to have obedience. It is a human quality, which a man must develop for himself, or he will never have it.

There are some things on which it is well to draw out the intelligence and sympathies of a child, and to make him understand the full reason and motive of what you do. But on this point I would not, except on rare and special occasions, enter into any detailed argument. For the most part, you will do better if you stick to the action rather than the cause, to the fact rather than the theory; by being orderly, not by talking about order.

You have the power to make a breach of the law impossible; but the child must not evade the consequences of it. Show that you do not expect transgression of it; or even desire all of them. The law is a sacred thing; binding the lawgiver as well as the lawbreaker, to be obeyed as much out of reverence for the law itself as for the persons who make or enforce it. Hence, you must never say a thing has to be done, when you say it is unnecessary, or when you say it is impossible; for you cannot say it is unnecessary, or possible, of itself, without assuming that you know whether it is necessary or impossible, or not. Involuntary and mechanical obedience has to be learned first; the habit of conscious, voluntary obedience will come by slow degrees.—From E. G. Hitch's Lectures.

Study the Children.

To amass facts, to group them in scientific order, to master all the new and unfamiliar methods for improving school work—these are the extent of the teacher's duty. His first and most important duty is to study the nature of the children. When a physician begins to prepare himself for his profession, he finds that he must devote much time to the study of the children that he is to work with. He must learn to be a companion and a teacher, and work with the various agencies of medicine. So the teacher must understand the mind of the child first. He must study its peculiarities, and the various modes by which it can best be influenced, if he is to get the most from it. The nature and traits of children—these should appeal to the teacher as subjects of the utmost importance. What the young mind has the capacity for, what cannot be taught, what can be taught, are questions that cannot be answered without careful study. The history of the various sorts of intricate mathematical problems. The pole and aim of education is to make our children wiser and better. By what means can each individual teacher forward this aim? This is the great problem set before him, and to solve it, his first duty must be to study the children.

Primary Reading.

From an article by Miss Lavina Thayer, in a late number of Country Life, we take the following useful paragraphs:

We will suppose it to be the opening of a term of school. I put in the class all the children who have no knowledge of reading. I would first talk with a view to description, set forty boys to work over forty clean slates, writing down observations almost as fast as they could be spoken. The variety of remarks which could be made by a set of children upon a single word, or upon the same subject, would be the subject of many of them. The correctness of writing and spelling were simply marvellous; so was the rapidity of thought which was brought to bear upon it. There was singing now and again in a sweet and low rather than boisterous fashion, which was in great and pleasing contrast to the shrieking and shouting vocalism of school music in our childhood days.

We saw them learning colors from card-board and crayons, precision from arrangement of slate work, facility of expression in their descriptions of pictures or objects, and certainty of facts from constant repetition of words or numbers which have first been presented in some tangible and reasonable form to their understanding. The child who counts out for himself his five black horses and loses three of them by a wild jump over a fence or a runaway, will not be likely to forget that two are left. And he probably will not be likely to forget them in a similar manner, and with an easier use of words at least. He comes with eagerness and avidity to the festival which has takes the place of the treadmill, and picks up his unconscious facts as if he were playing with pebbles and stones on the seashore, instead of being obliged to delve them laboriously from the dark mine of knowledge.

Boston Journal.
words they know anything about. Each one in the class will say, "The boy and dog run." They will say it intelligently, stopping at the end with the proper emphasis. What have they been reading? Why, they have been reading: How long have these children been in school? Two days, perhaps. With a dozen words judicially selected, a large number of sentences may be formed. These children know what is meant by these words, what is to prevent them from reading them in an intelligent manner? I think all who have given any attention to children in their conversation, will admit that their manner of reading the one day is a little more for the child in this respect than the school room, generally speaking.

Who cannot call to mind something like this? "The boy and dog run." If it is so easy, why is it not possible for the child in this respect to the school room, generally speaking.

Let us hear in mind that reading and spelling are as widely different as any other two branches of study pursued in our schools. If we mix the two together, we have just what can be found in almost any school—reading not spelling, but instead that which deadens the intellectual faculties, warps the understanding, and makes the whole of the school life a miserable mistake, because he has never been taught to read intelligently. I teach the use of capitals and punctuation marks from the very first. The first time I put a sentence on the board, I begin with a capital letter and finish with a period—calling only the attention to the fact. All questions are finished with an interrogation point, giving the name. Some one says, "Oh! I don't believe you can teach a child all that." Let any one who doubts try the experiment. Another says, "Would you talk to a class about sentences before you have developed the meaning of the word?" I would take that way of developing the word, by using it every time I make a sentence. I think there is no better way of developing the meaning of words than by making a frequent use of them.

