## UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN PROCESSES OF MAKING OAKUM.

Specification forming part of Letters Patent No. 195,684, dated September 25, 1877; application filed February 17, 1877.

To all whom it may concern:

Be it known that I, CHARLES M. WINTER, of Kankakee, in the county of Kankakee and State of Illinois, have invented a new and Improved Process of Making Oakum, of which

the following is a specification:

In making oakum by my process new fiber is used, either flax, hemp, or other similar fibers, any of which are saturated with a solution made of sal-soda or similar alkali, lime, pine-tar, and asphaltum, with water as a solvent. After the fiber is thus saturated it is passed through a weak solution made from muriatic or other like acid and water, which cleanses it from the soda and lime, and leaves the tar and asphaltum in the fiber. It is then dried and finished by carding.

These solutions contain about one pound of sal-soda or similar alkali, one-half pound of lime, nine pounds of pine-tar, and three pounds of asphaltum to three gallons of water—the acid solution, about five per cent. of acid and

ninety-five per cent. water.

I do not claim the special use of flax, hemp, or other fibers, or of tar or asphaltum in the

manufacture of oakum, for they have been used; nor do I claim the use of sal-soda or similar alkali and lime otherwise than as agents for cutting and holding in solution the tar and asphaltum for this particular purpose; nor the acid, except for the use as above specified.

The object of my invention is to prepare a good article of oakum cheaply from new, strong fiber, with a cheap safe solution or process, without using as solvents kerosene, benzine, or other like expensive and dangerous oils.

claim as my invention-

The process of making oakum by using a solvent made from sal-soda or similar alkali and lime, dissolved in water, for cutting and holding in solution the tar and asphaltum with which the fiber is saturated, and the cleansing of said fiber with the acid solution, substantially as specified.

CHARLES M. WINTER.

Witnesses:

J. E. LANGLOIS, OTIS DURFEE.