NEW DISCOVERIES ALL OVER THE EARTH

Why Your VACATION In the Country Does You GOOD

IT seems, according to careful recent experiments, that much we have learned of the value of oxygen, of the open bedroom window at night and the poison of carbonic acid gas is erroneous. In the first place, city air and country air are exactly alike chemically; there is not a bit more oxygen in the country nor less carbonic acid gas than in the city.

Even if there were twice as much or even three or four times as much, it wouldn't interfere with our health. These things seem against all reason, yet they are true, even to the extent that our old "enemy," carbonic acid gas, isn't a poison or an enemy at all.

The lungs apparently want to have the air they contain hold just six per cent of carbonic acid gas. The ordinary atmosphere of outdoors in the city or country carries less than one per cent. If the carbonic acid gas is artificially decreased in the atmosphere the lungs at once breathe more slowly, so that they give out the gas with less speed and let it accumulate to the desired six per cent. If the carbonic acid gas is allowed to accumulate in a room the lungs breathe a little faster, but nobody notices it if the percentage is doubled or trebled. When it is increased to six times the normal amount, or the same as the lungs themselves contain, then the breathing becomes labored and exercise causes distress.

In the same way all sorts of liberties may be taken with the oxygen contents of the air and no disturbance is caused. So it isn't the oxygen we get nor the carbonic acid gas we avoid that does us good on our vacation outing.

Experiments have been made in an air-tight room in which half a dozen young men were confined. The oxygen was reduced and the carbonic acid gas increased until the young men found they could not light matches and their cigarettes went out.

They ceased their laughing and became uneasy, remarking that the experiment had gone far enough. Sweat poured out upon their bodies and they were obviously in distress. One of them demanded oxygen, saying they were all choking.

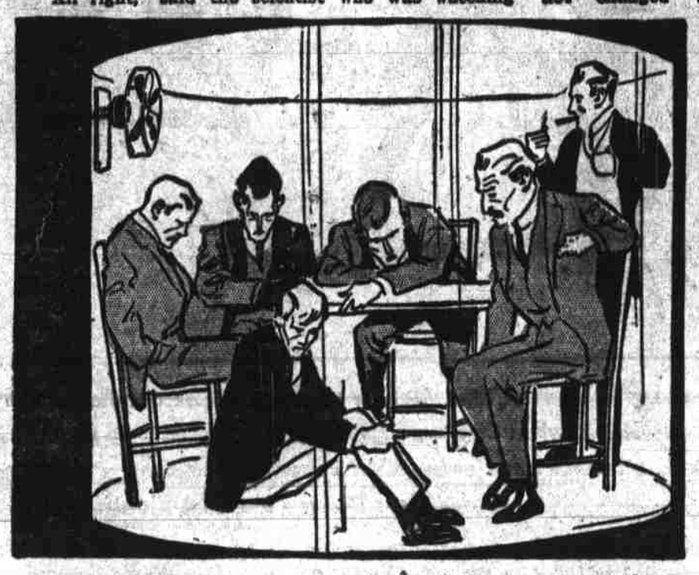
"All right," said the scientist who was watching them through a glass window. He pressed a button and started a powerful electric fan in the top of the air-tight room. This drove a column of air down upon the group of sweating, choking men.

At once they felt comfortable and returned to their laughing and joking until the end of the experiment. They were all convinced that the scientist had driven in some oxygen gas or at least some fresh air when the electric fan started.

