

VOL. 34.

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No. 28.

THE PEACE OF THE SUMMER DAY.

- H, the perfect peace and quiet Of the fair midsummer day,
- As up n the rippling waters
- Heaven's lights and shadows play. From the depths of distant woodlands
- From the depths of distant woodlands Hear the robin's piping call,
- While the breezes through the tree-tops
- Croon a lullaby for all.

Far from city haunt and bustle Came we on a summer's morn; 'Neath the shine of heaven's glory Lingering till the week was gone. Ab, could hearts grow cold and selfish Or forgetful of the "Best,"

As in God's own grandest temples Heart and mind songht daily rest ?

- Life must have its winter season, Summer cannot last for aye; Storms must come, and storm clouds follow Brightest sunshine in the sky;
- Brightest sunshine in the sky; But the peace that maketh perfect, Never-dying, gladsome rest, Only comes where there is cherished

Only comes where there is cherished Love's sweet summer in each breast.

- Love which goeth on forever, Hand in hand with charity; Love which wearies not, nor faileth
- In its gentle sympathy;

In the God whose name is Love: Then, indeed, will peace and gladness

- Make the bluest skies above.
- -Mary D. Brine, in Christian Weekly.

MATTY'S NEW HEART.

It was cool and pleasant in Matty's room upstairs, with the breeze stirring the white curtains at the windows, and gently lifting the brown curls of Matty herself, seated beside a little table on which were piled her school-books. This room was her own particular nook,—"den," papa called it. There were pots of bright geraniums in one window, while a canary in his gilded cage occupied the other.

A pretty little room it was; but the occupant and owner took no note of the handsome carpet or the blue and white walls, not even of the knick-knacks, so dear to a girl's heart, scattered about. She did not hear the bird-notes, filling the air with melody; she did not feel the breeze; but, in. stead, she was hot and uncomfortable. She was, in truth, deep in a conversation. Her rhetoric lay open before her, several sheets of writing-paper lay spread on the table, but she was talking; and while so doing, the end of her pen-holder was nervously chewed. You see, Matty was talking to— Matty. The girl in the chair was the outside Matty, and the girl she was talking to was the inside Matty. "I would n't do it," says inside.

"I would n't do it," says inside "I am going to," says outside.

"O Matty, don't! Just think!" urges

inside. "1 won't think! I'll make those girls

"But, Matty, it will be just the same as stealing."

"Stealing !" screams outside. "The idea! How can it be stealing just to write down something you find in an old newspaper, and read it in school? Why, I could write as

good as that myself, any way!" "But you know you'll say it's your composition, and it is n't."

"I won't say a word about it. I'll just hand it in with the others, and I'm sure I can't help what teachers choose to think. Why, Professor Wright might make mistakes

about lots of things, and it would be none of my business!" "What would your Sabbath-school teacher think if she knew you-" "Has n't got anything to do with Sabbath-schools. This

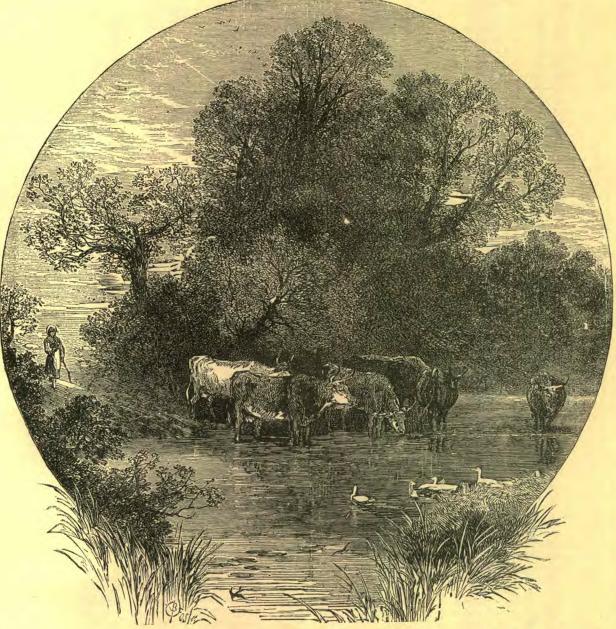
is a school composition." "How can you say your prayers," still pleads inside, in a very faint voice, "if you—"

"I said I was going to, and I am. So there! Won't those hateful girls stare? They won't know what half the words mean. I don't think I know what they all mean," she added, dubiously; "but I can look them up in the dictionary!"

"But, Matty, it is so"—the voice sounded very far away —"wrong, and you know—" She took up the newspaper and dipped the pen in the ink. Then she carefully copied she could not win their love, that they should at least envy her.

Every month the pupils in the school were required to write compositions. The most meritorious one was selected to be read, while the writer's name occupied the roll of honor. Not satisfied with her own efforts, Matty was finally tempted—and yielded—to do what we have just seen.

She was pretty busy, and the thought of what she had done did not trouble her. If it did creep in at some odd moment, she resolutely put it out of her mind. Not until the next morning, while looking over her lesson prepara



word for word. Next she looked it over to see that the punctuation was correct, and that there was no mistake. The page was neatly folded, and across the top was written "Matty Matthews's Composition."

