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CORRODIBLE GROUNDWORK FOR LACE.
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917,402.

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Fig.1.

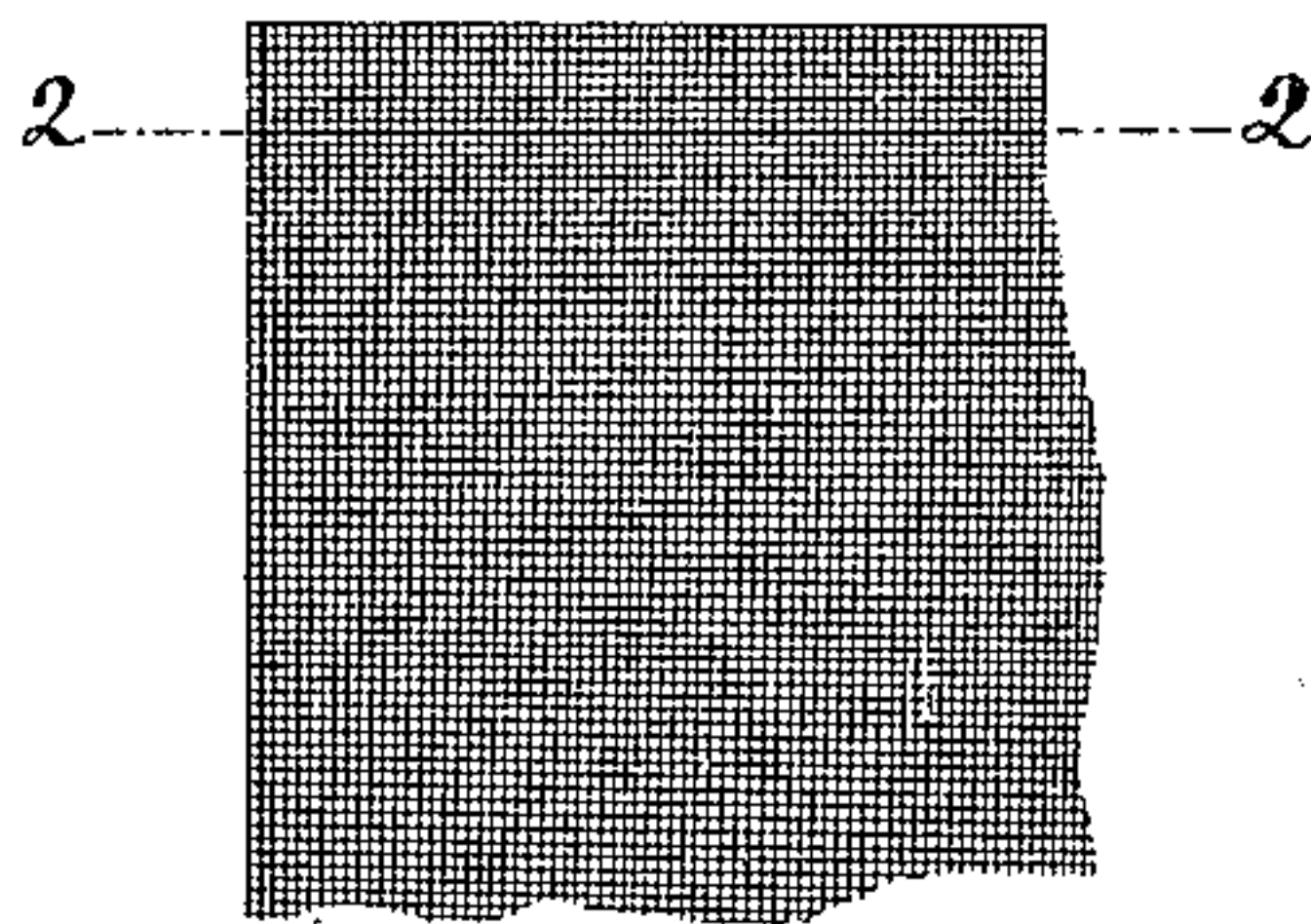


Fig.2.



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CORRODIBLE GROUNDWORK FOR LACE.

No. 917,402.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RÜDOLF BAUER, doctor of philosophy and chemist, a subject of the King of Saxony, and resident of Leipzig, in the Kingdom of Saxony, German Empire, have invented new and useful Improvements in Corrodible Groundwork for Lace, of which the following is a full, clear, and exact specification.

The subject-matter of the present invention is a corrodible groundwork for lace and an improved process for manufacturing the same. Such lace has hitherto been made on a large scale by embroidery being stitched on a woolen material, the latter being destroyed by boiling it in caustic soda lye under pressure after the embroidery is finished, so that the cotton embroidery alone remains. Now it has been attempted to replace the expensive woolen material, which is lost in this process, by cheaper cotton material. Since lace is in most instances made of cotton, it is a matter of preparing the corrodible groundwork, which is also to be made of cotton, in such manner that the corrodible ground is destroyed in the desired manner by a treatment subsequent to the groundwork being embroidered, but that the cotton lace itself is not attacked or destroyed.

