

THE EARTH.

VOL. V.

Oct 1904

No. 51.

THE SUN AND MOON MIRACLE.

Under the above heading an article appeared in *The Messenger* for May, 1904. *The Messenger* is a monthly paper which professes to teach advanced religious truth. It also advertises, on its covers, criticisms of popular and sectarian doctrines; also a reply to the higher critics, and "Joshua's address to the sun and moon."

It might be expected that a paper of such pretensions would adhere to strict Bible teaching at all hazards, as against so-called scientific theories respecting the universe of God's Creation. But the article under consideration betrays more concern to reconcile Bible statements with the perverted "science" of the day, especially of course the so-called "science of astronomy, than to find out what is the truth of God on such matters. Hence the editor is more ready to quote from men who uphold modern theories of astronomy, than from Christian Zetetic writers who can give the only explanation of the miracle which is at all consistent with Bible teaching. But the editor of *The Messenger* seems to ignore these, and tries with others to make the divine records bend into something like harmony with the science of the day. This seems highly inconsistent of one who professes a superior standard of Bible exposition.

The editor of *The Messenger* quotes from *The Glasgow Herald*, which was reviewing an article on the subject in the *Church Quarterly*. From his article I will give the following extracts :

"One of the most frequently discussed of these difficulties has been, to all appearance, solved with admirable scholarship, and in the most conclusive manner, by a writer in the current number of the *Church Quarterly*. Probably no miraculous intervention of providence has presented a more formidable problem to human reason than that at Gibeon, when the sun stood still in the midst of the heavens in order that Joshua and his people might avenge themselves on their enemies. That the sun was actually and literally arrested in his mid-day course

is verified by the writer of the book of Ecclesiasticus, the Rabbins, and the Greek and Latin Fathers.

“When the stupendous import of the miracle was understood by divines acquainted with the mechanism of the solar system (?) this literal interpretation was regarded as untenable, and while the German theologians, in explaining the occurrence as an *impression* produced on the mind of Joshua, the sun *seeming* to stand still because the day's work had been achieved between noon and sunset, our English exegetists *conjecture* that the refracted light of the sun was sustained in the heavens after the disc had gone down.”

This extract shows how the miracle was literally accepted by ancient worthies, who had no need to “reconcile” it with modern atheistic theories of the universe; and that it was only when modern “divines” accepted astronomical theories about “the mechanism of the universe” that they felt constrained to find some other “explanation” in harmony therewith. It is a curious fact that all such “divines,” including the editors of professedly religious papers, seek for an explanation in harmony with what they believe to be the facts of “science,” rather than one in harmony with the inspired account and the general teaching of the Holy Scriptures on Creative truth. Really they, for the most part, throw discredit on the Bible account, as we have seen, by assuming it was “an impression” merely on Joshua's mind (what about the Amorites—had they the same impression?), or, that the phenomenon was caused by “refraction,” or that the account is a myth, or a mere poetic license due to the exuberance of the Eastern imagination!

But let us notice what is this last, though probably not final, speculation as to what the miracle really is supposed to be, if miracle at all.

The plain and unvarnished account of the Bible is to be discredited, and so the writer asks: “Why should the moon pause in the valley of Aijalon when at mid-day her light would have added no increasement to that of the sun?”

Now the fact that the moon's motion was also arrested, instead of being a difficulty with Bible students ought rather to show them that Joshua spoke by the inspiration of God. Had he only spoken as a man the sun's light was all that he needed to enable him as an Israelitish general to pursue, and complete the conquest of, his enemies. Then why did he command the moon also to stand still? Because if the moon had not been stayed, as well as the sun, the Israelitish calendar would have been put out of order; the

months would have been disarranged, and the reckoning of time and the cycles of time would have been interfered with. Hence we may see that Joshua spoke under the direct inspiration of God, and that the sun did stand still, otherwise the moon need not have been interfered with at all.

But what is this supposed

NEW EXPLANATION.

I will again quote from the article in *The Messenger*.

“To the writer in the *Church Quarterly* the miracle appears to have been one of ‘protracted darkness rather than of protracted light.’ The sun and moon did indeed ‘stand still’ (though they are trying all the time to prove they did not!) “But the English words fail to convey the significance of the expression in the text.” (Oh!) “In the language of the ancient poem, the Book of Jasher, Joshua addressed the sun, and said: ‘Be thou silent! Be dumb!’ And the sun stood still; silent; and the moon stayed; that is *stopped or ceased shining.*” (Italics mine).