Some have already admitted, perhaps, that, after all, children can be taught the rules of spelling before they have learned the meanings of the words. This is true. The intelligence is to be cultivated, and the rule is to be taught, but to spell is to know the word, for it is only when you can spell that you can use the word in its right place. 

The American of Philadelphia proposes, as a test of the capacity and instruction of American college students and graduates for practical journalism, a list of the best works of the English authors, the best English essays and the best poems, written by college students or college graduates.

H. B. Bryant's Chicago Business College has all the requirements of a first-class institution. Forty students, a thorough and practical course, elegant and commodious apartments, world-wide reputation, and plenty of students.

According to the Civil Service Year Book for 1881, the English Educational Department includes the following employees: one accountant, with a salary of $1,200; eleven first-class clerks, with salaries ranging from $375 to $500; twenty-one second-class clerks, with salaries from $275 to $450; twenty-two third-class clerks, with salaries from $250 to $375; and fifty-eight lower division clerks, with salaries from $200 to $300.

The reasons are not so much as for a poem, clothing, coal and provisions.

PACIFIC, $1,200—To sum it up, after three years of bedridden sickness, costing $200 per year, total, $1,200—all of this expense was stopped by three bottles of Hop Bitters, taken by my wife. She has done her own housework for a year since, without the loss of a day, and I want everybody to know it for their benefit."—N. E. Farmer.

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GRATEFUL WOMEN—None receive so much benefit, and none are so profoundly grateful and show such an interest in recommending Hop Bitters, as women. It is the only remedy peculiarly adapted to the many ills the sex is always universally subject to. Chills and fever, indigestion or diarrhea, constant or periodical sick headaches, weakness in the head or kidneys, pain in the shoulders and different parts of the body, a feeling of lassitude or depression, and all these are alleviated by these Bitters. 

During the past winter term the General Educational Institutes instructed 23,610 students. Berlin had 4,707, the largest number, but Heidelberg and Strasbourg the greatest number of foreigners.

CONSUMPTION CURED—An old physician, retired from practice, having had no patient had an English Education, and he was perfectly satisfied with the result. A simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Cataract, Asthma, and all Throat and Lung Affections, also for the best of Beauty, Health, and All Nervous Complaints, after having tested, its wonderful curative powers in many cases, has felt it his duty to make it known to his suffering fellow. Actual, it not was a desire to relieve the human suffering. I will send free of charge to all who desire it, this recipe to German, French, Dutch, and English, with full directions for preparing and using. Sent by mail by addressing, stamp, this paper, W. W. SHEK, 149 Powers Block, Rochester.
THE REMARKABLE PLANETARY PHENOMENA OF 1881.

Unquestionably the year 1881 brings the earth to one of the most remarkable astronomical epochs in recorded time. Aside from all those considerations which excite the apprehensions of the votaries of astrology, there is matter enough in the unusual planetary attitudes of this year to awaken the belief of all intelligent minds that our sun is controlled by the astrologers' and other birds of evil omen.

The accompanying diagram indicates the positions of several great planets at the critical moment spoken of. Observe that at that time all the planets will be in the western half of the zodiac: the earth alone occupying the eastern half, with her moon towards the side of greatest attraction. With the exception of Uranus, all these planets will be seen in pestilential Taurus, the "war, famine, and fever-breeding" constellation. All except Uranus are nearly in a direct line, their apparent right ascension being as planets in the conjunction at the same time is not so remarkable, although it is an event occurring at long intervals, but this period of conjunctions gathers interest from the fact that it occurs so near the perihelion points of most of these same planets. Neptune will be in perihelion in June; Mars, on May 26th; Mercury, on August 26th. Venus passed perihelion March 6th. Jupiter and Saturn will not reach their perihelion points for some time to come, Saturn not before Aug. 5, 1885, yet they are in that portion of their orbits near their closest proximity to the sun.

