

THE YOUTH'S INSTRUCTOR

VOL. 34.

BATTLE CREEK MICH., OCTOBER 6, 1886.

No. 40.

For the INSTRUCTOR.

THE GEYSERS OF THE YELLOWSTONE.

IN the northwestern corner of Wyoming Territory lies one of the most wonderful regions of the Great West,—the geyser district at the head of the Yellowstone River. A geyser, as you all know, is a gigantic fountain of boiling water, playing at intervals of a longer or shorter time, according to its age. In Iceland and New Zealand are geysers that have been celebrated for hundreds of years; but those in our own country have not been known till recently, yet they are the largest and grandest hot springs in the world.

Just west of the basin of the Yellowstone River lies the Firehole River, the chief branch of the Madison. If you look in a good atlas, or any map of the territories, I think you will find the Yellowstone and the Madison, and can form a pretty accurate idea of where this great geyser region of the Firehole River lies. Here, in a valley some twelve miles long and two or three wide, are hot springs on so magnificent a scale, that if all similar wonders in the world were brought together, they would form no comparison to these.

It would not be possible, without the aid of ample illustrations, to make plain to you why this hot water at intervals projects itself into the air; and therefore I shall give you instead some word pictures from the pens of famous explorers, in regard to some of the most prominent geysers of this region.

"Further from the river, near the center of the large group of spouting and boiling geysers," writes one traveler, "is a large, oval opening, with scalloped edges, the diameters of which were eighteen and twenty feet.

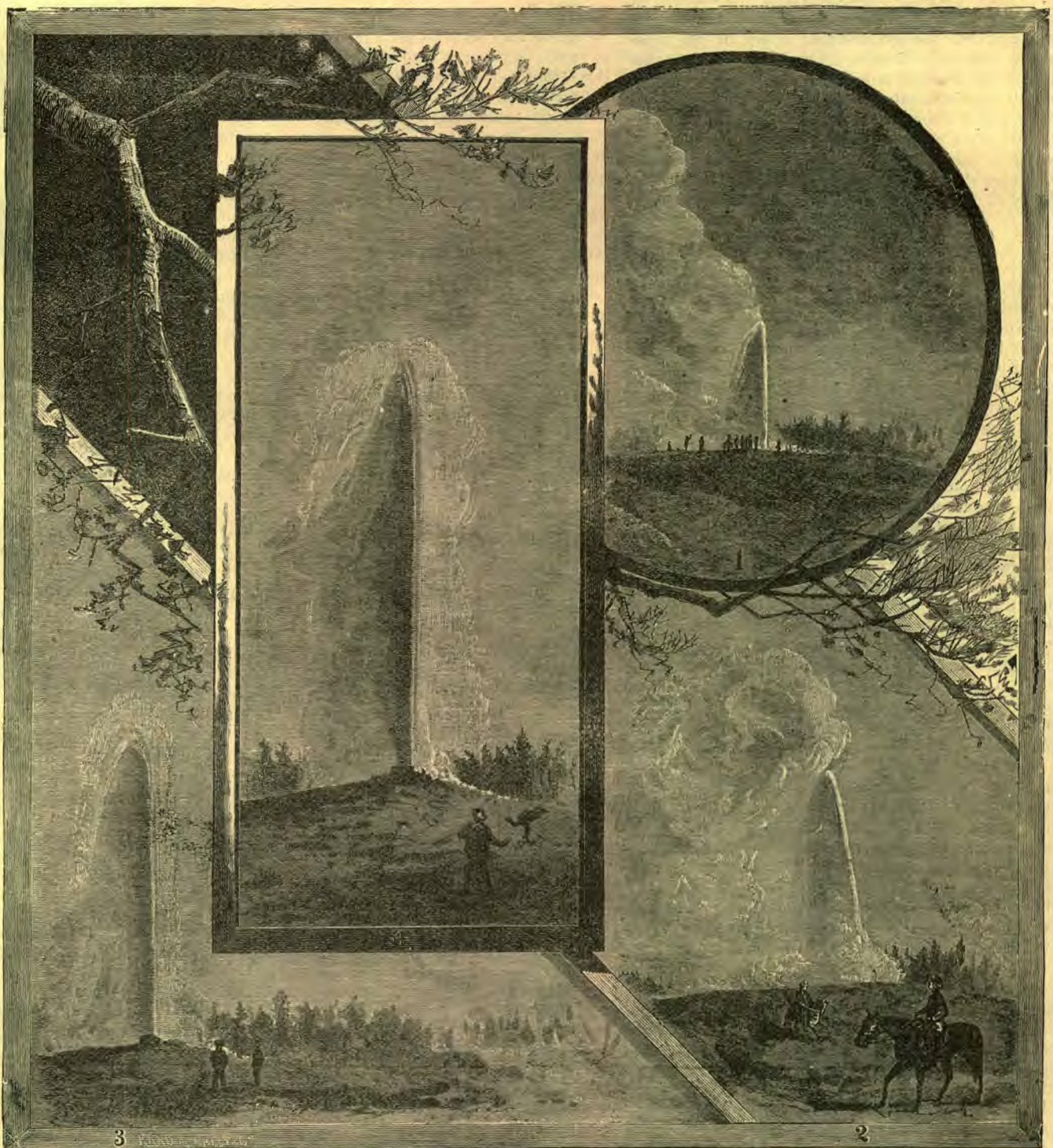
"No water could be discovered, but we could distinctly hear it gurgling and boiling at a great distance below. Suddenly it began boiling and spluttering, and sending out huge masses of steam, causing a general stampede of our company. When within about forty feet of the surface, it became stationary, and we returned to look down upon it. It was foaming and surging at a terrible rate, occasionally emitting small jets of hot water nearly to the mouth of the orifice. All at once it seemed seized with a fearful spasm, and rose with incredible rapidity, hardly affording us time to flee to a safe distance, when it burst from the orifice with terrible force, rising in a column the full size of this immense aperture, to the height of sixty feet; and through and out of the apex five or six lesser jets or round col-

