

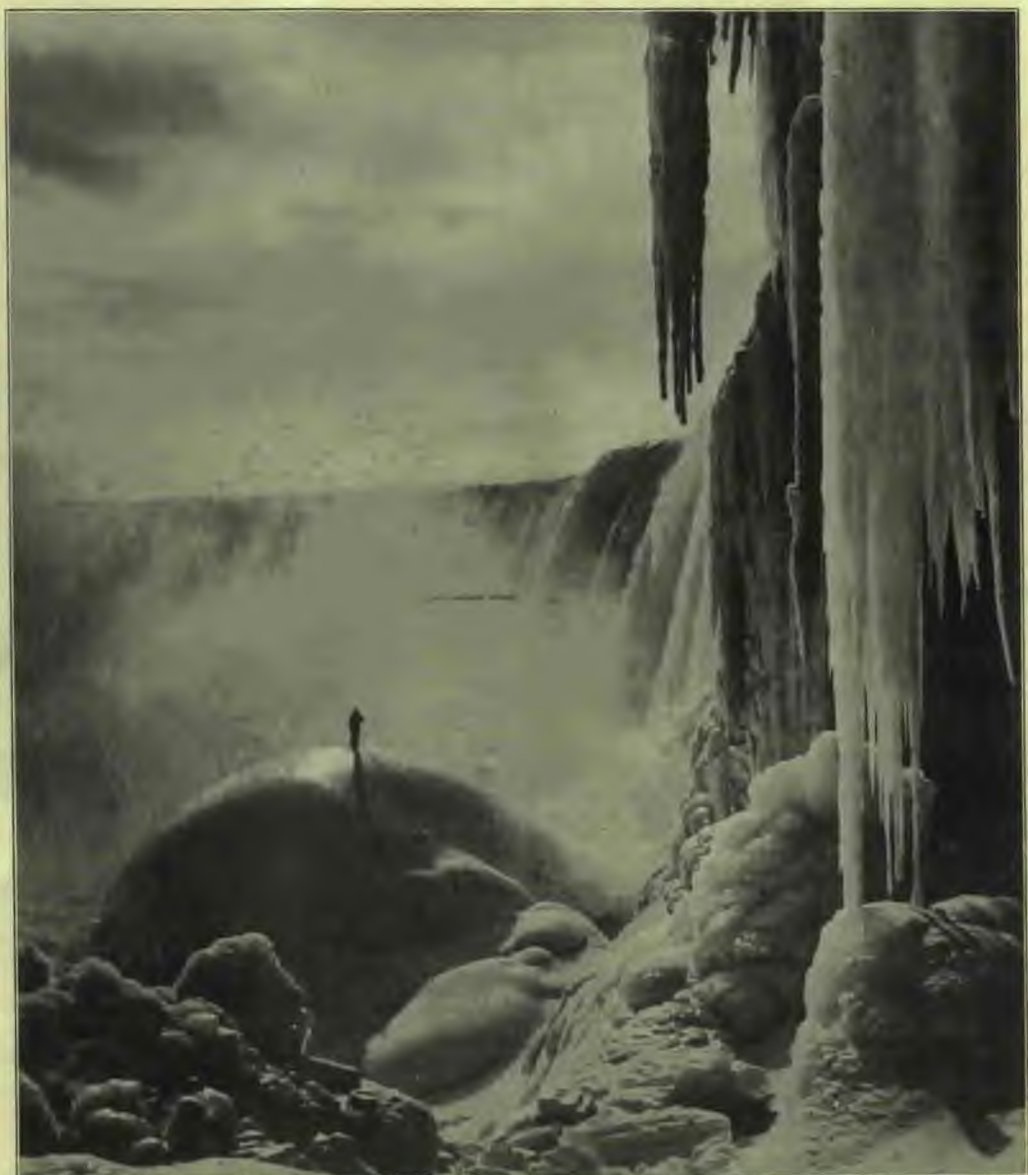
Wm. Lough

The YOUTH'S INSTRUCTOR

Vol. LXI

January 14, 1913

No. 2



Copyright, Underwood and Underwood, N. Y.

THE HORSESHOE FALLS IN WINTER

If you fail to read Mr. Thurber's articles on "Glimpses of Burma," you will miss an unusually interesting sketch of life in that land first made dear to us by the experiences of the heroic pioneer missionaries, Adoniram Judson and his wife.

DR. FREIDRICH FRIEDMANN, of Germany, claims to have discovered a cure for tuberculosis. He says he has already cured six hundred cases. His treatment consists in injecting into the patient a serum from turtles in which serum bacilli have been cultivated.

In the schools of Austria the children are taught to carry several sheets of writing-paper in their pockets at all times. Then when a child is thirsty, he can roll one of the sheets into a cone and make a perfectly serviceable cup. How to roll the sheets deftly is first taught to the children.—*Exchange*.

THE commission appointed to devise means for the eradication of the hookworm in the mountain districts of Kentucky, in its report for Breathitt County says that out of 1,785 persons examined 1,263 were affected. In some schools, every pupil was found to have the disease.

POSTAGE-STAMPS in mile lengths soon will be printed by the government, as the result of the invention of a machine by Benjamin R. Stickney, of the Bureau of Engraving and Printing. The new machine will print, gum, dry, and either cut into sheets or coil in mile lengths the product of the press. It probably will save the government a vast sum of money, for it is claimed by the inventor that it will cut down the cost of producing stamps at least fifty-seven per cent.

"DR. LOUIS W. SAMBON, chief of the Pellagra Field Commission, was the first to dispute the prevailing theory that pellagra is caused by damaged corn. He

declared it an infectious disease, carried by a small fly, or gnat, that belongs to the family of Simuliidae. His investigations in several countries tend to confirm this theory, and parasitologists are now studying the organism that is believed to cause the disease. Pellagra has hitherto been regarded as fatal; it often causes insanity, and has affected millions of persons in many countries."

"THE British post-office has finally decided not to admit claims to compensation on account of registered mail lost on the 'Titanic.' Under an international convention an indemnity of fifty francs (ten dollars) is payable to the owner of any registered letter or package lost in transit to any foreign country through negligence on the part of the mail service or transportation line; and if negligence had been admitted in case of the 'Titanic,' the amount payable as compensation would have been something like \$4,000,000, which would have fallen eventually on the steamship company. But the post-office has somewhat tardily taken the ground that the loss was 'due to causes beyond control,' and is now sending out notices to claimants to that effect."

Principal Contents

CONTRIBUTED ARTICLES	PAGE
Glimpses of Burma — The Chinaman	3
Genius and Insanity	4
How to Measure Distant Objects	6
A Glimpse of a Great Industry	7
My Conversion	9
Don't's for Guests	10
Rebecca's Cross	11
SELECTED ARTICLES	
Transformation (poetry)	3
Unforgotten (poetry)	4
Time's Opening Day	5
Doings of Our Class	8
How Dolls Are Made	12

The Instructor

WITH A Good Bible

A GIFT SUGGESTION

For \$2.50 we will send to any address the **INSTRUCTOR** for one year, and a good Bible 1 x 5 1-2 x 7 1-2 inches in size, **self-pronouncing, references, maps, large minion, CLEAR-TYPE EDITION, divinity circuit, red under gold edges**, in every way a good, serviceable, and attractive Bible for young people.

For \$3.00 we will send to any address the **INSTRUCTOR** for one year, and a Bible like the one described above, except it has larger type (long primer), and is 1 1-4 x 6 x 8 inches in size, just the Bible for the aged or those having impaired vision.

This offer is not limited to any class of subscribers or to any period of time.

If you want a good Bible at the price of the poor, and an excellent paper fit for people of quality, this is your chance.



ORDER THROUGH YOUR CONFERENCE TRACT SOCIETY

The Youth's Instructor

VOL. LXI

TAKOMA PARK STATION, WASHINGTON, D. C., JANUARY 14, 1913

No. 2

Transformation

ONLY a little shriveled seed,
It might be flower, or grass, or weed;
Only a box of earth on the edge
Of a narrow, dusty window-ledge;
Only a few scant summer showers;
Only a few clear shining hours;
That was all. Yet God could make
Out of these, for a sick child's sake,
A blossom wonder, as fair and sweet
As ever broke at an angel's feet.

Only a life of barren pain,
Wet with sorrowful tears for rain,
Warmed sometimes by a wandering gleam
Of joy, that seemed but a happy dream;
A life as common and brown and bare
As a box of earth in the window there;
Yet it bore, at last, the precious bloom
Of a perfect soul in that narrow room;
Pure as the snowy leaves that fold
Over the flower's heart of gold.

—Henry van Dyke.

Glimpses of Burma—The Chinaman

R. B. THURBER



JOHN CHINAMAN takes off his queue to progress, and we take off our hats to John Chinaman. (Who of those who know him will question the appropriateness of this given name? What John suggests to the average English reader's mind, that's the Chinaman.) Views of Burma are in-

complete without giving our friends of the Middle Kingdom (beg pardon, Republic) a prominent place. In America we do not see the Chinaman at his best. It may be he is not so seen in China. Be that as it may, in Burma he is seen at the best the writer has had the privilege of seeing him.

The American is jerky and hilarious compared with the Chinaman, who is steady and serious. He simply leans against what the Westerner pushes, but he is always leaning. No obstacle can long withstand that constancy of labor and that taking of everything to heart. The Chinaman has a destiny. I fully believe that we can not in a lifetime learn to understand his processes of mind. And that is not to say he is inferior. He is different.