So that according to this the sun did *not* “stand still” at all, neither was the moon actually stayed over any valley; they both simply “stopped shining,” and went their ways! So that Joshua was wrong, the ancient Israelitish worthies were all deceived, and eminent men of God since those days, until in modern times some “German theologians” arose who were acquainted with the mechanism of the solar system”!

Well may the Bible cry out: “Save me from my friends”! if this is the way they handle the Holy Writings.

We might certainly have expected something better than this from a prominent Christian editor. He quotes from *Rig Veda*, to show how a solar myth sprang up, but in his testimony fails! because he does *not* quote from the Word of God. He goes into Sanscrit, and says that the root *ark* means “to make bright, to cheer, to gladden, etc. From this root “one of the names of the sun, *Arkab*,” was derived meaning “a hymn, a song of praise, etc. Hence the myth that hymns of praise proceeded from the sun. Therefore, Joshua’s command amounted to no more than this, the sun must stop singing, that is, it must put out, or hide its light; it must “cease shining.” That was all, and so astronomy, or rather the Bible is saved from the reproach of

science! The darkness was "protracted rather than the light"! Although it was light to begin with, the "darkness was protracted"! And this protracted darkness enabled Joshua to pursue his enemies!

Well, those who can accept this explanation are easily led, but it seems apparent that it requires more credulity, or scientific gullibility, shall I say, than the ordinary Bible account demands of simple faith in Him who is able to do things past our human comprehension—even the Creator of heaven and earth.

BE SILENT.

The great point insisted upon by these would-be expounders, is, that the original Hebrew for "stand still" means also "be thou silent." But this is no new discovery. The translators of the Old Testament must have understood the Hebrew language. And in both the "Authorized Version," and in the Revised Version, the old words are written: "Stand thou still;" while in the Revised Version the words: "be silent" are placed in the margin. There is no objection to either reading if properly understood. It is a wellknown fact that all motion produces sound, and as the sun is in rapid motion, there must be some sound attending on that motion. So that here again we have another proof of the scientific accuracy of the Bible.

The Bible clearly teaches that the sun's motion is accompanied by a sound; therefore if this sound must cease, the motion also, which causes it, must cease. Hence the record of this miracle is quite in keeping with Bible teaching, and true science.

To command the sun to "be silent" is equivalent to the command "stand thou still;" as there was no other way of stopping the sound but by arresting the motion. This at once harmonizes the difficulties. If we believe as the Bible teaches, and observation proves, that the sun is in motion over a motionless earth, all is clear; but if we have more faith in so-called "science" than in the Bible, we shall have to accept all sorts of tricks of interpretation, resorted to in order to get rid of the difficulty of reconciling the statements of the Bible with modern ideas of the mechanism of the universe. Besides, those who try to explain away this miracle

because of the *idea* involved of a moving sun, to be consistent, ought also to explain away every other passage in the Bible (and they are many) which speaks of the motion of the sun.

Of course those who object to the account because of the miraculous are practically unbelievers in Bible inspiration. But professed Christians, and editors who pose as teachers of a high Christianity, ought, in all consistency, to accept the Bible and the Word of God before the fanciful speculations of modern theoretical science.

The book of Nature, also, itself reveals the true order of Creation to those who have eyes to read it aright. Only lately, in a daily paper, was another decisive proof of our contention. But this I hope to give in another article, under the title of *The Land Proof*.

THE PLANET EARTH.

Another paper which professes to speak in a religious manner, gives an article with the heading of the *Planet Earth*. The writer, under "Medical Talk," says, "that the earth, in common with all the planets, revolves around the sun is a fact which rests upon the clearest demonstrations of philosophy. That it revolves like them upon its own axis, is a truth which every rising and setting sun illustrates." "Either the earth moves around its axis every day, or the whole universe moves around it in the same time."

