

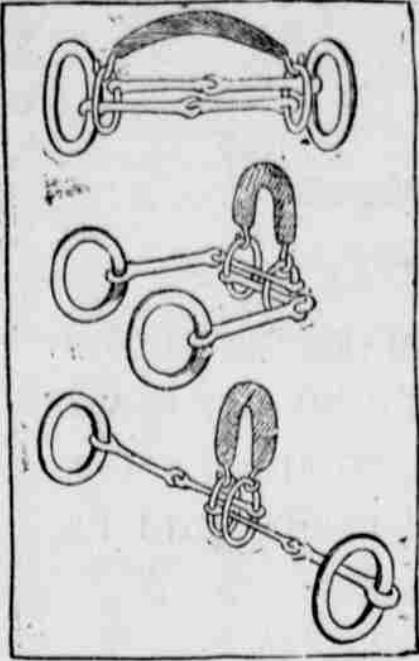
## SCIENTIFIC TOPICS.

### CURRENT NOTES OF DISCOVERY AND INVENTION.

**First Gatling Gun—Its Origin Wrapped in Some Obscurity—Three Eclipses Visible This Year—A Life-Saving Collar—Bit For a Nervous Horse.**

#### Bit For a Nervous Horse.

This new safety bridle is a French invention and is composed of two jointed snaffles and a curb, forming a spring which is placed over the horse's nose without disturbing him unless occasion should necessitate its use. The bit is operated by the reins, or there can be extra or safety reins added. As soon as the horse becomes restive or unmanageable, it is only necessary to pull up a little harder on the reins, when the links slide out and cause a pressure on the horse's palate and tongue and forces the mouth open, preventing him taking the bit in his teeth, and at the same time the curb presses



on his nostrils. The animal loses his free respiration and soon comes under control. The cut shows the bit in its three positions, and explains its operation.

#### First Gatling Gun.

The early inception of the Gatling gun is wrapped in much obscurity. Some French critics claim that their mitrailleuse antedates it, but there is absolutely incontrovertible proof that not only is this not so, but that the French government made strenuous efforts to secure exclusive control of Gatling's invention; failing which their competing mitrailleuse quickly followed the adoption of the doctor's gun by the American authorities, says Self Culture. Some good Christians have claimed that Dr. Gatling invented his famous weapon from humanitarian motives—an argument which has some weight, as we well know that a mob or a regiment even, will very quickly get out of range and danger when once it is known that such a gun is facing them. The doctor himself calls his invention a "peacemaker," but, with the greatest respect to him, I do not believe he had any idea of saving life or anything of that sort in mind while at work upon the gun, whatever he may have thought of since. There was a field for weapons, offensive and defensive, the more murderous the former the better, and from what then existed in firearms and from the fertility of his own brain the Gatling gun was evolved—the first of its kind. His experimental gun was made and tested before military men and experts at Indianapolis in 1862. When the first lot—paid for by Dr. Gatling—was ready for shipment to Gen. Butler, the factory burned and with it his guns were destroyed and his hopes blighted. Another year and many thousands of dollars were spent to remake the patterns and drawings and a new batch of guns—a year of heart-burning, pinching and sacrifice that many of us, at some time or another, have experienced—and therefore one with which we can sympathize. Gen. Butler used some of these guns on the James river, near Richmond, and the way in which their inventor cherishes the records of the execution wrought by them is amusing when one thinks of the humanitarian theories attributed to their origin. In 1860 the government officially approved the gun and, after tests that make an inventor shiver to think of, placed an order for 100. Then not only did the powers of Europe order guns, but so did China, Japan, Siam, Egypt and the South American countries. A machine gun that spread devastation in a swath wider than a company of infantry and fired inch bullets at the rate of 1,200 a minute (to-day, fired electrically, its speed is slightly in excess of 3,000 per minute), was a revelation to most foreign experts and no Christian or other power could long withstand the temptation of mowing down its Christian or other foe at any such rate and by machinery.

