

**NOTES ON SCIENCE.**

**CURRENT NOTES OF DISCOVERY AND INVENTION.**

**Mexico's Stone Idols—Found Only in Remains of Cities Destroyed Centuries Ago—Another Invention For us in Case of Fire—A Magic Ball.**

**STONE IDOLS OF MEXICO.**  
 These idols are of very distinct types, each locality having its own characteristic forms. The material naturally varies with the class of stone found in the vicinity; some are of granite, some of marble, and the largest number are of volcanic rock, some of hard lava, and others, including the largest, of the soft tufa which is found so extensively in the volcanic regions, and is most easily worked. One small idol, in human form, is of material so light that it will float on the surface of water. They vary greatly in size, the largest being over five feet in height, while the smaller ones do not exceed a finger's length. The great majority are crude representations of human figures, but there are also images of quadrupeds of various kinds, and also of birds. The largest specimen of this ancient sculpture is that known as the "Stone Lions of Cochiti," in which the animals are each six feet long and surrounded by an absolutely circular wall, like some of the Druidical remains in England; but they are carved from the solid rock, and while a most important and interesting relic of ancient fetish worship in connection with the chase, yet they are immovable and cannot be classed among household goods.

As previously suggested, none of these idols are ever found in the ruins of the large number of Pueblo towns destroyed or deserted about the time of the revolution of 1680, and which are those most accessible and usually visited. They only exist in the ruins of cities destroyed centuries ago, while the aboriginal religion was universal and before any destruction or hiding of idols had occurred as a consequence of the introduction of Christianity. It is possible, therefore, says a writer in Leslie's Weekly, with certainty to fix the age of every such stone idol at not less than 300 years, and many of them are, no doubt, very much older. Their varied types not only represent different localities, but different phases of advance in art in the same locality. No more interesting relics of the ancient civilization of America have ever been discovered within the limits of the United States.

**PLANTS MUST HAVE SLEEP.**

All forms of vegetable life must, at regular intervals, be allowed to relapse into a condition of repose or some radical change will result in the form of the plant. A geranium cannot be out all night with the larkspur and look bright and fresh the next morning. Neither can the fir tree neglect its proper sleep to sit up all night with the ash without ruining its health and growing to look a demoralized and disreputable old tree long before its time. In the country the trees and the flowers go to bed with the chickens, but in the city the most moral and well intentioned shrub, the most circumspect and staid trees, will be kept awake by a variety of causes, while an immoral hollyhock or a dissipated elm tree has a short life and a merry one in the great city.

Of the causes which keep the trees and flowers awake nights the botanist says that, in the first place, there is the matter of noise in all its forms and the vibration which goes with the constant activity of city life. Plants and flowers of all kinds sleep best away from the glare, so the lights of a city, which shine all through the night, must contribute to this interference with vegetable sleep. Electricity, independent of its use for lighting purposes, has a bad effect upon plant life, seeming to make trees and flowers irritable and nervous and to break up their constitution. But, above all, a plant must have sleep; so don't wake the geraniums or disturb the slumbers of the sunflower.—San Francisco Bulletin.

**POCKET FIRE-ESCAPE.**

If you ever have attempted to slide down a rope with your bare hands you can realize that it is a difficult feat unless one is well versed in the manner in which it should be performed. The novice who has tried this form of descent will have a mean-



**FRICITION GRIP TO ENGAGE THE ROPE.**

ure of appreciation for the "pocket fire-escape" which the picture illustrates, it having been recently patented by Arthur Oakley of Massachusetts. While nearly every hotel is now protected with ropes, they are practically of little value as fire-escapes without some sort of braking device which will aid the person descending in regulating his speed so as to land gently at the bottom, and this grip is intended

for this purpose. It comprises a split tube of rubber or other flexible material and is adapted to partially surround the rope, the re-enforced ends aiding in securing a firmer grip on the rope. By tightening the fingers around the sleeve it increases the internal friction until the desired rate of speed is attained. It is an easy matter to insert the rope through the split in the sleeve, and when not in use the grip is not too large to be carried about the person or in the satchel of the traveler.