This is the style of their reasoning. The "fact" of the earth's revolution rests, we are told, upon philosophy! We were taught to believe that "facts are stubborn things," but this gentleman has evidently found one of another kind. It "rests upon philosophy." This is a poor basis for a fact to rest upon; and strange to say this fact does not seem to rest long at a time. We are continually shaking it off its philosophic pedestal. Yet the writer adds, "it pleased the all wise Creator to assign the earth its position amongst the heavenly bodies." Oh! we should like to know where he learned this. Has the Creator given him a special revelation? We cannot find it in the Book which He has given us containing the revelation of His Will and His Works. We freely admit that the earth either moves round its axis of rotation "or" the whole of the heavenly bodies move

around the earth. But which is it? Our opponents affirm that it is earth which rotates; hence they are so anxious to explain away Joshua's miracle, from which it is evident that he thought it was the *sun* which moved! If they could prove that the sun, moon, and stars, were gigantic bodies at immense distances, it would seem incongruous to suppose that they all revolve about the earth. As this writer says: "To suppose the latter case to be a fact would be to cast a reflection on the wisdom of the Supreme Architect, whose laws are universally harmonious." But if an architect built a house, and then made an "electric globe to light it a million times bigger than the house, would not this reflect upon his skill? So their suppositions are unsound, and their philosophy is at fault.

If we profess to believe the Bible we should stand by its teachings against all the "vain philosophy" in the world. Bible writers, and Bible readers, for over five thousand years believed that the earth was stationary, and that the sun moved around it, and so caused the alternation of night and day. This agrees with the evident meaning of the account of Joshua's miracle. If any one could give good proof that the earth moves, and that the sun is relatively stationary to it, then it would be time enough to attempt to "reconcile" the account with the "facts" of astronomy. But no man in the world has ever been able to do this.

That the account was believed by the world of old, as a miraculous intervention on the part of the Creator, Who surely has all power over His Own Works, is testified by Josephus, whose *statements* I hope to give in a future issue.

CELESTIAL MOTIONS.

All that is really known of the motions of the heavenly bodies (sun, moon, stars, planets, and comets,) is from observation. No other source of information is open to man.

Whatever calculations may be made, they are all based upon observed phenomena.

Whatever laws are laid down they should be the result of observation.

Eclipses can be known and foretold only by carefully observing and noting all their past occurrences. The tables for future eclipses of the sun and moon could never have been made by mere calculation apart from the tabulation of the motions of these bodies in past ages.

Hence it is that buildings for the purpose of discovering these celestial motions are called "Observatories," and the science is called "Astronomy," which means the *Star Laws*, or the laws of the stars; *i.e.*, the laws which govern the motions of the heavenly bodies.

Our English word "science" is the Latin word *scientia*, and means *knowledge*: and our English word "knowledge" is from the Greek word *gnosis*.

We must distinguish, therefore, between *science* and *hypothesis*; between facts and theories; between what we know and what we think. If we do this there will be quite a number of so-called sciences which are no sciences at all. Geology is in no sense a science. Chemistry is. Astronomy is a mongrel science, being partly knowledge and partly hypothesis. Geometry is a science. What we *know* can never be altered. But hypotheses must be constantly changed in order to accommodate or modify them with newly acquired facts.

A fact is a *thing done*, and is unchangeable.

We approach the subject of the star motions, therefore, apart from all hypotheses. So-called astronomy, instead of consisting of the collection of observed facts, is a changing system of theories invented in order to explain the observed phenomena.

When theories are put forward where only a few facts are known, they have to be altered as the knowledge is accumulated. And no true theory can be formed unless and until we have all the data before us.

It is on these lines that the subject of astronomy is treated in the *Encyclopædia Britannica*. There we read:

"Whether the earth rotates within the star sphere, or the star sphere rotates round the earth, or both the earth and the star sphere rotate, it is known that *relatively to the earth*, the star sphere rotates from east to west in twenty-four sidereal hours. This rotation whether apparent or real, takes place without any appreciable change in the relative position of the fixed stars."

Here then we have a plain statement of facts. But here is the parting of the ways. Men agree to theorize as to these observed motions, and at the outset, before they acquire a single additional fact, they lay it down that these motions of the star sphere are only *apparent*, and not *real*.

But this is just the point which has to be proved.

Instead of waiting to prove it, they beg the whole question; and quietly assume a conclusion which is absolutely at variance with our senses, which alone are capable of judging the matter at all.

