



CEREAL FOOD MAKING.

Cooked Grains Are Separated, Passed Between Rollers and Flattened into Flakes.

The superintendent of a much-advertised breakfast food recently stated that he ate a pound of his product every day.

"You see, our brand is a new one," he explained to a friend. "I want to see that every package is up to the top standard before it leaves the factory; so I taste a lot of the stuff to see if the men are making it correctly."

According to this superintendent, cereal breakfast foods do not require very much complicated machinery.

The first process is to wash the grains of the cereal out of which the thin flakes are to be made. Then it is steamed for several hours in big caldrons, the bottoms of which have holes in them like a sieve.

The next step is to transfer the cooked grains from the vessels to a series of flat, perforated sifters, and the mushy mixture of grains is forced through in such a way that different grains are separated and stand out distinctly from one another.

At this stage the grains are passed between great metal rollers, which flatten them into flakes.

These flakes, still containing considerable moisture, are finally dried on wire netting by means of hot air.

Then, last of all, they are packed into their pasteboard boxes, ready for shipment by the case of twenty-four boxes.

"That's all there is to it," said the superintendent.

"In my factory we are just making a start, but we'll increase the size of the plant before long. You have no idea how easy it is to boom a new breakfast food."

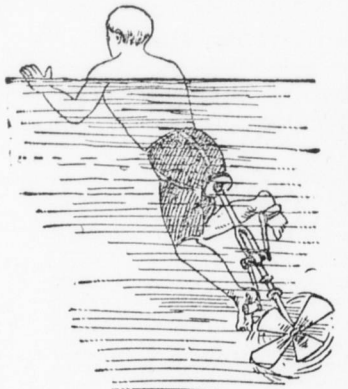
"To tell the truth, about the largest expense item on our books each month is the price of fancy advertising cards and other announcements."

"We have found thus far that our sales are proportionate to the activity of our publicity bureau."—St. Louis Republic.

SWIMMING MADE EASY.

Apparatus Invented by Chicago Man Makes Use of Bicycle Pedals and Screw Propeller.

The majority of bathers find more pleasure in paddling leisurely about and sporting in the surf than in exerting themselves to the extent necessary to acquire any speed in the water, but to the athlete this is rather tame, and only muscular exertion affords satisfaction. Were it not for the training necessary to become rapid swimmers no doubt more people would enjoy the exhilarating sensation of propelling themselves rapidly through the water by the aid of the hands and feet. The physical training is made unnecessary,



NEW SWIMMING MACHINE.

however, by the machine which has just been invented by a Chicago man, and which we have illustrated in the picture. It is nothing more nor less than a screw propeller, attached to the man instead of to a boat, and the man who is a good bicycle rider should soon become proficient in the use of this swimming apparatus, as the movement of the feet is exactly similar to that required to drive the wheel on land. Probably the only difficulty the beginner would have with this machine would be in maintaining the body in the correct position to obtain the best results with the propeller, but with a little practice the hands are soon taught to poise the body at the proper angle and guide the swimmer through the water. It is unnecessary for the hands to aid in the propulsion, as the screw will furnish sufficient power for the work.—Chicago News.

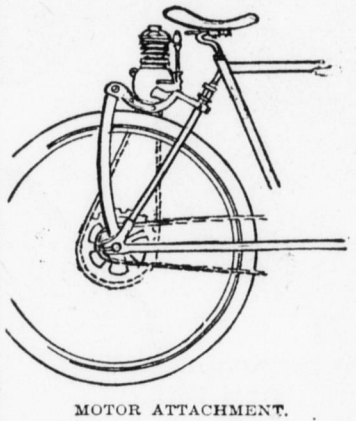
Electric Lights and Dust.

The tendency of dust to collect on electric light fittings and wires and on walls and ceilings near them is ascribed partly to the influence of air-currents induced by local heating and partly to electrification of the dust particles. These, when floating in a room, are attracted to the electric conductors on the non-earthed side of an earthed system. They either remain upon the conductors, or, becoming charged, fly off and stick to the neighboring walls. By putting the switches in the non-earthed wire, this deposition of dust can be confined to the time during which the lamps are alight. Further improvement, according to Mr. D. S. Mourou, can be effected by using concentric flexible conductors, the outer conductor being connected to the earthed side of the system.

MOTOR FOR BICYCLES.

Its Inventors Claim That It Can Be Attached Readily to Any Standard Frame.

