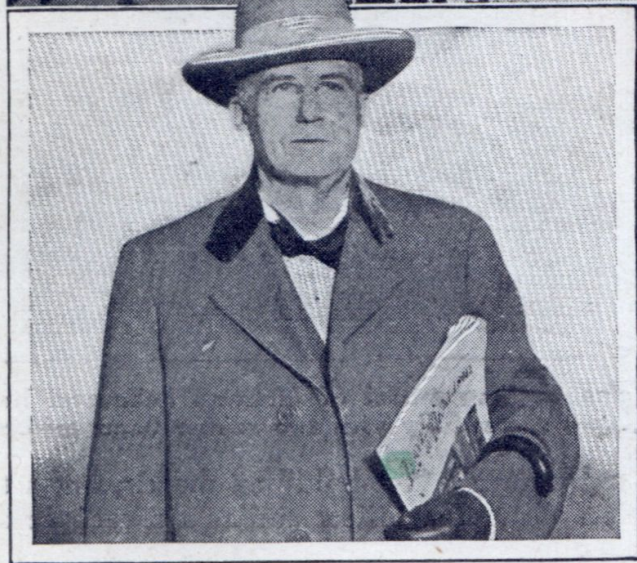
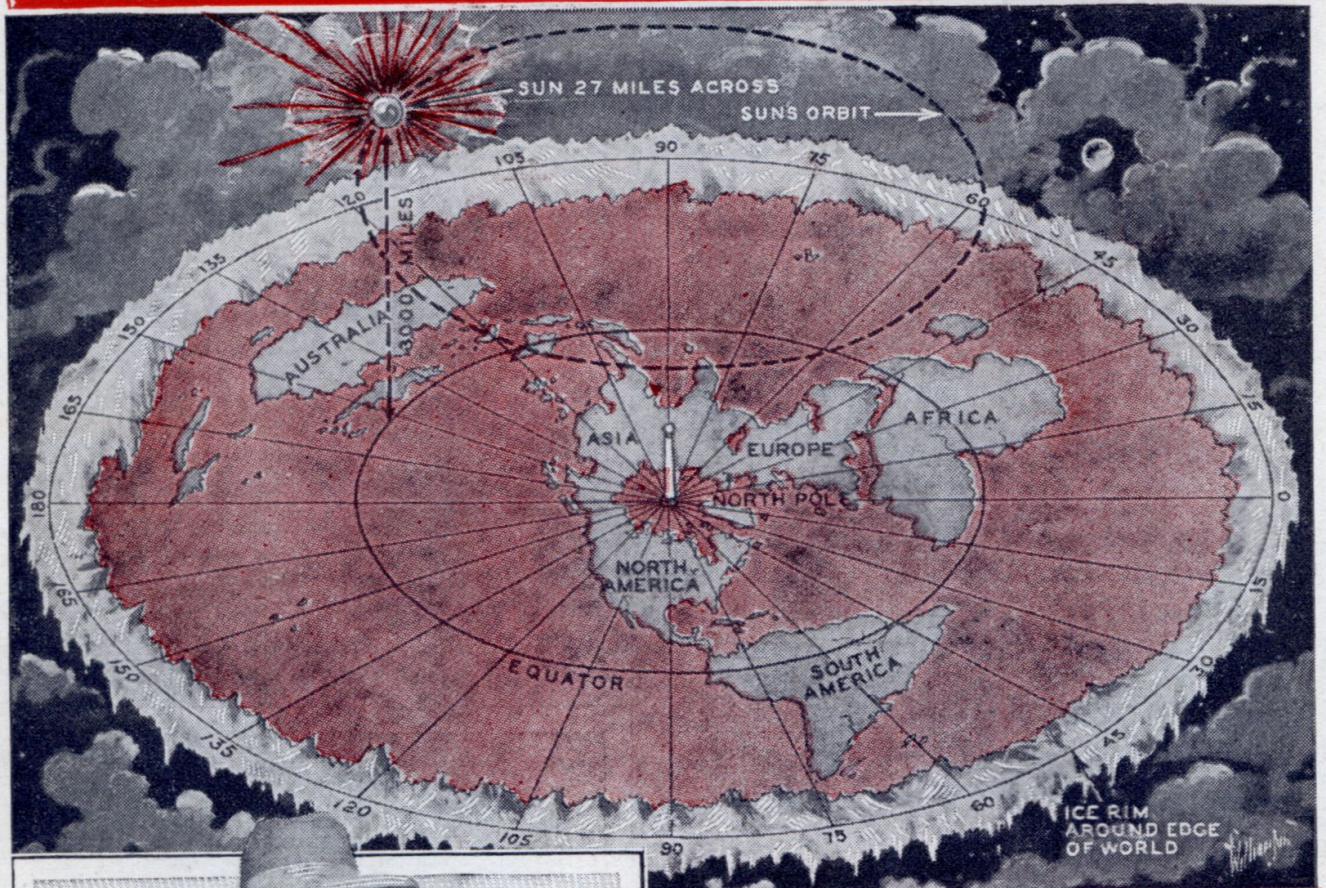


\$5,000 for PROVING



Wilbur Glenn Voliva, who claims the earth is flat and offers \$5,000 for proof to the contrary.

