

the University, who may desire to know the process of obtaining the velocity of the earth at any point of its elliptic orbit, we will here give the formula, expressed in words instead of algebraical symbols.

Let twice the distance of the earth from the upper focus of the ellipse be multiplied into the square of the velocity which the earth would have if it revolved in a circle whose radius is equal to its distance from the sun, and the product be divided by the major axis of the orbit, and the square root of the quotient will be equal to the velocity of the earth at that point of its orbit.

In consequence of the unequal velocity of the earth, it describes one-half of its angular distance around the sun much sooner than the other half. If we conceive a right line drawn through the sun at right angles to the major axis, and extended on each side to the earth's orbit, that portion of the orbit on the perihelion side of this line will contain an equal number of degrees that the other portion contains; but the portion of the orbit on the perihelion side is much shorter and also is described with greater velocity than the other. The difference of time in the description of these two portions of the orbit is about 7 days and 17 hours.

Consequently our summer is about 8 days longer than our winter; that is, the sun is about 8 days longer in the six signs on the northern side of the equator than he is in the other six on the southern side.

The subjects investigated in this lecture are, from their very nature, necessarily abstruse and difficult to comprehend, except by the mathematician. But we trust that many, if not all, of our future lectures will be more adapted to the comprehension of a mixed assembly. We shall not, however, neglect any interesting or fundamental principles in the science which will aid the astronomical researches of the more advanced students of the University.

#### AGRICULTURAL.

THERE is a general impression among butter makers that when cold weather sets in there is no longer any profit in dairying; that the extra feed necessary to produce the milk, and the greater care required to make butter at this season of the year, render it impossible to follow it with profit. Another objection against winter milking is that it overtaxes and weakens the cows. This objection is a good one, where cows receive the least possible care and the smallest amount of food that will bring them through in tolerable condition; but where the cows are fed an abundance of good, nourishing food, so that the milk makes no drain upon the amount needed to maintain bodily heat and animal vitality, the constitution of the cow will not be impaired. When thus fed and comfortably housed, even though milked up to a short time before calving again, the cow will usually be in a far better condition for the opening of the coming season than where she has been dried up and wintered in the usual manner.

At the last meeting of the Parent Society for the Improvement of Stock, Bishops Layton, Maughan, Crismon and others made some very excellent remarks about the care of sheep, &c. Bishop Layton stated and Bishop Maughan repeated the statement that as sheep had been cared for in the past, and in many instances at present, when killed they were unfit for food. Mutton, an excellent article of food, easily digested, nutritious and healthy, was positively unfit to be eaten in very many instances, through the wretched care bestowed upon many flocks of sheep. Sheep-raising is a profitable business, as was proved by the statements of these experienced men, when properly conducted. The profits which Bishop Layton said he had made at the business was decidedly encouraging; but those profits had been made by bestowing attention upon his flock, and taking pains to keep the animals free from disease. It is stated by those most familiar with the business that no other stock will give such a return for the trouble of fattening as sheep. We have seen it estimated that a sheep, say of 120 pounds, live weight, will consume 21 pounds of clover hay per week, and increase in weight 2 pounds. Of course the hay must be good, not burnt up stuff, but cut when in full bloom, and cured in such a manner as to retain all its juices. If it is desired to fatten sheep rapidly, the addition of a small quantity of oats to their other food will be of great service; a gallon of oats, once a day, among twenty sheep, will be a great help to fattening. They do not require very close quarters, in fact, they will not bear very close confinement; but their quarters must be dry, well ventilated, and abundantly littered with clean straw; they must be fed regularly, kept quiet and have access to water. In cold weather they ought to be fed better than when the weather is mild.

In three years a farmer on the Isle of Man raised seven bushels of barley from a single grain.

CONSTANTLY taking off from the land and never putting anything on it, will assuredly produce sterility and barrenness, as constantly taking out of the

flour barrel and never putting in, will come to the bottom.

GREAT benefit is derived by cattle from the use of salt pork. Half a pound has been known to work wonders. A Mr. Crane states that his father had a steer which lay down in a lot and was expected to die, it was suggested to give it some uncooked pork. A few slices were placed in its mouth, which seemed to give it an appetite. The next day it was on its feet, and subsequently it became a fine ox. We have seen many a sick ox and cow cured on the Plains by the same simple means.

THE Pacific Rural Press suggest that when a farmer loses a horse, or ox or any other animal, instead of leaving the carcass to be devoured by coyotes and crows, he should cover it with six or eight times its bulk of earth, and thus arrest the fertilizing gases which will be thrown off in the course of decomposition. By so doing he would secure a quantity of manure which would pay him five times over for the trouble it would cost him.

In the *Cultivator and Country Gentleman* we notice two cures for worms in horses. One who had tried all common remedies, such as tobacco, ashes, indigo, sulphur, copperas, etc., without effect, for a mare troubled with worms, was advised to try calomel. For a dose he gave what would lie on the point of a knife-blade at three times, repeating it in forty-eight hours. He gave it at night in chop feed, and kept the animal from water until nine or ten o'clock next day. He remarks that had he not seen them he should have thought it impossible for so large a number of worms to pass from one animal. The cure was perfect.

