Good Health.

Wholesome Air.

There are some very interesting facts brought to light in the analysis made in various localities to determine the quality of the air. On this subject an exchange says:

Analyses show that air in open and exposed localities varies in the amount of oxygen, which it contains from 20.4 to 21. The most favorable localities, as on the heaths of Scotland, show the latter; while it is necessary to go underground into a mine to find the former. Well ventilated mines where it is possible to labor, rarely go below 20. These results are delivered from thousands of careful analyses. Cavendish made 500 in the course of his inquiries.

The cursory reader may think that the difference between 21 and 20, and in the per cent. of oxygen in the atmosphere can have but little importance, and is hardly worth inquiring into. It is true that the deficiency named is small when considering in figuring; but when we reflect that while 21 represents the largest amount of oxygen ever found in the best natural atmosphere a candle goes out at 18.50, and life can be barely sustained for a short time at 17.20, the importance of a small per cent. of difference becomes apparent. Even so small a difference as that between 21, and 20.981 is equal to 190 in a million; and if we place imparity in water at that rate it will amount to 13 grains in a gallon. This amount would be considered enormous, if it consisted of putrifying matter or any organic matter usually found in water.

But we drink but a small quantity of water and with such a percentage we might be several days in swallowing the whole 13 grains; whereas we take into our lungs from 1500 to 2000 gallons air each day. Moreover the blood receives such impurities almost entire, very little being filtered out in its passage to the lungs; while the stomach has powers of disinjection and destruction which renders very much of the organic impurities in water harmless. But if we take the air found in the pit of a theater, generally about 20,740, we find that minute analysis becomes a matter of the highest importance.

The senses are bad and inefficient guides to the wholesomeness of air as regards the amount of oxygen and carbonic acid, save when the former is reduced and the latter increased to such an extent that the lungs seem to refuse to expand and the whole vital action is threatened with paralysis. Rooms badly ventilated, which contain less than 20.7 per cent. oxygen, are very unwholesome, and the necessity of taking into consideration the proportion of oxygen and carbonic acid in the sanitary inspection of factories and works is abundantly evident from the results obtained by Dr. Smith.

Mr. Clemson, a French chemist, made public, in 1856, a theory with regard to the presence of living organisms in the atmosphere, so minute as to be almost or quite unobservable by the best microscope, and which organisms exerted a marked influence on health—in fact, were the origin of most diseases to which men are subjected. He also argued that there is phosphoric acid in the air, derived from the successive generations after generations of myriads of these organisms, produced, living and dying in the atmosphere, that such organisms exist and are at work, food for more perfect organisms from the microscopic points of life to the most perfect animal existence. He also entertained the idea that the increased fertility of the earth by being broken up and exposed to the atmosphere, was due to the presence of such animalculæ.

To Keep Teeth Healthy.

It is surprising that so plain a duty as cleanliness of the teeth should be so often entirely neglected. And yet there are people who pride themselves on being scrupulously clean, who forget all about those hardworking servants, the teeth. Dr. Lane has the following with regard to their care:

The great enemies of our teeth are acids. A source of acid is the decomposition of sugar in the mouth, which changes to lactic acid. The saliva of the mouth in its normal condition is an alkaline, and is an excellent preservative. If the enamel is smooth it furnishes no lodging for foreign bodies, but if it is rough, foreign matter accumulates and turns to acid. This, having eaten through the enamel, proceeds inward with a rapid march, and hollows the tooth in a short time if not arrested.

Extreme care should be taken that acids do not remain in the mouth, neither should sugar nor other substances be suffered to undergo decomposition there. The greatest panacea for poor teeth is cleanliness. Thoroughly brush the teeth, not only night and morning, but always after eating. An error frequently made in using a brush on the teeth, is that of drawing it transversely across them, from one side of the mouth to the other. This practice long-continued produce transverse fissures, which finally become so deep that the teeth present an appearance of having been filed into. This transverse brushing also has the pernicious effect of forcing the mucous into the interstices between the teeth. The teeth should be brushed from above downward and from below upward—never from side to side. The inner surface should also be as carefully cleaned, and care should be taken that no particles of food are left in the interstices.