When Matty was a wee little thing, her lips not yet able to form words, her baby ears had heard that she was a "bright" child; grown older, her elders had injudiciously praised her for aptness in learning, until the present time, when, fourteen years old, her vanity had become so awakened, that refused praise and adulation, Matty became vain, selfish, haughty, and overbearing; as a consequence, disliked by her school-fellows. Conscious of this, no longer receiving from them the flattery so dear to her, she resolved, if tory to going to Sabbath-school, did she feel much concern. "Miss Lulu," she reflected, "had such clear gray eyes, they just looked through one. Suppose Miss Lulu knew—" but she would n't think about such unpleasant things. How pretty her hair was! That shade of blue was very becoming, too.

That Sabbath the lesson was in Matthew, fifteenth chapter, and when they came to the verse about the heart, Miss Lulu, her teacher, drew such a picture of the heart when it is unregenerate, unrenewed, that all in the class were impressed. Then she told them that Christ could give them a new heart if they had faith in him. It was not in vain that Miss Lulu spent an hour in prayer that morning; not in vain that she pleaded with God during the week to bless that Sabbath morning's lesson. One precious soul had been made to see itself as it was in the sight of God. The troubled face was noted; after the class was gone, she had a long conversation with Matty, at the close of which Matty went out with a bright face, and, we believe, a new heart.

When Monday morning came, Matty had another talk, this time with Professor Wright. Nothing was kept back. She confessed to him that the composition she handed in, with her name attached, was not hers at all, but one copied from an old newspaper; and four days later, when the compositions were returned, Matty's was marked zero. The girls stared, and whispered some comments, but they were not quite so severe as they would have been a week previous. Somehow, something had come over Matty. She was not so disagreeable as she used to be. She stepped forward, and said: "Girls, Professor Wright says I need not tell you unless I want to, but I do want to. This composition is not mine; I copied it, and pretended it was mine. I'm sorry, and-and I want you all to forgive me.' Matty then broke down; but the girls all kissed her, and said to themselves that certainly something had come over Matty.

They did not know about the new heart, but Matty knew; and more than one, by her influence and quiet example, has been led to trust the same Saviour that Matty did that Sabbath morning.—S. S. Times.

Written for the INSTRUCTOR. THE GREAT AMERICAN DESERT.

The children who studied geography not many years ago, would have found laid down upon the map of America an immense region of country between the Mississippi River, and the Rocky Mountains, marked "desert." This tract of country was about three hundred miles wide from east to west, and some six hundred miles long north and south, taking in a part of Nebraska, Colorado, Kansas, Texas, etc. At first it was popularly supposed to be a barren, sandy waste, utterly uninhabitable; and fearful stories were told about its desolation. I remember, when a boy, of hearing about it; and I imagined it to be nothing but a dead level of burning sands, with scorching sun, and without water. But a closer acquaintance with this region of country proves these first impressions to have been entirely erroneous. It is not a desert at all.

When first discovered, there were immense droves of buffaloes feeding upon it, besides antelopes and other wild animals. I have crossed it several times in different directions. Only a few days ago, I enjoyed a ride through it from east to west on the cars, and will describe it to you as correctly as 1 can. The surface is not a perfect level, as might be supposed. There are many places, where, indeed, it is so level that nothing intercepts your sight as far as the eye can reach, which, perhaps, would be fifty miles in every direction from you. Even here, the ground is rolling, that is, there are little rises, and then small depressions; but generally the surface is quite broken, so that in traveling a mile, you will go up and down little hills and valleys. In some places, a steep bluff rises, as high as a house, and then come large hills and quite deep valleys. In fact, in many places it is full as uneven as the land in Michigan, Indiana, or Iowa.

As to trees, there are almost none at all. A few little scrub trees are seen once in awhile along a stream of water, but they are only like the shade trees along our city streets, of not great size. They are soft wood, mostly the cotton-wood, or poplar. Once in a great while you will see a little shrub away from the water; but as a general thing, the land stretches away for miles upon miles without a single tree, shrub, or bush of any kind.

The surface of the ground is very thinly covered, or perhaps we would better say, not more than half covered with very small, short, fine grass, called buffalo-grass. It spreads itself close on the ground, and grows about the length of a little boy's fingers. Mixed with this, there are little short weeds not much higher than the grass. This is all that grows upon the ground; but yet the cattle love this grass, and often become very fat upon it, though, of course, it takes a large tract of land for one animal. The soil is rich, and would produce good crops if there were only water.

The one great lack of this region, now called the plains, is the want of water. It does not rain much, so the land is nearly always exceedingly dry. There are a few small rivers running through it, long distances apart. Here and there are little brooks of water, but they often dry up. If water could be had on this land, the ground would be just as good and raise just as big crops as in any other place. In some places, the people bore down several hundred feet into the ground, when the water will boil right up just like a great spring, and water all around it. Then every thing looks green, and grows freely. In some places they irrigate the land, that is, they cut little ditches from the river, and turn the water off on the land. This makes every thing green and fine.

This great tract of land is used almost wholly, at pres ent, for raising cattle and sheep. So men buy up thousands of acres of it for a small price, and then turn a herd of several hundred cattle right out on this plain, with a man to watch them. This man is called a cow-boy. He has a pony, and stays with the cattle all the time. He has to drive them every day to some brook for water, watch them, and keep them together. The animals remain here summer and winter without any shelter. I call that rather lonesome business. Once in awhile, you will see a little

shanty of a honse, not much larger than an ordinary henhouse, and you will have to go several miles to reach the nearest neighbor. I hardly think I would want to live there.

