GERMS IN ICE CREAM

Number of Microbes in a Dish of the Confection Exceeds Two Billions.

FOUND BY PROFESSOR BILLINGS

As the Age of the Delicacy Increases the More Bugs One Gets for His Money.

When one purchases a dish of ice cream he buys, in addition to the cream, 2,522,656,000 germs and he eats that number when he consumes the ice cream, says the New York correspondent of the Cincinnati Enquirer. That is the number of microbes found by Prof. F. H. Billings of the Kansas University, bacteriological laboratories, in ten cents worth of fresh ice cream. Prof. Billings has been conducting experiments in germs in ice cream for six months, and his conclusions are that there are never fewer than 2,500,000,000 kicking squirming microbes in the average dish of real fresh ice cream—that which is not more than a day old.

As the age of the cream increases the more bugs one gets for the same money. The smallest number of microbes found in ice cream three days old was 3,941,666,666. These figures are for the cleanest, purest and best of ice cream that Prof. Billings could buy. The number of microscopic organisms in cream prepared under none too strict sanitary conditions is very much greater than these figures show. The university has just sent out a bulletin on the subject of germs in ice cream. This says in part:

"Cold is unquestionably unfavorable to the activity of the germs, but the experiments showed that germs are the most resistant to extremes of temperature of all known organisms. Often one thinks nothing of using ice from a river when one would not think of drinking the water from the same stream. The process of freezing removes some of the germs, but others will live in the ice all summer and have their activity restored when they are put into a pitcher with the ice to make a cooling drink.

"The experiments proved that germs increased in number in stored ice cream. A sample of fresh ice cream tested 16,000,000 germs to the cubic centimeter. After three days' storage in a frozen state the number of germs in the same sample had gone up to 25,000,000 to each cubic centimeter.

"Tuberculosis germs have lived for forty-five days in the laboratories when they were kept at a temperature of 345 degrees below freezing. The germs lost none of their vitality or virulence in that time. Other germs have stood equally severe tests without injury.

"Cold cannot be depended upon as a germ exterminator, but the winter is a bad time for the microbes. They have fewer opportunities to get in their deadly work. The cold weather renders the germs less active and they are not so harmful. Sufficient use of ice during the summer months will stop the ravages of the germs in warm weather. It is impossible to find milk that is free from germs. Some milk has many millions fewer germs than other milk, depending upon the sanitary conditions of the dairy and how the milk is handled. The filth germs kill many bottle-fed infants, and infant mortality is most prevalent in warm weather, when the germs are most active. Keeping the milk cold in warm weather does not reduce the number, in fact, it increases the number, but it makes the germs less active and hence less harmful."

PHILIPPINE OPPORTUNITIES.

Future of the Lumber Industry—Manila's Fine Waterways.

The United States government for several years has been at an enormous annual expense in coaling in Japan the transpacific transports, war vessels and interisland fleets pertaining to the Philippine service, Cassier's Magazine says. Recently, however, the rich coal fields in Baton, Rappu-Rappu and Cararay islands, in the Gulf of Albay, have been placed in operation.

Lately President Taft ordered that Mango and Nagtagan islands be added to the government reservation composed of Batan and adjacent islands. These islands, all situated closely together, though small, are nevertheless rich in a very fine grade of coal, the amount of which, it is known, will supply all needs for many years to come.

There lies ahead of the hardwood and furniture industries of the Philippines a splendid future. The islands possess the most beautiful woods in the world and they are reaching their development just at a time when the world is looking for hardwoods. The timber is not located in thick stands, but is well scattered, covering, it has been estimated, an area aggregating 40,000,000 acres. Of this great amount less than 1 per cent is under private ownership.

Most of these woods, which have no equal in richness of color, durability, brilliance of polish and size of timbers, are difficult to transport by water. Their texture is so close and their specific gravity so great that they quickly sink.

Their weight averages about seventy-five pounds to the cubic foot; height, from 50 to 100 feet, their natural annual growth being estimated by the insular government at 1,400,000,000 cubic feet, nearly all of which is now going to waste. In 1904 the bureau of forestry had record of some 396 different species; now the list has increased to 665, the species being well mixed.

