

# The YOUTH'S INSTRUCTOR

Vol. LVIII

January 11, 1910

No. 2

## BE KIND

*Be kind !*

*Life is too short to stop to nourish hates ;  
Right may be wronged, and yet, while justice  
waits,  
Love heals the wound that anger aggravates.*

*Be kind !*

*Think not that tenderness unmans the strong ;  
That sacrifice can sanctify a wrong ;  
That love and patience ever last too long.*

*Be kind !*

*Not ours to rob the poor, the weak to rend,  
But ours the power and duty to defend,  
To be indeed to him in need a friend.*

*Be kind !*

*Let smile and sunshine be instead of frown ;  
Let thought of others keep thy passions down ;  
Let kindness be thy joy, and strength, and  
crown.*

— O. F. Fletcher, in the *Wellspring*.





ELEKTRON is a new metal that has been found which is only a little more than half as heavy as aluminum, but is as strong as the best aluminum alloys.

"A NEW record for wireless on the Pacific was made recently when a message was received in San Francisco from a steamer at Honolulu, the distance being twenty-one hundred miles."

"THE four thousand seven hundred twenty-five tons of coal burned by the 'Lusitania' on a record trip across the Atlantic would be fuel enough to keep ten families warm all their lives."

At a cost of three million five hundred thousand dollars, it is planned to lift the Mississippi River bodily from its bed in the city of St. Paul. Here the river describes a great curve, directly across which the new channel will be cut. The old bed, when filled, will provide a building area equal to seven hundred ordinary city blocks.

THE young people's society of Nevada, in addition to providing the public library at this place with a full set of "Conflict of the Ages," in cloth binding, and the six magazines published by our people, with the YOUTH'S INSTRUCTOR for one year, has purchased twelve shares in the Washington Seminary fund, nine of which were purchased by individuals. The society has also arranged to pay, out of its donations, for a full scholarship for a tenth-grade student in one of the Southern schools. We trust the work of this energetic little company will be an encouragement to many of the sister societies.

### Child Street-Cleaners

IN Sheboygan, Michigan, the schoolchildren all wear green buttons. The button is the badge of a society whose object is to keep the streets clean. It is the duty of the child that wears the button to pick up bits of paper and other waste material which he or she finds on the street. The children have so entered into the spirit of the thing that they have collected more than one hundred dollars by popular subscription to buy waste-paper boxes to be put on the street corners.—*The Watchword*.

### Home Mission Work

MAY I write to you concerning something that has appealed to me for some time, a work in which every one can have a part?

It is this: reading at least one chapter a day in the New Testament, marking the verses that tell of Christ's second coming, fixing in the mind what is said as to the manner, times, etc., and asking our relatives, neighbors, friends, in fact, any one we can, to read and mark in the same manner.

Then when we meet those who are thus reading, we shall have a subject of interest to talk about. How many young, old, and middle aged will get at least one person to join them in reading the New

Testament through in this manner? New-years is almost here, the easiest time of the year in which to begin such a plan. I have wondered if thousands of persons could not be persuaded by a little personal effort to join us in this endeavor.

One family, when asked to carry out that plan, bought a new Bible.

NELLIE E. KNAPP.

### A Personal Word for the Master

DURING a recent camp-meeting in California, I went home with a friend one evening to stay all night and go back to the meetings in the morning. He lived in the same city where the camp-meeting was held.

In the morning we enjoyed a good visit, and were thinking of missing one of the meetings on the camp-ground when this friend, having some work at home to do, caring for the sick, etc., suggested that I go to the meeting with another friend who was not an Adventist. I consented, with the hope that the meeting might prove of benefit to both of us. As this friend was a lady, I did not feel as much at liberty to speak of the love of Jesus to her as I would otherwise have felt.

However, we went to the meeting, I with the hope that the service might do her good, not thinking of a personal word for Jesus spoken directly by myself.

At the close of the discourse one of the ministers added a few words to what had been already said, and then made a stirring appeal for all who would to come forward and give their hearts to God. This appeal was made several times, and then came what was apparently the final call. The Spirit of the Lord was present in power, and many were going forward weeping, but my friend made no move toward going. I had hoped she would. I thought it the best chance she would ever have, and prayed the Lord to help her, but allowed timidity to keep me from speaking to her personally. Finally, partly through fear of missing perhaps the last opportunity for her, and partly with the hope that she might be saved, I asked her if she would not give her heart to God to-day. She said she would, and at once broke the bands of Satan that were holding her, went forward, and gave her heart to Jesus. To-day she rejoices in the blessed hope of eternal life.

E. C. SILSBEE.

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# The Youth's Instructor

VOL. LVIII

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## The Story of the Heavens — No. 3

### The Earth

H. U. STEVENS

**A**S we look out upon the earth, it appears to us to be a broad surface broken into hills and hollows, mountains and valleys, bounded by a large circle at which the earth and sky seem to meet. And from this information we might say, as the early Greeks said, that the earth is "an immense, flat, circular plane." It looks that way. The Greeks said it was bounded by a river, called "Oceanus" (not the Atlantic), which flowed around it. Plato, one of the greatest thinkers in ancient Greece, said the earth was not a plane, but that it was a cube. Another Greek said it was a low cylinder, with Greece and the Mediterranean on the upper circular surface. An early English writer, who was noted for his learning, taught that the earth was egg-shaped, "floating in water, everywhere surrounded by fire." And two very noted Greek philosophers taught that the earth was a sphere. Columbus believed the earth to be round, and thought he could reach India by sailing west. But men in general would not believe it till Magellan had actually sailed around it in the early part of the sixteenth century. Then, and only then, were their doubts entirely swept away.

Perhaps you question, "Why does the earth look like a plane, when, in fact, it is a sphere?" If you will get a large ball, you may easily see. A sphere of any kind will do; but let us suppose you have one which is one foot in diameter. Now imagine a tiny insect upon the ball that can see a distance of only one-fourth inch. How do you imagine the ball would look to such a creature? Of course you say, "Flat, and not curved as it really is." Well, we are many times smaller in comparison to the earth than the insect is to the ball. Do you wonder, then, that the earth looks like a plane to us?

Another difficulty which some men have imagined in believing the earth a sphere is this: How can those who are on the "under side" cling on? It seems as if they must "fall off." That is very easily explained when we know what causes people "to fall." The great earth draws everything on its surface toward its center, and consequently holds all things to its surface. Again, considering the fall which helped in the last difficulty, if "down" is toward the center of this ball to the insect on the surface, can you find a place on its surface where "down" would be away from the surface? Can a body, then, on the earth "fall" away from its surface?

There are many things which we might mention that show the earth to be round:—

1. As a sailor approaches land, he can always see the tops of the mountains before the broad bases come in sight.

2. If you could watch a ship, through a telescope, as it sails out to sea, you would see it sink out of sight below the horizon in a way which would leave

you no longer room to doubt that the earth is round.

3. Every body which we can study in the sky — the sun, moon, and all the planets — is a sphere or nearly so. If you ever get a chance to look at them through a telescope, notice this fact. Now the earth, being one of the planets, we would naturally think, is also a sphere.

4. During the eclipse of the moon which occurred on Nov. 27, 1909, you could have observed that the shadow which the earth casts on the moon, and which causes the eclipse, is circular. Now, it always looks like a circle; and the only body which always casts a circular shadow is a sphere. The earth, then, must be a sphere.

Other facts could be considered which make it certain that the earth is round like a ball. But none, perhaps, will be so convincing as the fact that we

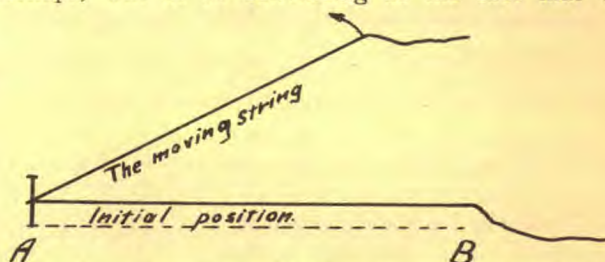


FIG. 1 — SHOWING MEANING OF TERM "ANGLE"

not only know that the earth is "round like a ball," but that we know its size, and know how much it lacks of being a true sphere.

Perhaps you will want to know how we measure the circumference and diameter of the earth. You learned in your geography that the circumference was about twenty-five thousand miles and its diameter about eight thousand. The question is, How do we know that the earth is this size? — nobody ever measured it.

To explain how the earth is measured we must learn something about a sphere and a circle, and what an angle is. Stick a pin upright into a board, as in Fig. 1 at A. To this pin tie a small thread, A B. How far can you turn the thread around the pin away from its first position, A B, before you begin to move over the same space that you went over when you first started? You say, "I can go clear around." "Turning clear around" is what we mean when we say that your string "turned through three hundred sixty degrees." If you had moved it only one fourth of the way around, we would say you turned it through ninety ( $360 \div 4$ ) degrees. If you had turned it only one eighth of the way around, we would say it was turned through forty-five ( $360 \div 8$ ) degrees. If you had moved it only one three-hundred-sixtieth of the way around, we would say that it had been turned one ( $360 \div 360$ ) degree. Now, whenever we say that a line makes an angle — say, twenty-five degrees — with another line, we mean that the



first line has started to turn away from the other line, just like the string, in Fig. 1, turns away from its original position  $AB$ , and that it stops at a position twenty-five three-hundred-sixtieths of the way around. For "twenty-five three-hundred-sixtieths of the way around," we write " $25^\circ$ ," and call it "twenty-five degrees." Can you tell me what an angle of  $7^\circ$  means? of  $5.2^\circ$ ?