The large majority of those who a few years ago took up cycling as an amusement have been unable to replace the bicycle with the automobile, now that the latter has made its appearance, and have had to be content to stick to the wheel, or find some other form of pastime to afford exercise and occupy their spare moments. As a slightly cheaper vehicle than the regular horseless carriage, the motor bicycle has been introduced, and a number of these machines may be seen every day in populated districts, but heretofore no provision has been made for attaching a motor to the old bicycle, and it has been necessary to provide an entirely new



MOTOR ATTACHMENT.

frame to carry the engine which propels the cycle. The usual method of mounting the motor for running the two-wheeled machine is to place it in a circular frame in the position occupied by the crank shaft in the regular bicycle. However, this is made unnecessary by the invention which we illustrate, which makes possible the use of the old machine with motor attachment. We would suggest, nevertheless, that the rear wheel be replaced by one of slightly stronger build, as the increased weight and the force of the motor will soon expose any weakness which may exist in spokes or rim. As the motor is shown, there is little, if any, added strain placed on the tubular frame, which is a strong point in its favor, when the attachment to old bicycles is considered. The driving hub should be provided with a coaster brake, and a second sprocket wheel is necessary to connect with the motor, while the gasoline reservoir and electric outfit can be arranged as usual on motor cycles.—Louisville Courier-Journal.

VITALITY OF SEEDS.

Under Reasonably Favorable Conditions It Is Preserved for Indefinite Periods.

Not to speak of the doubtful instances of seeds taken from the pyramids having germinated, melons have been known to grow at the age of 40 years, kidney beans at 100, sensitive plant at 60 and rye at 40. And there are now living in the garden of the Horticultural society raspberry plants raised from seeds 1,600 or 1,700 years old. The seeds of charlock buried in former ages spring up in railway cuttings; where ancient forests are destroyed, plants appear which have never been seen before, but whose seeds have been buried in the ground; when some land was recovered from the Baltic sea, a carex was found upon it, now unknown in that part of Europe. M. Fries, of Upsala, succeeded in growing a species of hieracium from seeds which had been in his herbarium upward of 50 years. Desmoullins has recorded an instance of the opening of ancient tombs, in which seeds were found, and on being planted they produced species of scabiosa and heliotropium. And many more such cases are on record, establishing conclusively that under favorable conditions the vitality of seeds is preserved for indefinite periods.

It seems as if seeds remain dormant so long as the proportion of carbon peculiar to them is undiminished; water is decomposed by their vital force; and it is believed that its oxygen, combining with the carbon, forms carbonic acid, which is given off. The effect of access of water is, therefore, to rob seeds of their carbon; and the effect of destroying their carbon is to deprive them of the principal means which they possess of preserving their vitality. Be this as it may, it is inconceivable that as soon as seeds begin to germinate their vitality is exhausted, and they perish, unless the seed is in a condition to continue its growth by obtaining sufficient food from surrounding media.—From Linley's Theory and Practice of Horticulture.

How Water is Colored.

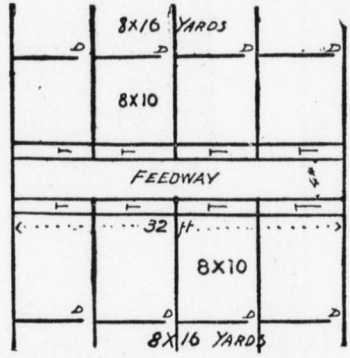
The usual color of water—greenish yellow to reddish brown—is now known to be due to dissolved substances from decaying vegetation, but particles in suspension—usually mineral and often containing iron—may be a cause of the color. The depth of tint is estimated by comparison with a mixture of platinum and cobalt, states Dr. A. E. Bostwick, the unit being the color given to 1,000,000 parts of water by one part of platinum. As a rule, water near steep rocks, with few trees, shows less than 20 units of color; near steep wooded or cultivated slopes, 20 to 50 units; near similar, but gentler slopes, 5 to 100; and in swamps, 100 to 500, or even more. In the United States, northern waters are more highly colored than southern. Filtering does not remove the color, and, as brownish water—though rarely harmful—is objected to for drinking, the coloring matter is often removed by chemical means, as by coagulating with sulphate of aluminum.



AN OHIO HOG-HOUSE.

Large Enough to Accommodate from 60 to 70 Head for Feeding and Sleeping.

My hog-house is 24 by 32 feet, with 6-foot posts. It has five bents. We used 6 by 6-inch timber for framing, as we had plenty of small timber. It can be built of plank just the same. The plan I send explains itself. A feedway 4 feet wide runs through the middle. The partitions on each side of this feedway are 3 feet high, and are made to swing over the troughs. There is a post at each corner of the pens, and a 2 by



PLAN OF HOG HOUSE.

