UNITED STATES PATENT OFFICE.

EMILE BRONNERT, OF NIEDERMORSCHWEILER, NEAR MÜLHAUSEN, GERMANY, ASSIGNOR TO THE FIRM OF VEREINIGTE GLANZSTOFF-FABRIKEN A.-G., OF ELBERFELD, GERMANY.

PROCESS FOR THE PRODUCTION OF THREADS, FILMS, OR PLATES.

1,102,237. Specification of Letters Patent. **Patented July 7, 1914.**

No Drawing. Application filed April 9, 1913. Serial No. 759,932.

To all whom it may concern:

Be it known that I, EMILE BRONNERT, a subject of the Emperor of Germany, residing at Niedermorschweiler, near Mülhausen, Alsace-Lorraine, Germany, have invented certain new and useful Improvements in Processes for the Production of Threads, Films, or Plates; and I do hereby declare the following to be a full, clear, and exact description of the invention.

For producing formed articles, such as threads, films or plates, by precipitating the same from viscose solutions it has been found to be advantageous to employ such acids, which form soluble or even deliquescent salts with the soda of the viscose; these acids being employed either alone or preferably together with a salt (for instance sodium salt) of the corresponding acid. Suitable cheap acids of this kind are the non-volatile aliphatic hydroxy acids, such as lactic acid, glycolic acid, citric acid, tartaric acid. The precipitation will practically be performed rather at a warm temperature (for instance a temperature of 20°–60° C. in the precipitating bath has produced good results, but the higher the temperature the more the coagulation together with decomposition takes place). For example a mixture of one liter of saturated solution of lactate of soda with for instance 140 grams of lactic acid added thereto makes at 60° C. an excellent precipitating bath for spinning artificial threads from a viscose solution for example into the well known centrifugal boxes with a satisfactory velocity.

The further treatment of the precipitated threads or the like may be carried out according to known processes. The employment of the said non-volatile acids of the fatty acid series (being of organic nature) together with their salts, instead of sulfuric or formic acid, is particularly advantageous because they are not volatile, and do no harm either to the gelatinous thread freshly formed or to the metals of which the spinning bones are made, or to the work people.

What I claim is:

In producing threads, films or plates or the like from viscose solution, the process which consists in conducting the viscose solution through a heated precipitating bath consisting of a solution of a salt of non-volatile aliphatic oxyacids such as lactic, glycolic, citric, tartaric acid together with a sufficient quantity—say 15–20% of the same free acid.

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

EMILE BRONNERT.

Witnesses:
DAVID BRONNERT,
ARNOLD ZUBER.