

# UNITED STATES PATENT OFFICE.

J. W. HARMON, OF NEW YORK, N. Y.

## IMPROVEMENT IN PREPARING CAOUTCHOUC PREVIOUS TO GRINDING.

Specification forming part of Letters Patent No. 4,357, dated January 15, 1846.

### *To all whom it may concern:*

Be it known that I, JOSEPH W. HARMON, of the city, county, and State of New York, have invented a new and improved method of softening the article known in commerce as "India-Rubber" or "Caoutchouc," and preparing it for grinding; and I do declare that the following is a full and exact description.

To enable those skilled in the art to make and use my invention, I will proceed to describe the construction of the apparatus and its operation.

I construct a vessel, of metal, A, of one hundred gallons measure, with a steam-tight lid. Into this vessel A, I put one barrel of crude turpentine or coal-tar and about forty gallons of water. Into another vessel, B, constructed of either metal or wood, and having a perforated false bottom or grating, D, about two inches from the bottom, and a steam-tight cover, E—the capacity of this vessel may be two hundred gallons—I place on said grating about one hundred pounds of india-rubber cut into small pieces. These two vessels A and B are connected by a pipe, C, leading from the top of A, and inserted under the grating of B. By the application of heat to the vessel

A, a decomposition of the crude turpentine or coal-tar is effected. When crude turpentine is used, the vapor or gas is spirits of turpentine. When coal-tar is used, the vapor of naphtha is generated. Either of these vapors, along with the steam which is generated in the vessel A, passing through the tube C and under the false bottom of the vessel B, acts on the india-rubber, so as to soften it and render it fit for grinding. From one to three hours of exposure to the vapors of steam and naphtha or turpentine will be sufficient to effect the necessary softening. The same apparatus may also be used for generating the vapor of naphtha or turpentine, substituting the spirits of turpentine or naphtha for crude turpentine or coal-tar.

What I claim as my invention, and desire to secure by Letters Patent, is—

The softening of india-rubber preparatory to grinding by the use of the vapor of either turpentine or naphtha, combined with steam, as herein described.

J. W. HARMON. [L. s.]

Witnesses:

P. F. STIRLING,  
ABM. W. BALDWIN.