

## SCIENTIFIC MISCELLANY.

**The Wind Measured by Its Whistle—Inoculation against Scorpion Stings—A New Skin for Wounds—Real Marble Artificially Produced—Sound-Mysteries of Earth and Air—A Remarkable Fuel—Power for the Next Great Fair.**

How it is possible to measure wind by its sound has been told by Prof. Carl Barus to the Natural Academy of Science. The whistling of the wind as it crosses a wire varies with the velocity, and this can be computed by the pitch of the note observed in case of a given diameter of wire and for a given air temperature. A special micrometer attachment can be made to convey the sound, isolated from other noises, to the observer at a distance. Every gust and variation of the wind can be studied in this way, and an idea of the direction of the gust can be had from the sounds obtained from three wires placed at right angles to one another. Micro-aulometry is the name proposed for observations by this method.

Inoculation with gradually increased doses of venom to induce immunity from snake-bites has proven very successful in late experiments in India, but it is now pointed out that this is probably no new achievement. The immunity of the Indian snake-charmers is evidently due to the fact that these individuals have survived accidental bites from cobras and karits, being thereafter proof against further bites. A Mahomedan fakir, who claimed that scorpions could not harm him, seems to have been similarly protected by a previous introduction of scorpion venom insufficient to kill, and he was seen to be stung by several scorpions after precautions making deception practically impossible, the stings having no apparent effect.

A substitute for natural skin for wounds, which is entirely absorbed during the healing process, is made in Germany from the muscular coating of the intestines of animals. This is divested of a mucous membrane, half digested in a pepsin solution, then treated with tannin and gallic acid.

Chalk slabs are now converted into marble in the work-shop by an imitation of Nature's processes—coloring with mineral stains, and hardening and crystallizing in a suitable bath.

Strange sounds of nature have attracted attention in all ages. Un- taught man gave a supernatural interpretation, and heard battles of the gods, voices of miraculous meaning, the cries of mysterious huntsmen, the barking of dogs of the air. Some of these sounds are becoming better understood. It is to be remembered that waves of sound from a single impulse have the property of putting other waves in motion, thus prolonging the effect and producing a tone from the combined wave-movements. Sweet melodies of the cave of Staffa are due to the pattering of water-drops; the joyous ringing of church bells in a desert is supposed to have been an effect of extreme dryness in vibrating the organs of hearing; the music of harp or organ is in some places—as in Tartary and Sweden—the echoing of vibrations set in motion by wind and sea on a rocky coast; the musical sounds of a rock on the Orinoco begin at sunrise and are ascribed to changes of temperature; the bell-tones of a rock in the Red Sea and thunder-like noises in the region of Mount Sinai are caused by the rolling of sand among the rocks; and voices in the air—like the "Devil's voice" of Ceylon, which passes from place to place on a clear night, sometimes as the bark of a dog, again as a mournful human voice—have been connected with heat or dryness. Accounts of artillery-like sounds have been called for by Mr. G. H. Darwin, the British physicist, who would have their geographical distribution determined as the first step toward systematic investigation. The "Barisal guns" of the delta of the Ganges—dull sounds often heard there, and more or less resembling distant artillery—are instanced; and a letter is given from M. van der Broeck, of the Museum of Natural History of Belgium, mentioning the similar and pretty common phenomenon of the Belgian coast known as "mist puffers," or fog dissipators. M. van der Broeck believes such noises to be widely distributed, but overlooked as discharges of guns. The detonations are dull and distant, usually heard in the day time when the sky is clear and especially toward evening on a hot day; and the noises do not all resemble artillery, blasting in mines, or distant thunder. This observer regards the noises as peculiar electrical discharges; but M. Rutot, of the Belgian Geographical Survey, thinks their origin may be subterranean—suggesting

wave beats of the earth's fluid interior.

A physician asserts that 99 per cent of what are termed colds are nothing more nor less than the poisoning of the mucous membrane by impure air.

Much is expected by M. Paul d'Humv, a French naval engineer, as results from his experiments in the conversion of petroleum and other oils into a solid mass suitable for use as fuel on ocean vessels. By mixing the oil with an ingredient not stated, and submitting the mixture to heavy pressure, he has succeeded in obtaining a hard, homo-geneous substance, that can be made in cakes of any size and shape, that cannot evaporate or cause explosion, that is unaffected by heat and cold, that is smokeless and odorless, and that burns with intense heat and only on the surface. Very little draught is required, and the combustion leaves not more than 2 or 3 per cent of ashes. The cost per ton is stated to be not more than \$5.00 to \$10.00, while it is affirmed that a ton of this material will equal 30 tons of coal. If all these advantages can be realized in actual, every-day experience, the inventor has good reason for his prediction that the new fuel will entirely change the present system of propelling warships and other steam vessels, as well as greatly influence many industries.