It is hardly necessary to say that we do not share in the apprehensions of fell disasters to our planet from the planetary grouping here described, which disturb so many minds. The balances of nature are too skillfully poised to be seriously impaired by their own action. Compensatory reaction offsets every disturbing force. If a planet's centripetal motion is accelerated, that very acceleration imparts a new increment to its centrifugal force, and the substantial integrity of its orbit is preserved. There is no evidence of magnetic forces emanating from the sun and its satellites are not held in as perfect control as the forces of gravity and inertia. Rather, the history of the earth during the human period may be taken as evidence that they are so controlled.

We give below liberal extracts from a highly interesting article, which appeared in a recent number of the Chicago Times, accompanying the same cut we are now making use of; because it presents very graphically the reasons lying at the foundation of a certain solitude indulged by many people, who really believe that the planets in conjunction we have described will be attended with terrible afflictions, if not by the destruction of the world. Let our readers bear in mind, however, that there have been wars, pestilences, floods, and earthquakes, at other times than those referred to by the astrologers here quoted. Indeed, many of the most terrible calamities of the kinds named have occurred during periods in which the planets were not in Taurus, nor the great planets in conjunction.

QUOTING THE CHICAGO TIMES:

All nature is but Art unknown to thee. All chance direction which thou canst not see; All secret harm, harmony not understood. All partial evil, universal good. Fie! Fie!

Man loves mystery, and that which is most awful in its spell has the greater charm for him. We are told that the planets in a magnetic condition relative to other bodies in the solar system; that during this period—termed the "perihelion passage"—great physical changes will be wrought upon the earth's surface, mighty earthquakes and continued earthquakes and deluges in various quarters of the globe, accompanied by famine, war and pestilence. These are among the terrors which we are looked for during this remarkable epoch. This period began about the middle of the year 1880, and will continue until the year 1881. The most startling phenomena occurring during this time will be about 1881-2 or thereafter.

Scientists, generally, ignore these prophecies, yet emphasize the eye of the phenomena known in the annals of astronomy. They declare, however, (reasoning largely from the standpoint of scientific prudence), that such planetary phenomena have no particular significance; nor is there any evidence leading us to anticipate an unusual physical occurrence during these undeniable conjunction and perihelion passages.

Sir Isaac Newton's theorem that material bodies are mutually attracted directly in the ratio of their mass and inversely as the square of their distance, which is recognized to-day as a demonstrable truth, is a result of some cause. Each atom in the universe is related to every other atom; hence, to use the sublime language of the immortal Pope:

All are parts of one stupendous whole. Whose body Nature is, and God the soul.

Atoms and worlds obey with perfect mathematical and mathematical law the common law of the universe, governing all forces and forms in the infinite sequence of expression, connecting one vast and consistent whole. Each star and planet in our sun and its appropriate system, seeking its harmonious place, attracts earth's total mass as truly as earth attracts the atom. The central star, or sun, of our system is 1,271,000 diameters greater than our earth, and its weight is greater by 385,000 times than that of our world. Its bulk is more than 600 times larger than all known planets together. This astronomy teaches, and yet the sun, whose immensity is almost infinite to our conception, is governed by the same subtle though powerful magnetic force which signs to the atom its allotted sphere. "The polar motion is a motion without which magnetically sustains the viability of vegetable forms from tiniest germ to largest monarch of the forest; is a pathological anomaly of that superhuman force of life which is superior and above all, to quicken the vibration of atoms and guide the rolling worlds amid the starry hosts."

All things quickened into life are endowed with a series of compound changes of condition, whence all effects bear a direct ratio to the parental unit. This is so in the one and all the same. When the powerful electric light front the sun comes in contact with our atmosphere, or the propacal form surrounding the planet, those rays are quickly deflected to a focal point, causing friction; hence the phenomena of solar heat. The heated materials of the earth are quickened, and new material forms are evolved. This magnetic action illustrates how...
reach to planets from distant orbs, acting directly in proportion to their masses, and inversely as the square of their distances.