All the fences are made of wire, and these are placed on very small posts, no larger than your arm. In coming across these plains the other day, we saw one herd of antelopes, an animal that looks almost like a small deer. You will sometimes see a few birds. The oddest animal found here is what is called the prairie-dog. The little fellow is about the size of a big gray squirrel, or a small rabbit. It builds up little mounds of earth, like an anthill, and makes a hole in this, that runs down into the ground. There are thousands of them. As we go by in the cars, the dogs come out on top of these mounds, and sit upon their hind legs to look at you. They are said to bark like little dogs.

Now that railroads run across these plains, it is pleasant to travel through them. But it must have been a very lonesome and dangerous thing to have traveled over this vast region years ago with a team. Thousands of people have died here of thirst and starvation, and by the cruel Indians. Butall this is past, and now people are beginning to settle even here, and make, in some places, comfortable homes. The more the land is cultivated, and the more trees are set out, the more it rains and the better things grow. So that now the great American Desert is practically no more. D. M. CANRIGHT.

NOT "SMART."

OF all forms of bad breeding, the pert, smart manner affected by boys and girls of a certain age is the most offensive and impertment. One of these so-called smart boys was once employed in the office of the treasurer of a Western railroad. He was usually left in the office between the hours of eight and nine in the morning, and it was his duty to answer the questions of all callers as clearly and politely as possible.

One morning a plainly dressed old gentleman walked quietly in, and asked for the cashier. "He's out," said the boy, without looking up from the

paper he was reading.

"Do you know, where he is?"

"No." "When will he be in ?"

"'Bout nine o'clock."

"It's nearly that now, is n't it? I haven't Western time." "There's the clock," said the boy smartly, pointing to a clock on the wall.

"Oh, yes; thank you," said the old gentleman. "Ten minutes until nine. Can I wait here for him?"

"I s'pose so, though this is n't a public hotel."

The boy thought this was smart, and he chuckled aloud over it. He did not offer the gentleman a chair, or lay down the paper he held.

"I would like to write a note while I wait," said the caller; "will you please get me a piece of paper and an envelope?"

The boy did so, and as he handed them to the gentleman, he coolly said,— "Anything else?"

"Yes," was the reply. "I would like to know the name of such a smart boy as you are."

The boy felt flattered by the word "smart," and wishing to show the full extent of his smartness, replied,— "I'm one of John Thompson's kids, William by name,

and I answer to the call of 'Billy.' But here comes the boss!"

The "boss" came in, and, seeing the stranger, cried out,— "Why, Mr. Smith, how do you do? I'm delighted to

see you. We"— But John Thompson's "kid" heard no more. He was

looking around for his hat. Mr. Smith was president of the road, and Billy heard from him later, to his sorrow. Any one needing a boy of Master Billy's peculiar "smartness" might secure him, as he is still out of employment. —Youth's Companion.

Written for the INSTRUCTOR. THE EAST INDIA MARINE SOCIETY.

This is the name of a benevolent society formed in the year 1798. It was founded by the captains of vessels in the employ of the East India Company, which sent a great many vessels to all parts of the world. The society was formed for the purpose of benefiting the families of unfortunate seamen. After it had been well established, and its members were sure of success, they extended a hearty welcome to all that had gone as master of a vessel around Cape Horn or the Cape of Good Hope. In order that the society might have funds to carry out its object, each member was obliged to pay the sum of twentyfive dollars on becoming a member; and so no one who would not be a help to the society, would be likely to join.

The society accomplished so much good in the way of relieving the sufferings of the needy, that the most eminent men in the country, such as General Washington, John Adams, Thomas Jefferson, and others have from time to time extended their hearty congratulations to its success. This society has continued its noble work, and has expended many thousands of dollars in relieving the sufferings of those whose only support was lost or disabled at sea. Thus many a hungry mouth has been fed, and many a sad heart made happy.

many a sad heart made happy. Besides assisting in aiding the poor, each member was expected to bring some curiosity home with him on every

voyage that he made, so that those who did not have the privilege of visiting foreign lands might enjoy the pleasure of seeing some of their curiosities. These specimens were all put together in a suitable place until a large amount had been gathered, when it was decided to have a museum. The place selected for it was the old town of Salem, on the eastern coast of Massachusetts. It was here that the society first started. They purchased a building and set about arranging the museum; but their collection grew so rapidly that it was soon found impossible to find room for it all. A larger and more convenient place was needed; but as the society was in debt, it was not able to secure a suitable building until the year 1866, when Mr. George Peabody came to this country the last time. Mr. Peabody, who was a friend to the society, immediately relieved their embarrassments, and placed a large sum of money within the reach of the society, the interest of which they might have to bear the running expenses of the museum. Since that time the museum has greatly enlarged, until now the Salem Museum, or East India Marine Hall, as it is called, ranks next to the largest of its kind in the world.