The World's Fair of 1900 will require an expenditure of 12,000 horse-power for lighting, according to a paper to the Society of Civil Engineers of France by M. G. Dumont. At the Paris exhibition of 1889 only 1500 horse power was necessary. For showing machinery and apparatus in motion, 350 horse power was used in 1855; 635, in 1867; 2500, in 1878; 5500, in 1889; and it is estimated that 8000 will be needed in 1900. Electric power transmission will be employed. Assuming 70 per cent total efficiency, the required horse-power of the steam engines is placed at 28,000, reduced to 20,000 by alternate use of power during the day for motors and at night for lighting. For the 180 days of the Fair, an aggregate of 38,520,000 horse-power hours will be furnished, at an expense, it is calculated, of about \$1,380,000.

In Berlin, the central stations supply current to 146 motors, using a total of 546 horse-power, for driving printing presses; and to 139 motors, aggregating 834 horse-power, for running elevators.

Liquid air is now an article of commerce, and is expected to prove of value not only for refrigeration but as a source of oxygen. In the liquefaction, nitrogen is eliminated until the product contains 70 per cent oxygen.

## Josh Billings Applied to Gene Field.

The death of Eugene Field recalls the tribute paid by Josh Billings to Artemus Ward when that gentle humorist passed to his long account. It may be fittingly applied to Field:

"Deth has done a cruel thing lately. Deth seldom is imparshall; this is all that can be said in his favor. He moves his sithe all round the world, now in this field, now in that; wheat, flowers and weeds drop, wilt and wither, for he sithes early and late, in city and town, by the hartstun and away agh where the wanderers are.

"Deth has done a cruel thing lately. Deth is seldom kind. Here a father, a mother, a wee small thing, but a month old, on a visit; there Mary and Charley go down in white clothes. Deth mows; menny fields are all bare, for Deth cuts close as well as cruel.

"Deth luvs to mow; 'tis his stile. He is old and slick with his sickle; he mowed for Abel of old and for Abel of yesterday.

"Deth mows strangely; all round fall the daisies and grass, and alone, snarling, stands the koarse thistle left for what! Deth kant tell, for God only knows.

"Deth, you have done a cruel thing lately; you have mowed where the wittiest one of all stood, whose words have gone, laffing all over the world, whose heart was az good and az soft az a mother's.

"Deth you have mowed where my friend Artemus stood, and humor wears mourning now for the child of her heart. I am sad, and I am sorry."

## Free Pills.

Send your address to H. E. Bucklen & Co., Chicago, and get a free sample box of Dr. King's New Life Pills. A trial will convince you of their merits. These pills are easy in action and are particularly effective in the cure of Constipation and sick headache. For Malaria and Liver troubles they have been proved invaluable. They are guaranteed to be perfectly free from every deleterious substance and to be purely vegetable. They do not weaken by their action, but by giving tone to stomach and bowels greatly invigorate the system. Regular size 25c. per box. Sold by O. M. Royster, Drug-gist.

## HOW TO WAKE A DEAD TOWN.

Some Wise Suggestions from a Western Man.

Two weeks ago Mr. T. C. Tipton, of Loudan, Tenn., asked the Manufacturers' Record "how to wake a dead town." Mr. Tipton told of the many natural advantages of Loudan, but pointed out how, from lack of energy and enterprise and because of the work of the never dying croakers, these advantages were not utilized, and how, because of this, the town, like hundreds of others, was to all intents and purposes dead. The Manufacturers' Record published his letter, and asked for suggestions as to how to quicken into life these dead towns that are a curse to themselves and to the country. Without life they furnish no employment, no opportunities for the young, who must either grow up in idleness or seek some new field in which to find a chance to work and live.

Wake up, dead towns, and become a blessing to your people and your section!

From an Indiana subscriber to the Manufacturers' Record we have the following letter, which we commend to our readers, for it tells what enterprise can do in waking dead towns to life and creating employment for their people.

INDIANAPOLIS, IND., August 30.