umns of water, varying in size from six to fifteen inches in diameter, were projected to the marvellous height of two hundred and fifty feet. . . .

"This grand eruption continued for twenty minutes, and was the most magnificent sight we ever witnessed. We were standing on the side of the geyser nearest the sun, the gleams of which filled

the sun's rays, cast upon the column, could be seen a luminous circle, radiant with all the colors of the prism, and resembling the halo of glory represented in paintings as encircling the head of Divinity. . . . This geyser we named 'The Giantess.'"

Another wonderful one is the Comet, which has three openings. "One, a very small aperture, emits



the sparkling column of water and spray with myriads of rainbows, whose arches were constantly changing,—dipping and fluttering hither and thither, and disappearing only to be succeeded by others, again and again, while the minute globules into which the spent jets were diffused, when falling sparkled like a shower of diamonds, and around every shadow which the denser clouds of vapor, interrupting

puffs of steam similar to the exhaust pipe of a steam engine. The large one in the center boils violently during an eruption, but does not throw water to a great height. The third opening is the geyser proper."

In describing its eruptions, Colonel Barlow says: "A roar was heard near the hillside a hundred yards distant, . . . and we saw a huge mass of steam is-

suing from a crater at the base of a hill, accompanied by a column of water rising to a height far exceeding that of any geyser yet seen. This grand fountain continued to play for several minutes, when, having subsided, I approached to obtain a closer view of the aperture whence had issued such a powerful stream. A sudden gust of steam drove me away, following which the water was again impelled upward and upward, far above the steam, until it seemed to have lost the controlling force of gravity. . . I have no hesitancy in saying this geyser played to the height of over two hundred feet.

"The enthusiasm of the party, as they watched this wondrous display, knew no bounds. Those who were usually loud and boisterous in the exhibition of their feelings, became subdued and simply gazed in silent awe; while the more sober members seemed to lose their natural gravity, and manifested their delight in shouts of rapture."

"We could not distinguish," says another observer, "the geysers from other hot springs except by seeing them play, and doubtless there are many besides in the valley of great size, which we saw when quiet, and classed as boiling springs. . . Taken as a whole, the Firehole Basin surpasses all the other great wonders on the continent. It produces an effect on the mind of the beholder utterly staggering and overpowering."

And yet not so very far from these boiling, seething torrents rise the high peaks of the Rockies, capped with snow! What varied forces are at work in Nature, and what uncontrollable ones! On the outside are glaciers, the great frozen rivers of the Alps, slowly and almost imperceptibly descending from the regions of perpetual snow to the sea. And underneath are the geysers, that suggest strange, uncontrollable, and unknown quantities of heat in the interior of the earth! How small human wisdom appears when trying to explain these mighty forces of the Creator! "Touching the Almighty, we cannot find him out: he is excellent in power and in judgment."

W. E. L.

SILAS DOOLITTLE.

WHEN Silas was a lad, he started out with the intention of doing great things. At first he decided he would be a minister. But he gave up that idea when he found how much time and labor must be spent in study, and in preparation for such a distinguished profession, and how uncertain he would be of a steady salary.

As he grew older, he fancied he would enjoy being a physician, and riding about the country; and had his plans all laid out, and even got together quite a number of medical books. But the difficulty here was, that he could not decide which branch of the profession to follow. Specialists commanded large fees, but whether he should be an oculist, aurist, surgeon, or general practitioner, was a puzzle to Silas.

At times he thought he would be a great traveler like Stanley or Livingstone; or an Arctic explorer, like Lieut. Greely, and in this way he went "from pole to pole," imagining great things and doing nothing. He talked with his companions, and inspired many of them to excel the boastful boy whose future was to be filled with brilliant exploits. Some of them called him a "gas-bag;" and others shrugged their shoulders and said, "Talk such—do little!"

As Silas grew up, his ambition to do great things increased, and he was constantly projecting schemes that were to astonish every body. But they were never completed. He did not seem capable of understanding that all great things have small beginnings; that the large tree is the growth of many years; that the great bridge is slowly built, and was begun by laying one stone upon another; that a great reputation is not made in a minute; and that great inventions do not suddenly spring up in the brain, and "flourish like a green bay-tree."

