

ence; for though he knew the train was being checked, he realized that it could not be stopped before reaching the place where the child was, and to the bicycle rider it seemed to take an hour to go the distance. When Long had started in the race he saw that to lose it meant to lose his life also, so that his run then became a race for two lives, and he won. It was an act of heroism in which the bicycle deserves credit for affording the means of saving the baby's life.

### STIMULANTS IN THE UNITED STATES

The use of alcoholic stimulants in the United States has decreased five per cent since 1892, chiefly in whisky and wines, but in 1896 there is yet the following showing of the drink bill of the American people, so far as alcoholic stimulants are concerned: Beer (domestic), \$538,682,857; beer (imported), \$3,300,531; whisky (exclusive of quantity used in arts), \$270,000,000; wines (domestic), \$29,199,514; wines (imported), \$20,530,980; grand total, \$861,693,832, or about \$12 per capita. In non-alcoholic beverages the proportionate use of tea has not increased, but coffee has, and to a remarkable extent. Bringing together the alcoholic and non-alcoholic stimulants used in the United States in 1896, the total value is \$1,016,126,400, as follows: Alcoholic drinks, \$861,693,832; non-alcoholic stimulants—coffee, \$120,261,086; tea, \$31,171,432; cocoa, \$3,000,000; total, \$1,016,126,400. This represents a yearly per capita expenditure for beverages of \$14.31 for the 71,000,000 inhabitants of the United States, or 4 cents per day, six-sevenths being for alcoholic drinks. The figures given are furnished by the American Grocer, whose editor is a government authority on the subject, and leads the New York Voice, a prohibition journal, to call attention to the incorrectness of the assertion that "poverty leads to drink," and the remark that, "while some of the lessened consumption of liquor is doubtless due to an improved public sentiment regarding the use of drink, and affords encouragement to the temperance advocate, a comparative study of the figures given shows conclusively that poverty and hard times, instead of driving men pell-mell to the bottle, tend to a lessened use of intoxicants."

### OUTSIDE OR INSIDE?

Experiments in geodetic survey are, according to the Chicago Times-Herald, being conducted on the coast of Florida, that, whatever the results may be, should be of general interest. The purpose is to demonstrate with scientific precision the curious theory that the inhabitants of the earth are living, not on the exterior but on the interior surface of the globe and that this surface, consequently, is not convex but concave. It is evident, could this be demonstrated, that the whole cosmogony of the present generation must be abandoned.

For many years Dr. Cyrus Teed of Chicago, the founder of the Koresban society, has advocated this view. Professor U. G. Morrow has now under-

taken to demonstrate it, and it is expected that the results of his labors in this direction will be published and will challenge most careful scientific investigation.

The proposition is simple enough. If the inhabited surface of the earth is convex, as now generally believed, an absolutely straight line starting at right angles to the perpendicular at any given point, on being extended, would gradually appear to rise above the level. It would be a tangent to the convex arc. If the surface be concave, a similar line would appear to rise for a certain number of miles and then again approach the level and finally run into it. Prof. Morrow proposes to show that the latter is actually the fact.

For this purpose he has constructed an apparatus he calls the rectilineator. This consists of a number of sections of double T straight edges, the right angled cross arms of which are arranged for adjustment. The modulus operand by which the surface of the earth is now being tested is that of practically building a line—mechanically forcing a straight line from the middle or leveled section to the terminal point of survey. And on this contrivance the Koresbans have staked their faith. The survey commenced on March 18th upon the beach of Naples, and so far, it is claimed, the result has been as anticipated. When the end of three miles has been reached, the horizontal axis of the straight line will be six feet nearer the water level than at the beginning, where it has an altitude of ten feet.

Simultaneous with these surveys other observations have been made. Prof. Morrow says he one day observed a large steamer in the southern horizon. Only the smoke was visible to the unaided eye, the body of the steamer being entirely out of sight. Through the staff's large mounted telescope, the whole of the body of the vessel, the professor says, was brought into view, even down to the water upon which it sailed.

Of another experiment the following account is given:

On the Bay of Naples a target 20 by 30 inches was placed near the water and observed at a distance of four and one-half miles. To the unaided eye the target was entirely invisible; the water horizon seemed to occult the lower limbs of the belt of mangrove trees constituting the background of the views. Out in the water of the bay the telescope was fixed at an altitude of 30 inches above the water, and through it the entire surface of the target stood out in bold relief in the dark background. The instrument was then lowered to within 18 inches of the water, with the same results; afterward, at a height of 10 inches above the water, and through it the entire surface of the target still in plain view. Very careful observations were made and repeated with the telescope at this altitude. The target appeared clear-out and well defined, and the space between the lower edge of the target and the water was even observable. Then, to make the test absolutely satisfactory to the Koresbans, the telescope was fixed upon the water's surface. With the instrument almost touching the water long and careful observations were made. The entire surface of the target could be seen standing yet with the dark line of background beneath it. On the basis of the earth's convexity the horizon, with the

axis of the telescope 2 inches above the water, would be about one-half mile distant, having four miles of water surface to decline from the horizon point, amounting to over 10 feet; the target, it is claimed, would have to be higher than 10 feet in order to be visible. As the top of the target was only 24 inches above the water, it would be over 8 feet below the line of sight.

Speaking of the alleged experiments, Prof. Morrow says:

We are now projecting other work—more extended observations and the construction of another rectilineator apparatus with which we expect to meet the scientific world in public test to completely and satisfactorily settle the question of the earth's shape for the general public. Our system, if not substantiated by actual facts, is worth nothing. If it is, and the earth is concave, then its premise is the greatest discovery of modern times, and it will be the system of the twentieth century and for all future ages.

### ENGINEERING ACCURACY.

The accuracy with which mechanical engineering may effect its operations underground and entirely out of sight or reach of immediate surface indications has received another illustration in the completion of the big waterworks tunnel between West Berlin and Clinton, Mass., this week. The tunnel is two and a half miles long, ten feet high and thirteen feet wide. Most of it is through solid rock. Boring or blasting was done from five points, one at each end of the tunnel and three from intermediate shafts. Eight tunnels were being bored at once, and were united into one at four points of connection with such accuracy that all came together within a fraction of an inch. The last connection, completed this week, was only one-fourth of an inch out of the way in covering a gap of over half a mile.

### PRAYING IN PUBLIC.

A few Sabbaths ago a preacher in one of the eastern churches, evidently being anxious to please his congregation, confidentially inquired of one of the leading members of his flock if he could suggest any improvement in the weekly religious service. The gentleman addressed frankly replied: "Yes, sir; if you could give more attention to your prayers and less to your sermons." In view of the fact that the sermons were not long but that the minister's prayers often were interminable so, the force of the suggestion could not be avoided.

In noting the incident there will be people in this part of the country who will feel that some who are called to officiate in public religious ceremonies might profit by the advice given to the eastern divine, and their conformity thereto would be appreciated by their fellow-worshippers. The sermon of a religious teacher should have bestowed upon it all the care necessary to make its statements accurate, clear, earnest and forcible, and be accompanied by the Spirit that bears witness to true religious instruction; and the bestowal of this care does not involve the preparation of "ready-made" dis-