Recent observers have found that plumb lines for accurate work should be of copper or bronze. A steel wire in a deep shaft was slightly deflected by the earth's magnetism.

In his latest researches Professor Cyrie has found that radium keeps its own temperature at 1.5 degrees C. above that of the atmosphere. This paradoxical substance emits more than enough heat to melt its own weight of ice, yet there is no combustion nor chemical nor molecular change.

Peat fuel in freight locomotives in Sweden has hauled the maximum load, the cost being about the same as with English coal. To ayoid the expense of an extra fireman, however, the peat is now mixed with an equal weight half of the world's product of ivory of coal, and the mixture has proven nuts and nine-tenths of the vegetable so satisfactory that it is to be tried ivory is manufactured into buttons, on passenger trains.

A new form of safety lamp, giving no heat and possessing no flame, has been invented by Professor Hans Molisch, and described before the Vienna Academy of Sciences, but it may not prove commercially successful. It consists of a glass jar lined with a compound of saltpeter and gelatine, in which a colony of luminous bacteria is caused to develop. Such a lamp gives a bluish-green light, sufficient to render coarse print legible, and to make faces recognizable at two yards' distance, and the luminosity lasts for

An English invention for the use of a current of electricity instead of steam to heat a radiating surface consists of a layer of powdered carbon, placed between enameled iron plates, and kept in position with asbestos cardboard. This constitutes the radiator, into which are led three copper strips, one at the center and one at each end, and a continuous current of electricity is passed from the center strip to the end strips. With a current of eight amperes, at 200 volts, future be discontinued altogether. a heating surface of 25 square feet can be kept at an average temperature of 190 degrees Fahrenhelt.

A new kind of glass that resists great heat as well as sudden changes of temperature is made from Brazilian quartz pebbles. The pebbles are heated red hot and then thrown into distilled water. The purest pieces are present the quartz glass is chiefly employed for making laboratory appara- after no legal claim. tus. Into a test-tube made in this Nowadays the coronation does not without breaking it. Vessels of other forms can be heated white-hot and then plunged into cold water without cracking.

Records are now being searched for notices of the rare white water, or phosphorescent fog. of the Indian Ocean and other seas. This appears as a weird haze, but proves to be a luminosity without mist, and it has been encountered as an ocean river a mile wide and as a broad area through which a vessel sailed fifty miles without touching the limits. One observer found the sea to the depth of a foot to be densely packed with luminous time microscopic animals were obtained in chains three inches long. The phenomenon has been seen before violent storms, and it has been suggested that some unusual atmospheric conditions may drive the luminous ocean animals in shoals to the surface.

BUTTONS ON BUSHES.

Strange Nut from Which Buttons Are Made in Great Numbers.

No, the ivory buttons you wear do not represent the death of an elephant in the wilds of Africa; your pearl buttons were probably never nearer than you took them to the shell of a bivalve mollusk, and the probabilities are that no rubber tree was ever tapped to produce the hard rubber buttons that adorn your overcoat. Down in Central America there is a fruit producing palm that has quite metamorphosed the button business and formed the nucleus for one of the most important industries in the United States. The seed of this fruit contains a milk that is sweet to the taste and relished by the natives. The milk when allowbecomes indurated and turn into subused in America, whether fermed with talk. Leave was granted, ivory, pearl, rubber, horn or bone, probabilities are that your buttons are | whole party of Americans defiled slowgrow on bushes.

The ivory plant is one of the marvels of the age, and is rewarding its bound by the contract. She steod still growers with vast fortunes. The nuts | for a minute, and shouted: "Leo Tolare brought to the United States by stol, Leo Tolstol, all your noble the shipload and hauled across the writings have had a profound influence continent to the big button factories, upon my life, but the one which has from which they issue forth in every taught me the most is your-." Here conceivable design, color, grade and she forgot the name of the work, classification of button.

The ivory plant has recently been buttons. It is believed though, that by me." with the proper cultivation the fruit would be as valuable as the Central American. If so the growing of but- peculiar-looking things? tons in America would become an industry of importance second only to the closets of flat dwellers .- Judge.

the growing of corn, wheat and cotton, for everybody wears buttons.