Now if you will tie your pencil into the string at  $B$  (Fig. 2) and turn the string to the position  $AC$ , allowing the pencil to rest on the paper, a curved line,  $CB$ , will be drawn. With the pencil at  $D$ ,  $DE$  would be drawn; at  $F$ ,  $FG$

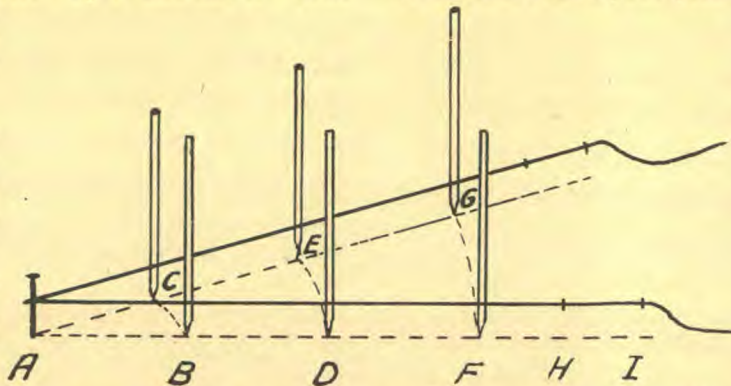


FIG. 2 — SHOWING RELATION BETWEEN ARCS AND THEIR RADII

would be drawn. Now, you can see very plainly that the curved line  $CB$  is shorter than  $ED$ , and that  $ED$  is shorter than  $FG$ . And if you drew another line from  $H$ , it would be longer than any of the others, and so at  $I$ . So you see that the farther you tie the pencil from the pin  $A$ , the longer line it makes on the board as the string turns to the position  $AG$  (or, as we say, "as it turns through the angle  $CAB$ "). If you were to measure  $AB$  and  $AD$ , you would find them, say, two inches and three inches respectively. Now if you could measure  $CB$  and  $ED$  along the curves, you would find different values for them, depending on the size of the angle. They would be twice as long for two degrees as for one degree, ten times as long for ten degrees as for one degree, twenty-five times as long for twenty-five degrees as for one degree, etc. But however long they are (and they could never be more than three hundred sixty times as long as they are for one. Why?), they always have a definite relation to each other. Every time the pencil at  $B$  passes over two inches, the pencil at  $D$  would pass over three inches, which, you will notice, are the distances of the pencil from the pin in each case. If  $B$  passes over four inches ( $2 \times 2$ ),  $D$  passes over six inches ( $2 \times 3$ ); if  $B$  passes over six inches ( $3 \times 2$ ),  $D$  passes over nine inches ( $3 \times 3$ ), etc. If we were studying the subject of "proportion" in arithmetic, we would say that the ratio of the distance  $ED$  to the distance  $CB$  is as 2 is to 3, and write it thus: " $ED:CB::2:3$ ." But remember that the figures represent the distances of the pencil from the pin. And this distance is called the "radius of the circles" which we would draw if we turned the string "clear around." Now  $CB$  and  $ED$ , which you see are parts of the circles, we call "arcs," and so we call  $AB$  and  $AD$  the "radii of the arcs  $CB$  and  $ED$ " respectively, even though the circles are not completed. We can therefore express the relation of the arc  $ED$  to  $CB$  (or any arc to another, formed with the same center and between the same lines although the radius

is different) by saying that their lengths are in the same proportion as their radii. The arcs, moreover, need not be between the same lines as long as the lines make the same angle in each case.

It is clear, then, that if you can measure the length of the line which your pencil draws while the string is passing through one degree, it is only necessary to multiply that distance by three hundred sixty in order to know how far it is around the circle.

Now, let us make an application of what we have learned to the earth. Do you remember what latitude is? — Yes; you say, "It is the distance north or south of the equator."

But did you ever notice that you never express the latitude of a place in miles, but always in degrees, as,  $40^\circ$ ? What then does it mean? In Fig. 3 we represent the earth as having been cut open through the center along the axis. The line  $NS$  represents the axis.  $E$  is on the equator.  $L$  is in "latitude  $40^\circ$ ," and this means that the line  $EC$  must turn forty three-hundred-sixtieths of the way around in order to take the position  $LC$ , or, in other words, the angle  $LCE$  is forty degrees. The angle, then, which the radius of the earth running to the position of the observer on the surface makes with the equator is the latitude of the observer.

Longitude is distance east or west from a given point measured on the equator. Now it is also clear that if we can measure the distance along the surface at the equator which corresponds to, say, one degree of longitude, we can easily find the distance around the earth by simply multiplying by 360. Such a distance has been actually measured, and we find it to be 69.2 miles at the equator. Multiplying 69.2 by 360, we obtain 24,984 miles as the circumference of the earth. To find the diameter of a circle from its circumference, it is only necessary to divide by 3.1416, which in this case gives nearly 7,927 miles.

We intimated above that the earth was not a "perfect sphere" by saying that we knew how much it lacked of being one. In a perfect sphere, we would obtain the

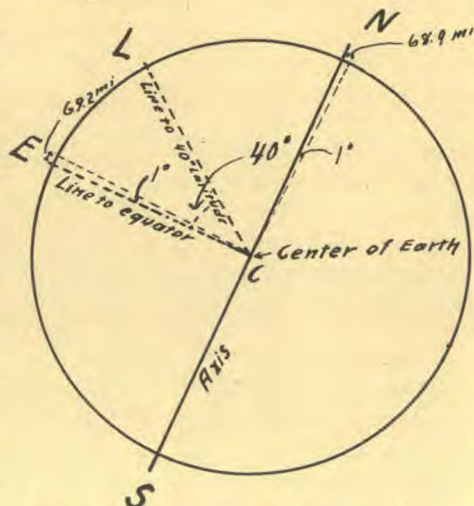


FIG. 3 — SHOWING MEANING OF LATITUDE

same length on the surface corresponding to one degree at the center, regardless of where we measured the arc. But this is not the case with the earth. It has been found that the polar diameter, the line extending through the center of the earth from pole to pole is twenty-seven miles shorter than the equatorial diameter, or the one we found by measuring the circumference of the earth at the equator. So the earth must be flattened at the poles, taking the shape a rubber ball takes when compressed between the hands.

You must not, however, let this illustration carry



you too far and lead you to think that the earth is as flat as the rubber ball is. Even though the distance of twenty-seven miles seems large, still, when considered in relation to the size of the earth, it is very small; for if you represent the earth by a globe one foot in diameter, the difference in the two diameters would amount to about one twenty-fourth of an inch, which could hardly be perceptible, and much less so if we represented the earth by the rubber ball.

It might be added also that all the variation from a smooth surface caused by the highest mountains and the deepest seas would not amount to as much as a scratch in the varnish of a one-foot globe. So you see our earth is as perfect a sphere as any we can handle.

Perhaps you wonder why the diameter of the earth is shorter along the axis than along the equator. There are other matters, also, which we promised last week to tell you about in this paper, but lack of space forbids, and we must postpone any further study till next time.

### Mohammed, the Prophet of Arabia — No. 4

#### The Hegira

THE hopes of Mohammed were now fixed on Medina. In his dreams his mind went north, and dwelt upon the Holy Land, the home of the prophets before him. How fitting it would be for him, the last and the greatest of all the prophets, as he loved to speak of himself, to tread the sacred paths of Zion, and to grace the holy temple at Jerusalem. About this time he had that wonderful night vision, the mysteries of which are so fondly cherished by every true Moslem. Gabriel accosted Mohammed and bade him prepare for a journey. He placed him upon a wonderful winged horse, named Al Borak, and together they sped with lightning rapidity to Jerusalem, calling on the way at Sinai and Bethlehem. In the temple Mohammed was greeted by a conclave of prophets, who addressed him with marked reverence.

Greater honor still was in store for him. By means of a ladder he ascended quickly into the first heaven, where he met and conversed with Adam. Passing through this, he went to six successive heavens, meeting Moses on the way, who greeted him enviously, explaining that he himself was able to lead but few of the stiff-necked and rebellious Israelites to the truth, while he, Mohammed, would have the honor of converting whole nations. Abraham also, who was in the highest heaven, manifested marked deference to him while in his company. At last Mohammed found himself in the presence of the Creator, who blessed him, and dismissed him with the behest that he and his people prostrate themselves in prayer toward the Kaaba five times daily.

When Mohammed awoke next morning, he made known the vision to his followers, the faith of some of whom it exceedingly tested, until Abu-Bekr declared his implicit belief in the journey as a simple matter of fact. For this he was awarded the title of The Attester.