The City of Manila has a perfect system of canals running in all directions. These canals are extremely valuable to business houses having their warehouse and go-downs along their banks. Cargoes are taken from the ships in the bay and transferred by lighter over these streams and the goods landed in storehouses, ofttimes far back from the bay shore in the heart of the city.

The city recently appropriated a large sum to extend, dredge out and deepen and to wall up this valuable system. Persons are often transported from their homes into the shopping district by water, the covered bancas resembling the gondolas of inundated Venice. Small motor boats will eventually carry passengers and low barges over these canals.

There is sufficient idle water power in the unharnessed mountain streams and falls in the islands to turn every wheel used in manufacture in the archipelago. Several of these falls are located near Manila, and plans are already on foot to utilize their energy. There is scarcely a province which has not from one to a dozen big waterfalls, nearly all of which will some day be valuable to man in more ways than one.

POPULAR SCIENCE

Mons. F. Bordas informs the French Academy of Sciences that very remarkable effects upon the color, and consequently the value, of germs of the crystallized alumina variety may be produced by heat. Exposure to a temperature of 572 degrees Fahrenheit, maintained for a long time, causes the yellow color of Oriental topaz and of artificial yellow corundum to disappear. The rare gem known as the Oriental emerald may be produced by subjecting a sapphire-blue stone to the temperature above mentioned. On the other hand, according to Bordas' experiments, the cathode rays have no effect upon the color of these stones.

An explanation of the manner in which a soft steel disk revolving at a high velocity cuts hard steel has recently been sought with the aid of microscopic inspection. The result corroborates the view hitherto held that the material acted upon is heated at the place of contact to the fusing point, and then brushed away. The high temperature appears to be confined very narrowly to the point of contact, so that a thin gash is cut. The temperature of the revolving disk does not rise so high, because of the large surface area of the disk. The part of the disk in contact is continually changing, while the frictional energy is concentrated on a very small area of the material subjected to its action.

Notwithstanding the frauds recently practiced with regard to the making of diamonds by artificial processes, the possibility of thus producing these precious gems exists, and has frequently been demonstrated since the initial success of Professor Moissan. Sir William Crookes recently delighted an audience at the Royal Institution by showing the process of making artificial diamonds from carbon dissolved in liquid iron. The essentials are very high temperature, very high pressure, and pure iron as a solvent. The diamonds produced are only of microscopic size, but they possess all the properties of nature's own product, and when they are magnified about 30 diameters with a microscope some of them present quite a formidable appearance. In shape they recall the famous Cullinan diamond, the largest known in the world.

Advice to a Truth Teller.

Washington had just said he couldn't tell a lie.

"In that case, George," continued his father, "never engage in any of the food industries. Folks will find out who gets the profits."

Heeding his advice, he chose a military career.—New York Sun.

A Wise Teacher.

"You seem to have gotten your boys interested in mythology very nicely."

"Yes; I explained to them that Hercules held a championship."—Louisville Courier-Journal.

Two men may live together in peace and friendship, but two women—never.

SKYSCRAPERS FOR ENGLAND.

Towering Flats to Be Erected in London's Ancient Resort.

Possibly no spot equally close to London has maintained its old-world exclusiveness to such an extent as Richmond, but there are signs that it, in its turn, is giving way to the march of modernity. A group of American capitalists is having prepared plans for the erection of a towering pile of flats, in one single edifice, on the summit of the hill, the Boston Transcript says.

The site selected, which has been in the market for some years, is that of Ancaster House, a Georgian mansion of considerable interest and an old-time hunting box of the duke of Ancaster, situated opposite the Star and Garter hotel and adjoining the park gates. The crown, on enfranchising the estate from copyhold, stipulated that buildings over a certain height should be set back fifty feet from the park, but outside that distance there is no height limit, and the proposed structure, nearly 400 feet in length of the park frontage, would enjoy unparalleled views both over that domain and the world-famed Richmond hill scenery.

