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## NEW MACHINE FOR CLEANING AND SEPARATING THE FIBERS OF LEAVES.

Two different fiber plants are known in Central America by the name *pita*. They are the wild pine apple (*Bromelia sylvestris*), also known as silk grass in Honduras, and ixtile in Mexico; and the century plant (*Agave americana*), commonly known as the American aloe.

The pineapple "pita" grows almost everywhere in tropical America, and is much used by the natives as a fiber plant. The leaves from which the fiber is obtained are from 1½ to 3 inches wide and from 5 to 8 feet long. When the plant is cultivated for fiber in Mexico the leaves are longer and the fiber exceedingly fine and strong. When the fibers are separated into their filaments by dissolving the gummy matter which binds them together a silky fiber greatly superior in strength to the best Russian flax is obtained—a fiber which is said to mix with silk better than any other.

The aloe "pita" is also widely distributed throughout the tropical world, and yields a brilliant and strong fiber, though not so fine as may be obtained from the pineapple or bromelia plant. The leaves, which are from three to six feet in length, are thicker and more fleshy than those of the wild pineapple.

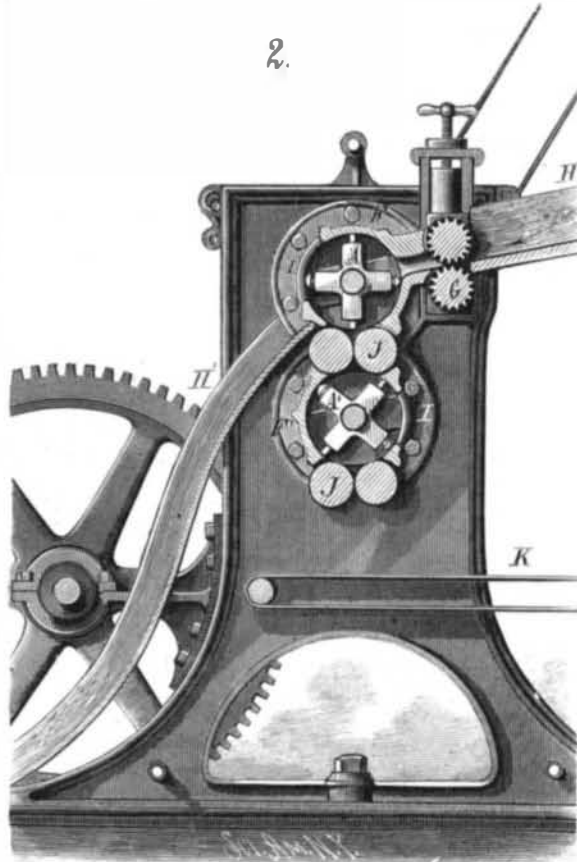
The plants known in Mexico by the name of Lechuguilla and Heniquen yield strong fibers which, like all other fibers of this class, are commercially valuable, providing they can be extracted from the leaves at a reasonable cost. Many attempts have been made to do this, but so far with only limited success.

We illustrate a simple and practical machine for extracting the fiber from this class of plants with great rapidity. The inventor informs us that this machine will treat twenty-eight thousand lechuguilla leaves an hour. Samples of the fiber extracted by the machine are very clean, and the fiber is long and very strong.

The larger perspective view shows the machine in active operation, and the smaller view, which is a vertical transverse section, shows the relation of the working parts.

The principal feature of this invention is the scutching cylinders, A, which is provided with yielding scutching knives or scrapers, and intermediate yielding feeding blades, which

draw the leaves into the cylindrical casing surrounding the cylinder and push the refuse pulpy matter outward through



VERTICAL SECTION OF MACHINE FOR CLEANING AND SEPARATING THE FIBERS OF LEAVES.

the opening, I, at the back of the cylindrical casing, F. These scutching blades beat and scrape one side of the leaf as it is fed from the inclined feeder trough to the cylindrical casing,

The scutching cylinder revolves at the rate of about 2,000 revolutions per minute, and as the leaves are slowly fed to the machine by the fluted feeding rollers, G, they are thoroughly treated on one side by the scutching or scraping blades, which press the leaf downward between rollers, J, which carry the partly scutched leaf downward to a second scutching cylinder, A', which revolves in the opposite direction, and cleans the refuse pulpy matter from the opposite side of the leaf, and the cleaned fiber is discharged through rollers, J, to an endless apron, K, below, which moves slowly and delivers it at a distant point to be dried and baled.