The Chinese associated with Burmese don't fight. They fit. And that, too, like my carpenter's best dovetail joint. Usually the weakness of the one is evened by the strength of the other. Their ancestry, religion, and traditions are much the same. Their intermingling produces an excellent combination. It has been our observation that the children of the mixed marriages are fortunate in possessing many of the virtues of both parents. They work and save with the father, laugh and dress with the mother. Burma is stretching social hands toward the populous nation to the north; and who can say that in an extended history they may not be one? At least the Burmese character is destined to be greatly modified by contact with the surrounding peoples. This light-hearted folk have many admirable traits, but they are not of the kind which survive in our practical, workaday age. Considering everything, a blending of the strong characteristics of both nations by race union will be the best boon which either can bestow on future Mongolian generations.

Generally speaking, a Chinaman works hard and long, saves his money, attains skill in a practical trade, and is strictly honest. The Burman, still generally speaking, lacks all these; that is, he does not seem to be strongly inherent. If he has them, they have been put on by supreme effort. But the Burman is happy,

good-tempered, lovable, and has excellent taste in the fine arts, all of which the Chinaman must seek. Both like to rule, and are not very amenable to discipline. Both are inveterate gamblers. Let it be understood that we are speaking of these traits as general tendencies of the majority. Every people exhibits all degrees of desirable and undesirable features.

If the Japanese are the French of the East, the Chinese are the Germans. With that slow but sure Teutonic energy, the Chinaman is "at it" early and late. He has come to Burma with his "hand in," and has proceeded to build a reputation. In Burma the skilled carpenters, cabinet-makers, leather-workers, metal-workers, and contractors are very largely Chinamen. Also large numbers are employed as bank clerks and accountants. John's methodical ways make him especially valuable as a director and executor of large public works; and while he is not generally found to be a civil engineer by education, and can not take the place of one, he already knows or is fast learning the best ways of doing things.

"Have a look" with me at our Chinese wood-working teacher here at the school. We wonder that he can turn out a chair equal to the best in the West, and yet seem to have so few of what we consider facilities at his hand. Though seemingly crude, his methods are scientific and up to date in "conservation of natural energy." He is in the business "on all fours;" for his natural capacity is almost doubled by the use of his toes as a standard or a vise. Such a tool has the advantage of not encumbering his tool-box. His work-bench is eight feet long, ten inches wide, two feet high at one end and one and one-half feet high at the other. By means of numerous pegs and wedges used in conjunction with square holes in the bench top he manages to duplicate processes which would seem to require more complicated appliances. Instead of being one-sided and awkward as he planes, he sits astride his work (is really "on the job"), and gives it the benefit of a straight-arm push.

No, he does not do everything backward,—nothing, in fact, that I have seen. With two pieces of iron shaped by the local blacksmith, two wooden standards, a bamboo pole, and a piece of rope, he rigs up a one-foot power lathe which is a marvel of simplicity and effectiveness. And again, no tool besides power-run machinery can bore a hole so quickly as does his string-and-rod "brace."

The Chinaman in Burma has taken his cue from the home land and has cut off his queue. Never can it be said again that a "pigtail" hangs down every Chinaman's back. And now that he is no longer tied to the past by the hair of his head, he is making radical advances in other ways. As we see his sturdy industry and independence, we can not but heartily wish him Godspeed.

You stretch your sleep-stiffed limbs,
Phlegmatic John;
And with a mighty stride
The world moves on.

Genius and Insanity

THE relation between genius and insanity is very close. Few realize how many of our luminaries of history were subjects of melancholia, hallucination, and delirium. A biographical study of geniuses is not always pleasing to those given to idealizing and hero-worship.

"Peter, the Great was subject to nervous attacks, which degenerated into epilepsy. One of his sons had hallucinations; another, convulsions. Caesar was epileptic, of feeble constitution, with pallid skin, and subject to headache. Raphael experienced temptations to suicide. Walter Scott, during his infancy, had precarious health, and before the age of two was paralyzed in his right limb. He had a stroke of apoplexy."

Thomas De Quincey, suffering from repeated attacks of neuralgia, resorted to opium, and by the time he reached thirty years of age, drank about eight thousand drops of laudanum a day. Carlyle, an irate dyspeptic, suffered from paralysis of the right hand. In his diary we find this note:

"Nerves all inflamed and torn up, body and mind in a hag-ridden condition." Bach died of apoplexy; one of his many children was an idiot. Goethe, whose mother died of an apoplectic stroke, was sure of having perceived the image of himself coming to meet him.

Englishmen of letters have a general bad tendency toward peculiarities. Swift was always fearing insanity, and was nicknamed "Mad Person." Upon seeing a tree that had been struck with lightning, he once remarked: "I shall be like that tree; I shall die on top." Like Keats, he prophesied truly that he would have no rest until he reached the grave. Later in life he became a violent maniac. Shelley, the "master singer of our modern race and age," was called "Mad Shelley;" he was given to walking about in his sleep. Once he had a vision of a child rising up out of the sea and clapping its hands, and although he knew it was false, yet he could not reason the vision away. Cowper, Goldsmith, Lamb, Poe, and Southey are all known to have had peculiarities symptomatic of insanity.

"Michelangelo, while painting 'The Last Judgment,'

fell from his scaffold and received a painful injury in the leg. He shut himself up and would not see any one. Bacio Rontini, a celebrated physician, came by accident to see him. He found all the doors closed. No one responding, he went into the cellar and came up-stairs. He found Michelangelo in his room, resolved to die. His friend the physician would not leave him, but he brought him out of the peculiar frame of mind into which he had fallen."

Lord Byron was scrofulous and club-footed. He was born in convulsions; and when overexcited by mental work, sometimes imagined he was visited by a ghost. "Napoleon I had a bent back, an involuntary movement of the right shoulder, and at the same time another movement of the mouth from left to right. When in anger, according to his own expression, he looked like a hurricane, and felt a vibration in the calf of the left leg. Having a very delicate head, he did not like new hats. He feared apoplexy. To a general in his room he said, 'See up there!' The general did not respond. 'What,' said Napoleon, 'do you not discover it? It is before you, brilliant, becoming animated by degrees; it cried out that it would never

abandon me; I see it on all occasions; it says to me to advance, and it is for me a constant sign of fortune.'"

Professor Moreau, of Tours, holds that genius is due to overexcitation of the nervous system; that "it is a *summum* of nature's energy, after which her procreative forces are exhausted." Dr. Reed attributes the fruits of genius to the stimulation of toxemia or poisons produced either by disease or by the use of drugs, citing the cases of De Quincey and Stevenson. However it may be, we can not help but admit that genius, notwithstanding its eccentricities, has given to

Unforgotten

I CAN not tell why there should come to me
A thought of some one miles and years away
In swift insistence on the memory,
Unless there is a need that I should pray.

Old friends are far away; we seldom meet
To talk of Jesus or changes day by day,
Of pain, pleasure, triumph, or defeat,
Or special reasons why 'tis time to pray.

We are too busy even to spend thought
For days together of some friends away;
Perhaps God does it for us, and we ought
To read his signal as a call to pray.

Perhaps my friend just then has fiercer fight,
A more appalling weakness or decay
Of courage, darkness, some lost sense of right;
And so in case you need my prayer, I pray.

Friend, do the same for me. If I intrude
Unasked upon you on some crowded day,
Give me a moment's prayer as interlude;
Be sure I need it, therefore pray.

—Marianne Farmingham.

the world many helpful things.

E. C. JAEGER.

Now! Now! Now!

A PERSIAN prince, having grown to man's estate and completed his education, divided his life into four decades. The first ten years of his life he would devote to travel, the second decade he would employ in the affairs of the government, the third decade he would reserve for the pleasures and benefits of friendship, and then the fourth decade he would give to God. It seemed to be an admirable plan, but it was marred by one unexpected event. During the first ten years the prince died, and for that contingency he had made no preparation whatever.

Rabbi Eliezer used to say to his disciples, "Turn to God one day before your death." "But," they replied, "how can a man know the day of his death?" "True," said Eliezer, "therefore you should turn to God to-day. Perhaps you may die to-morrow." This is a worthy, though not the highest, motive for serving Jesus Christ.—*Selected.*

Time's Opening Day



ITTING and thinking of the coming new year, it seemed to me that old Father Time advertised a grand opening: "Years, new years of all varieties and qualities, to let!" Influenced by a universal desire, everybody was pushing toward his office, I among the rest; and he and all his clerks were busy attending to the wants of the various customers.

The first one I noticed was a business man, full of energy and earnestness. His order was given in quick, strong tones: "Ten years in advance, please," offering at the same time a very liberal price, and accompanying it with the assertion that if he could be accommodated, he would be able to complete an undertaking he had planned and worked at for several years.

"We can not do that," quietly but positively said the clerk. "We can issue but one year at a time, and we can not assure you of getting all of even that. We deliver our goods in very small instalments, following one another in as rapid succession as they can be used. You need not pay in advance. You have no responsibility till the delivery is made. There will always be just so many of them, and they will never be delayed nor depreciated in value."

Evidently the man was disappointed; but the clerk kindly assured him that the office would be open next New-year, and if he still wanted the good offices of Father Time, he had only to call. He left with an air of submission to the inevitable, and I saw the contract was marked with a black seal, at which the clerk looked sadly, though the man himself did not notice it.

To the next comer I noticed the clerk declined to give any assurance, though he was young and apparently vigorous. But as he passed me in reckless haste, I smelled liquor on him and noticed that he staggered, and I knew at once the reason of the clerk's treatment of him.

The next, a young woman, spoke up sharply: "I want a pleasanter year than the last you gave me."