The general idea is that the architecture shall approximate to and follow the leading features of well known lofty edifices in New York, and be fitted with appliances for luxury and domestic economy quite novel to this country. There is nothing of this character at present in England, and the promoters say that should the scheme be carried out Richmond will at all events benefit, as its vast natural beauties have not sufficed to save it from a lack of material prosperity which has been creeping over it for some years past. Lovers of natural beauty, however, may have something to say.

Ancaster House was given to Sir Lionel Darell by George III., who used to make a stay there every week. More recently it was the residence of Sir Francis Burdett.

Knowledge That Is Power.

The world is full of people who know a great deal but cannot use their knowledge. They are weighted down with unavailable facts and theories, says Orison Swett Marsden in Success Magazine. You have often met people who seem to know much, who are so encyclopedic in their greedy absorption of facts, that their general knowledge is like an enormous pack on a soldier's back, which exhausts his vitality and impedes his march. It makes them heavy of foot and clumsy in everything they do. They impress you as not being large enough to swing their loads and carry them with ease. They are like children tugging away at great pieces of furniture which they can scarcely lift.

It is not the ability, the education, the knowledge that one has that makes the difference between men. The mere possession of knowledge is not always the possession of power; knowledge which has not been digested and assimilated and become a part of yourself, knowledge which cannot swing into line in an emergency, is of little use, and will not save you at a critical moment.

To be effective, a man's education must become a part of himself, as he goes along. All of it must be worked up into power. A little practical education that has become a part of one's being and is always available will accomplish more in the world than knowledge far more extensive that cannot be utilized.

Driven by Hunger to Desperation.

Mrs. Mode had just returned home from the country, to discover her previously well-stocked wardrobe empty. "Good gracious, Herbert," she cried to her husband, "where are all my clothes? And what in the world is that big black patch out on the lawn?" "Nelly," he replied mournfully, "after I had starved for two whole days, you wrote me that the key of the pantry was in the pocket of your bolero. Well, I don't know a bolero from a box-plaited ruffle, and I was desperate, so I took all the things out on the lawn and burned them. Then I found the key among the ashes."—Success Magazine.

A Bright Idea.

Yeast—It is said that the baya bird of India spends his spare time catching fireflies, which he fastens to the sides of his nest with moist clay. On a dark night a baya's nest glows like an electric street lamp.

Crimsonbeak—Say, there's a bright idea for decorating that keyhole in my front door.—Yonkers Statesman.

Explained.

Dentist—Why, I just put that bridge work in last week. What happened to it?

Woman—I quarreled with my husband and while indulging in a torrent of invective the flood of words carried out all the bridges.—Kansas City Times.

An optimist is a person who invests in a gold brick every time the opportunity presents itself.

Don't be crazy to do a lot of things you can't do

THE SALVATION ARMY AND WHAT IT HAS ACCOMPLISHED.

THE ARMY ON THE MARCH.

The Salvation Army was born in 1865. It has something to show for the elevation of the downtrodden, One of its champions says:

"The Salvation Army flag is flying in fifty-five countries. It has no less than 7,500 societies and, excepting in heathen countries, is self-supporting. The Salvationists hold services in thirty-two languages and are led by 15,000 officers, assisted by 50,000 local officers, men and women, who earn their living by the sweat of their brows and give their time and money and work to the cause. In its advocacy twenty-five newspapers are published in seventeen languages. There are 17,000 bandsmen who play sacred music without pay. In Great Britain these bands march 54,000 miles a week to attract men and women to the cross. Over 200,000 hungry and wretched creatures are fed by its instrumentality. No man, woman or child who has fallen on the highways of life—and very slippery these highways are—and reaches out a hand and says: 'I want to get up again and want to lead an honest, industrious life,' to every such person there should go out another hand to lift him up. We have many other branches of work. In all we have 120 different departments or plans for benefiting people, and the number is increasing constantly.

