UNITED STATES PATENT OFFICE.

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METHOD OF RECLAIMING ASPHALTIC WASTE PRODUCTS.

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To all whom it may concern:

Be it known that I, SILAS M. FORD, a citizen of the United States, and a resident of St. Paul, in the county of Ramsey and State of Minnesota, have invented a certain new and useful Improvement in Methods of Reclaiming Asphaltic Waste Products, of which the following is a specification.

The main object of my invention is to provide a new and improved method for reclaiming or saving the waste resulting from the manufacturing of asphalt felt roofings and the like.

More specifically, the object of my invention is to bring these waste products into a condition such that they can be handled economically by chilling or freezing the product until it is brittle.

Another object of my invention is to form from such waste product after it has been made into a plup, water-proof containers of various kinds.

Another object of my invention is to form from such waste products a pulp that may serve as a putty.

This sort of product is carried commercially as a putty and is worked to the proper consistency by the addition of oil when used.

In the manufacture of asphalt felt roofings and similar lines, there is necessarily a certain amount of waste and breakage, defective product, and the like, that cannot be used in the ordinary processes of manufacturing in the line in which the waste occurs. It has been customary in the past to burn this waste product as there has seemed to be little use for it in the form in which it occurred.

Such a procedure is, of course, wasteful, as the product is lost for all uses, and moreover the method of getting rid of the waste product creates an excessive smoke which is, in itself, an intolerable nuisance in a settled community.

It has been suggested and attempts have been made for reclaiming parts of the waste product by breaking up the material by the application of pressure and then adding a volatile solvent to bring the mass to a plastic consistency, thereby forming a plastic cement.

The methods employed have required an enormous lot of power and the heating of the asphalt has been also expensive, and while this idea is old in different forms, it has not, to my knowledge, been commercially successful.

By a series of tests and experiments I have determined that by chilling or freezing the waste product, either naturally in cold weather or artificially throughout the entire year, the product can be run through grinders or knives with a comparatively small amount of power and then broken up into small particles, and still a large percentage of the fibers in the felt base are preserved and kept intact.

The disintegrated mass so obtained can be then put into molds and under pressure, and with a very small amount of heating formed into any desired water-proof article, such as water buckets, basins, and water-proof containers of almost any conceivable shape, and the mass so formed may, when warm, be either molded or rolled, or put up as an asphalt putty without further working.

For some classes of articles I prefer to add to the mixture either more fiber or more asphalt, as the nature of the product to be formed demands, and as a rule add something in the nature of long fibers, either asbestos or vegetable fibers, which may be mixed with the reclaimed waste product in any of the methods now well known to those skilled in the art.

I believe myself to be the first to conceive the idea of chilling material of this nature in order to render more effective and economical the breaking up of the product, and will claim this part of the process broadly, together with the method of utilizing the resultant products in the formation of water-proof containers.

Claims:

1. The method of reclaiming waste bituminous felt products comprising first chilling said waste product and then disintegrating it while in a chilled condition.

2. The method of reclaiming waste product resulting from the manufacture of asphalt felt roofing and the like, comprising chilling said waste product, passing it through knives or grinders while in chilled condition, thereby reducing it to small particles, and molding the resultant product into water-proof containers.

3. The method of reclaiming waste prod-

uct resulting from the manufacturing of asphaltic felt roofings or the like, comprising chilling the waste product, breaking it up into small particles while in chilled condition and molding the resultant product under pressure and heat.

4. The method of reclaiming waste product resulting from the manufacturing of asphaltic felt roofings or the like, comprising chilling said product, breaking it up into small particles while chilled, mixing with the resultant small particles a fibrous material, and forming thereby a product for the manufacture of water-proof articles.

5. The method of reclaiming waste product resulting from the manufacture of asphaltic felt roofing and the like, comprising chilling said waste product, breaking it up into small particles while chilled, adding fibrous and bituminous material thereto and forming the resultant product into water-proof containers under pressure and heat.

SILAS M. FORD.