



LIGHTNING ATTRACTIONS.

The numerous casualties by lightning strokes this season have attracted popular attention. The total number for the year may not exceed the average, but it seems larger than usual because chiefly concentrated within a few days. Long spells of hot weather are apt to be diversified by thunder-showers, and there have been in other years frequent instances where for a week or two each day of oppressive heat would close with a brief, sharp rainfall and considerable electric display. But the three weeks of hot weather we recently experienced were singularly free from thunder-showers till toward their close; and then there was lightning enough, all at once, to have served for several ordinary occasions. Exactly why hot weather is apt to be followed by showers with lightning has never been fully explained. A scientific theory was long ago broached, and ably supported, that attributed the disturbance of electrical equipoise to the same cause as that which brings the summer shower, the process of evaporation from the land and sea. But more careful research afterward told against the explanation. It is not clear why the transfer of moisture to the sky should make any change in electrical conditions, unless, so said the scientific authorities, there was a chemical as well as a mechanical change. In fact, while immense progress has been made both in theory and in practical application as to electricity, our knowledge concerning the lightning of the sky is comparatively little advanced since the day when *Eripuit celo fulmen, sceptrumque tyrannis* was written of Benjamin Franklin.

Another unusual freak of recent lightning is the number of strokes in large cities. As a rule, trees and buildings that stand alone, especially on high ground or in open country, are most exposed to this danger; where there are many houses or trees together, the thunder is less likely to fall. Cities enjoy greater immunity also because they are plentifully supplied with good electrical conductors, such as metal roofs and the leaders from them; the net work of rails upon the streets and of pipes beneath them, and we may add, though it is no excuse for keeping them there, the telegraph posts and wires that disfigure our thoroughfares. All such things draw electricity from hovering clouds, but draw it silently, and it passes without shock. This is also the business of a good lightning-rod. Most people imagine that a lightning-rod is to attract and carry down lightning, as such. A rod may have to do this once in a great while; but in nineteen cases out of twenty it ought to be employed during a thunder-shower in removing surplus electricity from the clouds, so that there will be no lightning stroke. Want of correct ideas about this has caused many persons to object to lightning-rods altogether, for fear that the rod would draw lightning.

We published at the time of their issue, a few years ago, in the *Tribune*, a summary of the statistics furnished by a German insurance company that makes a specialty of risks from lightning. They showed very conclusively that the risk to buildings was least where the protection by lightning-rods was greatest, and *vice versa*. A similar result was reached in England in the protection of telegraph poles by lightning-rods. The efficacy of the rod depends, however, upon certain well-known conditions, such as that its parts are well-lapped and welded; its points are bright; its thickness is sufficient for the roof-space it is to protect; and that it terminates in a large mass of moist earth, or metal. Some of these matters are apt to be neglected by unscrupulous vendors of "patent" rods. Ours is not, however, the only country where frauds in lightning-rods are executed. Quite recently one of the most celebrated observatories in Italy was struck by lightning, the chief damage accruing to the rod. Its platinum points were melted. Now platinum does not melt readily, even in the fervid heat of the electric arc. So an examination was ordered, and it was found that the platinum points had contained a large percentage of lead.

But to return to our own recent thunder-showers. They each provided from three or four to half a dozen or more lightning strokes in several cities. Few of these did serious damage, though occasioning great alarm, as in the case of the Insane Asylum on Blackwell's Island, and the building near the Reservoir at Albany, where the policemen were assembled. Primarily we may account for the number of strokes in cities as elsewhere, by the extraordinarily heavy charge of electricity that was present during the shower, as displayed in the rapidity, number and continuance of blinding flashes. But there was prob-

ably a secondary cause in the unusual number of tall flagstaves that had been erected on the roofs of city buildings. Flagstaves, especially when wet, make fair conductors, as far as they go; they stop just short enough to be likely to bring lightning to a point where it can do the most damage. By a good fortune which was scarcely merited, it appears that in the majority of these instances, the greater part of the destructive force was expended on the flagstaves. They were not riven or blown to shreds as trees sometimes are, when all the sap within is turned into steam by a lightning stroke; but what was left of them was so wrenched and broken that they will never serve for another Fourth of July.—*N. Y. Tribune*.