#### Three Eclipses.

In this, the last year of the nineteenth century, which, by the way, is not a leap year, though it is divisible by four, there will be three eclipses, two of the sun and one of the moon. The solar eclipse, taking place on the 28th of May, will be visible throughout the United States, and be total from the southern part of Virginia down through Mexico, while north of Norfolk, Va., it will be partial. In the city of Baltimore it will begin at 7:48 a. m. Of all phenomena of nature there is none so profoundly impressive and awe-inspiring as a total eclipse of the sun, and a trip to those regions of the country through which the shadow of the moon will sweep on the 28th of

May is well worth undertaking. It scarcely admits of any doubt that many thousand people of the northern and middle states of the Union will go to see a phenomenon which comparatively few people have ever had the privilege of beholding. The average breadth of the eclipse track will be nearly 60 miles. A second eclipse of the sun will occur on the 21st of November. It will be annular, but not visible in this country. A partial eclipse of the moon will take place on the 12th of June, though it will not be visible in this country.

#### Deadliest Poil on Known.

The discoverer of prussic acid was instantly killed by inhaling one whiff of his own handiwork. Pure prussic acid is never sold or handled. The smell of it is always fatal. It kills not in three minutes or half an hour, but the instant it enters the lungs as a gas. The mixture ordinary sold as prussic acid is 98 parts water to two parts of the drug. Even in this form it is very deadly. A 20 per cent mixture of the acid would kill nearly as quickly as if pure. Atropine, though it has no harmful odor, is so deadly that as much of it as would adhere to the end of a moistened forefinger would instantly cause death. Cyanide of potassium has a pleasant smell, which is not injurious, but a small quantity swallowed kills at once. Pure ammonia, if inhaled, would cause death almost as quickly as prussic acid. When a carboy of nitric acid is broken someone has to suffer. It will burn wood, eat through iron plates and destroy whatever it touches. Such an accident once happened in an acid factory. Everyone ran away, leaving the acid to amuse itself by setting fire to the things. Soon it was seen that the building would be destroyed and hundreds of people thrown out of work, and four men volunteered to put out the fire in the acid room. They succeeded and came out feeling all right. Five hours later all were dead.

#### The Present Aim of Physics.

In his evening address on "The Centenary of the Electric Current," delivered before the British association, Prof. Fleming referred to Hertz's proof that electrical energy could leave a rod in which a rapid oscillatory current was set up, and could travel with the speed of light outwards in all directions. It existed as free radiant or wave energy in the ether after it left the radiator and before it reached the receiver. Both optical and electrical phenomena had compelled the assumption of an imponderable material which could be the vehicle for energy in certain forms. The aim of physical inquiry at the present time was to devise a theory of the ether, such that from the simplest possible assumptions could be deduced the facts of electricity, magnetism and optics.

#### Diamonds in South Africa.

Since the discovery of the first diamond at Reitfontein, in August, 1897, there has been a considerable development of the diamond industry in the Transvaal, and in 1898 the output amounted to 11,025 carats, valued at \$43,151. The largest stone found there this year weighed 38½ carats. The average value of the diamonds in the Pretoria district is stated to be \$3.89 per carat, those found at Kimberley at \$6.33 per carat and those occurring at Jagersfontein, in the Orange Free State, \$8.27 per carat. The area of diamondiferous ground in the Transvaal is very extensive, but its thickness is not considerable. The weight of the diamonds found throughout the Transvaal in 1898 was 22,843 carats, valued at \$212,812.

#### A Life-Saving Collar.



An ingenious Belgian inventor has constructed a life-saving collar that will fit the necks of children and adults. It will keep bodies weighing over 200 pounds afloat.—New York Journal.

#### Scientific Jottings.

Great Britain's Automobile club has adopted a badge made as a pin, button or pendant. It is made up of a ring of blue enamel bearing the club's name, in the center of which is a small representation of Hancock's "Infant," a steam wagon built in England about 1830.