The time was now auspicious for the flight from the city of Mecca to the promised land of Medina. Mohammed gave command to his followers, saying, "Depart ye unto Medina; for the Lord hath verily given you brethren in that city, and a home in which ye may find refuge." So they made preparations, chose companions for the journey, and set out in

parties secretly. Within two or three months, all the followers of Mohammed, with the exception of a few who were detained in prison or slavery, had migrated to the city of promise. The refugees, including their households, numbered between one and two hundred souls. Mohammed, Abu-Bekr, and Aly were the last to leave. They crept in the shade of the evening through a back window of the house, and escaped through the unfrequented streets of the southern suburb.

Three days the fugitives hid in a cave to elude the Meccans, who had evidently decided to put an end to this apostasy from the faith of their fathers, by detaining and probably killing the leader. But they had arrived at their decision too late for its accomplishment. When the way was clear, the prophet and his companions resumed their flight, and in a forced march of eight days came within sight of Medina on Monday, June 28, A. D. 622. They lodged four days more without the city, at Coba, until all opposition had been removed and befitting preparations had been made for the prophet's reception. On the morning of Friday, Mohammed, mounted on his favorite camel, Al Kaswa, with Abu-Bekr seated behind him, entered the city amid much rejoicing and thanksgiving.

Onward moved Al Kaswa, with slackened rein, until a vacant plot of ground was reached, where he kneeled down of his own accord, it is said, to allow the prophet to dismount. Mohammed inquired for the owners of the land, and immediately purchased it as a site for a building in which to worship, and houses for his wives. On this piece of land was erected the first Mohammedan mosque. It was a humble building, four square, each side being about one hundred fifty feet long. The foundation was built of stone, the walls of brick; the roof was of palm branches supported by rafters and pillars made from the trunks of palm trees.

Jerusalem was the kibra, or quarter to which the faithful turned their faces when they prayed, for the first few years. Afterward, by special revelation, they were instructed to prostrate themselves toward the city from which they had escaped, in which was the holy Kaaba, the temple which they would one day purge of its idols and restore to the pristine worship of its original builders, and of their ancestors, Abraham and Ishmael.

The palm trunk pillars used in the construction of the first mosque were the original of the beautiful Saracenic columns with which the Mohammedans delight to adorn their palaces and their places of worship.

The Mohammedan era is dated from this migration from Mecca to Medina. The first year of the Hegira, or flight (A. H. 1), corresponds with half of A. D. 622 and half of 623. Friday, the sacred day of the Mohammedan world, was here first observed in commemoration of the prophet's triumphant entrance into the city; and also, it is supposed, as a distinguishing mark from the Jews and the Christians. There is no close analogy however between the Sabbath and the Moslem Friday. In the latter there is no hallowing of the day, as one meant for religious rest and worship. After the public service, the people were encouraged to return to their ordinary occupations.

GEORGE TEASDALE.

"BLESSED are the undefiled in the way."





### Clippings From "Popular Mechanics"

#### A Fire Kindler

**P**UT about a gallon measure full of sawdust that has been well saturated with kerosene into a deep tray. Add enough melted rosin to stiffen the entire amount when it is cold. When cold, this mixture can be cut into squares and put away until ready for use. Put one square of the kindler into the fireplace of a stove and place the fuel on top. A hot fire will be produced a short time after the lighting.

#### A Barrel Shelf

The grocery man receives a large portion of his goods in barrels, and the clerk finds it quite a task to make up sugar and rice into packages for the trade.



Shelf Fits Any Barrel

Herewith is illustrated a little device that will greatly assist him when filling paper bags with the product contained in a barrel. The shelf is made of a board having a width that will about cover one quarter of the barrel rim. Four nails are

driven through one end of the board to allow the ends to pass down on each side of the hoop and staves. A brace is attached to the other end so it will rest on one of the lower hoops.

#### Making Over an Old Paint Brush

When a brush is used in varnish and thick paints, the mixture usually sticks to the outer hairs, and seldom, if ever, reaches the center part. If the brush is left in the bucket until the paint dries, it will produce a hard crust on the outside. A great many painters will throw such a brush away. There will be no need of doing this if you take a sharp knife and cut around the top part of the hairs, cutting away the outside part with the dried paint, and leaving nothing but the unused hairs remaining. This will make a smaller brush, but it will be practically a new one. The first illustration shows the ordinary brush, and the second, one that has been cut down.



Paint Brush Made Over

#### How to Carry Books

Almost all schoolchildren carry their books with a strap put around and buckled very tight. This will make dents in the cover where the board overlaps the body of the book. If the strap is left loose, the books are liable to slip out. Place the cover of one book between the cover and fly-leaf of its neighbor, and the difficulty will be remedied. This will place the books in alternate directions. Books stacked in this manner do not require the strap buckled tight, or, they can be carried without any strap just as well.

#### Potatoes Preserved on Coke

A new method for keeping potatoes and preventing sprouting is reported by Richard Guenther, United States consul at Frankfort, Germany. It consists of placing them on a layer of coke, and Dr. Schiller, of Brunswick, who is responsible for the idea, is of the

opinion that the improved ventilation thus gained is not alone responsible for the result.

He believes that it is due to the oxidation of the coke, which, however, is a very slow one. Coke contains sulphur, and he considers it quite possible that the minute quantities of oxides of carbon and sulphur which result from the oxidation, mixing with the air and penetrating among the potatoes, are sufficient to greatly retard sprouting. Potatoes so treated are said to keep in good condition for a year.

#### Drop a Coin in the Slot, and This Device Does the Rest

IN one of the city post-offices in Paris there is an apparatus which automatically registers letters, and issues a receipt for the sender of the letter. The apparatus is arranged to receive the French nickel, or twenty-five-centime piece. Advantage is taken of the fact that it is slightly magnetic, for in passing down the coin chute it is obliged to leap a gap and is prevented from dropping through by means of a magnet. A counterfeit of iron can not pass the gap, because it would be lifted up by the magnet, while non-magnetic coins would fall through. The letter slot does not open until after the coin is placed in the machine, and the receipt is not issued until after the letter is placed in the machine. The receipt, in the form of a ticket, is dated and stamped by turning the crank at the side of the apparatus. The whole operation is performed in less than five seconds, and is calculated to do away with the long line of waiting applicants at the usual registering windows. The apparatus can also be placed in banks or stores, where there is no danger of its being stolen, thus relieving the pressure at the regular post-office.—*Scientific American*.

#### Home of the Antarctic Petrel

IMAGINE, if you can, a flock of birds forty miles long and nearly half that many miles wide. Can you think that such a thing is possible? It is, for such a sight can be seen on and about the Furneaux group of islands, situated to the northeast of Tasmania and under the direct government of that state. These birds are the antarctic petrels, but are called by the inhabitants of the islands "mutton-birds," and they constitute the principal means of support of the dwellers of the Furneaux group. This bird, when full grown, is about the size of the well-known silver sea-gull of our country, and its color, at first a grayish-black, with age becomes a jetty black.

Every year about the twentieth of September, almost to a day, these birds arrive, not by the thousands but by the millions, at their rookeries, and for about four weeks they are busy in restoring their old nests or building new ones. This work is carried on at night, as the birds are at sea during the day in quest of food. After all preparations have been made, the female lays but one egg, which closely resembles a duck egg. The male bird assists in the hatching, usually taking the first turn, while his mate goes in search of food, a small supply of which she brings to him each evening. After a two weeks' sitting, the male bird is relieved, and the female takes to the nest. After that they take turns until incubation is complete.

The newly hatched mutton-birds have quite a commercial value, being used for human food as well as for the extraction of oil.



The only danger attached to gathering the young birds is that of being bitten by poisonous snakes, as the rookeries are infested with such reptiles, and one is likely to lay hold of a serpent instead of a young bird in thrusting a hand into the hole of the nest.

#### The First Stage of the Industry

The first stage of the mutton-bird industry is known as oiling. A stick, pointed at one end and stuck in the ground at the other, serves as a kind of spit or skewer on which to fix the birds as they are gathered. As they are taken from the nest, their necks are quickly broken by a skilful jerk, and they are then hung by their necks on the sticks. When a few hundred have been gathered, the oil is extracted by squeezing



*Technical World*

THE PETREL IS NOT DISTURBED BY VISITORS

firmly the body of the bird, which is as greasy as a piece of butter, and passing the hand gradually along toward the neck until the oil exudes from the beak. This oil sells for twenty cents a gallon, for which is required one hundred birds.

The next step is called "fattening." The birds are plucked, the legs and wings removed, an opening is made along the back, and the skin and fat in which the bird is incased are all removed. This fatty substance goes into a pot and is boiled down in the same way that hog lard is made. Then the birds are salted down. The birds are sent to the principal ports of Australia, and are sold for two dollars and a half a hundred, which nets to those who do the capturing nearly two dollars a hundred. The market for this kind of food seems to be confined exclusively to the commonwealth of Australia, and chiefly to the mining districts, where fresh food is hard to obtain, and where the mutton-birds are used as a substitute for salt pork, and are a welcome change from tinned meats. Millions of these birds are gathered each year, only about one hundred fifty thousand being retained for the use of the inhabitants of the islands where the rookeries are situated.