DANGEROUS SOAP.—We have remarked of late the introduction into the market, under high-sounding names, of various strong potash combinations, intended for laundry and cleansing purposes. One of these preparations, which appears to contain more caustic potash than any other ingredient, lately caused the death of a child who accidentally ate some of it; and we have found the same stuff strong enough to remove old hard paint from wood work when merely wetted by the same and allowed to rest thereon for perhaps an hour or two. We advise our readers to let such preparations severely alone; they are ruinous, to clothes, and, except to cleanse kitchen floors or other grease-soaked places, should not be used. Even the ordinary low grade soaps are heavily charged with soda and impurities, which, the manufacturers say, they are obliged to add, in order to hold their own with fraudulent dealers who adulterate still more heavily; and these soaps are also highly destructive to fabrics. It is much better economy to purchase a good quality, even a superior quality, of white soap for household purposes; for the extra cost of the soap will in the end, be more than saved in the lessened wear of clothes or oil-cloths, and of paint. It is hardly necessary to add that strong alkali soaps should never be used on the skin, as their effect is corrosive and harmful. The object of using soap for the toilet is simply to overcome the natural oil which exudes from the body, and render it possible for the water to combine therewith; and a very little of the soap is ample for this purpose.—*Scientific American*.

WHERE THE "SPELLING REFORM" WOULD TAKE US.—It would be easy to have a new and improved method of spelling if all people who speak English could agree upon one method of pronouncing words. Let us suppose, for example, that "historical orthography" were discarded, and a philosophical orthography commenced upon its ruins. How would "horse" be spelled? It is certain that it would have no "r" in it in Virginia, where not one person in a dozen ever uses an "r" in that or any similar word. How would "tomatoes" be spelled? In one place "tomatoz," say in New England; but in Virginia exactly the same pronunciation would call for the spelling "tomartaz," the "r" in such positions in this State being always on an "h." In another locality it would be spelled "tomaytoz." In another "tomatoz." And soon shading off into a hundred differently spelled words. These are but illustrations; but they show how the scheme would work. In a hundred years there would be no two States of the Union which could understand each other's written language.—*Richmond Dispatch*.

BEWARE OF OPIATES.—In order to induce natural and healthful sleep such methods are to be adopted as will abstract an excess of blood from the brain. This may be accomplished by exercise, which draws off the blood to the more weary organs; while a well-ordered digestion demands the blood that keeps the brain in too great activity for the stomach, where it is needed. To sleep well, too, according to Dr. Ferrier, one must, if possible, rid himself of all care, anxiety and disturbing thoughts as the natural season of repose approaches. A brisk walk toward the close of the day, and when the brain has been over-taxed, is commended to us. But Dr. Ferrier warns us, and it were well if he could be heard everywhere and heeded, from opiates as "dangerous ground." They do not produce sleep so much as torpor. If you cannot get sleep by methods which nature itself dictates, he says, it is full time to call in the family doctor.

A WORD TO THE GIRLS.—It is a great wonder to grown folks how slim girls can make so much noise as they do. They don't walk, they pound, as if their business was to wear out carpets. Girls are forever talking about being stylish and genteel, and worrying about an inch or two in the width of their trimmings, or the shape of their hats, as if their standing depended on such things entirely, while they are as coarse and common as can be in their manner of carrying themselves. It is always to be desired that your clothes should be fresh and pretty, but it is of much more consequence that your bodies should be nice, and well trained in their move-

ment. The dress may be something you can't help, but the body and the manner is yours—to be a credit or discredit, as it happens.—*Wide Awake*.

GRASS IN INDIA-RUBBER.—At a meeting of the Asiatic Society of Bengal, in Calcutta, says *Chambers' Journal*, a piece of telegraph cable was exhibited, showing that the india-rubber covering had been pierced by grass. The piercing was so complete, and the contact of the grass with the copper ore so perfect, that "dead earth," as it is technically called, was produced and the efficiency of the cable destroyed. The species of the grass, owing to its dried-up condition, could not be determined. It was suggested as a probable explanation "that the seeds had become attached to the core when under water, and had afterward germinated when the core was stored."