The best ivory nut for commercial purposes is found on the banks of the River Magdaleria, in the United harvested several times a year by the

ers' authority on everything that people wear, says: "The ivory nut is used almost solely in the manufacture of buttons, though some factories also make poker chips from them. The nut, however, has superseded the in vogue formerly. It admits of wid purpose than any other known sub stance, and is easily worked. The United States consumes more than one

"When the nut reaches the button factory it is cut into three slabs. In the process of cutting out, the button is partially shaped. Afterwards the thread holes are drilled and countersunk. The button is then sent to the polisher, who uses the shavings and powder made in drilling to polish them in their white state. Afterward they are sent to the designer, who traces on the buttons in indelible dyes the designs needed to make them match the various weaves, coloring and textures of fabrics. After receiving these outlines, if the buttons are to remain smooth and receive another the pattern desired."-Popular Me

CROWNING IS UNNECESSARY.

Plenty of Monarchs Reign Comfortably Without the Ceremony.

The suggestion is made in certain high quarters that the coronation-un less privately performed-should in

There are various potent reasons for this. In the first place, the sovereign in these days does not require coronation. The fact of his being on the throne is sufficient justification for his sovereignty. In the old days, before the ceremony became a mere religious function, as at present, it was regarded as essential to crown the king before next selected, and welded with the his right and title could be looked upon oxyhydrogen blow pipe into long stems as unquestioned. He was then actuvessels of any shape can be made, At people as the rightful sovereign, against whom all pretenders had ever

way a white-hot coal can be dropped even serve the purpose of symbolizing two mules, just in front of another kingship. That fact is assumed by the accession ceremony following the death of a predecessor. That the coronation ceremony is not now regarded were obliged to turn aside and make in the same light as heretofore is at | way for this cavalcade.-Century. tested by the fact that most of the reigning kings of Europe have never CHICAGO GIRL WINS FAME been crowned.

The kaiser, who has now been or the throne for over twelve years, will probably never have the crown, either of Prussia or Germany, placed upon his imperial head.

There is a story prevalent on the continent that the bishop of Posen whose predecessors have crowned Prussian kings for many generations fishes an inch long, while at another is persona non grata with the kaiser and that as long as the present bishop lives the sovereign will not allow him to perform the ceremony; but there is also a belief that the kaiser is not particular whether he is crowned or not, so long as he is on the throne firmly and irrevocably.

Victor Emmanuel, king of Italy, has not been crowned; nor has Queen Wilhelmina of Holland, who, though her coming of age was generally mistaken for a coronation, has not yet had her crown placed on her head.

The same is true of the king of Spain, whose coming of age and accession were not an actual coronation The sultan, who is now one of the longest-reigning monarchs in Europe, don Express.

Tolstoi's Little Joke.

An old friend of Leo Tolstol, writing to the "Novoe Vremya," related an incident which occurred in the novelist's recent visit to the Crimea, says an exed to remain in the nut long enough change. A rich American arrived in stance as brittle and hard as the ivory friends, and asked permission to see from the elephant's tusk. The plant the great Russian, who was ill, promthat produces these nuts is called the island that they would be content with ivory plant. Most of the buttons now a glimpse and would not trouble him

Tolstoi sat upon his balcony, "like come from this lvory plant. Thus the a Buddhist idol," as he said, and the made from a vegetable milk, and they | ly and silently before him, taking their

gaze as they passed. One lady, however, refused to be

The sick author leaned over the rall of the balcony, and whispered with discovered in California, but the nut a smile, "The Dead Soris?" "Yes, it produces in its wild state is of in. yes," she replied. "That book," said ferior quality and will not make good Tolstoi, "was written by Gogol, not

> Their Identity. Inquisitive Party-What are those

> Dealer-Pressed family skeletons for

WHEN A SULTAN TRAVELS.

a sleade of the Sultan of Morocco Not an Imposing Spectacle.