At certain seasons of the year there is not a bird to be seen around the islands. Where they go, it is not known. Their flight is extremely swift and irregular, and if they strike any obstruction, like a rock or the mast of a ship, the collision is usually fatal to them. The lighthouse at Goose Island, one of the Furneaux group, has to be protected with iron screening, and frequently hundreds of dead birds are found at the base of it.—*Newton Forest, in Technical World.*

#### The Paradox of Asbestos

OF all the queer materials which nature seems to have provided for no other purpose than that man may show his ingenuity in their use, nothing compares to that mineralogical vegetable asbestos, which in its native state is both fibrous and crystalline, elastic and yet brittle, a stone which will float, and which may be carded, spun, and woven like flax or silk. Asbestos is mined in practically every section of the globe, and the asbestos of the various countries differs as greatly in appearance as does the foliage of the trees and plants native to each. It is alike in but one feature—that it is absolutely indestructible, no known combination of acids even affecting the strength or appearance of its fiber, and the fiercest flames leaving it unscathed.

Some varieties of asbestos are as compact as marble, and will take the highest polish; others have loose, silky fibers. "Mountain wood" is a variety presenting an irregular, filamentous structure, like wood; and other varieties, taking their names from their resemblance to the various materials, are rock cork, mountain leather, fossil paper, and fossil flax.

Asbestos is really a variety of amphibole, or hornblende, composed of separable filaments, with silky luster. Its colors are various shades of white, gray, or green, passing into brown, red, or black.

Asbestos has been put to a thousand practical uses. In London and Paris, firemen, clad in asbestos clothing and masks, practically defy the flames, being able actually to pass through a blaze if no longer time is required than the period during which they can hold their breath. Asbestos roofing will eliminate all danger of fire from falling sparks. Millions of feet of steam-pipes, boilers, etc., are covered with asbestos, which causes them to retain all heat, while the same material forms a frost-proof protection for gas- and water-pipes. Asbestos would seem almost indispensable to the electrical engineer, as many parts of electrical devices through which the current passes become heated, and were it not for the non-conducting and heat-resisting qualities of asbestos, which is introduced, the apparatus would be either put out of commission or completely destroyed by short circuiting.

One of the thousands of special uses to which asbestos is applied is for covering walls. Instead of plaster, which must be tediously applied, allowed to dry, finally covered with plaster of Paris, and polished, a single coat of asbestos is put on the raw bricks. The wall may be covered as soon as built, and a room the walls of which were completed in the morning can have by night a nicely finished interior, as smooth as glass and as hard as stone. This glossy surface will not crack, for, while perfectly firm, the asbestos is elastic, and it is, moreover, fireproof.—*Washington Post.*

A GRACEFUL presence bespeaks acceptance, gives force to language, and helps to convince by look and posture.—*Jeremy Collier.*



### "Torpedo With a Brain"

A WONDERFUL torpedo, which picks up sound and tracks it down, is reported to be in the hands of the British admiralty.

The "torpedo with a brain," as the new weapon has been called, is controlled by a microphone attached to the torpedo's rudders. When the microphone picks up a sound, it deflects the rudders in such a manner as to guide the torpedo straight to the source of the sound waves.

Properly aimed, the inventors claim that the torpedo will pick up unfailingly the noise made by the propellers of an enemy's vessel. Further than this, it is claimed that the mechanism is such that it can be so adjusted that the torpedo will strike not at the immediate origin of the sound, but thirty or forty yards to the right or left of the sound, at the will of the manipulator.

The feature, if proved, would make it possible to place the torpedo in the vital part of a ship steaming across the new weapon's track.—*Washington Post*.

### Odd Geographical Facts

A NOVEL way to demonstrate the size of the State of Texas is to spread out a map of the Union and stretch a string across Texas the longest way. Then placing one end of the measure at Chicago, one will find that the other end will extend into either the Atlantic Ocean or the Gulf of Mexico.

The two largest counties in the United States are Custer County, Montana, and San Bernardino County, California. Each of these is a little more than twenty thousand square miles in extent, and the States of Massachusetts, Rhode Island, Delaware, and New Jersey could be put inside the boundary of either of them.

The smallest county in the Union is Bristol County, Rhode Island, which has only twenty-five square miles.

The county in the United States having the largest population is New York, which has two million people in it. At the time of the last census, Bailey County, Texas, which is about the size of the State of Rhode Island, had only four inhabitants.

About fifty miles from Durango, Colorado, there is a point where four States meet. Here, by stepping a few feet in either direction, one can walk in four different commonwealths in as many seconds. These commonwealths are the States of Colorado and Utah and the Territories of New Mexico and Arizona.

A nearly parallel case is at Harper's Ferry, where the train stops a few minutes to allow the passengers to alight and enjoy a view which permits them to look into three States — Maryland, Virginia, and West Virginia.

The highest and lowest elevations in this country are in California, within one hundred miles of each other. The loftiest is Mt. Whitney, 14,499 feet high, and the lowest is Death Valley, about four hundred fifty feet below the level of the sea.

Two Oceans Pass, in Yellowstone Park, is so named because whenever there is a shower in the vicinity, and a certain small creek overflows, its waters spread out over the edge of the continental divide and pass into tributaries of rivers which flow to the Atlantic and to the Pacific.

The longest city street in the United States is Western Avenue, Chicago, which is exactly twenty-two miles long. Its nearest rival is Halstead Street, also in Chicago, which is two thirds of a mile shorter. Halstead Street is so much more closely built up that

it is usually spoken of as the longest street in the world. Interspersed with the native Americans on this one street are Germans, Italians, Russians, Jews, Bohemians, Poles, and Greeks. Halstead Street is crossed over and under by twenty railroads.—*Boston Globe*.

### Wall-Paper and Light

THE magazine *Popular Electricity*, explains how a poorly lighted room can be easily improved by a change of wall-paper. A wall-paper which will "absorb" light is a great enemy when the evening shadows make us dependent upon artificial light.

Illuminating engineers claim that a white wall will reflect fifty per cent of light, whereas a red wall-paper will reflect only fifteen per cent. A light buff or yellow will reflect forty-five per cent; a dark brown about twelve and five tenths per cent. A light apple-green will reflect forty per cent; a dark green will give us fifteen per cent.

Wall-paper, whatever its color, absorbs light, but a tinted surface wall reflects the light.—*East and West*.

### Temperance Arrows

THE old Greeks held self-control to be one of the noblest qualities; and were they not right? Without it hardly any other noble qualities are possible for us.

Gluttony ruins millions of lives. Perhaps it is next to strong drink as a destroyer of human happiness. Eating more food than is actually needed to keep up strength is a waste of money, but it is an even greater waste of the strength needed to digest it. Generally the unnecessary food is not digested, but decays in the body, poisoning the system.

Intemperance in most cases is brought about by faulty habits of mind. We have not taught ourselves to examine our moods carefully and indulge only those that are worth indulging. We think we need this luxury or that, while in reality we do not need it at all, and a proper control of our desires will make us perfectly contented without it.

Intemperances differ. An amount of exercise that would merely suffice for a robust man would be an intemperance and imprudence for a delicate girl. A dress that would be entirely proper for the wealthy would be an extravagance for a girl whose mother works for her living.

In these strenuous times and in our strenuous country many men and women are under severe temptations to intemperance in work. There is so much to be done. If one is a good worker, there are so many glorious opportunities for labor and so many pressing calls. We are likely all the time to forget that allegiance to God and faithfulness to our work require us to keep our bodies strong and our minds alert by rest and recreation. A work-drunkard is often praised for his energy when he should be severely blamed.

The writing of pleasant letters is a beautiful accomplishment not sufficiently cultivated by most persons, and yet even here there is danger of intemperance. I have known some that in the exuberance of friendship spent far too much time in this occupation, besides imposing burdens upon their friends by the necessity of answering their too frequent and voluminous epistles.—*Amos R. Wells*.





## What Can Children Do?

**A** MINISTER was walking in one of our Southern cities recently when he was met by a gentleman who recognized him. "You do not know me," the gentleman said, "but I knew you before the war. My name is —. I am now living in this city. I knew you as soon as I saw you, and wanted to speak to you. And besides," he said, "I wanted to tell you about what occurred at your brother's house during the last year of the war. I was passing there (a soldier in the Confederate army), and stopped and asked if I might sleep in the church, or in the vestibule of the church.

"He said I would find that a hard bed, and invited me into his house. But I hadn't slept in a house for months, and wasn't fit to sleep in a decent bed. So I told him I wouldn't do that, but agreed to sleep on his porch. So after supper I lay down on the porch to go to sleep. But before I got to sleep, your brother's little daughter was going to bed, and I heard her saying her prayer at her mother's knee; and after praying for the family she asked God to bless the soldier who was sleeping on the porch.

"I was a wild, careless soldier, and didn't think about religion at all. But that prayer went to my heart. I tried to shake off the feeling about it — wished I hadn't come there; but I could not get rid of that prayer for the 'poor soldier.' And that prayer led me to the Saviour. I never did get free from the burden it laid on my soul until I became a Christian."

The little girl who offered the prayer was at the time only five years old, yet God heard her prayer and answered it immediately. She did not know it was answered, and never would have known it but for her uncle's meeting the "poor soldier," and learning from his own lips the precious truth.