Here can be seen curiosities from the most distant lands, and almost every island of the sea, and from the bottom of the ocean. There are many things here which we would like to mention, but space forbids. Perhaps we will speak of these at some future time. As we looked over these things which were brought from all over the world by men who made it their business to travel on the waters, we thought of what was written by a good man many, many years ago: "They that go down to the sea in ships, and do business in great waters; these see the works of the Lord, and his wonders in the deep." E. H. RICE.

HUGH MILLER'S FIRST FOSSIL.

HUGH MILLER was a stone-mason's apprentice. He and his fellow-workmen had not only to build stone walls, but to cut the stones from the quarry where they found them in solid mass. At the time of which I speak, they were working in a quarry situated near a bay in the northern part of Scotland. On the shores of this bay they used to find, after every storm, fragments of a bluish-gray limestone, these pieces of stone belonging to a stone formation which extended under the bay, from which they were broken by the violence of the storm.

Hammering away at one of these fragments one day, Hugh laid it open, and found within a beautiful shell. It was a handsome specimen, but like no shell he had seen before. It curved round and round, like a ram's horn, and beautiful figures were molded on its entire length. In color it was bright cream, giving off, when moved about in various lights, some of the brilliant hues revealed by a prism. "How did the shell get inside the stone ?" thought the boy. "What kind of an animal once lived in it? Where shall I find such shells now ?"

At the dinner-hour the pretty shell was shown to the other workmen. They looked at it, wondered for a little while, and then laughed at the boy for his eager desire to read the riddle, to find out how the shell got in the solid rock. Hugh worked away at his riddle, breaking open all the little rounded fragments of limestone that came to his hand, and finding many objects in the stone, sometimes scales of fishes-not just like any fish he knew, but certainly fish-scales-sometimes whole groups of shells, sometimes the impression of fern leaves within the stone. What did it mean? How came they there? Long thought about the problem, and, after awhile, access to books on geology, in which learned men told what they thought about the mystery, convinced him that as an apple is put in the center of the dumpling while the dough is still soft enough to be molded around it, so the shell was put in while the material of which the stone was made was in a soft, plastic condition, and that it had afterward been submitted to the conditions that had hardened it about the shell or the fish-scale.

The rivers that pour their waters into the lakes or ocean pour also the sediment that they have washed away from the rocks at their sides or from their beds. All this sediment, collecting in the water, would soon make it muddy and impure were it not that it settles to the bottom. While it is settling, however, more is being poured in, and so the work goes on, the mud, sand, lime, or whatever the water had brought with it, being quietly settled at the ocean or lake bottom, one layer above another. While this is settling, year by year, the animals that live in the water are dying and settling to their graves, where they are slowly covered up by these accumulations, their fleshy parts decaying, their bones, shells, and scales remaining. When pressure and other changes have hardened all this sediment into stones, the shells are fastened into the stone just as an apple is boiled in the dumpling, but far more securely, of course. Thus Hugh read the riddle of how the shell got into the stone, and by patient labor went on to solve other and more difficult questions about the rock, till, in mature manhood, he became a well-known geologist, capable of helping others, while the men who laughed at him for caring for the riddle and its solution have passed away, and none of us know that in their lives they added one whit to the knowledge of the world.-S. S. Classmate.

"My boy," said a father to his son, "treat every one with politeness, even those who are rude to you. For remember that you show courtesies to others, not because they are gentlemen, but because you are a gentleman."

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JULY 14, 1886.

THE YOUTH'S INSTRUCTOR.

The Sabbath - School.

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FIFTH SABBATH IN JULY.

IMPORTANT BIBLE SUBJECTS.

LESSON 15.-REVIEW.

1. WHAT is sin? 1 John 3:4.

2. In what condition are all the world? Rom. 3:23.

3. Then in what service are all men? Rom. 6:16, 17. 4. If men are overcome by sin, in what condition are

they ?-In bondage. 2 Peter 2:19. 5. What is it that declares that all men are thus in

bondage? Rom. 3:19.

6. What are the works of the flesh? Gal. 5:19-21.7. What are the fruits of the Spirit? Gal. 5:22, 23.

With what are the fruits of the Spirit in harmony? 9. Then of what must the works of the flesh be the

transgression? 10. In what condition are those who are not led by the

Spirit? Gal. 5:18.

11. Then what is it to be "under the law"? 12. In order to redeem men, what position was it neces-

sary for Christ to take? Heb. 2:17. 13. Then since he came to redeem sinners, those under

the law, how was he made? Gal. 4:4, 5. 14. Was Christ indeed counted as a sinner? 2 Cor. 5:21; Isa. 53:12.

15. What curse is pronounced upon transgressors of the law? Gen. 2:17; Rom. 6:23.

16. How did Christ redeem us from this curse? Gal. 3: 13.

17. For what purpose did Christ thus take upon himself sin and death? 2 Cor. 5:21, last clause.

18. What is the righteousness of God? Isa. 51:6, 7. 19. Since "in Christ" we become doers of the law, what

does that insure to us? Matt. 19:17, last part. 20. What then may we say that Christ is to us? 1 Cor. 1:30.

FELLOW-HELPERS.

DAVID had set his heart upon building a house for the Lord, and doubtless experienced a pang of keenest disappointment when he found himself debarred by the divine decree.