WOULD you like to earn \$5,000? If you can prove that the world is a sphere, floating in space, turning on its own axis, revolving around the sun, you can earn a prize of that amount. Such a prize has been posted for years, offered by Wilbur Glenn Voliva, general overseer of Zion, Ill., home of the Christian Catholic Apostolic

Voliva's conception of a flat world, with the North Pole in the center and the sun revolving in its orbit above the equator. A wall of ice around the edge of the earth keeps adventurous mariners from falling off into space.

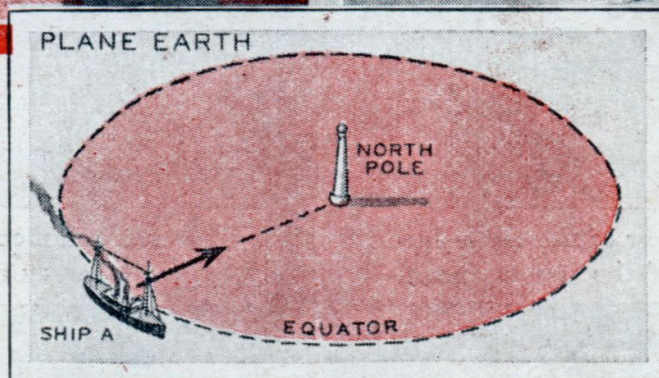
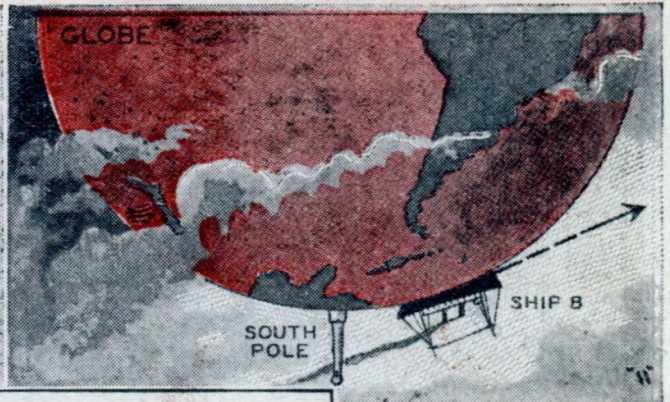
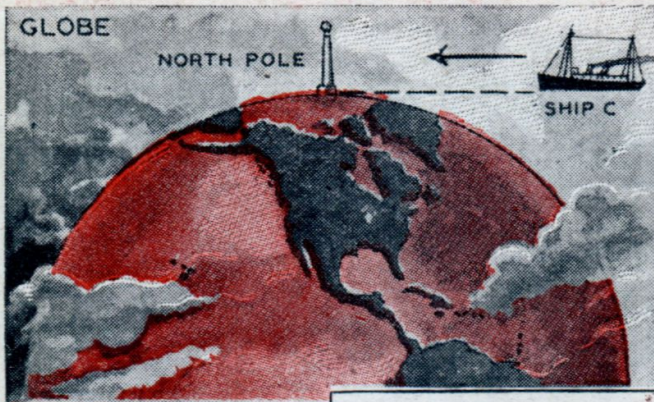
by JAY EARLE MILLER

Post and Gatty didn't fly around the world, according to Wilbur Glenn Voliva, they merely flew in a circle around the North Pole. This article presents Voliva's theory of a flat world, and tells you how you can win his offer of \$5,000 for proving that he is wrong.

Church, founded some thirty years ago by the late John Alexander Dowie.

Many have tried to claim the \$5,000—and all have failed. The catch is that your proof must not start with the assumption that the world is round, or rather a globe, for Voliva believes the world is round, but a round, flat disc rather than a sphere. Without that basic premise that the earth is spherical no one

the EARTH a GLOBE



These three drawings are what Voliva offers as graphic proof that the earth is not a globe. Ship C above represents an impossible position in space which must be occupied by any ship that is hundreds of miles from the pole, and still has the compass needle pointing north from a level position. What's your answer?