An incident is related of a little girl who lived in a certain city in Illinois who decided, if possible, to get her father to attend Sunday-school. The superintendent had asked each one to bring a new member, and little Mary Paxton decided that the new scholar in her case should be her father.

She went home and asked her father to go with her to Sunday-school. He was nearly forty years old, and so ignorant that he could not read. He was rough in appearance, and rude in speech. He hated the church, and despised Sunday-schools and religion and everything good. But he loved his little Mary, and when she took him by the hand, he did not resist. He went to Sunday-school and was led to Christ.

He then learned to read for Christ's sake, and he

finally came to be a Sunday-school evangelist. "He founded fifteen hundred Sunday-schools, into which seventy thousand children were gathered, and out of which sprang one hundred churches."

It may seem a small thing for a Christian boy or girl to be always in the pew to cheer the pastor while he preaches, and to be always in the Sabbath-school with a knowledge of the lesson, and to be helpfully present in at least one prayer-meeting every week; but just such simple, faithful service as that keeps the Christian church alive and active.—*Selected.*

### The Silver Lining — No. 2

ONE afternoon as Johnny and his cousin Thelma came in from a horseback ride to Chapultepec and through the beautiful park, they found a gentleman sitting in the parlor conversing with Mr. Brun. Thelma rushed up to greet him. "O Mr. Black, when did you return? Do tell us how you succeeded."



After introducing her cousin, the two young people settled down to listen to the interrupted conversation, which proved so interesting that Johnny soon forgot his weariness and became intensely interested.

Mr. Black was a colporteur of the American Bible Society, who had traveled all over Mexico, and the recital of his adventures would fill volumes. He was a very modest, quiet man, and seldom spoke of himself, but now, seeing the absorbing interest of the boy, he related several incidents of his work.

St. Paul and Livingstone had been Johnny's two heroes, and often had he, when reading of Paul's travels and sufferings, wished that he could have been with him, and now here he was sitting in a room opening on a court gay with flowers as Oriental in appearance as one of the houses in Palestine, listening to an account of beating, stoning, perils of water, perils of robbers, perils of countrymen, perils by the heathen — in the city, in the wilderness, and on the sea — until he fancied he must be dreaming, and that he would presently awake and find himself in his easy chair at home before the fire, in the old sitting-room.

"When are you going on your trip out west, Mr. Black?" inquired Thelma, who was a great favorite with the hard-working missionary.

"Just as soon as we can find some one to go with me. The young man I was intending to take is sick, and my friends will not consent to my going alone, with only the peon; but I must leave you now, I have a great deal to attend to."



That evening as the family were sitting in the *patio* enjoying the moonlight, Mr. Brun said: "Mr. Black has done a wonderful work among the natives here. He can sell Bibles where others can do nothing, and he sells to all classes."

"Papa," said twelve-year-old Teresa, "to-morrow is the twelfth of December. Will you not take us out to Guadalupe? I would like Johnny to see it first on the grand day."

"Certainly," replied her father. "Mr. Black is going out to sell Bibles, and we can go with him, and you can see his methods; but we must not get too near to him, or we may get some stones," he added, laughing. "And now, *buenos noches, mis muchachos*; you will have to secure a half-holiday, and we will have an early dinner, and set out by one."

Next afternoon Mr. Brun's carriage, containing himself, wife, and the three young people, was on its way to Guadalupe. The sun shone bright, the cool, invigorating breeze blew softly over them, the lake glistening in the distance, while far above, like silent sentinels guarding the beautiful valley, towered the snow-capped peaks of old "Popo" and the White Woman.

The road was lined with carriages, clumsy two-wheel ox carts, mules, horses, burros, and crowds of people on foot, all going to, or returning from, the shrine of the Virgin at Guadalupe, as this was the anniversary of the day of her appearance to the Indian and her command that a church be built on the spot.

There was a small village at the foot of the hill, through which our party proceeded on foot, leaving the carriage in charge of the *cochero*, and climbed the steep path leading to the church. Johnny was more interested in the people than in the building, with its decorations of gold and silver, its miraculous painting of the Virgin with the costly dresses and jewels which adorned it.

There were native Indians from the mountains, each tribe with its distinctive dress; and peons dressed in their best — wide trousers and blouses of coarse muslin, dazzlingly white, sashes of gay colors, tall hats, sandals, and striped blankets with a slit in the center for the head. This blanket is the peon's inseparable companion, overcoat by day, blanket by night, and cushion upon which to kneel on the cold stone floor of the church during the service.

Finely dressed ladies and gentlemen mingled with the throng of kneeling worshippers. Finding it impossible to gain an entrance into the church, which was insufferably hot from the people, the innumerable candles, and the smoke of the incense, they passed around one side, and there near an entrance was Mr. Black selling Testaments and Bibles and Gospels to the interested throng as fast as he could hand them out.

Soon a priest came hurriedly around the corner, dashed into the crowd, and after snatching a book from one who had just bought it, turned to the people and ordered those who had bought them to bring them to him. Some did so, but others had already secreted theirs. The priest told them that they must not touch or handle those books, and that they must drive the foreigner from the place. In a minute the cry arose, "*Que muere el Gringo!*" and stones were flying freely. But the object of all this tumult understood the signs, and disappeared around the corner.

"I doubt if we ever see our friend again," said Johnny. "But can't we do something to help him?"

"O dear Mr. Black," sobbed Teresa, "I always feared they would kill you, and now they have done so, I am sure."

"All we can do now is to get out of here as quickly as possible, and so quietly as not to excite this multitude more. When the ladies are safely in the carriage, I shall return and hunt for our brave missionary," said Mr. Brun.

When our party reached the other side of the large building, there they found Mr. Black busily selling to people passing in and out at the door. He saw them, and made a sign of greeting, and they stood, greatly relieved, until he came to them.

"Well, I have sold out, and now I am going home," he declared.

"We are ready to go; will you not ride with us?" answered Mr. Brun; and the party walked down to the carriage.

On the way Mr. Black told of his experiences, and spoke feelingly of how anxious he was to get off on his trip, "for," he said, "I expect my wife from the States before long, and I want to be here to meet her when she arrives. Are you not

improving rapidly, Johnny?"

"O yes, sir; I am very much better?"

"How would you like to take the trip with me? It would cure you, and you would get an experience that would be valuable to you."

"I!" gasped the boy; "why, Mr. Black, —" his eager face and shining eyes said the rest.

Just then the carriage rolled through the broad doors into the *patio*, and they alighted. Mr. Brun took the arm of the missionary, and led him into his private room. "My friend, what do you mean? Are you in earnest?"

"Of course I am. You do not think I would jest, do you? It would be just the thing for him, to travel on muleback, camp in the open air, and eat whatever we can find."

"But what a care he will be to you," objected Mr. Brun.

"Care! his company will more than compensate me for that; and really I can make him useful. He is such a bright lad, and so interested in missions,



THE VIRGIN OF GUADALUPE



that I should enjoy having him along, and we will teach him to speak Spanish."

"Yes, he is learning it very fast under the girls' tuition; but will there not be danger? You know I am responsible for him to his parents."

"No, I do not think there will be any personal danger where we are going."

"Very well, then; if the boy wants to go, I have no objections."

Mr. Black stepped to the door. "Johnny, come here." The boy quickly appeared. "My boy, are you willing to bear hardships as a good soldier in the cause of Christ, to help carry the blessed word of life to these poor ignorant people? We shall travel on mules, and camp wherever night overtakes us, do our own cooking, or eat in the little open-air *fondas* when we are in the towns."

"O, yes, indeed," replied Johnny, eagerly; "I should like it so much. O Mr. Black, how good you are to me!"

"Wait till we get back again, and then you can thank me," said Mr. Black. "Well, as that is settled, can you be ready to start Monday?"

"I will see to that," said his uncle. "I have roughed it enough prospecting and mining to know what is needed."

"Well, that's settled," said Mr. Black; "we will start early Monday morning. Good-by until then. I will have the mules ready."

MAY McCULLOCH CARR.

#### Letters to a Grandson — No. 12

MY DEAR BOY: I think of you many times every day. How anxious I am that you may improve your opportunities and get the most and best out of this school year.

Your mother is not yet able to work, and the waiting time must often seem long. If you do your best, it will be a source of great comfort and cheer to her.

No doubt your lessons will sometimes seem dry and hard; but King Edward, Abraham Lincoln, James Garfield, and many others have had to pass over the same road, each one for himself. Look backward and see how much you have learned, and look around you and see how much others have learned, and let this encourage you. You think study is easier for some others than for yourself, but remember this: *it is the will to do, the determination to conquer, that counts — simply good solid mental application.* You never saw a merchant, an architect, an editor, a teacher, or one engaged in any other useful occupation, make a success who had not learned to think. What would a gold-mine be worth if it was never worked? So it is with the human mind; only the mine does not deteriorate if unworked, and the mind does.