"And do you want the same brand, 'My own way'?" asked the clerk.

"Yes, sir; always."

"I am sorry," he replied, "we have no pleasant years of that brand;" and she moved on with a scowl of determination, muttering, "I don't care; I'll have my own way anyhow."

Then came a high-school boy for his new year. He looked pale and thin, overworked and nervous.

"Do you mean," said the clerk, "to use it as you have the last year—the days full of exciting work in school, and a large share of the nights given to study and striving for prizes?"

"Yes," he said, decidedly; "I must lead my class, and I can not do so with less effort. Why, this is our senior year! By the way, I wish you would give me a little better health in this than I had in the last I got of you. I came near giving out, and the new year will call for more than ever before."

"I am sorry, my boy," said the clerk, "but we can not give good health in such years as you call for,

The good-health years have far less study and more exercise, less care and more recreation. But they are the better for it. I wish I could persuade you to take one. I am sure you would be better satisfied with the results."

I thought he was going to accept the clerk's suggestion, but he said, shortly: "Not this year; I may try one next year; this, as I said, is my last year in school, and I must do my best."

As he withdrew, the clerk sighed and said, "I am afraid this is the last call he will make on us."

"The last year I got of you," said the next, a lazy-looking young woman, "was a bad lot—full of work and worry, especially for others, and that did not pay me. If you can't give me one without that, I believe I should rather have none."

"O," said the obliging clerk, "we keep all kinds to suit the wishes of callers! Now, here is a year without any work for others, and only such as you wish to do for yourself."

As she took it, I saw the brand,— "One year of unhappiness,"—and when I looked inquiringly at the clerk, he said, aside, to me: "That is the trade-mark, and they are warranted."

Then I saw coming forward a young couple, beautiful and strong in all the possessions of young manhood and womanhood, and the promises of life. They wished for years as nearly complementary as possible; for they meant to live largely in and for each other. As they consulted, I heard expressions which gave me to understand that the years they had spent had proved unsatisfactory, and that they wished for better. She said: "My dear, there can be no euchre nor dancing parties in

these, no late suppers, no stimulants;" and he seemed to agree with her.

The good old clerk beamed upon them as he said: "I know what you want," and put them each down for a year of domestic happiness, of the "Christ in the home" brand.

"You will find in these a sufficiency of social life and work for others, but they are most highly recommended for their value in building up home and homely virtues."

As they stepped away, love and hope and faith shone in every look and movement.

Then there came stepping quickly forward a clean, nice, modest-appearing young man, whom the clerk readily and pleasantly recognized; for he called out: "Did you like the year I gave you last?"

"Yes, indeed," said the young man. "So much that I am going to indulge myself in a more extravagant order for my new year. Please give me a year full of work for Christ."

I saw the brand, and it was, "One year of joy—pure—warranted."

"Mr. Clerk," I cried eagerly, "give me such ——" But I was too eager; for in my zeal to get so desirable a prize I awoke. I had simply been asleep, and dreamed it all.—*W. H. De Motte, in Epworth Herald.*

"THINGS slowly obtained are long retained."

Time

Do you wish me, then, away?
You should rather bid me stay:
Though I seem so dull and slow,
Think before you let me go.

Whether you entreat or spurn,
I can never more return:
Times shall come, and times shall be,
But no other time like me.

Though I move with leaden feet,
Light itself is not so fleet;
And before you know me gone
Eternity and I are one.

—W. D. Howells.

How to Measure Distant Objects

CLAUDE CONARD



LL here again, ready for business, even if it is raining hard outside — Luella, Pearl, Irene, and Sadie; Victor, Samuel, and Harry. That is good.

Last week when we were looking at the stars so far away, some one asked how such great distances are measured.

Surely no one from the earth can visit such places even in an aeroplane. No, it can not be done in that way; but the bare principle is all that we can study here to-night, for very delicate instruments and long periods of time are required to make such calculations. I hardly think, either, that we can find out all we want to know on this subject in one lesson, but we shall spend the evening on it anyway.

Here is a foot ruler into which a pin has been stuck near the edge at each end. Also this large piece of wrapping-paper is placed on the table with its edge just even with the edge of the table. Now without leaving this side of the room, let us find how far it is to the door-knob across on that side.

To do this, first we shall measure off three feet along the edge of the paper as a base line from which to make our calculations. Lay the ruler down at one end (F) of this three-foot line so that you can sight along the pins to the door-knob (O). After the ruler has been placed in exact position, mark with a pencil along its edge. Then move three feet over to the other end of the line and sight also from there (E) to the knob (O), being careful to place the same side of the ruler on the mark each time, and also to make the line along the same edge in both cases.

Notice that these two lines come closer together as they go toward the knob, and if our ruler were long enough and the paper large enough so we could extend the lines clear out to the door, they would meet each other and form a large triangle (EOF). One side of this triangle (EF) — our base line — would be three feet long, for we made it so. Let us proceed to find the length of the other sides (EO and FO).

Cut off the end of the paper to our left (AEGD), following the line which was first marked by the ruler (EG). From our first sighting point (F) to the right, measure three inches along the edge of the paper to the left (Fe). Take the end of the paper which was cut off, and lay it on the larger remaining piece so that the two edges nearest us (AE and ae) will come together, and, too, so that the point where we started to cut along the ruler line (E) will come just up to the three-inch mark (e) which we have just made.

If now we mark again along this cut edge (EG),

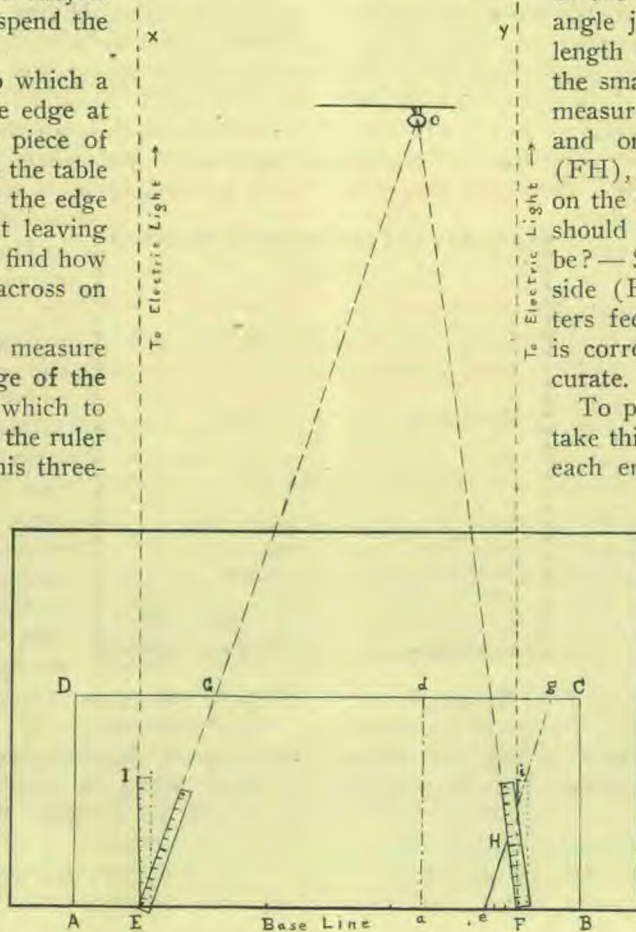
we shall have drawn a small triangle (eHF) just the same shape as the larger one (EOF) which was formed a few moments ago by the two ends of the three-foot line and the door-knob. Two of the sides of the smaller figure (eF and FH) are parts of the same lines (EF and FO) forming the larger one, and the other side (eH) of the smaller is parallel, or runs in the same direction as the third line (EO) of the larger. We made one side (EF) of the large triangle three feet long, and the corresponding side (eF) of the smaller figure three inches; and as the two triangles are exactly the same shape, differing only in that one is larger than the other, we shall expect to find either

of the other sides of the larger triangle just as many feet long as the length of the corresponding side of the smaller one is in inches. Let us measure our smaller triangle. Six and one-half inches on one side (FH), and six and three-quarters on the other (eH). Then how long should the sides of the large triangle be? — Six and one-half feet on one side (FO) and six and three-quarters feet on the other (EO). That is correct if our work has been accurate.

To prove our reckoning, we shall take this tape line and measure from each end of our base to the door-knob. The result: six feet four and one-half inches on the shorter side (FO) and six feet eight inches on the longer (EO). Not exactly the same, but perhaps as nearly so as could be expected with such rudimentary instruments as a foot ruler and two pins.

Now suppose we open the door and try to measure in the same way the distance to that electric light out on the hill half a mile away. Taking three feet again on the paper as a base line, we lay our ruler down at each end and sight to the electric light. But notice the difference from the former case after the lines (Fi and Ei) have been drawn. They run so nearly in the same direction, or parallel as it is called, that they look as if they would never meet and form a triangle.

Cutting off the end of the paper at the line (EI extended) as was done before, and laying the cut edge alongside the other line (Fi), we find that the two run so close together that they look like one line. In fact, if we should figure it out exactly, the result would show that with the longer side (Fi) of the small triangle which we are trying to construct twelve inches in length, the shortest side, which would correspond in position to the three-inch line in the former case, would be only one seventy-fifth of an inch long. This small distance would be covered several times by an ordinary lead-pencil mark. So we see it is impossible



with only a piece of wrapping-paper, a lead-pencil, ruler, and pins to calculate the distance to an electric light one-half mile away, using a base line of only three feet. It might be done quite readily by taking a line of one hundred yards or so out-of-doors.