4 runs from post to post 3 feet from floor, to nail partition to. The 2 by 4's swing in a 2-inch auger hole. At the bottom of each swinging partition a 1 by 2 strip is nailed. When you feed slop you push the partition in, and the pigs cannot bother you. In the middle of feedway we have a slop tank. Water for mixing slop is supplied from a raised tank, which is filled by a windmill.

Overhead there is a corn-crib 6 feet wide and 24 feet long, on the south side, and on the north side a row of grain bins 6 feet wide and altogether 32 feet long, with an alley of hallway between crib and bins. The corn-crib is shorter, to give room to come upstairs. We floored only 16 feet upstairs, leaving 4 feet open for ventilation. There is a door at each end, upstairs and down, with a chute coming down from corner-crib into feedway. There are 8 windows and 8 small doors. When weather is hot we open every door and window, and it makes the house cool. We have a block floor, but cement would be as good or better. A sleeping place is provided in the corner of each pen. This house will accommodate 60 to 70 head for feeding and sleeping. We pasture hogs when weather is fit, but make the house headquarters.—I. N. Ash, in Ohio Farmer.

CARE OF THE FOALS.

Unless the Mare Is Fed Well and Judiciously Her Offspring Will Fail to Develop.

If the foal is worth raising at all, it is worth raising well, and if not fed and cared for properly, will be a disgrace to its sire and a source of loss to the owner, says the Live Stock Journal. The mare should be fed well enough to allow her to supply the foal with abundant, rich, nutritious milk. Her food should be rich in nitrogenous ingredients, for these are most required for frame building. She should be allowed to suckle her foal often, if she is worked, and never when she is tired and sweaty. It does not pay to allow the foal to run with the mare at plow or on way to town. Milk is taken often in this way, but not in suitable condition for the foal, and, besides this, the foal is getting too much fatiguing work in following its dam. Work the mare lightly, if at all. Before it is too late put in a strip of fodder corn alongside of the pasture. Let it be, say, ten rods wide and plant the corn thickly with seeder, having some of the sprouts shut off. Plant several times, with a few days between the seedings. Use this green corn fodder for the mares to help out the pastures and feed the mares in addition generously upon oats, bran and cut hay. Wet this food with molasses water, if you want lots of milk, and can keep flies off of the stable. Just as early as possible let foals learn to eat a mixture of crushed oats, bran and dried blood meal foods for frame building, and if there is any tendency to weak bones add bone meal, which may now be had in the market, and do much to prevent such troubles as "osteoporosis" (big head). No foal flesh must be lost, if best results are to be obtained in horse breeding. Foal flesh is to be put on by feeding the mares, and as soon as possible supplying the foals with a generous ration of nitrogenous food such as we have suggested.

Wood Ashes as Fertilizer.

If pure, unbleached wood ashes could be obtained plentifully, and at a moderate cost, they would give perhaps more satisfactory results, as the ashes are rich in potash and contain lime in its best form, and also serving well as a protection against the attacks of some kinds of insects. Ashes can be used without liability of injury on all kinds of crops if broadcasted over the soil, as many as 150 bushels per acre not being considered excessive on certain soils, and they make a better fertilizer for clover than barn-yard manure. For fruit trees ashes cannot be excelled.

A good trough for little pigs can be made of a long, narrow and shallow box of any kind. The first feed of wet bran will make it milk tight.—Field and Farm.

A PROMINENT CHURCH WORKER SAYS SHE OWES HER LIFE TO PE-RU-NA.



Mrs. Hattie LaFountain

Mrs. Hattie La Fountain, Treas. Protected Home Circle and Catholic Ladies of Ohio, writes from Galion, O., as follows:

"After my first child was born I suffered for several months with bearing down pains accompanied by dreadful headaches. I was afraid my health was ruined for life, and felt very downcast about it. One day when a friend was visiting me she told me of Peruna and what it had done for her when she suffered with irregular menstruation. My husband procured a bottle the same evening and I began to take it daily according to directions. Before the first bottle was used I was entirely well, and you certainly have one grateful woman's blessing. I have also advised my friends to use it."

MRS. HATTIE LA FOUNTAIN.

Secretary Woman's State Federation Says: "Pe-ru-na Does More Than is Claimed for it."

Mrs. Julia M. Brown, Secretary of the Woman's State Federation of California, writes from 121 1/2 Fifth St., Los Angeles, Cal., as follows:

"I have never known of any patent medicine which did what it professed to do except Peruna. This remedy does much more than it claims, and while I have never advocated any medicine I feel that it is but justice to speak a good

word for it because I have found it to be such a rare exception.