And astronomers reach this conclusion, in spite of the fact that they have to make, in the same article, the following confession of truth:

“Thus far there is nothing in the observed celestial motions which opposes itself to the belief that the earth is a **FIXED CENTRE** around which the celestial bodies are carried.”

We are content with this presentation of the subject. We accept it at its full value; and this value cannot be over-estimated.

If we follow the authors of this statement, we should have to ignore all our senses; and abandon fact for theory, what is clearly apparent for what is clearly unreal (though it is called “real.”) And we shall have to accept the theory of a “fictitious sun” as a substitute for the “real sun.”

Thus do astronomers juggle with words; and draw fictitious diagrams in order to support their theories.

No matter what new facts may be observed, they are useless to them; for they must be *forced* into harmony with their great hypothesis. The hypothesis must not be adapted to the newly discovered facts.

Astronomers are therefore just in the condition of an animal tethered for his food. No matter what good food may lie beyond the length of the tether, it is impossible for the animal to get at it. So these astronomers may go to their so-called “south pole,” but they start, securely tethered by their dominating hypothesis, which will control the interpretation of whatever they may see. And if the newly discovered facts do not agree with the theory, so much the worse for the facts, which will be severely suppressed or contorted.

But to return to Celestial Motions. The laws which

govern them all can be ascertained only from *observation*. Any subsequent calculations of the motions of the heavenly bodies must be based on the previously known observations.

There can be no calculations independent of previous observations.

As to the moon: it is a matter of observation that she moves in the same direction as the sun, and that it takes her $27\frac{1}{3}$ days to make her circuit of the star sphere. She is observed to be in the same place among the fixed stars every $27\frac{1}{3}$ days. Relatively to the sun, she is rather more than 2 days later. So that the lunar month is about $29\frac{1}{2}$ days.

The planets are observed to have their own independent paths among the fixed stars; and they vary in their respective circuits. Observation shows that they appear to move in loops: *i.e.*, their circuits are made round moving centres. The purpose of astronomy is not to explain these motions but to accept the observations which explain the motions to us.

The Sun has his own observed motions relatively to the fixed stars and the earth. And in the absence of any proof to the contrary we must believe that these motions are his *real* motions. If any wish to persuade us that these motions are not real, but only "*apparent*," the burden of proof lies with them, and they must give us indisputable evidence that our senses are not to be trusted. But this is exactly what is wanting. Instead of proofs we are asked to accept hypotheses. But this we decline to do.

It is idle to demand a hypothesis from us. It is not for us to *explain* the phenomena, but to observe them, and record them, and believe them.

When what we see agrees with the Word of God, there is still stronger ground why we should not be moved from our position. In *Ps.* xix. 4-6, He who made the sun has told us that:

"For the sun He hath set a tent among them (*i.e.*, the stars),

And he, as a bridegroom, is going forth from his chamber. He rejoiceth as a mighty one to run his course.

From [one] end of the heavens is his going forth,

And his revolution unto the ends of it.

And there is nothing hid from his heat."

The statement in the *Encyclopædia Britannica* (Art. Astronomy) accords exactly with this:

“The observations of the sun’s motions and place among the fixed stars during so great a number of years, furnish complete evidence that the sun moves through a great circle, and its path is always the same, and among the same stars.

“In a period of about 365 days the sun traverses the whole of this path; and this period fixes for us the length of the year.”

From the most ancient times this path of the sun was called the “ZODIAC.” This word is popularly supposed to refer to animals or living creatures, from the Greek word *zao*, to live. But this is quite a mistake. The Greek word *Zodiac* comes from a primitive root, through the Hebrew, *Sodi*, which in Sanscrit means *a way or a step*. As the word *Zodiac* means the *way or path* of the sun as it moves among the stars in the course of the year, the name was obviously derived from this observed fact.

This path (or Zodiac) was divided into twelve parts. Why, we know not, unless it arose from the observation of twelve full moons in the successive parts of it in the course of the year. These twelve parts were called “mansions” or “houses” in which the sun was looked on as dwelling for one month in each.

The antiquity of these observations is shown by the “Fifth Creation Tablet,” now in the British Museum. It reads as follows—our own remarks being put with brackets :

“Anu [*i.e.*, the Creator] made excellent the mansions of the great gods [*twelve*] in number [*i.e.*, the twelve signs of the Zodiac, or mansions of the sun.]