Prof. Stewart, in discussing the question of terrestrial magnetism—a theme which he pronounces ripe for mathematical calculations of solar physicists—says that he, co-operating with Sir Geo. Airy, astronomer royal of England, reached results and criticisms concerning solar phenomena, which activity corresponds to an increase or decrease of magnetic and meteorological activity; and says Stewart: "When an approaching or receding diurnal chart indicates the progress of magnetic phenomena from west to east lagbracht corresponding solar change, we infer that the air which weather travels faster than atmospheric weather, and may prove to be the determining cause of progressive changes in earth's meteorological phenomena. Earth's atmosphere has been gradually growing clearer and more refined, hence the atmosphere more powerfully affected by solar rays, as material offspring. So our sun's condition is directly impressed upon all its planets, including every living thing thereon. A grand parental love is also reflected from that great solar heart which vibrates a sustaining pulse and heats upon the farthest shores of our universe."

Earth, therefore, in common with all bodies in the universe, submits to the exact proportional obedience to innumerable influences, approaching as gently as the flow of light at dawn. The successively varying or vanishing withdrawal of direct solar rays agitates sudden changes of magnetic influences both at sunrise and sunset, or when obscured by intervening clouds; yet earth's rotation, which determines the apparent sunburst or approaching twilight, moves with unvarying regularity. It is useless, therefore, to ignore the fact that the advancing or receding solar rays awaken entirely new conditions in every atomic form of life exposed to its direct presence. All on earth's surface are visibly affected by solar atmosphere, changing in the atmospheric changes induced by electric equalizations. The influx of parental force from currents of positive electricity, and electric effects in offspring, we look upon as magnetic. Celestial bodies revolve subject to controlling influences, which are celestial and paternal, while attendant satellites occasion perturbations. The moon obeys the earth's motion, as the earth does that of the sun, and the sun its grand centre in the star depths beyond; thus each family of satellites in turn receives and transmits parental influences according to exact law.

**ATMOSPHERIC INFLUENCES.**

Flammarion says: "The laws of magnetism regulate solar heat and the barometrical pressure of the atmosphere, which in reality is an immense machine. This machine, the sun, is a planet surrounded by everything endowed with life. Earth's universal mass of air, condensed into water, would cover the entire surface thirty-two feet deep." Quetelet says: "It now naturally expands to fill a space one-fortieth of earth's diameter, or about two hundred miles above the surface; that this atmospheric envelope is an aerial laboratory that forms, nourishes, and sustains man. Breathing afforded him three-quarters of his physical nourishment, one-quarter only being received from solids and liquids."

Atmospheric disturbances, therefore, affect man most directly.

Flammarion says: "Miasmas, the propagators of epidemics, are superinduced by the aerial currents: cholera, small-pox, yellow fever, and diseases which proceed under attack whole districts to have their principal source of propagation in the atmosphere, which is the factory of death as it is of life." We observe on the part of advanced thought an inclination to consult planetary positions for the keener penetration surrounding magnetic changes and meteorological conditions.

**EFFECTS OF PERIHELION INFLUENCES UPON THE PHYSICAL UNIVERSE.**

Having demonstrated somewhat the laws governing the physical universe, let us now inquire concerning the possible effect this great conjunction, perturbation and opposition of planets, may have upon our earth's atmospheric envelope. Phoenix, the noted antiquarian and astrologer of San Francisco, writing for The Chronicle, says: "Periods of planetary conjunction when satellites become impregnated with fresh electric force, develop a new form of magnetism from the combined association of two bodies. The intensity of vibrations of electric solar and starry light becomes so quickened at periods of perihelion as to inaugurate and impel the development of many forces upon earth. Each hour brings about the conjunction of hands upon the dial of every watch, with meridional conjunctions at noon and midnight. Thus regular conjunction of planets and stars mark with absolute exactness fixed times and eras on the undying index-dial of mighty astral cycles." Phoenix adds: "Astronomical epochs determined by the conjunction, opposition, and perihelia of stars present periods of awakening energy and peaceful decadence marking the division of grand eras, along with the immense circumference of sideral orbs, whose single days are truly as a thousand of the earth's solar years. At such periods unusual phenomena occur. More frequent depressions and rapture in the sun's colorific envelope reveals through dark spots penetrating its luminous outer atmosphere the surface of its solid crust within. Solar conditions necessarily affect our earth when disturbed by perturbing influences from planetary perihelia, and the complete conjunction of perihelion and mighty stars, near kindred of our own earth, is thus subject to direct as well as delegated influences when combined with increased force along lines of conjunction. When united attraction outweighs earth's general or any local resistance, cosmical revolutions compel restoration of lost equilibrium between internal and external forces, disturbing earth's crust along lines of least resistance. As the electric equalizations of every storm purify some tainted condition of earth's atmospheric envelope, so earthquakes, disturbing the linear surface of earth's crust, compellng readjustment of its ocean levels, become necessary periodic conditions attending the healthy growth and progress of every planet. Reaction gradually succeeds, more quietly developing secondary effects, whose new form of growth is rendered harmonious and possible by the determining impression of the new impulse. This trying change, necessary to benefit and develop, commonly to work upon individuals in the fullness of appointed time, with the loving assurance, 'as thy days so shall thy strength be.' Human life is continuous from infancy, yet includes in its own development periods inaugurating mental and constitutional changes, clearly defined as primary, tertiary, or present quaternary era, which astrologists generally agree has far advanced towards its natural close."

