

Radium Will Soon Be Cheap - Only \$2,700,000 A Pound

Never was the scientific world so excited as by the discovery, three or four years ago, of a substance which seemed to contradict the laws of nature, after they had been slowly established during many centuries of observation. The discovery was by accident, but it is generally ascertained that they occur most frequently to men who were investigating along particular lines, and so it was with radium. Since the discovery there was a property in light which could impress an image on a sensitive plate, every development of photography and its kindred sciences by slow degrees up to the discovery of radium.

The qualities of the new substance so mysterious, so contradictory, one may say so miraculous, that the interest of the scientific world was instantly aroused. The factory is located at Pier-Marne, in France. The process of extracting radium-bromide is slow, occupying from two to five months; tedious in the last degree and most incredibly expensive. It is estimated that, counting the cost of machinery and labor, both of the comparatively unskilled laborers in the factory and that of the trained chemical experts who perform the concluding operations, the cost of extracting a kilogram of pure radium-bromide, out thirty-five pounds, would be about \$80,000,000. It is easy enough to believe that no such quantity of radium has been extracted from its ores, and the most that any scientist can hope to procure is a few small particles, hermetically sealed in a glass box, and these bits, most of them half to one-tenth the size of a pea, are the material with which chemists and physicians make their experiments.

The radium factory abstracts from many tons of minerals the microscopic quantities worth thousands of times their weight in gold. The materials are most varied, principally being pitchblende. Pitchblende is of itself a very remarkable compound, containing the sulphates of almost all known metals. By wagon loads the material is sent through a crusher, then placed in a great tank, whose contents are stirred by a mechanical device, to processes so numerous and intricate that to give even a crude notion of them would require a volume.

Topics of Times

London's underground tubes have a total length of 145 miles.

England imported from Argentina in 1907 nearly \$21,000,000 worth of beef and \$11,472,345 worth of mutton.

Canada has twenty wireless stations, and a new wireless service is being established between Prince Rupert and Vancouver.

One of the great intellects of England has stated that not above fifty thousand people in all Britain can read and understand the ordinary London newspaper.

Wesleyan Fish, Jr., began in the Revue Central shops in Chicago at a salary of \$25 a month. Later he was promoted to station agent at \$60 a month in his eagerness to learn the work from the bottom up.

The Wesleyan conference of England recently passed by a large majority a motion to admit women as delegates. This resolution must be approved by the synod before it becomes a rule of the denomination.

The women of Chicago are urging an increase in the number of milk inspectors for that city. They say that it is impossible for the eight inspectors now on duty to make sure that in a small part of its supply is in a wholesome condition.

The good times are coming. Oh, the good times are coming, no matter what they say; You kin hear 'em hummin', hummin', for a hundred miles away; They're a-singin' through the summer, an' a-fightin' through the freeze; A-ridin' down the rivers an' a-blowin' in the breeze!

Comin' A-hummin'— Like a regiment a-drummin'; Lane has got a-turnin', Buttermilk's a-churnin' So keep your lamps a-burnin' Till the good times come!

Oh, the good times are comin'; you can see 'em on the run, A-twinklin' in the dewdrops an' a-shinin' in the sun!

A-dumpin' over the daisies, an' a-babblin' in the brook, An' lookin' at a fellow like his sweet-heart used to look!

Comin' A-hummin'— Like a regiment a-drummin'; Lane has got a-turnin', Buttermilk's a-churnin', So keep your lamps a-burnin' Till the good times come! —Atlanta Constitution.

Needed Them in His Business. Miss Gotrox—Nearly all my admirers think I should be able to get tips from you on the market. Gotrox—Encourage them in that belief, my dear. It won't be long before I'll be ready to unload the stock I'm carrying.—Puck.



For every ton of pitchblende residue over five tons of acids and other chemicals and fifty tons of water are required, and after continuing the separation and purification for months there remains at the bottom of the great tank a handful of impure radium-bromide, which is turned over to chemists of long experience, for final reduction. When they have finished their work, there are left a few grains of the substance known as radium-bromide.

When this remarkable mineral was first announced there were the highest expectations entertained among medical men, their patients and the public, regarding its future usefulness in medicine. Lupus has been cured with it, so have persistent ulcers. Cancer, when in its first stages, has yielded to the power of its rays, but deeply-established cancer has resisted its influence. It is now believed that the virtues attributed to the water of certain springs are due to the presence of radioactivity.