The impregnation of cotton material with sulfuric acid or chloric acid is well-known, in order to then use the cotton material as the corrodible groundwork for lace. The employment of such acids, however, has the disadvantage that the material keeps for only a short time after it is impregnated, and then becomes so tender that it can no longer be embroidered because it tears when it is being stretched in the embroidering machine. The tensile strength suffers in consequence of the action of the acids at ordinary temperatures, so that it is only possible to work up the material very rapidly.

In the accompanying drawing, Figure 1 represents in plan a piece of fabric treated according to the invention, and Fig. 2 is a cross-section of the same on line 2, 2, Fig 1.

In accordance with the present invention cotton material is impregnated with neutral, non-hygroscopic sulfates capable of being thermolytically dissociated, such as, for example, aluminum sulfate, copper sulfate, potassium-chrome sulfate, ferrous sulfate, potassium-aluminum sulfate or the like. These sulfates practically do not attack the

corrodible groundwork, so that it is possible to make impregnated corrodible groundwork ready for stock, to store and to transport the same without it being destroyed prematurely as when it is impregnated with acids. This corrodible groundwork prepared in this manner is embroidered in the usual manner with the embroidering machine, whereupon the embroidery is heated together with the corrodible groundwork, whereby the one or more sulfates employed are split up. The fiber of the corrodible groundwork is destroyed and can be removed from the embroidery in any known manner by beating it with brushes or in other suitable manner.

The prepared cotton material can be preserved for months without losing its durability. Its resistance to damp air is so great that it can even be worked up in rooms containing damp air, whereas this is perfectly impossible when the materials are impregnated with acids. Also it is of importance that the cotton material impregnated according to the present process does not rust the embroidering machines or needles, as is always the case when the material is impregnated with acid. Besides cotton embroidery, embroidery made of colored artificial silk or the like can be made on the corrodible groundwork without the impregnating agent damaging the embroidery itself. The neutral, non-hygroscopic sulfates capable of being thermolytically dissociated are able to destroy sufficiently rapidly the corrodible groundwork impregnated with them when heated to a sufficient temperature, for example 120 degrees of centigrade, so that it is easily possible to separate the groundwork from the embroidery.

The quality of the corrodible groundwork made according to the present invention, in spite of the impregnation having no injurious effect on the embroidery, is of particular importance in the case of embroidery consisting of cotton, artificial silk or other fibers, on the most delicate texture, for example fine cotton-net or tulle. These embroideries are made by the tulle being placed on the corrodible groundwork, and by the tulle and corrodible groundwork being embroidered in common. After tulle-embroidery is finished the corrodible groundwork can be completely destroyed by heat without the fine texture of the tulle being attacked. Further, when the described corrodible groundwork

is employed, it is possible to make embroidery of artificial silk on metallic tulle, for example, which has an exceedingly charming effect, without the impregnating agent of the corrodible groundwork attacking or discoloring the metal or the artificial silk. It is impossible to make such embroidery in which metallic fibers are employed on woolen corrodible groundwork, or according to the well-known method on cotton corrodible groundworks impregnated with acids, without the embroidery being unpleasantly discolored.

A further advantage of the present process is that the embroidery keeps the form exactly which is once given to it on the machine. The individual stitches of the embroidery which has been corroded away from its groundwork are situated at exactly the same distances at which they were made, since the corrosion does not shrink the cotton embroidery-threads as it does when woolen material is corroded away by caustic soda lye.

As an example for the impregnation, it may be mentioned that suitable cotton material is saturated with a 15% aqueous solution of aluminum sulfate, then colored in suitable manner, and dried at a low temperature, say about 25° to 30° centigrade. This material keeps for many months and can therefore be used as required for embroidering during a period of this duration. After it is embroidered the material is heated to about 120° centigrade, whereby the material is destroyed and can now be removed from the real embroidery in known manner by beating it out with brushes or in other suitable manner.

What I claim, is:—

1. Process for manufacturing a durable corrodible groundwork for lace consisting in impregnating a material consisting of vegetable fibers with a neutral, non-hygroscopic sulfate capable of being thermolytically dissociated and in drying the same.

2. Process for manufacturing a durable corrodible groundwork for lace consisting in impregnating cotton material with an aqueous solution of aluminum sulfate and in drying the same.

3. Process for manufacturing a durable corrodible groundwork for lace consisting in saturating a material consisting of vegetable fibers with a fifteen per centum aqueous solution of aluminum sulfate, in coloring the same, and in drying it at a temperature of about twenty-five degrees to thirty degrees centigrade.

4. As a new article of manufacture, the herein described durable corrodible groundwork for lace consisting of a material consisting of vegetable fibers impregnated with a neutral, non-hygroscopic sulfate capable of being thermolytically dissociated.

5. As a new article of manufacture, the hereindescribed durable corrodible groundwork for lace consisting of a material consisting of vegetable fibers impregnated with aluminum sulfate.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

RUDOLF BAUER.

Witnesses:

LOUIS VANDORN,
R. H. DUNLAP.