

LATEST HEALTH FOOD.

It is Compressed Milk, in Which All Sorts of Lactent Microbes Are Squeezed to Death.

After pasteurized milk, aerated milk, sterilized milk, peptonized milk, lactated milk and malted milk, there is now to be added a new kind of scientific hygienic milk.

It is compressed milk. By this new process the microbes that abound in cow's milk are squeezed to death, at least a part of them are, for there are 500,000 germs to every teaspoonful of raw cow's milk.

To investigate the effect of pressure on bacteria, an apparatus was devised which is remarkable for having produced what is probably the greatest hydrostatic pressure ever reached, over 450,000 pounds per square inch.

The particular object of these experiments was to determine whether the bacteria in milk might not be killed by hydrostatic pressure, so that it would keep a longer time without souring. Moderate pressures were first tried, but appeared to have no effect. The pressures were then increased and notable results were obtained.

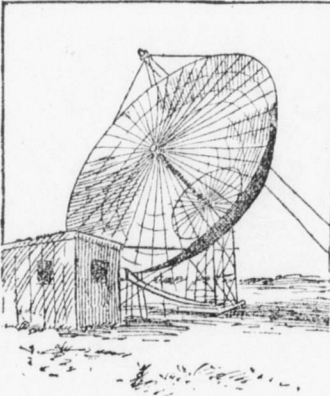
Milk subjected to pressures of 70 to 100 tons kept from 24 to 60 hours longer without souring than untreated milk. The degree to which the keeping qualities of milk were improved appeared to depend as much on the time for which the pressure was maintained as upon the actual pressure reached.

Pressures of 90 tons per square inch maintained for an hour delayed the souring of milk from four to six days. Complete sterilization of the milk, however, was in no case effected, even at the highest pressures, and the milk in many cases acquired peculiar tastes and odors on keeping, indicating that certain species of bacteria were killed while others were not.—Chicago American.

MONSTER SOLAR MOTOR.

Heat of the Sun Utilized to Run the Engine of an Irrigation Plant in California.

The first sun motor to be put to a practical everyday use is believed to be that recently installed at Pasadena, Cal. Its principle is as old as man. Its application is new. By means of a huge construction of mirrors, resembling an inverted umbrella on a large scale, the heat of the sun's rays is concentrated on a long cylindrical boiler, which without the application of any other heat furnishes sufficient steam for the running of a ten horse-power engine. The engine is at work pumping water from a well 12 feet deep. The best record it has made is the lifting



SOLAR MOTOR IN ACTUAL USE.

ing of 1,400 gallons of water a minute, which is sufficient to irrigate 500 acres of trees or 200 acres of alfalfa. By the use of the sun motor the item of fuel is entirely done away with. Steam is raised on sunny days by turning the mirror frame until the proper focus is obtained on the boiler. The supply of water in the boiler and the working of the machinery are arranged automatically, so that little human labor is needed in connection with its use. The most immediate and important use of the new motor is expected to be the furnishing of a supply of water for irrigating the sandy deserts of the southwest, where the sun shines brightly for more than 70 per cent. of the days and fuel is almost impossible to obtain.

Fire Alarm for Buildings.

A new electric fire alarm is intended to announce the appearance of fire to passers-by outside the building in which it is placed. It consists of a metallic case containing a charge of pyrotechnic compound similar to a Bengal light, and surmounted by a small igniting fuse. The whole is made water-tight, and is arranged to be put in position on a cornice or other prominent part of the building. The fuse is connected through thermostats with a battery, so that a high temperature in the vicinity of one of the thermostats closes the circuit, explodes the igniting charge and lights the slow-burning compound, which gives a brilliant light, and this attracts the attention of people in the neighborhood.

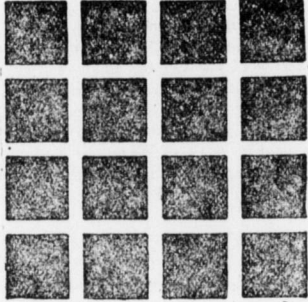
Why Glass Holds Water.

Utensils of glass will hold water because the globules of water are too big to squeeze through the glass, but glass is as full of holes as a sponge, and air blows right through it, because the specks or molecules of air are smaller than the holes.

