



## CONDUCT IN CASE OF FIRE.

The following directions for conduct in case of fire are issued by the British Royal Society for the Protection of Life from fire.

Every householder should make each person in his house acquainted with the best means of escape, whether the fire breaks out at the top or at the bottom.

Inmates at the first alarm should endeavor calmly to reflect what means of escape there are in the house. If in bed at the time, wrap themselves in a blanket or bedside carpet; open neither windows nor doors more than necessary; shut every door after them. [This is most important to observe.]

In the midst of smoke it is comparatively clear toward the ground; consequently progress through smoke can be made on the hands and knees. A silk handkerchief, worsted stocking, or other flannel substance, wetted and drawn over the face, permits free breathing and excludes to a great extent the smoke from the lungs. A wet sponge is alike efficacious.

In the event of being unable to escape either by the street-door or the roof, the persons in danger should immediately make their way to the front-room window, taking care to close the door after them, and those who have charge of the household should ascertain that every individual is there assembled.

Persons thus circumstanced are entreated not to precipitate themselves from the window while there remains the least possibility of assistance, and even in the last extremity a plain rope is invaluable, or recourse may be had to joining sheets or blankets together, fastening one end to the bedpost or other furniture. This will enable one person to lower all the others separately, and the last may let himself down with comparatively little risk. Select a window over the doorway rather than over the area.

Do not give vent to the fire by breaking into the house unnecessarily from without, or if an inmate, by opening the door or windows. Make a point of shutting every door after you as you go through the house. For this purpose doors enclosing the staircase are very useful.

Upon discovering yourself on fire, reflect that your greatest danger arises from draft to flames, and from their rising upward. Throw yourself on the ground and roll over the flame, —if possible on the rug or loose druggot, which drag under you. The table-cover, a man's coat, anything of the kind at hand, will serve your purpose. Scream for assistance, ring the bell, but do not run out of the room or remain in an upright position.

Persons especially exposed to the risk of their dresses taking fire, should adopt the precaution of having all linen and cotton washed in a weak solution of chloride of zinc, alum or tungstate of soda.

**PROFESSOR HUGHES' MICROPHONE.**—The discoveries recently made by Professor Hughes will, the *Echo* thinks, undoubtedly revolutionize the whole art of telegraphy. His microphone magnifies the weakest vibrations into sounds audible to the human ear, and there is every probability that in a short time articulate speech will be transmitted over indefinite length of wire. It is impossible to say now what substances will not transmit vibrations when placed in an electrical circuit—a pile of nails or a small heap of chain taking up the sounds of the human voice, and transmitting them clearly and accurately to a telephone many miles distant. The best results appear to be obtained with charcoal impregnated with a metal—willow charcoal, for instance, raised to a white heat and quenched in mercury. The metal is thus obtained in a finely divided state through all the pores of the charcoal, and vibrations inaudible to human ears are taken up by it and intensified until they are audible from the diaphragm of the telephone, the loudness or volume depending entirely on the capabilities of the latter. The scratch of a pin, the touch of a brush, the chords of a piano, or the tones of a voice, are transmitted with equal clearness, and by the simplest means, for a single-cell Daniell, a bell telephone, line wire, and a Hughes microphone are all the apparatus necessary. As already intimated, it is impossible to say what may or may not be used as the transmitter; for a piece of chain, three nails, a glass tube filled with shot or metallic powder, and a piece of charcoal, plain or impregnated with metal, with or without the tube, have been found sufficient for the purpose; and every day new devices are improvised. It should be mentioned to the honor of Professor Hughes that he has not taken out a patent, but has freely given to the civilized world a discovery the importance of which cannot yet be appreciated.

