UNITED STATES PATENT OFFICE.

EDUARD UNGNAD, OF RIXDORF-BERLIN, GERMANY.

PROCESS OF TREATING FIBERS, &c., TO IMITATE SILK.

SPECIFICATION forming part of Letters Patent No. 643,923, dated February 20, 1900.

Application filed August 10, 1898. Serial No. 688,252. (No specimens.)

To all whom it may concern:

Be it known that I, EDUARD UNGNAD, chemist, of 52 Juliusstrasse, Rixdorf-Berlin, in the Empire of Germany, have invented new and useful Improvements Relating to the Treatment of Fibers, Yarns, and Fabrics to Imitate Silk, of which the following is a specification.

My invention relates to the treatment of fibers, yarns, and fabrics to imitate silk.

Silk is dissolved in an alkaline solution while heating. The fibers, yarns, or fabrics to be enriched are soaked in this solution, freed from any excessive quantity of same, and then treated in a bath of alkaline bicarbonate in excess or hung in a large chamber through which gases containing carbonic acid—for instance, washed products of combustion—are conducted. The carbonic acid contained in the products of combustion or in the alkaline bicarbonate of the bath combines with the alkali of the silk solution, converts it into an alkaline carbonate, thereby depositing the silk from its solution onto the fiber. After drying the silk to the fiber the alkaline carbonate is lixiviated by warm water, a portion of same is rendered caustic again by the addition of lime, and thus serves for dissolving fresh quantities of silk, while the other portion is converted by the passage of products of combustion into alkaline bicarbonate, and, as hereinbefore stated, is used again as a bath for the deposition of the silk on the fiber, or the solution of bicarbonate is heated and carbonic acid expelled from it, which gas, as set forth, may likewise be employed for saturating the alkali and separating the silk.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

The improved process of treating vegetable fibers, yarns and fabrics to imitate silk, which consists in subjecting them, after they have been soaked in the usual manner in an alkaline solution of silk, to the action of carbonic acid which combining with the alkali of the silk solution converts it into an alkaline carbonate and thereby deposits the silk from its solution on the fiber, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

EDUARD UNGNAD.

Witnesses:
HENRY HASPER,
C. H. DAY.