

UNITED STATES PATENT OFFICE.

EDUARD ADOLPH CLOSMANN, OF TEGEL, NEAR BERLIN, GERMANY.

WATERPROOF-COATED LINEN AND PROCESS FOR PRODUCING THE SAME.

No. 861,435.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDUARD ADOLPH CLOSMANN, a subject of the Grand Duke of Hesse, residing at Tegel, near Berlin, Germany, (whose post-office address is 5 Strandschloss, Tegel, near Berlin, Germany,) have invented certain new and useful Improvements in Waterproof-Coated Linen and Processes for Producing the Same, of which the following is a specification.

This invention relates to the coating of starched and 10 ironed goods to form an impervious layer or waterproof coating whereby collars, cuffs, or any other linen may be washed and cleaned without removing the starch or destroying the gloss or stiffness of the same. Heretofore for this purpose, starched goods have been coated 15 with albumin and with a mixture of a white dye stuff and ordinary varnish. It has been impossible however to obtain satisfactory results in this way for the reason that the coating produced by the varnished mixture or by the varnish mixture and albumin easily cracked 20 and chipped and loosened itself from the linen, besides destroying the natural appearance of the linen.

In accordance with the present invention, the linen to be treated is coated with a solution of gun-cotton or pyroxylin in amyl acetate. The gun-cotton or pyroxy- 25 lin employed is such as is used for producing collodion and is often referred to as nitro-cellulose. It will be referred to hereinafter simply as pyroxylin.

In carrying out the process, the article to be treated is preferably coated first with a solution of pyroxylin in 30 amyl acetate, which solution contains finely divided zinc-white or some other suitable dye stuff. In this way the meshes of the linen are filled up and a ground is formed for the coating without destroying the natural appearance of the linen. The zinc-white or other 35 dye stuff is held in suspension throughout the solution and serves to close the fine pores in the surface of the linen and to prevent the penetration of the pyroxylin solution into the body of the linen. Thus a coating simply is formed upon the surface of the linen which, as 40 has been found by experiment, retains its natural appearance. Moreover, the linen is not rendered unnatu-

rally stiff by the present process, as the coating does not produce such stiffness as is effected by other processes where the pyroxylin is thoroughly impregnated with the linen. The linen thus grounded is coated one 45 or more times, according to the degree of gloss desired, with a substantially pure solution of pyroxylin in amyl acetate. In this way a coating may be obtained which is easily cleaned and which neither scales nor cracks or changes its color in use or after repeated cleaning. 50

The grounding solution, that is the solution employed first may have the following proportions by weight; five parts of pyroxylin, and ninety-five parts of amyl acetate containing about one part by weight of zinc 55 oxid. The proportions of the pure solution of pyroxylin in amyl acetate referred to above may be as follows, one to five parts of pyroxylin in one hundred parts of amyl acetate.

I claim as my invention;—

1. The process of coating starched and ironed linen with 60 a water proof layer without destroying the natural appearance of the linen, which process consists in applying a solution of pyroxylin in amyl acetate with a dye stuff in suspension therein and then coating the linen with a substantially thinner solution of pyroxylin in amyl acetate 65 substantially as and for the purpose set forth.

2. The process of coating starched and ironed linen with a waterproof layer without destroying the natural appearance of the linen, which process consists in applying 70 a solution of pyroxylin in amyl acetate with zinc-white in suspension therein in the proportion of five parts of pyroxylin, ninety-five parts of amyl acetate and one part of dye stuff substantially, and then coating the linen with a solution of pyroxylin in amyl acetate in the proportion 75 of five parts of pyroxylin to one hundred parts of amyl acetate, substantially as and for the purpose set forth.

3. As a new article of manufacture, the combination of a starched and ironed linen having a superficial coating 80 of pyroxylin and zinc-white with a second coating of pure pyroxylin, substantially as set forth.

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

EDUARD ADOLPH CLOSMANN.

Witnesses:

JOHANNES HEIN,
WOLDEMAR HAUPT.