NEW OPTICAL ILLUSION.

Unique Problem Contributed to Science by M. Henri Coupin, a Noted French Philosopher.

The following new and curious optical illusion is contributed by M. Henri Coupin to La Nature. He says: "Our illustration represents a series of black squares placed at regular distances apart and separated by white bands crossing each other regularly at right angles. At least this is how the illustration has represented them. But in reality, in each of the places where the white bands cross we see very plain shadow, or, more exactly, a sort of penumbra with indefinite



INTERESTING ILLUSION.

boundaries. If the attention be fixed on one of these spots in particular it disappears at once, while the neighboring spots persist. This is evidently due to the fact that the phenomenon is produced only in regions of the retina distant from the 'yellow spot' (spot of most distinct vision)—regions where the sight is always a little confused. It would be interesting to vary the size of the squares and of their intervals to see at what moment the phenomenon would disappear. Optical illusions are a good deal more than mere amusements. Studied with care, they can do a good deal toward clearing up the problem of vision which is still so imperfectly understood."

WORN-OUT STEEL RAILS.

They Are Not Sent to the Scrap Heap, But Are Used for Sidings, Spurs and Branch Lines.

Several thousand miles of new and heavier rails are laid every year on railroads in the United States, and these renewals are made much oftener than the actual requirements of travel call for them, there being a steady substitution of heavy for light rails.

Nearly 90 per cent. of the track of all railroads in the United States is now of steel. A steel rail will usually wear out first at the ends, owing to the wheels hammering over the open joints. The average life of an iron rail is six years, of a steel rail 12.

A 40-pound steel rail—40 pounds to each yard of length—would be taken up and replaced by one of 55 pounds; a 55-pound rail would be replaced by one of 70 pounds, and a 70-pound rail would be replaced by one of 85 pounds, perhaps. There is about one such change at the end of each four years, or three complete replacements of rail during the time one would serve in use.

The custom, general among American railroads, has given rise to the question: What becomes of the old steel rails, or rather those for which others were substituted? Any railroad man can readily give the answer: They serve, second-hand, the interests of the road, being used for sidings or spurs.

A siding, in railroad phrase, means a line of track on which a freight or accommodation train may be run while a through train is passing, or on which a train may be sidetracked before loading or unloading. A spur is an irregular line of track which connects a storehouse, warehouse, factory, mill, or ship landing with the main line, and the multiplication of these spurs has been of undeniable service to all roads in the development of their freight business.

The traffic on sidings is small; on spurs it is still less, and the displaced steel rails may be in use on them for many years.—N. Y. Sun.

FUNERAL TROLLEY CAR.

Baltimore Street Railway Companies Have Had One Built at Considerable Expense.

Baltimore has a number of fine suburban cemeteries, all of which are reached by some division of the street railway lines, and the company found by putting in a few crossovers they could take a car from any part of the city to any one of the burying grounds. It was, therefore, decided to offer cars for transportation of funeral parties, says the Street Railway Review. The company built a special car well adapted for the purpose. The car is divided into two compartments, the smaller of which has running its full length another compartment or vault in which the casket is carried. A heavy plate glass door hinged to swing downward gives access to the vault from the outside. When a casket is to be placed in the car, the shelf is drawn out, the casket lifted upon it, and the shelf is then pushed back in place. The larger compartment has 12 cross seats in the center aisle, giving a seating capacity of 24; the smaller compartment has four seats. Heavy black curtains divide this section into two private compartments for the immediate family of the deceased. Floral contributions are piled upon the top of the vault, and can be seen from the street. The car is finished inside and out with black enamel with nickel-plated fixtures. The car has been named "Dolores," meaning sorrow, and it is rented at from \$20 to \$25 for each interment.



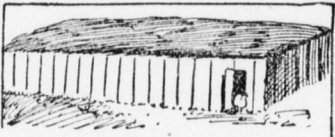
TEMPORARY HOUSES.

A Pennsylvania Poultryman Prefers Them to the Costly Structures He Used for Many Years.

