SCIENCE AND INDUSTRY.

A crop of potatoes on an acre of ordiwary soil can be made to produce E 200 rations of alcohol. Of the world's rainfall, three-fourths, is estimated, it is supplied by vapor

from the Pacific and Indian oceans. People in the Arctic regions can conwrse when more than a mile apart. The air, being cold and dense, is a very

good conductor, and the smooth surface of the ice also favors the transmeission of sound. A test of the friction of ball bearings of different sizes at different speeds

Mass shown that at high speeds such bearings fail completely. For ordimary pressures and speeds, their value meems to have been overestimated, as they give but little loss by fric-tion the eri-polished and thoroughly exted bearings of ordinary kinds.

Great expectations have been formed ied a process for the electrolytic ex-Araction of zinc from its ores which has been devised by M. De Laval, the eatled "Edison of Sweden." Zinc ore occurs in considerable quantities im Sweden and Norway and waterfalls have abundant, so that M. De Laval has merry natural advantage for the succossful application of his process.

At a meeting of the Gardeners' So--wicty of Berlin, held recently, a solcan warning was read by a member against the primula obconica, a pale Blac variety of the popular winter Mower. It seems that this particular wariety, which is very prolific in bloom; has tiny hair underneath the leaves. and when these hairs come in contact with the human skin they cause inmmation. A member said that his daughter had suffered for three years from this inflammation, which also af-"feeted her hair so much that she be--came baid. The only alleviation known for the inflammation is a decoction est erectin.

A new process for recovering the great quantities of tin lost in tinnediron waste has been patented in Swe-The material is placed in a vessel ad iron or other stronger electro-posi-Live metal than tin, and this receptarele is filled with caustic alkati, a depolarizer-such as copper oxide-being also provided. An electric current is set up, the tin at the same time separating as alkali stannate. When the Mali has become saturated with stannate, a current of carbonic acid injected into the solution, causing the tin to separate as stannics hydrate. This is treated with acid, and metallic tim is finally obtained from the resulting solution by electrolysis.

WHY WILLIE WAS DROPPED.

Couldn't Remain Away from Home Over Night Without His Pretty Pajamas.

"Well, how's Willie?" asked the girl on the aisle just before the curtain rang up. "You don't seem to have him won your mind so much as formerly." "No." said her companion, sadly, ac-

esirding to the Chicago Chronicle, "No. quite true.' "What's the cause of this effect?

What's the why of this wherefore? Is he backward with the solitaire?" "No, not exactly that. I've about made up my mind to pass him up. His come is on the Grecian order-flat.

That's what's the matter with him." "Go on." said the girl on the aisle, reympathetically. "My ears are capacions and my heart is large."

"O. there isn't much to it. He came were to see me the other night in the fog. It was such a mark of devotion that I let him put his arm-well, you know, just, as he was putting his overcoat on, and, anyway, I couldn't help if. for I was holding his coat, and he Jooked so noble, anyhow, with his large eyes. I think large eyes are a sign of a bovine nature, now, though,

"When we opened the door we found "It was raining cats and dogs and all corts of animal life. It was pouring so that he really couldn't go home, and as mey brother Tom was away in New York I told him he could have Tom's - room.

"He turned his large eves into the wight and shivered as he turned to me mnd asked if I really wanted him to istay. I told him I'd be glad. I'm afraid I couldn't get home in time for Breakfast,' he objected. 'O, we've got wough buckwheats and coffee for you,' I said, and then he said he'd be glad to 1:54 ST.

"I left him in the hall while I went rup to tell mamma to get Tom's room yrady. I came down in a few minutes. and no Willie in sight. His hat and coat were gone." Rather an abrupt departure, I thought to myself, and just then some one came tearing up the front steps and burst into the hallway. It was Willie. I just run over home to get my pajamas, seeing I was going to wfav here all night, he said."

"Well, I think you are justified in swrning him down," remarked the girl we the aiste. "A mon with as little rense as that couldn't even furnish a

flat in Austio." "That's what papa said next morn-

"mg," rejoined her friend.

a An Odd Community. A quaint custom has just been obmersed by the German emperor and 16 subjects, the Hallores, a curious people who own and work certainwich salt mines near Halle, in Saxempy. Every new year the emperor weceives a visit of ceremony from representatives of this little commounity, who appear before him in Their national gala attire-long black enats, black knee breeches, white mtockings and buckled shoes. -Chiezgo Pribune.