EDITOR MANUFACTURERS' RECORD:

In your issue of August 23 Mr. T. C. Tipton, of Loudan, Tenn., asks how to wake a dead town. I want to say that I never learned of a town that did "wake up" until every inhabitant took a financial interest in some manner, usually by aiding some factory enterprise, or thorough advertising and continuous advertising, not for a week, but for years in selected advertising mediums. A good medium costs money, but we get what we pay for every time. I believe the Manufacturers' Record has been, and is today, doing more for advancement of Southern interests than all other papers and magazines combined. I take it and read it, and my neighbors come and borrow it, and when they return it one would think it had been used for ten years. As a result of the Manufacturers' Record being in my home, I took an interest in a large orchard company at Marshallville, Ga., called Red Clay Orchard Co. Mine is only one case; for my copy of the Manufacturers' Record has been the means of causing Northern capital to go South to the amount of \$25,000. I am an Indiana man, and so are all my investing friends. Now, there are thousands of dollars of Northern capital lying in the banks and safety vaults not only in Indianapolis, but in all large cities, only waiting a favorable opportunity for investment. But those towns wanting financial aid must first show their own confidence by leading off, then the outside capital will follow. Let me tell your readers that in Indiana in seven years' time there were raised bonuses aggregating upwards of \$1,000,000 in only twelve towns. What did these towns do? Why they gave this money to factories that had capital of over \$20,000,000, employing upward of 20,000 hands, a weekly pay-roll of \$40,000 and an annual output of products exceeding the amount of capital stock. I know a small town of about 1500 souls which wanted a factory, and wanted it badly. A meeting of business men was called, fifteen were present; out of the fifteen a self-constituted committee was appointed on ways and means to get up a subscription. One man who owned 200 acres of land offered to donate forty acres valued at \$10,000. His offer was accepted, the land was platted, and within three days every person able to buy a lot (except an occasional croaker, whom we have with us as well as the flea and serpent in every town,) bought of these 100 lots, and raised \$10,000 in easy payments. Two years ago that town did not circulate \$1000 a month, including every store; today they pay out in wages over \$2000 per week for help alone, and another big plant is building, while new stores and dwellings are going up on every hand. Moreover, every man, woman and child feels the beneficial effects of the distribution of money, and no one wanting work is idle. You say you can't do the same thing, and can't get the factory if you would? You can't do anything unless you try. While en route South last month I noticed many idle "hands" lounging around stores and holding a post down—big men playing marbles, others playing chess, shooting craps—men who looked to me as if they had brains for better business, and should be earning something for themselves and their families. Some say they have no means. Then let a few that have means join hands and start the ball rolling; get your advertisement start-

ed; announce to the world that your town is there, and let every soul that enjoys the town's privileges be instructed to talk out in meeting, in the country, in other cities, everywhere, that your town is awake, and that it is the place to live in and invest money in, and that your people are enterprising and full of push. Sometimes it pays to engage an experienced promoter, but make sure of your man, he can only aid in securing industrial enterprises. While South early this year I had the pleasure of meeting several distinguished gentlemen who are doing what the Manufacturers' Record is accomplishing and advocating, viz, inducing settlers and capitalists to come South. It looks like the capitalists and settlers were doing it with a good will. Gov. W. J. Northen is doing good work, so also is Hon. J. L. Hand, of Pelham, Ga. I believe Senator Hand will succeed in securing the location of a large sanitarium and hotel for his town, Pelham. Judge Joseph Tillman, of Quitman, Ga., is also one of the right stripe to aid the upbuilding of the South. E. M. Rumph, of Marshallville, Ga., is doing great good in settling up his section. But these men are to be admired for the stick-to-it-iveness, which has brought the success that has already crowned their earlier efforts. Let not friend Tipton, of Tenn., or others in other dead towns despair. You lead off and make an effort and try what you can do, as we never know without trying.

I will tell a true story here about an Arkansas town. The people wanted a factory badly, and concluded that a "saw mill and sucker-rod plant" would be the ideal for their quiet place to shake up the dust and pick up the idle and give the idler work, that he might have money to pay his grocery bill. The chairman of the meeting was directed to write to an Indianapolis firm for the cost of a complete "mill." The letter answered; and in a few days a reply came from the chairman that \$800 was all the money the town could raise, and if they had the \$1500 demanded for such a "mill," what in "hades" would they want of a saw mill? I felt sorry for the town, for there were a few enterprising spirits there, and I trust that that kind of luck will not deter others from trying, for where there is a will there is a way. Now get to work and find. G. W. CROSS.

## Phifer's Celery Farm—Irrigation.

One of the interesting things about Charlotte, particularly at this season, is the celery farm of Mr. W. W. Phifer. It is located to the east of the city, between the Carolina central railroad track and the bed of the old Phifer's pond and has been worked up to its present state of perfection only after several years of toil. A feature of this farm is the system of irrigation devised by Mr. Phifer. On this farm is to be seen a practical plan of irrigation and one that can be adopted on almost any farm in Mecklenburg. Farmers who have seen it have been impressed with the benefits of irrigation and it will not be long until the Phifer system will be brought into use in different parts of the county. Mr. Phifer's farm is planted this year in 60,000 plants, and he will have celery on the market Thanksgiving. This is as early as it can be made ready for market in this section.—Charlotte News.