Five new vessels are being fitted up by a couple of prominent ocean liner companies with ice-making and refrigerating machinery. In addition to the usual cooling rooms and ice-making plant, two of the staterooms are cooled artificially. This is said to be the first case in which staterooms have been cooled with the aid of refrigerating machinery.

Two parts of sweet oil and one of water will relieve sunburn.

## FOR HOME AND WOMEN

### ITEMS OF INTEREST FOR MAIDS AND MATRONS.

**Odd and Effective—Dainty Frock for Girl of 12—How to Dress Tastefully—Here Are Certain Rules That Must Be Followed Out to the Letter.**

#### How to Dress Tastefully.

A well-dressed woman stands sponsor for a rule which every woman could adopt with distinct profit to her personal appearance. I cannot quote it, but I can give its idea in words which will be plain enough to follow. A woman can never err in taste if she matches her hair in street attire, her eyes in house wear and her complexion in evening clothes. That is not to be taken quite literally—the hair may be light brown, which will harmonize with various shades of that color. The eyes may be pale blue, but they do not necessitate pale blue dresses, although that shade would undoubtedly prove the most becoming. A pink complexion would not always call for that tint, but for harmonizing shades, although the strict letter of the rule would be safer for those who are confessedly lacking in color judgment. At all events it would save us from many of the sights which daily meet our eyes. When I read a fashion note telling of the popularity of green and blue combined I feel a premonitory shudder at what I am doomed to witness later on. None but an artist can successfully combine violent colors, for certain shades only are capable of a pleasing combination, yet women who persist in following every fashion, however wild and absurd, will evolve startling and hideous costumes which would never have been dreamed of had the fashion not been suppressed. An announcement of the rage of black and white is a different matter, for I have yet to see where these two refuse to blend. Black is a serviceable color, for it serves as a background to all others and will often settle a vexed question of economy. Soft shades are becoming to all, vivid colors are for the few. I heard a young woman object to a scarlet throat ribbon worn by her friend because it took away what little warmth there was in her rather pale face and suggest something more delicate. She was right, too, for scarlet is exceedingly trying when laid against the majority of faces. If it was relieved a bit at the throat with white you would see a vast change for the better. There is much art in dressing the neck. The long throat needs high collars, broad ribbons and many folds, while the short one can stand but a mere line of any of these things. A short collar on a long neck takes away every particle of style from the owner's appearance, and a high one will give a touch which transforms her. This adapting of the fashions to one's own points is a fascinating study if you choose to make it so, and one that makes a woman distinctive. Because a high coiffure is considered the acme of fashion should not be a reason for the woman who is handsome in a low one to change. Such a change might transform her into a very ordinary-looking woman. There never was and never will be a style that cannot be modified to everybody's needs—the manner of doing it is the sticking point. Have you never been puzzled to find just what made one woman stylish and attractive, while her neighbor, prettier, perhaps, was noticeable for nothing but neatness? It might

have been nothing more than the manner in which she pulled down her belt in front or pinned her veil or arranged her necktie. It was undoubtedly some little touch which just suited her personality—she had discovered it and her neighbor had not. Why not? Probably because she never tried; she was content to accept fashions as they came without considering individuality.

#### Dainty Frock For Girl of 12.



Made of slate gray cashmere, trimmed with bands of white cloth, edged with purple velvet. The gumples is of white silk, decorated with purple applique bowknots.

#### Furnish the Kitchen.

It is a mistake to lavish money on drawing rooms and sacrifice the kitchen. Kitchen utensils are of the first importance. The cook cannot do her work well without proper tools and proper environment. A kitchen outfit costs little. New oilcloth for the floor, table and sink is cheap and adds immeasurably to the contentment of the maid. An attractive kitchen bespeaks the good housekeeper. It is easier to convince the servants of the desirability of keeping it clean. Neat tin and wooden boxes with labels are a delightful acquisition to the kitchen closets and much more pleasant to handle than leaky paper bags. Colored paper with pinked edges for the shelves will work wonders for the general effect and a growing plant or two gives an air of luxury which surprises those who have never tried it.—Cleveland Plain Dealer.