Dark tooth powder should not be used, because it works up under the gums, and discolors the edges. Pure soap is a good dentrifice. A tooth powder, must above all things, be alkaline, and should contain nothing capable of becoming sour, such as the sugar of milk, which is sometimes used. Whenever a tooth powder is praised for rendering the teeth very white, it should be looked on with distrust since it is pretty sure to contain some agent that will attack the enamel. Tooth powder should be so fine grained that when rubbed between the fingers no particle can be felt. As the chief ingredent of tooth powder, there is nothing better than carefully prepared oyster shell or carbonate of magnesia. To flavor it, a small amount of calamus root may be added, which has good effect on the gums. Prepared chalk mixed with a small amount of camphor also makes a good tooth powder.

In the preservation of the teeth, the three following rules should be observed:

1. Careful avoidance of acids and careful cleansing of the teeth with such substances as render acids inert—for example, alkalies.

2. Occasional examination of the teeth, in order that a commencing cavity may be detected in due time and the proper remedy resorted to.

3. Immediate removal of such teeth as are decayed beyond reclamation.

The latest plan for obviating sea-sickness is the following: Construct a large well in the ship; around the center of gravity is the best position for it. This well should have no bottom. The water in it will appear to have a rising and falling motion, but will in fact be at rest, while the walls of the well slide up and down. In this well float a small ship, and you are secure against seasickness. The proposer of the plan calls this "taking a small harbor to sea."

Growing Plants in Sleeping Rooms.

It is a current notion that growing plants contaminate the air of an apartment by the exhalation of carbonic acid during the night. Professor Kedzie, of the Michigan Agricultural College, has been making experiments to test the truth of this view, and gives the results as follows: "Not to leave this matter in the condition of mere conjecture, I have gathered and analyzed specimens of air from a room where the influence of growing plants would be exhibited in a greatly exaggerated form. Thus, instead of taking the air from a room containing a few plants, I gathered it from the College greenhouse, where more than 6,000 plants are growing. I gathered the air before sunrise on the mornings of April 16 and 17. The room had been closed for more than 12 hours, and, if the plants exhaled carbonic acid to an injurious extent, the analysis of air from such a room would certainly disclose this fact. The three specimens of air gathered on the morning of April 16, from different parts of the room, gave 4.11, 4.00, 4.00 parts of carbonic acid in 10,000 of air, or an average of 4.04 in 10,000. The two specimens gathered April 17 gave 3.80 and 3.80 parts of carbonic acid in 10,000, or an average on the whole of 3.94 parts of carbonic acid in 10,000 of air; while the outdoor air contains 4 parts in 10,000. It will thus be seen that the air in the greenhouse was better than "pure country air." This deficiency of carbonic acid was doubtless due to the absorption of carbonic acid and consequent accumulation of oxygen during daylight, since the windows of the greenhouse were closed day and night on account of the cool weather. To ascertain whether the air of the greenhouse had more carbonic acid by night than by day, I gathered two specimens of air in different parts of the house, at two o'clock P.M., April 17. These gave 1.40 and 1.38 parts of carbonic acid in 10,000, or an average of 1.39 parts, showing that the night air contained more carbonic acid than did the air of day. Now, if a room in which there were more than 6,000 plants, while containing more carbonic acid by night than by day, contains less carbonic acid than any sleeping-room on this continent, we may safely conclude that one or two dozen plants in a room will not exhale enough carbonic acid by night to injure the sleepers."

Useful Information.

Sulphuric Acid and Weeds.—A correspondent of the *Journal of Horticulture* (English) writes: "Take an old blacking bottle, with a wire round it to carry it by, and a stick to dip with. The stick should not be pointed, but should be notched round for an inch or two at the end, the better to hold the liquid. Just one drop quite in the heart of the plaintain is sufficient to cause death and the notched stick will contain at one dip enough to destroy three or four plants. If the acid is good, the work of death can be both seen and heard, for the vitriol hisses, and it burns up the plaintain in a moment. A row of plaintains a foot wide sprang up on a lawn here where an iron fence formerly ran. The owner, seeing at a place he visited the good effect of vitriol, put the hint in practice. The plaintains were killed in an hour and have never appeared again. It is three years ago, and it is impossible to recognize the line of the fence; it completely burns the roots out. I have tried it on large dandelions with the same result. One of the young gentlemen here amused himself by hunting out the longest thistles he could find to experiment on; the vitriol completely killed them by eating the roots out. One drop will do. Care is required that it does not touch the skin, boots or clothes; it is not safe in the hands of children, but a man or woman with ten minutes' practice can kill plaintains much more quickly than any lad can eat gooseberries.