In the morning, at 4 o'clock, the bugle sounded to break camp; the foot States of Colombia, where by some it soldiers arose, pulled up their tent is called the Tagua palm. The fruit begs, and were away in the darkness. forms a globular head about twice the Bradually the remaining tents came size of a man's head and weighs from lown, and the throng of Arabs were twenty to twenty-eight pounds. The us the move. The Sultan's tent rehead is a kind of cluster of bulbs, and one sade. A little to one side his minin all contains from fifty to sixty seeds. sters and kaids patiently waited, the The seeds are allowed to dry and are atter forming a large, hollow square, at one end of which stood the minsters, while in front of them a spaci-The Apparel Gazette, the great deal ous blue and gold chair awaited its sacred occupant. Presently the wall opened and he ap-

peared, his mask-like visage turning neither right nor left. With garments twaying rhythmically, he walked to the chair and seated binself. A slave at archaic mud, rubber and bone buttons his side fanned him with a white silken cloth, to defend his sacred muser and more varied treatment for this ter from imaginary insects. He whispered to the slave, who called to one of the ministers. Hurriedly he appeartd, lowering his hood; then, after removing his slippers just back of his majesty, presented himself, and after a short conversation was dismissed. Presently five gorgeously saddled horses were brought before their royal master, who, with a motion of hiand, chose one, the others being taken away, while he rose with great solemnity and mounting, rode to all sides of the square, to be thrice saluted by each body of soldiers. This ceremeny completed, the musicians, armed with oboes and tom-toms, disturbed the atmosphere with a doleful, prehistoric dirge, and the procession was under way. It was nothing but an entanglement of artillery, infantry, flags, horse men, and court officials in a mad riot, coat of coloring, they are put into dye ing its insides furiously, the wheat, straw, and chaff found their channels rated pattern, they are put into a straw, and chaff found their channels pressing machine fitted with dies of spellbound, Behold! they were moving with military precision, a brother of the Sultan at the head, followed by an extremely wide row of mounted soldiers carrying silken standards of

all colors. Then came the artillery, rattling and bumping, and coming to grief often where the roads were bad. Next followed mounted soldiers and a score of government officials, a sort of police. After a short space, riding alone, came the kald of the mishwa (master of ceremonles), very straight and very black, picturesquely hugging his gun

close to him. After him followed four led horses abreast, all richly saddled, for the Sultan's use should he tire of his mount. Then, with some distance intervening, came the Sultan alone, save for six like knitting-needles, from which glass ally accepted by the nobility and the black slaves, who kept up a continual wafting of white cloths in the direction of his face.

> A palanquin containing the blue chair then appeared, carried between row of mounted standard bearers, followed by the minister of war and the important members of the court. All

AS A VOCALIST IN EUROPE



Jane Norin, who recently made successful debut in Paris, where she sang Juliet, is a Chicago girl and the has never had the ceremony perform wife of Secretary Becker of the Ameried, and it is certain that he never will can Chamber of Commerce in Paris, be crowned. There is no crown sym- During the past three seasons she has bolic of Ottoman sovereignty .- Lon sung in the Castle Square Company inder the name of Josephine Ludwig. She received many encores on her first appearance in Paris.

Singers and Croakers.

The extent to which the agricultural portious of the Middle West are now his yacht, accompanied by a party of supplied with modern conveniences may be inferred from the story which follows: There came a ring at the telephone in a farmhouse in Northern Indiana one day last summer, and the farmer himself responded.

"Hello!" he said. "Hello!" said the voice at the other end of the wire. "Can you furnish me bass singer for to-morrow night?"

"A bass singer? Why, yes, I reckon so," answered the farmer, laughing. What do you want one for?" "Because the one we've had up to now is sick. What would be your

terms?" "Well, I usually furnish 'em by the dozen. I won't charge anything for one. How do you want him sent?" "What are you talking about?"

"Who do you think you're talking to? "Isn't this the Indianapolis Opera House?" "No. This is the Barataria frog

farm. This country can struggle along without kings and queens as long as i has a few political bosses.

OLD

FAVORITES ****

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The Courtin'.