The most singular property of this magical element is the fact that it gives out heat constantly, almost uniformly and under all circumstances, without loss of weight, change of substance or deterioration. A particle of radium has been known to radiate its heat for a year or two at a time, and when weighed again has not lost a ten-thousandth part of an ounce. Every one knows the various ways in which heat is produced, but radium is a self-producer of heat, and so far as we now can see, the process may continue indefinitely, and it is this property which makes the little grain of radium-bromide, which looks exactly like a grain of common salt, so wonderful in the eyes of the chemists, for it apparently contradicts flatly every principle regarding the evolution of heat.

JERSEY'S DESERTED VILLAGE

Now Reclaimed, It Is a Summer Resort with Eighty-two Inhabitants. In a gorge close down against the inner base of First mountain David Felt in 1845 began an enterprise that years after gave New Jersey her deserted village. He owned a blank book and stationery store in Brooklyn and another in New Orleans. To supply these with material, says the Travel Magazine, he built a factory in the bottom of the narrow gorge and at the bluff edge of the level land above he placed for his employees several commodious houses whose back windows looked sheer down upon the factory, twenty feet below.

He told Thomas Stead that he had "two barrels of specie" to start with, and as land was cheap, lumber abundant on his 600 or 700 acres and dressed stone at hand in the ruins of a powder mill dating from the war of 1812, he built spacious and well. Prosperity smiled upon the hidden village.

The Civil War changed the course of life for the little community. New Orleans was cut off by the blockade and David Felt, despairing over the loss of business, sold out before the war was over. The place passed into unsympathetic hands, deteriorated as the inhabitants moved away, and in the early '70s was known the countryside over as the deserted village. The great water wheel rotted down, the little stream that had furnished the power being neglected slipped back into its old bed in the bottom of the gorge. The acres of farm land that lay broadly between the First and Second mountains were covered with weeds.

Only the shade trees profited by the neglect that was over all and grew into stately proportions. The natural beauty of the spot, coupled with the lure that attaches to a deserted village, drew to it the curious to gaze through the broken windows into the empty houses, stroll through the great factory stripped of its machinery and silent and to eat picnic lunches under the noble trees of the unkept lawns.

To-day this is changed. It is a summering place for the fortunate. The creaking doors have been fixed, the buckling floors repaired, the scaling paint renewed, the overgrown lawns mowed, the broken roadways mended and now securely hidden in this quiet nook there is a population of eighty-two.

QUEER STORIES

In India there are nearly twenty-six million widows.

Brazil grows more coffee than any other country in the world.

Out of a total of eighteen south pole expeditions nine have been British.

At a rose competition in Paris recently, sixty-nine entirely new varieties of roses were exhibited.

The first airship annual, entitled "All the World's Airships," is to be published in England in October.

On the shores of Cape Cod there were during a period of twenty years following 1881 as many as 1,000 wrecks of vessels carrying precious cargoes of human beings and of freight.

Residents of the cork regions of Spain beat the bark in kettles with spouts, through which issues a gas that is used as an illuminant. The refuse is sold as the "Spanish black" pigment.

Post houses on Roman roads were erected every five or six miles. Each of them was constantly provided with forty horses and a hundred miles a day was an easy journey. Any one using these posts must show a mandate from the emperor.

A sum of \$4,620 was paid at Christie's rooms, London, for a set of ten Chippendale mahogany chairs, the backs pierced with a shell and carved with foliage and conventional scrolls, which at one time were, it is believed, in the possession of Marie Antoinette.

American apples containing the San Jose scale are refused entry at German ports, but this precaution is criticised as superfluous, because such apples rejected at Hamburg have been shipped to England and Denmark without having caused a spread of the pest.

A five-pound bluefish passes eastward from Vineyard Sound in the spring and weighs ten or fifteen pounds in autumn. The bluefish is an unmitigated sea butcher and is able to whip any other species not larger than himself. He attacks menhaden with such ferocity as to pack them in windrows a foot deep on the coast.

The Original Airship. Now, while the airship fills all ears So new and novel it appears, Pray who has done the job for years? Old Pegasus.

