

SCIENCE AND PROGRESS

CATARRH AND ITS SYMPTOMS.

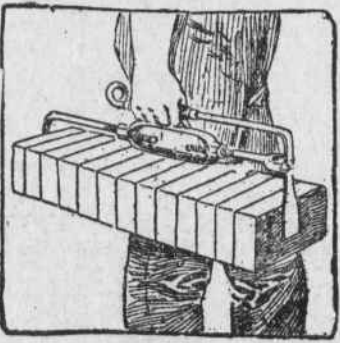
Catarrh is an inflammation of any of the mucous membranes of the body. It is marked by the usual signs of inflammation and, as the word implies—being derived from a Greek word meaning to flow down—by a more or less profuse discharge. Catarrh may be acute or chronic, and the latter, as will be explained later, may be either atrophic or hypertrophic. Acute catarrh unfortunately needs no description, for it is only too familiar to us all as a cold in the head. In this case it is the mucous membrane of the nostrils which is inflamed. The most obvious symptoms are swelling of the membrane, which may be so great as to close the nostrils completely, and a profuse discharge. When acute catarrh attacks the pharynx or larynx we have a sore throat, and if the inflammation extends still farther we have bronchitis. In the latter case the most evident sign is a cough, due either to the presence of a mucous discharge, or to irritation caused by the air passing through the inflamed bronchial tubes. In young children the inflammation in the larynx causes much swelling, and this gives rise to the difficult breathing and hoarse voice which characterize one form of croup. If catarrh attacks the stomach it causes severe indigestion, and when the intestinal mucous membrane is affected the most prominent symptom is diarrhoea. Conjunctivitis and acute inflammation of the ear are the expressions of catarrh of the eye and the drum of the ear. In chronic catarrh the process is less active; there is usually little or no pain, but the discharge is profuse and thick. In hypertrophic catarrh the mucous membrane becomes permanently thickened, but in atrophic catarrh it is thinned. Atrophic catarrh is not really an inflammation, but rather the result of a previous inflammation which has destroyed the mucous membrane, leaving in its place merely a thin skin, covering the surface, but answering none of the purposes of a mucous membrane. A catarrh may be caused by anything that acts as an irritant to the mucous membrane—dust, sulphurous, ammoniacal, or other strong fumes, undue dryness of the atmosphere, and so forth, in the case of the air-passages or eyes; indigestible food, alcohol, and so forth, in the case of stomach or intestines. Often the inflammation is due to the action of microbes, which are probably always present, but can work harm only when the soil has been prepared for them by mechanical injury, or by congestion caused by a chilling of some portion of the surface of the body.

A LESSON FROM AMERICA.

During the Paris exposition an American firm obtained permission to drive an artesian well in the Bois de Vincennes near Paris. The city of Paris has two artesian wells which required respectively nine and six years to be driven. The American well was sunk to a nearly equal depth, 1,935 feet, last summer in two months. The French were surprised at the rapidity of the work, as well as by the homeliness and simplicity of the apparatus. The American company has since offered to donate the well to Paris as an addition to its water supply, and some of the French scientific journals express the hope that "the practical lesson which the new world thus offers gratuitously will not be without its fruit."

CARRIES A ROW OF BRICKS.

The invention shown below is a device for picking up a row of bricks quickly and transporting them with

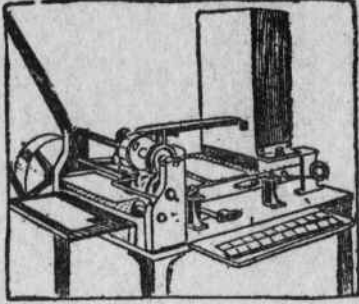


DEVICE FOR CARRYING BRICKS. safety. The device consists of a turnbuckle provided with threaded sockets at the ends, in each of which is journaled a screw-threaded shaft. The one at the left in the drawing is bent downward and flattened to form a grip, and the one at the right end is a clevis. In this clevis is pivoted an L-shaped lever, which is flattened at the short end to form the opposite grip for the row of bricks, the long end being bent back over the turn-buckle and provid-

ed with a grip for carrying in the hand. In operation the turnbuckle is set to spread the grips apart until the desired quantity of bricks can be picked for each load. Then the flat grips are dropped over the two end bricks of the row, the handle meanwhile being lowered and the hand grasping the turnbuckle. As soon as the carrier is in position an upward pull on the lever clamps the grips over the bricks and binds them together with such force that they can be transported without danger of dropping. A patent on this device has been granted.