I started 18 years ago with a well-built poultry house, which, while comfortable in winter, was too hot in summer. It finally became infested with vermin, which I could not keep rid of. I finally built sheds of poles and old hay, and have used them with the best results. These sheds are made 25x100 feet and ten feet high, with poles set in the ground six to eight feet apart. Use poles for the top pieces, put crosswise. Fence wire is stapled on top of the cross pieces lengthwise, about 14 inches apart.

About two feet of old hay is put on and tar paper laid evenly over the hay, with the ends projecting on the north about five feet. Six-foot small-mesh poultry netting is put on the sides all around the shed, and before stapling to place the wire is set in the ground about eight inches to keep out rats. Poles are then set about three feet from the sides all around the shed, with the exception of the south side, and a few strands of wire tacked to them to keep the sides in place. When the hay is put in it is tramped well until it is built up to the paper and the projecting laps laid over.

When cold weather sets in the south side of the shed is covered with heavy



HENHOUSE MADE OF HAY.

duck and slats nailed over the duck. For entrance a flap is left and a board tacked to the duck endwise. Loops of leather or wire are stapled to the board to draw taut. This will give the building plenty of light and will answer better than window glass. During the warm months the duck is removed and put away for future use. The sides on the north are also removed for ventilation. In the fall new sheds and runs are erected upon a new location, the poles removed, the old pile of hay burned and the ground plowed for a garden for the next season.

During the winter when the weather requires it these sheds are heated with steam from two old steam cookers in a greenhouse, which is located about the center of this row of sheds. Two-inch pipe is laid through the sheds upon blocks of wood in a trench 20 inches deep. It is covered with boards and then dirt. The pipes through the shed are not covered, with the exception of slats over the trench. The steam does not return to the greenhouse, but is let out at the end of the last building. I breed fancy poultry altogether and was unable to get paying prices for stock and keep them in perfect order until I adopted this style of buildings.—Orange Judd Farmer.

POULTRY YARD HINTS.

The dust bath is still one of the necessities in the poultry house.

Make your buildings tight and warm for your fowls, and they will be better egg producers.

Green bone and meat scraps in winter take the place of bugs and worms that the fowls have during the summer.

A pullet is at her best as a show bird just before she reaches the laying point—as regards color, condition of plumage and general physical development.

If you have eggs to sell this spring it is high time you were advertising them. Get yourself before the public in time to get well acquainted before the egg season begins.

It is never wise to buy breeding stock at beginning of breeding season. Buy before, so that the stock will have become used to its new surroundings before breeding season commences.—Barnum's Midland Farmer.

Good Horses in Demand.

The breeding of horses, like all other kinds of live stock, will pay if the aim is to produce the very best. The greatest drawback to the business at the present time is the lack of good stallions of the different breeds throughout the country. So far as our observation extends there are fewer first-class stallions accessible at this time than ever before, and it will take some time to get them through the country. Those who have good mares of any breed and are in reach of the right kind of stallions are fortunate just at this time, and will make the rearing of horse stock a profitable branch of farming.—Farmers' Voice.

Planting Locusts for Posts.

The black, yellow and white locusts are merely varieties or forms of the same species, Robinia pseudacacia. The black and yellow forms are considered most resistant and are usually found in the driest places. If seeds or suckers can be had from these dark and dense-wooded types they would naturally be preferred for planting. All varieties of the common locust are attacked by borers, and a multitude of insect enemies. The honey locust, Gleditsia triacanthos, is not troubled by insects to so great an extent as the Robinia, but is much inferior in lasting qualities as fence material.—Rural New Yorker.

DAN GROSVENOR SAYS:

"Peruna is an Excellent Spring Catarrh Remedy---I am as Well as Ever."



HON. DAN A. GROSVENOR, OF THE FAMOUS OHIO FAMILY.

Hon. Dan A. Grosvenor, Deputy Auditor for the War Department, in a letter written from Washington, D. C., says:

"Allow me to express my gratitude to you for the benefit derived from one bottle of Peruna. One week has brought wonderful changes and I am now as well as ever. Besides being one of the very best spring tonics it is an excellent catarrh remedy." Very respectfully, Dan A. Grosvenor.