God makes such nights, all white an' still Fur 'z you can look and listen, Moonshine and snow on field an' hill, All silence an' all glisten.

Zekle crep' up quite unbeknown An' pecked in thru' the winder, An' there sot Huldy all alone, 'ith no one nigh to hinder,

There warn't no stoves (tell comfort died) To bake ye to a puddin'. The wa'nut logs shot sparkles out Towards the pootiest, bless her,

A fireplace filled the room's one side

With half a cord o' wood in-

Ah' leetle flames danced all about The chiny on the dresser. Agin the chimbley crook-necks hung, 'An' in amongst them rusted The ole queen's arm that gran'ther

Young Fetched back from Concord busted. The very room, coz she was in, Seemed warm from floor to ceiling, An' she looked full ez rosy agin

Ez the apples she was peclin'. 'Twas kin' o' kingdom-come to look On sech a blessed cretur, A dogroze blushin' to a brook Ain't modester or sweeter.

He was six foot o' man, A 1, Clear grit an' human natur'; None couldn't quicker pitch a ton Nor dror a furrer straighter.

He'd sparked it with full twenty gals, Hed squired 'em, danced 'em, druv 'em, Fust this one, an' then thet, by spells-All is, he couldn't love 'em.

But long o' her his veins 'ould run All crinkly like curled maple, The side she breshed felt full o' sun Ez a south slope in Ap'il.

She thought no v'ice hed sech a swing Ez hisn in the choir; My! when he made Ole Hundred ring, She knowed the Lord was nigher.

An' she's blush scarlit, right in prayer, When her new meeting bunnet Felt somehow thru' its crown a pair O' blue eyes sot upon it.

Thet night, I tell ye, she looked some! She seemed to 've gut a new soul, For she felt sartin-sure he'd come, Down to her very shoe-sole.

She heerd a foot, an' knowed it tu, A raspin' on the scraper-All ways to once her feelin's flew Like sparks in burnt-up paper.

He kin' o' l'itered on the mat. Some doubtfle o' the sekle, His heart kep' goin' pity-pat, But hern went pity

An' yet she gin her cheer a jerk Ez though she wished him furder. An' on her apples kep' to work, Parin' away like murder.

You want to see my pa, I s'pose?" 'Wall-no-I come da signin' "-"To see my ma? She's sprinklin' clo'es Agin to-morrow's i'nin'."

Or don't, 'ould be presumin'; Mebby to mean Yes an' say No Comes nateral to women, He stood a spell on one foot fust,

To say why gals act so or so,

Then stood a spell on t'other, An' on which one he felt the wust He couldn't ha' told ye nuther.

Says he, "I'd better call agin;" Says she, "Think likely, mister;" Thet last word pricked him like a pin, An-wall, he up an' kist her.

Then ma bimeby upon 'em slips, Huldy sot pale ez ashes, All kin' o' smily roun' the lips An' teary roun' the lashes.

For she was just the quiet kind Whose naturs never vary, Like streams that keep a summer mind Snowhid in Jenooary.

The blood clost roun' her heart felt glued Too tight for all expressin', Tell mother see how metters stood, An' gin 'em both her blessin'.

Then her red come back like the tide Down to the Bay o' Fundy, An' all I know is they was cried In meetin' come nex' Sunday. -James Russell Lowell.

MONUMENT TO ST. CLAIR.

Daughters of the American Revolution Wish to Honor His Memory.

The Daughters of the Revolution, who have done so much permanently to mark historic spots in the country, are now once more agitating a movement to honor fittingly General Arthur St. Clair by placing a handsome monument over his grave. This is a proper move, says the Philadelphia Inquirer. not because St. Clair deserves to be honored above others who are still without monuments, nor because he was a great general or administrator. He should be honored because in a peculiar way he was connected with our history for a very long period. He was one of the first of "typical Ameri-

Born of a wealthy and titled house in Scotland, he entered the army and served in the "French and Indian war" under Wolfe. Settling in the Ligonier valley, he became one of the wealthiest and most enterprising of our Western citizens. He served throughout the war for independence and, though dens live a man of high qualities, he had many most unfortunate experiences, though he was officially cleared of any blame. The state of A close friend of Washington, he be- to cach a her came thehead of the army, and after get my the way and

given by Washington he was utterly defeated by Little Turtle, involving a disaster which it took years and another Pennsylvanian to retrieve.