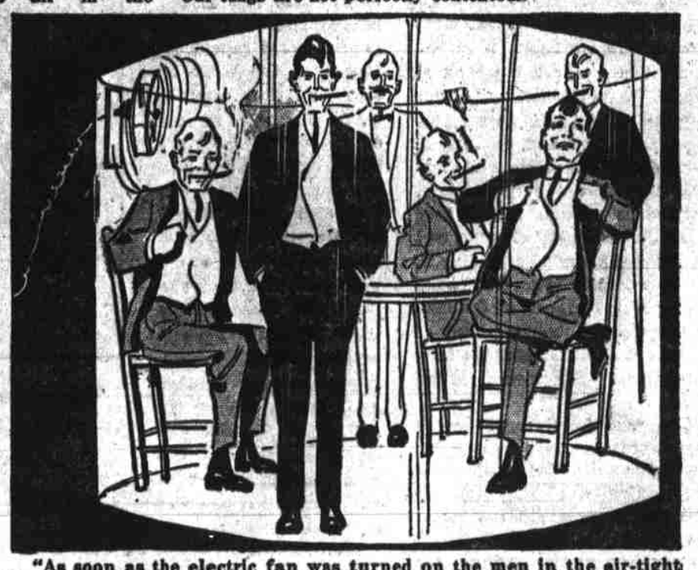
As a matter of fact he had not changed the air in the least, but merely caused it to circulate. This rapid movement of the atmosphere removed the moist, superheated air from the clothes and around the skin and gave the bodies a chance to cool. The entire discomfort had come not from the "badness" of the air, but from heat and moisture combined with lack of motion.

So it is with "bad air." We never notice how much or how little oxygen or carbonic acid gas is in what we breathe, but we do feel and resent humidity and heat especially if the air is not moving.

Another thing affects us powerfully through the nervous system—and that is smell. Unpleasant odors may make us even sick, but they are no indication that our lungs are not perfectly contented.



"After remaining for some time in the air-tight room the men began to suffer. Sweat poured out upon their bodies and one of them cried out that he was chocking. The oxygen was reduced and the carbonic acid gas increased to such an extent that they could not light matches and their cigarettes went out."



"As soon as the electric fan was turned on the men in the air-tight chamber began to feel better. They thought the improvement was due to the fact that some oxygen or fresh air had been forced into the chamber, but this was not the case. The fan had relieved their discomfort by setting the air in such rapid motion that it removed the moisture from their clothing and gave their bodies a chance to cool."

IMPORTANT EFFECT of the AIR'S CIRCULATION on Your HEALTH

The reason that heat and moisture upset us so much more than the chemical qualities of the air is the fact that the human body is really a water-cooled motor, exactly like an automobile engine.

Inside of us fuel is constantly being burned up, exploded, and the gases of these explosions are "exhausted" through the lungs. Heat also is created inside us and must be gotten rid of or we would "heat up and stick" like an engine run dry.

The gas engine has a water-jacket surrounding the cylinder. When the water absorbs the heat from the cylinder and carries it to the front of the car it runs through the radiator, which is merely a device to give the water a chance to be cooled by close contact with air. From the radiator it returns to the cylinder jacket.

The blood acts as a water-cooling system. Every organ is surrounded by a jacket and even penetrated by blood vessels. The blood is continually making round trips from the heated interior of the body to the skin, where it gives off the heat to the air. If the surrounding air is cool the system works easily. If the air is warm the pores assist by giving out moisture. This moisture by evaporating accelerates the cooling process. If the air is both hot and moist, the cooling process at once meets difficulties. The air is too hot to absorb the blood's heat and too moist to permit of cooling by evaporation. Therefore, the sweat drops collect, the heart pumps desperately, the veins stand out and distress is evident.

Even in this situation moving the air rapidly by an electric fan or otherwise relieves the discomfort.

Not only does the body need a current of air against the skin to keep cool, but it needs it as a stimulant to all the activities of the body. The human race, like all creatures, has had its main stimulus from outside, and the human engine runs better for an occasional dash of rain in the face or enduring a plunge in cold water or meeting a biting wind.

It is the circulation of air you get in the country, the beating of the sun and the rain in your face that do you good, not the superior quality of the country air, because it isn't superior in any great degree.

Eat ASPARAGUS as a MEDICINE

ASPARAGUS is considered one of the healthiest of quick-growing plants used for food, and is really a medicine as well as a food.