Silas is always blaming some one else for his having missed a rare opportunity, when the blame rests wholly upon himself. He neglects what he calls "trifles," in order that he may be prepared to undertake some great thing to-morrow. It is always "to-morrow." He is always "going to do," and never found doing. He is growing old now and his habits are fixed, and as long as he lives he will keep on planning great things and accomplishing—nothing. Small deeds lead up to great ones. Walter Scott labored for years before he became known as the great novelist. Luther, from boyhood, was fitting himself to become the great reformer. John Wesley, at eleven years of age, was preparing himself by earnest study to become a great preacher.

Sir Isaac Newton, Bernard Palissy, Benjamin Franklin, Samuel Morse, and others, were unwearied in their researches, and constantly making small ex-

periments, and meeting with cruel disappointments, before they were recognized as great inventors. Columbus, the great discoverer, spent years in fruitless endeavors to obtain the assistance he needed to carry out his scheme.

We overweight ourselves by attempting to do greater things than we are able to accomplish. It is better to begin small, and work up gradually to a larger sphere, gaining strength and knowledge by each day's duties, and fitting ourselves by study, by observation, and by experience to fill the place God intended us to fill, and which only those fill acceptably who have followed his leading. Those who sit idly waiting to do great things will win the name and fame of their prototype—Silas Doolittle.—S. S. Classmate.

"FOR MY KING."

JUST to shine for Jesus every day;
Just to sing his praises on my way;

Just to gather jewels by his aid,
To go onward ever not afraid;

Just to drop a love word as I go;
Just to cheer a lone heart in its woe;

Just to smile for Jesus, on my way—
To work and speak for Jesus when I may;

Just to shine for Jesus everywhere,
This, O blessed Saviour! is my prayer.

—Mrs. C. E. Fisher.

For the INSTRUCTOR.

SEA TALES.—NO. 1.

TELL you something about the sea? Well, I will, but first of all I want to ask a favor of every boy that picks up the paper to read what I do write; and it is this,—that he first examines his hands, and if they are not scrupulously clean he will make them so, that no dirty finger marks may be found upon the INSTRUCTOR when papa or mamma mails it to an inquiring friend or acquaintance, or forwards it to a city mission.

Another thing; if you want me to write about the sea and its mysteries, why, of course, I will have to use many *sailor*, or *nautical* phrases, yet I cannot stop to explain them, as I must be economical both of the time of the compositors at the INSTRUCTOR Office, and of the space I occupy in the paper; therefore every one of you will be expected to consult a dictionary for the meaning of the nautical terms. If you have not a good dictionary, and will write to the *Review and Herald*, Battle Creek, Mich., they will tell you how you can easily earn a capital one.

Now for my story. About four weeks after we sailed away from New York, one morning about daylight, our mate, Mr. Stone, called me to come up on deck to "see a man-of-war."

Seizing the glass, I ran up, and hastily scanned the horizon in every direction.

"Where away, sir?" I asked.

"A trifle forward of the lea-beam, sir."

Again I looked carefully in the direction given, but could see nothing.

"My eyes must be poor, this morning, sir," I said, "I can see nothing."

At that moment I happened to glance at the mate, and caught him grinning broadly, as only he could grin, while Mr. Allen, our second mate, who stood by, was almost bent double in his efforts to suppress his laughter. I waited in amazement for an explanation of this singular conduct, and after a little, Mr. Stone silently pointed to a tiny object about five inches in length, floating on the sea, some twenty feet from the vessel. This I learned was what sailors call a "Portugese man-of-war." They are called so derisively, as the Portugese have no navy. They are found in the tropical seas, and in the Atlantic Ocean, near to the equator, sometimes singly, and again in vast numbers. They have, along the ridge of the back, a kind of crest, which they erect, and when caught by the wind, it assumes the appearance of a natural sail, and enables the plant to glide over the surface of the water. As this one approached the brig, it drew in its crest, or sail, and "came about." It was amusing to watch it as it "bore away."

Attached to the body of this plant are feelers, or *tentacles*, from four to five inches long, and which can be extended to a much greater length, when shot out to capture prey. The body, of delicate crimson tints, has much the appearance of a somewhat solid soap-bubble. Through the whole run veinings of rich tints, purple, azure, orange, and green, changing in color at every movement, while the feelers are a deep purple color. A better comparison, perhaps, would be that of a shell standing upright upon an oval-shaped blue cushion, the shell radiating various colors to its edge, that being a bright rose color. The plant is poisonous to handle, the sting of the tentacles being very severe and leaving after it a very painful white pimple.

All that day a perfectly dead calm prevailed. The sun, right overhead, poured his rays unrelentingly

upon us. The captain spread blankets over the skylight, to darken the cabin, yet with little benefit, as the heat grew more and more intense as the day advanced. Our vessel was then lying two or three hundred miles from the coast of South America, a few degrees above the equator. All felt quite miserable and despondent. I was becoming rapidly morbid and blue, and struggling hopelessly with a clear fit of homesickness, when suddenly Mr. Allen sang out, "Shark on the lea side, sir! a big fellow, sir!"