Ship A is represented at about 45 degrees south latitude, and shows how the compass needle can point north without distortion on a flat world.

Ship B is represented above in the southern hemisphere, and shows how impossible it is for the compass needle on this ship to point north, for a compass never indicates north to be down in the ground. This is an argument you'll have to answer convincingly if you win the \$5,000.00 offered by Voliva.

has found an absolutely convincing proof that Voliva is wrong when he describes his disc-shaped world, firmly planted on its foundations, surrounded by a wall of ice to keep mariners from falling off the edge, and surmounted by a crystal dome in which the stars are hung like chandeliers to light the night. Nor can you submit proof to absolutely disprove the belief of Voliva that the sun, instead of being an 800,000 mile ball of fire more than ninety millions of miles away is really a fairly insignificant affair, only some 27 to 30 miles in diameter and about 3,000 miles above the earth. Or that the sun and moon move in orbits while the earth stands still, that the moon is about the same size as the sun and the same distance from the earth, shines by its own light, and moves in much the same orbit as the sun.

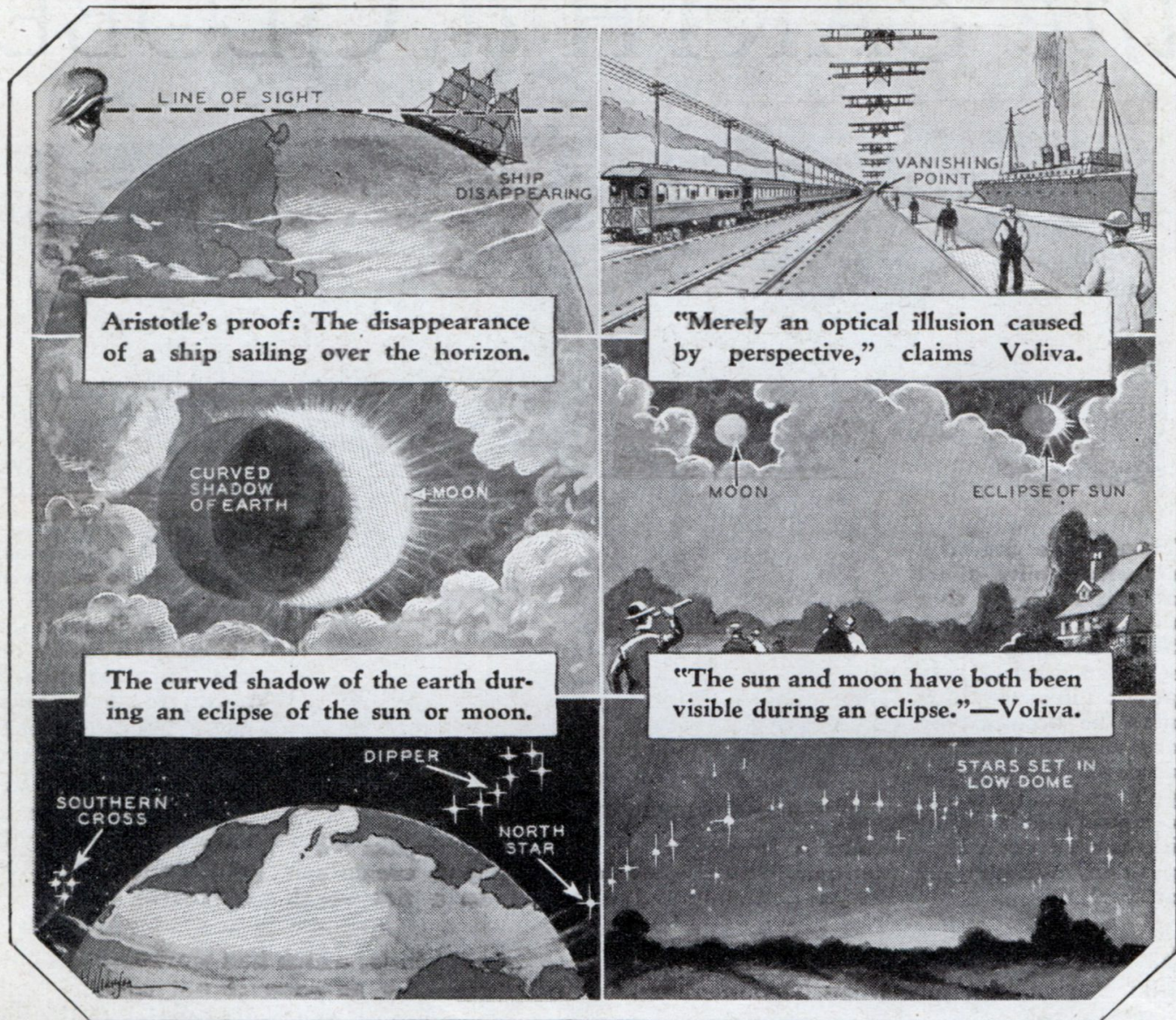
In these days of 100 and 200 inch telescopes, accurate measurement of the speed of light and the diameter of distant stars, any challenge of the correctness of the familiar Pythagorean-Copernican-Newtonian system of astronomy may come as a shock. Actually the belief that the world is flat isn't confined

