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## THE WORLD OF SCIENCE.

### ZOOLOGY.

THE NUMBER OF EGGS IN A HEN.

The *Rural New Yorker* says: "A curious point of inquiry among zoologists has been, for a long time, 'How many eggs are there in the ovary of a hen?' To determine this, a German naturalist, a short time since, instituted some careful investigations, the result of which showed the ovary of a hen to contain about 600 embryo eggs. He also found that some twenty of these are matured the first year, about 120 during the second year, 135 during the third, 114 during the fourth, and during the fifth, sixth, seventh and eighth years the number decreases by twenty annually, it consequently following that after the fourth, or at most the fifth year, hens are no longer profitable as layers, unless it may be in exceptional instances.

Some interesting experiments were also made a short time since, in Germany, to determine the comparative fecundity of ducks and hens—that is, from which of the two the larger number of eggs can be obtained in the same time. For this purpose three hens and ducks were selected, all hatched in February, and nourished with suitable food. The following autumn the ducks had laid 225 eggs, while the hens laid none. In the next February the laying season began again with the ducks and continued uninterrupted till August. They showed no inclination to sit, but became very thin, although they afterwards fattened up somewhat. The total number of eggs laid by the hens amounted to 257—or 86 eggs each—and 392—or 131 each for the ducks. Although the eggs of the ducks were rather smaller than those of the hens, yet they proved to be decidedly superior in nutritive material, so that the superiority in productiveness was decidedly with the ducks.

In regard to the means or possibility of deciding the sex of eggs, much difference of opinion exists. But M. Genin, in a communication to the French Academy of Sciences, says on this subject that he is now able, after having investigated the matter carefully for several years, to state that all eggs containing the germ of males have wrinkles on their smaller end, while female eggs are smooth at the extremity.

### AGRICULTURE.

PROPAGATION OF POTATOES BY CUTTINGS.

Potatoes of large size are said to be produced by a monk in France by cutting two side shoots from each stalk when it is from five to seven inches high, and setting them in good, rich, mellow garden soil. In a few days they send out roots, and form tubers about as early and in as large quantities as the original stalk, while the latter does not seem to be injured by the moderate pruning. The experiment also seems to have been successfully tried elsewhere previously. The plan may be found especially serviceable in the propagation of new and rare varieties for seed.

INVESTIGATION OF THE POTATO DISEASE.

Announcement has already been made of the selection of Prof. de Barry, of Strasburg, by the Royal Agricultural Society of England, to make a series of investigations into the life history of the potato fungus, for the purpose of filling up a certain blank in our knowledge of the development of this destructive object. This gentleman, in carrying out his investigations, has lately discovered that the disease is not propagated by defective tubers, and that, although the mycelium was distinctly apparent in the stalks of plants raised directly from diseased tubers, neither gonidia nor germs were evolved. He also expresses the hope that he has at last discovered the resting places of the oospores, or the active primary germs of the fungus. This is the special point upon which further information is needed, and may suggest the proper means of preventing the continuance of the disease in any given locality by warning agriculturists against planting their potatoes in a spot where they must, at some time, inevitably be destroyed.

### HISTORY AND GEOGRAPHY.

CHANGING THE EARTH'S GEOGRAPHY.

Several projects which are likely to change the features of geography to some extent, have been furnished to the American Geographical Society, and are worthy of notice. The Suez canal, already successfully carried out, has separated entirely the continents of Asia and Africa. The Isthmus canal, between the Pacific ocean and the Caribean sea, will, in like manner, when completed, divide the North and South American continents. The proposed Maryland and Delaware ship canal, to connect the waters of the Chesapeake and Delaware bays, by way of the Sassafras river, will convert the large peninsula—115 miles long from north to south, and over sixty-five miles wide at the widest part, comprising more than three fourths of the State of Delaware, the counties of Northampton and Accomac, Va., and nearly all that portion of Maryland on the eastern shore, or an area of little less than 5,000 square miles—into an island. Another ship canal is to cut off the Peninsula of Barnstable from the mainland of Massachusetts. Both of the latter enterprises, it is thought, will soon be accomplished, as the benefits to American commerce that will come from them are most manifest.