**ONE ORBITAL RELEVATION.**

of the earth around the sun completes a solar year. Longer cycles mark grand years of the Pleiades, defined on the dial of earth's northern sky by high or low meridional transit or transit of polar stars. The Pleiades year begins when Alcyone, the central star of that group, crosses the celestial meridian at midnight, whether coming on the meridian earlier or later, as it then completes a processional cycle of the equinoxes in 55,827 years. The approaching planetary phenomena indicate a terminal point of 6,000 years, and mark the end of the fourth grand quadrant along this precessional cycle. Zakiel, an eminent astrologer of England, says: "The effects of the approach of so many large planets to the sun should begin to appear in 1824 and 1825. There are some other phenomena which will signalize the year 1832, and aid in rendering it indeed a 'great year.'" The conjunction of
Saturn and Jupiter, in the sign Taurus, April 18, followed quickly by the conjunction of Jupiter and Mercurial, May 7, and Mars and Jupiter July 21, all occurring in Taurus, "will," he says, "if astrologers are right in the assessment of solar and planetary signs, rule over the earth. As the sign Taurus (and history abounds with proof establishing this fact), appear with greater effect in Ireland, Poland, Asia Minor, Persia, India, China, and in almost every place in the world, so that you may know that the sign Taurus is diabolical in its signification. As Asia Minor was declared by Pythagoras to be ruled or influenced by Taurus, and as Sagittarius, the sign of the animals rising, prevailed in Sagittarius, while Mercury is in the eighth degree of Pisces, there is a strong concurrent of elements during the last conjunction of Saturn and Jupiter in the sign Taurus, in the year 1429, we shall arrive near the end of the series of three thousand years before, and detailed the foundation of the city of Sais—by the Egyptian delta, about the summit of the Nile divides over eight thousand miles from the city of Sais towards the ocean. This they record in their sacred register Solon studied at leisure. The most famous of earth's catastrophies was the flood, the account of which is given in the great island of Atlantis. This is described as a continent lying over against the Pillars of Hercules, which are still standing together, and says, the priest, "Was the passage to other islands and to a continent contiguous of which the ancients... was..." in those countries in 1815 and the years immediately following. Raphael, another English astrologer of celebrity, says: "It cannot be denied, however, but that 1851 will be a remarkable year, chiefly on account of the great conjunction of Saturn and Jupiter, and the proximity of the sun at the time in the sign Taurus. The eighth degree of Virgo..." and will be ascending at the time, and the first degree of Gemini... This... will cause an upheaval from perihelion effects, that may expect such an event to alter the force of the earth by the prevalence of great... The uprise in the islands and the subsidence of land..." he says: "In conclusion, although I do not anticipate the approach of the last day..." He predicts a general European war, especially in Poland, Ireland, Cyprus, and other places influenced by Taurus. "The semi-square of Mars," he informs us, "will produce much excitement, sedition, and crime, chiefly during the next four years, as Mars is not degrees from a complete..." After this time, he says, much good will occur, and the seasons be more propitious, and the crops generally good. These and many similar prophetic perihelion consequences are common in all astral sciences. It is very hard, he feels, that Zadkiel foretold, within six days, the assassination of the late Czar of Russia. And many truthful and propitious signs that we are... the sun in Pisces..." and 1838 to 9. Nine is a peculiar number, for in all its multiples the sum is nine. What, then, do these mystical numbers portend? Pythagoras says: "Numbers and music are the principles of the entire universe, that the world is regulated by numerical harmony." 

