FREEBURG'S
ASTRONOMY

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Manual of Astronomy

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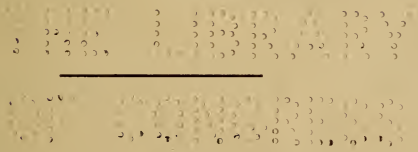

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There are Eight Diagrams scattered through the Book

General Contents

INTRODUCTION

THE problem is solved. There will be no more wonder; how our mother earth is traveling in space alongside of her sisterhood of planets and stars. The stars did not all come into existence at one time. The existence of one of these stars runs up into incalculable time. The stars or planets go through many great changes. They are first cinders from the sun and then they work off into space from the sun and cool off, and then they become a mineral globe, like our moon. It is a mineral kingdom; it has no atmosphere and no density or water on its surface.

The heaven is a great dome. It contains many great objects, and their great distance from us and how they can exist without a foundation or something to hold them up is mysterious to most any man's mind. But nature has brought them there to stay for innumerable ages. These bodies are held in check by an magnetic current from our sun. This magnetic current is caused by the heat from the sun and cooled by space, and works nearly on the same principle as load stone. The object of writing this book is to give the people of the world a full understanding, as far as I am able to explain, what I have observed in the star heaven and studied nature for thirty-five years. My aim is to give to the world the truth as far as I understand it. I have treated in this book on all the objects in space that can be seen with a naked eye. In my next publication treating on the heavenly bodies I will give very nearly the exact distance to the sun and the moon. I think the distance given to the sun is too great or the moon is too near to the earth.

The Earth.

The earth's motion in space, the center of the orbit of our earth, is a little to the west of the north star or Polaris. It is about four millions of miles below or underneath the north star. The orbit in which our earth is traveling, to receive its light and heat from the sun, is a true circle and is about two millions and two hundred thousands of miles in diameter, and its circumference is about seven millions of miles. Diagram figure one shows our earth in four different positions on its orbit—in the winter when it is nearest to the sun, and in the summer when it is farthest from the sun, and in the spring and autumn of the year when the days and nights are equal.

The speed of our earth on its orbit is about eight hundred miles an hour, and its rotation toward the sun is about one thousand and thirty-eight miles an hour. Our earth travels from the west to the east on its orbit; it also rotates from the west to the east toward the sun. This orbit which I have discovered is the true orbit of our earth, which is seen in diagram figure two, where it shows the earth on its orbit in the spring and autumn of the year, when the days and nights are equal. The scale drawing of these diagrams of the earth and its orbit requires the sun to be six feet off from one of this diagram to give the right light to the earth. The explanation of our earth on its orbit commence at the first of the year, or January the first. The earth travels east one-quarter of its orbit when the day and night are equal; then it is spring of the year and east of Polaris. Thence it passes on its way to its farthest

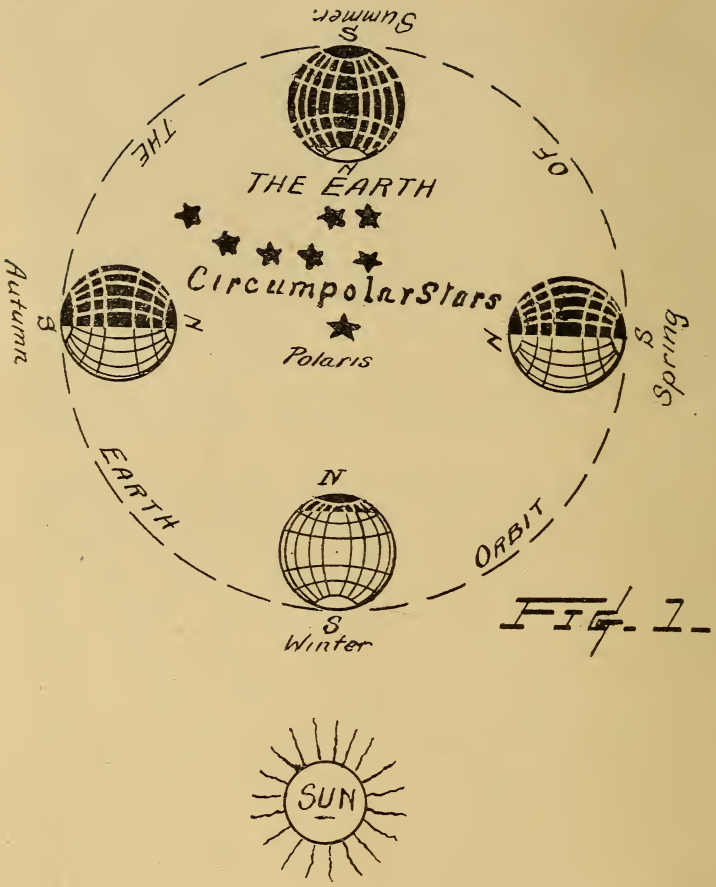
Summer
S
THE EARTH
N
THE
OF
Circumpolar Stars
Polaris
Autumn
S
N
N
S
Spring
EARTH
ORBIT
N
S
Winter