AFRICAN EXPLORATION.

The Egyptian government has recently sent two exploring parties into the interior of Africa. Each was composed of eight European and twelve native officers, and sixty-three soldiers. Their destination is Sondan, and the country lying between the provinces of Darfour and Kosdofan, and so on to the Equator, west of Albert N'yanza. The repairing of the wells along the route, and the preparation and verification of maps, are among the chief objects of the expedition. To these duties are also added a study of the peculiarities of the climate, of the character of the people, of the commerce in which they are engaged, and of the products and agricultural capacities of the country. The results of these observations will be embodied in full official reports, and it is expected that they will be of great service in opening up the country and advancing its civilization.

### MECHANICS AND ENGINEERING.

STRENGTHENING GLASS.

Considerable attention has been lately directed in France to a process invented by De la Bastie for strengthening glass so as to render it both hail and fire-proof. A sheet of unprepared glass, a quarter of an inch thick, held in a wooden frame, was placed on the floor of a room, and a brass bell weighing about three ounces was let fall on it from a height which was gradually increased until the glass was broken by the shock. It was found that the unprepared glass was broken when the ball fell from a height of ten inches. A sheet of glass only half the thickness, but which had been prepared by the new process, was then placed in the frame, the same weight allowed to fall upon it from a gradually increasing height, but without any effect when dropped from the ceiling of the room. An experiment to test the resistance of the glass to fire was also made with perfect success; the glass, heated in the flame of a lamp, and suddenly immersed in cold water, not showing the slightest signs of disturbance.

NEW PORTABLE ENGINE.

A portable engine on a new plan has recently been constructed in Paris. It is mounted on two wheels only, with springs, and can be readily drawn by horses, shafts being attached to the springs. When at the place where its services are required, the wheels are readily taken off, and the machine allowed to rest on its two bed plates, in which are holes for securing it to a foundation, if necessary. The boiler is cylindrical in form and tubular. The fire box, which is wholly within the shell of the boiler, can be removed; the shafts are then attached to move the engine from place to place. An efficient superheater is fixed at the upper part of the boiler, the cylinder of the engine is steam jacketed, and the cut-off is controlled by the governor. The feed water is conveniently heated by an appliance with the shell of the boiler.

### ENTOMOLOGY.

NOISY INSECTS.

A curious fact in the natural history of the tropics is mentioned by Mr. J. Thomson, in his recently published narrative of ten years' travel in Farther India and China. In describing his visit to Penang, on the Straits of Malacca, he says: "It will hardly be credited by those who have never visited a hill country in the tropics, that soon after sunrise the noise of awakening beetles and tree-loving insects is so great as to drown the bellowing of a bull or the roar of a tiger a few paces off. The sound resembles most nearly the metallic whirr of a hundred Bedford looms. One beetle in particular, known to the natives as 'the trumpeter,' busies himself all day long in producing a booming noise with his wings."

INGENUITY OF A SPIDER.

A correspondent writes to *Nature* that a spider constructed its web in an angle of his garden, the sides of which were attached by long threads to shrubs at the height of nearly three feet from the gravel path beneath. Being much exposed to the wind, the equinoctial gales of this autumn destroyed the web several times. The ingenious spider now adopted a new contrivance. It secured a conical fragment of gravel, with its larger end upward, by two cords one attached to each of its opposite sides, to the apex of its wedge-shaped web, and left it suspended as a movable weight to be opposed to the effect of such gusts of air as had destroyed the webs previously occupying the same situation. The spider must have descended to the gravel path for this special object, and, having attached threads to a stone suited to its purpose, must have afterwards raised this by fixing itself upon the web, and pulling the weight up to a height of more than two feet from the ground, where it hung suspended by elastic cords.

### MEDICINE.

IMPORTANT MEDICAL DISCOVERY.