PLATO'S REFERENCE TO ANCIENT RECORDS

Plato's "Timaeus" contains an account related by Critias to Socrates, who said to Sostratus, an orator, "I know that there is a place in the district named Saitic, the capital city of which was Sais. Solon told the Egyptian priests... and to the configuration of nature, for these occur from time to time, according to the position of the heavenly bodies, when portions of the earth are destroyed by two great conflagrations..." and enumerated the generations since it occurred, being probably 4120 B.C. The priest said: "Like the rest of mankind, this also is governed by the principles of the universe..." and a noted period of the precession of the equinoxes..." The whole of which..." he says... "there is a revolution. He says: "Alyone, or Tauri, is not a very large or bright star, but then it is the center of a group of stars more bound up with the constellations than any other under the sky..." This book is replete with wonders, yet he is careful to prove his work by step. Who was the architect, he asks, which he says..." and at that point..." And... 4000 years ago the true solar year, representing..." and... the length of base..." and... the mean distance from the earth to..." And the great pyramid inch representing a solar year. The diagonals of the great pyramid base, recorded in inches at the rate of one pyramid inch to each year, give for each diagonal 20,713.26 of those units, or, for the two, 25,827, nearly. This measure is memorialized also in the king's chamber. It would have come from... from these wonderfully significant communions based upon the pyramid unit and cubic, which was the universal astronomical and geometrical unit in the计量 systems of the..." the mean distance from terrestrial and celestial mechanics; that nothing less, as Piazzi says, than "divine revelation..." which could have... his interpretations there lead him to say that "Surely, there will be remarkable changes..." and... an illustration of what he interprets..." which would in pass this most exceptional period of the "..." and... and..." he quotes Mark..." There shall be affliction such as there was not from the beginning of creation, which God created unto this time, neither shall be." 

*A pyramid unit, or inch, is shorter by one sixtieth of an inch than the English inch.*

A pyramid cubic is 35 pyramid inches, or 1.404 British units.

LITERARY ITEMS

President Garfield says he has never had time to write a book.

A biography of Ole Bull is said to be in preparation by Prof. B. B. Anderson. Of 800,000 volumes lent from the free library of Manchester, only 74 were lost.

Prof. Swing is of the opinion that there are not more than twenty really great novels.

There are in the United States 3,708 public libraries, containing 15,438,671 volumes.

The late Mrs. S. C. Hall and her husband published no less than 300 of their own works.

Marion Harland, (Mrs. E. P. Tabor), receives an income of about $3,500 per year from the copyright on her cook books.

There are in France 543 local words to designate various land, and one of the most understood out of the neighborhood in which it is used.

Worcester's new dictionary has the word "boom," "an enthusiastic and spontaneous movement in favor of a person, thing, or cause." 

A Chinese chart of the heavens made about 500 years B.C., giving correctly the positions of 1,690 stars, is preserved in the great Paris Library.

Victor Hugo ranks Paris with Athens and Rome as one of the three greatest seats of the world that has seen, Cities, the old man terms the second class of the devoted places, the workshops of divine labor!"
EDUCATIONAL BOOKS.

Sower's Field and Engineering has hardly made its appearance when a second edition is called for and will immediately be supplied by John Wiley & Sons, N. Y.

Campbell's Handbook of Synonyms and Prepositions (Lee & Shepard) is a convenient pocket volume, which will be of use to every writer or talker who seeks precision of language.

Carlyle's Gleanings of Variations, a work remarkable as dictated by a blind man, in which the most careful examination has failed to detect errors, has rapidly filled its subscription list and is in the printers' hands.

Mr. Henry Cabot Lodge has filled a gap in our national history in his admirable volume, The English Colonies in America which well describes the life and society of the thirteen American colonies before the meeting of the Stamp Act Congress of 1765. (Harper & Brothers.)

Practical Physics, a comprehensive study of phenomena, forming a complete guide to the study of the elementary sounds of the English language, and containing 3,000 words of difficult pronunciation, forming a system of pronunciation, forming a system of pronunciation, etc. By E. V. De Graff, A. M., C. W. Bardeen, Syracuse, N. Y. A useful little manual.

Mr. John Mac Mullen recently contributed to the N. Y. Evening Post a series of essays on The Educational and Moral Influence of Music and Painting, in which he brings original ideas suggested by his own long experience, especially on matters apart from text-book study. These essays are here gathered in pamphlet form, and are worthy of the attention of wide awake teachers.