PHYSICAL DEVELOPMENT.—There is nothing of such transcendent importance to a race or nation as *physical stamina*—strong, vigorous, healthy constitutions. How did the Germans, in the late war, gain such signal victories over the French? Why do that people now stand at the head of all the European nations in power and statesmanship? Why do the Germans take the lead at the present time in the cultivation of the sciences, and in almost every department of literature? Is it not owing to their grand *physique* more than to anything else?—*Dr. Allen's Address*.

—Dr. R. Southey, in a lecture reported in the *Lancet*, remarks: "Health and longevity are not synonymous; neither are health and great muscularity. The most muscular men, great prize-fighters, men who could fell an ox with their fists, have been known to be always ailing and complaining about themselves. The state of perfect training, regarded by those who know little of it as a condition of most perfect health, is rather one of morbid imminence. Longevity, like height, is a race attribute, but it does not signify health. The three oldest people I ever knew, women who reached respectively eighty-nine, ninety-eight, and a hundred, were valetudinarians, and had been so nearly all their lives."

—Portions of snow were severally placed by Curter, under precisely similar conditions, in an ordinary glass goblet, in one with double sides, and in another with double sides and silvered. It was found that the times required for melting were respectively as one, three, and ten—a fact explained by the non-conducting character of the enclosed air in the second case, and by the superadded reflecting power of the silvered surface in the third. It is suggested, therefore, that double-walled silvered goblets might be found especially adapted for ice-cream, &c.

—Hollow, iron window-shutters, designed to be partially filled with water as a protection against fire, are soon to come in use. On exposure to fire without or within the building, it is estimated that the thin sheet of water held in the shutters will tend to absorb the heat without injury to the iron. A small hole is made at the top of each shutter to allow for the escape of the excess of water caused by expansion.

—Peanut oil, first made in the South during the war, is now in large demand. It supplies the place of almond and olive oil for various uses, and is lower in price, retains its purity and flavor for a longer time, and is less susceptible to the effect of light than olive oil. The oil is extracted entirely from the meat of the nut by pressure, the refuse being used as cattle feed or a fertilizer.

DOMESTIC.

—The bane of our nurseries is punch and other like drinks for the mother, and soothing-syrups for the child. The alcoholic habit and the opium habit may both be formed in a child before it is old enough to talk. It often drinks in poison from what should be the purest fountain in the world, its mother's breast. Whatever manufacturers may say, the potent constituent of all soothing-syrups is opium in some one of its forms. This has again and again been proved by chemical analysis, from which there is no appeal.

TO CLEANSE A SPONGE.—Put a little powdered carbonate of ammonia in water and lay the sponge in it for a few days, and it will be well cleaned.

MACARONI.—Put one pound macaroni to three pints beef soup; add a little salt; boil fifteen minutes. By that time the macaroni should have taken up all the soup. Take it up, lay on a dish or flat plate, sprinkle grated cheese thickly over it, and pour over all some well-boiled tomatoes strained and seasoned with salt and pepper. Put it in the oven to heat all well together, then serve. Some prefer without the tomatoes, but this is the true Italian way.

FRUIT PUDDING.—Make a crust in the proportion of four ounces of suet to six of flour, a pinch of salt, and water to make a stiff paste, roll it out thin before putting into a buttered

basin, then add the fruit mixed with sugar, except in the case of apples, which are sometimes hardened by boiling with sugar, put on a lid of paste, and boil the pudding an hour and a half. Care should be taken to roll the crust thin, in order to get as much fruit as possible into the pudding.

CLEANING AN OVEN.—To clean an oven, follow these directions: After the fire is out, and the oven is slightly warm, take a large basin of water as hot as you can bear it, and in which an ounce of soda has been dissolved, and, with a clean flannel, thoroughly wash it out. Thus you will remove the burnt fat that gives to dishes an unpleasant taste. Do this twice a week. It is not only essential to see that an oven is well heated, but that it is also kept quite clean. Nothing would taste so the oven were the oven as it ought to be.