Instantly all work was suspended. The captain sprang upon deck, and I tumbled up after him. The mate ran forward, and Mr. Allen got out the harpoon. The sailors scampered about trying to obey the orders of everybody, and the result was, for sometime, a scene of the wildest, but most comical confusion, during all of which the huge monster, some fourteen feet long, swam lazily around the brig, with one eye cocked up aloft waiting for the bait he seemed to know would surely come. After a little the steward appeared with a piece of pork, about five pounds' weight, and fastened it to a strong hook and line. By this time the shark lay forward of the galley. Here Mr. Allen had stationed himself with the harpoon. The steward threw over the bait. The little pilot fish which are found always with sharks, and act as foragers for them, searching for and guiding the sharks to anything eatable that floats upon the water, and living upon the scraps that fall from the mouths of the larger fish, came out from under the shark, and after smelling the bait, splashed and tumbled before him to attract his attention, disappearing as the fish turned on its side and darted for the hook.

Whiz went the harpoon, fastening itself just back of the head and between the backbone and the fin. Over and over rolled the shark, completely bending the harpoon around its head, and wrapping the line in fold after fold about its body. In this condition Mr. Allen pulled it toward the brig, where the steward was busy making a bow-line to slip over its head, Mr. Allen in the meantime keeping the harpoon-line taut, so that the shark could not bite it. Unfortunately the lea braces hung dangling in the water, and before they could be hauled out of the way, the shark became fouled in them, and in less time than it takes to write it, had himself coiled up tightly, causing the harpoon line to slack, and enabling him to seize and bite it off.

The struggles of the monster were now terrific, lashing the water to a foam, and making it impossible to slip a bow line over him. The braces were gathered up, and the word given to haul in, hopes being entertained that he would be held fast until otherwise secured; but as soon as half of his length had been hauled clear of the water, the coils began to unwind, slowly at first, as the writhings of the fish kept the ropes pretty tightly bound around him; but just as the greater part came into view over the side of the brig, the coils rapidly unwound, and the monster descended into the sea with a splash that sent the spray in every direction. The worst of it all was that the shark carried off the only harpoon on board; yet, as the captain remarked, "We had our fun, anyhow!" Sailors have a dread and hatred of sharks, and never let an opportunity escape to capture and torture one. Sharks are very tenacious of life. They are frequently mutilated in every conceivable way, yet when thrown again into the water, swim away apparently unconcerned. Sharks are, in the sea, what the hog, the vulture, and the buzzard are on land, that is, scavengers, and nothing is too putrid or offensive to please their palate. They are furnished with several rows of teeth having motion to them. These teeth are the shape of, and the motion is similar to, that of the knife within the cutter bar of a mowing machine. It was looking into the mouth of a shark, it is said, that suggested the principle of the cutting apparatus of the mower, to McCormick, its originator.

W. S. CHAPMAN.

THE ALABASTER BOX.

My dear little friends, I suppose many of you have read the sweet story in the Bible, about Mary who broke for her Lord the precious box of alabaster. It was a very costly and rare perfume. I want to tell you, that although Christ is no longer with us here on earth, yet we can still break for him our alabaster boxes. Do you ask me how? Well, he says that when we serve his dear children, we serve him, just as much as though he were present with us. And I think every day, perhaps every hour, we can give to him one of our alabaster boxes. I do not mean the very ointment that Mary had, but we can speak kind and helpful words, we can encourage the downtrodden, we can carry flowers to the sick, make our homes sunny and cheerful, lend books to the poor, and do so many little things to make others rejoice!—Pansy.

The Sabbath-School.

FOURTH SABBATH IN OCTOBER.

PARABLES OF CHRIST.

LESSON 4.—THE GOOD SAMARITAN.

1. Who was it that on a certain occasion stood up and tempted Jesus? Luke 10: 25.
2. Who were called lawyers in those days?
3. What question did the lawyer ask? Same verse.
4. What way did Jesus take to answer him?—*He asked him a question in return.*
5. Repeat the question. Verse 26.
6. How did the lawyer answer the Saviour? Verse 27.
7. What encouragement did Jesus give him? Verse 28.
8. What spirit did the lawyer manifest? Verse 29.
9. What did he say? Same verse.
10. How did Jesus answer the question?—*By giving a parable.*
11. In this parable, what befell the man who was traveling from Jerusalem to Jericho? Verse 30.
12. How did the thieves treat him? Same verse.
13. Who first chanced to come that way? Verse 31.
14. How did the priest treat the suffering traveler? Same verse.
15. What course was taken by a Levite who happened that way? Verse 32.
16. Give a brief account of the offices and duties of the priests.
17. What were the chief duties of the Levites?
18. What would be expected of men in such holy offices?
19. What other traveler was journeying from Jerusalem to Jericho that day? Verse 33.
20. How was he affected at the wounded sufferer? Same verse.
21. How did he manifest his compassion? Verse 34.
22. How much did the Samaritan pay the host when he went away the next morning? Verse 35.
23. How did the good Samaritan show that his kindness was a settled principle rather than a sudden impulse? Last part of the same verse.
24. When Jesus had finished the parable, what question did he ask the lawyer? Verse 36.
25. What answer did the lawyer give? Verse 37.
26. What instruction did Jesus then give him? Same verse.
27. What relation existed between the Jews and the Samaritans?—*They were bitter enemies.*
28. How then could this Samaritan regard the unfortunate Jew as his neighbor, and treat him so kindly?
29. What beautiful lesson may we learn from this parable?
30. How does the Saviour impart the same lesson by direct precept? Matt. 5: 43-47.

