

F. E. MELLINGER & H. H. MARKLEY.
MACHINE FOR CONVERTING LATEX INTO SHEETS OF CRUDE RUBBER.
APPLICATION FILED JAN. 19, 1911.

1,008,607.

Patented Nov. 14, 1911.

2 SHEETS-SHEET 1.

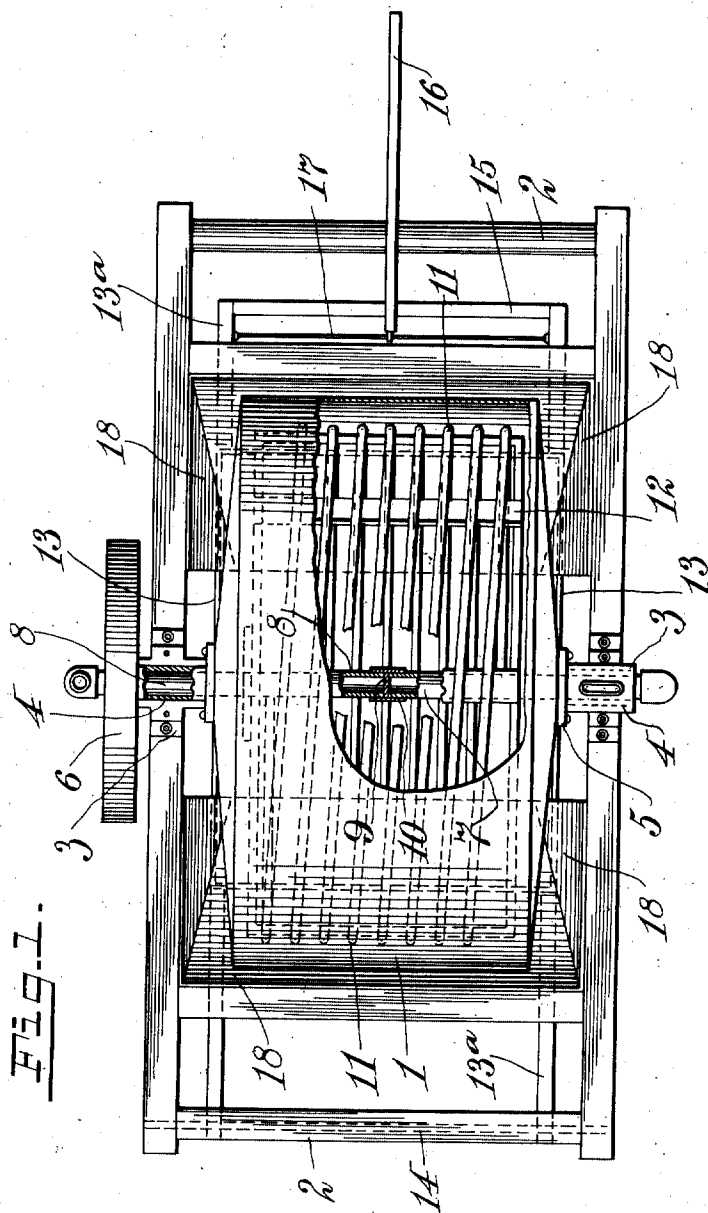


Fig. 1.

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Witnesses

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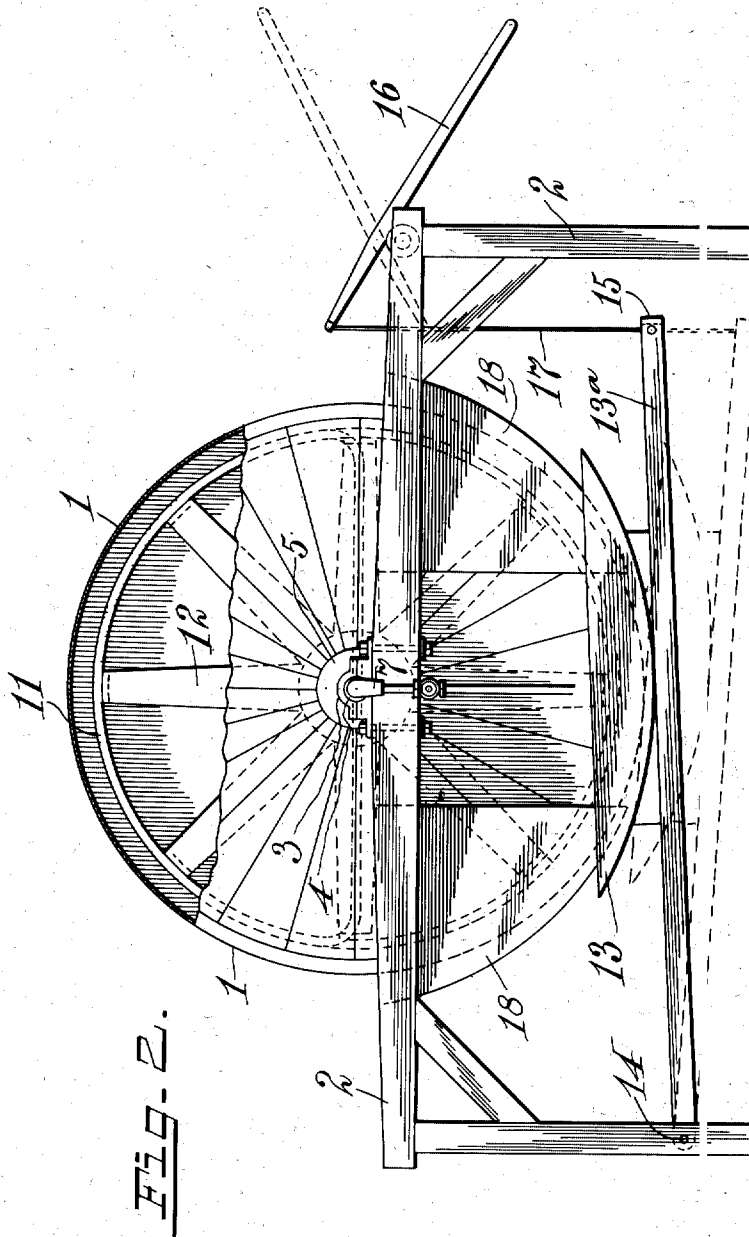


Fig. 2.