#### These Unkind Friends.

"I wonder what made Mabel scream so when she found she was under the mistletoe?" "Possibly her whereabouts was in danger of going unnoticed."—Stray Stories.

### ODD AND EFFECTIVE.



Pale, putty colored amazon cloth laid in double box plaits encircling straps of the cloth, the ends meeting alternately on the front box pleat. White panne velvet, dotted with yellow, wrinkled stock and plain yoke.

## OUR BUDGET OF FUN

### SOME GOOD JOKES ORIGINAL AND SELECTED.

**A Variety of Quips, Gibes and Ironies to Cause a Smile—Flotsam and Jetsam from the Tide of Humor—Witty Sayings.**

#### A Youthful Whirlwind.

A slam at the gate, and a bang at the door,  
And a pell-mell rush through the hall;  
A headlong race o'er the kitchen floor,  
Like the sound of a whirlwind small,  
I catch a flash from roguish eyes  
As blue as the morning sky;  
And my apple-basket is overturned  
And the whirlwind passes by.  
There's a scamper of feet down the garden path  
As a boy and dog disappear;  
But a shout, a bark and a merry laugh  
Come back to my waiting ear.  
I gather up my scattered work,  
With a smile at their noisy joy;  
For what is a boy without a dog,  
Or a dog without a boy?  
But all has grown so hushed and still,  
To the door I wondering creep,  
There, under the apple-tree, down by the barn,  
The whirlwind has gone to sleep.  
—M. E. Sanford.

#### Exception to the Fun.

"Has there been anything of importance in a social way going on since I was here last?" inquired the drummer who visited the Arkansas hamlet of Porkville once every thirty days.  
"Wa-al, no," replied the landlord of the tavern; "nothin' in particular, except that a feller by the name of Huck Buckleby was tar-an'-feathered night befo' last. A big crowd of our best people was present, an' everybody peared to enjoy the affair."  
"You don't tell me!"  
"Wa-al, everybody but Huck Buckleby, anyhow."—Judge.

#### Opportunity to Economize.

"No!" declared Mr. Wimping. "I shall not pay \$3 for the privilege of taking you to the theater. I don't say that I can't afford it, but I claim that no ordinary play is worth \$1.50 a seat."  
"But, John," his wife replied, "you used to take me so often! You didn't seem to think \$1.50 a seat was too much then."  
"Aliecia, don't talk nonsense! We can sit just as near together at home now as it is possible to in the most cramped theater in town."

#### Cautious.

"One word, Emilie. Would you mind if I tell you that I love you to distraction, that I can't live without you, and that I'll kill myself if you refuse to listen to me?"  
"Yes, I should mind, for I can never care for you!"  
"Then I won't say it!"—Lustige Blatter.

#### Wait a Few Months.

"That couple haven't been married long."  
"How do you know?"  
"She goes to the gate with him every morning when he starts for his work, and comes out and watches for his return in the evening—and he's never late."—Stray Stories.

#### The Story All Wrong.

"I called in," said the man, "to say that your story about the fire next door to me was all wrong."  
"All wrong?" asked the editor.  
"Yes, sir! Why, hang it, sir, I spell my name with two 's's', and I make soap, not shoe blacking."—Philadelphia North American.

#### Glad to Hear It.



The Landlord—"Auntie, I will have to raise your rent."  
Auntie—"Well, now, dat's pow'ful good in yo', Mistah McGuire, cos fo' de Lawd, I done giv up all hope uv evah raisin' it m'self."

#### Imitating the Men.

"Yes, they have two mantels in every room in the new women's club house."  
"What's that for?"  
"For the members to put their feet on."  
"The women put their feet on the mantel?"  
"Yes, they are made expressly for them—just 18 inches above the floor."—Cleveland Plain Dealer.

