

ALIEN PROPERTY CUSTODIAN

METHOD OF PRODUCING VERY THIN SILK PAPER

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This invention relates to a method of producing very thin silk paper.

It is an object of the invention to produce very thin paper of the type known as silk or cambric or tissue paper, which is equivalent to the so-called Japanese or India paper.

Another object of the invention is to produce such a paper from suitable long-stapled fibre materials, such as, artificial silk, cellulose wool, linters or mixtures of such substances, which are inexpensive and everywhere available.

A particular object is to produce such paper in large size sheets and endless sheets.

A special object of the invention is to make thin silk paper which is suitable for the production of permanent stencils for manifolding or duplicating apparatus, and more particularly to render possible the production of such stencils in a continuous automatic or mechanical process.

Various kinds of cellulose wool are available which are equivalent to the conventional raw materials used for the production of Japanese paper, more particularly regarding the length of staple and the titre as well as regarding the curling or curliness and the felting capacity of the fibre which is an important expedient for the production of very thin paper sheets.

However, it has been found that it is very difficult to produce a suitable silk paper by the conventional method of dipping a paper sieve into a suspension of very low concentration of such fibre material in water in which binders are dissolved. The production of larger or endless sheets is impossible with this dipping method.

Now, I have found that very good results can be obtained by first spreading out the fibre material on endless belts or sieves in the form of a thin web and then applying thereto for

example, by spraying, sprinkling or another suitable impregnating method, a suitable binder that has been dissolved in water or other suitable solvents; the fibres when dried are felted and stuck together in the form of a thin sheet of paper.

Suitable binders are, for example, aqueous solutions of glue, gum arabic, starch, tragacanth gum and the like. Also, substances such as artificial and natural resins which are not soluble in water may be used in the form of solutions in spirit, benzene or benzol or other suitable non-aqueous solvents.

Machines for producing very thin fibrous webs from fibre materials are well known and developed to a high degree of perfection, for instance, in the spinning industry, so that it will be easily possible for one skilled in the art to produce endless webs of the kind required in my novel process. For the same reason, it will not be necessary to illustrate my novel process by a drawing.

It will thus be understood that my invention renders it possible to produce from cellulose wool, artificial silk, linters or mixtures thereof large size sheets or endless bands of very thin silk paper, which is at least equivalent to Japanese paper, in a continuous process and such sheets or bands can be used for producing permanent stencils for manifolding apparatus in a mechanical operation. Of course, such mechanical operation is greatly superior to the process of impregnating the single small sheets of Japanese paper so far available individually with the film producing substance, in the manufacture of the said permanent stencils.

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