It requires a very rich soil, and thrives best when the soil is given a liberal salting, which in almost every other case would not be good for the plant life. The vegetable grows very rapidly, making a shoot from six to twelve inches tall, and from the size of a lead pencil to that of a good-sized walking stick in one night.

It acts quickly on the secretory organs of the body, and especially the kidneys. Milk is often used in the preparation of this vegetable for food, and it is not wholly put out of commission by the use of the milk, but the vegetable is much more valuable as a kidney tonic if it is cooked in water, and the milk is absent in the dressing. The water carries off the impurities and the milk combined with the asparagus does not do the work so readily. It seems to be a fact that like in many other cases, water is an important factor.

Anyone affected with a light touch of gravel will find that in eating a mess of asparagus cooked and dressed with water and not milk, they will be greatly benefited and relieved, and with little or no pain. The juices of this vegetable do not dissolve the hard particles, but they are carried away with more ease than in any other known manner.

It is well to have plenty of juice with the asparagus when served. When poured over toast it is not injured in any manner, and is a certain relief to certain ills, and it is a wonderful tonic to the kidneys as well as to the entire system.

Asparagus is best during June. After the first week in July it should not be pulled or cut, especially during the following six or eight hot weeks. In September some of the tender stalks may be gathered and served, when it is as good as in Spring or early Summer, but the September gathering is not good for the plants unless the month is wet and quite warm, like April or May.

Canned asparagus will act as a tonic on the kidneys, but is not as good as the fresh vegetable, which is cooked within a few hours after it is gathered.

Experts declare the secret of the value of asparagus lies in the fact it can absorb more salt in growing and in its preparation for the table, than any other form of vegetation used for food.

COFFEE WITHOUT CREAM Does You the LEAST HARM

THE latest investigation of the character of coffee and its effect upon the human system suggests more than one modification of existing ideas. It has been proved that the chief alkaloidal element in coffee is the caffeine, and that this poison acts directly upon the nerves, under certain conditions. But the saner physicians suggest that if coffee be taken not too strong, and only as an adjunct to food the deleterious effect is minimized almost, if not quite, to the vanishing point. The large amount of water taken in the form of coffee is necessary to the system, and aids in the general economy. The danger in taking coffee alone is that its effect is increased tremendously, while if food is taken at the same time the nerves are not so apt to be attacked.

It has also been proved that when milk and sugar are put into the coffee certain chemical changes take place causing the mixture to become highly indigestible. The omission of the milk makes a great difference in the digestibility, as has been proved by the well-established custom of the French who take black coffee after their meals.

The flavor of the coffee is not due to the caffeine at all, but to its essential oil known as caffeone. This is produced in the process of roasting, and on this account the same coffee properly roasted or too little or too much roasted tastes altogether different.

A process of extracting the caffeine from the coffee has been perfected, and as this is the poisonous element, those who are affected by it had best use the caffeineless coffee which can be obtained generally.

It is not generally known that what we call the coffee-bean is not a bean at all. The blossom of the coffee-plant forms where the leaves meet the stalk, and the blossom develops into a fruit about the size of a cherry, and not unlike it in color when ripe. Inside of this fruit is the seed, usually split in two parts, forming two of our common "beans." These are secured either by drying off the fruit in the sun, or by a wet process in which machinery is used. The seeds when finally secured are dried, and are what we call "green coffee," later to be roasted.

It is generally agreed that coffee first grew wild in Abyssinia, thence being taken to Arabia, and afterward to all parts of the civilized world in which it would grow. There are some twenty-five different kinds of coffee found in different parts of Africa, still growing wild in many sections.

The name is supposed to be derived from the Arabic K'hawaw, or from the Abyssinian province of Kaffa.

When first introduced into Arabia in the fifteenth or sixteenth century, it created a great religious scandal. It was utilized by devout Mohammedans that they might more easily keep awake for religious vigils, and some of the priests attacked its use as a violation of the Koran, which forbids all intoxicants. It was so popular, however, that the authorities soon gave way and coffee houses were established all over Arabia, and thence spread even to the continent of Europe, as early as the seventeenth century.