Vegetable Glue.—Gum Arabic solutions are frequently employed instead of glue and mucilage, but are objectionable on two accounts. First, they render the unsized paper transparent, and if a piece of common printing paper is attached to any dark or printed surface the color shines through, and beside it does not attach it firmly to other paper. Neither can paper be attached to wood or pasteboard. Paper pasted on metallic surfaces with gum arabic usually separates from it in a short time. As a cement for glass, porcelain and earthenware, it is utterly useless. We are informed on good authority that all these disadvantages are overcome by simply adding an aqueous solution of sulphate of aluminum, two grains of the crystalized sulphate of aluminum being sufficient for 250 grains of concentrated gum solution prepared from two parts gum to five of water. The salt named dissolves in ten times its quantity of water, and is added directly to the gum solution. A solution of alum does not answer as well as the simple sulphate of alumina, which can be prepared from alum by precipitating the alumina with ammonia, washing thoroughly on a filter and dissolving in sulphuric acid. The vegetable glue thus prepared will not, of course, ferment, sour or mold, which will be appreciated by those using it.—*Jour. of App. Chem.*

—one third. Have the double-tree made wide enough to allow space for three single-trees to work well (although only two are fastened to it), and the plow will take "land" enough. Any one who uses this clevis can never be made to use a triple-tree again.—*Country Gentleman.*

Plaster as a Protection from Fire.—After the conflagration in Paris it was generally found that, with good plaster-work over them, beams and columns of wood were entirely protected from the fire. In cases where limestone walls had been utterly ruined on the outside by the flames passing through the window openings, the same walls, internally, escaped almost unscathed, owing to their being coated with plaster. On many such plastered walls the distemper decorations were still to be made out.

To Remove Rust from Finely-Finished Steel.—Rub the rust with any kind of soft animal fat, and lay the articles by, wrapped in thick paper, for two or three days; then, after cleaning off the grease with a piece of soft flannel, rub the spots well with powdered rotten stone and sweet oil, after which the polish may be restored by rubbing with powdered emery, on a soft leather; and the process may be finished with finely-powdered chalk or magnesia.

To Clean Brass Ornaments.—Brass ornaments, that have not been gilt or lacquered, may be cleaned, and a very brilliant color given to them, by washing them with alum boiled in strong lye, in the proportion of an ounce to a pint, and afterward rubbing them with a strong tripoli.

The sand blast is being applied to all kinds of cuttings. It will not only engrave and perforate glass, but all hard substances.

Domestic Economy.

Salt and Milk Rising Bread.

For salt rising, take a half teaspoonful of salt to a pint of warm water and stir in flour enough to make a thick batter. The dish used, which with the spoon should be thoroughly cleansed and scalded, should be a little more than two-thirds full, and set in a warm place until the batter rises so as to fill it. The most common way is to put the dish of rising in warm water and set it where it will keep at quite a warm temperature; but some use a cloth or a paper to exclude the cool air instead of placing in water. The time in which the rising will sufficiently ferment, is usually from five to seven hours, according to the degree of warmth and the kind of flour used.

When "light," take a quantity of flour corresponding to the amount of bread desired and stir in scalding (not boiling) water enough to scald one-third, then add cold water (or milk, which is better,) enough to cool the scalded flour so that it will not scald the rising; put in the rising and stir altogether vigorously until you have a thick batter and put in a warm place to rise. When light and puffy stir as thick as possible with a spoon, then mix with the hands until kneadable, cut off in loaves of a size to half fill your baking tins, knead thoroughly, shape to and put in your tins and again put in a warm place to rise. When the loaves have doubled in size put in a moderately heated oven and bake from one-half to three-quarters of an hour according to size of loaves, and you will have bread as moist, spongy and eatable as fermented bread can be. Bread of unbolted flour can be made in the same way, but is better stirred to a stiff batter and baked in deep dishes instead of being kneaded and baked in shallow tins.