“The stars he placed in them. The lumasi [*i.e.*, the groups of stars or figures] he fixed.

“He arranged the year according to the bounds [*i.e.*, the twelve signs] which he defined.

“For each of the twelve months three rows of stars [*i.e.*, constellations] he fixed.

“From the day when the year issues forth, unto the close, he marked the mansions [*i.e.*, the Signs of the Zodiac] of the wandering stars [or planets] to know their courses that they might not err or deflect at all.”

Thus the most ancient observations agree with the most modern; and both certify to the truth of God’s Word.

The path of the sun through the Twelve Signs of the Zodiac is called the *Ecliptic*, because it is the line in which *eclipses** take place.

But the sun does not come back to quite the exact point in the sign, at the same moment when he commenced the year. This difference goes on every year; but it is so small that it takes about 71 or 72 years to make a difference of one three-hundred-and-sixtieth part of the whole Zodiac. In other words it would take no less than 25,579 years for the sun to complete this vast cycle.

This path of the sun, i.e., the *Ecliptic*, if it could be viewed from immediately beneath the "Polar" Star, would be seen as a complete and perfect circle, in which the Sun would be exactly the same distance from the horizon during the whole 24 hours: so that there would be no rising or setting. When, however, the observer is removed from this central position, the path of the sun is seen to be necessarily oblique, and the sun will be seen to rise and set obliquely.

When the observer is standing beneath the sun, instead of the "Polar" star, the sun would be seen to rise and set *perpendicularly*, and no longer *obliquely*; the *obliquity* depending on the position of the observer relative to the point of the sun's polarity. At this point, and on this line there would be *no shadow*, no matter what latitude he might be in.†

But this line, called the *Equator* appears to be constantly moving North or South, because there is another motion of the sun to be considered. Indeed, there are *four* motions to the sun. Two relative to the Fixed Stars, and two relative of the Earth. There is

I.—The motion relative to the *Fixed Stars* :

- (1) The *annual* cycle.
- (2) The *great cycle* of 25,579 years.

II.—The motion relative to the *Earth*.

- (1) The *daily* circuit of the hours.
- (2) The *annual* movement North and South, caused by the daily motion being spiral.

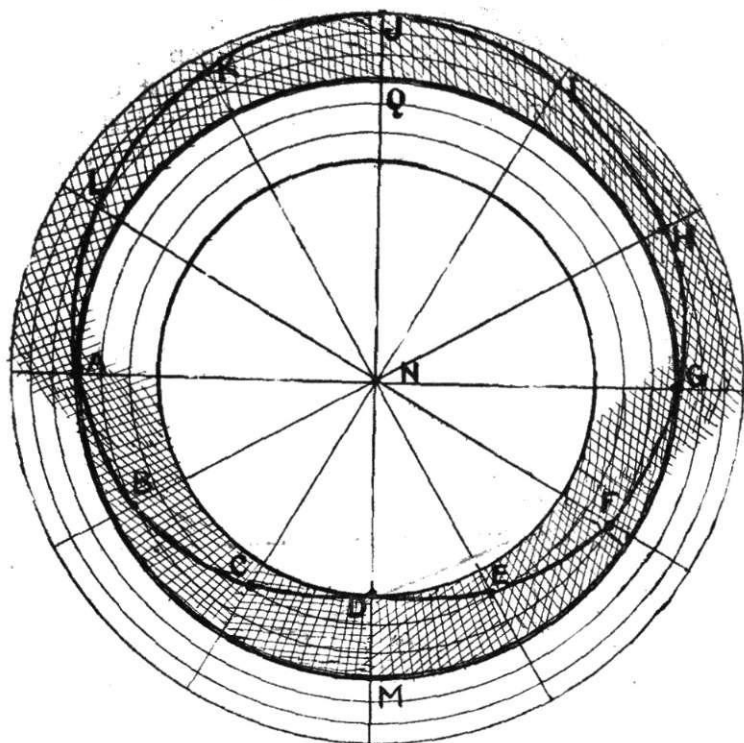
* *Eclipse* means a *failure*; by one body being left or blotted out for a time through another body being interposed.

