

Marvels of Everyday Science

Competent Scientists Apply Their Skill to Problems of Agriculture, Housekeeping, Schools, Business and Governmental Activities.

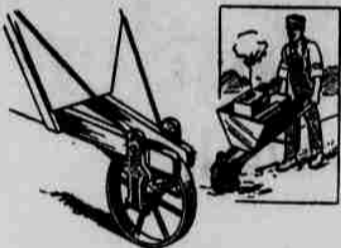
AN ITALIAN has invented an electrically operated machine for propelling distinctive odors by which he purposes to produce in a Milan theater a "Symphony of Odors." The inventor insists that a degree of harmony may be sensed through the olfactory nerve not unlike that sensation we term music when sensed through the auditory nerves. Instead of a "Polonaise in E Flat," he would give a "Fantasia in Violets," or a "Nocturne in Apple Blossoms." By combining a number of these instruments, he declares he is able to produce arpeggios of perfume, harmonies of fragrance and haunting nuances of scent which will rival, if not surpass, the crashing chords and melodious phrases of master musicians.

One More Victory for Science.

Until the aid of science was invoked the work of unloading cars loaded with coal in winter in Philadelphia proved to be a heavy task, for it often happened that whole trainloads arrived with the coal frozen into a solid mass. Science built a concrete and nearly airtight house at Greenwich Point, into which 21 loaded coal cars may be backed at one time—like so many pies in an oven. Here, in a temperature of 150 or more degrees, the solid contents of a car is thawed loose from the sides. In 40 minutes or so, the cooking process being complete, the cars are taken from the oven and hoisted over the ship, when the coal runs out easily. That hot air can do to 21 cars in 40 minutes what it took 100 men a day to accomplish.

Shock Absorber for Wheelbarrow.

A gold medal was recently given in France for a shock-absorbing attachment for the common or garden variety of wheelbarrow. The shock absorber consists of two uprights, one on each side of the wheel, at the bottom of which the axle is inserted so as to bear against vertically supported springs. The device is intended not only to save any fragile load carried on the wheelbarrow, should an obstruction be struck



on the road, but also to lessen the jar on the hands of the laborer when handling heavy loads on uneven ground.

Curing Hay Artificially.

Experiments extending over five years have demonstrated that hay cured by steam heat is preferred by stock to the sun-dried article, and chemical analysis confirms this practical test by showing that the percentage of protein is higher in artificially cured hay. The method calls for a complete steam plant, where steam heat is secured from the exhaust of the engine. The freshly mown hay is drawn under a shed and pitched onto conveyor belts which carry it to the top of the building used in steam drying. The hay is carried back and forth over steam coils underneath the conveyors seven times. An even heat of 240 degrees F. is maintained, and the hay remains on the conveyor from 20 to 40 minutes. When it is discharged it is well cured, of better color, and the leaves are preserved in better shape than hay cured in the fields in the ordinary way. The method lends itself to co-operative action among farmers.

Iron Fence Posts.

Iron fence posts are coming into general use. The points claimed for them are that they make the fence lightning proof, that they are easy to set and that they will last and hold the fence in shape longer and better than any other. Will they be able to make good?

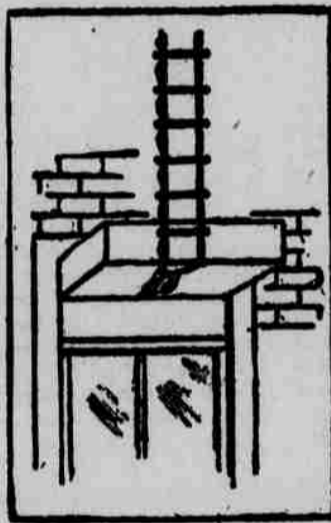
Film Pictures of Flying Bullet.

An apparatus capable of making film pictures at the rate of 100,000 a second has been invented, and with it some remarkable pictures have been made. In

fired from a revolver were taken while the bullet was passing through a space of 10 inches. This bullet was fired through a thin piece of wood, and the film showed a curious situation. The wood did not show any effect from the impact of the bullet until the bullet had passed completely through it. Then splinters began to form, the stick split, and finally fell to pieces. No camera shutters can be used with this apparatus. A series of electric sparks are flashed at the rate of 100,000 a second and a picture is made with each flash. The film is carried on a wheel 3 feet in diameter that makes 9,000 revolutions a minute.

Handy Fire Escape.

An effective and convenient form of fire escape has been designed by a Canadian. It is small, light and compact and can be kept in the top of a closet in hotel or house room, but is quite strong enough to bear the heaviest person in safety. The escape consists of a rope ladder with a hook



which is detachably when connected to the ladder. The hook engages the inside of the window sill, and the casing lies along the sill. In this casing is a compression spring, and fastened to the string are jaws which engage the top of the ladder. It takes only a few seconds to whisk this device from the top of a closet or corner of a room, fasten it to the window sill and throw it out. Then the clumsiest of persons can descend it, the spring support making the descent much easier than it would otherwise be. This form of fire escape is a big improvement over the single rope device formerly used in small hotels and homes.