NOTES.

A certain lawyer.—One who professed to be well skilled in the laws of Moses, and whose business it was to explain them.—*Barnes.*

A priest. . . . a Levite.—The Levites, as well as the priests, were of the tribe of Levi, and were set apart to the duties of religion. The peculiar duty of the priest was to offer sacrifice at the temple, to present incense, prayers, the morning and evening services of the temple, etc. The office or duty of the Levites was to render assistance to the priests in their services. In the journey of the Israelites through the wilderness, it was their duty to transport the various parts of the tabernacle, and the various sacred utensils. It was their duty to see that the tabernacle and the temple were kept clean: to prepare supplies for the sanctuary, such as oil, incense, wine, etc. They had the care of the sacred revenues, and, after the time of David, they conducted the sacred music in the temple service.—*Ibid.*

SOFTLY! SOFTLY!

The habit of speaking in a low tone is worthy of cultivation. By a low tone we do not mean indistinctly. Whatever we say should be said with distinctness, though it need not be said noisily. Sometimes, in a Sabbath-school, a teacher becomes so deeply engaged in the lesson as to forget that any one else is around, and he lets his voice out in startling tones that can be heard all over the room. Where there are several teachers of this sort, the din becomes astounding; and as it bursts upon the ear of the visitor when he opens the door, he might imagine himself in a bedlam did he not know the place was only a peaceable Sabbath-school.

There are some preachers who set a bad example in this direction, not only by unnecessary loudness of voice in the pulpit, but in every place where they happen to be. And it occurs to us as possible that preachers and teachers may be more inclined to this habit than some others by reason of their profession, which sometimes demands a loud tone of voice.

Preachers and teachers are not, however, the only violators of decorum in this direction. One cannot go a day's journey in a public conveyance, or take a meal in hotel or restaurant, without being compelled to hear the conversation of some who forget that their voices may reach farther than they intend. We have sometimes been the unwilling hearer of family affairs and business matters detailed with painful minuteness and painful distinctness by persons from ten to twenty feet away.

In a Sabbath-school the teacher need not speak loud enough to be heard across the room in order to get and to hold the attention of the scholars. There is a power in low, soft tones, and if all teachers will cultivate them, the order of the Sabbath-school will be greatly improved.—*S. S. Journal.*

Our Scrap-Book.

SOMETHING MORE ABOUT COTTON.

In the last INSTRUCTOR you had a description of cotton raising in the South. While this is fresh in your minds, you will be interested in some additional particulars about cotton, large quantities of which are also grown in India. From these countries it is shipped elsewhere; and it being so bulky, in order to get as many pounds as practicable into a ship, before packing they press it into the smallest space possible by means of hydraulic engines; that is, engines worked by water. The trade in this article is very extensive. A writer in *Treasure-Trove*, tells how it is carried on. He says:

"When the cotton arrives in New York or Liverpool, the bales are unloaded and warehoused. There are a great number of docks for the ships, and warehouses for the cotton. So great is the trade, that large buildings have been constructed solely for merchants to transact cotton business, and they and their brokers are such good judges that they can tell at a glance all the different kinds and their value; for cotton varies very much in color, length, and silkiness. Every day, and almost every hour, messages are sent by means of the electric telegraph cable under the sea between England and America about the price of cotton, and other information respecting it.

"From Liverpool, cotton is often shipped again to other countries, but large quantities are bought by English manufacturers, and the bales go by rail to those towns where so many things are made which we all use, that they are called 'manufacturing towns.' When the bales reach the factory, they are unpacked, and the cotton is found matted and tangled and mixed with broken seeds; so the first thing to be done is to clean it perfectly, by passing it between two sets of fine wire points, bent in opposite directions, which comb out the cotton and lay it flat. It is combed two or three times, and it then looks beautifully white and soft, and is called 'sliver.'

"The next process is termed *drawing*, because the sliver is passed through a machine called a *drawing-frame*, which *draws out* and arranges the fibers in a uniform and paralleled direction. The fibers are then twisted into thick "royes" or loose cords, which are wound on bobbins, from which they are twisted or 'spun' by the spinning-machine into fine thread called yarn, and then woven in a machine called a loom, into all kinds of fabrics for shirts, under-clothing, dresses, etc. These processes are all carried on by beautifully-made machinery."

FACTS ABOUT BELLS.