While airships make a great ado About supporting only two, Who keeps a wife and family crew? Old Pegasus.

While airships fly the channel breeze Who always has with equal ease Flown Podunk creek or Carib seas? Old Pegasus. —New York Sun.

The Pessimist. We knock the pessimist at times, Because in gloom he glories; But here's a boost—he never tries To tell us funny stories. —Puck

Editorials

Opinions of Great Papers on Important Subjects.

ALASKA.

ALASKA has long desired a territorial status, and last year the Yukon exposition seemed a good time to make a strong play for it. It has a white population of 40,000, nearly the same as Nevada, and, though this is small for a State, it has usually been considered enough to make a Territory. It has averaged an annual output of gold of \$20,000,000 in the last five years. Since 1880 its gold product has been over \$140,000,000. It is proving to be a great copper country, and in 1906 9,000,000 pounds of copper were exported from Alaska. Recent surveys, still incomplete, show that Alaska has coal in abundance and of the finest quality. Surface indications of oil are reported. Marble has been found in various quarters. Tin, silver and a large number of miscellaneous metals are reported. All this indicates a very rich possession, but the gold exceeds them all. The gold-bearing areas of Alaska are so extensive as to make it not improbable that it will prove to be one of the richest gold-producing sections of the world. This indicates a land of inexhaustible riches, but President Taft tells the Alaskans that a mining population is a wandering population and not good material for local self-government.—Philadelphia Press.

PASSING OF THE SLEIGH.

IT IS little short of treason to carp at progress. We shall hardly be able to do so if in its manifestations we balance what we have gained against that which we have lost. Yet a feeling of regret can hardly be repressed at times when the things of life and love that once carried their thrills no longer possess interest for a new generation. It is not more than a quarter of a century ago when the sleighing season meant a series of road carnivals all over New England, and in Boston in particular. Its coming was awaited with eager interest and enthusiastically, almost rapturously, improved when it arrived. Every man who owned a horse also owned a sleigh of some description, and it was pretty sure of making its appearance at the earliest opportunity. The press went into descriptions of turnouts as minutely as it now reports the ladies' gowns at a horse show.

There are sleighs still, and there are conservative people who like to recall the old festival days of the road by using them. On a pleasant Sunday there may be heard quite a jingling of the bells over the boule-

ards; but they seem comparatively lonesome and there is more pathos than pleasure in listening to them. The output of these vehicles is annually small. When the sleighing is good the automobile can be run, and the two methods of transportation do not sympathize. Those who own the motors can put a little more value into them by cutting out the cutter. They can still be seen on the speedways at appointed times, but as a public pastime their day is nearly over.—Boston Transcript.

THE TREMULOUS ISLANDERS.

CUBA revolutionless is only a dream. Cuba capable of self-government in an orderly manner, capable of considering political expedients without resort to rifle and machete, is an idea for altirists only. The present administration has less than a year of unprotected conduct to its credit. The hopes that the adherents of the President and those of the Vice President could fuse have dwindled away. Since the American troops withdrew the politicians have drifted farther and farther apart. They are now at odds which can never, it is asserted in Havana, be overcome. It is only a matter of weeks before rebels will be sulking through the canebrakes taking pot-shots at persons passing along the highways. It will be only a question of weeks before the Vice President slips from the capital city and in some disloyal town a new flag is hoisted.—Toledo Blade.

THE PANAMA CANAL IN WAR.

THE strategic value of the Panama canal is estimated to be equivalent to a fleet of large battleships. This is the conclusion of Dr. Cornish, given before the Royal Geographical Society in London. Taking the cost of the canal at \$500,000,000, which would only build forty first-class battleships nowadays, the United States will have a good bargain, and be able to cover a total coast line without any material increase in her vessels. The canal will double the sea efficiency of our fleet for half the sum of money that would otherwise be necessary to maintain communication between the Pacific and Atlantic coasts. At the same time the merchant marine of the United States will some day be developed, and justify the people in maintaining a naval armament that will be fully equal to that of other nations.—National Magazine.

A TRUCE TO VARIETY.