The First "Majesty," The first ruler honored with the with of "his majesty" was Louis XI... ed France. Before that time severwigns were usually styled his or her "highness." - Chicago Chronicle.

THIS IS THE PULP ACE.

Ornesiar Observation of Age and Windom Which May Be True In Part.

"Yes, sir," said the wise old chap in the corner of the waiting-room, as he pounded the sill until the window rattled, and drew the attention of all the travelers as well as the quiet man to whom he was speaking, "this is the pulp age-the pulp age, and nothing else."

"Seems pretty fair sort of age," mildly remarked the quiet man, relates London Tit-Bits.

"Pretty fair --- of age? Sir, sir, you amerish me! Yes, you do. Ever hear of the stone age, sir?" "I wasn't here then."

"I should say not! No, the stone age, sir, was a paradise to the present pulp age. Yes, it was. In the stone age, sir, man was in his infancy, sir-yes, he was. Now-well, he is in his pulpacy, yes, he is-and mighty poor quality of pulp at that." "In the stone age man was an animal and lived in a cave, didn't he?" gently asked the quiet man.

"He did. He enjoyed life to its fullest when he hammered out a hole in the rock with a stone cutter. He lived on berries, the man of the stone age did he and his wife and little stonemasons. They were peacefully content among their stone quarries, the-"

"Newspapers printed on stone,

"Didn't want newspapers then. Didn't have no football games to bother then. No one bothered about things then. Glorious times when you compare it to this pulp age. Why, sir, at the present time we buy magazines printed on pulp. What will be the result in two or three hundred years from now? Maga-.. zines will be dust, simply dust. Terrible havor thus pulp age is creating for future generations."

"But you and I will not be there-" "Oh, of course you fall back on that old, selfish fancy that you and I need borrow no trouble about the morrow. Every man of sense and reason should look out for the morrow. But if this pulp age keeps on clinching things the morrow will of no earthly use to a human being 500 years from now. Ever think of

"It's too far off." Sell "Yes; same old weak excuse of human nature. We must have our noses rubbed against the grindstone of 1,000 years in the future before we begin to look out for what is to come and mend our ways. Our paper money is pulp, our shoe buttons are pulp, and our tiles in winter are pulp. Our very bread and cakes on the diningroom tables are pulp. Our-well, our brains are pulp. Four thousand years from now the entire world will be a ball of pulp--"

"But why bother?" "Why? I've just put £500 into the pulp business, so that my offspring will be millionaires 10,000 years from now -- But here's our train."

WOMEN AS SAFE-BLOWERS.

Gang of Them in Tennessee Who Are Experts in That Unusual Calling.

A story comes from Tennessee of the recent arrest there, of a number of women who had been following the somewhat unfeminine occupation of cracking safes. The source of their operations was a small town near Nashville, where they robbed a bank and got \$1,700. Women have often developed into expert forgers, as for instance in the recent case of an American woman abroad who succeeded in conducting a forgery scheme for a considerable length of time and until she had fraudulently collected a vast sum of money. They make high-class pickpockets and, in fact, are infinitely more successful in this line of work than men, reports the Chicago Chronicle.

One curious fact in this connection, despite the frequent announcements publicly made of offenses of this kind committed by women, a man is never on the lockout for the female pickpocket unless he finds himself in a questionable resort and in bad company. For this very reason women find it much easier to pick a man's pocket. They can get closer to men, too, without becoming offensive and can lift the diamond pin out of his scarf, nip his watch and chain, or any other valuable thing he may have before he will

ever dream of apything wrong. In that kind of pilfering, too, peculiar to kleptomania she is more succossful, because, in this instance, of the way sh. dresses and woman's peculiar demeanor around the counters in dry goods stores. If a man, for instance, should go into a dry goods store and begin to pick up little things and fumble over them, apparently for the purpose of inspection, he would at once arouse the suspicion of every clerk within visual range. On the other hand, a woman may do exactly the same thing without exciting the least suspicion. It is simply looked upon as woman's way. This makes it a matter of comparative case for the kleptomaniae. But the woman safeblower is a new type, and it simply means that the police of the country will soon be confronted with many new problems in dealing with the fe-

Where the Pacific Cable Lies, The most bazardous section of the Manila telegraph cable is that completed between San Francisco and Honolulu, in which the sea bed is precipitous, with valleys 31,600 feet deep. The next two sections, extending to Guam, will cross plains of mud at a depth of about 18,000 feet, while the last section is over a series of mountains. Scientific American.

male offender.