As member of Congress, Governor of the Northwest Territory and soldier he had much to do, and though nothing that he accomplished shines brightly in history, he was a man of many parts and deserves recognition. His fall came through his polical convictions. A confirmed federalist, he hated Jefferson, his superior, with an intensity which he cared not to conceal. He used his high office to try to make Ohio a federalist State by cutting it down to half its present proportions. In advocating this he used language which Jefferson could not overlook and was removed from office. This was his fall, from which he never recovered, though he lived long. Losing his property, he conducted a log-cabin hotel while trying to get the State and Congress to recognize his just claims to compensation for property devoted to the service of the country. He died at an advanced age, embittered by his sufferings and the alleged injustice done him while he saw mediocre men gain prominence and power.

He died in the belief that the country was going to ruin, largely induced, no doubt, by the fact that his own services had been rejected. He was, with all his limitations, a man of merit, though perhaps he is known better as the man who made Washington swear than for anything else. The outburst of profanity on the part of Washington, continues the Inquirer, when he heard of the disaster to the Western army is declared by the only auditor to have been almost fiendish in its vigor and sulphurous character. However, Washington recovered his equanimity and is loved none the less because he was very human with all his wisdom.

## MILLIONS FOR A MUSEUM.

New National Structure Will Cost an Immense Sum of Money.

Plans have been completed for the new \$3,500,000 structure that is to be erected for the National Museum in Washington. The regents of the Smithsonian Institution are superintending this work, and it is their idea when the new building is completed to have a complete rearrangement of the exhibits now in the National Museum and the Smithsonian Institution buildings.

The new structure is to be devoted to the scientific collections of the government, the present National Museum building to the industrial arts and the old Smithsonian building to the Smithsonian and National Museum library and art collections. The regents propose that the scientific collection in the new building shall be the finest in the world, and an officer of the institution makes the statement that already many of the branches to be covered have reached a perfection that is not equaled in any other museum in the world, even the great British museum. The chief subjects to be covered are biology, anthropology, geology, zoology, botany and American history. The present National Museum building will be given up to a great exposition of industrial art, including the already immense and unique collection of the museum, and many additions that the regents are planning to secure as rapidly as possible. The museum will be modeled in its scope and general plan after the Victoria and Albert Museum of Great Britain. Among the chief departments will be those of land transportation, boat models, implements of war and electrical apparatus, of which the museum already has rich

collections. The plans for the Smithsonian building contemplate the creation in time of a magnificent library and art gal lery. The scientific library of the institution is already one of the finest in the world. Its scope will be broadened and it will become a much more important unit in the general scheme of the institution. The plans for the art gallery are as yet tentative. The new structure will be 486 feet long and 345 feet broad, with a height of four stories.-Brooklyn Eagle.

Passing of Osage Hedge.

The osage hedges which b rder thousands of Illinois forms are gradually disappearing. This hedge, introduced a half century ago by Professor J. B. Turner of Jacksonville, became very popular, and for many years was a favorite fence, not only with farmers, but with lot owners in the smaller towns, and with the railroad companies.

The high price of fence posts and lumber made the osage an economical fence, also, and in spite of its faults It gradually became extensively used. It held its own until wire fencing appeared. Then it became evident that the caage was doomed. Wire fencing was more effective, was cheaper, took up I ss room and required less care. The railroads lagan grubbing up their hedges and substituting wire. The farmers followed their had, and where there used to be talles of hedge there are only rode of it now.

The us go is still used for wind breaks, but aw m; o the fact it is injurious to year late in near it is becoming a fixed i'e it will probably soon be chand uni utilely.-Chicago Inter Ce and

of upi Valley. If the Mass lov were as suchuselts it I mit tants.

Page do pot

milk."