Having no daughters of their own, Mr. and Mrs. Dillworth were very fond of their lively niece, Clarice, and it was therefore a pleasant surprise when they received word that she was going to stop over for a short visit on her way home from Chicago. In her letter she announced that she had just been taking a course of cooking lessons, and would treat them to the newest and daintiest dishes. A writer in the Chicago News tells the tale: An explanation of Clarice's sudden interest in domestic science was afforded, when she arrived, by a very new-looking diamond ring which sparkled on her finger. "I've brought my book of recipes," Aunt Amanda, she announced, "and I'm going to stay two weeks and do all the cooking while I'm here." "You're welcome, I'm sure, my dear," responded her aunt. "I just get sick and tired thinking what to have for the next meal. It's the same thing over and over!" "Well," exclaimed Uncle Nathan, as he pushed back his chair after supper, "that certainly was a treat! The trouble with your aunt is," he explained, "that she lets herself get into a rut." "As there are thirty-one ways to serve potatoes, that seems quite unnecessary," said Clarice, with just a touch of patronage in her tone. "Then, when one knows how to make nineteen different salads, it's easy to have a variety." "Variety is the spice of life," quoted her uncle, oracularly. "There are so many dainty desserts nowadays, too," continued Clarice, "that pie really has become obsolete. How did you like the pineapple mousse?" "Fine!" declared Dillworth. "I'll venture to say, Amanda, that you've never even tried to make a pineapple mousse." "No," said Mrs. Dillworth, too much overcome to mention the fact that her cup custards were the envy of half the women in town. During the ensuing days Mrs. Dillworth, whose culinary successes were mainly attributable to good guessing, often secretly hoped for failures; but Clarice measured and timed herself with what seemed to her aunt slavish precision, and each succeeding meal eclipsed the previous one. Poor Mrs. Dillworth was divided between envy of her niece's achievements and dread of the day when the burden again should fall upon her own shoulders. Would Nathan, after this orgy of scientific cooking, ever again be satisfied with her humble efforts? Her own appetite failed at the sight of his enjoyment, and she found it difficult to conceal the bitterness of her mortification. "Getting tired of my cooking, Uncle Nate?" inquired Clarice, as she found

THE BISHOP'S LETTER.

Once a year the Episcopal church issues a letter on the subject of temperance, which has been a custom for some time. It is interesting to read the joint letter issued on this important subject to the ministers of the Episcopal church by Bishop Tuttle, of Missouri, the presiding bishop, which letter is also signed by the 66 other bishops of that church in this country. The letter reads: "The church temperance society has labored for years to deepen and strengthen and extend such self-restraint in checking and resisting the great evils of the drink habit. "It may conduce not a little to the success of these efforts if, by information and exhortation in sermons and by devotions and supplication in prayer, the attention of our church people can be concentrated upon the wise and sober Christian way in which the church temperance society essays to do its work. "Therefore the society asks of the bishops, and the bishops ask of the clergy and people of their respective dioceses, that they will unite in making the Sunday next before Advent, November 21, 1909, a day of special references to the subject of temperance in the prayers and sermons of our churches." It is worthy to note that the letter contains no references whatever to prohibition laws in any State of the Union. Ministers are simply asked to speak on the doctrine of self-restraint, which contains of course, the evils of the drink habit. Moreover, not a word is said about total abstinence and nothing about poisonous drinks,

Personality an Asset.

That an attractive personality is one of the most valuable assets in business life, and particularly in the railroad service, is the belief of George A. Cullen, general passenger agent of the Lackawanna railroad. No matter in which department of the railroad a man is employed, if his personal characteristics render him companionable among his fellows a tremendous obstacle has been surmounted on the road to success. Then, too, if an employe is pleasant and agreeable in his dealings with the public, he will avoid a great proportion of the alleged grievances on the part of passengers. Mr. Cullen has devised a "standard of fitness" by which to measure the efficiency of railroad men. They should have a thorough understanding of all the technical details that pertain to the duties of their positions, but should give requested information in plain and simple language that the layman may readily understand. All trainmen should have a proper regard for their personal appearance. A fund of general information is invaluable, and any extra or unexpected attention or information that may be offered is always appreciated and remembered by the anxious passenger. Last but not least of the elements that make up an attractive personality is that of kindness, a quality that can save trainmen from many disagreeable situations which inevitably arise.—Harper's Weekly.

The only gambling tip which amounts to anything is advice to keep out of the game.

Sympathy has little effect on tooth-ache.