But, after all, he had dedicated to this sacred service treasures of gold and silver, amounting, at the very lowest estimate, to not less than six hundred millions of dollars. Surely such a contributor had no small agency in the erection of the house, even though he himself was not permitted to see it rise. So many a man has gone to his grave, lamenting deeply his failure to achieve the results for God and humanity upon which he had set his heart and hope, and yet he accumulated the materials, prepared the way, and made the doing possible by some God-ordained successor. Adoniram Judson saw comparatively little of the fruits of his labors; but what sowing he did, what foundations he laid! and the converts gathered in to-day in that far-away land where he toiled so long, are as truly his converts as though, with his own hands, he had baptized them.

Old Dr. Stoughton gave the best years of his life to the founding and fostering of a school of the prophets, and died at last of a broken heart, because he could not make it grow. And yet a casual sermon which he preached one night in a farmer's house was instrumental in the conversion of a flaxen-haired boy, named John P. Crozer, who was to become a prince in Israel, and whose wealth was to found the well-known Crozer Theological Seminary.

God moves in a mysterious way his wonders to perform. And what matters it what part we have in God's great plan, so we perform the part assigned us, and perform it well. One clears the way, and another builds; one gathers materials, and another brings them into requisition; one soweth, and another reapeth; and yet both of them shall rejoice together, and equally rejoice, if with equal fidelity they have done their work. David, with a touch of exquisite pathos, said to Solomon, "My son, it was in my mind to build a house unto the name of the Lord, my God," but the Lord had said to David, in substance, what he had previously said to another of his ancient servants, "Should it be according to thy mind ?" God upsets our plans, and yet consummates them; defeats our purposes, yet credits us with our purposes, carries them on through other agencies, and then crowns them with victory, and us with glory.

There never was a finer attitude or utterance than that of John the Baptist, when, having prepared the way for he meekly stands deli disciples to the leadership of another, and declaring his willingness to be anything or nothing, only so that Christ might be all in all. We fear that in much of our so-called Christian work there is not a little of self-consciousness, and self-will, and self-glorification, unwittingly mixed. Let us learn to rejoice in the work, even more than in our share of the work; and let us also be comforted with the assurance that our labor shall not be in vain in the Lord, and that even after we rest from our labors, our works shall follow us,-Baptist Teacher.

I HAVE been benefited by praying for others, for by making an errand to God for them, I have gotten something for myself.-Rutherford.

Our Scrap-Book.

UNILLUMINED.

THE human mind on which no hallowed light Shines from the sphere beyond the starry train, Is like the dial's gilded disk at night, Whose cunning tracery exists in vain.

- William Cullen Bryant.

DO PLANTS HAVE NERVES?

You have read in the Scrap-Book of many strange plants, but perhaps of none any more interesting than a class of plants that are known to shrink at the least disturbbance, and with which we think you would be very much amused. The one known as the sensitive plant, some of you may have seen. Then there are others just as curious, if not more so. One, the telegraph plant of Bengal, is described as a novel affair. A writer in the Sunday-School Advocate savs:-

"Its leaflets keep moving without being touched. They go steadily on, one leaflet being up while the other is down, like a seesaw. Sometimes, when the stalks are twisted, they go round and round. When the sun comes on them, they move more quickly; and if they are held, or get stuck, so that for awhile they cannot move, as soon as they get free they set off all the faster, to make up for lost time."

Of the sensitive plant, the same writer says :-

Of the sensitive plant, the same writer says:-"This plant has four leaflets on a stalk; each leaflet bears about twelve pairs of smaller leaflets spread out flat. "Touch one gently with your finger. Almost before your hand has left it, it has begun to move. All the leaf-lets stand up straight, and then bend toward one another, and close up; the stalk droops down, instead of standing upright, just as leaves do when they want water. But watch a minute, and you will see it gradually unfold and stand up again, as it did before. "Now touch it again; it will fold up and droop just as it did the first time, only it will take longer about it. Then it will unfold again, more slowly than before. "Every time you touch it, it will get a little slower in its movements, until at last it moves so very slowly that you will get tired of watching it. Poor thing! it is tired, just as people who start out walking very fast indeed, get slower and slower, till, by the time they reach home again, they are only crawling."

After naming the peculiarities of some other members of this delicate class of plants, it calls the Indian Camrunga tree the most senstive of all, and tells some of its odd ways, like the following:-

ways, like the following:— "The leaves grow like a feather, that is, a stalk with a number of leaflets on each side. If you just touch the stalk with your finger-nail, all the leaflets will move downward, till their undersides almost touch, and the whole leaf will droop. If you touch all the leaflets on one side very gen-tly, they will droop, while their opposite neighbors remain stationary; or if you like, you can touch every other leaf-let, and leave the alternate ones standing; in fact, there is no end to the amusement they afford. "When it begins to get dark, the leaves go to bed—that is to say, they droop, till their undersides quite touch; so you see they move more to please themselves at night than they did during the day from being touched."

HELIOGRAPHY.

HELIOGRAPHY is defined by the Inter-Ocean as-"A system of telegraphing by mirrors which flash the rays of the sun. It is said that the idea of conveying sig-nals in this manner was known to the ancients, and was employed by Alexander the Great, 333 B. c. As the method can only be employed to advantage in places where the sky is free from clouds and the atmosphere quite clear for long periods of time, it has seldom been extensively used in the armies of northern countries, but it is a method that has great advantages when it can be employed.