to Zion. China, which had workable systems of astronomy as soon if not sooner than Greece or Egypt, continues to stick to the flat world theory, and thousands of other people scattered over the globe have this, or theories even more unusual.

Ever hear of Orlando Ferguson? Ferguson, a resident of Hot Springs, South Dakota, designed a weird and wonderful map back in 1893 which showed a square world, with an angel seated on each of the four corners. The inhabitable or known world was not, however, flat. The central section, comprising what we know as the northern hemisphere, was convex, curving downward from the central "north pole" to the equator, while the southern hemisphere was concave, curving upward from the equator to the rim. The shape was much like a soup plate with a raised center.

Then there is Gustave F. Ebding, of Cleveland, who recently published a book to prove that the world is a hollow sphere, and that we live inside it instead of on the outside, the so-called Koreshan theory of Koresh and Prof. U. G. Marrow. Then there is the theory

Aristotle's Proofs That the Earth Is a Globe and Voliva's Refutations



Aristotle's proof: The disappearance of a ship sailing over the horizon.

"Merely an optical illusion caused by perspective," claims Voliva.

The curved shadow of the earth during an eclipse of the sun or moon.

"The sun and moon have both been visible during an eclipse."—Voliva.

The changing aspect of the heavens in different latitudes, some stars appearing and others disappearing, proves the earth is round. Or does it?

"The stars are set in a hemispherical dome so close to the earth that all cannot be seen at the same time," is Voliva's explanation of this point.

of Marshall B. Gardner that the earth is a sphere with the inhabitants living on the outside, but that the sphere is hollow. Variations of the Gardner theory have been used often by fiction writers, who have peopled the inside with strange races and hung up a small sun in the center to illuminate it.

a proof as any of the three cited by Aristotle, for it is possible to circumnavigate Voliva's flat world, traveling either east or west, and come back to the starting point.

Compared to some of these ideas Zetetic Astronomy, or the flat world theory of Voliva and his followers at Zion, has considerable to commend it.

Aristotle's three proofs were:
 First. The disappearance of a ship as it sails over the horizon, the hull vanishing first, and the masts and rigging last, and the reappearance of an approaching ship in reverse order.

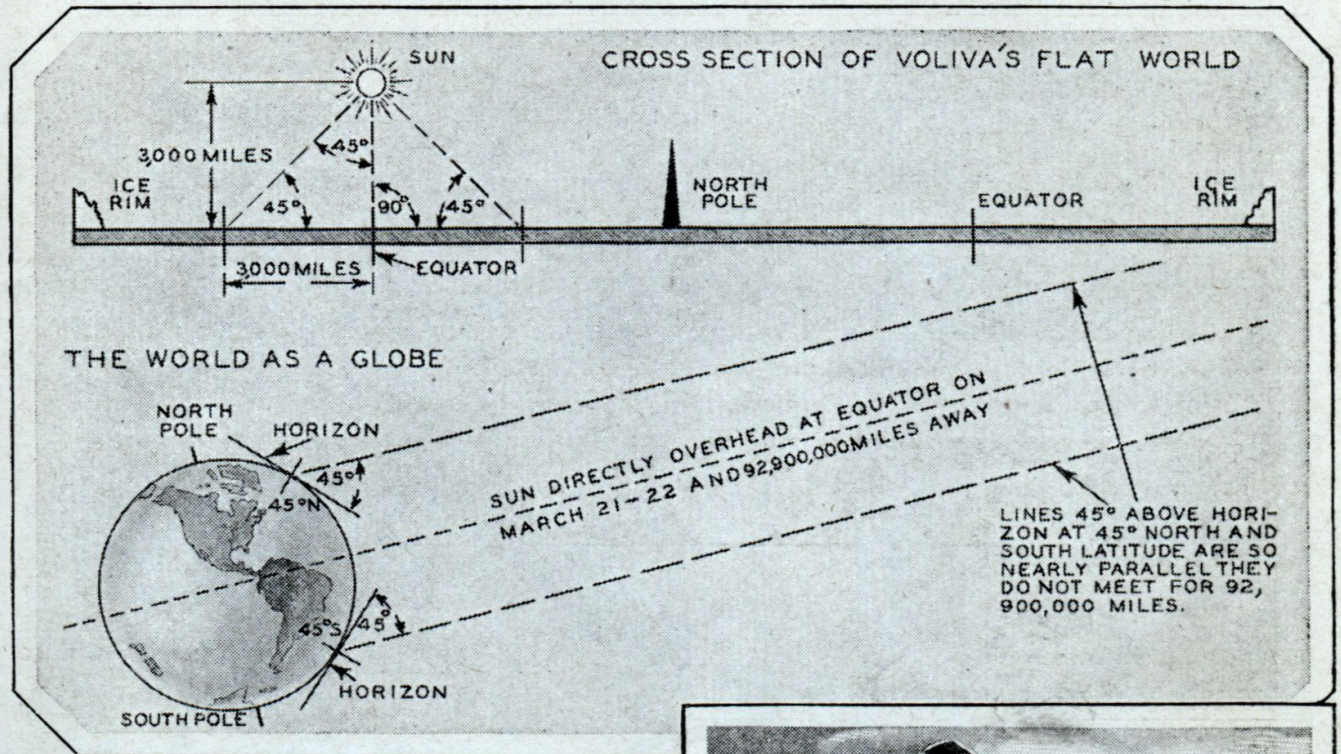
The three commonest proofs that the earth is a sphere were cited by Aristotle in ancient Greece 1800 years before Columbus "sold" the world on the spherical theory, and they are still in use. The mass of the people did not really begin to believe that their world was a globe until the earth had been circumnavigated. Actually that was not as good