STAMP AFFIXING MACHINES.

In large offices, where thousands of letters are sent out every day, some



HIGH-SPEED STAMPING APPARATUS.

sort of a stamp-affixing machine is a necessity, and the more accurately and rapidly it will do its work the better, as it is often desired to catch a mail with a batch of letters written late in the afternoon. By the old hand method of affixing the stamps it would require the whole office force to do the work, but shown herewith is a machine which the inventor claims will require next to no attention, the only aid necessary being a boy to feed the stamps. If the latter could be had in a long strip instead of ten in a row the machine would take care of itself after once started. The machine is designed to be run by a small motor or other belt power, but it may also be operated by foot or hand power. The envelopes are placed in the upright tube on the right, and are fed across the intervening space to the rollers by an endless belt, which is perforated at intervals, and forms, together with the rollers and side-walls, an air cell. From this cell a tube leads to a suction fan, which, being set in motion by the starting of the machine, creates a partial vacuum inside the belt chamber and thus holds the letters firmly on the belt by drawing air rapidly through the perforations. The stamps are suspended in a tray in conjunction with a narrow feed roller, which transfers the stamp past the moistener and delivers it to the envelope at the right instant. The machine is also adapted for the placing of gummed labels on envelopes, and may thus be utilized as an addressing machine.

MUSICAL BEETLES.

The researches of Mr. C. J. Gahan show that while the structure of the musical or stridulating organs of beetles is extremely simple, they sometimes possess contrivances for varying the pitch. The general structure of such an organ is a hard surface covered with striations, over which some other member of the body furnished with a rasping edge or area is rubbed. When the striated surface is divided into parts with finer and coarser markings, variations of pitch can be produced. The organs occur in various species on the head, the legs, the wing-cases and the hind body. The katydid and the cricket, which produce musical tones in the same way, do not belong to the beetle family.

SCIENTIFIC NOTES.

New Spinning Machine.

Some two years ago a resident of Boston, Mass., devised a new spinning machine, which he took with him to Bradford, the center of the spinning industry of Great Britain. There, added by local engineers and experts, he improved his appliance, which is now in active operation. It is capable of spinning a variety of materials, such as asbestos and peat moss, as easily and readily as wool, and when completed it is difficult to determine the original nature of the fabric.

Use of Ice in Brazil.

Consumption of ice in Brazil is constantly increasing. This is due principally to the demand for ice in restaurants, hotels and other public places. Foreigners are most insistent in their calls for ice. Our consul at Santos is of the opinion that an ice company would prove a profitable undertaking in that place, the use of ice being practically unknown in the fish, vegetable and meat markets. He also thinks the American refrigerator would sell well in Brazil.

A friend's faults may be noticed, but not blamed.

Bureau of Standards

TEMPLE OF SCIENCE WITH DOUBLE WALLS

Uncle Sam's new supreme court of weights and measures, for the building of which congress just gave Secretary Gage a quarter million dollars, is the largest bureau added to the government for many years. You have seen it referred to in the news dispatches as the national bureau of standards. That is its official name. It might be more properly called the supreme court of weights and measures, because it really will be the tribunal of last appeal, whereat disputes as to the accuracy of weights and measuring instruments can be finally settled. This new bureau will save millions of dollars a year to our great industries, will make the researches of scientists more accurate, will enable the surveyor to stake out our building and farm lots with greater precision, will give the common people better measure of dry goods, groceries, gas and electric light. This bureau of standards will correct our weights and measures, that they may all be equally uniform. It will test yard sticks, meter sticks, peck measures, pound weights, kilogram weights, thermometers, steam gauges, and all kinds of delicate measuring devices. It will stamp each with a government stamp certifying its truthfulness or error. A representative of each measuring or weighing instrument to be stored in the new bureau as "the" standard of that particular measure and weight, with which all others of its class must be compared. There will be a standard yard graduated into standard feet and inches; other standards of length, standards of weight, quantity, electricity, heat, light, pressure and so on, with their subdivisions and multiples. Today we are dependent upon Germany, France and England—which have standardizing bureaus—for these corrections. It will be difficult to realize the amount of care which will be taken with these standards installed in the new bureau. It will be far enough from the city to be out of reach of the vibrations caused by electric cars and heavy wagons. Many of the walls will be double, to prevent penetration of hot or cold air and consequent fluctuation of interior temperature. Compressed air and vacuum pipes will extend throughout the build-

