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THE MAKING OF TO-MORROW

HOW THE WORLD OF TO-DAY IS PREPARING FOR THE WORLD OF TO-MORROW

Americans a Nation of Pill-eaters

By James Oliver Curwood

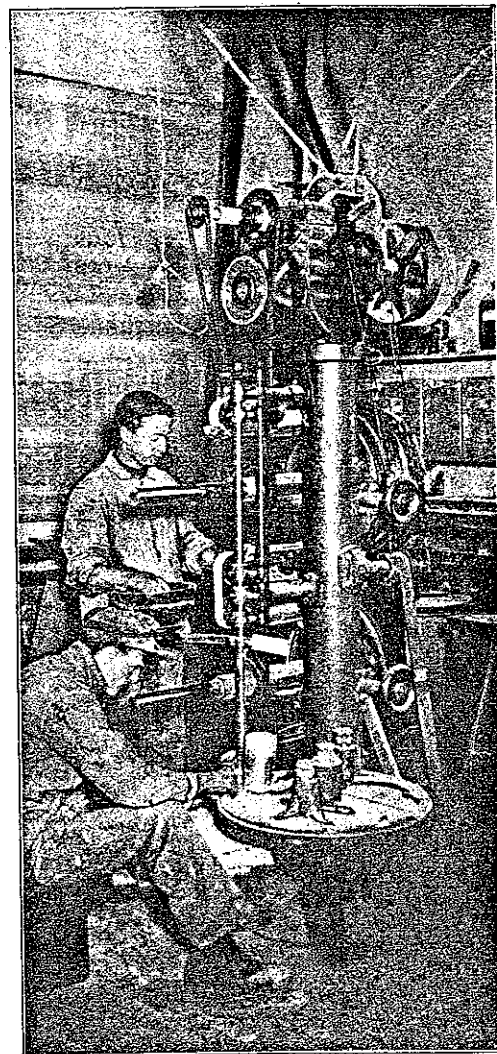
DETROIT is the greatest pill city on earth. In other words, in this city, which is also famous for the manufacture of automobiles, fully sixty per cent of the world's total supply of pills is made. There is hardly a malady on earth that Detroit pills will not alleviate, and there is no place that they do not go. In her pill factories are made over eighteen hundred different varieties of the little pellets, and if pills to suit can not be found among these, others will be made to order.

Imagining Detroit's annual crop of pills strung on thread, like Christmas popcorn, the rope would reach nearly three times around the earth at the equator.

Detroit now produces seven billion pills each year, and the number is increasing at the rate of five hundred million annually, which goes to show that the pill-eating habit is growing greater instead of less. One-third of these pills are consumed in America, a conclusive proof that Americans are the greatest pill-swallowers on earth. Last year the average consumption was something like fifty pills per capita. If one eats less than forty he is not doing his duty, and can not be called a good American. Another interesting "pill statistic" brings forth the fact that American women, and not men, keep up the pill industry. Correspondence with a score of the best-known physicians in as many of the largest cities in the United States testifies to the fact that, next to candy and beauty-washes, the special weakness of the American woman is pills! She takes them to grow fleshy, and she takes them to grow thin; she uses them to toughen her epidermis and she indulges in another course of pellets to whiten it; some will drive away freckles, and others are sworn to give her that healthy complexion for fifty cents, for which otherwise

she would have to go to the seashore; there are pills for her appetite and pills for her nerves, brain pills and liver pills and hundreds of other kinds besides.

The list is constantly growing. In De-



A MACHINE THAT WILL TURN OUT TWO MILLION PILLS A DAY

troit, each year sees two hundred new kinds added to it, for pill-discoverers are more numerous than inventors. There is almost as much romance in the pill as there is in gold. In the search for pill materials the whole world is scoured. Savage lands are explored. The wildest jungles and waterless deserts are overcome in the search. The costliest of expeditions are formed. Even fishing fleets are chartered in the northern seas by great Detroit pharmaceutical institutions to secure fish that contain valuable oils.