THE *Praeger Landwirthschaftliches Wochenblatt* contains the following in regard to the cure of rheumatism by the means of bees-stings. The correspondent says:—"That his wife having suffered so much as to be unable to enjoy any sleep or rest for the space of six months, the right arm being almost lame, preventing the sufferer from doing any household work, making her even unable to dress or undress herself, and having heard that a farmer, quite incapacitated by rheumatism, had been accidentally stung by bees, and thereby got entirely cured, he persuaded his wife to try this remedy, as the pain from the sting of the bees would not be greater than that already suffered. Three bees were therefore laid and pressed upon the right arm for a considerable time, in order that the poison bladder of the insects should entirely empty itself. The effect produced was astonishing, as the lady, even on the first night, was enabled to enjoy a long, good sleep, the first time for at least six months, the racking pain being entirely gone. The arm was, of course, swollen greatly in consequence of the sting, but the swelling disappeared gradually upon the application of some cooling lotion. All pain was gone, the lame arm recovered its previous vigor, and not the least sign of rheumatism has ever shown itself."

**FREAKS OF THE TELEPHONE.**—An instance of the telephone's wonderful sensitiveness is furnished by its inventor. He relates how a private wire was established between the houses of two friends, the distance being about two miles. Night after night, one of the gentlemen heard through his telephone the sounds of a piano accompanying songs, many of which were familiar to him. He was surprised to learn that this music did not proceed from his friend's house. Thinking, therefore, that some one had played a trick upon him by attaching an independent telephone at some intermediate point of the circuit, a search was instituted, which, however, resulted in nothing being discovered. Where these phantom sounds came from remains to this day a mystery, but the circumstances have been advertised, together with a list of the songs recognized, in the hope that one of the performers will come forward and help towards the elucidation of the enigma. It is probable that the wire passed over some house in which the music was produced, but how without help it could reach the telephone is impossible to guess. The occurrence of the aurora borealis seems always to disturb its equanimity, for during the display it is said to emit various sounds, but whether appreciative or the reverse is not stated.—*Science for All*.

The *Lancet* says it is discouraging to observe the meagre results of enterprise bestowed by designers and producers of appliance useful in the most helpless stages of sickness. For example, a thoroughly efficient feeder, suitable for use in the case of an adult, does not exist, and expert nurses revive the old-fashioned butter boat. A shaded hand-lamp, of no greater weight than may be borne on a finger, and so contrived that the light will fall at the point required, without assailing the eyes of the patient, is not yet devised. Complicated and costly beds, quite out of the reach of any middle-class family, and therefore available only for the wealthy, or the fortunate inmates of hospitals, alone meet the requirements of cleanliness without discomfort. The like is true of nearly all the apparatus for the relief of pain by change of posture, and for securing immunity from pressure, or steadiness in a particular position. The rich and the poor are provided, but not the multitude in narrow circumstances, with small and inelastic financial resources.

**ONE CAUSE OF INSANITY IN PARIS.**—The immoderate use of absinthe is said to have caused much of the insanity that now peoples the asylums of Paris. The horrors of the siege and the Commune, and the over-indulgence in wines and liquors during those dreadful months, drove many a poor creature raving mad. During the period extending from October, 1870, to May, 1871, the consumption of alcoholic drinks in Paris amounted to five times as much as it ordinarily does during an entire year. The reason of this is simple enough. Food was scarce in the beleaguered city, and liquor was plentiful. People lived for weeks on bread and wine. Fuel was not to be had, so draughts of brandy were resorted to for warmth. Such a regimen, acting on frames enfeebled by want, on minds exasperated by defeat and sorrow, on passions inflamed by scenes of carnage, might well drive a whole population distracted. Hence, I doubt not, came nine-tenths of the disorders and the horrors of the Commune. Paris during that terrible period was literally suffering from delirium tremens.—*Lippincott's Magazine*.

**SANITARY INFLUENCE OF TREES.**—The value of trees in a sanitary point of view in large and overcrowded cities can scarcely be over-estimated. Apart from the sense of relief and coolness which they impart, their influence as purifiers of the atmosphere is almost incredible. It has been calculated that a good sized elm,

plane or lime tree, will produce 700,000 leaves, having a united area of 200,000 square feet. The competent authority above quoted proceeds to show that not only do the leaves absorb deleterious gases, but they exhale oxygen. They must, therefore, be of immense benefit in overcrowded and unhealthy districts. When to this it is added that trees modify temperature, promoting coolness in summer and warmth in winter; also that they purify the soil below as well as the atmosphere above, we have a very powerful sanitary argument for tree planting.—*London Medical Examiner*.