ing, as will several systems of electric wires. There will be double windows capable of flooding the rooms with light, also light-proof shutters making them absolutely dark. There will be fire-proof vaults for the storing of the standards. A separate building, 1,000 yards or more away, will install the engines, dynamos and other heavy machinery essential to the work. As a whole, the institution will be a modern temple of science, of which the country may be justly proud. The bureau will also establish a standard electric cell, measuring standard volts; indeed, electric standards of many kinds. Although applications of electricity represent a rapidly growing business with investments of \$2,000,000,000, there are in this country no facilities for testing meters and other instruments used in electric measurements. A standard thermometer will be another of the many instruments to be stored in this bureau. With this will be compared for correction the millions of thermometers used by physicians and surgeons, by scientific laboratories and great industrial establishments. For a long time Uncle Sam has had an office of weights and measures for giving out, mostly to its scientists, standards of weights, measures and capacities which have been adopted for convenience, but not by law. It has always been a part of the coast and geodetic survey, but is now merged into the new bureau of standards. What is practically our standard for measuring length at the present time is to be found here. This is known as the "standard meter," a bar of metal, kept in three or four cases for its protection. This bar cost \$2,500, and the metal alone in it is said to be valued at \$1,500. The United States standard kilogram, which was similarly obtained from Paris, is a duplicate of the world's standard kilogram, installed in that city. It is a small cylinder of the same metal used in the construction of the standard meter. This metal, by the way, is an alloy of platinum and iridium, selected because it cannot be destroyed by heat. It cost \$1,000. Two bell jars, one fitting over the other, protect it from the dust. It is handled only by a pair of forceps with chambré skin ends.—Philadelphia Record.

HAVE AGE AND STATURE

DECREASED SINCE THE DAYS OF ADAM AND NOAH!

The impression is quite general that the people of prehistoric times were much taller than those of the present day. In 1718 Henrion, a member of the French Academy of Sciences, published a pamphlet in which he asserted that Adam was 123 feet 9 inches tall; Eve, 118 feet 9 inches; Noah, 27 feet; Abraham, 20 feet; Moses, 13 feet. He gave elaborate reasons for his statements. A present-day scientific student of the Bible goes Henrion one better and makes Noah 67 feet tall and attributes to the flood survivor a weight of 1,375 pounds. His reasons for this estimate are not bad, either. He says: According to Genesis, Noah lived 950 years and then died. The average life of man to-day is about 70 years. It is a well-defined rule in nature that animals, bipeds and quadrupeds live about three and one-half times the number of years required for individual maturity. Thus man in this century matures in 20 years and dies at the age of 70 years. Dividing the age of Noah by three and one-half we find that he matured in about 270 years. The average man of to-day at maturity measures about 5 feet and weighs 125 pounds. Five feet in 20 years is equivalent to three inches in one year. Applying the same rule to Noah's maturing years, we find that at his maturity he was 67 feet tall and weighed 1,375 pounds. It stands to reason that if Noah was so great in body Adam must have been equally as large. The mere fact that Adam was never born evidences that he was a gigantic man. Everything created during the formation ages was according to a very large standard. The trees were skyscrapers, the animals immense and all other things in proportion. Why should

Adam have been a freak in this array of colossal nature?

Civilization and multiplication of the races diminish the lives of individuals as well as the statures. Why? Possibly because our civilization is an unnatural perversion of the life contemplated by our Creator for us, and as free agents we are gradually destroying the race as a penalty for our wrong power to multiply having been given us, death is a natural consequence, but death by natural decay, instead of death by disease, crime, war, pestilence, results of civilization, was contemplated. Hence our civilization and all other civilizations are more or less responsible for the inevitable extinction of the race.

A curious mathematical coincidence lay in the above proof of man's decline in stature and age. Thus the stature of man in a few more than 6,000 years, according to Hale's chronology being the age of the human race, and according to my deductions, has decreased from 65 to 5 feet, at which rate of decrease the world will be depopulated in 461 years, or the year 2,362. The age of man has likewise decreased from 900 to 70 years in the same time, at which rate the race will become extinct in about 461 years, or the year 2,362. As you observe, both deductions reach the same conclusion.

There may be an element of truth in this theory, at least it is worth probing. The great trouble with us to-day is that we are too easily satisfied; we lack the ability and energy to "figure out" or "search for evidences of truth" and instead accept all kinds of theories and dogmas as they are presented to us, surrounded mostly by a halo of fanaticism, impossible and absurd.