The *Pall-Mall Gazette* says: "The public, no less than the scientific world, will read with interest a very important statement recently made by Dr. Richardson in the course of a lecture he delivered before the Society of Arts. Speaking of the nitrite of amyl, which has within these last few years obtained a remarkable importance owing to its extraordinary action on the human body, Dr. Richardson said that a distinguished chemist, Prof. Guthrie, some years ago, while distilling over nitrite of amyl from amylic alcohol, observed that the vapor, when inhaled, quickened his circulation, and made him feel as if he had been running. There was flushing of his face, rapid action of his heart, and breathlessness. In 1861-2 Dr. Richardson made a careful and prolonged study of the action of this singular body, and discovered that it produced its effect by causing an extreme relaxation first of the blood vessels, and afterward of the muscular fibers of the body. To such an extent did this agent thus relax that Dr. Richardson found it would overcome the tetanic spasm produced by strychnia, and having thus discovered its action he ventured to propose its use for removing the spasm in some of the extremest spasmodic diseases. The results, he added, have more than realized his expectations. Under the influence of this agent, one of the most agonizing of known human maladies, *angina pectoris*, has been brought under such control that the paroxysms have been regularly prevented, and in one instance at least altogether removed. Even tetanus or lockjaw has been subdued by it, and in two instances of an extreme kind so effectually as to warrant the credit of what may be truly called a cure. It is earnestly to be hoped that further experiment may confirm this good news, and that Dr. Richardson, to whom we already owe the introduction of ether spray as an anæsthetic, may really have vanquished the terrible foe that he has been combating."

### ASTRONOMY.

ATMOSPHERE OF JUPITER.

An estimate by Mr. Burton, printed in the "Monthly Notices" of the Royal Astronomical Society, fixes the depth of the atmosphere which surrounds the planet Jupiter at from three thousand to nine thousand miles. This result is deduced from four years' study of the shadows of Jupiter's satellite cast upon the disk of the planet during transit across it.

WHAT MAKES THE SKY BLUE.

The ethereal blue color of the sky is due to minute particles of matter which float in the air. Were these particles removed the appearance of the sky would be dead black. It is a fact in optics that exceedingly fine portions of matter disperse or scatter the blue rays of light, still coarser portions scatter all the rays, making white light. The atmosphere is full of aqueous vapor, the particles of which diffuse white light in all directions. When the particles are enlarged, they become visible in the form of clouds. That the diffusion of light in our atmosphere, the blue coloring of the sky and the colors of the clouds, are due to the presence of matter floating in the air, has been conclusively proven by Tyndall. On passing a beam of sunlight through a glass tube, the beam is rendered brilliantly visible by the reflection of light from the dust particles floating in the air contained in the tube. But on removing the dust particles, which is done by filtering the air by cotton wool, or causing the air to pass over a flame, the beam of light is no longer visible in the tube.—*Scientific American.*

### METALLURGY.

VALUES OF METAL.

The following table of the respective values of metals is not without interest. The first four are so rare as to be sold in minute quantities, yet their rates are given for the sake of comparison with the others:

VALUE PER POUND AVOIRDUPOIS.

| | | | |
|---|---|---|---|
| Indium | $2,522.00 | Silver | $18.85 |
| Vanadium | 2,510.00 | Cobalt | 7.75 |
| Ruthenium | 1,400.00 | Cadmium | 6.00 |
| Rhodium | 700.00 | Bismuth | 3.63 |
| Palladium | 653.00 | Sodium | 3.30 |
| Uranium | 576.00 | Nickel | 2.50 |
| Osmium | 325.00 | Mercury | 1.35 |
| Iridium | 317.44 | Antimony | 36 |
| Gold | 301.45 | Tin | 33 |
| Platinum | 115.20 | Copper | 25 |
| Thallium | 108.77 | Arsenic | 15 |
| Chromium | 58.00 | Zinc | 11 |
| Magnesium | 46.50 | Lead | 7 |
| Potassium | 23.00 | Iron | 2 |

### METEOROLOGY.

THE PHILOSOPHY OF RAIN.

To understand the philosophy of this beautiful and often sublime phenomena, so often witnessed and so very essential to the existence of plants and animals, a few facts derived from observation and a long train of experiments, must be remembered.