MARBLE CAKE.—*White Part*—Whites of four eggs, one cup white sugar, half cup of butter, half cup sweet milk, two teaspoonfuls of baking powder, one teaspoonful of vanilla or lemon, and two and a half cups of sifted flour. *Black Part*—Yolks of four eggs, one cup brown sugar, half cup molasses, half cup butter, half cup sour milk, one teaspoonful cloves, one teaspoonful cinnamon, one teaspoonful mace, one nutmeg, one teaspoonful soda, and one and a half cups sifted flour. Put it in the cake-dish alternately, first one part and then the other. Tin should be lined with buttered paper.

JELLY CAKE.—Beat three eggs well, the whites and yolks separately; take a cup of fine white sugar and beat that in well with the yolks, and a cupful of sifted flour, stirred in gently; then stir in the whites, a little at a time, and a teaspoonful of baking powder and one tablespoonful of milk; pour it in three jelly-cake plates and bake from five to ten minutes in a well-heated oven, and when cold, spread with currant jelly, and place each layer on the top of the other, and sift powdered sugar on the top.

COLD MEAT PIE.—Cut about three pounds of cold roast beef in slices, line the bottom of a pie-dish with it, put a layer of chopped onion, carrot, turnip, a small quantity of savory herbs, and a little seasoning between each layer of beef, and proceed in this way until the dish is nearly full, mash some potatoes, and spread them smoothly over the top; put it in the oven for about three quarters of an hour; a little water should be put in the bottom of the dish to prevent its burning. Cold leg of mutton may be sliced and served

ECONOMICAL BREAKFAST DISH.—When there are only a few bits of meat, and two or three cold potatoes, put some well clarified "dripping" into a skillet, slice the potatoes, cut the meat fine, add salt and pepper to suit the taste. Beat three or four eggs, according to the quantity of meat on hand and the number of the family. If eggs are not plenty use fewer, and add instead half a cup of cream. Beat eggs and milk together and pour over the meat and potatoes. Keep over the fire, constantly stirring till eggs are cooked. Do not leave it a moment, as the eggs and milk scorch easily and this would spoil the whole dish. Meat and potatoes prepared in this way are very palatable.

SANDWICHES.—Chop one-fourth of a pound of cold pressed ham or tongue very fine; add a table-spoonful of chopped pickles, a teaspoonful of mustard and a little pepper. Put about six ounces of butter in a basin, and stir till it is like smooth cream. Then put to this the chopped meat and seasoning. Have your sandwich bread cut in thin slices, spread the meat over the bread evenly, but not very thick and lay over this, in spots here and there, the thinnest possible bits of cold veal, poultry, game, interspersed with occasional strips of fat; dust over a very little salt and pepper, and spread over this another slice of thin bread. When all your bread is thus made into sandwiches, trim the slices in whatever shape you please, but neat and tastefully. These are nice for pic-nics, or parties, and will keep good, under cover in a cool place, from twelve to twenty-four hours.

A NICE WAY TO COOK A TURKEY.—Clean a large, plump turkey, perfectly remove all the pin feathers, singe, wash thoroughly, and wipe very dry inside and out. Now stuff the turkey, leaving plenty of room for the stuffing to swell; sew up with a small, strong cord, or coarse thread. This done, cut with a sharp knife a dozen or more deep but not long gashes in all the fleshy parts. Press a good-sized, plump oyster into each cut as far in as you can; close the flesh over each oyster as much as can be done; draw the skin over tightly, and as far as possible cover up or hide each gash with the skin; sprinkle over a little flour some pepper and salt, and put a little into your dripping-pan, with some water. If you have a grate or bars in your pan to keep the meat from resting on the bottom of the pan, it is a great advantage. Baste the turkey often with its own drippings. Be sure and not scorch it, but bake to a clear, golden-brown.