**MAGIC BALL FOR THE CHILDREN.**

If the toy ball shown by the illustration does not succeed in mystifying the children and even older people it will be strange, for the device is intended to roll uphill and down without any visible means of propulsion. The gist of the invention is to mount a motor within the hollow body, as shown, in such a manner that its weight will overcome the force of the spring which, as will readily be understood, will cause the ball to revolve instead of the motor. The latter is pivoted on a spindle extending from wall to wall inside the ball, the spindle being rigidly attached to the sphere. A winding shaft projects in line with the small slot beside the spindle, and when the key is inserted in the slot and the ball held tightly in the hand the spindle and shaft of the key prevent the motor from turning and permit the spring to be wound. When the ball is under way the slot is invisible, and as the mechanism is almost noiseless there is nothing to indicate that the ball is not bewitched, causing much amusement to those unacquainted with the interior mechanism.



**MOTOR INSIDE THE SPHERE.**

**SCIENTIFIC JOTTINGS.**  
 An exposition dealing with the prevention of seasickness is being held at Ostend, Belgium, and a large variety of appliances and remedies are exhibited.  
 In St. Louis the nut-cracking industry gives employment to a considerable number of persons, there being three plants in the city. The nut-crackers are driven by electricity, each nut being fed individually into the crusher. After the shells are cracked the nuts are winnowed by an air blast and the meat is picked from the crushed shells by hand, women and girls being employed for this part of the work.  
 A new process of preparing wood for building is in use in Austria. Green wood is placed in a large wooden trough whose bottom is covered with a lead plate. This is connected with the positive pole of a battery. Covering the wood is a second lead plate which forms the negative pole. The wood is then subjected to a bath in a solution composed of 10 per cent resin and 75 per cent soda. Under the influence of the electric current the sap is drawn out of the wood and rises to the surface, the solution being absorbed by the wood. The operation requires from five to eight hours. The treated wood is allowed to dry for about two weeks, when it is ready for use. The drying can be hastened artificially if desired.

**HOW THE SEA RETAINS LIFE.**

One of the reasons formerly urged against the existence of living creatures in the abysses of the ocean was the supposed absence of oxygen there. It was deemed impossible that any considerable quantity of oxygen could exist at great depths. But recent discoveries have shown that there is no lack of oxygen even at the greatest depths. The explanation is that the cold water of the polar regions, charged with oxygen from the atmosphere, creeps along the bottom toward the equator, from both poles, and thus carries a supply of oxygen over the whole vast floor of the oceans. The surface water moves toward the poles, and so a great system of circulation exists. "Were it not for the world circulation," says Prof. C. C. Nutting, "it is altogether probable that the ocean would in time become too foul to sustain animal life, at least in its higher manifestations, and the sea, the mother of life, would itself be dead."

**GUARDING A TUNNEL.**

Should Italy and Switzerland fall out what would happen to Simplon tunnel? The opening on either side will look like the great doors of some medieval fortress. And they will be fortresses in all reality. Suppose these two belligerents should fall out. They would rush like a whooping plague through that tunnel and invade each other? Indeed they would not. In the little fortresses at each end there will be a man and a button. The man will press the button and bring down the mountain. When the smoke lifts there will not be any tunnel any more. Some 5,000 or 6,000 men will have worked night and day for five years and a half at a cost of 70,000,000 francs—and destruction!—Everybody's Magazine.

