## Narrowing the Search For the Principle of Life; The Remarkable Claims of a Noted Indiana Biologist

the old world and the new are agog over the possibility that the search for the mysterious "principle of

life" has been grently narrowed by experiments recently compieted by Dr. Charles W. Littlefield of Alexandria, Ind., who claims that with salt, ammonia, water and alcohol he has created germs that change in shape, seek food and move to and fro. For over fifteen years Dr. Littlefield has been trying to solve the riddle of life and is confident that he has at last hit upon the answer. There are other scientists, however, equally skilled and critical observers, who are inclined to be openly skeptical and affern that the germs or atoms present in the doctor's test tubes come from an outside source being either attached to the walls of the tubes or present in the substances employed in the experiments. In support of their contention they point to the work of Revi, centuries ago, and to that accomplished by Pasteur in recent years in demonstrating the extraneous origin of infinitesimal germs.

Dr. Littlefield's confidence has not been shaken in the least by these adverse criticisms. He is convinced that periments has been proved in a way

Testing Artificial Protoplasm, Revivifying a Dead Cal. Noo 2000000 Charles W. Littlefield 200 1.000

if he would try to prove the validity of [ Repeated failures did not discourage this belief he must study not alone the Dr. Littlefield, and ultimately he created had the effect of reanimating them Since then Dr. Littlefield has freto do now was to discover just what covery to therapeutics, but it is report- cess,

the theory upon which he based his ex- and retain this principle." In other [ iar discoveries incidental to the search words, if it were possible to discover for the primal cause. that will successfully withstand the closest scrutiny. This theory, stated in brief, is that the vital principle is in brief, is that the vital principle is further asserts, is highly magnetic, and long ago in order to devote himself enabsorbed from the atmosphere and that the phenomens of death results only the biological research. He ob-the phenomens of death results only the biological research. He ob-the phenomens of death results only the biological research. He ob-served that his patients appeared to be the phenomens of death results only the biological research. He ob-the phenomens of death results only the biological research of blood, muscle, says, he had an opportunity to that his patients appeared to be the phenomens of death results only the biological research of blood, muscle, says, he had an opportunity to the human being, when he served that his patients appeared to be the phenomens of death results only build corrected structures. The biological research is provided by the possible to carry on such an exhaustive the biological research of blood, muscle, says, he had an opportunity to the human being, when he served that his patients appeared to be the possible to carry on such an exhaustive the biological research of blood, muscle, biological research of blood, muscle, says, he had an opportunity to the human being, when he unfavorable comments of scientific con-temporaries, he continues strated to rebecause, to quote from Dr. Littlefield, build organized structure. The ex- constantly affected by some mysterious study in a living body he endeavored to lifeless, but the observant doctor ascer- had been under water half an hour. temporaries, he continues steadily at "the functional activity of the body ceases to create that condition neces-any to absorb from the atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by have resulted in neces-to atmospheric conditions. The thing by his dis-the theorem attent to be have resulted in neces-to atmospheric conditions. The thing by his dis-to atmospheric conditions. The thing by his dis-the theorem attent to be have resulted in neces-to atmospheric conditions. ceases to create that condition neces- clusions are in themselves exceedingly just stated, he finally came to believe sary to absorb from the atmosphere interesting and have resulted in pecul- lay in the atmosphere. Knowing that sible those of nature,

Cup Hunter Lipton as the Snapshotter Catches Him; The Story of His Eventful Career Told In Pictures aller

torn to pieces, but was quickly reunited ing an ounce of common salt, six ounces in an organized structure very similar of 90 per cent alcohol, two ounces of to animal tissue. As he saw this the aqua ammonia and six ounces of pure impression deepened in the doctor's water in a dish, he distributed the mix. mind that he was looking upon the ture on five small plates in an air tight nower whereby the various elements of glass tube. Within an hour and a half the normal body are built into the great Dr. Littlefield declares he had the satis. composite organism full of life and faction of seeing salt crystals transvigor. The more he pondered, the formed into living forces. As they be, further he experimented, the stronger came imbued, with life they changed grew his belief that he was approach- from the conventional cubic or square ing a solution of the greatest problem shape into hexagons and from heragons into globular forms, the life first This belief became a conviction when appearing in their centers. Magnetism he discovered that his "magnetic fluid" of a pronounced type was present, sep. reduced to a powder had the power of arating and reuniting the crystals. To reinfusing life in dead animals. He the doctor it appeared that the new. first tried the powder on bees and flies born germs were seeking nourishment hat had been drowned and found that through what, for lack of a scientific sprinkling the powder over the insects name, he terms "feeders,"

notable cure being that of a man who

were the conditions affecting it, and I ed that he has had astantate

"free" ammonia, Placing a drop of causes of death.

experimentation.

.Dr. Littlefield, eagerly confident that he in rebuilding tissue impaired or de was upon the right track, renewed his stroyed by organic disease, his most

Failure followed failure. At length was suffering from tuberculosis of the

the doctor obtained some surprising re- bowels. The suggestion has been made

sults from a light salt solution, which that the "magnetic powder" will ult

he saturated with an oleoresin and mately be found invaluable in revivity.

stood for hours in an atmosphere of ing victims of asphyxia and kindred

this liquid under a magnifying glass, he Not satisfied with having accom-

found that it possessed peculiar mag- plished this much, Dr. Littlefield how netic properties and that when any determined upon a giant stride-the at-

solid substance which would float was tempt to produce life. More experiplaced in the liquid the substance ments, more failures, followed, Always

would fly from center to periphery and he toiled with his "volatile magnetie"

back again. The artificial protoplasm theory as the basis of his tests, Final-

on being dropped into the liquid was ly he tried a novel combination. Mix-

TRUMAN L. ELTON



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SIR THOMAS JOHNSTONE LIP. So be anxiously watching the strug spach Sharrock III, and the Reliavant as upbuilt an estate running into the most widely known subjects of King Edward as well as the mosts wile is as the mosts wile that he restains his pluck, and that he retains his pluck, and that he retains his pluck the most widely known subjects of King Edward as well as the most widely known the retains his pluck to "lift" the ever elucive America's to King Edward as well as the most pop- is manifest from his repeated enorts acquainted with every detail of the siders the money well spent and he never aguest on our to "lift" the ever elusive America's management and conduct of his en- certainly is never happier than when year, when he elevated his yachting have endcared him to his American for the rights and feelings of other the siders of the rights and feelings of other the siders of the siders the money well spent and he here the siders the never happier than when year, when he elevated his yachting have endcared him to his American for the rights and feelings of other the siders the never happier than when year.

users of the highways.