SOUTHREL MIGRATIONS.

Extraordinary Movements of the late tle Nut-Crackers Not Easily Accounted For.

The remarkable migrations performed at times by this species constitute a most interesting feature in their history. They congregate in the autumn in immense numbers, and move off in the same general direction, not turning aside for the largest streams, though usually averse to water, says Forest and Stream. Dr. John A. Kenalcost relates that during one of these migrations innumerable squirrels swam across the Niagara near Buffalo, landing so exhausted as to be easily taken by hand or knocked down with sticks. Mr. Kennicutt has the following notes in regard to these migrations:

"The reason for these migrations is not satisfactorily explained. That they are caused by want of food is hardly probable, as the squirrels are found to be fat at the time, and as often leave localities abounding with food as otherwise. After one of these grand migrations, very few of the species are found in the localities from which they have moved, and these, as if alarmed at the unusual solitude, are silent and shy. They rapidly increase in numbers, however, and in a few years are as abundant as before. I am not aware that they ever migrate except when exceedingly abundant. Of these immense hordes but few probably survive. No sudden increase in their numbers was heard of in southern Wisconsin after the several migrations from northern Illinois. Many are drowned in attempting to cross streams; not a few are destroyed by man; some die from utter exhaustion, and when forced to travel in an unnatural manner, upon the ground, they fall an easy prey to rapacious birds and manimals, all of which feast when the squirrels migrate.

"I learn from Dr. Hey that one of these migrations is said to have taken place in 1842; he witnessed another in 1847, and a third in 1852. He further says that the migrations observed by him in southern Wisconsin occurred when the mast was exceedingly abundant and the squirrels in good condition. Near Racine they were observed passing southward in very large numbers for about two weeks, at the end of September and the beginning of October, and it was a month before all had passed. They moved along rather leisurely, stopping to feed in the fields and upon the abundant nuts and acorns of the forests. So far had they departed from their accustomed habits that they were seen on the prairie, four or five miles from any timber; but even there, as usual, they disliked to travel on the ground, and ran along fences wherever it was pos-

MARVEL OF AMERICAN FARMS.

They Produce Nearly One-Third of the Food-Stuffs of the Entire World.

The story of American agriculture has been the story of our growth in population and of the extension of our national domain-a record without a parallel in the history of the world. A Chicago man once said that he had lied a great many times about the growth of his city, but Providence had always quickly come to his relief. It would take a gifted liar to overstate the growth of our agriculture or exaggerate the marvel of its present proportions. The difficulty is to prodimagination to any appreciation of the simple facts.

Uncle Sam already occupies the first rank among the farmers of the world in the magnitude and value of his crops. Although his family constitutes only one-twentieth of the human race, he produces nearly onethird of the world's food supply, while Russia, which comes next as a Tood producer, has one-twelfth of the world's population and supplies less than one-fifth of its food. Compare our wheat crop for 1900 with that of the other leading wheat countries of the world:

tounding of the north	
Country. United States	Bushels
Russia in Europe	396.623,000
British India	182,582,60
Hungary	135,000,000
Italy Spain	105,000,000
Argentina	101,266,009 5 5,33 0,009

The expert (not official) estimate of our wheat crop for the last year is 700,500,000 bushels and the same authority places our corn erop at the output of wheat for the entire world in 1900.

We are told, by government authority, that our crop of cereals for a single year is 90,000,000 tons. Let us try to get hold of these figures so that they will mean something to us, says Josiah Strong, in Success. How long a train of corn would be required to ship this crop, allowing 40 feet outside measurement to each car, and ten tons of grain to each?

If we had a double track belting the globe at the equator these cars loaded with our grain crop for a single year would fill both tracks solid and then enough would be sidetracked to reach from New York to San Francisco six times!