† When we are in this position with God, we experience the truth of James i. 17. With Him as our only object there is "*no parallax*." But it is the introduction of any other second object which causes *parallax*. If we keep *polarity* with Him then there is no *parallax*, and no shadow caused by His turning.

It is needful to add a few words with regard to the last of these four motions caused by the daily circuit being spiral. On or about June 21st the sun's daily path relative to the earth reaches its furthest point North; and on about December 21st it reaches its furthest point South.

The line immediately beneath the sun when at its northern limit is called the "Tropic of Cancer." The word "tropic" is from the Greek *tropos*, a turning. On reaching that northern point it *turns* back, until in about six months it reaches its most southern limit, and again turns North. The southern point is called "The Tropic (or turning) of Capricorn." And the parts of the earth between the circles thus marked out are called "*The Tropics*." The northern limit is known as the "Summer Solstice," and the southern limit as "The Winter Solstice." The days are longer in the former, and shorter in the latter. *Solstice* is derived from *Sol*, the sun, and *sisto*, to make to stand. When the sun is midway between the two *Solstices* the days and nights are equal. This occurs about March 21st, when going North, and about September 23rd, when declining South; and the days and nights being then equal, those points are called the *Equinoxes* (from the Latin *nox*, night).

Further observation reveals the fact that the sun's path, called *the Ecliptic*, is not at these points immediately concentric with the *Equator*: that is to say, the *Equator* does not have the *Ecliptic* for its zenith; but the two circles are what is called *Eccentric*.



In this diagram *A M G Q* represents the earth's *Equator*, and *A D G J* represents the sun's *Ecliptic*; and the points *A* and *G* will be the Equinoctial points, while points *M* and *J* will be sun's furthest point North and South. The twelve parts into which both are divided, correspond with the twelve signs of the Zodiac, which are represented as follows :

A B : Aries (Equinox)

G H : Libra (Equinox)

B C : Taurus

H I : Scorpio

C D : Gemini

I J : Sagittarius

D E : Cancer

J K : Capricorn

(*M* the sun's furthest North)

(*J* the sun's furthest South)

E F : Leo

K L : Aquarius

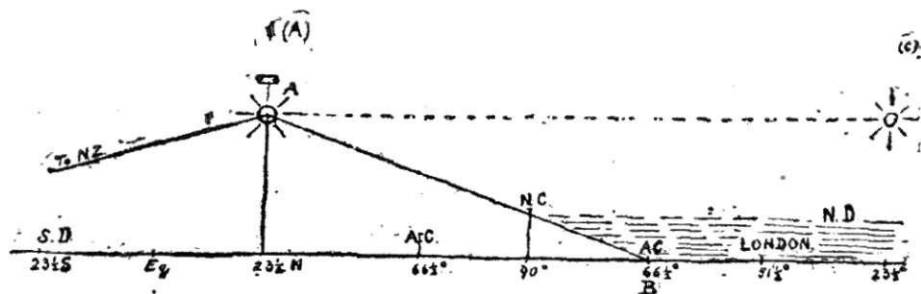
F G : Libra

L A : Pisces.

As to the origin and meaning of these signs we must refer our readers to Dr. Bullinger's *Witness of the Stars*.* One

thing seems evident, that their origin was Patriarchal, and served for 2000 years to perpetuate the great primeval promise and prophecy of *Gen. iii. 15*; and to keep alive the hope of the Coming "Seed of the Woman." The first sign, "Virgo," shows Christ as the Virgin-born; while the last shows Him as the "Lion of the tribe of Judah" leaping forth to crush the head of the Dragon beneath His feet.

When the Scriptures of Truth were afterwards written, the need for the Heavenly witness would be no longer needed. Hence the Babylonian and Greek Mythology was not virtually some newly invented system of error, but rather the perversion and corruption of primitive truth, after its great lesson had been lost to the nations.