1. Were the atmosphere here, everywhere, and at all times, of a uniform temperature, we should never have rain, hail or snow. The water absorbed by it in evaporation from the sea and the earth's surface, would descend in an imperceptible vapor, or cease to be absorbed by the air when it was once fully saturated.

2. The absorbing power of the atmosphere, and consequently its capacity to retain humidity, is apportionately greater in warm than in cold air. The air near the surface of the earth is warmer than it is in the region of the clouds. The higher we ascend from the earth the colder do we find the atmosphere. Hence the perpetual snow on very high mountains in the hottest climate.

Now, when from continued evaporation the air is highly saturated with vapor, though it be invisible and the sky cloudless, if its temperature is suddenly reduced by cold currents descending from above, or rushing from a higher to a lower latitude, its capacity to retain moisture is diminished, clouds are formed, and rain is the result. It condenses, cools, and like a sponge filled with water and compressed, pours out the water which its diminished capacity cannot hold.

### IDIOMS OF FOREIGN LANGUAGES.

The Hindus are said to have no word for "friend." The Italians have no equivalent for our "humility." The Russian dictionary gives a word the definition of which is "not to have enough buttons on your footman's waistcoat;" a second means to "kill over again;" a third "to earn by dancing." The Germans call a thimble a "finger-hat," which it certainly is, and a grasshopper a "hay-horse." A glove with them is a "hand-shoe," showing that they wore shoes before gloves. The French, strange to say, have no verb "to stand," nor can a Frenchman speak of "kicking" any one. The nearest approach he, in his politeness, makes to it is to "threaten to give a blow with his foot," the same thing, probably, to the recipient in either case, but it seems to want the directness, the energy, of our "kick." The terms "up stairs" and "down stairs" are also unknown in French.

A MEMPHIS doctor treated a patient for asthma, when his disease was kidney complaint. A jury has put a $3,500 plaster on these fortunate glands.

### A DECIDED AMAZON.

A woman has recently been detected in England who has been driving a cab, in the guise of a man, for the past ten years. She was born, it seems, at Taunton, Somerset, where her father was land agent to a nobleman. She had a great liking for "handling the ribbons," and learned to drive horse while very young. When little more than fourteen years of age she was married to an army surgeon by the name of Honeywell, and her name, as a married woman is Margaret Honeywell. The two lived together so unhappily that at length she ran away from home and went to London. She there met with a woman who had formerly been farm-servant to her father, and who had married a cabman, and from what she heard in regard to the cab-driving business, she resolved to earn an independent living in that branch of industry. By wearing her hair short, and by a judicious use of clothing, she managed to present the appearance of a short, stout man. Her face being of a masculine type, her complexion florid, and she having an impediment in her speech, caused by a defective palate, conspired to render the illusion perfect. For three years in London and six in Liverpool she plied the whip as a cab "man," her sex being unknown and unsuspected by all, with one exception. During that period she was on several occasions placed in a peculiar and delicate position, but came out from each ordeal without even suspicion of her sex being aroused. On one occasion a noted bone-setter in Liverpool examined her knee, which she thought had been injured, but which turned out to be only affected with rheumatism. Although he treated the complaint successfully, he seems to have noticed nothing peculiar in the formation of the limb. Mrs. Honeywell states that during the time she acted as a "cabby" she saw a notice in a newspaper that her husband had failed in business. The one exception referred to is a woman who has been known as "Bill Seymour's wife" for some years, and who has also been in the habit of taking her "husband's" dinner to the cabstand daily. In all probability the public would not have heard for some time of this female cab-driver had it not been for her unfortunate share in a theft which caused her arrest and discovery.

### BAD SPELLING.

Frequently, cases of bad spelling crop out among the professions, and some lamentable instances of weakness in this respect come to light among the "humanitarians." For instance, a young lawyer in an interior city one early morning locked his office door and left upon it this mysterious legend: "Gon to brexfus." In a small New England town a druggist was surprised and disturbed to receive at the hands of a dirty-looking customer the following prescription: "Pleas give the bare sumpthin to fizick him 15 cts worth." During the war a letter written by a rebel soldier to his sweetheart was captured, wherein the writer said: "We will lick the yanks to-morrow if godlemity spares our lives." Some wonderful things in the way of directions appear on letters passing through the mails—for example, the letter directed to a Pittsburgh Judge, indorsed, "To the onerable gug." The proprietor of a country store once worked himself into a brain fever endeavoring to make intelligible the following note, given to him by a small boy, the son of one of his customers, "mister Gream Wunt you let my boay hav a pare of Easy toad shuz?" However, he was probably not more horrified than the schoolmaster who received a letter from a man who wrote: "I have decided to inter my boy in your scull."