THE RUBIES recently made in Paris by MM. Feil & Frey are described as being so like the natural gems that they cannot be distinguished from the latter by any test. They are hard enough to scratch topaz; they have precisely the same density as natural rubies; they crystallize in the same six-sided system; and their color is similarly lessened by heating them, and restored upon cooling. The chemical and physical properties of the artificial gem appear to be exactly the same as those of the gem as it occurs in nature. This success of the French chemists is the more interesting from the immense comparative value of rubies. A true Oriental ruby of medium size is stated by a writer in the *Nineteenth Century* magazine to be worth ten times as much as a diamond of equal weight. One of thirty-seven carats, brought from Burmah in 1875, was sold on the continent of Europe for \$50,000.

**HEALTH AND TALENT.**—It is no exaggeration to say that health is a large ingredient in what the world calls talent. A man without it may be a giant in intellect, but his deeds will be the deeds of a dwarf. On the contrary, let him have a quick circulation, a good digestion, the bulk, the shews, and sinews of a man, and he will set failure at defiance. A man has good reason to think himself well off in the lottery of life if he draws the prize of a healthy stomach without a mind, rather than the prize of a fine intellect with a crazy stomach. But, of the two, a weak mind in a Herculean frame is better than a giant mind with a crazy constitution. A pound of energy with an ounce of talent will achieve greater results than a pound of talent with an ounce of energy.—*Home Journal*.

A TIMELY WARNING to those about to enjoy the summer luxury of sea bathing, is given in the *Medical Record*, by Dr. Sexton, of the New York Ear Infirmary. He finds salt water to be peculiarly irritating to the delicate membrane of the inner ear, while cold fresh water may be equally injurious. Every year hundreds of people are sent to the infirmary for treatment whose trouble has arisen from getting water into their ears while bathing, or from catching cold in the ears at such times. He recommends, as a precaution, the plugging of the ears with cotton before entering the water, particularly in surf bathing.—*Scientific American*.

IT IS NOT EVERY MAN who can hear with his teeth better than with his ears, but there are two or three employes of the water works who can tell whether water is passing through a pipe by resting the teeth on a stopcock and stopping both ears with the fingers. The operation was performed recently in front of the Massasoit House, where a pipe was supposed to be obstructed. In this case the workman held one end of a small metal rod in his teeth, allowed the other end to touch the top of the stopcock, covered both ears, and quickly said, "I hear a small quantity of water passing through the pipe."—*Springfield (Mass) Union*.

A MAN HAS submitted to Pittsburg, Pa., a novel method of lighting the city. He proposes to erect three lighthouses, one on Nunery Hill, one on Coal Hill, and one on Heron Hill, from which shall be emitted "such a flood of light that anywhere in Pittsburg or Alleghany City a pin could be seen if lying on the pavement in the darkest night." The lights will be so placed that a perfect crossing of the beams will be effected, and every light will neutralize the shadows of the other.—*Evening Post*.

A SINGULAR fact is given in the *Journal de Medicine* of the effect of the habitual use of milk in white lead works. In some French lead mills it was observed that, in a large working population, two men who drank much milk daily were not affected by lead. On the general use of milk throughout the works the occurrence of lead colic ceased. Each operator was given enough extra pay to buy a quart of milk a day. From 1868 to 1871 no cases of colic had appeared.—*Scientific American*.

IT IS NOW well known that if the wire of a telephone be extended parallel to telegraph wires, and supported on the same posts, the clicking of the telegraph instruments will be distinctly heard in the telephone, so that messages passing can be read. This opens a new war utilization of the telephone, as it will be necessary simply to carry its wire near an enemy's telegraph line to read his despatches without tapping his wires.