I have drawn a rough diagram showing how the sun can be seen when in Cancer. It is not true to scale, but it will illustrate my meaning. When the sun is in Cancer, at A, it could be seen at midnight over the North Centre (N.C.) as far as B, $66\frac{1}{2}^{\circ}$ north latitude; that is 90° degrees away. It cannot be seen in London, nor far beyond the 66th parallel N, because the rays are refracted above the atmosphere; so that all that is beyond is in darkness at night. But at the same time the sun can be seen at N.Z. (New Zealand) because New Zealand is less than 90° away. Twelve hours later, when the sun arrives at C, it is of course daytime in London, $51\frac{1}{2}^{\circ}$ N, and then the sun is too far away to be seen in New Zealand, and they have darkness there. But the sun can still be seen at what is called the North "Pole," because it is less than 90° degrees away, hence the sun can be seen over this area all the 24 hours, and *vice versa* in the extreme south during our winter.

The distance the sun can be seen, I believe, is about 90° .

CONTINUOUS DAY ON EIFFEL TOWER, PARIS.

The Feast of the Sun celebrated a thousand feet in the air.

Camille Flammarion, the world-famed astronomer, invited his friends and fellow scientists to a late supper, and to spend the night on the top of the Eiffel Tower in Paris, to witness daylight, which was continually visible for 24 hours. This took place on the night of June 21-22, and the Parisians called it "Camille Flammarion's Feast of the Sun."

As I have already stated, when speaking, this is no surprise to me. In a recent address I pointed out the fact that the Midnight Sun, while visible in the south is seen a part of each 24 hours by us. And in *The Earth*, December 1903, p. 302, reference is made to the Observatory on Ben Nevis, and the possibility of seeing the Southern Midnight Sun from such an Observatory, or from a captive balloon at North Cape, is suggested by Mr. Middleton. I think of trying to make observations from a balloon ere long. I also hope to start a ship for making further explorations in southern regions as soon as possible.

CIVILIZING THE SAVAGES.

(A Strange "Science" Initiation).

I read of a very sad case,
In a dark aboriginal race,
 Invaded by white men,
 Who went there to fight them,
And "civilize" all in that place.

The white men, of course proving masters,
Some benefits brought, *and* disasters!
 But one of the worst,
 I've heard it rehearsed,
Was binding all down with stick-fasters.

They fastened their feet to a flat form,
Attached to a big wheel, as platform;
 Then turning the *big wheel*,
 Though some natives *did* squeal,
They swung them *heads downward* in that form!

Those Antips, nigh guilty of treason,
Should all have repented their knees on;
 For by whirling them round,
 Ere long it was found,
That many poor souls lost their reason!

"Zetetes."

FALSE SCIENCE.

I would not for all the world judge any man. I dare not do so, but false doctrines and false "science" I may condemn, and I adopt this course, not with the idea of condemning those who have been deceived by these things, but in hopes of opening the eyes of all who might be thus deceived. All error is outside the pale of Christianity. If a man or woman be enlightened in all true doctrine, possessing knowledge of truth even beyond his or her fellow creatures, and yet acts not up to that light or knowledge possessed, such will undoubtedly stand condemned more than one who, though less enlightened, lives up to the light he possesses.

But the world has been educated in unscriptural cosmogony, and for about 300 years all upholders of modern science, so far as the globular theory is concerned, at least, have led men to regard the Bible as being very fallible, while their Scripture-contradicting science is set forth as infallible and irreproachable truth. Therefore, the present generations are to be pitied rather than condemned, because through the force of *use* 'tis hard to leave the faith of kin or sire. Yet the truth will prevail and live! And may each one of us be led into her paths, is my earnest wish.

"In your article on 'degrees' on page 382 of *The Earth*, you state that a degree is the 360th part of the circumference of a circle. Then you go on to say that the degree ($^{\circ}$) is divided into 4 minutes of 60 seconds.

"Now this statement is very misleading, as the degree, as defined in the opening sentence, is divided into 60 minutes of 60 seconds, or 360 seconds; when spoken of as consisting of 4 minutes of 60 seconds, or 240 seconds, some explanation, I think, should be given as to how this is arrived at. This would prevent any confusion between angular measure (in which the degree is divided into 60 minutes) and *time*, where in *4 minutes the sun's position* in regard to the earth is changed one degree."