"Now, what are you doing to lift up the people who are down? the poor, the drunkard, the sinful, the hungry, and the poor lassies who have gone over the line and who are in the worst hell this side of the river? What are you doing for them all? Do you think it is my special work; that you have no part in it? Will you help me? Will you help the Salvation Army? Will you help with your sympathy and prayer? You may say: 'We have our churches and missions to maintain.' What a pitiful condition your city would be in if you did not have. When you have done all this there will be something left for the Salvation Army. The Salvation Army is no longer an experiment. It has passed out of the area of speculation. It is an accomplished fact."

SAVES TRAINER'S LIFE.

At New York the sharp teeth and claws of Clayton, a leopard, nearly cost the life of Mrs. Pauline Russelle, his trainer, but the length and strength of his tail saved her. Clayton would not perform. Mrs. Russelle prodded him with an iron bar and called to her assistant for aid. In the instant of turning her head to call, the leopard leaped. He bore the woman to the ground and stood over her, growling and lashing his tail. It was then that the quick-witted assistant, reaching into the cage, grabbed Clayton's tail, took a double hitch around the bars of the cage with it, and rescued Mrs. Russelle.

NIGHT TOILERS IN BANKS.

Some Money Repositories Work Clerical Forces Continuously.

Four big banks in the Wall street district resemble the great gold mines of the West in one striking feature, Harper's Weekly says. They have three eight-hour shifts of toilers, and the work never stops. One set takes up the routine where the other leaves off. All night long, Sundays and holidays, a staff of men in each of these banks is busy opening thousands of letters, sorting and listing innumerable checks and drafts that represent fabulous sums of money and getting them ready for the day force, which is the only one the public comes in contact with or ever hears about. If this work was not carried on incessantly the banks would soon be overwhelmed with a mountainous accumulation of detail.

Two shifts—the "scouting force," as they call themselves—work between 5 in the afternoon and 9 the next morning. Each bank has a big drawer in the general postoffice. Messengers clear this of its letters every hour all night long. Three thousand letters a day is the average mail of one of these large banks. Two-thirds of it comes in during the night. These letters, in the case of one of the biggest of these banks, contain from 35,000 to 40,000 checks and drafts. At times these inclosures represent as much as $30,000,000. Rarely does the total fall below $20,000,000.

The letters are opened as fast as they are received, the checks are counted and the totals verified with the footings of the lists. The letters are then stamped, which shows that they have been "proved in," as the banks call it. After that they are turned over to the clerks, who send out the formal acnowledgments of the remittances they contain. The various checks are assorted according to the numbers of the books in which they are to be entered and otherwise; the sight drafts are grouped according to the routes of the bank's messengers and all is made ready for turning the night's accumulation over to the day force, so it may be handled by it as expeditiously as possible.

Each of these shifts of night workers at the banks consists of from twelve to twenty men. Some banks get along with but one extra set of clerks at night. These come on duty at midnight and leave at 8 a. m. This plan of working all night long in order to keep up with the tremendous amount of business that comes in by mail was inaugurated about five years ago. The first bank that tried it found that so much valuable daytime was saved that one institution after another took it up, until now there are four that have these three eight-hour shifts of clerks, and several more who work only a part of the night.

A Calamity.

A noted judge was examining a candidate for admission to the bar. All the questions had been satisfactorily answered and the lawyer-to-be had passed so brilliantly that the judge decided to put a simple question to terminate the ordeal. Gazing benignly at the young man, he asked:

"'What is the liability of a common carrier?'

"Although lawyers the world over and from time immemorial have wrestled with this problem, though millions of words have been taken into the record of various cases in which this unanswerable question was involved, the fledging calmly eyed the judge and at last solemnly replied:

"'Your honor, I must beg you to withdraw that question. I did know the answer, but unfortunately I have forgotten.'

"For a minute the judge eyed the young man, then turning to the lawyers who were grouped around him, remarked:

"'Gentlemen, this is a sad case, in fact, a calamity. The only living man who ever knew the liability of a common carrier has forgotten.'"

Never Failed to Do So.

He—You should always speak well of your neighbor, you know.

She—I always do, though I can assure you this is the meanest woman in creation.—Boston Transcript.

Flirtation is attention without intention.