

ALIEN PROPERTY CUSTODIAN

PROCESS FOR THE PRODUCTION OF GUNCOTTON GELATIN SUITABLE FOR BEING CONVERTED INTO GUNCOTTON DEVOID OF SOLVENT

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No Drawing. Application filed June 17, 1941

In the production of the various kinds of guncotton devoid of solvent the cellulose nitrate is mixed under water with gelatinizing substances e. g. with nitroglycerine, and possibly with other charge materials, as e. g. with stabilizing or flame-reducing materials. From the mixed and partly gelatinized mass, the water contained in it is removed by centrifuging, following which the material is rolled between heated rollers. The purpose of the process of rolling is to render gelatinization more perfect with the aid of pressure and of increased temperature. Rolling is continued until the water has evaporated completely and gelatinization has reached the desired degree. In the process of rolling the material is as a rule rolled into cakes of 1 to 2 centimetres thickness, following which the cakes are folded and passed again through the rollers. The process of rolling takes about one hour, and therefore the output capacity of the rolling mills is relatively low. During the period of rolling the guncotton gelatin is permanently subjected to a high temperature, amounting to about 70° Centigrade, as well as to a high pressure, and therefore the guncotton gelatin is liable to take fire easily.

The process according to the invention eliminates the drawbacks enumerated above, and, by reducing the length of time of rolling, enables the output capacity of the rolling mills to be increased in a substantial extent.

According to the invention, the partly gelatinized material composed of cellulosic nitrate and of a gelatinizing substance which have been

mixed with each other in an aqueous medium, is, after being separated from the water e. g. by means of centrifuging, placed, whilst still in a wet condition, on heated rollers between which it is rolled into a very thin layers, the thickness of which is preferably smaller than 1 mm and may advantageously amount to even less than 0.5 mm, i. e. to a few tenths of one mm. Rolling is preferably performed in such a manner as to ensure that the mixture of materials which is to be gelatinized should reach the desired degree of thinners after having been passed through the rollers a single time. The thin sheets obtained in the process of rolling are subsequently dried in air. It will be advantageous to proceed in such a manner that the thin sheets obtained by rolling are suspended on frames and air having a temperature of about 25 to 35 degrees Centigrade is driven through the room containing them. By these means it will be possible to dry the guncotton sheets within a time of about 24 hours. Following this, the dry sheets thus treated may then, after preliminary heating, be converted within a few minutes, on the guncotton rolling mills, into guncotton gelatin representing the finished product.

In the process according to the invention it is only a short time that the guncotton gelatin spends between the heated rollers; this circumstance greatly reduces the danger of ignition and substantially increases the output capacity of the rollers.

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