According to the records the first English coffee house was opened in 1652, and became so popular that many others were opened soon afterward.

Now-a-days the "cafe" is the last place in which any one looks for coffee, but originally that was the French name of coffee, and appeared on the sign outside of the coffee houses in Paris. Other drinking was introduced later, until gradually the cafe came to mean a barroom, nothing more.

According to the latest figures Brazil produces about 72 per cent of all the coffee grown in the world, and the Dutch East Indies only 2.3 per cent, so it is easy to see what small chance we have of getting much Java coffee into the United States. As for Mocha coffee, grown in Arabia, so little is produced that hardly a grain could be spared for each inhabitant of the States. And yet we consume about nine-and-a-half pounds of coffee per year for each inhabitant of the United States, while in the Netherlands each person drinks more than fifteen pounds. And yet the Dutch are not the most nervous people in the world, father are they the most phlegmatic. Thus is another popular theory exploded.

When You're Perfectly Right in KEEPING What You FIND

THERE are a good many popular sayings on matters legal which if followed literally may lead to trouble. The old saying that "Findings Are Keepings," is one of them.

It is true that under the law the finder of lost property is entitled to keep it against all the world except the rightful owner, but he may get himself into serious trouble unless he makes a reasonable effort to locate the real owner.

At least that is so in New York and probably in some of the other States where New York's Penal Code is more or less closely followed. There is a section of that code which provides that, unless he makes a reasonable effort to restore it to its owner, the finder of lost property is guilty of larceny.

Just what amounts to "a reasonable effort," must depend upon the circumstances of each particular case. One would not be expected to go to any considerable expense to locate the owner of an article of little value, but, on the other hand, if the property found were worth several thousand dollars, the finder might reasonably be expected to expend his own money, if necessary, to locate the loser. If he didn't, he would be guilty of larceny under the statute.

There is no duty upon the part of the finder to advertise for the owner unless that method seems to be the most likely one to locate him.

If you find a gold watch on a street car, it is your duty to turn it over to the conductor or to the lost property department of the railway company, not because the company has a better title to it than you, but because that is the most likely method of locating the owner. If the property is not reclaimed within a reasonable time, you may insist upon having it returned to you. For this reason, when you turn over lost property in this way either obtain a receipt for it admitting your claim to it as a finder, or if you cannot obtain such a receipt, deliver with the article a letter asserting your claim, keeping a copy of the letter.

Again, if you find a pocketbook in a store, and there is no clue to its owner, it is your duty to inform the shopkeeper of your find, but there is no reason why you should turn it over to him unless by so doing the owner may be more easily found.

Articles found in the public highway may be turned over to the nearest police station, but in most cases it would suffice simply to notify the police authorities of your find.

Will the "DASHEEN" Replace POTATOES?

THE dasheen is not a new vegetable, because it has been known and used in Japan and China for thousands of years, but in this country it is practically "new" to the people, since it was introduced here not very long ago, and even then it is known to only a few people.

That a vegetable which makes such an excellent substitute for the Irish potato should have a name like "dasheen" it would seem as though it were an Irish vegetable, for the name certainly sounds "Irish;" but it is far from that, being an Oriental name. It is also cultivated in the West Indies, Central and South America, parts of Africa and Malaysia. But it is only recently that it has been grown in the South, and experiments are being made with it by the United States Agricultural Department.

To grow the dasheen a particular soil is needed. It cannot be grown to great advantage in the sections where the Summer seasons is short, as in Canada, but it is believed it would succeed in most parts of the United States. The Trinidad variety of the dasheen has been made to yield 400 bushels to the acre. A rich, wet soil is needed, with plenty of potash. The potash can be added if the proper soil otherwise is secured.