Second. The curving shape of the earth's shadow on the moon during an eclipse.

Third. The changing aspect of the heavens in different latitudes, some stars disappearing and others appearing, as the polar star in the northern hemisphere and the southern cross south of the equator.

"There is not a scintilla of truth in any of them," Voliva retorts, "and yet you will find

Voliva and Scientists Prove Different Theories From Same Phenomena



The spring and autumn equinox as seen from 45° North and South Latitude on either a flat or spherical earth. Voliva's world is a disc 24,000 miles in diameter. On March 21-22 the sun is directly above the equator and is seen at 45° above the horizon at 45° North and South Latitude. The distance from the equator to either 45° North or South Latitude is one-eighth of the earth's diameter, or 3000 miles, therefore the sun must be 3000 miles away. With the spherical world the same reasoning would place the sun 92,900,000 miles away. The diagrams explain both theories.

them in every geography, and every primary teacher repeats them like a parrot. I decline to be a parrot. A parrot is a man who never thinks for himself, but repeats what he hears without any questions as to why or wherefore."

Zion maintains that the disappearance of a ship over a horizon hull first is an optical illusion of perspective, no different from the apparent merging of the railroad tracks in the distance. A man at the foot of a tree a couple of miles across a plain may be invisible, while the tree itself stands up against the sky and is visible for miles. Earth curvature of eight inches to the mile is not sufficient to explain the invisibility of the man.

As for Aristotle's second point, Voliva and his followers maintain there is no proof that the curving shadow of an eclipse is the shadow of the earth, and maintain that there have been several eclipses within historical times in which both sun and moon were vis-