### CAUGHT AT LAST.

For some months a London juvenile put money in his purse at the expense of blind beggars. His plan was to follow the victim, throw a piece of meat to his dog, when the animal, thus adroitly engaged with a bone, did not interfere with the mere abstraction of a few cents from a tin cup. This process had many successes, and but one failure. Even dogs are uncertain. Evidently a fine specimen held the bind man's penny catcher in his mouth. It was a little wooden bowl, and there were three or four coppers in it; but the dog had had a fine bone in the morning, and the boy, who depended on that, depended irrationally. As he put his hand on the coppers the dog seized him by the throat. Assistance from the police was necessary to compel him to relinquish his hold. And the boy, did the thought of prison stir his soul? Not in the least. He was busy with the other subject. He said, "An ungrateful dog. That is unnatural, impossible even. This dog, therefore, must be mad." And this fancy prostrated the youth to such a degree that he was taken to the hospital and died shortly after, his case being stated by the physician in attendance as a most acute case of hydrophobia.

AN old lady called on us Wednesday to advertise her house for rent. We offered to write it out for her, but she said she had it with her. She took a seat, laid her muff on a table, then picked it up again and placed it on her lap by the side of her reticule. She opened the reticule to get at the advertisement, when the muff rolled off on the floor. We restored it, and she then arose and carried it across the room to a desk where she deposited it very carefully. Then she resumed her seat and reopened the reticule, and after a patient search among its contents, brought out a folded handkerchief. After unwinding the handkerchief with extreme caution, she produced a package of newspapers. This she slowly unfolded, layer after layer, until she came to a half page of note paper. That was the announcement of rent. There were only three lines of it, but it was there, just as perfect and unimpaired, as when she started from home with it, half an hour before. In this age of recklessness and shiftlessness, such an instance of carefulness deserves more than a passing notice.—*Danbury News.*

### JOSH BILLINGS SEZ.

It don't make enny diffrense what trade or profeshun yu put yer son at, for if he ever sukceeds at enny, he haz got to do it by adding dignity to the one he adopts.

Enny bizness that is lawfull iz honarabel, and no buzness, simply, ever made enny one respektabel.

Buty is a women's prerogative, but buty in a man iz the next kalamity to being a fool.

The man who kan think kan never be lonesum.

It is no partikular kredit to say ov a man, that "hiz word iz az good az hiz bond."

Superstishun iz the child ov ignoranse and fear, and iz worthy ov its parents.

Fickshun iz a narrow strip ov very produktive land, lieing between the dominyuns ov truth and falsehood, owing allegiance to neither.

The fakulty to decide between right and wrong, and the power ov memory, make reazon, and the planning ov things, and the doing ov them, iz man's chief buzness.

A hungry man needs no bill ov fare.

Old age luvs to rekount the trials ov its youth, and from Abraham's time down to now, haz always mourned the growing degenerasy ov the times.

Thare never haz lived a man yet who was willing to swop off a truth for a lie, not if he knu it.

The man who hasn't got enny habits hasn't got enny thing that he kan call hiz own.

The best way i kno ov to lighten our burdens, iz to look around and find sum one who haz a bigger load than we hav, and then pity them.

Poverty iz a grate blessing to sum folks—az long az they are poor they are endurable.

Neither a good or a bad example haz ever yet been wasted on the world.

The meanest buzness that enny one kan follow iz to trade in sekrets.