## How the Andes Will Be Crossed In Palace Cars; The Story of a Remarkable Engineering Achievement



all probability the Argentina sweeps like a parallel of latipeople of lower South tude for miles and miles across great America will ere long steppes and over broad rivers. Even after leaving Mendoza, 630 miles from witness the consum-Buenos Ayres, construction is fairly mation of a great enmation of a great en-gineering project. This is the building of is the building of a to follow the valley of the River Mentranscontinental rail, doza, a mountain stream which, with road from Buenos Ayres, in the tributaries, drains the melting snows

mountain reads.

ungineers have to employ a rack rail

similar to those on the Harz and other

Argentine Republic, to Valparaiso, of the summits and is subject to sudden in Chile, crossing the Andes moun- rises and trencherous variations. Th tains at an elevation of 10,450 feet above sea level. The Transandine rail-way, as it will be named, came into way, as it will be named, came into ground afforded by these terraces, being so long as twenty years ago, but crossing or cutting through the rock the difficult engineering problems in- when necessary and even running on volved, to say nothing of the long part of the river bed itself. At about standing houndary dispute between 100 miles from Mendoza the ground be Chile and Argentina, served to delay gius to rise sharply, and thereafter to work time and again. Even today the entrance of the great tunnel the operations are suspended in Chile, owing to a quarrel between the government and the owners of the line on the | When completed the Transandine

Chilean side of the Andes, but work rallway will rank as one of the highest, will soon be resumed, for the matters if not the highest, of the world's rallin dispute are not serious and it is rouds. Even in its unfinished state it certain that an agreement will speedily has attained an attitude seldom reached be effected. Since the boundary con-troversy was settled construction has been proceeding randity on the Argen been proceeding rapidly on the Argen- is to say, from November to April-betime side, and the railway is now haid tween five and six thousand people as far as Las Cuevas, near the frontier, avail themselves of it, being carried where a two mile tunnel will pierce the over the uncompleted section by mule summit ridge.

On both sides of the Andes the en. the Cumbre pass at an elevation of route in the mountains the road will along the line is shipshape. Many pas-On both sides of the Andes the en-gineers have had to contend against railway will be \$71 miles, but it will be ruptions arising from floods, storms or affected by the high altitude, although great natural obstacles incidental to the ascent of the mountains. The impossible to run through trains be-cause the gauge varies greatly in dif-the details of the track of the taken to prevent in the taken to prevent the taken taken to prevent the taken taken to prevent the taken taken to prevent taken grades of the railroad are necessarily ferent localities, descending from a the tracks to a depth of several feet. The value of the Transandine road very steep in this region, the rise for maximum of 5 feet 6 inches to a mini- The officials in charge of the work, nevertheless, can hardly be overestia considerable distance being more mum of 3 feet 4 inches. This will however, say that the greatest precau- mated. It may truly be said that it



will be utilized for the transportation out limit. River Plate valley soil is in of freight and mails from Oceania to places of the richness of the Nile delta. Chile a railroad which should run from ment is made that one of its most im- of rich black loam of a depth of twenty Much to the surprise of those who mediate results will be the establish- feet. Thousands of acres of ground declared that his scheme was visionment of a fast steamship service be-about Buenos Ayres and Montevideo ary, Mr. Meiggs succeeded in pushing a considerable distance being note than 420 feet to the mile. Comparative per although it will able extent, however, although it will be actent, however, although it will be actent from any of these sources. Already a system of track watchmen has been inaugurated, the duties of the watch and Europe six to convening and it is believed that so the service has been properly to get a standpoint, will lie in the opening up of an opening in the markets of the old competitor in the markets of the old progressive and announced its will get at the service has been properly to set the service has been prop tween New York and Eucnos Ayres, have been constantly cultivated for two the road part way up the Andes, but

the poorly supplied markets of Chile, from which country, in return, the people of the Argentine Republic will eceive coal, copper and other mineral products.

Both Chileans and Argentinians are progressive and industrious. The forner, indeed, have been nicknamed the 'Yankees of South America," and it may be taken for granted that they will turn to the best possible account the facilities offered by the road. For that matter the same must be said of the Argentinians who have, through great influx of immigration, acquired cosmopolitan characteristics of heir cousins of the north. The manner n which they are improving by irrigation and tree planting the vast plains whereon they grow wheat and raise live took testifies to their industry and enterprise. There is thus a social bond between Chile and Argentina, a bond which, despite political differences, may levelop into a practical commercial mion as a result of the solidifying inlucnce of the steel rail.

It is interesting to know that the allroad is being built under the watchful eyes of engineers from this country and that American capital is invested n it. The statement has been made that among other financiers the well chown house of J. P. Morgan & Co. 18 ingely interested. American materials ilso figure in the construction of the oad, which, by the way, was first proected by an American, Henry Meiggs, boasting as it does hundreds of miles the coast to the Argentine boundary. JAMES L. KEPPHAUS.