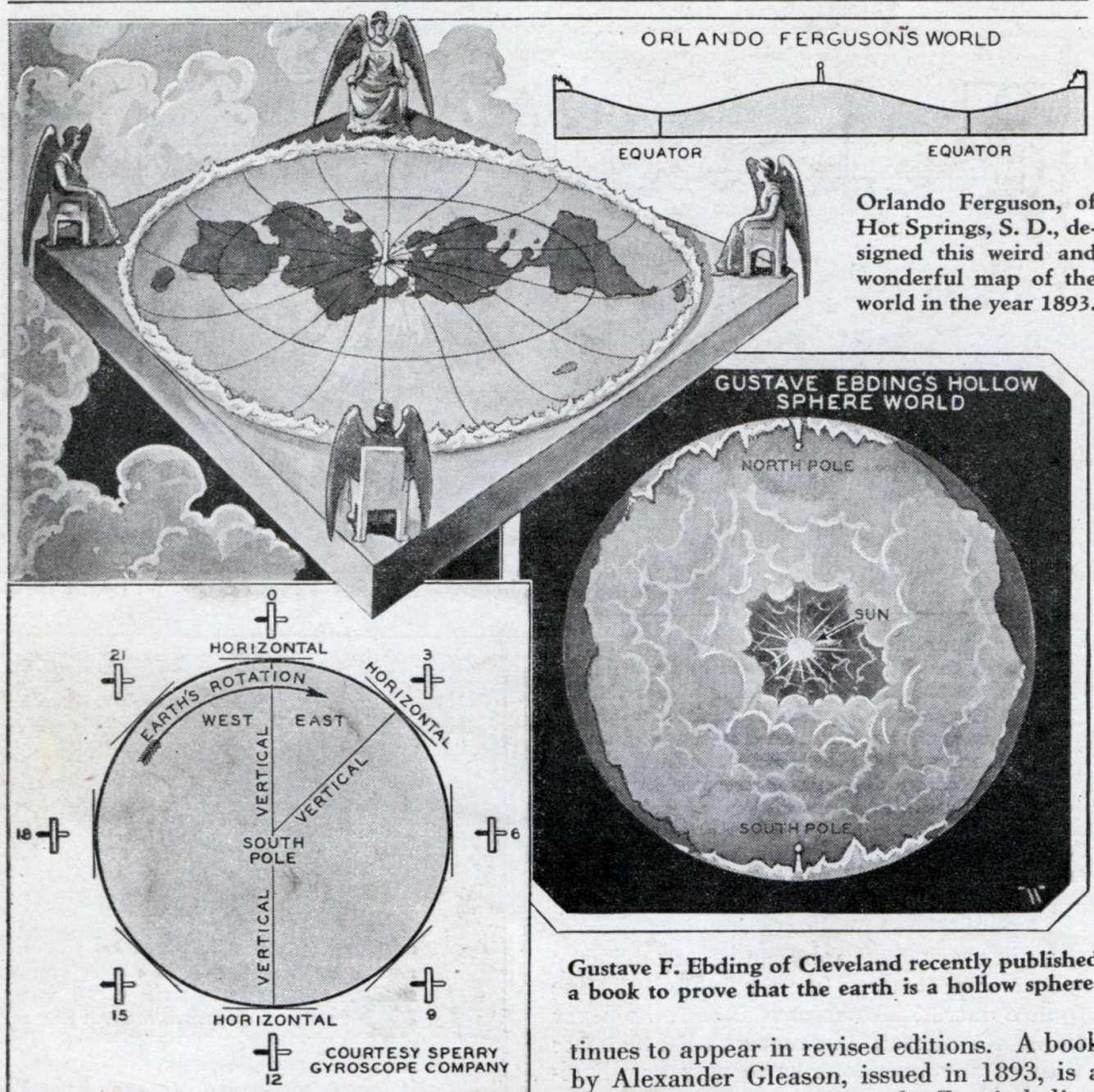


"An airplane is built to fly level and follow a horizontal line. When flying 300 miles an hour on a globe, an airplane pilot must drop his ship 60,000 feet an hour from a level line drawn tangent to the earth at the point of departure."—Voliva's "Leaves of Healing," his church organ.

ible at the same time, so that the eclipse could not have been due to the earth's shadow.

As for the third proof, the Zionites and other believers in the Zetetic Astronomy of "Parallax" maintain that the stars are set in a hemispherical dome so low and close to the earth that not all stars can be visible from any one point. Dr. Samuel B. Rowbottom,

Voliva Is Not the Only Man to Have Weird Ideas About Earth's Shape



Orlando Ferguson, of Hot Springs, S. D., designed this weird and wonderful map of the world in the year 1893.

Gustave F. Ebding of Cleveland recently published a book to prove that the earth is a hollow sphere.

A gyroscope at the equator, with its spinning axis horizontal in an east and west direction, will appear to make one revolution a day about an axis at right angles to the spinning axis of the earth.

of England, who, under the name of "Parallax" provided the explanations for all natural phenomena to fit the flat world theory, died in 1884, but his followers have kept his work alive.

The flat world theory is not confined to any country, sect or group. Within recent years the Rev. John Dmich, a Catholic priest, has written a book "The Earth Is Not Round" which has had a wide sale. Another pamphlet, "One Hundred Proofs that the Earth is not a Globe", issued by William Carpenter in 1885, the year after Rowbottom's death, con-

tinues to appear in revised editions. A book by Alexander Gleason, issued in 1893, is a standard text book among the Zetetic believers. Gleason also issued the map which is used in the parochial school at Zion, where the flat world theory is taught as fact, and the spherical world belief covered only as an incidental superstition.

The Gleason map, a copy of J. S. Christopher's projection, shows the world as a disc, with the north pole in the center and the south polar regions spread as a wall of ice around the rim. The northern hemisphere is more nearly correct in this form than on the standard Mercator projection generally used in schools, for navigation and for other purposes. The southern hemisphere, however, is enormously distorted.