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UNITED STATES PATENT OFFICE.

FRANK E. MELLINGER AND HENRY H. MARKLEY, OF LUMIJA, MEXICO.

MACHINE FOR CONVERTING LATEX INTO SHEETS OF CRUDE RUBBER.

1,008,607.

Specification of Letters Patent.

Patented Nov. 14, 1911.

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To all whom it may concern:

Be it known that we, FRANK E. MELLINGER and HENRY H. MARKLEY, citizens of the United States of America, residing at Lumiija, in the State of Chiapas, Mexico, have invented certain new and useful Improvements in the Process of and Machine for Converting Latex into Sheets of Crude Rubber; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention consists in a new and useful process of, and a machine for, converting latex into sheets of crude rubber.

The process consists in intermittently rotating a metallic cylinder or drum, which is heated on the interior; in applying a coating of the latex to the circumference of said drum, and in allowing each coating of the latex to dry or set before the next succeeding coating is applied, until a sheet of crude rubber of desired thickness is obtained.

The machine for carrying out the process will now be described in connection with the accompanying drawings, of which—

Figure 1 is a top plan view with a portion of the rotating drum broken away to reveal the heat-conducting pipe. Fig. 2 is a side elevation of the machine.

In the drawings and the description to follow, the same reference characters will indicate the same parts.

The cylindrical shell or drum 1 is of suitable dimensions to produce a sheet of crude rubber of suitable size for practical purposes. For example, the width of the drum and its circumference may produce a sheet of rubber three feet wide by eighteen and one half feet in length, or these dimensions may be varied as may be desired. The said drum is constructed of metal and is supported in a suitable frame 2. 3, 3 designate boxes or bearings secured to each side of the frame, and 4, 4 designate short tubular shafts with flanges 5, 5 which are secured to the opposite sides of the drum at the axis of rotation. The shaft on one side is extended to receive a pulley 6 through which power is transmitted to rotate the drum. Extending through the bearings 3, 3, and through the axis of the drum, are two sections 7 and 8 of pipe in

alignment, separated by a wall or closed end 9, and held together by a coupling sleeve 10. Arranged on the interior of the drum is a heating coil 11, the ends of which connect respectively with the sections of pipe 7 and 8. Heat is provided by steam introduced to the coil 11 through section 7 and discharged through section 8. The heating coil 11 is stationary on the interior of the drum, being supported on a fixed frame or spider 12, free from engagement with the interior of the drum at any point. The spider 12 is mounted in any suitable way, for example, on the sections of piping 7 and 8. It will thus be seen that the interior of the drum is uniformly heated, and the latex applied to the circumference thereof is likewise subjected to a uniform heat free from fumes or smoke. This insures a superior quality of crude sheet rubber. The latex is supplied to the circumference of the drum by means of a suitable pan or reservoir 13 through which the circumference of the drum passes and is thus coated throughout its periphery with a uniform application of latex. The pan 13 is supported upon a pivotal frame consisting of two side bars pivoted to the main frame at 14, and united by a cross piece 15. The pivotal frame so constructed and mounted, is operated to raise and lower it by a hand lever 16 at the front of the machine. This lever has a suitable connect on 17 with the forward portion of the pan support. It will of course be readily understood that these are mere details which may be varied more or less without affecting the principles involved. And further, it will be understood that any of the well known means of heat radiation may be applied to the interior of the drum, such for example as steam, hot water or electricity. In operation, the latex is applied to the surface of the drum during the rotation thereof at a suitable speed for the work. The pan or reservoir 13 is raised by means of the lever, and is maintained in an elevated position until a coat of latex is applied to the periphery of the drum. The latex pan is then lowered and the previously applied coat permitted to dry, after which said latex pan is again elevated and lowered. This process is repeated until the desired thickness of rubber has been built upon the periphery of the drum.

The full and dotted lines, Fig. 2, show the positions of the latex reservoir.

18 designates a suitable shield, which in-

closes the lower half of the circumference of the drum 1. This shield conforms to the shape of the drum, and it extends from the inner bottom of the reservoir 13. The object
5 and purpose of said shield is to prevent any spattering of the latex during the rotation of the drum. The said shield may be secured in any suitable manner between the side bars
2 of the frame.

10 Having described our invention, we claim:

In a machine for converting latex into sheets of crude rubber, the combination with a metallic drum having its ends inclosed, means for rotating said drum, and means for
15 uniformly applying heat to the periphery of said drum from the interior thereof, of a vat

adapted to contain latex which is delivered intermittently to the periphery of said drum, and means for removing said vat from the drum after each application of latex, and
20 again elevating it to apply an additional coat after each preceding coat dries under the influence of the heated periphery of the drum, substantially as specified.

In testimony whereof we affix our signa- 25
tures, in presence of two witnesses.

FRANK E. MELLINGER.
HENRY H. MARKLEY.

Witnesses:

A. G. WEISS,
PERCY STOUT.