A few years ago a Detroit firm sent out Dr. H. H. Rusby, a well-known botanist, on one of the most venturesome expeditions known. From Arica, Peru, Doctor Rusby crossed the Andes, and descended three thousand miles of the Amazon in canoes and on rafts. For months he disappeared from the world, and at one time he was given up for dead. Surrounded by poisonous serpents, dangerous animals, fever and disease, the Doctor was meanwhile examining every new botanical discovery he made. And one day he discovered the drug which has made him famous, and which is now known as the greatest remedy in the world for a painful disease. This drug was richi.

At another time a Detroit pill-hunter traveled from Buenos Aires three thousand miles across the continent on horseback, and discovered chekan. Another Detroit expedition penetrated two thousand five hundred miles up the Amazon, and in the wild and almost impenetrable swamps of the Madeira River discovered the drug, manaca, which now goes into millions of pills annually for the cure of rheumatism. Other expeditions have explored the jungles of India and Africa.

Once the materials are secured, it is only a step into the great pill establishments in Detroit. In a certain great room in each of these factories, which rumbles and thunders with machinery and where the air is filled with dust, strange odors and whirling splinters, different kinds of woods and herbs are being ground up. One man may be at a machine which looks for all the world like a buzz-saw, grinding up santal logs, to be used in the making of santal oil a little later. Others are grinding herbs and strange-looking masses, of which not one in a thousand would know the use.

After the pill materials are secured, ground up and mixed for the manufacture of the various kinds of pills, the result goes to what is known as the "mass room." Here there are dozens of rollers, with men at them, mixing all sorts of colored stuffs. One mess looks like delicious ginger-bread; another might be the "dough" for angel-cake; but the most of it would be rye bread, if a cook should make a guess. The odors are suffocating, and in a minute or two a thousand particles, each with a taste of its own, seem to fly into one's mouth.

The next might be called the "biscuit and noodle" department, for after the "dough" is mixed, it is cut into little "biscuits" and fed into the "noodle machines," which turn out the lumps in long smooth pipes. These pipes go to hundreds of girls, who cut them and roll them into pills. These are called "hand-made" pills. But the greater number are made by huge pill machines, which gulp in the dough from the top, and turn out a veritable deluge of tiny round pellets at the bottom. One of these machines will make two million pills a day.

The pills now go in racks to a drying-room, and after they are dry, they are sent to the "coating" room, where they are put into huge, revolving, copper drums. Into the mass of swiftly moving pills is dipped ladlefuls of the sugar syrup which "coats" them. After revolving for a number of hours under a strong current of air, each pill has clothed itself in an even surface of the "coating," and is ready for the last drying, and then the sorting, packing and shipping. The colors of the coating are of all the colors of the rainbow. Some very high-priced pills are even coated with gold and silver. This is done by placing among the revolving pills thin sheets of gold and silver leaf.

But there are millions of pills which are not coated with sugar or gold or silver, but whose "skins" are made of gelatin. Each operator has a hollow bar, to one end of which is attached a flexible tube through which the air is being continually exhausted from the bar. On this bar are several rows of tiny openings, and on these are placed the pills, which are held there by suction while they are dipped into a hot gelatin bath. Then the pills are allowed to cool, then reversed, and their other half coated.



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The Rio Grande Irrigation

By Frank N. Bauskett

THE construction of the Engle dam soon to begin, the Secretary of the Interior having given his sanction to this huge undertaking. This huge piece of masonry is to obstruct the Rio Grande, built in connection with what is the Rio Grande irrigation project lies in New Mexico and includes several units, namely the Engle dam, the Leesburg diversion dam and the dam which is now to be completed, the waters which it will be sufficient to irrigate 25,000 acres of the Pecos Valley.

The reservoir that will be formed by the Engle dam will be one of the largest artificial bodies of water in the world. It will be forty miles in length and have a capacity of 2,000,000 acre-feet of water for the 180,000 acres of land irrigated by its waters. The dam is built on a bed-rock foundation to top of the dam walls or crest, is to be 265 feet high. At the bottom it will