### OLD-FASHIONED WINTERS.

The New Haven *Palladium* has been searching history for a colder winter than the present, and selects 1741 as a specimen. In that year the snow, which covered the whole country as early as the 13th of November, was still found the the next April covering the fences. In January, a tent was maintained on Charles river, Boston, for the entertainment of travelers. From Feb. 22, George Washington's ninth birthday, until March 6, the people crossed the sound on the ice every day from Stratford, Conn., to Long Island, a distance of three leagues. Even as far east as New London the ice extended into the sound as far as could be seen from the town, and Fisher's Island was united to the main land by a solid bed. On March 28, the Boston *News Letter* reports that the people living on Thompson's Island had crossed over to Dorchester to church on the ice for the fifteen preceding Sundays. As late as the 9th of July, a letter from New London, Conn., reports on the east side of the Connecticut river a body of ice, as large as two carts can draw, clear and solid, and adds very artlessly that "it might lie there a month longer, were it not that so many resort out of curiosity to drink punch made out of it." On the 17th of July snow was still lying in a mass in the town of Ipswich, Mass., nearly four feet thick. But the most marvelous record of that season is the statement made by Alonzo Lewis, author of the annals of Lynn, Mass., that Francis Lewis, the signer of the Declaration of Independence, drove his horse from New York to Barnstable, the whole length of Long Island sound, on the ice."

### WOLF GENERALSHIP.

Our pioneer method of hunting wolves, by encircling a large section of land and drawing in, is imitated by the wolves themselves in India, if Col. W. Campbell tells the truth. Through a telescope he saw at a distance a small herd of antelopes, and further on a pack of wolves sitting together, apparently in consultation as to the mode of catching the "deer" animals. Soon five of the wolves marched off and cautiously stationed themselves in a circle around the herd, which did not perceive them. One wolf remained at the original station, and one crept up into the midst of the herd of antelopes, causing them to run. But the latter were soon met by one of the wolves, and starting in an opposite direction were met by still another, and so on till they huddled together in fear and stood in one place. At this stage Mr. Campbell interfered by a shot, which scattered the wolves and relieved the antelopes. This instance of animal ingenuity is only one among thousands which have been related, showing that the lower animals have every reasoning faculty that man has, only in a far lower degree.

### ANOMALIES.

Paper can be manufactured from iron. If a tallow candle be placed in a gun and shot at a door, it will go through without sustaining injury; and if a musket ball be fired into the water, it will not only rebound, but be flattened; if fired through a pane of glass, it will make the hole the size of the ball without cracking the glass; if suspended by a thread it will make no difference, and the thread will not even vibrate. Cork if sunk two hundred feet in the ocean will not rise on account of the pressure of water. In the Arctic regions, when the thermometer is below zero, persons can converse more than a mile distant. Dr. Jamison asserts that he heard every word of a sermon at the distance of two miles.

ANNA DICKINSON is announced to lecture at Savannah, Ga., next month.

### LIKE JEHU THE SON OF NIMSHI.

If you have any sympathy on hand for which you have no particular use you may as well bestow it upon a certain clergyman of New Haven, Connecticut. This clergyman has long wanted a horse, but being afflicted with a want not entirely unknown in his profession, the want of money, has been unable to purchase the desired quadruped. Recently, however, he came into possession of a fine horse without paying for it. The clergyman has a friend, a sporting gentleman, who remarked to him one day that he had a horse totally useless to him as it was too slow on the road and that he should receive the animal as a gift. To say that the reverend gentleman was elated would be to express in the most absurdly inefficient manner his satisfaction and astonishment. To get a good horse for nothing was a wonderful stroke of fortune, and to get a kind, slow horse, one with a deliberate clerical gait was best of all. The horse was sent to him soon afterward, and its fine appearance but added to the clergyman's gratification. As soon as possible a carriage was obtained and then the minister took the reins and drove out upon a popular avenue to give the staid horse an airing. Once upon the avenue where fast horses were careering by the clergyman's animal began all at once to conduct itself sigularly. It pricked up its ears and champed and pulled at the bit and pawed out with its fore feet and snorted like a Tartar of the Ukraine. In vain, the reverened gentleman strove with the beast as he would strive with the enemy of souls. A fast horse encouraged by a fast driver dashed by and like a shot the divine's steed rushed forward in competition. The fast man with the fast horse plied the lash, but the good man's steed gained steadily though the good man dug his heels into the floor of his carriage and tugged at the reins, with perspiration on his forehead and holy horror in his eyes. People on the sidewalk stared to see their pastor having a brush with a jockey, and small boys shouted "hi! hi!" Lapping, neck-and-neck, then ahead dashed the clergyman's horse and the envious jockey yelled out an admiring curse, while the plaudits of lookers on were freely vented. Finally the horse of the minister slackened his speed and its grief-stricken owner managed to get it home and in the stable. Then straightway he hunted up the donor of the fiery steed and demanded an explanation. The generous individual was all mystification and innocence. "Fast!" said he, "why, that horse 'aint fast! I bought him in New York for a fast one and took him out and tried him, and I was sick enough, I tell you, when I found he could only make 2:45. There 'aint any speed in him! That's the reason I gave him to you!" And that was all the satisaction the clergyman got from the unconscious cause of his discomfiture.

