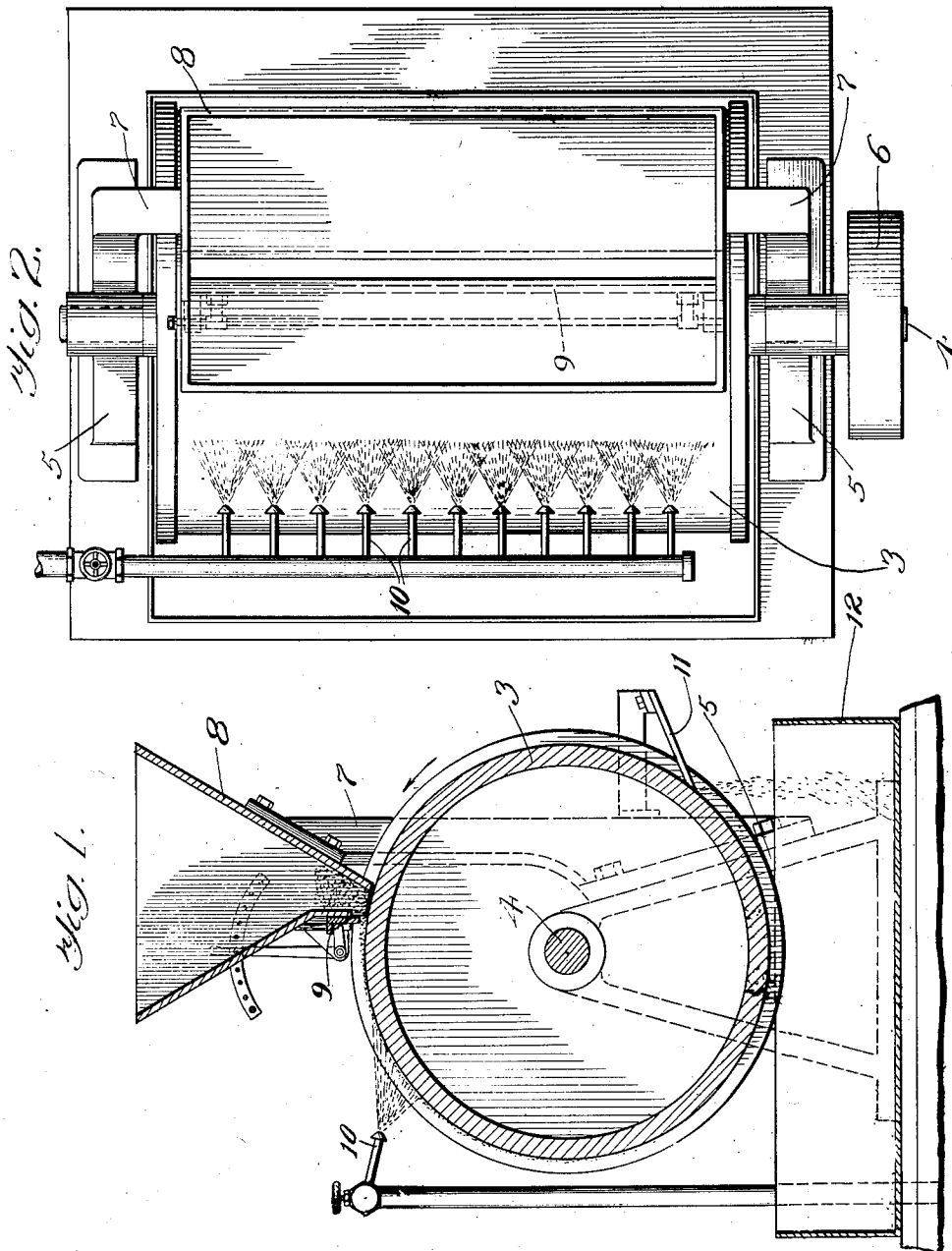


J. C. ROSS.
PROCESS OF TREATING ELATERITE.
APPLICATION FILED APR. 27, 1911.

1,057,094.

Patented Mar. 25, 1913.



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UNITED STATES PATENT OFFICE.

JAMES C. ROSS, OF COLORADO SPRINGS, COLORADO, ASSIGNOR TO THE HYDRO-CARBON COMPANY, A CORPORATION OF NEVADA.

PROCESS OF TREATING ELATERITE.

1,057,094.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed April 27, 1911. Serial No. 623,758.