Hon. John Williams, County Commissioner, of 517 West Second street, Duluth, Minn., says the following in regard to Peruna: "As a remedy for catarrh I can cheerfully recommend Peruna. I know what it is to suffer from that terrible disease and I feel that it is my duty to speak a good word for the tonic that brought me immediate relief. Peruna cured me of a bad case of catarrh and I know it will cure any other sufferer from that disease."

Miss Mattie L. Guild, President Illinois Young People's Christian Temperance Union, in a recent letter from Chicago, Ill., says:

"I doubt if Peruna has a rival in all the remedies recommended to-day for catarrh of the system. A remedy that will cure catarrh of the stomach will cure the same condition of the mucous membrane anywhere. I have found it the best remedy I have ever tried for catarrh, and believing it worthy my endorsement I gladly accord it."

Mrs. Elmer Fleming, orator of Reservoir Council No. 168, Northwestern Legion of Honor, of Minneapolis, Minn., writes from 2535 Polk street, N. E.:

"I have been troubled all my life with catarrh in my head. I took Peruna for about three months, and now think I am permanently cured. I believe that for catarrh in all its forms Peruna is the medicine of the age. It cures when all other remedies fail. I can heartily recommend Peruna as a catarrh remedy."

The spring is the time to treat catarrh. Cold, wet winter weather often retards a cure of catarrh. If a course of Peruna is taken during the early spring months the cure will be prompt and permanent. There can be no failures if Peruna is taken intelligently during the favorable weather of spring.

As a systematic catarrh remedy Peruna eradicates catarrh from the system wherever it may be located. It cures catarrh of the stomach or bowels with the same certainty as catarrh of the head.

If you do not derive prompt and satisfactory results from the use of Peruna, write at once to Dr. Hartman, giving a full statement of your case and he will be pleased to give you his valuable advice gratis.

Address Dr. Hartman, President of The Hartman Sanitarium, Columbus, Ohio.



Mrs. Elmer Fleming, Minneapolis, Minn.

POOR LITTLE JOHNNY! AND HIS "TUMMY"!

Small boys, and many times large ones, and occasionally girls, too, big and little, suffer terribly from convulsive pains or "cramps" in the bowels and stomach—pain so violent that it "doubles up" the ones attacked, and makes it impossible for them to stand up.

Some people call it colic, but most honest, plain-spoken people call it "belly-ache" and very properly, for the seat of the trouble is in the bowels, and caused by the violent efforts of the bowels to rid themselves of something which doesn't belong there. The small boy usually gets it from over-eating or from eating forbidden fruit, and suffers mostly in the summer time.

It's spring now, and "in times of peace, prepare for war." Let the boys and girls and the big folks, too, for that matter, clean out the clogged channels filled with winter bile and putrid undigested food, strengthen the 30-foot of bowel canal, liven up the liver, and "summer belly-aches" will have no terrors, because they won't happen. The way to make the body ache-proof is to use CASCARETS, gentle, sweet, fragrant CASCARETS, the perfect system cleaners and bowel strengtheners. For fear that anybody in the family should ever be attacked by belly-ache, keep a box of CASCARETS in the house always, and remember that all pains and troubles in your insides are



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CURE all bowel troubles, appendicitis, biliousness, bad breath, bad blood, wind on the stomach, bloated bowels, foul mouth, headache, indigestion, pimples, pains after eating, liver trouble, sallow complexion and dizziness. When your bowels don't move regularly you are getting sick. Constipation kills more people than all other diseases together. It is a starter for the chronic ailments and long years of suffering that come afterwards. No matter what ails you, start taking CASCARETS to-day, for you will never get well and be well all the time until you put your bowels right. Take our advice; start with CASCARETS to-day, under an absolute guarantee to cure or money refunded.

Any Doctor is willing to treat you for rheumatism, if your credit is good or you pay his fee. But only one doctor will cure your rheumatism, and he charges nothing for advice. This physician is Dr. Greene, the discoverer of Dr. Greene's Nervura. If you will write to him at 35 West 14th Street, New York City, he will tell you exactly how to get rid of rheumatism for good and all. It won't cost you anything to get his advice. Why don't you write to Dr. Greene to-day?

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