FIG. 1.

SUN

point in the north from our sun, when we have the summer and our longest days, when the sun shines most direct over our northern country. Then it ret-

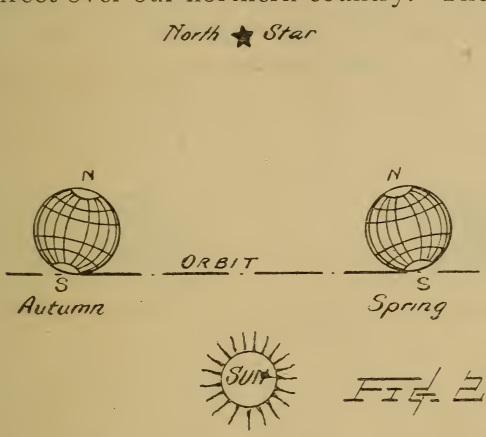

FIG 2.

rogrades on the west side on its orbit and west of Polaris. Then it is autumn, and the days and nights are equal again. Then it retrogrades to its place of beginning, when it is winter and the earth is nearest to the sun, causing our shortest days, as seen in diagram figure three.

The north star is nearly in the center of the zodiac signs, and our earth passes through these signs in about three hundred and sixty-five and one-quarter of a day on its orbit. If our earth should pass away from the north star one hundred and eighty-five millions of miles farther than it is at the present time, and pass around the sun in the south and retrograde to its place of beginning, we would not see the north star for nine months in the year. If our earth should travel around the sun, its speed on its orbit would be over sixty-six thousand miles an hour, and it would be nearly sixty-six times as fast

as a cannon ball travels after it is shot out of the cannon. I think the earth would have an awful time at such a speed. Our earth could not possibly travel one hundred and eighty-five millions of miles

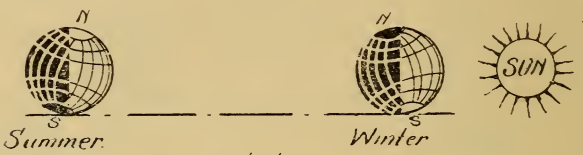

Fig. 3.

from the north star and pass around the sun and still be the same distance from the north star and always pointing toward the north star at the same time. There is not a star or planet in space that travels around the sun. Any star or planet that would have to travel at that speed could exist but a short time. It could not maintain its atmosphere, but relieve itself of its density and would enter into vacuum and go to eruption.

The moon has a greater speed in space than any of the other heavenly bodies that are known to exist, and it hasnt' any more than one-sixtieth part the speed that the astronomers claim the earth has. Now I will make a comparison in the distance and size of the sun and the planet Jupiter. Now the astronomers claim that the nearest Jupiter is to the earth is three hundred and sixty-three millions of miles.

The sun is claimed to be ninety-one and one-half millions of miles from our earth.

The size of the sun at that distance looks to be about the size of a man's head. Now, it is also

claimed by the astronomers that the sun is over one thousand times larger than Jupiter, and it is understood by the figures that are given before that Jupiter is nearly four times farther from the earth than the sun. Now the size of the two planets and its distance from the earth will show that Jupiter is so far off from the earth that it never could be seen with a naked eye at any time. Now, another particular notice is the stars about Polaris. They all seem to be traveling around Polaris and the astronomers cannot give any account for it. The seven stars that are called the big dipper, or part of the constellation the big bear, are best known about the north star. These stars, with all the rest of the stars about Polaris, seem to be making a trip around Polaris once a year. I claim that it is not these stars that are passing around Polaris. The drawing in this book will show the cause of these circumpolar stars and all other stars that seem to be passing around Polaris. The reason for our earth's traveling on an orbit from the north to the south is because it works on an expansion and contraction which are caused by the heat from the sun. The earth expands at the south pole when we have winter at the north pole, and the north pole expands when there is winter at the south pole. The pole that receives heat from the sun expands and the other pole contracts, and this forms a magnetic current which causes the earth to pass a certain distance from the sun, and then retrogrades.

