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**Richards**

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(54) **CAOUTCHOUC, FLUID, TO RENDER ARTICLES WATERPROOF**

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# George H. Richards

## Letters Patent.

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said George H Richards himself of his improvement in the mode of rendering a variety of articles Water Proof by means of fluid Caoutchouc and of otherwise using that substance so as to produce new and valuable results.

To all whom it may concern. Be it known that I George H. Richards have discovered a new and useful mode or new and useful modes of rendering a variety of articles water proof by means of fluid Caoutchouc, and of otherwise using that substance so as to produce new and valuable results, and that the following is a full and exact description of my said invention or discovery — It is well known that the substance commonly called gum elastic or india rubber but more correctly Caoutchouc is produced by the dessication of the sap or juice of several plants and trees, and particularly of the Siphonia Caoutchouc and Jatropha Elastica, growing in the South-eastern part of this Continent and from the Urceola Elastica of Asia.

This substance in the fluid form has never been applied to the purposes of manufacturing or preparing of many things to which it is peculiarly applicable altho' bottles, boots, shoes, balls, and sheets have been formed thereof in the places where the above named and similar plants grow, it is true that for the purposes of philosophical experiment small portions of the juice have been taken to Europe and brought to this Country but it has never been advantageously employed for the purposes of utility until it was done by me.

Solutions of the indurated substance as usually imported have been made in ether naphtha oil of turpentine spirits of turpentine spirits of coal tar and other liquids and a varnish has been thus made which has been occasionally applied to useful purposes, and of the ways thus applied the solution is alone exempted from my use and application of Caoutchouc.

My application of Caoutchouc consists principally in the application of it from its original fluid state and I use it either substantially that

is to say by itself alone, or employ it in connexion with other substances, as a cement, or as a varnish, or a covering, or impregnation, or saturation, or stiffening. By its use I render the object to which it is applied either elastic or more durable, or waterproof, or airtight according to their natures and the purposes to which they are to be applied.

When used as a cement or varnish, I sometimes employ it alone but generally mix it with glue, pitch, tar, copal, or other adhesive or brightening articles, it may be employed either in a cold or warm state, though the warm may generally be considered preferable.

Without attempting to enumerate or specify the various objects or substances to which I mean to apply the fluid Caoutchouc, I will mention a few of them. I apply to cloth of every kind, to ropes, cordage, strings — to all articles manufactured from fibrous materials — to the products or fabrics generally, of wood, leather, metals, and minerals, cotton hemp, flax, wool silk &c. to cover, or saturate, leather wood or other porous substances, to varnish metals to preserve them from oxydation. For these and other objects I sometimes mix with fluid Caoutchouc the earths, metallic oxides and carbonaceous substances either simply or in combination, but generally in a state of minute division: and I thus produce a variety of compound substances, having almost any degree of hardness, possessing many proportions of Caoutchouc, or combining ornament with utility, according to the nature and objects of the mixture. The action of atmospheric air and of Solar heat is sufficient to convert the fluid into a solid substance, but it may sometimes be expedient to facilitate the process by artificial heat. The Caoutchouc or its Compounds may be applied by dipping the article to be covered or saturated, into it, or a brush may be used in the manner of varnishing. No particular directions are necessary for this print as everything must depend upon the nature of the substance upon which the operation is performed. I claim as original the useful application of the native fluid Caoutchouc, as set forth in this Specification, either alone, or in combination when employed for the purposes, or in the manner herein before set forth.

Witness
Jno. Chalmers
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George H. Richards.

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