There are few teachers, however excellent, who please everybody, in school and out, and in most schools there is at least one grumbler. Now where there is *only* one, he is soon crowded to the wall, and is absolutely obliged to go out of business. I have noticed that the one who is bright enough to tell just what a teacher should and should not do under all circumstances, rarely climbs the ladder of fame higher than a hod-carrier, although all do not follow that occupation. The one who as a boarder complains most of the fare, is usually the one who lived on half

rations at home. If food is absolutely clean, well cooked, sufficient in quantity for health, and otherwise healthful, no one has reason to complain. To be sure, food to be healthful, must be relishable, but the mischief-maker Taste crept into the garden of Eden, and has caused no end of trouble ever since. Once knowledge and judgment has decided what is best, the will power, duly exercised, can educate taste.

A gentleman was visiting a friend who was a teacher. As they were talking, a fine, frank-looking boy passed. Said the teacher, "That is a boy I can always depend upon; he never fails me." My dear boy, I am not ambitious that you should ever become president of the United States, but I am anxious that you should deserve the fine compliments that teacher paid the boy.

As ever, with much love,

GRANDMA.

## Questions and Answers

[The editor, thinking it would be more satisfactory if the ideas of various educators could be obtained, sent questions that had been received, to a number of persons, requesting answers. The responses given are worthy of consideration.]

*Is it proper for a young lady to visit a gentleman friend at his home, when she lives in a distant city, and is not on intimate terms with his sister?*

No, emphatically no! Young men of right principles prize modesty and dignified behavior on the part of their young lady friends. Your friend should think all the more of you if you refrain from the doing of that which is likely to call forth adverse criticism. And his sister, if she rightly values true womanhood, will consider it eminently proper that you carefully avoid everything that is questionable.

The question might be a very different one were you on intimate terms with his mother or sister, and the invitation came from that source as well.

MRS. M. A. LOPER.

*"Why is it not wise for young people to 'keep company' while attending school?"*

Because the practise would bring into the school a spirit of sentimentalism, which would interfere with study and good order. It is not wise to be always "keeping company" with some one, even if not attending school. Often it happens that boys and girls pass through a long course of these slender attachments, like a humming-bird flitting from flower to flower, but seeming never satisfied to light. Such associations dissipate the affections until the persons are scarcely able to recognize or bestow true affection. Most divorce cases are the result of marriages contracted before the parties are old enough to be governed by reason rather than by impulse.

C. C. LEWIS.

*"Would you consider it wrong for Seventh-day Adventist young people to learn and practise certain 'steps' while marching in calisthenic drill? It has been said that it leads to dancing."*

The same principle would doubtless apply in such drills as in recreations. We should guard against everything which would lead us toward the thoughts or pleasures or forms of sin. As Christians, our pathway must lead upward, not downward. "Our influence has no nights, and keeps no Sabbaths."

There are many games and forms of recreation which might be harmless in themselves, were it not



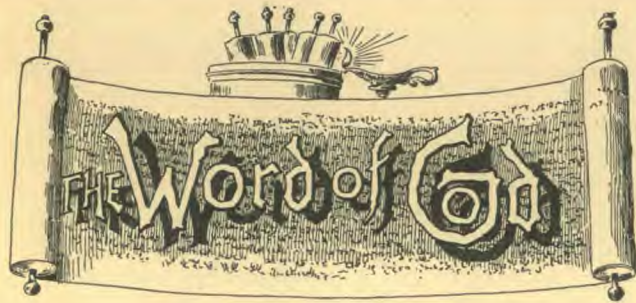
that they have become marked as the pleasures of sin through the use that has been made of them, and the company they keep. Calisthenics in their proper place are doubtless beneficial for physical discipline, but the range of exercises and drills is so wide that there is no necessity for using such "steps" as are referred to in the question, which might suggest to the children the thought of dancing, and lead them to believe that dancing itself may be a harmless physical drill. It is best to avoid even the appearance of evil.

E. R. PALMER.

*"At what age and stage of development in preparation for the work of God should a young man or woman begin to think seriously of getting a companion for life?"*

No one can say, except in very general terms, when young people should begin to think about this matter. But whenever they do think about getting a companion, they ought to think seriously. Choosing a companion for life is not child's play. Better leave it until a reasonably good education is acquired. This will bring the parties to a proper age for marriage. Authorities agree that not until the man is twenty-five and the woman twenty-one at least, are the physical powers sufficiently mature properly to discharge the grave responsibilities of married life. Nor is the judgment sufficiently well-equipped. And this emphasizes the advisability of deferring this step until the education is completed. Prudence also would indicate that it is wise to defer marriage until the life-work has been selected. It is but reasonable to suppose that one's companion should be in sympathy with one's work in order to be a true helper in that work. But if the companion be selected first and the work afterward, it will be a mere chance if they fit well together. When a young man, therefore, has completed, or practically completed, his preparation for the work of God, and when he is certain that a wife would be a blessing to himself and to the cause of God which he is about to enter — then, and not till then, should he seriously consider the choice of a companion for life.

C. C. LEWIS.



### Who Changed the Sabbath?

#### The Sabbath Was Not Changed by God the Father

It could not have been God who changed the Sabbath; for he changeth not. In him is no variable-ness, neither shadow of turning. Mal. 3:6; James 1:17.

#### The Sabbath Not Changed by Christ

It could not have been changed by Christ; for he, too, is unchangeable (Heb. 13:8), and he and the Father are one. John 10:30.

Christ came not to change the law, and he says, "Till heaven and earth pass, one jot or one tittle shall in no wise pass from the law." Matt. 5:17, 18.

### The Apostasy

Paul, in speaking to a company of elders, foretold an apostasy. Acts 20:17, 28-30.

This apostasy, he tells us in another place, would go so far as to set up a man in the place of God. 2 Thess. 2:3, 4.

It is the same power which Daniel describes under the symbol of a little horn. Dan. 7:25.

### The Papacy

It is the Papacy that has set up a human being, a sinful man, or man of sin, in the place of God, where he "displays himself as actually being God." 2 Thess. 2:3, 4. See Twentieth Century New Testament.

In a sermon, preached when he was archbishop, Cardinal Manning put the following sentences in the mouth of the Pope: "I acknowledge no civil power; I am the subject of no prince; and I claim more than this. I claim to be the supreme judge and director of the consciences of men; of the peasant that tills the fields, and of the prince that sits upon the throne; of the household that lives in the shade of privacy, and the legislator that makes laws for kingdoms; I am the sole, last, supreme judge of what is right and wrong."—"Our Country," page 53. Thus has the man of sin "displayed himself as actually being God." See "Claims of the Papacy," Nos. 1-4.

### The Sabbath Changed by the Papacy.

The Papacy has thought to change the times and law of God. Dan. 7:25. See "Claims of the Papacy," Nos. 2, 3.

There is but one commandment that relates to time, and it is therefore the only one that could be altered, and at one stroke change both the times and the law. That one is the fourth, or Sabbath, commandment, which is found in the very heart of the decalogue. This the Papacy has attempted to change. See "Claims of the Papacy," Nos. 5-8.

### Conclusion

"We ought to obey God rather than men." Acts 5:29.

Read Bible Students' Library, No. 187.

O. F. BUTCHER.

### "He Shall Speak Great Words"

THE following paragraphs from a Catholic paper, the *Western Watchman*, printed in this country, are significant:—

"Henceforward only such laws will be passed by the Reichstag as will suit the Catholic party, and the greatest Protestant state in Europe must, willy nilly, take its orders from Rome. We would put it thus bluntly, because we would emphasize the victory the Center [the Catholic party of the Reichstag] has won; and for the further reason that the parties which have controlled the policy of the German empire for many years, to the exclusion of the Center, have always boasted that the country would have to be governed either by them or by the Pope. We take their own estimate of the situation, and state a condition in the words of their own description. The Center is again in supreme power, and with the Conservatives will rule the destinies of the German state."

"It takes a lot of provocation and a long time to work up the church in our day to the fighting point; but her fingers are just as well skilled for war as they ever were; and the world needs a sight of the Catholic Church in battle array. It will do it good, and



then the Lord of hosts will come forth from his concealment behind the clouds, and show a startled world that his arm is not shortened. We need a holy war in Christendom. France is the home of Christian chivalry. She has poured out blood and treasure in the past like water to smite the infidel and rescue the sanctuaries of the church from their profaning grasp. The infidel is now entrenched in France herself. He rules on the Seine with more haughty sway than he ever did on Asiatic slope or Mediterranean wave. Let the soldiers of the cross have at him. Don't parley with him; smite him, hurl him from his political entrenchments, and let his resting-place be at the bottom of the great river that in ages gone by saw so many Christian soldiers set out to give battle to the enemies of God and holy church. We have said many times already, and we repeat it here: the next revolution in France will end with the massacre of the infidels."

On the intolerance of the Roman Catholic Church Archbishop Kendric says:—

"We confess that the Roman Catholic Church is intolerant; that is to say, that it uses all the means in its power for the extirpation of error and sin; but this intolerance is the logical and necessary consequence of her infallibility. She alone has the right to be intolerant, because she alone has the truth. The church tolerates heretics where she is obliged to do so, but she hates them mortally, and employs all her force to secure their annihilation. . . . Our enemies know that we do not pretend to be better than our church, and in what concerns this, her history is open to all. They know, then, how the Roman Church dealt with heretics in the Middle Ages, and how she deals with them to-day wherever she has the power. We no more think of denying these historic facts than we do of blaming the saints of God and the princes of the church for what they have done or approved in these matters."