Mattress as Lifeboat.

A mattress stuffed with ten pounds of kapok will support in the water a 200-pound man lying on it. Kapok, says the Scientific American, is a fibrous, silky material which grows in the seed pods of a tropical tree. The trees grow in the East Indies, India, West Indies and other tropical lands,



but it is only that which comes from the Island of Java that has this remarkable property of buoyancy. The mass of fibers keeps the water out because its own surface tension restrains it from penetrating the interstices of the mass. Java kapok will support in water twenty times its own weight, and if the kapok is in a leather casing it will continually support this weight for two months or more before the water does finally penetrate the mass sufficiently to make it sink.

Health and Sanitation

BY A PHYSICIAN.

IMPROPER conditions of the nose and throat are not only dangerous to health, but stunt the physical and mental development of the child.

Colds in the head, catarrh, adenoids and enlarged tonsils are the most frequent of these improper conditions found in little children.

Adenoids are small masses of soft tissue normally found in every child's nasal passages between the back of the nose and the throat, which through catarrh or other causes may become enlarged and block up the air passages, interfering with breathing through the nose and forcing the child to breathe through the mouth, preventing proper inflation of the lungs and stunting the development of the chest. They keep up a constant catarrhal condition near the ventilating tube leading from the throat to the ear and in this way impair the hearing of the child.

Another common throat disease is enlarged tonsils. The tonsils are small, almond shaped bodies situated on each side of the throat. They have a certain purpose, and I do not believe in the indiscriminate removal of all enlarged tonsils. In fact, I condemn what I unhesitatingly call the "massacre of the tonsils" so often chosen as the treatment of enlarged tonsils. The cause is in many cases not in the tonsils, but in the general condition of the patient. Proper medicine and hygienic treatment will cure many cases without an operation. Only when the tonsils are enlarged, hard and fibrous, seriously interfering with speech and swallowing, should they be removed.

Prevention is better than a cure. If a child catches a cold, do not let the cold "wear itself away." Treat it at once or it may lay the foundation for adenoids and enlarged tonsils.

GREASE in a sink is a very prolific cause of disease. It cannot but accumulate from dishes and utensils, and when small bits of vegetable matter adhere to it a shelter is given to mischievous bacteria. Besides, grease will clog the drain and become a menace and an inconvenience. The surest and simplest cleansing agent is a strong solution of washing soda and boiling water. The sink should first be scrubbed with soapuds and the hot solution then dashed down the drain. This cleansing should be done at least once a week.

DR. EMERSON, the Superintendent of Public Instruction of Buffalo, N. Y., approves of the activities of medical school inspectors and nurses.

He says, "In this way many children have received medical and surgical attention who otherwise might still be suffering in body and retarded in their progress through the schools. Medical supervision of this kind facilitates the advancement of pupils from grade to grade and reduces the number of repeaters in our schools, thus lowering the per capita cost of instruction. It raises the general average of efficiency both for pupils and for teachers, and is therefore a measure of the wisest economy."

The school nurses have rendered in-

Fish Spits; Kills Flies.

A novel recruit to the swat the fly campaign is the fly shooter, a fish called *Toxotes jaculator*, round, prettily striped, with a wide mouth and a projecting lower jaw. It is able to squirt a jet of water with enough force and accuracy to knock a fly down at the distance of two or three feet. When Mr. Fly strikes the water he is promptly eaten.

Unfortunately these valuable fishes belong only to the fresh waters of Japan and the Asiatic coast, so that they cannot be relied upon to exterminate our outdoor insect population, but they may be kept in an aquarium with the goldfish, when they will help to protect our houses from flies and at the same time afford amusement by the accuracy of their shooting.

valuable service; he continues to say that they "have supplemented the work of doctors by treating many conditions that would otherwise have remained uncared for in the families of the poorest children, and by visiting the homes of those who were neglected."

LARGE corporations, lumber companies, railroad companies, etc., are always endeavoring to comply with rules and regulations of health and sanitation. They are now beginning to protect the health of their employes by taking up actively and systematically the prevention of disease among their number. These companies will soon demand trained sanitarians.

THE Panama Canal zone is a shining example of what proper sanitary measures will accomplish. It cost the U. S. Government \$2.43 per capita. It is money well spent, however, when you consider that the death rate has been reduced from 240 to 11 per thousand per annum.

I should never sow clover without a nurse crop. Sowing it into oats about the middle or last of March has shown good results.

Do not feed moldy silage to horses.

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