The British army use the heliostat, an instrument which was first invented by a Hollander early in the eighteenth century, and also the heliograph, which was the invention of Mr. Mance of the Persian telegraph service, in 1875. The in-struments differ somewhat in construction, but their results are the same. They produce signals by causing a reflected ray of the sum to appear and disappear alternately at a dis-disappearance of the ray being carried in length so as to produce the combination of long and short signals, known as the Morse alphabet. The distance to which signals can be sent in this way depends on the size of the mirror used and the angle of reflection of the rays, but even more upon the state of the atmosphere; so that in exceptionally clear weather they can be seen at enormous distances. Glass mirrors are employed with best effect in making the flash visible to great distances. From the Himalyas a tix distance of sixty miles; but if the air was at all misty, a very much larger mirror had to be employed. In addition to its value in time of war, the heliograph has been found very useful in defining distant points for large surveys, and has also been used by the astronomers at the Cape of Good Hope in verifying the are of the meridian."

CHINESE MEASURES OF TIME.

THE Christian Weekly recently published an article om the National Bapu Time," some paragraphs of which may interest the readers of the INSTRUCTOR. The writer says :-

"The longest fixed measure of time among the Chinese is the cycle of sixty years invented by Nall the Great, un-der command of the emperor Hwangti, 2,637 years before Christ. This sexagenary cycle is the only Chinese meas-ure of years, and is used not only throughout China, but by the Mongols, the Coreans, the Japanese, the Loochooans, the Annamese, and the Siamese. Beginning 2,637 B. C., their 75th great cycle ended in 1863 with 4,500 years of Chinese annals. Chinese annals.

Chinese annals. "The Chinese year contains either twelve or thirteen months, which correspond closely with the moon's changes. The first day of the month is new moon, the middle of the month full moon, and the end of the month old moon. There are either twenty-nine or thirty days in a month, and the number of days in a certain month may be differ-

ent in different years. The calendar for the year tells the number of days in each month for that year, and when one wishes to know whether there are twenty-nine or thirty days in the month, he inquires, saying, 'Is this month a greater or lesser one?' One year in every three has an in-tercalary month, some month being repeated, and called the second fifth month or the second eighth month, as the case may be. Any month, except the first or the twelfth, may be thus repeated. There is no division of time into weeks, and the native Christian keeps his Sabbath in the midst of a populace pursuing week-day vocations. Days are designated solely by their order in the month, as the sixth, the tenth, etc. "The days, beginning at 11 o'clock P. M., are divided into twelve periods. These two-hour periods are again divided each into eight periods. This period, fifteen minutes in length, is the shortest fixed Chinese measure of time. "Contrivances for marking the time are few and simple.

each into eight periods. This period, fifteen minutes in length, is the shortest fixed Chinese measure of time.
"Contrivances for marking the time are few and simple.
The eity of Canton there is a very ancient bronze clepsydra, in which the water leaks from a large ornate vase and fills a smaller vase in just two. hours, while the leak-age from the lesser vase fills one an eighth as large in just fitteen minutes. I have not heard of other than this one water-clock in the empire. Portable sun-dials are common in the shops, and so must be in demand, though they are not often seen in practial use.
"When the sun is visible, the Chinese judge very accurversation, short periods are denoted by all sorts of familiar incidents, such as 'The time it takes to eat a meal,' or, 'As long as it takes an incense-stick to burn out,' etc. Hour and minute-glasses are unknown, but pastilles [a small cone made of gum, benzoin, cinnamon and other arof a room] are sometimes burned when a similar brief length of time needs to be marked.
Marcica-brac of wealthy Chinamen, but the masses of the people have no time-pieces. As a consequence, appointments are made with a broad margin for waiting. Chapel services are fixed at the country stations for the Sabbath morning, and when all who are expected arrive, the preacher begins the service."

HOW DWELLINGS WERE LIGHTED ANCIENTLY.

THE Inter-Ocean, in answering the question, "What was used before glass in windows?" says :--

was used before glass in windows?" says:-"In the Orient and the old times, windows rarely, if ever, opened upon the street, but upon the court, as may be seen to this day, and as noted by most travelers. Such win-dows are provided with lattices or jalousies. Instead of window glass, the Chinese use a thin stuff varnished with shining lac, polished oyster-shells, and thin plates of horn. Among the Romans, windows were originally closed with shutters: afterward they were made of a transparent stone, which is believed to have been mica; in the second century they used horn. It is held by some high authorities there are traces of glass windows having been used in Pompeii, but there are others equally high who claim it to be very doubtful. "Glass for windows began to be used about the third

but there are others equally high who claim it to be very doubtful. "Glass for windows began to be used about the third century, as there are allusions to it by Lacantius and by St. Jerome and Gregory of Tours in the fourth century. The Venerable Bede says that glass windows were first in-troduced into Britain in 674, but then and for many years after, the use of window glass was confined to ecclesiasti-cal structures. In the twelfth century, houses in England that were provided with glass windows were regarded as magnificent; and even in the sixteenth century m England and in the seventeenth in Scotland only the dwellings of the wealthy were provided with glass. In France, in the fourteenth century, its use was becoming more general among the wealthy classes. In ancient temple architecture, windows were unknown, the light for the most part having been obtained from openings in the root. In the early Gothic or Norman style the windows were small and com-paratively stunted, simple openings, with semi-circular heads. In the early English style the windows were more elongated and had pointed arches."