"I have known several women who were little better than physical wrecks, mothers who dragged out a miserable, painful existence, but were made well and strong through the use of Peruna. I have known of cases of chronic catarrh which were cured in a short time, when a dozen different remedies had been experimented with and without good results. I use it myself when I feel nervous and worn out, and I have always found that the results were most satisfactory." JULIA M. BROWN.

Tommy's Essay on Preachers.
The following essay by a youthful boarding school boy throws quite a new and interesting light on church dignitaries. "There are three kinds of clergymen bishops, rectors and curats. The bishops tell the rectors to work and the curats have to do it. Curat is a thin married man but when he is a rector he gets fatter and can preach longer sermons and become a good man, we should always respect a curat because Sunday he may be a rector and we must always pity those who are low down in the world. Any of us may be a rector, so we must not hit a man with a stone."—Chicago Chronicle.

Growing Evil.
"My boy" warned the old gentleman with the white ribbon, "the drink habit is growing worse every day."

"Your right," responded Jimmy Flynn. "My girl Lizzie used to be satisfied with two sodas, and now she wants four."—Chicago Daily News.

"Doesn't the odor of burning leaves make you sick?" asked Jimmie. "Oh, no," replied Junks. "I smoke Turkish cigarettes, you know."—Cincinnati Times-Star.

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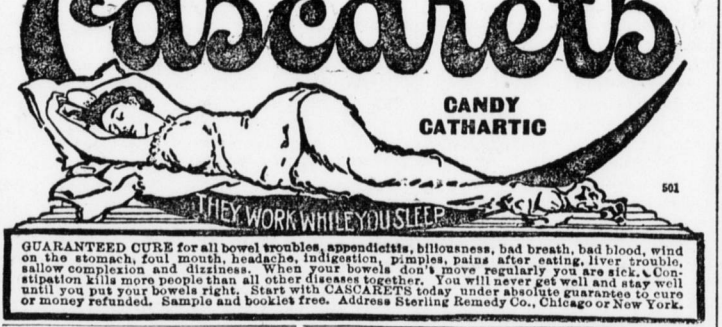
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HER GREAT FORTUNE. A Woman Saved From Life-Long Misery and Made Happy and Useful.

A woman confined to the house for several years with a chronic female derangement had finally given up hope of being cured.

She had tried physician after physician, and remedy after remedy, without any permanent improvement.

Her treatment had cost her husband who was a poor man, hundreds of dollars. They had been obliged to deny themselves many comforts of life in order to get money enough to pay the physicians.

The woman had become weak, nervous and wretched, and scarcely able to keep out of her bed. Her children were growing up neglected and ragged, because of the want of a mother's care. Her husband was becoming discouraged and broken down with overwork.

Picking up the paper one day she happened to read an item which contained the news that Dr. Hartman would treat such cases free of charge by letter. She immediately wrote the doctor describing her case, and giving him all her symptoms.

She soon received a letter telling her exactly what to do, and what medicines and appliances to get. She began the treatment (the principal remedy being Peruna) at once, and in a few weeks she was well and strong again, able to do her own work.

This offer of free home treatment to women is still open to all who may need the services of this eminent physician. All letters applying for treatment will be promptly answered, and be held strictly confidential. Miss Annie Hoban, Post Peacohontas of Yemassee Council of Red Men (Women's Branch), writes from 872 Eighth Ave., New York:

"Three months ago I was troubled with backache and a troublesome heaviness about the stomach. Since brought me no rest for it was a restless sleep. The doctor said my nervous system was out of order, but his prescriptions didn't seem to relieve me. I was told that Peruna was good for building up the nervous system. After using it for two months I know now that it is. I want to say that it made a new woman of me. The torturing symptoms have all disappeared and I feel myself again. Peruna did me more good than all the other medicines I have taken."

ANNE HOBAN,
Miss Mamie Powell, Lake Charles, Louisiana, writes:

"I sincerely believe that Peruna is a woman's best friend, for it has certainly been that to me. I had had headaches, backaches and other aches every month for a long time, but shortly after I began taking Peruna this was a thing of the past, and I have good reason to be grateful. I take a bottle every spring and fall now, and that keeps my health perfect, and I certainly am more robust now than I have been before and am weighing more. I do not think any one will be disappointed in the results obtained from the use of Peruna."

MISS MAMIE POWELL.
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, O.

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