REPLY.—In the first place what was intended to be stated was that: according to the *Encyclopædia Britannica* (not necessarily *my own* opinion), a "degree" is the 360th part of the circumference of a circle, and the principle is applied to the circumference of the earth, which Newtonian astronomers assume to be a globe; but the position of the sun in regard to the earth's surface is, for purposes of calculation, supposed to change one degree ($^{\circ}$) every 4 minutes—15 degrees each hour, making a total of 360 degrees in 24 hours. Navigators are taught to "suppose" that the sun changes its place, but we know that the sun does really change its place with respect to the earth; travelling over and around it in 24 hours. The wording of the two paragraphs referred to, was intended to convey this idea, and when it was put that a degree is thus divided into 4 minutes of 60 seconds, it was intended to inform my readers that, by this method of calculation, the time allowed for the sun to move one degree over the earth would be 4 minutes. It is, however, unnecessary again to traverse the ground of my previous article, though I had perhaps stated my opinion too briefly. But anyone can see that the 4 minutes must refer to the time it takes the sun to travel one degree over any particular country. This gives 15^o per hour, and 360^o for a day.

THE EARTH'S CURVATURE.

A correspondent, who queries my figures admits the fall would be about 4,000 miles, from N to E, on a globe such as our earth and sea is said to be. He, however, goes on to endeavour to differentiate the dip in the quarter-circle. He says: "the dip of half of the globe would be 4 000 miles to centre of the earth, but in the quarter-circle it would not be one third this." But as a matter of fact, it is a conclusion based upon unquestionable ground that the curvature of a globe of 25,000 miles increases as the square of the distance multiplied by 8 inches; and if an object has been seen by long-sighted people with a telescope, after the asserted curvature of the globe should have hidden such object, it is proof positive that the earth is *not* a globe.

There is an old adage : "you cannot eat your cake and have it too ;" so, in like manner, you cannot have your globe and see over the curve at the same time. There are hundreds of instances on record, gathered from present-day experience, where lighthouses and other objects are continually seen, when, if the earth were a globe, they would be hidden by the earth's curvature.

THE DAWN OF DAY.

Lines from Lady Blount's Manuscript Case.

(Matt. v. 45.)

In blissful shades
Fair, glorious ether morn,
So beautiful, so lovely, and so bright,
Thou waftest o'er
Sweet fragrance and delight—
With hope—dear hope—
And peace, and joy conjoin'd.

The fleecy clouds—
Glide softly o'er the sky,
A thousand shapes pass onward swift
Yet linger some, [and fast,
As tho' enframed and cast
By more than "chance,"
And legion forms flit by.

The gorgeous sun
Sets forth to mark Time's course,
Full disc above horizon, bold & grand
The sky king moves
God's medium pow'r—or Hand!
Through rays converged—
Brings light from heaven to earth.

God's Will be done
His sun declares His glory,
Each day his zenith's reach'd—noon's
In cipher fine [hour is told :
His course we thus behold :
Th' heavenly bodies speak !
Faithful their witness—true !

Yet life's fair morn
In hope full often breaks,
But without God it passes as the wind ;
Each mundane thing
May perish—unfulfill'd !
But Wisdom lives !
And is found through Christ in God.

THE FLAT-EARTH CONSCIENCE.

How much right has the state to teach a child what its parents do not believe, and make them pay for it? No right at all say the Nonconformists..... Most people say the parents have a right to have their children brought up in their own views ; but the same people, who give this as a conclusive solution of the problem, might be staggered if they were asked to apply that solution consistently. For instance, there are 10,000 people in Britain who firmly believe that the earth is a disk with the North Pole in the middle, and no South Pole at all ; and that the sun is a small body, always over the earth-disc, whose rising and setting are a mere effect of perspective ; and that this is the teaching both of the Bible and of true science. The "Zetetics," as they call themselves, are numerous enough to support an ingenious magazine (*The Earth*) as big as the *Race-Builder*. They call for the banishment of the globe from the schools. This means practically the abolition of geography and astronomy as at present taught. Yet how can the Nonconformist who objects to rate-supported Anglican teaching, or the Anglican who objects to rate-supported "undenominational religion," consistently refuse their support to the Zetetics.—CALDWELL HARPUR. (From *The Race-Builder*.)

Although some Zetetics may have been led in the past to think that there is no "South Pole," all leading Zetetics, now living, admit that there is a South Pole, or *point in the heavens*, but not such a South "pole" as that which is taught as being the end of the supposed axis of the earth.—Ed.