The History of a Mountain, by Elsie Reclus, just issued by Harper & Brothers, is an admirably translated and illustrated volume, describing the character and composition of the rocks, how they are deposited and elevated; the changes in their formation and chemical phenomena, and the animals they produce, including glaciers and avalanches, their life, animal and vegetable, their inhabitants.

Intermediate Lessons in Natural Philosophy, by E. J. Houston, A. M., is designed for pupils who have finished a primary course of instruction, but who are not sufficiently advanced to take up the larger textbooks. Its publication was determined upon at the request of teachers in many parts of the country, who have felt the need of a book of this grade to meet the wants of their own classes. Eldredge & Bro., Philadelphia.

Charles Scribner's Sons have just issued the new book of Prof. St. George Mivart on The Catastrophe. It is intended to be an introduction to the natural history of the large group of backboned animals, but the subject has been so treated as to fit it also to serve as an introduction to zoology generally, and even to biology itself. The book is treated here scientific, theoretical, and in detail, not an atom of its physiological system being neglected.

In Appleton's American Standard Geographies, the "elementary" and "larger" volumes have been added to the series. These are based on modern scientific educational principles, giving special prominence to the illustrative, social and practical features. The illustrative designs are numerous and original, the maps being distinctly printed and colored with a view to easy reference. As geographies they differ from the old-fashioned school-books as light from darkness.


In the International Science Series, D. Appleton & Co. have brought out General Physiology and Medicine, by Dr. L. Rosenthal, of the University of Erlangen, which the author says in his preface is the first attempt of a connected account of the general physiology of the world and of the various forms of animal life. One of the author's theories is, that structural modification is the result of the influence of conditions which he strives to find in the larger organic world; causes for change in the organism. He holds the theory that forms now classed as natural in a genus or family may be derived from different species or genera. The book is issued in the International Science Series, by D. Appleton & Co.

MISCELLANEOUS BOOKS.

I. K. Funk & Co. have brought out These Sayings of Mine, a series of sermons on the first seven chapters of Matthew, with other sermons on Christ as a preacher, by Dr. Joseph Parker, minister of the City Temple, London, who has distinguished himself in Manchester, as well as London. Edited by Charles, Bardeen, Parolds, and The Priesthood of Christ, are all well known, and this collection of sermons is one to add to his reputation as author and preacher.

Turkish Life in War Time is an interesting contribution to the list of books called forth by the late struggle between Russia and Turkey. It is valuable as presenting from an authoritative source an independent view of the conflict from the standpoint of the Turkish people. The author, Mr. Henry O. Dwight, was then, and at a long time previous, a resident of Constantinople, and possessed unrivalled facilities for studying the situation. The book is admirable in its description of the Turkish Empire in its recent and present state. Charles Scribner's Sons.

How we Fed the Baby, contains some novel ideas as to the amount and frequency of food necessary for a healthy baby; also directions for the care of one. How to make and keep it strong and well. Something may doubtless be learned from it that will be of use in the nursery, but young mothers should "go slowly" in adopting all of the author's fancies, at least before consulting their family physician. There are many useful hints on the care of the health, for adults. The book is written by C. E. Page, M. D., and brought out by Fowler & Wells, New York.

The third volume of Lippincott's "Philosophical Classics," edited by William Knight, and edited by Prof. A. Campbell, has prepared it with a view of presenting as an organic whole the results of Berkeley's three distinct periods of philosophical activity. The effect of Berkeley's thought, upon a later generation and a comparison of his ideas with the scientific and theological beliefs of the present day are studied. The whole is carefully analyzed and will introduce the philosopher to a class of readers who otherwise might never know him.