**FOR WOMEN AND HOME.**

**ITEMS OF INTEREST FOR MAIDS AND MATRONS.**

**Saving Steps—Valuable Suggestions to a Housewife—A Definite Plan in a Good Thing—Home Fashion Notes—Cooking School.**

**HOW TO SAVE STEPS.**

One of the leaflets in the reading course for farmers' wives, issued by the college of agriculture of Cornell University, is entitled "Saving Steps." Many of the suggestions come from the farm housewives themselves, and more than one of them can be passed on to any housekeeper, says the New York Evening Post. One, certainly, that applies at any time and to all most any one is embodied in the text that more work is accomplished by forethought while mind and body are at rest. "When I waken in the morning," writes this housekeeper, "I do not rise immediately, but I plan the work of the day, and study to see how I may save steps and accomplish as much work. I find that if I go about my work thoughtlessly I travel over the same ground several times when it is not necessary. Before I learned to do this, I would get up suddenly after awakening and at once feel a sense of hurry, which soon became worry, and before the forenoon was over I was exhausted in my efforts to see how fast I could work. Now, when I feel myself getting anxious, I try to relax mind and body and the work goes more smoothly and I accomplish more." Another good suggestion is that bad habits formed in good health are not easily corrected. Needless trips from room to room, and roundabout methods adopted when the necessity to save steps does not seem imperative, are habits that are paid for later—a condition that is true of more occupations than housework. Some purely practical suggestions that any housekeeper may utilize in her own establishment are, among others, that a high stool, to be used when vegetables are to be prepared or dishes washed, saves long standing, and that the use of a tray to carry dishes re-

duces the number of trips. Many private city homes copy the economy of restaurants in this respect, and have large, tin-lined baskets, in which the soiled dishes may be packed in the dining room or butler's pantry. Another hint is that the work of a kitchen should be confined to a small space. The French kitchens are models in this respect, and the apartment kitchens of the city copy them. The average basement kitchen is too large; at least its working center should be confined to a much more restricted place. Cover the tables with zinc, as they are then much more easily cleaned and afford a smooth surface for work; see that the kitchen table is sufficiently high, that the cook need not stoop in standing before it; sinks, too, should be fully waist high to save stooping, and also to prevent the sloppings of water.

**A RECEPTION GOWN.**



In gray popeline de chine, with decoration of brussels lace, and puffings of the material on sleeves and bodice. The belt is composed of three folds of dark gray velvet with little set bows; the same idea is repeated on the stock. The bodice apparently laces with gray velvet ribbon around steel buttons, but in reality opens under the pleat.



**THE FASHION OF DRESSING THE HAIR ON A LINE WITH THE COLLAR IS CAUSING MUCH CONCERN.**

**BUSY WOMAN ON THE BOWERY.**

In the midst of the noisy revelry of the Bowery, a woman sat in front of a saloon in the light of an electric lamp, knitting, the other night. Jeering, laughing, howling, swearing men and women passed and repassed, but the placid expression of her face did not change, says the New York Press. Half-drunken sailors with tawdriy dressed girls lurched against her, but she did not drop a stitch. Bear-eyed men loafed in the doorway and hungry and sullen creatures pursued their ways of wickedness or misfortune, but the woman remained serene of countenance, and her work grew under her busy fingers. She might have been in a country village for all the effect that the notorious Bowery produced on her.

**TAILORED COAT AND SKIRT.**



**Gray diagonal cloth, with velvet collar and buttons, the latter fastening**

through a gray silk cord which follows the jacket edge. New shape in reverse, the leaf pattern; the same idea repeated at wrists. Two circular shaped ruffles on the skirt. Hat of interwoven birds' plumes and velvet folds.

**OUR COOKING SCHOOL.**

**Chili Sauce.**  
 Peel twelve ripe tomatoes and four onions, seed two green peppers and chop all these vegetables fine, then mix. Stir into them four tablespoonfuls of sugar, two of salt, two teaspoonfuls each of ground cinnamon, cloves and allspice, one teaspoonful of ground ginger and a quart of vinegar. Boil steadily for at least two hours. When cool bottle and seal.

**Estufado.**  
 Two pounds of beef (ribs) or mutton, one tablespoonful of dripping, onions and green peppers to taste, four slices of toast, a little black pepper, garlic, vinegar, thyme, raisins, olives, tomatoes.  
 Heat dripping in saucepan, put into it the ingredients (leave peppers whole and mince garlic), cover closely and stew thoroughly. Serve on toast.