### FOR DOMESTIC DIFFICULTIES.

The following copy of an agreement prepared in 1846, by a woman who wanted to live happily with her troublesome husband, is published in the Knoxville *Press and Herald*: "You do solemnly swear that you will never beat, nor cus or abuse me without grater provocation than I have given you; that you will not debar me from going to see my connection and neighbors when opertunity permits nor them from coming to my amusement or assistance in sickness nor health; that you will not be against going with me to meeting or for me to go on the same terms; that you will never throw up what has been passed in angoir; that you will provide house room handy to water, and stay there; that you will not move me out of the settlement without I am willing to go; that you will provide things to work on an with; that you will not treat me with the hardship, flout or wound my feelings, as you have done, but perform the duties of a husband, and try for a living in peace on all sids. I do solemnly swear that I will not throw up what has been passed in angoir; that I will not flout or wound your feelings without cause; that I will perform the duty of a wife so far as health and reason will permit. I will treat you with kindness while you do me, and try for a living in peace on all sids."

### FORESTS OF RUSSIA.

According to recent statistics, the extent of the forests of Russia in Europe is about 442,897,500 acres, or 40 per cent. of the whole area. The forests are very unequally distributed, and although cultivation and communication are thus rendered impracticable, the facilities are becoming every year increased. Nearly 65 per cent. of the forest land is situate in the four governments of the north—in Archangel, Vologda, Olonetz, and Perm. Between 1866 and 1870 upward of 20,000 acres were planted, exclusive of the action of private owners. The principal trees are the Scotch pine, spruce, fir, larch, birch, lime, aspen, and oak. The value of the forest products exported in 1871 amounted to 16,026,553 roubles. But the internal consumption gives a better idea of the immense wealth of these forests. The approximate value, as stated by Mr. Werekhn, must be at least 265,450,000 roubles per annum. Wood is the only fuel used in Russia, and the railways consume wood to the annual value of 7,200,000 roubles. It is estimated that 40,000,000 wooden spoons are manufactured every year.

### TRUE.

"No," said *paterfamilias*, "young Jones shall not marry my daughter, because he's not steady. I don't mean that he drinks, or the like; but he does not keep to a thing. He changed schools again and again. He changed about in college. He meant to be a lawyer—now he is in for medicine, and I think I heard him romancing the other night about the delight of being an artist, and living in the Yosemite, or in the polar regions, picking up bits for great pictures. The fact is, fellows of that sort never do more than pick up bits. They are never thorough. They can't be relied upon. I wouldn't take him in my office, and I don't want him in my family—that's all." And *paterfamilias* was right.