RUSSIA AND AMERICA

In the Behring straits Russia and America shake hands. Big Diomedé island and Little Diomedé stand side by side, the former Russia's outpost, the other our own. A little strip of narrow sea lies between the two, and so clear is the air on a fair day that it seems as if from one island you

could easily reach across a hand to the other. North across Kotzeline sound, is Point Hope, a barren sandspit, extending far into the Arctic sea. It is the home of a tribe of Eskimos, who go to the mission school and church and learn to sing hymns, to speak a little English and to use soap.

WHY MRS. PINKHAM

Is Able to Help Sick Women When Doctors Fail.

How gladly would men fly to woman's aid did they but understand a woman's feelings, trials, sensibilities, and peculiar organic disturbances.

Those things are known only to women, and the aid a man would give is not at his command.

To treat a case properly it is necessary to know all about it, and full information, many times, cannot be given by a woman to her family phy-



MRS. G. H. CHAPPELL.

sician. She cannot bring herself to tell everything, and the physician is at a constant disadvantage. This is why, for the past twenty-five years, thousands of women have been confiding their troubles to Mrs. Pinkham, and whose advice has brought happiness and health to countless women in the United States.

Mrs. Chappell, of Grant Park, Ill., whose portrait we publish, advises all suffering women to seek Mrs. Pinkham's advice and use Lydia E. Pinkham's Vegetable Compound, as they cured her of inflammation of the ovaries and womb; she, therefore, speaks from knowledge, and her experience ought to give others confidence. Mrs. Pinkham's address is Lynn, Mass., and her advice is absolutely free.

His Lack of Directness.

The young man was embarrassed, but he began bravely:

"It cannot be a surprise to you, Miss Eupherbia," he said, "that is, you must have suspected, from the length of time I have been coming here, that I—I say that it must have been apparent to you for some time that I could have had but one object in view in—although, of course, I can't claim that you have given me any cause to be confident. Still, you may have asked yourself, what other motive, if any, I could have had, when it must have been evident—and yet—"

"Mr. Bullmore," she interrupted, "please be more direct and explicit, if you can. You wobble painfully."—Chicago Times.

Carry Your Dinner in Your Purse.

A restaurant for concentrated food is to be started in Paris by an enterprising French chef. The happy diner will enjoy a menu of tabloids. From the hors d'oeuvres to dessert his entire meal will be presented to him in a few square inches.

In this way a busy man will be able to eat his dinner in a very few minutes, and carry it about him in his waistcoat pocket to swallow in spare moments. Even drinks are provided in the same form, and a bottle of claret or whisky and soda can thus be carried about in one's purse.—Home Chat.

An "M. D.'s" Open Letter.

Benton, Ill., May 20.—R. H. Dunaway, M. D., of this place, in an open letter, makes the following startling statement.

"I had Diabetes with all its worst symptoms. I applied every remedy known to the profession, as well as every prescription suggested in our books. In spite of all, I was dying, and I knew it.

"As a last resort, and with scarcely any faith whatever, I commenced taking Dodd's Kidney Pills. In one week I saw a great improvement. After I had taken five boxes I was sound and well. This is ten months ago, and I have not taken any medicine of any kind since, and am convinced that my cure is a permanent one.

"As a practicing physician, with years of experience, I most positively assert that Dodd's Kidney Pills are the best medicine in the world to-day, for Diabetes or any other Kidney Disease. Since using them myself, I have used them in many cases in my practice, and they have never failed.

"I am making this statement as a professional man, after having made a most thorough test of Dodd's Kidney Pills, and because I feel it my duty to the public and to my professional brethren. The truth can never hurt any one, and what I have said is the absolute truth.

"R. H. DUNAWAY, M. D."

It is no wonder that the public are enthusiastic over this new medicine, when our leading physicians themselves are being won over to its use.

The woman who wears her shoes so full of feet that they look as if they would burst from a pin-prick, seldom shines as an intellectual light.

PATENTS.

List of Patents Issued Last Week to Northwestern Inventors.
William Conner, Minneapolis, Minn., coin-controlled newspaper-delivering machine; Daniel T. Denten, Lakeview, Minn., harvester; James Farrell, Trosky, Minn., wire-winding apparatus; Lewis H. Kroke, Dwight, N. D., monkey wrench; Alice Seashols, Minneapolis, Minn., soap-holder.
Lothrop & Johnson, patent attorneys, 911 & 912 Pioneer Press Bldg., St. Paul, Minn.