What makes it look like the sun is traveling north in the summer is the position the earth is in on its orbit. The earth stands about ten degrees out of perpendicular. The north pole of our earth leans towards the sun at midsummer, when the earth is

farthest from the sun, and the rounding of the earth is what makes it look like the sun is passing north in the summer. Diagram figure three shows the position of the earth in the winter and in the summer on its orbit.

What made me think that our earth had its orbit underneath the north star was because I observed that the stars in the northern constellation appear to be passing around Polaris once in three hundred and sixty-five and one-quarter days. The big dipper, or the circumpolar stars, is so called because it is the first stars to be seen passing around Polaris. These stars are north of Polaris and also north of the sun, and our earth passes them in the month of June about six o'clock in the evening. Then these stars are directly over our heads.

THE ZODIAC SIGNS.

The earth is passing through the zodiac signs, commencing in the winter solstice at six p. m., when our earth is on the south side of its orbit, or nearest to the sun, and is traveling east on its orbit. In January we pass the first sign of the zodiac. It is the Aries—the Ram. It is four stars of second and third magnitude. These stars are about seventy degrees from Polaris. In February we are passing through the second sign—Taurus, the Bull. This constellation is eleven stars of first, second, third and fourth magnitude. This sign resembles a U to the east and a V to the west. This constellation is about seventy degrees from Polaris.

And this sign or constellation is southeast of Polaris. This sign can be known by a group of nine big stars of first and second magnitude, and is called Orion. These stars are seventy-five degrees from Polaris. The third sign is Gemini—the Twins. In March the earth passes through this sign of eight stars of first and second magnitude, about sixty degrees from Polaris, very near east of Polaris. In April we pass through the fourth sign, Cancer—the Crab—three stars of the second magnitude.. These stars are in the shape of one-eighth of a circle and are about eighty degrees from Polaris. In May we pass the fifth sign,Leo—the Lion—composed of twelve stars of the first and second magnitude. This constellation is about eighty degrees from Polaris. In June the earth passes the sixth sign, Virgo—the Virgin. These stars are of the first and second magnitude and are about ninety degrees from Polaris and are about north of the north star.

In July we pass through the seventh sign—Libra, the balance. It is composed of six stars of first, second and third magnitude, four forming nearly a square figure, and is about one hundred and ten degrees from Polaris. In August we pass through the eighth sign—Scorpio, the Scorpion—sixteen stars of first, second and third magnitude. These are one hundred and twenty degrees from Polaris and are northwest of the north star. The position of these stars resembles a real scorpion. In September we pass through the ninth sign—Sagitarius, the Archer—thirteen stars of the second magnitude. These stars are one hundred and twenty degrees nearly west from Polaris. The six stars in this constellation form a triangle. In October the earth passes the tenth sign, or Capricornus, the Goat, composed of

stars of second and third magnitude, situated about one hundred and fifteen degrees from Polaris. In November we pass the eleventh sign, Aquarius, the Waterman—twelve stars of second and third magnitude. This sign is about one hundred and ten degrees from Polaris. The main group of these stars is southwest of the north star. In December we pass the twelfth sign—Pisces, the Fishes—nine stars of second and third magnitude. This sign is south of the north star. This constellation is nearly a straight line of six stars from the east to the west, and three of these nine stars in this sign are forming a line to the southwest. The line that divides the two signs, Pisces, the Fishes, and Aries, the Ram, is due north of the sun. So it will be seen that the orbit of our earth is north of the sun.

The astronomer thinks that the sun has a motion in space and that the sun is passing toward a point also in the constellation Hercules. To my observation, I have never discovered that the sun has any movement in space. If the sun passes through the zodiac signs once a year, on an orbit about six hundred millions of miles, and still our earth be traveling outside of the sun at a distance of ninety-two and one-half millions of miles, our earth would be so far from the north star that we never would see it. The orbit that our earth would be traveling on would have to be three hundred and seventy millions of miles in diameter. Then our earth would have to pass on its orbit about one hundred and thirty-two thousand miles an hour. No planet could exist at such a speed.

THE MOON.