To all whom it may concern:

Be it known that I, JAMES C. ROSS, a citizen of the United States of America, and resident of Colorado Springs, El Paso county, Colorado, have invented a certain new and useful Improvement in Processes of Treating Elaterite, of which the following is a specification.

My invention relates to the process of treating elaterite or other hydrocarbons.

It relates more specifically to the method of treating elaterite and similar hydrocarbons by burning the same in the open air in the manner described in the patent to Ross, No. 984,240, issued February 14, 1911, in which is described the method of refining elaterite and similar mineral deposits, preparatory to using the same as a substitute for rubber, by first grinding the material and then burning the same in the open air.

My invention relates to certain specific improvements in the process described in the above mentioned patent, and will be more clearly understood by reference to the accompanying drawings, in which—

Figure 1 is a sectional view of an apparatus for carrying out my process. Fig. 2 is a plan view of the same.

I have there shown a revolving drum 3 of metal or other fire-proof material revolving upon a shaft 4 supported in the trunnions 5. Suitable driving wheels are provided upon the end of the shaft in order to supply power to the same. Mounted above the same upon a standard 7 is a feed hopper 8 of any desired construction, having an outlet adjacent to the upper surface of this drum, and provided with an adjustable feed-gate 9. Mounted adjacent to the upper surface of the drum are a series of burners 10 so positioned that they project a flame toward the upper surface of this drum. Adjacent to the drum on the opposite side thereof is positioned a suitable scraper 11, the purpose of which will be hereinafter described. Mounted upon a support below the drum there is a receptacle 12 to catch the material as it is scraped off the drum by the scraper 11, as will be more particularly described in the specification.

In the carrying out of my process, the crude material, such as elaterite for example, is first ground into a finely divided state, and then mixed with an amount of

liquid fuel in order to aid the combustion of this ground material, although this liquid fuel is not essential. This ground material is then placed within the feed hopper 8 and fed upon the upper surface of the drum. As will be more clearly seen in Fig. 2, this drum has a broad upper surface, and material is fed upon the same in a thin layer, so that all the particles have free access to the air. The drum is then rotated in the direction indicated by the arrow, and as this material comes in contact with the flame from the burners 10, it is ignited and formed into a coherent mass spread in a thin layer over the surface of this drum, and adheres to this drum. As the drum continues to rotate, this material is carried in its burning state with the drum, and burns freely upon the surface of the same. This drum is preferably of sufficient size and the rotation is sufficiently slow so that the time occupied by the material in passing from the burners where it is ignited until it comes in contact with the scraper 11 is sufficient to allow this material to burn itself out. As it strikes the scraper 11 it is removed from the surface of the drum, and falls in cakes into the receptacle 12, where it is allowed to cool and harden. The product thus obtained can be used as a substitute for mineral rubber, and when mixed with sulfur and vulcanized in the ordinary way, this product possesses considerable elasticity and resiliency.

While I have shown a specific manner of carrying out my improved process, I do not wish to limit myself to the same.

What I claim as my invention is:

1. The process of treating hydrocarbons, which consists in feeding the material upon the surface of a movable body, igniting the same while on said body, and then allowing it to burn freely while remaining on said body.

2. The method of treating hydrocarbons, which consists in first grinding the material, then feeding the ground material upon the surface of a revolving drum, allowing this material to burn freely upon the surface of the drum until it has practically burned itself out, and then removing the same from the surface of the drum.

3. The method of treating hydrocarbons, which consists in first grinding the material and mixing the same with liquid fuel,

then feeding the ground material upon the surface of a revolving drum, igniting the material while on this drum, allowing this material to burn freely upon the surface of the drum until it has practically burned itself out, and then removing the same from the surface of the drum.

4. The process of treating hydrocarbons, which consists in first grinding the crude material, then feeding this material upon the surface of a moving body, igniting the material and allowing the same to burn freely upon the surface of this moving body until it has practically burned itself out.

5. The process of treating hydrocarbons, which consists in first grinding the crude material and adding liquid fuel thereto, then feeding the ground material upon the surface of a moving body and igniting the material and allowing the same to burn freely upon the surface of this moving body until it has practically burned itself out.

Signed by me at Colorado Springs, Colorado, this 22nd day of April, 1911.

JAMES C. ROSS.

Witnesses:

JOHN H. WILSON,
EDWARD BALZER.