

UNITED STATES PATENT OFFICE.

CHARLES EFROS, OF NEW YORK, N. Y., ASSIGNOR TO VINCENT P. TRAVERS,
OF SAME PLACE.

COMPOSITION FOR TREATING FIBER.

SPECIFICATION forming part of Letters Patent No. 562,219, dated June 16, 1896.

Application filed September 12, 1895. Serial No. 562,287. (No specimens.)

To all whom it may concern:

Be it known that I, CHARLES EFROS, a resident of the city, county, and State of New York, have invented Improvements in Compositions for Treating Fiber, of which the following is a specification.

My invention consists in a composition which may be sprinkled upon fiber, such as hemp, flax, jute, manila, sizal, and New Zealand, either before or after spinning. To this end I prefer to take the following ingredients in about the following proportions, to wit: To about thirty pounds of naphthalene are added about fifteen pounds of paraffin, the whole being incorporated together in a kettle, preferably copper, heated by external means and provided with a stirring mechanism, which effects the incorporation of the ingredients. In another vessel I place forty-five pounds of tar-oil and thirty pounds of rosin-oil and one hundred and eighty pounds of wood-tar and incorporate them together. I then mix the ingredients in the second vessel into the ingredients in the first vessel and add fifteen pounds of paraffin-oil of about 28° Baumé. The whole mass is then molten together at a temperature below 180° Fahrenheit, and I then thoroughly incorporate thirty pounds of plumbago into the molten mass and preferably strain the mass after the plumbago has been incorporated. The composition thus produced is used to impregnate fiber, either before spinning the said fiber or during the spinning of the fiber. This impregnation may be effected by sprinkling the fiber or by applying the composition to the fiber in a vacuum-pan, so that the fiber will be thoroughly impregnated with the compo-

sition, which, after application to the fiber, forms a coating around the same that renders it waterproof and self-lubricating and shields it from germ action of all kinds. Fiber treated with this composition either before or during spinning can be spun into rope, yarn, or cordage of any kind and will be found to be thoroughly impregnated with the composition, which gives it the valuable property before noted without having lost any of its strength. No expensive or cumbersome or extensive mechanism is required for carrying out this process, and the fiber will have its original strength, not being impaired in strength by exposure to heat, as was necessary in using a high-temperature bath, through which the rope was passed, as heretofore.

In spinning, the fiber treated by my process is more easily handled and less liable to form an obstruction than fiber not so treated, the fiber being efficiently lubricated and not presenting a sticky surface to produce friction. Fiber thus produced in addition to the above-mentioned properties will have other properties. For instance it will not be damaged by the variable action of moisture and drying, as has been the case in fiber now in use.

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

The composition consisting of paraffin, naphthalene, wood-tar, tar-oil, rosin-oil, paraffin-oil and plumbago in about the proportions specified for the purpose of impregnating vegetable fiber, as set forth.

CHARLES EFROS.

Witnesses:

GEO. E. MORSE,
MAURICE BLOCK.