The other remedy is a handful of sifted wood ashes put into a quart bottle, and the bottle filled with cider vinegar; it will foam like a glass of soda. It should be given to the horse that has worms the moment it foams. Two bottles, it is said, will cure the worst case.

A CORRESPONDENT of the *German town Telegraph* says that from carefully tried experiments, he found that wheat bran caused his twelve cows to give nine quarts a day more milk than when fed on corn, and wheat and rye shorts—which would be about three gills more for each cow, at each milking. But he thinks the bran would soon reduce them in condition, so that they would not then give so much. He now mixes two bushels of wheat bran with one bushel of corn meal, with very satisfactory results—feeding them twice a day to the twelve cows. He adds that carrots increase the flow of milk, and make it of the best quality; and that apples increase it as much as turnips and produce much better quality. These results are very nearly the same as those of our own experiments, performed with less attention to accurate weighing and measuring.

JOHN H. MORRIS, of Morrisville, Pa., gave it as his idea that in order to get the greatest benefit from clover as manure, "you should run a mower over it when the first crop begins to mature; let it lie where it falls till the second ripens its seed, then turn all under."

SAMUEL WOODS, of Rogersville, Pa., gave the following as his plan for making hens lay "when the streams are locked and all the landscape is clothed in white": First, give the fowls a well-protected building, with some straw or hay. Then place a number of boxes in different places for nests. Mine are twelve inches square and twenty-two inches long, made tight, except one end. A small board is nailed on the open end to keep the nests to its place, and laid on its side; this protects the eggs. Since this plan was adopted, my hens have paid for it richly in eggs, while my neighbors do not get any.

A CORRESPONDENT of the *Western Rural* says: "I noticed in your paper a few weeks ago a sure cure for foundered horses. I send you mine, which I have tried on many different horses, and in cases of long standing. Take some old woolen blankets or rags—if woolen rags are not handy, take straw—and wrap the legs tight up as high as you can conveniently, then take hot water, hot enough to scald the hair off on a well horse, pouring it around the horse's legs until they are well soaked; then in one hour serve in the same way, except not quite so hot, and in two hours he will be as well as ever. This I know to be a sure cure, and there is no danger of injuring the animal as

would be the case with turpentine. The horse is paralyzed; the limbs are cold, and the hot water will start the blood circulating and start the perspiration. I have taken boiling hot water and applied it and never injured a hair."

A DISPATCH from Jacksonville, Ill., to the *Chicago Tribune* asserts, on the authority of Prof. J. B. Turner, that the peach buds in that locality were all killed by the intense cold weather of December, and that orchardists inform him that the peach buds throughout Central Illinois are nearly or quite all destroyed.

AMONG persons the least disposed to treat the character and claims of the Latter-day Saints and their religion with fairness, candor and truth, the clerical body have rendered themselves conspicuous; in fact, amongst them the Saints have found some of the bitterest enemies they have ever had to encounter, and on more than one occasion in their chequered history ministers have been the ring leaders of mobs who have imbrued their hands in the blood of our people. But once in a while a parson or minister will do honor to the ministerial calling by telling his honest convictions in relation to the "Mormons," despite his own, or the prejudices and prepossessed notions of his hearers.

Among this number we are pleased to make honorable mention of the Rev. W. B. Wright, of Cincinnati, O. In a late sermon preached by him he made the following remarks: It is generally supposed that the Mormons are licentious hypocrites. Few doubt but the leaders are such. But ask yourselves the question—Is it reasonable, on any recognized principles of human nature, that men whose mental power would have insured them wealth in any society should have joined their lot with the lowest stratum of society, gone a thousand miles over trackless wildernesses and almost impassable mountains, starved a year on crusts and bark and roots, for a purely selfish purpose? Is it so hard to gratify in Paris or New York that men should dare a hundred deaths to build a harem in a desert?

"Self-indulgence—Sybaritism, seeks the tropics; it enfeebles, it loathes toil! But these men are in love with labor! Contrast Utah with California. Utah was a desert—men have made it a garden. California was a paradise—men are making it a desert—burying the rich soil beneath the clay and gravel in their hunt for gold; filling the clear rivers with sand and mud, till the channels are choked! What is the reason? Ask Plymouth Rock for the answer!

"Do I believe Brigham Young and John Taylor and Orson Pratt sincere men? I do most certainly. Such work as they have done was never before accomplished, except by sincere, believing men; some of them are hypocrites, doubtless. But the most of them, it appears to me, believe themselves inspired of God as sincerely as ever Moses believed it of himself. Any legislation based upon the theory that these men do not believe what they affirm will be lamentably ineffectual."

A man, holding the position of a sectarian minister, who will thus fearlessly and honestly express his views about the "Mormons" is the possessor of genuine worth, and he ought to be numbered amongst, and saved with, the people whose character he thus defends!

#### LOCAL AND OTHER MATTERS.

##### FROM FRIDAY'S DAILY

PRESIDENT YOUNG'S MOVEMENTS.—The following was received per Deseret Telegraph Line, this afternoon:

February, 3.

The President stayed at Toker last night and left for Cedar City at 8.40 this morning. He stays there to-night."