The dasheen is excellent cooked in as many ways as the potato may be served, perhaps in more. It can be boiled or baked, fried, mashed, made into croquets, and also used as a stuffing for fowl and meat. It is said to contain more nutriment than the potato, having from 40 to 70 per cent more protein or nitrogenous substances. It has an added advantage in that it does not taste like the pototo. It would not add much were it to tasts like the potato, as people are always looking for new foods and new flavors. The dasheen has something of a flavor of boiled chestnuts.

The leaf is something like the leaves of marshy or water plants, being elephant-ear shape. The vegetable is a bulb or tuber and is planted much like the potato. It is harvested, however, with less labor, as the plants grow close together and one dasheen or tuber is at the end of the stalk. It is harvested by pulling up the stalk. Then it is allowed to dry on top of the ground, if possible. If there is too much rain it has to be dried elsewhere. It will keep six months, sometimes longer, if kept dry.

While it will probably never take the place of the potato, it will supply a new food, and because of its nature it will doubtless partly take the place of the potato, giving us two such vegetables instead of the one. Just how cheaply it may be grown is not known as yet, but the Government experimenters hope to learn all this within another season or so.

Tuber and Leaf of the Asiatic "Dasheen," Which May Prove a Valuable Substitute for the Potato.

The desirability of a vegetable that will at least partly take the potato's place is understood by all agriculturists, and by many housekeepers. Farmers are always seeking some new variety of potato that is hardier than the old ones—for unusually wet or unusually dry seasons always affect the crop seriously, sometimes to the extent of a potato famine.

The famous Burbank has done a great deal toward meeting this situation, the potato bearing his name having proved immune to many of the influences of weather and unfavorable soil which mean almost total crop failures of older varieties. Still, such is the popular dependance upon this tuber that the cultivation of an acceptable substitute would meet a real and widespread economic need.

It is well known that the failure of one potato crop in Ireland reduces thousands of the population to starvation's point. In this country a scarcity of potatoes, with prices increased three or four times above normal, adds a heavy burden to those borne by a majority of households, as few families now economize in the matter of potatoes any more than they do in the case of bread.

Why a Talking Machine Is One of the HARDEST Audiences to SING Before

IT is well known that the grand opera stars make a great deal of money singing into the talking machines of various concerns in order that these companies may manufacture the records for sale, but the fact that almost without exception a grand opera star would much rather sing before the most critical audience than before a talking machine is by no means generally known.

In the first place it is rather uncanny, standing in a big empty room before a mammoth horn protruding from between curtains, with the conductor away up high where he will not interrupt the sound waves, and the "orchestra" composed of weird looking instruments made especially for this work.

The singer stands on a little wooden platform at the mouth of the receiving trumpet.

A red light is flashed, and the queer little orchestra gets to work. Then at the crucial moment the artist has to sing to this strange little assembly with the same zest he would under the inspiration of brilliant lights, beautiful clothes, splendid settings and an applauding audience. It is an ordeal, because he has to sing with far greater care in front of the talking machine than is required when an audience is to be pleased. The slightest variations means a start-over, a slight clearing of the throat, a deep breath or slight shuffle of the feet—and the revolving discs record every one of these faults—and the record is spoiled. But these faults are all criticised by an experienced record-director, and it is his business to see that nothing short of the perfect records are produced—because from these first moulds are made all of the thousands of records that go into so many homes.

When the artist has finished, the records is played over and the imperfections criticised. The weak spots are rehearsed, and the whole trying business commenced over again.

And so it is acknowledged by many of the theatrical and music-hall stars that to produce a record of pure and distinct tone is far harder than to make their way sucessfully through a whole operatic score. It is a tremendous task to get a set of the perfect records from the opera favorites. It has been said that Caruso has been forced to spend over four hours of untiring work before he was able to perfect his "Ridi Pagliacci" in the opera of "I Pagliacci," and in that time was forced to make over thirty fresh starts before a disc of pure and distinct tone was obtained.