The moon is a follower of the earth. It gives to the earth about three months of light in the year. It has three motions in space. In one it follows the earth on its orbit around the north star in about three hundred and sixty-five and one-quarter of a day. The second motion of the moon is an orbit or revolution about the earth. This revolution is made in about twenty-nine and one-half days. The third motion is a revolution towards the sun. This motion is made in about twenty-four hours and fifty minutes. This motion is from the east to the west.

It appears to an observer that the moon is making a journey around the earth once about every twenty-four hours; but in that time it loses about fifty minutes in each rotation that our earth is making towards the moon. Diagram figure four shows the motion of the moon towards the earth and the sun. The moon's orbit overlaps the orbit of our earth once in each revolution. It makes toward the earth. The moon revolves from west to east on its revolution, but its rotation is from east to west, and this motion is made in twenty-four hours and fifty minutes, and at the same time it makes these two motions it follows the earth on its journey around Polaris. Explanation of diagram figure four: a is the follow orbit of the moon; b is the orbit of the earth; c is the revolution orbit of the moon; d is the earth; e is the moon. Figure four shows a full moon, first quarter moon and the last quarter and the dark moon, a full revolution on its orbit.

In June the moon rises with its face perpendicular, which is shown in figure five. In December the moon rises with its face parallel, which is shown in figure six, and these changes are constantly going

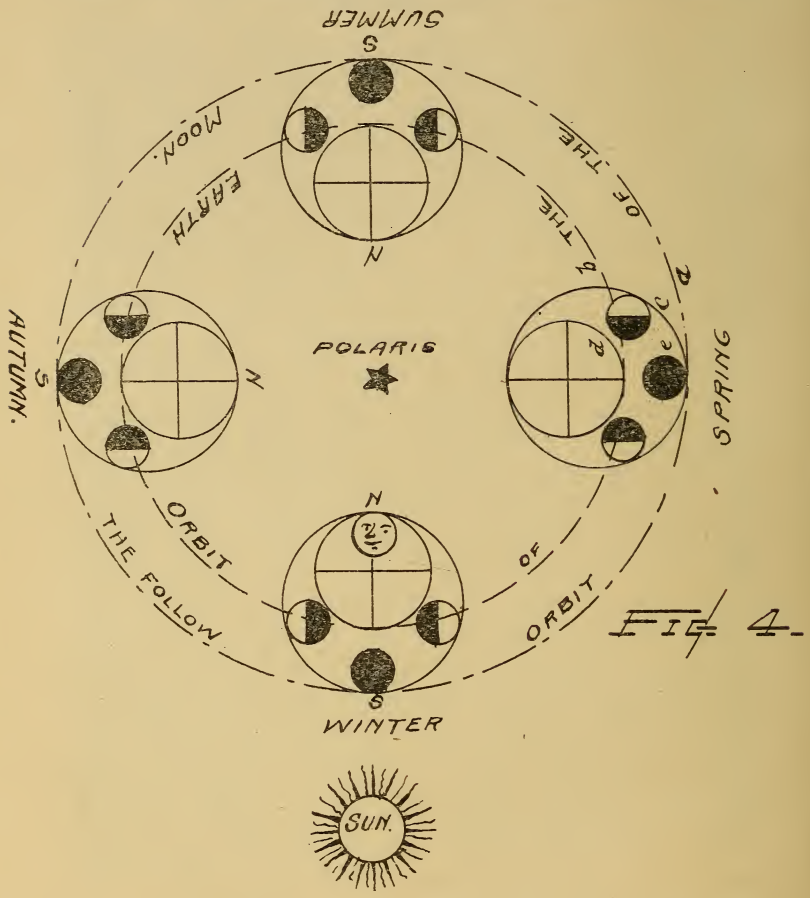

FIG 4.

on on account of the moon following the earth on its orbit around Polaris, as shown in figure seven. The north pole of the moon, which is always facing

the earth, is receiving light from the sun about seven days at each revolution on its orbit as a starting point for the moon on its two orbits. For instance, the new moon for nineteen hundred and two is on the ninth day of January at four o'clock and thirty

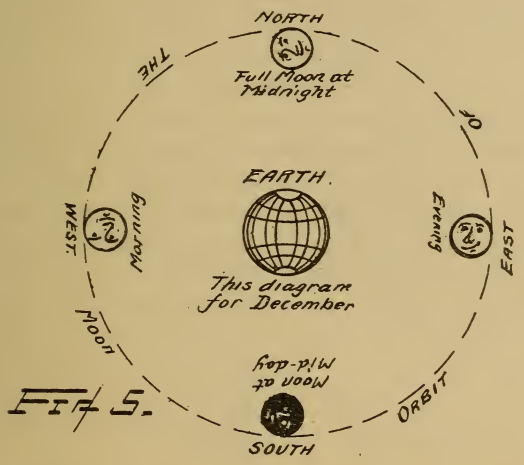

FIG 5.