(Continued on page 200)

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\$5,000 for Proving Earth a Globe

(Continued from page 74)

Australia, for example, is drawn out as an enormously long and narrow island. Chester M. Shippey, director of research in Voliva's church cabinet, admits this is one of the weaknesses of the flat world theory, for the time table of the Australian trans-continental railroad shows a mileage far less than the Christopher map would call for.

Voliva maintains that there is no South Pole, and that it is 60,000 miles around the southern ice wall. Captain Gunnar Isachsen, the Norwegian explorer, last winter circumnavigated the Antarctic continent in a voyage of about 14,000 miles. Zion says Isachsen may have circumnavigated something, possibly an island of that size, but did not go around the antarctic ice rim, and points to the 60,000 mile journey of Ross in 1848 and the following two years, when he circumnavigated the ice rim. Of course Ross was in a sailing ship which tacked back and forth for three years on a journey Isachsen completed in a few weeks, which could explain the discrepancy in the distance traveled.

"They say that Byrd flew over the South Pole," Voliva said recently, "but there is no South Pole. East, west and south are not absolute directions; they are only relative directions with reference to north. East and west are points at right angles to north."

Voliva maintains that the sun is not more than 30 miles in diameter and about 3,000 miles from the earth. As proof he points to the fact that on March 21-22 the sun is directly overhead at the equator and appears 45 degrees above the horizon at 45 degrees north and south latitude. As the angle of sun above the earth at the equator is 90 degrees while it is 45 degrees at 45 degrees north or south latitude, it follows that the angle at the sun between the vertical from the horizon and the line from the observers at 45 degrees north and south must also be 45 degrees. The result is two right angled triangles with legs of equal length. The distance between the equator and the points at 45 degrees north or south is approximately 3,000 miles, so the sun would be an equal distance above the equator, and, from the apparent size of the sun's image, it would follow that it has a diameter of about 30 miles.

Of course, if one starts with the assumption that the world is a sphere instead of a flat surface, the same facts can be used to prove

\$5,000 for Proving Earth a Globe

that the sun is nearly 93,000,000 miles away, and has a diameter of more than 800,000 miles.

Voliva argues that if the sun were that big and at that distance there would be no change of seasons because the sun's rays would reach both hemispheres with equal volume regardless of its position north or south in relation to the equator. On the other hand the same argument can be used to prove that on his flat world there could be no seasons, and no period of total darkness at the north pole. Actually, of course, the amount of the sun's rays reaching the earth is radically reduced by the envelope of air and moisture, without which, in fact, life would be impossible, because days would be unbearably hot and nights impossibly cold, just as they are on the moon and some of the planets. Prof. Piccard, the German balloonist, found a temperature of about 72 below zero outside his airtight balloon car at an altitude of ten miles, while inside it the temperature was 104 degrees above zero. If the flat world believers deny the absorption factor of moisture and air in the round world theory they have removed the only argument that could explain seasonal changes and polar nights in their flat world.

Some of the claimants of Voliva's \$5,000 prize have argued that, because the moon and the planets appear to be spheres it must follow that the earth is a sphere, an assumption which Voliva and his followers deny. That, says Voliva, is like arguing that because a cow is an animal and has horns, all animals have horns, or that all cows have horns.

Probably the best spherical world proofs ever found were the two discovered by Jean Bernard Leon Foucault, the famous French engineer, when he invented the Foucault pendulum and the gyroscope. The performance of both can only be explained on the assumption that the earth is a sphere, revolving on its axis, but they do not prove the fact within the meaning of Voliva's prize offer. The Foucault pendulum illustrates the diurnal motion of the earth as it revolves on its axis, the plane of the oscillation of the freely suspended pendulum slowly changing until it appears to make one revolution each day.

The gyroscope has the same property. If a gyroscope is set spinning on the equator with its spinning axis horizontal in an east

(Continued on page 202)

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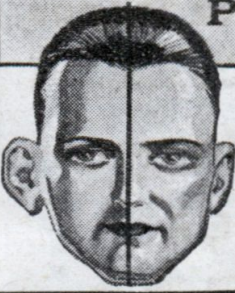
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THE single plate dry clutch has been adopted in practically all cases by car manufacturers, although in the case of some of the heavier cars double plate clutches are in use. However, during the past a number of car manufacturers have used the multiple disc clutch and a few have used single plate clutches, which are operated in a bath of oil.

Where these clutches have been thus designed it is absolutely necessary that they receive the proper amount of oil at stated intervals. Usually the oil used is one-half kerosene and one-half engine oil, mixed before being placed into the clutch compartment.