Making an Effort. "Every man should have a mission

in 'life," said the parson. "Sure thing," answered the politician. "I've been trying for the last two years to get a foreign mission with a good salary attached."-Ohio State

Paradoxical But Not Strange. Weak-minded people sometimes are the most headstrong.-Chicago Daily

A LITTLE NONSENSE.

Those treorise entry it see when the Year tre disease I suppose he falls asleep." -Cleveland.

The Frosted Hand .- "Yes, and after she refused me she waved her hand in farewell." "Sort of cold wave, wasn't 11?"-Cleveland Plain Dealer.

Easily Knocked Out. Biggs- "Say. that kind of talk knocks me silly. Diggs-"And it wasn't a very hard blow at that."-Chicago Daily News. Mr. Byrnne Ooyne-"Ab, sweetest one, may I be your captain and guide your bark down the sea of life?" Mrs. Berrymore (a widow)--"No: but

you can be my second mate."-Detroit

Tess-'O, yes, I feel pretty sure of hlm. I rejected him when he proposed first because I was positive he'd try again." Jess-"And you were right. He did try again and I accepted him." -Philadelphia Press.

His Modest Request,-"I suppose you'd like to be worth a million dollars?" she suggested. "No, mum," replied the tramp. "It 'ud be too much trouble lookin' after the money. All I want is that some feller what's worth a million dollars shall pervide fer me: -Chicago Post.

Quite Similar .- La Monte-"Who is that old fellow that is always hunting for you to buy him a drink?" In Movne-"He claims to belong to the upper crust." La Montt- "The upper crust ch? Well I notice be is always short and always dry."-- Chicago Daily

BOSTON'S HISTORIC ASSETS.

One of the Richest Cities in the United States in Old Buildings and Monuments.

No city can be fully appreciated or enjoyed by a visitor or a transient sojourner in it. Only the resident citizen possesses it. Those own most of it who best know its past, and understand most clearly what it has stood for that men value. Such citizens are like owners of homes rieh in treasures of art and literature, who, when they entertain a guest, give life and meaning to all the wealth that surrounds him. To be really great in character a city must have a noble history, abundant and well-kept memorials of it, and citizens who know, appreciate and are proud of it. Such a city has rich assets in its past, in its people and in the advantages it can give to its children, says the Boston Congrega-

Boston, in these respects, is .. the richest city in the United States. More great events in American history, and more eminent men who have figured in that history, have been associated with it than with any other city. It has stood for political and religious and individual freedom, for self-government and righteous government, for the rights of the oppressed, for the truth as its citizens believed it, and for a united country, with a persistence handed down from father to son as sacred inheritance, which has given to the city a character of its own. These things go far toward making it desirable above most other places as a residence for the best classes of Americans.

Boston for these reasons has - a peculiar attractiveness for visitors. The Common has fascinating stories to repeat to all who walk across it who have read history. Rarely does one pass the Shaw monument without finding a group before it to whom it is giving its message of the heroism of serving the ignorant and the helpless. Faneuil hall, the old South church and the old statehouse are among a number of buildings whose value to Boston cannot be estimated in money. Last year at the old statehouse, besides Bostonians, 10,564 persons were registered from various parts of our own country, and 477 from other lands. All such places are permanent educational institutions, impressing their lessons on the character of the rising generation of the city and extending their influence through the entire country.

But Boston has been prodigally wasteful of its historic assets. It threw away the Hancock house. One must search diligently to find where the old Province house stood. The old First church, Trinity, Winter Street and many other historic churches-who knows where they stood or what they did to make Boston what it is? And now Park Street church is about to follow its predecessors into oblivion. Much of what the institutions of Boston have been and have done must be forgotten if their material abiding places disappear. These places are a rich asset, not of a denomination or a party, but of the whole city. The loss of them is a loss to coming generations greater than their fathers can appreciate. It is time for Bostonians to unite for the preservation of the most valued possessions which they hold in common.

Proof Positive. Stranger-Have you a good catarrh.

cure? Druggist-Yes, sir, I have the very

thing you want. "Can you recommend it?"

"Sure. I have catarrh myself, and I've used nothing but this preparation for nearly 20 years."-Chicago Daily News.

Epiteptics in the States. There is now some sort of special provision established for the epileptic class in 19 states. In each of these institutions adequate systems of segregation, occupation, and education of the patients are in course of more or less complete installation. -Indianapolis News.