Now shut the door again and place your eye as close to the knob as possible, looking toward the pins which have been stuck at the ends of the three-foot line on the table. Notice that you have to look in a slightly different direction to see one pin from what you do to see the other. This difference in direction is the same difference in the direction of the imaginary lines from the two sighting points to the door-knob in our first experiment, and is what is called by astronomers the parallax of the object the distance to which is being measured.

In our study next time we shall try to see how astronomers apply these principles of parallax and triangulation—measuring by triangles—in obtaining the distances to the heavenly bodies.

A Glimpse of a Great Industry — No. 1

COMPARATIVELY few persons, perhaps, realize the magnitude of the lumber industry, especially that of the United States. And while many of us are somewhat familiar with the ordinary methods employed in manufacturing lumber, some of our young people may be interested in taking a glimpse of the modern plant as equipped with machinery built on scientific principles, and operated by experts under capable management.

A lawyer once stated that he could conceive of nothing in connection with a sawmill that should require the services of professional men, even in the loosest sense of the word, and such it is evident is the mind of some sawmill operators; but to the lumberman who supplies the world's markets with properly manufactured goods in keeping with the progress of the age, when rapid yet accurate work is the order of the day, it presents a different aspect.

He is ever in search of practical men who possess technical knowledge; who have been trained, or may be trained, for some line of work in the industry; and such men command exceptional wages.

Until the latter part of the seventeenth century the best means employed for making lumber was the use of what was known as the sash mill. This mill consisted of a single saw placed in a frame which was attached to a crank and shaft, and in most instances was propelled, vertically, by water-power. Later, however, as the industry developed, mills were built having several saws attached to the same frame, forming a gang, which no doubt appeared to the people of that time as a very progressive method.

We learn from history that the saw was in use during medieval and even ancient times; yet simple as it seems to be, it, like most other instruments, has undergone a wonderful change in efficiency during the past century, improvements having been steadily increasing up to the present time.

In the year 1777 Samuel Miller, of England, invented the circular saw, which is still in use in many of the largest capacity mills, although it has been discarded in many places for the band-saw, which is more economical in that it cuts a much narrower kerf.

Miller's saw was a simple piece of steel, disk-shaped, having solid teeth; and, not being adjusted according to scientific methods, could be run only at a compara-

tively low speed; nor could it stand very heavy feed; that is, the log could be forced against it only very moderately. Soon, however, as science advanced, the principles which govern the workings of that simple-appearing piece of steel began to be studied, and it was disclosed that it might be made to accomplish much more. Thus the science known to the trade as saw-hammering was instituted, as well as other methods employed to improve its efficiency. Since it would require a small volume to discuss even the fundamental principles of "blocking" and "tensioning" as done by the professional saw-hammerer, or to explain the philosophy of such in connection with the natural laws governing the working of the circular saw, we shall pass on.

By such means the circular, as well as other rapid-working saws, has been greatly improved, especially by American saw-makers. Richard Hoe of the firm of R. Hoe & Co. of New York City, who also greatly improved the printing-press, added much to the value of the circular saw by inventing what is known as the inserted tooth. Such teeth may be removed when worn or otherwise impaired, and replaced by others, in only a few seconds of time. A whole set in a large saw may be changed in about ten minutes. And while we often hear a circular saw howling away, sometimes several minutes, to cut a single log into lumber, the up-to-date circular saw when driven by sufficient power and handled by expert operators, has accomplished some remarkable feats.

The first sawmill in America was built in New York in 1633, and the first sawmill to be propelled by steam was erected in New Orleans in the year 1803. We imagine that the working of the latter was something like that of some of the diminutive portable affairs we sometimes see nowadays, or like some country mills of small capacity in districts where most of the timber has been previously cut off. However, were we to enter some of the great plants of modern designs located on navigable rivers or near large timber limits, our mechanical nature, if such we possess, would at once be aroused.

The amount of sawn lumber produced in the United States during the year 1909, as shown by government statistics, was 44,585,000,000 feet. These figures will stand a bit of contemplating, and it will be seen that much more lumber is produced by this than by any other country or perhaps a collection of other countries. One of the leading industries of our northern neighbor is lumbering. Canada contains many large manufacturing plants, some of which cut as high as several hundred thousand feet of lumber daily; yet during 1909 that country, according to the report of the forestry branch of the department of the interior, produced but little over 3,800,000,000 feet. We shall take a view of how some of this vast amount of lumber is produced.

After securing a pass, which may be had at the office, the foreman will take us to a flight of stairs leading to a walk built high above the machinery, where can be seen the entire operation. The logs are drawn from the water, in the river or lake, by means of an endless chain having attachments that engage them as it passes beneath, pulling them high into the mill. They are brought in contact with this chain by a man, who, by the use of a long pole having spikes in one end, pulls or pushes the logs, as may be required, near to the spout-like arrangement through which the hauling chain passes.

As they near their destination, they are sorted and sent to their respective decks, in front of which stand mills for sawing them into lumber, by means of an engine made especially for the purpose, called a flipper. This engine consists of a small steam cylinder placed beneath the mill floor and connected with certain levers so arranged as to cause the logs, as they pass along, to be tossed, if not very large, or rolled rapidly to such decks.

In such a mill nothing is lifted by hand from the time the logs are engaged by the hauling chain until the product reaches the car, yard, or kiln ready for stacking. The log decks incline toward the mill, and the logs are prevented from rolling farther toward the carriages by what is known as a "log-stop-and-loader," or "loading-nigger." This is another engine made especially for that purpose. By placing his foot on a pedal, the sawyer can cause a log to be loaded instantly. Ordinary-sized logs are tossed to the carriage, which is made very strong, weighs many tons, and is equipped with a large amount of fine machinery.

Although this carriage is propelled by what is termed "gun-shot" feed, being another engine constructed for that special purpose, two men ride it constantly, during working-hours, for the purpose of operating the modern dogging device and set works.

As soon as a log is loaded by the nigger, it is fastened by means of steel dogs, whose pawls are caused to engage it instantly, being operated by one motion of the hands by one of these men, while the thickness of the slab or lumber to be sawn is regulated by the special set engine, which is operated by the other. Thus it will be seen that even the "setting" is done by steam. Instead of the sawyer having to pull the log forward by means of a lever to enable him to take another cut, as is the case in the ordinary mill, an engine is placed on the carriage for the purpose, and is operated by the setter, as above mentioned. This engine is equipped with a throttling lever, by which steam can be admitted to its cylinder, and with what is termed a stop-lever, by which the thickness of the lumber to be sawn can be regulated. One click of the latter is sufficient to warrant any desired thickness.

The sawyer communicates his requirements to the one who operates the setting device, as before referred to, by what is termed "the silent language of the sawmill." Such is a system of signals made by the hand, finger, or fingers. The position of the hand, as well as that of the fingers, has its significance.

The reader may wonder how steam is conducted to an engine attached to a moving carriage, and also how men are able to remain on such a rapidly moving machine; but it is surprising to learn that the men thus employed acquire the ability very quickly, and are soon able to steady themselves by the levers they operate, without any other support. Although the carriage in some fast-cutting mills is started and stopped very quickly, which to the casual observer would seem almost with a snap, yet to those riding it and to the sawyer who controls it, it is known to have its motion a bit modified, both at the close and at the start of its travel, although its return after a cut, in some mills, is often made in less than a second of time. To the observer, this modification, however, is so slight that perhaps most of us would not care to take the position.

The method by which steam is transmitted to the "steam-set" engine is very simple. Beside the carriage are placed tubes which are really diminutive steam cylinders, except in length, equipped with stuffing-

boxes to prevent leakage, through which a hollow piston rod passes as the carriage moves, it being connected with the engine on the carriage by a pipe. Thus, by means of another pipe connecting the larger tubes with the boilers, a circuit is completed.

If the log when being loaded chances to strike the carriage in a position unsuited to the ideas of the sawyer, who should be an expert, its position is changed by means of another device styled a "turning-nigger." This is also a separate engine built for that purpose. It is placed beneath the floor, and is operated by the sawyer, who by the use of a lever causes it to send forth a steel arm on which are spikes that engage the log, turning it as little or as much as may be desired as quickly as steam can act. With another motion of the same lever, he can cause it to push the log against the head-blocks, thus insuring accurate work. It is wonderful to see how an inanimate thing can be made to act as if possessed of intelligence.

When properly adjusted, a slab is taken, on a log twelve feet long, usually as quickly as one can rapidly count to ten or twelve. Even if it is a large hardwood log, it seldom requires (by the mill here described, which is perhaps known to be rather extra for rapid work) more than three or four seconds to make the largest hardwood cuts. If the log is one of much value, after the slab and a board or two have been removed, it is turned to its opposite side, and the operation is repeated, after which it is turned at least four times for the purpose of avoiding defects. This method is employed for what is termed plain sawing, which requires that most of the valuable hardwood logs be turned, in all, five to eight times. If designed for what is known as "quarter-sawn" stock, it is first quartered, then cut by different methods, according to the requirements of the trade.

By the use of such machines, and the direct-acting steam-feed arrangement, the best type of which consists of a cylinder as long as the required length of timber to be sawn, having a piston whose rod is attached to the carriage, an expert sawyer can, if the log is ordinarily straight, involving no extra turns, seize a log from the deck and remove the slab almost instantly, and afterward cause a literal stream of lumber to flow from a single saw. H. E. MILES.