In the case of the Hudson car a half-pint of oil is introduced through a plug in the rear of the flywheel, which may be gotten at through a hand hole in the flywheel housing. Certain of the Overland models also use the wet clutch.

\$5,000 for Proving Earth a Globe

(Continued from page 201)

and west direction it will appear to make one revolution a day about an axis at right angles to the spinning axis. At the end of twelve hours the gyroscope will appear to have reversed ends, though actually it will continue to point just as it did at the start, only the earth will have made a half revolution. Also, if a spinning gyroscope were carried around the earth along a north and south meridian, passing over the two poles, it would constantly change its angle so that the horizontal spinning axis would always be at right angles to a vertical line from the earth's center. In other words, if the gyroscope were at 50 degrees north latitude, the gyro axle would be at an angle to the earth's axis equal to the degree of latitude, or 50 degrees, and also at an equal angle to a line passing through the center of the gyroscope and parallel to the polar axle of the earth.

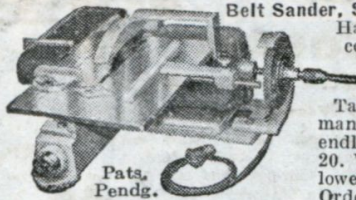
The performance of the gyroscope and pendulum can only be explained by the assumption that the earth is a revolving sphere.

Much of the Zetetic "proofs" of the world's flatness consist of attacks on the spherical theory. For example Voliva and his followers argue that an airplane pilot traveling 300 miles an hour would have to "fall" 60,000 feet an hour in order to maintain his altitude above a spherical world and keep from shooting out in space. Of course, they deny the existence of gravity, and the fact that an airplane maintaining a constant distance from the earth's center is neither falling nor rising. But also the formula on which they calculate the rate of "fall" is not true.

The formula is based on the well known fact that the earth's curvature is eight inches in one mile. In other words if three stakes of equal length are set up on water, at distances of one mile, and a sight is taken over the tops of the two end stakes, two miles apart, it will pass eight inches below the top of the middle stake, one mile away. But the Volivalites go on to calculate that the "drop" increases as the square of the distance, and therefore that distance squared, multiplied by eight and divided by twelve will give the drop from the horizon in feet for any distance. Actually there is no formula in spherical trigonometry which can be used to calculate such a spherical triangle for any desired distance. That can be proven

(Continued on page 204)

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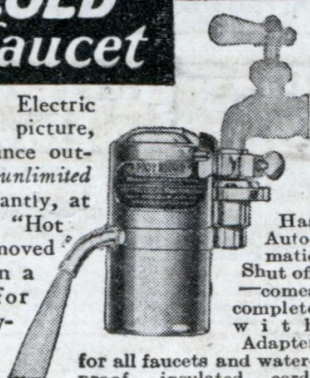


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(Continued from page 202)

very easily by any one who knows plane geometry, for it requires no knowledge of trigonometry to show the error in the formula. If you draw a circle, with its equator and the vertical meridian, giving the north and south poles, and then draw a horizon line at the north pole, you can prove the fact. A flyer starting from the north pole and traveling to the equator, would cover 6,000 miles if the globe is 24,000 miles in circumference. The diameter of a 24,000 mile globe is 7,639.69 miles, and the radius is 3,819.845 miles, so the "drop" from the horizon of the north pole would be the same.

But according to the Zion formula, if you square the distance of the flight, 6,000 miles, you get 36,000,000, multiply that by 8 (the curvature per mile) and you have 288 million, divide by 12 to get the feet, gives 24 million, and divide that again by 5280 to get the miles, and the answer is 4545.45 miles, or an error of more than 725 miles. To have the drop which the Zion formula indicates the earth would have to have a diameter of more than 28,588 miles.

The Zion formula also makes no provision for angles in the negative or positive sense, as measured in trigonometry, and if the flyer kept on past the half way mark it would show the drop continuing to increase, instead of decreasing, until, if he returned to his starting point, the formula would show him to be 72,935 miles away in space.

The Voliva prize probably will remain uncollected unless some future space traveler some day anchors his ship a few thousand miles out in space and takes a movie of a globular world turning on its axis. That seems to be the only way the \$5,000 can ever be collected.

A Home-Built Gymnasium

(Continued from page 120)

On the bottom ends of these thread a pair of 1 1/4-inch cross couplings and into their bottoms, two 1 1/4-inch nipples 3 inches long.

The two side openings of the crosses should face at exactly right angles to the length of the plank. Then thread a 12-inch length of 3/4-inch pipe into each side opening of the crosses, then an elbow, a nipple and a cap. These form the cross legs.

Lastly the 3-inch base nipples are threaded into the bottom openings of the crosses and