BETTER THAN BLOODHOUNDS.

Apprehending Fugitives from Justice.

A great deal has been said and written lately about the arrest of the supposed safe crackers in Union county. Some are disposed to give the bloodhounds credit, while others boast upon the superior service of Union county officers. Of course, the bloodhounds should have all the credit due them in the chase, and no one will deny that it takes nerve to face the deadly fire of such desperadoes as those in Monroe jail, and our offcers deserve congrutulation-deserve a continuance in office as long as they are so faithful and true to the trust reposed in them. But the most important thing that makes Union county a net that entangles criminals and puts them behind the bars has scarcely been mentioned in this connection. I refer to the extensive and superior telephone service in our rural districts, says a correspondence of the Charlotte (N. C.) Observer. A few minutes after these desperadoes opened fire upon the officers at Monroe, just before daylight, the news was tronsmitted by telephone to the neighborhood exchanges, and in a few minutes more it reached every nook and corner of the county. Everybody was then on the lookout and ready to spot any stranger or suspicious character that might be seen in the community, and they were therefore enabled to assist the officers in getting quick information in regard to the whereabouts of the eriminals.

It will be remembered that the Marvin safe crackers who were convicted in Anson county criminal court, and sentenced to the penitentiary, were arrested at Marshville, on the west-bound train which was due here about nine o'clock at night. About 15 minutes before the arrival of the train the central received a telephonemessage from Sheriff Gaddy, of Wadesboro, saying: "Arrest the men that got on the train at Lilesville." There was no time to lose. Some of those who assisted in the arrest were in bed, but when the train arrived they were in the car almost by the time it stopped and covered the desperadoes with revolvers and forced them to surrender. Does anybody believe that these criminals, or those at Monroe, would have been arrested without the use of the telephone?

Some time ago, at the request of the publisher of the Progressive Farmer, the writer submitted an article on "rural telephones" and their advantages. Among the benefits of the general establishment of the rural telephone system we noted that one of the benefits would be the tendency to lessen terrible crimes over the country, inasmuch as it would render it almost impossible for a criminal to escape. My claim for this advantage has been abundantly verifled by the arrest of six safe crackers-desperate and cumbing characters-in Union county.

With ten telephone exchanges, two others being established and between 300 and 400 telephones in the country districts. Union county is far in advance of any other county in the state in rural telephones, and the system is growing every day at an increased ratio.

ANOTHER BRITISH KING.

One Who Rules with His Queen Over an Island Containing Seventy-Seven Subjects.

Another sovereign besides King Edward rules within the British isles. His kingdom is Bardsey Island, situated three miles south of the Carnarvonshire peninsula, in Wales, where he rules with autocratic sway, says London Tit-Bits. The inhabitants number 77, including the king and queen, the former being the direct descendant of a long line of monarchs who have reigned in the island from time immemorial. The language spoken is an archaic form of Welsh. and is totally unintelligible to the people on the mainland.

The king, in the intervals between regat duties, acts as doctor, schoolmaster and registrar of births, marriages and deaths, and does not consider himself too important to dig potatoes and gather crabs when oceasion requires. He owes no allegiance to Englard, and consequently pays no taxes. The people live on home-grown barley bread, butter and milk, while the rocks afford an inexhaustible supply of crabs and lobsters, which they are glad to retail to the wandering stranger for the small sum of one penny each.

They know nothing of the outside world, as newspapers never penetrate to their isolated kingdom. The area of the island is about 370 acres, and on the southeast side there is a small harbor which will admit vessels of about 45 tons. In the quaint cottages manny exquisite examples of old Welsh carvings are to be found, and the beautiful ruins of the Abbey of St. Mary are of particular interest to the antiquarian.

Uncle Renben Sayn: It's a mighty good feelin' to walk around wid de consciousness dat we aum a heap better dan our fellowmen, but somehow it allus happens dat a mud-hole gits in front of us an' we have to take our chances wid dewicked.-Detroit Free Press.

Quite l'ossible. Mr. Casey- Th' ancients, Kelly;th' ancients used to calkilate time be th' sun!

Mr. Kelly-Sure, Oi don't belave thot. How would they know phat toime to close th' front door av th' saloons?--Puck.

WEEPS WHILE HE WORKS.