(To be concluded)

Doings of Our Class

BEFORE we organized, I suppose our class was just a "crowd," and a selfish one at that. After we really began to take an interest in the class, we began to think about getting others to join it. In this we succeeded pretty well. The new members were most of them lovely girls, but they were girls who, for one reason and another, we never met, except at Sunday-school and at the class-meetings, and somehow, though we were polite to one another, we didn't seem to really get together. Even the socials didn't solve the problem, for you know it's the hardest thing in the world to get a girl to come out to a social affair if she feels that she's strange and on the outside of things. Those of us who had belonged to the old class didn't need the socials much, and those who did need them wouldn't come. We talked it over among ourselves, and finally a way opened.

One Sunday one of the "new girls" mentioned, in an incidental way, that her birthday was the following Thursday. Her parents lived somewhere in the country, and she had counted on spending her

birthday at home, but found now that she couldn't get away.

Afterward, when several of us were walking home together, one of the girls suggested that we all send birthday postals to the girl who was going to have to spend her birthday away from home. We decided to tell every girl in the class; then some one else had a bright idea. Our social was that week, so it was suggested that we make it a sort of birthday celebration. We knew even the new girls would come to that. One of the girls thought we should each one bring her a present. We should have fallen in with this suggestion if the president of the class hadn't been wise enough to offer us something better.

She foresaw difficulties that didn't occur to us then. She said that the idea was a good one, but that we must be careful about setting a precedent that it would be hard to live up to.

"I will vote for the present feature if you will agree not to spend any money," she said. When several of us wanted to know how that could be done, she answered that she was pretty certain that she had something pretty in her box of souvenirs. That made some one else think about a strand of beads she had been intending to make into two short ones. Another girl said that she'd fix up a box of her mother's cookies. "They won't cost anything," she added, "because we always have them."

The birthday celebration was such a success that we decided to make birthdays a regular feature in our work. We bought a class birthday-book, and each month the secretary looks over it, and when the monthly social is announced she adds, "Honoring the birthdays of —;" whoever it happens to be, for several times we have had several birthdays in one month. We have managed the present feature with very little trouble, though sometimes it is amusing to see the ingenuity that has been exercised in finding suitable presents without buying them. One of the girls whose home is in the country brought back a lot of the daintiest little gourds made into cups. We are all hoping to get one. We haven't any stranger problem now, for you know when you get to feeling responsible for keeping one another's birthdays, and talking about them in a familiar way, you feel almost as if you belong to the same family; at least, it has worked that way with us.—*The Lookout*.

My Conversion

It has been three years since I was in complete darkness as far as the Bible is concerned. Until that time I resided in Cabanas, Cuba, where my home still is. Three years ago there came to San Claudio as missionaries Mrs. Carnahan, her husband and two daughters. Mrs. Carnahan decided to give lessons in English and on the piano in Cabanas. She arranged with my father to stay at our house the days she was in town.

Mrs. Carnahan had a school in San Claudio, although it was small, as she had moved there but recently. As the number of students increased, it was decided to build a larger school. My mother promised that I might go there to school when the new building was finished. After I had been there for a time, I saw how different their religion was from ours. I had been brought up in the Catholic Church, and could not believe that it was false.

Those at school began working and praying for me. Mrs. Carnahan afterward told me that many were the

times she asked God to show me his truth. God answered her prayer, and I began to believe a little, although I still had doubts. At last I accepted the gospel of Christ completely, knowing that it is the only way of salvation. I soon found that my father was entirely opposed to my connecting with the Adventist people. My mother was not opposed, and I believe that were it not for my father, she would accept the truth. I waited nearly two years for baptism, as my father would not consent to my being immersed. During that time I saw others baptized who had accepted the truth after I was converted. At last in August, while in Havana visiting relatives, I was baptized without my father's knowing it.

To-day I am very happy because God guided me so that I learned and accepted his truth. After giving thanks to my Lord, I give thanks to our dear sister who is giving her life to the teaching of the gospel.

There are several young persons in the school who are taking the missionary course so as to go out later and win others to Jesus. My wish is that I may have a part in this blessed work of giving the light to those who are in darkness, especially to my parents. I also desire to stand firmly and to have a home in the city of gold.

MARGARITA ESCUDERO.

A Kansas Nobleman

ONE day the people riding by the little country schoolhouse near the home of Peter Schofield, a Kansas farmer, found the following notice on the schoolhouse door:—

The Lord has spared my stock. My horses have gone through the epidemic without loss, and I have twenty head to lend to my less fortunate neighbors, without charge, for plowing. Those who need are welcome to them.

This simple notice brought joy to many of the neighbors of generous Peter Schofield, for a stock plague had raged in the rural neighborhood, and some of the farmers had lost all their horses, and were too poor to buy others. This plague was the worst disaster that had come to this part of Kansas since the days of the great pest of grasshoppers that swept thousands of acres of crops from the fields.

"No title is more adorning and no honor is more enduring than the generous impulse which inspired this man to become a benefactor to the distressed in his community."—*The Christian Herald*.

In a Nutshell

"BIBLE READINGS IN A NUTSHELL" is the title of a Bible game gotten out by George C. Cary, a brother to our missionary in the islands of the Caribbean Sea. The author of the readings was a missionary there also for four years. Some of the titles of the readings are: "The Second Advent of Christ," "End of the Wicked," "Nature of Man," "Proper Diet for Man," "The Seven Seals," "The Two-Horned Beast," and "The Twenty-Three Hundred Days."

The game can be secured from the author at Paradise Valley Sanitarium, National City, California, for twenty-five cents. It will be furnished to agents or to young people's societies for half price.

THERE are chords in the human heart—strange, varying strings—which are only struck by accident; which will remain mute and senseless to appeals the most passionate and earnest, and respond at last to the slightest casual touch.—*Charles Dickens*.



THE HOME CIRCLE

"You must live each day at your very best:
The work of the world is done by few;
God asks that a part be done by you."



New-Year Thoughts

Let us walk softly, friend;
For strange paths lie before us, all untrod;
The new year, spotless from the hand of God,
Is thine and mine, O friend!

Let us walk straightly, friend:
Forget the crooked paths behind us now,
Press on with steadier purpose on our brow,
To better deeds, O friend!

Let us walk kindly, friend:
We can not tell how long this life shall last,
How soon these precious years be overpast;
Let Love walk with us, friend.

Let us walk quickly, friend:
Work with our might while lasts our little stay,
And help some halting comrade on the way;
And may God guide us, friend!

— Lillian Gray.

Don't's for Guests

S. ROXANA WINCE



ON'T keep nagging your hostess if she happens to mispronounce your Christian name, or calls you by the pet name your mother gave you when a child. What if you don't like it? You will not be with her long and may never meet her again; why spoil her pleasure in your visit for a mere whim?

If you "call her down" every time she speaks your name, will not her otherwise sunny memories of your stay under her roof-tree be clouded always by the thought of your petulance?

Don't repeat to her what others have said about her friends. The arrow will remain in her heart as long as she lives. You have no right to inflict anguish on another. The Bible says: "He that uttereth a slander, is a fool." "He that refraineth his lips is wise." "Love covereth a multitude of sins." How would you feel should your visitors tell you what had been said — and unjustly, too — about your friends?

If you dislike little children, don't air your dislike of them when visiting mothers who have little ones. It wounds them more than you can know. It lessens you in the esteem of every one. A child-hating woman is an anomaly in the world, a curious freak of nature. Think of the girl who would not for any price take a baby in her arms! How different from Miss Willard, who, when congratulated upon having so much of fame, said, with tear-wet lashes, "I would give it all to feel a pair of baby arms about my neck." The child-hating girl may be an ardent lover of the truth, and may be able to do much good in the way of teaching it to others, but her best and holiest opportunities will be lost because she refuses to teach and to be taught by the children. Jesus loved and blessed the children.

Don't criticize the belongings of your hostess, not even with the kindest motives. She may laugh gleefully when you say, "Why don't you get a white oil-cloth or a bright woolen covering for your library table in place of that gloomy old thing?" but she will feel "teary" inside, and the more so when you quiz her as to why she does not have a range instead of a stove, linoleum instead of carpet, and new silver spoons, knives, and forks in place of the old ones. She knows her circumstances better than you know them, and she can not have all she would like to have and

give what she feels she must give to the cause of Christ.

Don't throw dozens of pieces into the washing when your hostess is not strong. It is an imposition. Under such circumstances, rub out your own clothes, or send them to the laundry.

Don't buy the things you crave with the money of your hostess, if sent to the store with her pocketbook and an order for groceries, and excuse yourself on your return by saying, "I thought such and such things would taste good." Buy them yourself or go without. Near relationship will not excuse your unwarranted liberty. Visits should be pleasant occasions, unmarred by any nagging, airing of dislikes, repeating of slanders, overburdening of aged persons or invalids, or the spending of money that is not one's own.

Wherever you go, "take the name of Jesus with you," and be a comforting as well as a comfortable guest; then will the very memory of your visit bring joy.

Be Helpful

Look out for others. If you are strong, so much the more should you keep an eye out to see where and when you can help one less favored than yourself.

A number of robust, active boys were busy in playing baseball, while a little lame fellow, about twelve, pale and sickly, stood leaning on his crutches, evidently very sorry that he was not able to take part in the exciting game. Indeed, he seemed to lose sight of the fact of how much his infirmity unfitted him to join in the sport of his stout and healthy companions. The other boys good-naturedly tried to persuade him to stand on one side, and let another take his place; but they were thoughtful enough to put it on the ground that they were afraid he might get hurt.

"Why, Jimmy," said one at last, forgetting himself for a moment, "you can't run, you know."

"O, hush!" answered another, the tallest boy of the party. "Never mind, I'll run for him, and you can count it for him."