minutes in the evening. The moon is at a point in constellation Mira about one hundred degrees south of Polaris, or the Little Bear. The moon will not return to the same point as given above on January ninth at four o'clock and thirty minutes until two thousand four hundred and seventy-seven, or in about five hundred and seventy-five years.

The three motions of the moon and the two motions of the earth make a great factor in calculating the eclipse of the moon and the earth. One estimates nineteen years, when the day of the moon returns to the same day of the month as it was nineteen years previous; or a close calculation terms back to about five hundred and seventy-five years,

when an eclipse of the moon will return where it was five hundred and seventy-five years previous, or nearly so.

We are taught the moon has no daily rotation towards the sun. Diagram figure five shows the rotation of the moon when it is full moon—how it rises in the evening and its position at midnight, and when it sets in the morning, at mid-day, and also shows that the moons' face has turned clear around while it made its motion around the earth toward the sun. This revolution is made in twenty-four hours and fifty minutes. This is the position of the moon in June. Diagram figure six shows the moon's position in December, how it revolves toward the sun in twenty-four hours and about fifty minutes.

Diagram figure seven shows how the moon follows the earth on its journey around the north star.

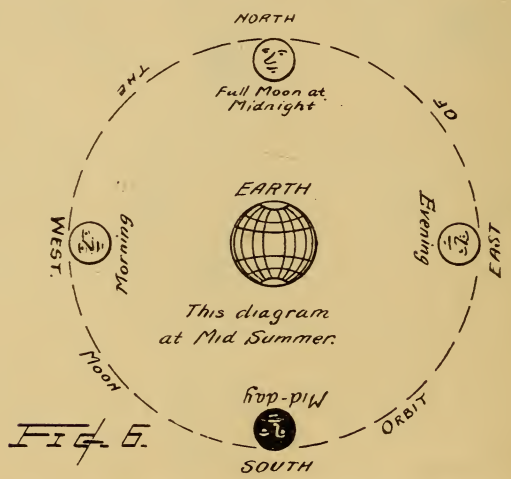

FIG. 6.

Figure seven shows the twelve and one-half changes of the moon on its orbit while it follows the earth on its journey around the north star toward the sun.

The astronomers think the moon has a rotation, but this motion is made only once in twenty-nine and about one-half days, and is made at the same time the moon passes on its orbit, which time is also twenty-nine and about one-half days. The heat of the moon. The sun gives six and one-quarter times more heat to each pole of the moon than our earth receives, on account of its short years, which are only twenty-nine and about one-half days.

Figure seven shows one complete full moon, which is one-quarter moon on one of its twelve full orbits. There are three more quarter-moons on this same orbit, and then it is complete and is passing on to the next orbit to the east, and so on till they are all complete, till the last one, in which the moon only makes one-half revolution, as seen in figure seven, toward the sun.

Figure seven. This diagram is marked with letters; a is the follow orbit of the moon; b is revolution orbit of the moon; c is the earth; d is the orbit of the earth.

The speed of the moon in space is greater than the sped of the earth. The speed on the orbit which the moon follows the earth on is about one thousand and one hundred and ninety miles an hour, and on its revolution orbit its speed is about one hundred and sixteen miles an hour. Its daily motion toward the sun is twenty-four hours and about fifty minutes, a little more than the motion of our earth, which is about twenty-four hours. The fifty minutes lost by the moon is on account of its traveling north and south on its orbit, which is traversed in twenty-nine and about one-half days.

