

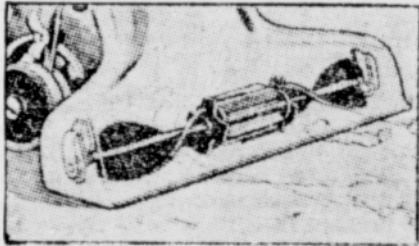
Marvels of Everyday Science

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

AN enormous biplane made by the Russian builder, Sikorsky, has succeeded in making a flight of 18 minutes' duration with 16 passengers on board, the weight of the passengers and crew carried in this remarkable flight being 2,640 pounds. Even more sensational was a cross-country flight made by the same machine when it had the pilot and eight passengers on board and maintained an average height of 3,000 ft. for a period of 2 hr. 6 min. This establishes a record both for duration and altitude for an aeroplane carrying nine persons. This machine is of peculiar construction and is similar to the first one of its type. The span of the upper plane is 114 feet, while the fore-and-aft length of the aeroplane is 62 feet. The wings are spaced 9 feet apart and have a total supporting surface of 1,820 sq. ft. The weight of the aeroplane when empty is 8,250 lb. It is fitted with four motors of 100 hp. each, and provision is made for installing a fifth motor if desired.

Vacuum-Cleaner Nozzel Has Brush Inside.

There has been recently patented a nozzle, for use with vacuum cleaners, which has a revolving brush so arranged just within it that, as the nozzle is swept back and forth over the floor,



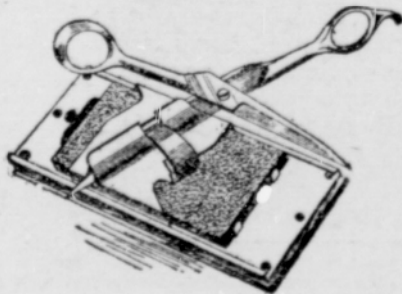
the brush assists in raising the dust particles, lint, thread and other removable dirt, and the action of the cleaner is more efficient.

Chinese Method of Preserving Eggs.

Covering eggs with a thin layer of sea salt and vegetable ashes, made into a paste with water, the Chinese succeed in so preserving them that they do not spoil quickly, and may be shipped long distances. The paste is put on about a quarter of an inch thick, and the eggs are then piled up and allowed to dry. When required for use, they are placed in water, and the paste dissolves readily. It is found that the salt penetrates the shell and inner membrane, giving a decidedly saline taste to the egg, hence they are used for purposes where the salty taste is not objectionable.

Automatic Hone Sharpens Scissors.

A hone with an automatic guide that holds the blade of a pair of shears in the right position by means of a clamping and pressure spring, has been placed on the market and appears to be simple in operation and sure in results. The base, upon which the carriage slides, is so arranged that the carriage can move only so far. A clamping guide holds the blade of the shear at the right angle upon the surface of the hone. Once fixed in position, the



shear is moved back and forth until properly sharpened, as the spring gives the requisite pressure and hold the blade rigidly while honing.

Motorcycle Saves Explorers.

When the rear axle of their automobile was damaged, a party of Englishmen who are exploring the dark continent from the Cape to Cairo were saved from disaster through the possession of a motorcycle. One of the party mounting the "single tracker," started backward over the jungle paths for an outpost of civilization, where repairs could be obtained, eventually returning in triumph with the necessary parts. The party is equipped, in addition to

usual supplies, with a motion-picture machine with which to record events of special interest.

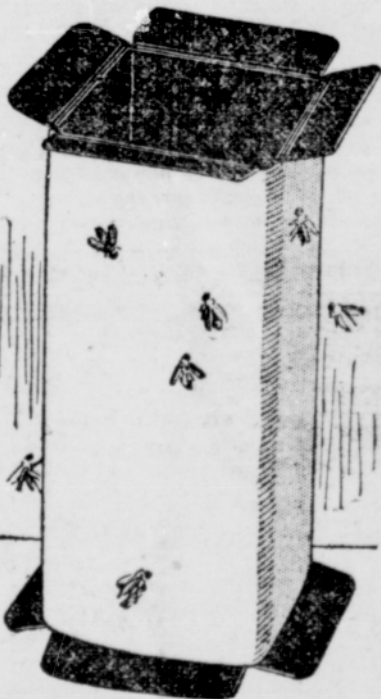
Motor-Driven Train for Roadless Ground.

The principal feature of this motor-driven train in hauling heavy loads across certain sections of Australia that have no substantial roads, consists in the front and rear rail-laying wheels which enable the vehicle to traverse long stretches of deep sand and soft soil without becoming stalled. The wheels of the engine, as may be seen, are provided with a series of planks which are automatically laid down and taken up when the vehicle is in motion. The train was constructed to carry a load of thirty-five tons and weighs sixty-eight tons complete, of which the engine accounts for twenty-five tons.

A firm believer in the influence of suggestion, an electric light man in Ohio, turned on his own porch lamp every night during the month of December. He gave no reason to his neighbors for so doing, nor did he mention to them the fact that he was operating this lamp continuously. However, by the tenth of the month ten neighbors on both sides of the street were operating their porch lamps every night. The fact that this was not a coincidence was established when on January 1 the electric light man discontinued the operation of his porch lamp and was followed in his example by all of his neighbors.

New Holder for Fly Paper.

A novel contrivance for holding sticky fly paper securely, and keeping it in such a position that tablecloths, centerpieces and polished surfaces do not come in contact with the paper has recently been patented. It consists of a hollow box-shaped affair of thin metal, the outer ends of which extend



outward, forming guards which keep the body of the device away from the surface of its support, while a full-sized sheet of sticky fly paper is folded about the center and kept in place by projecting prongs thrust through the edges of the paper.

Newspaper Made for Use as Wrapping Paper.