So saying, the noble fellow took his place by Jimmy's side, saying to the other, in a lower tone, "If you were like him, you wouldn't like to be told of it all the time."— *Selected.*

CHILDREN'S PAGE

Rebecca's Cross

MAMIE MELEEN



REBECCA turned wearily upon her pillow. Tired and discouraged, she prayed that she might die. There had been a time when she had fought against such feelings; but now that the immediate danger was past and her thoughts once more centered upon her sorrow, her heart failed, and she prayed for release. Her mother, anxious and worried, wondered at her listlessness. The kind old doctor again began to look grave, while sympathetic neighbors vied with one another in making dainties to tempt her; but it was of no avail. Sometimes when she could bear her grief no longer, she would hide her face among the comforters and cry long and bitterly. Why, O why, had this blight come upon her just now? Was she always to go through life thus in darkness? and she placed her hands piteously upon her sightless eyes.

Rebecca had not yet learned of Him in whom is "no darkness at all;" and in the anguish of her soul she buried her sorrow deeper within her. All this could not but have an unwholesome effect upon her, and she failed rapidly.

Early one bright spring morning the doctor surprised

the family by placing Rebecca in a large chair by the window, and announcing that he himself would stay with her that morning. For a long time he sat watching the expression of her face. He saw lines of pain and of sorrow there, and sometimes he fancied he saw something deeper. What was it? Was she even then silently but surely slipping from them?—No, it could not be! It must not be! She was needed, and she must stay. He would save her if possible.

Someway this silent, sad-faced girl had crept very close to his heart, and he longed to see her restored to health. Drawing his chair up more closely to hers, he began tenderly:—

"Rebecca, what is it? Can't you trust me with this? I have done what I could to heal your physical pain, and now can't you trust me with this, the ache of your soul? O, I know it is there!" he added quickly as he saw the startled look which came into her face, "I

know it is there. Your whole little body is crying out under the strain. I know that you have had a cross laid upon you; but why shun it? Why not bear it with a courageous heart? Others with equally heavy crosses are watching you, and will you disappoint them?" He stopped, for with a quick, nervous movement she raised her head, and with a voice filled with anguish cried, "Doctor, please don't talk so! I can't bear it! Let me die in peace. I want to die, and I will die. I can't live in this dark world. You can't know what you are saying or you wouldn't talk that way," and her voice ended in a sob. It was the first sign of emotion she had shown since the day when she had been told of her loss, and the heart of the good



"Photo Era," by Wolfram and Company

A DEAR AT BAY

old doctor rejoiced; for to him it was a good omen. Still it was but the beginning; the fight was yet to come, and he was puzzled to know just how to proceed.

"Rebecca," he said seriously, "life is but a mountain after all. You can scale it or go around its base, as you choose. You are at the base of this mountain now. Before you is a steep rocky ascent. You did try to climb this, but the stones were so sharp and the thorns pierced so cruelly that in your effort to pick

out a smoother path you lost sight of that straight and narrow one, and in your bewilderment you stumbled and fell. That is why your heart is so bruised and sore now. But it will heal, and then you will try again. This is a sure pathway. There is One who trod it before us. He made certain every step of the way before he asked us to follow, and now can't we trust him? I have scaled my mountain. I am at its summit now. Soon I shall pass over on the other side. As I pause and gaze at the scenes spread out before me, my heart thrills, and the difficulties of the way fade into insignificance before this far greater glory; and in the fulness of my heart I am led to exclaim, 'Blessed be the name of the Lord!'

"Now, little girl, I must go. Duty calls me elsewhere. Pray God that he will keep you. Rebecca, do you pray? No, I thought not. Then begin now. It will help you much. Promise me that you will. Good-by! God bless you!" That was all, and he was gone. It was the last time that Rebecca was privileged to hear that benignant voice, for shortly after this the doctor was called to his rest.

Left alone, she pondered his earnest words, but not as one without hope. Deep down in her heart a determination sprang up. She would strive; she would climb until she, too, had obtained a view of that glorious land beyond the summit of her mountain.

Getting Ready to Be Blind

WHEN W. I. Scandlin realized the full force of the specialist's verdict in his case,—that he was going blind,—he then and there made up his mind that repining was not to form any part of his conduct. He had been a good business man, a good writer, and a good friend all his life; and so he bravely resolved that if he was to be blind, he was going to be the very best specimen of a blind man that it would be possible for him to be. True, he received the sympathy of his wife and children: but it was not the kind of sympathy that spends itself in words; for his wife, who had been his good comrade ever since they started in life together, also resolved bravely to be that good comrade still, to go hand in hand, to keep step with him in the dark days to come.

Naturally, his first thought was of his family. What could he do as a blind man, not only to support himself, but to support them as well? That his children were grown and might be expected to look to themselves never entered his head. He had always provided for them, and he meant to keep on doing so. He began assiduously to cultivate such arts as may be pursued by those who are without sight. For instance, it occurred to him that he might become a lecturer, and so he proceeded to write out and to memorize a series of lectures to be delivered after he became blind. He had been an enthusiast in photography, so he made a set of lantern slides with which to illustrate each lecture, and for practise he gave these lectures in the privacy of his own home, his brave wife learning them with him, one by one, so that she might help him in the coming darkness.

He also took lessons on the typewriter, learning every part of it with his hands so that one day he might be able to manipulate any part of it without sight. Speaking of this period, he recently said:—

"When I found that darkness was inevitable, I started in to work up three illustrated lectures. I had been fond of photography, and I had a lot of prints showing phases of the United States Life-saving Serv-

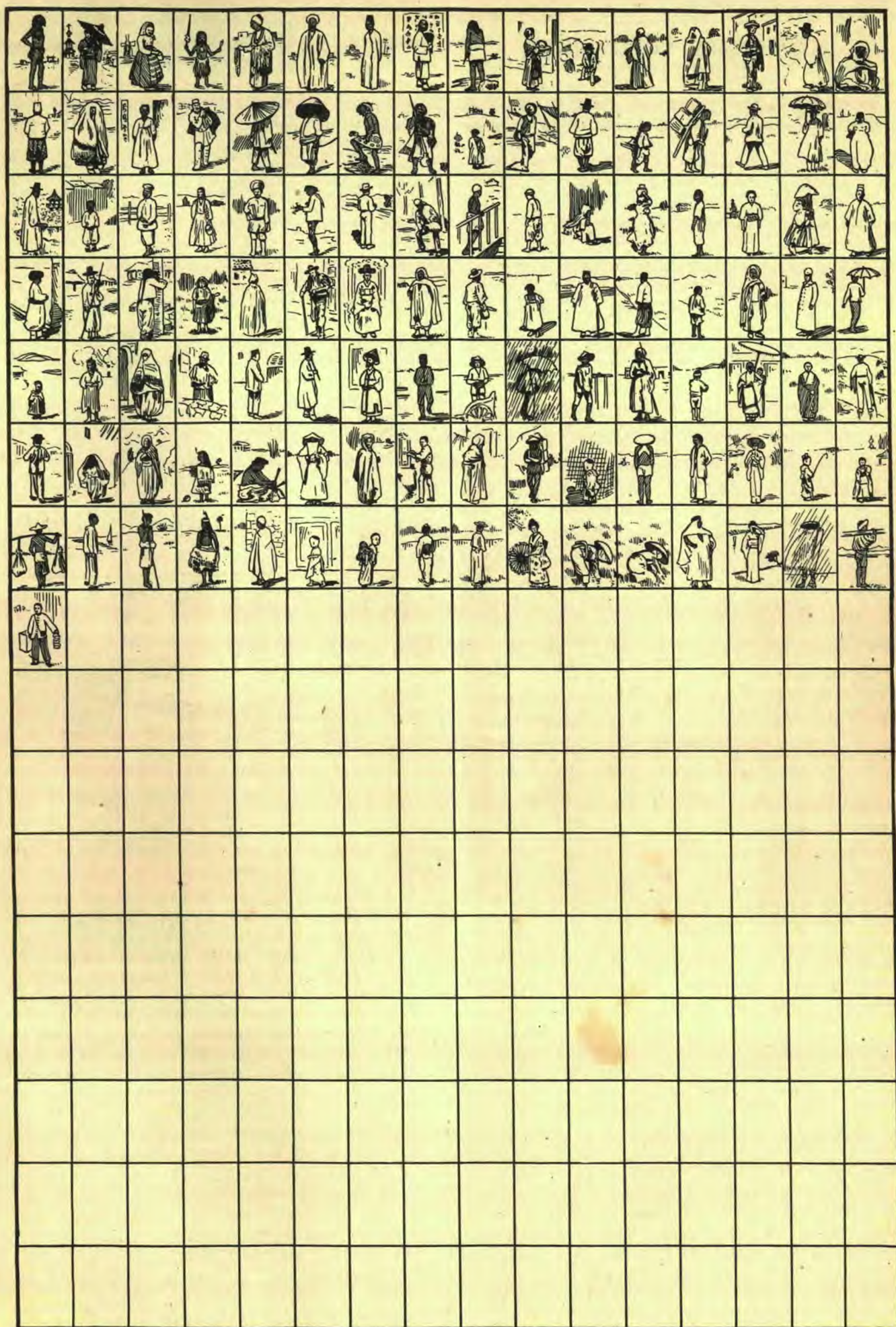
ice. Then I worked up a lecture on 'Photography in Its Relation to the World,'—that is to say, its every-day use,—illustrated by seventy or eighty slides. I had still another lecture describing the postal service. I started in to learn these slides in regular order, so that to-day I have a number of lectures with seventy to eighty slides each. I can now start in on any of them, talk over an hour and a quarter without a break, and if my operator makes no slip, I can guarantee to make no slip myself."—*The Christian Herald*.