### A SURGICAL COLLECTOR.

A troublesome murder case in Wisconsin has just been settled by a verdict at Elkhorn. Dr. Martin is a practicing physician in Raymond, Racine county. His son A. P. Martin, officiated as the doctor's collector. Dr. Martin attended a farmer named Derrick West, during a spell of sickness, and West disputed the bill presented by the son. West was resolved to stand a lawsuit or even death, rather than pay what he regarded as an exorbitant bill for saving his life, and the collector went at him with a dangerous knife and killed him. A. P. Martin was tried for homicide, and the jury called it manslaughter in the second degree. After the verdict had been pronounced, it was discovered that one of the jurors had expressed an opinion about the case previous to the trial. On this ground the verdict was set aside and a new trial granted. Martin was not satisfied with the manner in which his surgical operation had been viewed and treated in that court, and, fearing a repetition of the verdict there, he applied for and obtained a change of venue to Walworth county. There Martin was found guilty of murder in the first degree. He did not like this verdict any better than the other; in fact, it disagreed with his ideas of comfort infinitely worse. The case was appealed to the Supreme Court, which decided that the defendant could not be convicted of murder in the first degree after having been found guilty of manslaughter in the second degree. The court remanded the case back for a new trial. The next time the jury found a verdict of manslaughter in the third degree, probably as a kind of compromise and to get rid of the case. Martin will have to be satisfied with this opinion of his surgical ability until he can get hold of another subject.

### "LITTLE BO-PEEP" AND THE DYING CHILD.

I remember when I was nursing in a hospital once, there was a poor little boy about six years old dying of rheumatic fever. I was night nurse in that ward; and regularly, when the attack of pain came on, he used to scream out for me:

"Nursey, sing. It hurts me. Sing the hurt away."

So then I'd prop him up on my arm an' sing one song after another, from "Twinkle, Twinkle, Little Star" to "Black-Eyed Susan," till the paroxysm of pain was over, an' he'd quiet down again. I always knew when that was by his joinin' his voice in, too—such a weak pipe of a voice, poor lamb! but I was better glad to hear it than any music, for it telled me the pain was gone for awhile, and I could lie him down to sleep again.

Poor wee mite! I was singing "Little Bo-Peep" the night he died. I had him in my arms. He'd been sinking all day. I knew he couldn't last out another; an' though he tried to join in as usual, his voice went into a gasp an' broke. I'd been sometimes used to call the children in the ward my little sheep, an' when I came to the end of the verse—

Little Bo-Peep, she lost her sheep,
An' doesn't know where to find 'em,
Let 'em alone an' they'll come home,
An' bring their tails behind 'em—

he looked up in my face with a bit of a smile on his poor little drawn white mouth, and said:

"Nursey'll know where to find her lickle sheep when he goes home. Will I be long going home now, nursey?"

Long! Ah, poor little lamb! Ten minutes later an' he'd gone home.—*Cassell's Magazine.*

### CURIOSITIES OF LANGUAGE.

Professor Hosmer, of Washington University, Missouri, lectured on "Words" in St. Louis the other evening. The speaker criticised a number of quaint expressions and others that were characterized by some oddity, awkwardness, or other peculiarity. The first was a remark to the following effect: "I hain't hooked his handkerchief neither. Besides 'twan't his'n. It's our'n; ax Bill." He said that many expressions, which we set down as intolerable for their grammar or pronunciation, were once strictly proper, and in many cases have been given up for poorer forms. In speaking of the double negative which occurs in the preceding passage, the lecturer quoted similar expressions from "Martin Chuzzlewit," and the writings of Shakespeare. The word "ax" was for centuries used in the best society, and an Anglo-Saxon grammar would suggest a better way of accounting for "ourn" and "yourn" than to suppose they were the mere blunders of boors.

The lecturer cited some lines sent to him in a valentine years ago:

By these four lines of meter,
I'd have you for to know
That I to seek a lover
Am a goin' for to go.

In vindicating Patty's taste in English, he said there was not a thing in those lines that was not once held to be strictly correct.

After quoting Chaucer, to prove that "Let her slide" was a classic phrase, the lecturer amused his audience with the following Berkshire ditty:

But to ther young man looked shy at me,
And from her seat she rie'n:
Let's you and I go our own way,
And we'll let shgos hj ea'n.

ALGERIA, it appears, stands first among countries noted for their mineral waters, in respect of the number, variety, and hygienic properties of her springs. In most cases ruins in the immediate vicinity attest the fact of the old Romans having appreciated the curative qualities of the waters quite as much as the Arabs of the present day do.