THE POSSESSED IN THE PROPERTY OF the Faster as His Business Increases.

A young man-a mere youth-still within the enchanted circle of years where unreal things seem real and the glitter of life is dazzling -- site weeping day by day in a Boston garret. Now and then he has half a mind to give the whole thing up. Then he goes to the window and looks out awhile, only to go back and weep, says the Transcript of that city. And on these sad days when the sodden air settles down like; a wet blanket. he closes his window. goes down the long, steep, darkened stairway into light, still weeping. He is an artist; yes; but an artist in horseradish. He it is who supplies the botels and restaurants with borseradish-real horseradish, pothalf turnip-and he who scrapes and grates horseradish must meeds werp. Up in herseradish kingdom the windows are curtained with the dust of time and the brown light peculiar to the garret softens into mellow tone the old rafters and shelves. Within its old walls one expects to see a man as encient as the color of the walls, with the light of his eyes as dim as that of the windows. Only have been se and and bowed with with hair as dull as though the dim light of the attic had stained it. For years and years he patiently scraped and ground, his patrons increasing from few to many. One day he began to speculate over a helper. Soon a boy was becoming a master in horseradish, and when the old man died the young man held his secrets. That is how it is that the young man; after canvassing the hotels and restaurants each morning for orders, returns to his attic to meditate and weep as he grates on the eternal-

Once the work was done by hand, but increase in business has made imperative a machine in the very apex of the roof, which can grind 150 pounds an hour, a quantity which would take a whole day to grate by hand. When the machine is going full blast on a humid day this little peck of an attic becomes a torture chamber with the fumes, and there is nothing for it but to close the window, lock up and seek the open. All our best horseradish comes from the middle west. Perhaps its soil is especially adapted to horseradish; perhaps the central state farmers are more skillful in culture; but this young merchant, though blindfolded, can instantly tell if a piece comes from New England or the west. The New England root does not hold its strength as long." Horseradish raising has become a very profitable business in certain sections of the middie west, whose farmers realize ashigh as \$300 an acre for this crop. The western horseradish root is well developed with few nits while the wild horseradish must be scraped by hand with the right sort of knife.

grind of life.

Each morning, with a wooden bucket on each arm, the horseradish merchant goes forth to his hotel trade, while the orders for private families are delivered in glass. One class of customers comes to him, men taking the horseradish cure for rheumatism. When sweet other is in season these sufferers hobble up the stairs to drink deep of cider in which horseradish has been mixed. The horseradish merchant declares he is no medicine man, but he says the men "do say" it does them good.

The busy months of the Horseradish grinders are those of the oyster. Every month with an "R" means horseradish, right in the center of a half dozen choice blue points, with ice and lemon. Trade is dult in the months without the "R," but, unlike most merchants, it is only when trade is bad that the horseradish man ceases to weep.

Origin of Weeping Williams.

"Did you know that all the weeping willows in this country are descended from a twig planted by the stepson of George Washington, at his place. at Abingtion, a few miles from Mount Vernon?" asked a tree lover, who has just returned from these inveresting estates. "It was this way: Young Custis, as a member of Washington's military family, sometimes carried messages, under a flag, between the belligerent commanders. In this serveice he became acquainted with a young British officer who, like others, had come over with an impression that the 'rebellion' would be speedily crushed out, and that he would then settle on the configurated lands of the rebels. He had even brought a twig from the weeping willow near Pope's villa, at. Twickenham, carefully wrapped in oiled silk. As his visions of a castle in America faded away he gave a twice to John Parite Custis, who, on his return to Abingdon in the spring, plant, ... ed it near his house. logrew and flourished. Just how it multiplied may be ! noted from one end of the country to the other."-Philadelphia Record.

Phyllos Was from Missouri. Phyllis So you were once pursued; by the Boers?

George (Phyllis' bashful lover, just returned from South Africa) - Yes, 20 ' of us were chased an entire day by a commando.

"And you received no injury?" "No, we cluded them, but it was a pretty Tight squeeze."

"A what?" "A tight squeeze."

"What's that?"

Momenta.

"You don't know what a tight squeece is? Well, er that is to say a · blese me. You know-I- er-think jt's about time you did know. I-erwill give you an illustration."-Spare

L'ABEILLE DE LA NOUVELLE-ORLÉANS