**Roast Mutton.**  
 Wipe the leg of mutton with a damp cloth, then wipe dry. Put into a covered roaster, dash a cup of boiling water over it and roast at the rate of twelve minutes to each pound of the meat. Fifteen minutes before serving remove the cover of the roaster and brown. If you do not use a covered roaster baste the meat every fifteen minutes while cooking with the gravy in the pan.

As you grow ready for it, somewhere or other you will find what is needful for you, in a book, or a friend, or best of all, in your own thoughts—the eternal Thought speaking in your thought.—George Macdonald.

**THE TIME TO LAUGH.**

**SOME GOOD JOKES, ORIGINAL AND SELECTED.**

**The Weight Came Back, or the Joke That Was Loaded at Both Ends—His Labor Lost—He Baffled the Raiders.**

**THE BLUFF ENDED HIM.**  
 "In our far country, you are doubtless aware," said the far Western man, "the man who steals a horse can count on being lynched if caught. One morning last year I was told by the foreman of our ranch that one of our best broncos had been run off in the night, and taking three of the boys with me, I soon picked up the trail. The thief rode straight away for twenty miles and then sat down to rest, and as we came up we found him seated under a tree and contentedly smoking his pipe. He made no effort to escape, but on the contrary put on something of a smile and welcomed us with:

"Sorry to have troubled you, gentlemen. I did not intend to ride over five miles, but the blamed broncho run away with me. Of course you've brought a rope along? It's a clear case, and you needn't lose any time."  
 "You stole the bronco?" I asked.  
 "Of course."  
 "And you know what follows?"  
 "Certainly. Let me get my collar off and kick off these old shoes. That limb up there looks strong enough. Let me throw the rope over, please. There it is, and I'll slip the noose over my head. Now, gentlemen, I think we are quite ready. I shall probably do some kicking around, but no more than I can help."  
 "The fellow's coolness knocked us out and we didn't know which way to shape. While we were puzzling over him he smiled and bowed and said:  
 "Have you any reason for keeping me waiting?"  
 "You seem to want to hurry," I replied.  
 "I do, gentlemen, I do. Yes, you will oblige me very much by pulling on the rope."  
 "Why do you wish to change climates?"  
 "Simply because I've lost my nerve and am n. g. In a poker game over at Tulare yesterday I held a royal flush and let a man with a pair bluff me down and rake in an \$80 pot. Gentlemen, proceed."  
 "But we didn't. We caught up the bronco and rode away, leaving the rope behind; but after we had gone half a mile we looked back and the fellow was dangling at the end of the rope. He had hung himself."

**Mr. Sheldon's Preference.**

"I see that the Rev. Mr. Sheldon says he'd rather drink a bottle of red ink than a bottle of beer."  
 "Queer taste, isn't it?"  
 "Never tasted it."  
 "What, beer?"  
 "No, ink. But say, just imagine Mr. Sheldon inviting a friend to join him in a glass of writing fluid! Wonder how he'd drink it?"  
 "I suppose he'd drink it with a chaser of blotting paper."—Cleveland Plain Dealer.

**THE WEIGHT CAME BACK.**

From the Chicago Tribune: He was a gay youth with a pleasant turn of wit and he had a friend in New York on whom he decided to play a joke. He thought for a long time, but the wittiest idea he could conjure up was to send him a telegram "collect," and get his laugh out of what he knew would be his stingy friend's agony when he came to pay the 50 cents charges for a foolish message. He wrote several messages on telegraph blanks. The one he finally sent read like this:  
 "George J. Kelly, Broadway, New York: I am in perfect health. J. Lincoln Reynolds."  
 He sent the telegram and enjoyed