LITTLE BITES

Mr. Morley's "Gladstone" is promised for Oct. 2. A number of portraits will accompany the text.

Jacob A. Riis has written "The Peril and the Preservation of the Home." It is to be published by George W. Jacobs & Co. of Philadelphia.

The five conspicuous novels last season were written by Gertrude Atherton, Edith Wharton, Charles Major, Frank Stockton and Mary Johnston. They were all five historical in subject and all five written by Americans. Turkey is "looking up" as the pro-

vider of literature. Poetry, short stories and novels are coming out in rapid succession and some of these works are to be translated into French. Achmet Midhat is mentioned as the most popular novelist. Webster's Spelling Book holds the

sale record. In the thirty-five years during which D. Appleton & Co. published this book 31,155,000 copies were sold, and in one year, just after the emancipation of the slaves, 1,596,000 coples were sold.

The forthcoming volume of McMaster's "History of the American People," which D. Appleton & Co. will issue in the fall, has an important monograph on President Jackson, fortified with many letters and hithertounpublished material.

The prevalent interest in the race problem has this season added three novels to the list of negro books-"The Leopard's Spots," "Handicapped Among the Free," and "The Inevitable." The three authors take varying views and paint their pictures in vivid colors.

Houghton, Mifflin & Co. are to pubish "The Flower Beautiful," being an illustrated volume by Clarence Moores. Weed. It is said to be the first book dealing purely with the decorative use of flowers, an art in which, according to the author, the Japanese have been pioneers.

How Methodism may be said to have begun in Susanna Wesley's nursery, rather than in the University of Oxford, so often called its birthplace, is one of the fresh and interesting points made by Professor C. T. Winchester in his papers on "John Wesley," printed in the Century Magazine.

F. Hopkinson Smith styles his new book "The Under Dog." It consists of thirteen stories, chiefly of men and women who have been misunderstood. The Scribners say that in fashioning them the author's sense of the dram# atic and the picturesque is united with an idealized justice and a serious pur-

The just issued index, edited by Sidney Lee, of the monumental "Dictionary of National Biography," is not only an index-it summarizes briefly the wealth of information given in this vast work, so that leading facts may be found in a moment, while precise references to volume and page guide the reader quickly to the fountain head of details.

"The Call of the Wild" is the title of Jack London's Klondike story, to be issued by the Macmillan company. It is said to show a long advance over even the best of Mr. London's previous work and to combine human interest and adventure. It is the same story as Ernest Seton Thompson's "Biography of a Grizzly," except that human beings enter into it more largely as actors in the drama.

David Gray in his "Gallops" estabished the horse as a member of soclety. In his "The Braybrook Baby's Godmother" one of the Century's many stories, even the baby who gives title to the tale plays a part subordinate to the foxes and the drags whose wrongs a charming New York woman tries to right. For Miss Cushing, never having visited a menagerie, thought of drags as small animals needing a champion to save them from cruel fox-hunters: and David Gray's story tells the ludicrous adventures into which her imperfect knowledge and righteous zeal led a houseful of guests.

Where Pulque Is Drunk.

"The pulqueries of the City of Mexico are a unique feature of the life of that country that never fail to catch the eye of the tourist and attract the attention of visitors," said A. S. Chewning, of El Paso, Tex., to a Washington Star man. "There are nearly a thousand such places, and they dispense many carloads of pulque every day. These pulque shops are open every day in the year, and surely present a picturesque appearance. The walls are decounted with the most extraordinary plears, representing bull fights and prine lights.

"The extraction of the pulque from the stems of each is done by hollowing out a sort of curringne end and letting the sap flow into at which it does very quickly. Then it is empired into a gourd, which is each if to the pulque dealer. A plant will plant from three to ten gallans, revers pelane shop in the City of Montes have a name pecullarly its own, but it as idelights of Life, The Sand 'di d'attentier.' 'The Hope, The . The Image of Jesus,' The d a lot of Pulque others of a ... when taken is an ities is intoxicating. ! the principal great trial drink of the is a thin, whitish first, and in other of sour