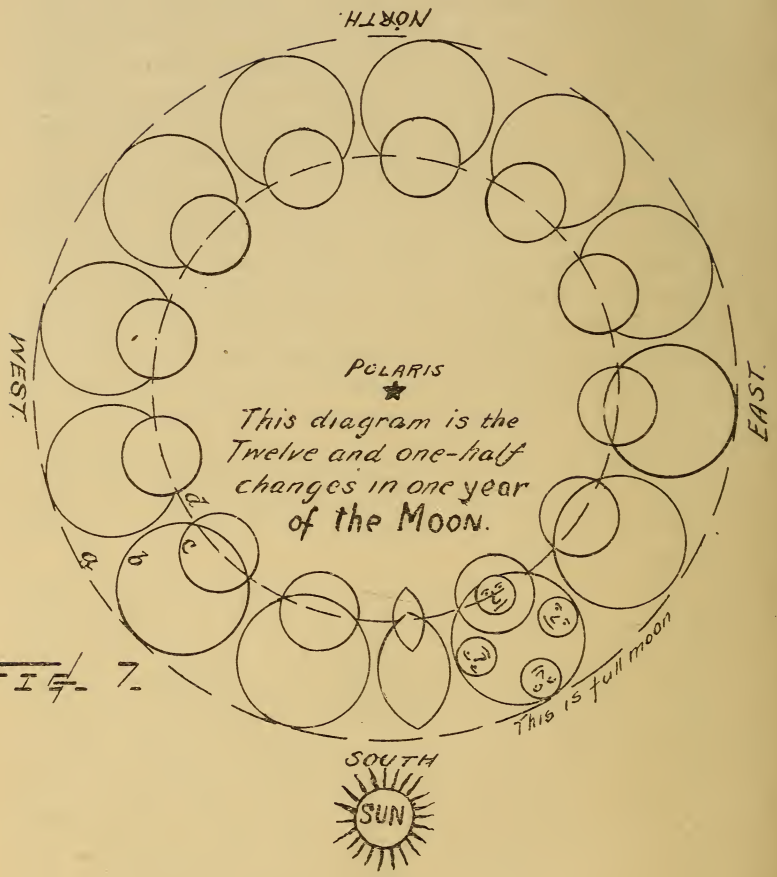
NORTH
WEST.
EAST.
SOUTH
POLARIS
This diagram is the
Twelve and one-half
changes in one year
of the Moon.
a
b
c
d
This is full moon
SUN

FIG. 7.

THE SUN.

Our sun, the great natural light, never had any beginning and never will have an end. It was with space, and space never had any beginning and never will have an end. The sun was brought into space by presure of darkness, and the sun is supported by ether and gaseous fluids that exist in space. It is brought into the sun by presure of darkness that exists outside of the sun, and the magnetic current that exists in the sun itself combines with the outside pressure. The substance of ether and gasses forced into the sun keep up the great fire of the sun. These gasses can never be destroyed, but only escape in vapor and pass into space, to be again forced back into the sun to reburn. Our sun has no movement in space. It is always south from the center of the orbit of our earth. It looks as if the sun rises in the northeast in the summer and sets in the northwest, but it does not. If a man started to follow the sun at noon when the sun is at the meridian and then traveled west as fast as the earth revolves toward the sun, or to the east, and followed the same latitude around the earth, he would always have the sun in the south, or at the meridian, the same as when he first started out.

THE SOLAR SPOTS.

There are two kinds of solar spots in or about the sun that have been discovered by observers. Those in the sun are slag that comes from ether that is consumed in the sun by fire from gases which are continually streaming into the sun, This slag is forming large cinders and afterwards forced out from the sun into space to cool off. And some of these cinders take up an orbit in space and become stars, while others go into eruption and become shooting stars. The other solar spots that are seen about the sun sometimes are stars or planets passing the disc of the sun on their orbit.

THE PLANET MERCURY.

This little planet Mercury is about one-third larger than our satellite, the moon. It does not give much light to our earth. Its orbit is in the constellation Columba and is in the southeast of Polaris when it is nearest to our earth. It is about two million and five hundred thousand miles distant. The orbit of Mercury is about three millions of miles in circumference, its periodic time is about twenty-nine days, and its speed on its revolutionary orbit is about one thousand three hundred and eighty-eight miles an hour. Its rotation is unknown, but no planet could exist without a rotation. Mercury appears to us many times in the year, but in the southern part of the heavens always.

COMPARISON OF MOON AND MERCURY.

Since the moon is the nearest planet, it will be easier to understand its size and distance than any other. The moon is over two thousand miles in diameter and about two hundred and fifty-two thousand miles from our earth, and at that distance it is reduced to less than one foot in diameter. Now, in two hundred and fifty-two thousand miles farther from our earth, the moon would pass out of sight altogether, and then the moon would be but little over one-half million of miles from our earth. Mercury is one-third the size large than the moon. Now, we are taught that Mercury is about thirty-six millions of miles from our sun. The mean distance to the sun from our earth is about ninety-two and one-half millions of miles. Then deduct thirty-six from ninety-two and it leaves Mercury about fifty-six millions of miles from our earth. Now we have seen the moon reduced to less than one foot in diameter in that distance. Mercury is about one-third larger than the moon. Then Mercury, at fifty-six millions of miles from our earth, would also pass out of sight; so we could never see it, not even with a telescope, at such a great distance.