Two days each week a daily paper published at Eberswalde, a Prussian town near Berlin, is printed on only one side of the sheet, and on these days the paper is made twice as large as usual so that the public loses nothing in the way of reading matter. The object of this curious arrangement is to make the paper useful as well as instructive, as it can then be used for wrapping up provisions without any touch of printers' ink.

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Health and Sanitation

IT IS unfortunate indeed that Toledo, Ohio, has suffered from a smallpox epidemic. Many more of our cities are liable to meet with dire results in this regard if vaccination is not more extensively done. An epidemic of any contagious disease once started is much more difficult to control than to establish the prevention.

Why did the French fail to construct the Panama Canal? Because they endeavored to treat disease after it occurred, rather than attempting to prevent it. It is much more difficult to treat any preventable disease than to administer the prophylactic and far more expensive. Toledo numbered 139 cases in December. Portland had five, but the latter city did not escape because vaccination is so thoroughly done—in fact laxity in this respect is constantly increasing. In Montreal, during nine months in 1883, 3,163 persons succumbed to smallpox.

Saginaw, Michigan, a few years ago, was quarantined as a whole against the surrounding country. What a terrible calamity to any city from a business standpoint, if nothing else.

There is no recognized standard text book on the science of medicine that condemns vaccination as a preventive against smallpox. There is no school of science medicine in the world that does not advise it.

THERE is, of course, the person who will contend that the fly isn't half so dangerous as advanced sanitary science contends. But such a person is a rare avis these enlightened days and his ideas fly in the face of proved facts. No doubt the same individual would see no danger in a contaminated source of water supply and would make light of the whole scheme of community and

individual cleanliness that is yearly robbing the graveyards of the country of a tremendous harvest. Take no heed of such a carper.

AVOID, as far as possible, handling flies with the bare hands. But if you do touch them, wash the hands thoroughly and avoid possible danger.

BATHING, as well as other good practices of our daily life, is largely a matter of habit and convenience. Bathing is an agreeable thing provided it is convenient and comfortable, and the necessity is great of having a bathroom that is cheerful and warm so that the habit may become a fixed one with the children as well as their elders. The Modern Sanitarian emphasizes this point in the following succinct argument:

"It is all very well to take a morning tubbing when we can slip from a snug bed into a bright warm, inviting bath room when the morning dip is a luxury, but how many of us would insist on such scrupulous cleanliness if, like our less fortunate dwellers of the slums, we had to carry our water from a distant hydrant, bathe without privacy in a cold room and then carry the water to a distant receptacle to be emptied. Not many, we venture. Which goes to show that bathing, like most personal habits, is greatly a matter of environment and convenience.

"If the slum dwellers were suddenly enriched and changed to the dwellings of the wealthy, while the wealthy people were impoverished and transferred to the slums, conditions would soon become entirely reversed; the former slum dwellers would become esthetes, devoted to the daily morning bath, while esthetes would slip back to the level of the great unwashed."

Dangers of Fire Season Explained

Western Forestry and Conservation Association Reports Progress in Preventive Work.

INDICATIONS of a dangerous forest fire season, unless June brings heavy rains, are reported by State, Federal and private forest forces to the Western Forestry and Conservation Association, which serves as a clearing house for all forest protective agencies in the Pacific Northwest. The early season, with little snow in the hills and inflammable vegetation well advanced, is considered to cause increased hazard if hot, dry weather is prolonged.

For the next few weeks, before careless campers and hunters become most numerous, slashings and uncleared rights of way are the greatest source of danger. Settlers, loggers and road crews are urged to clean these up as long as it remains safe to do so, but reminded to take every precaution and that from June 1 to September 1 burning without permit from a fire warden is punishable by law, besides carrying liability for heavy damage if destruction results. Both private and official agencies report, however, that public sentiment in these matters has greatly improved, there being much less carelessness than in former years when the injury from forest fires to all members

of the community was less realized. Besides the danger to the life and property of settlers, every loss of timber reduces the return from forest industry, which is the greatest source of community revenue in the Northwestern states and contributes to every other industry. Settlers are beginning to recognize it as the greatest support of a market for farm products.

Method and expenditure for patrol and fire-fighting have been carried further in the Pacific Northwest than anywhere else in America. The chain of allied timber owners' associations extending from Montana to California protect nearly 25,000,000 acres, employing several hundred patrolmen, besides emergency help, and spending large sums for telephone and trail construction. These systems dovetail under cooperative agreements into those of the states and the government, making a triple alliance which covers the entire field. Preparation for more effective patrol than ever before is being made this year and the public is urged to reciprocate by exercising unusual care with slashings, camp fires, matches and tobacco in the woods.

A FRENCHMAN staying at a London hotel, when presented with his bill, paid it without formal protest, but was indignant at its amount. "I wish to see ze proprietaire," he said to the clerk. In a minute the proprietor appeared.

The Frenchman was all smiles, "Ah," he said, "I must embrace you." "But why should you embrace me?" asked the astonished hotel keeper, "I do not understand." "Look at zee bill!"

"Yes, your receipted bill. What of it?" "What of eet? Simply zees, saire. It means zat I shall nevaire, no, nevaire, see you again."

MRS. PANKHURST, as the Majestic sailed from New York, talked to a reporter about the comparative deceitfulness of men and women.

"Women," said the reporter, "are the more deceitful."

"No," said Mrs. Pankhurst, "men are the worse. Look at the way they deceive their wives."

Mrs. Pankhurst smiled and tossed her head.

"Oh, no," she said. "How could the average man ever get a wife if he didn't deceive her?"

A California firm is selling eucalyptus charcoal at \$24 a ton, as against \$20 a ton for oak charcoal. Since most of the California-grown eucalypts do not make good lumber, uses for other products of the trees are being sought.