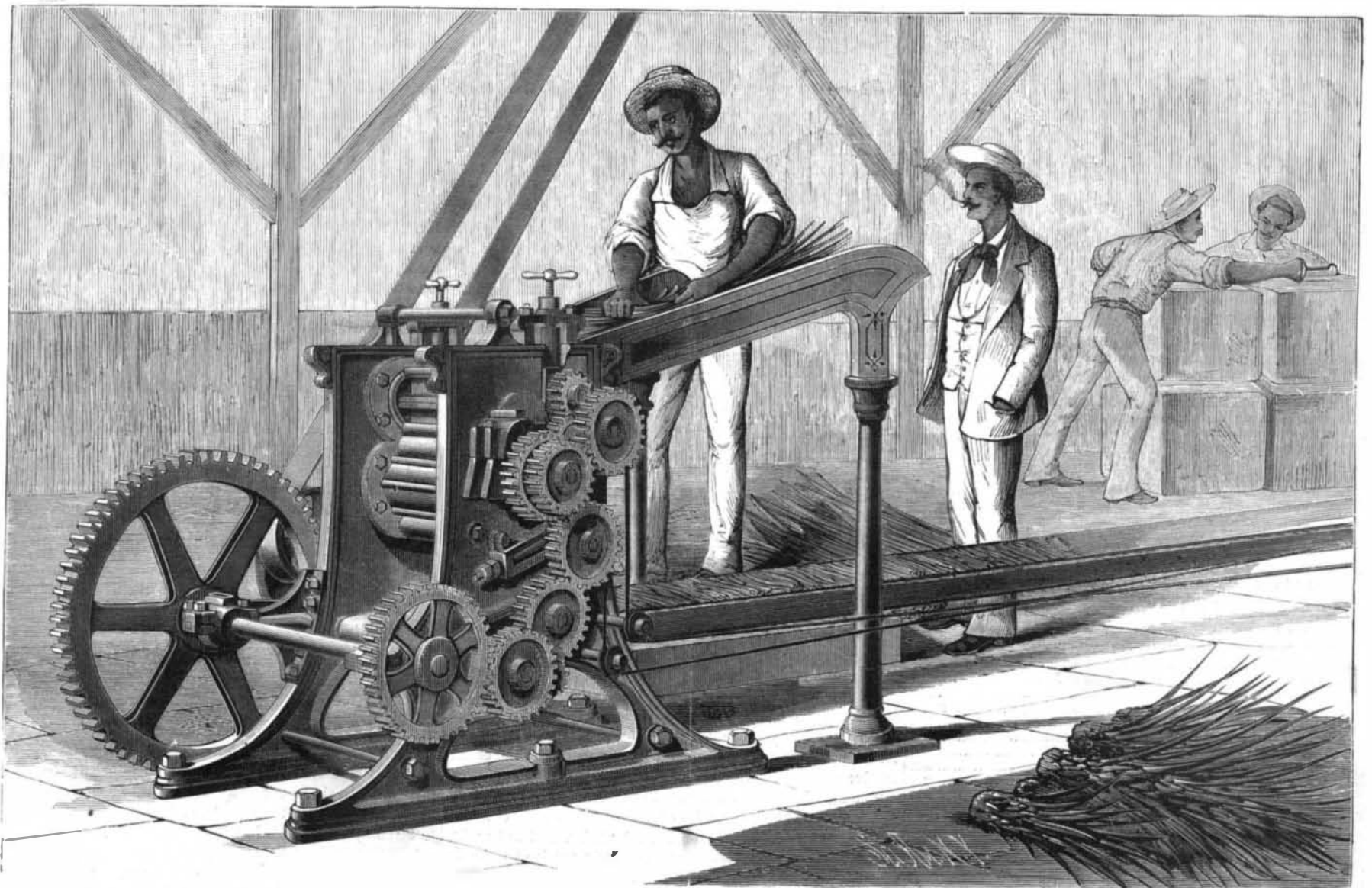
With this machine the fiber can be very rapidly and cheaply extracted from fiber-bearing plants of the character above referred to.

This machine is the invention of Mr. Eugenio Beovide, of Mineral de Catorce, Mexico, who has recently secured a patent for it in the United States.

## The Faure Battery for Trams.

On February 22, a tramcar was run on the Leytonstone line of the North Metropolitan Tramways Company by means of the Faure accumulator and a dynamo machine connected by cog wheels and gearing to the wheels. The distance traversed was about two and a half miles. The dead weight of the car was 5¼ tons; the speed reached seven miles an hour, although the car was not of the most advantageous build for the purposes of the experiment. The experiment was successful, stopping and starting the car being effected with great promptitude. The experiment was carried out by Mr. Radcliffe Ward, engineer to the Faure Company.—*Electrician*.

**GOLD TURNED INTO VAPOR.**—E. W. Morley, of Hudson, Ohio, lately exhibited two slides, each of a specimen of the metallic globules said to be gold, from the roof of the Mint at Philadelphia. These were examined with a two-third objective, and Prof. Hanks stated that his examination and treatment of them with acid showed conclusively that gold would become volatilized, and no doubt pass off in the fumes from the retort.



BEVIDE'S MACHINE FOR CLEANING AND SEPARATING THE FIBERS OF LEAVES.