How Dolls Are Made

THE making of the composition dolls as seen in the German factories is an interesting process, even though some of the rooms are hot, steamy places where one does not care to stay long at a time. First, there is the kneading-room, where a big mixing-trough is set, and in this all sorts of rag-bag material are to be found—old gloves, rags, bits of cardboard, etc., and gum tragacanth. This mixture is kneaded by hand to the consistency of a paste, heated, and carried into the mold-room. There it is dipped up by women and poured into the patterns which are set up in rows. The molds are put away until they are cold enough to handle, when a workman, by a dexterous movement of his hands, separates the leaden sides, and the doll's head is revealed. The polisher then trims off the ragged seams, and sends the head to another room, where the holes for the eyes are cut out. This is an extremely delicate task, as all the sockets must be of uniform size. The work is done by hand, a long, sharp knife being used. The heads are next painted, waxed, or glazed, depending upon the character of the material from which they are made. The arms, legs, and hands are molded in the same manner as the heads, a special machine being used for stamping out the hands. These parts are painted in flesh color, while the heads must have rosy cheeks, red lips, and dark or light eyebrows, as the color of the eyes used may require. Putting in the eyes is a simple operation, unless the eyes are to open and shut, in which case the balancing of the lead becomes a matter of some skill. Germany possesses a secret formula for the enamel used on the faces, and the dainty, natural flesh tint of the better grade of dolls is the result of this process. The making of the eyes is a dreary task, for it must be done away from the sunlight; and in some parts of Germany the eye-makers work in the cellars. It is said that one town supplies three fourths of all the dolls' eyes used. Violet is the most difficult color to mix, and few violet-eyed dolls are found. The wig is the final touch, and this is usually made of real hair imported from China. The hair used for blonde dolls is the same, except that the color is extracted.—*Leslie's Weekly*.

"Wireless Telegraphy and Telephony Simply Explained"

THE foregoing title is the name of a new book written by Alfred P. Morgan. It is a practical treatise on these subjects, being comprehensive but simple in its treatment of them, and will be of great interest to all who wish to get a clearer insight into the marvels of wireless telegraphy. It should be in both the home and the school library, as a book of reference for youthful readers. Price, \$1. Address Review and Herald Publishing Association, Takoma Park, Washington, D. C.



ONE HUNDRED THIRTEEN SPACES FILLED

Besides the reports that were given in the INSTRUCTOR of Dec. 10, 1912, the following reports have been received from the following churches and persons: Pleasant Hill, Ohio, \$5; Hull, England, \$16.25; Richmond, Maine, \$6.50; Merrill, Wisconsin, \$5.95; Sebastopol, California, \$30; Hickory, North Carolina, \$25; Mankato, Minnesota, \$120; offering at Minnesota camp-meeting, \$10.87; Red Lake Falls, Minnesota, \$3.40; Hewitt, Minnesota, \$3.83; Esther and Reubena Nelson, \$8.45; Irma and Jessie Christenson, \$1.50; Traverse City, Michigan, \$31.



M. E. KERN
MEADE MACGUIRE
MATILDA ERICKSON

Secretary
Field Secretary
Corresponding Secretary

Society Study for Sabbath, January 25

1. OPENING Exercises (fifteen minutes).
2. Bible Study (ten minutes).
3. Temperance Program (twenty-five minutes).
4. Social Meeting (ten minutes).

Suggestions for the Program

1. Special temperance songs where possible; review Morning Watch texts; report of work, minutes.
2. An impressive text for the Bible study may be found in Gen. 4:9, 10, or Prov. 23:29-32, or 1 Cor. 10:31.
3. Have three five-minute talks or papers on various phases of the temperance question, such as "Liquor," "Tobacco," and "Other Phases of Intemperance." Material for these topics is so abundant that references are needless. If so desired, selections from the new Temperance INSTRUCTOR may be substituted for some of the topics suggested. Follow these topics with a report of the temperance committee suggested last week.
4. Surely it would be most appropriate for each one to express in this social service his determination to do more faithful work to save the intemperate and to protect the innocent by circulating the Temperance INSTRUCTOR and other literature, getting signers to the pledge, and by engaging in aggressive temperance work planned by the society or department.

Missionary Volunteer Reading Courses

Senior No. 6 — Lesson 15: "Patriarchs and Prophets," Chapters 26-29

1. WHAT were Israel's next two tests? How did they bear these? Of what benefit to us is the record of their wanderings? What weekly lesson in Sabbath sacredness did they have for forty years? What did the manna typify?
2. At Rephidim how was God's mercy shown? What lesson in dependence upon his power was given? Where did the route next lead?
3. Describe the preparations for, and the scene attending, the proclamation of God's law. Repeat the commandments, and give an explanation of each.
4. How did this manifestation affect the people? That they might more fully understand the commandments, what provision was made? What message now came? Tell what followed their leader's descent from Sinai. What occurred when he was again called up?
5. During his absence, what happened? What destruction was threatened? what intercession made?
6. Upon his return, what did Moses do? What made Aaron's sin so great? How was the apostasy punished? Why was this necessary?
7. What further unselfish pleas did Moses make? How were they answered? What was his experience when next summoned to the mountain? Explain the brightness of his countenance. What does it testify to us?
8. With what success had Satan met in his efforts against God's law up to this time? What did he now plot against Israel?
9. What is his design in causing violation of the second commandment? the fourth? the fifth? the sixth? the seventh? What will God's dealings with rebellion demonstrate?
10. Summarize the main points of these chapters.

Junior No. 5 — Lesson 15: "Pilgrim's Progress," Pages 114-141

1. To what place did Christian and Hopeful now come? Can you draw any lesson from the quickness with which they passed over it? State the truths you gather from what occurred at Lucre Hill.
2. What expressions of thankfulness were awakened in the two men at sight of the pillar of salt?
3. Into what dangers were they brought by leaving the right way?
4. Give an account of what befell them in Doubting Castle. Note the means of escape. What warning did they post for the benefit of other pilgrims?
5. At the Delectable Mountains what information was received? what welcome? What wonders were shown them? What warning was given?
6. Give the substance of the conversation with Ignorance. Passing him, what sad sight did they behold? Relate the story which this recalled to Christian's mind.
7. How did he contrast Esau and Little-Faith? How did he show the dangers of combat with Faint-heart, Mistrust, and Guilt? What two things did he say were necessary to withstand these men?
8. What mistake was made on resuming the journey? How was deliverance effected?



IV — The Story of Eden (January 25)

LESSON SCRIPTURE: Gen. 2:8-20.

MEMORY VERSE: "If ye love me, keep my commandments." John 14:15.

Questions

1. What place did God prepare for the man he made? What grew in the garden? Gen. 2:8, and first part of 9; note 1.
2. What was placed in the center of the garden? How was the garden watered? Verses 9, 10; note 2.
3. What was Adam permitted to do? Verse 16.
4. Of what tree was he commanded not to eat? What penalty would he suffer if he disobeyed? Verse 17. Why did God give such a commandment? Note 3. What is the test of our love to God? Memory verse.
5. What did God say was not good for the man? What did he say he would do for him? Verse 18.
6. What did the Lord bring before Adam? Why did he do this? Verse 19.
7. To what did Adam give names? Verse 20.
8. Who was made ruler over all the things God had created? Gen. 1:28.
9. How did God provide a companion for Adam? Gen. 2:20-23.
10. What was established in Eden? Note 4. What was the schoolroom? What did the students study? Name the teacher. Who were the students?
11. What was written in everything these students saw? Note 5. What secrets did they seek to learn? What mysteries were objects of study? What do we call these studies now? Should you not like to attend such a school?

12. What work was given the pupils in this model school? Verse 15; note 6.

13. What was God's purpose in creating the earth? Isa. 45: 18.

Notes

1. "Everything that God had made was the perfection of beauty, and nothing seemed wanting that could contribute to the happiness of the holy pair; yet the Creator gave them still another token of his love, by preparing a garden especially for their home. In this garden were trees of every variety, many of them laden with fragrant and delicious fruit. There were lovely vines, growing upright, yet presenting a most graceful appearance, with their branches drooping under their load of tempting fruit, of the richest and most varied hues. It was the work of Adam and Eve to train the branches of the vine to form bowers, thus making for themselves a dwelling from living trees covered with foliage and fruit. There were fragrant flowers of every hue in rich profusion. In the midst of the garden stood the tree of life, surpassing in glory all other trees. Its fruit appeared like apples of gold and silver, and had the power to perpetuate life."

"The home of our first parents was to be a pattern for other homes as their children should go forth to occupy the earth. That home, beautified by the hand of God himself, was not a gorgeous palace. Men, in their pride, delight in magnificence and costly edifices, and glory in the works of their own hands; but God placed Adam in a garden."—*"Patriarchs and Prophets,"* pages 46, 47, 49.

2. "Our first parents, though created innocent and holy, were not placed beyond the possibility of wrong-doing. . . . They were to enjoy communion with God and with holy angels; but before they could be rendered eternally secure, their loyalty must be tested."—*Id.*, page 48.

3. "At the very beginning of man's existence a check was placed upon the desire for self-indulgence, the fatal passion that lay at the foundation of Satan's fall. The tree of knowledge, which stood near the tree of life in the midst of the garden, was to be a test of the obedience, faith, and love of our first parents."—*Id.*, pages 48, 49.

4. "A model school was established in Eden, the home of our first parents. The garden of Eden was the school-room, nature was the lesson book, the Creator himself was the instructor, and the parents of the human family were the students."—*"Education,"* page 20.