Milk rising and salt rising bread are the same, with the exception that one-half a teacup of new milk is added to the rising for the former and is preferable to all water. As you value good bread and good health, never put ginger, saleratus, or any other useless things that some people deem necessary, into your sponge or rising.—*Rural New Yorker.*

House Vermin.—Cockroaches are the plague of many housekeepers, and yet a little Paris green is death to them. Keep it in a common flour dredging box, label it Poison, and apply it weekly to their haunts. Bed-bugs or chinch-bugs can also be dispersed and utterly routed with this remedy; and both cockroaches and bed-bugs will flee from powdered borax. Travelers should always carry a paper of borax in their bags, and sprinkle it under and over their pillows, if they fear they shall become food to the last named wretches. Sprigs of wormwood will drive away large black ants; and none of them, whether black, brown, or red relish wintergreen, tansy, Paris green, cayenne or kerosene; so if they invade our pantries we can, by a judicious application of some one of these articles, make the premises too unpleasant for them. Fly paper should be kept around the house as early as the middle of May. Put it in every open window, and thus destroy every intruder.

Rice Croquettes.—Half a cup of rice; 1 pint milk; two tablespoonfuls sugar; 3 eggs; a little grated lemon-peel; 1 tablespoonful melted butter; a saltspoonful salt. Soak the rice three hours in warm water enough to cover it. Drain almost dry, and pour in the milk. Stew in a farina-kettle, or one saucepan set in another of hot water, until the rice is very tender. Add the sugar, butter and salt, and simmer ten minutes. Whisk the eggs to a froth, and add cautiously, taking the saucepan from the fire while you whip them into the mixture. Return to the range or stove, and stir while they thicken, not allowing them to boil. Remove the saucepan, and add the grated lemon-peel; then turn out upon a well-greased dish to cool. When cold and stiff, flour your hands and roll into oval or pear-shaped balls; dip in beaten egg, then in fine cracker crumbs, and fry in nice lard.

Tapioca Cream.—Soak two tablespoonfuls of tapioca in just enough water to cover it, all night. The next morning, boil one quart of milk with the soaked tapioca, add two-thirds of a small cup of sugar to it and a little salt. Beat the yolk of three eggs thoroughly, and when the milk has boiled for ten minutes, stir them into it, remove it from the fire, and stir rapidly for five minutes, so that they will not curdle. Flavor it with vanilla; beat the white to a stiff froth, and put over the top of the pudding dish into which you have turned the tapioca; sift sugar over it, and brown for five minutes in the oven; serve it cold. This makes a more delicious dessert than pastry, and can be prepared the day before it is needed.

Tomato Omelet.—Beat up six eggs, mix two tablespoonfuls of flour, with a little butter, and add some salt and pepper. Peel four tomatoes, and chop very fine. Stir altogether and fry. Oyster omelet is made in the same way, substituting a dozen chopped oysters for the tomatoes.

Moths in Carpets.—To prevent moths from injuring carpets, buy half a pound of gum camphor, and that will save all the carpets in your house for a year, by placing a few little crumbs under the edges of the carpets, without moving them.

Waste of Power.

The power needed and the power consumed in wood-shops are two quite different things. The old saying that time is money, is equally and more obviously true if rendered, power is money. It is an element of cost, just like oil, tools, or lumber. Power is, however, a less tangible thing, and because it is not seen and handled, is too often allowed to waste and escape under the notice of those who are rigidly careful in other matters. How common it is in going into a shop to hear the belts screeching on the pulleys, belts running half on the tight pulley when it is standing, or sometimes a machine blocked to keep it from starting, with the belts dragging on the pulleys. All this means waste of coal and waste of money, not by loss of power alone, but by the destruction of belts. If a belt is allowed to rub on a tight pulley, or any other fixed object, it is at once heated and stretched, and as it stretches on one side, the tendency is to draw it more on to this object; if on the edges of tight pulleys, which is most common, its driving power is impaired to the extent that it is rubbed or stretched on its edges, as no contact takes place when it is shifted. Whenever a heated bearing is suspected, the rule is to hunt it up at once and correct it; the same thing should be done with the screeching of belts—whenever heard, look it out, and change the shafting until it runs true. A belt always runs to the nearest end of a shaft, which is just the opposite way from what is generally supposed. The old theory that a belt always runs to the highest part may be true, and is undoubtedly true with reference to the convexity of the face of pulleys, but does not apply to pulleys that are set diagonally to the line of the belt.—*Cabinet-Maker.*