THE PLANET JUPITER.

The planet Jupiter is a little larger than the earth and a little smaller than Venus. The orbit of Jupiter is not as large as the orbit of Venus. The distance to Jupiter from the earth is about six millions of miles, and its orbit is about eleven millions of

miles in circumference, while its periodic time is about four hundred and seventy days, or about fifteen and one-half months. The orbit of Jupiter is about the constellation Canis Major, or the Little Dog, and is a little to the southeast of the zodiac sign Gemini. Jupiter is traveling on its orbit about nine hundred and seventy-five miles an hour.

Jupiter gives more light to our earth than any of the planets, on account of its being the nearest to the earth, except Mercury. It can be seen almost any time in the year. One time it is the morning star, and at another time it is the evening star. The distance of Jupiter from the sun is about ninety-five millions of miles. The astronomers claim the mean distance of Jupiter from the sun is four hundred and fifty-seven millions of miles. The mean distance of Jupiter from the earth is four hundred and seventy millions of miles, and at such a great distance Jupiter would have to be twice the size of the sun.

THE PLANET VENUS.

The planet Venus is larger than our earth and it is farther from our earth than Jupiter. Its years are longer than the years of our earth. The orbit of Venus is about thirteen millions of miles in circumference, and the motion on its orbit toward the sun is about eight hundred and twenty miles an hour. Its periodic time, or year, is about six hundred and sixty days, or about twenty-two months. It does not give as much light to our earth as Jupiter, and is about seven millions of miles from the earth.

The orbit of Venus is about constellation Argo, east of the north star, and about one hundred and twenty degrees from Polaris. Venus gives a very bright light when it is about the earth. Its light is very nearly white, but Venus does not give light very long on each change it takes on its orbit. The distance of Venus from the sun is about ninety-seven millions of miles. The astronomers claim that Venus is seven thousand six hundred and sixty miles in diameter—very nearly as large as our earth. Its periodic time is about two hundred and twenty-five days, and its greatest distance from the sun is about sixty-seven millions of miles. It is not a very good comparison with her appearance to our earth.

THE PLANET MARS.

The planet Mars is larger than Jupiter or Venus. Its distance from the earth is about nine millions of miles, and its periodic time is about seven hundred and ninety days. The size of its orbit is about sixteen million five hundred thousand miles, while the speed on its orbit is about eight hundred sixty-nine miles an hour. The orbit of Mars is in the southern constellation, and is about two millions of miles east of the constellation Argo. The constellation Argo is about one hundred and twenty degrees east of Polaris, or the Little Bear. Mars does not give much light to our earth, as it only appears to our earth once in about every other year, and when he comes around on his orbit toward our earth he gives a light for some time. Mars is slow as to speed, considering other bodies in space.

THE STARS.

The stars in space that can be seen with the naked eye are all dark bodies and are being supported by our sun. The planets, so-called, are the nearest bodies to our earth. The stars are so far from the earth that their motion is not much known to us, although the stars are planets, the same as our earth. They all have an orbit; no object could exist in space without an orbit and rotation. These planets were once planted in space by the two combined powers of space and the sun. The space is the supplier and the sun is the builder of dark objects in space. The north star is no more than a common star, but on account of its being nearly in the center of the orbit of our earth, it is more known than any other star.

THE NORTH STAR.

To get the right angle to one of the two-inch diagrams in this book, it requires what represents to be the north star eight inches off from one of these diagrams to give the right distance to the Polaris from the earth. In taking the distance to the north star, and employing the longoscope and the orbit of the earth for a base, I find the distance to the north star does not exceed four millions of miles from the earth; and the orbit of the earth does not exceed two millions and two hundred thousand miles in diameter. The north star is very nearly as large as the earth, and on an average is the nearest star to the earth. There are stars nearer to the earth sometimes, but these pass away a great distance from the earth at intervals.

DOUBLE STARS.