5. "On every leaf of the forest and stone of the mountains, in every shining star, in earth and sea and sky, God's name was written. With both the animate and inanimate creation, —with leaf and flower and tree, and with every living creature, from the leviathan of the waters to the mote in the sunbeam,—the dwellers in Eden held converse, gathering from each the secrets of its life. God's glory in the heavens, the innumerable worlds in their orderly revolutions, 'the balancings of the clouds,' the mysteries of light and sound, of day and night,—all were objects of study by the pupils of earth's first school."—*Id.*, page 21.

6. "To Adam and Eve was committed the care of the garden, 'to dress it and to keep it.' Though rich in all that the Owner of the universe could supply, they were not to be idle. Useful occupation was appointed them as a blessing, to strengthen the body, to expand the mind, and to develop the character. . . . The garden of Eden was a representation of what God desired the whole earth to become, and it was his purpose that, as the human family increased in numbers, they should establish other homes and schools like the one he had given."—*Id.*, pages 21, 22.

IV — The Son of God as Priest

(January 25)

Questions

1. WHAT kind of high priests were appointed under the Levitical system? Heb. 7: 28, first clause.

2. In contrast with the priests who were subject to human frailties, who was appointed priest by the word of the oath? Same verse, last clause.

3. Who, then, is the great priest who was represented by the many priests under the Levitical system? Heb. 4: 14; note 1.

4. Where does this priest carry on his ministry? Heb. 8: 1, 2.

5. What was the oath by which the Son of God was made priest? Heb. 7: 21.

6. What relationship preceded the oath and determined the priesthood? Heb. 5: 5.

7. What direct announcement of his appointment as priest grew out of the declaration of the sonship? Verse 6; note 2.

8. What contrast is drawn between the relation that Moses, who was a type of Christ, sustained to the house of God, and that sustained by Christ to it? Heb. 3: 5 and first clause of 6.

9. Being a son over the house of God, what other office could he fill? Heb. 10: 21.

10. In the epistle which specially sets forth the priesthood of Christ, by what name is he first mentioned? Heb. 1: 1 and first clause of 2.

11. What name applied to him establishes the deity of the Son? Verse 8.

12. By what other divine name is the Son designated? Verse 10.

13. What description is given of the nature of the Son of God, who became high priest? Verse 3, first part.

14. What comparison is drawn between this glorious being and the angels? Verse 4.

15. What is the "more excellent name" which he has inherited? Verse 5.

16. What is said of the preeminence of the Son over his fellows? Verse 9.

17. How is the exalted character of our High Priest further described? Heb. 7: 26; note 3.

18. In view of our having such a high priest, to what exhortation may we well take heed? Heb. 3: 1.

19. State the main points of this lesson.

Notes

1. Although the priests appointed under the Levitical system were compassed with infirmity and subject to death, yet they served "that which is a copy and shadow of the heavenly things," and their priesthood was typical of the priesthood of the Son of God. They did not represent any other created being, but only him who was made a priest "after the power of an endless life," even Jesus the Son of God.

2. Jesus did not become a priest by a merely arbitrary appointment. He could enter upon his work as priest in behalf of sinful men because he was the eternal Son of God, and the Scripture recognizes this fact by making the declaration concerning his sonship the basis of the oath which appointed him to the priesthood. When the Lord declared Jesus to be his Son, he established the basis of the priesthood.

3. From the description given in the first chapter of the epistle to the Hebrews, it is perfectly clear that no created being could be "a minister of the sanctuary, and of the true tabernacle, which the Lord pitched, and not man." Any interpretation of the Scriptures, therefore, which requires that some other person than the Son of God should at any time minister in the heavenly sanctuary, must be discarded as being untrue to the inspired explanation of the typical priesthood.

Conversion of the Bulgarians

IN Thessalonica, in the ninth century, there lived a monk named Methodius. He had studied in Constantinople as well as in Rome, and was an artist as well as a holy man.

The Bulgarian king had a taste for art, and had filled his galleries with pictures of battles and terrible deeds of warfare. Hearing of Methodius, he invited him to the court at Tirnova and showed him his pictures. Then he asked the monk if he could paint anything more terrible than those. Methodius promptly replied that he could, and was at once commanded to do it. When the picture was finished, it was carried to the king. "Show me," cried Bogaris, "with what event you have rivaled all my bold deeds of terrible warriors." "Behold, O king," replied Methodius, "the most terrible event that man can contemplate or imagine," and he uncovered a picture of the "Last Judgment." The picture and the pleading of the monk so influenced the king that he later asked to be baptized. And by the example of the king and the sermons of Methodius the whole Bulgarian nation was nominally converted to Christianity.—*James Baker.*

The Youth's Instructor

ISSUED TUESDAYS BY THE
REVIEW AND HERALD PUBLISHING ASSN.,
TAKOMA PARK STATION, WASHINGTON, D. C.

FANNIE DICKERSON CHASE - - - EDITOR

Subscription Rates

YEARLY SUBSCRIPTION	- - -	\$1.00
SIX MONTHS	- - -	.50
CLUB RATES		
5 or more copies to one address, one year, each	- - -	\$.75
5 or more copies to one address, six months, each	- - -	.40
5 or more copies to one address, three months, each	- - -	.20

Entered as second-class matter, August 14, 1903, at the post-office at Washington, D. C., under the act of congress of March 3, 1879.

Bent Nails

"DRAW the nail out carefully, my boy. Be careful not to bend it."

"I could straighten it if I did bend it, couldn't I?"

The carpenter smiled into the earnest face of the young man who was learning the trade under his teaching.

"You might get it quite straight, but it would never be so strong as before it was bent. It would bend easier next time, and you could not drive it just as true to the spot as you did at first."

It was a lesson the young carpenter never forgot: the nail that has been bent once will bend easier next time. It never is as strong to resist a blow as it was in the beginning.

The power in us to resist the inclination to do wrong is like a bright nail. Once bent, it will bend easier next time. Yield to temptation to-day, and to-morrow you will have less strength to hold fast than now.

Just as long as you stand up manfully, and say, "I do not think this is right; I can not do it," just so long the metal is strong and true in your heart. It is easier the next time to say the same thing. Yes, power to stand firmly for the right grows with every testing, if we bravely meet the tempter face to face.

But just as surely as you say, "I'll do it for this one time!" the steel is weakened and your life-work endangered.—*Selected.*

What Will Make You Glad?

WHEN the years have slipped by and memory runs back over the path you have trod, you will be glad that you stopped to speak to every friend you met, and left them all with a warmer feeling in their hearts because you did so.

You will be glad that you were happy when doing the small, every-day things of life; that you lived the best you could in life's lowly round.

You will be glad that there have been all along your way: "I know that I can trust him. He is as true as steel."

You will be glad that there have been some rainy days in your life. If there were no storms, the fountains would dry up, the sky would be filled with poisonous vapors, and life would cease.

You will be glad that you stopped long enough every day to read carefully and with prayer in your heart some part of God's message to those he loves.

You will be glad that you shut your ears tight against

the evil things men said about one another, and tried the best you could to stay the words winged with poison.

You will be glad that you brought smiles to men, and not sorrow.

You will be glad that you have met with a hearty hand-shake all the hard things which have come to you, never dodging out of them, but turning them all to the best possible account.—*Presbyterian.*

How Light Came to Lady Somerset

ONE of the most influential Christian workers of recent years is Lady Henry Somerset, leader of the temperance hosts of Great Britain. Before her conversion she was surrounded by a rich and fashionable circle of titled men and women, few of whom were Christians. Through infidel books also she had come to doubt the very existence of Christ. Yet she could not rest in such a state of uncertainty. She pondered and thought, and read and even prayed, but found no resting-place for her faith. Finally one evening, as she was walking in her grounds, she heard a voice speaking to her inmost soul, "Act as if I were, and thou shalt know that I am." The more she pondered on the message, the wiser it seemed. And from that hour she began to try to do the will of God. Whatever a Christian woman ought to do, that was her law. And she did come to know, and came into a joyous and inspiring fellowship with Jesus Christ.—*Louis Albert Banks.*

A New Life in a New Year

THEY tell us that on a certain dangerous seashore there is a man who lives in a queer house built entirely of wrecks. The floors are made of a ship's deck, the kitchen out of an old ship's galley, and the walls are the cabin panels of wrecked packets and steamers. The whole structure is composed of the smashed remnants of better things.

Such are the lives and characters of thousands of unconverted souls; such may yours be, my impenitent friend. One part of your character is made up of broken Sabbaths; another part of broken promises to your Saviour that you would repent and serve him. The whole fabric shows broken commandments of God in every wall. Your heart house can not stand inspection, and God will put it to the flames.

Move out! Now is a good time to begin a new structure, that will be storm-proof and fire-proof, and will be a habitation for Jesus Christ to dwell in with you. Dig deep; lay your foundation on the Rock. The first thing you do to please conscience and Christ will be the first material put into the structure. Don't lose an hour; don't stop with wishing and praying to do better; put prayer into practise, and in God's strength begin a new life. Christ is ready to come unto you; are you ready for him?—*The Expositor.*

Attractiveness of True Religion

A CHINAMAN who had been watching a missionary's conduct very narrowly, came to him at last and said, "I want your God to be my God." "Why?" asked the missionary. "Because if your God is like you, he must be good." In another case, a boy had heard Whitefield, with his marvelous voice and glowing heart, preach about the Lord Jesus Christ. Dying while yet a child, and as the fever mounted to his brow, and as the fire burned in his eye, he said, "I should like to go to Mr. Whitefield's God."—*Selected.*