UNITED STATES PATENT OFFICE.

GEORGE LYNCH, OF LONDON, ENGLAND.

PROTECTIVE AND NON-PENETRATIVE COVERING AND THE LIKE.


To all whom it may concern:

Be it known that I, GEORGE LYNCH, a subject of the King of Great Britain, residing in London, England, have invented certain new and useful Improvements in Protective and Non-Penetrative Coverings and the like, of which the following is a specification.

This invention relates to improvements in protective and non-penetrative coverings and the like adapted to be employed for many military and other purposes.

I have found that if wool or cotton wool is impregnated while in its normal loose or fluffy condition with dry powdered resin which is sticky or adherent at normal temperature it becomes, while retaining its normal loose or fluffy condition more or less non-penetrable by sharp points, such as the points of barbed wire, bayonets or the like, and stops or very materially resists the passage of flying articles, such as bullets, shrapnel and other similar flying fragments.

My invention therefore consists essentially in a protective and non-penetrative material comprising wool, or cotton wool, in a normal loose or fluffy condition impregnated or treated with resin in a dry powdered form which is sticky or adherent at normal temperature and preferably insoluble.

In carrying out the invention the wool or cotton wool is treated or impregnated with the powdered resin by dusting it in between the fibers in any suitable or convenient manner. The resin may for instance be sprinkled or blown over or into the fiber, the sprinkled or treated fiber being subsequently passed through rollers or beating or tapping means whereon it is gathered.

Or into or into intimate contact with the fibers of the woolly material yet without causing them to adhere or without impairing the normal loose or fluffy condition of the material. Or the powdered resin may be introduced during the manufacture of the sheets, or laps of the fibrous material. For instance in the manufacture of cotton-wool where the final sheet consists of a number of separate laps or sheets superimposed upon one another the powdered resin may be blown or dusted between the several sheets before they pass through the calender rollers adapted to unite the separate laps into one.

In any event the finished product should be wool or cotton wool of normal loose or fluffy character with the dry powdered resin introduced intimately among the fibers.

After treatment the woolly material may be covered or enclosed in a suitable waterproof or other fabric covering of the shape or pattern of the article ultimately desired.

For the purpose of traversing barbed wire for instance, the material may be made up in quilt-like sheets or blankets of any desired size which can be thrown over barbed wire entanglements and over which the soldiers can readily pass without receiving a scratch, or the material may be made up into gloves for the handling of barbed wire.

Sheets such as above described may also form ground sheets for the men or by lacing them together along two edges and an end they may form warm sleeping bags which at the same time give protection to the inmate. Or the material may be made up into uniforms, clothing, helmets, gauntlets, leggings or the like, and will give protection against bayonet thrusts or the like and against shrapnel, bullets or other flying fragments. It is not wholly impenetrable by bullets but it very materially retards their passage. Or it may be used for armor ing aeroplanes, gun carriages, motor cars or the like, providing an inexpensive and light method of doing this, the material being mounted or supported in any suitable manner on a metal or other framework with or without a sheet metal or other backing. Or the treated woolly fiber may be introduced into a light metal or other receptacle forming a sort of jacket to receive it and constructed of the desired shape and size to form the armorring.

In any case in which the wool or cotton wool is enclosed in coverings or envelopes of textile fabric, the sheets forming such coverings or envelops will have their securing stitches or seams spaced at such intervals as may be necessary to preserve the normal loose and fluffy condition of the material.

It will be obvious that the material may also be employed for many other analogous purposes.

Having thus described the nature of the said invention and the best means I know of carrying the same into practical effect, I claim:

1. As a new article of manufacture, a protective and bullet-impeding material for use in military operations comprising a sheet or
quilt of wool or cotton wool in a normal loose or fluffy condition impregnated throughout its extent with dry powdered resin.

2. As a new article of manufacture, a protective and bullet-impeding covering for use in military operations comprising wool or cotton wool in normal loose or fluffy condition impregnated throughout its extent with dry powdered resin and inclosed by a water-proof or other fabric covering of any desired shape or pattern which does not impair the loose or fluffy character of the wool or cotton wool.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE LYNCH.

Witnesses:

JOSEPH MILLARD,

WALTER J. SKERTON.