MUSICAL FISHES.

THE fishes are supposed to have no voice at all; and indeed, this is the case with most of them. But there are exceptions to every rule; and so it is with the fish. One fish utters a cry when it is seized. There is another which wails, like a child, when it is taken from the water. Another fish makes a sound as it swims-that is, at one season of the year; all the rest of the year it is silent. But what

of the year; all the rest of the year it is silent. But what do you think of a fish that sings? There is a little white fish, with blue spots on its back, which lives in America, and which can actually make a sound like music. A traveler was one day lying on the beach resting himself, when suddenly he heard a sound; it was like music in the distance. He got up and looked about him; but nothing was to be seen. A boatman was close by, and he asked him if he had heard anything. "Yes," said the boatman; "I heard a fish *singing*." The fish was called by some people the "siren;" by others *musico*, or "musician." The traveler pushed off in a boat, to hear the music better. He heard a number of voices singing together. It was like a concert in the water. The sound was a little like an organ playing at some dis-tance. tance.

tance. These musical fishes are said to begin to sing at sunset, and keep on singing during the night. They are not very timid, and will continue their music, even if people are standing by to listen.—*The Sea and its Wonders*.

THE names for gypsies vary in different languages. In Poland, they are called Zingani; in Italy, Zingari; in Spain, Gitanos; in France, Bohemians; in Germany, Zisgeuner. The Persians, it is stated, apply to them a name meaning "Black Indians." Their most ancient name is that of Sinte, which is supposed to be connected with Sind, the patiye name for the Indus native name for the Indus.

NovA Scotla has a known coal area of nearly seven hun-dred square miles, or nearly twice the area of the Pennsyl-vania anthracite fields. Some of the Nova Scotla fields have a greater thickness of workable coal than probably oviste anywhere else in the world exists anywhere else in the world.

THE eccentric Lord Holland, of the reign of William III., used to give his horses a weekly concert in a covered gallery specially erected for the purpose. He maintained that it cheered their hearts and improved their temper, and an eye-witness said, "They seemed to be greatly delighted therewith."

THE YOUTH'S INSTRUCTOR.

The male is often eighteen or twenty feet high, and if three tall men stood one on the head of the other, the highest would hardly reach the giraffe's nose. What a neck this would be to have a cold in! Just think of two or three yards of sore throat! A bed blanket would be required to wrap around it.

Not many years ago this animal was known only to a few travelers, whose accounts of it were scarcely believed. But at length four giraffes were trapped in Abyssinia, and were exhibited and became known to the world.

The giraffe resembles the leopard in color, having a sleek and spotted skin. The shoulders are high, giving it a tapering appearance from the head to the tail; but the hind legs are as long as those in front. Its tongue is often stretched out a foot or more from its mouth, and is used, like the trunk of the elephant, as a feeler, grasper, and an organ of taste. With it he picks out the best and tenderest of the leaves, rejecting all others instantly by the touch. When carried around for a show, he is quite inclined to reach up to the high seats and twist off the

For Que Little Ques.

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A MASQUERADE.

- LITTLE old woman before me Went slowly down the street; Walking as if aweary Were her feeble, tottering feet.
- From under her old poke bonnet
- I caught a gleam of snow, And her waving cap-strings floated,
- Like a pennon, to and fro. In the folds of her rusty mantle
- Sudden her footstep caught. And I sprang to keep her from falling,
- With a touch as quick as thought. When under the old poke bonnet,
- I saw a winsome face, Framed in with the flaxen ringlets
- Of my wee daughter Grace.



the lion springs unperceived upon the giraffe, he soon overcomes it by his superior strength and terrible claws, and the poor creature yields to its fate, looking mildly and imploringly upon its foe. In their own native woods, giraffes like company; they

In their own native woods, giraffes like company; they herd together in droves of twenty or more, and are led by an old experienced male. Hunters often mistake a drove for so many trees; or think the tall trees are the necks of the giraffe, and so creep up very slyly, only to laugh at their own mistake.

There is a peculiar and not unpleasant odor about these animals, which reminds one of the smell of balm honey; and the same is perceived in the flesh when cooked. This is supposed to be derived from the fragrant flowering shrubs on which they feed.

Hunters find it difficult to bring down these haughty monarchs with their rifles, and so resort to deep pit-falls, with an inside cross wall, not as high as the sides; and if a giraffe is so unfortunate as to fall in, his hind feet are on one side of the wall, while the forelegs are on the other. Thus hung, he is unable to fouch the ground.

Thus hung, he is unable to touch the ground. Surely a man must be cruelly hard-hearted to hunt for sport these noble and confiding creatures, and God will not hold him guiltless who wantonly torments and destroys them.—Selected.

Setter Budget.

You will all be glad to read a letter from a little girl away in New Zealand. It came by the way of Eld. Haskell, who, you know, has recently returned from starting a mission there. Eld. Haskell says he "had the pleasure of baptizing her among the first few who were baptized, and she is now a member of the church." The letter is from MAR-GARET HARE, of Auckland, New Zealand. She writes: 'As I have never written for the Budget, I thought I would write a few lines. I am a little girl eleven years old. I have one brother and four sisters. We have been keeping the Sabbath since Mr. Haskell came here first. There are a good many keeping the Sabbath in Kaeo. We go to Sabbath-school nearly every Sabbath. I go to day school, but just now there is no school because the schoolmaster's daughter is sick."