**HE FOUND A CHUNK OF LEAD.**

One day about a month after he had sent the witty telegram the express wagon stopped in front of his house and the messenger brought in a small wooden box.  
 "There are two dollars charges," said the messenger as he put the box down on the table. Reynolds looked at it and saw that it was marked, "Value \$100. This side up with care." He wasn't expecting any package, but he could not resist the temptation of seeing what was inside, so he finally

paid the money and pried the lid off the box. Inside was a mass of excelsior and waste paper. Far down at the bottom he found a large chunk of scrap lead. The piece must have weighed five or six pounds and to it was fastened, by a dainty pink ribbon, a small card. On the card was written the following message:  
 "Dear Reynolds: This is the weight which your thoughtful telegram lifted from my heart. Yours truly, G. J. Kelly."

**MEMORABLE LOCALITIES.**



**Mother Fly—Yes, Willie, this is Mount Terrible and here's the spot where your poor dear papa met his death.**—Chicago News.

**HE BAFFLED THE RAIDERS.**

The success of a raid on an alleged gambling house in a Massachusetts town was foiled by the presence of mind of an attendant of the place, who allowed the dice. Of course this clever trick wouldn't work in some gambling places. Even a Massachusetts throat would scarcely be able to worry down the paraphernalia of a fully equipped establishment. But it was a winner on the occasion named. The bones clicked against the teeth of the attendant, there was a gulp and a wriggle, and the law's myrmidons were baffled! The attendant might have added as he tossed the cubes of chance across his tongue that the die is cast, but being entirely unfamiliar with classic lore, he merely remarked with a skillfully disguised wink that he didn't know nothin' about no dice nohow.

And as the state constable had no warrant which authorized him to raid the attendant's midst, he turned away, leaving the swallower in the throes of a fit of laughter that made the dice rattle at every three.—Cleveland Plain Dealer.

**HIS LABOR LOST.**

Mr. and Mrs. Bixtable resided in an apartment house, but as theirs was the lower flat they exercised a kind of supervision over the little lawn in front. One morning Mrs. Bixtable discovered her husband in the rear of the building engaged in strapping the lawn mower on the handlebar of his bicycle.

"Why, Gerald," she said, "how ridiculous! Don't you know—"  
 "It isn't ridiculous at all!" he retorted. "I've carried heavier weights than this."  
 "But—"  
 "I know what I am doing, Miranda. Don't bother me."  
 She said nothing more. With a vast amount of work he succeeded at last in trying and strapping the implement across the front of his bicycle and started to trundle the machine out to the road.  
 Then he made a discovery.  
 "Why, Miranda," he exclaimed, "it's too wide to go out through any opening we've got!"  
 "I know it, Gerald," quietly responded his wife. "That's what I was trying to tell you."—Youth's Companion.

**Other Books Received.**

"Hirsh's Tabulated Digest of the Divorce Laws of the United States," by Hugo Hirsh. Funk & Wagnalls company, New York. \$1.50.  
 "The Wheels of the Machine," by Charles M. Sheldon. Advance Publishing company, Chicago.  
 "Prairie Breezes," by S. A. Harrison principal of the Burroughs school, Chicago.

**His Last Chance.**

"Marse Tom, you mus' sho' run for governor."  
 "Why so?"  
 "Kaze you done run fer ever' thing else on de top side er de arth, en dey's so many in de race for governor mebbe you won't get beat dis time!"—Atlanta Constitution.

**Bound to Believe.**

"In spite of the lucky stone you carry in your pocket you lost all your money and a sign fell on you and broke your arm."  
 "Yes, but wasn't it fortunate I had that lucky stone? Think what might have happened to me otherwise!"—Boston Traveler.

**Well within the Law.**

"What are you doing there?" shouted the night watchman to the fellow who had broken into a tobacco store.  
 "Well," replied the burglar, "I didn't really think there was any law against a fellow taking a little snuff."—Yonkers Statesman.

**Matter of Diet.**

Simkins—"A scientist says the goat is the most unreliable of all domestic animals."  
 Timkins—"No wonder. A diet of tin-can labels and circus posters is enough to destroy the spirit of truth in any creature."