REGRET.—We regret extremely to learn that Elder Wilford and Sarah B. Woodruff, this afternoon buried their infant son Charles Henry, aged about nine weeks. We condole with the bereaved parents in their affliction.

"THE DUKE OF NORTHUMBERLAND."—This celebrated animal, recently imported from Canada by W. C. Rydall, Esq., and purchased since arriving here by the Parent Society for the importation and improvement of stock, &c., has been removed from Faust's stables and placed in charge of Bishop Thomas Jenkins, and will be kept in future on his premises on East Temple St.

A GOOD WORK DONE.—A very useful work is now in process of completion on the Deseret Telegraph Line. The poles to which the wires of that line are attached are

mainly pine and quaking-asp, both of which will decay and become worthless in the course of four or five years. To avoid the necessity of having to erect new ones in that length of time, Superintendent A. M. Musser, having an eye to economy and the best interests of the line, has had all the poles, from Ogden to clear away down South, strengthened with, in most cases, two cedar posts which are firmly pinned, one on each side, to each pole, which will render the erection of new ones unnecessary for twenty or twenty-five years. The work from Ogden to Pleasant Grove has been done by Bro. B. W. Driggs, of the latter place.

MONTPELIER.—A YEAR BY MAIL.—Mr. C. H. Bridges, writes a few items from Montpelier, Rich county. He says they have a day and a Sabbath school and a co-operative store in operation; and as a general thing matters are prosperous in that part of the country. They have scarcely any snow there and the winter has been very mild; the "monster" has not yet been caught; and the mails are not so regular as desirable. He gives an illustration of the latter fact, too good to be lost. Last November, twelve months, he posted a letter at Montpelier to a relation residing six or seven miles south of this city; and strange to tell, last November that very letter was returned to him through the post office.

A better and truer illustration than the above, of the promptness and efficiency of the mail service in Utah under the present administration it would be hard to furnish.

##### FROM SATURDAY'S DAILY.

MOVEMENTS OF PRESIDENT YOUNG.—By Deseret Telegraph line we learn that President Young left Cedar City at 7.15 today, and stayed at Parowan for dinner. He goes to Beaver to-night.

FEMALE PRESIDENT FOR 1872.—Victoria C. Woodhull is the nominee of the "Cosmopolitan Party" for President of the United States in the election of 1872. We think she has a very slim chance for election; but Victoria is a good name. Queen Victoria has done very well, or has done very little ill, for England, and President Victoria might do as little for the United States; anyway she could hardly fail to do as much good as some Presidents have done.

INSURANCE. READ THIS!—There is a good deal being said just now about life insurance, and the agents of most of the companies endeavor to make a great point of the positive impossibility of failure on the part of the companies, and the consequent non-liability to loss of those who take out policies. Their representations, verbal and printed, sound very specious and plausible to the ears of the uninitiated; but the following extract from the *Chicago Tribune*, which may be depended upon as strictly reliable, tells a different story, and we recommend its statements to the attention of our citizens:

"The failure of the Monitor Mutual (Life) Insurance Company, of Boston, adds a fifth case to those of the Great Western, Farmers and Mechanics, and others, which, within two months past, have transpired. These cases need alarm no one who, if he has insured at all, has taken the pains to find out the difference between the solvent and the insolvent companies. About thirty of the hundred companies now doing a 'life insurance' business in the United States are as plainly insolvent as any of those which have failed, in all respects, except that the cash has not yet given out, and are still able, therefore, to pay salaries. But they have not the available assets with which to reimburse their existing policy holders in a sound company, and no responsible company would take their whole assets as a compensation for insuring even half of their risks. Fully one-third in number of the companies now existing are insolvent in fact, and the sooner they fail the less their policy-holders will lose. But such failures will leave wholly unaffected the bulk of the life insurance outstanding, of which fully seventy per cent is carried by eleven companies, which are thoroughly responsible and safely conducted."

"NONNAC."—Our correspondent "Nonnac," writing from Omaha on the 28th ult., says "I crossed the river, (Missouri) three times on the ice to-day. I felt serious, as it is the first time I have done so since our wagon went through, twenty-two years ago. The bridge built by the U. P. R. R. on spiles, driven fifteen feet below the bed of the river, answers every purpose while the ice lasts. Trains run regularly without any risk. It is thought the new bridge will be so far completed as to enable them to run trains over next August. They are constructing an embankment or levee from the neighborhood of Bluff City to connect with the bridge on the east side of the river; they convey the earth from the bluffs by a small engine and cars. They evidently mean business by the way the work progresses."

MOUNTAIN HAIR VIGOR.—The Elko, Nev., *Independent* is responsible for the following:

"A decoction of white sage which is very readily obtained, by boiling it a few hours over a slow fire, will accomplish more in restoring bald heads, fastening falling hair, and renovating and giving healthy action to the scalp than a whole store full of the usual remedies advertised for that purpose."

LUMBER! LUMBER!—Cheap for Cash. Common from \$3 to \$3.50; Clear, \$4 per hundred feet. Mill running winter and summer. d14 3m J. J. THAYNE, 1st Ward, S. L. City