## All Free.

Those who have used Dr. King's New Discovery know its value, and those who have not, have now the opportunity to try it free. Call on the advertised Druggist and get a Trial Bottle, Free. Send your name and address to H. E. Bucklen & Co., Chicago, and get a sample box of Dr. King's New Life Pills Free, as well as a copy of Guide to Health and Household Instructor, Free. All of which is guaranteed to do you good and cost you nothing. For sale at O. M. Royster's Drug Store.

## About the Mysterious Eel.

Good gracious! Just listen here to the Shelby Aurora. This elucidates the eel question:

A large eel weighing nine pounds was brought to Shelby Tuesday by Mr. Stanford Jolly and attracted much attention. Robt. S. Ellis was chosen to skin the eel which he did with dexterity.

Eels are a strange fish, and not without mystery concerning its life-history. The wide gape, long projecting lower jaw, round cylindrical body with flat and long tale, without scales, its stealthy habits and winter somnolence, its blood poisonous to the skin yet not injurious to the stomach, are some of its characteristics. Many do not know that the eel that lies in the mud in the day-time often travels on land and migrates in the night many miles in search of water-animals spawn and carcasses.

## POKER STORIES.

When Denver was but a small place it was the rendezvous for many skilled players. There was a banker there at that time by the name of Cook who had an abundance of cash and who could handle the cards like an expert. Jerome B. Chaffee, at one time United States Senator from Colorado, with two or three others who used to play with Cook a good deal, concocted a little scheme by which they figured they could have a great deal of fun at Cook's expense, and at the same time get a champagne supper out of him. So Chaffee and his companions, who had plenty of money, and who had suffered financially by being caught in a good many jackpots that Cook had opened, arranged among themselves that the very next time they played with Cook they would show him a trick he would not forget in a hurry.

The scheme was to open a pot and if Cook stayed to deal him enough cards to make six in all, and if he stayed on a pair he was to get four aces; then when the pot had reached a good size to call him, make him show six cards, have the laugh at his expense, and, after giving him back his money out of the pot, make him set up the champagne. It generally made Cook very mad to lose a pot of any considerable size and they knew if they made this a large one his wrath would know no bounds.

The day at last arrived when they were all together in Cook's office, and Chaffee suggested a game of poker to while away the afternoon which was a stormy one. Cook readily assented, little dreaming of the good time that was to be had at his expense. The cards were dealt and several hands played around when at last Chaffee opened a jackpot on three kings. Cook stayed on a pair of jacks and called for three cards. He got four aces. It then dawned upon him that something must be up, but he did not quite grasp the situation. Chaffee called for two cards and bet the limit. Cook raised him and they had it back and forth. The others dropped out after several rounds just to swell the pot. The betting continued until at last there was an even \$10,000 in the pot, when Chaffee called him and made him show down his cards. Cook threw four aces and a jack on the table and started to rake in the pot. The one who had dealt objected, stating that he saw Cook have six cards in his hand. The others insisted at once that they saw him have six cards.

"Prove it then," cried Cook, "I did not deal; you dealt, and if you give me six cards, where are they?"

"Chaffee and his companions at once inaugurated the most rigid search for the missing jack. They looked under tables, in drawers—everywhere a card could possibly get. They made Cook disrobe, which he did without objection, and subjected himself to the most rigid examination, but the card could not possibly be found anywhere.

## AN ADMIRAL TALKED TOO MUCH.

Kirkland Must Answer for Indiscreet Expressions Abroad.

Admiral Kirkland, who is now on his way home from the European station which he was recently relieved by Admiral Selfridge, will have to answer certain charges the Department will prefer against him or else suffer the penalty of a court of inquiry and perhaps court-martial.

The admiral was relieved from his command because of his indiscreet statements regarding the Armenian affair, and his letter of congratulation to President Faure, which the Department held was unwarranted and unauthorized on the part of the commander of the United States forces in Europe.

It is also said now that the admiral has been insubordinate in his correspondence with the Department, and has shown a disposition to ignore any restrictions which the naval regulations placed on all officers, regardless of their rank. It is said he has used language to the Department not becoming an admiral.

## Twenty Years Proof.

Tutt's Liver Pills keep the bowels in natural motion and cleanse the system of all impurities. An absolute cure for sick headache, dyspepsia, sour stomach, constipation and kindred diseases.

## "Can't do without them"

R. P. Smith, Chilesburg, Va., writes I don't know how I could do without them. I have had Liver disease for over twenty years. Am now entirely cured.

## Tutt's Liver Pills