The nature of the country has much to do with the sound of bells. In a hilly locality a bell will not be heard half so far as if the land were level or nearly so. A bell will be heard a great deal farther lengthwise of a valley than over the hills at the sides. Where bell-rooms are lower than the surrounding buildings and trees, these obstructions break the sound and prevent a free passage for a distance. Towers having small windows or openings, with the lower boards close together, often box up the sound. In cities the noise of steam and horse-cars, manufacturing establishments, carriages and carts rattling over the pavement, is so great that bells are not expected to be heard at any considerable distance, and this is the reason why in all cities several bells are used for fire-alarm purposes, it being impossible for one bell—no matter how great it may be—to be heard above the thousand and one noises incident to every large place. It is a great mistake to suppose that bells can be heard in proportion to their weight; that is, that a bell of two thousand pounds will be heard twice as far as one of one thousand pounds. This is not so, for the reason that the larger bell does not possess anything like the resonant surface of the smaller one. What is gained and admired in the larger bell is the deep, majestic, and dignified tone, which it is impossible to secure in the smaller one, the weight of a bell invariably gov-

erning its tone. A bell of one hundred or two hundred pounds in an open belfry, or an engine house, a school house, or a factory in the country is frequently heard a long distance, out of proportion, apparently, to one of one thousand pounds in a church tower near by, and instances of this kind frequently cause no little comment in the way of comparison. One reason of this is that the small bell has a sharp, shrill, penetrating sound that must of necessity be heard a great deal farther, in proportion to its weight, than the low, mellow sound of a church bell. The same principle applies to the whistle of a locomotive, and it is heard a long distance simply because its tone is shrill and penetrating. When hung stationary, and struck or tolled, bells will not be heard, as a rule, half as far as when swung. The swinging motion throws up the mouth of the bell, and not only carries the sound off, but imparts to it a richness that is always absent when the bell is at rest and struck. A great deal is to be gained by ringing the bell properly, throwing the mouth well up and not lazily jingling it. It is not physical strength that is required in ringing a bell as much as "getting the knack" of catching the rope just right, particularly on the second "down pull." The windows in the tower should be as open as possible, and the tower ceiled just above the windows.—*Fireman's Standard.*

TRAINING THE EYES.

The following story from *The Penn Monthly* is related of Agassiz, and it is sufficiently characteristic of this remarkably accurate observer to have the merit of probability. We are told that once upon a time the professor had occasion to select an assistant from one of his classes. There were a number of candidates for the post of honor, and finding himself in a quandary as to which one he would choose, the happy thought occurred to him of subjecting three of the more promising students in turn to the simple test of describing the view from his laboratory window, which overlooked the side yard of the college. One said that he saw merely a board fence and a brick pavement; another added a stream of soapy water; a third detected the color of the paint on the fence, noted a green mold or fungus on the brick, and evidences of "bluing" in the water, besides other details. It is needless to tell which was awarded the coveted position. Houdin, the noted slight-of-hand performer, attributed his success in his profession mainly to his quickness of perception, which, he tells us in his entertaining autobiography, he acquired by educating his eyes to detect a large number of objects at a single glance. His simple plan was to select a shop window full of a miscellaneous assortment of articles, and walk rapidly past it a number of times every day, writing down each object which impressed itself on his mind. In this way he was able, after a time, to detect instantaneously all the articles in the window, even though they might be numbered by scores.

THE REAL FACTS ABOUT THE UPAS TREE.

It will appear strange to you that so useful a plant as the bread-fruit should be akin to the upas tree of Java. Yet such is the case. You have heard of the upas tree no doubt before, how it is said to give out so unwholesome a vapor that all animals and plants which come near it die, and how the juice flowing from its wounded stem is one of the most deadly poisons. It has also been reported that where the upas exists, there is nothing to be seen but a desert region, whitened here and there by the bones of destroyed animals. Now, it is very hard to believe all this of a tree which belongs to the same tribe as the bread-fruit, and it appears that it is nearly all untrue. You may go near the upas tree without being destroyed, and it grows in the woods of Java side by side with other trees, which are not injured. Its juice, however, is poisonous, so that if any one were wounded by an arrow whose barb had been smeared with upas-tree juice, he would die.—*Selected.*

SODA INSTEAD OF STEAM.

Four locomotives are now being built at the Baldwin Locomotive Works in Philadelphia, which are to be run by using soda for generating motive power. They are to be used in Minneapolis, Minn., where the use of steam engines in the streets is forbidden. The engines look like ordinary passenger-cars. Inside the boiler is placed the soda, which, being dampened by steam, produces an intense heat. When the soda is thoroughly saturated, the action ceases. The moisture is then driven from the material and it is again ready for use. These engines are the first of their kind that have been built in this country. They have about the same power as those of the elevated roads, and will readily draw four light cars. Soda engines are used in Berlin and other European cities successfully, and also in the St. Gothard Tunnel under the Alps, where steam engines cannot be used, as the length of the tunnel renders any system of ventilation impracticable. The torpedo boat *Peacemaker*, which made its trial trip in the Hudson River last Tuesday, is run by using soda.—*Christian Advocate.*

GENERAL GRANT'S baptismal name was Ulysses Hiram. By a mistake on the part of the Congressman who gave him his appointment to West Point, he was nominated as Ulysses S. An attempt was made to rectify this error; but to accomplish it would have involved considerable trouble, and as the term by the member had expired, he entered under the misnomer, and concluding to adopt it, honored his mother's family by taking Simpson as his middle name.

For Our Little Ones.

HOW BIG?

How big, how big is the little lass?
Stand her up here near the window-glass,
With her golden wig
And merry's a grig
(A grig is a cricket in the grass),
Stand her up here and let us see
How tall may the little maiden be.

Who would suppose she would outgrow
Dresses and stockings and aprons so?
Not only outgrows
Her pretty clothes,
But to make herself tall would stand tiptoes!
Now measure! See, my rule I lay
On the silk locks, floating every way.