Dr. T. L. Nichols, the dietetic and physiological author, has added to his list of works The Diet Cure, an essay on the relation of food and drink to health, disease and cure. "There are still people," the author says, "who eat and drink moderately, and yet are as well off as other people eat and drink as they may. * * * I write my books that I may not be answerable for the lives I may prolong. In round numbers 500,000 people die every year in England and Wales. The number ought not to be above, and might be below, 250,000,000. There is a large amount of valuable information in this little volume, whatever may be the peculiar ideas of the author. M. L. Holbrook & Co., New York.
In bringing out a new edition of Michaud's valuable *History of the Crusades*, A. C. Armstrong & Son have answered a demand for the only extended work which considers the whole subject, bringing together a vast amount of historical information in attractive style. It is at once useful for study or reference, covering the condition of all Europe in the medieval ages and presenting it in a most picturesque light. The wild religious enthusiasm which led to the seven successive crusades is analyzed and explained, and the biographies of the leaders of the movement are as carefully outlined as the lapse of time will admit. The work is issued in three substantial volumes made in attractive library style.

It has been justly regarded a weakness on the part of the medical profession that more attention is not paid to the prevention of disease. There is no end of physicians who will undertake the cure of sickness, but comparatively few deem it a part of their duty to guard the public health by the inculcation of physiological and dietary rules. The author of *Construction Plainly Treated*, and relieved without the use of drugs, Joseph F. Edwards, M. D., has done an excellent service in clearly defining the conditions and causes of constipation, its perils to health, and the course of living necessary to eradicate the habit, without medicine or drugs. Such a book may be profitably read by young and old.

**May Magazines**

*Harper's Young People* is one of the pleasantest of juvenile weeklies, in matter and illustration. Our Little One (Lothrop & Co., Boston) from cover to finish, is one of the most elegant magazines published for very little folks. In typography, paper and illustrations it is a gem.

*Wilde Awake* is profusely and delicately illustrated. "A King's Bed" is a capital specimen of pen-and-ink illustration. Lots of reasonable stories and sketches, of which "A Good Little Mother" is delightful. Among the fine poems is "An Old Law" by Celia Thaxter. D. Lothrop & Co., Boston.

Arthur's Home Magazine has the usual variety of reading matter. The serial, "Bay Windows," is continued. Several short stories and sketches, an illustrated article, "Hints for Painting on Terra Cotta," also several short poems on miscellaneous subjects. "Home Circle" and "Boys' and Girls' Treasury" are both interesting, and "Fashion" and "Housekeeping" departments are well represented.

*Appleton's Journal* finishes "A Greek Idyl" pleasantly. "Deademoins" is the Shakespearean topic of Lady Martin. "Byron" is by Matthew Arnold, and James Anthony Froude discusses Keble and Dr. Newman, "The Metternich Memoirs," and the introduction of Thomson, the new English poet, is interesting literary papers. The editor criticizes Henry George's "Progress and Poverty," and his argument against the justice of private ownership of land.


*Scribner's Monthly* is in "the style," having a good portrait of Thomas and Mrs. Carlyle. John Muir will write, and Sholes of Sierra Nevada." There is a racy, illustrated poem on "Calyptrina." "In and out of London with Dickens," also "Attention. Ward. His House and Family," "Among the Equinoxers." "Impressions of Thos. Carlyle in 1848," by Ralph Waldo Emerson, will be regarded as the star article. It gives us a better understanding of the sturdy Englishman than can be obtained from English sources.

The "House of Commons," by W. H. Auden, in *Lippincott*, gives the reader an excellent idea of that venerable legislative body in a brief compass. "Oyster Culture" is exhausted by W. F. G. Shanks, a professor of the bluish luxury. "The Truth About Florida," by Louise Seymour Hadley, is somewhat disappointing, but evidently nearer the truth than most interested writers like to get. "Granada and the Alhambra" has some striking illustrations of grand architectural ruins.

Harpers' frontispiece, "I Held Love's Head Until It Did Ache," by old Robert Herrick, is a quaint and original design by E. A. Abbey. "Music and Musicians in New York," is illustrated with portraits of Theodore Thomas, Damrosch, Gerster, Campini, Anna Louise Carey, Sullivan, Clara Louise Kellogg, etc. There are fine portraits of Thomas Carlyle and George Eliot. The editor deals with the question of copyright claiming that the prospect of a good understanding between this country and England were never fatter than now.

In the Nineteenth Century, Capt. Alexander Kirchkammer, of the Austrian army, explains the theory that England is prepared to make war, showing that its moral and military strength are insignificant, compared with the extent of territory it has to defend, its immense commerce and its disturbing problems. The English people look upon its army as something quite distinct from itself; they do not understand the nineteenth century development of war; England is essentially aristocratic; the people have no place in the political system; military reform in England is impossible.

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