M. E. KERN . . . . . Secretary  
MATILDA ERICKSON . . . . . Corresponding Secretary

## Society Studies in Bible Doctrines

### Lesson IX—Types and Shadows

**SYNOPSIS.**—From the very beginning the atonement of Christ was planned to meet the emergency of sin; but not till four thousand years or more had passed was he manifested in sinful flesh to live and die for our salvation. Before this men manifested their faith in the coming Redeemer by making animal sacrifices. By this means atonement was made, and their sins forgiven. There was no virtue, however, in these sacrifices in themselves only as they showed faith in "the Lamb of God, which taketh away the sin of the world." When Christ died, the virtue in all typical offerings ceased.

#### Questions

1. When was the provision made for the sacrifice of Christ for sins? Rev. 13:8.
2. When was the sacrifice actually made? Heb. 9:26; Gal. 4:4.
3. Before the death of Christ how did men show

their faith in the promised one? Gen. 4:4; Heb. 11:4.

4. What was the repentant sinner to do? Lev. 4:27-29.

5. What was to be the character of the offering, and how was it to be brought? Lev. 1:3.

6. As a result of the sacrifice what did the individual receive? Lev. 4:31, last clause.

7. Was there any real virtue in the blood of animals to atone for sin? Heb. 10:1, 4.

8. To what then did all these offerings look forward? Heb. 9:26, 28; John 1:29.

9. What did Christ's atonement then cause to cease? Dan. 9:27.

10. Read "Patriarchs and Prophets," page 68, first paragraph.

## Missionary Volunteer Reading Course No. 3

### Outline No. 14—"The Moslem World," pages

136-160

#### Notes

**STANDING OF MISSIONARIES.**—"At the beginning of work in Turkey all classes were suspicious of the missionaries. Experience with the representatives of the Roman Catholic and Greek churches had led the Mohammedans and others to fear that their errand was not wholly religious. At the same time, it was impossible for one brought up in the atmosphere of Turkey not to confound religion with nationality.

"It required more than fifty years of residence in that country, accompanied by a life of constant devotion to the interests of the people, to remove the impression that the missionaries were there for what they could make out of it. The following conversation, which actually took place, illustrates fairly well the attitude of inquiry and doubt. The parties to it were a missionary and an intelligent Armenian in the interior of the country:—

"'You must receive a pretty large salary to lead you to leave your home and friends in America and endure here among us the hardships of this country?'

"'Quite the contrary,' replied the missionary; 'I receive what all American missionaries receive, and no more, that is, my bare living with no surplus.'

"'Then,' the Armenian quickly replied, 'you must expect, after you have learned the language, to receive some government appointment at a large salary?'

"The missionary answered, 'Few missionaries have ever given up missionary work for a government appointment, and I have never seen one who would consider such an appointment, or who would remain in the country at all for diplomatic or consular service.'

"'What are you out here for, anyway?' asked the discouraged guesser.

"'We missionaries have come out here only to help the people of this country to establish worthy Christian institutions and to become better men and women.'

"'Surely there is some other reason,' said the man as he walked away. 'Who would ever bring upon himself such hardship and trouble for that?'

"The true Christian motive that considers others' needs ahead of self-interest was little understood, and it required generations of missionary labors to bring the people to begin to understand it.

"Times of great national distress, like war, massacres, famine, and plague, had given the missionaries unusual opportunity to prove to the people that they



were there, not for their own personal comfort, but to bind up the broken heart and give cheer to the downcast and the dying. Every added missionary grave, and they dot the country from Arabia to the Black Sea and from Persia to Salonica, was an added argument which no Oriental could answer, that the missionaries were there to minister and not to be ministered unto, and to give even their lives for others."

MIRZA IBRAHIM.—In lands where both the church and the government are Moslem, the Mohammedan who accepts Christianity is considered a criminal. Mirza Ibrahim knew that; nevertheless in 1888 this young Mohammedan in northwestern Persia attended some Protestant meetings. He was won by the purity of Christianity, and regardless of cost accepted Christ as his Saviour.

His wife and friends scoffed at him. Soon he was obliged to flee for his life. He found refuge in the home of a missionary, and for two years he helped in a little Turkish school. Then, at his own request, he went forth to declare the glad tidings to the surrounding villages, but he soon felt the arm of the civil law laid heavily upon him. He was cast into prison. A chain was placed about his neck, and his feet were made fast in the stocks. Yet his accusers were not content; they thirsted for his blood; the government, however, hesitated to execute Ibrahim openly lest it should only increase the interest in Christianity, and shake the confidence in Islam. So they chained him to a gang of murderers in the prison. Even these he tried to win for Jesus. One night the gang threatened to choke him if he would not say that Jesus was false, and Ali true; but he replied, "Jesus is true, choke me if you will." They treated him so brutally that he died from the injuries received.

Prisoners and officers were impressed with Ibrahim's daily life. When the crown prince asked the jailer how Ibrahim died, he replied, "He died like a Christian." The martyrdom of that faithful young man sent a thrill throughout Persia.

## Junior Reading Course No. 2

### Outline No. 14 — Optional Bible Study

#### Notes and Suggestions

THIS week each member of the Junior circle is asked to read the story of any Bible character which he may choose. The lives of such men as Daniel, Zechariah, Nehemiah, and Jonathan could be profitably studied.

Very soon we shall begin our reading on birds, and that will help us to be more ready to welcome the little songsters in the spring.

WHOEVER fears God, fears to sit at ease.—*Mrs. Browning.*

THE man who makes no mistakes does not usually make anything.—*Edward Phelps.*

"THEY who take only their clothes to church never know about the robe of righteousness."

"GIVE to the world the best you have, and the best will come back to you."

BEWARE of dissipating your powers; strive constantly to concentrate them.—*Goethe.*



## IV — Jesus Reproves the Jews

(January 22)

LESSON SCRIPTURE: John 8:33-59.

MEMORY VERSE: "Whosoever committeth sin is the servant of sin." John 8:34.

### The Lesson Story

1. When Jesus, speaking to the Jews in the temple, said, "And ye shall know the truth, and the truth shall make you free," he meant that they would be free from sin and from the results of sin. But some of the Jews replied, as if they did not understand him, "We be Abraham's seed, and were never in bondage to any man: how sayest thou, Ye shall be made free?"

2. "Jesus answered them, Verily, verily, I say unto you, Whosoever committeth sin is the servant of sin. . . . If the Son therefore shall make you free, ye shall be free indeed."

3. Christ declared that although the unbelieving Jews were children of Abraham, they ought not to be called his children. Jesus said, "Ye seek to kill me, a man that hath told you the truth, which I have heard of God: this did not Abraham."

4. Then they said, "We have one Father, even God. Jesus said unto them, If God were your Father, ye would love me: for I proceeded forth and came from God; neither came I of myself, but he sent me. . . ."

5. "And because I tell you the truth, ye believe me not. Which of you convinceth me of sin? And if I say the truth, why do ye not believe me? He that is of God heareth God's words: ye therefore hear them not, because ye are not of God."

6. "Then answered the Jews, and said unto him, Say we not well that thou art a Samaritan, and hast a devil? Jesus answered, I have not a devil; but I honor my Father, and ye do dishonor me."

7. Jesus said also, "If a man keep my saying, he shall never see death." Because the righteous are soon to be raised to eternal life, their death is spoken of as a sleep.

8. But the Jews wanted some excuse to complain of Jesus; hence they said: "Now we know that thou hast a devil. Abraham is dead, and the prophets; and thou sayest, If a man keep my saying, he shall never taste of death. Art thou greater than our father Abraham, which is dead? and the prophets are dead: whom makest thou thyself?"

9. Jesus replied, "Your father Abraham rejoiced to see my day: and he saw it, and was glad. Then said the Jews unto him, Thou art not yet fifty years old, and hast thou seen Abraham? Jesus said unto them, Verily, verily, I say unto you, Before Abraham was, I am."

10. "Then took they up stones to cast at him: but Jesus hid himself, and went out of the temple, going through the midst of them, and so passed by."

### Questions

1. What assurance did the Saviour give to all who would be his true disciples? From what does he free those who accept his word? How did the Jews reply to Christ's statement about being made free? John 8:32, 33.



2. To what were they really servants, though they did not realize the fact? Who alone could free them from the bondage of sin? Verses 34-36.

3. What did Jesus declare concerning the Jews? What did they do that Abraham would not have done? Verses 39, 40.

4. Who did they then say was their Father? How did Jesus reply to them? Verses 41, 42.

5. Had those who opposed Christ been able to find any wrong in his life or in his words? Why, then, did they not accept him? Verses 45-47.

6. Of what did the Jews accuse him? Instead of being controlled by Satan, by whom was Jesus controlled? Verses 48, 49.

7. What promise did the Saviour make to any who would follow his teachings? Verse 51. Why is the death of Christians often called a sleep?

8. For what reason did many who heard Jesus not seem to understand what he meant? Verse 47. How did some try to prove that he spoke falsely? Verses 52, 53.