She is just the height that's best of all—
Neither too tiny nor too tall,
Large enough quite
To be polite.

A fair sweet lady, though, oh, so small!
So small, such a mere little child, she may
Be household baby for many a day.

—Clara Doty Bates.

For the INSTRUCTOR.

YOUNG MISSIONARY WORKERS.

We want to say a few words to the children about missionary work, and will begin by asking how many of you try to get others interested in the truth which will save them when Jesus comes? Do you know the Bible says, "Even a child is known by his doings?" How many can tell where that is? Thinking all may not know just where to look for it, I will tell you. Please turn to Proverbs 20: 11, and there you may read it. Now just think of those words a moment. They certainly tell us that if we never care for others' comfort or salvation, but only live to please ourselves, then we may be known to be selfish. I do not think any of our little folks want to be looked upon in this light, which they must be if they care for nothing only pleasure and gaiety.

Why can you not do something to help others see the truth, and so be known as young missionary workers? Have you not read what the Saviour said to his disciples,—"He that reapeth receiveth wages, and gathereth fruit unto eternal life"? This was said concerning a time when the harvest was to be gathered; and who among the INSTRUCTOR children has not been taught that we are living amid the closing scenes of the world's history? Just ponder those words of the Saviour,—"He that reapeth." That does not mean only ministers, or grown-up people; but it means every body, any one who will reap. So you see the children are included, every one who has a mind to work.

But some of you may ask, "What can I do?"—Much, with the blessing of the Lord; and God can bless the efforts of a child to the salvation of others just as well as he can the efforts of grown-up people. The Lord regards the earnest, sincere desire of even a child. You know that our Saviour said, when he was here on the earth, "Suffer little children to come unto me, and forbid them not, for of such is the kingdom of heaven." If the Lord wants little children to come to him, he will certainly help them when they try to work for him. This is what he always has done.

I know one little boy here in Australia, whose mother embraced the truth last summer, and began to do missionary work. Seeing his mother become so earnest, the little boy made up his mind that instead of spending his money for sweet-meats, and wasting his time in play, he would do what he could to help others see the truth which had become so precious to him and his mother. So in one missionary meeting he subscribed for three copies of *Bible Echo* (this is our Australian missionary paper), with which to do missionary work. These papers he sends off to those who are interested to read them.

Now I imagine I hear some of you say, "Well, I suppose his mother is wealthy, and pays for his papers. We could do the same if some one would pay for papers for us." If any of you think so, you are mistaken; for his mother is not wealthy, neither does she pay for his papers. He made up his mind how he would pay for them before subscribing for them. He

earns the money by working in a printing office, and pays for them himself.

How much better that is than if he spent his money for candy or nuts, as some boys would do. And then, who can tell how much good that boy will do in sending out his missionary papers? No doubt God will bless his efforts to the good of many.

I also know a little girl, only nine years old, who, after hearing something said about how to do missionary and colporter work, took some tracts to a house not far from her own home in the city, and asked the lady of the house if she would not like some religious reading. The lady took it, and thanked the little girl, who, emboldened by her first venture, went to another place and left more reading. At both these places they read the tracts, and sent for the girl, and each paid her the value of the tracts; and one of them asked her if she could not let her have some that would tell her why her mother kept Saturday for the Sabbath. These being furnished, the lady then wanted some one to come and talk with her about these things. It is very likely the lady will receive all the truth, and then may be the means of bringing others along to see it too.

This shows that the Lord will bless the efforts put forth by even the children. Then, too, all who learn to work for the Lord in this way, learn also to love the truth more and more themselves, and are not so likely to be led away into wrong. Children, time is short, and the Lord wants all who believe the truth to become active workers for him. Who will engage in the work now?

Melbourne, Australia.

J. O. CORLISS.



Letter Budget.

PROBABLY our little people were busy during the month of June in cultivating their missionary gardens, caring for their missionary fowls, and enjoying the sweet early summer; for so few letters were received that month that we can use most all of them in one paper. So you see we are steadily gaining ground, making room for the feast of fat things by and by. Don't forget your part.

MATIE M. NEWCOMB writes from Multnomah Co., Oregon. She says: "I once wrote a letter to the Budget while we were living in Florida. Now we are living in Oregon. We started from Florida the latter part of April, and had a very pleasant journey. We saw some beautiful scenery as well as some not so fine. We came the southern route,—from St. Louis to Ft. Worth in Texas, then to El Paso and Southern California, then to San Francisco and by the ocean steamer to Portland, Oregon. We sailed out through the Golden Gate of the broad Pacific, and were on the ocean three days and two nights. The last day we were on the Columbia River. The ocean was very calm all the way. I was seasick two days. Large flocks of sea gulls followed the vessel. We arrived in Portland in time for the camp-meeting, the first one I ever attended. I enjoyed it much, especially the children's meetings conducted by Prof. Brownberger. He talked so good to us, and we could understand it. We can attend the Sabbath-school every Sabbath now. I never had the privilege before. I study in Book No. 3. I think this is a nice country."