There are no double stars in the heavens. They are all single. But they seem to be lapping over one another in passing on their orbit. I have known some in the heavens in the northern constellation to be double stars at one time and single at another time, and they stay single for four or five months, when they become double stars again. These stars simply pass on their orbit. Our sun furnishes light and heat to all stars that can be seen with the naked eye. Fixed stars and nebulas are not known to a naked eye.

THE MILKY WAY.

Galaxy, or the milky way, is that luminous cloud-like band that stretches across the heavens in a great circle. It is inclined to the celestial equator about sixty-three degrees and intersects it in the constellations Cetus and Virgo. These stars seem to be turning clear around in heaven in three hundred and sixty-five and one-quarter of a day. In the summer or the last of June these stars are very nearly north and south, and in the last of October this belt of stars is east and west; and in the next three months, or the last of January, these stars are very near north and south again, and in this way it seems to continue in motion. But it is not the milky way or these countless stars that has this great

motion. It is our earth on its orbit about the north star. The stars in galaxy are no suns or nebulas; they are only common stars that are receiving light and support from the sun. The suns are not so plentiful about our earth. The explanation of the suns is seen in this book where it treats on the sun.

LONGUSCOPE.

This longuscope represents an instrument to take the distance to far-off objects in space—the sun, the

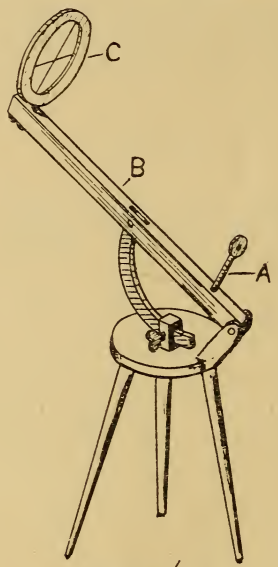

FIG. 8.

moon and some of the stars—and by the aid of the earth for a base I will be able to determine very

nearly the distance of these far-off objects. For instance, the sun. I will take the distance and its dimensions at the same time. To get very near the exact distance, it will have to be performed at the equator, either in the spring of the year or in the autumn, when the sun crosses the equator of the earth. To use this instrument, it will have to be set at eleven o'clock in the forenoon, an hour before the sun is at the meridian, or an hour after the sun has passed the meridian. One hour of the earth's motion is one thousand and thirty-eight miles an hour toward the sun. This one thousand and thirty-eight miles will furnish a base to determine the distance to the sun. To explain this instrument: A is the eyeglass, darkened enough so that the sun cannot affect a person's eye in looking at the sun. B is the rod that gives the angle to the sun from a level base. C is an adjustable circle or ring with a cross wire in the center. This circle can be adjusted to any size to cover any object in space. The eye-glass can be adjusted so it will be the same distance from the rod as the cross wire in the circle, at any size of a circle.

THE ECLIPSE OF THE SUN.

The eclipse of the sun happens when the moon passes between the earth and the sun, and it happens most frequently in the middle of spring or autumn of the year; but sometimes it will happen at any time in the year. Such eclipses will happen mostly in the summer on account of the position our earth is in and the way the moon passes on its

orbit between the earth and the sun, as is shown in figure seven. The eclipse of the sun happens when the moon is dark, or new moon, and passes over the earth in the daytime.

ECLIPSE OF THE MOON.

These eclipses happen only when the moon is the farthest in the north, and when the moon is what is called full moon, and when our earth is either on the east side of its orbit or on the west side. When the earth is on the east side of its orbit, I mean east from Polaris, and when the moon is the farthest in the northeast from the sun and is full moon.

SHOOTING STARS AND COMETS.

The shooting stars are things that happen every hour of the days and nights. These shooting stars are formed in the sun and forced out into space. These cinders are at a welding heat when they leave the sun, and these commence cooling off and work off from the sun, outside the heat limit of the sun, which is a great belt around the sun. It extends about fifty millions of miles around the sun. It is sometimes called the zone ring around the sun. When these objects have passed outside of the zone belt they commence to look for an orbit in space, and if they hold together long enough they will take up an orbit and become a second-class planet, like the moon; and these second-class planets develop

themselves in space and become first-class planets in time. Then, again, there are some that will not hold together but will go to eruption and become shooting stars; and there are others that will hold together and maintain their fire for a time and pass through the space and exhibit a great light for some time while they last, and these destructive bodies are what what is called comets.

MAGNITUDE OF STARS.

What constitutes a magnitude is not given by astronomers. But I find it to be about three millions of miles to each magnitude.