9. What did the Saviour then say of Abraham? Where was Christ while Abraham was living? John 1:2. How long had Abraham been dead when the Son of God lived upon the earth?—Nearly two thousand years. What reason did the Jews give for not believing that Jesus had seen Abraham? Give his reply. John 8:56-58.

10. In what manner did they then give vent to their hatred? Why was Jesus not injured? Verse 59.

would keep his saying? How severely was his teaching denounced? Verses 51-53.

13. In replying, what relation did Jesus say Abraham sustained to him? Verses 54-56.

14. In what way did Abraham see the day of Christ? See "Desire of Ages," pages 468, 469.

15. What blind retort did the Jews make? What was Jesus' reply? Verses 57, 58; note 4.

16. Give other scriptures that prove the pre-existence of Christ.

17. What result followed this interview? Verse 59.

18. As in the case of the Abrahamic descent, what is the true principle of the apostolic succession? Note 5.

#### Notes

1. God's eternal purposes will be accomplished. Ps. 33:11; Isa. 46:10. Though the blighting curse of sin now rests upon the earth and its inhabitants, it is an immutable fact in God's purpose that sin is only a temporary intrusion and will be destroyed. Rev. 22:3. It is a thing of time and not of eternity. Thus the servants of sin abide not forever. Here is the divine law of the survival of the fittest.

2. It was the predicted and declared purpose of Jesus to free from sin those who would accept him. Isa. 42:7; Matt. 1:21; Luke 4:18; 1 John 3:5. How slow we are to accept of the full provisions of the gospel! But every one who stands before the Son of man at his coming must be wholly freed from the bondage of sin. Rev. 14:5. See "Early Writings," page 61 old edition, page 71 new edition.

3. The slanderous insinuations concerning the character of his birth (verses 19, 25), Jesus passed by apparently without notice, endeavoring all the while to impress his hearers with the truth of his unity with God, the unreasonableness of their opposition to him, and their need of regeneration.

4. "Jesus said unto them, Verily, verily, I say unto you, Before Abraham was born, I am." John 8:58, A. R. V. Jesus here states clearly his pre-existence. He was associated with the Father in the work of creation. Gen. 1:26. "All things were made by him; and without him was not anything made that was made." John 1:3.

5. "Descent from Abraham was proved, not by name and lineage, but by likeness of character. So the apostolic succession rests not upon the transmission of ecclesiastical authority, but upon spiritual relationship. A life actuated by the apostles' spirit, the belief and teaching of the truth they taught, this is the true evidence of apostolic succession. This is what constitutes men the successors of the first teachers of the gospel."—"Desire of Ages," page 467.

#### Tecumseh, Indian Chief

TECUMSEH was probably the greatest orator known among the Indians. His language was remarkable for poetic beauty. When he addressed an audience, his face shone with a passionate emotion that worked like magic on his hearers. He was a man of sensitive dignity, as shown by the following incident:—

When he and his warriors held the famous conference with Harrison, he looked around, after concluding his address, for a seat; but none had been reserved for him, and he seemed offended. A white man quickly offered him a seat near General Harrison, saying:—

"Your father wishes you to sit by his side."

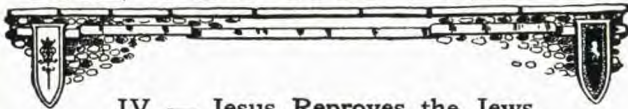
"The sun is my father," answered Tecumseh; "the earth is my mother, and I will rest on her bosom;" and he sat down on the ground.

At the siege of Fort Meigs, while the Indians were murdering some prisoners, Tecumseh ran between the Indians and the prisoners, and brandishing his tomahawk, dared the former to kill another man. Then turning to General Proctor, who had witnessed the massacre without protest, he exclaimed, "Why do you permit this?"

"Your Indians can not be restrained," answered Proctor.

"Be gone," cried Tecumseh, "you are unfit to command; go and put on petticoats."—*Philadelphia Press*.

## THE YOUTH'S LESSON



### IV — Jesus Reproves the Jews

(January 22)

LESSON SCRIPTURE: John 8:31-59.

LESSON HELP: "Desire of Ages," chapter 51, pages 466-470.

MEMORY VERSE: John 8:34.

#### Questions

1. What did Jesus indicate, to those who believed on him, as a condition of true discipleship? John 8:31.

2. What promise was made to those who would fulfil this condition? Verse 32.

3. How did the Pharisees reply? Verse 33.

4. What did Jesus explain to be the greatest bondage? Verse 34. See also Rom. 6:16.

5. What did he say of the servant of sin? John 8:35; note 1.

6. Where only can real freedom be found? Verse 36; note 2.

7. How did Jesus show that his enemies were not the spiritual children of Abraham? Verses 37-40. See Rom. 9:6, 7.

8. What disproved their being children of God? John 8:41-43; note 3.

9. With whom were they allied in spirit and purpose? What reason did Jesus assign for their unbelief? Verses 44, 45.

10. By what argument did he show to them their true condition? Verses 46, 47.

11. What was their answer? How did Jesus reply? Verses 48-50.

12. What further did Jesus say of the one who



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## Get to Work

QUICK! Let us find our work. *You* preach a sermon — *you* give a tract — *you* hand a flower — *you* sing a song — *you* give a crutch to a lame man — *you* teach a Sabbath-school class A B C — *you* knit a pair of socks for a foundling — *you* pick a splinter from a child's finger. Do something! Do it now! *We will be dead soon!* — T. DeWitt Talmage.

## The Benefits of Railway Service

A RAILROAD official, while in conversation recently with a number of persons, spoke of the excellent training the railway service gave to young men. This was due chiefly, he said, "to the discipline which teaches the value of time." Then he continued: "A green boy enters the operating department, and he finds a condition of absolute exactness as to time; that 9:47 is not 9:40 or 9:45, or even 9:46, just as it must not be 9:48. It is 9:47. Neither a fraction of a minute more nor less. At home, in school, and in the positions offered in commercial life, there is more or less latitude; even the banks allow some leeway in the payment of notes. But in the operating department of a railroad, the clock which records the passage of time is the absolute monarch of action. And so the boy is taught exactness, and has constantly in his mind the doing of the thing to be done at the precise moment when it should be done. Two or three years of this training indelibly fixes the habit; for example, in my own case, there is no reason why I should not now come to my office when I please, one day at eight, and the next at ten o'clock. But I can't do it. I set nine o'clock as my office hour, and when an occasional delay on the way down brings me there five or ten minutes late, I feel all day like a train which has lost its schedule and is running wild. I have tried time and again to overcome this feeling, but I can't; it's too firmly fixed.

"However, as valuable as is this training, two or three years should be enough for any bright boy, unless he intends to make railroading his life-work. In that time he will have learned the lesson which no college or university can possibly teach, or ever will, for the responsibilities of handling trains and the penalties for carelessness are things which can not be bound in text-books or delivered in lectures."

The supreme value of the habit of promptness is acknowledged by all who have made a success in the

business, social, or religious world; but the young man who has stanchness of purpose and a sense of his obligations to others will see to it that he forms the habit of exact promptness, whether he be in the railway service or in some other less hazardous work.

A Sunday-school of one hundred members in Hillsboro, Kansas, has recorded but one tardy mark against its membership for two years and six months. The pupils of this school have certainly put themselves under valuable discipline, and any one who realizes the worth of the habit of meeting every engagement on time will not fail to impose upon himself in youth the severe discipline necessary to secure this ideal.

## A Good Letter

Editor of the "Youth's Instructor,"—

I have just finished another year in which I have been a member of our Reading Circle, that is, of the one which requires us to read five of our denominational books a year. The titles of the books that I have read during 1909 are as follows: "Here and Hereafter," "Marvel of Nations," "Thoughts on Daniel and the Revelation," by Uriah Smith; "Gospel in Creation," by E. J. Waggoner; and "History of the Sabbath," by J. N. Andrews. The last-named I have read twice.

The more I read our books, the more I feel confirmed in the truths of our faith. I feel as if I could give an answer to every man that asketh me a reason of the hope that is in me.

I have already selected a list of five more of our books to read the following year.

Yours very sincerely,

FORREST WASHBURN.

Memphis, Tennessee.

## Football Fatalities

AN unusual number of football players have been killed this season, and that, too, after an effort had been made to "open" the game, and diminish the crowding and tumbling in a pile on the man who holds the ball. Several institutions, after the death of a player, canceled the rest of their games, and the superintendents of the New York City schools have voted that the game must be abolished as too dangerous. But Gen. G. W. Wingate, president of the Public Schools Athletic League, hopes the board of education will veto the action of the superintendents. He says it is "a great game," that it "gives the elements of team work, resolution, and manliness." But he says boys ought not to play it unless "in good physical condition." We would refer to our hygienic editor the problem how to secure the physical condition which would save a boy's neck from being broken by his head being twisted over, as has been the case with several boys thus killed this season. The argument that it develops team work and courage is the true line of defense. But that can be done just as well in the safe and open association game, which ought to take its place, certainly with immature boys, and probably with college boys as well; and baseball gives team work as well, and takes some courage. In football the mass plays ought to be abolished, and it were well if the other football, so popular in England, and growing more popular in this country, should take its place.—*The Independent.*

"CONSCIENCE is the champion of justice."