THE MANAGER of the Jardin d'Acclimation, at Paris, has directed the attention of African

explorers to the zebra, as a beast of burden better suited to the climate than any of the domesticated animals, not even excepting the ass. Several zebras, now under his charge, have been successfully broken in.

In nearly 200 houses in Boston, where there have been cases of diphtheria, it was found that in every case there had been a derangement of the waste-pipes before they entered the sewers.

## DOMESTIC.

A CEMENT for wood vessels required to be water-tight may be formed by a mixture of lime-clay and oxide of iron, separately calcined and reduced to fine powder, then intimately mixed, left in a close vessel, and mixed with the requisite quantity of water when used.

RED SPIDERS are most minute and destructive insects, that increase multitudinously, and voraciously attack abutilons, roses, smilax, and some other plants, and are usually the result of failing health or a dry atmosphere. The cure is repeated spongings; and the prevention is occasional spongings, frequent syringings, and vigorous plant growth. Gardeners employ powder sulphur, painted on the hot-water pipes or on boards, slates, or walls facing the sun—but inside the greenhouse, of course—to help to destroy this pest; but woe to plants and insects alike if the pipes get much more than milk-warm.

COOKERY FOR INVALIDS.—Pick some codfish into small pieces, pour boiling water over it and let it stand fifteen minutes, then pour off the water and cover it with cream; heat but not boil it; add a little pepper and pour it over a slice of toasted bread or a split cracker. Corn-meal gruel is seldom properly made. It should boil at least an hour slowly. If the patient has no fever, more or less cream should be added five minutes before it is taken up. For a convalescent, a handful of raisins boiled in it is a great improvement, and a small bit of butter and grated nutmeg may be added. If sweetened, loaf sugar should be used, but most sick people will relish it better without.—*The Household*.

MOLASSES CAKE.—Two cups of New Orleans molasses; two teaspoons (not heaped up) of soda, stirred into the molasses until it is thick and foaming, one full quart of flour, one and a half cups of warm water, in which half a cup of butter has dissolved, or nearly so. Then add one teaspoon of salt, one-half one of cloves, two of cinnamon, and two of ginger. In making this cake we have often put in three spoonfuls of cinnamon, and a handful of extra flour. We have no hesitation in saying that this molasses cake, when properly made and baked, is delicious. We use paper in the pans, and bake in three cakes, in a brisk oven, making the cakes thus not very thick.

PICKLE GOOD FOR USE AS SOON AS MADE.—One gallon of chopped cabbage, half a gallon of green tomatoes, one quart of onions, six pods of green pepper from which the seeds have been extracted, all chopped fine and mixed. Let it stand for a night, and then strain off the liquor and throw it away. Now the pickle is ready for the fire, when must be put in the kettle with it a tablespoonful of ground mustard, two ounces of ginger, two ounces of cinnamon, two ounces of cloves, three ounces of salt, one ounce of celery seed, one gallon and a half of vinegar. Boil all well together until the vegetables are tender and clear. When this is the case the pickle will be found ready for use.

CLEANING LACE.—A correspondent of the *Christian Union* says:—"These are days when lace is appreciated, and when it is really thought precious. We hold these truths to be self-evident. Lace should never be starched, and most lace needs no stiffening. The best mode of doing it up is that which least displaces the original threads or mesh, or changes the beauty of the work; squeezing or wringing are, of course, out of the question. "I have always found the washing on a bottle the wisest and safest way, using a large bottle for large pieces. Cover the bottle first with old cotton, wind the lace on it carefully, and then cover it smoothly with a piece of plain net; soak and wash, and, if it needs bleaching, or there are any spots in it, lay the bottle in a pan of water sufficiently deep to cover it entirely and set it in the sun. Hardly any spot is proof against this. "The lace will often be in perfect order if left to dry on the bottle after being rinsed, or, if taken off when nearly dry, it may be delicately smoothed with light and careful fingers. "This method is the least troublesome, the most merciful to the lace; and the wisest every way, saving all wear and tear in washing. It is heart-breaking to see elegant lace pulled and starched. Those who are wisest in lace wear it in its yellow state, its color being proof of its age and rarity."