Rosa JACKSON writes a letter from Tippecanoe Co., Ind. She says: "I am a member of the INSTRUCTOR family; so I will write a few lines for the Budget. I am ten years old. I go to Aunty Peret's Sabbath-school. We have just begun Book No. 2. Ilike the INSTRUCTOR very much. I have three brothers, and we all go to school. I go every day. There are about five hundred children in our school. At home we have chickens, geese, and cows. I like to help mamma take care of them. I would like to have my letter printed."

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EVELINE VAN GUNDY, writing from Deer Lodge Co., Montana, says her arm that she hurt some time before, and which she had written about, is getting well. Her great grandma is now eighty years old. They had a young bear, but he became so unruly that they had to kill him. He was so fat his flesh looked like pork.

was so fat his flesh looked like pork. JESSIE MCNEAL and TENSA HOWELL write a letter from Sciota Co., Ohio. Jessie says: "Thinking you would like to near from us away down in Southern Ohio, and as Tensa was making me a visit, we thought we would write to the Budget. I am the youngest of the family. I attend Sabbath-school, which is four miles away, with my parents, brother, and sister. There are fifteen scholars in the school and four classes. Papa is superintendent." Tensa says: "Jessie and I get our lessons in Book No. 3. My aunt is our teacher, and we like her very much because she explains things so well to us. I go to Sabbath-school with mamma and my brother. My little sister Flora died last November with the diphtheria. We all miss her very much at the Sabbath-school. I am fourteen years old. My oldest brother and sister do not keep the Sabbath. We do not have preaching very often. We will close, hoping to see this letter printed."

GEORGIE PEAVY, of Harvey Co., Kan., says: "If you will let mamma write for me, I will send a letter to the Budget. I am seven years old. I help papa do the chores. I water the mule, feed and water the chickens, and help take care of my little brother Eddie, who is three years old. We both go to Sabbath-school. I study in Book No. I. We have a good sc ool. Eld. Cook preached here Monday night from Revelation 22. The house was full. I want to be a good boy, so I may be saved when the Lord comes."

ROBETTA HILL, writing from Mercer Co., Mo., says: "This is my first letter to the Budget. I an a little girl eleven years old. I have one sister and two little brothers. We go to Sabbath-school with our parents. I study in Book No. 4, and my brothers in No. 1. I love the Sabbathschool, and try to have good lessons. I give my teacher and school-mates at the day school some of my Ixstructors to read, and they seem to like to read them very well. I an trying to do missionary work this way. Father says he will give me some ground for a missionary garden, and I am going to try to make a success of it. I hope to meet the INSTRUCTOR family in the new earth."

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Mantle and cape together Dropped off at my very feet; And there stood the little fairy, Beautiful, blushing, sweet!

Will it be like this, I wonder, When at last we come to stand On the golden, ringing pavement Of the blesséd, blesséd land ?

Losing the rusty garments We wore in the years of Time, Will our better selves spring backward, Serene in a youth sublime ?

Instead of the shapes that hid us, And made us old and gray, Shall we get our child-hearts back again,

With a brightness that will stay ? I thought—but my little daughter Slipped her dimpled hand in mine;

"I was only playing," she whispered, "That I was ninety-nine." --Selected.

THE GIRAFFE.

ERE is an animal whose long legs and high head are a wonder indeed! He is the tallest of all earthly dwellers, and crops his food with ease from the branches of the trees. Other animals are content to eat the grass at their feet, but the giraffe never stoops to any thing so low. He is ever looking upward; indeed, he cannot put his nose to the ground without much effort and straddling of his forelegs. flowers from the ladies' bonnets, and, as might be expected, he makes no little stir among them. Other mischief he does with this unruly member, which he can contract to a very small point.

His eyes are large and very beautiful, and so made that he looks in every direction without the trouble of turning his head; no enemy can approach undiscovered. He is fond of company, and is said to shed tears when separated from his mate.

His nostrils are protected, even down to the margin, by strong hair which shuts out the entrance of the fine sand, which the suffocating storms of the desert stir up. Thus God wonderfully adapts him to the place where he is to live.

He is swift of foot, and presents a singular appearance when running. His tail is curled up over his back, and he switches it to and fro so swiftly that it makes a hissing sound; his head moves with it in exact time, while his two hind feet at every leap strike far ahead and on either side of the front ones.

These animals are as gentle and inoffensive as deer, and when tamed, are playful and affectionate. The giraffe has some human traits of character, being very fond of attention, and often resorting to little tricks to gain the admiration of visitors.

Unlike most other animals, it is dumb, never expressing by a sound its pleasure or its pain; even when dying, no groan or sigh escapes it; but its great, lustrous, mild eyes tell what its tongue fails to articulate. Oh, who would wish to but on every selection and below a source of

wish to hurt or annoy so beautiful and helpless a creature! When attacked by beasts of prey in their own native woods, the giraffes escape by flight, if possible; but if not, they let fly their nimble hind legs with such lightning-like velocity, that even lions are glad to beat a retreat. But if