Next comes a letter from Texas, from GEO. SPIKES, of Kaufman Co. He writes: "As my time has expired for the INSTRUCTOR, I will renew and have you send it too to my cousin, Eula Spikes. I am only a little boy, not quite seven years old, and as I cannot write, I have to get papa to write for me. Papa and mamma are all the Adventists in this neighborhood, though grandma and one uncle and aunt keep the Sabbath. I can read very well in the INSTRUCTOR, and love to

read the Budget. I also love to read Eld. Canright's pieces to children. I send my love to all."

EDITH SMITH writes from Grant Co., Dakota. She says: "I am a little orphan girl ten years old. I have no father, mother, brother, or sister. My mother died one year ago. She was not a Sabbath-keeper, but now I live with a family who keep the Sabbath, and I love to keep it with them. When I came to live here, I did not know what the Bible taught, only that the world was once drowned, and would be again destroyed by fire. I have been through books Nos. 1 and 2, and am now studying in No. 3. I have learned by heart the ten commandments, the Lord's prayer, the first chapter of Daniel, the thirty-fifth of Isaiah, and the first of the Revelation, and have read the New Testament almost through. We go six miles to Sabbath-school. Two weeks ago Eld. A. D. Olsen baptized five persons here. I am trying to be a good girl, and hope to have a home with the INSTRUCTOR family in the new earth."

LORENA L. McCracken, of Los Angeles Co., Cal., writes: "I would like to tell you how well pleased I am with the INSTRUCTOR, which I receive every Sabbath. I enjoy reading the Budget very much. I go to Sabbath-school, and have a good teacher. I am trying to keep God's commandments. Will you pray that I may be one of those out of the INSTRUCTOR family who shall be saved? I send my love to all the readers of the paper."

CHARLEY F. SMITH writes a letter from Pierce Co., Wis. He says: "We are the only Sabbath-keepers within many miles of this place, and it is very lonely here. We have a family Sabbath-school. My brother Frankie and I study Book No. 2. We each have a missionary chicken. Mine is hatching on eleven eggs, and my brother's hen has eight little chicks. We will let you know in the fall what we realized from them. I am trying to be a good boy and keep the commandments with my parents, and hope to see the whole INSTRUCTOR family in the new earth. What a great reunion that will be!"

ANTON HANSON writes a long letter from Montcalm Co., Mich. We shall be obliged to shorten it considerably, as we do many others, for want of space. He says: "My father is the oldest settler here. He has been here thirty years, and has a nice farm of fifty acres. We live one mile from Gowen, a very little village, with but two grocery stores. Our corn and potatoes have come up and look nice. The wheat, rye, and oats stand nice too. There is a large settlement of Danes here, but there are only a few American people. Carl Rasmussen has come from Chicago to canvass among the Danes. I attend Sabbath-school regularly, and have perfect lessons every time. My brother and I are the only members in my class, and we take lessons in Book No. 3. I have taken the INSTRUCTOR since I can remember. I am now taking music lessons. I am fourteen years old. When I have nothing else to do, I help my mother do housework. I can wash dishes, mop the floor, milk the cows, knit stockings, and crochet mittens. I have five brothers, the oldest is in a store in Wisconsin; and I have three half brothers."

MABEL N. HORNING writes a letter from Tuscola Co., Mich. She says: "I am ten years old, and have two brothers and one sister younger than myself. Our baby brother is ten months old, and we all love him. We all keep the Sabbath. Clarence and I study in Book No. 2. We try to have our lessons perfect. I love to go to Sabbath-school, which is three miles from here. Our pa went eighteen miles to attend meeting to-day, so Clarence and I walked to Sabbath-school. I love the INSTRUCTOR. Ma reads the papers and explains them to us, then we send them to our cousins in Canada, where there are no Sabbath-keepers. Ma and I intend to visit there in the fall. We had a missionary garden last year, and sent the money for the Australian Mission. We expect to have more this year. Ma gives us eggs; we now have eight dozen. I have many things to be thankful for. I am trying to be a good girl, and help ma all I can when I am home from school. Pray that I may have the 'Well done' said to me."

THE YOUTH'S INSTRUCTOR

IS PUBLISHED WEEKLY BY THE

S. D. A. PUBLISHING ASSOCIATION,
Battle Creek, Mich.

Mrs. M. J. CHAPMAN, - - Editor.
Miss WINNIE LOUGHBOROUGH, Ass't Editor.

The INSTRUCTOR is an illustrated, four-page sheet, especially adapted to the use of Sabbath-schools. Terms always in advance.

Single copy, - - - - - 75 cts. a year.
5 copies to one address, - - - - - 60 cts. each.
10 or more copies to one address, 50 cts. each.

SPECIAL PREMIUM OFFER.

GOLDEN GRAIN SERIES.

For every new subscription, accompanied with 85 cents, we will give "The Golden Grain Series," consisting of a package of ten beautiful pamphlets of 32 pages each. These comprise a choice collection of sketches, stories, poems, etc., adapted to the wants of children, and contain more reading matter than can be found in many dollar books. Remember, the whole series, 320 pages, and the INSTRUCTOR for a year, for 85 cents.

Address, YOUTH'S INSTRUCTOR,
BATTLE CREEK, MICH.,
Or, PACIFIC PRESS, Oakland, California.