

UNITED STATES PATENT OFFICE

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METHOD OF IMPREGNATING WOOL

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My invention relates to the method of impregnating wool, fibre, to wit, wool in its initial condition, or wool yarn, but not to the impregnation of finished knitted goods. If finished goods are impregnated the spaces between the fibres will become clogged, and the finished goods will be partly deprived of their heat-insulating properties.

It is an object of my invention to impregnate wool, in such manner as not to interfere with the heat-insulating properties of the wool.

To this end I treat the wool fibre or yarn with a saponaceous watery emulsion of oil or fat and thereupon with a solution of aluminium formate $\text{Al}_2(\text{CO}_2\text{H})_3$, and dry the wool at temperatures at 60-80 degs.

It has already been suggested to impregnate cotton so as to render it water-repellent. However, the methods as suggested heretofore are not suitable for treating wool, as the impregnation interferes with its heat-insulating properties and impregnated garments or the like of wool are not better than cotton articles as to their heat-insulating properties.

According to my invention this drawback of the old methods is eliminated by treating the wool as described.

In reducing my method to practice, I may treat 10 kilogrammes of wool yarn in an emulsion of 5 grammes of soap and 10 grammes of olive oil in one litre of water. After having been treated with this emulsion for a short time, the yarn is placed in a solution containing 30 grammes of aluminium formate in one litre of water, moved several times through the solution, and is then dried at 70 degs. centigrade, the temperature range of the drying being preferably 60 to 80 degs.

The impregnation effected in this manner is permanent and is not interfered with by repeated immersion in water nor by the usual cleaning, of the impregnated articles.

Various changes may be made in the details disclosed in the foregoing specification without departing from the invention or sacrificing the advantages thereof.

I claim:

1. The method of impregnating wool fibre comprising treating the wool with a saponaceous watery emulsion of oil, containing 5 grammes of soap, and 10 grammes of olive oil, in one litre of water, then treating it with a solution of aluminium formate, and drying at 60-80 degs.

2. The method of impregnating wool fibre comprising treating the wool with a saponaceous watery emulsion of oil, containing 5 grammes of soap, and 10 grammes of olive oil, in one litre of water, then treating it with a solution of aluminium formate, containing 30 grammes of aluminium formate in one litre of water, and drying at 60-80 degs.

In testimony whereof I affix my signature.

EUGEN SCHLIERER.