#### Why He Felt Badly.

"You seem much upset, my good man."  
"Hupset! I should think I am hupset. Our blessed kid's just set 'isselt on fire, and blowed if the missus ain't been and put it out with my pot of beer an' me stoney broke, too."—Sketchy Bits.

#### The Main Point.

"Yes, my dear," said a New York man to his 18-year-old daughter, "I wish you would do your best to captivate the heart of our coachman."  
"And elope with him, papa?"  
"Yes, my dear."  
"Ah, I see; you dear, cute papa! You want all the papers to say I am a fascinating beauty and a reigning belle."  
"Well, that would help a little; but that is not the main point."  
"What is it, then, papa?"  
"Why, the papers will all say you are the daughter of a millionaire, and that will enlarge my credit. See? Now, you run out to the stable; that's a good girl."—Ohio State Journal.

#### A Plain Case.



Mrs. Jaggon—"Intoxicated again?"  
Jaggon—"Som' I, m' dear—hic—so'm I."

#### Widened Scope of Education.

"But," we urged, "life is not all joy! Do you do anything to fortify these young persons against the sorrows of life?"  
The preceptress of the seminary smiled a sad, haunting smile.  
"Yes," she answered in a low voice, but distinctly, "we teach them how to weep without making their noses red!"  
Here, again we were reminded how vastly the scope of education had widened since the days of our youth.—Detroit Journal.

#### A Wise Precaution.

"What on earth are you bringing all those umbrellas in here for?" asked Mrs. Van Fashion, as Mr. Van Fashion puffed into their bedroom with an armful of rain interceptors.  
"Why, I thought that reception was due tonight."  
"Yes, and you are afraid the guests will steal them, are you?"  
"Not at all. I am afraid they will recognize them."—Life.

#### In a Circle.

"It is really wonderful," mused the deep thinker, "how a thing or an entity will have its beginning, run its course, and end exactly as it began. You follow me, I hope?"  
"I think I do," said the worldly one.  
"For instance, a man will get a jug. Immediately a jag is developed. Then he may produce a jig, and very likely he'll wind up in the jug."—Philadelphia Press.

#### The Cannibal and His Captive.

The cannibal's captive now had recourse to argument.  
"In a hot country," he urged, "strictly vegetable diet is conducive to longevity."  
"Whose longevity?" demanded the cannibal, with a loud, insulting laugh.  
In the native state, man's sense of humor is often stronger than his sense of propriety.—Detroit Journal.

#### Detected Symptoms of Softness.

"I think I'm making some headway," said the persistent lover, who is not in favor with her father.  
"But I thought the old gentleman kicked you out whenever he found you at the house."  
"He does, but I have noticed that he is not kicking nearly so hard of late. I feel sure that he is gradually relenting."—Stray Stories.

#### Signs of the Times.

"Signs of trouble down in Cuba," read the hat drummer.  
"I noticed it when I was there," remarked the correspondent. "Beer signs were becoming more conspicuous every day."—From the Chicago Daily News.

#### Questions of Diet.

"Are you a vegetarian?"  
"Yes; by proxy. I have always insisted that cows and other food animals should be strictly limited to a vegetable diet."—Washington Star.

#### Training the Baby.

"Oh, ma, come up here quick."  
"What's the matter, Tommy?"  
"Bobby's playing circus, and he's goin' to make the baby dive off the mantel."—Indianapolis Journal.

#### Friendly Suggestion.

"There will soon be 300 electric cars running in New York."  
"People with New York streets to cross will do well to cross 'em now."—Cleveland Plain Dealer.

#### Comparatively Well Preserved.

"Waiter, this steak is badly burned."  
"Yes, sir; but you hadn't oughter make a fuss, sir; that man over there's got one broiled to a crisp, sir."—Detroit Free Press.